FEDERAL ALTERNATIVE OF GOVERNOR C.L. "BUTCH" OTTER

FOR GREATER SAGE-GROUSE MANAGEMENT IN IDAHO

September 5, 2012 Version

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BACKGROUND

As Governor of the State of Idaho, I hereby submit to the U.S. Secretary of the Interior and U.S. Secretary of Agriculture (collectively, "the Secretary") the State of Idaho's Alternative ("Idaho's Alternative") for incorporation into the National Greater Sage-Grouse Land Use Planning Strategy ("Strategy") of the U.S. Bureau of Land Management ("BLM") and U.S. Forest Service ("USFS") (*see* BLM/USFS 2012). The Strategy aims to incorporate objectives, desired habitat conditions and management actions into land use plans for Federal lands – for the BLM, the Resource Management Plans ("RMPs") required by the Federal Land Policy and Management Act ("FLPMA") and for the USFS, the land management plans ("LMPs") required by the National Forest Management Act ("NFMA")—by September 30, 2014. The ultimate outcome for the Strategy is to conserve the Greater sage-grouse (*Centrocercus urophasianus*) ("sage-grouse") and its habitat and potentially avoid a listing under the Endangered Species Act ("ESA") (*see* BLM 2011a).

The State of Idaho wishes to express its appreciation for the Secretary's recognition of the important role states can play in managing and conserving the sage-grouse. This recognition is also evinced in the ESA as it directs the Secretary to "take[ing] into account those efforts" being made by a state prior to a listing determination. 16 U.S.C. § 1533(b)(1)(A). Accordingly, I believe the recommendations contained herein not only provide a balanced approach to this complex natural resource issue, but also ensure the long-term sustainability of those habitat attributes necessary to preclude the need to list the species under the ESA.

In order to place Idaho's Alternative in proper context, it is necessary to set out a brief overview of the process the State employed. As Idaho currently enjoys viable and widespread populations of sage-grouse, I was fully aware of the need for a carefully planned process to ensure we conserved the species and its habitat while maintaining predictable levels of land use. I would strongly urge our Federal partners to approach the issue in this fashion.

GOVERNOR'S SAGE-GROUSE TASK FORCE

On March 9, 2012, I issued Executive Order 2012-02 establishing the Governor's Sage-Grouse Task Force, hereafter "Task Force" (*see* Task Force Website, available at: http://fishandgame.idaho.gov/public/wildlife/?getPage=310). The Task Force was a diverse group of stakeholders comprised of representatives from local sage-grouse working groups, conservation interests, state and local officials and industry. The Task Force was charged with providing recommendations on actions for developing a state-wide regulatory mechanism to preclude the need to list the species under the ESA.

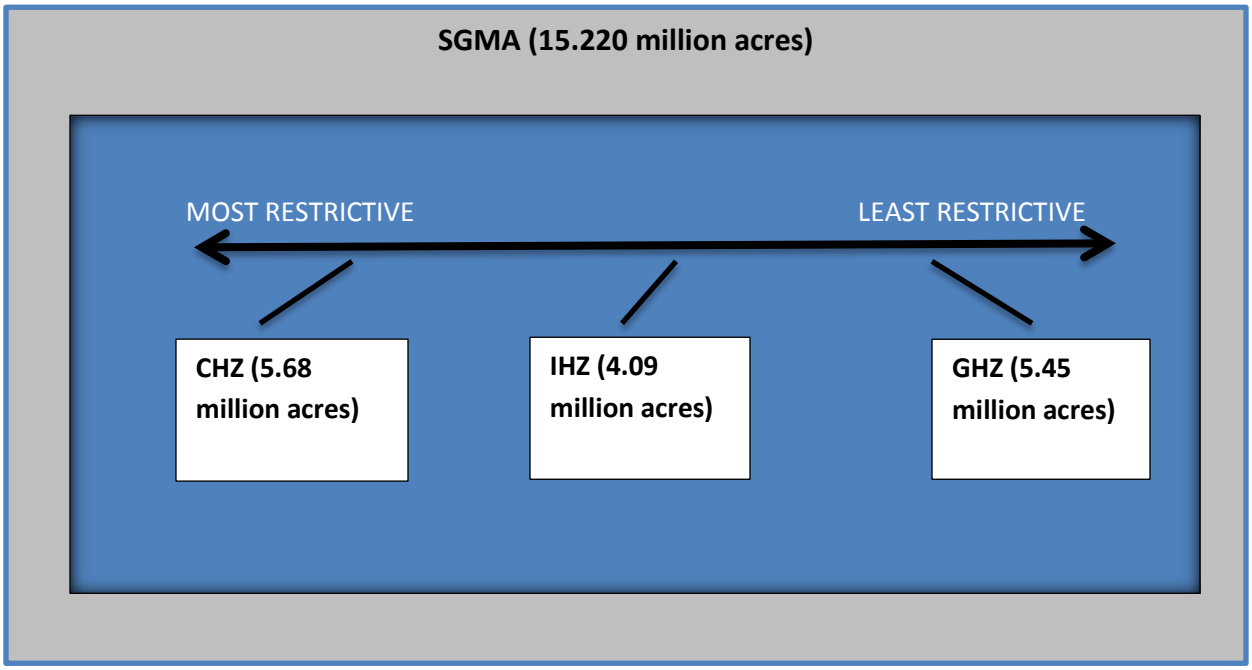
In March through May 2012, the Task Force met eight times in various locations across the State of Idaho. Each meeting was open to the public and provided an opportunity for the public to comment on sage-grouse conservation and its potential effects. Additionally, the Idaho Department of Fish and Game ("IDFG") hosted a Web page displaying the times and locations of Task Force meetings, agenda, meeting notes, and presentations made during the meetings. *See* IDFG 2012b. Thus, the Task Force conducted an open and transparent information-gathering and decision-making process.

After much deliberation and discussion, the Task Force on June 15, 2012—aided by the technical expertise of IDFG, the U.S. Fish and Wildlife Service ("Service"), and other relevant State and Federal agencies—delivered its recommendations to me for review and consideration. After carefully reviewing those recommendations, I developed a set of "guiding principles" to help evaluate the strength of the Task Force's recommendations, public comments and other important considerations. These guiding principles will be discussed in further detail under section I.

OVERVIEW OF THE STATE'S ALTERNATIVE

Consistent with the unanimous recommendation of the Task Force, the State is adopting the designation of a Sage-Grouse Management Area ("SGMA") with three distinct management zones: Core Habitat ("CHZ"), Important Habitat ("IHZ") and General Habitat ("GHZ").

Figure 1. Idaho's Sage-Grouse Management Area[1]



[1] The acreages displayed in Figure 1 are approximate values.

Generally, these management zones outline a suite of basic management activities that may, under certain conditions, or may not occur within a given area. In other words, the three management zones within the SGMA represent a management continuum that includes at one end, a relatively restrictive approach aimed at providing a high level of protection to the species within the CHZ, and on the other end, a relatively flexible approach for the GHZ allowing for more multiple-use activities. While the IHZ provides greater flexibility than in the CHZ, the overall quality and ecological importance of the habitat within this zone is more closely aligned with the habitat in the CHZ than in the GHZ.

Allocation to a specific management zone does not mandate or direct the relevant Federal agency to propose or implement any action; rather, the three habitat zones provide an array of permitted and prohibited activities. Activities not specifically addressed by the Alternative are still subject to the allowances and restrictions of the applicable resource management plan.

The measures set forth below are essential to sage-grouse conservation in Idaho and should receive not only priority consideration in the Strategy, but also in the shaping of future agency budgets. In order to accomplish the objectives set out below, I strongly urge State and Federal agencies, including the Service, BLM, USFS and other federal agencies to work collaboratively to ensure uniform and consistent application of Idaho's Alternative. In particular, BLM needs to make federal funding for fire suppression, especially in the CHZ, a top priority.

It is important to note that this document does not represent a complete list of sage-grouse actions for the State of Idaho. This document only provides special management for sage-grouse on lands managed by the BLM and USFS, and while beneficial to other sage-steppe species, agencies will still have the obligation to analyze other values when considering a proposed action.

That said, with this management framework in place, the State will approach willing private parties, local governments, other Federal partners, and the Idaho Department of Lands to see what actions are necessary and appropriate to complement the State's Federal Alternative. Furthermore, it is important to note that the relevant Federal agencies in considering these measures as part of environmental analyses, planning updates and ESA listing determinations, should recognize that actions on these lands can have direct and indirect impacts on State endowment trust lands managed by the Idaho Department of Lands. Thus, it is important to evaluate sage-grouse management in a comprehensive and holistic manner.

STATE OF IDAHO'S ALTERNATIVE

The following section further explains the "guiding principles" used to develop Idaho's Alternative.

I. GUIDING PRINCIPLES

A. Task Force Recommendations

Because the Task Force represents the diverse stakeholders associated with this issue, the State has made a concerted effort to defer to their recommendations. In areas where the Task Force provided alternative recommendations and/or left actions to the discretion of the State, we have endeavored to capture the intent of the Task Force consistent with the parameters set out in the Governor's Executive Order.

B. ESA Considerations

On March 23, 2010, the Service determined the species warrants listing over all of its range, including Idaho, but is precluded by higher listing actions. 75 Fed. Reg. 13,910 (Mar. 23, 2010). Specifically, the Service found Federal resource management plans deficient with respect to addressing the primary threats to the species—namely, habitat fragmentation due to wildfires, invasive species and infrastructure development. *See* 75 Fed. Reg. at 13,973-80.

Following the Service's decision, the United States District Court for the District of Idaho ruled that pursuant to a D.C. District Court settlement, the agency must reevaluate the status of the species under the ESA by September 30, 2015. In response to this deadline, the Secretary of the Interior in December 2011 invited the eleven western states impacted by a potential listing of the species to develop state-specific regulatory mechanisms to address these cited deficiencies in an effort to preclude a listing under the ESA. Accordingly, one of the State's primary objectives in submitting this Alternative is to develop a management framework that passes muster under the ESA.

C. Idaho's Management Approach

The State's management approach was designed to be clear and measurable over varying spatial and temporal scales. This approach consists of management objectives attempting to address key decision points outlined in the Service's 2010 determination. As mentioned above, the Service's 2010 decision cited lack of regulatory mechanisms and habitat loss as the primary drivers for its warranted but precluded decision. Importantly, both of these factors affect the population status of the species. The Idaho Sage-Grouse Management Approach includes: (1) implementation of regulatory mechanisms to support the overall management and conservation objectives of the species; (2) stabilization of habitats and populations, including a systematic review of habitat and

population status; and (3) development of adaptive regulatory triggers and a wildfire emergency clause to address sudden and unanticipated changes.

The best available information indicates that wildfire, invasive species and infrastructure, as defined below, are the primary threats to sage-grouse in Idaho. The State aided by the valuable contributions of the Task Force developed a suite of regulatory measures to address these primary threats as well as some activities identified by the Service as secondary threats (e.g., recreation, improper livestock grazing and West Nile virus). The State believes that implementation of these measures will provide significant conservation benefits to sage-grouse, other sage-steppe obligate species, and should be sufficient to preclude a listing under the ESA in Idaho.

Notwithstanding these efforts, unexpected and catastrophic events (e.g., major wildfire event(s), West Nile virus) may result in a substantial loss of habitat and concomitant decline in sage-grouse populations sufficient to trigger a change in the regulatory approach to the issue. Hence, the State has developed adaptive regulatory triggers and an emergency wildfire clause to ensure the populations and habitats within the CHZ, and to a lesser extent, the IHZ are maintained and enhanced. These adaptive triggers are intended to provide a regulatory backstop for navigating unanticipated and deleterious impacts to the species.

If these measures prove necessary, the State would still be well positioned to conserve the species and its habitat, while maintaining predictable levels of land use. It is important to note the development and implementation of regulatory triggers, primarily to deal with wildfire, is a new approach for managing this particular species. With that recognition, the State anticipates continuing to work with its partners to refine this feature of the plan to ensure the triggers are properly attuned to the needs of the State and the species.

To aid in the assessment of this management approach, the State has divided the SGMA into four individual Conservation Areas ("CA") across the State: two north (Mountain Valleys, Desert) and two south (West Owyhee, Southern) of the Snake River. Each Conservation Area is divided into Core, Important, and General management zones ("MZs") based upon modeling of sage-grouse breeding bird density, habitat connectivity and persistence, scientific knowledge based on surveys and radio-telemetry studies, and the recommendations of the Task Force.

Although wildfire, infrastructure, and invasive species pose threats for sage-grouse in all CAs, wildfire and invasive species tend to be a greater issue in the Desert and West Owyhee CAs than in the Mountain Valleys or Southern CAs. Additionally, sage-grouse habitats in the Desert and West Owyhee CAs are relatively contiguous, while those in the Mountain Valleys and Southern CAs tend to be more fragmented. North of the Snake River, the CHZ is approximately three million acres, while the CHZ south of the Snake River is approximately 2.7 million acres.

