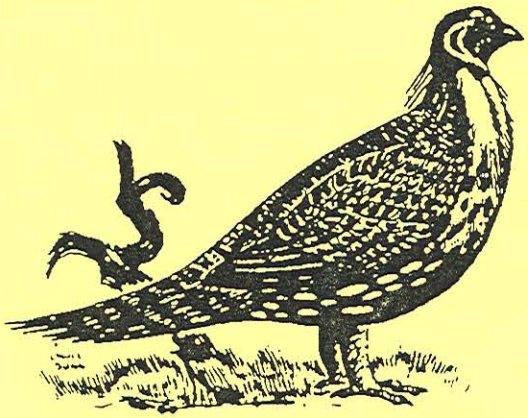
THE PONCHA PASS GUNNSION SAGE GROUSE CONSERVATION PLAN



FINAL

MARCH 21, 2000

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I. PREAMBLE

Sage grouse in southwestern Colorado occur in eight highly fragmented populations scattered in six different counties. These sage grouse have recently been recognized as a separate species with less than 4,000 breeding individuals. Because of fragmentation, distribution and limited size of each population there is concern that this species will become a candidate for federal endangered or threatened status with the United States Fish and Wildlife Service (USFWS). Biologists and concerned parties involved with efforts on the discreet populations have been sharing information on attempts to develop effective strategies to maintain and improve sage grouse populations.

The Poncha Pass Gunnison Sage Grouse Work group is a local level multi-interest group including affected landowners, land use agencies (Bureau of Land Management (BLM)) and the Colorado Division of Wildlife (CDOW). The common goal of the group is to develop a plan to preserve and enhance Gunnison sage grouse populations and habitats, while respecting private landowner rights, maintaining local control and incorporating economic, social and cultural values. The work group exists to help coordinate and support local efforts to achieve this goal over a five year period.

II. THE PLAN AND ITS PURPOSE

This document establishes a process and a framework that will guide management efforts directed at improving sage grouse habitat and reversing the long-term decline of the Gunnison Sage Grouse in the Poncha Pass area. Central to this process is the idea of landowner and agency involvement in determining appropriate management activities designed to meet jointly developed goals and objectives. This plan guides that effort.

The purpose of the Poncha Pass Sage Grouse Conservation Plan (the plan) is to provide for coordinated research and management across jurisdictional/ownership boundaries and to develop support that is necessary to assure the well being of the sage grouse species. Designed to be dynamic, the plan will be flexible enough to include new information and issues, as well as results from previous conservation efforts. It will also be designed to ask questions and collect data necessary to develop solutions for future resource management decision making.

III. GUIDING PRINCIPLES

This overall general objective is designed to guide sage grouse and other resource management efforts, particularly the selection of conservation actions and the way in which they are implemented.

1. Promote working group involvement in planning, implementation and decision making.

2. Maintain an atmosphere of cooperation and participation among the CDOW, land managers and affected private landowners.

3. Implement conservation actions in a way that meets the needs of sage grouse and is least disruptive and encourages the development of a stable and diverse economic base in Saguache County.

4. Respect individual views and values and implement conservation actions on a collaborative basis in ways that have broad support.

5. Make every effort among working group participants to seek efficiency and integration of efforts, and to select conservation actions that also promote other land-health or resource-management objectives whenever possible, especially among agencies in the implementation of conservation actions.

6. Distinctive from other sage grouse conservation plans, the Poncha Pass plan will emphasize scientific field research and monitoring in order to discover the biological issues that threaten this species' well being. This research will seek to discover what issues positively and negatively affect sage grouse.

IV. BACKGROUND

Concern about the status, declining populations and the long-term survival of the Gunnison sage grouse started to surface in the early 90's. In 1995 the Gunnison Sage Grouse Plan for the Gunnison Basin in Colorado was started. The plan was designed to establish a process and put into place a framework that would guide management efforts aimed at improving sage grouse populations and reverse the long-term decline of the Gunnison sage grouse.

The Gunnison sage grouse plan, completed in June of 1997, dealt with the major population of Gunnison sage grouse but did not address the six remaining

subpopulations scattered throughout southwest Colorado. It was decided that each subpopulation would need a separate plan with local input of prime importance. In the San Luis Valley one subpopulation remained in the Poncha Pass area. In August 1997 the first meeting of the San Luis Valley sage grouse group brought together landowners, resource agencies, environmental groups and interested publics. At a later meeting this group decided a conservation plan was needed for the Poncha Pass sage grouse.

This plan will consist of two main sections. The first part, the Conservation Assessment, describes sage distribution and factors that influence or affect sage grouse. The second part, the Conservation Strategy, outlines the goals and objectives, conservation actions, an implementation plan and monitoring requirements.

