SAGE GROUSE

QUARTERLY REPORT

Contract No. 146311

January 2017

Stag Consulting

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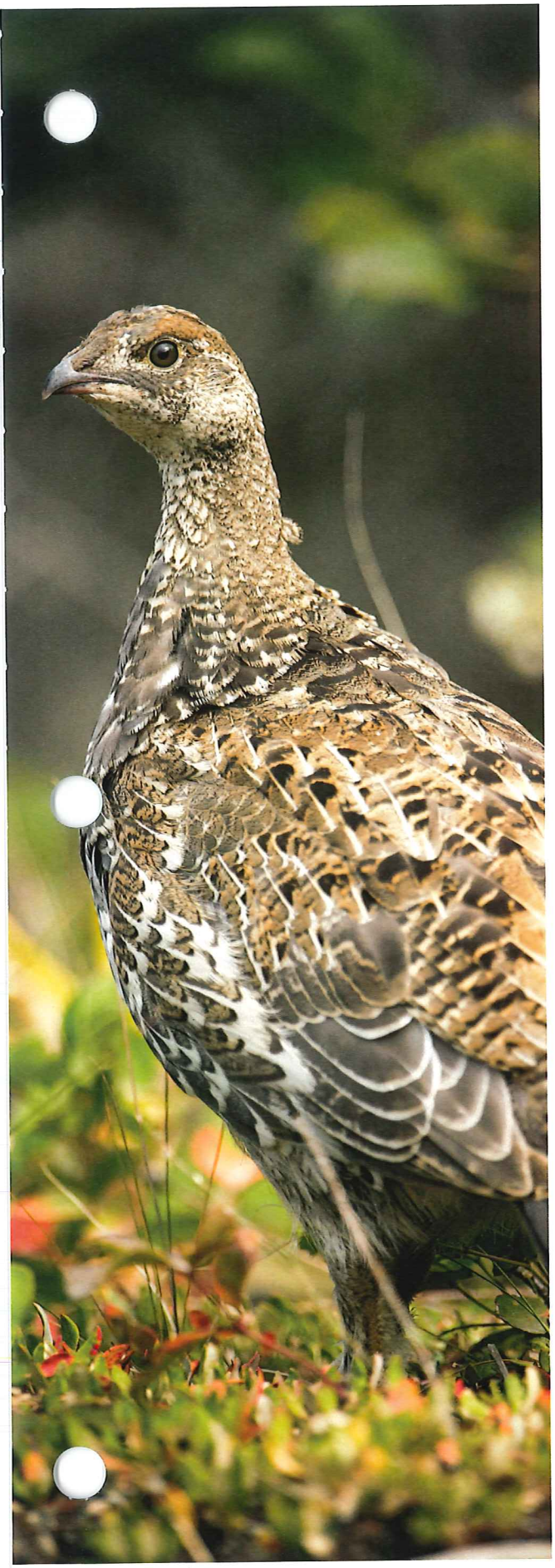


CONTENTS

STAG CONSULTING EFFORTS

This report is provided in compliance with state of Utah Contract 146311. The contract requires Stag Consulting to provide "written, quarterly progress reports to the Department of Natural Resources and to the Natural Resources, Agriculture, and Environment Interim Committee." This report will provide an overview of the progress and results of the second quarter of the contract period that covers October 1, 2016-December 31, 2016. This report is being provided in addition to the quarterly progress reports that have previously been submitted by Stag Consulting related to the Sage-grouse Coordinated Consulting Team's efforts, which are incorporated herein by reference.

Greater Sage-grouse Coordinated Consulting Team's Work

The Sage-grouse coordinated consulting team has expended significant efforts for the following contractual purposes:

1. Legal Strategies
2. Educating Members of Congress
3. Engaging the Public in the Process

Legal Strategies

As with many species, the legal and administrative history of Greater Sage-grouse and efforts to force an Endangered Species Act listing is long, convoluted, and full of controversy. The push to list sage-grouse as an endangered species began over 31 years ago. Understanding the reasons for which an ESA listing has been proposed is helpful to understand the legal strategies the Sage-grouse Coordinated Consulting Team utilized to protect the interests of the State of Utah.

BACKGROUND

Greater Sage-grouse as a Candidate Species

Greater Sage-grouse were first proposed as a potential candidate for study pursuant to the Endangered Species Act on September 18, 1985. At that time, it was suggested that a potential western subspecies of Greater Sage-grouse should be included as a "category 2" research candidate for listing consideration on the Endangered Species List (50 FR37958). Subsequently, it was questioned whether western and eastern variations of the Greater Sage-grouse justified a subspecies separation. In 1996, use of the "category 2" designation of species for listing consideration under the Act was discontinued (61 FR 7596), effectively removing Greater Sage-grouse as a candidate species for listing consideration.

Repeated Petitions to List Greater Sage-grouse

However, this was just the beginning of efforts to force the U.S. Fish and Wildlife Service to list the Greater Sage-grouse. From 1999 to 2003, eight petitions to list the Greater Sage-grouse as an endangered or threatened species were filed. Three of these petitions to list pertained to Greater Sage-grouse in Utah, as these petitions requested listing of the Greater Sage-grouse range-wide. On January 12, 2005 the Service announced a 12-month finding that listing of Greater Sage-grouse was not warranted, consolidating its findings on the three range-wide petitions (70 FR 2243).

Lawsuit Challenging the "Not Warranted" Decision

On July 14, 2005, plaintiff Western Watersheds Project filed a complaint in a federal district court challenging the Service's 2005, 12-month finding as "arbitrary and capricious." On December 4, 2007, the U.S. District Court of Idaho ruled in favor of the plaintiff and remanded the listing decision to the Service for reconsideration. On January 30, 2008, the court approved a stipulated agreement between the Department of Justice and the plaintiff, Western Watershed Project.

New Decisions "Warranted but Precluded"

The U.S. Fish and Wildlife Service published a new listing decision for Greater Sage-grouse on March 23, 2010. The Service's new findings concluded that a listing of Greater Sage-grouse was "warranted but precluded," designating the bird as a candidate species under the Endangered Species Act. As a candidate species, the bird remained under state management authority while listing determinations for species of higher conservation priority were conducted. The published finding identified primary threats to sage-grouse as habitat destruction and/or modification. A significant focus of the "warranted but precluded" decision was whether regulatory mechanisms were adequate to protect sage-grouse and their habitats.

Mega-Petitions to List 1,230 Species Filed

From 2007 to 2011 petitions to list hundreds of species on the Endangered Species List were filed. In fact, these "mega-petitions" proposed listing 1,230 species nationwide. These petitions included 207 species in the Mountain-Prairie Region and 475 species in the Southwest Region. Considering that U.S. Fish and Wildlife Service averaged only twenty petitions per year from 1994 to 2006, the filing of petitions to list 1,230 species during this period was truly unprecedented. In fact, a single special interest group filed petitions to list over 700 species in a four-year period.

Lawsuits filed to Challenge the "Warranted but Precluded"

Petitioners pushing these "mega-petitions" also filed dozens of lawsuits in an attempt to force endangered species listing of many of these species. Among these lawsuits were challenges to the "warranted but precluded" determination on Greater Sage-grouse. "Warranted but precluded" findings must demonstrate: (1) there are higher priority proposed rules that preclude the Service from issuing a proposed rule at the time of the finding; and (2) expeditious progress is being made to add qualified species to the list.

Multi-District Litigation Settlement and September 2015 Deadline for New Decision

On May 10, 2011 a Multi-District Litigation (MDL) Settlement was announced between the Obama Administration and the private plaintiff organizations. The settlement resulted in legally mandated deadline for 251 candidate species. The specific deadline for a decision on Greater Sage-grouse under this agreement was September 2015. Several third parties attempted, unsuccessfully, to challenge the MDL settlement in court.

Causative Factors in "Warranted but Precluded" Listing

It is important to point out that the 2010 finding of "warranted but precluded" was based on two factors: (1) the present or threatened destruction, modification, or curtailment of habitat or range of Greater Sage-grouse; and (2) the inadequacy of existing regulatory mechanisms.

Threats to Greater Sage-grouse and sage-grouse habitats identified in the 2010 "warranted but precluded" decision include:

1. *Direct conversion (to agriculture or urbanized land)*
2. *Infrastructure (road and power lines)*
3. *Wildfire and change in wildfire frequency*
4. *Incursion of invasive plants*
5. *Grazing*
6. *Nonrenewable and renewable energy development*

Four of these perceived "threats" pertain to sage-grouse and their habitats in the state of Utah: (1) Pinyon/juniper encroachment; (2) Wildfire and change in wildfire frequency; (3) Direct conversion through ex-urban development; and (4) Non-renewable energy development.

PROGRESS & RESULTS

Quantified Spatial Legal and Scientific Analysis of Potential "Threats"

The Sage-grouse Coordinated Consulting Team worked closely with the State of Utah and agencies within the state to provide a more complete and transparent understanding of how Utah's plan is working to ameliorate perceived threats to Greater Sage-grouse and address the needs of birds across the state. This is helpful to:

1. *Provide an enhanced level of understanding of the science and management efforts on behalf of Greater Sage-grouse;*
2. *Increase the reliability of information relative to these efforts and results;*
3. *Demonstrate a level of certainty that Utah's conservation practices utilize science-based solutions that are proven to work for Greater Sage-grouse; and*
4. *Illustrate how Utah's investment in conservation of sage-grouse habitat is addressing other important values in the state of Utah, including watershed restoration, wildfire, invasive species concerns, balancing conservation needs with responsible energy development, and low-density rural development.*

We are grateful for the contributions and efforts of:

Utah Public Lands Coordinating Office

Utah Department of Natural Resources

Utah Division of Wildlife Resources

Utah Division of Forestry Fire and State Lands

Governor's Office of Economic Development

Utah Division of Oil, Gas & Mining

Governor's Office of Energy Development

Utah State University

The University of Utah

This was truly a coordinated and collaborative effort to process volumes of information, requiring countless hours and tireless efforts to meet the aggressive deadlines of this project. The years of data accumulation, science, research and extensive subject matter expertise were instrumental in synthesizing these Utah Conservation Strategies documents.

UTAH'S PLAN

On February 14, 2013, the State of Utah adopted an updated Conservation Plan for Greater Sage-grouse in Utah ("Utah's Plan"). Utah's Plan stated goal was "to protect high-quality habitat, enhance impaired habitat, and restored converted habitat to support, in Utah, a portion of the range-wide population of Greater Sage-grouse (Centrocerus urophasianus) necessary to eliminate threats to the species and negate the need for the listing of the species under the provisions of the federal Endangered Species Act (ESA)."

The 2013 Utah's Plan was not the first conservation plan for Greater Sage-grouse, but rather built upon previous statewide conservation plans and decades of experience managing Greater Sage-grouse in the state. Utah's Plan also adopts important conservation objectives and measures to ensure long-term conservation success of Greater Sage-grouse, including:

1. *Protection of 90% of habitat and 94% of Sage-grouse in Sage-grouse Management Areas (SGMAs).*
2. *Maintaining an average of 4,100 male Sage-grouse on a minimum of 200 leks (breeding areas).*
3. *Increasing usable habitat by 50,000 acres per year and improving an average of 25,000 acres of habitat each year.*
4. *Protecting 10,000 acres of habitat on private and School and Trust Lands (SITLA) lands.*

State management of sage-grouse allows for implementation of common-sense conservation measures that not only protect balanced use of our working landscapes, but also long-term conservation of species like Greater Sage-grouse. These conservation measures are paying dividends for Utah's Sage-grouse populations.

Utah's sage-grouse populations have been increasing over the last 15 years, with a 40% increase in 2014. Increased population counts were also documented in 2015 and 2016. This demonstrates that Utah's Sage-grouse populations remain resilient and can respond with strong population growth in years with favorable conditions. Additionally, 10-year population averages, which help control for annual population fluctuations, demonstrate that sage-grouse population growth trend is one of positive long-term growth and stability. In fact, the 10-year rolling average number of males counted on leks shows increasing population trends since the mid-1990's. Utah's sage-grouse are currently at 101% of its population objective.

Visit *http://wildlife.utah.gov/learn-more/greater-sage-grouse.html* to view a copy of Utah's Conservation Plan and learn about it's successful track record.

Total Sage-grouse Populations #'s Within State Sage-grouse Management Areas 1968-2014

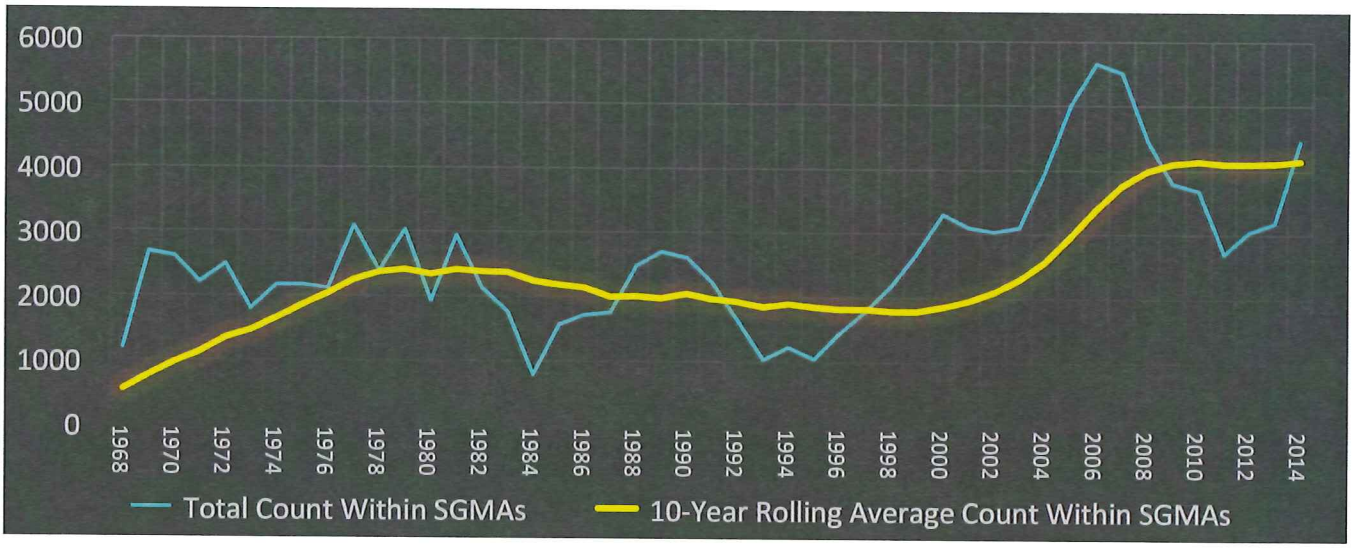


Figure 1. Population growth trends based on 10-year rolling average illustrates the growth of state Sage-grouse populations in Utah.

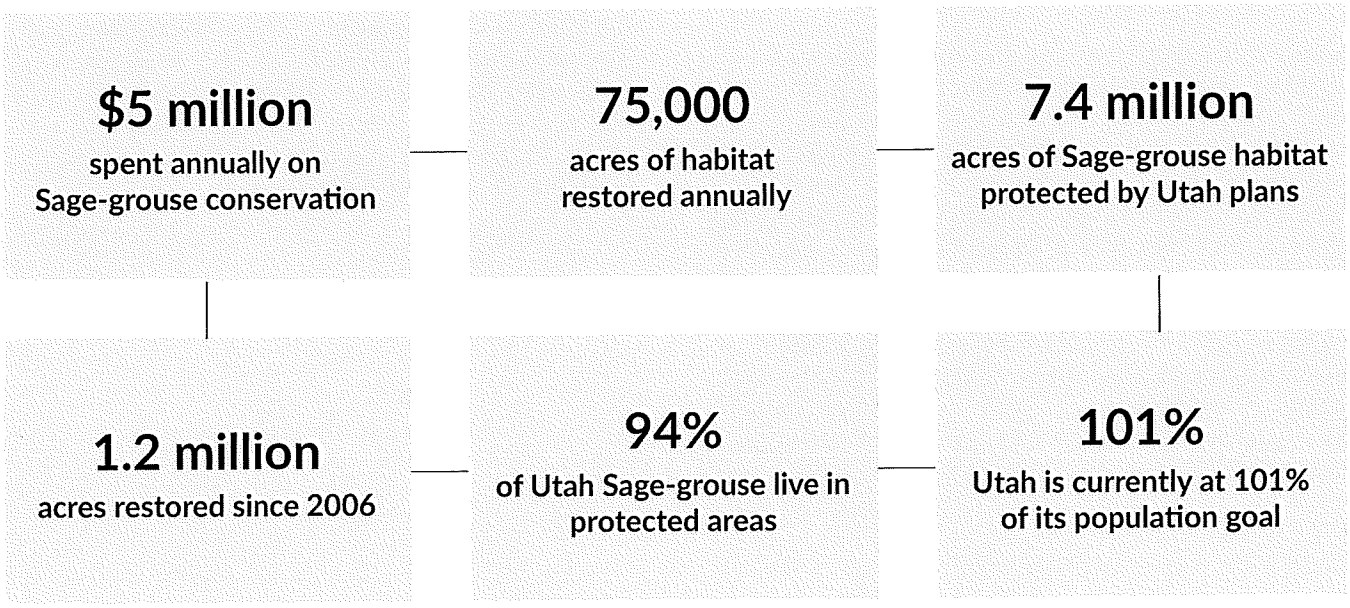


Figure 2. Utah's Plan is based on quantifiable objectives both in on-the ground conservation investment and overall Sage-grouse population numbers.

Reaffirming Utah's Commitment to Long-term Sage-grouse Conservation

During the 2015 Utah Legislative Session, the Utah Legislature passed Senate Concurrent Resolution 3 (SCR 3), reaffirming the state's commitment to long-term sage-grouse conservation, funding for Utah's plan and requesting Congressional action to provide additional time for implementation of Utah's Plan. For a complete copy of SCR 3 please refer to Exhibit A.

Utah Demonstrating that State and Local Solutions Work

Implementation of Utah's Plan utilizes science-based strategies and proven conservation solutions for Greater Sage-grouse. Utah's adaptive management strategies are vitally important as additional science is developed on Greater Sage-grouse conservation. State management of sage-grouse under the Utah model provides significant benefits not only to sage-grouse, but also other critical issues facing Western Landscapes.

Sage-grouse experts acknowledge that sage-grouse conservation should be possible given the current numbers and distribution of sage-grouse. Perhaps this is the reason why efforts to force an Endangered Species Act listing have focused on long-term "threats" to sage-grouse populations and their habitats.

Utah's conservation strategies focus on the most important threats, mechanisms to augment sage-grouse populations, and increase the redundancy and resilience of habitat in areas where sage-grouse populations can grow and thrive. Just as important, these solutions protect the rights and needs of Utahns and bring together diverse stakeholders to invest in on-the-ground sage-grouse conservation efforts in their own communities.

Utah Conservation Strategies

A complete analysis of Utah's detailed conservation strategies were developed to demonstrate that Utah's Plan works to address the needs to sage-grouse in the state of Utah. These conservation strategies documents create spatially explicit and detailed quantification of issues identified as potential "threats" as identified in the "warranted but precluded" decision by U.S. Fish and Wildlife Service. These "Utah Sage-grouse Conservation Strategies" (or "Utah Conservation Strategies") provide a more complete understanding of the scope and nature of each threat and a meaningful level of certainty for implementation of on-the-ground conservation measures.

This project challenged many of our assumptions about threats, where they occurred and the degree to which these threats could impact Greater Sage-grouse and their habitats. For example, we found that 77% of habitat within Utah's SGMAs were not affected by these potential threats.

Just as surprising, we found that conifer encroachment, wildfire, and post wildfire effects were substantially more likely to create long-term impacts to sage-grouse habitats and populations than oil and gas development and low density rural development within the 7.5 million acres comprising Utah's SGMAs. Most striking was the fact that over 95% of these birds live in areas that are virtually free of any of these threats. This strongly suggests that populations of birds are not only stable and free from threats, but inherently select habitat areas not naturally affected by wildfire, conifer encroachment, and invasive plant species. Utah's Conservation Strategies are more than sufficient to not only protect these habitats, but also increase the total usable habitat in areas where the grouse populations can continue to grow and thrive.

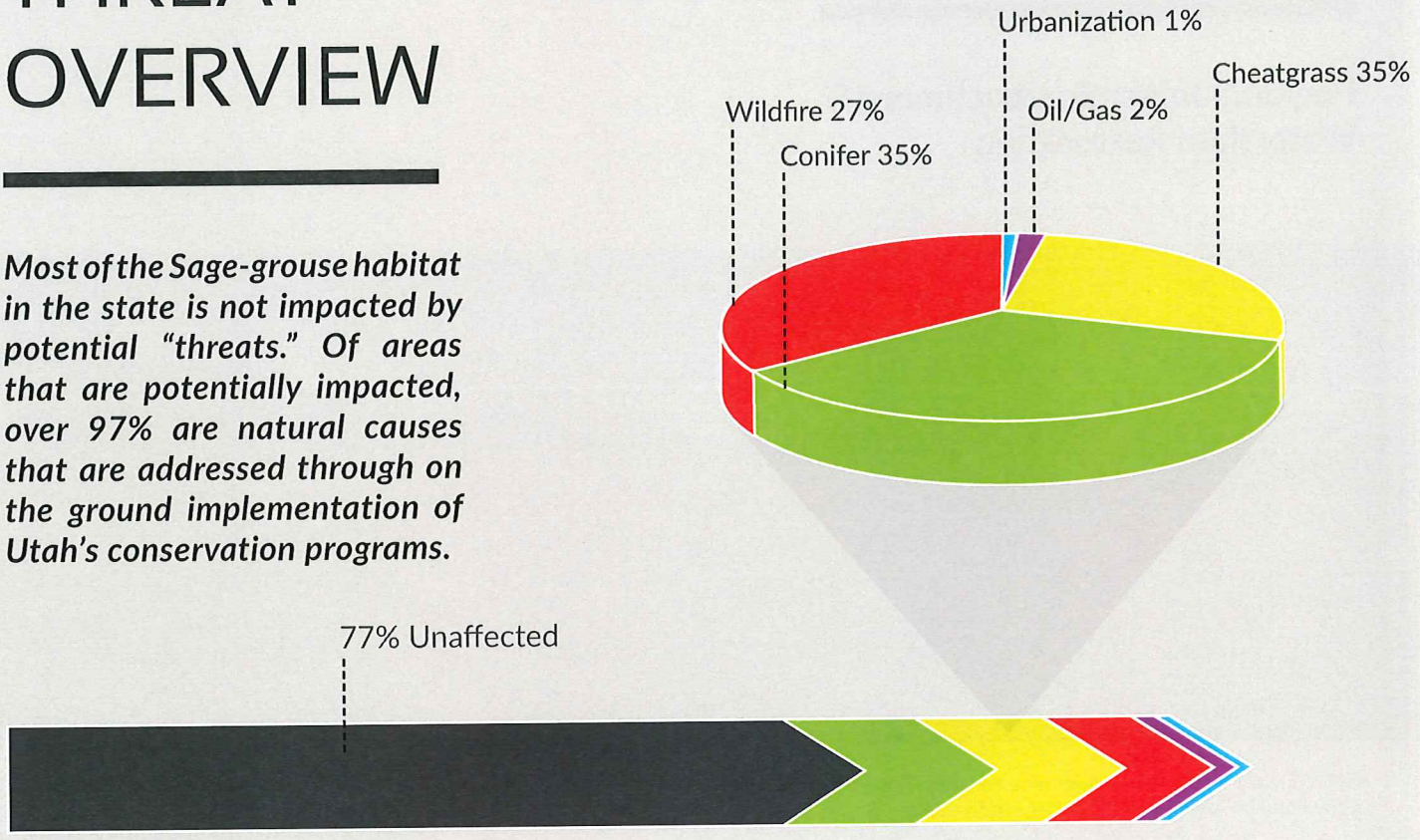
Utah's Plan and Utah's Sage-grouse Conservation Strategies provide a comprehensive model that can work for sage-grouse and other important conservation needs within the state of Utah. The following sections explain how Utah Conservation Strategies work for Greater Sage-grouse, Greater Sage-grouse habitats, and provide common sense solutions that work for Utah's economy, education funding, and protect the needs of hard working Utahns.

POTENTIAL THREAT OVERVIEW

Most of the Sage-grouse habitat in the state is not impacted by potential "threats." Of areas that are potentially impacted, over 97% are natural causes that are addressed through on the ground implementation of Utah's conservation programs.

1

Figure 3. Quantified Threat Analysis Based on SGMA acreage affected



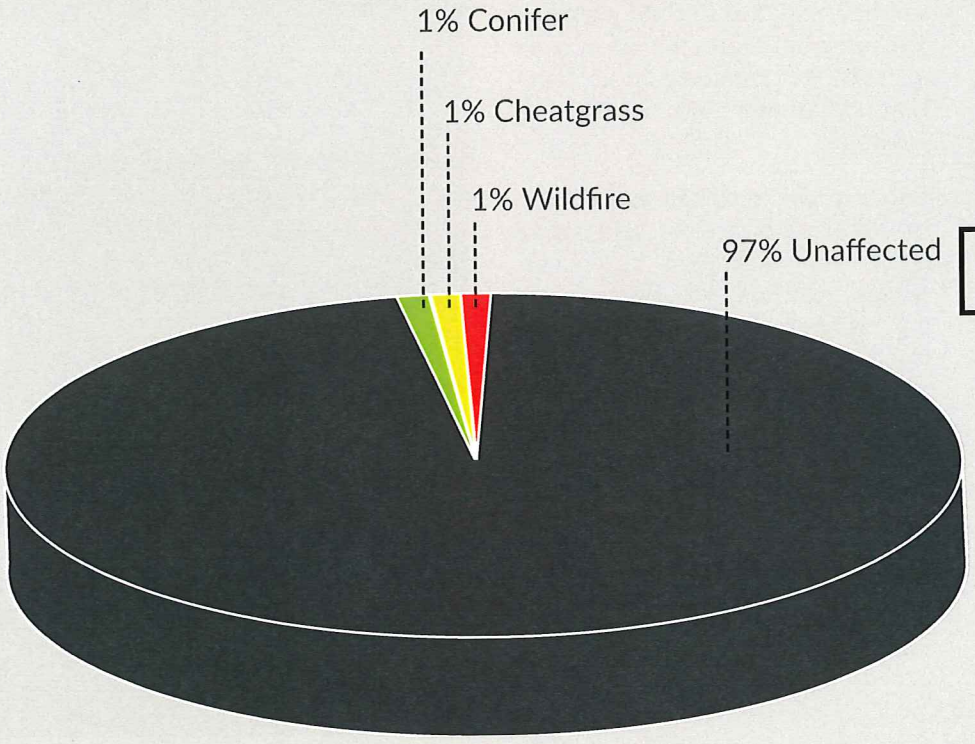


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Figure 4. Over 95% of Utah's Sage-grouse reside in areas of best available habitat. These areas correspond with areas which are largely not impacted by conifer encroachment, wildfire or invasive plant species due to the moisture and natural characteristics of the habitat in these areas.

UTAH CONSERVATION STRATEGIES

Pinyon/Juniper Encroachment & Watershed Restoration

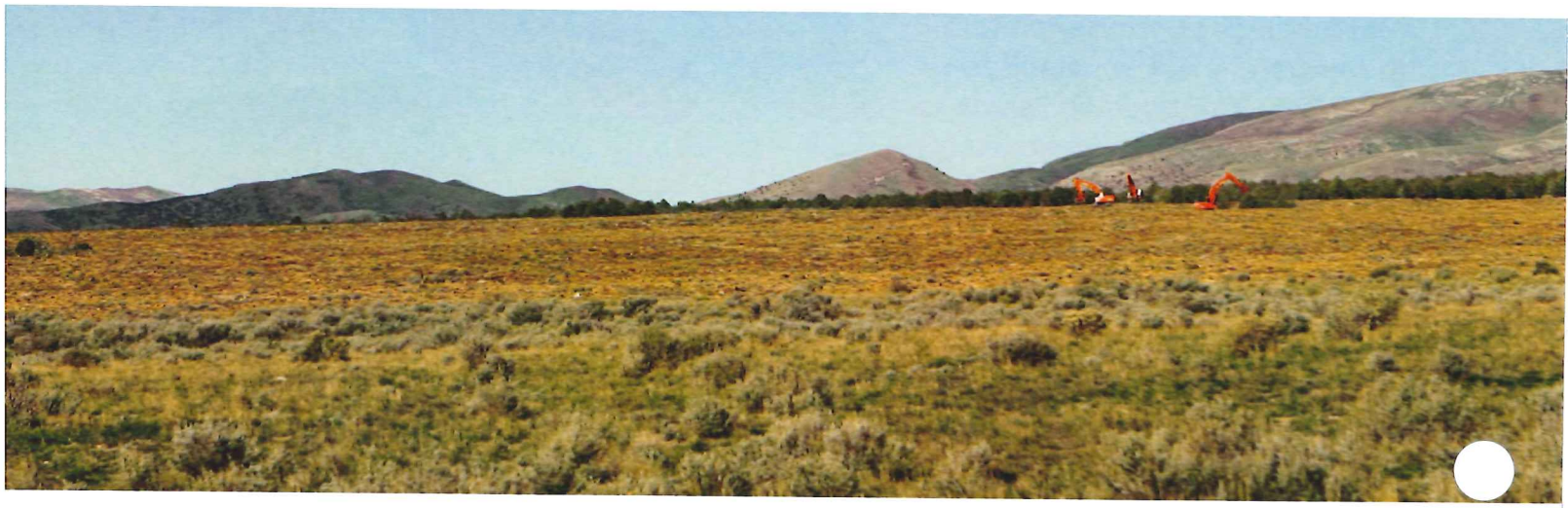


Figure 5. Landscape scale conifer removal in the State of Utah is effectively addressing habitat fragmentation and addressing other important concerns in Sage-grouse habitat.

The state of Utah has invested and will continue to invest millions of dollars into enhancing and restoring habitat for sage-grouse through targeted removal of encroaching pinyon/juniper trees in sage-grouse habitats. Recent peer-reviewed scientific research demonstrates that removal of pinyon and juniper trees is an important practice for sage-grouse habitat. The study found that even a small percentage of encroachment by pinyon and juniper trees can lead Greater Sage-grouse to abandon nesting and brood rearing habitats.

Since 2006, Utah has completed conservation projects on over 500,000 acres of sage-grouse habitat through Utah's Watershed Restoration Initiative and its partners. The program leads the country in addressing habitat loss from conifer encroachment into sage-grouse habitats.

For a more complete explanation of the importance of addressing conifer encroachment into sage-grouse nesting and brood rearing habitat, please refer to the National Sage-grouse Technical Team of the USDA Natural Resource Conservation Service's handout at http://www.sagegrouseinitiative.com/conifer-removal-restores-sage-grouse-habitat/.

PINYON/JUNIPER REMOVAL FOR PROACTIVE HABITAT RESTORATION

Overview: *The State of Utah has invested, and continues to invest, millions of dollars into enhancing and restoring habitat for Sage-grouse through targeted removal of conifers. Recent peer-reviewed scientific research demonstrates that conifer removal is an important conservation practice for Sage-grouse. The study found that even a small percentage of encroachment by pinyon and juniper trees can lead Greater Sage-grouse to abandon a nesting/brood-rearing area. Since 2006, Utah and its partners have completed conservation projects on more than 560,000 acres of Sage-grouse habitat through Utah's Watershed Restoration Initiative. This program leads the country in addressing habitat loss from conifer encroachment.*

The Importance of Restoring Sage-Grouse Habitat

Conifer encroachment, primarily of pinyon and juniper species, is an area of emphasis in conservation planning within the state of Utah and other Western states. There is a good reason why this is so important. Pinyon and juniper trees have expanded into hundreds of thousands of acres of Utah Sage-grouse habitat in the last 150 years. One estimate suggests this may be an increase of 300-400% from pre-settlement landscapes (Tausch and Hood 2007).

Currently, there is sufficient habitat to support healthy Sage-grouse populations. However, the U.S. Fish and Wildlife Service has identified habitat fragmentation and wildfire as two of the primary threats that may support a listing of Sage-grouse under the Endangered Species Act. Conifer encroachment accelerates habitat fragmentation and increases the likelihood of catastrophic wildfires. To address these challenges, the state of Utah has developed a comprehensive science-based strategy to remove pinyon and juniper trees that are beginning to encroach into existing Sage-grouse habitat. Utah's plans also have a more ambitious goal: to increase the amount of suitable habitat and the quality of that habitat within each of the state's Sage-Grouse Management Areas (SGMAs).

Figure 1 - Biologists work with landowners to implement conifer removal on private property. This program not only helps Sage-grouse populations, it can improve desirability of habitat for grazing.

How Conifer Woodlands Impact Greater Sage-Grouse

To develop comprehensive strategies and implement conifer removal projects in ways that ensure maximum benefit for Greater Sage-grouse, it is important to understand how conifers impact Sage-grouse populations. Pinyon/juniper encroachment hurts Sage-grouse and Sage-grouse habitats in four fundamental ways:

1. Creating an inhospitable environment for Sage-grouse populations;
2. Crowding out sagebrush, grasses and forbs;
3. Increasing the frequency and severity of wildfires; and
4. Altering landscapes in other ways that diminish the value of habitat for Sage-grouse.

A recent study conducted by The Nature Conservancy, University of Idaho and Natural Resources Conservation Service (NRCS) Sage-Grouse Initiative demonstrates that Sage-grouse may avoid areas of even low-density conifer encroachment.

The study found that Sage-grouse leks were not active in areas where conifers covered more than 4% of the land area (Figure 2). The study also demonstrated that Sage-grouse will avoid even small trees widely scattered across a landscape. While the early encroachment stands had less of an impact on understory vegetation than higher-density conifer stands, these areas still did not contain active Sage-grouse leks.

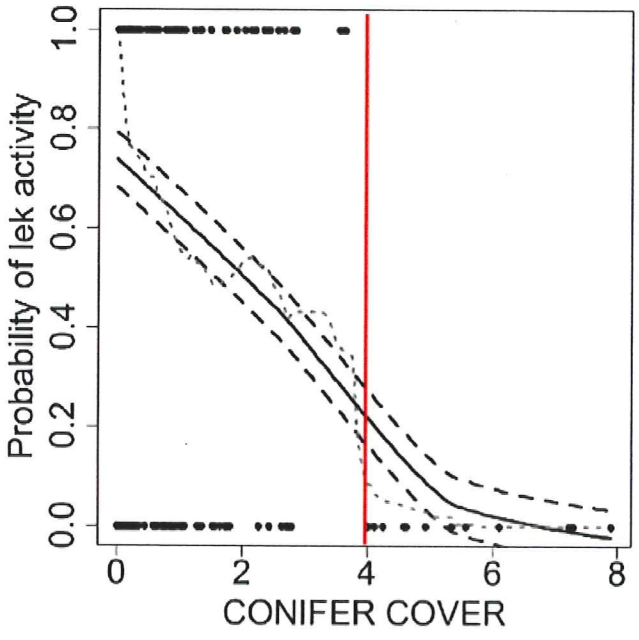


Figure 2 - Recent research underscores the importance of using science-based solutions and proven methodologies in planning and implementing conifer treatment programs.

Conifers also affect Sage-grouse in other ways. Jeremy Maestas from the NRCS Sage-Grouse Initiative Technical Team explains how conifers directly impact Sage-grouse habitats, "They act like millions of tiny little straws sucking up what little moisture we get…it eventually dries up the springs and streams that are so critical to this desert environment." Conifers can also affect soil acidity and compete with understory grasses, forbs and other plants that Sage-grouse rely on for food. Additionally, larger trees can serve as roosts for hawks, ravens, crows and other birds that prey on Sage-grouse eggs and nestlings. Just as important, conifer woodlands also increase fuel loads that can, in turn, dramatically increase the risk of catastrophic wildfire. These wildfires can alter the suitability of Sage-grouse habitat for years.

Not only do conifers increase the risk of wildfire, but the density of conifer stands can increase with the passage of time. Within the next 20 years, the low-density Phase I and Phase II conifer stands may progress toward higher-density Phase III conifer stands (Figure 3). This is a major concern because it is much more expensive and time-consuming to rehabilitate phase III conifer stands and areas burned by catastrophic wildfires than to

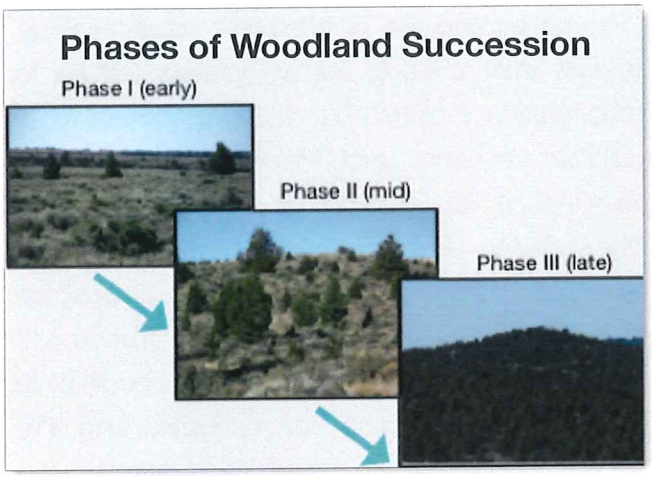


Figure 3 – Progression of conifer stands is an important focus of researchers and land managers.

treat Phase I and Phase II stands. Utah's Conservation Plan for Greater Sage-Grouse (the Conservation Plan) directs the investment in solutions to address those challenges. In fact, the state of Utah invests millions of dollars to complete up to 75,000 acres of habitat work annually.

Proven Strategies for Conifer Removal

Scientists and other experts use specific criteria to prioritize the treatment of tens of thousands of acres of pinyon/juniper encroachment. These criteria not only ensure proper implementation of

Figure 4 - Lop and scatter projects provide cost-effective long-term treatment for Phase-I conifer encroachment.

removal projects, but they also help improve occupation and use of treatment areas by Sage-grouse after projects are completed. Criteria for prioritization include, but are not limited to (1) wildfire frequency and intensity, (2) cheatgrass dominance, (3) Sage-grouse carrying capacity in the SGMA, (4) habitat-restoration capacity, (5) proximity of Sage-grouse populations, (6) seasonal importance of habitat to Sage-grouse, (7) proximity to mesic areas, (8) land ownership, (9) availability of funding for projects, and (10) regulatory obstacles to conservation projects.

State and federal agencies have identified several practical guidelines which dramatically improve the likely success of these treatments:

1. Targeting stands in early stages of encroachment with still intact sagebrush or areas which are important transition corridors;
2. Removing all conifer trees in an area to reduce conifer cover to less than four percent; and
3. Using treatment methods that maintain sagebrush and understory cover.

Figure 5 - Higher-density encroachment areas can be managed by using a brush hog to remove conifers.

This methodology is explained by the NRCS Sage-Grouse Initiative:

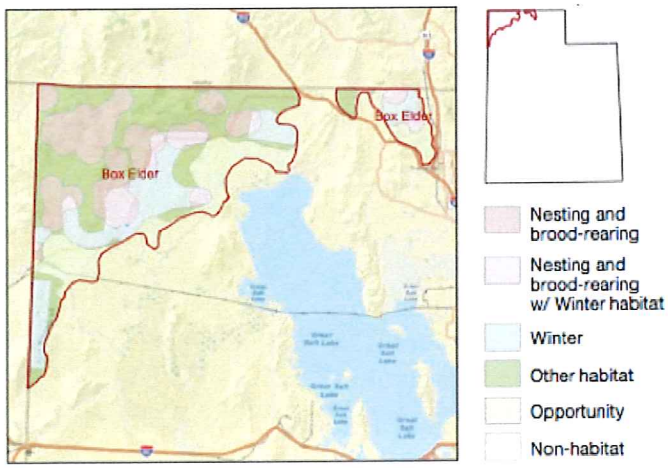
"Managers can get the most bang for their buck by focusing conifer removal treatments on early encroachment stands in and around landscapes that are already pretty good for grouse. Prioritizing Phase I stands (those with young scattered trees, <10% conifer canopy cover and intact sagebrush and understory vegetation) for complete removal of conifers will likely prove the most effective for restoring and sustaining habitat. Treating early Phase II stands can also prevent conversion to conifer woodlands and help functionally restore sagebrush habitat for several decades. (Baruch-Mordo et al. 2013)."

Utah's Investment in Sage-Grouse Habitat

The state of Utah has a track record of investing in conifer removal and successful subsequent use of the treatment area by Sage-grouse. Since the year 2006, the Utah Watershed Restoration Initiative has completed projects on at least 560,000 acres of Sage-grouse habitat (Figure 6). A large percentage of these projects involved pinyon and juniper tree removal. With the scientific data and information gleaned from these efforts, experts in the state of Utah can better assess areas where pinyon and juniper removal will provide the greatest conservation lift.

Through this proactive planning effort the state of Utah systematically identifies areas in each of its SGMAs where conifer woodlands encroach into

Box Elder Sage-Grouse Management Area



Box Elder Sage-Grouse Management Area and Watershed Restoration Initiative

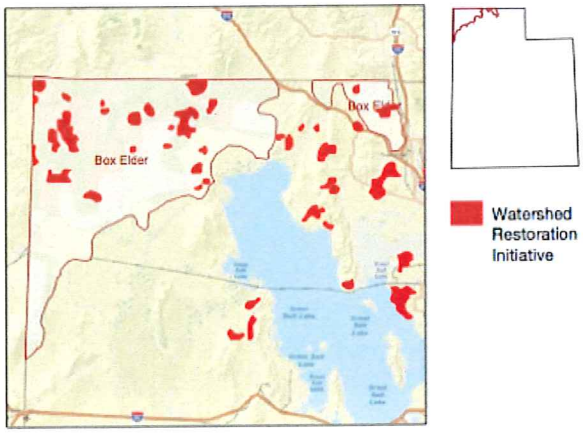


Figure 6 - Understanding Sage-grouse utilization of habitat is a fundamental part of habitat treatment projects within Sage-grouse Management Areas.

Sage-grouse habitat. In the summer of 2014, the state completed extensive fine-scale mapping (Figure 7) of pinyon pine and juniper coverage for all eleven SGMAs. This data is used by the Sage-grouse biologists and ecologists who have a working knowledge of the habitats and Sage-grouse utilization patterns of Utah's SGMAs. Using this information, these experts have developed a comprehensive conifer-removal strategy to be completed during the next 15 years. Coordinating with local working groups, the state has completed detailed plans for implementing conifer removal projects for each SGMA.

Utilizing scientifically established benchmarks for successful implementation, ecologists and Sage-grouse experts are targeting removal in areas that will immediately benefit Sage-grouse. These programs identify areas of treatment according to the following criteria:

1. Encroachment Areas: stands of early-phase encroachment in habitats currently occupied and used by Sage-grouse.
2. Tier I Opportunity Areas: Phase I and Phase II conifer stands with healthy understory but with minimal or no use by Sage-grouse. Nearby bird populations are likely to use the post-treatment area.
3. Tier II Opportunity Areas: conifer stands with healthy understory that are adjacent to encroachment areas. These areas are less

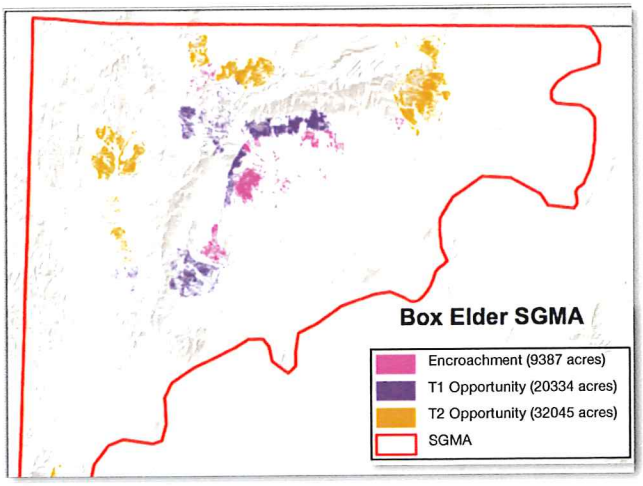


Figure 7 - Implementation of the Conservation Plan proactively protects existing habitat and restores habitats in TI and TII opportunity areas not adequately utilized by birds due to pinyon/juniper encroachment.

Figure 8 - Removal of encroaching pinyon/juniper ensures the health of watersheds in sage grouse habitats. This mesic area is an important source of food and moisture during summer brood rearing.

important to short-term strategies but provide longer-term opportunities for habitat restoration and enhancement.

By implementing proven conservation practices in these treatment areas, Utah is not only reducing the threat of fragmentation of Sage-grouse habitat, the state is increasing usable space by eliminating existing conifer stands and expanding and enhancing habitats in areas where sage grouse can thrive. These projects have increased the productivity of habitat for Greater Sage-grouse by improving stream flows, wet-meadows and the quality and quantity of food sources. Research in the state of Utah demonstrates that pinyon/juniper removal improves utilization rates by Greater Sage-grouse. Conifer removal also helps accomplish other important objectives including improving watersheds, addressing the threat of wildfires and invasive plants, reducing the likelihood of future conifer encroachment, and enhancing the value of habitat for other species.

Detailed Conservation Strategy for Long-Term Success

The Conservation Plan, as part of its identified goals and objectives, calls for the enhancement and improvement of habitat. To accomplish these goals, the state has developed detailed plans to target pinyon/juniper removal in SGMAs. These finalized implementation plans clarify the general

Figure 9 - Projects that restore active corridors can help improve hatchlings survival success. These programs also provide valuable firebreaks and contribute to healthy watersheds.

habitat definitions and expectations listed in the Conservation Plan. Habitat areas mapped for the Conservation Plan have been found to contain areas of conifer encroachment that are prime targets for treatment. Additional acreage has been identified for subsequent treatment, labeled Tier I and Tier II Opportunity Areas.

Over the course of the next two years, the state will treat Encroachment Areas totaling 60,139 acres. Tier I Opportunity Areas totaling 100,320 acres will be treated during the next 5 years. Tier II Opportunity Areas totaling 184,811 will be treated during the next 15 years. Cumulatively, these projects will treat nearly 350,000 acres of pinyon/juniper trees. Not only will these projects ameliorate the threats posed by pinyon/juniper encroachment, they will substantially reduce habitat fragmentation. Specifically, they will expand the overall acreage of contiguous suitable Sage-grouse habitat within Utah's SGMAs.

The key to these projects is consistency. "Pinyon and Juniper encroachment happens at a very slow rate over a period of decades. Steady implementation of targeted conifer removal in Sage-grouse habitat is the best mechanism to stop the loss of nesting and breeding acreage and restore habitat where sagebrush remains but conifers have displaced the Sage-grouse," explains Alan Clark, who oversees key aspects of Utah's Watershed Restoration Initiative. "As a result, we are now removing more acres of conifers in our SGMAs than the encroachment that is occurring, resulting in a net gain in contiguous Greater Sage-grouse habitat." While pinyon/juniper encroachment is not considered a threat in all of the state's SGMAs, projects have been planned for each SGMA to increase usable space for Sage-grouse. The scale of this statewide program is impressive.

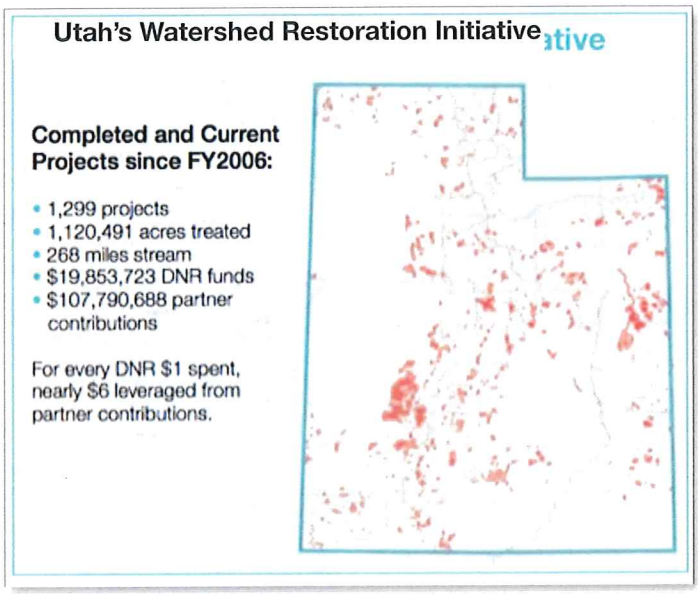


Figure 11 - Utah's Watershed Restoration Initiative is proactively implementing landscape scale habitat improvements for Greater Sage-grouse.

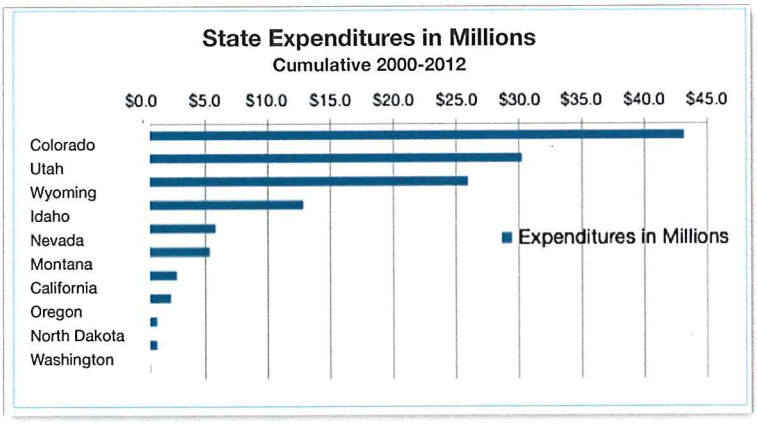


Figure 10 - Utah invests tens of millions of dollars on Sage-grouse conservation efforts.

Here's the breakdown of Utah's strategic plan for each SGMA:

1. Box Elder

Past Treatments:	91,185	acres
Encroachment Treatments 0-2 years:	9,387	acres
Tier I Opportunity Treatments 0-5 years:	20,334	acres
Tier II Opportunity Treatments 0-15 years:	32,045	acres
Box Elder Total:	**152,951**	**acres**

2. Parker Mountain

Past Treatments:	30,474	acres
Encroachment Treatments 0-2 years:	10,795	acres
Tier I Opportunity Treatments 0-5 years:	8,923	acres
Tier II Opportunity Treatments 0-15 years:	27,760	acres
Parker Mountain Total:	**77,952**	**acres**

3. Panguitch

Past Treatments:	53,086	acres
Encroachment Treatments 0-2 years:	11,995	acres
Tier I Opportunity Treatments 0-5 years:	10,315	acres
Tier II Opportunity Treatments 0-15 years:	27,356	acres
Panguitch Total:	**102,752**	**acres**

4. Rich/Morgan/Summit

Past Treatments:	29,852	acres
Encroachment Treatments 0-2 years:	3,202	acres
Tier I Opportunity Treatments 0-5 years:	20,334	acres
Tier II Opportunity Treatments 0-15 years:	32,045	acres
Rich/Morgan/Summit Total:	**85,433**	**acres**

5. Hamlin Valley

Past Treatments:	9,839	acres
Encroachment Treatments 0-2 years:	8,720	acres
Tier I Opportunity Treatments 0-5 years:	28,246	acres
Tier II Opportunity Treatments 0-15 years:	36,219	acres
Hamlin Valley Total:	**83,024**	**acres**

6. Sheep Rock Mountains

Past Treatments:	22,515	acres
Encroachment Treatments 0-2 years:	7,981	acres
Tier I Opportunity Treatments 0-5 years:	4,341	acres
Tier II Opportunity Treatments 0-15 years:	18,113	acres
Sheep Rock Mountains Total:	**52,950**	**acres**

7. Carbon

Past Treatments:	661	acres
Encroachment Treatments 0-2 years:	4,091	acres
Tier I Opportunity Treatments 0-5 years:	4,203	acres
Tier II Opportunity Treatments 0-15 years:	221	acres
Carbon Total:	**9,176**	**acres**

8. Bald Hills

Past Treatments:	68,799	acres
Encroachment Treatments 0-2 years:	2,577	acres
Tier I Opportunity Treatments 0-5 years:	1,466	acres
Tier II Opportunity Treatments 0-15 years:	4,841	acres
Bald Hills Total:	**77,683**	**acres**

9. Uintah

Past Treatments:	128,153	acres
Encroachment Treatments 0-2 years:	1,063	acres
Tier I Opportunity Treatments 0-5 years:	1,383	acres
Tier II Opportunity Treatments 0-15 years:	2,718	acres
Uintah Total:	**133,317**	**acres**

10. Ibapah

Past Treatments:	7,413	acres
Encroachment Treatments 0-2 years:	139	acres
Tier I Opportunity Treatments 0-5 years:	476	acres
Tier II Opportunity Treatments 0-15 years:	3,266	acres
Ibapah Total:	**11,294**	**acres**

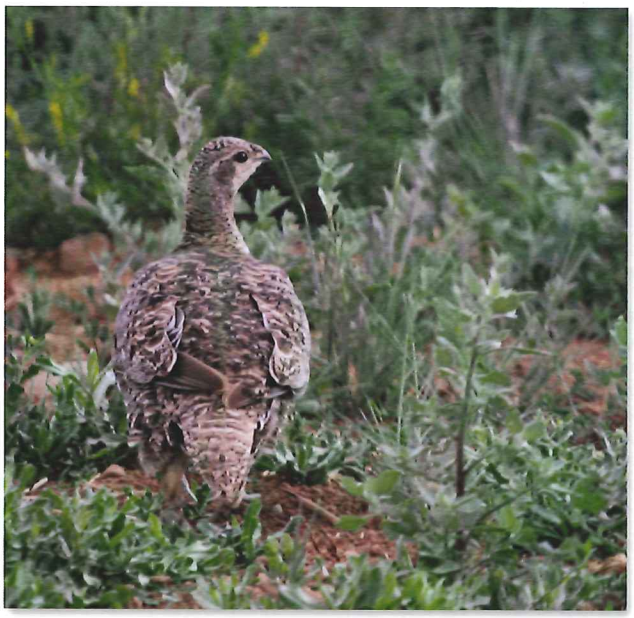
11. Strawberry

Past Treatments:	8,473	acres
Encroachment Treatments 0-2 years:	189	acres
Tier I Opportunity Treatments 0-5 years:	299	acres
Tier II Opportunity Treatments 0-15 years:	227	acres
Strawberry Total:	**9,188**	**acres**

Conclusion

Research in Utah is demonstrating that when trees are removed from encroachment and opportunity areas, Sage-grouse can begin to immediately occupy those newly restored areas. "Our research has demonstrated that Sage-grouse may respond quickly to habitats improvements such as pinyon and juniper removal, and will occupy treated areas within one year after treatment. The Utah plan, with its bold objectives to create or enhance 75,000 acres of habitat annually, are designed to increase the state's habitat base," explains Terry

Figure 12 - Sage-grouse chick in restoration area.



