

**IRON COUNTY
GREATER SAGE-GROUSE RESOURCE
MANAGEMENT PLAN**



September 23, 2013

Iron County

Greater Sage-grouse Resource Management Plan

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ACRONYMS:

BLM	Bureau of Land Management
COT	Greater Sage-grouse Conservation Objectives Final Report
DNR	Utah Department of Natural Resources
DWR	Utah Division of Wildlife
EIS	Environmental Impact Statement
ESA	Endangered Species Act
FWS	U.S. Fish and Wildlife Service
IC Plan	Iron County Greater Sage-grouse Resource Management Plan
ICRMP	Iron County Resource Management Plan
LAWG	Local Area Working Group
NEPA	National Environmental Policy Act
NRCS	Natural Resource Conservation Service
OHV	Off-Highway Vehicle
PLPCO	Public Lands Policy Coordination Office
SGMA	Sage Grouse Management Area
STILA	School and Institutional Trust Lands Administration
UDAF	Utah Department of Agriculture and Food
USFS	U.S. Forest Service

1.0 Introduction

Iron County's Greater Sage-grouse Resource Management Plan (IC Plan) is designed to protect, maintain, and enhance existing habitat; and encourage opportunities to convert potential habitat to support and increase, in Iron County, the population of greater sage-grouse (*Centrocercus urophasianus*) necessary to eliminate threats to the species and negate the need for the listing of the species under the provisions of the federal Endangered Species Act (ESA). The U.S. Fish and Wildlife Service's (FWS) most recent finding on the need for a listing, issued in March, 2010, found that the listing of the greater sage-grouse was warranted on a range-wide basis, but that further action was precluded by higher ESA priorities of the Service. The FWS is now bound by a court decree to review this decision by the end of 2015.

The IC Plan is designed to minimize the threats facing the sage-grouse while balancing the economic and social needs of the residents of Iron County through coordinated programs with the State and Federal officials. The major emphasis of the IC Plan is to encourage:

- **incentive-based program** for private, county, and School and Institutional Trust Lands Administration (SITLA) lands, and a
- **reasonable and cooperative regulatory programs** on other state and federally managed lands.

Implementation of the IC Plan requires a cooperative effort among local, state and federal agencies, working in concert with private interests.

1.1 Background

The Iron County Board of Commissioners approved the Iron County Resource Management Plan (ICRMP) in 2009, and amended it into the Iron County General Plan in 2010. The ICRMP provides a basis for county cooperation, coordination, and communication with state and federal land management agencies when developing natural resource plans that impact the county. The ICRMP also allows for development of county resource and/or site specific planning that identifies current conditions of the resource being planned for, and outlines desired outcomes the county would like to see accomplished for a specific resource. The IC Plan is a resource specific plan and falls within this category. It specifies Iron County's desires for sage-grouse management to state and federal land agencies and should be included in consistency reviews during state and federal planning processes.

The FWS determined the range-wide listing of the greater sage-grouse was warranted because of habitat fragmentation, and the lack of a regulatory structure designed to protect habitat. Various "threats" to habitat were identified and discussed in the finding. As a result of the finding, the Bureau of Land Management (BLM), the U.S. Forest Service (USFS), the State of Utah and the other western states, and several counties with sage-grouse habitat, have each initiated planning and other actions designed to mitigate the identified threats and protect important sage-grouse habitats, develop adequate management mechanisms, and thereby eliminate the need for a listing under the ESA.

The State of Utah, under the direction of Governor Herbert, adopted the Conservation Plan for Greater Sage-grouse in Utah, February, 2013. It will represent Alternative E in the BLM/Forest Service Region-wide Environmental Impact Statement, and is the basis for the IC Plan. For decades prior to the current review, the DWR has been supporting research and community-based conservation efforts to learn more about the ecology of the species. Those research studies are listed in Appendix 8 of the Utah Conservation of the Greater Sage-Grouse Plan. To facilitate the research effort, the DWR established ten Local Area Working Groups (LAWGs) under the general direction of Utah State University. Two LAWGs - the Southwest Adaptive Resource Management and the Color-Country Adaptive Resource Management - represent the sage-grouse populations in Iron County. These LAWGs are composed of private interests, state and federal agency personnel, representatives from local government, academic institutions, private industry, and private individuals and governmental entities. The LAWGs in Iron County identified three populations of sage-grouse (Sage Grouse Management Areas or SGMAs) and developed management plans (Appendix 1) for each SWMA that assess the local nature and scope of the threats to the species, and recommends actions needed to address those threats.

1.2 Conservation Principles

The overall effort to protect habitat and associated populations of sage-grouse in Iron County is based upon the principles described in the Utah Conservation Plan for Greater Sage-grouse and set forth in the Greater Sage-Grouse Conservation Objectives Final Report, prepared by the FWS chartered Conservation Objectives Team (COT), and dated February, 2013.

The COT report reiterates that sage-grouse are a landscape species, and long-term species conservation will require the cooperation of the counties, western states and federal agencies to negate the need for a listing of the species. The COT report emphasized the need to protect the “best of the best” habitat given the high cost, long time-frame to completion and relative uncertainty of sagebrush restoration, and recognized that not all populations are required to contribute to a range-wide conservation of the species. The COT report also recognized that because of variation in range-wide, and local, environmental conditions, state wildlife management agencies are in the optimal position to determine the appropriate conservation goals for the species, and give advice on the necessary methods to achieve the goals.

2.0 Conservation Goal and Objectives

In 2003, the Utah Wildlife Board adopted the first Strategic Plan for the Management of Sage Grouse in Utah, and in 2009, the plan was revised. In February, 2013 the State of Utah approved the Utah Conservation Plan for the Greater Sage-grouse. This plan identified local population dynamics, site-specific threats, and research needs, and recommended management strategies to conserve the species. Many of the research needs were subsequently addressed, thereby contributing to the deep body of knowledge about sage-grouse in Utah, and the IC Plan adopts the conservation goals and objectives from those plans.

The biological pillars of sage-grouse conservation remain;

- 1) protection of habitat which provides for the year-round life-cycle needs of the species,
- 2) perpetuation of conditions necessary to ensure recruitment of a continuing population within the aggregate state population, and
- 3) enhancements or improvements of sage-grouse habitat that has been impaired or altered through restoration or rehabilitation activities.

Sustaining the existing sage-grouse populations and increasing populations through habitat restoration and rehabilitation are the basis of the IC Plan. Iron County's current distribution of sage-grouse is dictated by:

- 1) the discontinuous nature of habitat which reflects the rugged and incised topography in Iron County,
- 2) natural events (such as wildfire),
- 3) human-caused habitat modifications,
- 4) the physical and genetic connectivity to nearby populations in Nevada, Beaver County, and Garfield County.

To prevent the need to list sage-grouse under the provisions of the ESA, the goals and objectives for the conservation of the species in Iron County remain consistent to those of the Utah Conservation Plan for Greater Sage-grouse as follows:

Sage-grouse Management Goal: Protect, maintain, improve and enhance sage-grouse populations and habitats within the established Sage-grouse Management Areas (SGMA) of the County, while balancing the economic and social needs of the residents of Iron County.

Objective 1 - Population: Sustain and increase the populations of males within priority habitat in SGMAs in the County, consistent with the acreage goals set forth in the State Plan.

Objective 2 - Habitat: Protect sage-grouse habitat on private and School and Institutional Trust Lands Administration (SITLA) lands annually through conservation covenants, leases, easements or other legal tools, with emphasis on the best-of-the-best populations.

Objective 3 - Habitat: Enhance sage-grouse habitat in the SGMAs annually. (No specific objective set due to impacts of wildfire in these areas).

Objective 4 - Habitat: Increase the sage-grouse habitat acreage within three SGMAs through management actions targeting "Opportunity Areas" (see definition) and vegetation rehabilitation of wildfire areas.

Objective 5 – Distribution: Maintain viable populations within each of the three SGMAs.

- Employ the management protocol (Section 6.0 below) requiring avoidance, minimization, and mitigation to preserve habitat and bird populations. Ensure a

path for birds to migrate within SGMAs on a seasonal basis, and start to develop connectivity between populations as a long-term goal.

- Viability of the populations in the Hamlin Valley SGMAs is tied to habitat occupied by birds in Nevada and is dependent upon the Nevada habitat.
- This objective, more than any other, has potential to be affected by factors (stressors) beyond the management control of the involved entities, such as catastrophic wildfire. Should the population trends within an SGMA temporarily or permanently suffer from the effects of such factors, the Utah Conservation for the Greater Sage-grouse Plan specifies that controls in the other SGMAs will be adjusted to achieve the state-wide objectives.