V. CONSERVATION ASSESSMENT

A. Area Boundary

The area used and potentially used by Gunnison sage grouse in the Poncha Pass area is in Saguache county south of the Chaffee county boundary on the north, extending south for about six miles on either side of U.S. Highway 285. It is bounded on the east and west by the Rio Grande National Forest Boundary and on the south by the east-west section boundary 4 miles north of the east-west border of township 47N and 46N. The area within this boundary encompasses about 17,280 acres (27mi. sq.) Of which ~ 11,520 acres (18 mi. sq.) are managed by the Bureau of Land Management, 640 acres (1mi. sq.) by the Colorado State Board of Land Commissions, and 5,120 (8 mi. sq.) acres are privately owned. Most of the area is managed for domestic livestock grazing, wildlife, recreation, and watershed values. Less than 10,000 acres are believed to be used at present by sage grouse due, primarily, to the presence of U.S. Highway 285 and three power lines west of 285 that bisect the area from northwest to southwest. (Figure 1)

Delineation of the boundary was based on known use sites and sage grouse observations, as well as the presence of sagebrush-dominated habitats. Substantial areas of rural dwellings, power lines and U.S. 285 are included within the boundary. While this was necessary to include all areas with potential for habitat development to benefit an expanded Gunnison sage grouse population, no inference on future changes in present land uses are inferred by the boundary delineated. Participation in this plan on the part of landowners is strictly voluntary.

B. Species Description

Description

Northern sage grouse (Centrocercus urophasianus) are large (2.4-7.2 lbs.) brown/gray chicken-like birds with conspicuous black (belly, underthroat) and white markings (breast of males, undertail converts). They are brown gray barred with black above, and have rounded brown wings with some black barring. Males during the breeding season (Mar-May) have conspicuous neck plumes, white upper breast with yellow-green air sacs and prominent, long spiked tail feathers. Both sexes have yellow green eye combs, which are less prominent in females, and a fringe of pectinations along the toes which are most noticeable in winter and early spring. Males weigh from 4 to 7 pounds, while females weigh from 3 to 4 pounds.

Gunnison sage grouse (Centrocercus minimus) found in southwestern Colorado differ in size (males are 3 to 4 lbs., vs. 4 to 7 lbs. in northern Colorado; females are 2 to 3 lbs. vs. 3 to 4 lbs. in northern Colorado), bill shape and size, and tail patterns (larger, more distinct white barring of tail feathers). The mating behavior of the Gunnison sage grouse differs markedly from that of the large-bodied sage grouse in northern Colorado.

Habitat Requirements of the Gunnison Sage Grouse in the Poncha Pass Area

Habitat needs for sage grouse in the Poncha Pass area of Saguache County relate to survival over winter (Nov-Mar), escape cover adjacent to lek sites (Mar-May), nesting cover (Apr-Jun), early brood-rearing habitat (May-Jun), late brood-rearing habitat (Jul-Aug), and fall habitat (Aug-Oct). Of these habitats, winter, nesting, and early brood rearing are most important with suitable escape cover near leks of near equal importance.

Winter Habitat

Sage grouse extensively use mountain big sagebrush and black sagebrush areas east of San Luis Creek. Some of these areas have significant amounts of Gambel oak present. Adequate winter habitat may be limiting because habitat may be unavailable in some years from January into March because of snow depth. Food eaten in winter primarily appears to be leaves of mountain big sagebrush and black sagebrush.

Lek Habitat

Suitable habitats for display do not superficially appear to be limited anywhere in the Poncha Pass area. However, numbers of males on known active leks are low, probably because of small population size. This does not appear to be related to quality of lek sites but instead may be related to the reduced amount and quality of total sagebrush-dominated habitats at those sites. Sites presently used for display are in native rangeland with taller (>20 in.) sagebrush in near proximity to display sites. Presence of taller sagebrush (mountain big sagebrush) with a lack of taller coniferous shrubs/trees and other obstructions appears to be critical for continued use of these sites by displaying male sage grouse.

Nesting Habitat

In general, sage grouse hens select sites for nesting with taller, more dense sagebrush (>20 in.,>25% canopy cover). These sites are frequently at slightly higher elevations (upper edge of the occupied habitat) where moisture allows greater and more robust grass and forb cover (>25 and 8% respectively, >6 in. total herbaceous height). Nests are typically at the base of taller (>20 in.) sagebrush plants.

Early Brood Habitat

The description of this habitat at hatch is identical to nesting habitat with hens moving their young chicks (<5-10 days of age) into areas dominated by forbs and grasses (including hay fields) with <20% live sagebrush canopy cover. Hens select drainage channels in the sagebrush type that have abundant forbs and moisture that provide insects for the chicks . Grass and forbs dominate at all known use sites with a definite preference for live sagebrush escape cover (>20 in. in height).

Late Brood Habitat

Hens with older broods prefer moist drainage channels and edges of hay fields. Forbs and grasses dominate at preferred use sites with some live sagebrush and other deciduous shrubs, (Gambel Oak). Shrub cover is important for escape while most foraging is on forbs.

Fall Habitat

Sage grouse of all ages and gender continue to use habitats identical to those used by broods in July and August until plants become desiccated (several successive killing frosts) heavily grazed, or harvested (hay fields). Taller sagebrush (>20 in.) with more canopy cover (>20%) becomes more important. Use increases on north and west facing slopes and diets change gradually from a high proportion of forbs to a high proportion of sagebrush. Drainage channels and edges of hay fields continue to be

heavily used until major snow events. During extensive snow cover, in late fall and early winter, use of mountain big sagebrush and black sagebrush stands is extensive.

