

## Fuels Management Benefits toward Sage-Grouse Habitat



One of the greatest single threats to the survival of the Greater Sage-Grouse is fire and invasive plant species. If the Sage-Grouse is listed, protection measures and recovery efforts will impact all public lands users and most citizens in the western United States. The physical and economic impacts of a listing at this magnitude would be unprecedented for western rangelands. The Utah BLM Fuels Management Program has played and continues to play a key role in the conservation, maintenance, and restoration of sagebrush landscapes on public lands as a primary means of preventing the Sage-Grouse listing.

The Bureau of Land Management

(BLM) fuels management program involvement with Sage-Grouse spans all three National Cohesive Wildland Fire Management Strategy goals: Restoring and Maintaining Fire Resilient Landscapes, Creating Fire Adapted Communities, and Responding to Wildfire.

Corporately, conserving, maintaining, and restoring, sagebrush habitat is one of the BLM’s highest renewable resource priority. Fuels Management provides one of the BLM’s best lines of defense through habitat conservation and maintenance treatments. Offices have placed a high priority on planning and implementing fuels treatments intended to reduce fire behavior characteristics and benefit Sage-Grouse habitat. Reduced fire behavior aids fire suppression and diminish fire extent within and adjacent to Sage-Grouse habitat.

The Fuels Management program cooperates extensively with other resource programs, and external partners, to **conserve** and **maintain** Sage-Grouse habitat by:

- removing early to mid-phase pinyon-juniper encroachment,
- establishing fuelbreaks in strategic locations to protect areas with sagebrush where large and destructive wildfires have occurred in the past, and
- treating new non-native weed infestations.

The fuels program, in combination with the Emergency Stabilization and Rehabilitation (ESR) program, places priority on pro-actively working to **restore** Sage-Grouse habitat by:

**Table 1. - FY2003 to FY2013 Utah BLM Fuels Funds Spent on Sage-Grouse by Year**

Year	Acres	Funding
2003	4,309	\$678,560
2004	5,947	\$467,346
2005	6,349	\$791,100
2006	10,298	\$689,250
2007	29,171	\$1,626,638
2008	29,066	\$1,222,300
2009	51,668	\$2,853,404
2010	40,598	\$2,995,428
2011	30,292	\$3,586,818
2012	52,935	\$4,601,868
2013	16,381	\$1,994,600
2014	57,122	\$4,571,597
<b>Total</b>	<b>334,136</b>	<b>\$26,078,909</b>



- increasing, at a landscape level, sagebrush cover through removal of late-phase pinyon-juniper encroachment,
- reducing cheatgrass cover and other non-native species cover, and
- increasing perennial grass/herbaceous, and sagebrush cover.

The BLM fuels program has invested in efforts within our sagebrush communities since the inception of the National Fire Plan:

