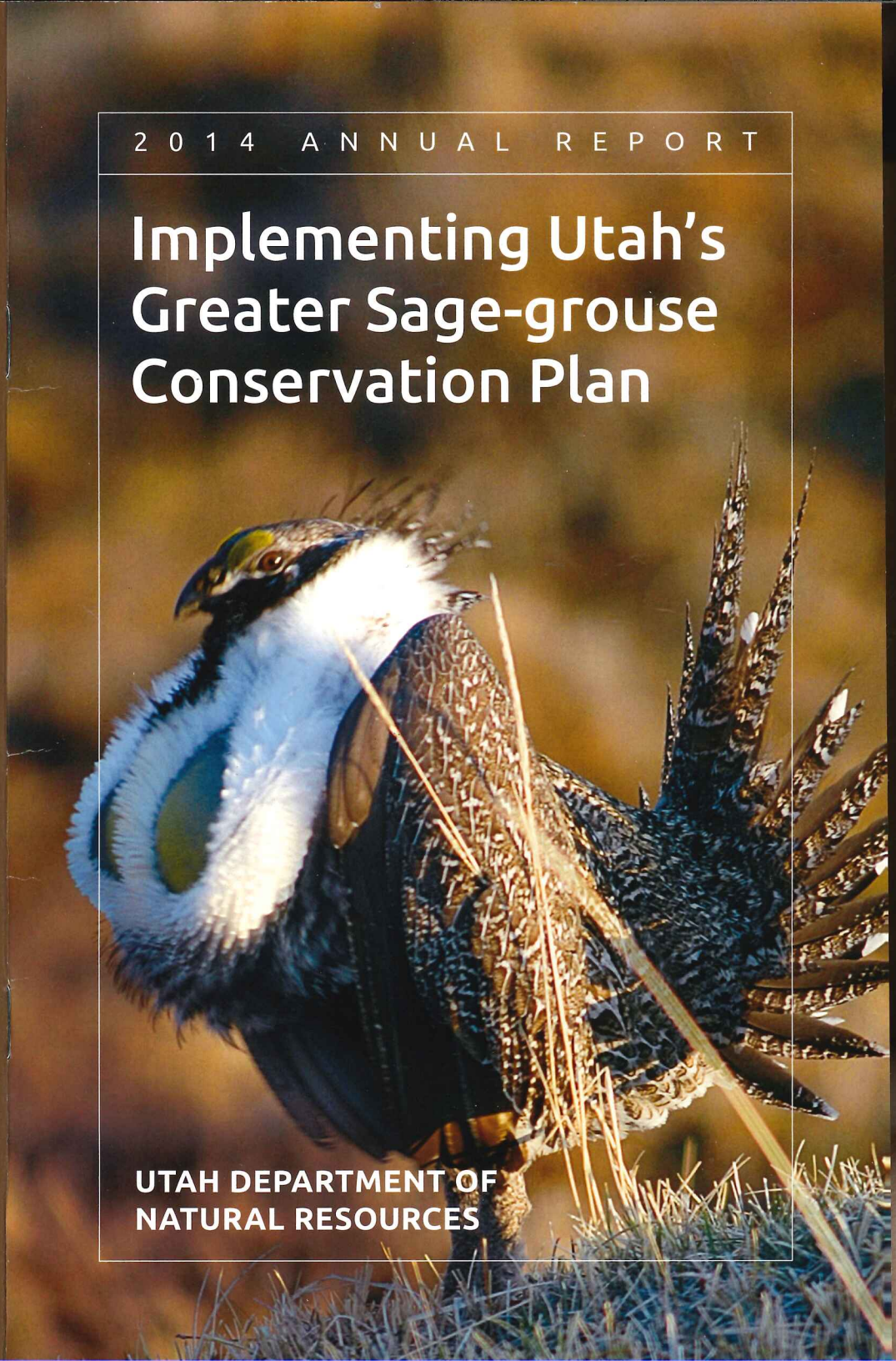
UTAH DIVISION OF WILDLIFE RESOURCES
1594 W NORTH TEMPLE • SALT LAKE CITY • UTAH 84114

2014 ANNUAL REPORT

Implementing Utah's Greater Sage-grouse Conservation Plan



UTAH DEPARTMENT OF NATURAL RESOURCES

The most up-to-date, high-resolution versions of the maps shown in this report are available at *wildlife.utah.gov/sage-grouse*.

Implementing Utah's Greater Sage-Grouse Conservation Plan

DNR and its partners are effecting landscape-scale conservation.

EXECUTIVE SUMMARY

FISCAL YEAR 2014 was the first full year of implementation of *Utah's 2013 Conservation Plan for Greater Sage-grouse* (State Plan). The following report outlines Utah's successful management of greater sage-grouse and its habitat. Using the best available science, including Utah-specific data and studies, the State has placed a great emphasis on conservation projects that benefit sage-grouse both in the short and long term.