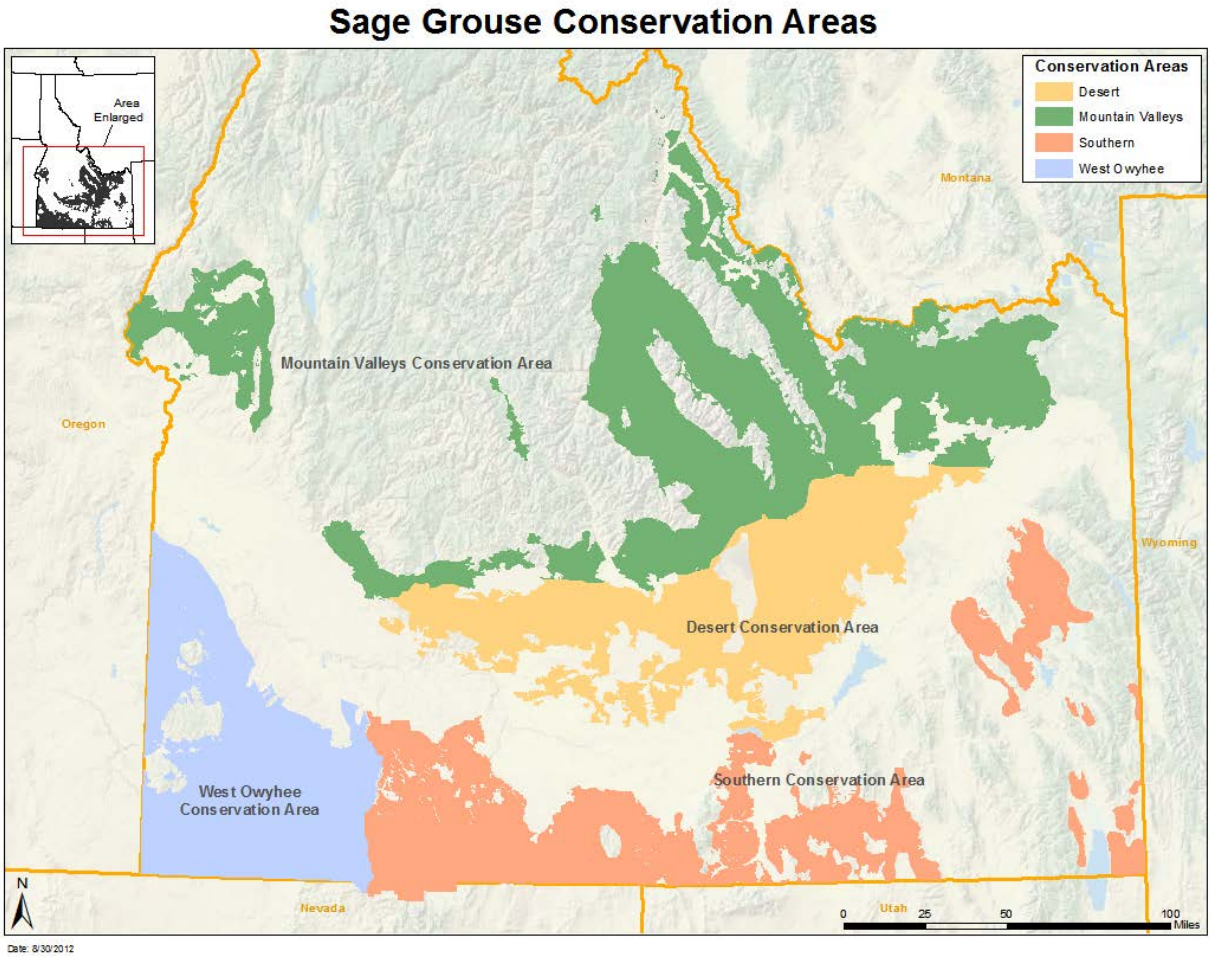
Acreage for the CHZ and IHZ in the four CAs is presented in Table 1. These four CAs are further described below:

North of the Snake River

- Mountain Valleys CA— Starting at Rexburg and extending west, sage-grouse habitat north and west of Highway 33 to Howe, Highway 33/22 to Arco, Highway 26/20/93 to Carey, Highway 20 west to Mountain Home, south from Mountain Home on Highway 51 to the Snake River. West-Central is included in this area.
- Desert CA—South of the above CA.

South of the Snake River

- West Owyhee CA—West of the Jarbidge River.
- Southern CA—East of the Jarbidge River, including East Idaho uplands and Bear Lake Plateau.



MANAGEMENT OBJECTIVES

Objective 1: Implement Regulatory Mechanisms – The State's first objective is to implement the regulatory mechanisms provided herein to maintain and enhance sage-grouse habitats, populations and connectivity in areas within the CHZ, buffered by strategic areas within IHZ, dominated by sagebrush. Through the implementation of these mechanisms, the State will be able to provide a level of protection sufficient to conserve at least 65% of the current known leks within the State, which are fully captured in the CHZ. Recognizing the risk and difficulty of controlling wildfire, invasive species and providing the opportunity to consider limited high-value infrastructure development, the IHZ provides an additional population buffer.

The effectiveness of this objective with respect to the primary threats of wildfire, invasive species and infrastructure will be assessed every three years for each Conservation Area. Secondary threats addressed in this Alternative will be evaluated according the various schedules contained in the regulatory language. IDFG will serve as the lead in conducting these assessments in concert with the Governor's Office of Species Conservation and relevant Federal agencies as the management of the species is currently under the jurisdiction of the State of Idaho.

Objective 2: Stabilize Habitats and Populations – The second management objective examines the effectiveness of the regulatory measures by monitoring the stability of habitat and population trends over time. As described above, the State recognizes the need to regularly analyze the effectiveness of the regulatory measures as well as to discern whether active conservation and restoration efforts, including conifer control, wildfire suppression, and more passive habitat protection techniques such as fuel breaks are effective strategies. Areas within the CHZ, and to a lesser extent the IHZ, will be used for baseline comparison to evaluate progress in achieving this objective.

During the first three-year period (2012-2015) of implementation, Idaho's management approach will emphasize limiting habitat loss in the CHZ and IHZ respectively to no more than a ten percent (10%) loss due to fire and/or infrastructure development resulting in a proportionate reduction of males counted on leks within a particular Conservation Area. This allowance is made because of the difficulty in developing effective wildfire suppression programs, including allocation of appropriate resources and infrastructure projects currently planned and/or underway.

Should a ten percent loss occur within this timeframe, IDFG in coordination with the Governor's Office of Species Conservation and other relevant State and Federal agencies will initiate a management review of the State's regulatory approach to assess the causal factors for declines. Conceptually, the review would include a determination of whether the loss is based on a population-related decline (e.g., West Nile virus, drought) or is driven by habitat loss. If the loss

is habitat-driven, the review team will assess the effectiveness of current best management practices, funding levels and restoration efforts in order to preclude the triggering of the adaptive regulatory triggers.

Three primary indicators provide a baseline for population status:

1) Maximum number of males counted on lek routes in 2011 within CHZ.
2) Number of active leks counted in 2011 within CHZ.
3) Average rate of population change.

Males counted on lek routes, numbers of leks and rate of population change provide a solid baseline against which future comparisons will be made to assess the success of the approach or indicate when populations may be in trouble potentially triggering additional conservation actions.

Using the average value for λ (finite rate of change) for 2009-2011 within CHZ is a relatively new approach for monitoring sage-grouse populations. Under this evaluation, population growth calculations (λ) will be compared to a value of 1.0 which indicates a stable population and evaluated for statistical significance.

Recognizing that this indicator was not discussed in any detail with the Task Force, the State will continue working with its partners to better understand this population evaluation tool to ensure a consistent on-the-ground application. In addition, the State may request a review of this approach by Dr. Oz Garton (Bio-statistician, University of Idaho). The State reserves the right to modify or remove the evaluation tool if it's application would lead to the regulatory triggers being tripped unnecessarily, or conversely, not being sensitive enough to changes on the landscape.

Table 1. Acreage of the CHZ and IHZ by Conservation Area in 2011.

Area	Core	% Core	Important	% Imp
North of the Snake River	2,994,000	34	2,480,000	28
Desert	1,044,000	33	751,000	24
Mountain Valleys	1,949,000	36	1,729,000	32
South of the Snake River	2,686,000	41	1,609,000	24
Southern	948,000	25	975,000	26
West Owyhee	1,738,000	61	634,000	22
Grand Total	5,680,000	37	4,089,000	27

Table 2. Species Population in the CHZ and IHZ by Conservation Area based on 2011 lek data.

	Males Counted				Active leks			
Zone	Core	%Core	Important	% IMP	Core	%Core	Important	% IMP
North of Snake River	4710	79	907	15	196	71	57	21
Desert CA	2332	83	294	10	101	78	17	13
Mountain Valleys CA	2378	77	613	20	95	64	40	27
South of Snake River	2468	64	1203	31	142	63	67	30
Southern CA	642	41	758	48	59	49	47	39
West Owyhee CA	1826	80	445	20	83	80	20	19
Grand Total	7178	73	2110	22	338	67	124	25

ADAPTIVE REGULATORY TRIGGERS AND WILDFIRE EMERGENCY RESPONSE CLAUSE

As mentioned above, sage-grouse adaptive regulatory triggers were developed to provide a regulatory backstop to prevent further loss and stabilize habitats and populations in the CHZ and IHZ where a demonstrated significant loss has either occurred over time or unexpectedly. These adaptive triggers are used when dramatic shifts in population or habitat occurs. Additionally, an emergency wildfire clause was developed to direct immediate response following a significant loss of sage grouse habitat due to catastrophic wildfire.

Whereas a review of the management approach is initiated when a Conservation Area exceeds a ten percent loss, an adaptive regulatory trigger—extending the conservation benefit of the measures in the CHZ to the IHZ—automatically occurs if two out of the three criteria outlined below are demonstrated. In developing these triggers it is important to note that sage-grouse populations often lag in their response to habitat loss and fragmentation. A negative population response may not be detected for three to five years following the habitat disturbance. Therefore, a habitat measure is also a component of the adaptive management trigger.

i. Maximum number of males on lek routes declines by >20% over a three-year period compared to 2011 values.
ii. A 30% or greater loss of sagebrush habitat is documented within defined breeding or winter habitat during a three-year period.
iii. The finite rate of change (λ) over 3 years starting with the baseline years 2009- 2011 is significantly less than 1.0.

As mentioned above, the number of active leks is a valuable indicator of population status and can be used to further inform decisions guided by the above triggers. Declines by >20% over a three-year period compared to 2011 values would indicate a problem. With the stated caveat above, the State may add, modify or remove criterion (iii) replacing the rate of change for evaluating whether to apply the adaptive regulatory trigger.

When the adaptive regulatory trigger is operative, population data and associated habitats will be reviewed to determine whether the problem is habitat related (e.g., fire) or caused by some other population-related issue (e.g., West Nile virus). If the problem is habitat related, the CHZ best management practices (*see* Section V, below) will be applied to areas in the IHZ within the same Conservation Area. For example, and while the trigger is operational, a project proponent in the IHZ would have to meet the more stringent criteria of the CHZ for developing new infrastructure. If the problem is not habitat related, appropriate management actions will be employed to minimize or alleviate the threat.

As mentioned previously, the State is also proposing an emergency clause to address dramatic habitat loss due to wildfire similar to the losses experienced in the Murphy Complex Fire. The current emergency clause states that where a wildfire burns 200,000 acres or more of CHZ habitat, and at least 50% of the burned acres contained important breeding or wintering habitat, the CHZ regulatory provisions shall apply to the IHZ within the relevant Conservation Area. The State may revise this clause based on a better understanding—e.g., mapping—of the important breeding and wintering habitat within the CHZ and IHZ.

D. Existing State Sage-Grouse Plan

In 1997, the then Idaho Sage-grouse Task Force, under the direction of the IDFG Commission, completed the Idaho Sage-grouse Management Plan ("1997 Plan"). The 1997 Plan divided Idaho into sage-grouse management areas and called for the creation of Local Working Groups ("LWGs") to develop sage-grouse management plans for each of Idaho's sage-grouse planning areas. Currently, for twelve local planning areas, nine LWG plans are completed, one LWG plan is nearly complete, and one plan is in progress.

Between 1999 and 2003, the Service received eight petitions to list the species as endangered or threatened under the ESA. In April 2004, the Service determined three of the petitions to list the species provided substantial information that listing might be warranted, thus initiating a comprehensive range-wide status review.

Based on the status review, the Idaho State Sage-Grouse Advisory Committee ("SAC") in 2003 was convened to assist the State in updating the 1997 Plan. The Conservation Plan for the Greater Sage-Grouse in Idaho was completed in 2006 ("2006 Plan"). The 2006 Plan was amended in 2009 to include the completion of the Implementation Chapter.

This Alternative builds upon, supplements, and in some instances replaces the 2006 State Plan and LWG plans by identifying habitat zones, adaptive regulatory triggers and concrete best management practices for primary and some secondary threats as identified by the Service necessary to preclude a listing. For activities not addressed by this Alternative, including predation issues, the 2006 State Plan and LWG plans will continue to be operative. For the sake of completeness, Idaho's 2006 Plan is incorporated herein by reference.

E. Valid Existing Rights

All management zones and recommendations are intended to be subject to and protect all valid existing rights. It is critical, especially for areas within the CHZ and IHZ that existing land uses and landowner activities continue to occur, particularly agricultural activities on all land ownerships.

F. Maps

The State recognizes that any attempt to map sage-grouse habitat must, by necessity, be at a broad, programmatic scale. The mapping of boundaries presented above is not intended to equate to verified boundary locations or on-the-ground habitat types from which the public can determine with certainty whether any particular location is inside or outside of a particular management zone.

Rather, the mapping exercise is intended to give governmental entities, land managers, project proponents and the public a general idea of where certain types of habitat and conservation priorities are spatially located as of the date of the map. The State also recognizes that this mapping exercising depicting current habitat for the species is not static, and any map must be verified through site-specific environmental analysis. Moreover, the map does not alleviate the duty of State and Federal agencies to determine the actual quality and trends of the habitat at a specific location where, for example, a project is proposed or grazing permit is up for renewal.

G. Infrastructure

When the Alternative refers to measures regarding infrastructure, it is referring to discrete, large-scale anthropogenic features, including highways, high voltage transmission lines, commercial wind projects, energy development (e.g., oil and gas development, geothermal wells), airports, mines, cell phone towers, landfills, residential and commercial subdivisions, etc.