Mesmer, PhD, a Sage-grouse range biologist who has been studying the birds for more than 20 years. "Our studies are also showing that where we have increased late brood-rearing habitats, both individual bird use and overall population production has increased because of increased chick survival."

Conifer treatments will be critically important in the next 10-15 years. Approximately 80% of the identified pinyon/juniper occupied areas in the state are categorized as Phase I or II, which means these areas still have a healthy understory. These will eventually evolve into Phase III conifer stands without treatment. Utah's fine-scale mapping of pinyon-juniper encroachment into Sage-grouse core areas is informing a state-wide conservation strategy to address conifer encroachment. With 560,000 acres of Sage-grouse habitat treated since 2006 and an additional 340,000 acres planned in the next 10-15 years, the state of Utah is successfully reducing the threat posed by conifer encroachment into Greater Sage-grouse habitat. These programs also help restore healthy watersheds, address the threat of wildfire, improve working landscapes for multiple uses.

> ***"Our research has demonstrated that Sage-grouse may respond quickly to habitats improvements such as conifer removal, and will occupy treated areas within one year after treatment."***
>
> *—TERRY MESMER, PHD SAGE-GROUSE RANGE BIOLOGIST*

Sources and Additional Reading

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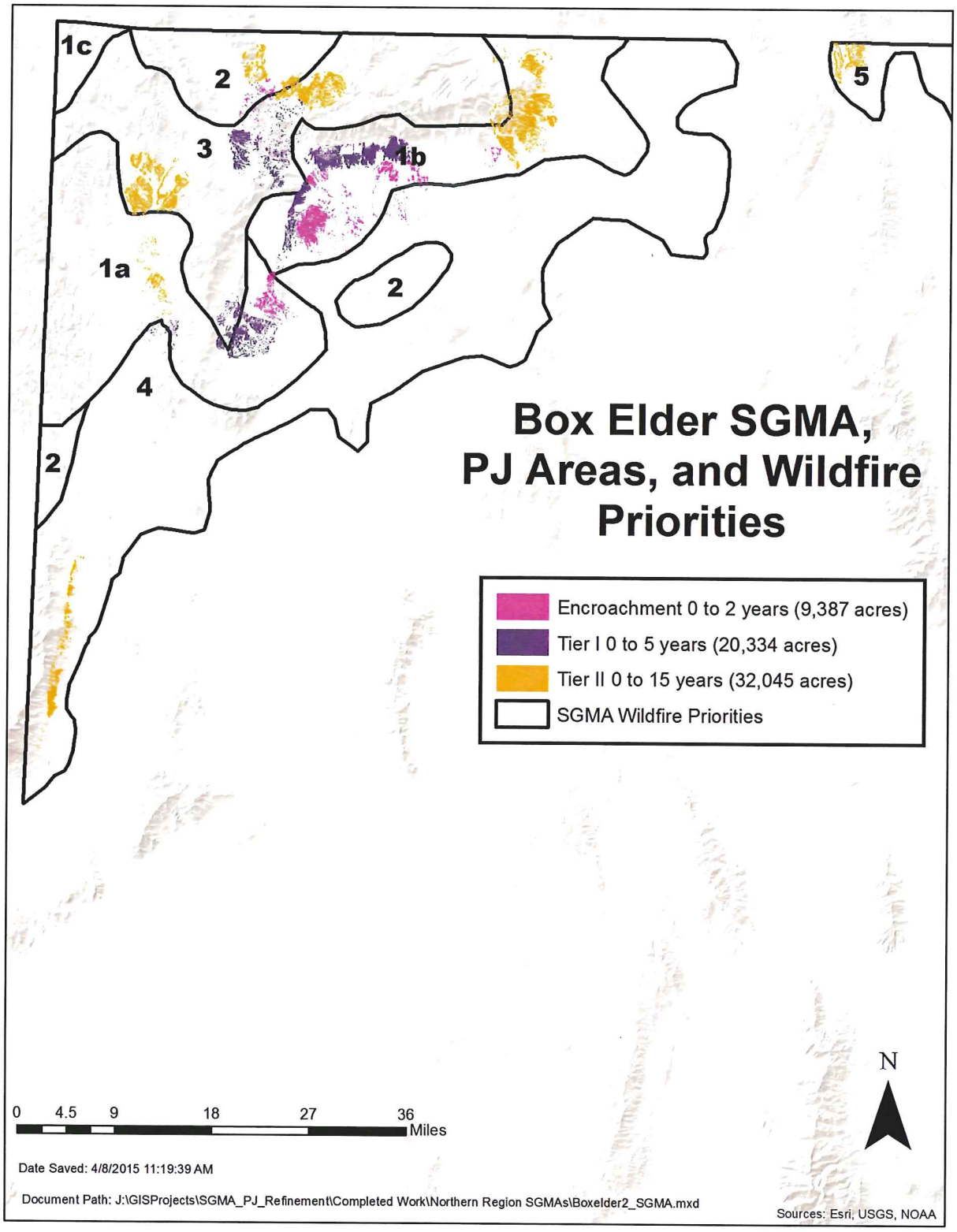
Knick, S., S.E. Hanser, and M. Leu. In press. Ecological scale of bird community response to pinyon-juniper removal. Rangeland Ecology & Management.

Miller, R.F., J.D. Bates, T.J. Svejcar, F.B. Pierson, and L.E. Eddleman. 2005. Biology, Ecology, and Management of Western Juniper. Oregon State University, Agricultural Experiment Station Technical Bulletin 152.

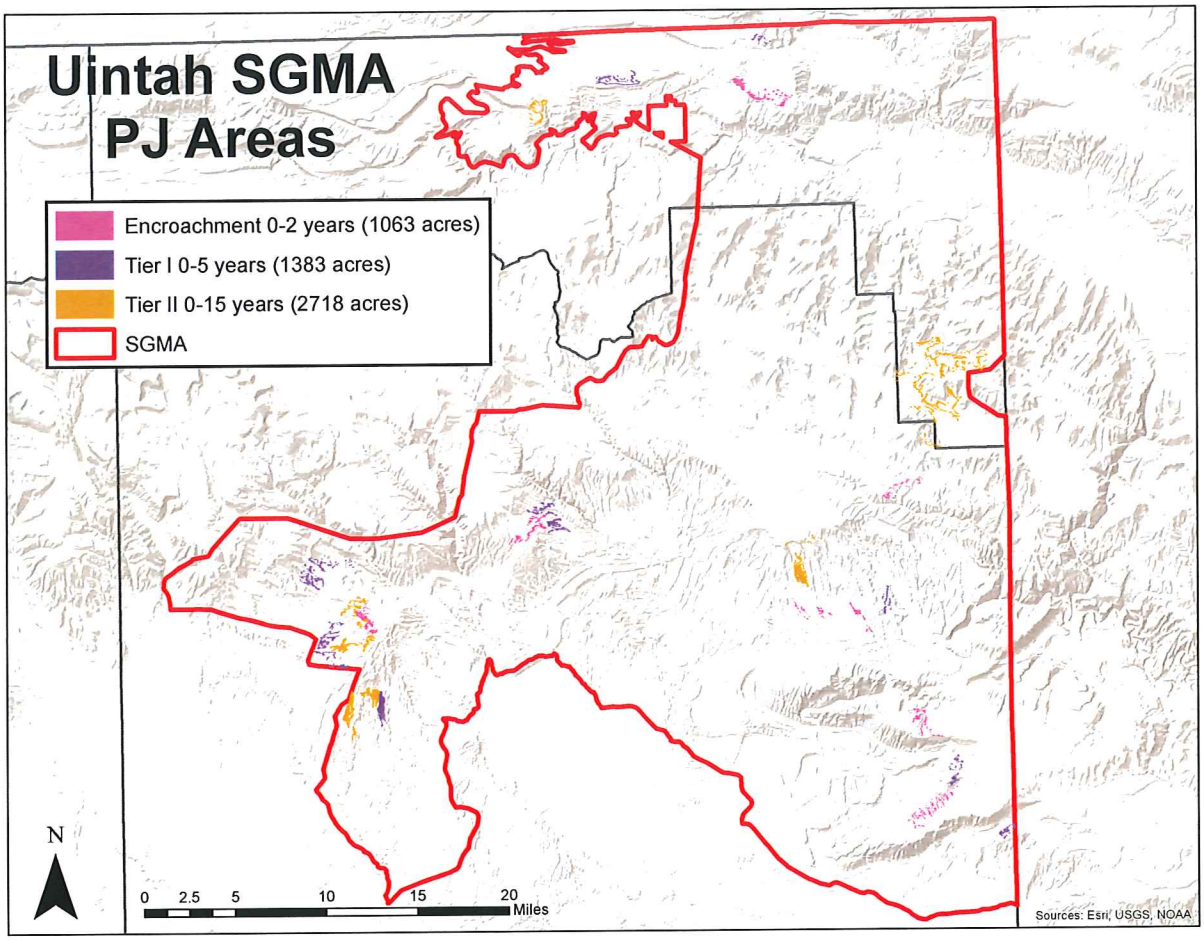
SGI. 2013. Tackling conifer encroachment. Produced by Conservation Media. Sage Grouse Initiative. Video available: http://www.sagegrouseinitiative.com/news-media/ photo-video-gallery/.Miller, R. F., J. D. Bates, T. J. Svejcar, F. B. Pierson, L. E. Eddleman. 2007. Western juniper field guide: asking the right questions to select appropriate management actions. U.S. Geological Survey, Circular 1321.

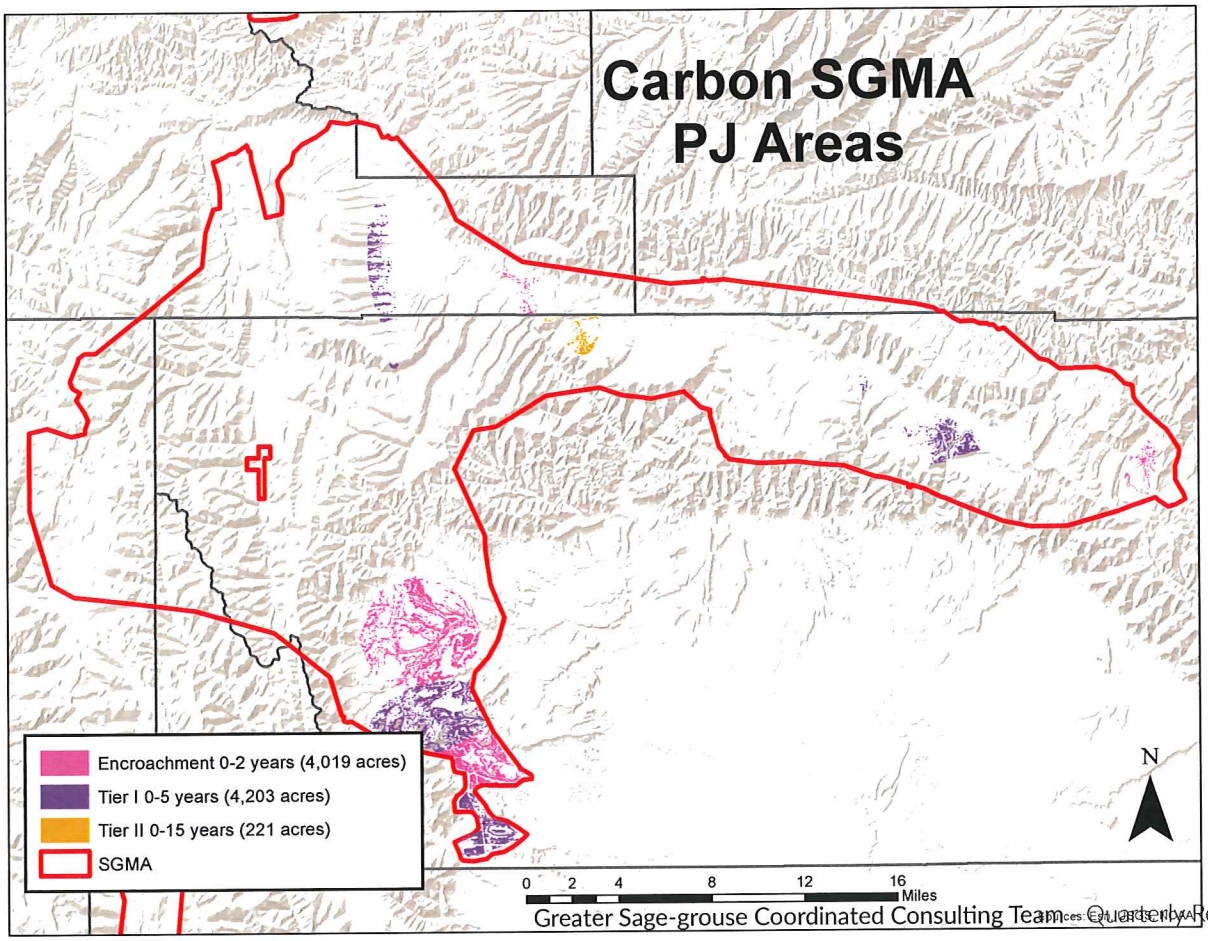
Tausch, Robin J.; Hood, Sharon 2007. Pinyon/juniper woodlands [Chapter 4]. In: Hood, Sharon M.; Miller, Melanie, editors. Fire ecology and management of the major ecosystems of Southern Utah. Gen. Tech. Rep. RMRS-GTR-202. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. p. 57-71.

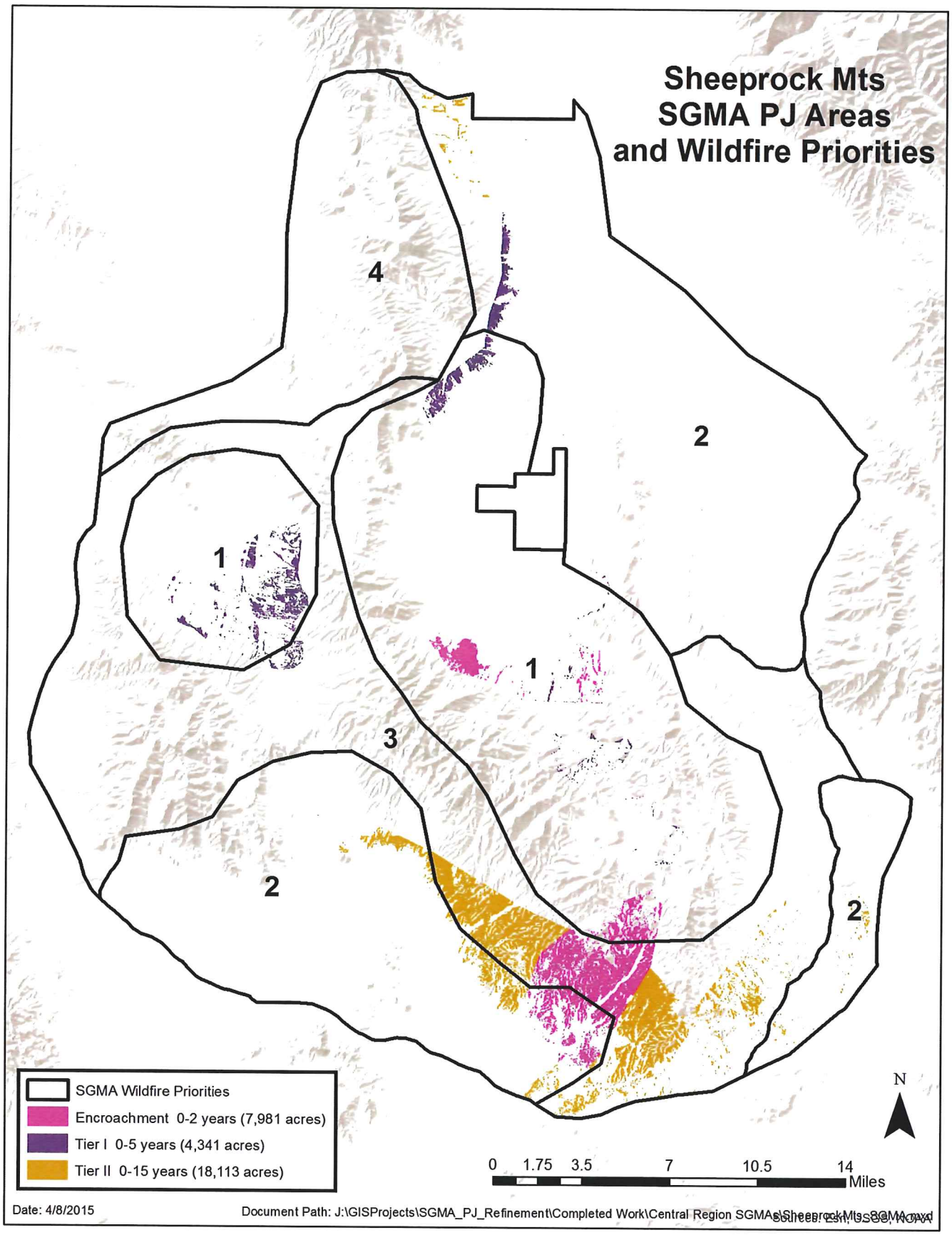
Pinyon Juniper Removal Maps[1]



[1] Wildfire Priority Boundaries are provided in connection with maps for Box Elder SGMA, Bald Hills SGMA, Sheeprock Mountains SGMA, Ibapah SGMA and Hamlin Valley SGMA. The remaining SGMA do not include priority areas due to the effectiveness of existing wildfire suppression efforts.


Uintah SGMA
PJ Areas
Encroachment 0-2 years (1063 acres)
Tier I 0-5 years (1383 acres)
Tier II 0-15 years (2718 acres)
SGMA
N
0 2.5 5 10 15 20
Miles
Sources: Esri, USGS, NOAA


Carbon SGMA
PJ Areas
Encroachment 0-2 years (4,019 acres)
Tier I 0-5 years (4,203 acres)
Tier II 0-15 years (221 acres)
SGMA
N
0 2 4 8 12 16
Miles
Sources: Esri, USGS, NOAA


Sheeprock Mts
SGMA PJ Areas
and Wildfire Priorities
4
2
1
1
3
2
2
SGMA Wildfire Priorities
Encroachment 0-2 years (7,981 acres)
Tier I 0-5 years (4,341 acres)
Tier II 0-15 years (18,113 acres)
N
0 1.75 3.5 7 10.5 14
Miles
Date: 4/8/2015
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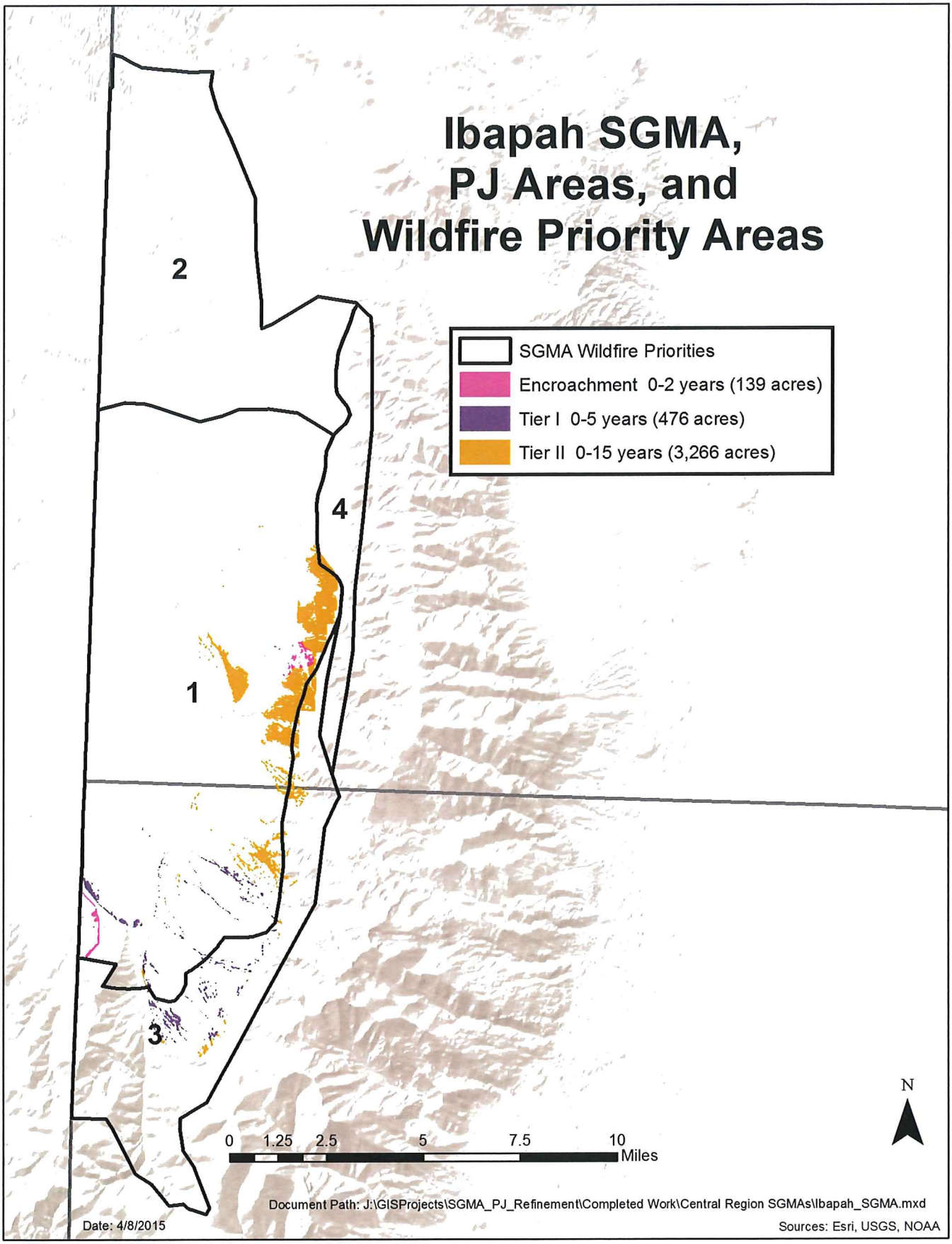
Sources: Esri, USGS, NOAA


Ibapah SGMA,
PJ Areas, and
Wildfire Priority Areas
SGMA Wildfire Priorities
Encroachment 0-2 years (139 acres)
Tier I 0-5 years (476 acres)
Tier II 0-15 years (3,266 acres)
1
2
3
4
0 1.25 2.5 5 7.5 10
Miles
N
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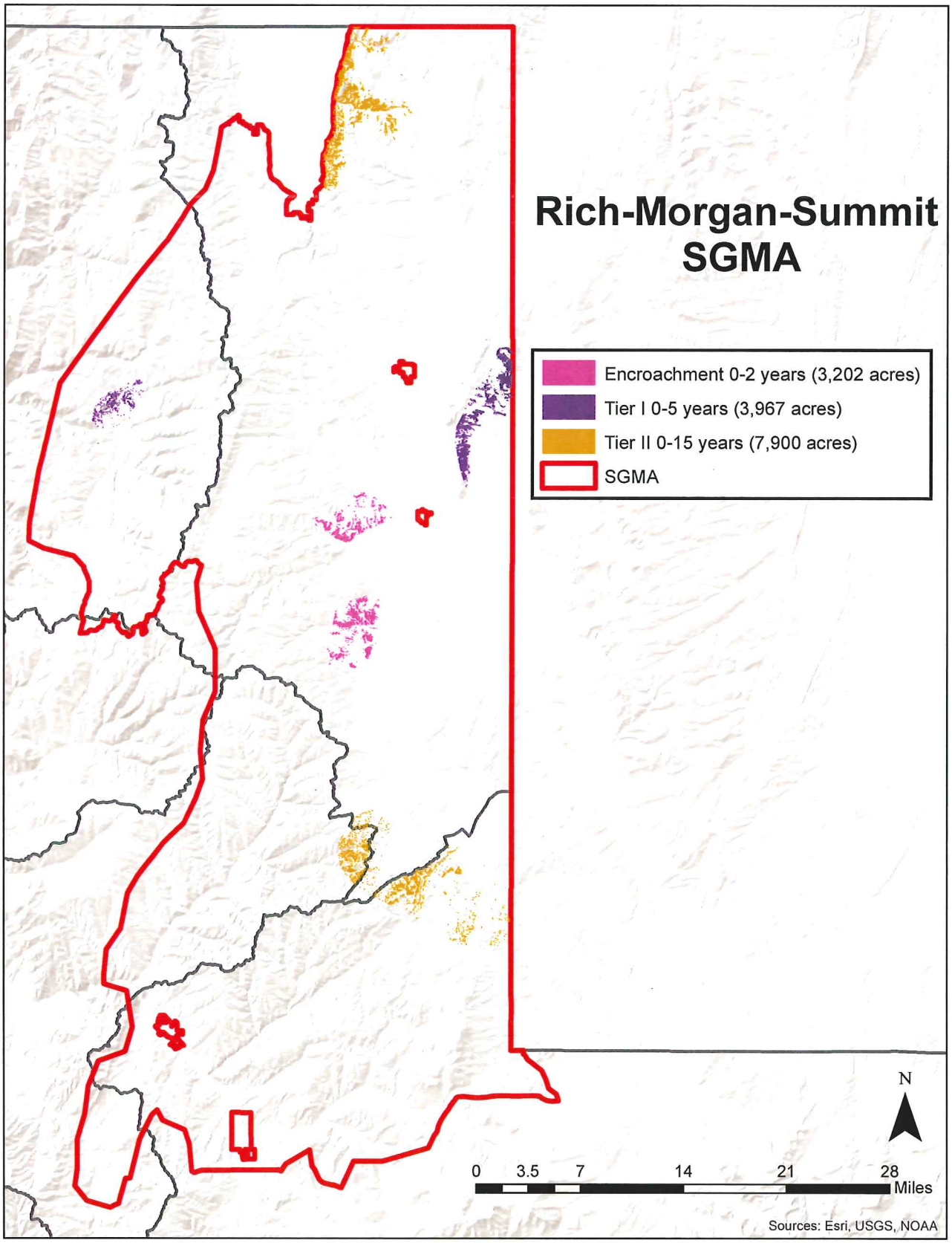
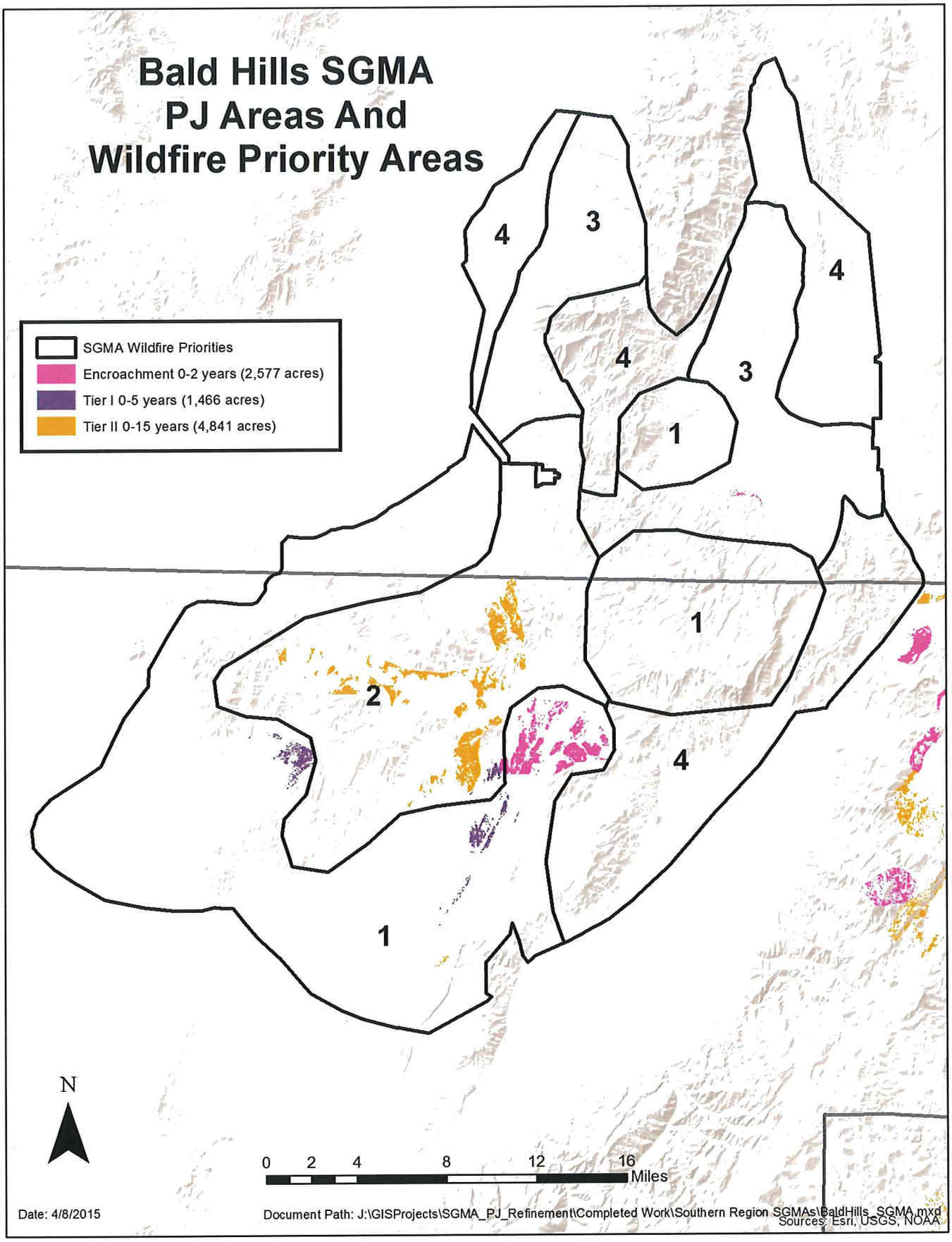
Date: 4/8/2015
Sources: Esri, USGS, NOAA


Rich-Morgan-Summit SGMA
Encroachment 0-2 years (3,202 acres)
Tier I 0-5 years (3,967 acres)
Tier II 0-15 years (7,900 acres)
SGMA
N
0 3.5 7 14 21 28
Miles
Sources: Esri, USGS, NOAA


Bald Hills SGMA
PJ Areas And
Wildfire Priority Areas
SGMA Wildfire Priorities
Encroachment 0-2 years (2,577 acres)
Tier I 0-5 years (1,466 acres)
Tier II 0-15 years (4,841 acres)
4
3
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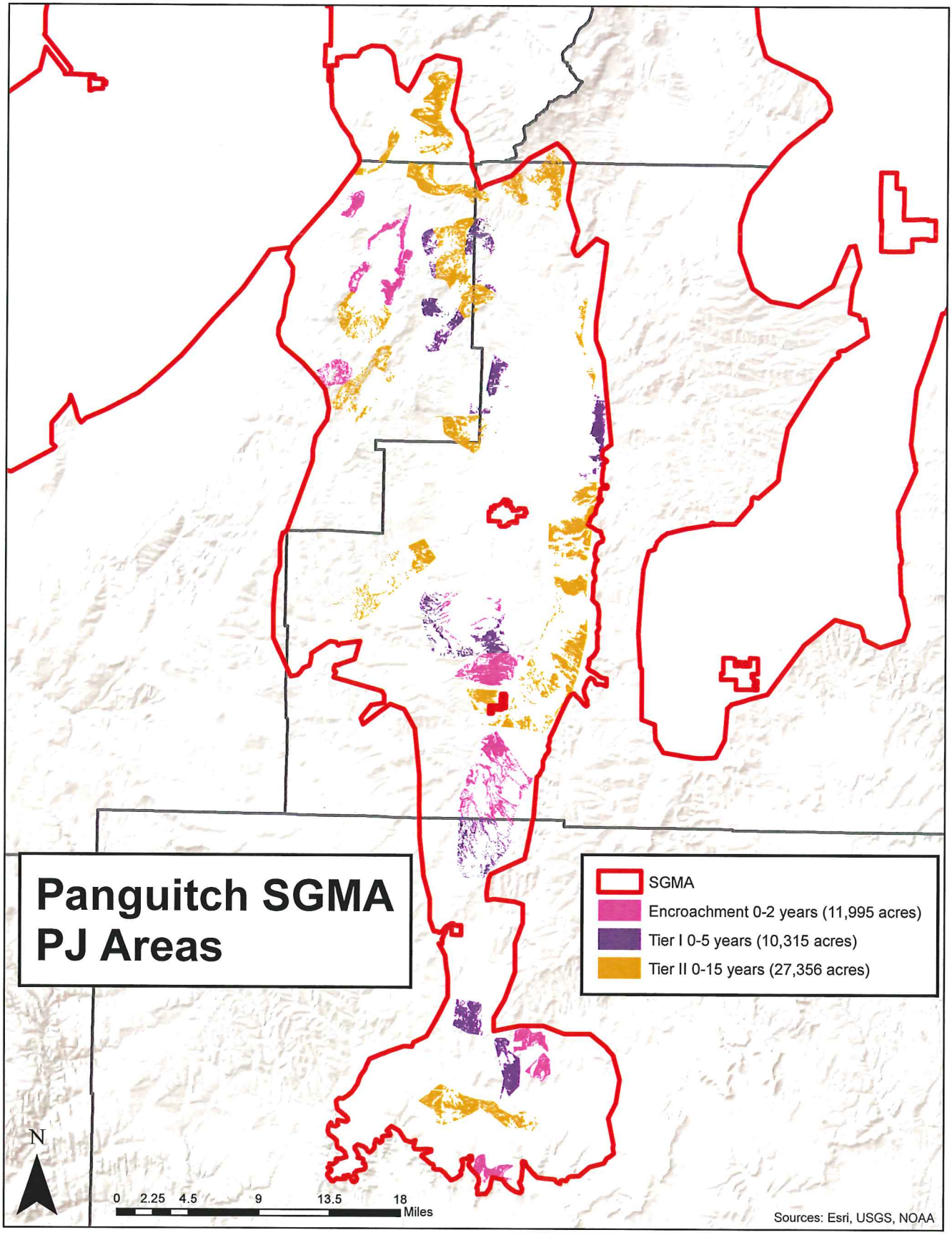
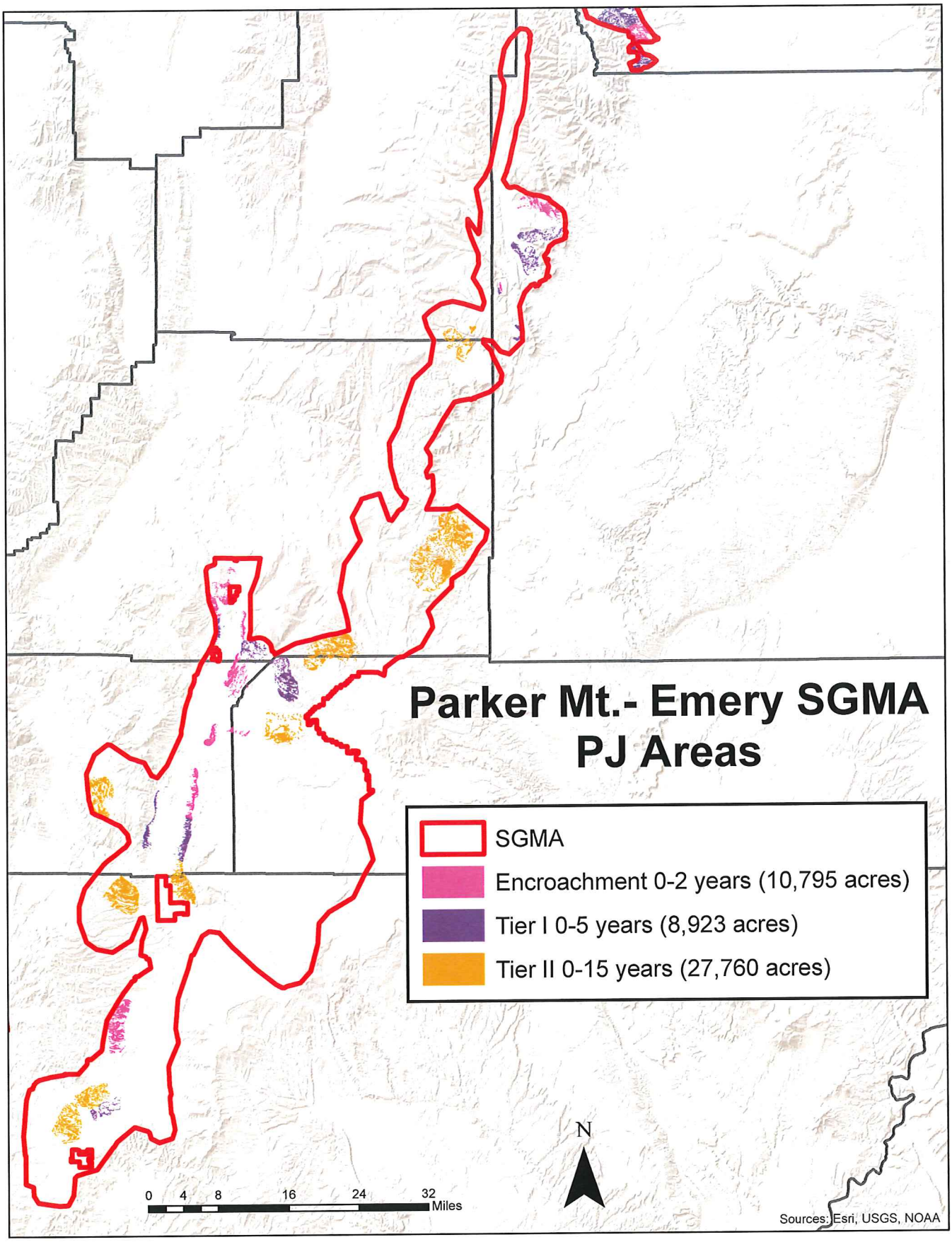
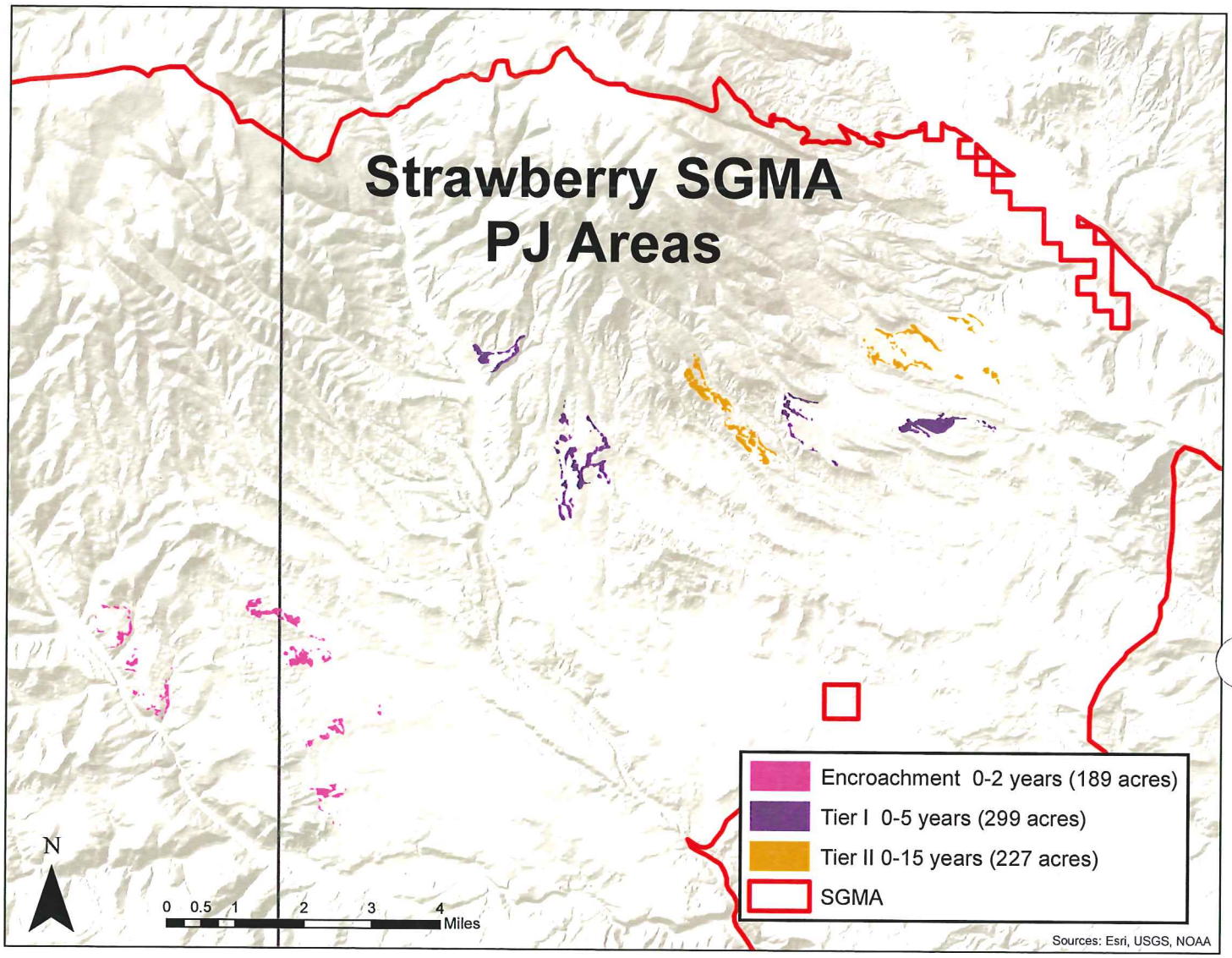
4
3
1
1
2
4
1
N
0 2 4 8 12 16
Miles
Date: 4/8/2015
Document Path: J:\GISProjects\SGMA_PJ_Refinement\Completed Work\Southern Region SGMAs\BaldHills_SGMA.mxd
Sources: Esri, USGS, NOAA


Panguitch SGMA
PJ Areas
SGMA
Encroachment 0-2 years (11,995 acres)
Tier I 0-5 years (10,315 acres)
Tier II 0-15 years (27,356 acres)
N
0 2.25 4.5 9 13.5 18
Miles
Sources: Esri, USGS, NOAA


Parker Mt.- Emery SGMA
PJ Areas
SGMA
Encroachment 0-2 years (10,795 acres)
Tier I 0-5 years (8,923 acres)
Tier II 0-15 years (27,760 acres)
N
0 4 8 16 24 32
Miles
Sources: Esri, USGS, NOAA


Strawberry SGMA
PJ Areas
Encroachment 0-2 years (189 acres)
Tier I 0-5 years (299 acres)
Tier II 0-15 years (227 acres)
SGMA
N
0 0.5 1 2 3 4
Miles
Sources: Esri, USGS, NOAA

UTAH CONSERVATION STRATEGIES *(CONT.)*

Wildfire Management & Restoration

Figure 6. Landscape scale conifer removal in the State of Utah is effectively addressing habitat fragmentation and addressing other important concerns in Sage-grouse habitat.

Wildfire is a natural occurrence on Utah's landscapes. Many plant and animal species, including Greater Sage-grouse, evolved in an environment having cycles punctuated by natural wildfire.

While sage-grouse can adapt and even benefit from some fires, disruptions in the natural fire cycle, encroachment of conifers, and the presence of exotic annual grasses such as cheatgrass have presented new challenges. Changes in wildfire frequency and intensity are raising concerns about the cumulative impact of fires within some of the state's Sage-grouse Management Areas (SGMAs).

The State of Utah invests millions of dollars into programs to proactively address wildfire concerns including:

(1) prevention;
(2) suppression (including rapid response to wildfire in SGMAs); and
(3) rehabilitation/restoration to areas affected by wildfire.

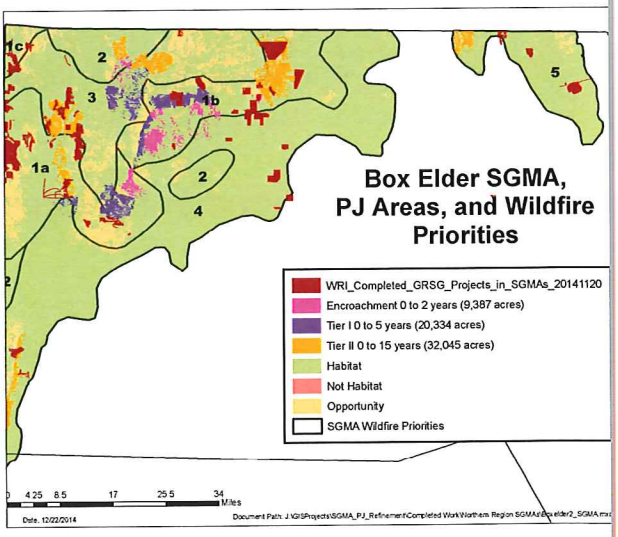
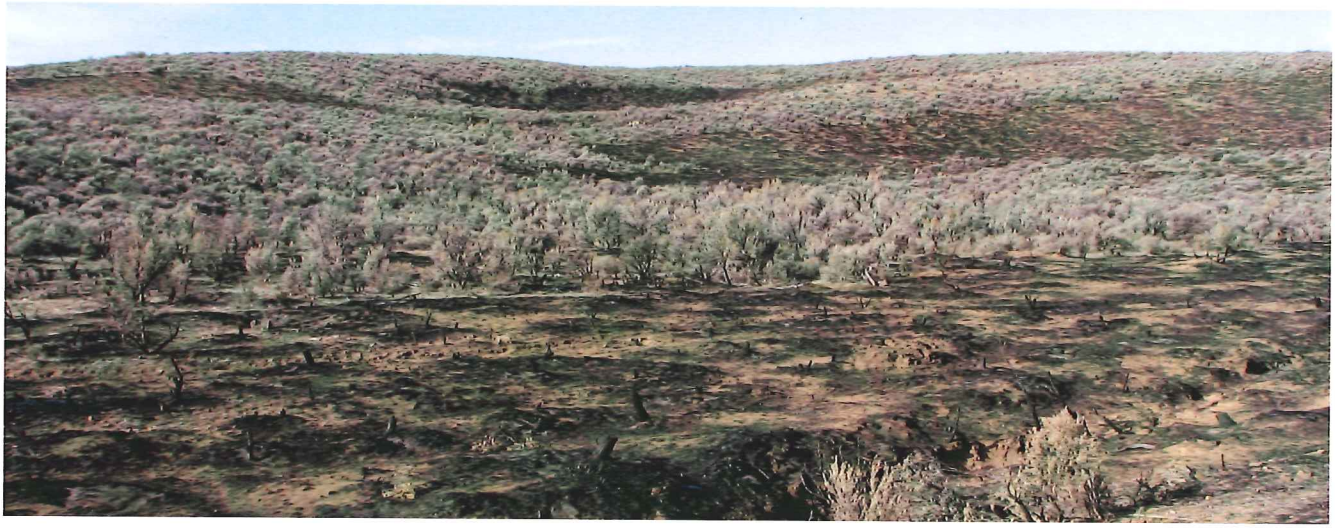


Figure 7. Implementation of Utah's Detailed Conservation Strategies for Wildfire can reduce the acreage burned by up to 85% within impacted SGMAs in the State of Utah.

WILDFIRE MANAGEMENT AND RESTORATION

Overview: *Wildfire is a natural occurrence on Utah's landscapes. Many plant and animal species, including Greater Sage-grouse, evolved in areas where cyclical wildfires were routine events. While Sage-grouse can adapt and even benefit from some fires, disruptions in the natural fire cycle, encroachment of conifers and the presence of exotic annual grasses such as cheatgrass have presented new challenges. Changes in wildfire frequency and intensity are raising concerns about the cumulative impact of these fires within some of the state's Sage-Grouse Management Areas (SGMAs). The state of Utah invests millions of dollars into programs to proactively address wildfire concerns including: (1) prevention; (2) suppression (which includes rapid response to wildfire in SGMAs); and (3) rehabilitation/restoration in areas affected by wildfire. Utah's Conservation Plan for Greater Sage-Grouse uses the best available science to reduce the threat of wildfire on Greater Sage-grouse habitats.*



Affected SGMAs: Box Elder, Bald Hills, Sheep Rock Mountains, Hamlin Valley and Ibapah.

Wildfire Management Strategies for Sage-Grouse

In Utah, wildfire is an important area of emphasis for Greater Sage-grouse conservation. Utah's Conservation Plan for Greater Sage-Grouse (the Conservation Plan) indicates, "Habitat loss due to fire and replacement of (burned) native vegetation by invasive plants is the single greatest threat to Greater Sage-grouse in Utah. Immediate, proactive means to reduce or eliminate the spread of invasive species, particularly cheatgrass (*Bromus tectorum*) after a wildfire, is a high priority."

These concerns also appear in the U.S. Fish and Wildlife Service 2010 Rule, which found that Greater Sage-grouse was "warranted but precluded" from listing. The rule specifically addressed the threat of wildfire:

"Many of the native vegetative species of the sagebrush-steppe ecosystem are killed by wildfires, and recovery requires many years. As a

Figure 1 - An airtanker drops retardant in Utah pinyon/ juniper wildfire.

result of this loss of habitat, fire has been identified as a primary factor associated with Greater Sage-grouse population declines (citations omitted)…In nesting and wintering sites, fire causes direct loss of habitat due to reduced cover and forage (citation omitted)."

Suppression costs in the western United States have exceeded one billion dollars in each year since 2000 and reached $1.7 billion in 2013[1]. Western wildfires are not only costly to suppress, but they also can degrade the value of vegetative communities and working landscapes. These impacts can substantially affect Greater Sage-grouse. Research suggests that changes in wildfire frequency are directly linked to conifer encroachment and the proliferation of exotic annual grasses such as cheatgrass (*Bromus Tectorum*) in sagebrush ecosystems. The U.S. Department of Agriculture's Rocky Mountain Research Station explains how high-density conifer stands can lead to catastrophic wildfires:

"Extreme burning conditions (high winds, high temperatures, and relatively low humidity) in high density (Phase III) stands are resulting in large and severe fires that result in significant losses of above- and below-ground organic matter (*Sensu Keeley* 2009) and have detrimental ecosystem effects (Miller et al. 2013). Strategic and targeted treatments to reduce these risks can help land managers protect key habitats and preserve underlying Sage-grouse population dynamics to reduce the risks of wildfire."[2]

Invasive exotic annual grasses, like cheatgrass in the Great Basin, provide fine-scale fuels that increase the propensity for fires, even from natural sources such as lightning. The presence of these grasses not only shortens the intervals between fires, but also increases the overall acreage burned in a typical fire. When combined with increased fuel loads from encroaching conifer woodlands, the risk of catastrophic wildfire in Sage-brush ecosystems has increased substantially.

[1]http://www.usatoday.com/story/weather/2014/07/23/western-wildfires-climate-change/13054603/

[2] "Using resistance and resilience concepts to reduce impacts of invasive annual grasses and altered fire regimes on the sagebrush ecosystem and Greater Sage-grouse: A strategic multi-scale approach"

How Wildfire Affects Sage-Grouse

To effectively address the threat posed by wildfires, it is important to understand how they impact Greater Sage-grouse populations. Wildfire affects Sage-grouse in four fundamental ways:

- Destruction of sagebrush and other desirable food sources
- Proliferation of exotic annual grasses that compete with desirable food sources including forbs, native grasses and sagebrush
- Increased frequency and severity of wildfires fueled by cheatgrass or other exotic annual grasses.
- Fragmentation of habitat by creating areas which are less suitable for Sage-grouse populations.

In 2013, a team of representatives from the U.S. Fish and Wildlife Service and various Sage-grouse states met to develop recommendations for reducing threats to Greater Sage-grouse and their habitats. The Greater Sage-Grouse Conservation Objectives: Final Report, which resulted from those meetings in February 2013, addresses concerns related to wildfire and post-wildfire effects:

"Fire (both lightning-caused and human-caused) in sagebrush ecosystems is one of the primary risks to the Greater Sage-grouse, especially as part of the positive feedback loop between exotic annual grasses and fire frequency."

Figure 2 – Sage-grouse chicks take advantage of a restoration area during summer brood-rearing period. Insects form an important part of the Sage-grouse diet during this important growth period.