The State Plan identified eleven sage-grouse management areas (SGMAs) comprising approximately 7.5 million acres of land that contain 94% of Utah's sage-grouse and established five major conservation objectives: 1. Sustain a statewide 10-year average population of 4,100 males on counted leks, 2. Protect 10,000 acres of sage-grouse habitat each year through voluntary, incentive based programs, 3. Enhance 25,000 acres of sage-grouse habitat each year, 4. Expand sage-grouse habitat by 50,000 acres each year through habitat restoration, and 5. Maintain viable populations within each SGMA.

After a 2011 low in the regular sage-grouse population cycle, Utah's sage-grouse population has rebounded to a 10-year rolling average of 4,152 male sage-grouse counted on lekking grounds within SGMAs. The current rolling average is 101% of the State Plan population objective. Utah's sage-grouse counts increased almost 40% over last year's—showing much better single-year popula-

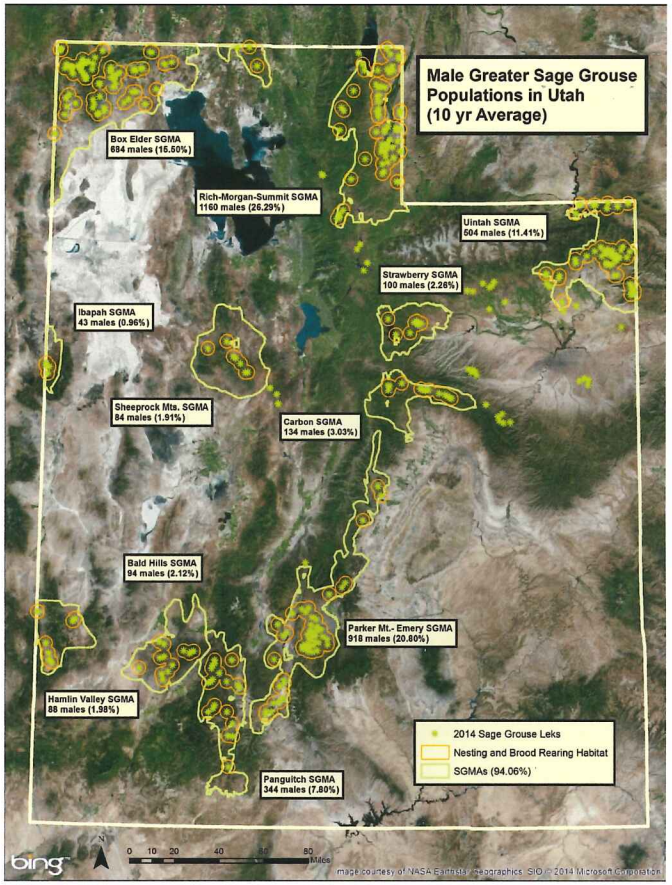
tion growth than typical historic trends.

Utah has a strong history of identifying habitat needs and funding restoration projects through Utah's Watershed Restoration Initiative (WRI). Since 2006 over a half million acres of sage-grouse habitat has been improved within SGMAs via direct WRI funding and partner contributions. In the State Plan's first partial year, FY 2013, acreage of habitat restoration and enhancement projects exceeded plan objectives by 7%. In the State Plan's first full year of implementation, FY 2014, Utah greatly exceeded plan objectives with a quarter million acres of sage-grouse habitat enhancement and restoration.

Ameliorating threats to sage-grouse and their habitat has put Utah in a unique position. Through a spatially explicit understanding of the landscape threats, state efforts can strategically focus on priority-based conservation. The implementation strategy for the State Plan provides a net habitat gain and ecological lift to the species. This report describes the efforts taken to reach the State Plan objectives and ameliorate the landscape threats to sage-grouse.

BACKGROUND ON SAGE-GROUSE MANAGENT AREAS

IN APRIL 2013, Utah Governor Gary Herbert approved *Utah's Conservation Plan for Greater Sage-Grouse*. It is a detailed, scientifically based plan that establishes an overall goal and measurable objectives for Greater Sage-grouse in Utah. It also identifies how Utah will manage sage-grouse habitat and populations to meet these targets. The plan is now being implemented; it conserves more than 90% of the state's greater sage-grouse habitat and 94% of the population. Eleven Sage-grouse Management Areas (SGMAs) comprised of 7.5 million acres of habitat were established. The management areas contain the year-round life cycle needs of the species.



