

DRAFT ENVIRONMENTAL ASSESSMENT

for

**Umbrella Candidate Conservation Agreement with Assurances
for Gunnison Sage-grouse (*Centrocercus minimus*)
in Colorado**

Prepared By

**Connie Young-Dubovsky
U.S. Fish and Wildlife Service
Denver, Colorado**

**Terry Ireland
U.S. Fish and Wildlife Service
Grand Junction, Colorado**

June 30, 2005

EXECUTIVE SUMMARY

The purpose of this Environmental Assessment (EA) is to satisfy the National Environmental Policy Act requirements for a proposed action to implement an umbrella Candidate Conservation Agreement with Assurances (CCAA) with the Colorado Division of Wildlife (CDOW). The purpose of the CCAA is to promote conservation of Gunnison sage-grouse (*Centrocercus minimus*), a declining endemic of the sage-steppe community in Colorado and Utah. Two other alternatives are compared to the proposed action to assess whether the action can be implemented without significant effects to environmental resources in the area. About one-half of the Gunnison sage-grouse range occurs on non-Federal lands in Colorado. The survival and recovery of the species is therefore closely associated with the current and future land uses occurring on the non-Federal lands. Therefore, there is an obvious need to secure the cooperation of those non-Federal landowners in Colorado who reside within the range of the species to promote the implementation of land uses that would be beneficial to the grouse. The umbrella CCAA would describe specific land-use activities and conservation practices that would be beneficial to the species on the non-Federal lands. In exchange for volunteering to implement beneficial practices for Gunnison sage-grouse, the participating landowners would be granted authorization to incidentally ‘take’ Gunnison sage-grouse under an Enhancement of Survival Permit (Permit) issued pursuant to section 10(a)(1)(A) of the Endangered Species Act (ESA), and by receiving assurances that they will not incur additional land-use restrictions if the species is listed under the ESA. The Permit would become effective if the grouse was subsequently federally listed, and would then authorize a level of unintentional ‘take’ for each enrolled landowner. Consequently, the greater public benefit is served by having an operational conservation program that will improve the species status, and the participating non-Federal landowners benefit by receiving an incidental take permit and assurances that they can continue agreed upon land uses.

The CCAA is consistent with the U.S. Fish and Wildlife Service’s (Service) “Candidate Conservation Agreement with Assurances Final Policy” (64 FR 32726). This policy encourages the implementation of conservation measures for species that have not been listed under the ESA, but warrant agency concern. The CCAA identifies obligations of the parties, including participating landowners. Approval of the CCAA would provide conservation benefits for Gunnison sage-grouse on non-federally owned lands in Alamosa, Archuleta, Conejos, Costilla, Delta, Dolores, Gunnison, La Plata, Mesa, Montezuma, Montrose, Ouray, Rio Grande, Saguache, and San Miguel counties, Colorado (Figure 1).

A comprehensive Rangewide Conservation Plan (RCP) for the Gunnison sage-grouse has been completed that describes the status of the species, threats to its viability, potential for recovery, and the conservation measures that are necessary to minimize extinction risk and retain genetic diversity (Gunnison Sage-Grouse Rangewide Steering Committee 2005). Under the RCP, helping to preclude Federal listing of the grouse is mentioned as an incentive to non-Federal landowners who choose to implement conservation measures for the species. However, RCP implementation on non-Federal land is voluntary, not all landowners with important Gunnison sage-grouse habitat may participate, and the RCP does not provide any regulatory assurances to participating landowners. Hence, the need for this proposed action.

ALTERNATIVES ANALYZED IN THIS ENVIRONMENTAL ASSESSMENT

Alternative A - *No Action Alternative* - A CCAA would not be developed, a Permit would not be issued, and landowners would not receive any future incidental take authorization or assurances for future management of their lands should Federal listing occur. Some beneficial conservation measures identified in the RCP may be implemented under this alternative, but the landowners receive no regulatory assurances.

Alternative B - *Proposed Action Alternative* - A CCAA would be developed, and a Permit would be issued to the CDOW. Participating landowners would sign up under the CCAA through a Certificate of Inclusion (CI) and be covered by the Permit. The goal of the CCAA is to pursue the conservation goal of the RCP. The conservation goal of the RCP states-- “Conservation strategies were identified for all significant threats to Gunnison sage-grouse, with a conservation goal of retaining large enough populations within the Gunnison Basin and elsewhere to have less than a 1 percent modeled risk of extinction, and to retain over 90 percent of genetic diversity over this 50-year timeframe.” The CCAA goal can then be more briefly stated as working to meet habitat and population management objectives of the RCP that pertain to non-Federal property.

Conservation measures on non-Federal lands would be implemented by the participating landowner or cooperating agencies, and the landowner would receive a level of incidental ‘take’ coverage and assurances that agreed upon land uses could continue if Federal listing occurs. These activities could include farming and ranching related activities such as hay and livestock production, farm equipment operation, and recreational activities (e.g., hunting of other species, fishing, dog training, camping, hiking, and use of off-highway vehicles (OHVs)). Other activities that also may be covered could include limited construction and energy projects (e.g., housing, roads, utility corridors, and oil and gas development).

Alternative C - *Landowner by Landowner Alternative* - An umbrella CCAA would not be approved, but an individual CCAA and Permit would be developed and issued by the Service with each landowner interested in conserving Gunnison sage-grouse. An incidental take Permit and regulatory assurances would also be provided under this alternative.

This EA concludes that the No Action Alternative will not improve the status of the Gunnison sage-grouse sufficiently to preclude or prevent Federal listing. While the RCP will be finalized and operational, we are concerned that the lack of assurances will discourage landowner participation, which may prevent attaining the CCAA goal. Since implementation of the RCP is voluntary, current land-use activities may continue under the No Action Alternative including those that may result in habitat degradation. Therefore, under this alternative, there appears to be less likelihood that beneficial conservation measures would be implemented on a sufficient number of the non-federally owned lands within the historical range of the species. While it is likely that Federal agencies will implement some beneficial conservation measures on the public lands, the goal of the CCAA cannot be achieved without the participation of non-Federal landowners. Therefore, we do not believe that this alternative will contribute to the CCAA goal to the same degree as either Alternative B or Alternative C.

Under the Proposed Action Alternative, Gunnison sage-grouse conservation benefits would occur to a much greater extent throughout the CCAA boundary than under the No Action Alternative because of the regulatory certainty of the individual CIs. The Proposed Action Alternative also would have a greater positive conservation benefit for Gunnison sage-grouse than Alternative C, because it would likely result in more landowner participation, resulting in more conservation measures being implemented over a greater proportion of the historic and occupied range. The goal of the Proposed Action (i.e., the umbrella CCAA) is to attain sufficient benefit on enrolled lands and other necessary properties that improves the status of the Gunnison sage-grouse to a degree that Federal listing is either precluded by higher priority species, or not warranted. That is, Federal listing of the Gunnison sage-grouse may be avoided or precluded if necessary Federal lands also are managed with similar results as the benefits realized on the non-Federal properties.

Alternative C (landowner-by-landowner) also would promote the survival and recovery of the Gunnison sage-grouse through implementation of land-use practices by individual non-Federal landowners. The beneficial conservation efforts therefore exceed those of Alternative A, because of its inclusion of regulatory certainty for the landowners. However, Alternative C is a less desirable approach for Gunnison sage-grouse conservation than the Proposed Action because the absence of an umbrella agreement may yield a fragmented distribution of enrolled lands, and the duplication of administrative processes to complete the individual CCAAs. Further, landowners and local communities in the Proposed Action boundary generally view State and local governments as the appropriate entities for delivering necessary public services. If negative public sentiments were to develop regarding a Federal agency's administration of a conservation strategy for a non-listed, resident species, it is conceivable that local community and non-Federal landowner enthusiasm could wane, which could then reduce or impede landowner participation. Conversely, the Proposed Action delegates the entire administrative and operational process to the CDOW which would ensure adequate landowner participation.

The Service completed an intra-Service biological evaluation for those federally listed or candidate species that may occur in the project area. With the exception of the Gunnison sage-grouse, we have determined that the proposed action will either not affect, or is not likely to adversely affect, any of the other federally listed or candidate species.

SECTION I. PURPOSE AND NEED FOR ACTION

A. PURPOSE FOR THE ENVIRONMENTAL ASSESSMENT

The purpose of this Environmental Assessment (EA) is to evaluate whether an umbrella Candidate Conservation Agreement with Assurances (CCA) for Gunnison Sage-Grouse (*Centrocercus minimus*) can be implemented without significant effects to the environmental resources in the project area. The EA compares the umbrella CCA with two other alternatives. The proposed action is needed to improve the status of the species on non-Federal lands because a large percentage of suitable habitat occurs on non-Federal lands. It is expected that conservation on non-Federal lands will greatly influence the species viability in the foreseeable future. The proposed CCA would allow the Colorado Division of Wildlife (CDOW) and the U.S. Fish and Wildlife Service (Service) (collectively “the agencies”), in cooperation with participating landowners, other Federal agencies, and non-governmental organizations, to implement conservation efforts within Colorado to maintain and expand Gunnison sage-grouse in both occupied habitat and potentially suitable habitat. It also would allow conservation measures for habitat that is within the historic range, but is currently considered ‘vacant/unknown’ or ‘potential habitat,’ as defined in the Gunnison Sage-Grouse Rangewide Conservation Plan (RCP) (Gunnison Sage-Grouse Rangewide Steering Committee 2005). The boundary of the proposed action includes all or portions of Alamosa, Archuleta, Conejos, Costilla, Delta, Dolores, Gunnison, La Plata, Mesa, Montezuma, Montrose, Ouray, Rio Grande, Saguache, and San Miguel counties, Colorado (Figure 1). Those non-Federal lands in Garfield, Eagle, and Pitkin counties historically occupied by Gunnison sage-grouse are not included in the CCA boundary, because there is no reliable information to conclude whether the resident grouse species was either Gunnison sage-grouse (*C. minimus*) or greater sage-grouse (*C. urophasianus*) (Figure 1).

