

**Utah's Adaptive Resources Management
Greater Sage-grouse Local Working Groups**

Accomplishment Report

2008



Photo by Todd Black

June 2009

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Submitted to

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Preface

This report summarizes the status and 2008 accomplishments of Utah's Adaptive Resource Management Greater Sage-grouse (*Centrocercus urophasianus*, hereafter referred to as sage-grouse) Local Working Groups (LWGs). These groups were facilitated by staff affiliated with the Utah Community-Based Conservation Program (CBCP). This report incorporates the information requested under 50 CFR Chapter IV, US Fish and Wildlife Service (USFWS) Policy for Evaluation of Conservation Efforts (PECE) When Making Listing Decisions (USFWS 2003). Specific topics addressed by the LWGs plans include:

1. Staffing, funding, funding sources, and other resources necessary to implement LWG's plans.
2. Legal authority of the partners to implement the plan.
3. The legal procedural requirements (environmental reviews) needed to implement the plans and how this will be accomplished.
4. Authorizations or permits that may or will be needed and how these will be obtained.
5. The type and level of voluntary participation (number of landowners involved, types of incentives used to increase participation).
6. Regulatory mechanisms (laws, ordinances, etc.) that may be necessary to implement the plans.
7. A statement regarding the level of certainty that the funding to implement the plans will be obtained.
8. An implementation schedule to include incremental completion dates.
9. A copy of LWG's approved management plans (These reports are available on our web site www.utahcbcp.org).

The conservation plans discuss the level of certainty that the management efforts identified and implemented will be effective. Specific topics addressed in the conservation plans include:

1. The nature and extent of threats to be addressed by the LWG's plans and how management efforts will reduce the threats described.
2. Explicit objectives for each management action contained in the plans and dates for achieving.
3. The steps needed or undertaken to implement management actions.
4. The quantifiable, scientifically valid parameters by which progress will be measured (e.g., change in lek counts, improved habitat conditions).
5. How the effects of the management actions will be monitored and reported.
6. How the principles of adaptive management resource management are being implemented.

The LWG sage-grouse conservation plans, previous annual reports, and meeting minutes can be accessed at www.utahcbcp.org.

Executive Summary

The Community-based Conservation Program (CBCP) encompasses the historical range of sage-grouse in Utah as identified in the 2002 (2009 revised) Strategic Management Plan for Sage-grouse (Figure 1). The plan, approved by the Utah Wildlife Board on 1 June 2002 *revised 2009), mandated the organization of local sage-grouse working groups (LWGs) to develop and implement sage-grouse conservation plans. The Utah Division of Wildlife Resources (UDWR) in cooperation with Utah State University Extension (USUEXT), private landowners, public and private natural resource, wildlife management, and conservation agencies and organizations have implemented the CBCP.

In 2008, Utah's Adaptive Resources Management Greater Sage-grouse (hereafter referred to as sage-grouse) LWGs continued implementation of their Sage-grouse Conservation Plans (Plan). The LWGs include representatives from state and federal agencies of land and resource management, non-governmental organizations, private industry, local communities, and private landowners.

In this report we summarize efforts of the LWGs to implement the conservation strategies and actions outlined in their Plans. These strategies meet the guidelines set forth by the US Fish and Wildlife Service (USFWS) in their Policy for Evaluation of Conservation Efforts (PECE) standards. The conservation strategies and action address the five USFWS listing factors as they apply to sage-grouse in each LWG area. Plan recommendations and guidance are voluntarily being implemented by all LWGs. The LWGs meet regularly to review actions and encourage adoption of Plan conservation strategies and actions. In 2008, greater emphasis was placed on identifying population and habitat conditions and issues specific to each LWG conservation area.

In this report, each LWG presents a table of ranked threats that currently or potentially affecting sage-grouse and sagebrush habitats in their area. This threat analysis, combined with recommended strategies and actions, provided a framework for LWGs to implement their Plans over the next ten years. Plans are being implemented using an adaptive resource management approach. As new information emerges from local and range wide conservation efforts, the LWGs are using it to update management strategies, and priorities in their area. As of January 2008, 10 Utah LWGs have completed sage-grouse conservation plans. These plans and a summaries of LWG activities can be found on-line at www.utahcbcp.org.