Utah's Sage-grouse Management Areas — 94% of sage-grouse in Utah are found within the eleven (SGMAs)

WE HAVE ALREADY MADE SUBSTANTIAL PROGRESS

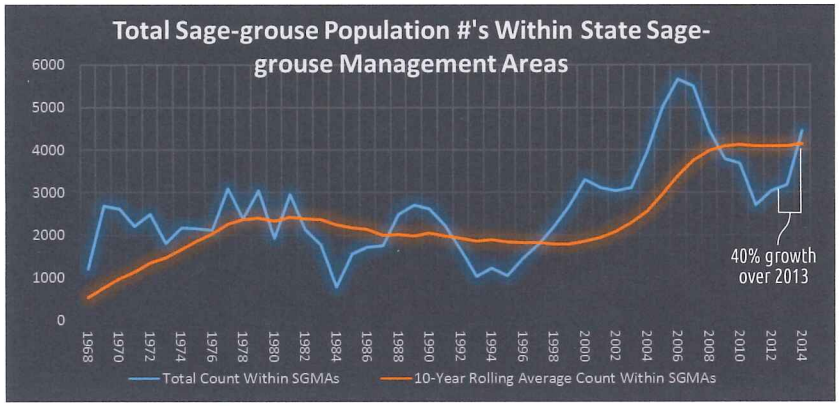
FOR NEARLY 20 YEARS, state biologists, researchers, land managers and local working groups have taken a proactive approach to protecting the greater sage-grouse. Project partners are already working together in the following areas:

Monitoring populations: Counts of males on leks have been conducted for more than fifty years. This spring, Utah's Division of Wildlife Resources (UDWR) biologists visited 306 known leks and observed male sage-grouse on 218 leks within SGMAs.

Plan Objective: 10-year average of 4,100–5,000 males observed on a minimum of 200 leks.

2014 sage-grouse counts were up 40% over 2013. This spring 4,449 males were observed, and the successful count brought the 10-year rolling average to 4,152 birds—101.3% of the plan objective. This is the third year of healthy population growth.

Plan Objective: Enhance and Increase Habitat by 75,000 acres per year.



*The Sage-grouse Population in SGMAs grew by 39.6% this year over last. This is the third year of healthy population growth.

Since 2006, 576,942 acres of habitat have been improved within Sage-grouse Management Areas through the Watershed Restoration Initiative and other land conservation partners.

In the first year of implementation, FY2013, 80,127 acres of Sage-grouse habitat were enhanced and increased thanks to a combination of state, federal and private investments of $9.6 million. The final total for FY2013 conservation projects was 106.8% of the annual objective. FY 2014 habitat project reports are still filtering in, but so far, 249,170 acres have been reported—over three times the conservation projects objective. This was a banner year for sage-grouse conservation.

Assistance and partnership with private landowners: Private landowners have always played a pivotal role in sage-grouse conservation. Thousands of acres of sage-grouse habitat have been restored and protected on private land in cooperation with the NRCS.

This year NRCS is rolling out "ESA Predictability." It allows trained habitat biologists to create range management plans with landowners that provide an incentive for actions that improve and conserve sage-grouse habitat while providing long term assurances.

Protecting sage-grouse habitat on federally managed lands: The BLM and USFS are amending their management plans to add reasonable protection for greater sage-grouse habitat, which we hope will reflect the approach of the Utah Conservation Plan.

On July 18, 2014, the BLM announced a proposal to prioritize sage-grouse habitat when addressing management of fire. The proposal was originally accompanied by a request for $30 million to increase fire prevention efforts.

Creating fuel breaks, reducing fuel loads, pre-positioning firefighting resources for expedited fire response and training rural fire departments are all part of the proposal (WO-IM-2014-14). The Fire Invasives and Assessment Team (FIAT), will direct these efforts to implement fire prioritization throughout the Great Basin. This will include Box Elder, Hamlin Valley, Bald Hills, Parker Mountain-Emery and Panguitch SGMAs.

Controlling predators: USDA-APHIS Wildlife Services removes predators that pose the greatest risk to sage-grouse populations.

Performing and reviewing essential research: Over 50 research projects have been conducted in Utah since 2000. All resulting data is now in a centralized database.

Identify and secure long-term funding for implementation actions: Many agencies are funding efforts to benefit sage-grouse but additional funding is necessary for full plan implementation. Both State and Federal Partners are committing millions of dollars to sage-grouse projects annually. From 2006 to 2013, the average overall investment annually has been just over $4.8 million. That average continues to climb, as the priority for sage-grouse conservation has intensified in recent years.