Under the CCA, individual “participating landowners” would be covered under a section 10(a)(1)(A) Permit upon the signing of a Certificate of Inclusion (CI). The CI is a mutually agreeable site-specific management plan that provides conservation for Gunnison sage-grouse consistent with the CCA and agreed upon land uses.

Should the species eventually be listed pursuant to the Endangered Species Act (ESA), the proposed Permit would authorize incidental take of Gunnison sage-grouse, consistent with the CCA and CI. The proposed covered activities, include but are not limited to--hay and livestock production, farm equipment operation, recreation (e.g., hunting, fishing, dog training, camping, hiking, and off-highway vehicle (OHV) use), and limited construction (e.g., housing, roads, utility corridors, energy development, etc.). The Permit would include ESA regulatory assurances as discussed in the Service’s “Candidate Conservation Agreement with Assurances Final Policy” (64 FR 32726).

Consistent with the Service’s “Candidate Conservation Agreement with Assurances Final Policy,” the conservation goal of the CCA is to pursue the conservation goal of the RCP, which states--“Conservation strategies were identified for all significant threats to Gunnison sage-grouse, with a conservation goal of retaining large enough populations within the Gunnison Basin and elsewhere to have less than a 1 percent modeled risk of extinction, and to retain over

90 percent of genetic diversity over this 50-year timeframe.” The CCAA goal can then be more briefly stated as working to meet habitat and population management objectives of the RCP that pertain to non-Federal property (See Table 1). We believe that monitoring progress towards the goal following CCAA implementation will help to determine whether Federal listing is either precluded by higher priority species, or not warranted. It is anticipated that the CCAA approach will be implemented on key non-Federal lands which will then promote the successful expansion and reintroduction of the species to currently unoccupied habitat throughout the umbrella CCAA boundary. The CCAA goal to implement conservation measures would be pursued by offering non-Federal landowners incentives in the form of regulatory certainty to alleviate their fears of restrictions on land use being imposed if the Gunnison sage-grouse is federally listed. Funding for conservation measures also are anticipated to be provided through State and Federal programs as described in the CIs. This EA is intended to inform the public about the proposal, and the comments received from the public will help the Service decide whether the CCAA approach is justified.

DRAFT

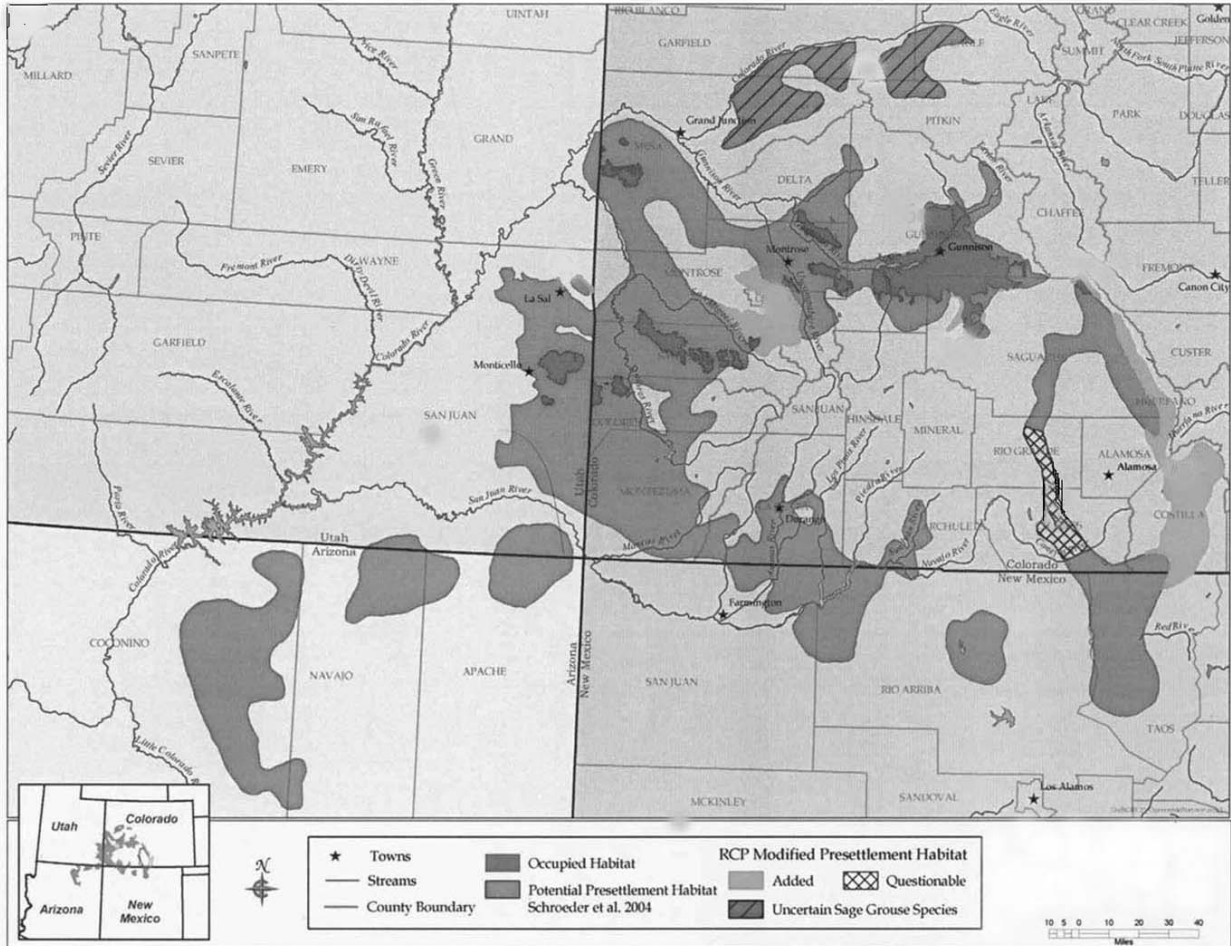


Figure 1. Current and Historical Gunnison Sage-Grouse Range (from RCP).

B. NEED FOR THE PROPOSED ACTION

Gunnison sage-grouse currently occupy about 924,000 acres of Federal and non-Federal lands in southwestern Colorado and southeastern Utah. A recent review of historical records, museum specimens, and potential Gunnison sage-grouse habitat concluded that the Gunnison sage-grouse is believed to have historically occurred in southwestern Colorado, northwestern New Mexico, northeastern Arizona, and southeastern Utah (Figure 1). Currently, Gunnison sage-grouse are estimated to occupy only 10 percent of their historical range (Schroeder et al. 2004) and are currently known to occupy only seven population areas (Table 2), as shown on the map in Figure 2. The RCP combined the Dove Creek, Colorado, and Monticello, Utah, populations into one population based on genetic similarity. Appendix D of the RCP tabulates habitat type, landownership, and conservation easements of each of the seven remaining populations. Based on estimates provided in Appendix D of the RCP, about 46 percent (425,116 acres) of the currently occupied Gunnison sage-grouse habitat occurs on non-Federal lands in Colorado and Utah (see Table 2).

Concerns about the declining population of Gunnison sage-grouse and the viability of the species started to surface in the early 1990s. On March 15, 2000, a review completed by the Service concluded that listing the species was warranted and, therefore, the species was designated a candidate species under authority of the ESA. Application of the species taxonomy weighted by assessment of potential threats to its existence determined a Listing Priority Number of '5.' Following the annual status review of the species in 2003, the potential threats to the species defended raising the listing priority to '2,' which placed it high in priority among all species currently designated as warranted for listing. The 2004 Candidate Notice of Review for the grouse and the RCP have identified the following threats as contributing to the species current low abundance, fragmented distribution, and precarious viability:

1. The currently occupied range is less than 10 percent of its historic range (Schroeder et al. 2004).
2. The historic range and quality of remaining habitat have been reduced by direct habitat loss, fragmentation, and degradation. Each of these is a consequence of urbanization, road and utility corridors, fences, energy development, conversion of native habitat to hay or other crop fields, alteration or destruction of wetland and riparian areas, drought, incompatible livestock management practices, competition for winter range by big game, and reservoir construction.
3. Disease (e.g., West Nile Virus), and predation.
4. Lack of existing regulatory protection.
5. Fire suppression promoting invasion by pinyon (*Pinus edulis*), juniper (*Juniperus spp.*), and oakbrush (*Quercus gambelii*); and promoting decadent stands of sagebrush.
6. Invasion by nonnative grasses and forbs.
7. Overgrazing by elk (*Cervus elaphus*) and deer (*Odocoileus hemionus*).
8. Drought.
9. Disturbance or death to adults/juveniles by OHVs.
10. Disturbance to adults/juveniles by construction projects.
11. Harassment of adults/juveniles from people and pets.
12. Ambient noise levels impairing acoustical quality of leks.

13. Low genetic diversity.
14. Herbicides, pesticides, and pollution.
15. Competition for habitat from other species.

The need for the action results from the decline of Gunnison sage-grouse throughout its range, and the concern that the current populations are not viable into the foreseeable future. The local Gunnison Sage-Grouse Working Groups and the RCP Steering Committee have concluded that habitat loss and degradation is the primary threat. Given the potential for Federal listing of the Gunnison sage-grouse under the current conditions, non-Federal landowners wish to work cooperatively to develop individual CIs to provide coverage under the CCAA and its associated Permit, thereby gaining some protection for potential future land-use restrictions. Approval and implementation of this CCAA and associated CIs for participating landowners will provide an opportunity for species conservation that also may obviate the need for Federal listing. The proposed action provides the agencies an opportunity to both halt the decline of the species, and conserve sufficient habitat such that measurable increases in suitable Gunnison sage-grouse habitat can be documented at regular intervals by the CDOW. The governing assumption of the Proposed Action is that what is good for Gunnison sage-grouse habitat is good for Gunnison sage-grouse. A direct link to the benefit of habitat improvement cannot be made because numerous non-habitat related factors (e.g., predation, disease) also influence the abundance and distribution of the species. The CCAA goal can only be accomplished by the agencies working collaboratively with non-Federal landowners in the area.

