

**ENVIRONMENTAL ASSESSMENT**

**DESIGNATION OF CRITICAL HABITAT  
FOR GUNNISON SAGE-GROUSE (*Centrocercus minimus*)  
IN COLORADO AND UTAH**

**Prepared by  
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# Table of Contents

Introduction.....	5
1.0 Purpose of the Proposed Action.....	5
1.1 Need for the Action.....	5
1.2 Background.....	7
1.2.1 SpeciesDescription.....	7
1.2.2 Distribution, Abundance, and Trends .....	7
1.2.3 Life History and Habitat Requirements.....	9
1.2.4 Threats.....	10
1.3 Endangered Species Act.....	12
1.3.1 Critical Habitat.....	12
1.3.2 Section 7 Consultation.....	13
1.3.3 Technical Assistance.....	15
1.3.4 Section 9 Prohibitions.....	16
1.3.5 Section 10 Permits.....	16
2.0 Description of Alternatives.....	17
2.1 Alternatives Considered but not Fully Evaluated.....	17
2.1.1 Designation of Critical Habitat Only on Habitat Currently Occupied.....	17
2.1.2 Designation of Critical Habitat Only on Public Lands.....	17
2.1.3 Designation of Critical Habitat Only in Gunnison Basin.....	18
2.2 Alternative A. No Action Alternative.....	18
2.3 Alternative B. Proposed Action (Designation of Critical Habitat).....	18
2.4 Summary of Actions by Alternative.....	20
3.0 Description of the Affected Environment.....	20
3.1 Physical Environment.....	21
3.2 Fish, Wildlife, and Plants.....	21
3.2.1 Gunnison Sage-grouse.....	21
3.2.2 Candidate, Threatened, and Endangered Species.....	21
3.2.3 Other Fish, Wildlife, and Plant Species.....	24
3.3 Human Environment.....	25
3.3.1 Transportation.....	25
3.3.2 Livestock Grazing.....	25
3.3.3 Mineral and Fossil Fuel Extraction.....	25
3.3.4 Residential and Related Development.....	25
3.3.5 Recreation.....	26
3.3.6 Agriculture and Water Management.....	26
3.3.7 Renewable Energy.....	26
3.3.8 Electric Power and Infrastructure.....	27
3.4 Tribal Lands.....	27
4.0 Environmental Consequences.....	27

4.1	Physical Environment.....	29
4.2	Fish, Wildlife, and Plants.....	29
	4.2.1 Gunnison Sage-grouse.....	29
	4.2.2 Candidate, Threatened, and Endangered Species.....	30
	4.2.3 Other Fish, Wildlife, and Plant Species.....	31
4.3	Human Environment.....	31
	4.3.1 Transportation.....	33
	4.3.2 Livestock Grazing.....	34
	4.3.3 Mineral and Fossil Fuel Extraction.....	35
	4.3.4 Residential and Related Development.....	36
	4.3.5 Recreation.....	35
	4.3.6 Agriculture and Water Management.....	37
	4.3.7 Renewable Energy.....	38
	4.3.8 Electric Power and Infrastructure.....	38
4.4	Tribal Lands.....	39
4.5	Archeological and Cultural Resources.....	39
4.6	Cumulative Impacts.....	40
5.0	Council on Environmental Quality Analysis of Significance.....	45
	5.1 Context.....	45
	5.2 Intensity.....	45
	5.3 Compliance with other Laws and Regulations.....	46
	5.4 Environmental Justice.....	46
	5.5 Contacts and Coordination with Others.....	46
	5.6 Public Review and Comment.....	43
	5.7 List of Contributors.....	47
6.0	References Cited.....	47
7.0	Maps of Designated CriticalHabitat.....	49

List of Tables

Table 1.	Current estimates of occupied habitat and abundance for each population.....	8
Table 2.	Designated critical habitat for GUSG.....	20
Table 3.	Candidate, threatened, and endangered species in counties with GUSG proposed critical habitat.....	21
Table 4.	Forecast baseline and incremental impacts by unit, 2013-2032 (2012\$, 7% discount rate).....	31
Table 5.	Forecast baseline and incremental impacts by unit, annualized (2012\$, 7% discount rate).....	32
Table 6.	Summary of environmental consequences by alternative (costs from Industrial Economics, Inc. (2014)).....	43

List of Figures

Figure 1. Current locations of GUSG populations.....8

## **Introduction**

The U.S. Fish and Wildlife Service (Service) is designating critical habitat for Gunnison sage-grouse (*Centrocercus minimus*) (hereafter, GUSG) in Colorado and Utah, as required by section 4 of the Endangered Species Act of 1973, as amended (ESA). On January 11, 2013, we proposed to list the GUSG as endangered (78 FR 2486) and to designate critical habitat for the species (78 FR 2540). We made a draft of this Environmental Assessment (EA) as well as our draft economic analysis available for public comment on September 19, 2013 (78 FR 57604). Final rules for listing and designation of critical habitat are due to the **Federal Register** by November 12, 2014.

Critical habitat designation is required by the ESA for listed species. This EA presents the purpose of and need for the critical habitat designation, the Proposed Action and alternatives considered, and an evaluation of the direct, indirect, and cumulative effects of the alternatives pursuant to the requirements of the National Environmental Policy Act of 1969 (NEPA) as implemented by the Council on Environmental Regulations (40 CFR 1500, et seq.) and according to the U.S. Department of Interior NEPA regulations (43 CFR part 46) and procedures. This EA was used to decide whether critical habitat would be designated as proposed, if the Proposed Action required refinement, or if further analysis would be needed through preparation of an Environmental Impact Statement (EIS). The Proposed Action was selected as described, with minimal changes.

### **1.0 Purpose for the Proposed Action**

The purpose of the proposed action is to designate critical habitat for GUSG in Colorado and Utah by utilizing provisions of the ESA. Critical habitat designation is required by the ESA for listed species. The purpose of the ESA is to conserve the ecosystem upon which threatened and endangered species depend. Critical habitat designation identifies areas that contain the physical and biological features essential to the conservation of this species and that may require special management or protection (section 3(5)(A)). The designation of critical habitat also describes the physical and biological features essential to the conservation of the species, which are identified as the Primary Constituent Elements (PCEs).

### **1.1 Need for the Action**

The need for this action is to comply with section 4 of the ESA, which requires that critical habitat be designated for endangered and threatened species unless such designation is not prudent. On January 11, 2013 (78 FR 2486) the Service published a proposed rule to list the GUSG as endangered throughout its range. A proposed rule to designate critical habitat (78 FR 2540) was published on the same date. We made a draft of this EA as well as our draft economic analysis available for public comment on September 19, 2013 (78 FR 57604).

When the range of a species includes States within the Tenth Circuit, pursuant to the Tenth Circuit ruling in Catron County Board of Commissioners v. U.S. Fish and Wildlife Service, 75 F.3d 1429 (10<sup>th</sup> Cir. 1996), we will complete an analysis pursuant to NEPA on critical habitat

designations. The current range of this species is in Colorado and Utah, which are both within the Tenth Circuit.

Critical habitat is one of several provisions of the ESA that aid in protecting the habitat of a listed species until populations have recovered and threats have been minimized so that the species can be removed from the list of threatened and endangered species. Critical habitat designation is intended to assist in achieving long-term protection and recovery of this species and the ecosystem upon which it depends. Section 7(a)(2) of the ESA (50 CFR §402.13) requires consultation for Federal actions that may affect critical habitat to avoid destruction or adverse modification of this habitat. Further explanation of critical habitat and its implementation is provided below. Under section 4(b)(2) of the ESA, the Secretary shall designate critical habitat on the basis of the best scientific data available and after taking into consideration the economic impact, and any other relevant impact, of specifying any particular area as critical habitat. The Secretary may exclude any area from critical habitat if he determines that the benefits of such exclusion outweigh the benefits of specifying such area as part of the critical habitat, unless he determines, based on the best scientific and commercial data available, that the failure to designate such area as critical habitat will result in the extinction of the species.

For activities that may result in “destruction or adverse modification” of critical habitat, we currently assess these effects based under guidance provided in 2004 (Service 2004). This guidance has us assess cumulative effects based on effects of future, non-Federal actions that are reasonably certain to occur in terms of the primary constituent elements or habitat qualities essential to the conservation of the species (Service 2004). Activities that jeopardize a species are defined as those actions that “reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery” of the listed species (50 CFR 402.02). According to these definitions, activities that destroy or adversely modify critical habitat would generally jeopardize the species. Therefore, designation of critical habitat has rarely resulted in greater protection than that afforded under section 7 by the listing of a species, except in the unoccupied critical habitat units. Section 7 consultations apply only to actions with Federal involvement (i.e., activities authorized, funded, or conducted by Federal agencies), and do not impact activities strictly under State or private authority. In practice, the designation of critical habitat for the three plants will likely provide little additional benefits to the species in presently occupied areas because there are functioning program activities already alerting Federal agencies and the public of endangered species concerns.

Below we summarize the life history, habitat characteristics, and threats for the GUSG. For further analysis, please see our 12-month finding published September 28, 2010 (75 FR 59804), our proposed listing rule published January 11, 2013 (78 FR 2486), and our final listing rule. For further descriptions of how we used life history and habitat characteristics to determine the essential physical and biological features for the GUSG, please see our final critical habitat designation.

## 1.2 Background

The GUSG differs from the closely related greater sage-grouse (*Centrocercus urophasianus*) in morphological measurements, plumage, courtship display, and genetics (Young *et al.* 2000, p. 444). However, the two species have similar life histories and habitat requirements (Gunnison Sage-grouse Rangewide Steering Committee 2005, pp. 22–23). In this EA we use information specific to the GUSG when it is available, but we also cite greater sage-grouse references when information specific to GUSG is lacking.

### 1.2.1 Species Description

The GUSG is a member of the Phasianidae family. For many years, GUSG and greater sage-grouse were considered a single species; however, in 2000, the GUSG was identified as a distinct species (Young *et al.* 2000, pp. 447–448). The current ranges of the two species of sage-grouse do not overlap (Schroeder *et al.* 2004, p. 369). The GUSG is dark brown with black underparts; breeding plumage in males includes ornamental feathers along the base and sides of the neck that are lost after breeding; tails are coarsely barred brown with prominent white to yellow-white bars; and females are smaller than males (Young *et al.* 2000, pp. 447–448). It is a large species of grouse known for an elaborate mating ritual where males congregate on strutting grounds called leks and “dance” to attract a mate (Gunnison Sage-grouse Rangewide Steering Committee 2005, p. 22).

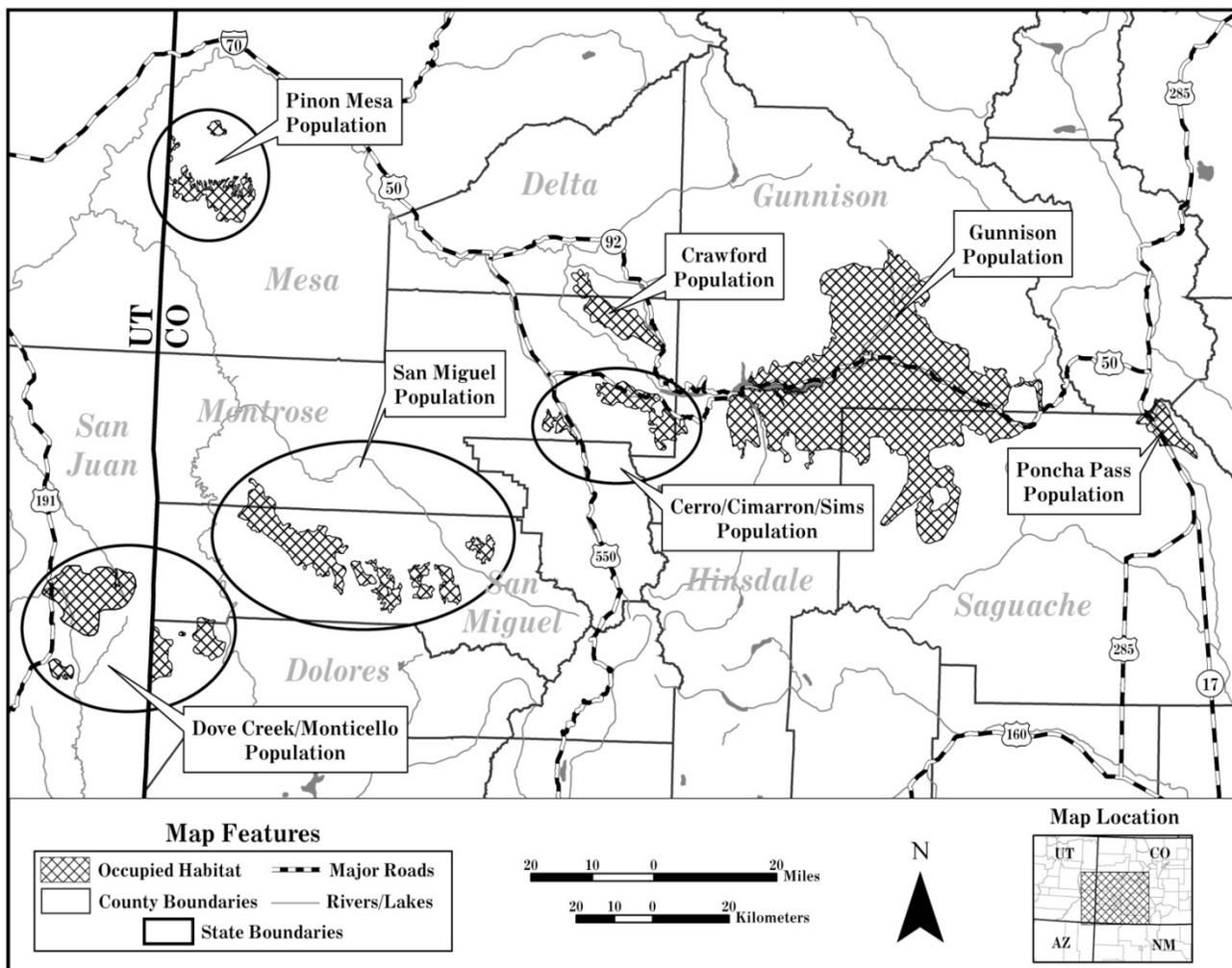
### 1.2.2 Distribution, Abundance, and Trends

#### *Distribution*

Based on museum specimens, published observations, and pre-settlement distribution of potential habitat, the GUSG is believed to have historically occurred in central and southwestern Colorado, southeastern Utah, northwestern New Mexico, and northeastern Arizona (Young *et al.* 2000, p. 448; Schroeder *et al.* 2004, p. 370). The Gunnison Sage-grouse Rangewide Steering Committee refined the likely historical range of the GUSG, estimating 55,350 square kilometers (km<sup>2</sup>) (21,370 square miles (mi<sup>2</sup>)) in the same four States (Gunnison Sage-grouse Rangewide Steering Committee 2005, p. 32). However, Arizona Game & Fish Department notes that there are no published records of GUSG in northeastern Arizona and questions whether Arizona was part of the species’ historical range (Riley 2013, pp. 1–2). There are no estimates regarding the portion of historical range that was occupied at any given time or regarding historical population numbers.

The current range of the GUSG includes southwestern Colorado and southeastern Utah. Occupied habitat within the current range includes seven widely scattered populations encompassing approximately 3,795 km<sup>2</sup> (1,511 mi<sup>2</sup>) in Colorado and Utah. This represents approximately seven to twelve percent of the species’ historical range. The seven populations are: Gunnison Basin, San Miguel Basin, Monticello-Dove Creek, Piñon Mesa, Crawford, Cerro Summit-Cimarron-Sims Mesa, and Poncha Pass (Figure 1).

Figure 1. Current locations of GUSG populations



*Abundance*

The current size of GUSG occupied habitat and current population estimates are presented in the following table.

**Table 1. Current estimates of occupied habitat and abundance for each population**

<b>Population</b>	<b>Occupied Habitat</b>		<b>2014 Population Estimate</b>
Gunnison Basin	239,641 ha	592,168 ac	3,978
San Miguel Basin	41,177 ha	101,750 ac	206
Monticello-Dove Creek (combined)	45,544 ha	112,543 ac	98
• Monticello	28595ha	70661ac	
	16549ha	41,881ac	

• Dove Creek			
Piñon Mesa	18,080ha	44,678ac	182
Cerro Summit-Cimarron-Sims Mesa	15,039 ha	37,161 ac	74
Crawford	14,170 ha	35,015 ac	157
Poncha Pass	11,229ha	27,747ac	14
Total	384,880ha	951,061ac	4,709

### *Trends*

The Gunnison Basin population is the largest population (approximately 3,978 birds) and, while showing variation over the 19-year period of record, including drought cycles and harsh winters, has been relatively stable, based on lek count estimates. The Gunnison Basin population encompasses 63 percent of all occupied habitat and 84 percent of the current total population. All satellite populations were generally in decline until 2010; however, increases in several populations have been observed recently and could be a product of numerous factors including but not limited to population cycles, translocation efforts, and increased access to leks. The population dynamics of the six smaller populations may be very different from the Gunnison Basin population (Davis 2012, p. 2).