Staffing

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Project Staff: S. Nicole Frey, Research Assistant Professor, Jack H. Berryman Institute, Department of Wildland Resources, Utah State University (station in the Department of Biology – Southern Utah University, Cedar City), Mr. Todd Black and Ms. Lorien Belton, Community-based Conservation Extension Specialists, Dr. David Dahlgren, Post-Doctoral Fellow, and Rae

Ann Hart, Assistant to an Executive, Department of Wildland Resources, Utah State University, Logan.

Funding: In July 2006, Utah State University entered into a 5 year agreement with the Utah Division of Wildlife Resources (UDWR) to develop and facilitate the Utah Community-Based Conservation Program. This agreement provides up to \$140,000 annually in funding and in-kind matches through June 30, 2011, to conduct the program. Additional funding of up to \$160,000 a year is provided through by the Jack H. Berryman Institute through Utah State University Extension. Additional support in terms site and agency specific grants and contracts in the amount of \$200,000 were entered into in 2008 to support local working group activities, project monitoring and evaluation.

Legal Authority

The LWG Plans implement Utah's Sage-grouse Strategic Management Plan (Strategic Plan) that was approved by the Utah Wildlife Board in 2002 (UDWR 2002, revised 2009).

Project Goals

1. Protect, enhance, and conserve Utah sage-grouse populations and sagebrush-steppe ecosystems.
2. Establish sage-grouse in areas where they were historically found and the current sagebrush-steppe habitat is capable of maintaining viable populations (Utah Sage-Grouse Management Strategic Plan 2002).
3. Protect, enhance, and conserve other sensitive wildlife species that inhabit Utah sagebrush-steppe ecosystems.
4. Sustain and enhance socio-economic conditions in affected local communities.
5. Complete actions that make listing sage-grouse as threatened or endangered unwarranted and/or assist in recovery if the species are listed.
6. Increase local stakeholders and community involvement and ownership in the species conservation planning processes.
7. Increase LWGs awareness, appreciation, and the application of the use of science in making land use and population management decisions.

Morgan-Summit Adaptive Resources Management (MSARM) Local Sage-grouse Working Group

The Morgan-Summit Adaptive Resource Management (MSARM) sage-grouse local working group is facilitated by Ms. Lorien Belton. MSARM has been inactive for more than a year, but will begin meeting again in 2009. Meetings will include spring and fall meetings and a summer or fall field tour, depending on project timing.

The MSARM project area overlaps with the Central Region Utah Partners for Conservation and Development team. One goal of upcoming meetings will be to discuss how best the group can leverage resources through UPCD and Watershed Restoration Initiative (WRI) efforts to benefit sage-grouse, both via project funding and enhanced monitoring programs. The group will also review strategies and action with an eye to planning upcoming collaborative projects.

The following updates reflect the individual or joint efforts of MSARM partners in 2008 and the early part of 2009 outside the formal work of the MSARM group.

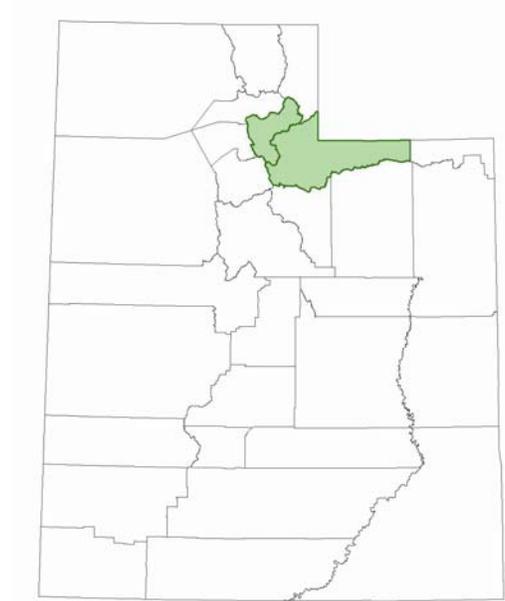


Figure 5. The Morgan-Summit Adaptive Resource Management (MSARM) Sage-grouse Local Working Group Conservation Area consists of 1,608,659 acres located in northern Utah.