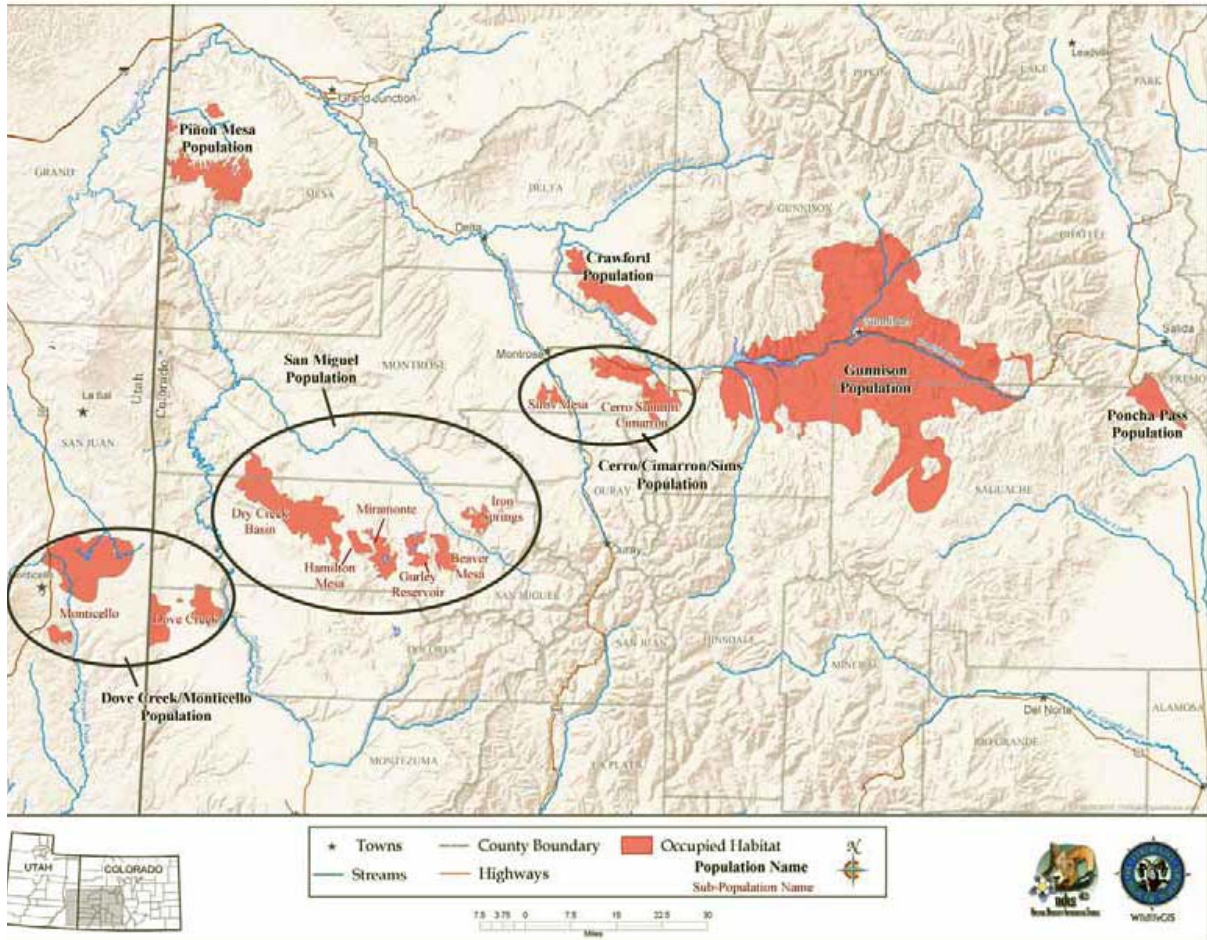


Figure 2. Locations of current Gunnison sage-grouse populations. The discontinuity in occupied habitat at the state line in the Dove Creek-Monticello area is not entirely a mapping artifact; where there is occupied habitat on the Colorado side there is an abrupt change to cropland on the Utah side of the border.

DECISION TO BE MADE BY RESPONSIBLE OFFICIAL

The Service will decide whether or not to approve the CCAA and issue the Permit, in accordance with section 10 of the ESA, based on the CCAA as proposed. Approval of the CCAA is dependent on the Service concluding that:

1. Take of Gunnison sage-grouse will be incidental to otherwise lawful activities, and will be in accordance with the terms of the CCAA;
2. The CCAA complies with the requirements of the “Candidate Conservation Agreement with Assurances Final Policy;”
3. The probable direct and indirect effects of any authorized take will not appreciably reduce the likelihood of survival and recovery in the wild of this species;
4. Implementation of the terms of the CCAA is consistent with applicable Federal, State, and Tribal laws and regulations;
5. Implementation of the terms of the CCAA will not be in conflict with any ongoing conservation programs for species covered by the CCAA; and,
6. The agencies and participating landowners have shown the capability for and commitment to implementing all of the terms of the CCAA.

ISSUES CONSIDERED DURING CCAA DEVELOPMENT

There have been no formal public scoping meetings or public hearings to solicit ideas regarding potential alternatives to conserve the Gunnison sage-grouse in Colorado. However, since 1995 there have been numerous working meetings with agencies and public stakeholders where a variety of issues have been discussed relative to this CCAA, conservation needs, strategies, and consequences to non-Federal landowners, local communities, and agency responsibilities. One issue commonly expressed by some landowners is that they will lose income should they choose to implement conservation practices on their lands. At the present time, the only incentives being offered to landowners are future regulatory assurances should Federal listing of the Gunnison sage-grouse occur in the future. That is, if the grouse is listed, landowners would not incur additional land-use restrictions on their lands. However, the lack of monetary incentives to make fee title acquisitions, or purchase conservation easements on non-Federal parcels, may limit the number of participating landowners, which would thereby limit the degree of benefit to the Gunnison sage-grouse. The agencies will be actively promoting the need for this program, which may result in future additional program funding. Therefore, while the CCAA’s immediate incentive is regulatory relief, future funding may be sufficient to also provide more tangible benefits to willing landowners.

At the present time some landowners are evidently not convinced that future regulatory assurances are an equitable exchange for their implementation of new land management and livestock grazing practices. The lack of enthusiasm by some may be due in part to the landowner’s familiarity with the Habitat Conservation Plans as a means to receive regulatory assurances, should the grouse be listed. Due to the limited funding now available to support fee title or conservation easement acquisition, some landowners may choose to wait to see if the species is actually listed, rather than agree to change their land-use practices and management

strategies in exchange for regulatory assurances that may be unneeded. Therefore, it appears that the potential listing of the grouse is not a significant influence to many landowners with suitable habitat for the Gunnison sage-grouse.

SECTION II. DEVELOPMENT AND CONSIDERATION OF ALTERNATIVES

The goal of the CCAA is to implement the habitat and population management objectives listed in the RCP that pertain to non-Federal property. These objectives are listed for each of the seven population areas, and differ depending on the habitat and other conditions within each population area. The current projected future population target for each of the seven populations is shown in Table 2. However, these population targets are based on the current population estimates, and on the current assessment of potential habitat conditions. With implementation of the CCAA, we are optimistic that the level of private landowner enrollment and conservation practice success will be high. Funding for implementation of conservation measures may be provided through currently established State and Federal funding programs.

We also believe that some Federal agencies will implement beneficial conservation practices on some public lands. Therefore, we are confident that there will be a need to reassess future population target projections. Consequently, while the overall goal and objectives of the CCAA will not change, we anticipate that success of the CCAA combined with public land participation will require the Rangewide Steering Committee to forecast population targets that exceed those now reported in Table 2. The realization of higher population targets for each population will further minimize the likelihood of Gunnison sage-grouse extinction or endangerment.

The agencies and other cooperators have collaborated extensively since March 2000 to identify alternatives that would minimize controllable threats to Gunnison sage-grouse, and thereby increase local and range-wide populations of the species. The primary objective identified was to reduce habitat deterioration and fragmentation, as these factors are widely recognized as the primary contributors to the species decline. Remediation of these factors will enhance the species survival and recovery potential. Numerous proposals to achieve this objective were discussed by the cooperating agencies, but most were found to be either infeasible or insufficient to yield a level of landowner participation that would reduce threats to the species. Therefore, the only alternatives addressed in this EA are those implementing an umbrella CCAA or individual landowner CCAA. These are then compared to the No Action Alternative.

A. ALTERNATIVE A - NO ACTION – WITH RCP

Under the No Action Alternative, the proposed CCAA would not be approved, the Permit would not be issued to the CDOW, and participating landowners would not be covered under the Umbrella CCAA or Permit. Agricultural activities would continue within the area covered by the CCAA in accordance with applicable laws, and are likely to be similar to current activities. The primary agricultural activities in the area that would continue are those related to hay and livestock production. The RCP would be operational and it is likely that some conservation measures recommended in the RCP would be implemented on non-Federal lands.

The Proposed Action CCAA with the CDOW would initially be approved for 20 years. Using this time as a reasonable horizon for the future, it is likely the ongoing threats under the No Action Alternative would cause Gunnison sage-grouse to continue to decline in numbers and distribution. While it is likely that some conservation measures will be conducted on the public lands by Federal agencies under this alternative, attaining the CCAA goal is not feasible without the participation of non-Federal landowners. Therefore, proposing Federal listing could be justified if declines in abundance and distribution continue under this alternative. We therefore do not believe that the conservation benefits attained under this alternative contribute to the CCAA goal sufficiently to either prevent continuing decline of the species, or preclude Federal listing.