### **1.2.3 Life History and Habitat Requirements**

Both species of sage-grouse have an obligate relationship with sagebrush (*Artemisia* spp.) (Hupp and Braun 1991, p. 255; Beck *et al.* 2003, p. 203; Crawford *et al.* 2004, p. 2; Schroeder *et al.* 2004, p. 366). GUSG require large, contiguous areas of sagebrush for their long-term persistence and exhibit a high site fidelity to all seasonal habitats. Habitat requirements for GUSG differ by season. The Gunnison Sage-grouse Rangewide Steering Committee (2005, pp. 27–31) categorized habitat for the species as follows.

- Breeding habitat (leks, nesting, and early brood-rearing): GUSG typically utilize the same leks from year to year. Leks are typically small open areas adjacent to sagebrush and are usually not a limiting habitat feature. Good nesting habitat requires sagebrush with sufficient canopy cover as well as substantial grasses and forbs in the understory. Early brood-rearing habitat is similar to nesting habitat and may include riparian areas.
- Summer-Fall habitat: As sagebrush communities dry, GUSG begin to concentrate in larger flocks and may use atypical habitat such as agricultural fields. From mid-September into October both species of sage-grouse move into areas with more dense sagebrush (more than 15 percent canopy cover).
- Winter habitat: Winter weather events trigger movement into habitat where sagebrush remains exposed above snow.

High rates of adult survival of sage-grouse are offset by low rates of juvenile survival (Crawford *et al.* 2004, p. 2). Demographic parameters for GUSG, including clutch size (6.8 eggs), likelihood of nesting (75.7 percent), nest success of at least one egg hatching (43.2 percent), and annual reproductive success—probability of a female hatching at least one egg in a season (35.1

percent)—were all lower than the same parameters for greater sage-grouse (Crawford *et al.* 2004, p. 4).

#### **1.2.4 Threats**

The following discussion of threats summarizes information presented in the final rule listing the GUSG.

##### *Present or threatened destruction, modification, or curtailment of habitat or range*

Fragmentation of sagebrush habitat is a primary cause of the decline of GUSG populations. Loss of habitat due to residential and road development is considered a current and future threat to the GUSG population as a whole. Habitat degradation that can result from grazing in a manner incompatible with local ecological conditions, particularly with the interacting factors of invasive plant expansion and climate change, is a current and future threat to GUSG persistence. Other current impacts to habitat including fences, powerlines, fire, invasive plants, piñon-juniper encroachment (typically, *Pinus edulis* and *Juniperus* spp.), large-scale water development, and climate change/drought can collectively contribute to habitat loss. Invasive plants, climate change, and drought will become an increasing threat to the species in the future, especially when acting in combination. Historical conversion of sagebrush habitats to croplands caused loss and fragmentation of habitat; however, due to the long-term downward trend in land area devoted to agriculture, we do not expect agricultural conversion to be a significant cause of further range contraction into the future. Impacts from mineral development (leasable, locatable and salable, and renewable) are occurring on the landscape and are contributing to habitat loss and fragmentation. However, these activities are occurring at a localized scale, and they are not currently a threat to the species rangewide.

##### *Overutilization for commercial, recreational, scientific, or educational purposes*

Hunting of GUSG is currently not legal and is not considered a threat. Lek viewing protocols designed to reduce disturbance have generally been followed; consequently, lek viewing is not considered a threat. Mortality from scientific research is low (two percent) and is also not a threat to the GUSG.

##### *Disease or Predation*

West Nile virus is the only disease that currently presents a potential risk to GUSG. The virus is distributed throughout most of the species' range and it is nearly 100 percent lethal to infected birds. However, occurrence of the virus is sporadic and to date it has not been detected in GUSG. Therefore, we conclude that disease is not currently a threat, but is likely to become a more significant threat in the future.

The best available information indicates that, as we stated in our proposed rule, predation is a current and future threat to the species, particularly in the satellite populations. While predation is a threat rangewide, we believe that the effects of predation are localized and more pronounced

in the satellite populations, and therefore we do not believe that the magnitude of this threat is significant.

#### *Inadequacy of existing regulatory mechanisms*

GUSG conservation has been addressed in some local, State, and Federal laws, regulations, and land management plans. However, these mechanisms are not adequate to ameliorate other threats to the species; therefore, inadequate regulatory mechanisms are considered a threat to the GUSG.

We commend Gunnison, San Miguel, Ouray, and Montrose Counties for implementing special regulations for GUSG for land uses within their jurisdictions. Existing local laws and regulations will help to reduce some of the negative effects of human development and infrastructure on GUSG. However, local regulatory mechanisms do not fully address the substantial threats to the species.

At a State level, Colorado Parks and Wildlife, Utah Division of Wildlife Resources, and other entities have implemented conservation easements to conserve GUSG habitat. Existing conservation easements provide a level of protection from future development on these lands, but they are limited in geographic scope such that they do not adequately address the threat of habitat loss across the species' range. Approximately 35,195 ha (86,968 ac), or 22.6 percent, of private lands in occupied GUSG habitat were under conservation easement as of 2013 (Lohr and Gray 2013, entire). State wildlife regulations provide protection for individual GUSG from direct mortality due to hunting but do not address habitat loss and other threats such as drought, climate change, or disease.

Implementation of Federal agency regulations specifically for GUSG conservation provides obvious benefits to the species, considering that approximately 54 percent of rangewide occupied habitat occurs on Federal lands. Protections afforded to GUSG vary by agency and field office or unit, but many of these protections are discretionary or undertaken on a voluntary basis rather than required by a regulatory mechanism. BLM's land use management plans are regulatory mechanisms, but for the most part do not currently include requirements directed at sage-grouse conservation. We find that existing Federal laws and regulations are not fully addressing the full scope of threats to the species.

#### *Other natural or manmade factors affecting its continued existence*

Small population size and structure is a threat to the six satellite populations of GUSG, both now and into the future. Although genetic consequences of low GUSG population numbers have not been definitively detected to date, the results from Stiver *et al.* (2008, p. 479) suggest that six of the seven populations may have effective sizes low enough to induce genetic deterioration, and that all seven could be losing adaptive potential. Available Population Viability Analyses for GUSG have resulted in somewhat disparate findings, each with their own limitations or weaknesses. The survival and persistence of the San Miguel population, and likely the smaller satellite populations as well, appear to be at risk in the near future. Although we expect the Gunnison Basin population will persist longer than the satellite populations, Davis (2012, entire) indicated that its future viability is also at risk due to natural environmental and demographic

fluctuations. Based on the best available information, we determined that resiliency, redundancy, and representation in GUSG are inadequate, or will be inadequate in the future, to ensure the species' long-term viability.

### *Summary of threats*

The following continuing, new, and increasing threats, which are acting on the species individually and cumulatively, contribute to the determination that the GUSG meets the definition of a threatened species: small population size and population structure; habitat decline, including habitat loss, degradation, and fragmentation of sagebrush habitats; drought; climate change; disease; and existing plans, laws, and regulations which are not adequate to address the full scope of the threats listed above.

## **1.3 Endangered Species Act**

### **1.3.1 Critical Habitat**

Section 4(a)(3) of the ESA states that critical habitat shall be designated to the maximum extent prudent and determinable and that such designation may be revised periodically, as appropriate. Section 4(b)(2) of the ESA requires that critical habitat designation be based on the best scientific information available and that economic and other impacts must be considered. Areas may be excluded from critical habitat designation if it is determined that the benefits of excluding them outweigh the benefits of their inclusion, unless failure to designate such areas will result in the extinction of the species.

Critical habitat is defined in section 3(5)(A) of the ESA as (i) the specific areas within the geographical area occupied by a species, at the time it is listed in accordance with the ESA, on which are found those physical or biological features (I) essential to the conservation of the species and (II) that may require special management considerations or protection; and (ii) specific areas outside the geographical area occupied by a species at the time it is listed, upon a determination that such areas are essential for the conservation of the species.

Section 3(5)(C) also states that critical habitat “shall not include the entire geographical area which can be occupied by the threatened or endangered species” except when the Secretary determines the area can be included.

The term “conservation” as defined in section 3(3) of the ESA, means “to use and the use of all methods and procedures which are necessary to bring an endangered species or threatened species to the point at which the measures provided pursuant to this Act are no longer necessary” (i.e., the species is recovered and removed from the list of threatened and endangered species).

Within the geographic area occupied by the species, the Service will designate only areas currently known to support the physical and biological features essential to the conservation of the species. If information available at the time of designation does not show an area provides features essential for the conservation of the species or that the area may require special

management considerations or protection, then the area should not be included in the critical habitat designation.

Section 4(b)(2) of the ESA requires that we base critical habitat designation on the best scientific and commercial data available, taking into consideration the economic impact, and any other relevant impact, of specifying any particular area as critical habitat. We may exclude areas from critical habitat designation if we determine that the benefits of exclusion outweigh the benefits of including the areas as critical habitat, provided the exclusion will not result in the extinction of the species. Within the geographic area occupied by the species, we will designate only areas currently known to be essential to the conservation of the species. This includes habitat currently unoccupied by the species that may be necessary for conservation of the species, such as areas important for population connectivity or range expansion. Critical habitat should already have the features and habitat characteristics that are necessary to sustain the species. We will not speculate about what areas might be found to be essential if better information were available, or what areas may become essential over time. If information available at the time of designation does not show that an area provides essential support for a species at any phase of its life cycle, then the area should not be included in the critical habitat designation. Within the geographic area occupied by the species, we will not designate areas that do not now have the physical and biological features that provide essential life cycle needs for the species.

Habitat is often dynamic, and species may move from one area to another over time. Furthermore, we recognize designation of critical habitat may not include all habitat eventually determined as necessary to recover the species. For these reasons, areas outside the critical habitat designation will continue to be subject to conservation actions that may be implemented under section 7(a)(1) and the regulatory protections afforded by the section 7(a)(2) jeopardy standard and section 9 protections, as determined on the basis of the best available information at the time of the action. We specifically anticipate that federally-funded or assisted projects affecting listed species outside their designated critical habitat areas may still result in jeopardy findings in some cases. Similarly, critical habitat designations made on the basis of the best available information at the time of designation will not control the direction and substance of future recovery plans, habitat conservation plans, or other species conservation planning efforts if new information available to planning efforts calls for a different outcome.

In accordance with section 3(5)(A)(i) of the ESA and regulations at 50 CFR 424.12 in determining which areas to propose as critical habitat, we are required to base critical habitat determinations on the best scientific and commercial data available and to consider physical and biological features that are essential to the conservation of the species, and that may require special management considerations or protection. These include, but are not limited to (1) space for individual and population growth, and for normal behavior; (2) food, water, air, light, minerals, or other nutritional or physiological requirements; (3) cover or shelter; (4) sites for breeding, reproduction, rearing (or development) of offspring; and (5) habitats protected from disturbance or that are representative of the historic geographical and ecological distributions of a species.

### **1.3.2 Consequences of Designation, the Section 7 Consultation Process**

Section 7(a)(2) of the ESA requires every Federal agency, in consultation with and with the assistance of the Secretary, to insure that any action it authorizes, funds, or carries out is not likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of designated critical habitat. In fulfilling these requirements, each agency is to use the best scientific and commercial data available. This section of the ESA sets out the consultation process, which is further implemented by regulation (50 CFR part 402).

Each Federal agency is to review its actions at the earliest possible time to determine whether any action may affect listed species or critical habitat. If the action may affect a listed species or critical habitat, consultation with the Service is required.

Informal consultation is an optional process that includes all discussions and correspondence between the Service and a Federal agency or designated non-Federal representative, designed to assist the Federal agency in determining whether formal consultation or a conference is required. If during consultation it is determined by the Federal agency, with the written concurrence of the Service, that the action is not likely to adversely affect listed species or critical habitat, the consultation process is terminated, and no further action is necessary. During informal consultation, the Service may suggest modifications to the action that the Federal agency and any applicant could implement to avoid the likelihood of adverse effects to listed species or critical habitat.

If a proposed action is likely to adversely affect a listed species or designated critical habitat, formal consultation with the Service is required. Formal consultation is a process between the Service and a Federal agency or applicant that (1) determines whether a proposed Federal action is likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat; (2) begins with a Federal agency's request and submittal of a complete initiation package; and (3) concludes with the issuance of a biological opinion.

With the request to initiate formal consultation, the Federal agency is to include (1) a description of the proposed action; (2) a description of the area that may be affected; (3) a description of any listed species or critical habitat that may be affected; (4) a description of the manner in which the listed species or critical habitat may be affected and an analysis of cumulative effects; (5) relevant reports including any environmental impact statement, environmental assessment, or biological assessment; and (6) any other relevant and available information.

Unless an extension is provided, formal consultation concludes 90 days after its initiation. Within 45 days after concluding formal consultation, the Service delivers a biological opinion to the Federal agency and any applicant. The biological opinion will include the Service's opinion on whether the action is likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of critical habitat. If the action is likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of critical habitat, the biological opinion will include a reasonable and prudent alternative, if any exist. A reasonable and prudent alternative is a recommended alternative action that can be implemented consistent with the scope of the Federal agency's legal authority and jurisdiction, that is economically and technologically feasible, and that would avoid the likelihood of

jeopardizing the continued existence of the listed species or the destruction or adverse modification of designated critical habitat.

For animal species, in those cases where the Service concludes that an action (or the implementation of any reasonable and prudent alternatives) and the resultant incidental take of listed species will not violate section 7(a)(2), the Service will provide with the biological opinion a statement concerning incidental take that (1) specifies the impact of the take on the species; (2) specifies the reasonable and prudent measures to minimize the impact; (3) sets forth terms and conditions that must be complied with by the Federal agency or any applicant to implement the reasonable and prudent measures; and (4) specifies procedures to handle any individuals actually taken. Reasonable and prudent measures, along with the terms and conditions that implement them, cannot alter the basic design, location, scope, duration, or timing of the actions and may involve only minor changes. Any “taking” covered in the incidental take statement and in compliance with the terms and conditions of the statement is not a prohibited taking under the ESA and no other authorization or permit under the ESA is required.

### **1.3.3 Technical Assistance**

Although it is not defined in the regulations, technical assistance includes those parts of the informal consultation that provide information to agencies, applicants, and/or consultants, but specifically stops short of concurrence on “may effect” determinations. The term is used to differentiate “informal” consultation (where a concurrence with an agency, applicant, or consultant on “may effect” is provided) and the provision of information. This differentiation is primarily made for record-keeping purposes.

A telephoned or written inquiry about the presence or absence of listed and/or proposed species in a project area usually initiates informal consultation and frequently generates technical assistance. Service biologists may respond in different ways:

- a) If species are not likely to be present, the consultation requirement is met and the Service may advise the agency, applicant, or consultant.
- b) If historical records or habitat similarities suggest the species may be in the area, then some survey work may be recommended to make a more precise determination.
- c) If the species is definitely in the project area, but the Service determines it will not be adversely affected, the Service may notify the agency of that finding.

Technical assistance from the Service may take a variety of forms. It can include information on candidate species as well as names of contacts having information on State-listed species. The Service may provide correspondence to State agencies or other Service offices to alert them to a project.

As a part of technical assistance, the Service may recommend:

- a) That the action agency conducts additional studies on the species' distribution in the area affected by the action, or
- b) That the action agency monitors impacts of the action on aspects of the species' life cycle. Monitoring may be recommended when incidental take is not anticipated, but might possibly occur, thus triggering the need for project changes or formal consultation.

#### **1.3.4 Section 9 Prohibitions**

Section 9 of the ESA prohibits “take” of endangered species of fish and wildlife. The Service has issued regulations (50 CFR 17.31) that generally apply to threatened wildlife, the take prohibitions that section 9 of the ESA established with respect to endangered wildlife. Take is defined in section 3 of the ESA as “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” Harm is further defined by the Service to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns such as breeding, feeding, or sheltering. Harass is defined by the Service as actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns, which include, but are not limited to, breeding, feeding, or sheltering (50 CFR 17.3). Incidental take is the take of listed fish and wildlife species that results from, but is not the purpose of, carrying out an otherwise lawful activity conducted by a Federal agency or applicant (50 CFR 402.02).

#### **1.3.5 Section 10 Permits**

Section 10(a)(1)(A) Enhancement of survival permits are issued to non-Federal landowners who volunteer to participate in Safe Harbor Agreements or CCAAs. These agreements encourage landowners to take actions to benefit species while also providing assurances that they will not be subject to additional regulatory restrictions as a result of their conservation actions. The permits provide authorization for take associated with conservation measures and routine land uses covered by these plans.

Section 10(a)(1)(A) Recovery permits are issued to allow for take as part of activities intended to foster the recovery of listed species. A typical use of a recovery permit is to allow for scientific research on a listed species in order to better understand the species' long-term survival needs. Recovery permits may also be issued for on-the-ground conservation activities such as captive rearing and reintroductions. Interstate commerce permits also allow transport and sale of listed species across State lines (for purposes such as a breeding program).