In other words, these experts reiterate the nexus between exotic annual grasses and the increased frequency of wildfires.

Cheatgrass proliferation after a wildfire is a concern, particularly in lower elevation areas which correspond with warm and dry soil regimes (xeric areas.) Unlike higher elevation, cool and moist areas, areas with xeric soil regimes areas are: (1) more prone to repeated wildfire; and (2) less responsive to restoration of native forbs, grasses and brush species. These areas also tend to include some nesting, brood-rearing and winter habitat.

The Conservation Plan is investing in solutions to address these challenges. In fact, the Utah Watershed Restoration Initiative and its partners have spent tens of millions of dollars to restore hundreds of thousands of acres affected by

wildfires, both inside and outside of Utah's SGMAs.

Proven Strategies for Wildfire

Utah wildfire experts and Sage-grouse biologists are working together on strategies to address the threat of wildfire. The primary objective of these strategies is to protect sagebrush habitats from wildfire. It is much easier to increase the resiliency of Sage-grouse habitat by proactively managing sagebrush ecosystems before sagebrush is burned in a wildfire. After sagebrush is burned in a wildfire, restoring or rehabilitating areas post-wildfire can be difficult and expensive. This is particularly true of Sage-grouse breeding and winter range.

If sagebrush is destroyed by wildfire, the process of natural vegetative succession may take years before healthy native sagebrush plant communities are fully restored. The moisture and temperature conditions needed for successful reseeding of sagebrush restoration may not be available every year. This is why money spent on prevention and suppression strategies makes good economic sense. Prevention not only protects sagebrush by reducing the number and frequency of new fires, but it can also help reduce the size of fires that do start. This saves millions of dollars that would otherwise be spent on controlling wildfires and restoring habitats after a wildfire.

Using specific criteria and the best-available science, Utah has developed a comprehensive strategy and detailed plan to address threats of wildfire and post-wildfire effects. Utah's approach focuses on reducing wildfire threats to habitats while ensuring that the habitat continues to work for Greater Sage-grouse.

This methodology is explained by the Sage-grouse National Technical Team (NTT) publication "A Report on National Greater Sage-grouse Conservation Measures," dated Dec. 21, 2011:

"These programs address the threats resulting from wildfires and post-wildfire effects along with a program (fuels management) designed to try to reduce these impacts. Together these programs provide a significant opportunity to influence

Figure 3 – When healthy landscapes are combined with fuels reduction and greenstripping (as shown below), sagebrush ecosystems are more resistant to wildfire.

sagebrush habitats that benefit Sage-grouse…it is critical not only to conduct management actions that reduce the long-term loss of sagebrush but also to restore and recover burned areas to habitats that will be used by Sage-grouse (Pyke 2011)."

Utah's Conservation Plan focuses on a three-pronged approach to address the threat of wildfire:

1. Prevention, including:
    a. Fuels management/reduction strategies and
    b. Fire-zone buffers such as greenstripping and firebreaks.
2. Suppression strategies, including:
    a. Prioritizing at-risk habitats,
    b. Providing rapid response strategies and
    c. Fire control resource allocation.
3. Post-fire habitat restoration and rehabilitation efforts to:
    a. Restore desirable vegetation and
    b. Control undesirable species such as cheatgrass.

Prevention

Money spent on prevention results in significant cost savings when compared with fire-suppression and rehabilitation efforts. Additionally, prevention is the best way to preserve sagebrush and keep habitats from fragmentation. Prevention is one of the most important parts of Utah's Sage-grouse conservation strategy for wildfire. Prevention involves both the reduction of fuels and the creation of buffers to help control wildfires that occur. The use of fuels-reduction strategies and natural buffers are proven solutions that help increase the resiliency of sagebrush habitats.

Fuels reduction, has become increasingly important in light of pinyon/juniper encroachment and the proliferation of exotic annual grasses. Removing pinyon/juniper and exotic annual grasses can help control both the frequency and severity of wildfires. The state of Utah invests millions of dollars into pinyon/juniper removal projects every year. Utah's Sage-grouse conservation strategy includes detailed plans for

Figure 4 - Conifer removal projects allows the sagebrush understory to flourish and strengthen the ecosystem's resilience to wildfire.

removing encroaching pinyon/juniper from sage-brush habitats. Conifer removal plays an essential role in addressing the threat of catastrophic wildfires. For more information on Utah's conifer-removal efforts, see the Utah Sage-grouse Conservation Strategies report on Pinyon/Juniper Removal for Proactive Habitat Restoration.

Most strategies for the direct removal of exotic annual grasses are either unproven or experimental in nature. However, grazing and post-fire reclamation efforts are proven methodologies to help control exotic annual grasses, particularly cheatgrass. Grazing can help immediately reduce the volume and contiguous nature of exotic annual grasses. Post-wildfire reclamation efforts are also vitally important to control the proliferation of cheatgrass. The treatments Utah uses to control the spread of cheatgrass will be discussed more detail on pages 7 and 8 of this report.

Suppression

Utah has a strong-track record of wildfire suppression. Ninety-eight percent of wildfires are stopped before they burn 1,000 acres. Small sporadic fires have minimal impacts on Sage-grouse habitats. Moreover, some research has found that when the cumulative impact of smaller fires is not excessive, they can actually be helpful to Greater Sage-grouse:

"Small fires may maintain suitable habitat mosaic by reducing shrub encroachment and encouraging understory growth…Sage-grouse using burned areas…may preferentially use the burned and unburned edge habitat."[3]

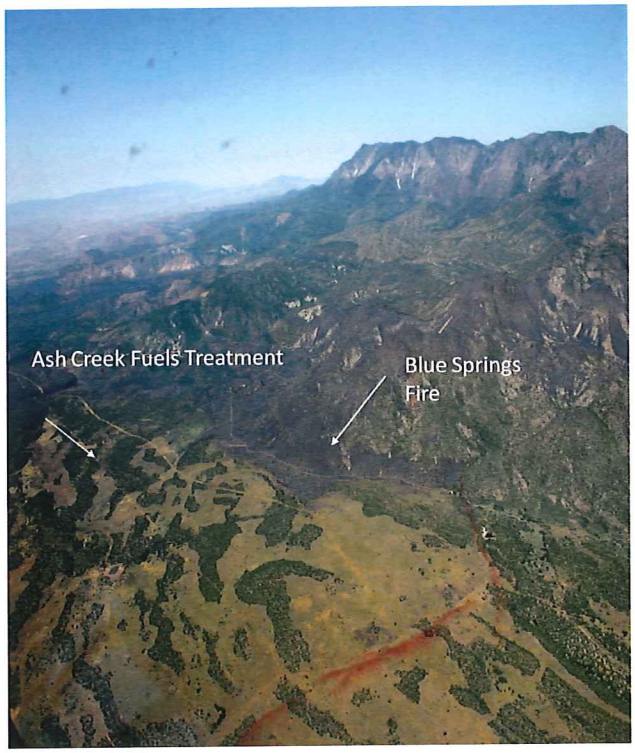


Figure 5 - Conifer removal projects provided important fire breaks which allowed crews to stop progression on blue Springs Fire saving thousands of acres of habitat.

Utah's fire-suppression strategy objective is to suppress all wildfires within SGMAs, with the goal of restricting or containing wildfires in these areas to the normal range of fire activity. Suppression of wildfires within Sage-grouse habitat is prioritized in Utah's fire plan immediately after human life and protecting communities. Utah's wildfire response strategies are evolving as additional information is learned about wildfire within key Sage-grouse habitats.

Utah's rapid response strategy involves ongoing cooperation between federal, state and county fire suppression entities. It also prioritizes resource allocation based on the threat potential inside and outside of at-risk SGMAs. Where resources are limited, Utah's wildfire suppression strategy provides the following degrees of prioritization:

[3][U.S. Fish and Wildlife Service 2010 Rule]

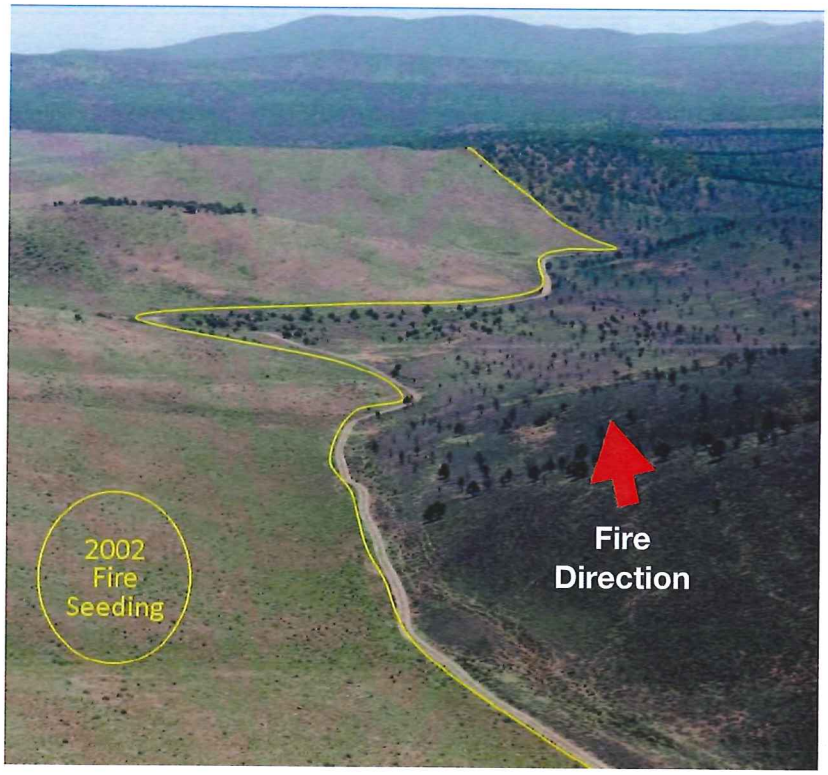


Figure 6- During critical drought conditions thousands of acres were saved from the fast moving Black Mountain Fire by a previous reseeding project of the Utah Watershed Restoration Initiative.

1. Highest priority areas within highest priority SGMAs
2. Prioritization among at-risk SGMAs
3. All SGMAs
4. Any identified connectivity corridors between SGMAs
5. All sagebrush habitats

Utah's conservation strategies stress the importance of using mechanical removal of pinyon and juniper trees within sagebrush ecosystems to eliminate the need for prescribed burns on Sage-grouse breeding and winter habitats. This not only protects sagebrush from unnecessary long-term removal, it ensures that treatment areas are suitable for utilization by Greater Sage-grouse after treatments are completed.

Restoration and Rehabilitation

There is a growing concern about the post-wildfire effects in Sage-grouse habitat. This is one of the reasons it is extremely important to prioritize prevention and suppression strategies for SGMAs which are most susceptible to wildfires and cheatgrass proliferation. It also means that restoration and rehabilitation after a wildfire is helpful. Post-fire strategies for cheatgrass may involve chemical or biological pre-emergents which actively suppress cheatgrass growth. Suppression of cheatgrass, when combined with reseeding of desired grasses, forbs and shrubs is a key part of Utah's restoration strategies after wildfires. Not only can these efforts promote the restoration of desirable vegetation, but they can also help control cheatgrass proliferation after a wildfire.

"The return on investment from this one wildfire alone potentially saved millions of fire-suppression dollars and clearly shows how healthy ecosystems are likely to thrive when post fire rehabilitation efforts are implemented successfully."

—PAUL BRIGGS, DISTRICT FUELS PROGRAM MANAGER

Before a wildfire, cheatgrass is approximately 1% of the understory vegetation in areas that have not previously burned. In the absence of wildfire, the presence of native grasses, forbs and brush help

limit the infiltration of cheatgrass. When wildfire occurs, cheatgrass is often the first plant to emerge, often at much higher densities than before the fire. In this way, the biology of cheatgrass is designed to compete with other plant species in response to wildfire.

Utah's strategy is proving to be very effective in controlling the spread of cheatgrass. After a wildfire, a chemical pre-emergent, which is specific to cheatgrass, is applied to the burned area. The area is then reseeded with native (and in some situations non-native) forbs, grasses and brush. Additionally, multiple reseeding of these areas can be utilized to take advantage of intermittent years where soil temperatures and moisture are favorable for sagebrush restoration. The pre-emergent artificially suppresses cheatgrass growth, which gives the newly reseeded area's forbs, grasses and brush a head-start. In most cases, a second application of the cheatgrass specific pre-emergent is unnecessary. Although a temporary increase in cheatgrass density may occur in the second year, the early-establishment allows desirable plants to more effectively compete with cheatgrass. In many instances, by the third year cheatgrass will return to lower densities within the understory vegetation.

The data shows that this strategy not only helps control cheatgrass proliferation, but it also helps keep cheatgrass densities at levels that minimize the impact on Sage-grouse habitat use. Just as important, by re-establishing desired vegetative communities, the natural processes of plant succession can be restored. This helps ensure that desired forbs, grasses and sagebrush will be restored in ways that will support Greater Sage-grouse populations long-term.

Figure 7 – Sage-grouse actively use winter habitats that have healthy sagebrush populations.

The Report on National Greater Sage-grouse Conservation Measures is consistent with Utah's approach on these post-wildfire restoration strategies:

"Use of native plant seeds for [Emergency Stabilization and Rehabilitation] seedings is required based on availability, adaptation (site potential), and probability of success (Richards et al. 1998). Where probability of success or native seed availability is low, non-native seeds may be used as long as they meet Sage-grouse habitat conservation objectives (Pyke 2011). Re-establishment of appropriate sagebrush species/ subspecies and important understory plants, relative to site potential, shall be the highest priority for rehabilitation efforts."

By implementing proven prevention, suppression and rehabilitation strategies, the state of Utah is effectively addressing challenges presented by wildfire and post-wildfire effects, including cheatgrass proliferation and dominance.

Utah's Investment to Address Wildfire

The state of Utah has a track record of investing in prevention, suppression and rehabilitation projects, as well as ensuring that those treatment areas work for Greater Sage-grouse. Since 2006, approximately 560,000 acres of habitat has been treated through Utah's Watershed Restoration Initiative. Many of these projects directly address threats of wildfire to Sage-grouse habitats. Utah's methodology for assessing treatment areas relies on years of experience and application of the best available science. Factors considered includes:

1. Characteristics of sagebrush habitats
2. Sage-grouse utilization of those habitats
3. Soil temperature and moisture regimes
4. Likelihood of rehabilitation/restoration success

Using these and other criteria, experts in the state of Utah are able to assess areas where additional pre-suppression projects would provide the most benefit. This information also helps inform prioritization of suppression and rehabilitation efforts.

Utah's systematic approach follows the suggested management practices of the Natural Resource Conservation Service (NRCS) Sage-grouse team, which encourages criteria-based methodology, "Natural Resource managers are seeking coordinated approaches that focus appropriate management actions in the right places to maximize conservation effectiveness (Wisdom and Chambers 2009; Murphy et al. 2013)."

The state of Utah has systematically identified the SGMAs where there is a heightened risk of wildfire and post-wildfire effects. Fortunately, many of Utah's SGMAs are not at a heightened risk. A comparatively small percentage of the acreage within these areas have been burned by wildfires during the last 20 years.

Other SGMAs are not only impacted by wildfire, but they are also at a heightened risk of post-wildfire effects. These areas have a higher overall percentage of land that has been burned by wildfire. Additionally, these SGMAs have large

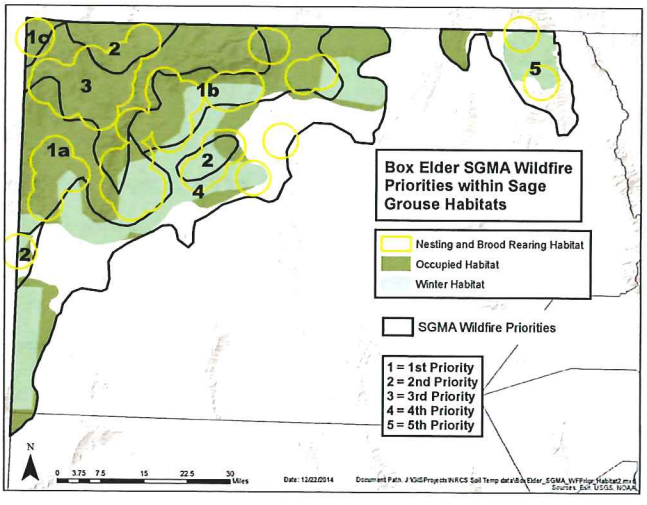


Figure 8 - Wildfire prioritization overlaid with Sage-grouse habitat utilization demonstrates importance of a multi-criteria approach in developing detailed wildfire strategies.

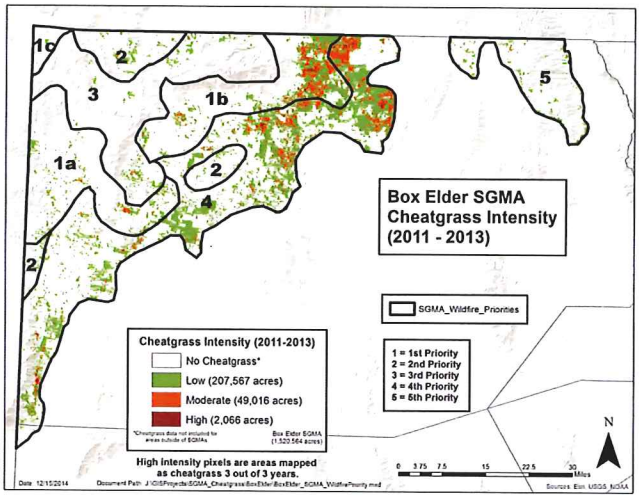


Figure 9 - Cheatgrass intensity is strongly considered when developing wildfire priority strategies within SGMAs.

areas with soil temperature and moisture regimes that are more susceptible to cheatgrass proliferation. These areas may also contain habitats where it is more difficult to successfully reestablish native forbs, grasses and brush. This is particularly true of the five SGMAs that lie within Utah's Great Basin. Language in the U.S. Fish and Wildlife Service's 2010 "Warranted but Precluded" finding confirms that areas within the Great Basin are at the greatest risk of wildfire, "Although fire alters sagebrush habitats throughout the greater Sage-grouse range, fire disproportionately affects the Great Basin (Baker et al. in press, p. 20)...and will likely influence the persistence of Greater Sage-grouse populations in the area."

The five Utah SGMAs that lie within the Great Basin include Box Elder, Bald Hills, Sheeprock Mountains, Hamlin Valley and Ibapah. These five areas hold 26% of the Sage-grouse in the state of Utah. A comparison of these five SGMAs and the 6 SGMAs outside of the Great Basin is helpful. Accumulated acreage affected by wildfire in Utah's SGMAs was closely tracked from 1995-2012.

Utah's five SGMAs within the Great Basin have had an average of approximately 10% of the overall habitat burned by wildfire since 1995. In contrast, the average for Utah's six SGMAs outside the Great Basin is much lower. They have only had approximately 1.8% of their habitat burned by wildfire since 1995. By focusing pre-suppression treatment efforts within the Great Basin SGMAs that are more prone to large acreage wildfires, Utah is proactively working to protect suitable habitat in areas with soil types that are more prone to the infiltration and persistence of cheatgrass and other exotic annual grasses.

Utah's proactive strategies are protecting Greater Sage-grouse habitats. In particular, the state's strategy of prioritizing prevention, suppression and rehabilitation efforts are proactively addressing challenges presented by wildfire and post wildfire effects in areas that are at the greatest risk.

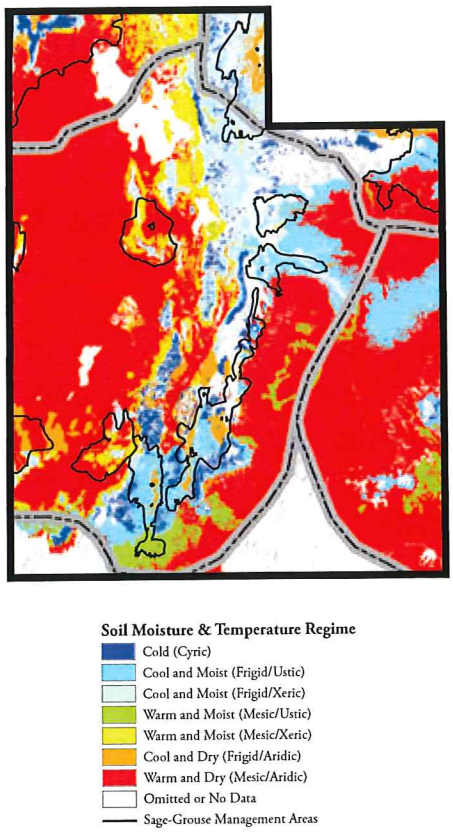


Figure 10 - Five SGMAs within the Great Basin have a high correlation with warm and dry soil regimes. Soil moisture and temperature are a primary indicator of wildfire propensity and post-fire effects.

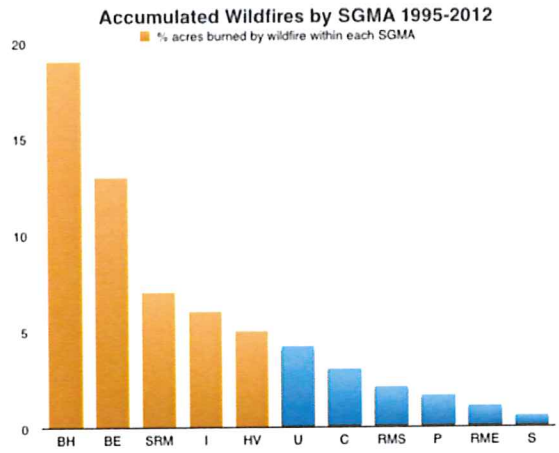


Figure 11- The contrast between acres burned by wildfires within Great Basin SGMAs and SGMAs in other parts of the state helps illustrate the benefits of prioritizing at risk SGMAs.

Detailed Conservation Strategy for SGMA Priorities

Box Elder

Overview

Detailed conservation strategies demonstrate that protecting Sage-grouse from the threat of wildfire in Box Elder SGMA is achievable. Spatial threat analysis illustrates that utilizing a priority system for prevention treatments and rapid-response strategies in difficult fire years can reduce the acreage burned by wildfire by up to 75% in the areas which are key to survival of 98% of the birds in the Box Elder SGMA. Considering that the Box Elder SGMA holds approximately twice as many sage-grouse as the combined populations of the Ibapah, Sheeprock Mountains, Hamlin Valley and Bald Hills SGMAs, a detailed conservation strategy for the Box Elder SGMA is important for protecting Sage-grouse from the threat of wildfire in the state of Utah.

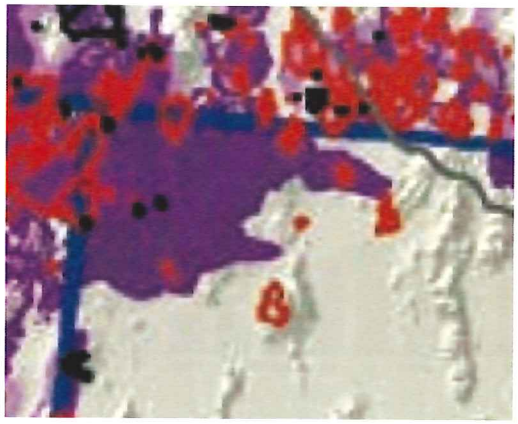


Figure 12 - Chambers et al wildfire map. Red and black polygons represent acreage burned by wildfire from 1995-2012 in Box Elder SGMA.

Detailed Analysis

Every Fire Every Year

In most years, every fire within the Box Elder SGMA can be suppressed before it grows too large. In fact, analysis of wildfires from 1995-2012 in Utah's SGMAs shows that 98 percent of wildfires are extinguished in less than 1,000 acres and 99.7 percent of wildfires are extinguished in less than 10,000 acres. In 16 out of 18 years, no wildfire exceeded 10,000 acres and relatively few overall acres burned in the Box Elder SGMA. However, in two years, 2005 and 2007 several large fires burned extensive acreage in the Box Elder SGMA. In 2008, the state of Utah responded with increased funding to enhance prevention and suppression efforts to address the threat of wildfire in Box Elder and other portions of the state.

Difficult Fire Years

Utah uses a three-pronged approach to address the challenge that wildfires pose to Sage-grouse in extreme conditions:

(1) Prevention: Improving the resiliency of the habitat through conifer removal and control of invasive annual grass before fires start.

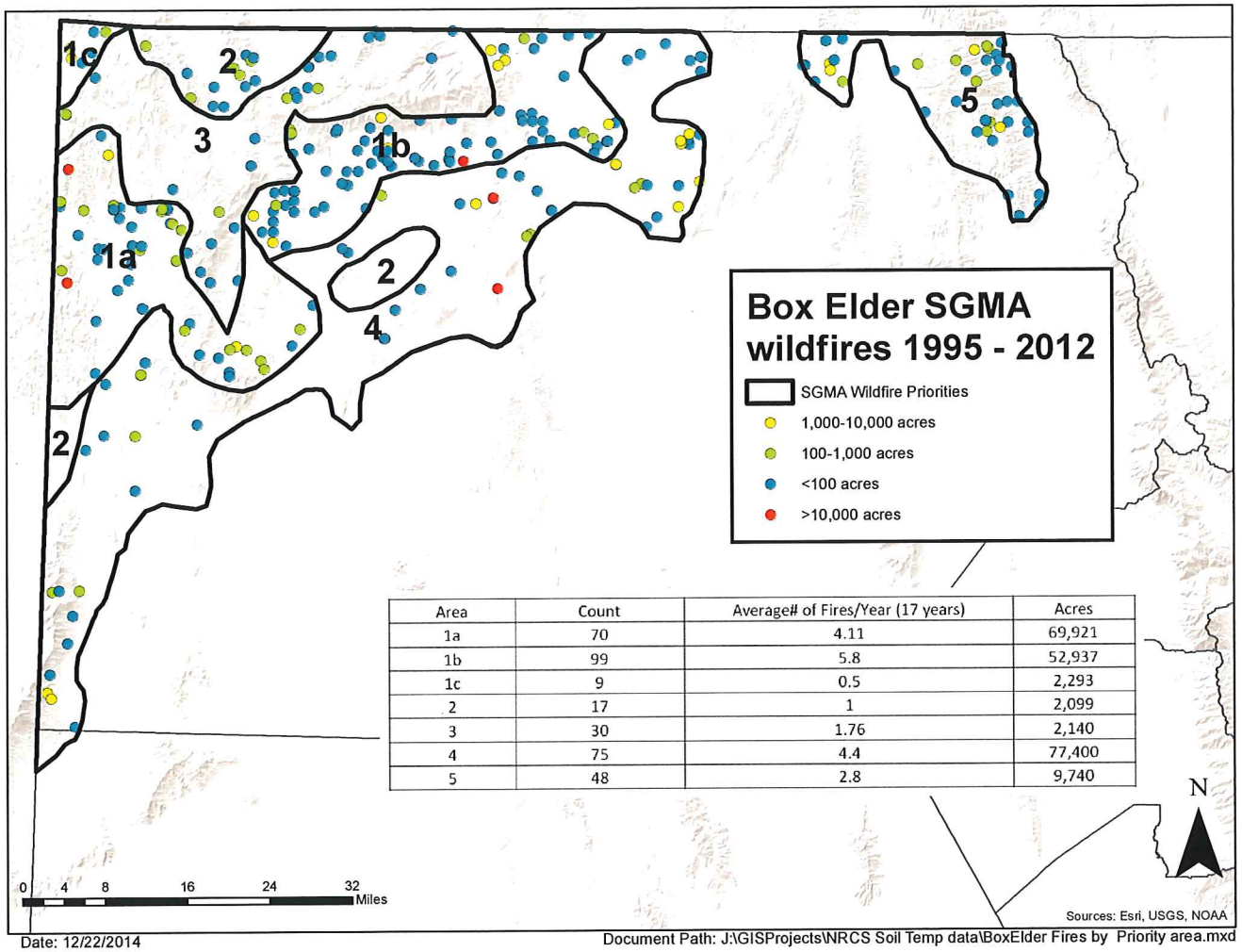
(2) Suppression: Rapid-response strategies that use a priority system for triage situations.

(3) Rehabilitation: Restoring burned habitat through reseeding and cheat-grass suppression to ensure burned acreage is returned to productive Sage-grouse habitat.

In the Box Elder SGMA, priority zones 1-5 were developed using historic fire data, soil/temperature regimes, sage-grouse distribution and key habitat types. Zones 1a and 1b have been designated the top priority areas to accelerate prevention and improve rapid response in the most severe wildfire conditions.

Protecting Key Habitat

While the Box Elder SGMA covers 1.5 million acres, population metrics indicate that nesting/brood-rearing habitat and priority winter range for 98% of the birds in this area occurs within zones 1a-c, 2 and 3. However, the majority of the acreage burned by wildfires in these areas occurs within zones 1a and 1b.



Area	Count	Average# of Fires/Year (17 years)	Acres
1a	70	4.11	69,921
1b	99	5.8	52,937
1c	9	0.5	2,293
2	17	1	2,099
3	30	1.76	2,140
4	75	4.4	77,400
5	48	2.8	9,740

Figure 13 - Ensuring fire control in priority zones 1a and 1b during difficult fire years presents an opportunity to reduce acreage burned by up to 75% in critical habitat for 98% of sage-grouse.

Wildfire not a threat in zones 1c, 2 and 3

Wildfire is not a significant threat in zones 1c, 2 and 3. Soil temperature and moisture conditions combined with existing wildfire-prevention and control strategies are currently sufficient to control wildfires in these areas. Although zones 1c, 2 and 3 encompass more than 440,000 acres, on average only a collective 363 acres burn in these areas per year. This is likely equal to or less than historical totals. In other words, any threat of wildfire in areas 1c, 2 and 3 is already being controlled to acceptable thresholds. Because zones 1c, 2 and 3 provide nesting/brood rearing habitat for 55% of the Sage-grouse in the Box Elder SGMA it remains an important priority for wildfire prevention and suppression efforts.

Cheatgrass favors warm-dry soils (which are classified as xeric or aridic soils by soils experts.) However, most of the soils in zones 1c, 2 and 3 comprise cool and wet soil types (cyric, frigid-xeric and frigid-aridic soils). This means that cheatgrass and other annual grasses are much less likely to become problematic within these zones. Soil moisture and temperature conditions In zone 3 and portions of zones 1c and 2, also allow restoration of healthy vegetation. Using soil moisture, temperature, elevation and other quantified variables, restoration specialists determine whether reseeding or other restoration activities will be helpful. Restoration activities after wildfire in these areas are often highly successful, and revegetation of desirable forbs, grasses and brush occurs in just a few short years.

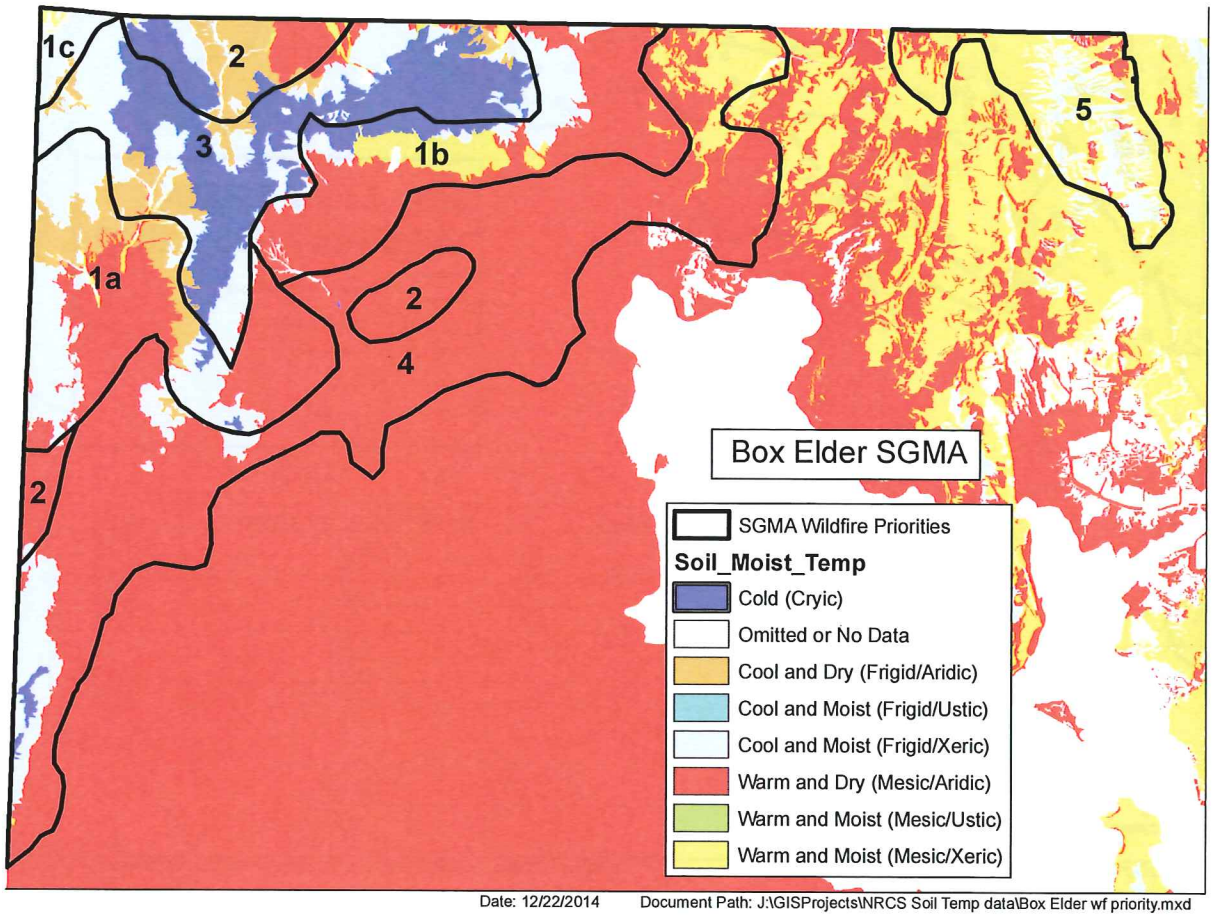


Figure 14 - Soil temperature and soil conditions and existing fire management efforts means wildfire is not a threat in zones 1c, 2 and 3. With less than 365 acres per year burning on average in these areas, sage-grouse populations are not at risk.

Few Birds in Zone 4

Zone 4 provides nesting/brood-rearing habitat for just 2% of Sage-grouse in the Box Elder SGMA. Nevertheless, because zone 4 includes general winter range, it is helpful for it to be included in the prioritization system. While there are less wildfires which start in zone 4 than zones 1a and 1b, the total acreage burned by wildfires from 1995-2012 in zone 4 was relatively high. Nevertheless, because of the large amount of winter habitat in the Box Elder SGMA, the amount of acreage impacted by wildfires in zone 4 is not considered limiting for sage-grouse populations. This does not mean that wildfire suppression is not important in zone 4. Instead, it reflects the reality that in triage situations, where multiple fires may be burning, prioritizing wildfire control in nesting/brood rearing areas and critical winter range in zones 1-3 is a higher priority than general winter range in zone 4. This is because winter range in zone 4 is in more abundant, and the impact of a large wildfire in zone 4 is less likely to directly impact sage-grouse populations than a large wildfire in zones 1-3. It is also important to point out that zones 1-3 contain important winter range for Sage-grouse in the Box Elder SGMA.

Analysis of historical wildfire trends suggests that controlling wildfires in zone 4 will not typically interfere with wildfire-control efforts in zones 1-3. For example, the two largest fires in zone 4 occurred in 2005 and 2006, while two largest fires

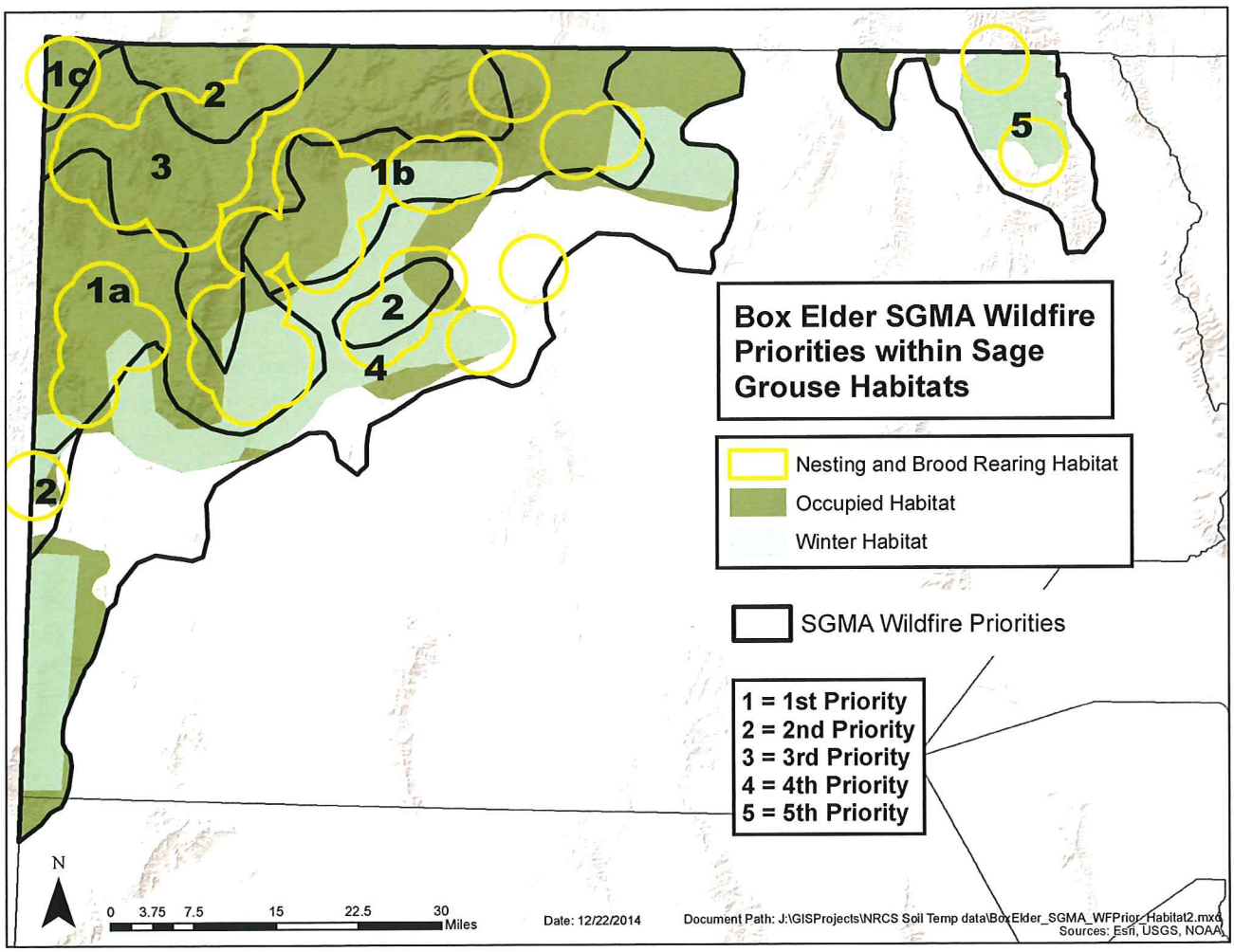


Figure 15 - shows that the majority of nesting brood rearing habitat occurs within zones 1-3. Zones 1-3 also contain winter habitat.

in zones 1a and 1b were in 2007. This demonstrates that the priority system can provide protection of general winter range, even in difficult fire years.

Detailed Wildfire Strategies for Zones 1a and 1b

Prioritization of zones 1a and 1b is important to inform improved rapid response and suppression strategies in the Box Elder SGMA. While there are few large wildfires in zones 1a and 1b, large wildfires account for most of the acreage burned in these areas. In some respects, this is a function of the soil temperature and moisture regimes, elevation and plant communities, but is also informed by historic wildfire trends. Prioritization reflects the fact that wildfires are not only more likely to occur in zones 1a and 1b, but they are also more likely to burn large amounts of acreage.

By prioritizing zones 1a and 1b, Utah can focus its enhanced prevention and suppression efforts on at-risk areas and habitats within the Box Elder SGMA that are important to Sage-grouse survival. There are multiple ways prioritization can be helpful to suppression efforts in the Box Elder SGMA. For example, if multiple fires start in a single night and resources become limited, it is helpful to recognize that a wildfire in zone 1a is more likely to become large than a wildfire in zone 3. Similarly, it is helpful to recognize that a wildfire in zone 1b is more likely to detrimentally impact Sage-grouse populations than a wildfire in zone 4.

Most years, all wildfires within the Box Elder SGMA are extinguished before they become very large. In fact, from 1995 to 2012, there were no wildfires in zones 1a and 1b that exceeded 10,000 acres in 16 out of 18 years. During those 16 years, wildfires burned just a combined 1,434 acres annually on average within zones 1a and 1b. However, in 2005 and 2007, large wildfires far exceeded these annual averages. For example, in 2005 one fire burned 18,420 acres in zone 1a. In 2007 two fires burned 59,296 acres in zone 1b and four fires burned 12,484 acres in zone 1a. Controlling these fires can reduce acreage impacted by wildfire by up to 75%.

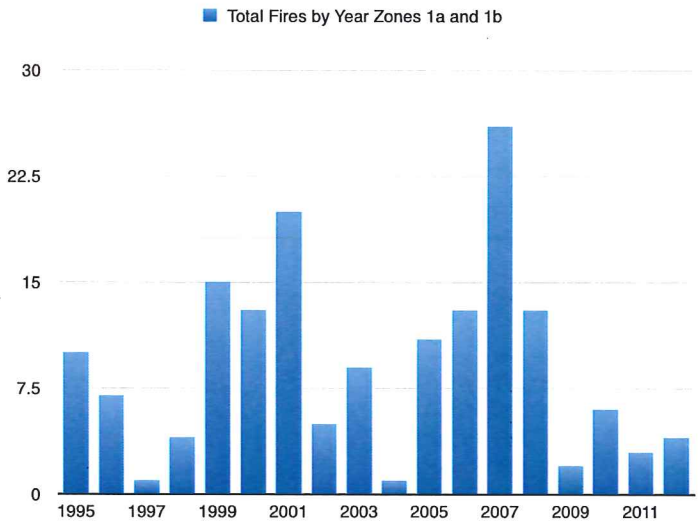


Figure 16 - The number of wildfires within zones 1a and 1b can vary considerably from year-to-year.

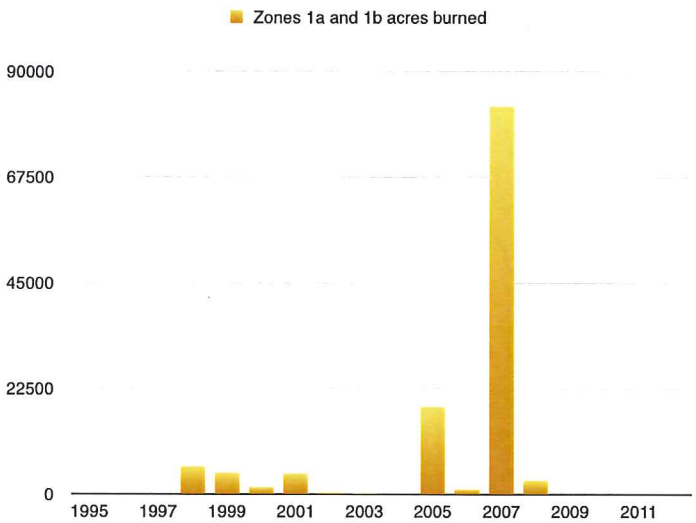
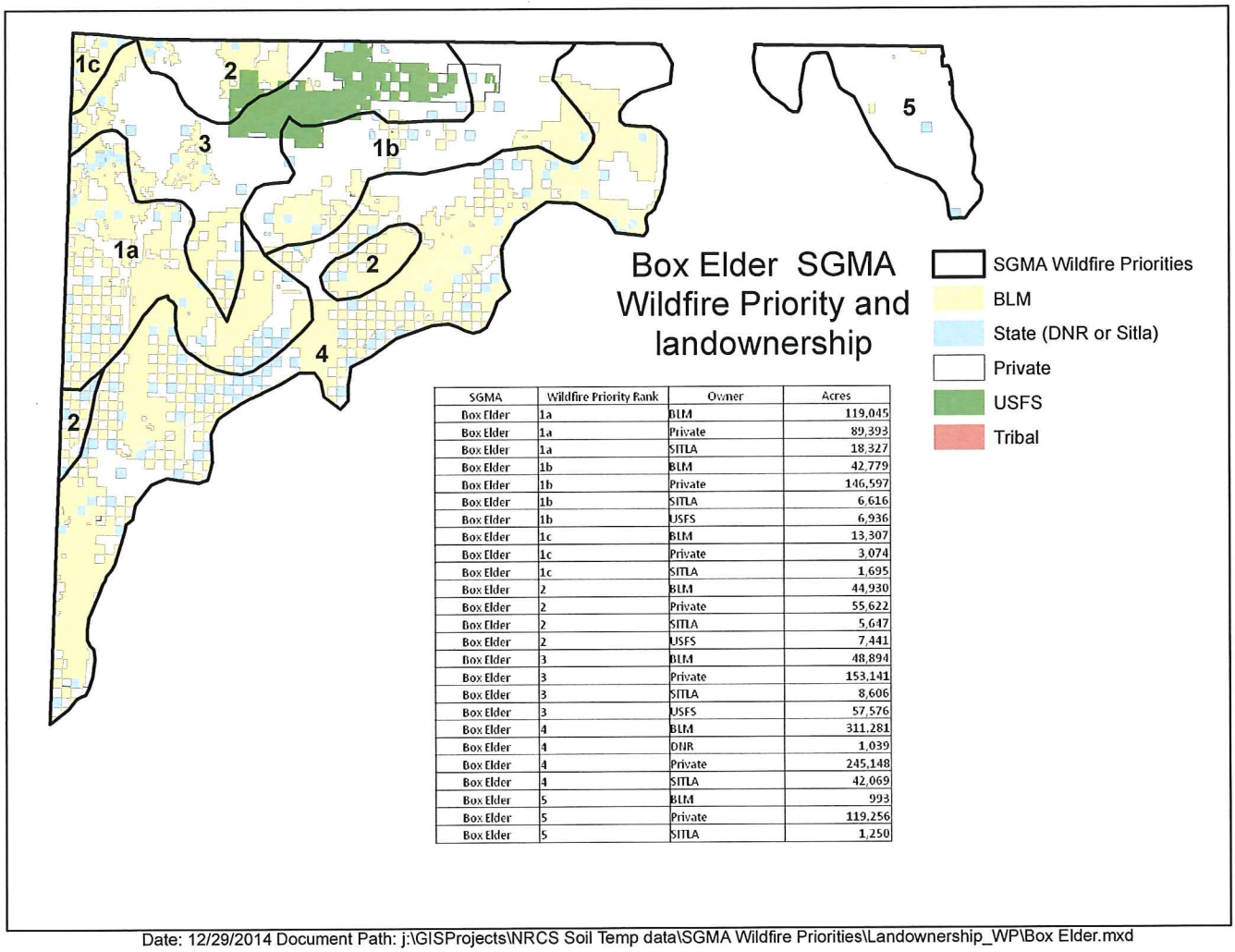


Figure 17 - Severe fire conditions in certain years (particularly 2005 and 2007) account for most of the acreage burned in key areas of the Box Elder SGMA.

Enhanced wildfire control in zones 1a and 1b protects nesting/brood-rearing areas and winter habitats for Greater Sage-grouse in the Box Elder SGMA. Zones 1a and 1b provide nesting/brood rearing habitat for 43% of the Sage-grouse in the Box Elder SGMA. Zones 1a and 1b are also important for protecting the habitat in areas 1c, 2 and 3 from catastrophic wildfire. In other words, controlling wildfires in zones 1a and 1b protects not only 43% of Sage-grouse in zones 1a and 1b, but also the 55% of Sage-grouse in zones 1c, 2 and 3. What this means is that protecting 98% of the birds can be achieved by reducing the number of large fires within the 226,765 acres designated as zone 1a and the 202,928 acres designated as zone 1b. Managing wildfires on the combined 429,693 acres of zones 1a and 1b is a much more manageable task than attempting to control every fire on 1.5 million acres in the most extreme fire conditions. Considering the fact that a small handful of fires in zones 1a and 1b in 2007 accounted for approximately half of the acreage burned in an 18-year period in the Box Elder SGMA, the priority system provides invaluable insight for improving rapid-response strategies and enhanced suppression efforts in future fire seasons.

Conifer Removal and Prevention Strategies for Zones 1a and 1b

Prevention is an important tool to reduce the incidence of large wildfires. Pre-suppression



SGMA	Wildfire Priority Rank	Owner	Acres
Box Elder	1a	BLM	119,045
Box Elder	1a	Private	89,393
Box Elder	1a	SITLA	18,327
Box Elder	1b	BLM	42,779
Box Elder	1b	Private	146,597
Box Elder	1b	SITLA	6,616
Box Elder	1b	USFS	6,936
Box Elder	1c	BLM	13,307
Box Elder	1c	Private	3,074
Box Elder	1c	SITLA	1,695
Box Elder	2	BLM	44,930
Box Elder	2	Private	55,622
Box Elder	2	SITLA	5,647
Box Elder	2	USFS	7,441
Box Elder	3	BLM	48,894
Box Elder	3	Private	153,141
Box Elder	3	SITLA	8,606
Box Elder	3	USFS	57,576
Box Elder	4	BLM	311,281
Box Elder	4	DNR	1,039
Box Elder	4	Private	245,148
Box Elder	4	SITLA	42,069
Box Elder	5	BLM	993
Box Elder	5	Private	119,256
Box Elder	5	SITLA	1,250

Date: 12/29/2014 Document Path: j:\GISProjects\NRCS Soil Temp data\SGMA Wildfire Priorities\Landownership_WP\Box Elder.mxd

Figure 18 - Ownership of land can affect suppression efforts as well as the timing, funding and regulatory hurdles for conifer removal and other habitat restoration efforts.

strategies can dramatically reduce the incidence of large wildfires and can enhance the ability to suppress fires that do start in severe conditions. In 2008, the state of Utah responded to the wildfires of 2007 with funding for an ongoing prevention and restoration program. Prevention is a critical part of the detailed wildfire-reduction strategy in zones 1a and 1b. Pinyon-juniper removal, restoration and other prevention work in zones 1a and 1b can also help address the threat of wildfire by:

(1) Reducing the fuel loads which that can increase the likelihood of catastrophic wildfires.

(2) Enhancing habitats to improve the success of suppression of wildfires in severe conditions.

(3) Reducing the size and intensity of fires that do occur.

These programs have been extremely successful. Since 2007, almost 100,000 acres of conifer removal, invasive plant control and Sage-grouse

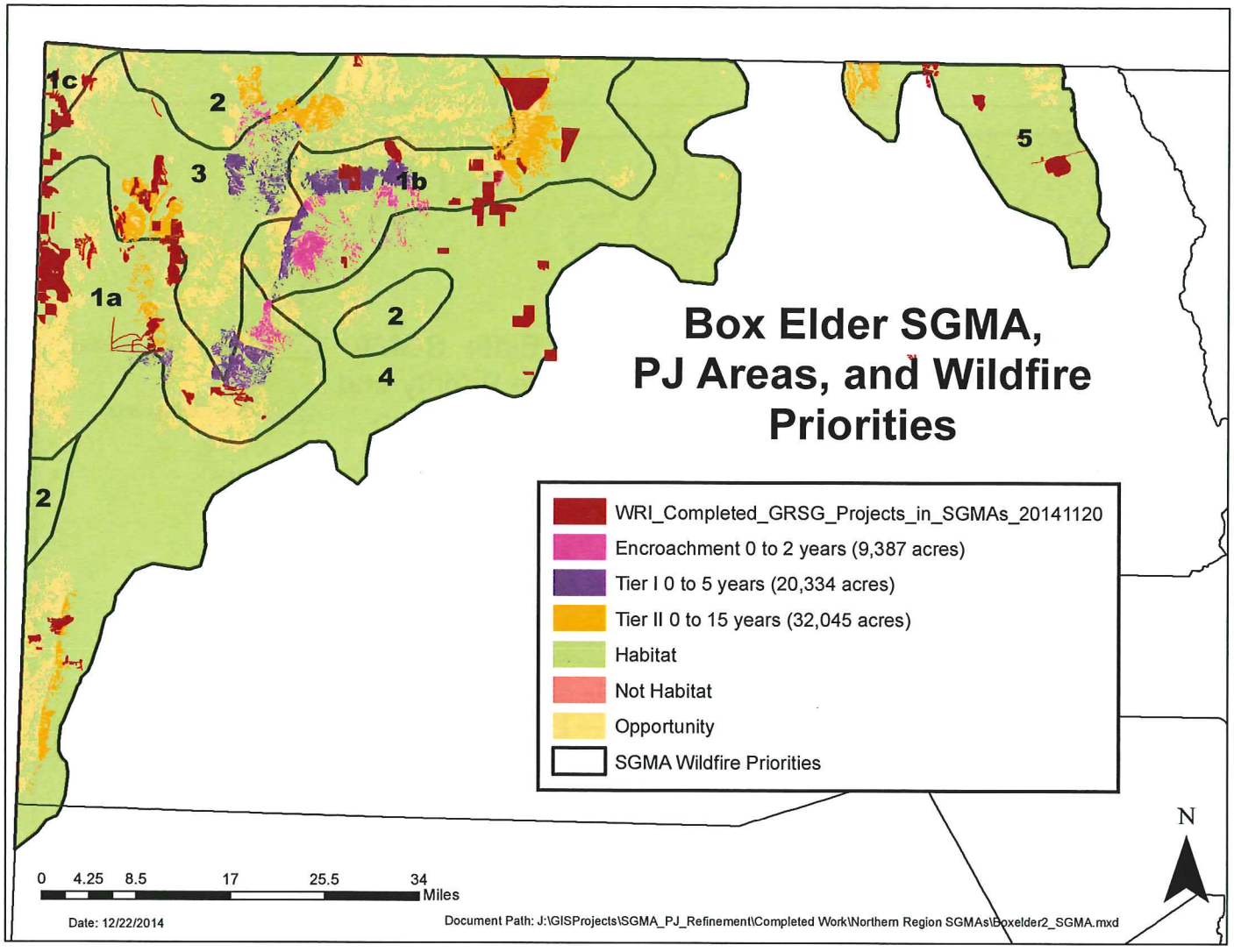


Figure 19-Watershed Restoration Initiative Projects totaling over 100,000 acres have been completed in Box Elder SGMA since 2006. Over 60,000 acres of conifer removal projects are planned in coming years to enhance grouse habitat and reduce the threat of catastrophic wildfire.

habitat restoration efforts have been implemented in the Box Elder SGMA. An additional 60,000+ acres of conifer removal is planned in Box Elder SGMA in the next few years. These projects increase the resiliency and redundancy of sage-grouse habitats, improve watersheds and mesic areas, remove vertical plant structures and reduce the threat of catastrophic wildfires. Many of these projects are planned adjacent to existing Sage-grouse populations or in areas of important winter range. Since 2008, wildfire totals in Box Elder have dramatically improved. Between 2008 and 2014, no wildfire burned over 2,500 acres in the Box Elder SGMA. In that same period, just 4 fires were larger than 1,000 acres.