Infrastructure related to small-scale ranch, home and farm businesses (e.g., stock ponds, fences, range improvements) do not fall within this definition. These issues are not included within this definition, and are addressed in other sections of the Alternative or through local resource management plans.

H. Mitigation Framework

Where compensatory mitigation—such as, for new infrastructure project authorized in the CHZ—is required to off-set impacts to sage-grouse or their habitats, the Idaho Sage-Grouse Mitigation Framework (see ISAC 2011) is the preferred mechanism to plan, select, implement and monitor these types of projects. Potential compensatory mitigation should be guided by a science-based statewide strategy to guide the selection of mitigation actions that will receive funding based on the benefits to sage-grouse populations. For example, restoration efforts are

likely to target perennial grasses and conifer encroachment areas within or adjacent to the CHZ, and secondarily, on perennial grasses and conifer encroachment areas within the IHZ with low fire risk. The Task Force recognized the importance of these targeted restoration efforts by including areas within the management regime of the CHZ current not meeting the general biological standard of 25-50% breeding bird density as described below in order to ensure these areas would still retain high restoration potential.

Mitigation efforts will focus on increasing the resiliency and productivity of sage-grouse populations and habitats, especially within the CHZ. Should these efforts materialize; the State will consider establishing a mitigation bank of sage-grouse habitation restoration projects that future development projects would repay through compensatory mitigation requirements. The State recognizes that this is a key provision in this Alternative, and intends to provide more detail on this component through the Governor's Implementation Commission.

I. Livestock Grazing Management

No studies exist directly relating livestock grazing systems or stocking rates to sage-grouse abundance or productivity. Most concerns about the effects of grazing on sage-grouse are localized in nature, whereas the species is demonstrated to be more responsive to stressors at a larger landscape. Therefore, grazing should be viewed as a landscape stressor with monitoring and management actions tailored accordingly.

Numerous studies have been published providing detailed information on characteristics of sage-grouse seasonal habitats (Knick and Connelly 2011). These studies provide insight on heights and cover of sagebrush and herbaceous plants needed for productive habitats (Connelly et al. 2000).

Based on this information, opportunities exist for livestock permittees, Federal and State agencies and university researchers to collaborate in an effort to fine-tune knowledge of current conditions and needed management actions in sage-grouse habitats throughout southern Idaho. This work would provide needed insight into current conditions within sage-grouse habitat and guide specific management actions necessary for ensuring healthy and stable sage-grouse populations.

Approach:

While grazing management options should be considered at a landscape scale, livestock grazing is typically considered in a site-specific context over time where vegetative condition can be manipulated by the timing and intensity of grazing practices. Currently, this is being done by designating allotments and scheduling grazing periods based on factors such as elevation, weather and plant growth (e.g., high elevations are grazed during summer months).

The three habitat zones provide additional options for scheduled grazing and should be considered. Altering grazing schemes in allotments within the CHZ, where needed and

appropriate, may be facilitated by enhanced grazing opportunities with introduced seedings or areas with lower value to sage-grouse (e.g., GHZ). The unintended consequences of altering grazing use, such as a possible increased risk of wildfire, must be carefully considered in any management proposal.

Guidelines for managing sage-grouse habitats and populations have been published (Connelly et al. 2000, Hagen et al. 2007) and are often included in various management plans. These guidelines describe *characteristics* of productive sage-grouse habitats based on a large number of studies conducted throughout the species' range. However, they do not reflect data collected in all parts of the range nor do they reflect data collected from randomly sampled locations. Thus, this information should not be considered as providing *standards* by which to judge effects of livestock grazing on the ultimate quality of sage-grouse seasonal habitats.

Proper grazing management greatly benefits from flexibility and the opportunity to schedule and adjust intensity, timing, duration, and frequency of grazing use over time in a manner that maintains rangeland health and habitat quality. In addition, vegetative characteristics of sage-grouse seasonal ranges can change spatially and temporally due to a wide variety of other influences. Therefore, these sage-grouse habitat characteristics should be viewed as a tool for assessing habitats and guiding management actions but not as a means of dictating grazing strategies or stocking rates. On-the-ground management actions and strategies to meet these habitat characteristics should be informed local resource knowledge and conditions.

Management Framework:

Grazing within the CHZ and IHZ will be managed according to the process outlined in the text below. The first step, and perhaps the most important, is to inform and educate affected permittees regarding sage-grouse habitat needs and conservation measures. These habitat needs or characteristics outlined in Tables 3-5 will be incorporated into relevant resource management plans as the desired conditions with the understanding that these desired conditions may not be achievable: (a) due to the existing ecological condition, ecological potential or the existing vegetation; or (b) due to casual events unrelated to existing livestock grazing.

Based on these habitat characteristics, conduct fine and site scale-habitat assessments to help inform grazing management. Where necessary, a determination of factors causing any failure to achieve the habitat characteristics (Tables 3, 4 and 5) will be conducted at a resolution sufficient to document the habitat condition. This determination will include consideration of local spatial and inter-annual variability. A determination of issues attributable to livestock grazing management should not result from one year of data at a specific location within an allotment.

The assessment process will be completed in conjunction with scheduled term grazing permit renewals (i.e., every ten years). Given limited agency resources, prioritization will be given to areas that have the potential to provide the greatest benefit to sage-grouse. Allocation of resources should be concentrated on allotments within the CHZ that have declining sage-grouse populations. Following those permits within the CHZ, resources will be further prioritized to

allotments within the IHZ with breeding habitats that have decreasing lek counts. (*See* Flow Chart below). Sage-grouse populations that are stable or trending upward will be a lower priority for permit renewal and the assessment process.

Typically, summer habitats will be managed to provide the conditions described in Table 3; winter Table 4; and breeding habitats in Table 5. However, the assessment/determination process must rely on published characteristics of sage-grouse habitat and the Ecological Site Descriptions, existing vegetation, habitat inventories/assessments (Stiver et al. 2010), and where available, state and transition models that describe vegetation and other physical attributes for sage-grouse. The related characteristics within the categories shown below will also be included. These characteristics indicate the ability of a given area to provide sage-grouse habitat.

> Category 1: The grazing allotment (or any pasture/significant area therein) has the existing vegetation and/or existing ecological condition (seral state) to provide sage-grouse habitat
>
> Category 2: The grazing allotment (or any pasture/significant area therein) has the ecological potential to provide sage-grouse habitat.

If the process and conditions outlined above demonstrate that livestock grazing is limiting achievement of the habitat characteristics (Tables 3-5), renewed permits will include measures, including but not limited to the actions outlined in (J), to achieve desired habitat conditions. These measures must be tailored to address the specific management issues.

Additionally, adaptive management changes related to existing grazing permits should only be undertaken if improper grazing is determined to be the causal factor in not meeting habitat characteristics, specific to site capability, based upon monitoring over time with appropriate site variability.

Table 3. General Characteristics of Late Brood Rearing Habitat.

Habitat Features	**Habitat Indicators**	**Habitat Characteristics**	
		Upland Sagebrush Communities	Riparian/Wet Meadow Communities
Protective Cover	Sagebrush Canopy Cover	10-25%	N/A
	Sagebrush Height	16-31 inches	N/A

	Sagebrush Proximity	N/A	Protective sagebrush cover (10-25%) is is within 300 m of of riparian/meadow feeding area.
Protective Cover and Food	Grass/forb canopy cover	>15%	N/A
Food	Forb Availability	Succulent forbs are available during the summer. Generally applies to higher elevations, such as mtn. big sage sites.	Riparian and wet meadow conditions are such that succulent forbs are available during the summer.

Table 4. General Characteristics of Winter Habitat.

Habitat Features	**Habitat Indicators**	**Habitat Characteristics**
Protective Cover and Food	Sagebrush Canopy Cover	10-30% exposed above snow
	Sagebrush Height	10-14 inches exposed above snow

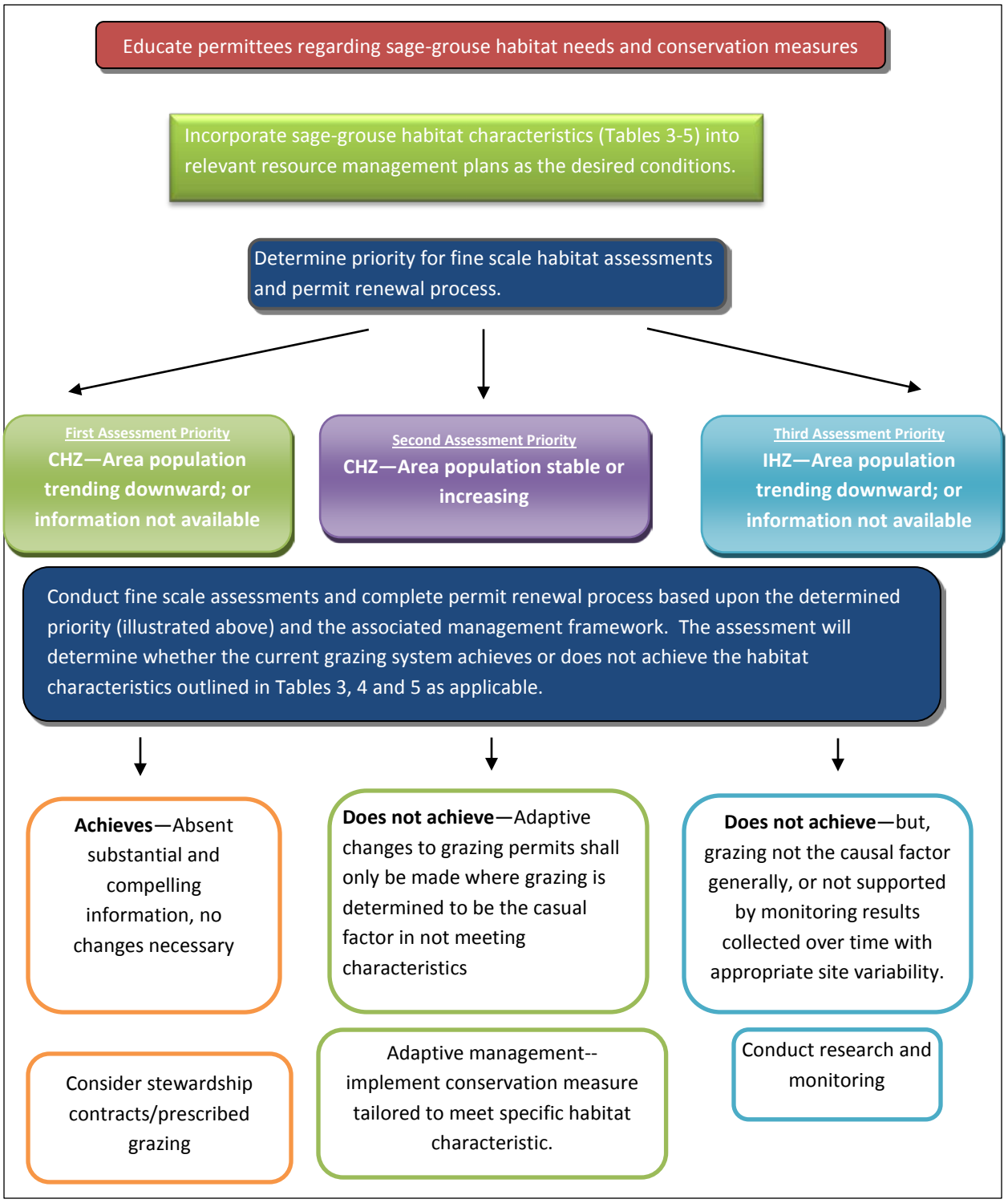
Table 5. General Characteristics of Productive Breeding/Nesting and Early Brood Rearing Habitat.

Habitat Features	Habitat Indicators	Habitat Characteristics	
		Arid Sites	**Mesic Sites**
Protective Cover	Sagebrush Canopy Cover	15-25%	15-25%
	Sagebrush Height	12-31 inches	16-31 inches
	Sagebrush Growth Form	Spreading	Spreading
	Perennial Grass/Forbs Heights (post hatch)	Adequate residual nesting cover[2]	
	Perennial Grass Canopy Cover	Not specified	>15%
Protective Cover and Food	Forb Canopy Cover	Not specified	>10%
	Total Grass/Forb Cover	>15%	>25%

[2] As defined by Connelly et al. 2000, Hausleitner 2003, and Holloran et al. 2005.