B. ALTERNATIVE B - UMBRELLA CCAA (PROPOSED ACTION)

Throughout their life cycle, Gunnison sage-grouse are commonly found on suitable habitat on many non-Federal land parcels within the currently occupied range. Suitable but currently vacant habitat also occurs on non-Federal lands throughout the historic range of the species. Therefore, non-Federal land parcels fulfill a vital need for both existing grouse populations and pursuit of the recovery objectives for the species as described in the RCP. Non-Federal landowner cooperation is therefore critical if Gunnison sage-grouse recovery is to succeed. The cooperating State/Federal agencies believe that Federal listing of Gunnison sage-grouse would discourage non-Federal landowner participation in its conservation due to the perception that land-use restrictions automatically follow the Federal listing of any species. This perception greatly discourages non-Federal landowners from implementing conservation actions, and, therefore, recovery of the species is impeded or prevented. Without cooperation, the potential for successful conservation of Gunnison sage-grouse is greatly diminished while the potential for Federal listing is enhanced. Under the Proposed Action Alternative, the Umbrella CCAA would be approved, the Permit would be issued to the CDOW, willing non-Federal landowners would enroll under the CCAA through CIs, and the non-Federal landowners would receive a level of protection from the 'take' prohibitions of the ESA.

The proposed CCAA is intended to reduce or eliminate the threats to the species that can be controlled through human actions on non-Federal lands throughout the range of Gunnison sage-grouse in Colorado. The specific objectives of the proposed CCAA are to protect, enhance, and restore Gunnison sage-grouse and their habitat on non-Federal lands. To accomplish these, the proposed CCAA is intended to implement the objectives of the RCP, while ensuring that actions are compatible with the economic vitality of the landowner. Success of the proposed CCAA will be measured by assessing its contribution to the CCAA goal, and also will include consideration of the following two issues--1) the economic impact to the individual non-Federal landowners as a direct result of the conservation measures, and 2) the influence of the measures on the Service decision of whether listing is warranted or not warranted. Provided the measures implemented result in an improvement to the status of the species and are compatible with the economic vitality of enrollees, the need to federally list may be unnecessary. Therefore, the CCAA will be assumed to be contributing to the pursuit of the stated goal, as an effective tool for the conservation of the species on non-Federal land. However, if improvements to the status of the species are not being realized the umbrella CCAA or individual CIs may need to be amended by some adaptive management strategies.

Under this alternative, Gunnison sage-grouse conservation efforts would be initiated throughout the species' current and historical range in Colorado. Participating landowners would implement, or allow the agencies to implement, Gunnison sage-grouse conservation measures on their land as identified in the individual CIs. Participating landowners would receive a Permit authorizing incidental take of Gunnison sage-grouse and would receive regulatory assurances from the Service that agreed upon land uses can continue should the species be listed under the ESA. Providing participating landowners ESA regulatory assurances should reduce concerns over a potential Federal listing and enhance landowner cooperation in Gunnison sage-grouse conservation efforts.

The conservation measures are of two basic types--1) securing sufficient currently occupied, unknown/vacant, and potentially suitable habitats through a CI, and 2) enhancing secured habitat so that progress toward the CCAA can be realized. An objective of the umbrella CCAA alternative is to acquire conservation easements on 100 percent of the non-Federally owned land containing Gunnison sage-grouse habitat. Meeting this objective is entirely dependent on landowner participation, and availability of adequate resources to the agencies.

The CDOW will contact individual non-Federal landowners within the various local population areas to encourage their participation in the program. The CDOW will provide willing landowners with information concerning current Gunnison sage-grouse use of their property, and will ask landowners for any additional information they may have about grouse populations and habitats on their property. The CIs will provide background information on the specific covered parcels to comply with the reporting and monitoring requirements of the CCAA. The information will be maintained by the CDOW. Each of the CIs would require that each landowner acknowledge and agree to the monitoring requirements included in each CI. The information that may be included in the CI is described below.

Property Owners with existing conservation easements will work with CDOW to develop the documentation or conservation measures required for a CI to be issued. Property Owners without easements may choose to place a permanent conservation easement on their property in conjunction with the CCAA and their CI. While a permanent conservation easement is not required, it would probably enhance the likelihood of Gunnison sage-grouse conservation success. The conservation easement can be held by a third party, and CDOW does not necessarily have to be a party to the easement process. However, CDOW will make resources available to the interested landowners that will assist them in placement of the conservation easement.

For Property Owners wishing to participate in CIs that do not need to include treatments or enhancements of their property, the following materials will be developed as part of the CI application and diligence process:

- Map of area, general description of habitat type covered by the CIs, and a legal description of the area and habitat types covered.

- Baseline inventory of property condition at the time of enrollment. This report will be a narrative description of current uses, current management practices with sufficient description to allow assessment of any change in management practice (e.g., stocking numbers, grazing periods, etc.), general assessment of condition of habitat, and an estimate of current Gunnison sage-grouse use. The CIs will contain an agreement by the Property Owner to maintain these conditions.
- Establishment of permanent photo point locations with GPS coordinates. Sufficient photo points will be established for each land parcel to ensure reliable monitoring throughout the period of the CI.

Those CI applications that are including treatments to improve Gunnison sage-grouse habitat will specify the improvements to be made, the source of funding for improvements, responsibility for completion of improvements, a time frame, and a monitoring plan to ascertain the success of improvements. The following materials will be included in the CI application:

- Map of area, general description of existing habitat types, and a legal description of the area and habitat types covered. Areas where treatments are to be applied would be specifically delineated.
- A baseline inventory of conditions at the time of enrollment in the CCAA to include narrative description of the current condition of various habitat features. For those areas that will receive treatments to enhance the habitat conditions, the report also will describe the treatment type, conditions under which treatments are to occur, timeline for treatment, and expected condition or objectives for treatment including management to be applied during or post-treatment.
- Established photo point locations with GPS coordinates. Sufficient photo points will be established for each land use to ensure reliable monitoring throughout the period of the CI.
- Established sampling protocol for treatment area, to enable collection of baseline data, and monitoring changes from the baseline conditions. Sampling would use standard techniques applicable to the type of treatment, and would likely use fixed points associated with photo points.
- A list of applicable monitoring methodologies (e.g., Daubenmire, Line transect, etc.), method applications, and reporting protocols.

C. ALTERNATIVE C - LANDOWNER BY LANDOWNER

Under this alternative, an Umbrella CCAA would not be approved, but individual CCAAs and section 10 Permits would be developed and issued by the Service to each landowner volunteering to participate in Gunnison sage-grouse conservation efforts. The agencies would work with interested landowners to develop individual CCAAs that would contribute to Gunnison sage-grouse conservation, while also striving for minimal adverse effects to the landowner economic vitality.

This alternative also would provide ESA regulatory assurances to alleviate landowner concerns over a potential Federal listing, and promote their participation in conservation efforts. However, developing individual CCAAs is time-consuming for both the landowners and the agencies, which may decrease their attractiveness and decrease landowner enthusiasm in the CCAA approach. The ability to implement a broad, landscape approach to Gunnison sage-grouse conservation (as intended by the RCP) may be less than that of the Proposed Action due to the inherent piecemeal processing and property selection characteristics of Alternative C. Further, as noted in Alternative B above, landowners and local communities may develop negative attitudes regarding the Service administration of a conservation strategy for a non-listed, resident species, which may reduce participation. Consequently, we do not believe that Alternative C will accomplish as much benefit to the Gunnison sage-grouse as the Proposed Action since the CDOW has more staff than the Service to effectively implement the CCAA. The CDOW also has considerable Gunnison sage-grouse expertise and knowledge of local conditions that will be more effectively utilized in Alternative B.

DRAFT

Table 1. Comparison of alternatives relative to RCP goal - reduce extinction risk, retain genetic diversity, prevent listing.

ACTION OR ACTIVITY	ALTERNATIVE A: CURRENT CONDITIONS WITH RCP	ALTERNATIVE B: UMBRELLA CCAA BY CDOW (PROPOSED ACTION)	ALTERNATIVE C: INDIVIDUAL CCAAs BY SERVICE
CCAA	No	Yes	Yes
CI	No	Yes	No
Process Efficiency	Low	High	Low
Process Scope	Landowner	Landscape	Landowner
Regulatory certainty for landowner	No	Yes	Yes
Landowner participation	Low	High	Low – Medium
Benefit to extinction risk	Not measurable	Measurable	Negligible
Benefit to genetic diversity	Not measurable	Measurable	Negligible
Defend Federal listing Not Warranted	Unlikely	More likely	Less likely
Overall contribution to proposed CCAA goal	Minimal	High	Low

SECTION III. AFFECTED ENVIRONMENT

A. INTRODUCTION

The lands to be covered in the proposed action and the analysis area for this draft EA include 15 counties in Colorado (Figure 1). This area encompasses sage-steppe and grassland habitats, and represents most of the historical range of the Gunnison sage-grouse in Colorado, as estimated in the RCP. The acres of Federal and non-Federal landownership for 'occupied habitat,' 'potentially suitable habitat,' and 'vacant/unknown habitat' were tabulated for each Gunnison sage-grouse population area in Appendix D of the RCP. The area is largely sage-steppe habitats interspersed with grasslands and non-Federal cropland. The primary land uses in the area are those related to hay and livestock production, which have been ongoing for over 100 years. These lands also are extensively used for dispersed recreation, such as hunting, hiking, fishing, trail riding, and OHV riding.