Section 10(a)(1)(B) Incidental take permits are required when non-Federal activities will result in take of threatened or endangered species. A habitat conservation plan must accompany an application for an incidental take permit. The habitat conservation plan associated with the permit ensures that the effects of the authorized incidental take are adequately minimized and mitigated. The Service's issuance of the incidental take permit is a Federal action that requires compliance with NEPA in the form of a categorical exclusion, environmental assessment, or environmental impact statement, depending on the level of impacts to the human environment.

Permit issuance also requires us to comply with section 7 of the ESA by conducting an intra-Service consultation and completing a biological opinion.

## **2.0 Description of Alternatives**

This section describes the critical habitat designation for the GUSG. The critical habitat designation is described in further detail in our final rule designating critical habitat. Alternatives are different ways of meeting the purpose and need for critical habitat designation as described in section 1 of this Environmental Assessment. The purpose and need for critical habitat can be summarized as providing protection of habitat that is essential to the conservation of listed species. In addition, we considered three potential alternatives without thoroughly examining the impacts of their implementation.

### **2.1 Alternatives Considered But Not Fully Evaluated**

The following three alternatives reflect public comments we received regarding the proposed rule to designate critical habitat for the GUSG (78 FR 2540, January 11, 2013) and include our explanation for why these alternatives were not evaluated further in this Environmental Assessment.

#### **2.1.1 Designation of Critical Habitat Only on Habitat Currently Occupied**

We received numerous comments suggesting that critical habitat only should be designated for habitat currently occupied by GUSG. Approximately 45 percent of the 578,515 ha (1,429,551 ac) of designated critical habitat is unoccupied by GUSG. Unoccupied habitat designated for critical habitat is either suitable for use by GUSG or could be suitable if practical restoration were applied. The latter situation most commonly occurs in areas where piñon-juniper has encroached on sagebrush habitat. Unoccupied habitat was designated as critical habitat based on: (1) its proximity to currently occupied habitat (based on typical sage-grouse movements of 18.5 km (11.5 mi) or less); (2) its ability to improve connectivity between and within GUSG populations; and (3) and providing extensive sagebrush landscapes capable of supporting a population of GUSG. The currently occupied habitat areas for the Piñon Mesa, Cerro Summit–Cimarron–Sims Mesa and Crawford populations, which range in size from 35,015 ac (14,170 ha) to 44,678 ac (18,080 ha) are smaller than the Rangewide Conservation Plan model’s predicted minimum required area. The currently occupied habitat areas in the Monticello–Dove Creek and the San Miguel Basin populations population are 112,543 ac (45,544 ha) and 101,750 ac (16,805 ha), respectively. These areas only slightly exceed the model’s predicted minimum required area. While correlative in nature, together these data suggest that the currently occupied habitat area for at least three populations included in this final designation is insufficient for long-term population viability, and may be minimally adequate for two populations. Consequently, based on what we now know, we believe that the existing occupied habitat is not sufficient to ensure conservation of the species. Thus, this alternative would not meet the purpose and need for the critical habitat designation and was not evaluated in further detail.

#### **2.1.2 Designation of Critical Habitat Only on Public Lands**

We received numerous comments suggesting that critical habitat should only be designated on public lands. Federal agencies manage 55 percent of currently occupied habitat and 55 percent of designated critical habitat. Approximately 45 percent of designated critical habitat is on private lands. The remainder of designated critical habitat is on State, city, or county lands. Although there is an abundance of public lands within the current range of the GUSG, much of it is either unsuitable habitat such as forested areas, or is at a greater distance from existing habitat than is typically covered during sage-grouse movements. Therefore, based on what we now know we believe that the habitat on public lands is not sufficient to ensure conservation of the species. Thus, this alternative would not meet the purpose and need for the critical habitat designation and was not evaluated in further detail.

### **2.1.3 Designation of Critical Habitat Only in Gunnison Basin**

We received numerous comments suggesting that critical habitat should only be designated within Gunnison Basin. As noted in the section discussing population trends, the Gunnison Basin population encompasses 63 percent of all occupied habitat and 84 percent of the current total population. The Gunnison Basin has been described as a core area for the GUSG. However, the other six populations provide necessary redundancy in the event of perturbations such as an outbreak of West Nile virus or the occurrence of drought, either of which could result in severe impacts to the species. The loss of one or more of the populations outside of Gunnison Basin would reduce the geographical distribution and total range of the GUSG and increase the species' vulnerability to stochastic events and natural catastrophes. Therefore, based on what we now know we believe that designating critical habitat only in Gunnison Basin is not sufficient to ensure conservation of the species. Thus, this alternative would not meet the purpose and need for the critical habitat designation and was not evaluated in further detail.

## **2.2 Alternative A. No Action Alternative**

Pursuant to NEPA and its implementing regulations (40 CFR 1502.14), we are required to consider the No Action Alternative. Alternative A, the No Action Alternative, would maintain the status quo, that is, we would not designate critical habitat for GUSG. While no critical habitat would be present under this alternative, the protections provided to GUSG by the species being listed under the ESA would still apply. As such, the protections afforded to GUSG by being listed under the ESA are considered the baseline against which we evaluate the action alternative described below. In the Final Economic Analysis (Industrial Economics, Inc. 2014), the costs listed as baseline would be associated with this alternative.

## **2.3 Alternative B. Designation of Critical Habitat (Proposed Action)**

Alternative B, our Proposed Action, would designate critical habitat as described in our final critical habitat designation. We designated approximately 578,515 ha (1,429,551 ac) of critical habitat in six units. The six units we designated as critical habitat correspond to six of the seven GUSG populations, which include: (1) Monticello-Dove Creek, (2) Piñon Mesa, (3) San Miguel Basin, (4) Cerro Summit-Cimarron-Sims Mesa, (5) Crawford, and (6) Gunnison Basin. The designated critical habitat is located in Delta, Dolores, Gunnison, Hinsdale, Mesa, Montrose,

Ouray, Saguache, and San Miguel Counties in Colorado, and in Grand and San Juan Counties in Utah.

Section 4(b)(2) of the ESA requires us to designate critical habitat on the basis of the best scientific and commercial information available and to consider the economic and other relevant impacts of designating a particular area as critical habitat. We may exclude areas from critical habitat upon a determination that the benefits of such exclusions outweigh the benefits of specifying such areas as part of critical habitat. We cannot exclude such areas from critical habitat if such exclusion would result in the extinction of the species concerned.

Our Draft Environmental Assessment analyzed the impacts of designating 689,675 ha (1,704,227 ac). However, in the final rule designating critical habitat, the Secretary has used her discretion to exclude 111,160 ha (274,676 ac) from critical habitat. We excluded private lands covered by final Certificates of Inclusion under the CCAA in the Pinon Mesa, San Miguel Basin, Crawford, and Gunnison Basin Units. We excluded private lands covered by permanent Conservation Easements in all 6 of the Units. We excluded Ute Mountain Ute fee title lands covered by a Species Management Plan for the Pinecrest Ranch in the Gunnison Basin Unit. These areas were excluded based on their implementation of plans or agreements for conservation of the species. Please refer to the Exclusions section of the final rule for a more complete description of our analysis under section 4(b)(2) of the ESA. Therefore, we have revised this EA to reflect that the proposed action is now to designate the remaining 578,515 ha (1,429,551 ac) as critical habitat.

Although we proposed critical habitat designation for the Poncha Pass population, we are not including it in the final critical habitat designation, because we have now concluded that the Poncha Pass area, for reasons unknown, is not a landscape capable of supporting a population of GUSG. Because the population has repeatedly declined to the point of extirpation and is not self-sustaining, something in the unit is not providing the wide array of habitats that support seasonal movement patterns and provide for all the life history needs of the GUSG. Each designated unit contains both occupied and unoccupied habitat. All or part of each unit occurs in Colorado. Two units—Monticello-Dove Creek and Piñon Mesa—occur partially in Utah. Maps of these units are found in section 10 of this EA. In the Final Economic Analysis (Industrial Economics, Inc. 2014), the costs listed as incremental would be incurred by this alternative.

Alternative B, the Proposed Action, includes the designation of critical habitat in areas believed to contain the physical and biological features upon which the GUSG depends. The Service refers to these essential habitat features as “primary constituent elements” (PCEs). The PCEs for this species includes those habitat components essential for meeting the biological needs of reproducing, rearing of young, foraging, sheltering, dispersing, and exchanging genetic material. GUSG are sagebrush obligates, requiring large, interconnected expanses of sagebrush plant communities that contain a healthy understory of native, herbaceous vegetation. The species may also use riparian habitat, agricultural lands, and grasslands that are in close proximity to sagebrush habitat.

PCEs for the GUSG are described as follows:

- All critical habitat must include a landscape-scale PCE of extensive sagebrush landscapes capable of supporting a population of GUSG. In general, this includes areas with vegetation composed primarily of sagebrush plant communities (at least 25 percent of the land is dominated by sagebrush cover within a 0.9-mi (1.5-km) radius of any given location), of sufficient size and configuration to encompass all seasonal habitats for a given population of GUSG, and facilitate movements within and among populations.
- All critical habitat must include one or more of the following site-scale PCEs:
  - Breeding habitat, with structural characteristics described in the final rule;
  - Summer-late fall habitat, with structural characteristics described in the final rule;
  - Winter habitat, with structural characteristics described in the final rule;
  - Alternative, mesic habitats used primarily in the summer-late fall season, as described in the final rule.

## 2.4 Summary of Actions by Alternative

In Table 2 we provide a comparison between Alternative A (No Action), which includes no designation of critical habitat, and Alternative B (Proposed Action), which includes critical habitat as proposed January 11, 2013 (78 FR 2540), with minor revisions.

**Table 2. Proposed critical habitat for GUSG**

<b>Critical Habitat Unit</b>	<b>No Action</b>	<b>Proposed Action</b>
Unit 1: Monticello-Dove Creek	0 ha (0 ac)	138,807 ha (343,000 ac)
Unit 2: Piñon Mesa	0 ha (0 ac)	84,087 ha (207,792 ac)
Unit 3: San Miguel Basin	0 ha (0 ac)	49,343 ha (121,929 ac)
Unit 4: Cerro Summit-Cimarron-Sims Mesa	0 ha (0 ac)	21,264 ha (52,544 ac)
Unit 5: Crawford	0 ha (0 ac)	33,860 ha (83,671 ac)
Unit 6: Gunnison Basin	0 ha (0 ac)	251,154 ha (620,616 ac)
<b>Total</b>	<b>0 ha (0 ac)</b>	<b>578,515 ha* (1,429,551 ac)*</b>

\* Total numbers do not sum exactly due to rounding

## 3.0 Description of Affected Environment

The geographic area for Alternative B, the Proposed Action, includes 578,515 ha (1,429,551 ac) of critical habitat on Federal, State, local government-owned, and private lands in Delta, Dolores, Gunnison, Hinsdale, Mesa, Montrose, Ouray, Saguache, and San Miguel Counties in Colorado, and in Grand and San Juan Counties in Utah. Private, county, State, and Federal lands are included in the Proposed Action except in the case of lands that have been excluded under Section 4(b)(2) of the Act. Lands excluded under Section 4(b)(2) of the Act include lands covered by completed Certificates of Inclusion in the Candidate Conservation Agreement with Assurances, lands protected under permanent Conservation Easement, and lands covered under the Ute Mountain Ute Tribe's Species Management Plan for Pinecrest Ranch.

The designation of critical habitat directly affects only Federal agencies. The ESA requires Federal agencies to ensure that actions they fund, authorize, or carry out do not destroy or adversely modify critical habitat to the extent that the action appreciably diminishes the value of the critical habitat for the survival and recovery of the species. Individuals, organizations, States, local and Tribal governments, and other non-Federal entities are only affected by the designation of critical habitat if their actions occur on Federal lands, require a Federal permit, license, or other authorization, or involve Federal funding (for example, section 404 Clean Water Act permits from the U.S. Army Corps of Engineers or funding of activities by the Natural Resource Conservation Service). This is explained in more detail in Chapter 5 (Environmental Consequences).

### 3.1 Physical Environment

Areas designated as critical habitat include intermontane (located between mountain ranges) and shrub steppe habitats dominated by, or near, sagebrush plant communities, generally between 1,500 and 2,900 meters (5,000–9,500 feet) in elevation. The areas designated as critical habitat in Alternative B are described in sections 2.1.2 and 2.1.3 above.

### 3.2 Fish, Wildlife, and Plants

The discussion in this section is broken down into a description of GUSG; a description of other candidate, threatened, and endangered species; and a description of other fish, wildlife, and plant species.

#### 3.2.1 Gunnison Sage-grouse

The designation of critical habitat for the GUSG is the subject of this EA. Details regarding the affected environment for this species are described in sections 1.2.1 and 1.2.2 above, and throughout section 4 of this EA.

#### 3.2.2 Candidate, Threatened, and Endangered Species

Table 3 summarizes the Federal candidate, threatened, and endangered species that may occur in the counties containing critical habitat for the GUSG. We have assessed whether these species occur within any of the critical habitat units (Alternative B) in the comment column. Critical habitat for GUSG likely overlaps with habitat for one candidate species— skiff milkvetch—and with habitat for the threatened Colorado hookless cactus. None of the three species with habitat that likely overlaps GUSG habitat have critical habitat designations. Certain activities in GUSG critical habitat may indirectly affect critical habitat for four endangered Colorado River fish— humpback chub, bonytail chub, Colorado pikeminnow, and razorback sucker.

**Table 3. Candidate, threatened, and endangered species in counties with GUSG critical habitat**

Common Name	Scientific Name	Taxonomic Group	Status	Critical Habitat Comments

Canada lynx	<i>Lynx canadensis</i>	Mammal	Threatened	The species is known or believed to occur in all CO counties that contain GUSG critical habitat. Lynx habitat includes montane and subalpine forests, as well as adjacent areas of quaking aspen ( <i>Populus tremuloides</i> ), mountain shrub, and willow ( <i>Salix</i> spp.) communities. Therefore, minimal overlap may occur in some higher elevation areas of GUSG critical habitat.
Humpback chub	<i>Gila cypha</i>	Fish	Endangered	Critical habitat for this species occurs in the Green R. in Grand Co., UT and in the Colorado R. in San Juan Co., UT, but does not overlap GUSG critical habitat. However, projects that result in water depletions in portions of GUSG critical habitat may indirectly affect the humpback chub and its habitat.
Bonytail chub	<i>Gila elegans</i>	Fish	Endangered	Critical habitat for this species occurs in the Green R. in Grand Co., UT and in the Colorado R. in Mesa Co., CO and San Juan Co., UT, but does not overlap GUSG critical habitat. However, projects that result in water depletions in portions of GUSG critical habitat may indirectly affect the bonytail chub and its habitat.
Colorado pikeminnow	<i>Ptychocheilus lucius</i>	Fish	Endangered	Critical habitat for this species occurs in the Green R. and Colorado R. in Grand and San Juan Co., UT, in the Gunnison R. in Delta and Mesa Co., CO, and in the Colorado R. in Mesa Co., CO, but does not overlap GUSG critical habitat. However, projects that result in water depletions in portions of GUSG critical habitat may indirectly affect the Colorado pikeminnow and its habitat.

Razorback sucker	<i>Xyrauchen texanus</i>	Fish	Endangered	Critical habitat for this species occurs in the Green R. and Colorado R. in Grand and San Juan Co., UT, in the Gunnison R. in Delta and Mesa Co., CO, and in the Colorado R. in Mesa Co., CO, but does not overlap GUSG critical habitat. However, projects that result in water depletions in portions of GUSG critical habitat may indirectly affect the razorback sucker and its habitat.
Boreal toad	<i>Anaxyrus boreas boreas</i>	Amphibian	Under review	This species is known or believed to occur in Gunnison, Hinsdale, and Mesa Co., CO. Its habitat is high elevation wetlands. There is little or no overlap with GUSG critical habitat.
Greater sage-grouse	<i>Centrocercus urophasianus</i>	Bird	Candidate	This species is known to occur in Grand Co., UT. However, its range does not overlap with GUSG critical habitat.
Yellow-billed Cuckoo	<i>Coccyzus americanus</i>	Bird	Threatened	This species is known or believed to occur in Grand and San Juan Co., UT, and in Delta, Gunnison, and Montrose Co., CO. However, there is little or no overlap with GUSG critical habitat.
Southwestern willow flycatcher	<i>Empidonax traillii extimus</i>	Bird	Endangered	This species is known or believed to occur in Grand and San Juan Co., UT and in Dolores, Ouray, Saguache, and San Miguel Co., CO. Critical habitat for this species occurs along the San Juan R. in San Juan Co., UT. The species utilizes wooded riparian habitat, with little or no overlap with GUSG critical habitat.
California condor	<i>Gymnogyps californianus</i>	Bird	Experimental population, non-essential	This species is known or believed to occur in counties containing GUSG critical habitat. However, the condor is an infrequent visitor and does not use the area for nesting.
Mexican	<i>Strix</i>	Bird	Threatened	Critical habitat for this species

spotted owl	<i>occidentalis lucida</i>			occurs in Grand and San Juan Co., UT, and in Montezuma Co., CO, south of GUSG critical habitat. The owl utilizes mixed conifer habitats in canyons and steep slopes, which does not overlap GUSG critical habitat.
Skiff milkvetch	<i>Astragalus microcymbus</i>	Plant	Candidate	This plant is known to occur in Gunnison and Saguache Co., CO. Its habitat is sagebrush steppe, and overlaps with GUSG critical habitat.
Jones cycladenia	<i>Cycladenia humilis var. jonesii</i>	Plant	Threatened	This plant is known to occur in Grand Co., UT. Its habitat includes mixed desert scrub, juniper, and wild buckwheat-Mormon tea, with little or no overlap with GUSG critical habitat.
Clay-loving wild buckwheat	<i>Eriogonum pelinophilum</i>	Plant	Endangered	This plant is known to occur in Delta and Montrose Co., CO in sparsely vegetated swales. Critical habitat for this species occurs in Delta Co., CO. There is no overlap with GUSG critical habitat.
Debeque phacelia	<i>Phacelia submutica</i>	Plant	Threatened	Critical habitat for this plant occurs in northern Mesa Co., CO. Its habitat includes badlands and shrublands, but does not overlap with GUSG critical habitat.
Colorado hookless cactus	<i>Sclerocactus glaucus</i>	Plant	Threatened	This plant is known or believed to occur in Delta, Mesa, and Montrose Co., CO. Its habitat includes alluvial benches along the Colorado and Gunnison Rivers. Associated vegetation can include sagebrush. Portions of its habitat overlap GUSG critical habitat.