Food	Forb Availability	Good abundance and availability relative to ecological site potential

Figure 3. Livestock Grazing Management in CHZ and IHZ



J. Implementation of Idaho's Alternative

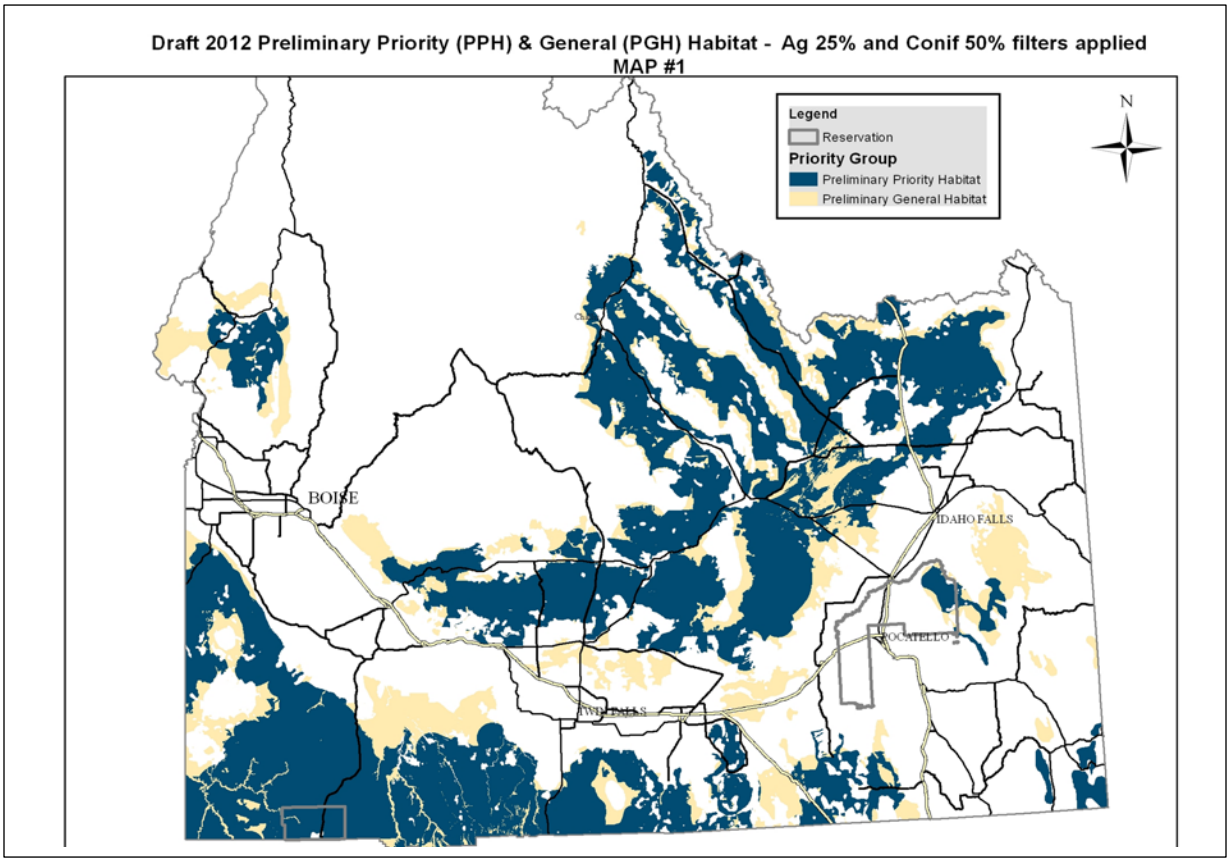
The Governor's Task Force has been a good model of collaborative problem-solving and decision-making. Should Idaho's Alternative be selected and incorporated into relevant resource management plans, I intend to establish by Executive Order an Implementation Task Force to ensure the intent of the State's Alternative is properly implemented. Specifically, the newly-formed group will examine situations where project proponents attempt to develop new infrastructure in the CHZ using the exemption process as described below; and whether proposed projects comply with the criteria outlined in the IHZ. This implementation model has proven successful in implementing the Idaho Roadless Rule.

Additionally, a key component to this alternative is adaptive management. While the State firmly believes the regulatory measures and other features of the plan effectively preclude the need to list, there is a need to continuously evaluate new information as it becomes available. For example, the U.S. Forest Service's research on *Pyrenophora semeniperda* ("black fingers of death") has shown effectiveness in eliminating the cheatgrass carryover seed. The State strongly encourages the Federal government to continue its research on this topic, and may modify this plan to make the application of this tool as an integral part of fire suppression.

II. IDAHO'S SAGE-GROUSE MANAGEMENT AREA (SGMA)

As mentioned previously, the State is adopting the designation of the SGMA with three distinct management zones CHZ, IHZ and GHZ. Recognizing and identifying distinct management zones within the SGMA enables the State and the Federal government to prioritize conservation and restoration efforts to those areas that provide the most effective opportunities to benefit sage-grouse populations and their habitat while maintaining predictable levels of land use. **Map 1,** as developed by the BLM, depicts two habitat areas and provided the Task Force with an initial starting point for discussions.

Map 1. Idaho Sage-Grouse Preliminary "Priority" and "General" Habitat Areas.

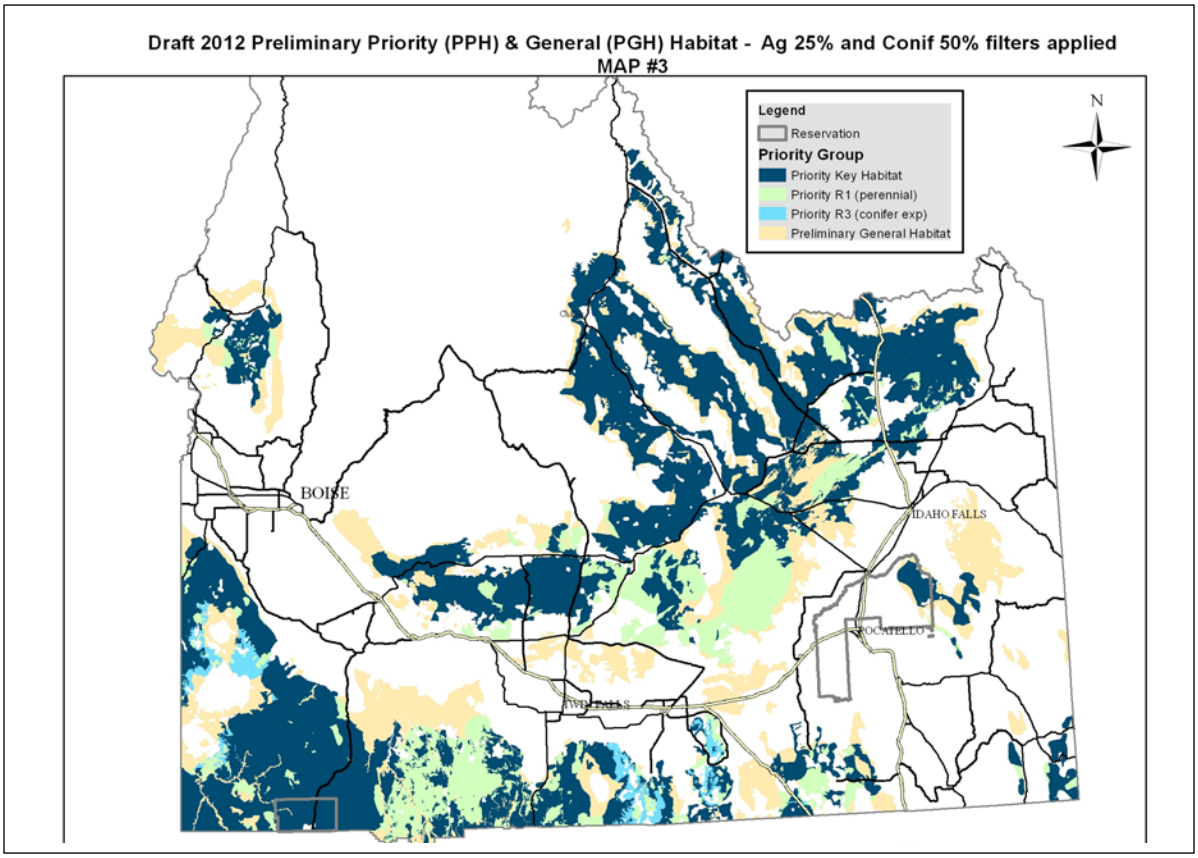


The two habitat areas in **Map 1** are referred to as preliminary "priority" habitat ("PPH") and preliminary "general" habitat ("PGH"). BLM defines PPH as those areas having the highest conservation value to maintaining greater sage-grouse populations, while PGH is defined as areas of occupied seasonal or year-round habitat outside of "priority" habitat. (Makela and Major 2012).

The State believes this mapping approach fosters an "in or out" management regime that does not adequately take advantage of the opportunity to provide better and more precise management direction based on the quality and location of sage-grouse populations and habitats in Idaho.

The need to refine habitat areas for Idaho-specific management purposes led to the development of **Map 2**. It improves on **Map 1** by differentiating three different vegetative types within the "priority" habitat areas: sagebrush, perennial grasses and conifer encroachment. The latter two types offer opportunities for restoration of sagebrush habitat for the species.

Map 2. Refined Idaho Sage-Grouse Areas.



For the development of Idaho's Alternative, I am adopting the Task Force's creation of the SGMA and the three management zones: CHZ, IHZ and GHZ. These are depicted on **Map 3**.

Map 3. Idaho SGMA Habitat Zones.

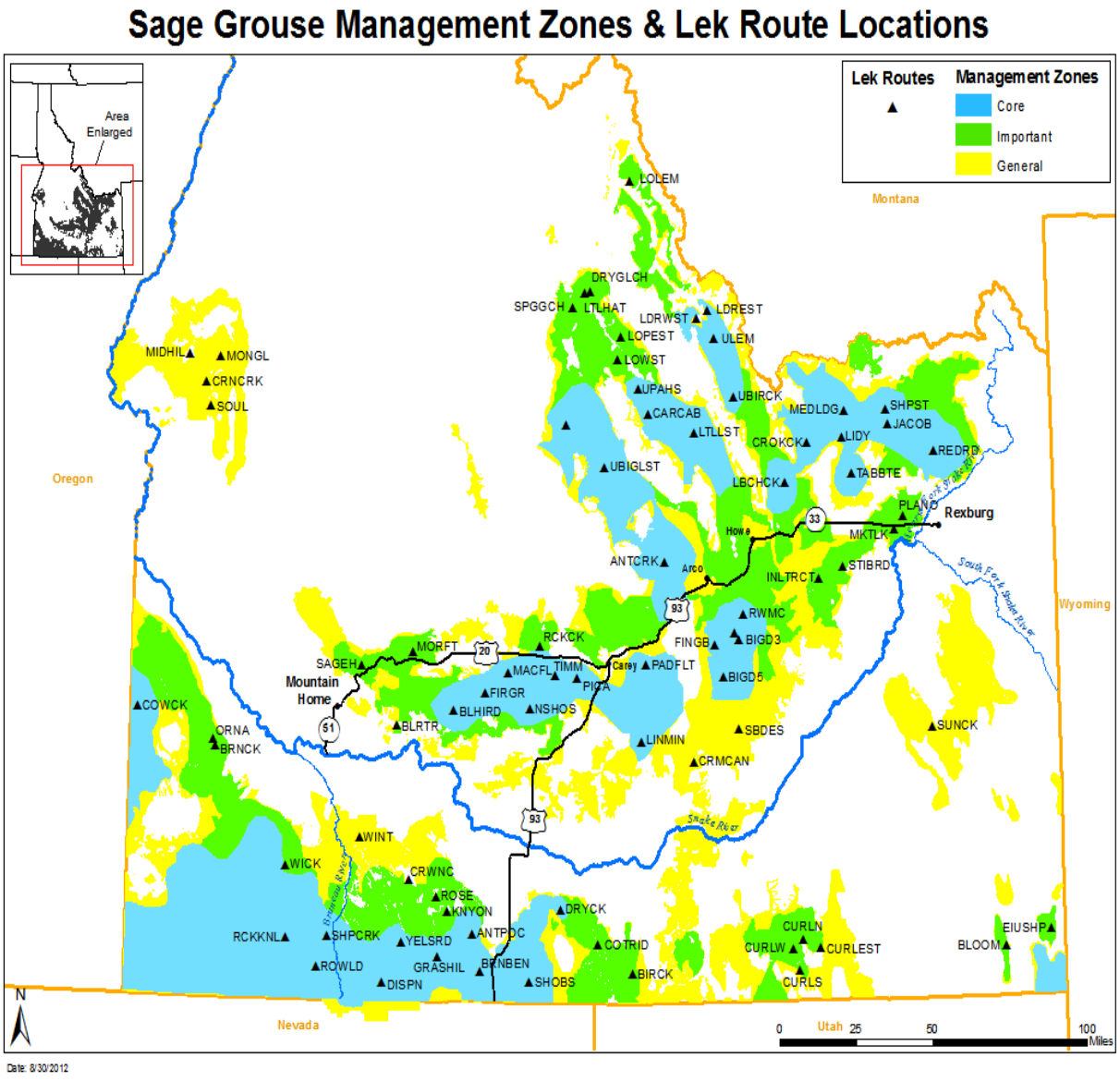


Table 6. Map 3 Lek Legend

Map Label	Lek Route Name	Map Label	Lek Route Name
ANTCRK	Antelope Creek	LOWST	Lower Pahsimeroi West
ANTPOC	Antelope Pocket	LTLHAT	Little Hat Creek
BIGD3	Big Desert #3	LTLLST	Little Lost
BIGD3	Big Desert #3	MACFL	Macon Flat
BIGD5	Big Desert #5	MEDLDG	Medicine Lodge
BIGD5	Big Desert #5	MIDHIL	Midvale Hill
BIRCK	Birch Creek	MIDMTN	Middle Mountain
BLHIRD	Bliss-Hill City Road	MKTLK	Market Lake
BLOOM	Bloomington	MONGL	Monday Gulch
BLRTR	Blair Trail	MORFT	Mores Flat
BRNBEN	Brown's Bench	NSHOS	North Shoshone
BRNCK	Brown's Creek	ORNA	Oreana
CARCAB	Carlson Cabin	PADFLT	Paddelford Flat
COTRID	Cottonwood Ridge	PICA	Picabo
COWCK	Cow Creek	PLANO	Plano
CRMCAN	Cream Canyon	RCKCK	Rock Creek
CRNCRK	Crane Creek	RCKCK	Rock Creek
CROKCK	Crooked Creek	RCKKNL	Rocky Knoll
CRWNC	Crow's Nest - Clover	REDRD	Red Road
CURLEST	Curlew East	ROSE	Roseworth
CURLN	Curlew North	ROWLD	Rowland Road
CURLS	Curlew South	RWMC	RWMC/INL
CURLW	Curlew West	SAGEH	Sagehen Flat
DISPN	Dishpan	SBDES	South Big Desert
DRYCK	Dry Creek	SHOBS	Shoshone Basin
DRYGLCH	Dry Gulch	SHPCRK	Sheep Creek
EIUSHP	EIU Sheep Creek	SHPST	Sheep Station
FINGB	Fingers Butte	SOUL	Soulen Center
FIRGR	Fir Grove	SPGGCH	Spring Gulch
GRASHIL	Grassy Hills	STIBRD	Stible Road
INLTRCT	INL/Tractor Flat	SUNCK	Sunday Creek
JACOB	Jacoby	TABBTE	Table Butte
KNYON	Kinyon	TIMM	Timmerman
LBCHCK	Lower Birch Creek	UBIGLST	Upper Big Lost
LDREST	Leadore East	UBIRCK	Upper Birch Creek
LDRWST	Leadore West	ULEM	Upper Lemhi
LIDY	Lidy	UPAHS	Upper Pahsimeroi
LINMIN	Lincoln/Minidoka	WICK	Wickahoney
LOLEM	Lower Lemhi	WINT	Winter Camp
LOPEST	Lower Pahsimeroi East	YELSRD	Yellow Sign Road

In sum, the CHZ and IHZ on **Map 3** total approximately 9.770 million acres, account for ninety percent (90%) of the known leks or breeding display areas in Idaho, and are believed to harbor the vast majority of the State's sage-grouse populations. Evidence for this includes census data that ninety-five percent (95%) of the male sage-grouse counted at leks are in these two zones. By contrast, the GHZ encompasses approximately 5.45 million acres, on which are found ten percent (10%) of the known leks and five percent (5%) of the male sage-grouse attending leks. Thus, the GHZ is the lowest priority for conservation or restoration efforts.