C. Species Status and Distribution

Geographic Distribution

Two races of sage grouse have been described with the Western race occurring in west-central Oregon and Washington and the Eastern race from eastern Oregon east, north, and south throughout the described distribution. More recently, a 3rd group of sage grouse has been described from southwest Colorado. This group differs from all other sage grouse populations studied by being significantly smaller in size, having different breeding behaviors and specialized feathers, and having a markedly narrow (one) range of genetic haplotypes. The present distribution of the Gunnison sage grouse is south of the Colorado-Eagle rivers in Colorado extending east to the Arkansas River and San Luis Valley. It also occurs east of the Colorado River in extreme southeastern Utah. The Colorado Natural Heritage Program has ranked the Decker Creek site as a very high significance area. This is because the Gunnison sage grouse is listed as critically imperiled both globally and in Colorado, and is vulnerable to extinction throughout its range.

Historic/Current Status of the Gunnison Sage Grouse

Rogers (1964) reported that all big sagebrush-dominated habitats in the San Luis Valley were historically used by sage grouse. The historic distribution was highly fragmented by habitats dominated by rabbitbrush and greasewood. It is believed that the historic population disappeared from the Poncha Pass area sometime before the 1930's.

In the early 70's the CDOW and the BLM reintroduced Gunnison sage grouse into the Poncha Pass area from the Gunnison basin. Seventeen sage grouse where reintroduced in the spring of 1971 and 13 to 15 additional birds were reintroduced in the spring of 1972. These birds have persisted to the present. In the mid-1980's it is believed the birds ranged from Poncha Pass south to the end of the sagebrush habitat At that time there may have been over 100 birds in the population. From anecdotal information it is believed the birds were doing fairly well until 1992 when during a legal hunting season up to 25 sage grouse where harvested. An apparent decline in the number of sage grouse and the range they occupy has been observed since 1992.

Presently, sage grouse are known to occur in Saguache County about 4 miles north of the east-west border of township 47N and 46N north to about 5 miles from the top of Poncha Pass on the east side of U.S. Highway 285 to the U.S. Forest Service boundary.

There is currently one known lek site within the Poncha Pass area. Leks have been monitored sporadically for the past 7 years by the CDOW. During the last several years the population appears to be in a sharp decline.

Gunnison sage grouse presently have no federal status with the U.S. Fish and Wildlife Service, Bureau of Land Management, or U.S. Forest Service. Recent scientific research indicates a decline in population numbers for the Gunnison species in southwestern Colorado. Therefore, there is a potential that the U.S. Fish and Wildlife Service will list this species as threatened or endangered.

Population Monitoring

Counts of male prairie grouse on leks provide managers with an estimate of minimum population size. Studies of sage grouse across western North America indicate there are about 2 females for each male in the spring population. Thus, if the number of males is known, it is possible to calculate a minimum population size. It is important to recognize that a count will not represent all males in the population and that any calculated population estimate will be lower than the actual population size.

Area and District personnel of the CDOW were requested, starting in the 1950's, to document sage grouse presence and general trends within specific areas. Thus, locations of active leks and counts of males on leks were recorded. Generally, only accessible leks were counted and intensive searches for new or relocated leks were not made because of manpower and equipment priorities. Searches and counts were sporadic as firm procedures were not in place. Consequently, lek count data prior to 1991 reflect only general trends in the sage grouse population. Procedures changed in the mid 1990's and now follow standard protocols (Appendix A). At Poncha Pass, lek searches were first done in 1991 and 2 lek sites were found. Surveys were intensified starting in 1997. In 1999 only one lek was found containing 5 males.

Population Size

Intensive fieldwork during the spring and summer of 1999 has shown that the population is critically low. It is estimated that the maximum population is between 15 and 20 birds and a possible minimum of only six birds with only one male. There is a