For more information on the science behind conifer removal and the benefits to Sage-grouse and their habitats, refer to the state of Utah's Sage-Grouse Conservation Strategies document on pinyon/juniper removal.

Most of the habitat restoration efforts in the Box Elder SGMA occurs in zones 1a and 1b. Ownership of land in pinyon-juniper removal areas affects whether funding availability, regulatory restrictions and NEPA assessments may delay or restrict conifer removal projects. For example, the fact that a large percentage of zone 1b is private land makes it much more likely that pinyon/juniper removal will implemented in the next few years. In contrast, zone 1a includes large portions of public lands managed by the Bureau of Land Management (BLM). Though BLM is an important partner in Utah's Watershed Restoration Initiative, NEPA requirements and availability of funding can delay pinyon/juniper removal projects by several months or even years on BLM managed lands.

Box Elder Conclusion

Existing wildfire prevention, suppression and rehabilitation strategies have successfully addressed the threat of wildfire in most years within the Box Elder SGMA. However, in extreme fire conditions, such as those experienced during the 2007 wildfire season, large fires can burn large amounts of acreage. These fires account for most of the acreage burned within important sage-grouse habitats within the Box Elder SGMA.To reduce the threat of wildfire in extreme fire conditions, the state of Utah has developed a priority system to inform prevention projects and rapid-response/suppression strategies. By utilizing a priority system, heightened protections are focused on key nesting/brood rearing and critical winter range. The priority system protects 98% of Sage-grouse in the Box Elder SGMA within the areas designated as priority zones 1-3.

Prioritization is helpful to focus wildfire prevention and suppression strategies in at-risk areas within the Box Elder SGMA. For example, while the Box Elder SGMA covers 1.5 Million acres, protecting 98% of the birds can be achieved by reducing the number of large fires within the 226,765 acres designated as zone 1a and 202,928 acres designated as zone 1b. Quantification and spatially explicit threat analyses illustrate that Utah's priority system for preventive treatments and rapid response strategies in Box Elder SGMA can reduce the acreage burned by wildfire by up to 75% in areas which are key to survival of 98% of the birds in the Box Elder SGMA. By utilizing priority areas, the science and data inform wildfire suppression strategies in a manner that not only reflects likely conditions on the ground, but also informs strategies for significantly reducing the threat of wildfire to greater sage-grouse populations.

Hamlin Valley

encompasses 158,065 acres. Between 0 and 22

Overview

Detailed conservation strategies for the Hamlin Valley SGMA are much more straightforward than for the Box Elder SGMA. Priority zone 1 contains 100% of the nesting/brood-rearing and key winter habitat in the Hamlin Valley SGMA. While Hamlin Valley covers 341,523 acres, priority zone 1 encompasses 158,065 acres. Between 0 and 22 wildfires occur annually within priority area 1. However, most of these fires are quite small. In fact, less than 100 acres burns in zone 1 of Hamlin Valley in a typical year. However, in 2002, one fire burned 4,550 acres. In 2012, another fire

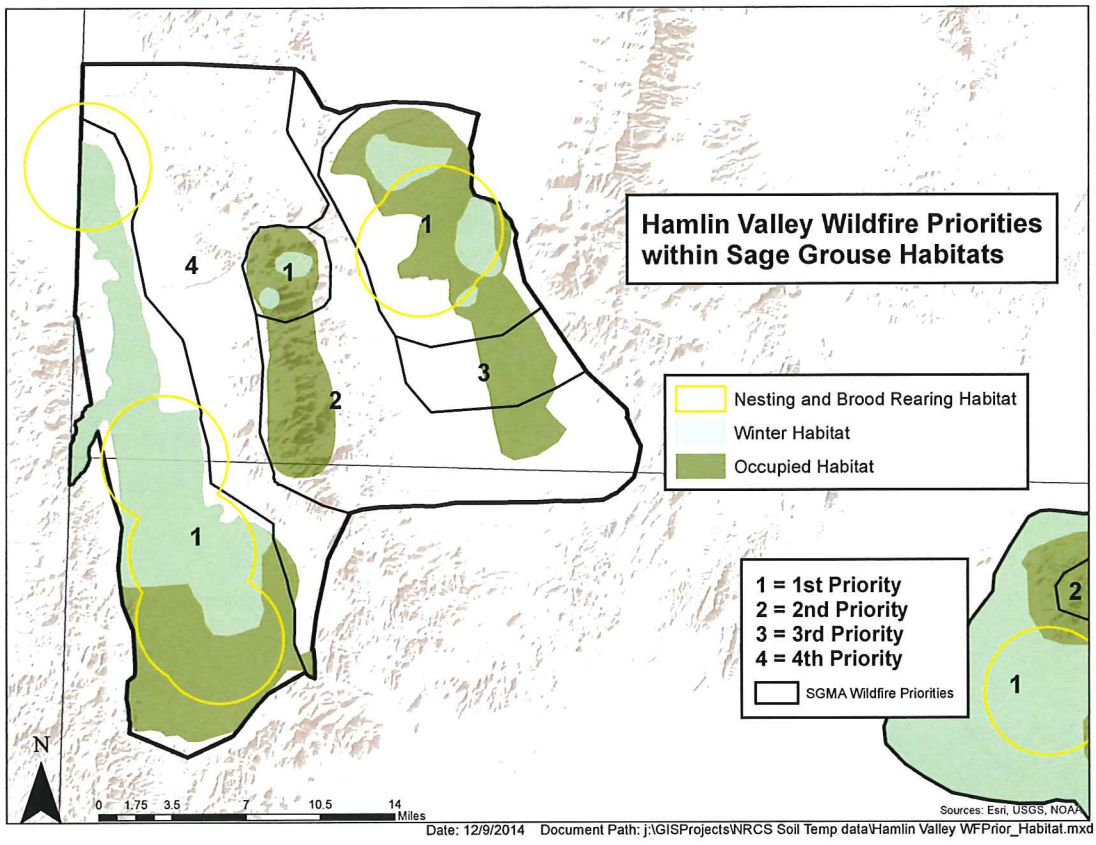
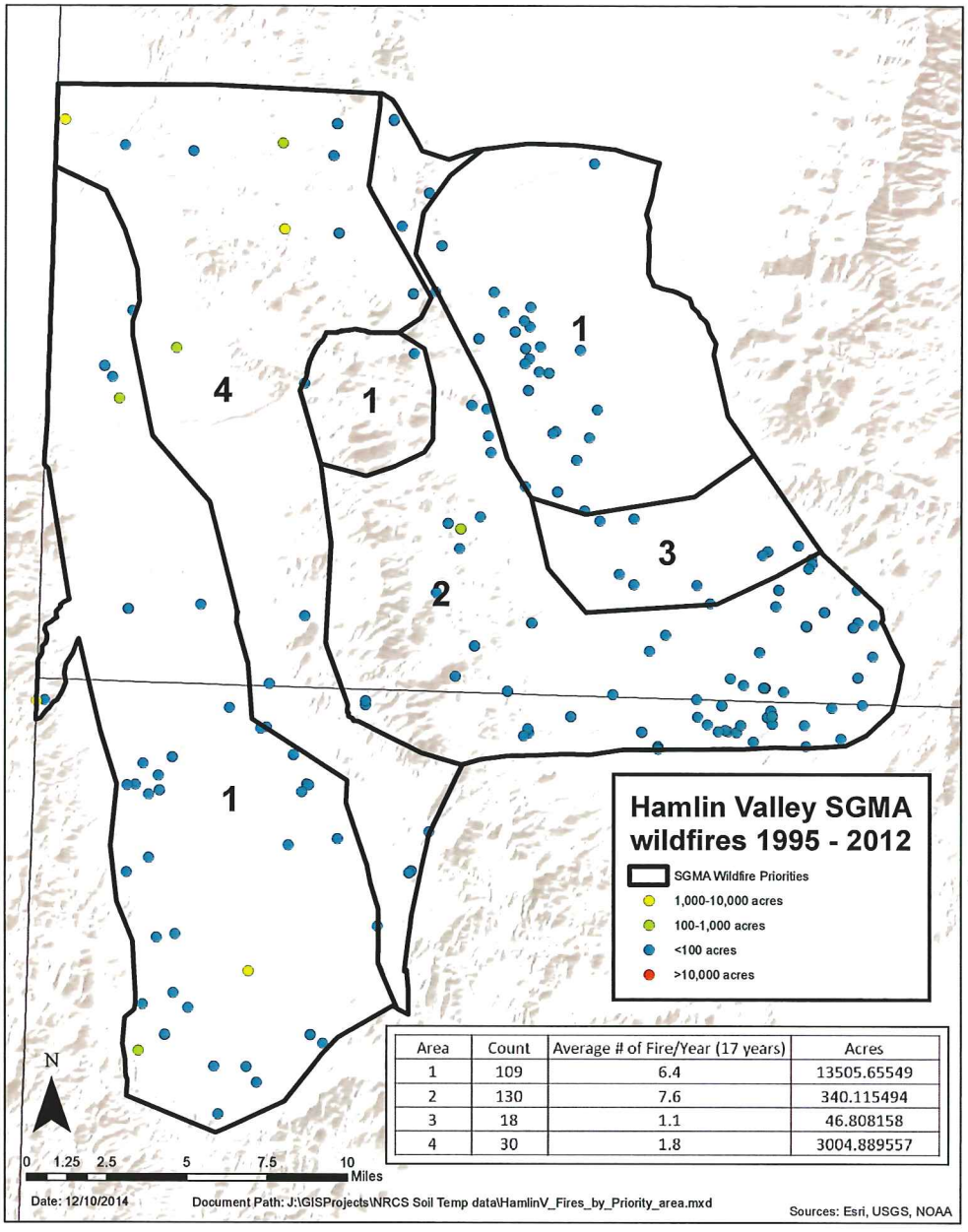


Figure 20 - One-hundred percent of leks, nesting/brood-rearing habitat and most key winter ranges are located in zone 1. Zones 2 and 3 contain some general habitat as well as opportunity areas. Zone 4 is primarily non-habitat.

burned approximately 8,500 acres. These two fires account for over 96% of the acreage burned in priority area 1 of Hamlin Valley from 1995-2012. While wildfire is not a major concern within zone 1, prioritization of zone 1 protects key habitat areas and provides an opportunity to reduce the incidence of large fires and overall acreage-burned within Sage-grouse habitat in Hamlin Valley.

Zone 2 encompasses an area of general habitat between the populations on the eastern and western portions of the Hamlin Valley SGMA. In an 18 year period f(rom 1995-2012), there were 131 fires in zone 2. However, soil temperature and moisture regimes and existing wildfire-suppression efforts resulted in just 340 acres burned during this 18-year period. While this area contains some seasonal habitat, it primarily consists of conifer stands that do not provide important habitat for Sage-grouse. It is important to control fires in zone 2 to prevent catastrophic wildfires which could burn into zone 1. Zone 2 also includes opportunity areas of possible habitat. Removal of conifers in these areas can increase the amount of available habitat for Sage-grouse as long as projects are conducted in areas adjacent to existing Sage-grouse populations, with adequate water and other habitat characteristics. Similar areas in other parts of Utah are being utilized by Sage-grouse within months of the completion of those restoration projects.



Zone 3 and zone 4 have very few wildfires. Zone 3 has had virtually no large fires in an 18-year period. Zone 4 represents non-habitat because of its geophysical characteristics.

Conifer removal strategies can provide additional protections for Sage-grouse habitat in Hamlin Valley. Areas planned for conifer removal are adjacent

Figure 21 - By reducing the incidence of large fires in zones 1, acreage burned can be improved by more than 90% in areas that hold leks and the nesting/brood rearing habitat for 100% of Sage-grouse in the Hamlin Valley SGMA.

to Sage-grouse leks, nesting/brood-rearing and important winter range. Typical of desert shrub habitats, the areas suitable for Sage-grouse tend to be fairly localized. Removing conifers from areas adjacent to these habitats helps provide buffers that further insulate Sage-grouse populations from the threat of wildfire. Conifer removal and other habitat-restoration efforts can also improve the quality of the habitat for Sage-grouse and its resiliency to wildfire. A total of

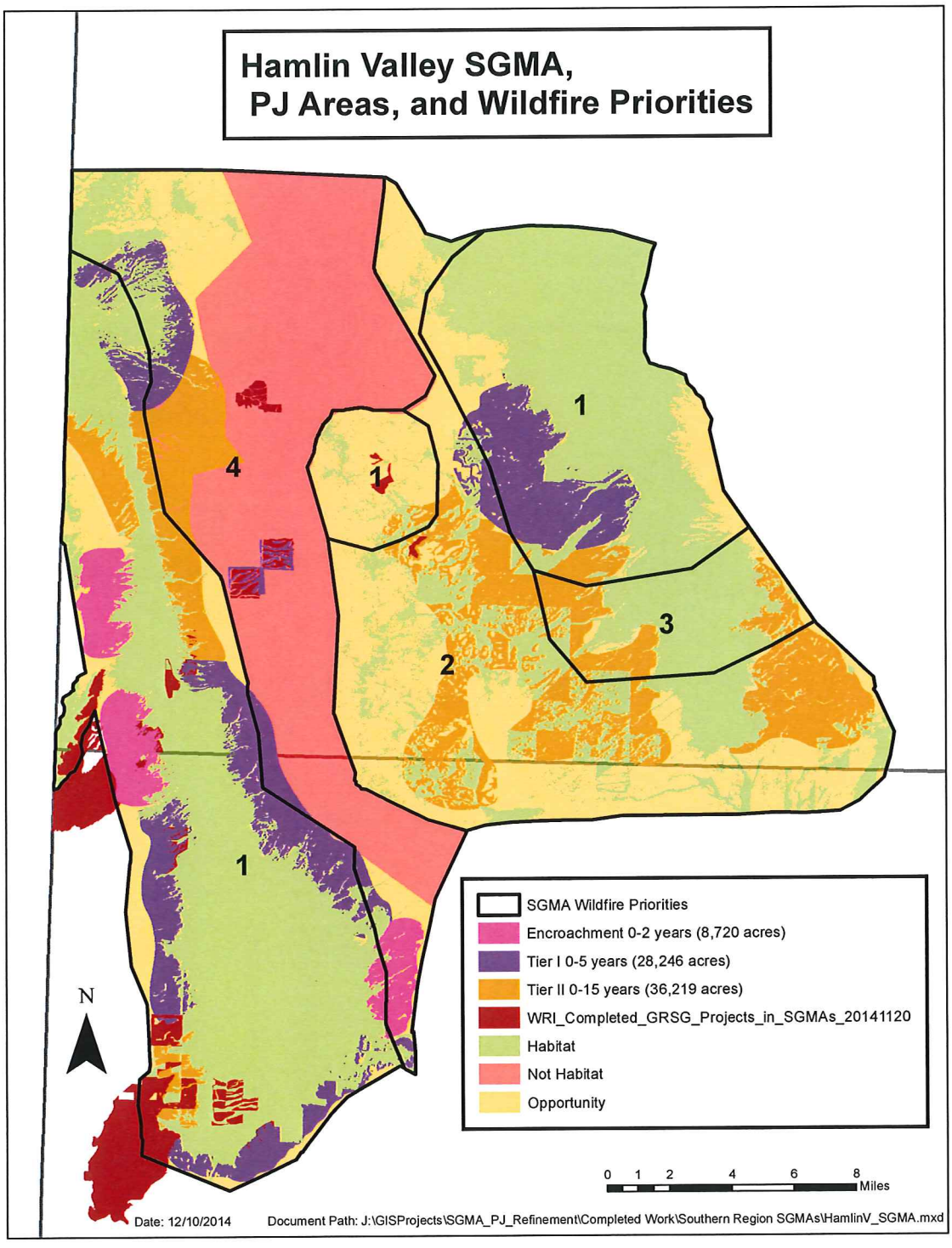
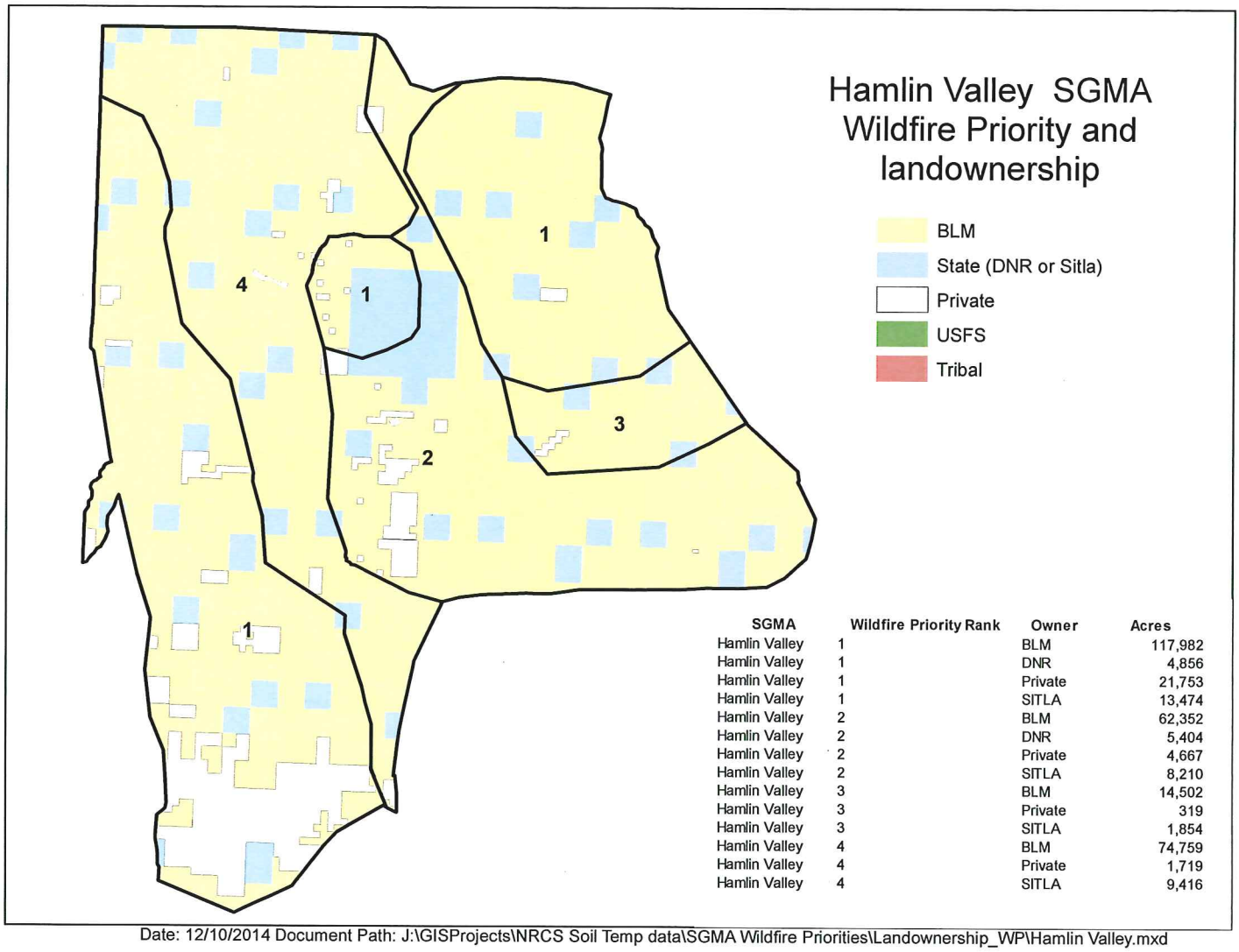


Figure 22 - Conifer removal in areas of leks, nesting/brood rearing habitat and key winter range are a priority in Hamlin Valley.

269,595 acres (roughly 79% of the Hamlin Valley SGMA) are managed by the BLM. This means that NEPA, funding and regulatory restrictions will need to be addressed as part of these pinyon-juniper removal efforts.

Hamlin Valley Conclusion

Spatial threat analysis illustrates that using a priority system for prevention treatments and rapid response strategies in difficult fire years can reduce the acreage burned by wildfire by up to 95% in the areas that are key to survival of 100% of Sage-grouse in the Hamlin Valley SGMA. Proactive conifer removal and habitat-restoration efforts will also help reduce the threat of wildfire in the Hamlin Valley SGMA.



SGMA	Wildfire Priority Rank	Owner	Acres
Hamlin Valley	1	BLM	117,982
Hamlin Valley	1	DNR	4,856
Hamlin Valley	1	Private	21,753
Hamlin Valley	1	SITLA	13,474
Hamlin Valley	2	BLM	62,352
Hamlin Valley	2	DNR	5,404
Hamlin Valley	2	Private	4,667
Hamlin Valley	2	SITLA	8,210
Hamlin Valley	3	BLM	14,502
Hamlin Valley	3	Private	319
Hamlin Valley	3	SITLA	1,854
Hamlin Valley	4	BLM	74,759
Hamlin Valley	4	Private	1,719
Hamlin Valley	4	SITLA	9,416

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Figure 23 - Lands managed by the BLM comprise the majority of the Hamlin Valley SGMA.

Bald Hills

Overview

In 2007, the Milford Flats Fire burned 357,000 acres in the area adjacent to the Bald Hills SGMA. This was one of the largest recorded fires in Utah history. The Milford Flat Fire underscores the importance of fire prevention, suppression and rehabilitation. Like other SGMA's in which Sage-grouse live, Bald Hills SGMA is primarily a desert shrub ecosystems. In these desert shrub ecosystems Sage-grouse populations are fairly localized in areas of suitable habitat. In the Bald Hills SGMA, 100% of the leks, nesting/brood-rearing and the key winter habitat are located in zones 1 and 2. Zone 1 contains most of the important winter range, the leks, and nesting/brood-rearing habitat for most of the Sage-grouse in Bald Hills. Zone 2 contains nesting/brood-rearing habitat for the remainder of the Sage-grouse in the SGMA. For this reason, fire suppression is prioritized for both zones 1 and 2, with a higher priority on zone 1 in difficult triage situations. This does not mean that zone 2 is not important, but it reflects the reality that a large fire in zone 1 is more likely to impact Sage-grouse populations than a wildfire in zone 2.

Zone 3 also contains some general Sage-grouse habitat, along with areas of non-habitat. Zone 4 is predominantly marginal habitat or non-habitat for Sage-grouse. While zones 3 and 4 are prioritized for wildfire treatment, they are assigned a lower

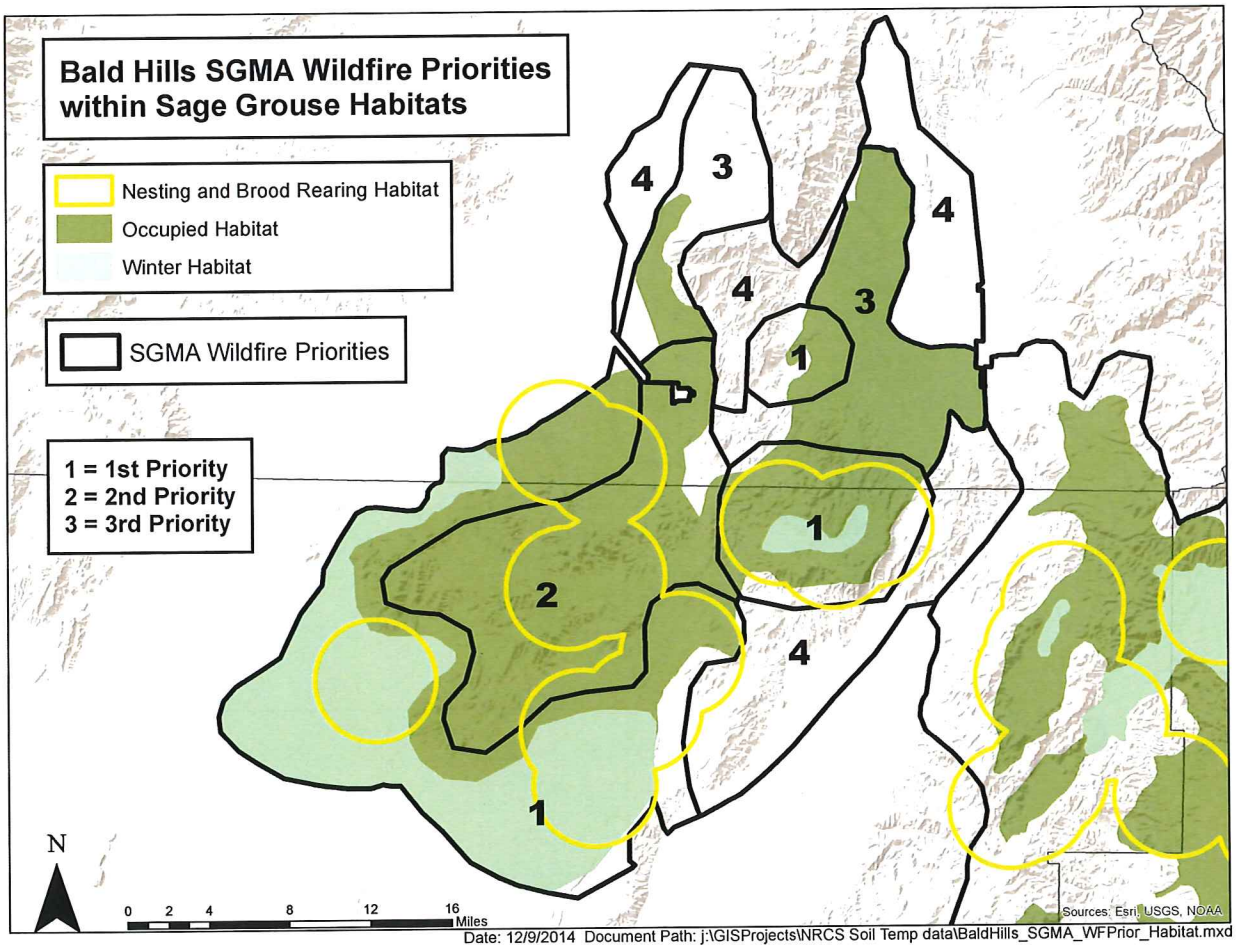
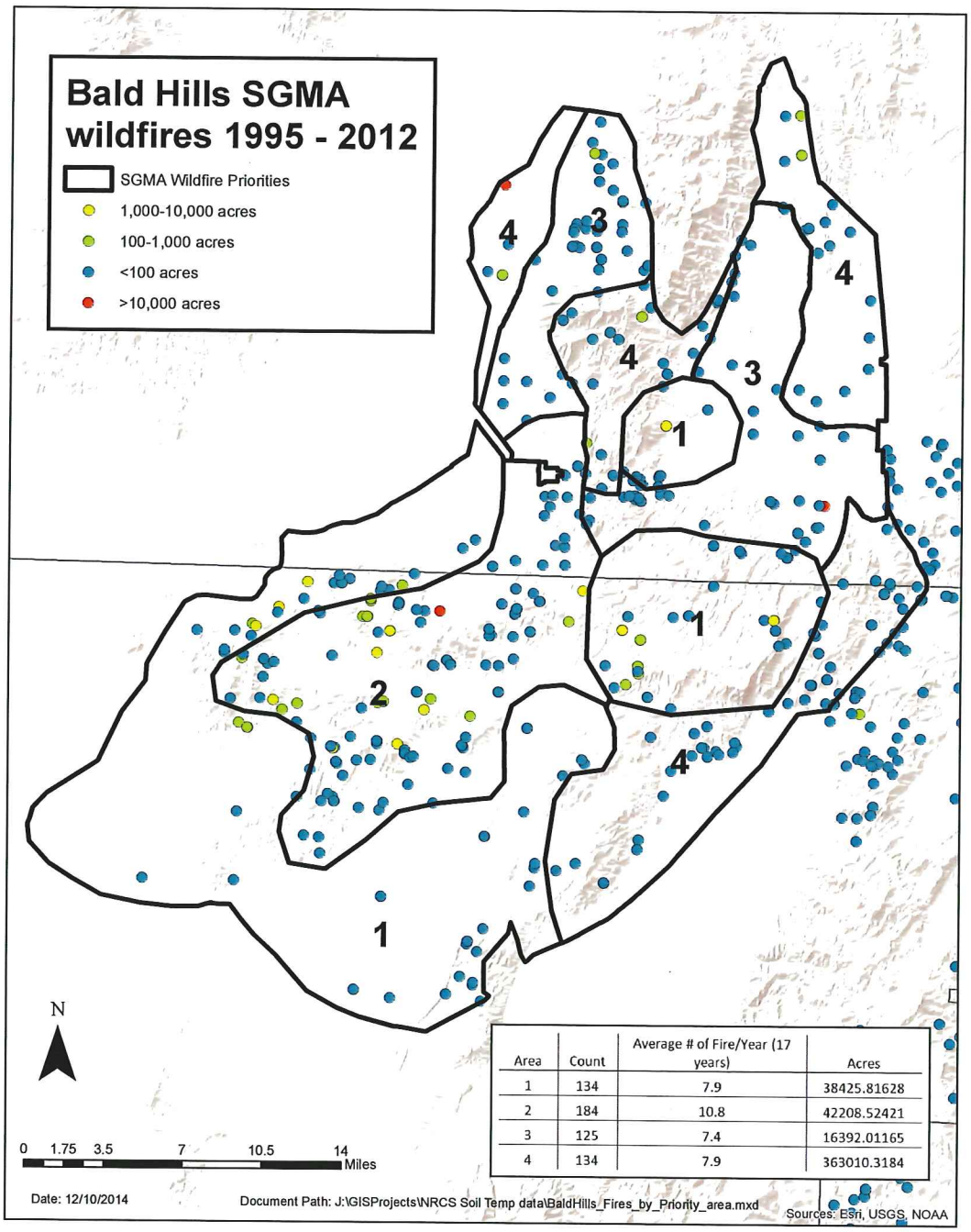


Figure 24 - One-hundred percent of leks, nesting/brood-rearing habitat and most key winter range are located in zones 1 and 2. A greater percentage of leks are found in zone 1 than in zone 2 along with key winter habitat. Zones 3 contains no leks but has some general habitat. Zone 4 is primarily marginal habitat or non-habitat.

priority than zones 1 and 2 due to the lack of leks, nesting/brood rearing and key winter habitat.

Detailed Analysis

The average number of wildfires is higher in the Bald Hills SGMA than in any other SGMA in Utah. In most years, these fires do not become a problem. Even in difficult wildfire years, most of the fires are suppressed without burning large acreage. However, a handful of large fires account for most of the acreage burned in zones 1 and 2. Six fires in zone 1 and five fires in zone 2 account for more than 87% of the acreage burned by wildfire in zones 1 and 2 over the 18-year period



Area	Count	Average # of Fire/Year (17 years)	Acres
1	134	7.9	38425.81628
2	184	10.8	42208.52421
3	125	7.4	16392.01165
4	134	7.9	363010.3184

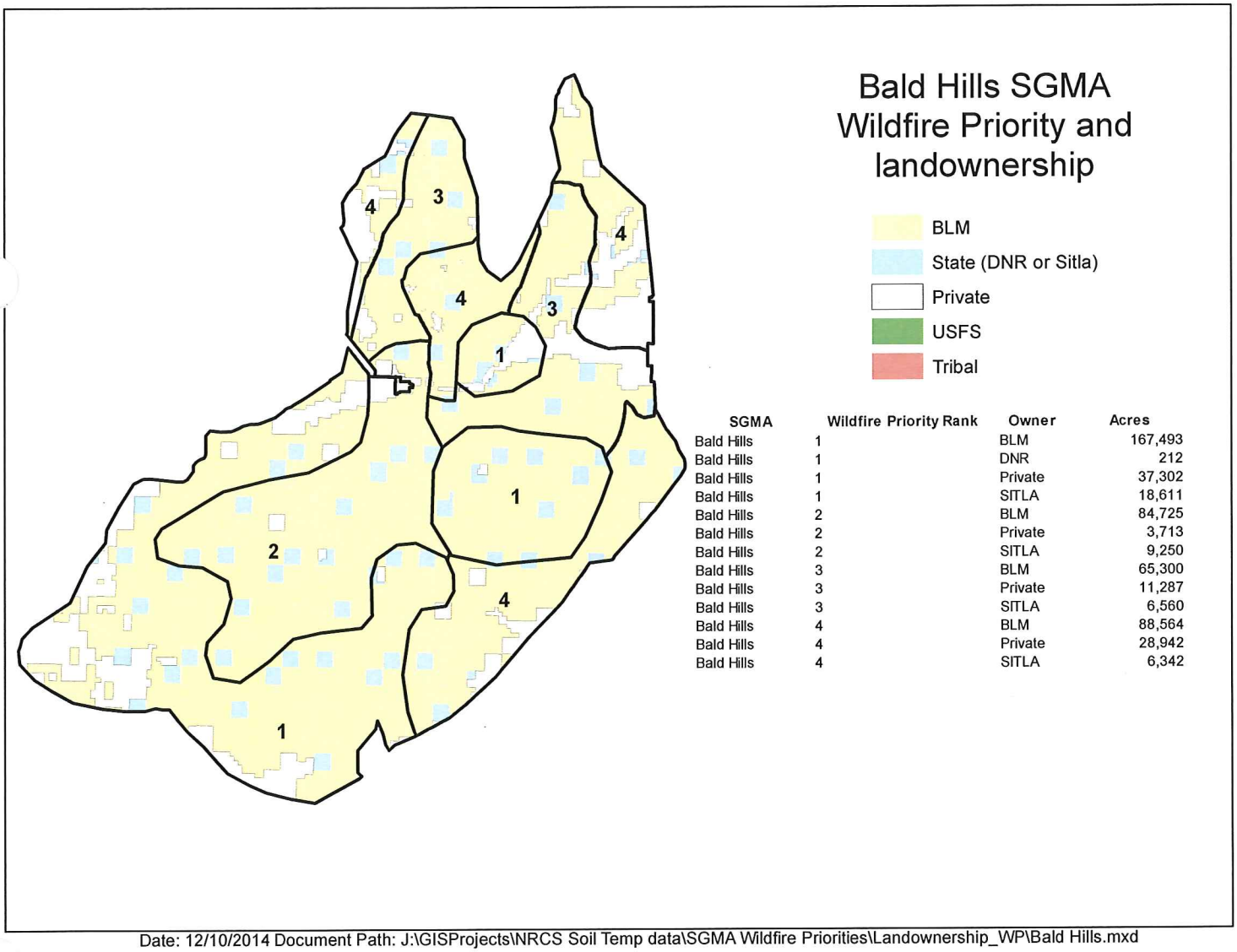
Figure 25 - By reducing the incidence of large fires in zones 1 and 2, the acreage burned can be improved by up to 85% in areas that hold leks and the nesting/brood rearing habitat for 100% of the Sage-grouse in the Bald Hills SGMA.

from 1995-2012. What this means is that by reducing the incidence of large fires in zones 1 and 2, the threat of wildfire can be reduced by up to 85% in areas that contain leks and nesting/ brood rearing habitat for 100% of Sage-grouse in the Bald Hills SGMA. This will also protect the key winter habitat in the Bald Hills SGMA.

Land Ownership

Most of the large fires within the Bald Hills SGMA occur on land managed by the BLM. This is likely the result of a variety of factors. First, the BLM manages 77% of the acreage within the Bald Hills SGMA. the state land is landlocked by BLM controlled land. Additionally, the higher elevation areas are largely BLM controlled, and these are places where there may be a higher number of lightning strikes.

Because much of the Bald Hills SGMA is managed by the BLM, coordination on pinyon/ juniper removal, fire-breaks, greenstripping and suppression efforts will be important. While past wildfires have already removed large swaths of



SGMA	Wildfire Priority Rank	Owner	Acres
Bald Hills	1	BLM	167,493
Bald Hills	1	DNR	212
Bald Hills	1	Private	37,302
Bald Hills	1	SITLA	18,611
Bald Hills	2	BLM	84,725
Bald Hills	2	Private	3,713
Bald Hills	2	SITLA	9,250
Bald Hills	3	BLM	65,300
Bald Hills	3	Private	11,287
Bald Hills	3	SITLA	6,560
Bald Hills	4	BLM	88,564
Bald Hills	4	Private	28,942
Bald Hills	4	SITLA	6,342

Figure 26 - The majority of the Bald Hills SGMA is managed by the Bureau of Land Management (BLM). State land is land is landlocked within BLM acreage. Because most of the acreage burned occurs in these areas, coordination will be needed to address the threat of wildfire within the Bald Hills SGMA.

pinyon/juniper growth, mechanical removals in areas adjacent to key leks, nesting/brood-rearing habitats and winter range is still needed to protect Sage-grouse within the SGMA.

Prevention

Because of the large number of fires and the fact that difficult wildfire conditions are not uncommon, key pre-suppression strategies can be helpful. Conifer removal strategies, firebreaks and greenstripping are not only useful to aid in suppression efforts, they can also help prevent fires from affecting the most important habitats for Sage-grouse in the Bald Hills SGMA. As previously discussed, regulatory hurdles (such as NEPA assessments and other approvals) can delay the timing and possibility of pre-suppression treatment projects. The BLM has been implementing firebreaks and greenstripping over the past several years. A map showing conifer removal strategies is depicted below (Figure 27). A comparison with leks and nesting/brood-rearing habitat shows the importance of conifer removal to reduce the frequency and intensity of large fires in these areas.

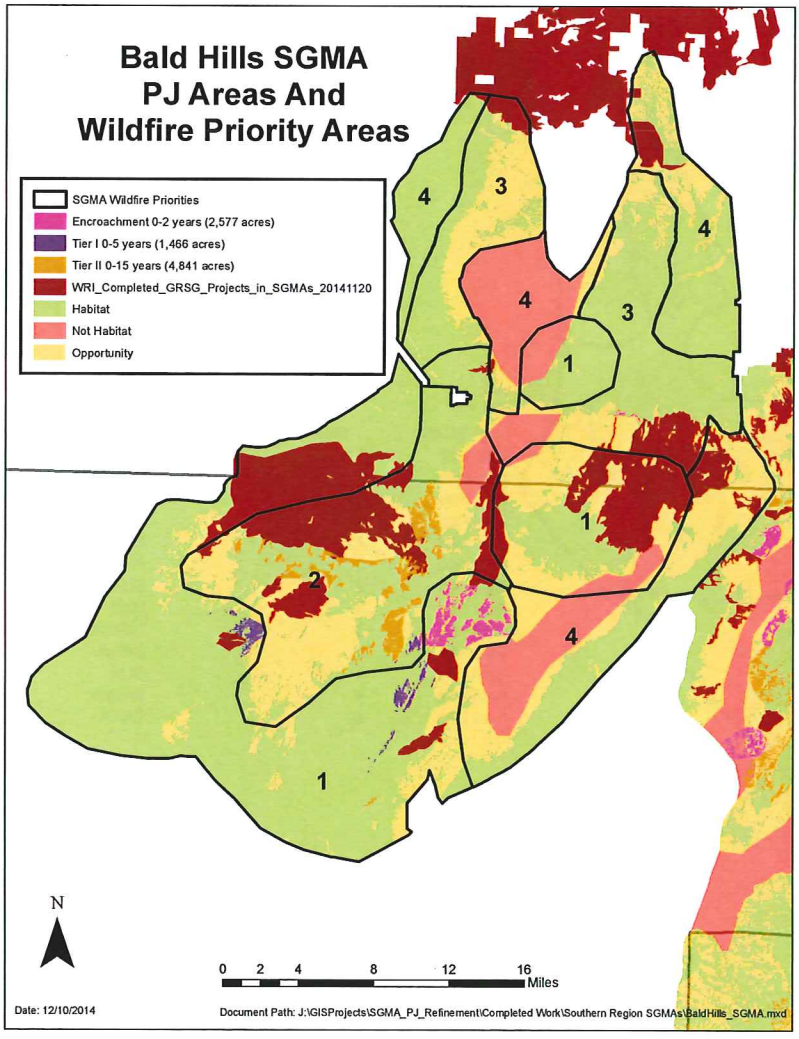


Figure 27 - conifer removal in areas of leks and nesting/brood rearing habitat are helpful to protect Sage-grouse populations in the Bald Hills SGMA.

Sheeprock Mountains

Overview

Wildfire is not a major threat to Sage-grouse populations and core habitat within the Sheeprock Mountains SGMA. All leks, nesting/brood-rearing habitats and key winter range are located within the 172,459 acres comprising zone 1. The remainder of the general winter habitat is found in zone 2.

From 1995-2012, wildfires burned 1,598 acres in zone 1. This is an average of less than 100 acres per year. This is is not unexpected given the soil/ temperature moisture types, elevation and vegetation within zone 1. Existing wildfire control efforts within zone 1 are sufficient to maintain wildfires within acceptable thresholds.

While wildfires burned quite a few acres within zone 2, the large amount of general winter habitat within zone 2 suggests that the existing level of wildfire should not be limiting. Nevertheless, by prioritizing wildfire control in zone 2, enhanced prevention and suppression strategies could substantially decrease the number of acres burned. While 31,250 acres burned in zone 2 from 1995-2015, two fires in 1998 (of 12,894 acres and 13,927 acres, respectively) accounted for 86% of acres burned. These fires were not in areas that would have a substantial impact on Sage-grouse

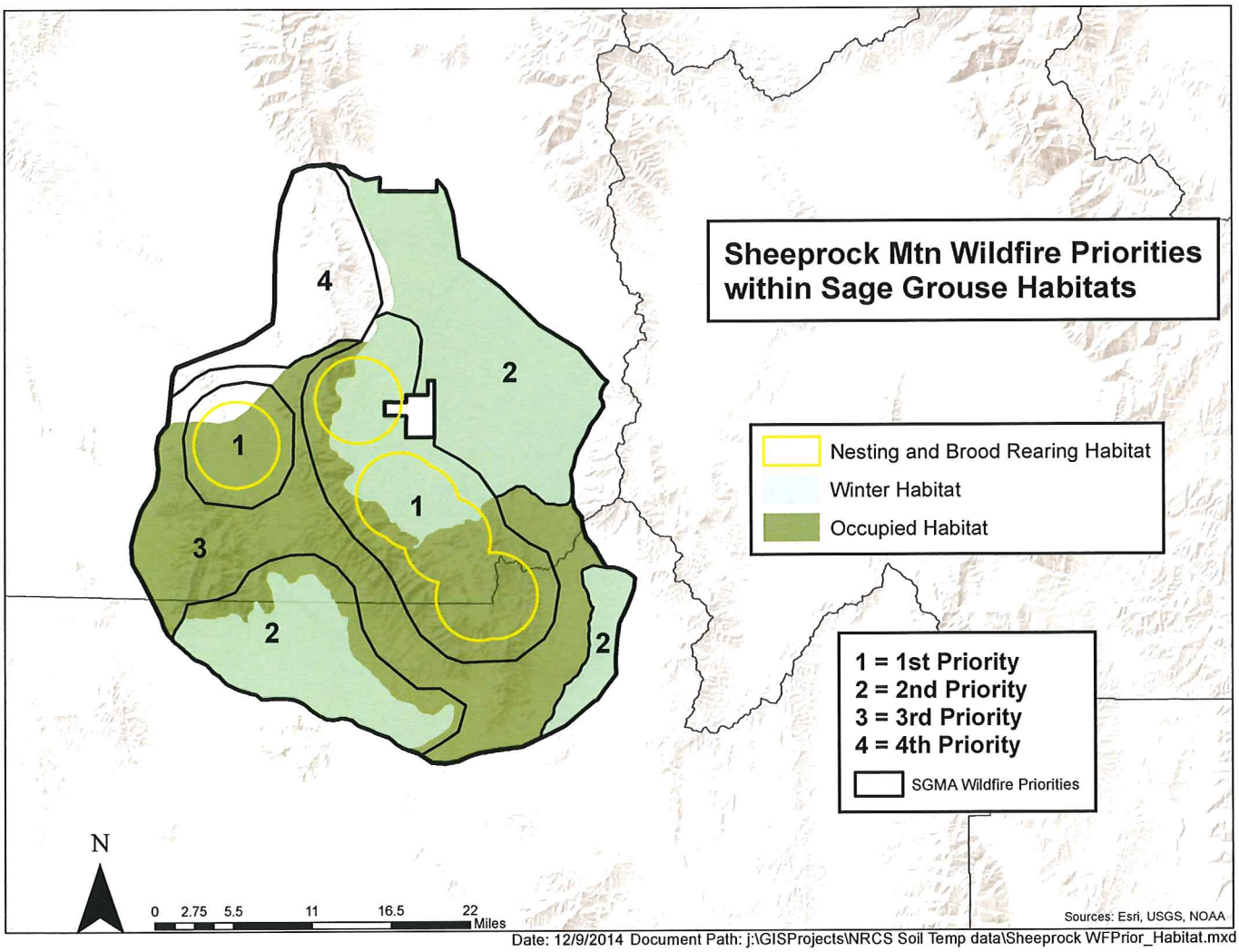
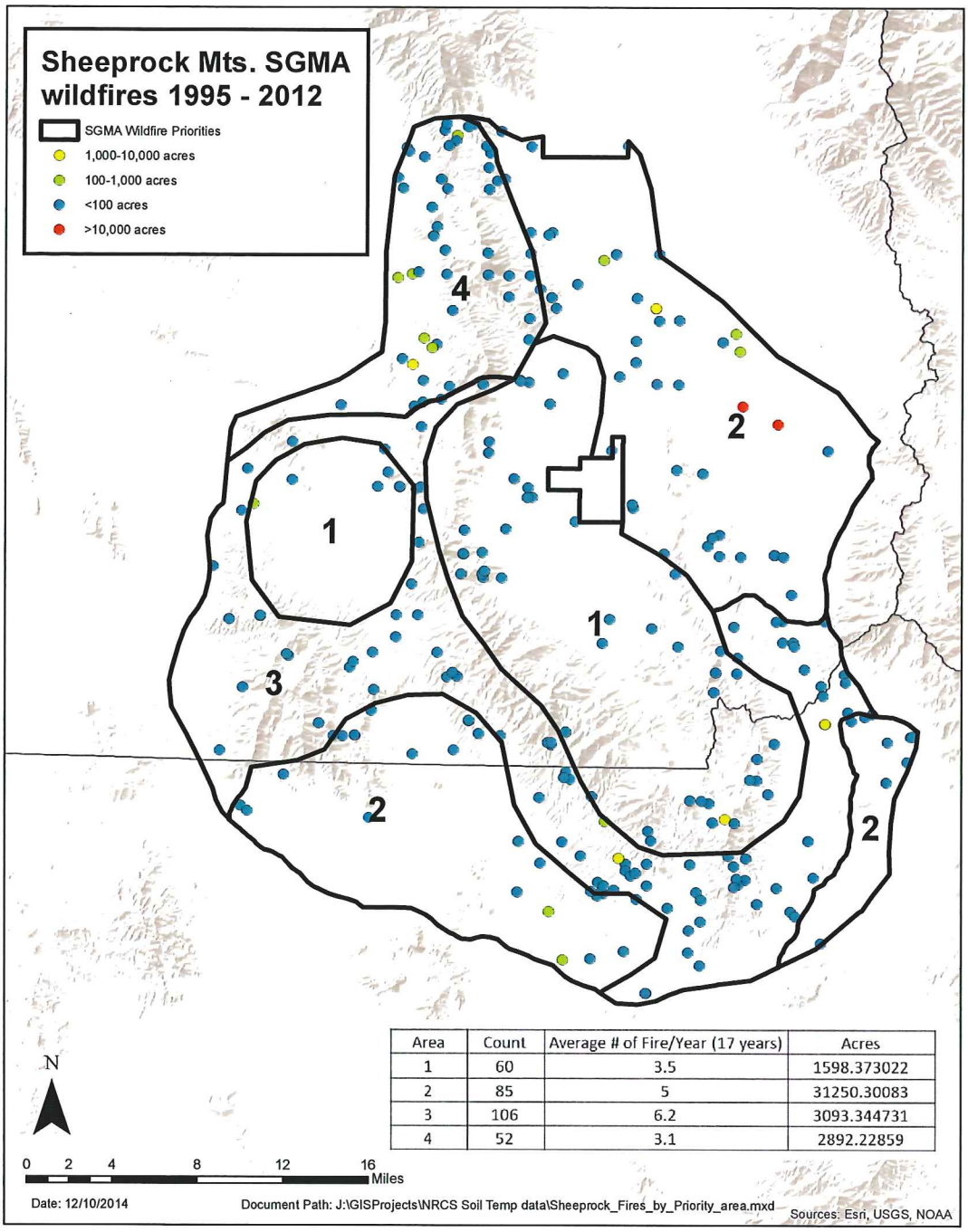


Figure 28 - 100% of Sage-grouse leks and nesting/brood rearing habitat are located within the priority zone 1 within the Sheep Rocks SGMA. The low incidence of wildfire and lack of large wildfires illustrate that existing habit should be sufficient to protect Sage-grouse populations in this SGMA.

populations. Nevertheless, prevention efforts including conifer removal and enhanced suppression strategies should be able to reduce the impact of wildfires within the Sheeprock Mountain SGMA. An additional 30,435 acres of conifer-removal work is planned in the Sheeprock Mountains SGMA over the next few years. Wildfire is not a major threat in zones 3 and 4. Between 1995 and 2012, 3,093 acres burned in zone 3, while 2,892 burned in zone 4. Because these areas contain general habitat, opportunity areas and non-habitat, it makes sense to prioritize these areas behind zones 1 and 2.



Area	Count	Average # of Fire/Year (17 years)	Acres
1	60	3.5	1598.373022
2	85	5	31250.30083
3	106	6.2	3093.344731
4	52	3.1	2892.22859

Figure 29 - Existing wildfire control efforts are effectively controlling wildfires within priority zone 1 which contains 100% of the leks and nesting/brood rearing habitat for the Sheeprock Mountains SGMA. Only 1,598 acres burned from 1995-2012 in zone 1, primarily during one fire.