B. GUNNISON SAGE-GROUSE

Sage-grouse are charismatic birds known for their elaborate mating ritual wherein males congregate and perform a courtship dance on a specific strutting ground called a lek. Sage-grouse species in North America were once abundant and widespread but have declined throughout their range. Currently two distinct species of sage-grouse are recognized by the American Ornithologists' Union (AOU)--the greater sage-grouse (*Centrocercus urophasianus*) and the Gunnison sage-grouse (*Centrocercus minimus*) (AOU 2000). Gunnison sage-grouse are significantly smaller than greater sage-grouse. There are distinctive plumage differences. Geographic isolation, distinct genetic differences, and behavioral differences in strutting display also separate these species (Kahn et al. 1999; Oyler-McCance et al. 1999; Schroeder et al. 1999; Young 1994; Young et al. 2000).

Most research exploring the life history and habitat requirements of sage-grouse has been conducted on the greater sage-grouse. Comparably little research has been done specifically on Gunnison sage-grouse. Except where referenced, the following brief life history information is taken from Schroeder et al. 1999 and applies to both greater and Gunnison sage-grouse.

Sage-grouse populations are closely associated with sagebrush (*Artemisia spp.*) habitats in western North America. Sage-grouse require sagebrush throughout the year for food and cover. Breeding activities occur from March to early June. Male sage-grouse display on leks in early morning and late evening to attract hens. Lek sites are open areas that have good visibility for predator detection and acoustical qualities so the sounds of display activity can be heard by other sage-grouse. Dominant males will breed with more than one female. Males provide no paternal care or resources. Hens generally leave the lek and begin their nesting effort immediately after mating.

Nests are typically shallow bowls lined with leaves, feathers, and small twigs placed on the ground at the base of a live sagebrush bush. Eggs are incubated by the female for approximately 25-29 days and clutch size ranges from 6-10 eggs. If the first nest is lost due to predation or severe weather, some hens will re-nest but second clutch sizes are smaller. Gunnison sage-grouse are less apt to re-nest than greater sage-grouse (Young 1994).

Chicks are able to leave the nest with the hen shortly after hatching. Hens with chicks feed on succulent forbs and insects where cover is sufficiently tall to conceal broods and provide shade. As chicks mature, hens typically move with their broods to wet meadow habitats which provide an abundance of forbs and insects for food, and tall grass for hiding from predators. Groups of unsuccessful hens and flocks of males follow similar habitat use patterns but are less dependent on wet meadow areas than are hens with broods.

As fall approaches intermixed flocks of young and adult birds move from riparian areas to sagebrush dominated landscapes that continue to provide green forbs. During the winter sage-grouse feed exclusively on sagebrush and are generally found in areas with extensive sagebrush stands. In particularly severe winters sage-grouse are dependent on very tall sagebrush where sagebrush exposure above snow is maximized, providing a consistently available food source. Sage-grouse are capable of making long movements of as much as 27 miles to find appropriate habitat (Apa 2004). As spring approaches, flocks of sage-grouse return to breeding areas used the prior year.

Accurately calculating the historic range of Gunnison sage-grouse is problematic for many reasons, but most notably due to the widespread loss of sagebrush habitats which preceded any scientific study of Gunnison sage-grouse. Additionally, the species has been extirpated from many areas for which no useful zoological records or specimens exist. A recent review of historical records, museum specimens and potential sage-grouse habitat concluded that the Gunnison sage-grouse is believed to have historically occurred in southwestern Colorado, northwestern New Mexico, northeastern Arizona, and southeastern Utah. Currently Gunnison sage-grouse are estimated to occupy only 8.5 percent of their historical range (Schroeder et al. 2004).

Gunnison sage-grouse currently occur in seven widely scattered and isolated populations in Colorado and Utah. Tables 7 and 32 and Appendix D of the RCP provide important statistics regarding the current and future population targets and occupied habitat acres. These data are summarized in Table 2 below.

Table 2. Population size, habitat acres, and easement acres, as reported in RCP.

LOCAL POPULATION	ESTIMATED POPULATION SIZE (2004)	FUTURE POPULATION TARGET	CURRENT OCCUPIED HABITAT (ACRES)	CURRENT OCCUPIED HABITAT IN NON-FEDERAL OWNERSHIP (ACRES AND %)	NON-FEDERAL LAND IN PERMANENT CONSERVATION EASEMENTS (ACRES AND %)
Cerro/Cimarron/Sims Mesa	39	TBD	37,160	32,265 (87%)	2,805 (8%)
Crawford	128	275	35,014	8,240 (24%)	523 (2%)
Dove Creek/ Monticello, UT	162	500	98,920	92,248 (93%)	3,581 (4%)
Gunnison Basin	2,443	3,000	592,926	196,327 (33%)	26,145 (4%)
Pinon Mesa	142	200	38,890	27,295 (70%)	7,314 (19%)
Poncha Pass	39	75	20,415	5,323 (26%)	0
San Miguel Basin	245	450	100,496	63,418 (63%)	884 (1%)
Totals	3,198	>4,022	923,821	425,116 (46%)	41,252 (4%)

Gunnison sage-grouse have been extirpated from much of their historic range. The current and future threats to the viability of the Gunnison sage-grouse were summarized earlier under “Need for the Proposed Action.” Of all the threats contributing to their persistent decline, the local Gunnison Sage-Grouse Working Groups and the RCP Steering Committee have concluded that habitat loss and degradation is the primary threat. It is widely accepted that isolation of small populations is generally detrimental to the long-term viability of a species. Small and isolated populations are generally more vulnerable to natural or man-caused disturbances, may realize acute population decline following the sudden influx of predators, parasites, or diseases, may lack dispersal abilities to re-occupy vacated habitat, and commonly lack sufficient genetic diversity to prevent the deleterious effects of genetic drift. The RCP acknowledges that each of these factors may influence Gunnison sage-grouse viability into the future.

C. VEGETATION

The RCP provides a list of herbaceous and woody plant species most commonly found throughout the boundary of the Proposed Action Alternative (Appendix A, Table 2).

Discussion in the RCP notes that noxious and invasive weeds have been identified as an important issue in the Crawford, Gunnison Basin, and Piñon Mesa Gunnison sage-grouse populations. Stakeholders are concerned with cheatgrass invasions, and the Crawford area local work group also mentioned knapweed and thistle. Cheatgrass in the Gunnison Basin is receiving research attention as well as treatment with herbicides (CDOW 2003).

Cheatgrass and several species of knapweed and thistle are on the Colorado Noxious Weed List (Colorado Department of Agriculture 2003). All of the Colorado counties with potential Gunnison sage-grouse habitat have county noxious weed programs, most of which identify knapweed and thistle species, but not cheatgrass, as noxious weeds listed for county control purposes. Noxious and invasive weeds are not known to directly threaten the physical health of Gunnison sage-grouse. However, the invasive characteristics of these weedy plants could cause a decline in quality and/or quantity of Gunnison sage-grouse habitat, thus affecting population parameters.

Cheatgrass is a species that thrives in disturbed, and especially burned, areas (Vallentine 1989, Whisenant 1990). It can even increase fire frequency (Whisenant 1990, Billings 1994, Miller and Eddleman 2000), favoring itself and potentially inhibiting perennial seedling establishment (Wright and Bailey 1982, Whisenant 1990, Grahame and Sisk 2002). A cheatgrass invasion into sagebrush habitat can lead to an eventual conversion of sagebrush/grass (perennial) community to sagebrush/grass (annual) or annual grass rangeland (Connelly et al. 2000, Miller and Eddleman 2000). Gunnison sage-grouse food sources vary through the year and include primarily sagebrush, forbs, and insects, but not grasses (Schroeder et al. 1999). In some cases, cheatgrass invasion encourages other exotic species such as knapweed and thistle (Grahame and Sisk 2002).

D. WILDLIFE

Numerous species of wildlife occur within the boundary of the Proposed Action. Table 1 of Appendix 1 of the RCP lists the mammals and birds that are likely to occur within the boundary of the CCAA. The conservation measures for Gunnison sage-grouse will be confined primarily to the sage-steppe and riparian habitats. Therefore, only those species that occupy these habitats would be affected by any of the alternatives.

E. FISH AND OTHER AQUATIC SPECIES

There are numerous fish and aquatic species that reside within the proposed CCAA boundary. The conservation practices that will be implemented for the grouse are those that are identified in the RCP. Each of these practices is confined primarily to terrestrial landscapes such as sage-steppe and alfalfa croplands. The scope of each action in proportion to the watershed occupied will be small, and is not likely to exacerbate erosive tendencies, modify stream flow regimes, or modify ambient water temperatures in any ephemeral or permanent stream, or other water body.

F. OTHER RESOURCES

Factors affecting other resources (air quality, geology and soils, water quality and quantity, cultural and historic resources, recreation, and visual resources) will not differ under any of the three alternatives. Since we anticipate sage-steppe and riparian habitats will be enhanced as a result of implementation of the CCAA, other resources associated with these vegetative types should not be negatively affected. Most lands in the covered area have been used extensively for over 100 years for agricultural purposes, which includes cultivated farmlands and livestock grazing. Impacts to any cultural or historic sites found in the area have likely already happened multiple times, and approval of the CCAA is not expected to result in additional impacts from those that would occur without the CCAA. Recreation and visual resources are expected to remain the same with or without the Permit. Since approval of the CCAA and issuance of the Permit will not have additional effects to these non-wildlife resources, these issues do not warrant further discussion within the scope of this EA.