### 3.2.3 Other Fish, Wildlife, and Plant Species

Many other wildlife species are also found within designated critical habitat for the GUSG, including some State threatened and endangered species and species of concern. Mammals include Pronghorn (*Antilocapra americana*) and kit fox (*Vulpes macrotis*). Birds include

burrowing owl (*Athene cunicularia*), American peregrine falcon (*Falco peregrines anatum*), bald eagle (*Haliaeetus leucocephalus*), and ferruginous hawk (*Buteo regalis*).

### **3.3 Human Environment**

A wide diversity of human activities and land uses occur throughout or adjacent to the areas identified for designation as critical habitat in Colorado and Utah under Alternative B. Private, State, and Federal lands are included within designated critical habitat for GUSG. The following activities were identified as the primary uses in the Final Economic Analysis (Industrial Economics, Inc. 2014, p. ES-5) and are expected to persist into the foreseeable future.

#### **3.3.1 Transportation**

Transportation activities within critical habitat consist primarily of construction and maintenance of roads. New roads typically are associated with residential development. There are approximately 219 km (136 mi) of State and Federal highways within GUSG occupied habitat. According to Colorado and Utah Departments of Transportation, volume and construction of new roads in occupied habitat have not increased significantly over the past 10 years.

#### **3.3.2 Livestock Grazing**

At least 87 percent of GUSG occupied habitat on Federal lands is currently grazed by domestic livestock; however, current stocking rates are substantially lower than historical levels. Approximately 292,000 ha (720,000 ac) of Federal grazing allotments are located on GUSG occupied habitat and 105,000 ha (260,000 ac) on unoccupied habitat. There are numerous management strategies associated with livestock grazing including the Gunnison Sage-grouse Rangeland Conservation Plan, the Gunnison Basin Candidate Conservation Agreement, BLM Resource Management Plans, and USFS Land and Resource Management Plans.

#### **3.3.3 Mineral and Fossil Fuel Extraction**

Potential types of mineral and fossil fuel extraction within the range of the GUSG include oil and gas operations, uranium mining, and potash mining. The habitat for two GUSG populations—San Miguel Basin and Monticello-Dove Creek—has a high potential for oil and gas development. Habitat for the Crawford population has a medium potential for oil and gas development. Energy development is currently occurring primarily in the San Miguel Basin. Approximately 21,800 ha (54,000 ac) of BLM lands are leased for oil and gas production within GUSG critical habitat; 38 percent of those lands are currently in production in Colorado. Within critical habitat in Utah, none of the leased acres are currently producing. Although uranium mining may occur in the future, there are currently no producing uranium mines. Potash exploration is currently active within GUSG critical habitat. Baseline conservation efforts with regard to mineral and fossil fuel extraction activities include timing requirements, avoiding surface disturbance, habitat restoration required in BLM Resource Management Plans, and habitat protections required by the Colorado Oil and Gas Conservation Commission.

#### **3.3.4 Residential and Related Development**

The primary development activity within critical habitat is residential development and is increasingly exurban in nature. The primary source of development within the critical habitat designation is the City of Gunnison in the Gunnison Basin unit. Other cities proximate to the designation include Grand Junction, which is located to the northeast of the Piñon Mesa unit, and Crested Butte, which is located to the north of the Gunnison Basin unit. In general, population growth and development in Gunnison County has been focused in the Crested Butte area outside of critical habitat, rather than in the area surrounding the town of Gunnison. Many of the counties within the designation do not anticipate extensive future development. These counties note that minimal population growth is expected as a result of current economic conditions, a lack of available water supply, other competing land uses such as grazing and agriculture, and the remoteness of these areas.

### **3.3.5 Recreation**

The season for hunting GUSG has been closed since 1989 in Utah, since 2000 in Gunnison Basin, and since 1995 for the other GUSG populations. Hunting for other wildlife species and fishing continues as a popular recreational activity within the range of the GUSG. Other recreational activities within GUSG occupied habitat include hiking and the use of off-highway vehicles such as motorcycles, all-terrain vehicles, mountain bikes, and snowmobiles. Recreational use of trails is expected to increase over the next 20 years.

### **3.3.6 Agriculture and Water Management**

Approximately 23,220 ha (57,377 ac) or 51 percent of GUSG occupied habitat in the Monticello-Dove Creek area is currently in agricultural production. Approximately 20,754 ha (51,285 ac) or 9 percent of GUSG occupied habitat in the Gunnison Basin; 6,287 ha (15,535 ac) or 15 percent of GUSG occupied habitat in the San Miguel Basin; and 5,133 ha (2,077 ac) or 14 percent of GUSG occupied habitat in the Cerro Summit-Cimarron-Sims Mesa area are also currently in agricultural production. Agricultural production is limited to three percent or less in habitat for the Crawford, Piñon Mesa, and Poncha Pass populations. Cultivated crops include wheat, beans, sunflowers, hay, and alfalfa. With the exception of Gunnison County, total area of harvested cropland has declined over the past two decades within the occupied range of GUSG. Many privately owned farms participate in voluntary conservation-based programs with the Natural Resource Conservation Service (NRCS) and Farm Service Agency (FSA). FSA notes that approximately 57,300 acres within the occupied range of the sage-grouse are currently enrolled in its Conservation Reserve Program (CRP). The largest portion of these acres is within the Monticello-Dove Creek unit. In addition, many of these farms rely on water supplied by local water conservation districts and water projects, such as the Dolores Project.

### **3.3.7 Renewable Energy**

Within the Gunnison Basin unit, approximately 4,600 acres of BLM land and 3,800

acres of USFS land are leased for geothermal development. However, the owner of the geothermal leases does not intend to develop the resource. Three wind energy projects are proposed for areas in the vicinity of the critical habitat designation in San Juan County, Utah. No renewable energy development currently occurs within GUSG habitat.

### **3.3.8 Electric Power and Infrastructure**

In addition to the type of residential development and related projects described above, impacts may be associated with the construction and maintenance of electric power infrastructure to meet electricity demand within developed areas. In Colorado, seven electric cooperatives are responsible for transmission and distribution within the range of the sage-grouse. Additional cooperatives address transmission and distribution in Utah. Hundreds of miles of power lines intersect the designation—for example, one of the seven cooperatives operating in Colorado, the Gunnison County Electric Association (GCEA), notes that it is responsible for 221 miles of power lines within the critical habitat designation. The proposed listing rule notes that 36 electric infrastructure rights-of-way exist on BLM land in the Gunnison Basin unit.

### **3.4 Tribal Lands**

Critical habitat was proposed on approximately 5,000 ha (12,000 ac) of fee land belonging to the Ute Mountain Ute Tribe within GUSG occupied habitat and proposed critical habitat in the Gunnison Basin. This land supports tribal grazing operations and tribal community events on Pinecrest Ranch. The land was excluded from designated critical habitat based on the Tribe's Species Management Plan for Pinecrest Ranch.

## **4.0 Environmental Consequences**

This section reviews the expected environmental consequences of designating critical habitat for the GUSG under Alternative A (the No Action Alternative) and under Alternative B (the Proposed Action to designate critical habitat). We evaluate the impacts of designating critical habitat by comparing a scenario where we would not designate critical habitat (baseline) and the scenario in which critical habitat is designated.

Designation of critical habitat does not have any direct effects on the environment, except through the section 7 consultation process. This is because critical habitat designation does not impose broad rules or restrictions on land use, nor does it automatically prohibit any land use activity. Each Federal action that could potentially affect designated critical habitat is analyzed individually during the section 7 consultation process. Individuals, organizations, local government, Tribes, States, and other non-Federal agencies are potentially affected by the designation of critical habitat only if their actions occur on Federal lands, require a Federal permit or license, or involve Federal funding (e.g., section 404 Clean Water Act permits from the U.S. Army Corps of Engineers or funding of activities by the Natural Resource Conservation Service).

Under section 7, Federal agencies are required to consult with the Service when their actions could affect critical habitat. For many listed species, critical habitat designation would not be expected to materially affect the number or nature of consultations. For instance, when critical habitat and the areas occupied by the species are equivalent, an action that would affect designated critical habitat also would affect the species and a consultation would be required regardless of critical habitat designation.

Measured (incremental) differences between baseline and the scenario in which critical habitat is designated may include, but are not limited to, changes in land use, environmental quality, property values, and time and effort expended on consultations and other activities by Federal landowners, Federal action agencies, and with State and local governments and private third parties whose projects have a Federal action. These incremental changes may be either positive or negative.

The Final Economic Analysis does not attempt to quantify the economic benefits associated with the critical habitat designation, but does recognize that there is an economic value associated with this designation (Industrial Economics, Inc. 2014). These benefits are especially true for those unoccupied areas where protections for the GUSG, through occupied habitat protections, would not otherwise apply.

Regardless of which alternative is chosen, or whether a Federal action affects critical habitat; in accordance with section 7(a)(2) of the ESA, Federal agencies are required to review actions they authorize, fund, or carry out to determine the effects of proposed actions on federally-listed species. If the Federal agency determines that its action may adversely affect a listed species, it must enter into formal consultation with the Service. This consultation results in a biological opinion issued by the Service as to whether the proposed action is likely to jeopardize the continued existence of the species.

A similar process is required when critical habitat is designated. While reviewing their actions to determine the effect on the listed species, Federal agencies also review their action for the effects on critical habitat and enter into section 7 consultations with us on actions they determine may affect critical habitat. If a proposed action is likely to adversely affect critical habitat, the consultation would result in a biological opinion as to whether the proposed action is likely to destroy or adversely modify designated critical habitat. Under Alternative B, critical habitat would be designated; therefore, instances where the Federal action agency would be required to address both the jeopardy standard and the destruction or adverse modification of critical habitat standard in section 7 consultations would occur.

Activities that would jeopardize the continued existence of a species are defined as those actions that “reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery” of the listed species (50 CFR 402.02). Activities that would destroy or adversely modify critical habitat will most often also result in jeopardy to the species.

It is difficult to differentiate between consultations that result from the listing of this species (i.e., jeopardy to the species) and consultations that result from the presence of critical habitat (i.e., destruction or adverse modification of critical habitat). The Final Economic Analysis (Industrial

Economics, Inc. 2014) quantifies the potential economic impacts associated with future section 7 consultations in or near designated critical habitats and it is incorporated into this EA. The following discussion will disclose the potential costs attributable to critical habitat designation, when available, from the Final Economic Analysis (Industrial Economics, Inc. 2014).

Individuals, organizations, States, local governments, and other non-Federal entities are only affected by the designation of critical habitat if their actions occur on Federal lands, require a Federal permit, license, or other authorization, or involve Federal funding (for example, 404 permits from the U.S. Army Corps of Engineers, dam licensing or relicensing by the Federal Energy Regulatory Commission, or funding of activities by the NRCS).

Potential environmental consequences that may result from implementation of the No Action and Proposed Action Alternatives are discussed below. All impacts are expected to be indirect, as critical habitat designation does not in itself directly result in any alteration of the environment.

The objectives of the ESA include protection of natural communities and ecosystems, minimization of fragmentation and promotion of the natural patterns and connectivity of wildlife habitats, promotion of native species and avoidance of the introduction of non-native species, protection of rare and ecologically important species and unique or sensitive environments, maintenance of naturally occurring ecosystem processes and genetic and structural diversity, restoration of ecosystems and communities, and recovery of species.

#### **4.1 Physical Environment**

None of the alternatives will directly impact the physical environment since the designation is an administrative action.

#### **4.2 Fish, Wildlife, and Plants**

##### **4.2.1 Gunnison Sage-grouse**

**Alternative A** – Under the No Action Alternative, there would be no designation of critical habitat under the ESA. Federally supported actions that may affect the GUSG would require section 7 consultations under the jeopardy standards in all areas occupied by the species. Consultations would likely be with: (1) the BLM and USFS regarding fire suppression, fuel reduction treatments, livestock grazing and management, permits for non-renewable and renewable energy development, individual projects, and management plans; and (2) the Service regarding section 10 enhancement of survival permits, habitat conservation plans, and Safe Harbor Agreements. Analysis under the adverse modification standard would not be required because no critical habitat would be designated.

**Alternative B** – Under the Proposed Action, there would be similar effects to the GUSG as under the No Action Alternative. There would also be impacts resulting from critical habitat designation beyond those already considered in section 7 consultations. These additional impacts would be more widespread under the Proposed Action, and the number of consultations would increase due to consideration of unoccupied critical habitat. The complexity of section 7

consultations would increase because the analysis would also have to consider adverse modification to critical habitat.

Designating critical habitat does not, by itself, lead to the recovery of a listed species. The designation does not establish a reserve, create a management plan, establish numerical population goals, prescribe specific management practices within or outside critical habitat, or directly affect areas not designated as critical habitat. Specific management recommendations for areas designated as critical habitat are most appropriately addressed in recovery and management plans, and through section 7 consultation.

Benefits to the GUSG that may accrue from the designation of critical habitat under the Proposed Action would relate to the requirement under section 7 of the ESA that Federal agencies review their actions to assess their effects on critical habitat. Critical habitat designation will help to focus Federal, State, local, and private conservation and management efforts by identifying the areas of most importance to the species. Critical habitat also allows for long-term project planning for species conservation. Other potential benefits include educational benefits through increasing the knowledge that a species exists or is in an area, improvements to air or water quality as a result of species protections, and conservation of native habitats. Some of these benefits can be attributed to listing the GUSG, and some would be attributable to the critical habitat designation.

#### **4.2.2 Candidate, Threatened, and Endangered Species**

**Alternative A** – Under the No Action Alternative, there would be no designation of critical habitat under the ESA. Most candidate, threatened, and endangered species within the range of the GUSG do not utilize habitat occupied by GUSG. Consequently, there would be no significant impact to those species. One candidate species (skiff milkvetch) and the threatened Colorado hookless cactus may share portions of the same habitat occupied by GUSG. The four endangered Colorado River fishes (humpback chub, bonytail chub, Colorado pikeminnow, and razorback sucker) may be affected by projects in GUSG habitat. These species may indirectly benefit as a result of ecosystem protections provided through conservation of the GUSG and associated requirements of section 7 of the ESA.

**Alternative B** – Under the Proposed Action, there would be similar effects to the candidate, threatened, and endangered species within the range of the GUSG as described under the No Action Alternative. As previously noted, critical habitat for GUSG likely overlaps with habitat for one candidate species: skiff milkvetch, and with habitat for the threatened Colorado hookless cactus. Furthermore, projects in GUSG critical habitat that result in water depletions may affect the four endangered Colorado River fishes or their habitats. For these species, there would be additional indirect benefits resulting from critical habitat designation beyond those already considered in section 7 consultations. The objectives of designating critical habitat include the protection of natural communities and ecosystems, minimization of habitat fragmentation and maintenance and restoration of natural landscape patterns and connectivity of wildlife habitats, promotion of native species and avoidance of introduction of non-native species, protection of rare and ecologically important species and unique or sensitive environments, maintenance of naturally occurring ecosystem processes and genetic and structural diversity, restoration of

ecosystems and communities, and recovery of the species. Management of critical habitat for the GUSG will not deleteriously affect these species, and could lead to net benefits through preservation of intact habitats.

### **4.2.3 Other Fish, Wildlife, and Plant Species**

**Alternative A** – Under the No Action Alternative, other fish, wildlife, and plants that utilize habitat occupied by the GUSG may indirectly benefit as a result of ecosystem protections provided through conservation of the GUSG and associated requirements of section 7 of the ESA.