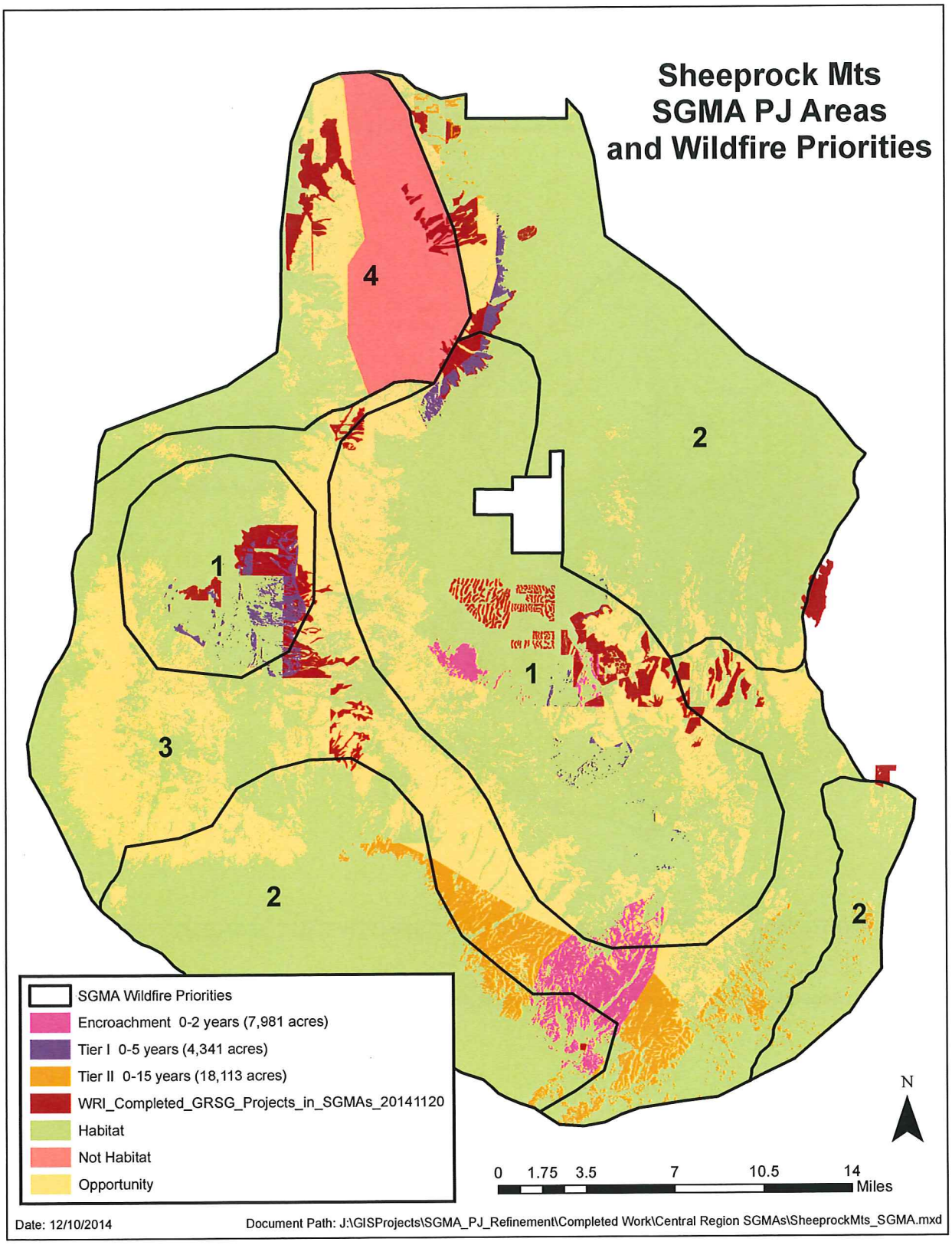
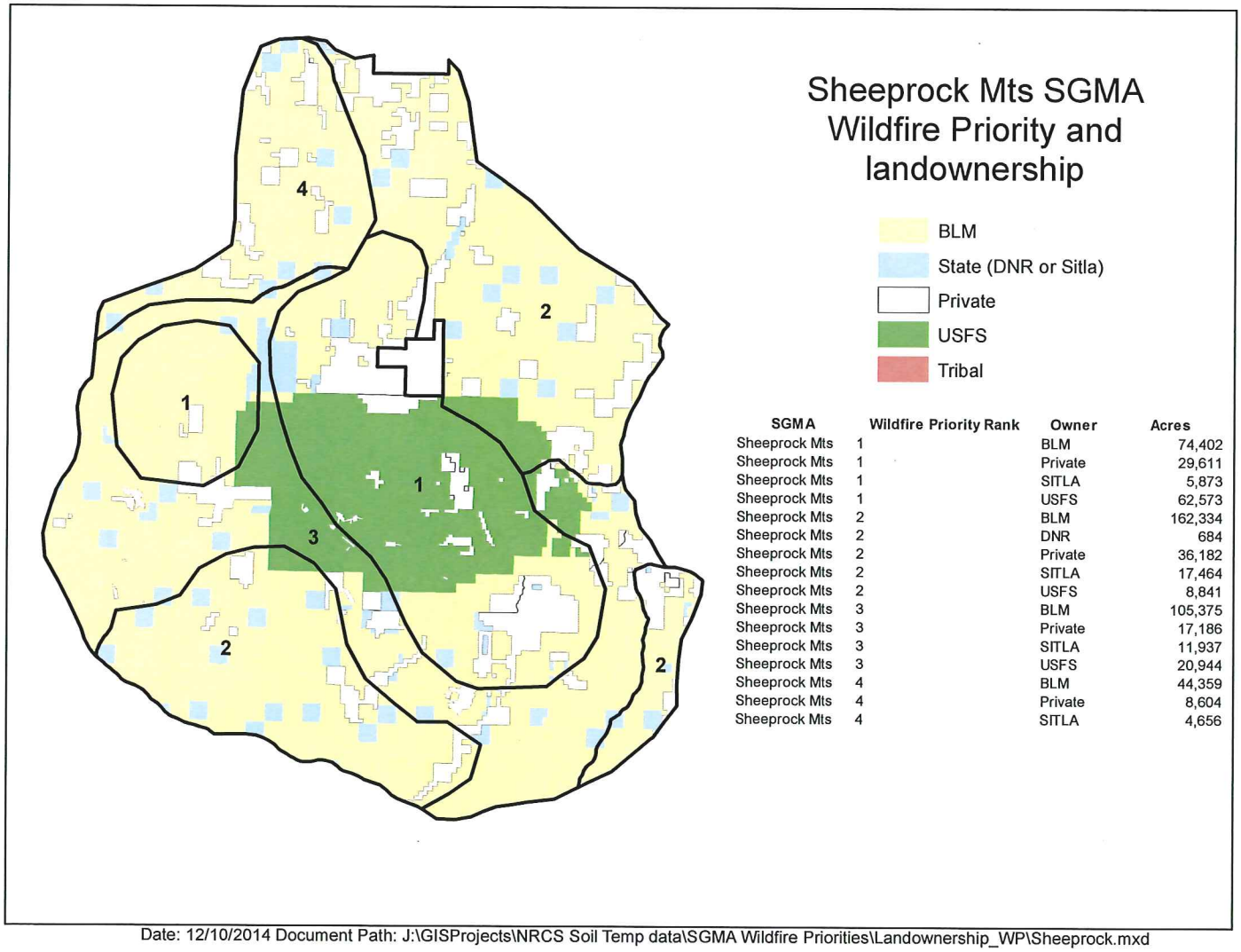


Figure 30 - conifer removal in areas of leks and nesting/brood rearing habitat are helpful to protect Sage-grouse populations in the Sheeprock SGMA. These projects also increase available habitat in key areas.



SGMA	Wildfire Priority Rank	Owner	Acres
Sheeprock Mts	1	BLM	74,402
Sheeprock Mts	1	Private	29,611
Sheeprock Mts	1	SITLA	5,873
Sheeprock Mts	1	USFS	62,573
Sheeprock Mts	2	BLM	162,334
Sheeprock Mts	2	DNR	684
Sheeprock Mts	2	Private	36,182
Sheeprock Mts	2	SITLA	17,464
Sheeprock Mts	2	USFS	8,841
Sheeprock Mts	3	BLM	105,375
Sheeprock Mts	3	Private	17,186
Sheeprock Mts	3	SITLA	11,937
Sheeprock Mts	3	USFS	20,944
Sheeprock Mts	4	BLM	44,359
Sheeprock Mts	4	Private	8,604
Sheeprock Mts	4	SITLA	4,656

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Figure 31 - land managed by the Bureau of Land Management and forest service comprise the majority of the Sheeprock SGMA.

Ibapah

Overview

Wildfire is not a major threat within the Ibapah SGMA. In fact, Ibapah averages less than one fire per year across the entire SGMA. Like other SGMA's that contain primarily desert shrub habitat, Ibapah has Sage-grouse populations and core sage-grouse habitat that are quite localized. In fact, 100% of leks, nesting/brood-rearing and key winter range is contained within the 51,299 acres in zone 1. Soil and temperature regimes within portions of the Ibapah SGMA suggest that providing enhanced prioritization of Ibapah SGMA makes sense.

Conifer removal is an important strategy for further reducing the threat of large wildfires within the Ibapah SGMA. Nearly 3,900 acres of pinyon-juniper removal are planned in coming years, and much of this will occur in zone 1. Upon completion of these pinyon-juniper removal projects very few conifers will remain within zone 1. This should further reduce the likelihood of large fires, while also making fires easier to suppress when they do occur.

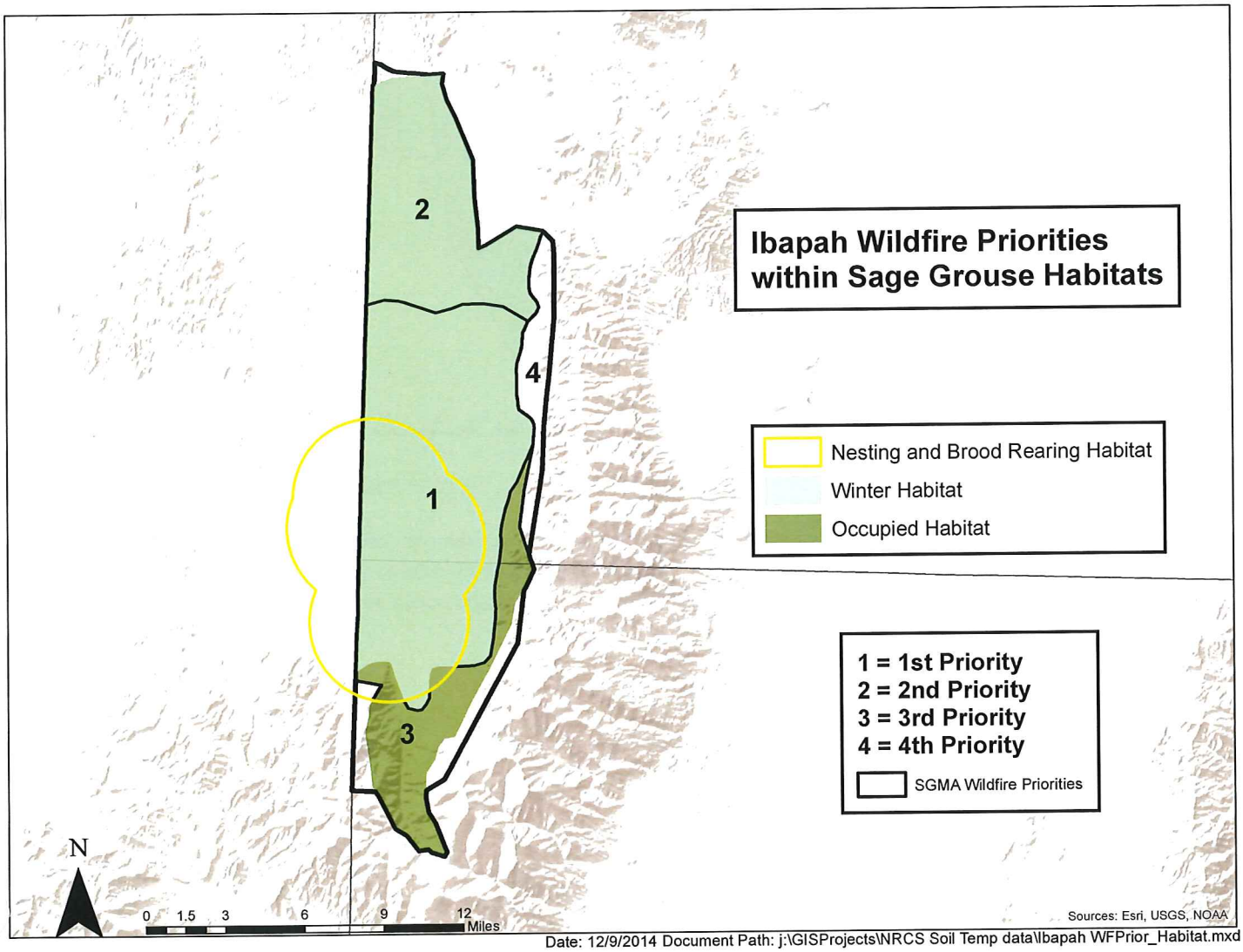


Figure 32 - One-hundred percent of Sage-grouse leks and nesting/brood-rearing habitats are located in the priority zone 1 of the Ibapah SGMA. The low incidence of wildfire and lack of large wildfires illustrate that existing habit should be sufficient to protect Sage-grouse populations in this SGMA.

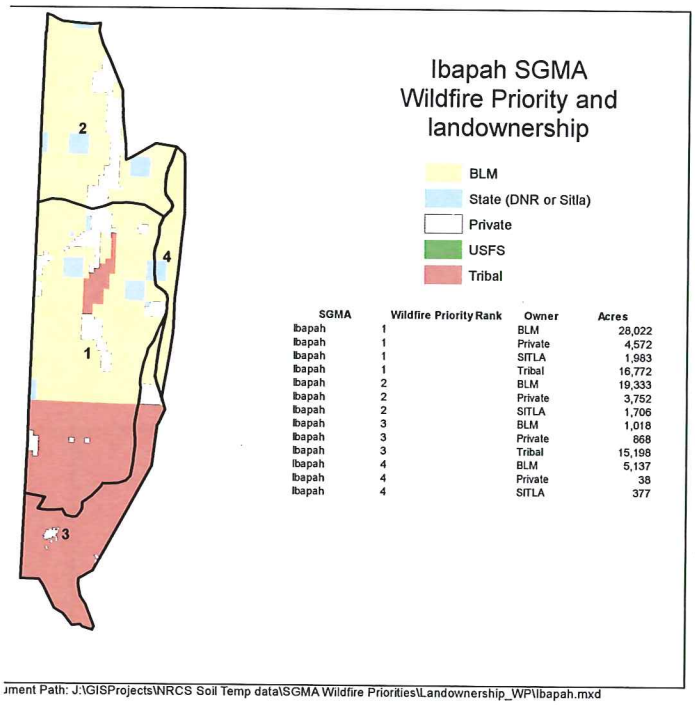


Figure 343 - The majority of the Ibapah SGMA is managed by the BLM while acreage in the southern portion is Tribal Land. Coordination will be helpful in implementation of conifer-treatment and fire-control projects within the Ibapah SGMA.

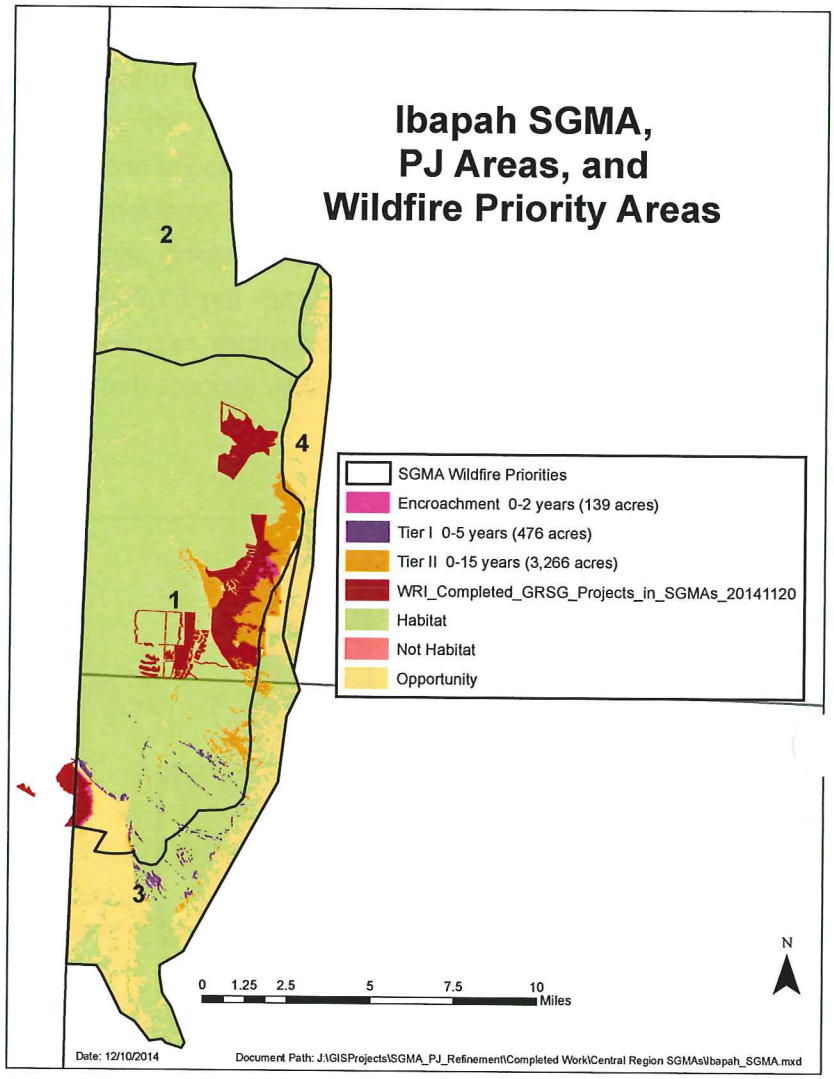
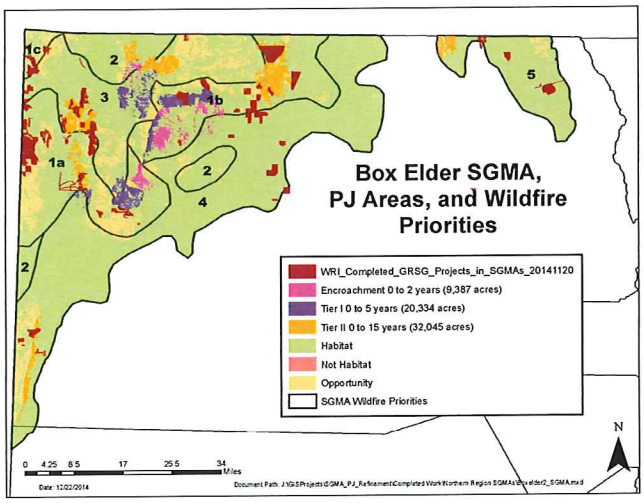


Figure 34 - Conifer removal near leks and nesting/brood rearing habitat will help protect Sage-grouse populations in the Ibapah SGMA. These projects also increase available habitat in key areas.

Conclusion Conservation for Long-Term

The following is a brief overview of habitat enhancement and wildfire prevention strategies for each Utah SGMA:

Box Elder - Highest Priority

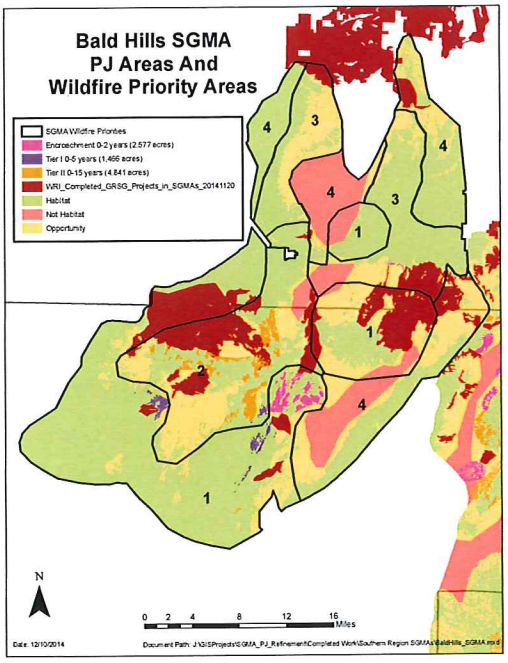


Past habitat work/conifer removal: 91,185 acres

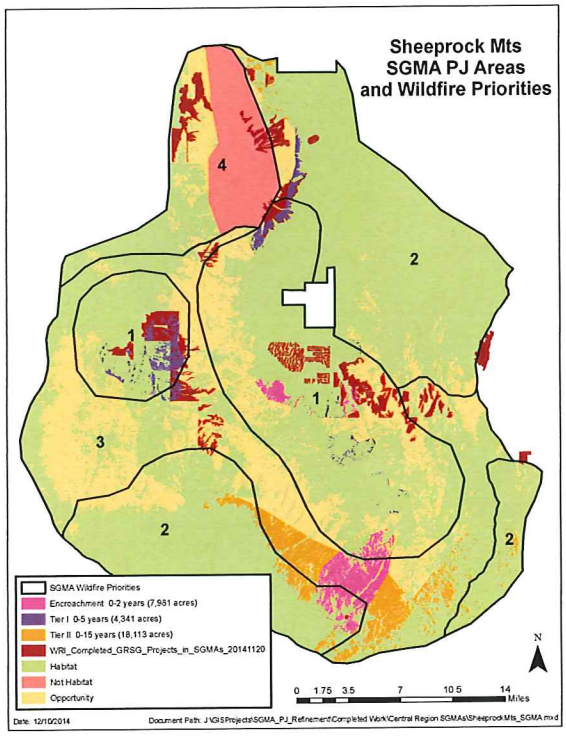
Projected work to be completed in next 10-15 years: 61,766 acres

Total habitat restoration:152,951 acres

Bald Hills - Highest Priority



Sheep Rock Mountains - Elevated Priority



Past habitat work/conifer removal: 22,515 acres

Projected work to be completed in next 10-15 years: 30,435 acres

Total habitat restoration: 52,950 acres

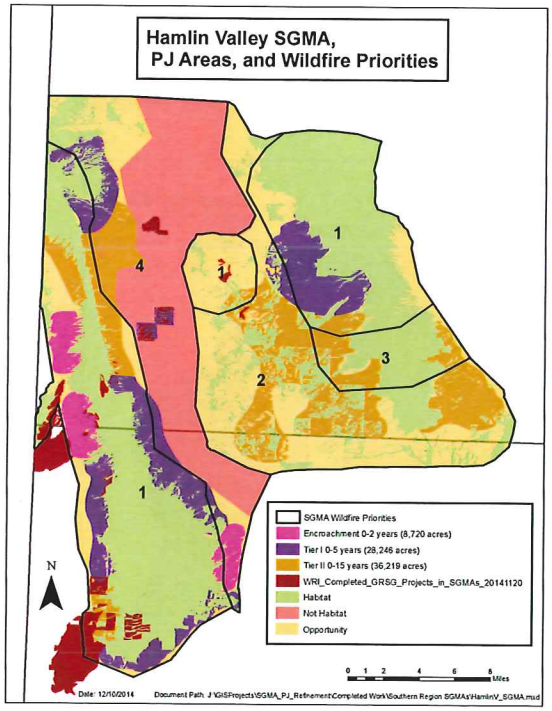
(Bald Hills Continued)

Past Habitat work/conifer removal: 68,799 acres

Projected work to be completed in next 10-15 years: 8,884 acres

Total habitat restoration: 77,683 acres

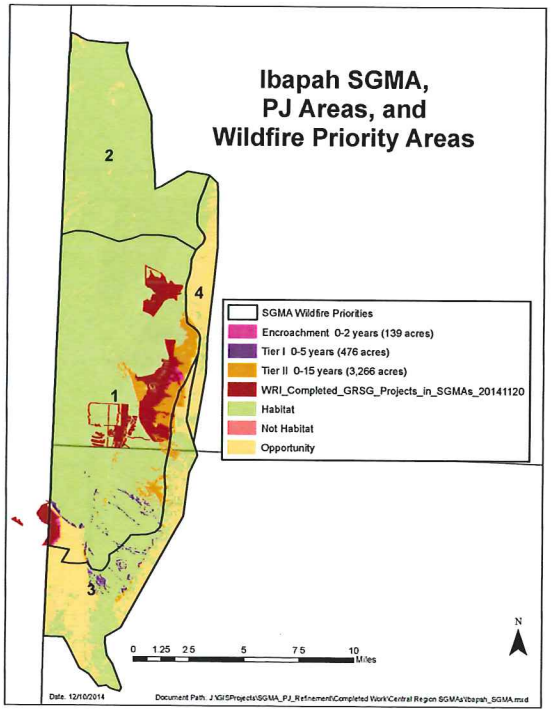
Hamlin Valley - Elevated Priority



Past habitat work/conifer removal: 9,839 acres

Projected work to be completed in next 10-15 years: 73,185 acres

Total habitat restoration: 83,024 acres



Ibapah - Elevated Priority

Past Habitat Work/Conifer Removal: 7,413 acres

Projected work to be completed in next 10-15 years: 3,881

Total habitat restoration: 11,294 acres

Conclusion

While wildfire is a natural occurrence in Western landscapes, changes in wildfire frequency and severity are a concern for Greater Sage-grouse. In Utah, wildfire impacts are primarily seen on five of Utah's SGMAs. These areas contain 26% of the state's Sage-grouse. In other words, most of the Utah's Sage-grouse populations are not in high-risk wildfire areas. In the SGMA's that have an elevated priority, Utah's addresses wildfire threats by implementing proven proven prevention, suppression and rehabilitation solutions. State and federal partners have a track record of cooperation, working together on landscape-scale prevention and rehabilitation projects to reduce the threat of wildfire in the state of Utah. Since 2006, more than 560,000 acres of Sage-grouse habitat restoration projects have been completed. Enhanced suppression strategies can further reduce the threat of wildfires in these higher-risk SGMAs. This will be an area of focus particularly in Box Elder and Bald Hills SGMAs where protection from wildfires is a top priority. It will also be a priority in the Ibapah, Hamlin Valley and Sheeprock Mountain SGMAs.

Sources: [NRCS, UT DWR]

UTAH CONSERVATION STRATEGIES *(CONT.)*

Oil & Gas Development

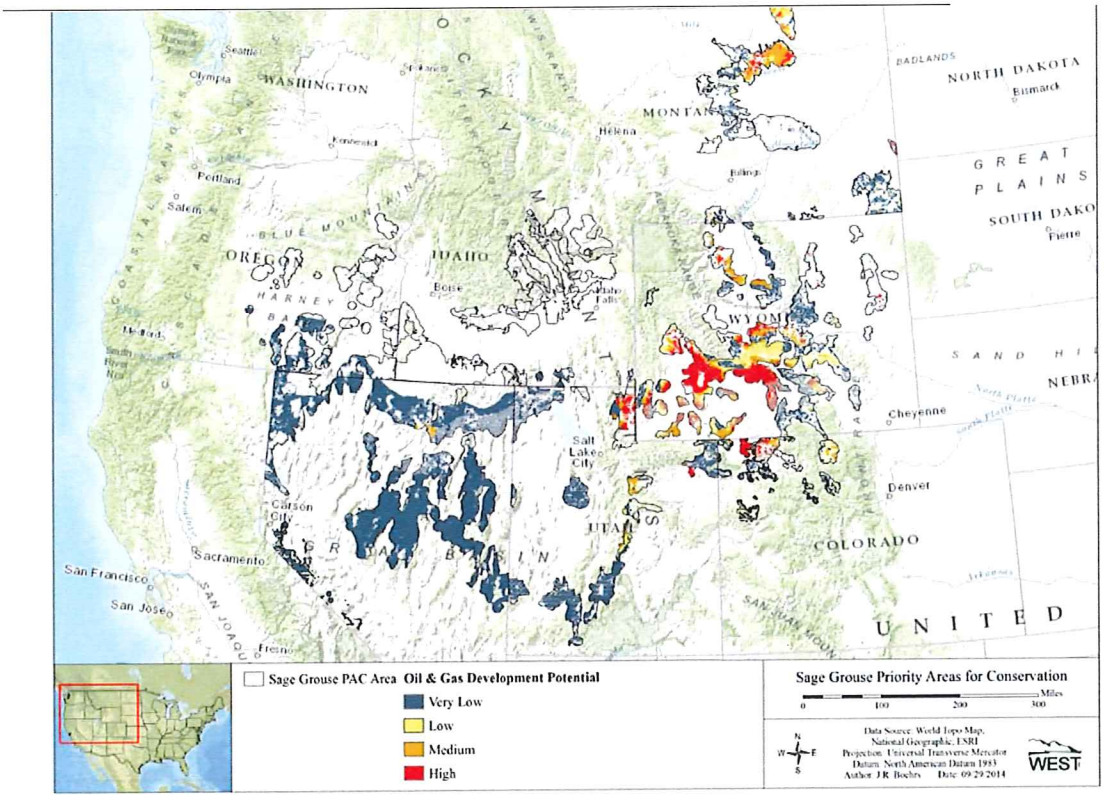


Figure 8. While oil and gas development is a significant concern in portions of the range, oil and gas development is not a significant concern in Utah's SGMAs (Copeland et al 2009).

Oil and Gas wells are not a threat within Utah's Sage-grouse Management Areas. 98% of the acreage within Utah's SGMAs, or 7.29 million acres, do not correspond with oil and gas fields/units. There are only approximately 189 known oil and gas wells located on these 7.29 million acres. This shows just how little actual oil and gas development has occurred on the vast majority of core sage-grouse habitat within the state of Utah. Utah's Plan provides a framework for balancing the need for long-term protection of sage-grouse populations with responsible energy development. Utah Governor Gary Herbert signed an executive order on February 25, 2015 addressing the state's regulatory mechanisms for oil and gas development in sage-grouse habitat. Given the limited and localized nature of existing oil and gas development within Utah's SGMAs, Utah's Plan is more than sufficient to ensure long term conservation of Greater Sage-grouse in the state.

OIL AND GAS DEVELOPMENT

Overview: *Oil and gas wells are not a major threat to Sage-grouse in the state of Utah. Ninety-eight percent of the acreage within Utah's SGMAs, or 7.29 million acres, does not correspond with oil and gas fields/units. There are approximately 189 known oil and gas wells located on these 7.29 million acres. The Conservation Plan for Greater Sage-Grouse in Utah provides a framework for balancing the long-term protection of Sage-grouse populations with responsible energy development. Given the limited and localized nature of existing oil and gas development within Utah's SGMAs, Utah's plan is more than sufficient to protect 94% of Utah's Greater Sage-grouse from the effects of oil and gas development.*

Affected SGMAs: Rich-Morgan-Summit, Uintah and Carbon.

Oil and Gas Development in Sage-Grouse Habitat

Utah has robust industries for oil and gas in several regions of the state. Ensuring that oil and gas development does not unnecessarily impact healthy Sage-grouse populations is an area of focus for the Conservation Plan for Greater Sage-Grouse in Utah (the Conservation Plan), adopted in February 2013. The best Sage-grouse habitat in the State of Utah is located within eleven Sage-Grouse Management Areas (SGMAs) established in the Conservation Plan. There is very little current oil and gas development within these SGMAs. In fact, most of the oil and gas wells are found on oil and gas fields that comprise just 2% of the acreage within Utah's SGMAs. There are just 189 known oil and gas wells on the remaining 98% of the acreage. Considering that the SGMAs hold 94% of the state's Sage-grouse on 7.4 million acres, the Conservation Plan properly balances responsible energy development with long-term conservation of Greater Sage-grouse. Existing oil and gas development has had little or no impact on the vast majority of Sage-grouse populations within Utah's SGMAs. Moreover, a detailed analysis of historic oil and gas development

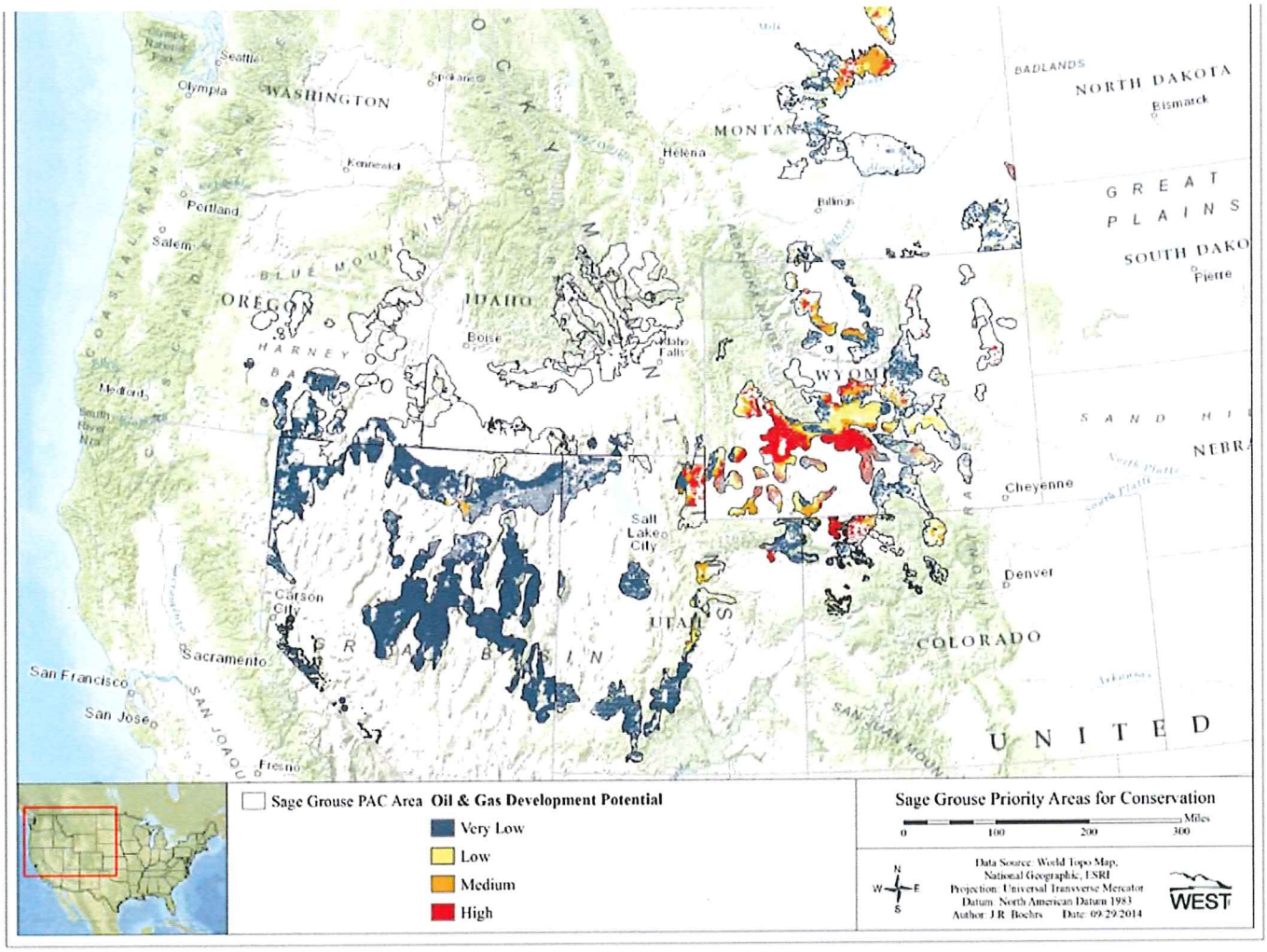


Figure 1: Most of Utah's SGMAs are categorized as "very low" development potential for oil and gas. See Figure 3 at http://westernvaluesproject.org/wp-content/uploads/2014/10/Greater-Sage-Grouse-Priority-Habitats-and-Energy-Development.pdf

trends, combined with an understanding of the geology of Utah's SGMAs, suggests that, within the foreseeable future, oil and gas development will not become a significant issue within the SGMA's. Nevertheless, the Conservation Plan, includes important provisions to ensure protections for Greater Sage-grouse, now and in the future. It provides a framework for ensuring responsible energy development in Utah's SGMAs through the application of buffers, avoidance, minimization stipulations and mitigation, if necessary, due to valid existing rights.

Conservation Objectives Team Report

Representatives from federal and state agencies joined together to develop recommendations for addressing threats to Sage-grouse through updated state management plans. The Conservation Objectives Team Report (COT Report), released in March 2013, includes topics addressing the establishment of Priority Areas for Conservation (PACs) and recommendations regarding oil and gas development. While the recommendations are non-binding, most Sage-grouse states developed some variation of the

recommendations as part of their state Sage-grouse conservation plans. Utah was no exception.

Priority Areas for Conservation and SGMAs

One of the important acknowledgements of the COT Report is that current Sage-grouse numbers and distribution are sufficient to ensure robust Sage-grouse populations. The COT Report's focus on Priority Areas of Conservation (PACs) as areas where short-term and long-term efforts should be focused to ensure the conservation of Sage-grouse. PACs use the same core area philosophy that underlies Utah's SGMAs.

The core areas philosophy does not preclude all development, but rather seeks to achieve balance between development and conservation: "Landscape planning to balance wildlife conservation with resource development...must embrace the social and political realities of the region...Core regions represent a proactive attempt to identify a set of conservation targets to maintain a viable and connected set of populations." (Knick and Connelly, Studies in Avian Biology, No. 38, page 513, 515) Utah's SGMA's were adopted within the COT Report as the PACs in the state of Utah.

Valid Pre-existing Rights

An important acknowledgement in the COT Report is the constitutionally mandated protection for "Valid Pre-existing Rights." Utah's SGMAs include several oil and gas fields and approximately 2.5 million acres of private property. These fields include not only oil and gas wells, but also active leases for additional future development. It is also important to note that private property can be leased for future mineral development. These are valid existing rights.

Existing oil and gas fields within Utah's SGMAs cover 146,364 acres, or 2% of the 7.4 million acres within Utah's SGMAs. A more in-depth analysis of several oil and gas fields is included on pages 8, 9 and 10 of this document. Several oil and gas fields (and oil and gas units) were included in Utah's SGMAs primarily because the areas can again serve as unencumbered habitat once wells are no longer in use. Additionally, these areas can be useful for connectivity between SGMAs.

There are just 97 known oil wells and 92 known gas wells within the 7.29 million acres outside of established fields/units within Utah's SGMAs. However, areas of higher well density among these outliers tend to be localized, and largely correlate with existing fields and units. This limited and localized nature of high well density is not surprising when one understands the nature of the oil and gas reservoirs within Utah's SGMAs.

Oil and Gas Development in SGMAs

	Nesting/ Brood Rearing Habitat	General Habitat, Opportunity Areas and Non-Habitat
Oil and Gas Fields Units	43,713 acres	102,651 acres
Areas inside SGMAs not having oil and Gas Fields/Units	2,802,034 acres	4,490,933 acres

Figure 2: Approximately 98% of the acreage within Utah's SGMAs does not correspond with oil and gas fields/units. Very little development occurs on the 7.29 million acres outside of oil and gas fields/units within SGMAs.

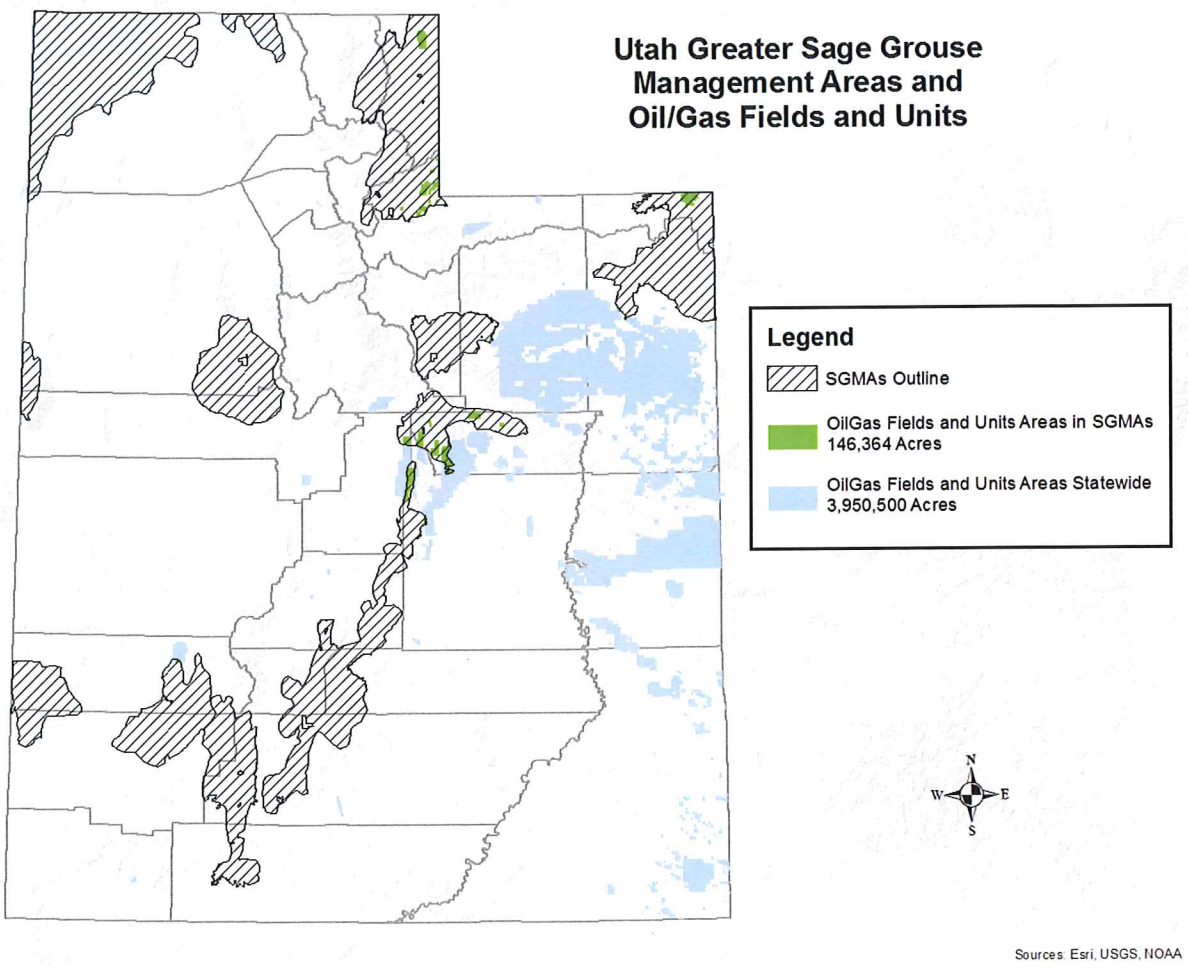


Figure 3: Just 3.7% of Utah's oil and gas fields and units lie within Utah's SGMAs. Ninety-eight percent of the acreage within Utah's SGMAs does not coincide with oil and gas fields.

Of the lands within SGMAs that are also within established fields/units, just 43,713 acres coincides with nesting/brood rearing habitats. This amounts to only 1.5% of nesting/brood rearing habitat statewide. More importantly, 2,802,034 acres of nesting/brood-rearing habitat does not coincide with oil and gas fields/units.

Leks and Nesting/Brood-Rearing Habitat

The COT Report discusses proposed general regulatory structures for oil and gas development in core areas with respect to leks, nesting and brood rearing habitat. Leks are areas where Sage-grouse congregate in early spring for mating rituals. Research has demonstrated that 90% of nesting occurs within three miles of active leks. What this means is that during the important spring mating and nesting/brood-rearing season, oil and gas activity in areas adjacent to leks could potentially have an impact of some level upon the birds' ability to successfully hatch and raise a brood of chicks.

For this reason, the Conservation Plan calls for no development within one mile of active leks, in order to support the spring mating season. Additionally, to avoid conflicts in nesting/brood-rearing areas, a three pronged approach of "Avoid,

Minimize and Mitigate" is prescribed in areas that lie between one and three miles from leks[1]. In addition, the Conservation Plan provides similar protections for vital winter habitat.

Regulatory Structure for Areas Outside of Nesting and Brood Rearing Habitat

Generalized federal recommendations suggest that oil and gas development be limited to no more than one disturbance per section for areas that are outside of nesting/brood rearing habitat. Under these recommendations, each well pad (a disturbance) can be up to 32 acres in size and can include multiple wells. Advances in directional drilling technology allow multiple well-bores to be drilled in all directions from one surface location in order to access the entire fluid reservoir within the 640-acre limitation.

However, while directional-drilling advancements are encouraging, there are some limitations that must be considered. For example, the surface topography of the land may dictate particular locations for surface facilities. Some of these locations may not allow directional drilling to access all subsurface mineral resources. If this occurs in an area of valid, existing rights, the Conservation Plan allows multiple pads to avoid waste of oil and gas resources, subject to strict mitigation requirements. In these cases, siting of well pads is conducted pursuant to the Governor's Executive Order, in consultation with the Utah Division of Wildlife Resources to satisfy the requirements of the Conservation Plan. In this manner, energy development can proceed with maximum consideration given to long-term Sage-grouse conservation.

The Foreseeable Future of Oil and Gas Development in SGMAs

Oil and gas activity is not a major threat to Sage-grouse in Utah, primarily because 98% of the acreage within Utah's SGMAs, or 7,292,967 acres does not coincide with oil and gas fields or with oil and gas units.

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[1] The Conservation Plan defines "Avoidance" as overt action that eliminates disturbance to Greater Sage-grouse and its habitat. Examples include (a) purposefully siting activities in non-habitat or opportunity areas rather than habitat areas, or siting a project outside the SGMA. "Minimization" means actions that reduce the amount, duration, or impact of disturbance within habitat. Examples include (a) using a smaller development footprint; (b) the reduction of noise levels below identified thresholds, or (c) the reduction of traffic volume on a road. Minimization does not preclude the need to mitigate (compensate) for the disturbance which occurs within habitat. "Mitigation" means actions that are designed to create new habitat or to reduce disturbances by the creation of or protection of other habitat for birds. For more information see page 20 at http://wildlife.utah.gov/uplandgame/sage-grouse/pdf/greater_sage_grouse_plan.pdf. Required mitigation can be between 1:1 and as much as 4:1 compensation, depending upon disturbance and habitat type.

Some oil and gas wells can be found in areas designated as nesting/brood-rearing habitat but outside of existing fields/units. However, the total number of wells in these areas is extremely low and will have little or no impact on long-term conservation of Greater Sage-grouse. There are 2,802,034 acres of nesting/brood-rearing habitat in Utah's SGMAs which are outside of oil and gas fields/units. There are currently 26 oil wells and 29 gas wells on these 2,802,034 acres. Outside of one area in the Rich/Morgan/Summit SGMA, very little development potential coincides with nesting brood rearing areas in Utah's SGMAs.

The historic low level of development within SGMAs specifically within nesting/brood-rearing habitats and other important areas, and the recent studies of geological potential suggest that oil and gas development is not a major threat to the species in Utah.

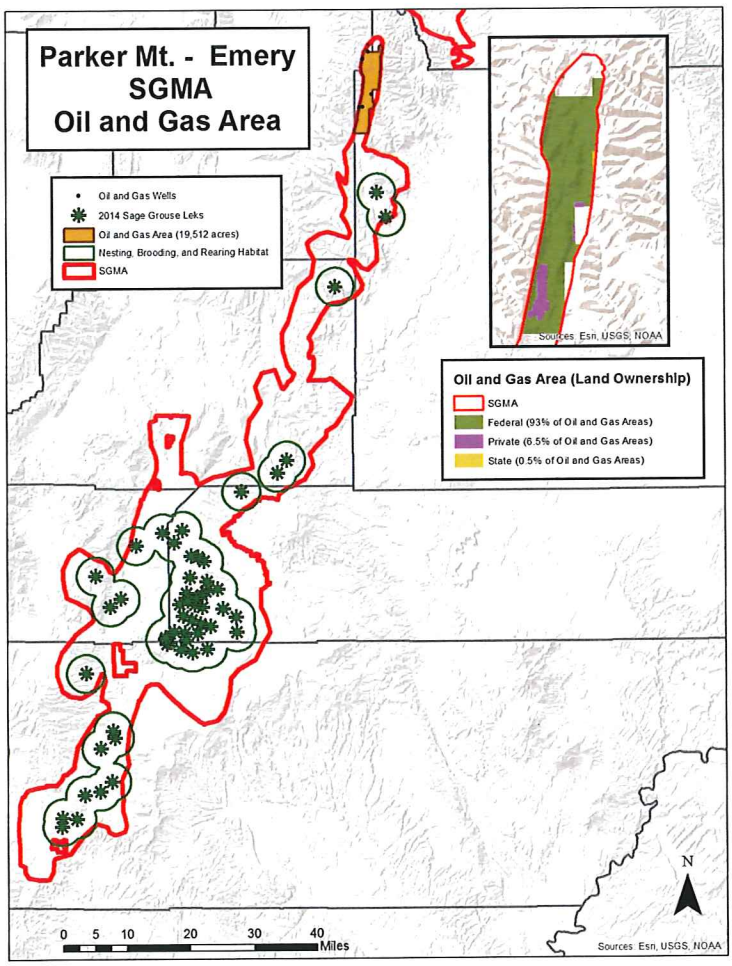


Figure 4: With just one oil well and three gas wells on 19,512 acres, there is very little development in the oil and gas field/unit located on the northern end of the Parker Mountain SGMA.

The Conservation Plan is designed to ensure that any future development in nesting/brood-rearing habitat is conducted in ways that avoid and minimize impacts on Greater Sage-grouse. This is consistent with the recommendations of the COT report, "If development must occur in Sage-grouse habitats due to existing rights and lack of reasonable alternative avoidance measures, the development should occur in the least suitable habitat for Sage-grouse and be designed to ensure at a minimum that there are no detectable declines in Sage-grouse population trends…"

Utah's conservation strategies for responsible energy development in SGMAs incorporate: (1) a fine-scale knowledge of Sage-grouse needs and habitats, (2) analysis of historical development patterns, and (3) an understanding of the likelihood of future development. Considering the low number of existing oil and gas wells in Utah's SGMAs and the fact that few areas have high-density development potential, Utah's balanced approach is more than adequate to protect Greater Sage-grouse nesting/brood-rearing habitats within SGMAs. Utah's balanced approach is also sufficient to protect private property rights and minimize unnecessary impacts on responsible energy development for many of the same reasons.

Oil/Gas Fields in SGMAs Outside of Nesting/ Brood Rearing Habitat

There are three oil and gas fields/units within Utah's SGMAs where valid existing rights coincide with nesting/brood-rearing habitat. The first area is in the southeastern corner of the Rich-Morgan-Summit SGMA. The second area is in the southeastern corner of the Carbon SGMA. These fields/units cover 15,706 acres in the Rich-Morgan-Summit SGMA, 9,981 acres in the

Carbon SGMA and 18,026 acres in the Uintah SGMA. It is notable that just one oil well and five gas wells are currently found in this particular field/unit in the Rich-Morgan-Summit SGMA (see Figure 4).

Because these fields contain valid existing rights, and have the potential for future development, these areas are treated by the state as long-term opportunity areas. They were included within the SGMAs in order to anticipate future growth needs for the individual populations. What this means is that when the oil and gas wells reach the end of their productivity, these areas will be reclaimed for use by Sage-grouse. Some of these areas are still utilized by birds despite development.

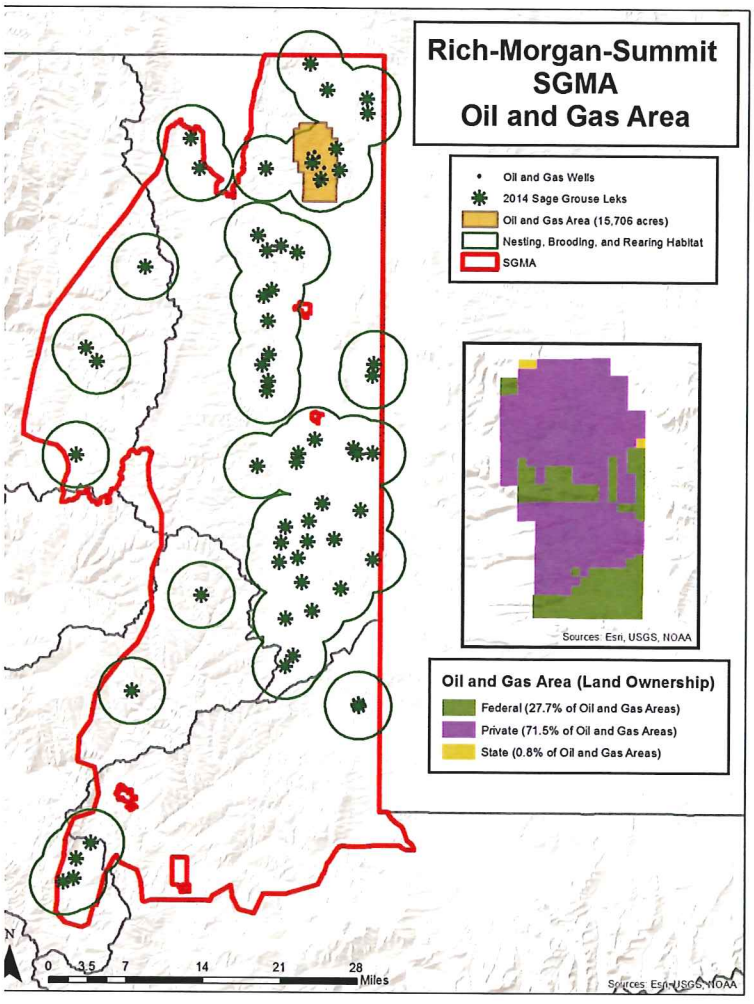
Given the level of existing development, these areas do not currently meet the criteria for priority habitat, but, in time, can contribute to long-term conservation of Sage-grouse in Utah.