- From 2003 to 2013, the BLM Fuels Management Program has invested \$92,087,524 in Fuels funds for treatments and activities resulting in over 1,306,224 acres treated in areas identifying Sage-Grouse as a Species of Interest (based on historic data in the National Fire Plan Reporting and Operating System (NFPORS)). Utah BLM was one of the first states to identify Sage-Grouse habitat for Fuels Management treatments expending \$26,078,909 in fuels funding for 334,136 acres of treatment (see Table 1). Utah ranks #2 in both acres treated and investment towards Sage-Grouse habitat. Even with fluctuations in funding and Departmental direction placing emphasis on Wildland Urban Interface (WUI) protection, the general trend in funding and acres treated benefitting Sage-Grouse has been upward. Budget reductions in FY2013 did show a significant reduction, but upward trajectory resumed in FY2014 in fuels funding within Utah BLM.
- In the Fuels Treatment Effectiveness Monitoring (FTEM) System, 162 out of 625 wildfire/treatment intersections reported since data collection began within the BLM in FY2012, were within 2 km of Sage-Grouse habitat. For Utah BLM 25 out of 147 intersections were in proximity of Sage-Grouse habitat (see Table 2). This represents areas where fuel treatments aided in wildfire suppression efforts and/or reduced the acres burned within or adjacent to Sage-Grouse habitat. Within the BLM as a whole, 32% of the intersections are credited with keeping a fire to less than 1,000 acres, reducing both the size and adverse effects of wildfires and thereby minimizing the potential negative impacts on Sage-Grouse habitat, showing a positive return on investment. For Utah, only six fires grew beyond 1,000 acres with 19 fires staying under 1,000 acres for 76% of the interactions. Eleven of these fires were suppressed at one acre or less (44%).
- While Department direction has been for fuels funding to go towards treatments to protect the Wildland Urban Interface (WUI), communities and their values, in many cases Sage-Grouse has benefitted. When WUI is in proximity to Sage-Grouse habitat, treatments have kept fires starting in the WUI small and manageable, thus reducing negative effects to Sage-Grouse habitat. For Utah BLM from 2002-2013, 191,918 of the acres for 69% have been within the WUI.
- The fuels program has been heavily involved with research in rangeland ecosystems, such as Joint Fire Science Project sponsored SageSTEP. SageSTEP is a long-term multidisciplinary experiment evaluating methods of sagebrush steppe restoration in the Great Basin. Four of the 19 sites are located in Utah, including Onaqui (2 sites), Scipio, and Greenville Bench. Brigham Young University and Utah State University are the primary research institutions working with the BLM along with other universities and the U.S. Geological Survey. Starting in 2005, initial research was funded through the Joint Fire Science Program with the fuels program funding the planning and implementation of associated treatments. The Fuels Program has continued to support long term monitoring, providing \$275,000 towards this effort over the past two fiscal years.
- In FY2012, the Fuels Program provided \$981,000 in funding for contracts associated with the Resource Management Plan (RMP) amendments and revisions as part of the BLM Great Basin and Rocky Mountain Greater Sage-Grouse regional planning efforts. Over \$200,000 was provided to Utah’s planning effort and associated contracts. Fire planners and fuels personnel are contributing time towards this planning effort.
- Utah BLM has been part of the Utah Catastrophic Wildfire Reduction Strategy. This statewide effort identifies Sage-Grouse habitat, the potential for extremely large fires (several fires of over 100,000 acres), the risk to the ranching interests, and the remoteness of areas within the state. Mitigation strategies that were discussed include an acceleration of

**Table 2. - Wildfires Intersecting Fuels Treatments within 2 km of Sage-Grouse habitat.**

Fire Zone	Number of Wildfires
Canyon Country Fire Zone	3
Color Country Fire Zone	3
Green River Fire Zone	6
West Desert Fire Zone	13
<b>Grand Total</b>	<b>25</b>

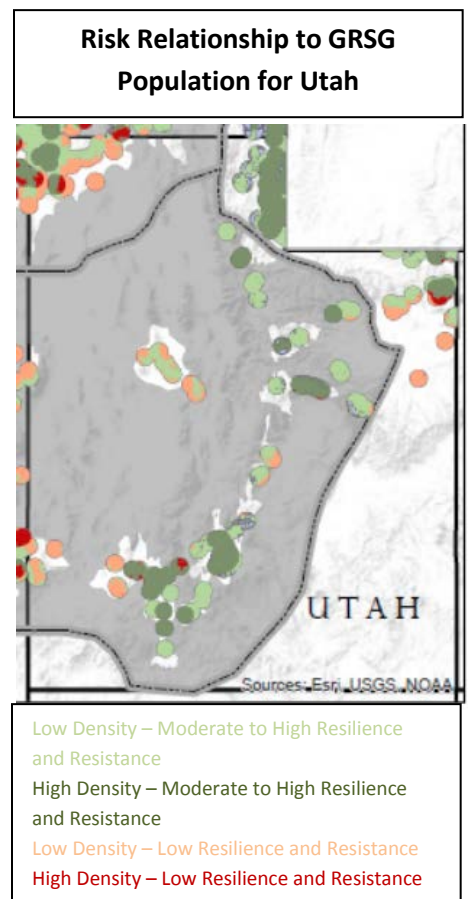


the fuels projects that have been going on, especially removing pinyon-juniper that has encroached on historical sagebrush communities. Additional green strip firebreaks were also identified as a strategy to help limit the size of fires. The concept of keeping fires smaller in size would also help in having the ability to restore burned areas after a fire because the means to do so would be available on a year to year basis. There is a need to have firefighting resources staged closer to areas. Under the FY2014 Omnibus Appropriation, BLM is prioritizing the funding of all treatments and activities identified by the States that benefit Sage-Grouse.