These Objectives will be tracked by the two LAWGs in Iron County. Habitat enhancement, improvement and restoration will be implemented and through programs such as the Watershed Restoration Initiative (WRI), Utah Partners for Conservation and Development (UPCD), the Natural Resources Conservation Service's (NRCS) Sage-grouse Initiative (SGI), the Grazing Improvement Program (GIP), and others.

3.0. Sage-grouse Management Areas (SGMAs)

Iron County is the extreme south-most boundary for sage grouse. There are three defined Sage-grouse Management Areas (SGMA) in the county – Hamlin Valley, Bald Hills, and Panguitch. The habitat in the Hamlin Valley and Bald Hills SGMAs lie in Iron and Beaver counties, and only a small portion of the Panguitch SGMA habitat is in Iron County (see Appendix 2 – SGMA Maps). Sage-grouse habitat occupancy within the county is a result of the natural topography of Iron County in a highly discontinuous habitat pattern. The management areas are separated by mountain ranges and, in all probability, no connectivity of individual birds currently exists between the SGMAs.

The IC Plan is anchored around efforts to conserve the species within three specifically identified SGMAs. The SGMAs represent the best opportunity for high-value and focused conservation efforts for the species in Iron County. This approach recognizes and accepts current use of the land, and identifies potential future uses which may cause conflict with the needs of the species. The sage-grouse populations within the SGMAs all lend themselves to increases through appropriate management measures and habitat enhancements. Each SGMA identifies areas on the landscape that provide these additional habitat enhancement opportunities (Opportunity Areas) for greater sage-grouse.

There exists very little if any sage-grouse habitat outside the SGMAs in Iron County. What little habitat that may exist outside of the SGMAs has been disturbed by human and natural causes, and is not suitable for enhancement or improvement. Therefore, greater sage-grouse populations that may exist in these areas are not considered essential to perpetuation of the species in Iron County, and no specific management actions for this habitat are recommended or required.

3.1 Scientific Information and Studies

The boundaries of each SGMA reflect the biological and geographical realities of area currently occupied by a population or populations of sage-grouse. The SGMAs are based upon the location of occupied leks, the identification of nesting and brood rearing habitat, on average, within a 3.0 mile radius of the occupied leks¹, and associated winter and other habitat.

For decades prior to the current review, the DWR has been supporting research and community-based conservation efforts to learn more about the ecology of the species. The Utah Conservation of Greater Sage-Grouse contains a listing of research studies and reports on sage-grouse conducted in Utah. To facilitate this effort, the DWR established ten Local Area Working Groups (LAWGs) as explained in section 1.1. These LAWGs were composed of private interests and governmental entities, and were charged to assess the local nature and scope of the threats to the species, and to recommend a course of action to address identified threats.

Because of this early and ongoing assessment, the LAWGs in Iron County have a high level of knowledge about seasonal range, migration routes, and other factors known to be essential to maintenance of the species, all in the context of Iron County's unique conditions. This information, along with peer-reviewed scientific studies, forms the basis for this plan.

3.2 Geography of Iron County

Sage-grouse occupied habitat in Iron County is highly influenced by the geography of the county which is characterized by mountainous terrain, separated by broad valleys and contain large tracts of pinyon/juniper stands that have encroached upon existing habitat. The three populations are disconnected "islands" of habitat, with very little if any known recruitment from other areas.

3.3 Analysis of Current Land Uses

The three SGMAs are on the northern border of Iron County. There are no affected municipalities or commercial and/or residential developments in Iron County. The majority of land within the SGMAs is federal (primarily BLM) interspersed with STILA sections and a few small parcels of privately owned lands. Some of the Panguitch SGMA habitat in the county is on Forest Service lands. The major use of these lands is livestock grazing. Grazing is mostly managed by federal land management agencies under the accepted Rangeland Health Standards. Grazing is a vital component of the local economy. The potential for development of wind and geothermal energy lies mostly in the Bald Hills northwestern portion of the SGMA in Iron County. Maintenance and

¹ In Utah, based on statewide averages, 91% of greater sage-grouse hens nest within 3 miles of a lek, This is based upon data compiled by the DWR, Utah State University and Brigham Young University.

development of utility infrastructure needed to serve Utah and surrounding states is present in the Bald Hills and to a lesser extent, in the Panguitch SGMA portion of Iron County. Recreation is mostly confined to hunting and some OHV use. Some of the area in the Bald Hills, Panguitch, and the Pine Valley portion of Hamlin Valley SMGAs is shared by the Utah prairie dog, a species listed as threatened under the Endangered Species Act. Current objectives for conservation of the Utah prairie dog are compatible with the sage-grouse conservation strategies as sage-grouse utilize some of the same areas during certain times of the year.

3.4 Maps and Mapped Habitat

3.4.1 Maps (Appendix 2)

Of necessity, identification of the three SGMAs requires the establishment of boundaries. These boundaries include 1) delineation of the extent of the SGMA, 2) delineation among habitat, non-habitat and opportunity lands within the SGMA, and 3) within habitat, delineation among nesting, winter and other habitat. The GIS maps which accompany the IC Plan (Appendix 2) contain representations of these boundaries for informational purposes, but are not meant to themselves represent a survey-grade boundary, and are not intended to be the final authority for habitat delineation issues. Parties should consult with the DWR to determine the precise delineation of habitat as part of the consultation for any particular development proposal. If in the review of any proposal or other action, differences between the maps and the on-the-ground situation become apparent, the on-the-ground boundaries should control.

3.4.2 Annual Review of SGMA Boundaries and Other Provisions of the Plan

The three SGMAs in Iron County should be reviewed annually as recommended in the Utah Conservation Plan for Greater Sage-grouse to assess changes in the distribution of disturbance, the increases in habitat through enhancement or improvement, decreases in habitat through wildfire or other events, status of population numbers, and related items. Recommended adjustments to SGMA boundaries will be forwarded to the Utah Public Lands Policy Coordination Office (PLPCO) for consideration.

Before mitigated areas are considered to be habitat within an SGMA, a preponderance of the evidence must indicate that sage grouse are occupying the mitigated area. Habitat altered by fire shall not be removed from an SGMA until rehabilitation or restoration of the burned areas is determined to be unsuccessful or not feasible.

3.5 Habitat Types Included Within SGMAs

Within each SGMA, lands were classified based on current or potential sage grouse habitat:

3.5.1 Habitat.

Habitat is the aggregation of seasonal areas used by sage-grouse at some point during the yearly life-cycle of the birds. Habitat includes the geographical extent of leks, nesting, brood-rearing, late-brood rearing, transitional and winter areas.

3.5.2 Non-Habitat.

Non-habitat areas within SGMAs include lands that do not contribute to the annual life-cycle of sage-grouse. Effort has been made to minimize the amount of non-habitat within an SGMA, but given the topographic, physiographic and land cover features within Utah and the scale and detail of mapping, the inclusion of some non-habitat was unavoidable.

3.5.3 Opportunity Areas.

Opportunity areas are those portions of a SGMA that currently do not contribute to the life cycle of sage-grouse but are areas where restoration or rehabilitation efforts can provide additional habitat when linked to existing sage-grouse populations. In Iron County, these areas include lands that have been altered due to wildfire or the proliferation of invasive plant species. Examples include areas where pinyon-juniper or other plant species have encroached upon habitat, rendering it less useful or useless as habitat. Opportunity areas may be transformed into either habitat or non-habitat based upon natural events or management choices, and may be used to mitigate disturbance within habitat as appropriate.

3.5.4 Additional Mapping of Habitat, Non-habitat and Opportunity Areas.

Implementation of the IC Plan should be accompanied by efforts to refine mapping of each of these habitats. These efforts should be coordinated among federal, state, county, and private landowners who may choose to participate. On-the-ground projects conducted under this Plan may contribute to this refined mapping for the project area.

3.6 Land Ownership

The three SGMAs in Iron County contain lands owned or managed by:

- Private or corporate citizens
- Iron County
- School and Institutional Trust
- Bureau of Land Management
- United States Forest Service
- Mineral Estate

Each type of land requires a different approach for successful protection of sage-grouse. See Appendix 3 for the property ownership breakdown within each Sage-grouse Management Area.

3.6.1 Private Lands

Although there are only small portions of private lands in Iron County that contain sage-grouse habitat, private landowners will be encouraged to participate in conservation efforts to the extent possible. There are many incentive based conservation programs available to the landowners who are willing to work with federal and state officials to establish conservation measures. Appendix 4 identifies protocol for private landowners wishing to participate in such programs.

3.6.2 County Lands

Iron County owns two parcels of land totaling approximately 525 acres within the Bald Hills SGMA. Although the parcels were acquired to mitigate Utah prairie dog habitat, future habitat improvement projects will take into consideration the benefits for sage-grouse.