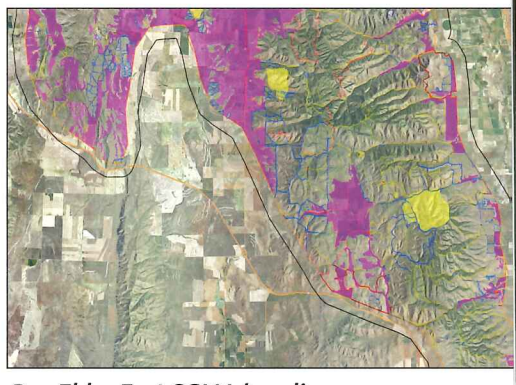
Adaptive Conservation Management: Utah's Division of Wildlife Resources promotes the "avoid, minimize and mitigate" approach. One of the most important tenets of Utah's Conservation Plan is to avoid permanent disturbance within sage-grouse habitat when possible. If avoidance is not possible, minimize that disturbance. If disturbance does occur, mitigate that disturbance at a level that will provide lift to the population, typically at a 4:1 ratio of conservation acres for each acre developed.

Energy, impact and habitat biologists attend site visits for mineral development, transmission line, pipeline, and residential development projects to provide recommendations for avoiding and minimizing impacts to sage-grouse. Reports of these site visits are tracked and recorded.

Coordinate with the sage-grouse Local Working Groups (LWGs): Local working groups provide valuable insights on local threats and help prioritize habitat projects with funding partners like the Watershed Restoration Initiative and NRCS. Input from these groups has led to refinement of habitat maps and site-specific clarifications on the baseline mapping project.

PLAN IMPLEMENTATION

ALTHOUGH many of Utah's sage-grouse conservation efforts have been underway for years, the plan identified additional science-based actions that need to be taken to protect sage-grouse and their habitat within the SGMAs.

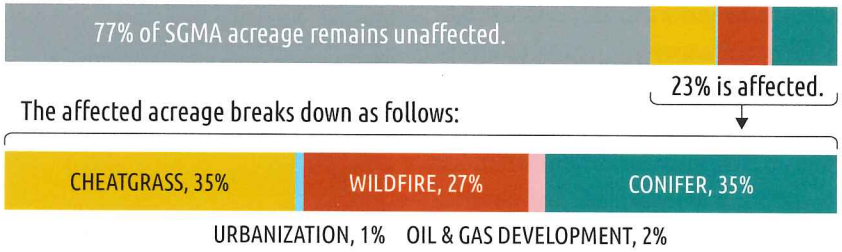


Box Elder East SGMA baseline map

Baseline Development Assessment: In the spring of 2014, UDWR worked with Utah State University's GIS lab to complete a baseline assessment of all current development within the eleven SGMAs. The baseline map is used

Quantified threat analysis

Sage-grouse habitat acreage adversely affected in Utah SGMAs.



The Division of Wildlife Resources recently completed GIS analysis of sage-grouse habitat in Utah looking at the potential of various threats identified by the COT report. Conifer encroachment, invasive weeds, wildfires, oil and gas development, urbanization, and high-risk fences were all analyzed to determine their effects on sage-grouse habitat and to establish solutions for ameliorating them.

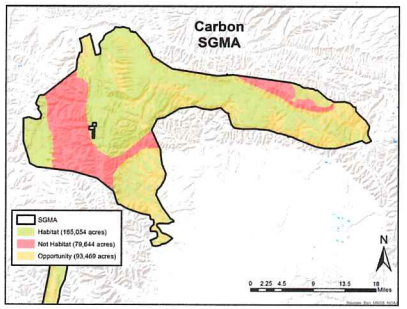
to assess and track new permanent disturbance. Utah's Conservation Plan established a target of limiting new permanent disturbance to less than five percent of sage-grouse habitat within SGMAs.

Mapping efforts with SGMAs: UDWR recently completed GIS habitat analysis in Utah which looks at potential threats identified by the COT report that affect Utah's sage-grouse populations. Conifer encroachment, invasive weeds, wildfire, oil/gas development, urbanization and high-risk fences were all analyzed to determine their relative impact on sage-grouse habitat and establishes solutions for ameliorating them.

Utah's 11 SGMAs were analyzed for encroachment and DWR has now refined its habitat maps to reflect areas where habitat projects can best target this threat. Utah is reducing pinyon/juniper encroachment throughout all SGMAs.

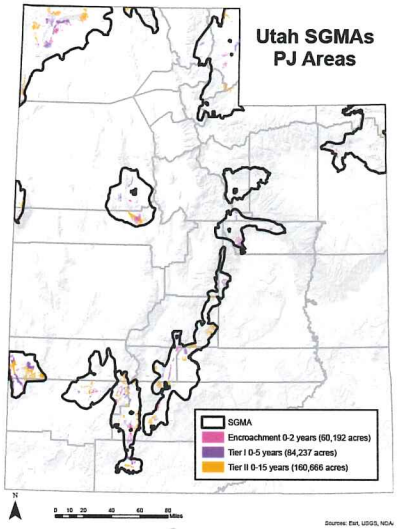
The Utah Division of Forestry Fire and State Lands indicated that the *Governor's Catastrophic Wildfire Reduction Strategy* was completed in late 2013. Their statewide steering committee and regional working groups are now in the process of developing a statewide risk map, which will include the prioritized sage-grouse habitat areas.