- Bureau-wide treatment and activities identifying Sage-Grouse as a Species of Interest within NFPORS account for \$28,328,658 in funding and treatments of 241,343 acres.
- This level of funding encompasses 62% of the total fuels program project allocation toward treatments and activities identifying Sage-Grouse. For Utah, 77% of the fuels program project allocation is going towards Sage-Grouse.
- In FY2014 Utah BLM Fuels Management is making its largest contribution towards the Sage-Grouse effort with over six million dollars in funding (\$6,194,717) and a target of 62,227 acres. This is the second largest effort within the BLM Fuels Management program. Utah BLM has identified \$2,337,000 in Planned Contributed Funds from other programs/partners. This is a million dollars more than any other state in Planned Contributed Funding.
- Within NFPORS, nationally the field has identified \$2 million in unfunded Fuels projects that would benefit Sage-Grouse habitat for FY2014. Utah BLM identified an additional \$807,640 in unfunded work and an additional capacity of 6,172 acres if funds were available towards projects with Sage-Grouse habitat.
- At the field, state, and national level, Fuels Management and Fire Planning continue to support various planning efforts related to Sage-Grouse. This includes the RMP amendments and revisions as part of the BLM Great Basin and Rocky Mountain Greater Sage-Grouse regional planning efforts. The BLM Fuels Program has also taken an active role in the Western Association of Fish and Wildlife Agencies, Fire and Invasive Assessment Team. The Utah BLM Fire Planner has spent countless hours working on this planning effort.

For FY2015 and beyond, there continues to be opportunities for the Fuels Management Program to contribute towards positive outcomes for Sage-Grouse:

- For FY2015, Utah BLM has identified \$9,158,417 in capacity to treat Sage-Grouse habitat for 99,705 acres of treatments. Allocations of FY2015 funds are currently underway with implementation and planning occurring on the ground.
- There is encouragement for increased funding in FY2015 as the President’s Budget proposes a new Department of Interior Landscape Resiliency Treatments Program within the Wildland Fire Management Program. The new programs proposed funding is \$30 million and recognizes the importance of treating fire adapted ecosystems for land health benefits, including area outside of the WUI. Land resiliency requires both the fire program and resource management to work together and the program places prioritization on a match from bureau base funds. For the BLM, these additional funds could benefit Sage-Grouse habitat.
- The Utah BLM Fuels Program is already heavily engaged in the Utah Partnership for Conservation and Development and the Watershed Restoration Initiative. Many of the Fuels Specialist has served as regional chairs and much of the implementation of associated projects occur through the Fuels Program.
- BLM will continue to facilitate the development of the Healthy Landscapes Initiative (HLI) and the Fuels Management Program to accomplish landscape stewardship actions. This new effort and identified Focal Areas aligns with the Landscape Resiliency Treatments Program, to positively impact Sage-Grouse habitat. At the District level within Utah, the Fuels program has taken a lead on the HLI.



- Provisions within the 2014 Farm Bill allow for greater collaboration and leveraging of funds between ranchers and agencies for activities to reduce hazardous fuels. Several Districts have already taken advantage of the Farm Bill and the Sage-Grouse Initiative with the Natural Resources Conservation Service (NRCS) to work with permittees and treat sagebrush communities benefitting both Sage-Grouse habitat, hazardous fuels, and forage for rangeland management. One of the focuses of the recent Utah BLM Prescribed Fire and Fuels Workshop was the efforts occurring with NRCS and included a field trip to Twin Falls where such partnership occurs.
- Conduct project and NEPA planning along with associated implementation at a landscape scale. Single small scale treatments are not impacting the large catastrophic fires effects on Sage-Grouse habitat. For some states there will be some transition in moving from working on smaller WUI planning areas to landscape level projects and it is expected that some lag time will occur with the shift in focus before implementation can occur bureau-wide, whereas Utah is positioned with numerous NEPA sufficient landscape level projects on the shelf and ready to implement.
- In 2010, the BLM Great Basin Restoration Initiative Workgroup developed the “Considerations for Strategically Reducing Fuels and Wildfires on Public Lands in the Great Basin with Targeted Grazing” for the application of domestic livestock grazing as a strategic resource to reduce fuel in specific areas to accomplish defined vegetation or landscape goals through the use of fences, water sources, or dietary supplements. Efforts to expand target grazing opportunities need to be further investigated to conserve Sage-Grouse habitat. The Utah State Fuels Specialist was on the team that developed this paper with several Districts employing this practice and incorporating the concept into new NEPA.
- At the field level, the Fuels Management Program has been recognized by many as the implementation arm of vegetation management. The program is positioned not only to implement projects, but also to plan and monitor both Fuels Management and other treatments such as those benefitting Sage-Grouse habitat.