G. FEDERALLY LISTED AND CANDIDATE SPECIES

The Service has identified the following federally listed or candidate species that may occur within the proposed action boundary:

Federally Listed Animals

Southwestern willow flycatcher (*Empidonax traillii extimus*)

Bonytail (*Gila elegans*)

Colorado pikeminnow (*Ptychocheilus lucius*)

Humpback chub (*Gila cypha*)

Razorback sucker (*Xyrauchen texanus*)

Bald eagle (*Haliaeetus leucocephalus*)

Black-footed ferret (*Mustela nigripes*)

Canada lynx (*Lynx Canadensis*)

Mexican spotted owl (*Strix occidentalis lucida*)

Uncompahgre fritillary butterfly (*Boloria acrocne*)

Federally Listed Plants

Astragalus humillimus (Mancos milk-vetch)

Eriogonum pelinophilum (Clay-loving wild-buckwheat)

Sclerocactus glaucus (Uinta Basin hookless cactus)

Sclerocactus mesae-verdae (Mesa Verde cactus)

Federal Candidate Species

Gunnison sage-grouse (*Centrocercus minimus*)

Yellow-billed cuckoo (*Coccyzus americanus*)

Boreal toad (*Bufo boreas boreas*)

Phacelia submutica (De Beque phacelia)

Astragalus tortipes (Sleeping Ute milk-vetch)

The Service has completed an intra-Service biological evaluation which concludes that none of the listed species will be adversely affected by the Proposed Action Alternative. We have concluded that of the plant and animal candidate species, adverse effects will occur to the Gunnison sage-grouse. An intra-Service consultation under section 7 of the ESA is therefore required to assess the degree of effects to the Gunnison sage-grouse.

H. LOCAL COMMUNITIES, ECONOMIES

The 15 counties within the boundary of the proposed action are predominantly rural in character. Local economies depend on natural resource exploration and development, tourism, recreation, and service-oriented industries (e.g., hospitals, schools). The lands include significant portions of public lands owned by the Bureau of Land Management, the Forest Service, and the National Park Service. The Ute Mountain Ute Indian Tribe and the Southern Ute Indian Tribe also own substantial portions of lands within the boundary. Appendix D of the RCP shows the proportion of Federal and non-Federal landownership. Extensive details of the local communities and their economies are available in numerous planning documents prepared by the Bureau of Land Management and the Forest Service (Bureau of Land Management 2005, USDA Forest Service 2005).

I. RECREATION

Numerous forms of outdoor recreation occur throughout the boundary of the proposed action. Hunting, birdwatching, wildlife photography, hiking, horseback riding, and OHV riding commonly occur on both Federal and non-Federal lands. These activities also may occur on sage-steppe or riparian habitats, which can therefore pose a risk to adult or juvenile Gunnison sage-grouse. The RCP addresses both the potential effects of these activities to Gunnison sage-grouse and their habitat, and identifies some conservation strategies available to minimize the potential adverse effects.

SECTION IV. ENVIRONMENTAL CONSEQUENCES

COMPARATIVE OVERVIEW OF ALTERNATIVES

The environmental consequences of each alternative differ generally by the number of non-Federal landowners participating in each alternative, the regulatory certainty provided to the landowners, and the degree of threat remediation associated with implementation of the conservation measures. Table 2 above summarizes these anticipated differences. We expect fewer benefits with Alternatives A and C and, therefore, believe the proposed action can be concluded as the best choice to attain measurable progress towards the CCAA goal.

Table 2 shows the acres of only the currently occupied non-Federal lands that are potentially eligible for a CCAA under either Alternative B or Alternative C. However, the RCP also reports acres of non-Federal ‘potentially suitable,’ and ‘vacant/unknown’ habitat that also could be eligible for CCAAs. We are unable to estimate how many acres will be enrolled in each alternative. However, we believe the assurance of regulatory certainty provided to landowners, combined with a broader landscape perspective, argue that more acres would be enrolled under the proposed action than either of the other alternatives.

For any of the alternatives, the agencies will be promoting changes to vegetation management and agricultural or livestock production practices to benefit the conservation of the grouse. The agencies are hopeful that these changes will result in measurable benefits to grouse throughout the entire historic range of the grouse. However, attaining such a broad scale result will not require significant changes to vegetative composition or economic livelihood on individual enrolled properties, because the practices will be confined to those lands actually occupied by Gunnison sage-grouse, or suitable for future occupation by the species. The following is a review of the differences among the alternatives for pertinent resource issues.

A. Alternative A - No Action with RCP

Under the “No Action” Alternative, a CCAA would not be developed, but the RCP would be implemented by the CDOW.

Effects to Resources

Gunnison Sage-Grouse - Under the No Action Alternative, we believe the Gunnison sage-grouse would continue to decline, occupied populations would be further isolated, and potential for Federal listing would be enhanced. Since current land-use activities are expected to continue under the No Action Alternative, many of the threats identified to Gunnison sage-grouse also would continue, including those related to habitat degradation. Without the ESA regulatory assurances provided under the CCAA, many landowners may have little incentive to conserve Gunnison sage-grouse. Indeed, the No Action Alternative may greatly discourage participation in conservation efforts because some landowners may fear that land-use restrictions would be imposed on their lands if Federal listing occurred. As a result of this potential, some landowners may adopt management practices to discourage occupancy of their lands by grouse. These landowners may be convinced that such actions would protect them from

potential land-use restrictions or ‘taking’ violations should the Gunnison sage-grouse become federally listed.

Due to the absence of regulatory assurances for landowners by implementing the RCP, and the likelihood that threats will continue, we are not confident that participation by landowners would be sufficient to show measurable progress towards the CCAA goal. Therefore, we do not believe the No Action Alternative would be as beneficial to the species as either Alternative B or Alternative C.

Vegetation - The potential effects to plant species would either be similar to current conditions, or beneficial, depending on the level of participation by landowners, and the implementation of RCP recommendations. Implementation of the RCP will benefit native plant species associated with the sage-steppe or riparian habitats because they are designed to benefit Gunnison sage-grouse by improving native plant composition and structure. Planting nonnative species (e.g., alfalfa) to enhance Gunnison sage-grouse prey or cover values will not occur on sites where significant impacts to native plant species would result.

Wildlife - We do not expect any significant adverse effects to other terrestrial wildlife species above the current condition. Some beneficial effects can be expected for wildlife species associated with the sage-steppe and riparian habitats following implementation of RCP recommendations. Therefore, we do not believe there will be any significant adverse effects to any native wildlife species under the No Action Alternative.

Fish and Other Aquatic Species - We do not believe that any measurable beneficial or adverse impacts to fish, amphibians, or other aquatic species will occur with implementation of the action.

Federally Listed and Candidate Species - With the exception of the Gunnison sage-grouse, we do not believe that any adverse effects will occur to any of the federally listed or candidate species under the No Action Alternative. However, we believe that many of the adverse effects to Gunnison sage-grouse, as identified in the RCP, will continue to occur. Therefore, this alternative could increase the vulnerability of the Gunnison sage-grouse to extinction compared to either of the other alternatives.

Local Communities and Economies - Non-Federal landowners and grazing permittees have expressed concern that livestock grazing management practices and stocking rates could be impacted on both non-Federal lands and public land grazing allotments if the Gunnison sage-grouse is listed under the ESA. Some landowners also indicated that they were concerned that land-use restrictions could be imposed on non-Federal lands to prevent any “taking” of the Gunnison sage-grouse. It is certain that should Gunnison sage-grouse be listed under the ESA, landowners would have to either avoid “take” of the grouse, or obtain a Permit for incidental take of the species. There are two methods of obtaining an incidental take Permit following listing of a species--1) if there is any Federal nexus for the action, the Federal agency could complete section 7 consultation with the Service to acquire an incidental take authorization for the permittees, or 2) the Service could develop a habitat conservation plan for each landowner, pursuant to section 10 of the ESA. The effects to local communities and economies of such a

listing is unknown at this time, because the required ‘take’ prohibitions for the Gunnison sage-grouse have not been developed.

Recreation - It is unlikely that implementation of the No Action Alternative will have any significant consequences to any of the existing recreational activities. Hunting Gunnison sage-grouse is currently prohibited by Colorado regulation, and would be prohibited under all alternatives. If the Gunnison sage-grouse were federally listed, take of Gunnison sage-grouse by shooting also would become a violation of the ESA. The RCP identifies some criteria that would need to be considered before hunting Gunnison sage-grouse could be authorized. The RCP also identifies some guidelines to manage public viewing of Gunnison sage-grouse at leks. With these exceptions, the existing knowledge base of the effects of recreational activities on Gunnison sage-grouse is inadequate to modify any other form of recreational activity in the proposed action area.

B. Alternative B - Proposed Action

Under the Proposed Action Alternative, the CCAA would be approved, the Permit would be issued to the CDOW, and participating landowners would be issued individual CIs under the CCAA and Permit. Participating landowners and/or the agencies would implement Gunnison sage-grouse conservation measures on the lands covered under each CI.

Effects to Resources

Gunnison Sage-Grouse - We believe the effects to Gunnison sage-grouse under the Proposed Action will be beneficial. The reasons for this are--1) implementation of practices recommended in the RCP are designed to benefit the grouse or its habitat, and will be different from many of the detrimental practices ongoing currently; 2) landowners are provided with some certainty regarding uses of their lands should Federal listing occur, and 3) the scope of the proposed alternative is broader than the narrow ‘landowner’ scale of either other alternative. This alternative would provide conservation measures on lands enrolled under the CCAA for protection of Gunnison sage-grouse populations at occupied sites, and the protection, enhancement, and/or restoration of sage-steppe/grassland and other habitats with the purpose of conserving Gunnison sage-grouse. The Permit would authorize take of Gunnison sage-grouse occurring incidental to the management of non-Federal lands, including those management activities normally associated with all agricultural and livestock operations. The proposed CCAA and its Permit would grant ESA regulatory assurances to each landowner that agreed upon land-use activities will continue, should the species be listed under the ESA.

Under the Proposed Action Alternative, participating landowners would allow implementation of conservation measures on all or portions of their land, as identified in their CI. The conservation measures may include habitat protection and maintenance, habitat enhancement, and or translocation and reintroduction of grouse. For example, native shrubs or nonnative forbs and grasses could be seeded to improve vegetative composition to enhance insect availability, or enhance their cover and thermoregulatory values. Vegetative manipulation through mechanical or chemical means, or through fire, also could be used to enhance and maintain habitat suitable for Gunnison sage-grouse.