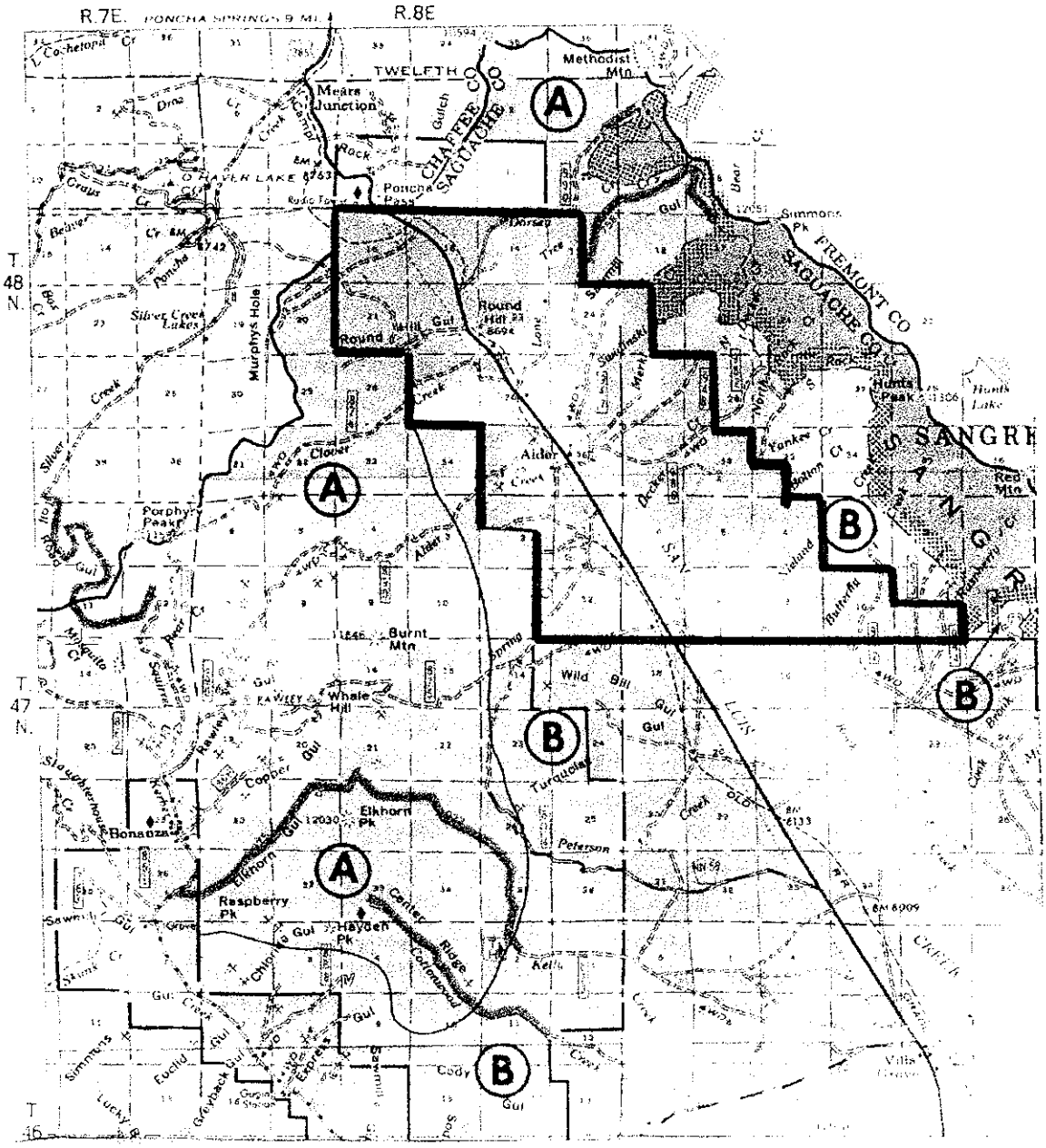

Figure 1.

PONCHA PASS GUNNISON SAGE GROUSE STUDY AREA

strong possibility that this population will disappear unless another reintroduction is undertaken.

Population Goals

A reasonable and desired minimum spring population goal for the Poncha Pass area would be to have at least 2 active leks with an average of 10 males per lek for a total counted male population of 20 birds. If this number represented 75% of the males in the population there should be 27 males in the population and 54 females (2 X # males) for a total of 81 grouse. It is estimated that the maximum sustainable population under optimum conditions might be 180 grouse.

VI. CONSERVATION STRATEGY

A. Objectives

Using the population goal outlined above as a target, the Poncha Pass Gunnison sage grouse work group developed general objectives. These general conservation objectives were developed from issues or factors that have been identified or have yet to be identified as contributing to the declining population size of sage grouse or affecting the quantity or quality of sage grouse populations in the Poncha Pass area.

The purpose of these general conservation objectives is to guide the identification of conservation actions. These objectives are also useful to explain the overall thrust of the conservation strategy. Three dominant themes or categories emerged which helped frame these general objectives. These three objectives are:

1. Discover through field research and monitoring, issues that positively or negatively affect the well being of sage grouse and incorporate this information in management actions to their benefit.

2. Protect and improve sage grouse habitat, as appropriate, by reduction, prevention and/or mitigation of habitat fragmentation.

3. Identify and manage physical disturbances to reduce adverse effects to sage grouse.

1. Factors that affect sage grouse

Many factors can affect the well being of sage grouse (see "Issues that affect sage grouse populations and their habitat" below). These issues can be categorized as

vegetative issues, other biological issues and land issues. Generally, in addition to genetic bottlenecks, the group of factors that affect habitat quality and/or fragmentation (discussed in the following section) are considered to be the most important to sage grouse recovery. Habitat quality is an indication of how well habitat meets the needs of sage grouse.

2. Sage Grouse Habitat Loss/Fragmentation

Loss of sage grouse habitat refers to areas that once provided habitat, but no longer do because that habitat no longer exists, is fragmented, or is not available. It should be thought of as a permanent loss. An example of habitat loss occurs when a subdivision occupies an area that once was a sagebrush community.

Fragmentation refers to the distribution or location of habitat in terms of its physical position or connectiveness.

3. Physical Disturbance to Populations

This refers to direct physical disturbance to sage grouse. Physical disturbance can result in sage grouse death or exert stress particularly if disturbance occurs during biologically critical periods.

Issues that affect sage grouse populations and their habitat:

Biological Elements

- genetic bottleneck
- poor nest and brood survival
- predators (humans, coyotes, ground squirrels, badgers, eagles and other raptors)
- harassment of the grouse on the lek
- conflicting land uses during critical biological activity periods
- monitoring/research
- disease
- adequate population size

Vegetative Habitat

- poor habitat quality and quantity
- lack of grasses and forbs
- condition of winter habitat
- drought

Land Planning/Mitigation
- fragmentation
- loss of topsoil & productivity
- changes in land uses
- people and pet encroachment
- recognition of private landowners rights
- mining & exploration
- recreational uses
- hunting
- travel management

Land Treatments
- timing, intensity and duration of livestock/big game grazing
- affects of land treatments on winter habitat
- poor management of land treatments
- fire management
- lack of habitat management/need for habitat management

Utilities
- power lines
- roads
- fence designs
- pipelines

*Unknown Issues, yet to be discovered.