3.6.3 School and Institutional Trust Lands Administration (SITLA)

Iron County will rely on the Utah Conservation of the Greater Sage-grouse Plan to provide guidance on the management of SITLA lands within the sage-grouse habitat. Iron County will provide input on habitat improvement projects as is currently being done.

3.6.4 BLM, USFS, and State Agency Lands

The three SGMAs in Iron County have a large percentage of federally managed lands. Iron County will follow the Iron County Resource Management Plan (ICRMP) when participating in the cooperative management decisions with the federal land managers regarding sage grouse habitat conservation. The ICRMP was developed jointly with federal land managing agencies to identify coordination strategies. In line with federal land planning and decision-making processes, the IC Plan features conditions and stipulations in subsequent sections to be employed by the BLM and USFS when considering activities on federally managed lands. Similarly, state agencies will employ the necessary management actions to fulfill the purposes of this strategic conservation plan for state lands.

3.6.5 Mineral Estate

The state recognizes that there are situations where the surface is owned by one entity or person, and the subsurface mineral estate is owned by another, including tribal governments. Because the surface estate is the key to conservation of

habitat, the SGMAs have been mapped according to surface ownership, but the county recognizes that implementation of the IC Plan will have to accommodate the dominant nature of the mineral estate, and react accordingly.

4.0 Implementation of the Conservation Plan

4.1 Private and SITLA Lands

The necessary covenants, easements, leases or other protective tools for habitat on private and SITLA lands considered essential for conservation of sage-grouse will be secured through cooperative assistance and funding efforts provided by all interested parties, including:

- Utah Department of Agriculture and Food (UDAF)
- Utah Department of Natural Resources (DNR)
- U.S. Department of Agriculture - Natural Resources Conservation Service (NRCS)
- U.S. Department of Agriculture – Forest Service
- U.S. Department of Interior – Bureau of Land Management (BLM)
- U.S. Department of the Interior - Fish and Wildlife Service
- Private sources – industry and non-governmental organizations
- Other

4.2 Coordination among Local Government, State Agencies and Federal Agencies

Iron County will work cooperatively with the BLM, Forest Service, Fish and Wildlife Service, state agencies and others in accordance with the Iron County General Plan, to accomplish the purposes of the IC Plan. Recommendations to the Utah Conservation of the Greater Sage-grouse Plan will be forwarded to the PLPCO for consideration.

4.3 Local Area Working Groups (LAWG)

The existing LAWGs have functioned well over the years, and provide the proper forum for the assessment of the nature and scope of localized threats which may affect the species. The LAWGs will, under the management supervision of Utah State University, assist the coordination efforts of PLPCO, as defined in the Utah Conservation of the Greater Sage-grouse Plan, by providing information concerning the effects of local disturbance on the species. In addition, the LAWGs will 1) make recommendations for projects to improve or enhance habitat or opportunity areas, 2) make recommendations for voluntary agreements on private, SITLA or county lands to benefit the species, and 3) make recommendations for conservation of the species on state and federal land as part of the implementation of the IC Plan.

5.0 Threat Assessment and Management Provisions

Based on information obtained from the DWR and the ongoing LAWG process, (which is based on peer-reviewed and observational science), the following threats have been identified for greater sage-grouse and habitat in Iron County as those of the greatest concern locally. These potential threats are presented in a non-hierarchical order. In all cases, evaluation of disturbance due to the listed threats should be addressed through the Management Protocol discussed in Section 6.0 below. The management provisions listed below that address threats to the species should be reviewed if new research demonstrates a modification is necessary. It will be necessary to allocate sufficient resources to fully address habitat loss and degradation in the next ten years.

5.1 Fire Control, Suppression and Rehabilitation

Habitat loss due to fire and replacement of (burned) native vegetation by invasive plants is the single greatest threat to greater sage-grouse in Iron County. However, fires ignited by natural events and human activities are beyond the control of human planning efforts. While unscheduled fires will occur, response to fire can have a large impact on the severity of the effects, especially over time as rehabilitation or restoration continues. The BLM has been responsive to wildfire for control and rehabilitation in the sage-grouse habitat areas. The IC Plan will continue to rely on the federal, state, and local agencies to respond to wildfire and provide the needed rehabilitation as necessary.

Fire by natural ignition should be addressed as a serious threat, and prescribed fire should be used when weather conditions are conducive to achieve the desired outcome. Immediate, proactive means to reduce or eliminate the spread of invasive species, particularly cheatgrass, after a wildfire, is a high priority. All federal, state and local governmental agencies, and other interested parties, should implement the following to protect sage-grouse habitat:

5.1.1 Encourage creation and implement a statewide fire agency agreement(s) as outlined in the Utah Conservation of Greater Sage-grouse Plan that will eliminate jurisdictional boundaries and allow for immediate response to natural fire. These should include fire suppression actions recommended locally, including, but not limited to:

- a) first strike agreements that allow fire control on an all-land jurisdictional basis;
- b) allocation of resources to maintain enhanced abilities of all fire agencies to control fire in SGMAs;
- c) allocation of resources to immediately commence restoration of habitats impacted by wildfire by all responsible agencies; and
- d) removal or establishment of waiver provisions for procedural barriers that may impact the ability of responsible agencies to respond to wildfire with effective reclamation or rehabilitation, such as federal raptor stipulations, cultural assessments, etc.

5.1.2 Work with the BLM to insure in the new upcoming Resource Management Plan provisions allow for:

- Use of fire-retardant vegetation that will buffer areas of high quality greater sage-grouse habitat from catastrophic fire.
- Consider the use of prescriptive grazing to specifically reduce fire size and intensity on all types of landownership, where appropriate. This could be particularly effective in areas where cheatgrass is encroaching on sagebrush habitat. This will require cooperation and coordination among different land managers and owners, and livestock owners. In some cases feed supplementation and water hauling may need to be utilized to obtain the desired results.
- Use prescriptive fire with caution in sagebrush habitat. The Western Association of Fish and Wildlife Agencies has prepared information that explains the risks from using prescribed fire in xeric sagebrush habitats.² However, to improve sagebrush composition, land agencies should consider use of mechanical control and fire to improve habitat for sage-grouse.

5.2 Invasive Plant Species

Habitat loss due to invasive plant species are a serious threat to greater sage-grouse habitat. These species displace native communities, and alter the soil and environment in a way that makes reestablishment of native ecosystems very difficult. An aggressive response to new infestations is key to controlling the spread of invasive species. Every effort should be made to identify and treat new infestations before they become larger problems. Iron County will continue to work with the federal land agencies to provide a cooperative weed control program. Additionally, containment of known infestations in or near sagebrush habitats should be a high priority for all land management agencies.

5.3 Predation

Predation is often tied to habitat quality, particularly in areas where an interface exists between human disturbance and the remaining habitat. While predator control may not be a long-term solution to a general range-wide decline in populations of greater sage-grouse, it has been shown to be an effective tool to gain increased survival of specific populations. Predation has been identified as a key threat in the SGMAs, primarily due to increased populations of corvids (primarily ravens) and raptors, and emergence of non-native canids (red fox) that did not co-evolve with greater sage-grouse. Predation control and management should be managed by USDA-APHIS Wildlife Services and the Utah Department of Agriculture and Food, in consultation with the DWR. Habitat modification to discourage predation should be managed by the federal and state land agencies in consultation with DWR.

5.3.1 Monitor predator composition and depredation rates through research projects. Apply habitat management practices (e.g., grazing management, vegetation treatments) that decrease the effectiveness of predators.

² See Appendix 5.

5.3.2 Develop strategies for active short-term predator control based on biological assessments appropriate to local conditions. This includes placement of treated eggs at or near leks and nesting areas to control corvids, removal of perches near leks, reducing the post size on fences or placement of barriers to discourage perching, removal of mammalian predators, etc.

5.3.3 Monitor effects of predator control to determine causal connections with greater sage-grouse survivability and modify control strategies accordingly.

5.4 Vegetation Management

Habitat loss in Iron County is caused by both natural and man-made alterations to existing habitat. Protection of remaining habitat is the primary focus of conservation efforts, but many locations can be reclaimed or restored by active vegetation management actions. For example, removal of encroaching conifers may create new habitat or increase the carrying capacity of habitat and thereby expand grouse populations; or the distribution of water such as livestock troughs, may improve seasonal brood-rearing range and enhance greater sage-grouse recruitment.

The SGMA participants in Iron County have a demonstrated record of enhancing and improving habitat through restoration and reclamation by partnering with such entities as the Utah Partners in Conservation and Development (UPCD, the Watershed Restoration Initiative (WRI), and the USDA, NRCS.