### Utah Fire Zone-By-Fire Zone Summaries

Numerous examples of positive impacts toward Sage-Grouse have been demonstrated from the Fuels Management Program throughout Utah BLM. Table 3 summarizes (by Fire Zone) accomplishments and funding spent on projects that benefited Sage-Grouse from FY2003 to FY2014. Table 3 is followed with successes from around Utah.

**Green River Fire Zone** - The Green River District Fuels Program has been working to improve and enhance Greater Sage-Grouse and other sagebrush obligate species habitat since 2003. Pinyon-juniper encroachment removal by mechanical means has been a major focus. To date through fuels funding 56,000+ acres have been treated in Greater Sage-Grouse habitat and another 58,000+ acres through the wildlife program utilizing UPCD/WRI funding in the Vernal area. In mountain sagebrush sites that respond well to fire treatments, 21,106 acres of prescribed fire have been completed. Since 2003 six wildfires have intersected fuels treatments in this occupied habitat that significantly reduced fire size and intensity allowing suppression resources to control the wildfires during the first operational period. In addition, another six wildfires intersected ten treatments adjacent to occupied habitat and were also instrumental in the suppression efforts.

Working closely with the district wildlife staff, Northeastern Utah Division of Wildlife Resources habitat and Sage-Grouse coordinator, and local landowners, the Green River District has been able to pool knowledge, resources, and funding to accomplish our goals of hazardous fuels reduction and habitat improvement. We have also acquired additional funding sources which included \$50,000 of oil and gas offsite-mitigation that were utilized in 2013 for the Anthro Bullhog treatment and this year an additional \$20,000 in funding from NRCS through a permittee/UPCD agreement towards two mastication treatments. Sage-Grouse

**Table 3. - FY2003 to FY2014 Fuels Funds Spent on Sage-Grouse by Fire Zone**

Fire Zone	Acres	Funding
Canyon Country Fire Zone	1,967	\$607,501
Central Utah Fire Zone	51,710	\$5,123,350
Color Country Fire Zone	166,673	\$10,274,529
Green River Fire Zone	56,260	\$3,653,931
West Desert Fire Zone	57,526	\$6,419,598
<b>Total</b>	<b>334,136</b>	<b>\$26,078,909</b>

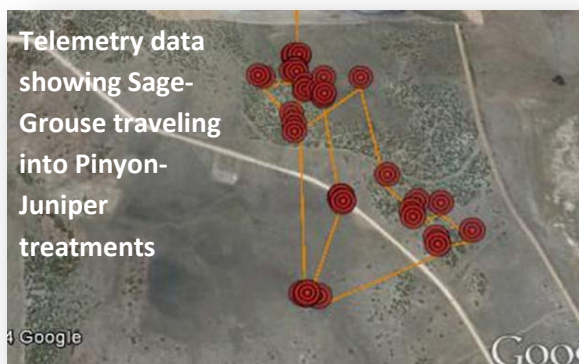


sightings have increased in a majority of treatment areas located in the Red Fleet and Diamond Mountain areas and this year a bird collaring project is scheduled using the telemetry data to validate and improve our treatment selections. For 2014, we have several multi-year, multi-partner treatments ready for implementation that will further benefit Sage-Grouse and other species that call the Uintah Basin home.

**Color Country Fire Zone** - The Color Country District in Utah treats approximately 20,000 acres of public land each year to reduce hazardous fuels and restore wildlife habitats that were altered by past management practices. Accomplishments include increasing Sage-Grouse habitat at a cost of approximately \$500,000 per project annually. The district has five landscape-scale project areas in Sage-Grouse habitat and has invested nearly \$4 million since 2010. Utah's Watershed Restoration Initiative (WRI) leverages these investments by contributing money from state agencies, non-profit sportsmen's groups, and other partner organizations. As a result, the number of Sage-Grouse sightings has doubled since 2012. Projects designed to protect and improve habitat for Sage-Grouse, mule deer and other wildlife are multi-year, multi-phase treatments planned and funded through the initiative to accomplish common wildlife and fuels management goals.