The three management zones within the SGMA take into account the distribution of sage-grouse populations in Idaho. Specifically, the CHZ and IHZ focus on protecting each of the two key meta-populations in the State. These meta-populations consist of a large aggregation of

interconnected breeding subpopulations of sage-grouse that have the highest likelihood of long-term persistence. One meta-population is located north of the Snake River and includes the North Magic Valley, Big Desert, and Basin and Range areas; the other is located south of the Snake River and includes south central Idaho, the upper Bruneau-Jarbidge Plateau, and the Owyhee Uplands.

Approximately sixty-five percent (65%) of the SGMA is administered by the BLM, and another seven percent (7%) by the USFS. Any proposed actions on lands managed by the Federal government, regardless of the management zone such projects may fall in, will still require appropriate site-specific environmental analysis under the National Environmental Policy Act ("NEPA") and any requisite site-specific decision-making, e.g. 43 C.F.R. Subpart 4160 (BLM) and 36 C.F.R. Part 251 (USFS) prior to approving proposed management actions.

Additionally, applicable resource management plan components must be followed during the planning and implementation of a project. For example, infrastructure development within the GHZ does not contain any special conservation measures for sage-grouse. However, within this management theme, some resource management plan components set sideboards or conditions for development. In particular, there may be other species listed under the ESA that mandates direction to reduce or minimize adverse effects. This direction is not inconsistent with this Alternative. Therefore, these consistent conditions would still apply to actions permissible under the Alternative and if the project cannot comply with the plan requirements, the proposed project would have to be modified, abandoned, or the specific plan component amended.

In addition to the overall desired conditions and ecosystem characteristics discussed earlier, this management zone addresses the following general conditions and uses.

III. IDAHO'S MANAGEMENT ZONES

A. CHZ

Current Condition: The CHZ encompasses approximately 5.68 million acres and supports the highest breeding densities of sage-grouse in Idaho. These areas include approximately sixty-five percent (65%) of the known active leks and are occupied by approximately seventy-three percent (73%) of male sage-grouse counted at leks throughout the SGMA. This management theme represents, and generally exceeds, the State's base population objective for the species.

The CHZ represents strongholds for sage-grouse populations in Idaho and supports the largest populations. Thus, this zone should represent the highest priority for conservation efforts and policies to address the primary threats to the species, such as wildfire, as described in the Service's 2010 listing determination.

Areas designated within the CHZ were mapped based on the following key data sets:

Twenty-five (25%) and fifty (50%) breeding bird density classes, which represent the top fifty (50%) of all leks in terms of male attendance, buffered at times by portions of the seventy-five (75%) class, depending on location, and the top two categories of the BLM's connectivity and persistence model (Makela and Major).[3] The lek connectivity model estimates the likelihood that those leks or population are likely to persist through time (Knick and Hanser 2011).

Depending on location, additional lands beyond the 25% and 50% thresholds have been included in the CHZ to consolidate key breeding areas, to include wilderness areas and lands within national monuments, and to foster population connectivity with neighboring states. The State recognizes that these are fluid boundaries because the habitat is not static, and as new information regarding the species becomes available, it may be necessary to adjust the boundaries for the three management zones.

Desired Future Condition: Maintaining or improving the status of the species within this management zone requires Federal agencies, in conjunction with the State and local partners, to work collaboratively to increase the resiliency of the habitat to disturbances, such as wildfire, and limit habitat fragmentation and loss only to projects pursuant to valid existing rights or incremental upgrades and/or that demonstrate, among other things, a significant high value benefit to the State of Idaho as well as provide compensatory mitigation consistent with the guiding principles above.

Management Focus: Management by Federal agencies should focus on the maintenance and enhancement of the habitats, population and connectivity areas identified in this zone.

Federal agencies need to marshal existing—and target future Federal resources—to reduce the number and size of wildfires, especially in the West Owyhee Conservation Area.

Idaho landowners and sage-grouse local working groups have already invested significant efforts in the CHZ and should continue to be informed and involved as these recommendations are refined and implemented. The State encourages local landowners to continue practices that aid in meeting conservation objectives for the CHZ.

[3] In 2010, the BLM entered into an agreement with the Service to model sage-grouse "breeding bird density" ("BBD") at three scales: across the range of the species; by WAFWA sage-grouse zones; and by State (Doherty et al. 2011). The BBD analyses involve ranking leks by attendance (i.e., highest to lowest number of males counted on leks) and summing the number of males until a desired percent-population threshold is met, hence the categories used—top 25%, 50%, 75% and 100% of the population.

Table of Generally Suitable Uses and Activities in CHZ[4]

Use/Activity	Yes	No	Conservation Measures
Fire Management	**X**		**Only human safety and structure protection shall take precedence.**
Invasive Species	**X**		**Actively manage exotic undesirable species sufficiently to prevent invasion.**
Infrastructure		**X**	**Limited exceptions are permissible.**
Recreation	**X**		**Prioritize the completion of comprehensive travel planning.**
Livestock Grazing	**X**		**Prioritize allotments for permit renewal and assessment process for allotments with declining sage-grouse populations.**

As illustrated in the table above, prospective infrastructure development authorized by the State Director is presumptively prohibited unless conducted pursuant to valid existing rights or as part of an incremental upgrade. The Task Force also recommended that a limited exemption process should be available to facilitate limited situations where a project proponent can satisfy stringent criteria and provide compensatory mitigation. It is important to note that a proponent would have to meet all the criteria outlined in the regulatory language.

[4] This table, along with the successive tables for each management zone, is for general illustrative purposes only. *See* Section V for Idaho's Alternative regulatory language for a complete understanding of the prohibitions and permissions for each management zone.

As the Task Force recommended, one of the key criterion for obtaining an exemption was a project proponent's demonstration that the project would provide a high-value benefit to meet critical existing needs and/or important societal objectives to the State of Idaho. In the draft Alternative, several commenters noted a discomfort with having federal officials determine what projects meet the exemption criteria. Because this Alternative is aimed at providing special management direction for sage-grouse on lands managed by the Federal government, the State does not have the authority to make land allocation decisions. More specifically, these commenters argued that these same Federal officials are not well-positioned to determine whether a project under this exemption provides a "high value" benefit to the State.

The State agrees with this line of reasoning. Thus, the factor is retained as part of the analysis, and should this Alternative be implemented, the State intends as part of the Implementation Commission to evaluate this factor as part of its responsibility to provide the Governor recommendations on site-specific projects developed through this plan.

Recognizing that maintaining and improving sage-grouse populations within the CHZ is important to the State's overall population objective, the balance between the economic value of future infrastructure projects and conserving the species to prevent an ESA listing clearly tilts in favor of the species within this the management zone. That said, it is impossible to predict projects that could be important to the economic vitality of the State in the future. Thus, the "high value" evaluation by the Implementation Commission will be critical in balancing these interests.

B. IHZ

Current Condition: The IHZ encompasses approximately 4.09 million acres. These areas include approximately twenty-five percent (25%) of the known active leks and are occupied by an estimated twenty-two percent (22%) of sage-grouse males. This management zone generally captures high-quality habitat and populations necessary for providing a management buffer for the CHZ, connecting patches of the CHZ, and supporting important populations and habitat independent of the CHZ.

The IHZ is primarily defined by the seventy-five (75%) breeding bird density areas. Given the migratory life history of many sage-grouse populations, a portion of the birds breeding in CHZ may make seasonal use of areas within the IHZ. The IHZ also includes areas of value for migration corridors, connectivity among breeding areas, and long-term persistence of each of the two key meta-populations of sage-grouse in Idaho.

Desired Future Condition: Maintaining or improving the status of the species within this management zone requires Federal agencies, in conjunction with the State and local partners, to work collaboratively to increase the resiliency of the habitat to disturbances, such as fire, and

limit unnecessary and undue habitat fragmentation to projects that demonstrate, among other things, a high value benefit to the State of Idaho.

Management Focus: Management by Federal agencies should focus strategically on areas within this zone that have the best opportunities for conserving, enhancing or restoring habitat for sage-grouse. Management by Federal agencies should employ more aggressive wildfire and invasive species management practices to prevent further encroachment of these two primary threats into the CHZ. The IHZ should also afford project proponents greater flexibility than in the CHZ with the understanding that the project still must demonstrate, among other things, a high value benefit to the State.

Table of Generally Suitable Uses and Activities in IHZ

Use/ Activity	Yes	No	Conservation Measures
Fire Management	**X**		**Where appropriate, develop more aggressive strategies to reduce fuel loads.**
Invasive Species	**X**		**Actively manage exotic undesirable species to prevent invasion in the CHZ without impairing sage-grouse populations.**
Infrastructure	**X**		**Permissible subject to certain criteria. Mitigate unavoidable impacts.**
Recreation	**X**		**Same as CHZ.**
Livestock Grazing	**X**		**Same as CHZ.**

C. GHZ

Current Condition: The GHZ encompasses approximately 5.45 million acres. This management zone generally includes few active leks, and fragmented or marginal habitat. The GHZ also includes habitat for two isolated populations of sage-grouse in the East Idaho Uplands and West Central Idaho. While these two areas generally represent better habitat than the remainder of the GHZ, the isolated nature of these populations make it unlikely that they will contribute to the long-term persistence of the two key meta-populations in the State of Idaho. Thus, local working group efforts will be key in these areas.

Desired Future Condition: Rely on efforts of local working groups to maintain populations where applicable.

Management Focus: Management by Federal agencies should focus, to the extent practicable, on facilitating multiple-use activities in order to avoid siting conflicts in the other management zones. Management by Federal agencies should employ a more aggressive wildfire and invasive species management practices to prevent further encroachment of these two primary threats into the CHZ/IHZ.

Table of Generally Suitable Uses and Activities in GHZ

Use/Activity	YES	NO	Conservation Measures
Fire Management	**X**		**Aggressive fire suppression techniques should be utilized.**
Invasive Species	**X**		**Employ aggressive invasive species measures in conjunction with CWMAs.**
Infrastructure	**X**		**Consistent with local resource management plans.**
Recreation	**X**		**No special application for sage-grouse.**
Livestock Grazing	**X**		**No special application for sage-grouse.**

IV. COOPERATING AGENCY STATUS

The State of Idaho formally requests cooperating agency status in this process. The Governor's Office of Species Conservation in conjunction with IDFG will serve as the State's

representatives in this process. The Task Force will continue to serve in an advisory capacity to ensure the State's Alternative is properly analyzed.

V. IDAHO'S REGULATORY LANGUAGE FOR LANDS MANAGED BY THE FEDERAL GOVERNMENT

A. Purpose.

The purpose of this Alternative is to provide, in the context of multiple-use management, Idaho-specific direction for the conservation and management of the greater sage-grouse in lands administered by the Bureau of Land Management and the U.S. Forest Service.

B. Definitions.

The following terms and definitions apply to Idaho's Alternative:

Adaptive Regulatory Triggers: Provides a regulatory backstop where a significant and unanticipated loss of sage-grouse habitats and populations occurs by applying the conservation benefits of the CHZ to the IHZ within the relevant Conservation Area.

Infrastructure: Discrete, large-scale anthropogenic features, including but not limited to, highways, high voltage transmission lines, commercial wind projects, energy development (e.g., oil and gas development, geothermal wells), airports, mines, cell phone towers, landfills, residential and commercial subdivisions. Infrastructure related to small-scale ranch, home and farm businesses, including but not limited to, stock ponds, fences, range improvements do not meet this definition and are addressed in other portions of the Alternative or relevant resource management plans.

Sage-Grouse Management Objective for the State of Idaho: Maintain and enhance the habitat and populations of sage-grouse located within the Core Habitat Zone ("CHZ"), while strategically buffered by areas within the Important Habitat Zone ("IHZ") having the best opportunities for conserving, enhancing or restoring habitat for sage-grouse. In the first three years of implementation, the approach will emphasize limiting habitat loss in the CHZ and IHZ respectively to no more than ten percent (10%) resulting in a proportionate reduction of males counted on leks within an individual Conservation Area.

Sage-Grouse Management Area: The Sage-Grouse Management Area ("SGMA") pursuant to this Alternative identified in **Map 3** that accounts for the entire known sage-grouse population in the State of Idaho.