5.4.1 Aggressively remove encroaching conifers and other plant species to expand greater sage-grouse habitat where possible.

5.4.2 Maintain existing vegetation treatment projects that are being invaded by undesirable plant species such as pinyon/juniper.

5.4.3 Aggressively remove invasive species, and rehabilitate areas to provide additional habitat for greater sage-grouse where possible.

5.4.4 Sagebrush treatment projects within nesting and winter habitat should be limited and require pre-approval by the appropriate regulatory agency in consultation with the DWR. Sagebrush treatment projects should maintain 80% of the available habitat as sagebrush within the project area; 20% of the habitat can be managed for younger age classes of sagebrush, if appropriate. Although vegetation treatments are generally recommended only to improve brood-rearing habitat, they need to be considered to improve conditions in winter and other habitat in Iron County.

5.4.5 Design water developments to enhance mesic habitat for use by greater sage-grouse and maintain adequate vegetation in wet meadows. Within SGMAs, the Rangeland Health Standards utilized by federal land agencies are compatible with the greater sage-grouse stipulations.

5.5 Transmission Corridors

Most existing utility corridors (pipelines, roads, major overhead electrical transmission and distribution lines) are well-defined at the present time, and related threats are considered minimal and will not require mitigation measures. Access to and maintenance of existing utility corridors contained within the existing ROWs will continue without further analysis. With respect to major transmission lines, research completed to date has not shown immediate impacts from existing power lines on nest or brood success. As a result, management stipulations and conditions will focus on mitigating direct disturbance of newly constructed utility corridors during construction.

5.5.1 Apply mitigation standards based on habitat type as discussed in the Management Protocol, and best management practices accepted by industry and state and federal agencies.

5.5.2 For electrical transmission lines, and where feasible and consistent with federally required electrical separation standards, site new linear transmission features in existing corridors, or at a minimum, in concert with existing linear features in greater sage-grouse habitat. Siting linear features accordingly shall be deemed to be mitigation for the siting of that linear feature. Mitigation for the direct effects of construction is still required.

5.5.3 Engage in reclamation efforts as projects are completed.

5.6 Renewable Energy Development

Development of renewable energy is a high priority for the State of Utah and Iron County. Preliminary results from scientific research have indicated that wind energy development near greater sage-grouse nesting and brood-rearing habitat may have a negative impact on nest success, brood success, and populations. However, research completed to date has not shown an immediate impact from transmission lines on nest or brood success, so necessary stipulations and conditions related to transmission lines associated with renewable energy projects should focus on disturbance during construction (see Utah Conservation of the Greater Sage-grouse Plan for discussion of the current research).

5.6.1 Engage in reclamation efforts as projects are completed.

5.6.2 Recognize that stipulations for other species (e.g. raptors) may impede the ability to effectively reclaim areas of impact and remove those barriers to achieve immediate and effective reclamation, if otherwise allowable by law.

5.6.3 Prioritize areas for habitat improvement.

5.6.4 Apply mitigation standards based on habitat type as discussed in the Management Protocol in Section 6.0.

5.6.5 New permanent tall structures should not be located within one mile of the lek, if visible by the birds within the lek.

5.7 Recreation and OHV Use

Recreational activities, particularly motorized off-highway vehicle (OHV) uses, may conflict with greater sage-grouse, most often in nesting and winter habitats where and when birds are unable to move freely. In SGMAs, limit or minimize impacts through the use of the Management Protocol discussed in Section 6.0 below. Iron County will coordinate with the BLM in development of their Travel Management Plan to address this issue.

5.7.1 Limit OHV use seasonally to identified trails and roads in nesting and winter habitat.

5.7.2 Encourage development of an educational process to advise OHV users of the potential for conflict with greater sage-grouse.

5.7.3 Adopt an Iron County travel management plan that includes consideration for greater sage-grouse.

5.8 Improper Livestock Grazing

Livestock grazing is a major resource use in most SGMAs, and can be an effective tool to improve habitat quality and seasonal nutrition, and thereby enhance local populations. Existing grazing operations which utilize accepted Rangeland Health Standards utilized by federal land agencies increase the necessary vegetation, and thereby increase the potential for nesting success and population recruitment.

Should concerns be raised about the effect of grazing on sage-grouse, and such effects are documented over a sufficiently long time-frame, corrective management actions should be addressed through Rangeland Health Standards identified by the proper land management agency. (See Utah Conservation of the Greater Sage-grouse Plan for more detail on grazing practices and greater sage-grouse conservation).

5.8.1 Rangeland habitat treatments to improve grazing should fully consider the impact on sage grouse seasonal habitat during planning and implementation.

5.8.2 Address incompatible grazing strategies through established Rangeland Health Standards consistent with the maintenance or enhancement of habitat.

5.8.3 Encourage allocation of funds and efforts by state and federal entities to the development of grazing strategies that will enhance or improve habitat for the preservation of greater sage-grouse.

5.8.4 Although current limited research in the Hamlin Valley SGMA has not shown fences to negatively impact sage grouse near leks and has not been identified as a threat to sage-grouse, where feasible, locate livestock fences away from leks and employ the NRCS fence standards. (See NRCS/CEAP Conservation Insight Publication "Applying the Sage Grouse Fence Collision Risk Tool to

Reduce Bird Strikes.”)³. Wooden fence posts should be equipped with anti-perching devices.

5.9 Hunting

Participate in discussion with DWR regarding hunting seasons of sage-grouse. Continue to support hunting closure of sage grouse in the SGMAs in Iron County until the goals and objectives are achieved, and until the DWR feels the populations can sustain limited hunting.

5.10 Wild Ungulate Populations (Including Wild Horses)

Concentration of wild ungulates and wild horses, specifically in the Hamlin Valley SGMA are perceived as a threat to sage grouse. State regulatory agencies should assist in design and permitting of activities in a manner that will not exceed the vegetation disturbance thresholds as identified in the Hamlin Valley Sage Grouse Management Area Plan. This includes an ungulate management strategy such as redefining the boundaries of the Horse Management areas to better manage horse herd objectives. Iron County will continue to coordinate with the BLM through the RMP process to address this issue.

5.11 Lack of Communication Among Public Parties

Participate and encourage joint planning efforts among federal and state agencies, and the LWGAs to coordinate conservation efforts, prioritize restoration projects, and identify opportunities that impact sage-grouse habitat.

6.0 Management Protocol and Mitigation

Management of activities on state and federally managed lands within SGMAs will be based on a hierarchical protocol that provides as follows:

- 1) Avoidance of disturbance to habitat or birds by an activity is the preferred option;
- 2) Minimization of the disturbance is desired if the disturbance cannot be avoided in greater sage-grouse habitat, with mitigation for the effects of the minimization decisions; and finally
- 3) Mitigation of the disturbance from an activity within sage grouse habitat is required if a disturbance cannot be avoided.

This Management Protocol does not apply to private or SITLA unless an agreement has been reached with the landowner to incorporate these provisions.

6.1 Disturbance

Disturbance, as defined in Section 10.0, is any ground disturbing activity, event or action, natural or human-caused, which will either eliminate or render greater sage-grouse

³ See http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb1049415.pdf

habitat unusable for the life-cycle of the bird, or human activities and presence which causes a negative response from birds within the SGMA. Disturbance based on ground disturbing activities can be temporary or permanent, while negative response disturbances can cause negative effects year-round, seasonally, or only at certain times of day.

6.1.1 Temporary ground disturbance is defined as any ground disturbing activity which lasts less than five years. Temporary disturbances do not need to be mitigated, if the reclamation or restoration work is effective within the five year period.

6.1.2 Permanent ground disturbance is defined as any ground disturbing activity which lasts five years or more.

6.2 Avoidance

Avoidance means an overt action that eliminates disturbance to greater sage-grouse and its habitat. Examples include:

- a) purposefully siting activities in non-habitat or opportunity areas rather than habitat areas, or siting the project outside the SGMA, or
- b) the use of seasonal noise restriction stipulations.

Avoidance requires no mitigation.

6.3 Minimization

Minimization means actions that reduce the amount, duration, or impact of disturbance within habitat. Examples include:

- a) using a smaller development footprint;
- b) the reduction of noise levels below identified thresholds, or
- c) the reduction of traffic volume on a road.

Minimization does not preclude the need to mitigate (compensate) for the disturbance which does occur within habitat.

6.4 Mitigation

Mitigation is defined as actions that are designed to create new habitat or ameliorate disturbances by the creation of or protection of other habitat or birds. Mitigation for a disturbance must be shown to be effective in the time-frame of the activity, not at some future date. Effective mitigation does not require that birds are immediately present using the land, only that the habitat is capable of supporting birds as part of their yearly life-cycle, however, as stated in Section 3.4.2 above, SGMA boundaries may not be adjusted in response to mitigation until birds are occupying the site. Mitigation should be performed in areas which have the highest likelihood of occupation by the species. The

amount of mitigation, if required, should be calculated based on the effects generated within habitat inside an SGMA.