The Kanab Watershed contains the southernmost population of Greater Sage-Grouse in the Western United States. Color Country Fuels Program, the Kanab Field Office, private landowners and the NRCS have placed a significant amount of project planning and implementation dollars into Upper Kanab Creek over the past five years. Color Country Fuels has taken the lead in developing a multi-year watershed level NEPA document, to help prioritize and fund a variety of vegetation projects over the next 15 years.



The agency has completed over 4,000 acres of hand thinning, 3,400 acres of mechanical treatments and 4,400 acres of seeding. In addition, 3,000 acres were completed during 2006 and 2007, as part of the Hazardous Fuels Reduction Categorical Exclusion, and prior to the larger Upper Kanab Creek Watershed restoration effort. Telemetry data documents grouse actively using these older treatment areas (see photo), and the newer treatments will expand both winter and brood rearing habitat near known occupied habitat.

One of the focuses of the Kanab Watershed project area has been to conduct treatments that cross-jurisdictional boundaries to provide landscape level benefits for Sage-Grouse working closely with private landowners, and NRCS and Utah's Watershed Restoration Initiative.

The Alton Sage-Grouse Project was a joint project between BLM and a private landowner, near the town of Alton, Utah. BLM removed Phase III trees through a mechanical contract and aerial seeding, and the private landowner simultaneously bulldozed trees and drill seeded the private land. In total, there were approximately 1,500 acres of pinyon-juniper removed to benefit mule deer, Sage-Grouse and turkeys, as well as provide a fuel break near the town of Alton.



Color Country Fuels coordinated with the Cedar City Field Office to mechanically treat Stage II and Stage III pinyon-juniper, within the Long Hollow Grazing Allotment. Approximately 1,000 acres were treated by mastication and hand thinning during 2006 to remove hazardous fuels and provide for Sage-Grouse habitat. This year, another 950 acres were treated, to release the sagebrush understory and improve Sage-Grouse brood-rearing and winter habitat. Approximately 850 acres of this year's project was completed as part of the mitigation for the Sigurd to Red Butte 345 kV Transmission Line.

In recent years, Sage-Grouse have been documented strutting at a historical lek within the 2006 project area. The newer treatment will provide connectivity between this project and several thousand acres of sagebrush habitat which would provide for Sage-Grouse brood-rearing and winter habitat. Aerially seeded grasses, forbs and sagebrush will provide for additional Sage-Grouse habitat needs. This year's treatment is Phase 1 of several Sage-Grouse and Utah prairie dog habitat improvement projects within this area.

**West Desert Fire Zone** - Since 2004, the West Desert Fire Zone near Salt Lake City had 69 treatments interact with wildfires. Current Utah BLM Operations Specialist and former West Desert Fire Management Officer Jeff Kline said, "The location of these fuels treatments has affected the fire behavior. They have been strategically located over the past decade in areas with high fire occurrence and intensity. I am convinced that we have reduced the number of acres burned, minimized the risk to firefighters and the public, and reduced impacts to Sage-Grouse." The photo shows where the Pine Creek wildfire burned into the Cook Canyon Fuels Treatment, illustrating how the treatment helped slow the spread and assist in controlling the fire. The Cook Canyon Fuels Treatment occurred within Sage-Grouse habitat. Within the West Desert Fire Zone, 13 of the 69 treatment interactions reported occurred within Sage-Grouse habitat.



**Summary** - While Utah may support 5-8% of the total range-wide population of greater Sage-Grouse, opportunities exist to not only to conserve existing habitat, but also expand upon such habitat. The Utah BLM Fuels Management program has and will continue to play a significant role in providing for the conservation, maintenance, and restoration of Sage-Grouse habitat as demonstrated through the acres treated and dollars invested. The examples highlighted represent a fraction of the positive work occurring within the BLM and across Utah. The BLM Fuels Management program is positioned to continue such work and contribute towards positive outcomes for the Sage-Grouse while meeting hazardous fuels objectives and continuing with traditional work, reducing the hazardous fuels and mitigating negative impacts to firefighter and public safety, infrastructure, and the natural resources.