B. Conservation Actions

Introduction

The backbone of the Sage Grouse Conservation Plan is its goals and objectives, which together establish a framework for developing conservation actions. Conservation actions are designed to be consistent with the plan's goals and also to meet one or more objectives. These actions also address issues that affect sage grouse, and/or their habitat. Due to the interrelationship of the habitat components, resource values, and issues, many actions may apply to more than one objective. However, to avoid duplication, these actions have been listed under the objective where the link is most direct. Any additional actions identified at a later date will be analyzed by the Poncha

Pass Gunnison Sage Grouse Work Group for application and design to ensure appropriateness and compliance with the goals and objectives set forth in this plan.

Implementation

Plan implementation will be priority-based, starting with those actions the Poncha Pass Sage Grouse Work Group believes to be most effective at accomplishing their goals. This group recognizes the need to be opportunistic and carry out specific conservation actions as situations present themselves. For instance, a particular conservation action might be implemented sooner than scheduled, if funding became available, or a group or individual came forward to help with completing a task. A specific example is the immediate action taken by the group when the need to transplant birds was recognized.

Some actions have already begun or are ongoing, particularly the fieldwork and monitoring of the birds, as well as livestock management efforts. Other actions would need to be done continually throughout the plan. These are normally a matter of policy or require small changes in the way resources are managed and land use activities take place. Sometimes a land use has to be proposed or initiated by a third party before the conservation action can be applied.

The process or mechanism to accomplish implementation of the Poncha Pass Gunnison Sage Grouse Conservation Plan is generally to rely on each Poncha Pass Gunnison Sage Grouse Working Group member or entity to implement to the best of their ability actions for which they have responsibility for, or an interest in seeing completed. Specific steps or tasks needed to carry out a conservation action will be developed as the implementation proceeds. Cost estimates, including those for monitoring and evaluation will be identified. Many actions, such as vegetation treatments are costly, and will be dependent on seeking cooperative funding from many partners, and possibly outside sources, such as grants. Because fieldwork, monitoring and scientific data collection is the cornerstone of our plan, this working group recognizes that fulfilling our research goals will require particular attention to acquiring adequate funding. Every effort to leverage money and resources will be made.

Because of the long time frame required to accomplish the plans goals, it is important to track the progress in meeting those goals. At least twice a year, the Poncha Pass Working Group will meet to examine accomplishments and keep the plan on track. Fieldwork will continue to be summarized monthly. As actions are completed they will become part of the yearly progress report that will be compiled by the CDOW.

An important part of the progress report and meeting will be to discuss and document any exceptions to, or deviations from planned accomplishments. Inadequate funding may preclude the completion of an action in a given period. In this instance, an adjustment to the implementation sequence would be needed. What is important, is to show continual progress toward accomplishing the goals in the plan.

Monitoring, Evaluation and Adaptation

Monitoring data will be gathered and used to evaluate progress in meeting the goals and objectives of this plan. Monitoring will be coordinated to insure that data collected will provide the needed information to assess the on-the-ground management actions and to measure progress in resolving biological issues, resource problems and conflicts that adversely affect the bird. This coordination will include appropriate consultation and cooperation with rangeland users to include mining and exploration, general public, landowners, academia, private organizations and local, State, and Federal agencies. Direct involvement by interested parties in the collection of data, and in subsequent evaluations based on these data, will add to the credibility of monitoring results.

It is important that all field monitoring information can be easily accessed by those interested in reviewing the data. Monitoring the response of the Gunnison sage grouse population to conservation actions will be measured by total number of active leks, and total number of males counted in the Poncha Pass area. The number of active leks and total males will reflect winter survival, as well as chick production in the previous year. Changes in habitat quality which result from the implementation of planned actions will be monitored using techniques applicable to the specific project or action.

Monitoring will be research and science driven with the objective being to add to the scientific knowledge of the Gunnison sage grouse. This body of research will be shared with other working groups, land managers both public and private, and academics.

Evaluations initiated by CDOW, USFWS, land management agencies, working group members and other parties affected by our actions may be conducted anytime during the implementation of this plan. The goal of evaluation is to determine whether progress is occurring and, if progress is not occurring, to identify adjustments to the plan or its implementation. Monitoring and research will be coordinated by the CDOW's sage grouse researcher.

CONSERVATION ACTIONS / IMPLEMENTATION

Conservation Actions Relating to Inventory and Mapping	When	Who
Identify and map potential sage grouse habitat.	Ongoing	CDOW/BLM
Inventory the current sage grouse population in the Poncha Pass area.	Ongoing	CDOW/BLM
Identify and map current nesting, brood rearing , lek and winter sage grouse habitat.	Ongoing	CDOW/BLM
Identify and map high priority or critical riparian habitats in sage grouse habitat.	Ongoing	BLM/CDOW with Working Group
Ground truth current sagebrush habitat maps.	Ongoing	BLM/CDOW
Inventory vegetation in the Poncha Pass area to compare with habitat requirements in lek, nesting\brooding\rearing and winter habitats.	Start 6/2000	BLM/CDOW grant
Inventory big game use on sage grouse habitat by use of browse transects.	Start spring 2000	CDOW
Identify and map potential impacts from power line corridors to sage grouse and their habitat.	Ongoing	BLM
Identify and map roads including roads open to Off-Highway Vehicles travel which impact sage grouse habitat.	Ongoing	BLM
Identify and map proposed land treatments that have the potential to impact sage grouse and their habitat.	Winter 2000/2001	BLM/CDOW
Periodically review and update maps so they can be used to determine changes in sage grouse habitat.	As Needed	Working Group