Conifer Encroachment: With the help of a study funded in part by UDWR and NRCS, a conifer encroachment map was created and used to refine the habitat within SGMAs. Previously mapped habitat and opportunity delineations were overlaid with new pinyon and juniper (P/J) data and areas with greater than 10% conifer cover were re-designated as opportunity areas. Areas with less than 10% conifer cover were classified as habitat.



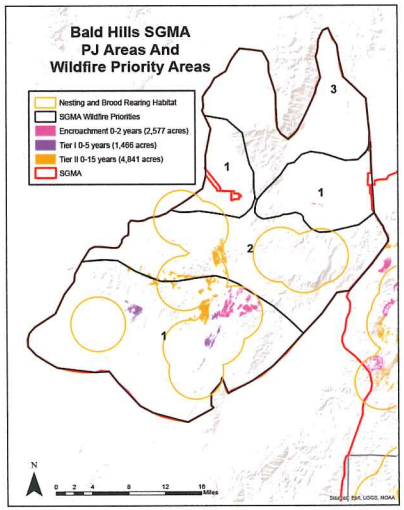
Conifer cover on Carbon SGMA

Pinyon & Juniper encroachment analysis and long term planning: In addition to the re-evaluation of opportunity and habitat, P/J mapping data were overlaid with LANDFIRE Biophysical Settings (BpS). (The BpS layer represents vegetation types that may have been dominant prior to Euro-American settlement along with the current biophysical environment.)



Local biologists used the combined data set as a guide for a planning process to identify and prioritize treatment projects over the next 15 years. The treatment projects are designed to provide the greatest impact on sage-grouse viability by improving and increasing the year-round habitat needs of the birds. Over the next two years, conifer encroachment will be ameliorated. The following 13 years of projects will expand and improve additional habitat.

Wildfires: Wildfire is a top threat to sage-grouse in the Great Basin. Careful monitoring and assessment of wildfires in Utah SGMAs are contributing to comprehensive strategies for protecting sage-



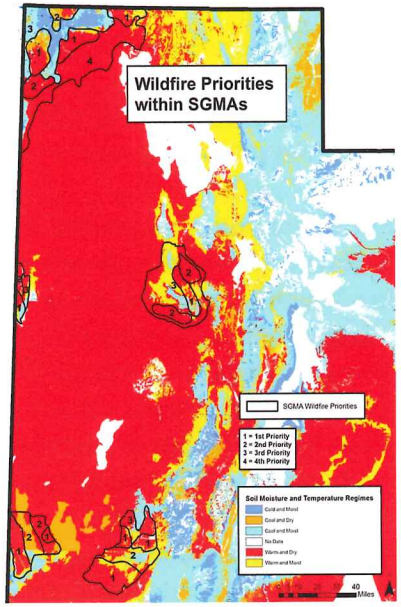
grouse habitat. Here is a quick overview:

- Over 93% of fires in SGMAs are suppressed within 100 acres.
- 4.5% within 1,000 acres, while 2% are within 1,000 and 10,000 acres

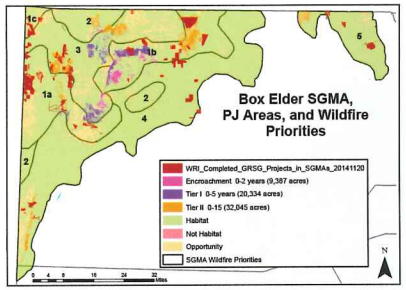
The western portion of Utah (Great Basin Region) is much more prone to wildfires. Five SGMAs have been prioritized and are being added to the Utah Forest Action Plan as high priorities into the wildfire risk assessment and as part of the Governor's Catastrophic Wildfire Reduction Strategy. Box Elder, Bald Hills, Sheep Rock Mountains, Hamlin Valley and Ibapah are the priority SGMAs.

Further, the use of a multi-tiered priority system within the priority SGMAs will enhance protection schemes during severe fire conditions. Soil temperature regimes, seasonal habitat, historical fire data, cheatgrass dominance and sage-grouse population data were analyzed to create the tiered fire priority areas.