**Alternative B** – Under the Proposed Action, there would be similar effects to other fish, wildlife, and plants within the range of the GUSG as described under the No Action Alternative. However, additional effects would occur under the Proposed Action through the designation of critical habitat. The objectives of designating critical habitat include the protection of natural communities and ecosystems, minimization of habitat fragmentation and maintenance and restoration of natural landscape patterns and connectivity of wildlife habitats, promotion of native species and avoidance of introduction of non-native species, protection of rare and ecologically important species and unique or sensitive environments, maintenance of naturally occurring ecosystem processes and genetic and structural diversity, restoration of ecosystems and communities, and recovery of the species. Other fish, wildlife, and plants may indirectly benefit as a result of these ecosystem protections and associated requirements of section 7 of the ESA. As a result of critical habitat designation, Federal agencies may be able to prioritize landowner incentive programs such as the Wildlife Habitat Incentives Program or Environmental Quality Incentives Program, conservation easements, and private landowner agreements that may benefit these other species. Critical habitat designation also may assist States in prioritizing their conservation and land management programs.

## **4.3 Human Environment**

As discussed above, individuals, organizations, States, local governments, and other non-Federal entities are only affected by the designation of critical habitat if their actions occur on Federal lands, require a Federal permit, license, or authorization, or involve Federal funding. Federal agencies will be required to consider the effects of their actions to the GUSG and consult with the Service as appropriate. A similar process is required for critical habitat. Incremental impacts are likely due to the implementation of consultations in unoccupied portions of critical habitat, where such efforts would not be requested without the designation of critical habitat.

A perception may exist within some segments of the public that any designation of critical habitat will severely limit property rights; however, critical habitat designation has no effect on private actions on private land that do not involve Federal approval or action. We recognize that there are private actions on private or State lands that involve Federal actions, and agencies will be required to consult with us under section 7 of the ESA for actions that may affect critical habitat.

Under the No Action Alternative, we expect that section 7 consultations would be undertaken to analyze the impact of the types of projects identified below on the listed GUSG. Consulting on the impacts of the projects to GUSG will require additional staff time from the Service, other Federal agencies, and, in rare instances, project proponents. We consider the administrative costs of these consultations to be “baseline” costs. These costs would be primarily incurred by the Federal land management agencies (BLM, USFS, and the National Park Service (NPS)). Other federal agencies that may enter into consultation with the Service include the Natural Resources Conservation Services (NRCS), Farm Services Agency (FSA), the U.S. Army Corps of Engineers (COE), Bureau of Reclamation (BR), and the Federal Highway Administration (FHWA). According to our economic analysis, costs associated with jeopardy analyses in occupied habitat will total \$46,800,000 over 20 years.

In comparison to the No Action Alternative, the Proposed Action may result in additional consultations for projects with a Federal nexus in unoccupied critical habitat. In occupied critical habitat, there will likely be a slight increase in the amount of time necessary to complete a section 7 consultation due to the additional analysis of whether the project will result in adverse modification. In the economic analysis, we refer to these impacts as incremental impacts. We assessed the costs of these incremental impacts and have determined that the Proposed Action will result in a total incremental cost of \$4,000,000 over 20 years.

Differentiating between consultations that result from the listing of the GUSG and consultations that result from the presence of critical habitat is difficult. However, the following discussion will address how much of the cost associated with all future section 7 consultations in or near the critical habitat units is likely attributable to critical habitat designation, as determined in the Final Economic Analysis (Industrial Economics, Inc. 2014). The Final Economic Analysis assigns costs to the baseline and incremental scenarios for each unit of critical habitat based on the location of future projects within occupied habitat (assumed to result in baseline impacts) or within unoccupied habitat (assumed to result in incremental impacts due to consultations in unoccupied habitat that would not otherwise occur). These costs over the next 20 years are summarized at a seven percent discount rate in Table 4 and presented in detail in the Final Economic Analysis (Industrial Economics, Inc. 2014). The 20-year analysis period reflects the maximum amount of time under which future activities and economic impacts associated with the critical habitat designation can be reliably projected, given available data and information. The economic analysis was completed before our removal of the Poncha Pass unit from our final designation and before our removal of the CCAA, CE, and Tribal exclusions. Since the designation is now 111,160 ha (274,676 ac) smaller than what was proposed, the overall economic impact would likely be an even smaller amount than discussed below.

Entries in Table 4 may not sum to totals reported due to rounding. Table 5 presents the annualized baseline and incremental economic impacts.

**Table 4. Forecast baseline and incremental impacts by unit, 2013-2032 (2012\$, 7% discount rate)**

Unit	Baseline Impacts	Incremental Impacts	Total

Monticello-Dove Creek	\$6,400,000	\$2,200,000	\$8,600,000
Piñon Mesa	\$3,200,000	\$730,000	\$3,930,000
San Miguel Basin	\$5,000,000	\$860,000	\$5,860,000
Cerro Summit-Cimarron-Sims Mesa	\$1,900,000	\$240,000	\$2,140,000
Crawford	\$3,300,000	\$370,000	\$3,670,000
Gunnison Basin	\$27,000,000	\$2,100,000	\$29,100,000
<b>Total</b>	<b>\$46,800,000</b>	<b>\$6,500,000</b>	<b>\$53,300,000</b>

The following table provides estimates of annualized costs for each unit of critical habitat at a seven percent discount rate. Entries in Table 5 may not sum to totals reported due to rounding.

**Table 5. Forecast baseline and incremental impacts by unit, annualized (2012\$, 7% discount rate)**

<b>Unit</b>	<b>Baseline Impacts</b>	<b>Incremental Impacts</b>	<b>Total</b>
Monticello-Dove Creek	\$560,000	\$190,000	\$310,000
Piñon Mesa	\$290,000	\$64,000	\$203,000
San Miguel Basin	\$440,000	\$76,000	\$109,000
Cerro Summit-Cimarron-Sims Mesa	\$160,000	\$22,000	\$38,000
Crawford	\$290,000	\$33,000	\$263,000
Gunnison Basin	\$2,300,000	\$180,000	\$204,000
<b>Total</b>	<b>\$4,000,000</b>	<b>\$565,000</b>	<b>\$4,565,000</b>

The following sections provide additional information on activities identified as the primary land uses in the Final Economic Analysis (Industrial Economics, Inc. 2014).

#### 4.3.1 Transportation

**Alternative A** – Under the No Action Alternative, approximately 64 percent of all baseline costs would be associated with transportation projects, with administrative costs of consultation estimated at \$5,100,000 over 20 years. Costs associated with jeopardy analyses in occupied habitat are considered baseline impacts. These costs would be primarily for BLM, USFS, and National Park Service (NPS). Eighteen informal consultations are expected annually for Colorado. Baseline costs over the next 20 years and annualized baseline costs are as follows:

- Monticello-Dove Creek \$1,300,000 over 20 years; \$110,000 annual
- Piñon Mesa \$1,200,000 over 20 years; \$100,000 annual
- San Miguel Basin \$320,000 over 20 years; \$28,000 annual
- Cerro Summit-Cimarron-Sims Mesa \$280,000 over 20 years; \$24,000 annual
- Crawford \$1,100,000 over 20 years; \$95,000 annual
- Gunnison Basin \$1,000,000 over 20 years; \$89,000 annual

**Alternative B** – Under the Proposed Action, in addition to the baseline costs described under the No Action Alternative, additional administrative costs for consultation on transportation projects are estimated at \$,830,000 over 20 years. Costs associated with adverse modification analyses as well as costs of consultation in unoccupied habitat are considered incremental impacts. Incremental costs over the next 20 years and annualized incremental costs are as follows:

- Monticello-Dove Creek \$460,000 over 20 years; \$40,000 annual
- Piñon Mesa \$20,000 over 20 years; \$1,800 annual
- San Miguel Basin \$5,600 over 20 years; \$490 annual
- Cerro Summit-Cimarron-Sims Mesa \$84,000 over 20 years; \$7,400 annual
- Crawford \$170,000 over 20 years; \$15,000 annual
- Gunnison Basin \$92,000 over 20 years; \$8,100 annual

#### 4.3.2 Livestock Grazing

**Alternative A** – Under the No Action Alternative, baseline costs associated with livestock grazing, including possible grazing restrictions and administrative costs associated with programmatic section 7 consultations under the ESA, would be \$1, 172,000 over 20 years. Costs associated with jeopardy analyses in occupied habitat are considered baseline impacts. These costs would be primarily for BLM and USFS. Privately owned ranches typically lack a Federal nexus for section 7 consultation under the ESA. Baseline costs to livestock grazing activities on Federal lands over the next 20 years and annualized baseline costs are as follows:

- Monticello-Dove Creek \$150,000 over 20 years; \$13,000 annual
- Piñon Mesa \$190,000 over 20 years; \$16,000 annual
- San Miguel Basin \$54,000 over 20 years; \$4,700 annual
- Cerro Summit-Cimarron-Sims Mesa \$17,000 over 20 years; \$1,500 annual
- Crawford \$150,000 over 20 years: \$13,000 annual
- Gunnison Basin \$650,000 over 20 years; \$58,000 annual

**Alternative B** – Under the Proposed Action, in addition to the baseline costs described under the No Action Alternative, additional grazing restrictions and administrative costs associated with programmatic section 7 consultations under the ESA would cost \$1,188,000 over 20 years. Costs associated with adverse modification analyses as well as costs of consultation in unoccupied habitat are considered incremental impacts. Incremental costs to livestock grazing activities on Federal lands over the next 20 years and annualized incremental costs are as follows:

- Monticello-Dove Creek \$150,000 over 20 years; \$13,000 annual
- Piñon Mesa \$580,000 over 20 years; \$51,000 annual
- San Miguel Basin \$330,000 over 20 years; \$29,000 annual
- Cerro Summit-Cimarron-Sims Mesa \$21,000 over 20 years; \$1,900 annual
- Crawford \$56,000 over 20 years; \$4,900 annual
- Gunnison Basin \$16,000 over 20 years; \$1,400 annual

### 4.3.3 Mineral and Fossil Fuel Extraction

**Alternative A** – Under the No Action Alternative, baseline costs associated with mineral and fossil fuel extraction projects, administrative costs of consultation are estimated at \$430,000 over 20 years. Costs associated with jeopardy analyses in occupied habitat are considered baseline impacts. These costs would be in the San Miguel Basin and Monticello-Dove Creek Units. Eight formal consultations are forecast per year for new oil and gas well pad construction on BLM lands. Baseline administrative costs over the next 20 years and annualized baseline costs are as follows:

- Monticello-Dove Creek \$170,000 over 20 years; \$15,000 annual
- Piñon Mesa \$0
- San Miguel Basin \$260,000 over 20 years; \$23,000 annual
- Cerro Summit-Cimarron-Sims Mesa \$0
- Crawford \$0
- Gunnison Basin \$0

Although the Service does not intend to preclude mineral or fossil fuel extraction as a result of listing the GUSG, comment letters from stakeholders indicates that significant impacts may result from companies’ desire to avoid additional regulatory burden by foregoing production in GUSG occupied habitat. These baseline potential regional impacts are estimated at approximately \$290,000,000 and 79 jobs annually in Colorado and approximately \$400,000 and 11 jobs annually in Utah.

**Alternative B** – Under the Proposed Action, in addition to the baseline costs described under the No Action Alternative, additional administrative costs for consultation on mineral and fossil fuel extraction projects are estimated at \$1,187,000 over 20 years. These costs would be in the San Miguel Basin and Monticello-Dove Creek Units. Costs associated with adverse modification analyses as well as costs of consultation in unoccupied habitat are considered incremental impacts. Incremental administrative costs over the next 20 years and annualized incremental costs are as follows:

- Monticello-Dove Creek \$1,100,000 over 20 years; \$93,000 annual
- Piñon Mesa \$0
- San Miguel Basin \$87,000 over 20 years; \$7,600 annual
- Cerro Summit-Cimarron-Sims Mesa \$0
- Crawford \$0
- Gunnison Basin \$0

Although the Service does not intend to preclude mineral or fossil fuel extraction within critical habitat for the GUSG, comment letters from stakeholders indicates that significant impacts may result from companies’ desire to avoid additional regulatory burden by foregoing production in GUSG critical habitat. In addition to baseline costs described under the No Action Alternative, incremental potential regional impacts are estimated at approximately \$160,000,000 and 44 jobs annually in Colorado and approximately \$272,000 and 5 jobs annually in Utah.

#### 4.3.4 Residential and Related Development

**Alternative A** – Under the No Action Alternative, baseline costs associated with residential and related development include administrative costs of consultation and land set-aside costs estimated at \$402,900 over 20 years. Baseline costs over the next 20 years and annualized baseline costs are as follows:

- Monticello-Dove Creek \$40,000 over 20 years; \$3,500 annual
- Piñon Mesa \$1,600 over 20 years; \$150 annual
- San Miguel Basin \$86,000 over 20 years; \$7,600 annual
- Cerro Summit-Cimarron-Sims Mesa \$18,000 over 20 years; \$7,600 annual
- Crawford \$6,200 over 20 years; \$550 annual
- Gunnison Basin \$260,000 over 20 years; \$23,000 annual

**Alternative B** – Under the Proposed Action, in addition to the baseline costs described under the No Action Alternative, additional administrative costs for consultation in unoccupied habitat and land set-aside costs are estimated at \$386,000 over 20 years. Incremental costs over the next 20 years and annualized incremental costs are as follows:

- Monticello-Dove Creek \$150,000 over 20 years; \$140,900 annual
- Piñon Mesa \$1,600 over 20 years; \$150 annual
- San Miguel Basin \$110,000 over 20 years; \$10,000 annual
- Cerro Summit-Cimarron-Sims Mesa \$22,000 over 20 years; \$1,900 annual
- Crawford \$24,000 over 20 years; \$2,100 annual
- Gunnison Basin \$73,000 over 20 years; \$6,400 annual

#### 4.3.5 Recreation

**Alternative A** – Under the No Action Alternative, baseline costs would be associated with recreational activities on BLM, NPS, and USFS lands. Costs associated with programmatic

consultations and additional monitoring and management are estimated at \$1,600,000 over 20 years. Baseline costs over the next 20 years and annualized baseline costs are as follows:

- Monticello-Dove Creek \$110,000 over 20 years; \$10,000 annual
- Piñon Mesa \$280,000 over 20 years; \$25,000 annual
- San Miguel Basin \$100,000 over 20 years; \$8,900 annual
- Cerro Summit-Cimarron-Sims Mesa \$18,000 over 20 years; \$1,600 annual
- Crawford \$580,000 over 20 years; \$52,000 annual
- Gunnison Basin \$390,000 over 20 years; \$34,000 annual

**Alternative B** – Under the Proposed Action, in addition to the baseline costs described under the No Action Alternative, additional costs associated with programmatic consultations and monitoring and management in unoccupied habitat are estimated at \$27,000 over 20 years. Incremental costs over the next 20 years and annualized incremental costs are as follows:

- Monticello-Dove Creek \$2,000 over 20 years; \$170 annual
- Piñon Mesa \$4,900 over 20 years; \$430 annual
- San Miguel Basin \$1,700 over 20 years; \$150 annual
- Cerro Summit-Cimarron-Sims Mesa \$320 over 20 years; \$28 annual
- Crawford \$10,000 over 20 years; \$890 annual
- Gunnison Basin \$6,800 over 20 years; \$600 annual

#### 4.3.6 Agriculture and Water Management

**Alternative A** – Under the No Action Alternative, baseline costs would be associated with agricultural activities. Costs associated with programmatic consultations with the NRCS and the FSA are estimated at \$68,000 over 20 years. Baseline costs over the next 20 years and annualized baseline costs are as follows:

- Monticello-Dove Creek \$19,000 over 20 years; \$1,700 annual
- Piñon Mesa \$5,900 over 20 years; \$520 annual
- San Miguel Basin \$6,100 over 20 years; \$540 annual
- Cerro Summit-Cimarron-Sims Mesa \$3,100 over 20 years; \$270 annual
- Crawford \$3,400 over 20 years; \$300 annual
- Gunnison Basin \$30,000 over 20 years; \$2,700 annual

**Alternative B** – Under the Proposed Action, in addition to the baseline costs described under the No Action Alternative, additional costs associated with programmatic consultations and monitoring and management in unoccupied habitat are estimated at \$23,000 over 20 years. Incremental costs over the next 20 years and annualized incremental costs are as follows:

- Monticello-Dove Creek \$6,500 over 20 years; \$570 annual
- Piñon Mesa \$2,000 over 20 years; \$170 annual
- San Miguel Basin \$2,000 over 20 years; \$180 annual
- Cerro Summit-Cimarron-Sims Mesa \$1,000 over 20 years; \$92 annual

- Crawford \$1,100 over 20 years; \$100 annual
- Gunnison Basin \$10,000 over 20 years; \$890 annual

#### 4.3.7 Renewable Energy

**Alternative A** – Under the No Action Alternative, baseline costs would be associated with renewable energy projects in the Monticello-Dove Creek area. Consultation costs are estimated at \$15,000 over 20 years. Baseline costs over the next 20 years and annualized baseline costs are as follows:

- Monticello-Dove Creek \$15,000 over 20 years; \$1,300 annual
- Piñon Mesa \$0
- San Miguel Basin \$0
- Cerro Summit-Cimarron-Sims Mesa \$0
- Crawford \$0
- Gunnison Basin \$0

**Alternative B** – Under the Proposed Action, in addition to the baseline costs described under the No Action Alternative, additional consultations costs in unoccupied habitat are estimated at \$5,000 over 20 years in the Monticello-Dove Creek area. Incremental costs over the next 20 years and annualized incremental costs are as follows:

- Monticello-Dove Creek \$5,000 over 20 years; \$440 annual
- Piñon Mesa \$0
- San Miguel Basin \$0
- Cerro Summit-Cimarron-Sims Mesa \$0
- Crawford \$0
- Gunnison Basin \$0

#### 4.3.8 Electrical Power and Infrastructure

**Alternative A** – Under the No Action Alternative, baseline costs of consultation and costs for raptor perch deterrents are estimated at \$37,160,000 over 20 years. Baseline costs over the next 20 years and annualized baseline costs are as follows:

- Monticello-Dove Creek \$4,600,000 over 20 years; \$400 annual
- Piñon Mesa \$1,600,000 over 20 years; \$140 annual
- San Miguel Basin \$4,200,000 over 20 years; \$370 annual
- Cerro Summit-Cimarron-Sims Mesa \$1,500,000 over 20 years; \$130 annual
- Crawford \$1,400,000 over 20 years; \$130 annual
- Gunnison Basin \$24,000,000 over 20 years; \$2,100,000 annual

**Alternative B** – Under the Proposed Action, in addition to the baseline costs described under the No Action Alternative, additional administrative costs for consultation in unoccupied habitat and

costs for raptor perch deterrents are \$2,900,000 over 20 years. Incremental costs over the next 20 years and annualized incremental costs are as follows:

- Monticello-Dove Creek \$350,000 over 20 years; \$31,000 annual
- Piñon Mesa \$120,000 over 20 years; \$11,000 annual
- San Miguel Basin \$320,000 over 20 years; \$28,000 annual
- Cerro Summit-Cimarron-Sims Mesa \$120,000 over 20 years; \$10,000 annual
- Crawford \$110,000 over 20 years; \$9,000 annual
- Gunnison Basin \$1,900,000 over 20 years; \$160,000 annual

#### **4.4 Tribal Lands**

**Alternative A** – Under the No Action Alternative, one formal consultation with the Ute Mountain Ute Tribe to address operations on Pinecrest Ranch in the Gunnison Basin is estimated. Baseline impacts associated with the consideration of jeopardy are forecast to be \$15,000 over 20 years.

**Alternative B** – Under the Proposed Action, there would be no additional consultation associated with the consideration of adverse modification to critical habitat since the Pinecrest Ranch has been excluded from critical habitat.

#### **4.5 Archeological and Cultural Resources**

**Alternative A** – Under the No Action Alternative, there would be no designation of critical habitat under the ESA. Federally supported actions that may affect the GUSG would require section 7 consultations under the jeopardy standards in all areas occupied by the species. Other than the need for these possible consultations and the potential increased protection of some sites, there would be no impacts on archaeological and cultural areas.

**Alternative B** – Under the Proposed Action, in addition to requirements for section 7 consultations described under the No Action Alternative, additional consultations under the jeopardy standards associated with unoccupied habitat designated as critical habitat as well as the consideration of adverse modification to critical habitat would be required. Other than the need for these possible consultations and the potential increased protection of some sites, there would be no impacts on archaeological and cultural areas.

#### **4.6 Cumulative Impacts**

The Council on Environmental Quality regulations for implementing NEPA define cumulative effects as “the impact on the environment which results from the incremental impact of the proposed action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions” (40 CFR § 1508.7). Designation of critical habitat for the GUSG will add minimal incremental impacts when added to other past, present, and reasonably foreseeable future actions. Therefore, we expect the cumulative impacts to be relatively small.

*Candidate, Threatened, and Endangered Species, and Other Fish, Wildlife, and Plant Species*— In addition to the GUSG, several candidate, threatened, and endangered species occur in counties with GUSG critical habitat (see Table 3). The Service has not designated critical habitat for the two terrestrial species whose habitat overlaps GUSG habitat (one is a candidate species). Critical habitat has been designated for the four endangered Colorado River fishes, and projects in GUSG critical habitat that result in water depletions may affect these fishes or their habitat. Some of the other species that occur in the same counties, but utilize different habitat, have critical habitat designations. Designation of critical habitat would result in some new or reinitiated consultations, project modifications or conservation measures based on newly designated critical habitat alone. Future consultations that could affect wildlife in critical habitat would occur for habitat restoration, land management, and development activities, which could result in minor project modifications that may affect wildlife and wildlife management plans, but these effects are likely to be mostly beneficial given that project modifications tend to focus on habitat-level activities that benefit wildlife in general. Therefore, when considering other present and future consultations and wildlife plans this critical habitat designation will likely contribute only minor cumulative impacts, given the small number and limited nature of additional project modifications anticipated.

*Transportation*- Designation of critical habitat would result in some new and reinitiated consultations, with project modifications or conservation measures for construction projects, based on newly designated critical habitat alone. Future consultations with potential impacts to transportation within critical habitat areas would generally be conducted by the FHWA, and could result in minor to moderate modifications to transportation projects. Therefore, when considering future consultations on transportation, this designation will contribute no more than moderate cumulative impacts given the nature of additional project modifications anticipated and implementation of avoidance measures by the FHWA.

*Livestock Grazing*--Designation of critical habitat would result in some new or reinitiated consultations, project modifications or conservation measures based on newly designated critical habitat alone. Future consultations with potential impacts to grazing within critical habitat areas could be conducted by Federal land managers who grant grazing permits, and could result in minor project modifications to livestock grazing.

The Service is aware there may be concerns from private ranchers about the cumulative impact of this designation on ranching activities. On some grazing allotments on Federal land, GUSG habitats could be excluded from grazing either year-round or seasonally, impacting private ranchers. In most cases, recommendations by Federal agencies to change the permitted or authorized AUMs in GUSG habitat areas result from multiple considerations, including the GUSG, other regulatory considerations, current forage availability, the general health of the sage-brush habitat, and climate/weather conditions. On private land, designation of critical habitat does not limit livestock grazing, except where a Federal license, permit, or funding may be sought or required. Therefore, when considering future consultations on livestock grazing, this designation will contribute only minor cumulative impacts given the nature of additional project modifications anticipated and implementation of avoidance measures by the USFS and BLM.

*Mineral and Fossil Fuel Extraction-* Designation of critical habitat would result in some new and reinitiated consultations, with project modifications or conservation measures for mineral and fossil fuel extraction projects, based on newly designated critical habitat alone. Future consultations with potential impacts to mineral and fossil fuel extraction within critical habitat areas could be conducted by Federal land managers who grant mineral and fossil fuel extraction permits, primarily the BLM, and could result in mostly minor project modifications to permit issuance, with more moderate impacts primarily occurring in the Monticello-Dove Creek and San Miguel populations. On private land, designation of critical habitat does not limit construction projects, except where a Federal license, permit, or funding may be sought or required. Therefore, when considering future consultations on mineral and fossil fuel extraction, this designation will contribute only minor to moderate cumulative impacts given the limited nature of additional project modifications anticipated and implementation of avoidance measures by the BLM.

*Residential and Related Development--*Designation of critical habitat would result in some new and reinitiated consultations, with project modifications or conservation measures for residential and infrastructure-related construction projects, based on newly designated critical habitat alone. Future consultation by agencies on development projects would likely result in minor project modifications. On private land, designation of critical habitat does not limit construction projects, except where a Federal license, permit, or funding may be sought or required. When considering past, present and foreseeable future activities, this critical habitat designation will contribute only minor cumulative impacts to construction and development given the limited nature of additional project modifications anticipated.

*Recreation-* The designation of critical habitat would result in some new and reinitiated consultations, project modifications, and conservation measures. Future consultations with potential impacts to recreation within critical habitat areas could be conducted by Federal land managers, primarily the BLM, USFS, and NPS, and could result in minor project modifications. Therefore, when considering other present and future consultations for recreation-related management planning, this critical habitat designation would likely contribute negligible to minor cumulative impacts, given the small number and limited nature of additional project modifications anticipated.

*Agriculture and Water Management-* The designation of critical habitat would result in some new and reinitiated consultations, project modifications, and conservation measures based on designated critical habitat alone. We anticipate very few consultations would occur related to agricultural conversion. Future projects that could produce impacts to water resources would be conducted by agencies with responsibility for collecting, storing, and transporting water, primarily the COE and BR. With the expected project modifications, these projects are expected to have minor impacts on water resources. Therefore, when considering other present and future consultations and water management activities, this critical habitat designation will likely contribute to minor cumulative impacts, given the relatively small number and limited nature of additional project modifications anticipated.

*Renewable Energy-* Designation of critical habitat would result in some new and reinitiated consultations, with project modifications or conservation measures for construction projects,

based on newly designated critical habitat alone. Future consultations with potential impacts to renewable energy development within critical habitat areas could be conducted by Federal land managers who grant renewable energy permits, primarily the BLM, and could result in minor project modifications to permit issuance, mainly in the Monticello-Dove Creek population. On private land, designation of critical habitat does not limit renewable energy projects, except where a Federal license, permit, or funding may be sought or required. Therefore, when considering future consultations on renewable energy, this designation will contribute only minor cumulative impacts given the limited nature of additional project modifications anticipated and implementation of avoidance measures by the BLM.

*Electric Power and Infrastructure-* The designation of critical habitat would result in some new and reinitiated consultations, project modifications, and conservation measures based on designated critical habitat alone. Future projects that could produce impacts to electric power and infrastructure would be conducted by agencies with responsibility for power generation and transmission line development. With the expected project modifications, these projects are expected to have moderate impacts on electrical power and infrastructure. Therefore, when considering other present and future consultations and electrical power and infrastructure activities, this critical habitat designation will likely contribute to at most moderate cumulative impacts, given the relatively small number and limited nature of additional project modifications anticipated.

As discussed previously, Federal agencies are required to ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of the listed species, or destroy or adversely modify designated critical habitat in accordance with section 7(a)(2) of the ESA. For activities that may result in “destruction or adverse modification” of critical habitat, we currently assess these effects based on guidance provided in 2004 (Service 2004). This guidance has us assess cumulative effects based on effects of future, non-Federal actions that are reasonably certain to occur in terms of the primary constituent elements or habitat qualities essential to conservation of the species (Service 2004). Activities that jeopardize a species are defined as those actions that “reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery” of the listed species (50 CFR 402.02). According to these definitions, activities that destroy or adversely modify critical habitat would generally jeopardize the species. Therefore, designation of critical habitat has rarely resulted in greater protection than that afforded under section 7 by listing of a species, except in the unoccupied portion of critical habitat units. Section 7 consultations apply only to actions with Federal involvement (i.e., activities authorized, funded, or conducted by Federal agencies), and do not impact activities strictly under State or private authority. In practice, the designation of critical habitat for the GUSG will likely provide little additional benefits to the species in presently occupied areas because there are functioning program activities already alerting Federal agencies and the public of endangered species concerns.

We have included a summary of the environmental consequences and economic impacts from the Final Economic Analysis in the following table. Economic benefits are not quantified in the Final Economic Analysis and consequently are not included in the key findings below.

**Table 6. Summary of environmental consequences by alternative (costs from Industrial Economics, Inc. (2014))**

<b>Impacts</b>	<b>Alternative A: No Action</b>	<b>Alternative B: Proposed Action</b>
GUSG	Listing GUSG would provide protection via section 7 consultations under jeopardy standards in currently occupied areas.	May be beneficial effects beyond those associated with listing the GUSG, especially in areas currently unoccupied by GUSG, but designated as critical habitat. Designation of critical habitat can help focus conservation activities for GUSG.
Other Candidate, Threatened, and Endangered Species	Listing GUSG may provide indirect protection to species that use similar habitats.	May be beneficial effects beyond those associated with listing, especially in areas currently unoccupied by GUSG, but designated as critical habitat. May help focus conservation activities for listed species.
Other Fish, Wildlife, and Plant Species	Listing GUSG may provide indirect protection to species that use similar habitats.	May be beneficial effects beyond those associated with listing, especially in areas currently unoccupied by GUSG, but designated as critical habitat. May indirectly help due to conservation activities for listed species.
Transportation	Listing GUSG may incur baseline costs of \$5,100,000 over 20 years associated with section 7 consultations under jeopardy standards in currently occupied areas.	May incur baseline costs of \$5,100,000 over 20 years associated with section 7 consultations under jeopardy standards in currently occupied areas; and incremental costs of \$1,830,000 over 20 years associated with adverse modification analyses as well as consultation in unoccupied critical habitat.
Livestock Grazing	Listing GUSG may incur baseline costs of \$1,172,000 over 20 years associated with section 7 consultations under jeopardy standards and possible grazing restrictions in currently occupied areas.	May incur baseline costs of \$1,172,000 over 20 years associated with section 7 consultations under jeopardy standards and possible grazing restrictions in currently occupied areas; and incremental costs of \$1,188,000 over 20 years associated with adverse modification analyses as well as consultation in unoccupied critical habitat.
Mineral and Fossil Fuel Extraction	Listing GUSG may incur baseline costs of \$430,000 over 20 years associated with section 7 consultations under jeopardy standards in currently occupied areas.	May incur baseline costs of \$430,000 over 20 years associated with section 7 consultations under jeopardy standards in currently occupied areas; and incremental costs of \$1,187,000 over 20 years associated with adverse modification

		analyses as well as consultation in unoccupied critical habitat.
Residential Development	Listing GUSG may incur baseline costs of \$402,900 over 20 years associated with section 7 consultations and possible land set-aside costs in currently occupied areas.	May incur baseline costs of \$402,900 over 20 years associated with section 7 consultations and possible land set-aside costs in currently occupied areas; and incremental costs of \$386,000 over 20 years associated with adverse modification analyses as well as consultation in unoccupied critical habitat.
Recreation	Listing GUSG may incur baseline costs of \$1,600,000 over 20 years associated with section 7 consultations and possible monitoring and management in currently occupied areas.	May incur baseline costs of \$1,600,000 over 20 years associated with section 7 consultations and possible monitoring and management in currently occupied areas; and incremental costs of \$27,000 over 20 years associated with adverse modification analyses as well as consultation in unoccupied critical habitat.
Agriculture	Listing GUSG may incur baseline costs of \$68,000 over 20 years associated with section 7 consultations in currently occupied areas.	May incur baseline costs of \$68,000 over 20 years associated with section 7 consultations in currently occupied areas; and incremental costs of \$23,000 over 20 years associated with adverse modification analyses as well as consultation in unoccupied critical habitat.
Renewable Energy	Listing GUSG may incur baseline costs of \$15,000 over 20 years associated with section 7 consultations in currently occupied areas.	May incur baseline costs of \$15,000 over 20 years associated with section 7 consultations in currently occupied areas; and incremental costs of \$5,000 over 20 years associated with adverse modification analyses as well as consultation in unoccupied critical habitat.
Tribal Lands	Listing GUSG may incur baseline costs of \$15,000 over 20 years associated with section 7 consultations in currently occupied areas.	No additional costs due to exclusion from critical habitat.
Archeological and Cultural Resources	Listing GUSG may provide indirect protection to sites located in occupied habitat. Minimal costs.	Listing GUSG may provide indirect protection to sites located in occupied habitat. Designating critical habitat in unoccupied areas may indirectly protect additional sites. Minimal costs.

## **5.0 Council on Environmental Quality Analysis of Significance**

Under Council on Environmental Quality (CEQ) 40 CFR Part 1508.27, the determination of “significantly” requires consideration of both context and intensity.

### **5.1 Context**

Impacts of the action, although long-term, will not be national, only regional and mostly local in context; and any impacts that occur are expected to be small.

### **5.2 Intensity**

Intensity is defined by CEQ as referring to the severity of impact. The following 10 points identified by CEQ were considered in evaluating intensity:

1. We foresee some additional negative impacts beyond what would be considered through section 7 consultation if the GUSG was listed. These additional negative impacts would largely occur in unoccupied portions of critical habitat. There also may be perceived negative impacts, but we are carrying out a public outreach program, which should address and minimize most of those misconceptions. There may be some beneficial impacts to the environment.
2. This designation will not have a discernible impact on human safety because this is an administrative action only, without any physical changes made to the landscape.
3. Although several areas designated as critical habitat are in proximity to parklands, rangeland, farmland, wetlands, scenic areas, and ecologically critical areas, it is unlikely that adverse impacts will occur to these areas because this is an administrative action only, without any physical changes made to the landscape.
4. There is a perception by some segments of the public that critical habitat designation will severely limit property rights; however, critical habitat designation has little or no effect on private actions on private land that do not involve Federal approval or action.
5. The Service has designated critical habitat for other species in other regions in the recent past and we are familiar with the associated effects. Therefore, we anticipate minimal effects to the human environment and we are certain this action does not involve any unique or unknown risks.
6. This designation of critical habitat is not expected to set any precedents for future actions with significant effects or represent a decision in principle about a future consideration because critical habitat has been designated before for other species, as required by law.