State Director: The Idaho State Director for the Bureau of Land Management ("BLM"). Where relevant and appropriate, the term "State Director" also means "Regional Forester" for lands subject to the management of the U.S. Forest Service.

C. SGMA.

1. *Designations.* All relevant National Forest System lands and BLM lands as designated in **Map 3** are hereby designated as the SGMA. Notwithstanding the need to make technical corrections, absent substantial and compelling evidence, these designations pursuant to **Map 3** should not be altered for at least five (5) years.
2. *Management Classifications.* Management classifications for the SGMA express a management continuum. The following classifications are established: Core Habitat Zone ("CHZ"), Important Habitat Zone ("IHZ") and General Habitat Zone ("GHZ").
3. *Conservation Areas.* In order to achieve the State's Management Approach, the following Conservation Areas are established: West Owyhee Conservation Area; Southern Conservation Area; Desert Conservation Area; and Mountain Valleys Conservation Area.
4. *Maps.* The State Director and the Director of the Idaho Department of Fish and Game shall maintain and make available to the public a map of the SGMA, including records regarding any corrections or modifications of such maps pursuant to this Alternative.

D. CHZ. Management by Federal and State agencies should focus on the maintenance and enhancement of habitats, populations and connectivity in areas within this management zone.

1. *Wildfire*
   - i. Incorporate the BLM Washington Office Instruction Memorandum ("WO IM") 2011-138 to reduce the number and size of wildfires in sage-grouse habitat.
   - ii. Only human safety and structure protection shall take precedence over the protection of sage-grouse habitat.
   - iii. Evaluate and decrease wildfire response time by twenty-five percent (25%). In order to achieve this objective:
     - a. Prioritize, maintain and improve a high initial attack success rate in suppression response and staging decisions;
     - b. Utilize available maps under (C)(4) and spatial data depicting sage-grouse habitats within this zone;
     - c. Redeploy firefighting resources not being fully utilized outside the SGMA to the extent such redeployment will not cause harm to human safety and structure protection; and
     - d. Request the necessary federal appropriations to achieve this objective.

iv. Evaluate the current fire suppression baseline, and in conjunction with the measures below, develop a consistent plan that improves on this baseline by twenty-five percent (25%).

a. Federal firefighters shall ensure close coordination with State firefighters, local fire departments and local expertise to create the best possible network of strategic fuel breaks and road access to minimize and reduce the size of a wildfire following ignition;

b. To the extent practicable, the close coordination described in (a) should result in consistent fire response plans and mutual aid agreements necessary to achieve the management objective in (iv);

c. Request and place additional firefighting resources and establish new Incident Attack Centers, with particular emphasis in the West Owyhee Conservation Area;

d. Create and maintain effective fuel breaks in strategic locations that will modify fire behavior and increase fire suppression effectiveness according to the following criteria:

- Target establishment of fuel breaks along existing roads or other disturbances.
- Identify and target higher-risk roads for fuel break construction and maintenance based on fire history maps.
- Implement a strategic approach to using these roads for rapid fire response.
- Analyze the benefits of the fuel break against the additional loss of sagebrush cover and risk on invasive weeds.
- Fire breaks must be properly maintained.

e. Request the necessary federal appropriations to achieve this objective.

2. *Invasive Species*

i. Actively manage exotic undesirable species to limit presence.

ii. Monitor and control invasive vegetation post-wildfire treatment for at least three years.

iii. Emphasize the use of native seeds for fuels management treatment based on availability, adaptation (site potential), and probability of success.

a. Reallocate native plant seeds for Emergency Stabilization and Rehabilitation (ES&R) from outside the SGMA and the GHZ to this management zone if necessary.
b. Where the probability of obtaining sufficient native seed is low, non-native seeds may be used provided sage-grouse habitat objectives are met.

3. *Habitat Restoration*

i. Prioritize the removal of conifers through methods appropriate for the terrain and most likely to facilitate expeditious sage-grouse population and habitat recovery. To the extent possible, utilize removal methods creating the least amount of disturbance.
a. Efforts should focus on areas with highest restoration potential typically evidenced by low canopy cover, existing sagebrush understory, and adjacent current populations.
b. Refrain from using prescribed fire and conducting removal projects in juniper stands older than one hundred years.
c. Maximize the use of Natural Resource Conservation Service funding through permittee grants under the Environmental Quality Incentives Program (EQUIP) and Wildlife Habitat Improvement (WHIP) programs.

ii. In perennial grasslands, actively restore sagebrush canopy cover and the ecological functions of the site. To the extent practicable, utilize native understory.
a. Prioritize areas for restoration with lower risks of wildfire and exotic species invasion.

4. *Infrastructure*

i. The development of infrastructure authorized after the effective date of the record of decision in areas designated as CHZ is prohibited, except if developed pursuant to valid existing rights or incremental upgrade and/or capacity increase of existing development (authorized prior to the record of decision) subject to best management practices in (G).
a. Impacts of proposed actions authorized in (i) shall be limited to the authorized existing footprint with no more than a fifty percent (50%), depending on industry practice, increase in footprint size and associated impacts; and
b. Projects authorized under (i) would only be subject to compensatory mitigation if new significant and unavoidable impacts are demonstrated to be associated with the project.

ii. Notwithstanding the limited prohibition in (4)(i), the State Director may authorize infrastructure development only in situations where the development:
    a. Cannot be reasonably accomplished outside of the CHZ; and
    b. Demonstrates the population trend for the species within the relevant Conservation Area is stable or increasing over a three-year period; and
    c. Demonstrates the individual or cumulative exceptions under this provision must best reduce habitat fragmentation ensuring the impacts will not accelerate and/or cause a population decline of the species within the relevant Conservation Area; and
    d. Co-locate with existing infrastructure to the maximum extent practicable; and
    e. Shall mitigate unavoidable impacts through an appropriate compensatory mitigation plan.

iii. Proposed development authorized under (4)(ii) are subject to the applicable best management practices in (G).

iv. Notwithstanding the limited prohibition in 4(i), the State Director may authorize, after the record of decision, oil and gas development only under the following circumstances:
    a. Exploration activities utilizing temporary roads are permissible provided site disturbance is minimized.
    b. There shall be no surface use or occupancy unless the State Director finds that the surface development, based on site-specific analysis, will not accelerate and/or cause declines in sage-grouse populations within the relevant Conservation Area based on the application of the criteria in 4(ii) and the best management practices in (G).

5. *Secondary Threats*

i. *Recreation*
    a. Prioritize the completion of Comprehensive Transportation Management Travel Plans ("CTMTPs") to minimize disturbance to sage-grouse populations and reduce the risk of wildfire and other habitat disturbances associated with cross-country travel.
    b. Prior to the completion of CTMTPs, restrict vehicles to existing routes.

c. Adopt a “restricted to designated routes” approach where appropriate to the extent such designation does not interfere with administrative use.

d. Discourage the creation of new roads and trails. Re-route existing routes where appropriate.

e. Identify and reduce activities demonstrating repeated displacement of nesting birds. Where existing routes are demonstrated to affect occupied leks, apply seasonal and time based use-restrictions tailored to address the site-specific conditions of the area.

ii. *West Nile Virus*

a. Reduce the risk of transmission of West Nile Virus to sage-grouse by minimizing the creation of breeding habitat for mosquitoes.

b. Consider the potential impacts of West Nile Virus transmission prior to permitting new ponds or reservoirs.

c. Minimize the construction of new ponds or reservoirs except as needed to meet important resource management and/or restoration objectives.

d. Non-pond/reservoir watering facilities, such as troughs and bottomless tanks, should be developed and maintained to provide high quality water that minimizes the development of habitat for mosquitoes.

e. Maintenance of functioning float valves and water return features should be constructed to prohibit water from being spilled on the ground surrounding the trough and/or tank.

f. To the extent practicable, water should be returned to the original water source to reduce suitable habitat for mosquitoes.

iii. *Livestock Grazing Management*

a. Incorporate the sage-grouse habitat characteristics in **Tables 3-5** and management considerations into relevant resource management plans as desired conditions recognizing that these conditions may not be achievable (1) due to the existing ecological condition, ecological potential, or the existing vegetation; or (2) due to casual events unrelated to existing livestock grazing.

b. Prioritize permit renewal and the land health assessments outlined in (iii)(c) in allotments with declining sage-grouse populations.

c. Conduct fine and site scale-habitat assessments and, where appropriate, a determination of factors causing any failure to achieve the habitat characteristics in Tables 3-5. The assessment(s) shall be conducted at a resolution sufficient to document the habitat condition and will include local spatial and inter-annual variability. Any determination relative to the habitat characteristics (Tables 3-5) shall be based upon existing ecological condition, ecological potential, and existing vegetation information to ensure the assessment recognizes whether or not these habitat characteristics are achievable.

d. The assessment will rely on published characteristics of sage-grouse habitat and the Ecological Site Descriptions, and **Tables 3-5**, and where available and applicable, rangeland health determinations made in accordance with 43 C.F.R. 418.2(c).

e. After conducting the assessment in (iii)(c), if the current grazing system achieves the habitat characteristics (Tables 3-5), absent substantial and compelling information no further grazing management changes are necessary.

f. If the process and conditions outlined in (iii)(c) demonstrate that livestock grazing is limiting achievement of the habitat characteristics (Tables 3-5), renewed permits will include measures, including but not limited to the actions outlined in (J), to achieve desired habitat conditions. These measures must be tailored to address the specific management issues.

g. Adaptive management changes related to existing grazing permits should only be undertaken where improper grazing is determined to be the casual factor in not meeting habitat characteristics, specific to site capability, based upon monitoring over with appropriate spatial variability.

h. Where management changes are needed and necessary pursuant to (f), implement management actions that are narrowly tailored to address the specific habitat objective applied at the allotment and/or activity plan level, including but not limited to the actions outlined in (J).

iv. *Livestock Grazing Infrastructure*

a. To the extent practicable, reduce the impacts of fences and livestock management facilities on sage-grouse.

b. Mark fences with permanent flagging or other suitable device to reduce sage-grouse collisions on flat to gently rolling terrain in areas of moderate to high fence densities (i.e., more than one kilometer of fence per square kilometer) located within two kilometers of occupied leks.
c. Identify and remove unnecessary fences.
d. Placement of new fences and livestock management facilities, including corrals, loading facilities, water tanks and windmills, should consider their impact on sage-grouse.
e. Avoid constructing new fences within one kilometer (0.6 miles) of occupied leks.
f. To the extent practicable, place new, taller structures, including corrals, loading facilities, water storage tanks, windmills, at least one kilometer from occupied leks.

E. IHZ. Management by Federal and State agencies should focus on areas within this zone that have the best opportunities for conserving, enhancing or restoring habitat for sage-grouse. Management by Federal agencies should also provide the necessary flexibility to permit high-value infrastructure projects.

1. *Wildfire*

i. Incorporate the BLM WO IM 2011-138 to reduce the number and size of wildfires in sage-grouse habitat.
ii. Only human safety and structure protection shall take precedence over the protection of sage-grouse habitat.
iii. Evaluate and decrease wildfire response time by twenty percent (20%) in the West Owyhee Conservation Area. Decrease wildfire response time in all other conservation areas by fifteen percent (15%). In order to achieve this objective:
a. Prioritize, maintain and improve a high initial attack success rate in suppression response and staging decisions;
b. Utilize available maps under (C)(4) and spatial data depicting sage-grouse habitats within this zone;
c. Redeploy firefighting resources not being fully utilized outside the SGMA to the extent such redeployment will not cause harm to human safety and structure protection; and
d. Request the necessary federal appropriations to achieve this objective.

iv. Evaluate the current fire suppression baseline, and in conjunction with the measures below, develop a management plan that improves on this baseline by fifteen percent (15%).
    a. Federal firefighters shall ensure close coordination with State firefighters, local fire departments and local expertise (i.e., livestock grazing permittees and road maintenance personnel) to create the best possible network of strategic fuel breaks and road access to minimize and reduce the size of a wildfire following ignition;
    b. To the extent practicable, the close coordination described in (a) shall result in consistent fire response plans and mutual aid agreements necessary to achieve the objective in (1)(v); and
    c. Request the necessary federal appropriations to achieve this objective.

v. Create and maintain effective fuel breaks in strategic locations that will modify fire behavior and increase fire suppression effectiveness.
    a. Target establishment of fuel breaks along existing roads or other disturbances.
    b. Identify and target higher-risk roads for fuel break construction and maintenance based on fire history maps.
    c. Implement a strategic approach to using these roads for rapid fire response.
    d. Closely evaluate the benefits of the fuel break against the additional loss of sagebrush cover and risk of invasive weeds.
    e. Fire breaks must be properly maintained.

vi. Prescribe or target livestock grazing where demonstrated to be appropriate as a tool for reducing fuel loads, reducing invasive species populations and maintaining functional fire breaks.
    a. Test the effectiveness and monitor the results on a site-specific basis through stewardship contracting.

vii. Reduce human-caused ignitions by coordinating with Federal, State and local jurisdiction on fire and litter prevention programs.

2. *Invasive Species*

i. Actively manage exotic undesirable species to limit presence in the CHZ.

ii. Monitor and control invasive vegetation post-wildfire treatment for at least three years.

iii. Emphasize the use of native seeds for fuels management treatment based on availability, adaptation (site potential), and probability of success.
    a. Reallocate native plant seeds for Emergency Stabilization and Rehabilitation (ES&R) from outside the SGMA and the GHZ to this management zone.
    b. Where the probability of success or native seed availability is low, non-native seeds may be used provided sage-grouse habitat objectives are met.

iv. Require best management practices for construction projects to prevent invasion.

v. Actively pursue eradication or control of noxious weeds and/or invasive species posing a risk to sage-grouse habitats using a variety of chemical, mechanical and other appropriate means in coordination with the local Cooperative Weed Management Area (CWMA).

vi. Establish an effective monitoring program to evaluate the success of weed control efforts in conjunction with the CWMAs.