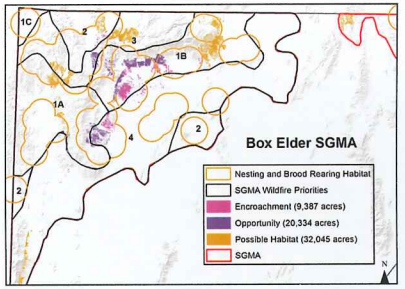
Invasive Plants / Cheatgrass: Cheatgrass degrades the resilience of a sagebrush landscape against wildfire. UDWR and the Utah State University GIS Lab worked to developed maps demonstrating low, moderate and high cheatgrass dominance. As fires are more likely in cheatgrass dominant areas, the



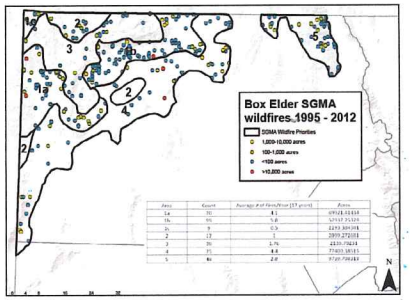
SGMA wildfire priorities in Utah



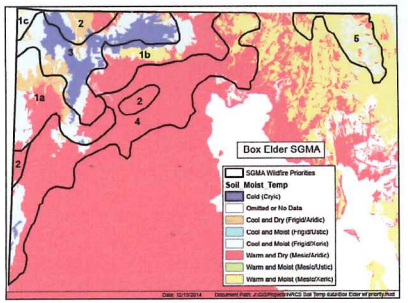
Box Elder SGMA pinyon/juniper areas and wildfire priorities



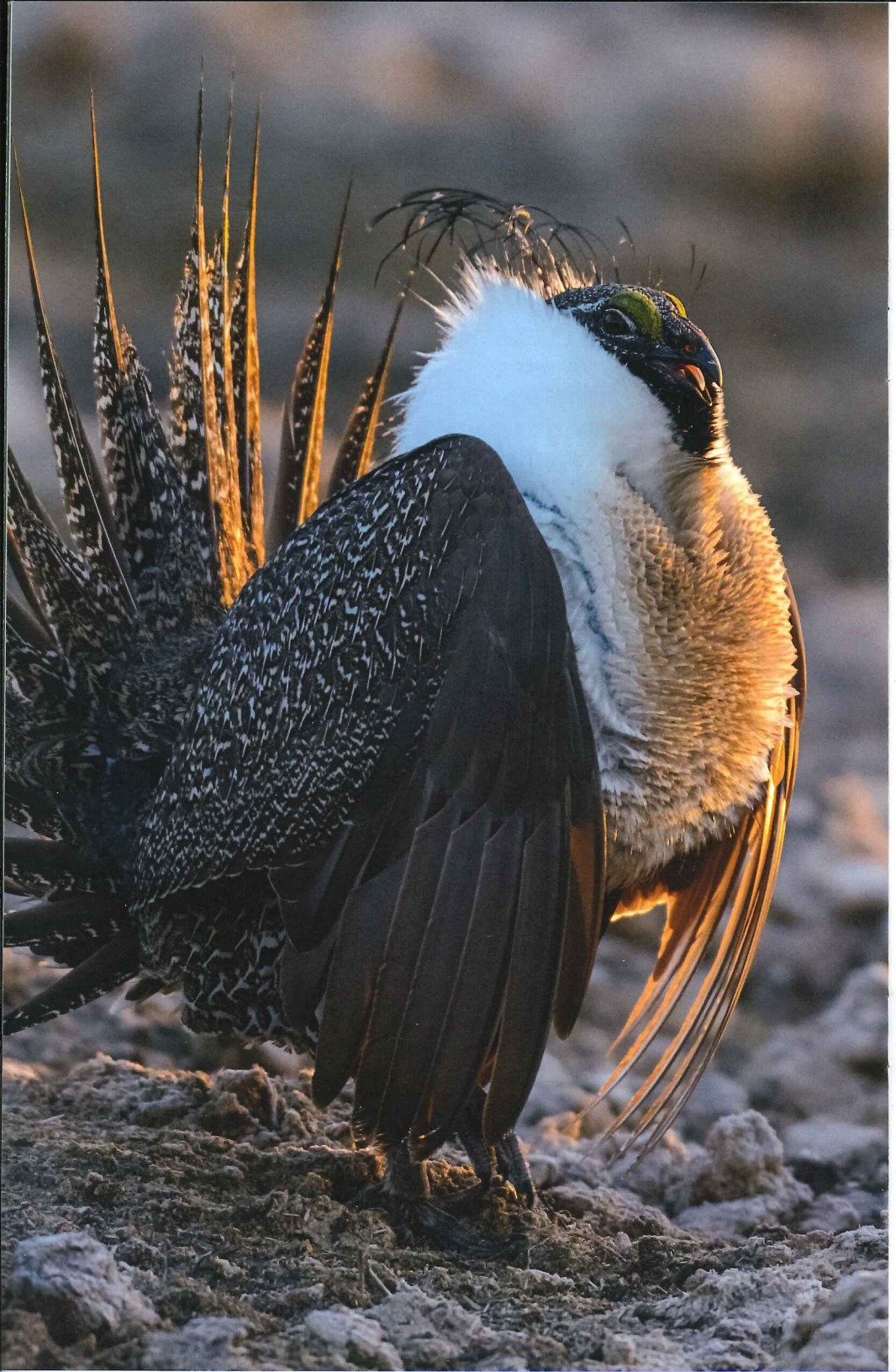
Box Elder SGMA nesting/brood-rearing and P/J treament areas