Areas in SGMAs outside of Nesting/Brood Rearing Habitat and Outside of Fields/Units

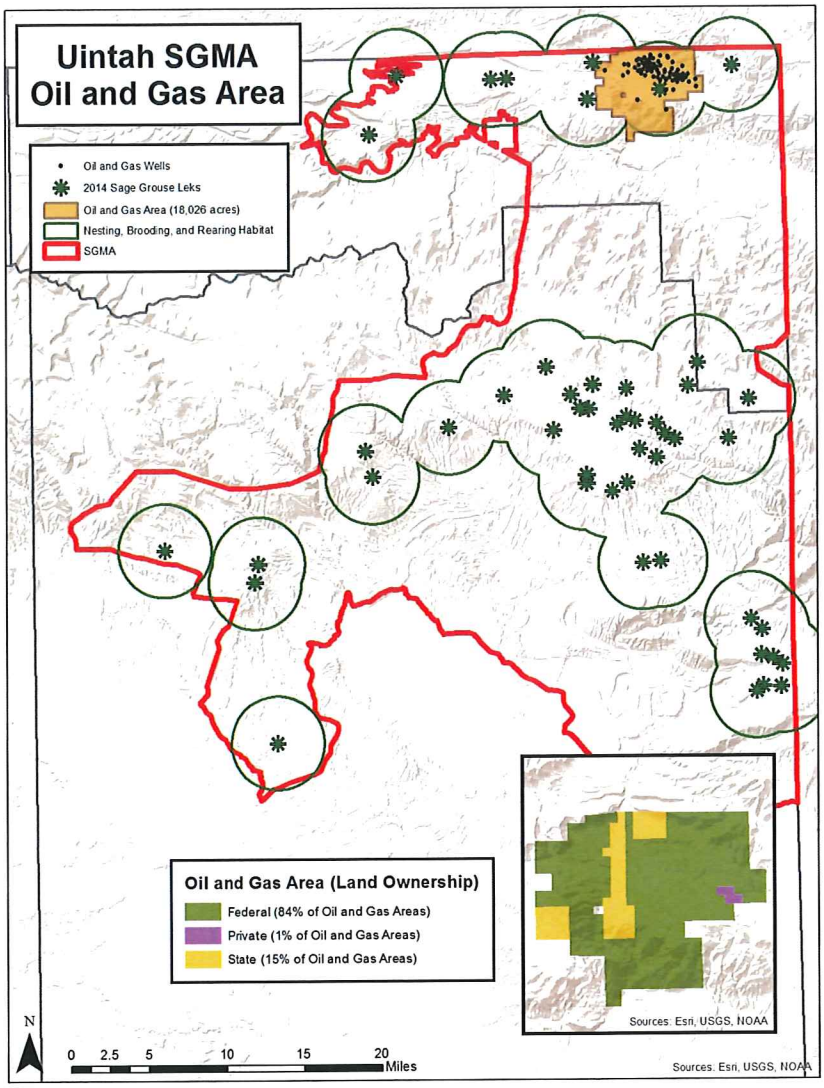
There are 4,490,933 acres within SGMAs outside of nesting/brood-rearing habitats that do not contain oil and gas fields/units. These areas currently have a combined total of just 63 known gas wells and 71 known oil wells. Given the low level of historic development, combined with an understanding of the geology in these areas, very little new oil and gas development is expected in the foreseeable future.

Maintaining well densities below one pad per section should not be a problem in these areas. Wells that do occur will continue to be sited using the "avoid, minimize and mitigate" three-pronged approach to ensure minimal impact to the Sage-grouse populations that use these areas.

Given the high level of natural fragmentation, the presence of conifer stands and the topography in these areas, efforts to site future oil and gas development in cooperation with the Sage-grouse experts from the Utah Division of Wildlife Resources will be an effective mechanism to protect Greater Sage-grouse and their habitats. In other words, important provisions the Conservation Plan related to oil and gas development are amply designed to ensure protections for Greater Sage-grouse now and in the future by ensuring responsible energy development in Utah's SGMAs.



igure 4: Not all oil and gas fields/units in Utah's SGMAs have igh level of development. One field of 15,706 acres in the Rich-lorgan-Summit SGMA includes just 1 oil well and 5 gas wells.



Uintah

Oil gas fields/units in priority habitat:

Acres	18,026
Gas wells	24
(40 underground storage wells)	

Ownership of fields/units:

Federal land	84%
State land	15%
Private land	1%

Oil and gas wells outside of fields/units in nesting/brood-rearing habitats :

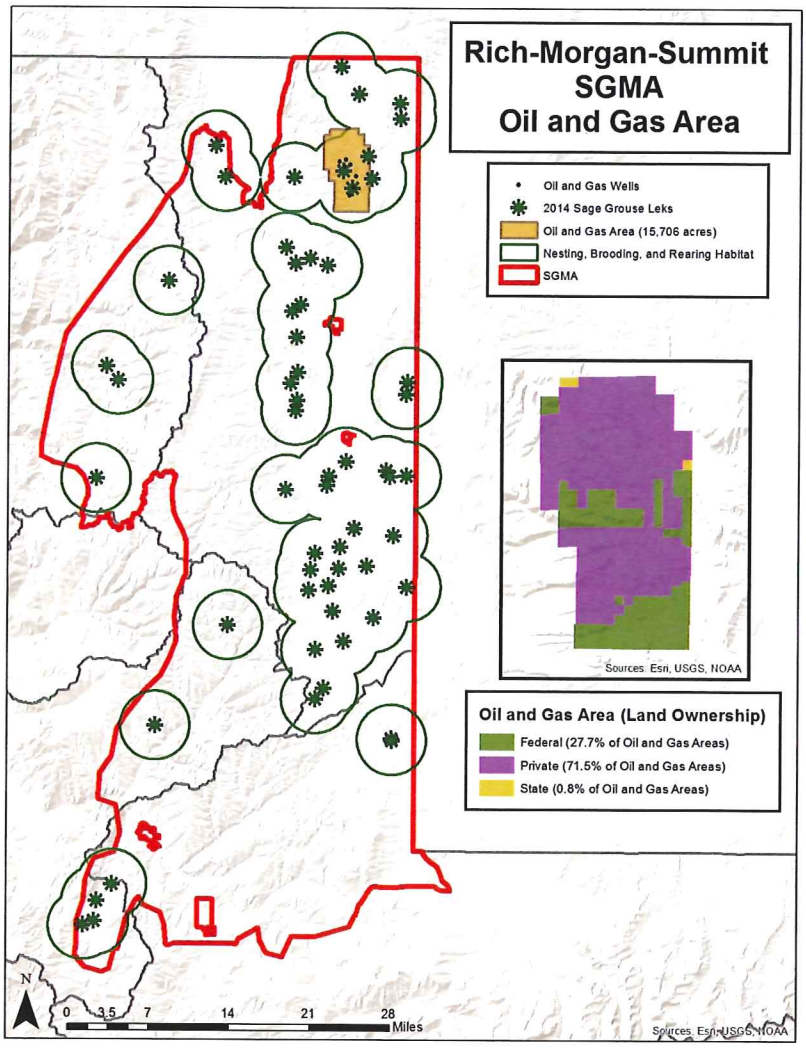
Acres	386,199
Oil wells	14
Gas wells	0

Oil and gas wells within SGMA outside of nesting/ brood rearing habitats :

Acres	388,614
Oil well	8
Gas wells	2

Detailed Assessment: Oil and gas development is not a threat in the Uintah SGMA. Valid pre-existing rights within the Clay Basin underground storage facility in the northern portion of the Uintah SGMA encompasses one active lek. This field includes approximately 24 active gas wells in addition to 40 underground storage wells. The COT Report suggests that all valid existing development rights, such those in the Clay Basin field, should be protected.

In the far southwestern portion of the Uintah SGMA, there are 14 oil wells adjacent to one lek. This is an area where additional development could be expected in the future. Pursuant to the Conservation Plan, no development will be permitted within one mile of a lek in the future. The plan also calls for avoiding, minimizing and mitigating any disturbance within three miles of a lek to help reduce any conflicts with Sage-grouse in these nesting/brood rearing areas. Implementation of the Conservation Plan is sufficient to protect these priority habitats within the Uintah SGMA.



Rich-Morgan-Summit

Oil gas fields/units in nesting/brood-rearing habitat

Acres	15,706
Oil well	1
Gas wells	5

Ownership of fields/units:

Federal land	27.7%
State land	0.8%
Private land	71.5%

Oil and gas wells outside of fields/units in nesting/brood-rearing habitats :

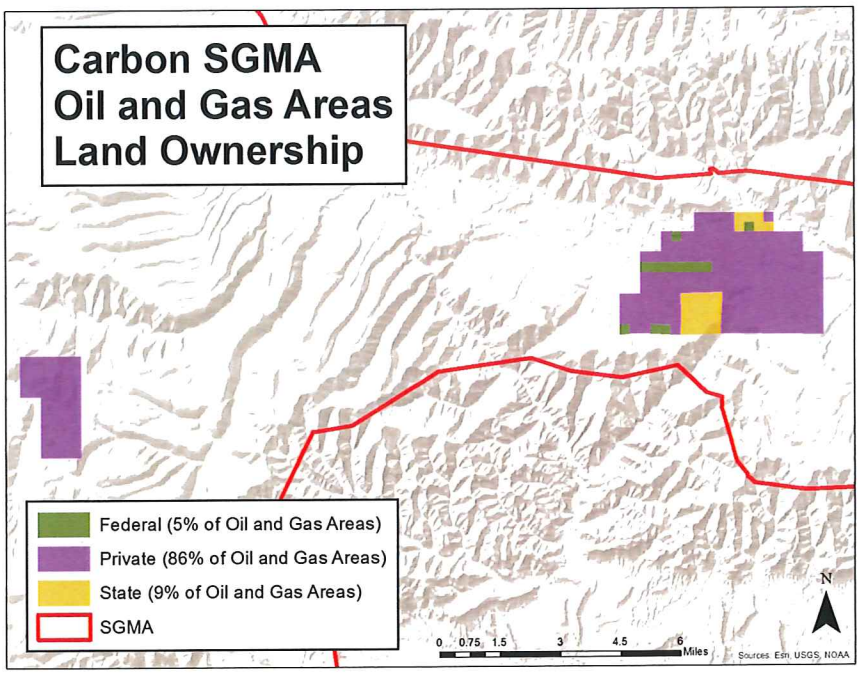
Acres	548,790
Oil wells	14
Gas wells	6

Oil and gas wells outside of nesting/ brood rearing habitats and outside of fields/units:

Oil wells	21
Gas wells	15

Detailed Assessment: There is relatively little oil and gas development in nesting/brood rearing habitats within the Rich-Morgan-Summit SGMA. There are two localized areas where most of the development occurs. In the northern portion of the Rich-Morgan-Summit SGMA there is one oil/gas field that includes two leks. With just six total wells in these fields, well density is far below thresholds that could impact Sage-grouse in the area. This is not an area where exploration and development is expected in the foreseeable future. (Figure 1)

A second localized area occurs in south/central portion of the Rich-Morgan SGMA on the border of Wyoming. This area currently has 14 oil wells and 6 gas wells and it is a place where additional development could be expected in the future. Pursuant to the Conservation Plan for Greater Sage-grouse in Utah, no development will be permitted within one mile of a lek in the future. The plan also calls for avoiding, minimizing and mitigating any disturbance between one and three miles of a lek to help reduce any conflicts with Sage-grouse in these nesting/brood-rearing areas. Implementation of the Conservation plan is sufficient to protect these priority habitats within the Rich-Morgan-Summit SGMA.



Carbon

Oil gas fields/units in priority habitat: 9,981 acres

Existing oil and gas wells :

Field #1 - Gas wells		3
	Oil wells	2
	(shared with gas wells)	
Field #2 - Gas wells		100

Detailed Assessment: Detailed Assessment: Field #1 has just five pads on 2,000 acres. Field #2 has valid existing rights and approximately 100 wells, which is considerably above the established threshold for priority habitat. Field #2 corresponds with one lek and the buffer of another lek. Field #2 is designated as a long-term opportunity area that will eventually be reclaimed for Sage-grouse habitat.

Conclusion

Very little oil and gas development coincides with Utah's SGMAs. Ninety-eight percent of the acreage within Utah's SGMAs, or 7.29 million acres, does not correspond with oil and gas fields/units. Utah's plan utilizes the "avoid, minimize and mitigate" approach, which accounts for valid existing rights. This is consistent with the Conservation Objectives Team Final Report:

"If development must occur in Sage-grouse habitats due to existing rights and lack of reasonable alternative avoidance measures, the development should occur in the least suitable habitat for Sage-grouse and be designed to ensure at a minimum that there are no detectable declines in Sage-grouse population trends…"

While future development is foreseeable on only a small amount of acreage within the SGMAs, implementation of the Conservation Plan and the Governor's Executive Order will balance existing and possible future development (including valid pre-existing rights) with robust long-term conservation of Greater Sage-grouse. The Conservation Plan establishes provisions that aggressively meet the fundamental goal of protecting usable space for and ensuring long-term conservation of Greater Sage-grouse in the state of Utah.

UTAH CONSERVATION STRATEGIES*(CONT.)*

Low-density Development in Sage-grouse Management Areas

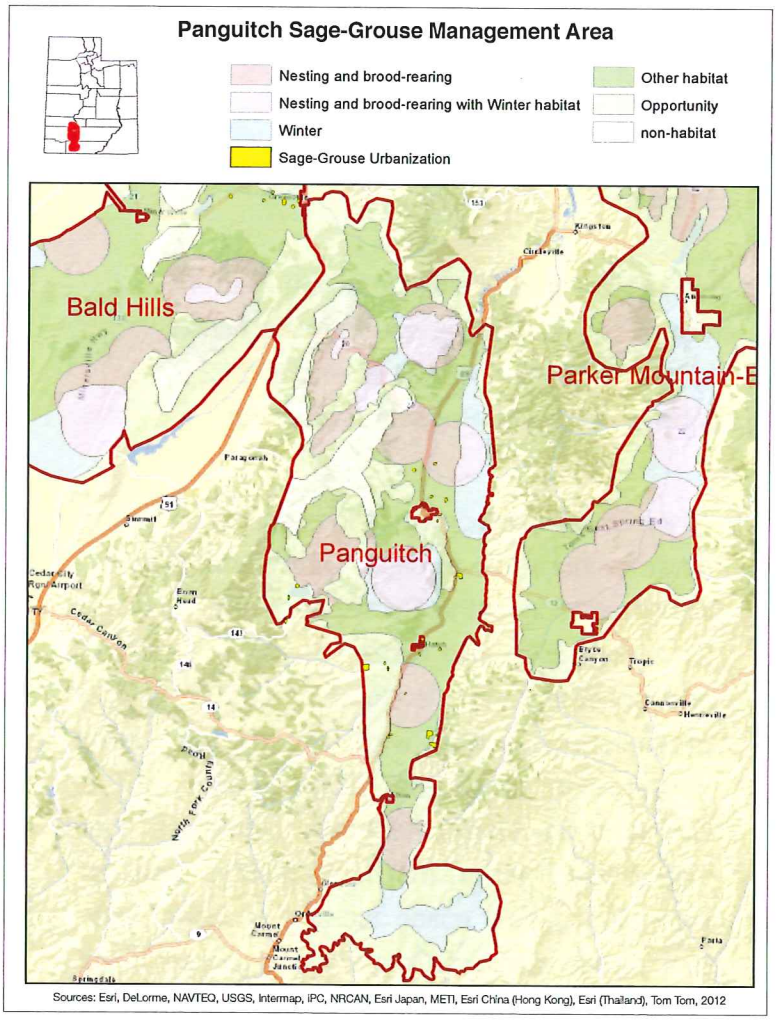


Figure 9. Low-density rural development is not a significant threat within core habitats of Utah's SGMAs.

Only three Sage-grouse Management Areas (SGMAs) in the state of Utah are projected to have more than 1,000 acres of new development by the year 2030. A detailed analysis of acreage projected to be developed within the state's SGMAs, illustrate that only the Rich-Morgan-Summit SGMA has more than 200 acres of expected conflict within nesting brood rearing habitats. What this means is that low-density development (sometimes referred to as exurban development) is not a threat to sage-grouse populations in the state of Utah. Millions of dollars are available through state, private, and federal funding sources to protect the interests of private landowners, incentivize protection of lands that are important to rural communities, sage-grouse populations, and to resolve development threats in areas of priority habitat. Localize impacts in the Rich-Morgan-Summit and other SGMAs will be addressed through processes explained in Utah's Plan.

URBANIZATION

Overview: *Only three Sage-Grouse Management Areas (SGMAs) in the state of Utah are projected to have more than 1,000 acres of new development by the year 2030. A detailed analysis of acreage projected to be developed in these SGMAs illustrates that only the Rich-Morgan-Summit SGMA has more than 200 acres of expected conflict with priority habitat. The conclusion is that urbanization is not a threat in the state of Utah. Localized impacts in Rich-Morgan-Summit will be ameliorated through Utah's Sage-Grouse Conservation Plan.*

Affected SGMAs: Rich-Morgan-Summit, Uintah and Panguitch.

Rich-Morgan-Summit

Total acres in SGMA	1,227,830 acres
Projected development by 2030	3,467 acres
New acres as % of total	0.026%
Nesting/brood rearing	1,213 acres
Winter habitat	2,254 acres
Northern - projected development	2,105 acres
Nesting/brood rearing	53%
Winter habitat	47%
Middle - projected development	97 acres
Southern - projected development	1,265 acres
Winter habitat	94%

Detailed Assessment: The estimated residential and commercial development is approximately one quarter of one percent on 1.2 million acres in the Rich-Morgan-Summit SGMA. Urbanization is not a threat to long-term survival of Sage-grouse populations in Rich-Morgan-Summit SGMA. Localized conflicts exist on both the northern end and southern end of the SGMA. Development on the northern end is projected to occur around existing development adjacent to Bear Lake and in the Bear River Valley near Randolph and Woodruff. Development on the southern end is projected to occur near Wanship and Kamas.[1]

[1]Map Source: http://www.nrcs.usda.gov/wps/portal/nrcs/detail/ut/technical/dma/nri/?cid=nrcs141p2_034122

Projected Development to SGMA's

	Total SGMA Acres	Projected New Development
Bald Hills	527,665	997
Box Elder	1,519,567	977
Carbon	354,559	702
Hamlin Valley	341,087	0
Ibapah	98,229	16
Panguitch	605,444	1,704
Parker Mtn	1,084,276	361
Rich-Morgan	1,183,844	3,188
Sheeprock	609,781	166
Strawberry	322,040	147
Uintah	792,839	3,466
TOTAL	7,439,331	11,725

Figure 1 - Three SGMAs are projected to have more than 1,000 acres of new development by 2030. Actual acreage within priority habitat is much less than 10,000 acres.

Uintah

Total acres in SGMA:	811,835 acres
Projected development by 2030:	3,466 acres
New Acres as % of total:	0.43%
Nesting/brood rearing:	0 acres
Winter habitat:	0 acres

Detailed Assessment: Urbanization is not a threat to long-term survival of Sage-grouse populations in Uintah County. Additional analysis suggest there is no projected residential and commercial development in critical habitat. Most development in the county is projected near existing development which is outside of the Uintah SGMA.[2]

Panguitch

Total acres in SGMA:	645,557 acres
Projected development by 2030:	1,704 acres
New acres as % of total:	0.26%
Breeding/brood rearing:	<200 acres
Winter habitat:	0 acres

Detailed Assessment: Urbanization is not a threat to long-term survival of Sage-grouse populations in Panguitch SGMA. Less than 200 acres of development coincides with critical habitat.[3]

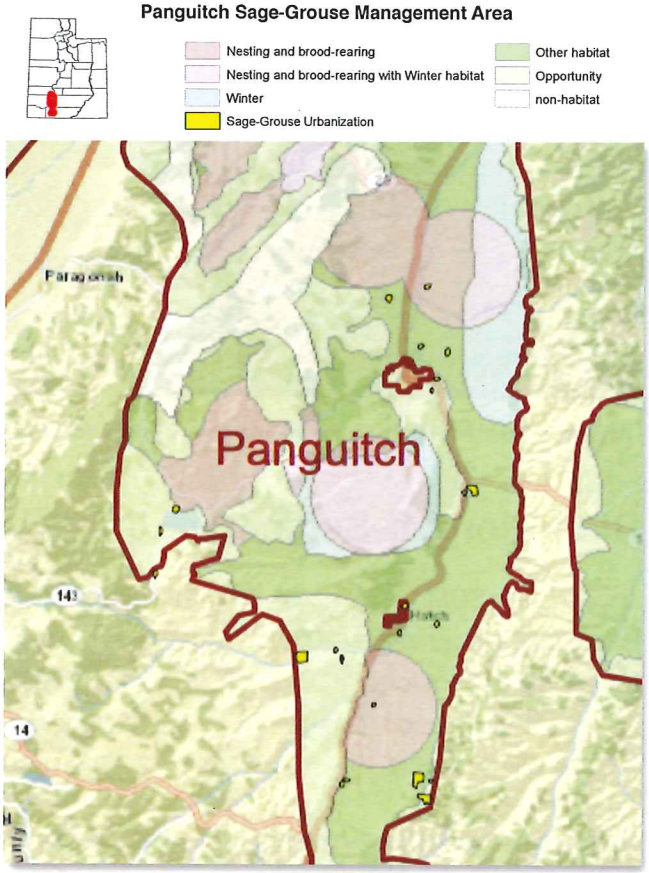


Figure 2 - Development in Panguitch SGMA is projected to occur primarily outside of wintering, nesting and brood rearing habitat.

[2]Map Source: http://www.nrcs.usda.gov/wps/portal/nrcs/detail/ut/technical/dma/nri/?cid=nrcs141p2_034122

[3]Map Source: http://www.nrcs.usda.gov/wps/portal/nrcs/detail/ut/technical/dma/nri/?cid=nrcs141p2_034122

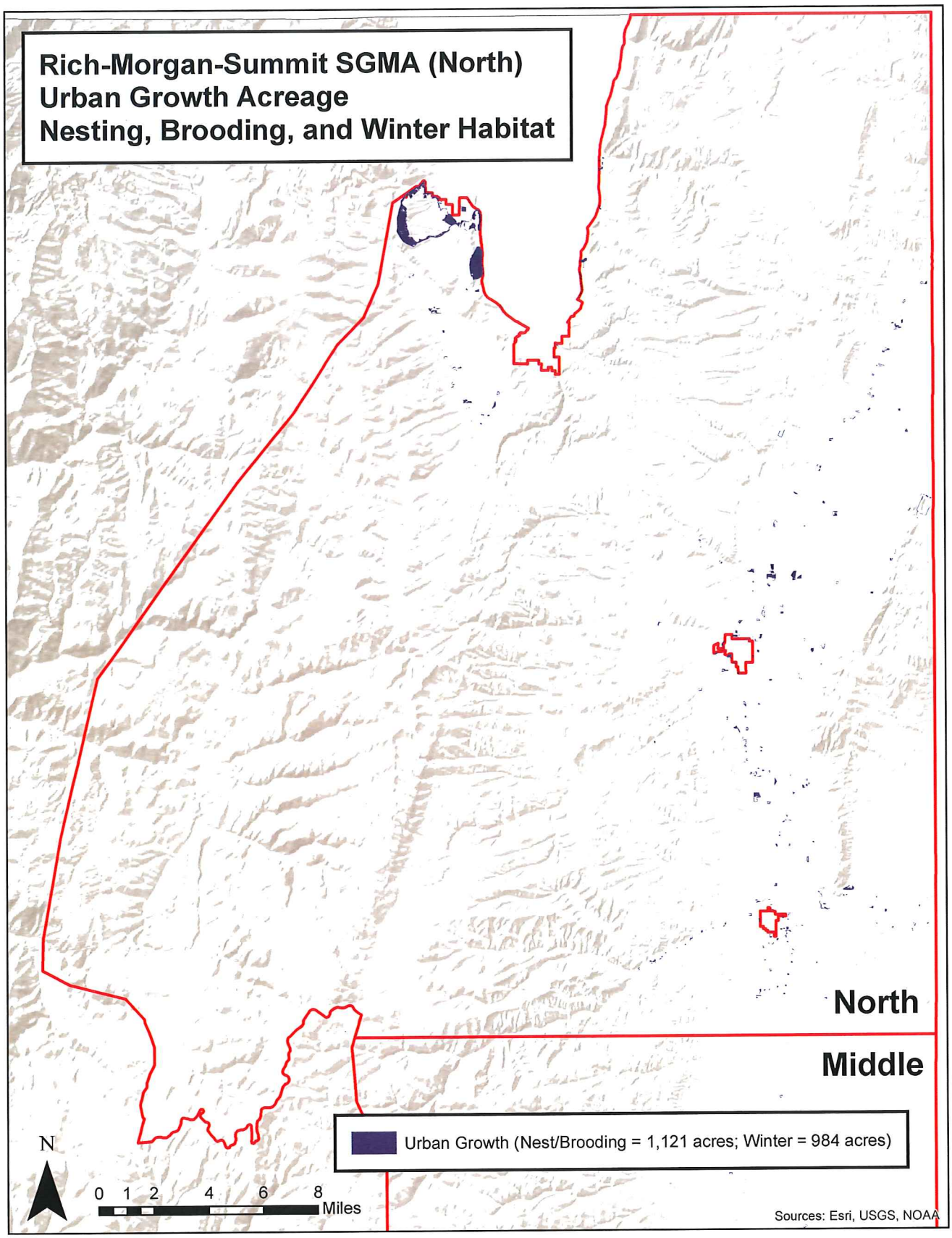

Rich-Morgan-Summit SGMA (North)
Urban Growth Acreage
Nesting, Brooding, and Winter Habitat
North
Middle
Urban Growth (Nest/Brooding = 1,121 acres; Winter = 984 acres)
N
0 1 2 4 6 8
Miles
Sources: Esri, USGS, NOAA

Figure 10. Sage-grouse biologists radio collar Utah Sage-grouse as part of intensive research studies in the state. Over 45 studies have been completed or are currently in progress to more effectively ensure success of Sage-grouse in the state.

Why Utah's Plan Was Not Given Full Consideration

Unfortunately, as we worked with federal regulators responsible for ESA determinations and federal planning, it became increasingly clear that Utah's Plan would not be given full consideration. This is because of U.S. Fish and Wildlife Service's Policy for Evaluation of Conservation Efforts When Making Listing Decisions (PECE Policy). While Secretary Salazar promised to give full consideration to state conservation plans if the states would update their plans, these commitments were not kept. Under the Obama Administration's interpretation of the PECE Policy, consideration of updated state plans was not allowed, even when those changes were made at the encouragement of the Department of Interior and U.S. Fish and Wildlife Service. Here is the relevant language:

"While the [Endangered Species] Act requires us to take into account all conservation efforts being made to protect a species, the [PECE] policy identifies criteria we will use in determining whether formalized conservation efforts that have yet to be implemented or to show effectiveness contribute to making listing a species as threatened or endangered unnecessary."

In meetings with U.S. Fish and Wildlife Service, senior officials indicated that updated state conservation plans would be treated as "yet to be implemented" or "yet...to show effectiveness." Moreover, the high bar required for consideration under the Obama Administration's interpretation of the PECE policy meant that many updated management plans, including those in Utah, were not given full consideration. Instead, Obama Administration officials argued that revised BLM and Forest Service plans with extreme restrictions should be implemented. That is exactly what has happened. Unfortunately, these new restrictions do little to address the needs of sage-grouse. Instead, they are focused on restricting human activity in ways that are largely unnecessary for sage-grouse conservation while also ignoring the need for more balanced, common sense solutions.

Educating Members of Congress

Key political and policy makers are keenly aware of what is happening with Greater Sage-grouse, including the Obama Administration's rewriting of federal resource management plans and activities on sage-grouse habitat in the West. The Greater Sage-grouse Coordinated Consulting Team is working with Utah's congressional delegation and educating other members of Congress on key issues related to Greater Sage-grouse and the Endangered Species Act. By threatening a judicial listing of Greater Sage-grouse if the new BLM and U.S. Forest Service plans are altered, truly the only relief for Utah and other Western States is congressional action.

PROGRESS & RESULTS

We have met with members of Congress from sage-grouse states and across the country. We have conducted tours of sage-grouse habitat with senior staff, sage-grouse and rangeland biologists, and state policy makers. These tours provided an opportunity to discuss implementation of on-the-ground conservation measures in the state of Utah.

We continue to find that there is significant bi-partisan support both in Western states and in Congress for solutions that protect balanced use of natural resources in ways that are consistent with policies and management strategies that work for long-term success of Greater Sage-grouse.

State Management is Working for Sage-grouse Conservation

One of the most important things to understand is that there is no emergency when it comes to sage-grouse. This has been an important part of our message to Congress. There are approximately 500,000 birds with seasonal habitats covering 167,000,000 acres. With current sage-grouse numbers and distributions, no one is suggesting that Greater Sage-grouse are imperiled. Instead, petitions to list the bird as "threatened" have focused on the adequacy of regulatory mechanisms to address perceived threats that activists suggest could lead to the decline of sage-grouse in the future.

Greater Sage-grouse seasonal habitats cover a huge swath of land including portions of 11 Western States. State management plans for sage-grouse have demonstrated a proven track record of success. Despite natural fluctuations in sage-grouse populations from year to year, 10-year rolling averages for sage-grouse have been stable or increasing for most sage-grouse populations in most states for the past two decades.

From 2014-2015, sage-grouse populations increased 68% range-wide. This has largely refuted one proposed theory that the stability of sage-grouse "was actually a sign of decline." This was a theory that showed up in the 2010 "warranted but precluded" rule by the U.S. Fish and Wildlife Service during the Obama administration. The theory attempted to suggest that despite the relative abundance of sage-grouse and sage-grouse habitat over the past 20 years, this long-period of population stability would likely be followed by a consistent cycle of decreasing bird populations. Contrary to this supposition, the period of stability was followed by a robust upward population growth cycle in which bird populations increased 68% range-wide in just two years. This not only put these fears to rest, but demonstrated that state conservation plans were more than adequate to ensure long-term sage-grouse stability and survival of Greater Sage-grouse across a substantial portion of the range.

Western States remain committed to common-sense sage-grouse conservation. Approximately $750,000,000 has been invested in habitat restoration and improvement in the last 20 years. These efforts are proactive, forward thinking, and are producing significant results for sage-grouse populations by improving the quality of sage-grouse habitat. These conservation efforts have produced over one million acres of habitat restoration for sage-grouse, mule deer, pronghorn, and other wildlife species. This investment is also addressing serious concerns, such as pinyon/juniper encroachment, catastrophic wildlfire, and productivity of public lands in Utah and across the West.

Sage-grouse Bill Introduced in 2015

On March 15, 2016, Congressman Rob Bishop introduced H.R. 4739 "The Greater Sage Grouse Protection and Recovery Act". The bill protects state conservation efforts for Greater Sage-grouse and provides a judicial safe-habor to ensure those conservation plans can be implemented for a period of 10-years.

The bill was cosponsored by members of Congress who represent districts which hold approximately 95% of America's Sage-grouse including, Cynthia Lummis-Wyoming, Michael Simpson-Idaho, Raul Labrador-Idaho, Ryan Zinke-Montana, Greg Walden-Oregon, Rob Bishop-Utah, Mark Amodei-Nevada, Cresent Hardy-Nevada, Joseph Heck-Nevada, Doug Lamborn-Colorado, Cathy McMorris Rodgers-Washington State, Kevin Cramer-North Dakota, and Paul Cook-California.

The provisions of H.R. 4739 have been included in the National Defense Authorization Act. Similar provisions were included in last year's National Defense Authorization Act which passed the House of Representatives.

Sage-grouse and the National Defense Authorization Act

On April 13, 2015, House Armed Services Committee Chairman Mac Thornberry introduced H.R. 1735, the National Defense Authorization Act (the National Defense Authorization Act or "NDAA"). Contained in the Chairman's mark-up was language sponsored by Congressman Rob Bishop (R-UT 1st District) related to Greater Sage-grouse. The provisions, which comprise Section 2862 of the NDAA, provide a 10-year extension of the deadline for making an Endangered Species listing determination for Greater Sage-grouse. This extension was designed to allow state management plans time to work and demonstrate their efficacy. The provisions also provide an optional 5-year extension of time on Sage-grouse management plans for the Bureau of Land Management within a state, if requested by the governor of that state. The bill does not change the current legal status of the bird from "warranted but precluded." Amongst other provisions, the bill also would require an annual report to Congress on the conservation status of Sage-grouse throughout their range.

A copy of the language of the Sage-grouse provisions in Section 2862 of the National Defense Authorization Act is provided in Exhibit B.

Figure 11. Utah's congressional delegation has been very active in protecting state management of Sage-grouse through Congressional action.

Figure 12. Approximately 50% of AF training flights in the Continental United States are conducted in western test and training ranges impacted by Sage-grouse. Additionally, the test and training ranges in the western United States provide capabilities that cannot currently be replicated anywhere else in the world.

Committee Vote

On April 29th, 2015, mark-up was held on H.R. 1735 in the Full House Armed Services Committee. As part of the mark-up, Representative Niki Tsongas (D-MA Third District) offered an amendment to strip Section 2862 from the National Defense Authorization Act (NDAA). The amendment failed with a strong, bipartisan vote of 26-36. The House Armed Services Committee voted on final passage with a vote of 60-2, clearly demonstrating the strong level of support for the NDAA containing the Rob Bishop Language.

House Vote

After its passage in committee, NDAA was sent to the Full U.S. House of Representatives for consideration. On May 15, 2015, the bill was passed by a vote of 269-151, once again demonstrating a strong level of support for the bill in Congress. All four members of Utah's congressional delegation in the U.S. House of Representatives voted in favor of the NDAA and have been active in their efforts to ensure continued inclusion of Section 2862 in the NDAA.

Here are several quotes from members of Congress on the Committee illustrating their attention to efforts to force more federal mandates relative to Greater Sage-grouse and the importance of ongoing state management of the species:

Rob Bishop - Utah

"More than 40 years ago, the Endangered Species Act was enacted with good intentions and bipartisan support to recover species at the brink of extinction. Unfortunately, with less than two percent of the more than 1,500 listed species ever recovered, the law is failing.

"Cramming thousands more species onto the list and blocking the use of millions of acres of land—including restricting even how our military servicemen can use lands for military training and readiness – cannot be a measurement of success. States are using resources wisely to recover species and keep them off the list. We should do more to encourage them,"

Cynthia Lummis - Wyoming

"Because these 11 states are so different, a cookie cutter approach will not work. Each state is unique. Their ecology, their economies, their culture, their Sage-groused habitat, and the reasons for Sage-grouse decline are very different."

Ryan Zinke - Montana

"Nowhere do I see what a healthy population is in Montana. When I don't know what a target number is, when the plan doesn't have anything constructive other than habitat, when it doesn't address wildfire, when it doesn't address predators, and yet the locals have expressed a considerable desire to save the species in a constructive manner that looks at predators, that looks at wildfires, looks at weather."

Cresent Hardy - Nevada

"I've watched and grew up in Nevada my whole life and I've watched what has happened throughout the state with the growth of the juniper and the lack, or mismanagement, of what I call the federal government and what they are doing."

Scott Tipton - Colorado

"They don't have an identifiable number [the Department of Interior for the recovery of the Sage-grouse]. Wouldn't it be a good idea, if we are actually going to have recovery, to be able to have a number that we know when we win?"

Dan Newhouse - Washington

"I live in central Washington. In my district, we have the Yakima training center, which is a 327,000 acre training site for our military. Of that, there are 77,000 acres that are currently designated Sage-grouse protection area. The army has already taken various steps and spent a lot of money to operate in a manner that minimizes the impact on the species. Things like seasonal management and habitat protection. If the ESA, under a listing would further impact and really take a lot of the training center out of being operable, and very severely limit its ability to carry out its mission."

Doug LaMalfa - California

"When we have these listings, who knows, by the time they are done implementing the plan, people can do less in the area to manage the timber, to manage the land, to do things that would dovetail well with the species and its recovery, it will just be off limits, the whole forest will burn. In the case we are talking about here, more juniper will grow because we are afraid we might disturb a nesting grouse, instead of doing things that are going to improve it. It is a big frustration."

Figure 13. Kathleen Clark from the Utah Public Lands Policy Coordination Office testifies at the U.S. House Natural Resource Committee hearing May 19, 2015.

U.S. House Committee on Natural Resources

On Tuesday, May 19, 2015, the U.S. House Committee on Natural Resources held a hearing in Washington D.C. entitled, "Empowering State Management of Greater Sage-grouse." Chairman Rob Bishop conducted the hearing with many members of the committee speaking in favor of state management of Sage-grouse.

Kathleen Clark from the Utah Public Lands Policy Coordinating Office spoke at the hearing, as did representatives from other impacted Sage-grouse states. The following is a portion from Ms. Clark's testimony:

I find myself in an interesting position. As a former Director of the Bureau of Land Management, I have extensive insight into operations of a federal regulatory and land management agency. I respect the role of the federal government in management of lands and natural resources and oversaw BLM's development and implementation of a rigorous range-wide Sage-grouse conservation strategy which helped to support a "non- warranted" listing determination for the Greater Sage-grouse (GRSG) in 2006.

As the current director of the Public Lands Policy Coordinating Office for the State of Utah (PLPCO), I oversaw a yearlong review of Sage-grouse in Utah, and the subsequent development of a bold, science-based conservation plan, including clearly identified goals and objectives recognized as innovative by observers of the process. Based upon that work and the subsequent efforts to find common ground with the federal land management agencies, I can tell you that sadly, there is a dichotomy developing between the State of Utah's collaborative planning process and a growing federal unilateralism. What started out as a promising partnership is becoming increasingly imbalanced and adversarial.

Let me be clear, the State of Utah is committed to long-term Sage-grouse conservation. Over $50 million dollars has been invested in the last 10-years in Sage-grouse conservation in Utah. The State, in a close partnership with federal agencies, has restored over 560,000 acres of Sage-grouse habitat since 2006, which work was funded and undertaken after the U.S. Fish and Wildlife Service determined the species was "not warranted" for listing. Research and groundwork have been the hallmark of Sage-grouse conservation. The State has engaged in an aggressive research program through our universities to scientifically determine the conservation needs of the

species. We have improved habitat and engaged in land management studies involving habitat improvement and restoration, predator control and population augmentation. Results have been stunning, and directly contradict the recent gloom and doom predictions concerning the Sage-grouse...

The State of Utah supports the efforts of Congress to allow the states the opportunity to demonstrate the robust nature of their plans, and demonstrate the required level of certainty required by the Service's PECE standards. The 10-year time frame mentioned in legislation is firmly based in the science of Sage-grouse in Utah, and is recognized in peer-reviewed scientific papers. We believe that congressional action is likely the only way to ensure the states have the necessary time to demonstrate effective conservation efforts and to secure the long-term sustainability of the GRSG.

Dustin Miller, the Idaho Director of Species Conservation, also testified. The following is a portion of Mr. Miller's testimony:

The State of Idaho holds to the notion that local collaboration, local ideas, and local efforts garner the greatest results. We have a lot of pride in our state, and we are especially proud of our western heritage and abundant natural resources...but as you've heard, some of the recent top-down directives from Washington, D.C. have the potential to derail years of positive collaboration.

Committee members from the Sage-grouse states of Utah, Nevada, Montana, Wyoming, Colorado, California, and Washington were strongly supportive of efforts to protect state management of Sage-grouse.

In anticipation of conference efforts to harmonize the House and Senate versions of the bill, a "Dear Colleague" letter was sent to the leaders of House and Senate Armed Services Committees regarding Greater Sage-grouse and section 2865. The letter reads in part:

> *We are writing in strong support for retention of Sections 2862 and 2865 contained in the House-passed National Defense Authorization Act for Fiscal Year 2016 (H.R. 1735) dealing with Protection and Recovery of Greater Sage-grouse and the Lesser Prairie Chicken. These sections were adopted with strong bi-partisan support in the House of Representatives...It is entirely appropriate that these issues be addressed within the context of the National Defense Authorization Conference Report...We believe that Sections 2862 and 2865 represent a balanced approach to both conservation and preservation of the species, by allowing time for the affected states to implement and demonstrate their individual plans.*

107 members of Congress signed the Dear Colleague letter. It was finalized July 9, 2015 and sent to leaders of the House and Senate Armed Services Committee. A full copy of the letter is included in Exhibit C.

Federal Government Agrees that Sage-grouse are not Threatened or Endangered

In 2015, the U.S. Fish and Wildlife Service agreed that Sage-grouse were "not warranted" for listing under the Endangered Species Act, either as a threatened or endangered species. This followed months of efforts by the Greater Sage-grouse Coordinated Consulting Team and the State of Utah to educate federal decision makers on the conservation needs of Sage-grouse populations in Utah and the way in which state programs are addressing those needs.

In making this announcement, Secretary Sally Jewell indicated:

> *This is truly a historic effort – one that represents extraordinary collaboration across the American West... The epic conservation effort will benefit westerners and hundreds of species that call this iconic landscape home, while giving states, businesses and communities the certainty they need to plan for sustainable economic development.*

U.S. Agriculture Secretary Tom Vilsack explained the importance of voluntary conservation efforts to the future of Greater Sage-grouse:

> *Together, we have shown that voluntary efforts joining the resources of private landowners, federal and state agencies, and partner organizations can help drive landscape-level conservation that is good for sage-grouse, ranching operations, and rural communities. Through the comprehensive initiatives on both public and private lands, the partnership has made and will continue to make monumental strides in supporting the people and wildlife that depend on the sagebrush landscape.*

A full copy of the "Not Warranted" press release can be found at https://www.doi.gov/pressreleases/historic-conservation-campaign-protects-greater-sage-grouse.

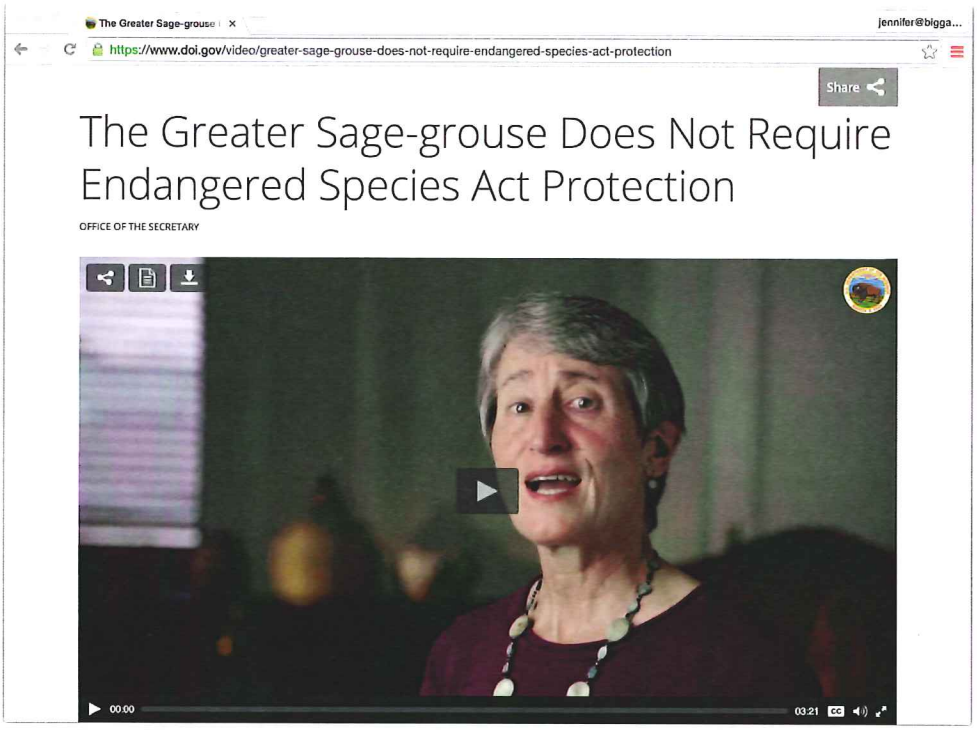
"Concerns regarding mismanagement of federal lands and impacts to Sage-grouse conservation remain a major concern."

Concluding that Greater Sage-grouse remain relatively abundant and well-distributed across the species' 173-million acre range, U.S. Fish and Wildlife Service explained that using the best available scientific information and taking into account ongoing key conservation efforts and their projected benefits, the bird does not face the risk of extinction now or in the foreseeable future, and therefore does not need protection under the ESA.

The decision not to list Greater Sage-grouse is a significant development. As recently as 2010, the U.S. Fish and Wildlife Service had made the determination that the species was warranted for listing, but that listing was precluded by higher conservation priorities under clause (iii) of section 4(b)(3)(B) of the Endangered Species Act of 1973 (16 U.S.C 1533(b)(3)(B). In recent months, federal officials had repeatedly suggested that a finding of "threatened" with a "4D" determination would provide states the management flexibility they required.

States pushed back, indicating that the Greater Sage-grouse numbers and distribution indicated that Sage-grouse were not at risk of extinction. Furthermore, they pointed out that state management plans were the best way to conserve the species, both now and in the future. The best available science and commercial data set forth in Utah's detailed conservation strategies demonstrate that conservation planning and implementation continues to move forward in a proactive and constructive manner.

It is important to note that the concerns regarding mismanagement of federal lands and impacts to Sage-grouse conservation remain a major concern. The data demonstrates that the most important conservation concerns for Sage-grouse in the state of Utah including wildfire, conifer encroachment and post-wildfire effects, are disproportionately occurring on federally managed BLM and Forest Service lands. Utah's Watershed Restoration Initiative has treated hundreds of thousands of acres in the state, including on federal land. However, continued progress in addressing these concerns will require the substantial progress in the coordination and implementation of conservation measures by federal land management agencies.



On September 22, 2015, DOI Secretary Jewell made the online announcement that "Because of an unprecedented effort by dozens of partners across 11 western states...the Greater Sage-grouse does not require protection under the Endangered Species Act."

While the decision not to list the Greater Sage-grouse as an endangered or threatened species represents significant progress, considerable risks remain due to controversial new BLM and Forest Service Management plans. Litigation by special interest groups also threatens state management of Sage-grouse.

New BLM & Forest Service Land-Use Plans

Controversial land use plans mean more restrictions on millions of acres in the state of Utah and across the West. Newly established "Sage-grouse focal areas" emphasize regulation and mineral withdrawal, not conservation of Sage-grouse. Leaders from western states condemn new restrictions as more bad news for public land states.

As a part of this process, substantial pressure was brought by the U.S. Fish and Wildlife Service on the Bureau of Land Management (BLM) and U.S. Forest Service (USFS) to implement new land use plans through the amendment process. These new BLM and USFS plans implement substantial new regulations on federal lands within Utah. In fact, many of Utah's elected officials have issued very direct warnings about the impact of these new plans on economic activity and the ability of Utahns to use public lands in the state.

What is notable is that these new plan restrictions substantially miss the mark from a conservation perspective. In their almost unilateral focus on human activity, they fail to address the most important conservation concerns on our public land. Just as importantly, they threaten to undermine the important collaboration that is needed for Sage-grouse conservation. Leading many to conclude that these plan amendments were not really about Sage-grouse conservation, but instead were intended to stop productive use of our public lands.

Independent research by the University of Utah's Bureau of Economic and Business Research dated July 2015 and entitled, "Valuation of Current Economic Activities in Greater Sage-grouse Range in Utah" indicates that over $5 billion in current economic activity occurs on current and historic Sage-grouse range in the state of Utah. The report found an additional $10.9 billion in agricultural and non-primary residential property values which may be contained in Utah's historic only and current Sage-grouse range. In addition, over 57 billion barrels of potentially available economic oil from oil shale is also located in historic and current range within the state of Utah.

In contrast with heavy-handed federal regulation, Utah's common-sense SGMA strategy protects habitats for 94% of Sage-grouse (highest percentage of any western state) while also providing minimal impacts on economic activities in these areas. For example, while there are estimated to be over 57 billion barrels of potentially available economic oil from oil shale located in historic and current range within the state of Utah, only an estimated 0.2 billion barrels of economic oil from oil shale are located within the state's SGMAs. Under new federal restrictions, all activities both in Utah's SGMAs and in areas outside of Utah's SGMAs could be severely restricted. This is one of the reasons why Congressional action on Sage-grouse is so important to protect the interests of the state of Utah from these unnecessary and sweeping federal land use controls.

"These federal land use plan amendments are unnecessarily restrictive."

"I have always believed that . . . Utah is better positioned to manage our sage-grouse populations than the federal government."

Many of Utah's elected officials have issued very direct warnings about the impact of these new plans on economic activity and the public land use in Utah.

Governor Gary Herbert (R-UT)
"I am deeply concerned with the decisions of the Departments of Interior and Agriculture which constitute a significant overreach by the federal government on this issue. The state of Utah has implemented a successful sage-grouse conservation plan that has been rejected by the federal government, jeopardizing conservation of the species and reasonable economic growth in Utah.

"Today's actions constitute the equivalent of a listing decision outside the normal process and fail to support an appropriate balance between conservation and other public uses of the land. The state is not satisfied with the Records of Decision on land use plan amendments as issued by the Bureau of Land Management (BLM) and the U.S. Forest Service (USFS). Their one-size-fits-all approach does not reflect the tremendous diversity in greater sage-grouse habitats across the West. These federal land use plan amendments are unnecessarily restrictive in nature and devalue Utah's management plan and the conservation commitments from private landowners.

Governor Gary Herbert (R-UT)

Congressman Chris Stewart (R-UT)

"I have always believed that, as a state, Utah is better positioned to manage our sage-grouse population than the federal government. Utah has in fact adopted a strong conservation plan designed to protect, enhance and restore sage-grouse habitats throughout the state. This effort by Utah has resulted in the restoration of more than 500,000 acres of sage-grouse habitat and a significant growth in sage-grouse populations. We will continue to work with the Departments of Interior and Agriculture to accept the State of Utah's conservation plan. We will also pursue legislative and potential judicial relief to protect the state's interests and ensure conservation of the species."

Congressman Chris Stewart (R-UT)
"While the Interior Department's decision not to list the sage grouse is a small step in the right direction, I remain fearful that the Federal land use plans will be just as onerous as an ESA listing. I am fully confident that states are more motivated and better suited than the federal government to maintain healthy sage grouse populations. The fact that Fish and Wildlife has deemed a listing not necessary shows that the western states efforts at conservation have worked. The states have been successful at protecting the sage grouse while maintaining jobs and the economy, and the federal government should follow suit in their land management plans."

Congressman Rob Bishop (R-UT)

House Natural Resources Committee Chairman - Congressman Rob Bishop (R-UT)

"This announcement changes nothing. It was an act of fundamental dishonesty. The Sage Grouse problem is no better solved today than it was yesterday before this announcement. Despite the Administration's decision, as long as the BLM is able to impose its will on the state of Utah by changing its land management plans as if the bird were listed, defense readiness will suffer. Large tracts of military test and training ranges will be off limits if the Administration has its way. Language I included in NDAA is now more vital than ever. It allows state plans that protect the Sage Grouse to go into effect, and prohibits the BLM from gaining greater control over land than they already have. Using effective state plans rather than a federal lands plan is better for the state. Without this language the federal government will continue to abuse the states, shortchange the taxpayer and weaken the military."

"As long as the BLM is able to impose its will on the state of Utah by changing its land management plans as if the bird were listed, defense readiness will suffer."

--Congressman Rob Bishop

Congressman Scott Tipton (R-CO)

Congressman Scott Tipton (R-CO)
Colorado has been at the forefront of implementing locally-tailored sage grouse preservation efforts, and a federal ESA listing would have jeopardized those efforts. The work being done at the state, local and federal level, which includes voluntary conservation and species protection on the part of landowners and government, is having a positive impact. We have heard abundant testimony from scientific and conservation experts that these locally-tailored plans are far more effective for species preservation than a one-size-fits-all federal approach. Unfortunately, the 'not warranted' decision is expected to be accompanied by the signing of the final federal land use plan amendments, which will still jeopardize this local preservation approach. These amendments will severely restrict ranching, recreation and energy and minerals development, including a likely mineral withdrawal of between 9-10 million acres, all of which will be devastating to local economies. While the 'not warranted' decision is welcome, the implementation of equally oppressive land use plans, which do nothing to improve on the work already being done locally to preserve the grouse, still leaves Colorado and other Western communities in a worrisome situation.

"We have heard abundant testimony . . . that these locally-tailored plans are far more effective."

Senator Steve Daines (R-MT)
While it is good news that the sage grouse is not listed as an endangered species, I remain concerned that the Obama administration's land-use plans will have a harmful impact on Montana's economy, our land users and Montanans' way of life. The fact remains, sage grouse numbers have increased in the west by nearly two-thirds since 2013. Montana needs to continue take the lead on sage grouse conservation and I hope BLM can revise their plans to allow Montana to do so. Because a sage grouse can't tell the difference between federal, state and private lands, Montana should take the lead not a bunch of out of Washington, D.C. bureaucrats.

Senator Steve Daines (R-MT)

Governor C.L. Butch Otter (R-ID)
While I appreciate Secretary Jewell's public recognition of local and state efforts to preserve the species and its habitat, the question behind a 'not warranted' determination is: 'At what cost'? For months now, the federal government's initially transparent and collaborative process has been replaced by closed-door meetings and internal memoranda. That's resulted in a land management scheme for sage-grouse habitat that remains a mystery to property owners and state and local wildlife advocates alike. The feds are asking us to trust them. It's not that simple and unfortunately this is far from over. I remain committed to do what's best for the species and people of Idaho.

> "For months now, the federal government's initially transparent and collaborative process has been replaced by closed-door meeting and internal memoranda."
>
> --Governor C.L. Butch Otter

Senator Mike Crapo (R-ID)
While a 'not warranted' decision is better than a listing determination under the Endangered Species Act, the Department of Interior's reliance on heavy-handed land-use management plans to arrive at this decision is unacceptable. The Department ignored much of what the Idaho Sage Grouse Task Force recommended and, instead, opted to move forward with top-down federal lands-use management plans. While the agency cited collaboration as the basis for its decision, the move to abandon the state's planning process that adequately addressed true threats to the bird--namely the impact of wildfires and invasive species on sagebrush habitat—will ultimately lead to greater uncertainty for sage grouse populations in the future.