7. This designation of critical habitat will be additive (cumulative) to critical habitat that has been, and will be, designated for other species. However, it is the Service's conclusion that the adverse impacts of any and all critical habitat designations are small, and therefore, insignificant due to the existing impacts, both beneficial and adverse, already resulting from the listing of the species involved.
8. This designation will have minimal adverse effects to National Register of Historic Places or other cultural sites.
9. Most impacts from this designation of critical habitat will be beneficial to endangered and threatened species, particularly the GUSG. Designation of critical habitat can help focus conservation activities for listed species by identifying areas essential to conserve the species. Designation of critical habitat also alerts the public, as well as land-managing agencies, to the importance of these areas.
10. This designation of critical habitat will not violate any Federal, State, or local laws or requirements imposed for the protection of the environment.

### **5.3 Compliance with Other Laws and Regulations**

The Final Rule for the critical habitat designation describes numerous laws and policies that are considered during the rulemaking process.

### **5.4 Environmental Justice**

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, 59 FR 7629 (1994), directs Federal agencies to incorporate environmental justice in their decision making process. Federal agencies are directed to identify and address as appropriate, any disproportionately high and adverse environmental effects of their programs, policies, and activities on minority or low-income populations. There are no identified adverse or beneficial effects unique to minority or low-income populations in the affected areas in Alternative A or Alternative B.

### **5.5 Contacts and Coordination with Others**

This designation of critical habitat has been coordinated with Federal agencies, Tribes, the States of Colorado and Utah, Counties, and other interested parties through letters, emails, telephone calls, and our web site. Federal contacts include the BLM Colorado State Office, the BLM Utah State Office, the USFS Washington D.C. Office, and the NPS Curecanti National Recreation Area and Black Canyon of the Gunnison National Park. Tribal contacts include the Ute Mountain Ute Tribe. State contacts include Colorado Parks and Wildlife, Colorado Department of Agriculture, Utah Governor's Office, and Arizona Game and Fish Department. County contacts include Boards of County Commissioners from Delta, Dolores, Gunnison, Hinsdale, Mesa, Montrose, Saguache, San Miguel, and Ouray Counties in Colorado, and San Juan County in Utah.

## **5.6 Public Review and Comment**

On January 11, 2013, we proposed to list the GUSG as endangered (78 FR 2486) and to designate critical habitat for the species (78 FR 2540). We made a draft of this Environmental Assessment (EA) as well as our draft economic analysis available for public comment on September 19, 2013 (78 FR 57604). At that time, a public comment period was opened for an additional 30 days. We also reopened the public comment period from November 4, 2013, through December 2, 2013, and announced the rescheduling of three public hearings on the proposed listing and critical habitat rules due to delays caused by the lapse in government appropriations in October 2013 (78 FR 65936, November 4, 2013). During these two comment periods, we received several comments requesting that an environmental impact statement (EIS) be prepared for the critical habitat designation for GUSG. However, we find, based on this EA, no significant environmental impact would occur as a result of critical habitat designation for GUSG. Therefore, an environmental impact statement is not necessary for the designation of critical habitat for GUSG.

## **5.7 List of Contributors**

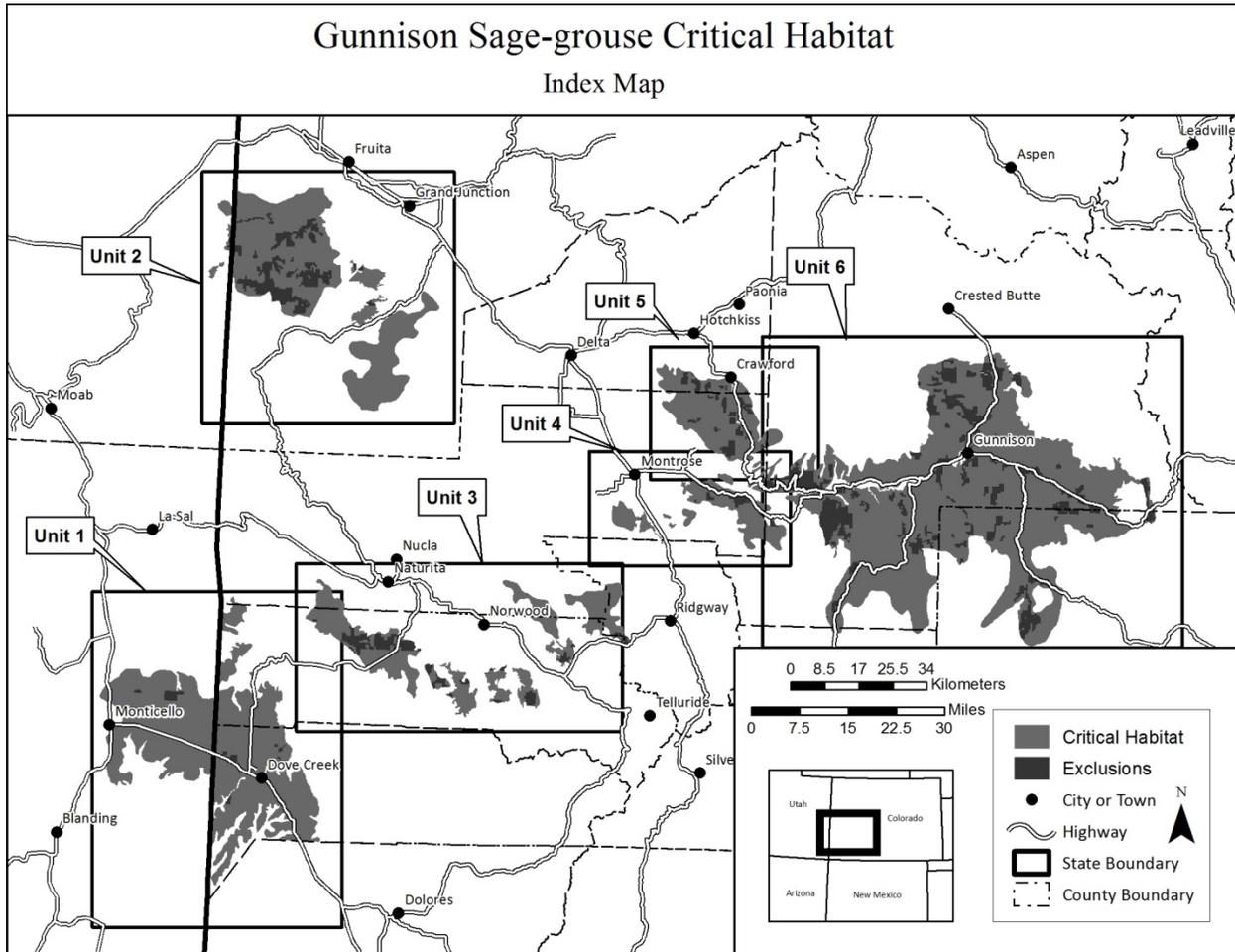
The principal authors of this document are staff from the Mountain-Prairie Regional Office, U.S. Fish and Wildlife Service and staff from the Western Colorado Field Office, U.S. Fish and Wildlife Service.

## **6.0 References Cited**

- Beck, J.L., D.L. Mitchell, and B.D. Maxfield. 2003. Changes in the distribution and status of sage-grouse in Utah. *Western North American Naturalist* 63(2):203–214.
- Crawford, J.A., R.A. Olson, N.E. West, J.C. Mosley, M.A. Schroeder, T.D. Whitson, R.F. Miller, M.A. Gregg, and C.S. Boyd. 2004. Ecology and management of sage-grouse and sage-grouse habitat. *Journal of Range Management* 57:2–19.
- Davis, A.J. 2012. Gunnison sage-grouse demography and conservation. PhD thesis. Colorado State University. 178 pp.
- Gunnison Sage-grouse Rangewide Steering Committee. 2005. Gunnison sage-grouse rangewide conservation plan. Colorado Division of Wildlife. 359 pp. and appendices.
- Hupp, J.W. and C.E. Braun. 1991. Geographic variation among sage grouse in Colorado. *The Wilson Bulletin* 103(2):255–261.
- Industrial Economics, Incorporated. 2013. Draft economic analysis of critical habitat designation for the Gunnison sage-grouse. Cambridge, MA. 203 pp.
- Industrial Economics, Incorporated. 2014. Final economic analysis of critical habitat designation for the Gunnison sage-grouse. Cambridge, MA. 197 pp.

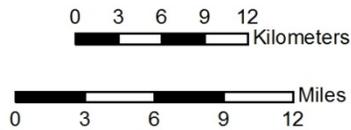
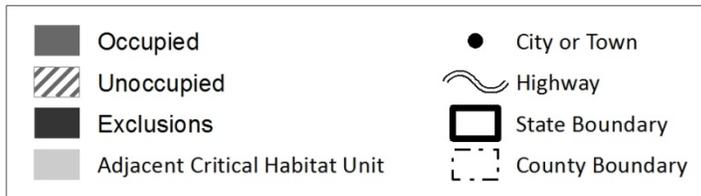
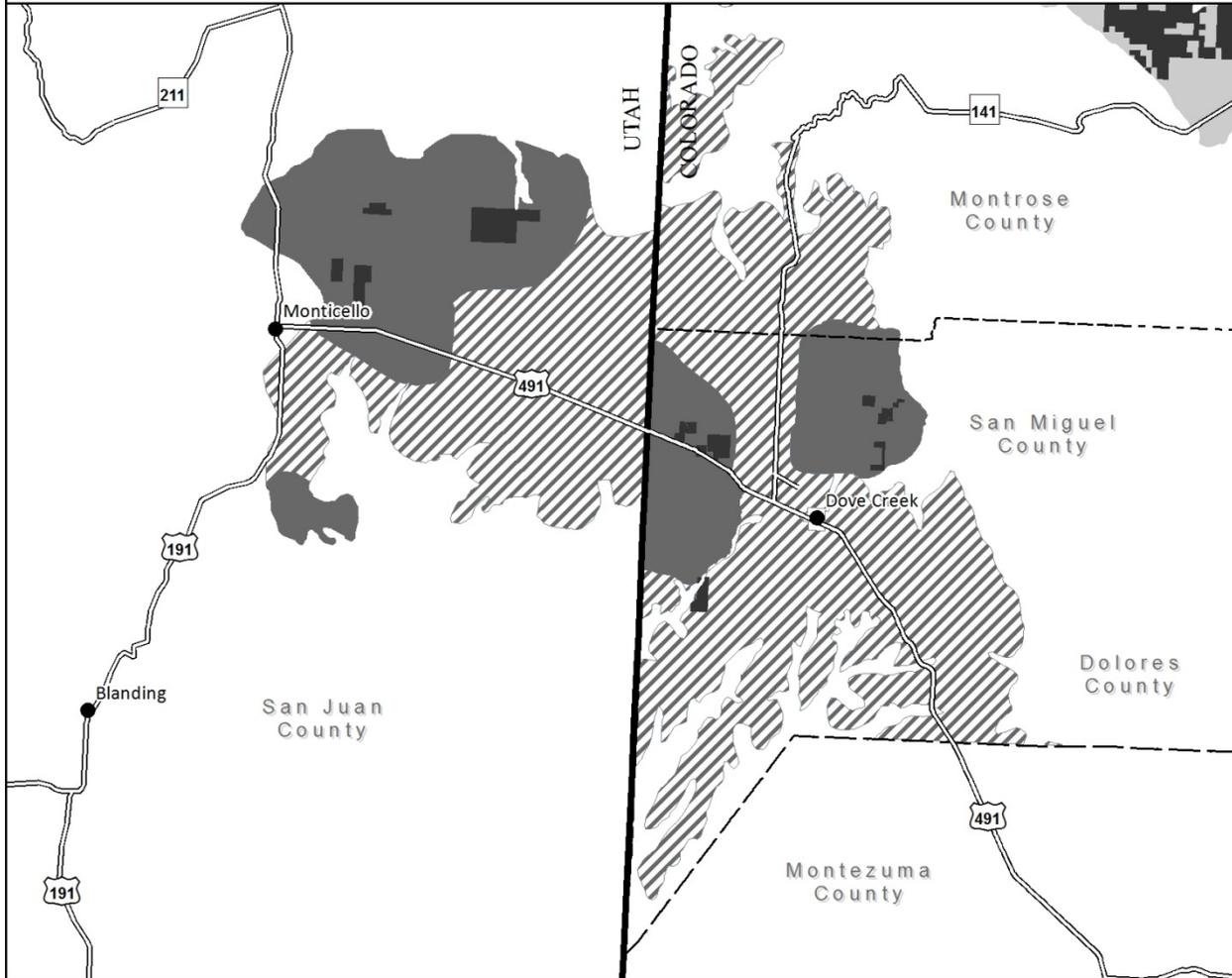
- Lohr, S. and N. Gray. 2013. Gunnison sage-grouse: permanent conservation easements on private lands. Gunnison Ranchland Conservation Legacy and Conservation Assistance Program. 60 pp.
- Riley, L.M. 2013. Letter from Arizona Game & Fish Department dated March 7, 2013. 3 pp.
- Schroeder, M.A., C.L. Aldridge, A.D. Apa, J.R. Bohne, C.E. Braun, S.D. Bunnell, J.W. Connelly, P.A. Deibert, S.C. Gardner, M.A. Hilliard, G.D. Kobriger, S.M. McAdam, C.W. McCarthy, J.J. McCarthy, L. Mitchell, E.V. Rickerson, and S.J. Stiver. 2004. Distribution of sage-grouse in North America. *The Condor* 106(2):363–376.
- Stiver, J.R., A.D. Apa, T.E. Remington, and R.M. Gibson. 2008. Polygyny and female breeding failure reduce effective population size in the lekking Gunnison sage-grouse. *Biological Conservation* 141:472–481.
- U.S. Fish and Wildlife Service. 2004. Application of the “destruction or adverse modification” standard under section 7(a)(2) of the Endangered Species Act. Letter to the Regional Directors for the Director of the U.S. Fish and Wildlife Service, Washington, D.C. dated December 9, 2004. 3 pp.
- U.S. Fish and Wildlife Service. 2010. 12-month finding on whether to list the Gunnison sage-grouse (*Centrocercus minimus*) as threatened or endangered. September 28, 2010 50 CFR Part 17. Federal Register Vol 75, No. 187. Pp. 59804–59863.
- U.S. Fish and Wildlife Service. 2013. Proposed rule to list the Gunnison sage-grouse (*Centrocercus minimus*) as endangered. January 11, 2013 50 CFR Part 17. Federal Register Vol 78, No. 8. Pp. 2486–2538.
- U.S. Fish and Wildlife Service. 2013. Proposed rule to designate critical habitat for the Gunnison sage-grouse (*Centrocercus minimus*) as threatened or endangered. January 11, 2013 50 CFR Part 17. Federal Register Vol 78, No. 8. Pp. 2540–2570.
- U.S. Fish and Wildlife Service. 2013. Proposed rule; reopening of comment period; announcement of public hearings; notice of availability of supplementary documents. September 19, 2013 50 CFR Part 17. Federal Register Vol 78, No. 182. Pp. 57604–57611.
- Young, J.R., C.E. Braun, S.J. Oyler-McCance, J.W. Hupp, and T.W. Quinn. 2000. A new species of sage-grouse (Phasianidae: *Centrocercus*) from southwestern Colorado. *The Wilson Bulletin* 112(4):445–453.