The proposed CCAA will reduce the primary threats to the species by implementing conservation measures designed to protect, maintain, enhance, and/or restore habitat. Conservation measures also will include commitments to reduce or eliminate the direct loss ('take') of Gunnison sage-grouse. Should all necessary landowners within the historical range of the species implement conservation measures in their CIs, and if similar conservation measures were implemented on all necessary public and non-Federal lands, the Service believes that the listing priority for the Gunnison sage-grouse could be lowered, or that a 'not warranted for listing' finding could be justified.

Under the Proposed Action Alternative, participating landowners would be covered under the Permit that authorizes a level of incidental take of Gunnison sage-grouse on the enrolled lands. However, within the occupied sites, incidental take of Gunnison sage-grouse is expected to be minimal because the site-specific conservation measures in these areas are intended to minimize adverse impacts from land-use activities. It is this level of infrequent, minor, incidental take that is intended to be authorized under the Permit. Therefore, incidental take is likely to occur sporadically, and is not expected to nullify the conservation benefits expected to accrue under the CCAA. The actual level of take of Gunnison sage-grouse is largely unquantifiable, but will be monitored through strategies developed in the RCP. Livestock grazing, other agricultural management practices, and housing development are not expected to degrade habitat on a large scale upon issuance of a CI. This is because best management practices will be utilized to meet the goals of agriculture, while also meeting Gunnison sage-grouse habitat and population goals. Housing development will be very limited or nonexistent on properties enrolled in CIs and, therefore, anticipated take from these activities is considered minimal to nonexistent. Some direct impacts could occur from related activities such as farm equipment operation, although there is no evidence that equipment operations have 'taken' grouse in the past. Take also is possible from human disturbance near a lek (i.e., 'take' in the form of harassment) or the injury or death to one or several adults or juveniles by livestock trampling or capture by herding dog.

The Service recognizes that this level and type of take is consistent with the overall goal of precluding the need to list the species, and that if conservation measures outlined in the RCP were implemented on necessary non-Federal and Federal properties, there would be no need to list the species. The incidental take measures will be specific to each of the CI and, therefore, will have to be described for each individual landowner. Consequently, the agencies will ensure that any incidental take that is authorized will be acute and short term and will not reach a level that would prevent attaining the CCAA goal. This conclusion is defended in part by the remediation of threats following implementation of the beneficial conservation measures on non-Federal lands.

Conservation benefits to Gunnison sage-grouse will occur more rapidly under the Proposed Action, relative to Alternatives A and C. Alternative C would require each individual landowner that is interested in conservation efforts to go through the CCAA process independently, which increases the time to complete individual agreements and, therefore, the time that the conservation measures would become fully beneficial to Gunnison sage-grouse. Landowners will likely be more interested in participating in Gunnison sage-grouse conservation efforts if the administrative burden and costs in doing so are minimized. The Proposed Action achieves this need by expediting both the enrollment process and thereby the delivery of the conservation

benefits. Achieving efficiency and success with one landowner will promote a message of successful cooperation among non-Federal landowners and agencies, which would effectively advertise the CCAA approach throughout its boundary. Such a result greatly increases the opportunities for Gunnison sage-grouse conservation above that of Alternative A or Alternative C.

Vegetation - Those landowners who participate in the Proposed Action can be expected to conserve or enhance the vegetative conditions for Gunnison sage-grouse habitat into the future. Some landowners may restore native vegetation, or take steps to otherwise enhance the composition and structure of existing vegetation. Such efforts will be designed to increase the abundance and quality of sagebrush and forbs, which are essential elements defining suitable Gunnison sage-grouse habitat. Generally, any ground disturbance that may occur as a result of these actions would be relatively small, and restricted to occupied Gunnison sage-grouse sites, or those sites with high potential for restoration to suitable habitat conditions. Due to the small scale of vegetative modifications, the effects of the proposed action on the other plant species are expected to be negligible.

Wildlife - The conservation measures implemented on the enrolled lands will be designed to alter vegetative composition and/or structure to promote suitable habitat conditions for the grouse. However, these changes will be a small proportion of the sage-steppe and riparian communities within the CCAA boundary, and will be confined primarily to those non-Federal lands with the greatest potential to increase the abundance of Gunnison sage-grouse. For those wildlife species that are associated with the sage-steppe and riparian communities, there would be some direct benefits. However, it is not possible to quantify the magnitude of the benefit because many of the species may be less dependent on the sage-steppe and riparian habitats than Gunnison sage-grouse, which minimizes the potential to impact their populations. Therefore, we do not anticipate significant impacts to other wildlife species.

Fish and Other Aquatic Species - We do not believe that any measurable beneficial or adverse impacts to fish, amphibians, or other aquatic species will occur with implementation of the action. Since actions to be implemented will enhance the sagebrush and surrounding habitats, any effects should be beneficial.

Federally Listed and Candidate Species - As stated earlier, we have completed an intra-Service biological evaluation to address the potential effects of the proposed action to the federally listed and candidate species. Of those species, we have concluded that the proposed action may adversely affect the Gunnison sage-grouse. We have no records of the federally listed plant species occurring within the CCAA boundary, and they are typically not associated with sage-steppe habitat. Consequently, with the exception of the Gunnison sage-grouse, we do not believe that the proposed action will impact any of the federally listed or candidate species.

Local Communities and Economies - Under the Proposed Action Alternative, the likelihood of listing the species under the ESA is reduced compared to the other alternatives. Providing ESA regulatory assurances to participating landowners should provide for greater certainty that they will continue to operate their businesses without adverse consequences, which should ensure that no adverse results occur to the current economic conditions. The Proposed Action also delegates

all administrative and operational responsibilities to the CDOW. The CDOW's knowledge of the Gunnison sage-grouse, the distribution of suitable habitats, and its rapport with non-Federal landowners, will greatly improve the enthusiasm for and participation in the program and, therefore, the delivery of beneficial conservation measures. The CDOW responsibility for the program will be much more effective in promoting good will for the program than Alternative C, and the inclusion of the regulatory assurances makes it more attractive than Alternative A.

Recreation - It is unlikely that implementation of the proposed action will have any significant consequences to any of the existing recreational activities. Hunting Gunnison sage-grouse is currently prohibited by Colorado regulation, and would be prohibited under all alternatives. If the Gunnison sage-grouse were federally listed, take of Gunnison sage-grouse by shooting also would become a violation of the ESA. The RCP identifies some criteria that would need to be considered before hunting Gunnison sage-grouse could be authorized. The RCP also identifies some guidelines to manage public viewing of Gunnison sage-grouse at leks. With these exceptions, the existing knowledge base of the effects of recreational activities on Gunnison sage-grouse is inadequate to modify any other form of recreational activity in the proposed action area.

Further, under the proposed alternative, recreational activities occurring on covered properties would be managed in accordance with the RCP, thereby resulting in minimal impacts to both the Gunnison sage-grouse and the recreational activities.

C. Alternative C - Landowner by Landowner CCAA

Under this alternative, an umbrella CCAA would not be developed by the CDOW. Individual CCAs would be developed by the Service on a case-by-case basis with those individual willing landowners interested in conserving Gunnison sage-grouse. The CCAA would include a section 10 permit from the Service to protect the landowners against the 'take' prohibition of the ESA, and also would include regulatory assurances.

Effects to Resources

Gunnison Sage-Grouse - More landowners would be expected to participate in Gunnison sage-grouse conservation than under the No Action Alternative, but fewer than under the Proposed Action Alternative. Gunnison sage-grouse would receive benefits under this alternative by implementation of the site-specific conservation measures provided in each individual CCAA. These conservation measures would likely be similar in nature to those under the Proposed Action Alternative, but we believe the resulting scope is likely to be much less because we do not believe it will be as attractive to the public as the Proposed Action. Gunnison sage-grouse conservation would be greater under Alternative C than under the No Action Alternative, since some proactive conservation measures with regulatory assurances would be implemented on non-Federal lands. However, Alternative C would be less efficient than the Proposed Action Alternative because it would not contain an umbrella conservation plan promoting a landscape scale approach, and also would duplicate administrative efforts. Under Alternative C, participating landowners also would be covered under a Permit, which would authorize some

level of incidental ‘take’ of Gunnison sage-grouse, and receive assurances regarding future agreed upon land uses.

Vegetation - Those landowners who participate in the Alternative C can be expected to conserve or enhance the vegetative conditions for Gunnison sage-grouse habitat into the future. Some landowners may restore native vegetation, or take steps to otherwise enhance the composition and structure of existing vegetation. Such efforts will be designed to increase the abundance and quality of sagebrush and forbs, which are essential elements defining suitable Gunnison sage-grouse habitat. Generally, ground disturbance that may occur as a result of these actions would be on a small scale, and restricted to occupied Gunnison sage-grouse sites, or those sites with high potential for restoration to suitable habitat conditions.

Because we believe there will be fewer actions as compared to Alternative B resulting from this alternative, the effects of Alternative C to the plant species is expected to be negligible.

Wildlife - The conservation measures implemented on the enrolled lands will be designed to alter vegetative composition and/or structure to promote suitable habitat conditions for the grouse. However, these changes will be a small proportion of the sage-steppe and riparian communities within the CCAA boundary, and will be confined primarily to those non-Federal lands with the greatest potential to increase the abundance of Gunnison sage-grouse. For those wildlife species that are associated with the sage-steppe and riparian communities, there would be some direct benefits. However, it is not possible to quantify the magnitude of the benefit because many of the species may be less dependent on the sage-steppe and riparian habitats than Gunnison sage-grouse, which minimizes the chance that conservation measures would impact their populations. Therefore, we do not anticipate significant impacts to other wildlife species.

Fish and Other Aquatic Species - We do not believe that any measurable beneficial or adverse impacts to fish, amphibians, or other aquatic species will occur with implementation of the action.