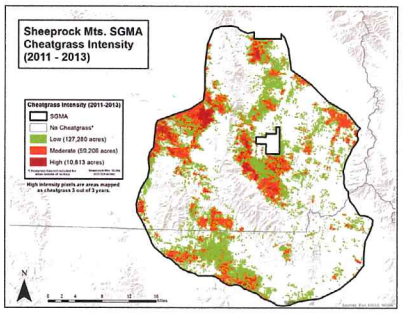
Box Elder SGMA historic fires

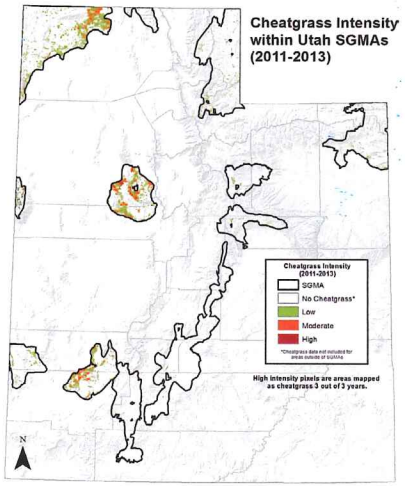


Box Elder SGMA soil temperatures

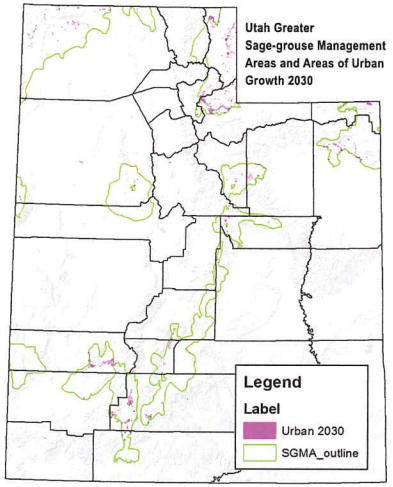


state now has the ability to focus rapid post-fire rehabilitation efforts in these areas to re-establish sagebrush, perennial grasses and forbs.

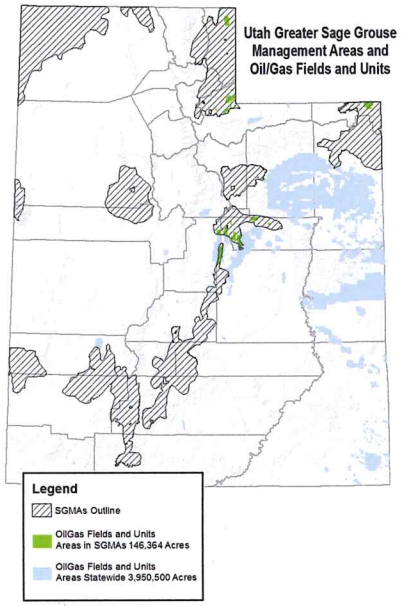


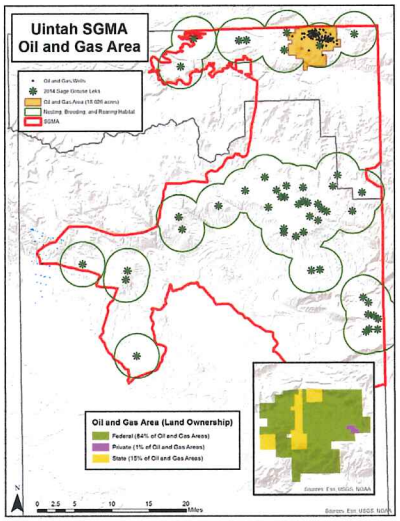


Urban Growth: Urban Growth inside SGMAs was analyzed using 2030 projections from Utah Governor's Office of Management and Budget. Aside from a few isolated areas of potential conflict, urban growth within SGMAs is not forecast to be a major threat in the foreseeable future—0.15% growth over 16 years.