7.0 Maps of Designated Critical Habitat



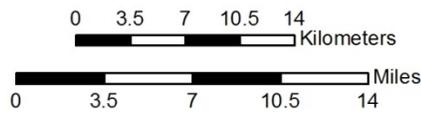
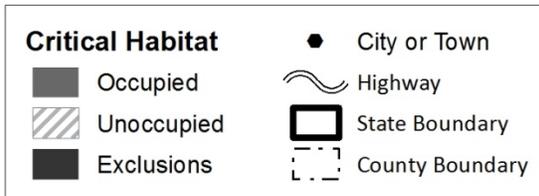
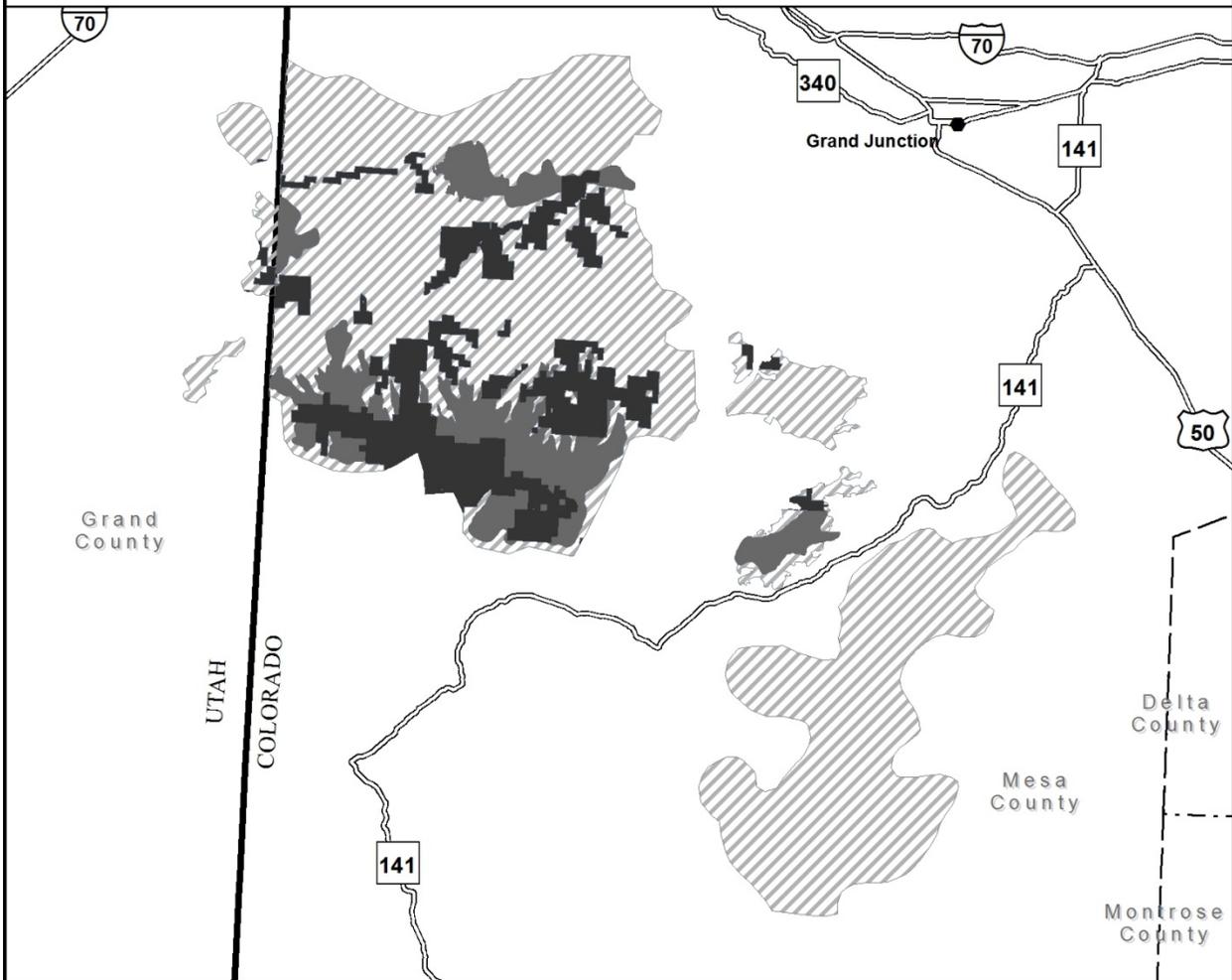
# Gunnison Sage-grouse Critical Habitat Unit 1: Monticello-Dove Creek

San Juan County, Utah; Montrose, San Miguel, and Dolores Counties, Colorado



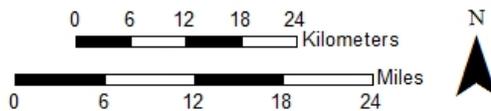
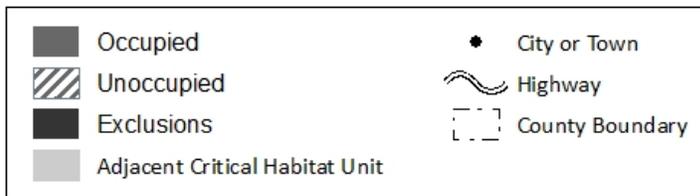
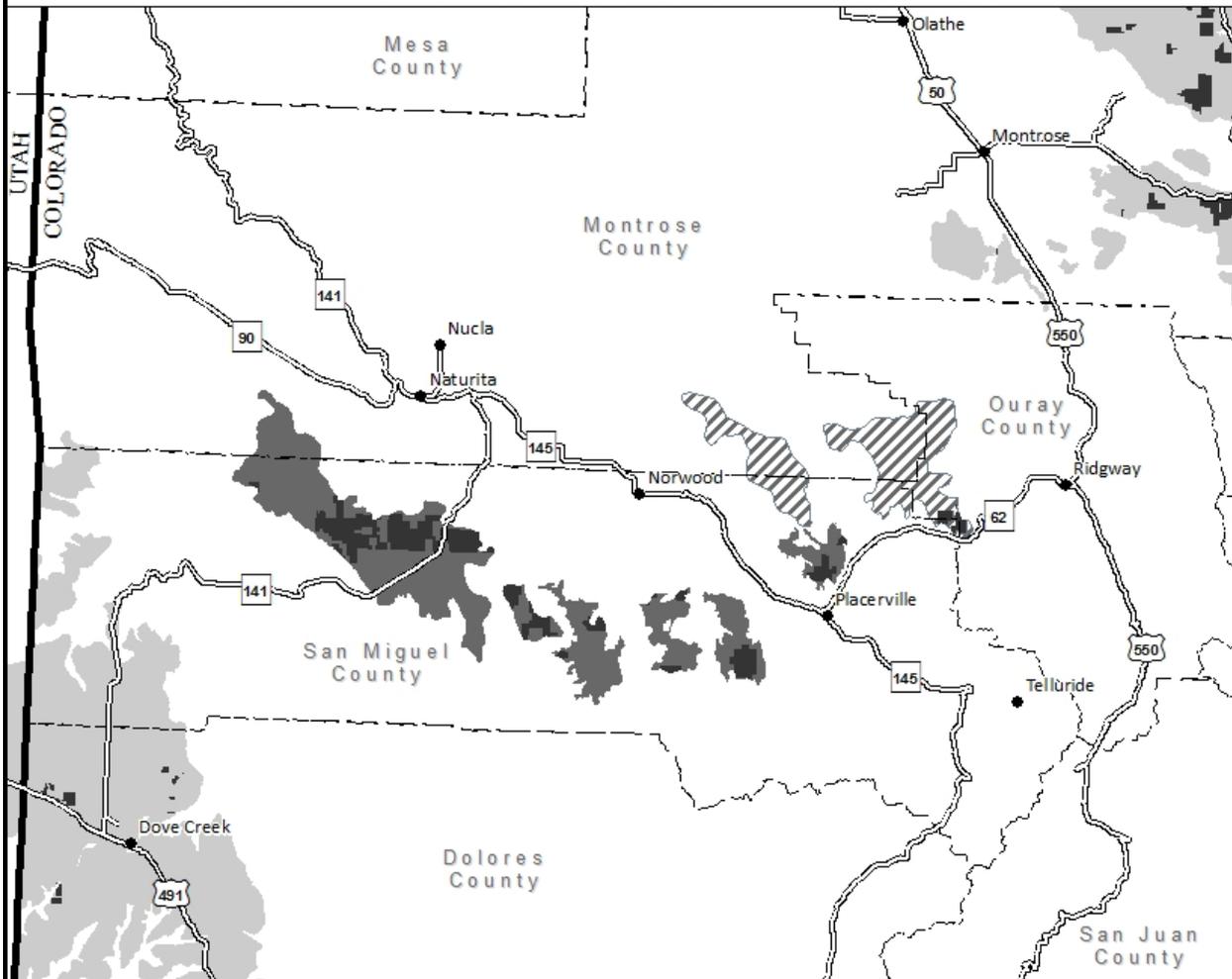
# Gunnison Sage-grouse Critical Habitat Unit 2: Piñon Mesa

Grand County, Utah; Mesa County, Colorado



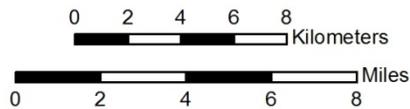
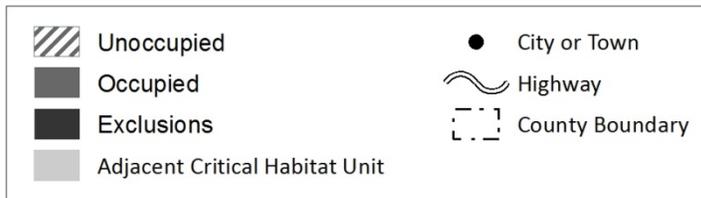
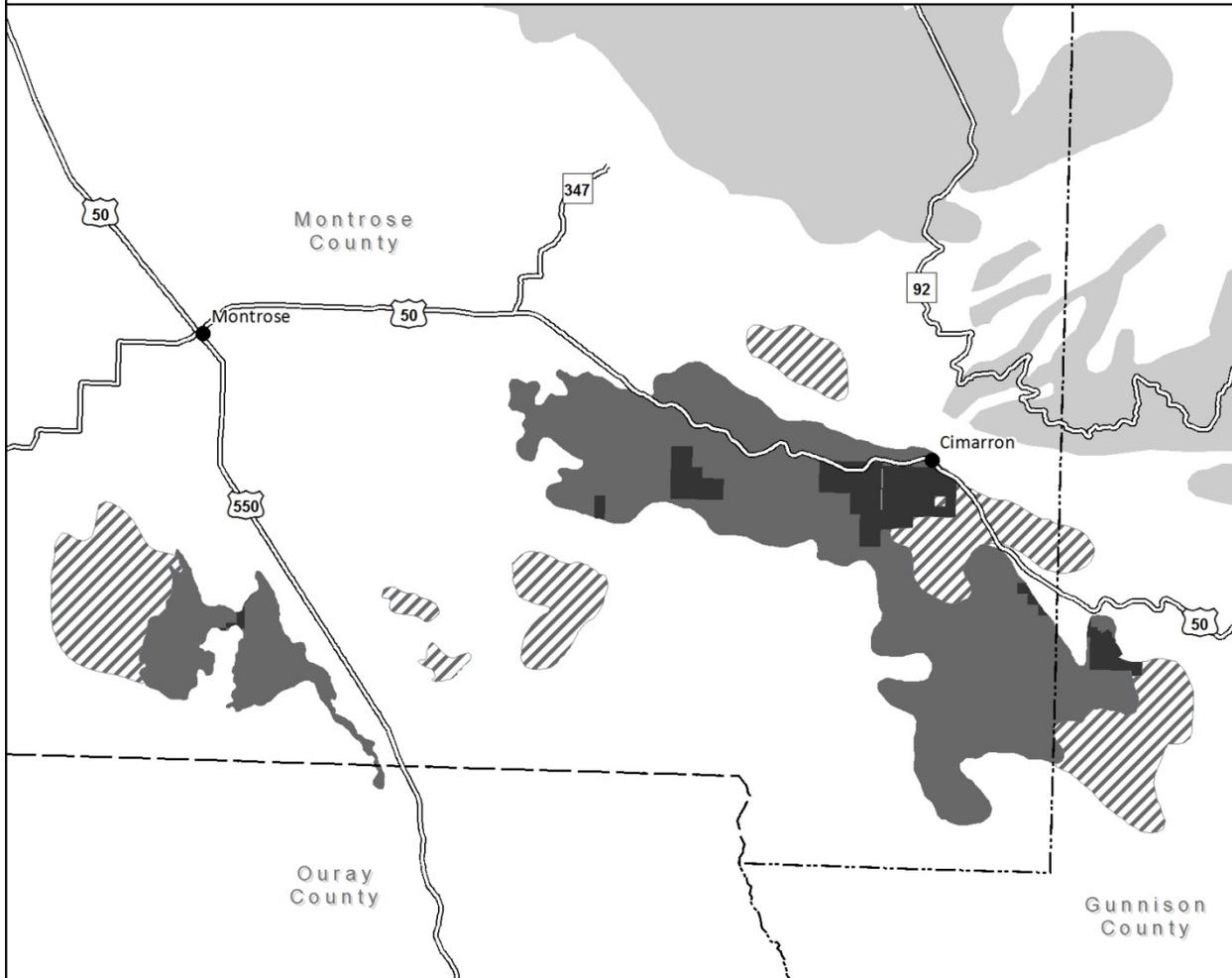
# Gunnison Sage-grouse Critical Habitat Unit 3: San Miguel Basin

Montrose, San Miguel, and Ouray Counties, Colorado



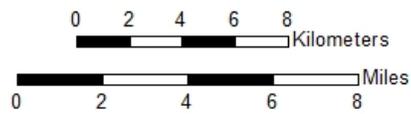
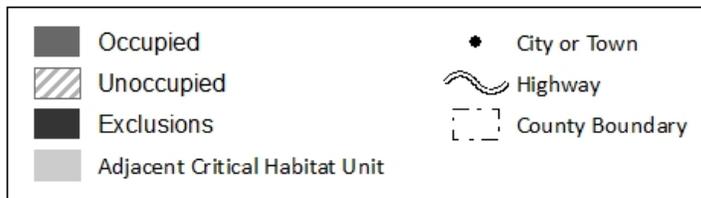
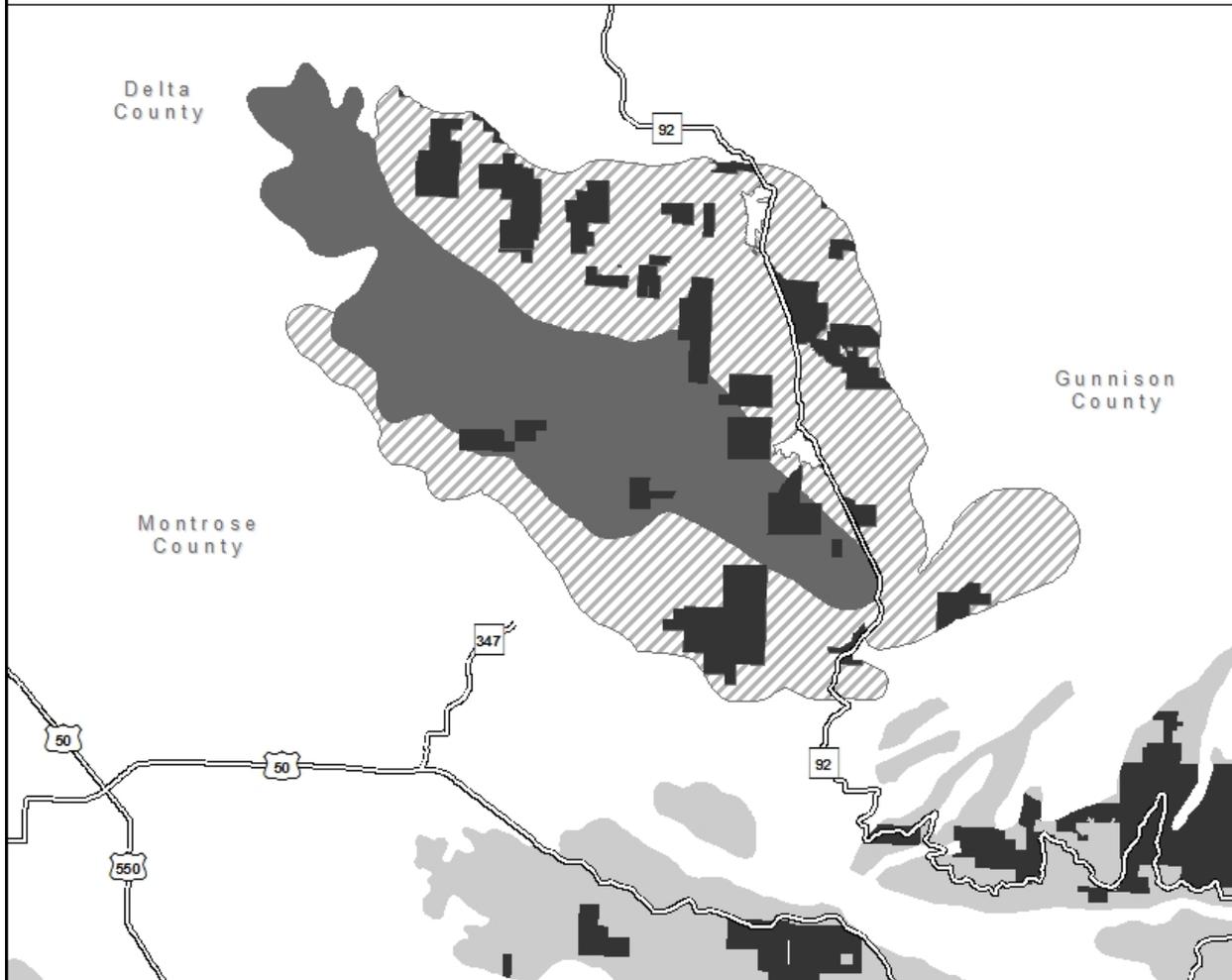
# Gunnison Sage-grouse Critical Habitat Unit 4: Cerro Summit-Cimarron-Sims Mesa

Montrose, Ouray, and Gunnison Counties, Colorado



# Gunnison Sage-grouse Critical Habitat Unit 5: Crawford

Delta, Montrose, and Gunnison Counties, Colorado



# Gunnison Sage-grouse Critical Habitat Unit 6: Gunnison Basin

Gunnison, Saguache, Montrose, and Hinsdale Counties, Colorado