Conservation Actions Relating to Research	When	Who
Use research specific to Gunnison sage grouse and apply to the San Luis Valley.	Ongoing	CDOW/BLM
Initiate research to investigate ways to minimize raptor use of power lines and fencepost for perches in predation of sage grouse.	Ongoing	BLM/CDOW
Initiate research to determine the success of the proposed sage grouse transplant.	2000	CDOW
Publish Gunnison Sage Grouse research in scientific journals.	2001	CDOW, other qualified researchers.
Determine how present land management in the Poncha Pass area is affecting sage grouse and sage grouse habitat.	Ongoing	BLM/CDOW
Carefully design, collect and distribute research data on physical disturbances to minimize negative impacts to sage grouse.	Ongoing	BLM/CDOW

Conservation Actions Relating to Monitoring	When	Who
Monitor vegetation in seasonal critical areas every two years and report trends.	Starting 2000	BLM
Monitor sage grouse populations in current and transplanted populations yearly and report trends.	Ongoing	CDOW
Monitor habitat improvement projects to insure they are meeting the habitat requirements.	As Needed	Working Group
Monitor changes in sage grouse habitat caused by land use changes.	As Needed	Working Group
Construct and monitor one or more exclosures in sage grouse habitat to determine vegetative potential.	2001	BLM

Conservation Actions Relating to Habitat Quality	When	Who
Determine how current land management in the Poncha Pass area is affecting sage grouse and sage grouse habitat.	Ongoing	BLM/CDOW
Identify and map potential impacts from roads to sage grouse and their habitat.	Ongoing	BLM
Use successful management techniques developed on Gunnison sage grouse ranges to improve habitat in the San Luis Valley.	Sometime in the future	BLM
If needed, manage big game herds to protect sage grouse habitat.	After effects are determined	CDOW
Initiate the collection of data for evaluating any sage grouse habitat improvement projects conducted in accomplishment of this plan=s goals.	After effects are determined	CDOW/BLM
If needed enhance riparian areas to benefit sage grouse production and chick survival by maintaining and protecting buffers along riparian areas, hay meadows and grazed pastures.	After effects are determined	Working Group
Manage existing and new utility lines to remove impacts to sage grouse.	As opportunity arises	Working Group
If needed manage roads and trails to minimize impacts on sage grouse habitat and sage grouse.	After effects are determined	BLM, Working Group
Avoid actions which would result in fragmentation of sage grouse habitat.	As Needed	Working Group
Manage sage grouse habitat to meet the habitat requirements of this plan.	After plan approval	Working Group
If needed implement livestock grazing management practices to solve problems with season, frequency, intensity and/or duration to meet the habitat requirements of this plan.	Ongoing	BLM
Design and manage future land treatments to improve or at least not degrade sage grouse habitat.	After effects are determined	Working Group

Conservation Action Related to Information, Education and Coordination	When	Who
Develop and distribute information about the value and importance of sage grouse and sage grouse habitat through the use of presentations, information brochures, videos, press releases, field trips, with an emphasis on youth education.	Winter 2000	Working Group
Coordinate the management of sage grouse habitat with all parties including agencies, private landowner and non-governmental organizations.	Ongoing	Working Group
Provide maps to public land agencies, Colorado Division of Wildlife, Saguache County, interest groups and landowners.	Ongoing	BLM/CDOW
Facilitate County\Agency interaction by designating a sage grouse contact person to interface with county planning.	Feb. 2000	Jeff Shook
Create an annual progress report.	Yearly	CDOW

Conservation Actions Related to Permanent Habitat Loss	When	Who
Encourage clustering, density credits, development right transfers, land exchanges, etc. to prevent loss of sage grouse habitat.	Ongoing	Working Group
Encourage the County to offer incentives to developers who protect and enhance sage grouse habitat.	Ongoing	Working Group
Develop a list of incentives programs and who offers them which could be used to prevent the loss of sage grouse habitat.	Ongoing	Working Group
Discourage land treatments known to be negative for sage grouse.	Ongoing	Working Group
Develop conservation agreements with private landowners.	Ongoing	Working Group
Monitor and encourage appropriate planning and zoning issues.	Ongoing	Working Group

Conservation Actions Related to Physical Disturbance	When	Who
Carefully collect management and research data to minimize negative impacts to sage grouse.	Ongoing	BLM/CDOW
Continue with no hunting season in the Poncha Pass area.	Ongoing	CDOW
Lessen the physical impacts motorcycles and Off-Highway Vehicles have on sage grouse and their habitat.	After effects are determined	Working Group
Deter poaching of sage grouse by increased law enforcement and education.	Ongoing	CDOW
Manage recreational use within sage grouse habitat to reduce impacts on sage grouse.	After effects are determined	Working Group
Manage motorized and mechanized travel by imposing seasonal use restrictions and using designated routes to minimize impact to sage grouse and their habitat.	After effects are determined	Working Group
Plan or permit organized events to avoid impacting sage grouse habitat.	As needed	Working Group

VII. GLOSSARY

Big Sagebrush - As referred to in this plan, includes the following species of sagebrush: *Artemisia tridentata* tridentata- Basin big sagebrush, A. t. vaseyana - Mountain big sagebrush.