Conservation Strategies and Actions: 2008 Accomplishments

- 1. Strategy:** Through 2016, prevent establishment of cheat grass and other non-native vegetation species in sage-grouse habitats.
 - 1.1. Action:** Seed treated areas, where appropriate, with ecologically suitable seed mixes
 - 1.2. Action:** Avoid using fire in sage-grouse habitats prone to invasion by cheatgrass or other invasive weed species.
 - 1.3. Action:** Evaluate all wildfires and proscribed burns and reseed with ecologically suitable seed, where appropriate, to prevent establishment of cheat grass and other invasive weed species.

Treatments of infestations are done by the county weed department, including aerial spraying of musk thistle and spot treatments for Dyer's Woad.

- 2. Strategy:** By 2016, increase grass/forb understory in sagebrush stands.

- 2.1 Action:** Use sagebrush thinning techniques (Lawson aerator, spike, etc) in a mosaic pattern, where possible, to thin sagebrush stands.
- 2.2 Action:** Seed, when possible, treated areas with ecologically suitable seeds.
- 2.3 Action:** Reclaim and/or reseed areas disturbed by treatments when necessary, using seed mixtures with appropriate grasses and desirable forbs
- 2.4 Action:** Restore understory vegetation in areas lacking desirable quality and quantity of herbaceous vegetation where economically feasible.
- 2.5 Action:** Conduct vegetation treatments to improve forb diversity (e.g., harrowing, aerating, chaining) and reclaim or reseed disturbed area, if needed
- 2.6 Action:** Develop management techniques to increase forb diversity and density in sagebrush steppe, within limits of ecological sites and annual variations
- 2.7 Action:** Work with public and private partners to implement rest-rotation grazing systems, where possible

UDWR completed a several-hundred acre project on the Henefer/Echo Wildlife Management Area to improve the cover vegetation from primarily grasses to a more sage-grouse and other wildlife friendly mix of sagebrush and forbs, which were seeded in the area. The project is part of ongoing long-term efforts to treat the area gradually. It is potential sage-grouse summer habitat, as well as longer term potential for winter habitat if sagebrush establishment is good. In addition, a Spike treatment on private land owned by Sheldon Richins was designed to reduce sagebrush cover from 35-40% to 10-15%. The treatment, done through NRCS, occurred in the fall of 2008.

- 3. Strategy:** By 2016, all new water projects will take into account MSARM recommendations to prevent conditions for extraordinary mosquito populations and potential persistence and spread of West Nile Virus in the Resource Area.
 - 3.1. Action:** Identify key elements of various water projects that are needed to prevent existence of standing water and minimize mosquito populations.
 - 3.2. Action:** Develop partnerships with key water management agencies to work cooperatively to both maintain necessary flow regime and prevent conditions for extraordinary mosquito populations
 - 3.3. Action:** Cooperate with Summit County Mosquito Abatement District.
 - 3.4. Action:** Assess any new water projects for contributions toward conditions that may enhance mosquito populations

West Nile is not an active concern in the area currently. Water developments for grouse were not done in 2008.

4. Strategy: By 2016, **search additional areas (TBD) for new active lek** sites.

- 4.1. Action:** Coordinate with UDWR to conduct aerial surveys in areas suspected to contain undiscovered active leks.
- 4.2. Action:** Coordinate with public and private partners to conduct terrestrial lek searches in areas suspected to contain undiscovered active leks
- 4.3. Action:** Coordinate with public and private partners to conduct count surveys of known active leks.
- 4.4. Action:** UDWR to enlist and coordinate private volunteers and/or other agency biologists search for new leks and conduct lek counts on active leks.
- 4.5. Action:** Through 2016, test dead sage-grouse for West Nile Virus and any other parasites/pathogens of importance

The UDWR conducts annual spring lek counts and did aerial surveys for new leks in the area in 2008. At least three were found by UDWR, all on private land at relatively high elevations. No West Nile has been found to date in sage-grouse in this area.

5. Strategy: By 2016 **decrease populations of sage-grouse predators**, especially in areas used by sage-grouse for nesting and brood-rearing.

- 5.1. Action:** Support efforts of USDA-WS to remove red foxes, coyotes, and ravens in areas used by sage-grouse for nesting and brood-rearing during spring and early summer
- 5.2. Action:** Develop educational materials and distribute to recreationists that provide information on the impact to non-native predator species from littering

Coyote predation management for livestock likely benefits sage-grouse, but nothing specifically sage-grouse focused is done. No monitoring of the predation impact on grouse in this area has occurred.