Senator Jim Risch (R-ID)
While I am pleased Secretary Jewell has acknowledged *the greater sage-grouse population is on the rebound, I am concerned the regulations generated by the Department of the Interior to reach this decision will do little to continue the recent population rebound in Idaho. We had pressed DOI early on to rely on a locally-driven, collaborative process to conserve the sage-grouse, but this process changed when it came to Washington, D.C. The two main threats to the greater sage-grouse in Idaho are fire and invasive species. The Secretary adopts a plan that relies heavily on regulation of the mining, oil, and gas industries when it should focus more heavily on fire control. Today's announcement serves as political cover for another top-down mandate that will not be the best prescription for sage-grouse in Idaho.*

Congressman Mike Simpson (R-ID)
For years, state and federal partners have worked toward the not warranted listing that was issued today, and, given the impact that a listing decision would have on Idaho and the West, I am pleased with the Fish and Wildlife Service's determination. That being said, I recognize that this decision does not come without a price. There has been widespread concern about the impact of the federal land management plans, especially from the states, which felt their recommendations in this process were disregarded.

Idaho Congressional Delegation: Congressmen Raul Labrador (R-ID) and Mike Simpson (R-ID), Senators Jim Risch (R-ID) and Mike Crapo (R-ID)

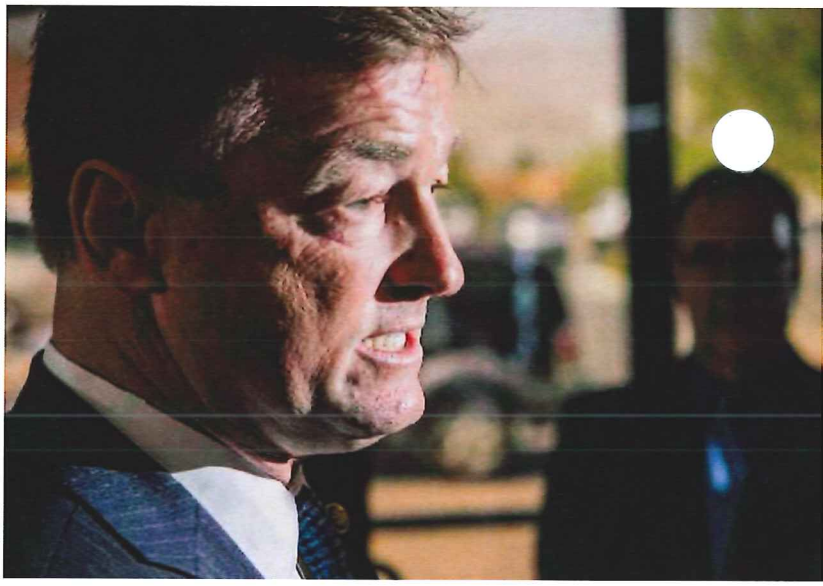
Whether the price we pay for a not-warranted decision will be too high remains to be seen. In the meantime, I will continue working with both federal and state agencies to see that the real threats to sage-grouse habitat, including wildfire, can be addressed.

Senator Dean Heller (R-NV)

This is not a win for Nevada. Even though the Fish and Wildlife Service has decided the greater sage-grouse doesn't merit protections under the Endangered Species Act, the Department of the Interior's final 'federal plans' pose major threats to many Nevadans' long-term way of life and success.

This has been an issue of the Department of the Interior using the threat of a listing to get what it really wanted all along: limiting Nevadans' access to millions of acres of land equal to the size of the state of West Virginia. At the end of the day, Big Government continues to tighten its grip at the expense of rural America's future, especially in Nevada.

Rather than addressing the real threats to sage-grouse habitat in our state - wildfire, the spread of invasive species, and wild horse and burro mismanagement – these new regulations simply restrict Nevadans' access to millions of acres of public lands. Nevadans hate to see the federal government further limit the use of their public lands. I will continue to fight these unnecessary restrictions and work with our Congressional delegation on policies that protect our environment, grow our economy, and support our western ways of life.



Senator Dean Heller (R-NV)

Broad-Based Congressional Support

Support in Congress acknowledges the need for more balanced common-sense protections afforded by state management plans. Efforts to exert draconian regulatory measures over non-endangered species by federal land regulators is a concerning new precedent.

For these and other reasons, Congressional interest has remained considerable in protecting the more proactive, balanced, and less restrictive plans of Western states. In fact, on November 5, 2015, 76 members of Congress from 35 states signed a "Dear Colleague Letter" in support of Congressional protections for state management of Sage-grouse.

The letter reads as follows:

> *We are writing to request that you include in any FY2016 spending measure language preventing the Interior Department from moving forward with the highly restrictive Resource Management Plan Amendments (RMPs) that are inconsistent with Greater Sage Grouse conservation planning at the state level.*
>
> *The U.S. Department of Interior recently announced that, while it would not consider listing the Greater Sage Grouse as threatened or endangered under the Endangered Species Act (ESA) for five years, it would instead move rapidly forward with RMPs which would result in land use restrictions on millions of acres of public lands. In many cases, the RMPs are as restrictive as a formal listing under the ESA.*
>
> *The Obama Administration's scheme to use the Sage Grouse as the excuse to institute restrictive RMPs to shut down virtually all development on large swaths of public lands in the West, particularly oil, gas, and mineral development, will have a devastative impact on state and local economies.*
>
> *The Administration's actions will have a negative impact on our nation's energy and natural resource independence. Furthermore, the Greater Sage Grouse is not truly endangered. Its population is greater today than it has been in recent years thanks to the concerted efforts of several States which have implemented at their own expense comprehensive Sage Grouse Recovery plans. One can purchase a hunting license for Sage Grouse in several states. With few exceptions, the RMP restrictions far exceed common-sense measures developed by states to more effectively balance conservation with the needs of their citizens.*
>
> *Environmental Groups have further indicated*

76 SIGNERS OF CONGRESSIONAL SAGE-GROUSE LETTER

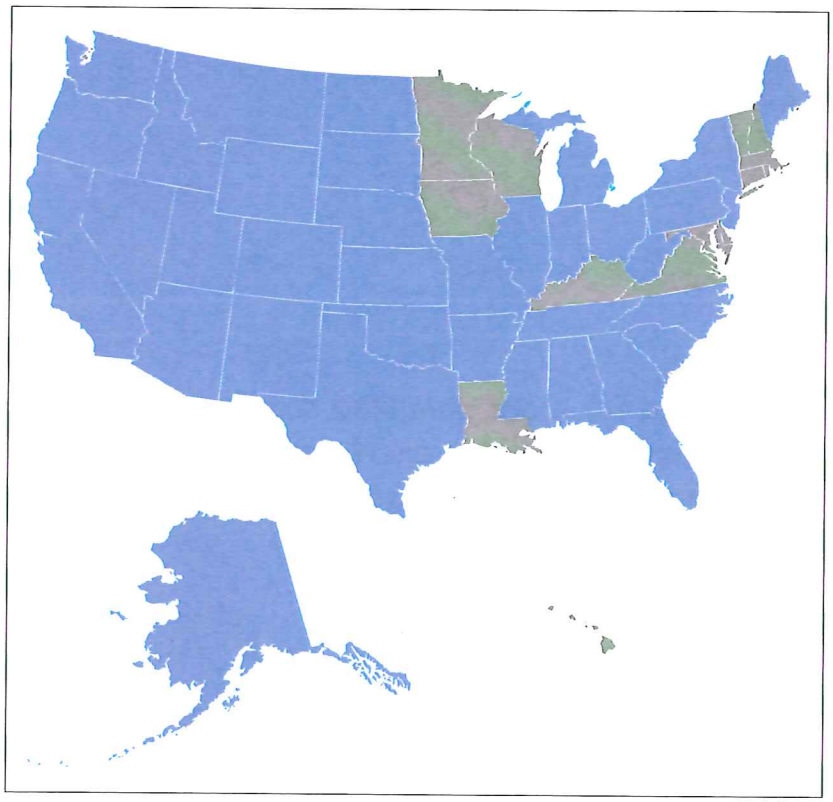


Figure 2. Seventy-six members of Congress from 35 states signed a "Dear Colleague" letter in support of congressional protections for state management of Greater Sage-grouse. Members included were:

Allen	Huizenga	Pompeo
Amodei	Hunter	Reed
Babin	Hurd	Renacci
Barletta	Jenkins, Evan	Rogers, Mike
Benishek	Kelly, Mike	Ross
Bishop, Mike	Labrador	Russell
Bishop, Rob	LaMalfa	Salmon
Brady, Kevin	Lamborn	Scott, Austin
Bridenstine	Latta	Sessions
Chaffetz	Loudermilk	Shimkus
Cole	Love	Shuster
Collins	Lucas	Smith, Adrian
Conaway	Luetkemeyer	Stewart
Cook	Lummis	Stivers
Cramer	MacArthur	Stutzman
Desjarlais	Marino	Thompson,
Duncan, Jeff	McClintock	Glenn
Finsher	McMorris,	Tipton
Franks	Rogers	Walden
Gibbs	Meadows	Weber
Gohmert	Miller	Webster
Gosar	Noem	Wenstrup
Hardy	Palazzo	Williams
Heck	Palmer	Woodall
Hill	Pearce	Young, Don
Holding	Poliquin	Zinke

that they would challenge the Interior Department's 5-year listing deferral in federal court within the next few months. The potential for Sage Grouse critical habitat designations under an ESA listing would negatively impact military readiness and several large military installations and training areas in several western states.

In conclusion, we believe that any FY2016 spending bill should both prevent unnecessary RMP restrictions from being implemented, as well as prevent court ordered reopening of the Interior Department's ESA listing deferral.

This high level of congressional support was instrumental in support for a Sage-grouse rider in the year-end omnibus spending bill. The interest in inclusion of Sage-grouse compared to other proposed riders was described in quoting Congressman Mike Simpson (R) Idaho on the negotiations over the omnibus spending bill:

Another top appropriator -- Energy and Water Development Subcommittee Chairman Mike Simpson (R-Idaho) -- said he places a higher priority on a rider targeting Bureau of Land Management land-use plans for the sage grouse rather than the Waters of the U.S. rule -- a top priority for many Republicans and some Democrats.

"I'd drop the WOTUS and put in sage grouse," Simpson said, noting injunctions at the district court level have put a stay on the water rule.

"If they have sage grouse in there, I guarantee there's 60 Republicans from Western states that would fight their rear ends off to make sure this bill passes," Simpson said. "If it's not, maybe they're not too interested. I don't know."[1]

1 See E&E publishing article "Horse-trading, rumors persist with 5-day reprieve on tap" December 10, 2015

"This amendment balances conservation with national security... There are also multiple examples already of state plans which are effectively managing and conserving sage-grouse populations. We need to give time for these state plans, orchestrated by folks closest to the land and to the issue at hand, to be fully implemented and to accomplish their goal of protecting this bird."

Engaging the Public in the Process

COORDINATED CONSULTING TEAM OUTREACH

During the past year we have learned that people not only want to know what is happening with Greater Sage-grouse, but also to understand how those decisions impact them.

ESA Listing and Control of Utah Working Landscapes

For the past decade, powerful special interest groups have been working tirelessly to replace state management authority of Greater Sage-grouse and their habitats with draconian federal regulation under the Endangered Species Act. Listing of Greater Sage-grouse would create a federal nexus on all 8+ million acres of Sage-grouse habitat in the state, allowing litigation by activist organizations on all land-use decisions whether the property is federally managed, state owned or private property. This would likely open the floodgates of litigation and further limit use of working landscapes in the State of Utah.

Utahns access to and decision-making authority with respect to working landscapes in the state, has dramatically declined in the last few decades. Legitimate questions are being raised about the staggering level of federal control over decisions that detrimentally impact the ability of Utahns to use, work and enjoy these lands. Listing of Greater Sage-grouse would substantially and likely permanently restrict access to and productivity of these landscapes.

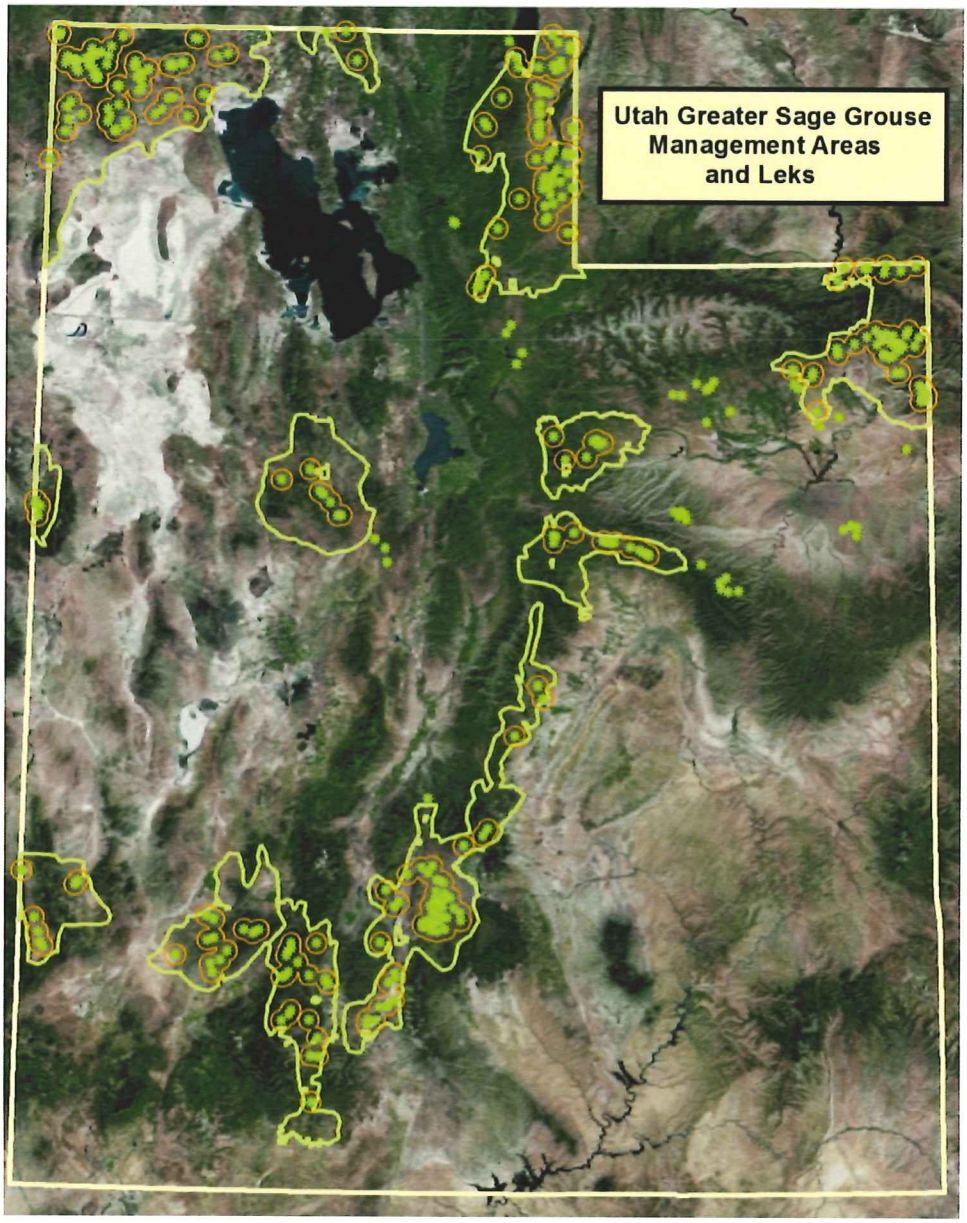


Figure 14. Sage-grouse are distributed across 8 million acres within the State of Utah. Most of the sagebrush habitat is desert shrub which is poor Sage-grouse habitat, accounting for the overall low population of Sage-grouse in the state.

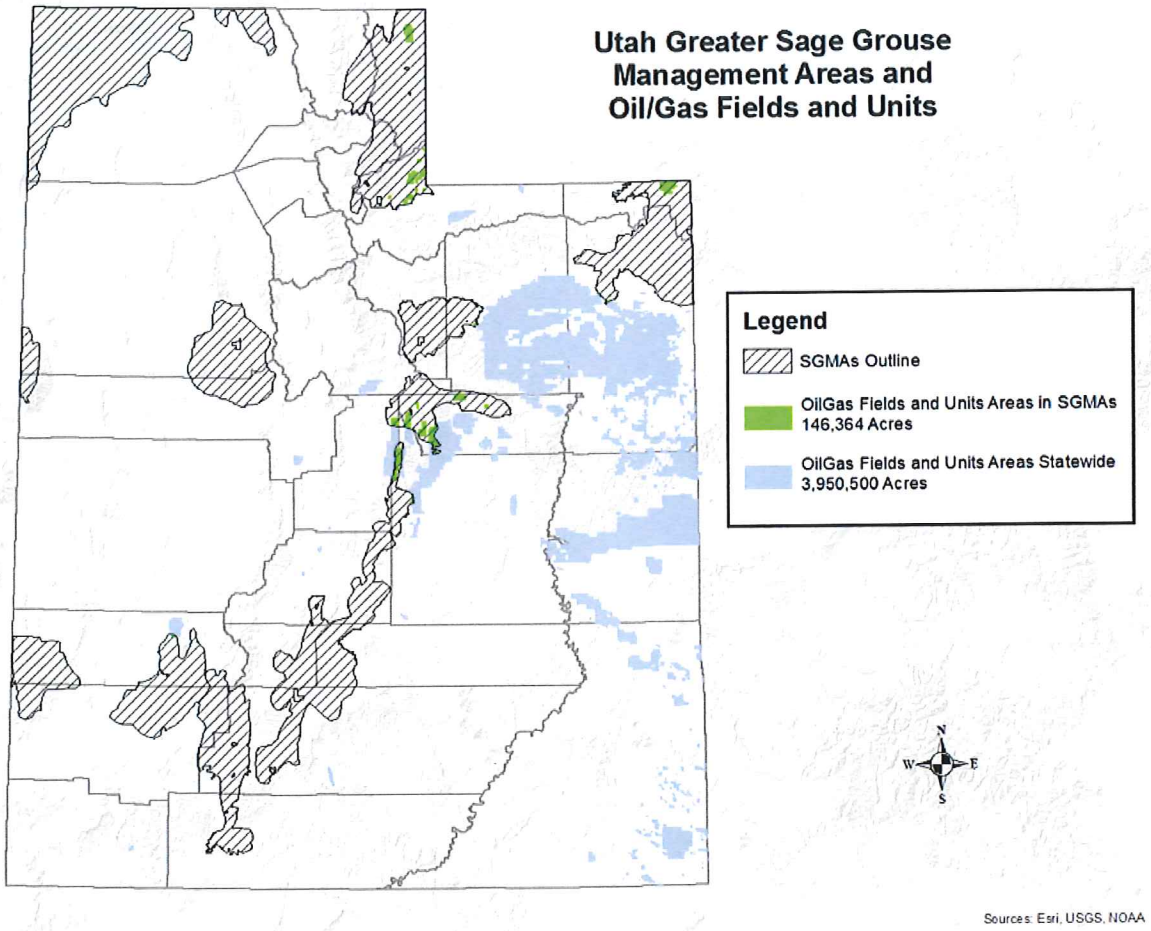


Figure 15. Protecting Sage-grouse within the state's SGMAs is possible while also allowing oil and gas development under state management authority. Federal listing of the species and additional federal restrictions in areas outside of the state's SGMAs could result in economic losses in the billions of dollars annually.

Economic Impact Analysis Illustrates importance of the issue to a healthy economy

As part of our efforts, we have worked with the Utah Public Lands Policy Coordination Office to more carefully quantify the potential impacts of a Sage-grouse listing, or additional restrictions through federal resource management plans. The Bureau of Economic stand Business Research at The University of Utah was commissioned to do a third-party independent assessment of economic activities within Sage-grouse habitats within the State of Utah (BEBR Report). The results of their analysis are insightful. These impacts threaten key components of Utah's economy including oil and gas, mineral development, outdoor recreation, education funding, livestock production and farming.

Here is a summary from the BEBR Report:

> *...a conservative estimate of activities in FWS current Sage-grouse range suggests they contribute 13,000 jobs with $831 million in earnings and $2.5 billion in gross state product (value added). Activities in historical-only range support 11,000 jobs with $723 million in earnings and $2.5 billion in GSP. Finally, activities in SGMAs support almost 5,000 jobs with $165 million in earnings and $339 million in GSP.*

By analyzing current, potential historic range and the state's SGMA's, the report clearly illustrates the substantial difference between state management focused within the state's Sage-grouse Management Areas and a federal model which could result in substantial restrictions in not only SGMAs, but also current and historic range:

> *The differences in values between SGMAs and those of the other two ranges is striking. As noted above and shown below, although oil and natural gas production from wells within SGMAs was once a major component of total production statewide, production within SGMAs has been in decline since the late 1980s (oil)/ mid-1990s (gas), with current production volumes only a very small fraction of their highs from the 1980s and 1990s.*

Educating the Public

Engaging the public to support common sense solutions for Greater Sage-grouse is the third area of emphasis set forth in the State of Utah contract requirements. New and existing and team members and resources are enhancing our ability to educate and engage the public.

Direct Engagement

The Greater Sage-grouse Coordinated Consulting Team is working with staff, contractors, partners and volunteers in key Sage-grouse states to directly engage the public. We focused these efforts in counties with Sage-grouse populations where listing of the birds not only could affect conservation of the species, but also education funding, hard-working families, outdoor recreation and local economies. We found that people support state-based management efforts and want federal wildlife managers to augment state efforts, not replace state efforts with more federal regulation. Significant in-person outreach efforts have been undertaken in Western States including Utah, Idaho, Montana, Wyoming, Nevada, Washington and Colorado.

Engaging Existing Supporters

During the last year we have engaged tens of thousands of interested western residents on the issue of Greater Sage-grouse. There is significant concern about the fact that a species with an approximate population of 500,000 birds spread across 11 Western states would be considered an endangered or threatened species. We also found that respondents felt the restrictions of the Endangered Species Act are best utilized as a last resort. This was particularly true where the efforts of impacted states have stabilized Sage-grouse population trends in recent decades. Just as importantly, the public trusts states to implement solutions that work

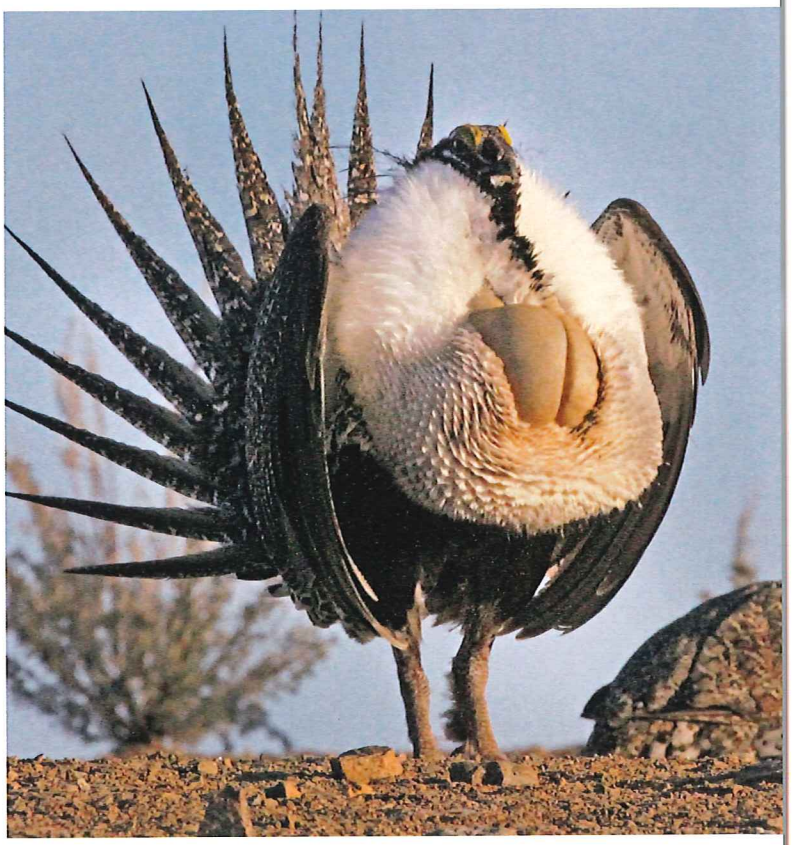
for conservation and for western economies. They also support funding from federal wildlife agencies to Western states to help advance efforts of state wildlife professionals to implement common sense solutions for conservation priorities like Greater Sage-grouse.

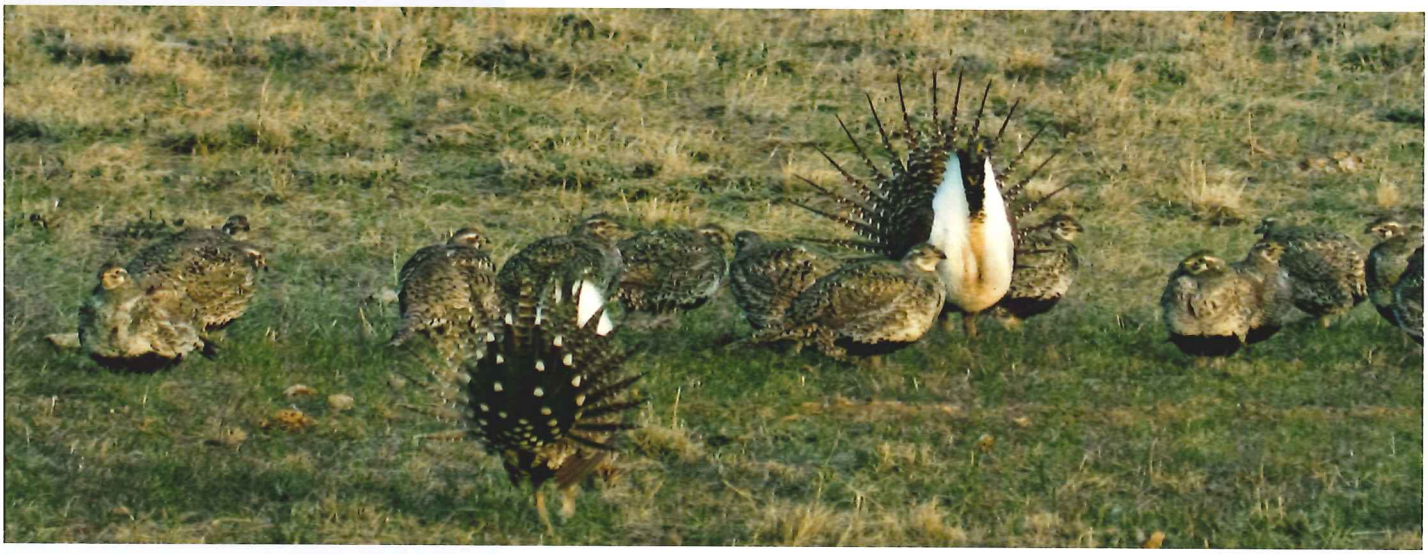
Paid Outreach

The Sage-grouse Coordinated Consulting Team began outreach efforts to help understand how certain demographics felt about the possibility of a listing of Greater Sage-grouse. The most responsive demographics included parents of school-age children, outdoor recreation enthusiasts and individuals concerned about economic productivity and jobs. We learned that these individuals responded more readily to information that conveys how a premature listing of Greater Sage-grouse might impact them and their families. There was a high degree of support for state conservation measures among these individuals. This support increased when the individuals understood these conservation measures were consistent with common sense solutions that ensure balanced use of resources in ways that protect education funding, outdoor recreation and minimized impacts to jobs and the economy.

Direct Action

Literally thousands of phone calls and tens of thousands of messages of support have been sent to Congress as part of these efforts to support state management of Sage-grouse. Over 50,000 individuals have signed the online petition in support of Congressional action to provide an extension of time. This is in addition to tens of thousands of existing supporters who have expressed concern regarding policies impacting Western states. These supporters have played a significant role in contributing to the momentum of Section 2862 of the National Defense Authorization Act.





Why Activists Use the ESA to push Greater Federal Control Unilateralism

The Anti-Use Ideology

There is an ideology and methodology which underlies these efforts to use the Endangered Species Act and other federal provisions to attack sportsmen, abundant wildlife, and the West. Political Scientist Martin Nie explains this in his groundbreaking article *The SocioPolitical Dimensions of Wolf Management and Restoration* published in the 2001 edition of the *Human Ecology Review*. See http://www.humanecologyreview.org/pastissues/her81/81nie.pdf

Professor Nie explains:

> *Similar to a number of other environmental issues and debates, wolf politics and policy is often about much more than just wolves and their management. The struggle over carnivore conservation is often a surrogate for broader cultural conflicts: "preservation versus use of resources, recreation-based economies versus extraction-dependent economies, urban versus rural values, and states' rights versus federalism" (Primm and Clark 1996, 1037).*

Citing Harvard University Professor E.O. Wilson:

> *"This is not really a story about wolves, but a story about people and their struggle to define the future of land use in the American West – it is within this highly charged political context that the wolf in Yellowstone must be understood as a symbol, 'a biopolitical pawn' in a much larger conflict currently being waged between the activists of two social movements – environmentalism and wise use." Scarce (1998)*

He also explains its connection to the concept of "rewilding" of the West:

> *The Wildlands Project (TWP) is also unmistakably interwoven into the story of wolf management and restoration. The mission of TWP is both simple and sweeping,* "to protect and restore the natural heritage of North America through the establishment of a connected system of wildlands – To stem the disappearance of wildlife and wilderness we must allow the recovery of whole ecosystems and landscapes in every region in North America – we live for the day when grizzlies in Chihuahua have an unbroken connection to grizzlies in Alaska; when wolf populations are restored from Mexico to the Yukon; when vast forests and flowing prairies again thrive and support their full assemblage of native plants and animals; when humans dwell with respect, harmony, and affection for the land; when we come to live no longer as conquerors but as respectful citizens in the land community *(The Wildlands Project 2000, 4)."*

The Underlying Anti-Sportsmen Philosophy

Many of the activists who push an increasing federal unilateralism over wolves, sage-grouse, ecosystem management and a diminished role of state wildlife agencies, are strongly anti-hunter or

anti-sportsmen in their philosophy. After a meeting of several large environmental groups, one activist explained the cooperative thinking on future policy decisions. The article, entitled, "Now is the time to be bold" explains:

> *So what solutions do I offer? The 5 Keys to Reforming Wildlife Management in America , are as follows: 1. Restructuring the way state Fish & Game departments operate. Politics: western governors appoint agency commissioners, which essentially, tell the state departments what to do. This is cronyism at its worst. Economics: state departments are mostly funded by the sale of hunting/fishing tags or permits. These agencies are bound into serving the interest of "sportsmen" because it's the hand that feeds them. Modern funding mechanisms, the application of best-available science and genuine public involvement are sorely lacking in these institutions and it must be addressed. Another option would be to empower the federal government to manage wildlife on federal public lands.*

The author goes on to suggest that the "conservation community" has adopted an agenda of: (2) Removing all grazing from public land; (3) Abolishing Wildlife Services: (4) Banning trapping/snaring on public land; (5) No killing of predators. What effect will this have on wildlife abundance? What effect will this have on sustainable yield, hunting and the North American Model? Of course this would be a disaster not only for hunting, but for conservation of wild game species in general. But it does show the level of anti-hunting sentiment that underlies the push for a growing federal unilateralism when it comes to wolves and sage-grouse.

Using the Federal Government and ESA as a "Club"

One high-level thought leader, activist, and former head solicitor in the Department of Interior during the Clinton administration was even more straightforward in his comments during a recent Congressional hearing on the Endangered Species Act. John Leshy was not only brazen, but surprisingly candid and unapologetic that the "federal government and the Endangered Species Act" "provides the club" to force states to do what they want them to do. Those who have followed the spotted owl, or gray wolf, will recognize the use of the Endangered Species Act as a surrogate, or proxy, to collaterally attack multiple-use such as logging, grazing, and hunting.

Eastman's Hunting Journal was candid in their assessment of how Sage-grouse will be utilized to attack hunting:

> *Endangered Species Act (ESA) is being used as a weapon to potentially destroy our hunting heritage... The sage grouse is the next piece in the puzzle for the feds and the animal rights groups to further limit our access and sport. If you look at the wolf and grizzly bear recovery area map, and overlay the proposed sage grouse recovery area you can easily see they fit together like a glove. The sage grouse habitat area will encompass most of what is thought to be some of the best mule deer habitat on the planet. Make no mistake about it, listing the sage grouse as endangered species would have disastrous affects on western hunters and recreationalists. This "power grab" of our precious wildlife resource is nothing more than politics as usual, pure and simple.*

In a letter dated, May 26, 2015, sportsmens organizations from Sage-grouse states signed a letter in support of congressional action to protect state management of Sage-grouse. In total, 150 sportsmen, conservation organizations, livestock organizations, and western leaders (see following page) signed the letter. A copy of the letter is included in Exhibit D.

Restrictions on access to BLM and Forest Service land can also restrict access to state and even private lands.

Lawsuits

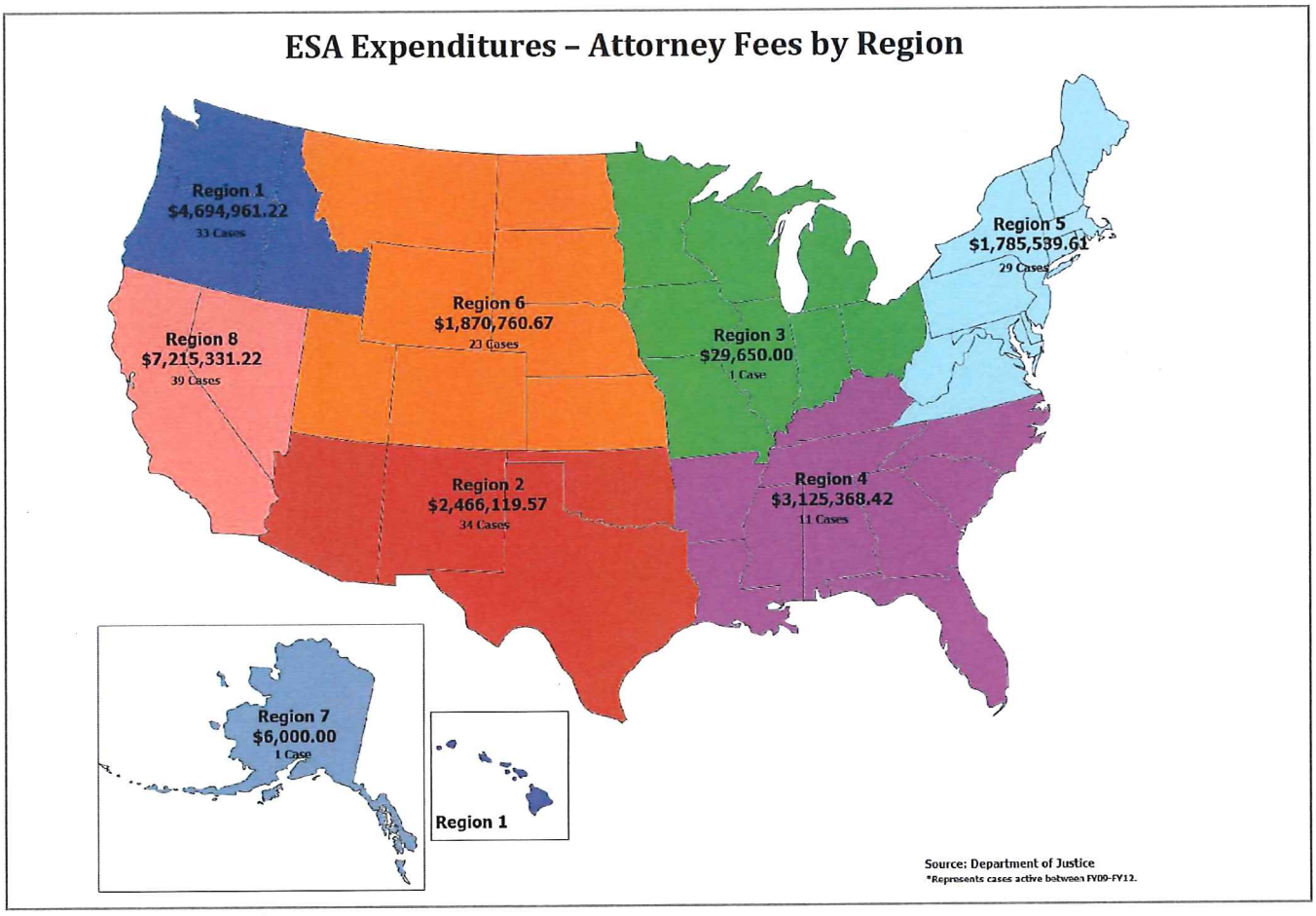
The legal and administrative history of Greater Sage-grouse is full of repeated petitions for listing as well as multiple lawsuits. More lawsuits and listing petitions for the species in coming years are virtually guaranteed. After a decade of lawsuits and ESA listing decisions for the Greater Sage-grouse, it is becoming clear there is no end in sight. This was the third ESA decision for the Greater Sage-grouse in just 10 years. USFWS is already indicating that they will make yet another ESA listing decision on Greater Sage-grouse in another five years. Additionally, several environmental groups have already indicated that they plan to file lawsuits to challenge the listing decision and/or the BLM and USFWS land use plan amendments.

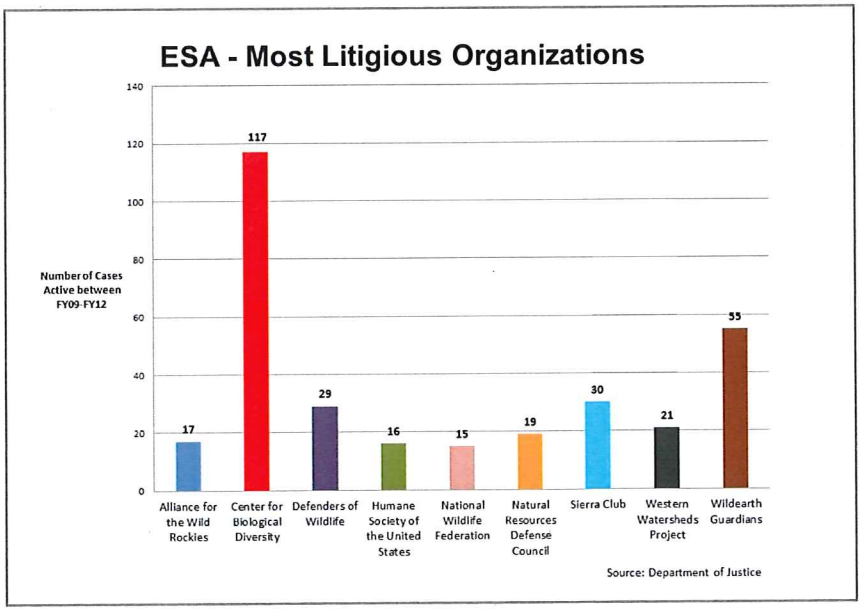
Many have begun to point out that new restrictions proposed by federal agencies and radical environmental special interests using the repeated threat of an ESA listing are more about micromanaging state wildlife policies and landscape control than advancing species conservation. Already hundreds of millions have been committed to conservation of Greater Sage-grouse, almost to the exclusion of other species of much greater conservation concern. The constant legal and political wrangling creates further frustration and uncertainty for those who are needed the most for conservation of the species.

One provision of the language introduced by Congressman Rob Bishop provides litigation safe-harbor to allow state conservation efforts to go forward without interference of litigation by these powerful special interest groups:

"Judicial Review—Notwithstanding any other provision of statue or regulation, this section, including determinations made under subsection (d)(3), shall not be subject to judicial review."

After years of abuse of the Endangered Species Act, it is time to allow states to thoughtfully implement their state conservation plans without further interference and manipulation.





Millions of Taxpayer Dollars Spent on Endangered Species Act Litigation and Attorney Fees

WASHINGTON, D.C., June 19, 2012 - According to data recently obtained from the Department of Justice (DOJ) in response to document requests, the federal government has defended more than 570 Endangered Species Act (ESA)-related lawsuits costing U.S. taxpayers more than $15 million in attorney fees – in just the past four years. This data provides further evidence that the ESA has become litigation driven, where money and resources are spent addressing endless, frivolous lawsuits instead of species recovery.

Environmental groups are filing the vast majority of litigation, with the Center for Biological Diversity and the WildEarth Guardians leading the charge.

(http://naturalresources.house.gov/newsroom/documentsingle.aspx?DocumentID=299899)

Historical Parallels

Disproportionate focus on "protections" which limit human activity leads to lost opportunities. In 1992, the U.S. Fish and Wildlife Service listed the spotted owl as an endangered species. The Service and environmental activists repeatedly stated that shutting down the timber industry was the answer to protecting the spotted owl. The negative impacts to industry, local economies, and hard-working families in the region have been well-documented. Eighteen years later, these draconian "protection" measures have not been successful in stopping the decline of the spotted owl. The singular focus on human activity missed a key factor in spotted owl decline—competition from the larger and more aggressive barred owl. Federal managers now acknowledge the role of natural selection in spotted owl decline. Now, to save the spotted owl from further decline, barred owls are being shot and killed. Unfortunately, almost 20 years of conservation opportunity was lost while the spotted owl was used as a surrogate for those who oppose human use of the natural resources in the Pacific Northwest.

Western states do not want to make this same mistake. In the last 18 months, it has become clear that states are investing heavily in Sage-grouse conservation. The state of Utah is no exception. Tens of millions of dollars have been invested in Sage-grouse conservation in Utah. Understanding the challenges facing Sage-grouse, Utah's plans have grown and strengthened populations. These conservation measures are making Utah's Sage-grouse habitats more resilient, redundant and capable of supporting more Sage-grouse. These programs are also providing important solutions for other challenges including wildfire, pinyon and juniper encroachment, invasive plant species, and watershed restoration. The right solution for Sage-grouse and citizens of the state of Utah is to ensure that the state's conservation plan can be fully implemented without further unnecessary and unhelpful restrictions. Our efforts are to protect state management of Sage-grouse and the programs that are providing such significant dividends in the state of Utah.

The singular focus on human activity missed a key factor in spotted owl decline--competition from the larger and more aggressive barred owl. Now to save the spotted owl from further decline, barred owls are being shot and killed.

Federal Agencies Increase Restrictions

BLM land use plans usher in another round of federal restrictions. The focus once again is primarily on shutting down human activity; threatening further loss of resources for conservation.

In this quarter's reporting period, the Sage-grouse Coordinated Consulting Team has worked diligently to work with members of Congress on concerns related to newly proposed federal regulatory restrictions. Restrictions on BLM and Forest Service land are a significant challenge for pinyon/juniper removal, wildfire prevention and suppression, and other important conservation measures for Sage-grouse. In fact, more than 90% of acres burned in an 18-year study period occurred on land managed by the Bureau of Land Management. Utah's Watershed Restoration Initiative is addressing these challenges. Our hope is that less federal red tape will allow more conservation work to be done in the next 10 years. Just as important is protecting the programs and private funding sources that made these programs possible.

This is one of the reasons that the newly proposed Sage-grouse "focal areas" have been a significant focus of concern to Western states. As part of the federal focal area strategy, approximately 9-10 million acres of mining withdrawals are being

proposed by the federal government. This raises many questions about the impacts to Western states, industry, economy, and jobs for those living across the West. While there has been much focus on these mining withdrawals across Oregon, Nevada, Idaho, Montana, Wyoming and Utah, BLM restrictions will be much more far reaching:

> "Prior to offering any parcels for sale, the BLM will ensure conformance with the sage grouse plans," says Mitch Snow, a spokesman for the agency. Those plans call for strengthened sage grouse protection across 67 million acres in 10 states, putting 28 million acres off limits for surface development. In addition, tiered restrictions will be placed on any new leases, which can include disturbance caps, density limits on well pads and roads, and buffer zones between drilling activity and leks, the birds' mating grounds.[1]

1 To read more visit: http://www.hcn.org/articles/blm-mulls-energy-development-in-sage-grouse-habitat

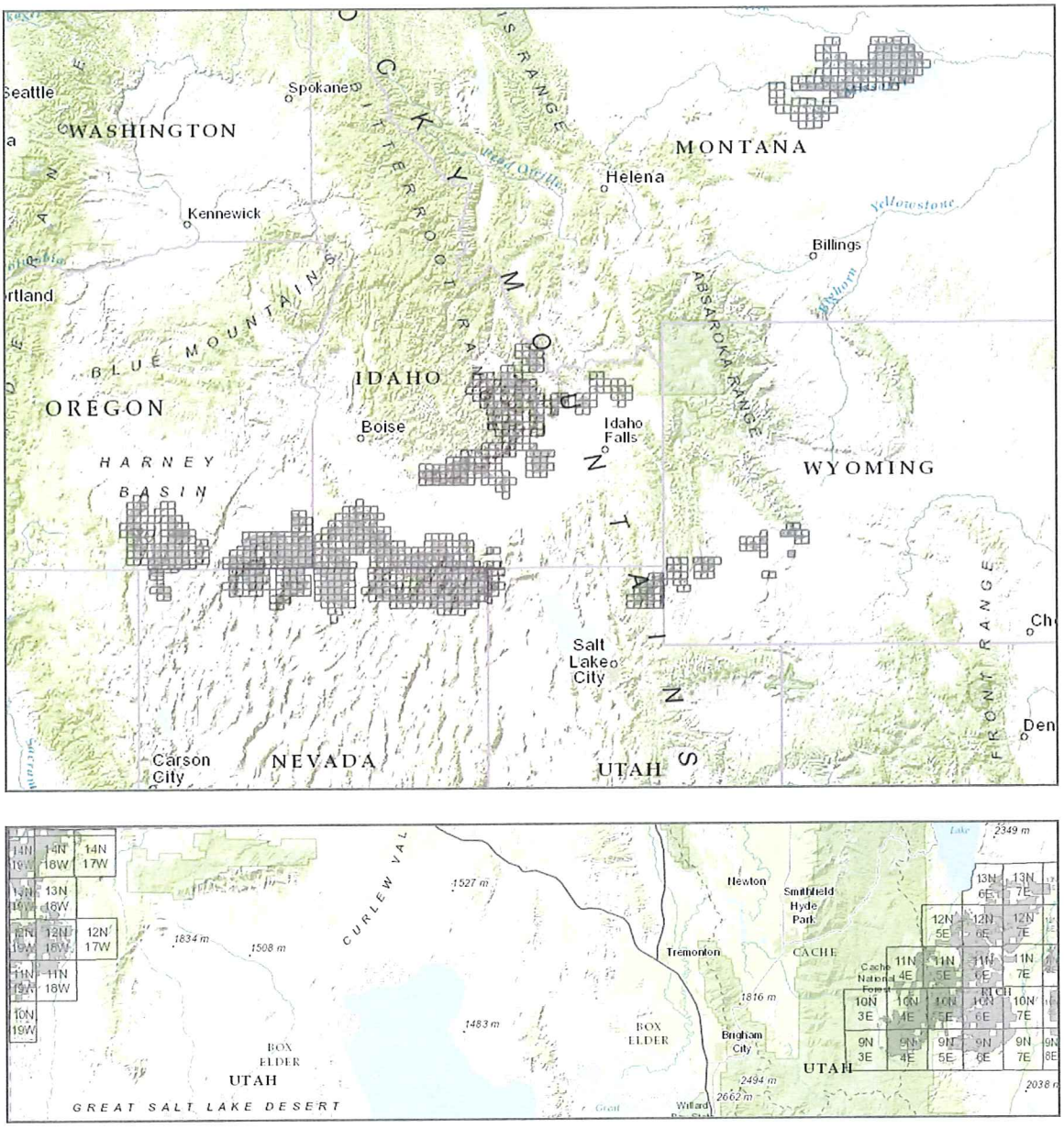


Figure 16. Proposed mining withdrawals in Sage-grouse focal areas comprise approximately 3.8 million acres in Idaho, 2.7 million acres in Nevada, 1.9 million acres in Oregon, 983,000 acres in Montana, 252,000 acres in Wyoming, and 231,000 acres in Northern Utah. (See http://blm-egis.maps.arcgis.com/apps/webappviewer/index. html?id=45b2d7896c36467aac3990b739d75a26)

Veteran's Cemetery

In Sparks, Nevada, the BLM's management plans also placed doubt on a veterans' cemetery. An op-ed in the Reno-Gazette Journal explains:

> *Another conflict exists in Sparks where Washoe County has identified a 40-acre parcel adjacent to the Pyramid Highway that would be an optimal location for a new veterans' cemetery. But the BLM map mischaracterizes this spot as habitat, even though it's currently being used by dirt bikers and most certainly isn't a good place for the birds.*
>
> *Washoe County has expended considerable resources to develop our own habitat maps because we think wildlife conservation is important. We certainly strive to avoid conflicts between wildlife habitat and development. But at the same time, we cannot be constrained by a faulty habitat map that means we can't acquire lands needed for development.*

Figure 17. Land proposed for a veterans' cemetery in the city of Sparks, Nevada placed at risk by propose Sage-grouse restrictions.

Water Tank Update

Efforts to rebuild an aging water tank illustrate the level of control already being exerted by federal regulators in the name of Sage-grouse. The truly draconian nature of the newly proposed land-use plans will continue to worsen over the long-term. In an article by the Associated Press, a meeting between Nevada Governor Brian Sandoval with Interior officials was required to allow even this basic project to move forward:

> *"Federal land managers are clearing the way for a rural Nevada county to replace an aging water tank that critics called a prime example of development doomed by new protections for the greater sage grouse.*
>
> *The move comes a week after Republican Gov. Brian Sandoval announced that the U.S. Interior Department agreed to address concerns about the land-use restrictions, including the water tank that White Pine County officials say is desperately needed near Great Basin National Park along the Utah line.*
>
> *U.S. Bureau of Land Management officials authorized the necessary right-of-way late Thursday that will allow construction to begin in July, agency spokesman Steve Clutter said.*
>
> *Clutter says the deal protects important habitat, consistent with regulations issued in September when Interior Secretary Sally Jewell determined that the chicken-sized bird doesn't need Endangered Species Act protection. Sandoval met with Jewell last week during a meeting of the Western Governors' Association and told reporters they had made strides in addressing concerns about the rules...*
>
> *Lawyers representing the BLM said in a brief filed late Thursday that the water tank site is 0.7 miles from an existing breeding ground and in an area that contains habitat for grouse breeding and nesting.*
>
> *Nevertheless, federal officials could approve the project because it would benefit the grouse through installation of anti-perching devices to keep away raptors, among other things.*
>
> *"Contrary to plaintiffs' assertions, these requirements are not 'one-size-fits-all,'" assistant U.S. Attorney General Luther Hajek wrote. "BLM has determined that the replacement of the water tank would provide a net conservation gain to sage grouse by reducing the attractiveness of the area to predators and ensuring a source of water to control wildfires."*[1]

1 To read the complete article visit: http://www.washingtontimes.com/news/2015/dec/11/blm-approves-nevada-project-critics-claimed-doomed/

It now appears that restrictions on the time frame allowed for construction may once again make the project impractical or impossible. Whether or not the project moves forward, the underlying takeaway from these examples points to a concerning new reality. The most basic of governmental decisions cannot be made without permission from the Department of the Interior.

While permission may be granted in some high profile cases, it is clear that Interior will use Sage-grouse to control even the most common-sense and basic of decisions. What this shows is that federal Sage-grouse plans were designed to dramatically affect Western states. This will have a debilitating affect on industry and citizens in the region. States have already shown that more balanced and proactive conservation measures can work for Greater Sage-grouse. Congressional action will be needed to allow for implementation of state's conservation plans to protect the state of Utah's interests from unnecessary impacts to Utahns, local communities, and the state's economy.

These concerns are shared by leaders in Congress:

"While [the Omnibus] does contain much good, it also has shortcomings. House leadership has acknowledged these issues and they are particularly aware of the impacts on western priorities. I am confident that in the coming months, those shortcomings will be addressed and made right. The problem with the bill is what it could have been and what it should have been. Western issues that improve our lives should NOT be held hostage by Democrats in the House and Senate. These issues were eliminated with the threat of a government shutdown for political reasons." (Congressman Rob Bishop)

Could Federal Plans be used to Decrease Mule Deer Populations?

Mule deer populations have been gradually declining over the past 40 years across the West. Cumulative population declines over the past 40 years have been significant. This has been an area of significant concern for sportsmen. So how will these 2,000 pages of new restrictions impact mule deer populations? Seasonal sage-grouse populations overlap with mule deer populations by as much as 91%. These are some of the most important mule deer areas to hunters in terms of mule deer population numbers, tag allocations, and hunting opportunity in the country. It is not limited to mule deer either. Sage-grouse also inhabit prime hunting areas for Pronghorn and Rocky Mountain Elk.

Considering the huge area of Sage-grouse habitat, 2,000 pages of new restrictions proposed by Bureau of Land Management, the U.S. Forest Service, and the U.S. Fish and Wildlife Service could have significant impacts on wildlife and hunting across much of the Mountain West. Just how much impact could these new restrictions have on mule deer populations? A review of the federal Sage-grouse record from U.S. Fish and Wildlife Service and other Federal agencies related to Sage-grouse is insightful. In fact, the Federal record all but paves the way for future mandates and judicial activism to further reduce mule deer and other wild ungulate populations. Consider the following quotes:

"...despite decreased habitat availability, elk and mule deer populations are currently higher than pre-European estimates."