Genetic bottleneck- Populations of animals may undergo fluctuations or have low numbers because of biological constraints. These constraints usually relate to low genetic diversity caused by a Afounder effect@ (small number of individuals in the initial population), inbreeding (few reproducing individuals), and deleterious genetic mutation. All of these factors could effect egg production, egg fertility, hen quality, male quality, survival of young, etc. and ultimately lead to population extinction.

Black Sagebrush - Artemisia nova

Canopy Cover - The percentage of ground covered by a vertical projection of the outermost perimeter of the natural spread of foliage of plants. Small openings within the canopy are included.

Ecological Site - A kind of land which differs from other kinds of land, in its potential natural community and physical site characteristics and thus differs also in its ability to produce vegetation and in its response to management.

Ecological Status - The present state of vegetation and soil protection of an ecological site in relation to the potential natural community (PNC) for the site. The vegetation rating is an expression of the relative degree to which the kinds, proportions and amounts of plants in a community resemble that of the potential natural community. The four ecological status classes correspond to 0-25, 26-50, 51-75, or 76-100% similarity to the PNC and are called early seral, mid seral, late seral and PNC, respectively. Soil status is a measure of present vegetation and litter cover relative to the amount of cover needed on the site to prevent accelerated erosion.

Habitat – The environment in which an organism or biological population usually lives or grows.

Haplotype - A single genetic marker found in blood, tissues, and feathers; usually associated with mitochondrial DNA analysis.

Integrated Weed Management - a strategy using a comprehensive, interdisciplinary approach to weed management. The purpose of integrated weed management (IWM)

is to achieve healthy and productive natural and agricultural ecosystems through a balanced program. This program includes, but is not limited to, education, prevention measures, good stewardship and control methods.

Lek - An arena where male sage grouse display for the purpose of gaining breeding territories and attracting females. These arenas are usually open areas with short vegetation within sagebrush habitats, usually on broad ridges, benches, or valley floors where visibility and hearing acuity are excellent.

Lek Area - The geographic area that includes all closely allied lek sites within 1 mile. This geographic area is usually stable over time.

Lek Count -The high count of males from all lek sites on the same day; which are taken at 7-10 day intervals between late March and mid May.

Lek Site - A particular site where sage grouse gather for display and mating in spring (Mar-May). The actual site used can vary daily, seasonally, and yearly.

Managers - This group includes both privately (usually landowners) and publicly (city, county, state, and federal) employed individuals who make decisions that affect land management that may impact sage grouse. Also included are those individuals that may influence policy that could affect decisions made by both public and private managers.

Potential Natural Plant Community (PNC) - The biotic community that would become established if all successional sequences were completed without interferences by man under the present environmental conditions. The potential natural plant community of an ecological site is the assumed end point of natural succession for that site in the absence of disturbances and physical site deterioration. It is the plant community that is best adapted to a unique combination of environmental factors and that is in dynamic equilibrium with the environment. Natural disturbances, such as drought, wild fires, grazing by native fauna, and insects are inherent in the development of any natural plant communities.

Strutting Ground -See Lek.

Uncommon - A term used by bird watchers, in reference to sightings or observations and may be defined as seeing sage grouse or recent sign 20% of the time in the field in suitable habitat, for example one in five days.

VIII. LITERATURE CITED

Rogers, G. E. 1964. Sage Grouse investigations in Colorado. Colorado Game, Fish, and Parks. Tech. Publ. 16. 132pp.

SIGNATURE PAGE

By signing below, the following parties have agreed to implement the Poncha Pass Gunnison Sage Grouse Conservation Plan to the best of their organizational ability.

Jerry A. Apker — 2-17-00

Jerry Apker, Area Wildlife Manager, Area 17 Monte Vista Colorado Division of Wildlife — DATE

Thomas Goodwin — 2/22/2000

Thomas S. Goodwin, District Ranger\Field Office Manager U.S. Forest Service\USDI Bureau of Land Management — DATE

Chuck Warner per S. Crowe — 2/21/00

Chuck Warner, Nature Conservancy — DATE

Stanley Crowe — 2/21/00

Stanley Crowe, LD Ranch — DATE

Ed Oliver — 2-21-00

Ed Oliver, Oliver Ranches — DATE

Gerald W. Grey — 2-21-00

Gerald Grey, Fullenwider Ranch Inc. — DATE

Roy Oliver — 2-21-00

Roy Oliver, President San Luis Valley Cattlemen's Association — DATE

Mike Oliver

Mike Oliver, Chairman, Saguache County Commission — DATE

Bill McClure — 3-7-00

B.11 ~~Mike~~ McClure, Saguache County Commissioner — DATE

Joe W. Alexander — 3/7/00

Joe Alexander, Saguache County Commissioner — DATE

Members of the Public — 2/21/00 — DATE

Members of the Public — DATE

APPENDIX A

INSTRUCTIONS FOR GROUSE LEK COUNTS

THE GROUSE LEK AND ROUTE FORMS ARE INTENDED TO STANDARDIZE THE DATA WE COLLECT. PLEASE FOLLOW THE STEPS OUTLINED BELOW.