6.4.1 Mitigation Bank

The Utah PLPCO office with assistance from the DWR, BLM, USFS, NRCS, DNR, UDAF, and other entities will oversee the creation and operation of a mitigation bank to allow projects to proceed while enhancing or improving habitat elsewhere. Iron County will work with federal and private entities to identify needed habitat improvement projects within the county and encourage use of mitigation resources to complete those projects.

6.5 Management Protocol

Agencies should follow application of the following Management Protocol upon federally and state managed lands within an SGMA as follows:

6.5.1 Habitat:

Areas identified as habitat on federal or state lands should be managed to avoid surface disturbance to the greatest degree possible. Consultation with the DWR must occur at the earliest opportunity when land use which may result in a disturbance is contemplated. This protocol may be applied by the private landowner, or on SITLA property, through an incentive-based agreement.

For purposes of determining the specific appropriate management response to a proposed disturbance, habitat is divided into four subcategories:

- 1) the lek⁴ itself;
- 2) the nesting and brood rearing area, *e.g.*, habitat within a three (3) mile radius of the lek;⁵
- 3) winter habitat; and
- 4) other seasonal habitat.

6.5.1.1 Lek

Management provisions include:

- a) Avoid disturbance within this area, if possible. Project proponents must demonstrate why avoidance is not possible.
- b) If avoidance is not possible, use minimization as appropriate to the area.
- c) If minimization is not sufficient, mitigation is required. Mitigation should be calculated at a minimum of a 4:1 ratio

⁴ Occupied leks. (See Section 10.7.2)

⁵ See footnote 2, *supra*.

starting with the first acre disturbed. Mitigation must produce lands capable of supporting greater sage-grouse as habitat before the proposed disturbance occurs, though birds do not need to be using the mitigated area. The proponent of the disturbance must demonstrate that the conditions have been met.

Successful mitigation for effects may include:

- i) Removal of trees on or adjacent to the lek
 - ii) Removal or marking of fences on or adjacent to the lek.
 - iii) Employment of the Mitigation Bank, if appropriate
- d) New permanent disturbance, including structures, fences, and buildings, should not be located within the lek itself.
- e) No permanent disturbance within one mile of the lek, unless it is not visible to the sage-grouse using the lek.
- f) New fences should not be located adjacent to leks where bird collisions would expect to occur. Consider relocating existing fences adjacent to leks if proven to negatively impact sage-grouse. If a fence is required adjacent to a lek, the construction should follow the standards identified in the NRCS fence collision risk tool (See NRCS/CEAP Conservation Insight Publication “Applying the Sage Grouse Fence Collision Risk Tool to Reduce Bird Strikes”)
- g) A disturbance outside the lek should not produce noise which raises more than 10 db above the background level at the edge of the lek during breeding season.
- h) Employ seasonal disturbance stipulations as follows:
- i. Implement time-of-day stipulations during the season when the lek is occupied. (*e.g.*, no activity from two (2) hours before **sunrise** to two (2) hours after **sunrise**)
 - ii. Avoid activities (construction, project vehicle noise, etc.) that will disturb lek attendance or breeding from February 15 - May 15. The local DWR biologist should be consulted for time and distance determinations based on site-specific conditions.

6.5.1.2 Nesting and Brood-Rearing Area

Management provisions include:

- a) Avoid disturbance within this area, if possible. Project proponents must demonstrate why avoidance is not possible.
- b) If avoidance is not possible, use minimization as appropriate to the area. For example, try to minimize effects by locating development in habitat of the least importance, take advantage of topographic features to screen the disturbance, or maintaining and enhancing wet meadow and riparian vegetation to provide food and shelter.
- c) If minimization is not sufficient, mitigation is required. Mitigation should be calculated at a minimum of a 4:1 ratio starting with the first acre disturbed. Mitigation must produce lands capable of supporting sage-grouse as habitat before the proposed disturbance occurs, though birds do not need to be using the mitigated area. The proponent of the disturbance must demonstrate that the conditions have been met.

Successful mitigation may include:

- i) Removal of trees to no more than 5% cover (the closer to 0% the better) and maintenance of at least 10% sagebrush cover;
 - ii) Maintain forb cover greater than 10% and greater than 10% grass cover during nesting and brood-rearing season;
 - iii) Maintain or improve wet meadows, when present; and
 - iv) Installation of green-strips or firebreaks to protect existing nesting habitat.
 - v) Employment of the Mitigation Bank, if appropriate.
- d) Cumulative new permanent disturbance in federally or state managed priority habitat should not exceed 5% of the surface area of federally and state managed nesting habitat within the priority habitat of the particular SGMA,⁶ taking into account the effects of rehabilitation, restoration and other mitigation actions.
 - e) Employ seasonal stipulations as follows: Avoid activities (construction, project vehicle noise, etc.) that will disturb nesting or brood-rearing from April 1 – July 15. The local DWR biologist should be consulted for time and distance determinations based on site-specific conditions.
 - f) Employ noise stipulations which allow no more than 10 db rise above ambient noise levels at the edge of the lek.

⁶ The 5% limitation must be implemented in concert with the provisions of Section 8.0, *infra*.

6.5.1.3 Winter

Winter habitat in Iron County is mostly dominated by Wyoming big and black sagebrush.

Management provisions include:

- a) Avoid disturbance within this area, if possible. Project proponents must demonstrate why avoidance is not possible.
- b) If avoidance is not possible, minimize as appropriate to the area. Minimization provisions include, for example, the location of development in habitat of least importance or by locating development to take advantage of topographic screening.
- c) If minimization is not sufficient, mitigation is required. Mitigation should be calculated at a 4:1 ratio starting with the first acre disturbed. Mitigation must produce lands capable of supporting greater sage-grouse as habitat before the proposed disturbance occurs, though birds do not need to be using the mitigated area. The proponent of the disturbance must demonstrate that the mitigation conditions have been met.

Successful mitigation may include:

- i) Removal of trees to no more than 5% cover (and the closer to 0% the better) and maintenance of minimum of 10% sage brush cover; and
 - ii) Installation of green-strips or firebreaks to protect existing winter habitat.
 - iii) Employment of the Mitigation Bank, if appropriate.
- d) Cumulative new permanent disturbances in federally or state managed priority habitat should not exceed 5% of the surface area of federal and state managed priority habitat of the particular SGMA⁷ taking into account the effects of rehabilitation, restoration and other mitigation actions.
 - e) Manage the area to maintain maximum amount of sagebrush, especially tall sagebrush, which would be available to greater sage-grouse above snow during a severe winter. Tall sagebrush is capable of standing above heavier than normal snowfall.

⁷ The 5% limitation must be read in concert with the provisions of Section 8, *infra*.

Greater sage-grouse do not require an understory component in winter habitat.

- f) Employ seasonal disturbance stipulations as follows:

Avoid activities (construction, project vehicle noise, etc.) that will disturb wintering sage-grouse from November 15 - March 15. The local DWR biologist should be consulted for time and distance determinations based on site-specific conditions.

- g) Sagebrush treatment projects within this area need pre-approval by the appropriate regulatory agency in consultation with the DWR. Sagebrush treatment projects within winter habitat should maintain 80% of the available habitat as tall sagebrush; 20% of the habitat can be managed for younger age classes, if appropriate.

6.5.1.4 Other Habitat

Other Habitat is habitat within SGMAs but which is not part of the lek, nesting or wintering areas. Management provisions include:

- a) Avoid disturbance in the area if possible. Project proponents must demonstrate why avoidance is not possible.
- b) If avoidance is not possible, minimize as appropriate to the area. Minimization provisions include, for example, the location of development in habitat of least importance or by locating development to take advantage of topographic screening.
- c) If minimization is not sufficient, mitigation is required. Mitigation should be calculated at a 1:1 ratio starting with the first acre disturbed. Mitigation must produce lands capable of supporting greater sage-grouse as habitat before the proposed disturbance occurs, though birds do not need to be using the mitigated area. The proponent of the disturbance must demonstrate that the mitigation conditions have been met.