3. *Habitat Restoration*

i. Prioritize the removal of conifers through methods appropriate for the terrain and most likely to facilitate expeditious sage-grouse habitat recovery. Especially prioritize and target removal treatments adjacent to the CHZ. To the extent possible, utilize methods creating the least amount of disturbance.
    a. Areas with highest restoration potential will typically have low canopy cover, existing sagebrush understory, and adjacent current populations.
    b. Refrain from using prescribed fire and conducting removal projects in juniper stands older than one-hundred years.
    c. Maximize the use of Natural Resource Conservation Service funding through permittee grants under the Environmental Quality Incentives Program (EQUIP) and Wildlife Habitat Improvement (WHIP) programs.

ii. In perennial grasslands, actively restore sagebrush canopy cover and the ecological functions of the site. To the extent practicable, utilize native understory.
    a. Prioritize areas for restoration with lower risks of wildfire and exotic species invasion, especially in areas adjacent to the CHZ.

4. *Infrastructure*

i. The State Director may authorize new infrastructure development where in the State Director's judgment the circumstances set out below exist.

a. Cannot reasonably be achieved, technically or economically, outside of this management zone; and

b. To the extent practicable, co-locate the project with existing infrastructure. In the event co-location is not practicable, the siting should best reduce cumulative impacts and/or impacts to other high value natural, cultural, or societal resources; and

c. Should not result in unnecessary and undue habitat fragmentation or other impacts causing a decline in the population of the species within the relevant Conservation Area; and

d. Mitigate unavoidable impacts through an appropriate compensatory mitigation plan; and

e. Comply with the applicable best management practices in (G).

ii. For oil and gas leases issued after the effective date of the record of decision, exploration activities utilizing temporary roads shall be exempt, provided site disturbance is minimized. Surface use or occupancy is permissible if projects can demonstrate, based on site-specific analysis, that such activities will not cause declines in sage-grouse populations through implementation of the best management practices in (G). Projects authorized under (ii) must mitigate unavoidable impacts through an appropriate compensatory mitigation plan.

5. *Secondary Threats*

i. *Recreation*

a. Prioritize the completion of Comprehensive Transportation Management Travel Plans ("CTMTPs") to minimize disturbance to sage-grouse and reduce the risk of wildfire and other habitat disturbances associated with cross-country travel.

b. Prior to the completion of CTMTPs, restrict vehicles to existing routes.

c. Adopt a "restricted to designated routes" approach where appropriate to the extent such designation does not interfere with administrative use.

d. To the extent practicable, discourage the creation of new roads and trails. Re-route existing routes where appropriate.

e. Identify and reduce activities demonstrating repeated displacement of nesting birds. Where existing routes are demonstrated to affect occupied leks, apply seasonal and time based use-restrictions tailored to the site-specific conditions of the area.

ii. *West Nile Virus*

a. Reduce the risk of the transmission of West Nile Virus to sage-grouse by minimizing the creation of breeding habitat for mosquitoes.

b. Consider the potential impacts of West Nile Virus transmission prior to permitting new ponds or reservoirs.

c. Minimize to the extent practicable, construction of new ponds or reservoirs except as needed to meet important resource management and/or restoration objectives.

d. Non-pond/reservoir watering facilities, such as troughs and bottomless tanks, should be developed and maintained to provide high quality water that suppresses development of habitat for mosquitoes.

e. Maintenance of functioning float valves and water return features should be constructed to prohibit water from being spilled on the ground surrounding the trough and/or tank.

f. To the extent practicable, water should be returned to the original water source to reduce suitable habitat for mosquitoes.

iii. *Livestock Grazing Management*

a. *See* V.D.5.iii.

iv. *Livestock Grazing Infrastructure*

a. To the extent practicable, reduce the impacts of fences and livestock management facilities on sage-grouse.

b. Mark fences with permanent flagging or other suitable device to reduce sage-grouse collisions on flat to gently rolling terrain in areas of moderate to high fence densities (i.e., more than one kilometer of fence per square kilometer) located within two kilometers of occupied leks.

c. Identify and remove unnecessary fences.

d. Placement of new fences and livestock management facilities, including corrals, loading facilities, water tanks

and windmills, should consider their impact on sage-grouse.

e. Avoid constructing new fences within one kilometer of occupied leks.

f. To the extent practicable, place new, taller structures, including corrals, loading facilities, water storage tanks, windmills, at least one kilometer from occupied leks.

F. GHZ. Management by Federal agencies should focus on multiple-use management consistent with local resource management plans.

1. *Wildfire*

i. Incorporate the BLM WO IM 2011-138 to reduce the number and size of wildfires in sage-grouse habitat.

ii. Fire suppression efforts should be emphasized, recognizing that other local, regional, and national fire suppression priorities may take precedent.

iii. Aggressively create and maintain effective fuel breaks in strategic locations that will modify fire behavior and increase fire suppression effectiveness. The fire breaks should target areas necessary to provide a buffer between the GHZ and the other management zones.

a. Target establishment of fuel breaks along existing roads or other disturbances.

b. Identify and target higher-risk roads for fuel break construction and maintenance based on fire history maps.

c. Implement a strategic approach for using these roads to enable rapid fire response.

d. Fuel breaks must be properly maintained and sited with consideration of active leks and risk of invasive weeds.

iv. Actively employ prescribed or targeted grazing as a primary tool for reducing fuel loads, reducing invasive species populations and maintaining functional fire breaks to the extent such activities do not adversely affect breeding habitats (i.e. occupied leks, nesting and early brood-rearing).

2. *Invasive Species*

i. Aggressively manage exotic undesirable species sufficient to prevent invasion into other management zones.

ii. Aggressively pursue eradication or control of noxious weeds and/or invasive species posing a risk to sage-grouse habitats using a variety of chemical, mechanical and other appropriate means in

coordination with the local Cooperative Weed Management Area (CWMA).

iii. Establish an effective monitoring program to evaluate the success of weed control efforts in conjunction with the CWMAs.

3. *Infrastructure*

i. A responsible official may authorize infrastructure construction consistent with the relevant land management components as provided for in (H).

4. *Secondary Threats*

i. *Recreation*

a. Nothing in this Alternative shall be construed as affecting the use of motorized equipment and mechanical transport in this management zone.

ii. *West Nile Virus*

a. Minimize the creation of breeding habitat for mosquitoes in sage-grouse habitat.

b. Prior to permitting new ponds or reservoirs, consider the impacts of West Nile Virus transmission.

c. Non-pond/reservoir watering facilities, such as troughs and bottomless tanks should be developed and maintained to provide high quality water that suppresses the development of habitat for mosquitoes.

iii. *Livestock Grazing Management*

a. Nothing in this Alternative shall be construed as affecting existing grazing permits in this management zone. Grazing permits are still subject to the grazing regulations (43 C.F.R. Part 4100, including Fundamentals of Rangeland Health, 43 C.F.R. Subpart 4160.

iv. *Livestock Grazing Infrastructure*

a. Identify and remove unnecessary fences.

G. Infrastructure—Best Management Practices.

1. For proposed actions authorized in the CHZ and IHZ, the following best management practices are applicable:

i. Utilize existing roads, or realignments of existing routes to the extent possible.

ii. Construct new roads to minimum design standards needed for production activities.

iii. To the extent possible, micro-site linear facilities to reduce impacts to sage-grouse habitats.

iv. Locate staging areas outside the CHZ to the extent possible.

v. To the extent possible, co-locate linear facilities within one kilometer of existing linear facilities.

vi. New transmission lines, excluding those lines under (viii), will be deemed co-located and/or permissible if construction occurs between July 1 and March 14 (or between July 1 and November 30 in winter concentration areas) and within one kilometer either side of existing 115-kilovolt (kV) or larger transmission lines to create a corridor no wider than two kilometers.

vii. New transmission lines, excluding those lines under (viii), outside of this two kilometer corridor can only be constructed where it can be demonstrated that the activity will not cause declines in sage-grouse populations or if the activity reduces cumulative impacts and/or avoids other important natural, cultural or societal resources.

viii. Locate essential public services, including but not limited to, distribution lines, domestic water lines and gas lines, at least one kilometer from active sage-grouse leks. If one kilometer avoidance is not possible, construct lines outside of March 15 to June 30.

ix. In addition to the applicable best management practices (i-viii), wind energy development, projects must also comply with the 2012 U.S. Fish and Wildlife Service's Wind Energy Guidelines.

2. For oil and gas leases issued after the effective date of the record of decision, the following best management practices are applicable:

i. Evaluate the affected area in accordance with the process outlined in the State of Wyoming's Executive Order 2011-5.

ii. For development within the CHZ, surface disturbance will be limited to three percent of suitable habitat per an average of 640 acres. Development within the IHZ will be limited to five percent of suitable habitat per an average of 640 acres.

iii. There shall be no surface occupancy ("NSO") within one kilometer of the perimeter of occupied sage-grouse leks; provided this distance is supported by the best available science at the time the development undergoes site-specific environmental analysis.

iv. Activity (production and maintenance activity exempted) will be allowed from July 1 to March 14 outside of the one kilometer perimeter of a lek where brood rearing, nesting and early brood-rearing habitat is present.

v. Areas solely used as winter concentration areas, exploration and development activity will be allowed March 14 to December 1.

vi. Locate main roads used to transport production and/or waste products >1.5 kilometers from the perimeter of occupied sage-grouse leks. Locate other roads used to provide facility site access and maintenance >1.5 kilometers from the perimeter of occupied sage-grouse leks. Construct roads to minimum design standards needed for production activities.

vii. New noise levels, at the perimeter of a lek, should not exceed 10dBA above ambient noise (existing activity included) from 6:00 PM to 8:00 AM during the initiation of breeding (March 1-May 15). Ambient noise level should be determined by measurements taken at the perimeter of a lek at sunrise.

viii. Absent some demonstration to the contrary, the proposed sagebrush treatment associated with this activity will not reduce canopy cover to less than 15 percent.

H. Scope and Applicability.

1. This Alternative does not revoke, suspend, or modify any permit, contract, or other legal instrument authorizing the occupancy and use of the applicable Federal lands prior to the effective date of the record of decision and prior to the completion of any statutory or regulatory decision-making process to revoke, suspend, or modify such permit, contract or legal instrument.
2. This Alternative does not revoke, suspend, or modify any project or activity decision made prior to the effective date of the record of decision.
3. Nothing in this Alternative shall be construed as restricting mineral leases, contracts, permits, and associated activities prior to the effective date of the record of decision.
4. Nothing in this Alternative shall affect mining activities conducted pursuant to the General Mining Law of 1872.
5. For the purposes of sage-grouse management, the provisions set forth in this Alternative shall take precedence over any inconsistent land management plan component unless prescribed by statute or regulation. Land management components that are not inconsistent with this Alternative will continue to provide guidance for projects and activities within the SGMA.
6. The best management practices in (G) and other protective stipulations in this Alternative should be evaluated on a continuous basis and at a

minimum, as new science, information and data emerge regarding the habitats and behaviors of the species.

7. Nothing in this Alternative waives any applicable requirements regarding site-specific environmental analysis, public involvement, consultation with Tribes and other agencies, or compliance with applicable laws.

I. Corrections and Adaptive Regulatory Triggers.

Correction or modification of designations made pursuant to this Alternative may occur under the following circumstances.

1. *Administrative Corrections.* Administrative corrections to the map of lands identified in **Map 3** include, but are not limited to, adjustments that remedy clerical errors, typographical errors, mapping errors, or improvements in mapping technology. The State Director may issue administrative corrections after a 30-day public notice.
2. *Adaptive Regulatory Trigger*. Where two out of the following three criteria are demonstrated within a Conservation Area, excluding areas within the GHZ, the measures in (D) shall apply to the IHZ containing wintering or breeding habitat in the relevant Conservation Area:
   i. Finite rate of change (*λ)* over three years starting with the baseline years 2009- 2011 is significantly less than 1.0. This is a moving average for rate of change (i.e. 2011-2013, 2012-2014, 2013-2015, etc.) when compared to 1.0 (indicating a stable population).
   ii. Number of males on lek routes declines by >20% over a three-year period compared to 2011 values.
   iii. A 30% or greater loss of sagebrush habitat is documented within defined breeding or winter habitat during a three-year period.
3. *Regulatory Trigger No Longer Necessary.* Where the core population data within the relevant Conservation Area meets or exceeds the 2011 values over a three-year period, areas within the IHZ are no longer subject to the CHZ management provisions.
4. *Emergency Wildfire Clause.* Where a wildfire burns 200,000 acres or more of the CHZ, and at least fifty percent of the burned acres contained important breeding or wintering habitat, the CHZ regulatory provisions in (D) shall apply to the IHZ within the appropriate Conservation Area.

J. Adaptive Management Measures for Livestock Grazing: Based upon the assessment process, the ecological conditions, the ecological potential and the status of sage-grouse populations, the following measures could be employed singly, or in combination where appropriate, in the development and

implementation of grazing management programs. Flexibility in administering grazing programs and providing offsetting grazing options over relatively large landscapes will help successfully implement these measures.