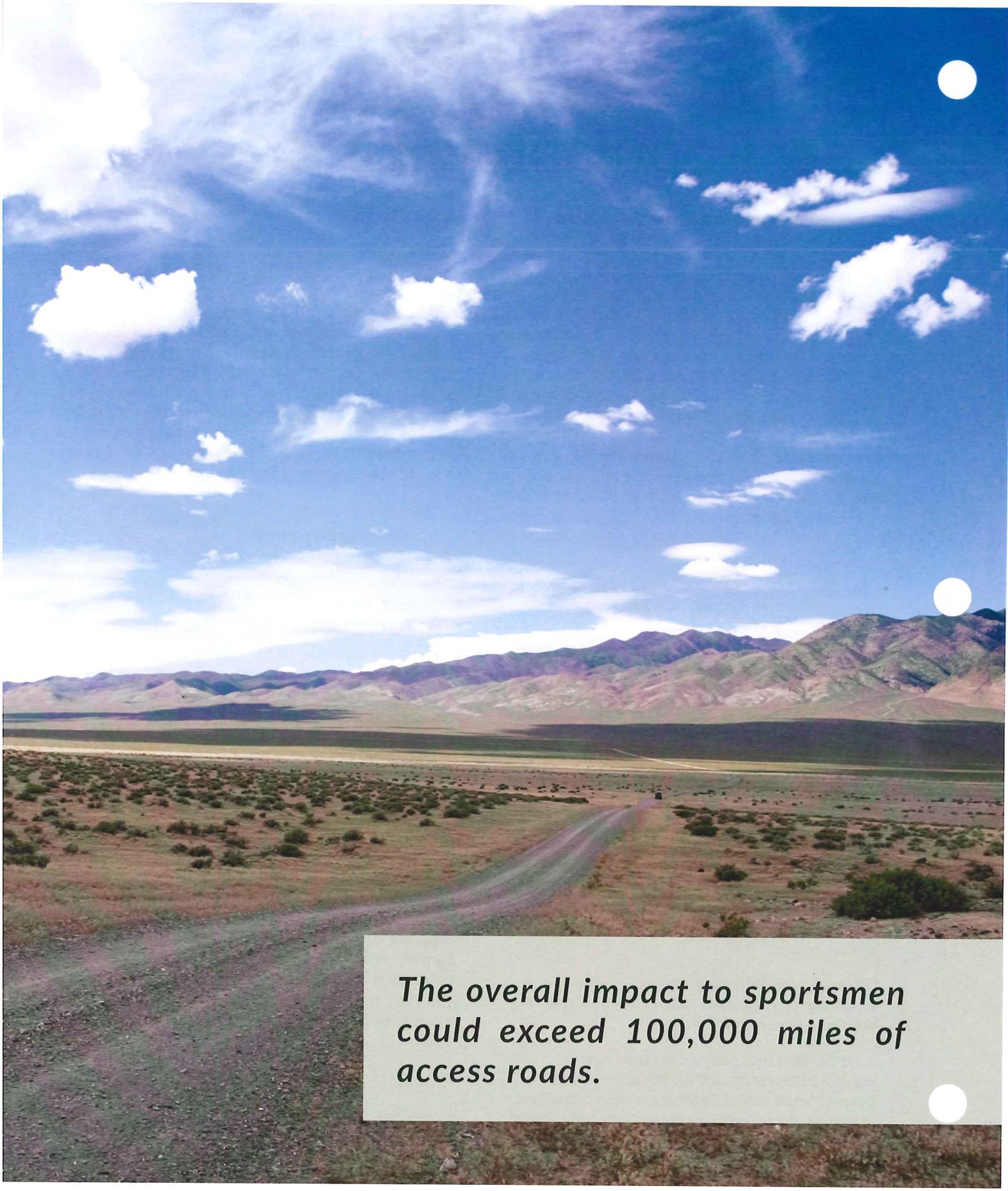
"Elk and mule deer browse sagebrush during the winter and can cause mortality to small patches of sagebrush from heavy winter use."

"...we do know that grazing can have negative impacts to sagebrush and consequently to sage-grouse at local scales...Given the widespread nature of grazing, the potential for population-level impacts cannot be ignored."

These official pronouncements open the door to lawsuits by anti-sportsmen organizations to reduce mule deer, elk and other ungulate populations in order to "protect Sage-grouse" and their "obligate sagebrush plant communities." It is no surprise that many of the same anti-sportsmen activist organizations that have been behind exploding wolf numbers and the commensurate imploding elk and moose population numbers, are also huge proponents of these new BLM management plans. A few of these groups include:

Defenders of Wildlife
The Center for Biodiversity
The U.S. Humane Society
Earth Justice
Sierra Club
WildEarth Guardians
Wildlands Network
Western Watersheds Project
Born Free USA
The Endangered Species Coalition

It is just as likely, that these groups will use this new treasure trove of regulation to file round after round of lawsuits targeting sportsmen, ungulate populations, livestock producers, and other productive uses in Sage-grouse habitat in the coming decades. A memo written by Bill Myers, former top solicitor for the U.S. Department of Interior, and partner at the western law firm of Holland and Hart explains that litigation is not only likely, but could easily lead to mandates for further reductions of mule deer, elk and other ungulates. It is just as likely that these mandates will be accomplished by blocking management of predators including wolves and coyotes. See Exhibit E.



The overall impact to sportsmen could exceed 100,000 miles of access roads.

Could Federal Plans be Used to Undermine the Rights of Sportsmen?

Access

Reducing mule deer, elk, and pronghorn population numbers is not the only way hunter's rights will be impacted by these new federal Sage-grouse plans. One of the most insidious impacts will be to reduce access to sportsmen. We'll use Utah as a case study in how significant restrictions on access could impact sportsmen.

Overview of Hunting, Fishing and Outdoor

An estimated 26.5 percent of hunters afield in Utah during 2012 entered the FWS current range of Greater Sage-grouse. Nearly one-third of fishing trips in 2011 were to destinations in FWS current range. Lesser shares of hunters afield and fishing trips were to SGMAs (21.0 percent combined) or historical-only range (16.9 percent). Hunting and fishing expenditures in SGMAs were $139 million, and spending in historical-only range was $112 million, both with similar shares from nonresidents. Total expenditures in FWS current range generated $124 million in earnings from 4,180 jobs and $243 million in value-added or gross state product.

Road Closures/Lost Access

Closing roads is one way access restrictions are accomplished. Road closures are already being mandated on 16 million acres of "Sage-grouse Focal Areas" across the Western United States by U.S. Fish and Wildlife Service, the BLM, and the U.S. Forest Service.

Lawsuits are already being utilized by activist organizations to close access roads for sportsmen. In fact, this has been happening for the past 20

Summary of Economic Contributions of Activities in Greater Sage-grouse Range in Utah, 2014
(Dollar amounts in millions)

	FWS CURRENT RANGE			HISTORICAL-ONLY RANGE			SGMAs		
Activity	**Jobs**	**Earnings**	**Value Added**	**Jobs**	**Earnings**	**Value Added**	**Jobs**	**Earnings**	**Value Added**
Oil and Gas Production	4,415	$366.5	$1,584.0	7,173	$595.5	$2,250.7	205	$17.0	$46.2
Coal Mining	2,394	$132.0	$433.3	–	–	–	–	–	–
Metals and Minerals Mining	932	$35.3	$85.3	845	$32.0	$77.4	826	$31.3	$75.6
Renewable Energy Generation	138	$138.1	$138.1	103	$5.1	$12.5	–	–	–
Cattle and Sheep Grazing	1,012	$34.6	$52.9	564	$18.8	$28.3	831	$27.9	$42.3
Hunting and Fishing	4,180	$124.4	$243.1	2,412	$71.8	$140.4	2,998	$89.2	$174.3
Total	**13,071**	**$830.8**	**$2,536.6**	**11,097**	**$723.2**	**$2,509.4**	**4,861**	**$165.4**	**$338.5**

Source: BEBR analysis.

years. These lawsuits to close "unimproved roads" have been filed by a variety of litigants. In the past 4 years, these lawsuits have become rampant. The same litigants in these road closure lawsuits are many of the groups pushing for 2,000 pages of restrictions in the name of Sage-grouse. Here are a few of these groups:

National Audubon Society
National Wildlife Federation
Natural Resource Defense Council
Wilderness Society
Western Watersheds Project
Wildearth Guardians
Center for Biodiversity

How much road are we talking? Using Utah again as a case study, there are approximately 9,000 miles of "unimproved" roads in Sage-grouse habitat throughout Utah. How much could this impact the rights of sportsmen in terms of access? Considering the much larger swaths of Sage-grouse habitat in Nevada, Idaho, Wyoming, Montana, and Oregon, the overall impact to sportsmen could exceed 100,000 miles of access roads.

BEBR Report

The Governor's Public Lands Policy Coordinated Office commissioned an independent study from the University of Utah's Bureau of Business and Economic Research on economic activity in Sage-grouse habitat in the state of Utah. The report found that literally billions of dollars annually in direct and indirect economic activity occurs within current and historic Sage-grouse range across the state of Utah. What is notable, is the sharp contrast between economic activity outside of Utah's Sage-grouse Management Areas and the much more limited activity within Utah's Sage-grouse Management Areas.

Is "An estimated 26.5% of hunters afield in Utah during 2012 entered the FWS current range of Greater Sage-grouse."

more regulation necessary?

In 2014, oil and natural gas production from wells located in historical-only range generated the greatest market value among the three areas, at just under $2 billion. In contrast, the estimated value of production from wells within SGMAs was about $42 million (See Valuation of Current Economic Activities in Greater Sage-grouse Range in Utah, Bureau of Economic and Business Research, University of Utah July 2014, Summary of Oil and Gas Revenue below).

This further supports our research that indicated that responsible Sage-grouse management is possible with responsible economic activity in the state of Utah. In fact, economic activity within Utah's SGMAs poses little impact to Sage-grouse populations within the state of Utah.

In a letter dated, May 26, 2015, sportsmens organizations from Sage-grouse states signed a letter in support of congressional action to protect state management of Sage-grouse. In total, 150 sportsmen, conservation organizations, livestock organizations, and western leaders (see following page) signed the letter. A copy of the letter is included in Exhibit D.

Supporters of Congressional Action

BigGame Forever
The Hunters Heritage Council
Washingtonians for Wildlife Conservation
Citizens for Responsible Wildlife Management
Sportsmen for Fish and Wildlife
Utah Association of Counties
Utah Farm Bureau
Utah Cattlemans
Utah Bowman's Assocation
Cooperative Wildlife Management Units Assn.
Oregon Outdoor Council
Oregon Hunters Association
National Wild Turkey Federation - South Sound Longbeards
Columbia Basin SCI Chapter
Nevada Association of Conservation Districts
Nevada Farm Bureau Federation
Nevada Woolgrowers Association
Nevada Cattleman's Association
Nevada PJ Partnership
Nevada Mineral Resource Alliance
Oregon FNAWS
Oregon Rocky Mountain Elk Foundation
Extreme Elk Magazine
Colorado Outfitters Association
Washington for Wildlife
Leupold
Eastman's Hunting Journals
Speaker Scott Bedke-Idaho House of Rep.s
Brad Little-Idaho Lieutenant Governor
Senator Bert Bracket-Idaho State Senate
Rep. Marc Gibbs-Idaho House of Representatives
COM Jerry Hoagland-Owyhee County, Idaho
Idaho Farm Bureau
Idaho Mining Association
Idaho Public Lands Council
CO Rep. J Paul Brown
CO Senator Ray Scott
CO Rep. Yuelin Willet
Colorado Mule Deer Association
Colorado Outfitters Association
Colorado Muzzleloaders Association
Colorado BigGame Forever
Colorado Trappers Association
Colorado Predator Hunters Association
Montana Guides and Outfitters Association
Montana Sportsmen for Fish and Wildlife
Montana BigGame Forever
Wyoming BigGame Forever
Teton County-WY BGF
Park County-WY BGF
Boulder County BGF-Colorado
Moffat County BGF-Colorado
Mesa County BGF-Colorado
Centennial Aurora BGF-Colorado
Weld County BGF-Colorado
Gunnison County BGF-Colorado
Safari Club International, the Inland Empire
Safari Club International, Central WA Chapter
Inland Northwest Wildlife Council
Northwest Chapter SCI
SW Washington Chapter SCI
Seattle-Puget Sound Chapter SCI
Seattle Sportsmen's Conservation Foundation, and many more.
Borderline Bassin' Contenders
Capitol City Rifle/Pistol
Cascade Mountain Men
Cascade Tree Hound Club
Cedar River Bowmen
Edison Sportsmen's Club
KBH Archers
Kittitas County Field & Stream
NW Field Trial & Hound Association
North Flight Waterfowl
Northwest Sportsman's Club
Okanogan Hound Club
Pacific Flyway
Pateros Sportsman's Club
Paul Bunyan Rifle and Sportsmen's Club
Pheasants Forever Chapter #257
Pierce County Sportsmen's Council
Richland Rod & Gun Club
Ruffed Grouse Society
Skagit Sportsman and Training Association
Tacoma Sportsmen's Club
Vashon Sportsmen's Club
Washington Falconer's Association
Washington Game Fowl Breeders Association
Washington State Bowhunters
Washington State Hound Council
Washington Muzzleloaders Association
Washington State Trappers Association
Wenatchee Sportsmen's Association
Washington Waterfowl Association
Wildlife Committee of Washington
Oregon United Sporting Dogs Association
Oregon Safari Club International
Oregon Trappers Association
Oregon Falconers Association
Benchmade
Double U Hunting Supply
Oregon Pack Works
HEVI Shot
HECS Stealthscreen
Bullseye Camera Systems
Elk101.com
NW Predator Hunters
Oregon Duck Hunters
S2 Calls
HuntonXMaps
Dominic Aiello
Dr. John Menke (Professor Range Ecologist retired)
N-4 Grazing Board
Nevada BigGame Forever
Lincoln County Wildlife Advisory Board
Buckskin National Gold Mine
Eureka County Natural Resource Commission
Senator Don Gustavson-NV Chairman Natural Resources
Senator Pete Goicoechea-NV Senate District 19
Assemblyman John Ellison-NV District 33
Assemblyman Ira Hansen-NV District 32
COM Demar Dahl-Elko County
COM Julian Goicoechea-Eureka County
COM Kevin S. Phillips-Lincoln County
J. Goicoechea-Nevada Land Action Association
John Uhalde-Ely Nevada
Bevan Lister-8 Mile Farms
David Stix-Stix Livestock
Dan Crowell-Eureka Veterinary Service
Jerry Sestanovich-Sestanovich Hay and Cattle
David A. Baker-Baker Ranches
S. Wallace Slough-Quinn River Crossing Ranch
Robert McDougal-Nevada Nile Ranch
Tony and Nancy Lesperance-Liberty Land and Livestock
Norman Frey-Fallon Nevada
Lura Weaver-Lyon County Nevada
Robert and Cassie Mason-Round Mountain, NV
Carl F. Slagowski
Fred Baily-Diamond Valley, Nevada
Lincoln County Conservation District
John Falen-McDermitt, Nevada
Maggie Orr-Lincoln County
William Blackmore-BigGame Forever Washoe County
Michael Turnispeed-BigGame Forever Carson City, Nevada
Lilla and Woodie Bell-Paradise Nevada
Travis Miller-Jiggs, Nevada
Fred and Chris Steward
Gracian Uhalde-Ely, Nevada
Pete Paris
Ron Cerri-Orovada, Nevada
Kade Lee-Lincoln County, BGF
John Caviglia-White Pine County BGF
Bruce Allen-Clark County BGF
Eureka County Conservation District
Brenda Richards-Murphy, Idaho
Richard Savage-Savage Cattle
John Faulkner-Faulkner Land & Livestock
Bill Baker-Baker Environmental Consulting
John Biar-Western Rangeland Consulting Services
David Little-Little Enterprises

CONCLUSION

In 2016, highly controversial BLM and U.S. Forest Service management plans went into effect for Utah and other sage-grouse states. The proposed restrictions, while having a major impact on jobs, productivity, families, and the state's economy, provide little benefit to sage-grouse. In fact, the proposals threaten the economic foundation for sage-grouse conservation statewide.

We anticipate significant interest in including sage-grouse language in must-pass legislation during the upcoming Congress and an improved reception for sage-grouse legislation by the new administration.

EXHIBIT A

CONCURRENT RESOLUTION URGING CONGRESS TO SUPPORT THE IMPLEMENTATION OF THE UTAH'S SAGE-GROUSE CONSERVATION PLAN

Enrolled Copy **S.C.R. 3**

CONCURRENT RESOLUTION URGING CONGRESS TO SUPPORT THE IMPLEMENTATION OF THE STATE'S SAGE-GROUSE CONSERVATION PLAN

2015 GENERAL SESSION

STATE OF UTAH

Chief Sponsor: Kevin T. Van Tassell

House Sponsor: Scott D. Sandall

LONG TITLE

General Description:

This concurrent resolution of the Legislature, the Governor concurring therein, urges Congress to support the state's sage-grouse conservation plan.

Highlighted Provisions:

This resolution:

- urges Congress to provide no funding to the United States Secretary of the Interior to consider, prepare, write, or issue a petition finding or proposed regulation for greater sage-grouse management through fiscal year 2025;
- resolves that the state implement its sage-grouse conservation plan; and
- urges Congress to enact legislation recognizing and encouraging state primacy in the long-term management of sage-grouse and its habitat.

Special Clauses:

None

Be it resolved by the Legislature of the state of Utah, the Governor concurring therein:

WHEREAS, the state of Utah is committed to the conservation of greater sage-grouse (Centrocercus urophasianus) and its present habitat located within the state;

WHEREAS, the state of Utah has produced a statewide sage-grouse conservation plan in support of this commitment;

WHEREAS, the Division of Wildlife Resources in the Department of Natural

Resources possesses significant expertise in the management of greater sage-grouse and its habitat, and experts in the division have been working extensively in full cooperation with the federal agencies managing federal lands within the borders of the state;

WHEREAS, the Endangered Species Act requires the Unites States Secretary of the Interior to take into account the state of Utah's efforts to protect greater sage-grouse prior to the Secretary's determination that the species is endangered or threatened;

WHEREAS, implementation of the state's conservation plan will produce scientific data related to disease or predation of the species, the adequacy of existing regulatory mechanisms, and other natural or human-influenced factors affecting the species' existence, all of which must be considered by the United States Fish and Wildlife Service in making a determination whether to list greater sage-grouse as threatened or endangered under the Endangered Species Act;

WHEREAS, categorical exclusions from the National Environmental Policy Act are necessary to allow the federal land management agencies to remove pinyon-juniper trees that are harmful to greater sage-grouse habitat;

WHEREAS, the state of Utah wishes to continue its collaboration with other states possessing current habitat for greater sage-grouse;

WHEREAS, the United States Congress and the President of the United States are to be commended for recognizing the unprecedented collaboration among the various states regarding greater sage-grouse conservation and the need to continue on-the-ground conservation and monitoring activities, as recognized through the enactment of Section 122 of the Consolidated and Further Continuing Appropriations Act of 2015; and

WHEREAS, time is needed to finalize and implement the state conservation plan over a period of multiple, consecutive sage-grouse life cycles to determine the efficacy of the plan and the need for modification, if any:

NOW, THEREFORE, BE IT RESOLVED that the Legislature of the state of Utah, the Governor concurring therein, urges Congress to provide no funding to the United States Secretary of the Interior to consider, prepare, write, or issue, pursuant to Section 4 of the

Endangered Species Act of 1973 (16 U.S.C. Sec. 1533), a petition finding or proposed regulation for greater sage-grouse for a period of 10 years through and including fiscal year 2025.

BE IT FURTHER RESOLVED that during this period, the state of Utah will implement its sage-grouse conservation plan, thereby establishing and enhancing its efficacy over time.

BE IT FURTHER RESOLVED that the Legislature of the state of Utah, the Governor concurring therein, urges Congress to enact legislation recognizing and encouraging state primacy in the long-term management of sage-grouse and its habitat to ensure an effective and balanced approach that seeks to recover and protect sage-grouse populations while protecting state economic interests, educational funding from state lands, and valid existing rights, including private property rights.

EXHIBIT B

SECTION 2862 OF THE NATIONAL DEFENSE AUTHORIZATION ACT

H.R. 1735—FY16 NATIONAL DEFENSE AUTHORIZATION BILL

CHAIRMAN'S MARK

*NOTE: THE SUMMARY TABLES ARE INFORMATIONAL ONLY AND WILL BE INCLUDED AS PART OF THE COMMITTEE REPORT.

TITLE XXVIII—MILITARY CONSTRUCTION GENERAL PROVISIONS

LEGISLATIVE PROVISIONS

SUBTITLE B—REAL PROPERTY AND FACILITIES ADMINISTRATION

Section 2813—Additional Master Plan Reporting Requirements Related to Main Operating Bases, Forward Operating Sites, and Cooperative Security Locations of Central Command and Africa Command Areas of Responsibility

This section would amend section 2687a(a) of title 10, United States Code, by adding a requirement for the Secretary of Defense to include with the existing overseas basing report a strategic summary for each main operating base, forward operating site, or cooperative security location within the U.S. Central Command and U.S. Africa Command area of responsibility. This section would sunset in fiscal year 2020.

SUBTITLE E—MILITARY LAND WITHDRAWALS

Section 2841—Withdrawal and Reservation of Public Land, Naval Air Weapons Station China Lake, California

This section would provide for the withdrawal and reservation of additional public land in San Bernardino County, California, to support operations at Naval Air Weapons Station China Lake, California.

SUBTITLE G—OTHER MATTERS

Section 2861—Modification of Department of Defense Guidance on Use of Airfield Pavement Markings

This section would require the Secretary of Defense to modify the Unified Facilities Guide Specifications for pavement markings, an Air Force engineering technical letter, and any other Department of Defense guidance on airfield pavement markings as necessary to permit the use of Type III category of retro-reflective beads. In addition, the Secretary shall develop appropriate policy to ensure that determination of the category of retro-reflective beads used on airfields is determined on an installation-by-installation basis based on local conditions and the life-cycle maintenance costs of the pavement markings.

Section 2862—Protection and Recovery of Greater Sage Grouse

This section would delay any finding by the Secretary of the Interior with respect to the Greater Sage Grouse under clause (i), (ii), or (iii) of section 4(b)(3)(B) of the Endangered Species Act of 1973 (16 U.S.C. 1533(b)(3)(B)) through September 30, 2025. In an effort to foster greater coordination between the States and the Federal Government regarding management plans for the Greater Sage Grouse, this section would prohibit the Secretary of the Interior and the Secretary of Agriculture from amending any Federal resource management plan applicable to Federal lands in a State in which the Governor of the State has notified the Secretaries concerned that the State has a State management plan in place. Lastly, this section would also require the Secretary of the Interior and the Secretary of Agriculture to jointly submit an annual report to the Committee on Natural Resources of the House of Representatives on the effectiveness of the systems to monitor the status of Greater Sage Grouse on Federal lands under their jurisdiction through 2021.

DIVISION C—DEPARTMENT OF ENERGY NATIONAL SECURITY AUTHORIZATIONS AND OTHER AUTHORIZATIONS

TITLE XXXI—DEPARTMENT OF ENERGY NATIONAL SECURITY PROGRAMS

LEGISLATIVE PROVISIONS

SUBTITLE A—NATIONAL SECURITY PROGRAMS AUTHORIZATIONS

Section 3101—National Nuclear Security Administration

This section would authorize appropriations for the National Nuclear Security Administration for fiscal year 2016, including funds for weapons activities, defense nuclear nonproliferation programs, naval reactor programs, and Federal Salaries and Expenses (formerly known as the Office of the Administrator), at the levels identified in section 4701 of division D of this Act. This section would also authorize a new plant project for the National Nuclear Security Administration.

Section 3102—Defense Environmental Cleanup

This section would authorize appropriations for defense environmental cleanup activities for fiscal year 2016, at the levels identified in section 4701 of division D of this Act.

Section 3103—Other Defense Activities

SEC. 2862 [Log 60798]. PROTECTION AND RECOVERY OF GREATER SAGE GROUSE.

(a) DEFINITIONS.—In this section:

(1) The term "Federal resource management plan" means—

(A) a land use plan prepared by the Bureau of Land Management for public lands pursuant to section 202 of the Federal Land Policy and Management Act of 1976 (43 U.S.C. 1712); or

(B) a land and resource management plan prepared by the Forest Service for National Forest System lands pursuant to section 6 of the Forest and Rangeland Renewable Resources Planning Act of 1974 (16 U.S.C. 1604).

(2) The term "Greater Sage Grouse" means a sage grouse of the species *Centrocercus urophasianus*.

(3) The term "State management plan" means a State-approved plan for the protection and recovery of the Greater Sage Grouse.

(b) PURPOSE.—The purpose of this section is—

(1) to facilitate implementation of State management plans over a period of multiple, consecutive sage grouse life cycles; and

(2) to demonstrate the efficacy of the State management plans for the protection and recovery of the Greater Sage Grouse.

(c) ENDANGERED SPECIES ACT OF 1973 FINDINGS.—

(1) DELAY REQUIRED.—Any finding by the Secretary of the Interior under clause (i), (ii), or (iii) of section 4(b)(3)(B) of the Endangered Species Act of 1973 (16 U.S.C. 1533(b)(3)(B)) with respect to the Greater Sage Grouse made during the period beginning on September 30, 2015, and ending on the date of the enactment of this Act shall have no force or effect in law or in equity, and the Secretary of the Interior may not make any such finding during the period beginning on the date of the enactment of this Act and ending on September 30, 2025.

(2) EFFECT ON OTHER LAWS.—The delay imposed by paragraph (1) is, and shall remain, effective without regard to any other statute, regulation, court order, legal settlement, or any other provision of law or in equity.

(3) EFFECT ON CONSERVATION STATUS.—Until the date specified in paragraph (1), the conservation status of the Greater Sage Grouse shall remain warranted for listing under the Endangered Species Act

of 1973 (16 U.S.C. 1531 et seq.), but precluded by higher-priority listing actions pursuant to clause (iii) of section 4(b)(3)(B) of the Endangered Species Act of 1973 (16 U.S.C. 1533(b)(3)(B)).

(d) COORDINATION OF FEDERAL LAND MANAGEMENT AND STATE CONSERVATION AND MANAGEMENT PLANS.—

(1) PROHIBITION ON MODIFICATION OF FEDERAL RESOURCE MANAGEMENT PLANS.—In order to foster coordination between a State management plan and Federal resource management plans that affect the Greater Sage Grouse, upon notification by the Governor of a State with a State management plan, the Secretary of the Interior and the Secretary of Agriculture may not amend or otherwise modify any Federal resource management plan applicable to Federal lands in the State in a manner inconsistent with the State management plan for a period, to be specified by the Governor in the notification, of at least five years beginning on the date of the notification.

(2) RETROACTIVE EFFECT.—In the case of any State that provides notification under paragraph (1), if any amendment or modification of a Federal resource management plan applicable to Federal lands

in the State was issued during the one-year period preceding the date of the notification and the amendment or modification altered management of the Greater Sage Grouse or its habitat, implementation and operation of the amendment or modification shall be stayed to the extent that the amendment or modification is inconsistent with the State management plan. The Federal resource management plan, as in effect immediately before the amendment or modification, shall apply instead with respect to management of the Greater Sage Grouse and its habitat, to the extent consistent with the State management plan.

(3) DETERMINATION OF INCONSISTENCY.—Any disagreement regarding whether an amendment or other modification of a Federal resource management plan is inconsistent with a State management plan shall be resolved by the Governor of the affected State.

(e) RELATION TO NATIONAL ENVIRONMENTAL POLICY ACT OF 1969.—With regard to any Federal action consistent with a State management plan, any findings, analyses, or conclusions regarding the Greater Sage Grouse or its habitat under the National Environmental Policy Act of 1969 (42 U.S.C. 4331 et seq.) shall not have

a preclusive effect on the approval or implementation of the Federal action in that State.

(f) REPORTING REQUIREMENT.—Not later than one year after the date of the enactment of this Act and annually thereafter through 2021, the Secretary of the Interior and the Secretary of Agriculture shall jointly submit to the Committee on Energy and Natural Resources of the Senate and the Committee on Natural Resources of the House of Representatives a report on the Secretaries' implementation and effectiveness of systems to monitor the status of Greater Sage Grouse on Federal lands under their jurisdiction.

(g) JUDICIAL REVIEW.—Notwithstanding any other provision of statute or regulation, this section, including determinations made under subsection (d)(3), shall not be subject to judicial review.

EXHIBIT C

SAGE-GROUSE DEAR COLLEAGUE LETTER

Congress of the United States
Washington, DC 20515

July 9, 2015

The Honorable Mac Thornberry
Chairman
House Armed Services Committee
2216 Rayburn Building
Washington, D.C. 20515

The Honorable John McCain
Chairman
Senate Armed Services Committee
228 Russell Building
Washington, D.C. 20510

The Honorable Adam Smith
Ranking Member
House Armed Services Committee
2216 Rayburn Building
Washington, D.C. 20515

The Honorable Jack Reed
Ranking Member
Senate Armed Services Committee
228 Russell Building
Washington, D.C. 20510

Dear Chairmen and Ranking Members:

We are writing in strong support for retention of Sections 2862 and 2865 contained in the House-passed National Defense Authorization Act for Fiscal Year 2016 (H.R. 1735) dealing with Protection and Recovery of the Greater Sage Grouse and the Lesser Prairie Chicken. These sections were adopted with strong bi-partisan support in the House of Representatives, and are supported by a large bi-partisan contingent of Governors in the West and Mid-West.

It is entirely appropriate that these issues be addressed within the context of the National Defense Authorization Conference Report. Unless these provisions are retained, the potential for onerous negative use restrictions on several military test and training ranges in 11 Western and 5 Mid-Western States caused by a formal listing under the Endangered Species Act (ESA) is very high.

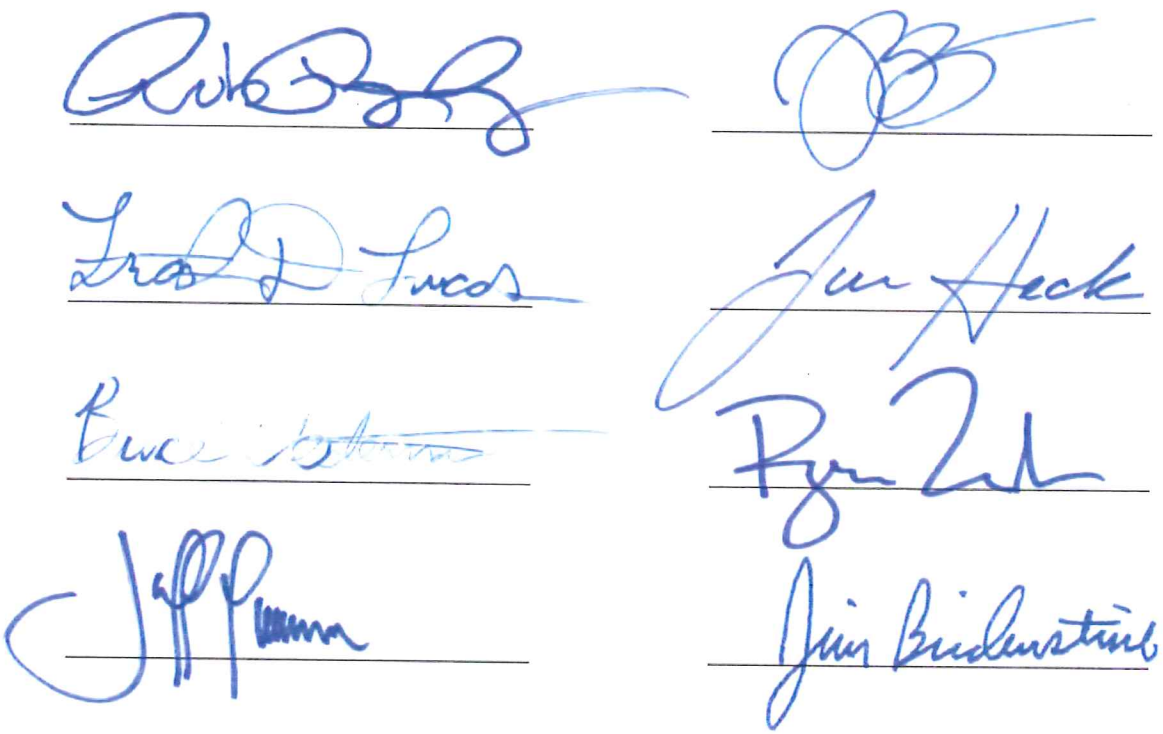
During these difficult times of defense cuts, a formal ESA listing would impose nearly incalculable financial burdens on the services caused by certain delays in tests and training, potential overflight restrictions, as well as mandatory and costly continuous ESA Section 7 consultations and biological opinions imposed by the U.S. Fish and Wildlife Service. We must act to avoid repeating the military's negative experiences in past years with ESA restrictions caused by a formal listing of the Red Cockaded Woodpecker in the Southeast. The military impacts with a Sage Grouse or Prairie Chicken listing have the potential to be much greater and more widespread unless these Sections are retained.

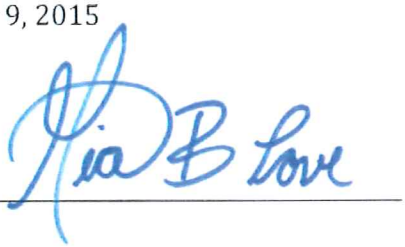
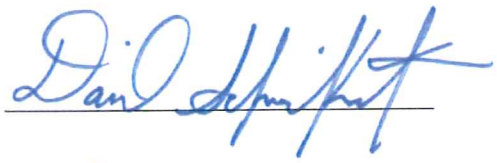
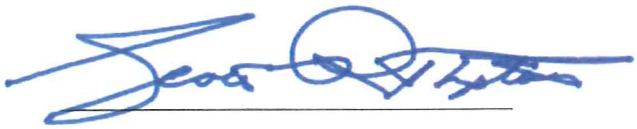
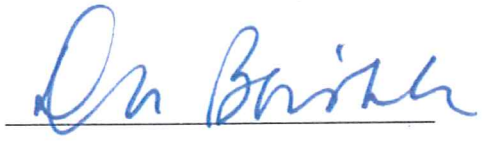
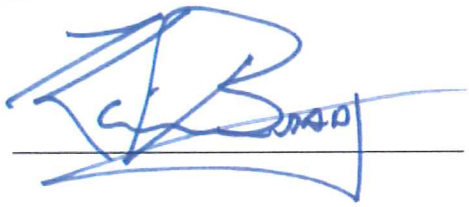
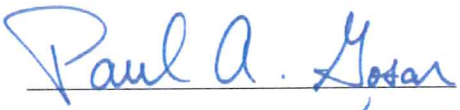
We believe that Sections 2862 and 2865 represent a balanced approach to both conservation and preservation of these species, by allowing time for the affected States to implement and demonstrate their individual plans. These provisions further provide for annual monitoring and reporting to Congress on the state plans' successes or failures.

This approach is fully consistent with the ESA itself that requires the Secretary "*to cooperate to the maximum extent practicable with the States.*" (16 U.S.C. 1535(a)). Indeed, within the ESA, Congress declared that the States should be encouraged to develop and maintain conservation programs to better safeguard the Nation's wildlife. Unlike the Federal Government, the States are implementing real plans to protect and conserve these species while also protecting the ability of the military to continue to use vital military test and training areas.

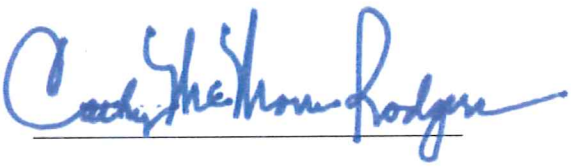
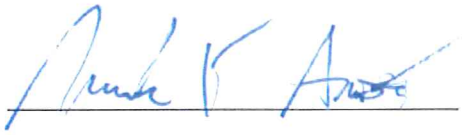
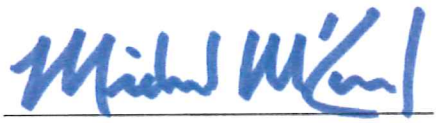
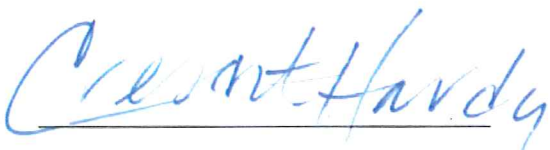
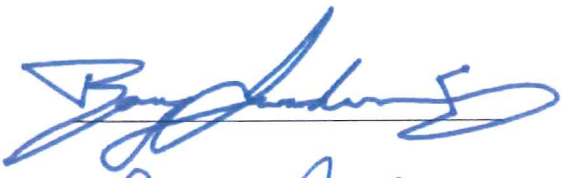
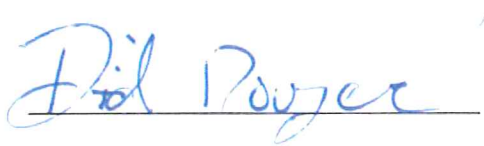
In conclusion, it is imperative that the final FY16 NDAA conference agreement retains these sections dealing with the Greater Sage Grouse and Lesser Prairie Chicken in support of State conservation plans. Thank you for considering our views.

Sincerely,






David Webster FL-10

Jane Jimus

Bar Flores

Roger Williams

Ann Wagner

Raul R. Labrador

Tom Marino
NO 83

Mark Meadows

Rodney Davis

Pat Tiberi

Tim Huelskamp

Marsha Blackburn

Mike Simpson

Lynn Jenkins

Kevin Cramer

Doug P. Lyce

Marlette Miller

Randy Neugebauer

Mike Coffman

Dave Brat

Evan H. Jenkins

Alex X. Mooney WV-02

Keith J. Rothfus

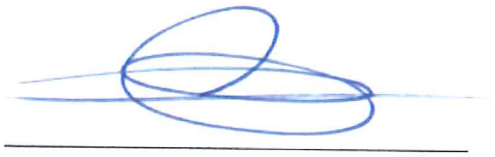
Ken Buck, CO-4

Ca 25

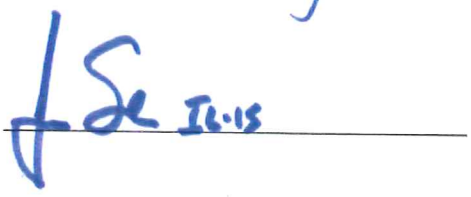
Tim Huelskamp

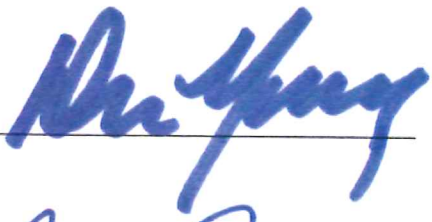
Dan Fanthorpe

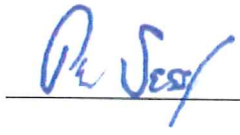
Doug Collins

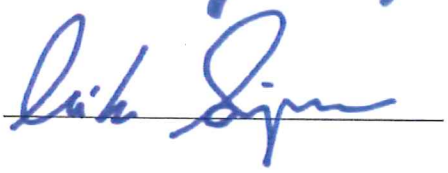


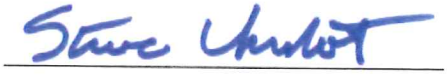
Steve King

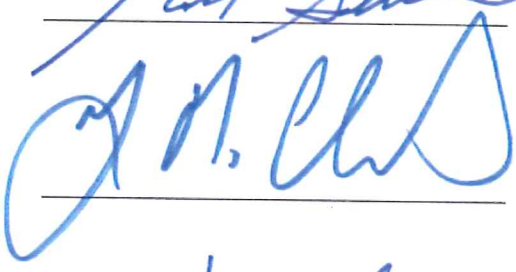


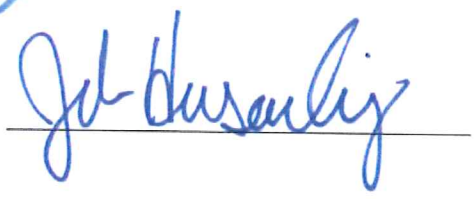


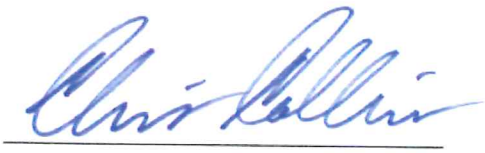


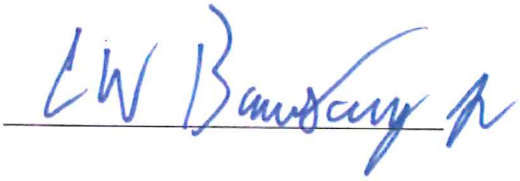












Lynn Jenkins

Jim Jordan

Bill Johnson

Kelly Woodall

Bill Shuster

Austin Scott

Bill Huizenga

Randy Hultgren

Kevin Yoder

Will Hurd

TN-04

Doug Collins

Richard Hudson

David B. McKinley

Steve Pearce

Lynn Jenkins

Tom Cole

Steve Stivers

Blaine Luetkemeyer

Trent Franks

Brett Guthrie KY-2

Steve Russell

Mike Pompeo

Mo Brooks

David Schweikert

EXHIBIT D

SPORTSMAN LETTER IN SUPPORT OF CONGRESSIONAL ACTION TO PROTECT STATE MANAGEMENT OF SAGE-GROUSE

April 26, 2016

Dear Speaker Ryan,

As Sportsmen, Conservationists, Livestock Producers, and State Leaders we are writing to request that you include the Sage-grouse language set forth in H.R. 4793 as part of the 2017 National Defense Authorization legislation before Congress. These provisions protect out state ability to implement their Greater Sage-grouse conservation planning efforts and remedy unnecessary restrictions to the highly controversial and unnecessarily problematic Resource Management Plan Amendments (RMPs) implemented by the Bureau of Land Management and U.S. Forest Service.

While some special interest groups oppose sage-grouse protections of created by Western State's sage-grouse conservation efforts, we strongly support the collaborative efforts by broad coalitions in our state's to protect sage-grouse using balanced common-sense conservation efforts and address the needs of our citizens. These conservation measures are working. In fact, Sage-grouse total range-wide breeding populations have increased by 63% over the last two years with a total breeding population of 424,645 birds across 11-Western States.

Newly proposed BLM and Forest service plans threaten these conservation efforts. With a few exceptions, the new federal RMP amendments far exceed the common-sense measures developed by Western States. Notwithstanding the success of state conservation efforts, instead of collaboration, federal regulatory agencies:

- Refused to even include Western States Greater Sage-Grouse Conservation Plan in the federal alternatives,
- Implemented many excessive restrictions of access to use of public land; and
- Summarily dismissed Western State's requests consistency review.

Environmental activists are already threatening new rounds of litigation to challenge the most recent decision not to list the Greater Sage-grouse. In point of fact, this was the third listing determination in just the past decade. Providing a litigation safe-harbor through the appropriations process will allow states to implement their plans in ways that responsibly address Sage-grouse conservation concerns.

In conclusion, we strongly urge inclusion of the Sage-grouse language set forth in H.R. 4793 that protect state management and conservation efforts as part of the 2017 National Defense Authorization legislation before Congress. These provisions allow Western States to correct punitive features of the proposed RMPs and address the threat of unnecessary and unhelpful litigation by special interest activists. These important provisions protect the responsible and common-sense conservation measures by Western States.

BigGame Forever
The Hunters Heritage Council
Washingtonians for Wildlife Conservation
Citizens for Responsible Wildlife Management
Sportsmen for Fish and Wildlife
Utah Association of Counties
Utah Farm Bureau
Utah Cattlemans
Utah Bowman's Assocation
Cooperative Wildlife Management Units Association
Oregon Outdoor Council
Oregon Hunters Association
National Wild Turkey Federation - South Sound Longbeards
Columbia Basin SCI Chapter
Nevada Association of Conservation Districts
Nevada Farm Bureau Federation
Nevada Woolgrowers Association
Nevada Cattleman's Association
Nevada PJ Partnership
Nevada Mineral Resource Alliance
Oregon FNAWS
Oregon Rocky Mountain Elk Foundation
Extreme Elk Magazine
Colorado Outfitters Association
Washington for Wildlife
Leupold
Eastman's Hunting Journals
Speaker Scott Bedke-Idaho House of Representatives
Brad Little-Idaho Lieutenant Governor
Senator Bert Bracket-Idaho State Senate
Representative Marc Gibbs-Idaho House of Representatives
Commissioner Jerry Hoagland-Owyhee County, Idaho
Idaho Farm Bureau
Idaho Mining Association

Idaho Public Lands Council
CO Representative J Paul Brown
CO Senator Ray Scott
CO Representative Yuelin Willet
Colorado Mule Deer Association
Colorado Outfitters Association
Colorado Muzzleloaders Association
Colorado BigGame Forever
Colorado Trappers Association
Colorado Predator Hunters Association
Montana Guides and Outfitters Association
Montana Sportsmen for Fish and Wildlife
Montana BigGame Forever
Wyoming BigGame Forever
Teton County-WY BGF
Park County-WY BGF
Boulder County BGF-Colorado
Moffat County BGF-Colorado
Mesa County BGF-Colorado
Centennial Aurora BGF-Colorado
Weld County BGF-Colorado
Gunnison County BGF-Colorado
Safari Club International, the Inland Empire
Safari Club International, Central Washington Chapter
Inland Northwest Wildlife Council
Northwest Chapter SCI
SW Washington Chapter SCI
Seattle-Puget Sound Chapter SCI
Seattle Sportsmen's Conservation Foundation, and many more.
Borderline Bassin' Contenders
Capitol City Rifle/Pistol
Cascade Mountain Men
Cascade Tree Hound Club
Cedar River Bowmen
Edison Sportsmen's Club
KBH Archers
Kittitas County Field & Stream
NW Field Trial & Hound Association
North Flight Waterfowl
Northwest Sportsman's Club
Okanogan Hound Club
Pacific Flyway

Pateros Sportsman's Club
Paul Bunyan Rifle and Sportsmen's Club
Pheasants Forever Chapter #257
Pierce County Sportsmen's Council
Richland Rod & Gun Club
Ruffed Grouse Society
Skagit Sportsman and Training Association
Tacoma Sportsmen's Club
Vashon Sportsmen's Club
Washington Falconer's Association
Washington Game Fowl Breeders Association
Washington State Bowhunters
Washington State Hound Council
Washington Muzzleloaders Association
Washington State Trappers Association
Wenatchee Sportsmen's Association
Washington Waterfowl Association
Wildlife Committee of Washington
Oregon United Sporting Dogs Association
Oregon Safari Club International
Oregon Trappers Association
Oregon Falconers Association
Benchmade
Double U Hunting Supply
Oregon Pack Works
HEVI Shot
HECS Stealthscreen
Bullseye Camera Systems
Elk101.com
NW Predator Hunters
Oregon Duck Hunters
S2 Calls
HuntonXMaps
Dominic Aiello
Dr. John Menke (Professor Range Ecologist retired)
N-4 Grazing Board
Nevada BigGame Forever
Lincoln County Wildlife Advisory Board
Buckskin National Gold Mine
Eureka County Natural Resource Commission
Senator Don Gustavson-NV Chairman Natural Resources
Senator Pete Goicoechea-NV Senate District 19

Assemblyman John Ellison-NV District 33
Assemblyman Ira Hansen-NV District 32
Commissioner Demar Dahl-Elko County
Commissioner Julian Goicoechea-Eureka County
Commissioner Kevin S. Phillips-Lincoln County
J. Goicoechea-Nevada Land Action Association
John Uhalde-Ely Nevada
Bevan Lister-8 Mile Farms
David Stix-Stix Livestock
Dan Crowell-Eureka Veterinary Service
Jerry Sestanovich-Sestanovich Hay and Cattle
David A. Baker-Baker Ranches
S. Wallace Slough-Quinn River Crossing Ranch
Robert McDougal-Nevada Nile Ranch
Tony and Nancy Lesperance-Liberty Land and Livestock
Norman Frey-Fallon Nevada
Lura Weaver-Lyon County Nevada
Robert and Cassie Mason-Round Mountain Nevada
Carl F. Slagowski
Fred Baily-Diamond Valley, Nevada
Lincoln County Conservation District
John Falen-McDermitt, Nevada
Maggie Orr-Lincoln County
William Blackmore-BigGame Forever Washoe County
Michael Turnispeed-BigGame Forever Carson City, Nevada
Lilla and Woodie Bell-Paradise Nevada
Travis Miller-Jiggs, Nevada
Fred and Chris Steward
Gracian Uhalde-Ely, Nevada
Pete Paris
Ron Cerri-Orovada, Nevada
Kade Lee-Lincoln County, BGF
John Caviglia-White Pine County BGF
Bruce Allen-Clark County BGF
Eureka County Conservation District
Brenda Richards-Murphy, Idaho
Richard Savage-Savage Cattle
John Faulkner-Faulkner Land & Livestock
Bill Baker-Baker Environmental Consulting
John Biar-Western Rangeland Consulting Services
David Little-Little Enterprises
Red Eagle Technologies-Alabama

EXHIBIT E

LEGAL MEMO: POTENTIAL IMPACT OF FEDERAL SAGE-GROUSE MANAGEMENT ON BIG GAME POPULATIONS

MEMORANDUM

June 13, 2016

TO: Ryan Benson

FROM: Bill Myers

RE: Potential Impact of Federal Sage-Grouse Management on Big Game Populations

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The federal government's recently announced sage-grouse management plans span some 165 million acres across ten western states. Sage-grouse and all other game species on these federal lands are property of the states and managed by the states as game animals. At the same time, the vast habitat for these animals is managed by the federal agencies. Thus, while the federal government does not own or control the game animals, it does control their habitat and becomes a de-facto manager of state wildlife through active management of their habitat.

The Bureau of Land Management ("BLM") within the Department of the Interior and the U.S. Forest Service manage nearly all sage-grouse and big game habitat on federal lands. The BLM recognizes the tension between state ownership of species and federal management of their habitat through regulations found at 43 C.F.R. Part 24. As stated in the regulations:

> Since development [in 1970 of an intergovernmental policy statement on management of fish and wildlife resources], a number of Congressional enactments and court decisions have addressed State and Federal responsibilities for fish and wildlife with the general effect of expanding Federal jurisdiction over certain species and uses of fish and wildlife traditionally managed by the State. In some cases, this expansion in jurisdiction in established overlapping authorities, clouded agency jurisdictions and, due to differing agency interpretations and accountabilities, has contributed to confusion and delay in the implementation of management programs.

43 C.F.R. § 24.1(a).

This expansion of federal responsibility, overlapping authorities, and clouded jurisdictions is exemplified in the federal government's recent announcements regarding sage-grouse management. One of the important questions in this context is what effect the federal government's prioritization of federal rangelands for sage-grouse habitat will have on other species such as elk, mule deer, and pronghorn antelope that use the same habitat.

In the U.S. Fish and Wildlife Service's ("Service") 2010 finding that sage-grouse warranted listing under the Endangered Species Act ("ESA"), the Service addressed the effects of wild ungulate herbivory on sage-grouse. The Service found that "despite decreased habitat availability, elk and mule deer populations are currently higher than pre-European estimates." The Service then admitted its ignorance as to the effects of elk, mule deer, and pronghorn antelope grazing on sage-grouse habitat. The Service went on to note that concentrated game herds can have substantial localized impacts on sagebrush vigor and other key elements of sage-grouse habitat. *See* 75 Fed. Reg. 13942 (March 23, 2010). In its most recent decision to not list sage-grouse, the Service revisited the question of the impact of wild ungulates on sage-grouse habitat and stated again that it lacked information regarding the impact of big game species on sage-grouse populations. *See* 80 Fed. Reg. 59908 (Oct. 2, 2015). The Service's 2015 decision to not list sage-grouse as endangered or threatened under the ESA is predicated on the Service's announcement that it would conduct a sage-grouse status review in five years and that it could reopen the "not warranted" finding at any time based on its own research or that of outside parties that may at any time petition for reconsideration of the "not warranted" finding of 2015.

Big game advocates are rightly concerned that the anti-hunting groups could easily use the Service's analysis to reduce deer and elk populations. Anti-hunting groups will see this as an opportunity to produce studies for the Service intended to show that big game populations have a significant negative impact on sage-grouse habitat and therefore big game should be reduced. In the absence of any contrary studies, Fish and Wildlife Service would have to consider this new "science" in determining whether to reopen the question of listing sage-grouse under the ESA. The Service likely would call on BLM and the U.S. Forest Service to increase their "regulatory mechanisms" to control big game populations in order to avoid a listing.

Hunting advocates should not assume that control of deer, elk, and antelope populations will result in increased hunting opportunities. For example, wild horses are a significant problem for sage-grouse habitat as they, too, consume the same plants used by sage-grouse. Yet, there is no agency program to reduce wild horse populations through direct reduction. Instead, fertility control and sporadic roundups and relocations are the methods of choice. Even if hunting is chosen as a method to control big game populations, various control efforts would be mandated by the federal government through a federal agency decision or federal court order binding the federal agencies to act in the name of sage-grouse protection rather than simply enlisting the cooperation of state wildlife agencies to control wild ungulates populations through hunting. Again, an example can be found in the current system whereby predators threaten sage-grouse and yet, the federal government has not enlisted state game and fish agencies as partners in the reduction of predators through hunting opportunities.

In summary, federal prioritization of sage-grouse habitat over all other uses of federal lands, including big game hunting, may well result in big game herd reductions. Those reductions are not likely to come about through hunting. Rather, confusion and delay in state game management is the likely result, as recognized by BLM's own regulations.

SAGE GROUSE

QUARTERLY REPORT

Contract No. 146311

Stag Consulting