Successful mitigation includes:

- i) Removal of trees to less than 5% cover and maintenance of at least 10% sage brush cover;
- ii) Maintain forb cover greater than 10% and grass cover greater than 10% during nesting/brood-rearing season;
- iii) Maintain or improve wet meadows, when present; and

- iv) Installation of green-strips or firebreaks to protect existing habitat.
 - v) Employment of the Mitigation Bank, if appropriate.
- d) Cumulative new permanent disturbance should not exceed 5% of the surface area of other habitat within the SGMA.⁸ Allowances must be made to include the temporal effects of any temporary disturbance, if any such effects are expected. The calculation of the spatial extent of each proposed project or land use, or the area of a natural event, such as wildfire, to be employed in this calculation, is defined as part of the definition of disturbance found in Section 10 below. The base upon which this calculation is made may be increased through successful rehabilitation or restoration of habitat, or other mitigation actions as appropriate.
- e) Manage the lands to avoid barriers to migration, if applicable.

6.5.2 Non-habitat:

No specific management provisions are proposed for non-habitat areas within SGMAs, except to consider noise and permanent structure stipulations around a lek, and to note that, birds may fly over the non-habitat as they connect to other populations or seasonal habitat areas.⁹

6.5.3 Opportunity Areas:

Opportunity areas may be employed to meet improvement, restoration or rehabilitation goals, or as mitigation areas for disturbance within habitat. If this occurs, an opportunity area may become habitat and be treated as discussed under the habitat section above, especially as part of the calculation for disturbance limitations. Alternatively, opportunity areas may be employed as the site for disturbances which are diverted from habitat, or other economic proposals not involving habitat, and therefore become non-habitat. In either event, boundaries of the SGMA, or the land types within, should be adjusted accordingly.

⁸ The 5% limitation must be read in concert with the provisions of Section 8.0, *infra*.

⁹ Existing corridors may or may not be included as habitat within the SGMA, depending on local conditions, topography, and other factors. Corridors are important to sage-grouse, but may not require restrictions on human activity. As a general rule, it will be adequate to avoid removal of sagebrush and to minimize development that would create a physical barrier to sage-grouse movement in these areas.

7.0 Existing Land Uses

Existing land uses within the SMGAs include power transmission lines, pipelines, grazing, hunting, limited recreation, etc. All existing uses are explicitly recognized by the IC Plan and shall not be affected by the implementation of this Plan. Existing concentrated uses within the three SGMA are considered non-habitat, for example power transmission and distribution line corridors.

Planned developments that are under review by county, state or federal agency project review processes, such as a review under the provisions of the National Environmental Policy Act (NEPA) which may be within an SGMA, should not be discontinued simply by virtue of presence of the proposed project within an SGMA, but should be reviewed, and permission to proceed resolved by the landowner and other applicable laws.

7.1 Existing Review Processes

7.1.1 Proposals which have completed environmental reviews, including the Sigurd to Red Butte Transmission Line, are recognized as in compliance with this (Existing Uses) provision of the Plan.

7.1.2 Proposals in Iron County which are nearly completed environmental reviews, and which have independently considered the effects of the project on greater sage-grouse, should continue the pending evaluation without recourse to the provisions of the IC Plan.

8.0 Five Percent Permanent Disturbance Limitation.

The five percent permanent disturbance limitation does not apply to private lands. Disturbance will follow the hierarchical protocol set forth in section 6.0. If a new and permanent disturbance cannot reasonably be avoided, then minimize such disturbance so that no more than 5% of federally and state managed priority habitat within any particular SGMA is newly, permanently and cumulatively disturbed, taking into account the effects of rehabilitation, restoration and other mitigation actions. First coordinate with Utah DWR when the disturbance and mitigation are contemplated.

If new and permanent disturbance cannot reasonably be minimized, resulting in more than 5% of federally and state managed priority habitat within any particular SGMA becoming newly and permanently disturbed, taking into account the effects of rehabilitation, restoration and other mitigation actions, then mitigate such excess disturbance elsewhere within the SGMA. First coordinate with Utah DWR when the disturbance and mitigation are contemplated.

8.1 Calculation of Permanent Disturbance Area

The cumulative calculation of permanent disturbance in any population area and specific habitats within a population area is the aggregate of the various man-made projects, construction and land use, as modified by the effects of rehabilitation, restoration or other mitigation actions. This does not include natural event disturbances.

8.2 Disturbance Calculation Where SWMA Spans into Beaver County

The three SGMAs in Iron County extend into Beaver County, and the Panguitch SGMA also extends into Garfield County. The 5% limitation shall be apportioned to each county's share of federally and state managed priority habitat in proportion to the total amount of federally or state managed priority habitat within the overall larger SGMA.

8.3 Calculating Actual Disturbed Area

The area of permanent disturbance is the area within a spatial polygon defined by the outside limits of the actual disturbed area, plus the area outside of this polygon where effects of the man-made construction, project or land use, based on the type of such, could be expected to cause a disturbance to GRSG.

8.4 Adaptive Flexibility for Special Circumstances

Because of the highly discontinuous nature of sage-grouse habitat in Iron County, the SGMA's are a composite of habitat, non-habitat and opportunity areas. In many cases, it may be difficult to discern whether an existing dispersed use is part of habitat or non-habitat, and thereby make an accurate calculation of the base for the limitation calculation. If it should become sufficiently apparent that an accurate determination of the base for the limitation calculation is not feasible, then Iron County in coordination with Utah DWR may propose and seek approval for an alternative measurement of, or technique to measure, the cumulative effects of disturbance.

9.0 Effective Date

9.1 The IC Plan shall become effective when approved by the Iron County Board of Commissioners, and shall remain in effect until June 2016, unless extended by the Commission.

9.2 By the end of June 2016, the IC Plan shall be reviewed, through the Iron County Natural Resource Advisory Committee for effectiveness and continued need.

9.3 If there is a continued need, the Iron County Board of Commissioners may extend the IC Plan, or approve an amended Plan via the Iron County Planning Commission process. The Plan shall thereafter be reviewed for effectiveness and need every five years.

9.4 Notwithstanding the provisions of Section 9 above, if the FWS should finalize a regulation which lists the greater sage-grouse as threatened or endangered under the provisions of the Endangered Species Act, this Plan shall immediately become optional, and may be revoked and rendered ineffective by the Commissioners at that time.

10.0 Definitions

10.1 Brood success: The success of a brood is achieved when one or more chicks in a brood survive to 50 days of age or more.

10.2 Corridors: Areas between greater sage-grouse habitat that provide a path for birds to move between populations. Corridors are generally found as sagebrush “islands of habitat” within other landforms, and assist with the natural movement of birds.

10.3 Disturbance: Disturbance is defined as

10.3.1 Any ground disturbing activity, event or action, natural or human-caused, that will either eliminate or render greater sage-grouse habitat not useable for the life-cycle of the bird, *or*

10.3.2 Human activities and presence which causes a negative response from birds within the SGMA. Any activity or presence that disrupts common activities or behavior of sage-grouse within a habitat at either the population or local scale is included.

10.3.3 The area of permanent disturbance is the area within a spatial polygon defined by the outside limits of the actual disturbed area, *plus* the area outside of this polygon where effects of the project, based on the type of project, could be expected to cause a disturbance, as defined in Section 10.3.2 above, to greater sage-grouse.

10.3.4 Duration of a Disturbance

Disturbance as defined in Section 10.3.1 and 10.3.2 is further divided into

10.3.4.1 Permanent disturbance: Any ground disturbing activity where the effects would be expected to last five years or more; and

10.3.4.2 Temporary disturbance: Any ground disturbing activity where the effects would be expected to last less than five years.

10.4 Habitat: The aggregation of seasonal habitat used by greater sage-grouse at some point during the yearly life-cycle of the birds. Habitat includes the geographical extent of leks, nesting, brood-rearing, late-brood rearing and winter areas.

Seasonal habitat: Areas of crucial importance to greater sage-grouse population survival throughout the year, including leks, nesting, brood-rearing, transitional, and winter habitat.

10.5 Habitat enhancement: An improvement to existing habitat that does not result in an acreage gain. For example: Removal of pinon-juniper conifer trees in young open canopy stands still used by sage grouse.

10.6 Habitat improvement: An improvement in opportunity areas that results in an acreage gain in habitat. For example: Removal of pinon-juniper conifer trees in closed canopy stands not used by greater sage-grouse.

10.7 Lek: An area where two or more strutting males attend the same location for two years or more; not necessarily consecutive years.

10.7.1 Active lek: Based on a year-by-year review, a lek that has been attended by male greater sage-grouse during the annual strutting and breeding season.

10.7.2 Occupied lek: A lek which has been active at least once within the last 10 years.¹⁰

10.8 Observational Science: Observational science (or scientifically observed) is defined to mean measurements recorded according to some pre-set scientific protocol, and is published literature which has not been peer-reviewed, (e.g., Master's Theses)

10.9 Opportunity Area: An area adjacent to habitat that can be treated by management actions. After treatment, the area becomes sagegrouse habitat.

10.10 Population: A group of greater sage-grouse utilizing habitat in a geographic area that share genetic traits and have regular genetic exchange.