1. Employ grazing management systems that ensure adequate nesting and early brood rearing habitat within the breeding landscape.
2. When use-pattern mapping or monitoring demonstrates an opportunity to adjust livestock distribution to benefit occupied sage-grouse breeding habitat, include as appropriate herding, salting, and water-source management (e.g., turning troughs/pipelines on/off, extending pipelines/moving troughs) in grazing programs.
3. If available and feasible, utilize exotic perennial grass seedings and/or annual grasslands to avoid breeding season of use of occupied sage-grouse habitat.
4. Modify authorized seasons of use within grazing permits to provide greater flexibility in managing livestock for the benefit of sage-grouse.
5. Where appropriate, maintain residual herbaceous vegetation at the end of the growing/grazing season to contribute to nesting and brood-rearing habitat during the coming nesting season. Table 5.
6. Insure that permittees are informed of management and movement requirements related to avoidance of recent burns, rehabilitation seedings or other restoration sites.
7. Manage grazing of riparian areas, meadows, springs, and seeps in a manner that promotes vegetative structure and composition appropriate to the site. In some cases enclosure fencing may be a viable option. However, recognize the availability and quality of desired herbaceous species may be improved by periodic grazing use of the enclosure.
8. Implement management actions (grazing decisions, allotment management plan/conservation plan development, or other agreements) to modify grazing management to meet seasonal sage-grouse habitat requirements. Employ proper grazing management by providing flexibility in scheduling the intensity, timing, duration and frequency of grazing use over time that best promotes management objectives. During drought periods, prioritize evaluating effects of drought in the CHZ relative to grouse needs for food and cover. Ensure that post-drought management allows for vegetation recovery that meets sage-grouse needs in priority sage-grouse habitat areas.
9. When using salt or mineral supplements: a) place them in existing disturbed sites, areas with reduced sagebrush cover—e.g., seedings or cheatgrass sites—to reduce impacts to sage-grouse breeding habitat, b)

where feasible use salts or mineral supplements to improve management of livestock for the benefit of sage-grouse habitat.

10. In general, avoid constructing new fences within 2 km of occupied leks. Where feasible, place new, taller structures, such as corrals, loading facilities, water-storage tanks, windmills, etc., at least 2 km from occupied leks to reduce opportunities for perching raptors. Careful consideration, based on local conditions, should also be given to the placement of new fences or structures near other important seasonal habitats (winter-use areas, movement corridors etc.) to reduce potential impacts.
11. New spring developments in sage-grouse habitat should be designed to maintain or enhance the free-flowing characteristics of springs and wet meadows. Analyze developed springs, seeps and associated pipelines to determine if modifications are necessary to maintain the continuity of the predevelopment riparian area within priority sage-grouse habitat. Make modifications where necessary, considering impacts to other water users when such considerations are neutral or beneficial to sage-grouse.
12. Ensure that new and existing livestock troughs and open water storage tanks are fitted with ramps to facilitate the use of and escape from troughs by sage-grouse and other wildlife. Do not use floating boards or similar objects, as these are too unstable and are ineffective. Use BMPs to mitigate potential impacts from West Nile virus.
13. When placing new water developments in sage-grouse breeding habitat, choose sites and designs that will provide the greatest enhancement for sage-grouse and sage-grouse habitat.
14. Avoid new water developments in higher quality native breeding/early brood habitats that have not had significant prior grazing use except in situations in which water developments may aid in better livestock distribution across the allotment and will not adversely impact the species.
15. Identify and when feasible, establish strategically located forage reserves focusing on areas unsuitable for sage-grouse habitat restoration or lower priority habitat restoration areas.
16. Monitor for, and treat invasive species associated with, existing range improvements.
17. Consider initiating vegetative manipulation projects where sagebrush canopy cover exceeds optimal characteristics to promote grass and forb understory growth. These projects should only be undertaken where it can be achieved without negatively impacting the species.

REFERENCES CITED

(Note: all World Wide Web URLs were last accessed on June 9, 2012)

Aldridge, C. L., S. E. Nielson, H. L. Beyer, M. S. Boyce, J. W. Connelly, S. T. Knick, and M. A. Schroeder. 2008. Range-wide patterns of greater sage-grouse persistence. Diversity and Distributions 14:983-994.

Baker, W. L. 2011. Pre-Euro-American and recent fire in sagebrush ecosystems. Studies in Avian Biology 38: 185-202.

BLM (U.S. Bureau of Land Management). 2011a. BLM national greater sage-grouse land use planning strategy. Instructional Memorandum No. 2012-044. Available online at http://www.blm.gov/wo/st/en/info/regulations/Instruction_Memos_and_Bulletins/national_instruction/2012/IM_2012-044.html

BLM (U.S. Bureau of Land Management). 2011b. A report on national greater sage-grouse conservation measures. Sage-grouse National Technical Team. Available online at http://www.blm.gov/pgdata/etc/medialib/blm/co/programs/wildlife.Par.73607.File.dat/GrSG%20Tech%20Team%20Report.pdf

BLM (U.S. Bureau of Land Management). 2011c. Breaking the current fire cycle. Proceedings, Collaborative Resource Management Symposium, BLM Idaho State Office, Boise District Resource Advisory Council, March 2011, Boise, ID. Several presentations on fuel breaks, available online at http://www.blm.gov/id/st/en/res/resource_advisory/boise/boise_district_rac.html

BLM (U.S. Bureau of Land Management). 2012. Sage-grouse and sagebrush conservation webpage, available online at http://www.blm.gov/wo/st/en/prog/more/sagegrouse.html

BLM/USFS (U.S. Bureau of Land Management and U.S. Forest Service). 2012. National greater sage-grouse planning strategy: land use plan amendments and environmental impact statements scoping summary report. Accessible online from BLM 2012, Sage-grouse and sagebrush conservation webpage at http://www.blm.gov/wo/st/en/prog/more/sagegrouse.html

Connelly, J.W., M.A. Schroeder, A.R. Sands, and C.E. Braun. 2000. Guidelines to manage sage-grouse populations and their habitats. *Wildlife Society Bulletin* 28: 967-985. Available online as Appendix D, Conservation plan for the greater sage-grouse in Idaho (ISAC 2009) at http://fishandgame.idaho.gov/public/wildlife/sageGrouse/conservPlanAppendices.pdf

Connelly, J. W., K. P. Reese, R. A. Fischer, and W. L. Wakkinen. 2000a. Response of a sage-grouse breeding population to fire in southeastern Idaho. Wildlife Society Bulletin 28:90-96.

Connelly, J. W., M. A. Schroeder, A. R. Sands, and C. E. Braun. 2000b. Guidelines to manage sage grouse populations and their habitats. Wildlife Society Bulletin 28:967-985.

Connelly, J. W., S. T. Knick, C. E. Braun, W. L. Baker, E. A. Beever, T. J. Christiansen, K. E. Doherty, E. O. Garton, S. E. Hanser, D. H. Johnson, M. Leu, R. F. Miller, D. E. Naugle, S. J. Oyler-McCance, D. A. Pyke, K. P. Reese, M. A. Schroeder, S. J. Stiver, B. L. Walker, and M. J. Wisdom. 2011a. Conservation of greater sage-grouse: a synthesis of current trends and future management. Studies in Avian Biology 38: 549-564.

Connelly, J. W., E. T. Rinkes, and C. E. Braun. 2011b. Characteristics of greater sage-grouse habitats: a landscape species at micro and macro scales. Studies in Avian Biology 38: 69-84.

Doherty, K. E., D. E. Naugle, B. L. Walker, and J. M. Graham. 2008. Greater sage-grouse winter habitat selection and energy development. Journal of Wildlife Management 72:187-195.

Doherty, M.K. 2007. Mosquito populations in the Powder River Basin, Wyoming: a comparison of natural, agricultural and effluent coal bed natural gas aquatic habitats. M.S. thesis. Montana State University, Bozeman, MT.

Doherty, M.K., J.D. Tack, J.S. Evans, and D.E. Naugle. 2010. Mapping breeding densities of greater sage-grouse: A tool for range-wide conservation planning. BLM Completion Report. Interagency Agreement # L10PG00911.

Garton, E. O., J. W. Connelly, J. S. Horne, C. A. Hagen, A. Moser, and M. A. Schroeder. 2011. Greater sage-grouse population dynamics and probability of persistence. Studies in Avian Biology 38: 293-382.

Hagen, C.A., J.W. Connelly, and M.A. Schroeder. 2007. A meta-analysis of sage-grouse *Centrocercus urophaisanus* nesting and brood rearing habitats. *Wildlife Biology* 13 (Supplement 1): 42-50.

Hausleitner, D. 2003. Population dynamics, habitat use and movements of greater sage-grouse in Moffat County, Colorado. M.S. thesis, University of Idaho, Moscow, ID.

Holloran, M.J., B.J. Heath, A.G. Lyon, S.J. Slater, J.L. Kuipers, and S.H. Anderson. 2005. Greater sage-grouse nesting habitat selection and success in Wyoming. *Journal of Wildlife Management* 69: 638-649.

IDFG (Idaho Department of Fish and Game). 2012b. Idaho sage-grouse task force webpage, available online at http://fishandgame.idaho.gov/public/wildlife/?getPage=310

ISAC (Idaho Sage-grouse Advisory Committee). 2009. Conservation plan for the greater sage-grouse in Idaho. Idaho Department of Fish and Game, July 2006, available online at http://fishandgame.idaho.gov/public/wildlife/sageGrouse/conservPlan.pdf with Chapter 6 --

Implementation milestones amended in October 2009 and available online at http://fishandgame.idaho.gov/public/wildlife/sageGrouse/conservPlanChapter6.pdf

ISAC (Idaho Sage-grouse Advisory Committee). 2011. Executive summary of the mitigation framework. Pages 6-7, in Idaho sage-grouse local working groups statewide annual report 2010. Available from Idaho Department of Fish and Game, Boise, ID. [Note: URL at IDFG Sage-grouse webpage does not function properly.]

Johnson, D. H., M. J. Holloran, J. W. Connelly, S. E. Hanser, C. L. Amundson, and S. T. Knick. 2011. Influences of environmental and anthropogenic features on greater sage-grouse populations, 1997-2007. Studies in Avian Biology 38: 407-450.

Knick, S.T., and J.W. Connelly (editors). 2011. Greater sage-grouse: ecology and conservation of a landscape species and its habitats. *Studies in Avian Biology* 38. University of California Press, Berkeley, CA.

Knick, S.T. and S.E. Hanser, 2011. Connecting pattern and process in greater sage-grouse populations and sagebrush landscapes. Pages 383-405 in S.T. Knick and J.W. Connelly, editors, Greater Sage-Grouse Ecology and Conservation of a Landscape Species and Its Habitats. Studies in Avian Biology No. 38. Cooper Ornithological Society. University of California Press. Berkely and Los Angeles, CA.

Knick, S.T., S.E. Hanser, R.F. Miller, D.A. Pyke, M.J. Wisdom, S.P. Finn, E.T. Rinkes, and C.J. Henny. 2011. Ecological influence and pathways of land use in sagebrush. *Studies in Avian Biology* 38: 203-252.

Leu, M. and S. E. Hanser. 2011. Influences of the human footprint on sagebrush landscape patterns: implications for sage-grouse conservation. Studies in Avian Biology 38: 253-272.

Makela, P., and D. Major. 2011. A framework to identify greater sage-grouse Preliminary Priority Habitat [PPH] and Preliminary General Habitat {PGH} for Idaho. Unpublished white paper, U.S. Bureau of Land Management, Idaho State Office, Boise, ID. 41 p. at http://fishandgame.idaho.gov/public/wildlife/SGtaskForce/BLMpriorityAreasWhitePaper.pdf

Miller, R. F., S. T. Knick, D. A. Pyke, C. W. Meinke, S. E. Hanser, M. J. Wisdom, and A. L. Hild. 2011. Characteristics of sagebrush habitats and limitations to long-term conservation. Studies in Avian Biology 38: 145-184.

Naugle, D. E., Doherty, K. E., B. L. Walker, M. J. Holloran, and H. E. Copeland. 2011. Energy development and greater sage-grouse. Studies in Avian Biology 38: 489-504.

Pellant, M., P. Makela, B. Dragt, B. Washa, P. Ryan, J. Rose, and D. Major. 2010. Considerations for strategically reducing fuels and wildfires on public lands in the Great

Basin with targeted grazing. BLM Idaho State Office, Great Basin Restoration Initiative Workgroup. Report available online at http://www.blm.gov/pgdata/etc/medialib/blm/id/Great_basin_lcc.Par.35362.File.dat/Suggestions%20For%20Strategically%20Reducing%20Fuels%20and%20Wildfires%20in%20the%20Great%20Basin%20with%20Targeted%20Grazing-Final.pdf

Sage-grouse National Technical Team. 2011. A report on national greater sage-grouse conservation measures. USDOI Bureau of Land Management, Washington, DC.

Scheaffer, R. L., W. Mendenhall, III, and R. L. Ott. 1996. Elementary survey sampling. Wadsworth Publishing, Belmont, CA.

Stevens, B. S., J. W. Connelly, and K. P. Reese. 2012a. Multi-scale assessment of greater sage-grouse fence collision as a function of site and broad scale factors. Journal of Wildlife Management. *In press*.

Stevens, B. S., K. P. Reese, J. W. Connelly, and D. D. Musil. 2012b. Greater sage-grouse and fences: does marking reduce collisions? Wildlife Society Bulletin. *In press*.

Stiver, S.J., E.T Rinkes, and D.E. Naugle. 2010. Sage-grouse habitat assessment framework. U.S. Bureau of Land Management. Unpublished report, U.S. Bureau of Land Management, Idaho State Office, Boise, ID.

USFWS (U.S. Fish and Wildlife Service). 2010. 12-month finding for petitions to list the greater sage-grouse (*Centrocercus urophasianus*) as threatened or endangered. 75 *Federal Register* 13910, March 23, 2010. Accessible online from USFWS endangered species: greater sage-grouse webpage at http://www.fws.gov/mountain-prairie/species/birds/sagegrouse/

USFWS (U.S. Fish and Wildlife Service). 2012. Wind energy guidelines. Accessible from USFWS wind energy development information webpage at www.fws.gov/windenergy/