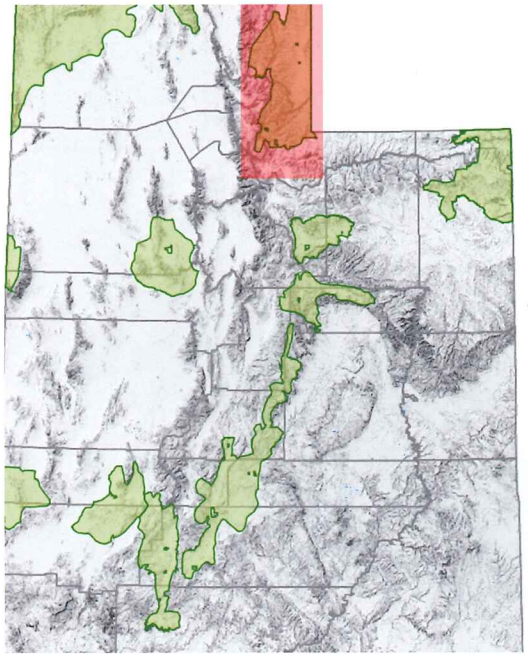
Oil and Gas Development: SGMAs were assessed for potential conflicts with oil and gas development. Through this assessment, UDWR identified oil and gas development occurring within 1.96% of SGMAs. The oil and gas fields and units are found within the borders of four principle SGMAs: Uintah, Rich-Morgan-Summit, Carbon, and the extreme north end of Parker Mountain-Emery. Of the total 7.5 million acres of sage-grouse management areas in Utah, there are 146,000 acres of possible conflict with oil, gas and mining. At this scale, UDWR expects that working with industry partners to avoid, minimize and mitigate future development will be feasible. Mitigation resources from oil and gas development provide funding for critical conservation projects and a net gain in habitat.

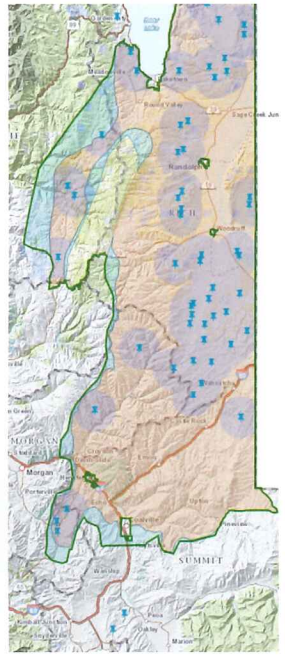




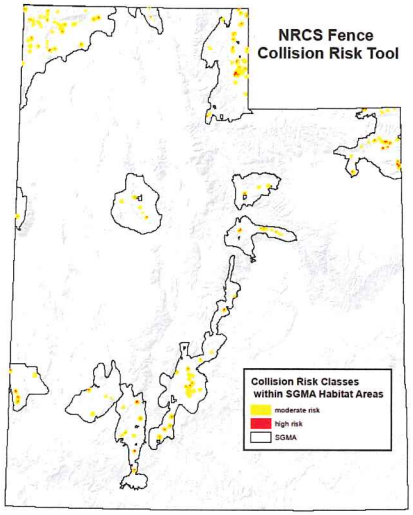
The most up-to-date, high-resolution versions of the maps shown in this report are available at wildlife.utah.gov/sage-grouse.

Avoidance and Minimization Planning: Information about lek locations, along with their three-mile buffers, are now available on the UDWR website. This ensures that early in the planning stage of development within the SGMAs, oil and gas industry planners and other developers have sufficient opportunity to avoid and minimize disturbances with the critical areas.





High Risk Fence Analysis: Research by Stevens (2011) suggests that proper fence marking can reduce bird strikes by up to 83%. In Utah, 6.3% of the SGMAs have high risk of areas for sage-grouse fence collisions. Marking or removing fences in high-risk areas for collisions is one way we can decrease bird mortalities. Using the NRCS high risk fence marking tool, DWR mapped all areas throughout Utah where sage-grouse fence collisions are most likely. This map has enabled the strategic placement of hundreds of thousands of fence markers to be placed to date.



CONCLUSION

BOTH state and federal partners are committing millions of dollars to sage-grouse projects. Finalizing the *Conservation Plan for Greater Sage-grouse in Utah* was a great accomplishment. However, with that complete, implementation of the state plan is well underway. Science-based conservation is now the focal point of the state's efforts and on-the-ground projects.

Historical data show the State of Utah has the capacity and dedication to fund and carry out landscape-level habitat conservation projects. Longterm planning efforts are now in place to demonstrate where resources will be directed to have greatest benefit for the species. By ameliorating threats and strategically improving, enhancing and increasing the amount of quality habitat, Utah has effectively outlined an implementation plan that will positively affect the longterm outlook and trajectory of sage-grouse.

CONSERVATION CONTRIBUTORS

Utah Department of Natural Resources
- Division of Wildlife Resources
- Oil, Mining and Gas
- Forestry, Fire and State Lands
- Water Resources

Utah's Watershed Restoration Initiative

Utah Department of Agriculture and Food
- Grazing Improvement Program

Utah Legislature

United States Department of Agriculture
- Natural Resources Conservation Service

Participating Utah counties