10.10.1 Migratory population: A greater sage-grouse population that moves 6 miles (10 km) or more between seasonal habitat locations.

10.10.2 Non-migratory population: A greater sage-grouse population that does not move more than 6 miles (10 km) between seasonal habitat locations.

10.11 Reclamation/ Rehabilitation: Affirmative action to return an area to a functioning condition immediately after a disturbance, and is generally related to a temporary disturbance or a planned activity.

10.12 Restoration: Affirmative action to return an area to a functioning condition, most often with a lapse between disturbance and action, and generally not planned when the disturbance occurred.

¹⁰ This is a standard definition adopted by all states which contain greater sage-grouse habitat.

10.13 SITLA lands: Lands owned or managed by the Utah School and Institutional Trust Lands Administration.

10.14 State lands: State Lands are lands managed by state agencies other than the School and Institutional Trust Lands Administration.

APPENDIX 1 – SGMA MANAGEMENT PLANS

Bald Hills Sage Grouse Management Area

Location Overview

The Bald Hills Management Area is located in southwestern Utah, in Beaver and Iron Counties, and is considered a population stronghold for this region of Utah. This population uses a series of leks throughout the habitat area, with males visiting more than one lek per season. Currently, the population is constrained to the Management Area by vegetation fragmentation and human development; however future improvements could connect this population to the Hamlin Valley Management Area to the west, and further north into Beaver County.

The area boundary was determined by consulting with members of the Southwest Desert sage-grouse local working groups; the boundary uses DWR designated habitats as a base, with small changes to include current vegetation types usable by sage-grouse, current radio-telemetry information regarding sage-grouse movements, and opportunity areas that might be used after minor habitat restoration. Along the perimeter of the Management Area boundary, unsuitable habitat that could not be expected to be converted to a sagebrush community and/or was not incorporated in sage-grouse movements was excluded.

Population Status

This population is regarded as stable with a high potential for growth. Most recent ten-year averages indicate ___ males on leks in the area, with a high of ___ males and a low of ___ males. Historic known peak populations in this region are ___ males, and historic lows are ___ males. Sage-grouse in this area show resiliency to known threats and are not considered as being in jeopardy.

Land Use

The primary land uses in this Management Area are grazing, agriculture, and swine production; predominant land ownership is Bureau of Land Management and private. The BLM manages the Bald Hills for multiple uses including conservation, recreation, energy development, and big

game hunting. Residential development is present in Minersville, in the north of the Management Area, where most of the agriculture production also occurs. There is potential for wind energy production as well as current and future power transmission lines.

Threats, Avoidance, Minimization, and Mitigation

Key threats to Sage-grouse are fire, enhanced native predator populations, conflicting or lack of vegetation management, and energy development. Improper cattle and/or wild ungulate/horse grazing management may become a conflicting land use in some specific cases, but is not identified as a conflict at this time. Recommended management for this area includes:

1. Aggressive and adequate fire prevention measures in place, including fuels reduction strategies.
2. Creation of a predator management strategy to manage predator populations in the Sage-grouse breeding and brood rearing seasons.
3. Aggressive reclamation and restoration efforts in areas that were historically sagebrush communities and/or historically occupied by sage-grouse.
4. No more than 5% surface disturbance, on average, per 640 acres for new activities in Sage-grouse habitat. Non-sage-grouse habitat is not included in this calculation. Disturbance above this threshold will be mitigated after and according to consultation with appropriate regulatory agencies and DWR.
5. Focus resources in habitat areas where management actions will enhance currently occupied Sage-grouse habitat, including expansion of populations.
6. Reclamation, restoration, and maintenance of linkages to Sage-grouse populations within the Management Area, and to populations to the north, east and west.

Recommended Regulatory Mechanisms

In order to achieve the conservation goals in the Bald Hills Management Area, the following regulatory mechanisms are recommended:

1. State regulatory agencies and DWR should assist in design and permitting of activities in a manner that will not exceed the vegetation disturbance or surface disturbance thresholds outlined above.

2. County land-use plans should be amended to regulate development and vegetation management disturbances, and to prioritize restoration and habitat enhancement efforts.
3. Joint agreements to address fire resources should be made between state, federal, and local governments.
4. Financial resources for fire prevention and response, predator management, habitat restoration and enhancement, and long-term habitat conservation should be prioritized.
5. Management of livestock and agricultural activities should not be altered unless there is compelling evidence that there is a causal effect on Sage-grouse declines. Livestock management should continue to be driven by incentive-based methods, and Best Management Practices currently used in the area.

Monitoring

Monitoring in the Bald Hills Habitat Area will be maintained by DWR. Population trends will be evaluated using a ten-year average of males on leks. Habitat acreage should be monitored to determine trends (if any) in habitat gain or loss. Metrics to evaluate success include 1) number of active leks, 2) ten-year average males on leks, 3) acres of suitable habitat within the Habitat Area.

Recommendations

The Bald Hills Habitat Area is identified as a unit that may quickly respond to continued habitat restoration and enhancement with increases in sage-grouse populations and distribution. There are currently several natural resource management actions that can be focused in key areas throughout Bald Hills that have a high probability of resulting in quality Sage-grouse habitat. As a result, this area should be a high priority for funding of habitat enhancement.

Hamlin Valley Sage-grouse Management Area

Location Overview

The Hamlin Valley Management Area is located in southwestern Utah, in Beaver and Iron Counties, on the border of Utah and Nevada and is considered a population stronghold for this region of Utah. Although currently isolated from other habitat areas, habitat restoration could link this population to the Bald Hills Management Area.

The area boundary was determined by consulting with members of the Southwest Desert sage-grouse local working groups; the boundary uses DWR designated habitats as a base, with small changes to include current vegetation types usable by Sage-grouse, current radio-telemetry information regarding sage-grouse movements, and historic habitat that might be used after minor habitat restoration. Along the perimeter of the Management Area boundary, unsuitable habitat that could not be expected to be converted to a sagebrush community and/or was not incorporated in sage-grouse movements was excluded.

Population Status

This population consists of a relatively small number of birds that uses less than 10 leks throughout the habitat area. Telemetry data has not shown that this population uses more than one lek per season, however this population of grouse is known to travel large distances within the Management Area. Additionally, this population spends a portion of its time in Nevada, usually during the summer months.

This population is regarded as moderately stable with a high potential for growth. Most recent ten-year averages indicate ___ males on leks in the area, with a high of ___ males and a low of ___ males. Historic known peak populations in this region are ___ males, and historic lows are ___ males. Sage-grouse in this area show have shown resiliency to known threats; however, population stability will soon falter if several threats are not addressed.

Land Use

The primary land use in this Management Area is grazing; predominant land ownership is the Bureau of Land Management. The BLM manages Hamlin Valley for multiple uses including wild horse conservation, recreation, and big game hunting. Development is limited to scattered houses, generally in the southern portion of the Habitat Area.

Threats, Avoidance, Minimization, and Mitigation

Key threats to Sage-grouse in the Hamlin Valley Management Area are fire, enhanced native predator populations, vegetation management (conflicting or lack of), wild horse management, and habitat fragmentation resulting in a loss of connectivity within the management area.

Development and conflicting land uses should be restricted to non-habitat areas. Improper cattle grazing management may become a conflicting land use in some specific cases, but is not identified as a conflict at this time. Recommended management for this area includes:

1. Aggressive and adequate fire prevention measures in place, including fuels reduction strategies.
2. Creation of a predator management strategy to manage predator populations in the breeding and brood rearing seasons.
3. Aggressive reclamation and restoration efforts in area that were historically sagebrush communities.
4. No more than 5% surface disturbance, on average, per 640 acres for new activities in Sage-grouse habitat. Non-sage-grouse habitat is not included in this calculation. Disturbance above this threshold will be mitigated after and according to consultation with appropriate regulatory agencies and DWR.
5. Focus resources in habitat areas where management actions will enhance current Sage-grouse habitat, including expansion of populations.
6. Aggressive strategies to reduce negative impacts of wild horse concentrations in Sage-grouse habitats; including management strategies to disperse wild horse concentrations.
7. Reclamation and maintenance of linkages to Sage-grouse populations in Nevada, to the West, and the Bald Hills, to the East.

Recommended Regulatory Mechanisms

In order to achieve the conservation goals in the Hamlin Valley Management Area, the following regulatory mechanisms are recommended:

1. State regulatory agencies and DWR should assist in design and permitting of activities in a manner that will not exceed the vegetation disturbance thresholds outlined above. This includes a wild horse management strategy.
2. County land-use plans should be amended to regulate vegetation management disturbances, and to prioritize restoration and habitat enhancement efforts.
3. Joint agreements to address fire resources should be made between State, Federal, and Local governments.
4. Financial resources for fire prevention and response, predator management, habitat restoration and enhancement, and long-term habitat conservation should be prioritized.