1) CONDUCT ALL COUNTS BETWEEN 30 MINUTES BEFORE SUNRISE AND 2 HOURS AFTER SUNRISE.

2) OBTAIN A MINIMUM OF 3 COUNTS AT 5 MINUTE INTERVALS OF EACH LEK ON EACH DATE COUNTED. A COUNT OF FEMALES, MALES, AND UNKNOWN BIRDS IS ALWAYS PREFERABLE TO A FLUSH COUNT. HOWEVER, SOMETIMES THAT TYPE OF COUNT IS NOT ALWAYS POSSIBLE. IF WHEN YOU ARRIVE AT THE LEK, IT IS APPARENT THAT YOU WILL NOT BE ABLE TO COUNT ALL OF THE BIRDS (DUE TO WEATHER CONDITIONS, LOCATION OF THE LEK IN RELATION TO THE TOPOGRAPHY OR VEGETATION, ETC) THEN YOU SHOULD FLUSH THE BIRDS, OBTAIN A TOTAL BIRD COUNT, AND MOVE ON TO THE NEXT LEK.

3) TIME: OF YEAR VARIES STATEWIDE AND FROM SPECIES TO SPECIES. THE FOLLOWING ARE SUGGESTED TIME FRAMES BY SPECIES. IDEALLY, YOU SHOULD VISIT THE LEK 4 TIMES, HOWEVER, IF YOU ARE ONLY ABLE TO MAKE 1 COUNT FOR A GIVEN LEK BE SURE YOUR VISIT COINCIDED WITH PEAK LEK ATTENDANCE.

SAGE GROUSE: MID-MARCH TO MID-MAY DEPENDING ON YOUR LOCATION.
MOUNTAIN SHARP-TAILED GROUSE: MID-APRIL TO MID-MAY.
PLAINS SHARP-TAILED GROUSE: LATE MARCH TO MID-MAY.
PRAIRIE CHICKENS: LATE: MARCH TO MID-MAY.

PLEASE FILL OUT THE FORM AS COMPLETELY AS YOU CAN. IF THE LEK IS AN ESTABLISHED (KNOWN) LEK, IS IT ACTIVE OR INACTIVE? IF THE LEK IS NEW, PLEASE PROVIDE THE UTM COORDINATES AND SPECIFY METHOD OF DETERMINATION (GPS UNIT OR MAP). FOR ALL LEKS PLEASE PROVIDE THE COUNTY, USGS QUAD, AND LAND STATUS.

IF YOU GO TO A LEK AND ARE UNABLE TO COUNT OR DO NOT SEE BIRDS, PLEASE FILL OUT A FORM W/THE DATE AND OTHER PERTINENT INFORMATION. THIS IS IMPORTANT INFORMATION ON TIME OF PEAK LEK ATTENDANCE.

IT IS IMPORTANT TO FILL OUT THIS FORM EACH TIME YOU VISIT A LEK SITE, REGARDLESS OF WHETHER YOU OBSERVE BIRDS OR NOT!!! IF YOU ARE UNABLE TO LOCATE BIRDS AT A KNOWN LEK, INDICATE IN THE COMMENTS WHETHER YOU SEARCHED THE SURROUNDING AREA TO ASCERTAIN IF THE LEK SITE CHANGED LOCATIONS. THANK YOU!

THE COMMENTS SECTION IS THERE FOR USE AS NECESSARY. IF YOU NEED ADDITIONAL SPACE, PLEASE USE THE SPACE BELOW.

All forms should be returned to the Area Biologist. They will review the information, compile the data, and forward it to Lyn Stevens. The data is incorporated into a statewide database.

1999 GROUSE LEK SURVEY FORM

SPECIES: _____ DATE:

LEK NAME: _____ DISTRICT/COUNT AREA:

OBSERVER(S):

LEK STATUS:

IF THE LEK IS ESTABLISHED (I.E. KNOWN LEK SITE), IS IT ____ ACTIVE OR INACTIVE ?

IS THE LEK _____ NEW?

_____ UTM Y (NORTHING) _____ UTM X (EASTING)

UTM COORDINATES DETERMINED BY _____ GPS _____ MAP

USGS QUAD

COUNTY _____ LAND STATUS: _____ PUBLIC PRIVATE

TIME	TOTAL MALES	TOTAL FEMALES	TOTAL UNKNOWN	TOTAL BIRDS

HIGH COUNTS:

MALES _____ UNKNOWN

FEMALES _____ FLUSH COUNT *

TOTAL BIRDS __

*THE FLUSH COUNT IS ONLY NECESSARY WHEN BIRDS ARE FLUSHED INADVERTENTLY OR THE OBSERVER IS UNABLE TO OBSERVE BIRDS ON THE LEK AND OPTS TO FLUSH THE BIRDS TO OBTAIN A COUNT. FLUSH COUNTS SHOULD BE DONE ONLY AS A LAST RESORT.

COMMENTS: USE AS NECESSARY (WEATHER, BEHAVIOR, PRESENCE/ABSENCE OF PREDATORS, OTHER DISTURBANCES TO BIRDS, ETC.) :