Federally Listed and Candidate Species - As stated earlier, we have completed an intra-Service biological evaluation to address the potential effects of the proposed action to the federally listed and candidate species. Of those species, we have concluded that the proposed action may adversely affect the Gunnison sage-grouse. We believe the degree of adverse effects to Gunnison sage-grouse could be greater under Alternative C than the proposed action because not as many landowners will be enrolled thereby providing fewer conservation benefits to Gunnison sage-grouse.

Local Communities and Economies - Increased conservation measures for Gunnison sage-grouse occurring with the individual landowner agreements would help attain the CCAA goal, which may reduce the likelihood of the species being listed. Providing ESA regulatory assurances to participating landowners should provide for greater certainty than Alternative A for these landowners. Due to limited agency staffing to process individual landowner agreements, the rate of completing individual agreements will be slow relative to the proposed alternative, thereby reducing both the landowner enrollment rate, and the number of conservation measures implemented. Further, as stated above, Federal agency and landowner participation in this

alternative may be less because of negative sentiments regarding the Service administration of a conservation strategy for a non-listed, resident species. There are no foreseeable adverse economic impacts to either individual landowners or local communities with Alternative C.

Recreation - It is unlikely that implementation of the proposed action will have any significant consequences to any of the existing recreational activities. Hunting Gunnison sage-grouse is currently prohibited by Colorado regulation, and would be prohibited under all alternatives. If the Gunnison sage-grouse were federally listed, take of Gunnison sage-grouse by shooting also would become a violation of the ESA. The RCP identifies some criteria that would need to be considered before hunting Gunnison sage-grouse could be authorized. The RCP also identifies some guidelines to manage viewing of Gunnison sage-grouse breeding behavior at leks. With these exceptions, the existing knowledge base regarding the effects of recreational activities on Gunnison sage-grouse is inadequate to modify any other form of recreational activity in the proposed action area.

Further, as stated earlier for the proposed action, under this alternative any recreational activities occurring on covered properties would be managed in accordance with the RCP, thereby resulting in minimal impacts to both the Gunnison sage-grouse and the recreational activities. However, because we anticipate less landowner participation in this alternative than the proposed alternative, we likewise expect less benefit to the Gunnison sage-grouse, and similar effects on the recreational activities.

Table 3. Summary of environmental impacts of each alternative.

ALTERNATIVE	IMPACTS TO SELECTED ENVIRONMENT PARAMETERS				
	GUNNISON SAGE-GROUSE	VEGETATION	OTHER TERRESTRIAL AND AQUATIC WILDLIFE	LOCAL COMMUNITIES AND ECONOMIES	RECREATION
- A - “No Action with RCP”	Gunnison sage-grouse continues decline at all occupied sites; Federal listing proposed in 2005.	Sage-steppe and riparian habitat continues decline. Landowners implement detrimental management practices to discourage Gunnison sage-grouse on their lands.	Limited beneficial effects to those species associated with sage-steppe/riparian habitat. No change to other species from current condition.	Negative public sentiments to Federal listing proposal.	No effect.
- B - “Proposed Action” – Umbrella CCAA	Gunnison sage-grouse abundance and distribution increases; extinction risk reduced, genetic diversity retained; long-term viability ensured; Federal listing precluded or not warranted.	Native species benefit by site-specific rehabilitation and protection associated with individual conservation agreements.	Beneficial impact to species associated with sage-steppe/riparian habitats.	Support for CCAA approach. Some economic benefit to non-Federal landowners by incentive payments for conservation measures.	No effect.
- C - “Landowner by Landowner CCAA”	Gunnison sage-grouse stabilized at some sites; extinction risk unchanged or increased; genetic diversity unchanged or diminished; viability not likely ensured; Federal listing likely warranted.	Native species would benefit from site-specific rehabilitation and protection associated with individual conservation agreements	Beneficial impact to species associated with sage-steppe/riparian habitat.	Negative public sentiment for Federal government lead in CCAA strategy. Some economic benefit to non-Federal landowners by incentive payments for conservation measures.	No effect.

CUMULATIVE EFFECTS

Cumulative effects include the effects of future State, Tribal, local, or non-Federal actions that are reasonably certain to occur in the action area considered in this conference opinion. Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the ESA.

Because the boundaries of individual enrolled lands cannot be delineated at this time, it is not possible to develop a meaningful description of the nature or scope of future non-Federal actions that may occur within the 11-State CCAA boundary. Certainly, there are numerous non-Federal actions that are ongoing or will occur in the future; however, the locations of individual enrolled property owners will not be known until the CCAA becomes operational and willing landowners come forward to participate in the program. While there is no way to predict the distribution or total acreage of lands that will be enrolled during the 20-year period of the CCAA, the CDOW will not issue a CI to any non-Federal landowner if it is determined that ongoing or future actions at the site may compromise the efforts to improve the lands for Gunnison sage-grouse. Consequently, we do not believe that the non-Federal actions on non-Federal lands that may occur in the future will have a bearing on the success of conservation efforts on any individual enrolled property. However, it is conceivable that non-Federal actions on properties that are not enrolled could impair or impede the degree of overall program success. For example, if a landowner chooses to allow mineral development on lands that are suitable for grouse, and those lands are rendered unsuitable following development, the value of the beneficial conservation practices implemented on contiguous or adjacent properties could be reduced. There is no credible method to estimate the level of non-Federal development that may occur throughout the 20-year duration of the CCAA and, therefore, no feasible way to minimize or avoid anticipated adverse impacts at this time.

The purpose of the cumulative effects analysis for a conventional, major construction action, is to assess whether the proposed action, when combined with the other anticipated non-Federal effects, will exceed a threshold of effects that is likely to jeopardize a species survival or recovery. However, in this case the proposed action will be entirely beneficial to the Gunnison sage-grouse (excepting a low level of incidental take). Consequently, while some non-Federal actions will undoubtedly occur that will cause adverse impacts to Gunnison sage-grouse or their habitat, the adverse effects will be lessened, rather than exacerbated, by implementation of the proposed action.

SECTION V. COMPLIANCE, CONSULTATION, AND COORDINATION WITH OTHERS

Environmental justice is achieved when everyone, regardless of race, culture or income, enjoys the same degree of protection from environmental and health hazards and equal access to a healthy environment. None of the alternatives would have an impact upon women, minority groups, or civil rights of any citizen of the United States (Executive Order 12898). The Ute Mountain Ute Tribe and the Southern Ute Indian Tribe also have lands within the Gunnison Basin and can apply for a CI. Therefore, we believe the proposed alternative is in compliance with Secretarial Order 3206.

SECTION VI. PUBLIC REVIEW AND COMMENT

The Service will make the CCAA available for public review and comment through publication in the Federal Register. The Service also will make this EA available to anyone by request, and following pertinent ESA and National Environmental Policy Act regulations and policy. The Service will send copies of the CCAA, and this draft EA directly to interested individuals including--Native American Tribes, non-Federal landowners, County Commissioners, congressional and State representatives, State and Federal agencies, and other potentially interested parties. The RCP is available on the web at http://wildlife.state.co.us/species_cons/Gunnison_sage_grouse/.

DRAFT

SECTION VII. REFERENCES

- American Ornithologists' Union. 2000. Forty-second supplement to the American Ornithologists' Union Checklist of North American Birds. *Auk* 117:847-858.
- Apa, A.D. 2004. Habitat Use, Movements, and Survival of Gunnison Sage-grouse in Southwestern Colorado: A Preliminary Report. Denver, Colorado: Colorado Division of Wildlife (unpublished). 73 pp.
- Bureau of Land Management. 2005. Planning website. http://www.blm.gov/nhp/spotlight/state_info/planning.htm. (Go to specific state websites for Resource Management Plans).
- Colorado Department of Agriculture. 2003. 8 CCR 1203-19: Rules pertaining to the administration and enforcement of the Colorado Noxious Weed Act. <http://www.ag.state.co.us/DPI/weeds/statutes/weedrules.pdf>. Site accessed November 15, 2004 (in RCP (GSGRSC 2005)).
- Colorado Division of Wildlife. 2003. Candidate status review to U.S. Fish and Wildlife Service. Colorado Division of Wildlife, Grand Junction, Colorado, U.S.A.
- Kahn, N.W., et al. 1999. Molecular analysis of genetic variation among large- and small-bodied sage-grouse using mitochondrial control-region sequences. *Auk* 116:819-824.
- Oyler-McCance, S.J. 1999. Genetic and Habitat Factors Underlying Conservation Strategies for Gunnison Sage-Grouse. Ph.D. Thesis. Colorado State University. 162 pp.
- Gunnison Sage-Grouse Rangewide Steering Committee. 2005. Gunnison Sage-Grouse Rangewide Conservation Plan. Colorado Division of Wildlife, Denver. 359 pages with appendices and maps. http://wildlife.state.co.us/species_cons/Gunnison_sage_grouse/.
- Schroeder, M.R., 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, D.L. Mitchell, E.V. Rickerson, and S.J. Stiver. 2004. Distribution of sage-grouse in North America. *Condor*:106:363-376.
- Schroeder, M.R., J.R. Young, and C.E. Braun. 1999. Sage-grouse (*Centrocercus urophasianus*). In A. Poole and F. Gill, eds. *The Birds of North America*, No. 425. Philadelphia: The Birds of North America, Inc.
- USDA Forest Service. 2005. Website for Region 2 Projects and Plans. <http://www.fs.fed.us/r2/projects/> (Go to individual Forest websites for Forest Land and Resource Management Plans).

U.S. Fish and Wildlife Service and National Marine Fisheries Service.1999. Announcement of Final Policy for Candidate Conservation Agreements with Assurances. Federal Register 64(116):32726-32736.

Young, J.R. 1994. The Influence of Sexual Selection on Phenotypic and Genetic Divergence among Sage-grouse Populations. Ph.D. Thesis. Purdue University. 123 pp.

Young, J.R., et al. 2000. A new species of sage-grouse (*Phasianidae: Centrocercus*) from southwestern Colorado. *Wilson Bulletin* 112:445-453.

DRAFT