Monitoring

Monitoring in the Hamlin Valley Management Area will be maintained by the DWR. Population trends will be evaluated using a ten-year average of males on leks. Habitat acreage should be monitored to determine trends (if any) in habitat gain or loss. Metrics to evaluate success include 1) number of active leks, 2) ten-year average males on leks, 3) acres of suitable habitat with the Habitat Area.

Recommendations

The Hamlin Valley Management Area is identified as a unit that may quickly respond to continued habitat restoration and enhancement with increases in sage-grouse populations and distribution. There are currently several natural resource management actions that can be focused in key areas throughout Hamlin Valley that have a high probability of resulting in quality Sage-grouse habitat. Management actions to improve this population of sage-grouse will have multiple state benefits. As a result, this area should be a high priority for funding of habitat enhancement.

Panguitch Management Area

Location Overview

The Panguitch Management Area is located in southern Utah, in Kane, Garfield, Paiute and Wayne Counties, incorporating more than a dozen, often connected leks. Due to the population exchange throughout this Management Area, and its incorporation of the southern-most Sage-grouse lek, it is considered an important population for Utah.

This population uses a series of leks throughout the habitat area, with some males visiting more than one lek per season. The population is distributed north-south in a series of, linked valleys and benches, and constrained by mountains and canyons. There is a large range in the number of males in attendance among these leks. Movement of Sage-grouse from one valley or bench to another among seasons is necessary to meet their seasonal habitat requirements in the highly variable annual weather conditions of this region. Movements among valleys are not present in each group of Sage-grouse, and not all used areas are known to managers.

The area boundary was determined by consulting with members of the Color Country sage-grouse local working groups; the boundary uses the DWR designated habitats as a base, with small changes to include current vegetation types usable by sage-grouse, current radio-telemetry information regarding sage-grouse movements, and historic habitat that might be used after minor habitat restoration. Along the perimeter of the Management Area boundary, unsuitable habitat that could not be expected to be converted to a sagebrush community and/or was not incorporated in sage-grouse movements was excluded.

Population Status

Many leks within this population are stable, while other are decreasing or have variable attendance; there is a high potential for growth with focused attention on vegetation management. Most recent ten-year averages indicate ___ males on leks in the area, with a high of ___ males and a low of ___ males. Historic known peak populations in this region are ___ males, and historic lows are ___ males. Many lek populations in this area show resiliency to known

threats, but some are considered to be in jeopardy. Most notably, the loss of connectivity between valleys could result in small isolated populations and subsequent loss of Sage-grouse in the southern section of the Management Area.

Land Use

The primary land uses in this Management Area are grazing, agriculture, recreation, and energy development. The predominant land ownership is Bureau of Land Management, US Forest Service and private. The Federal agencies manage the area for multiple uses including grazing, recreation, habitat conservation, energy development, and big game hunting. Residential development is present in several small towns including Panguitch, the largest town in the Management Area. There is currently mining activity in the Management Area, with potential for future energy production as well.

Threats, Avoidance, Minimization, and Mitigation

Key threats to Sage-grouse in the Panguitch Management Area are enhanced native predator populations, vegetation management (conflicting or lack of), energy development, and residential/commercial development. Improper cattle and/or wild ungulate grazing management may become a conflicting land use in some specific cases, but is not identified as a conflict at this time.

Recommended management for this area includes:

1. Creation of a predator management strategy to manage predator populations in the breeding and brood rearing seasons where needed.
2. Aggressive reclamation and restoration efforts in areas that were historically sagebrush communities and/or historically occupied by sage-grouse.
3. No more than 5% surface disturbance, on average, per 640 acres for new activities in Sage-grouse habitat. Non-sage-grouse habitat is not included in this calculation. Disturbance above this threshold will be mitigated after and according to consultation with appropriate regulatory agencies and UDWR.
4. Focus resources in Sage-grouse habitat areas where management actions will enhance currently occupied Sage-grouse habitat, including expansion of populations.
5. Coal Mining

- a. Recognition of existing mining operations and anticipated expansion into new lease areas.
 - b. EIS, EA, and other mine planning processes should consider the state management plan and associated maps as the preferred sage grouse management alternative. BLM, USFS, DWR, and DOGM biologists should be consulted early in mine development planning.
6. Reclamation and maintenance of linkages to Sage-grouse populations within the Habitat Area, and to populations to the north, east and west.

Recommended Regulatory Mechanisms

In order to achieve the conservation goals in the Panguitch Management Area, the following regulatory mechanisms are recommended:

1. Local, State, and Federal regulatory agencies and DWR should assist in design and permitting of activities in a manner that will not exceed the vegetation disturbance or surface disturbance thresholds outlined above.
2. Recognize that the Surface Mining Control and Reclamation Act (SMCRA), implemented by DOGM provide adequate regulatory mechanisms for surface and underground coal mining site reclamation, avoidance, and mitigation.
3. County land-use plans should be amended to regulate development and vegetation management disturbances, and to prioritize restoration and habitat enhancement efforts.
4. Financial resources for predator management, habitat restoration and enhancement, and long-term habitat conservation should be prioritized.

Monitoring

Monitoring in the Panguitch Management Area will be maintained by the DWR. Population trends will be evaluated using a ten-year average of males on leks. Habitat acreage should be monitored to determine trends (if any) in habitat gain or loss. Metrics to evaluate success include 1) number of active leks, 2) ten-year average males on leks, 3) acres of suitable habitat with the Habitat Area.

Recommendations

The Panguitch Management Area is identified as a unit that may quickly respond to continued habitat restoration and enhancement with increases in sage-grouse populations and distribution. There are currently several natural resource management actions that can be focused in key areas throughout Panguitch Management Area that have a high probability of resulting in quality Sage-grouse habitat. Furthermore, there are some portions of the area that are in jeopardy and may result in extirpation without immediate direct management. As a result, this area should be a high priority for funding of habitat enhancement and other management actions.

APPENDIX 2 SMGA MAPS

(See Attached File)

APPENDIX 3 – SGMA LAND STATUS

Property Ownership Within Sage Grouse Management Areas Connected to Iron County

SGMA*	acres	Land type	acres	Owner	acres
Bald Hills	528,303	habitat**	342,799	BLM	265,371
				Private	48,067
				SITLA	28,705
				DNR	131
				IRON C	525
		opportunity	139,967	BLM	99,675
				Private	31,199
				SITLA	9,013
				DNR	80
Hamlin Valley	341,523	habitat	143,219	BLM	100,981
				Private	24,038
				SITLA	13,291
				DNR	4,909
		opportunity	132,458	BLM	111,190
				SITLA	12,897
				DNR	5,351
				Private	3,020
Panguitch	607,210	habitat	343,377	BLM	163,044
				Private	90,619
				USFS	58,544
				SITLA	30,174
				DNR	990
		UDOT	6		
		opportunity	220,244	BLM	99,768
				USFS	64,095
				Private	49,124
				SITLA	6,263
DNR	994				

APPENDIX 4

Protocol for Private Landowners to Participate in Greater Sage Grouse Conservation Efforts

A number of different state and federal agencies and organizations make a variety of technical assistance available to private landowners interested in doing work on their lands to benefit the conservation of greater sage-grouse. The Utah Division of Wildlife Resources employs biologists and other staff with training and expertise in the conservation, ecology, and management of sage-grouse and their habitat. The Utah Department of Natural Resources has funding available through the Watershed Restoration Initiative. The Utah Department of Agriculture and Food has staff and funding available, particularly for landowners with livestock grazing on their property. The Natural Resources Conservation Service has staff dedicated to sage-grouse conservation on private lands. Some sage-grouse Local Working Groups can provide assistance through staff and members of the LWG. All can assist landowners with projects that can benefit both the landowner's needs and the conservation needs of sage-grouse. State and federal conservation programs are available to assist landowners with sage-grouse conservation efforts.

With all of these options, the biggest problem for a private landowner is to find the right person and program to meet their needs without getting lost in the quest. As a result, the State of Utah will provide a single point of contact for private landowners to request assistance with sage-grouse conservation projects, whether a habitat improvement project like removing pinyon-juniper encroaching in sage brush, or obtaining a conservation lease or easement to avoid development of sage-grouse habitat. The contact will forward the landowner's need to the correct person and agency.

Please check the website of the Public Lands Policy Coordination Office (<http://governor.utah.gov/publiclands>) or the Department of Natural Resources (<http://naturalresources.utah.gov>), or call the Public Lands Office at 801-537-9801 to obtain the latest contact information.