6. Strategy: **Monitor impacts of lek viewing** opportunities on lek behavior and lek attendance.

- 6.1. Action:** Provide educational material (brochures, presentations, etc.) to interested birding groups about the ecology of sage-grouse and threats they face in the Resource Area.
- 6.2. Action:** Increase law enforcement patrols in and around crucial lek sites
- 6.3. Action:** Through 2016, include information about MSARM activities in County

Extension newsletter

The group has not met to discuss these actions.

7. **Strategy:** By 2016, increase funding opportunities for private partners interested in improving sage-grouse habitat on private land.
 - 7.1. **Action:** Participate in SCD and UPCD northern region team; share Plan Strategies with these groups and encourage funding of Plan Strategies
 - 7.2. **Action:** Increase information dissemination about funding opportunities to private partners
 - 7.3. **Action:** Develop educational material about habitat improvement techniques appropriate for sage-grouse habitat improvement and distribute to private partners
 - 7.4. **Action:** Coordinate habitat projects on private land that meet the needs outlined in Plan and the needs of private partners

Projects for sage-grouse are designed and then go through the Utah Partners for Conservation and Development project funding process in the winter. Various LWG participants participate in UPCD as well as on the SCD. SCD involvement will likely increase as the group focuses more on project implementation. NRCS partners meet with landowners to keep them informed of sage-grouse friendly project opportunities. Due to the large proportion of private land in the area, Farm Bill money is a key mechanism to potentially improve habitat for sage-grouse. One project was planned but later dropped by the landowner; an NRCS/DWR staff member is following up with the landowner. Also see Strategy 2.

8. **Strategy:** By 2016 increase amount breeding habitat in “good” condition.
 - 8.1. **Action:** Work with public and private partners to implement rest-rotation/time controlled grazing management strategies, where appropriate
 - 8.2. **Action:** Work with NRCS and private partners to implement Farm Bill programs beneficial to sage-grouse
 - 8.3. **Action:** Coordinate with county weed board to implement noxious weed program to reduce impacts on sage-grouse
 - 8.4. **Action:** Work with NRCS and private partners to monitor effects of treatments on sage-grouse populations and habitat

See strategies 1, 2 and 7. The county weed departments conduct ongoing weed management but as the group has been inactive, extensive coordination between sage-grouse efforts and weed efforts have not occurred.

9. Strategy: Coordinate fire management practices with public and private partners to prevent loss of crucial sage-grouse habitat and enhance/improve sage-grouse habitat, where appropriate.

9.1. Action: Comment on BLM/USFS fire plans

9.2. Action: Re-seed sites, post-burn, with ecologically suitable seed mixture to prevent the establishment of cheat-grass

9.3. Action: Use fire management to reduce sagebrush canopy cover and create diverse sagebrush stands in brood-rearing and summer use areas

No fire projects were done in 2008 through UDWR. The group did not meet in 2008 to discuss these actions or updates. Ongoing burns are conducted on Ensign Ranch by Jeff Young, although they have not occurred in the last two years due to dry weather conditions. These burns are ongoing cool season sagebrush burns done in mosaic patterns (between 200-2000 acres per year) in the area where they have observed sage-grouse activity. They have several leks in that area. Sage-grouse monitoring is done as an add-on to monitoring related to the commercial hunting operations. Deseret Land & Livestock Wildlife Foreman Todd Cornia has implemented 1500-2000 acres of small (50-200 acre mosaics) cool season burns in sage grouse brood habitat in Morgan county (on Deseret property) in the last five years. These burns were designed to improve breeding habitat for both sage grouse and mule deer.

10. Strategy: Improve lek vegetation conditions to allow for predator recognition and visibility.

10.1. Action: Open lek areas that have been invaded by sagebrush and other shrubs

10.2. Action: Map and inventory leks with potential for restoration

10.3. Action: Maintain and enhance desired habitat conditions for leks

No lek vegetation projects were done specifically in 2008.

11. Strategy: Improve mesic and riparian areas for sage-grouse and watershed health.

11.1. Action: Identify opportunities or needs to create small wet areas, implement such projects where economically feasible

11.2. Action: Design and implement livestock grazing management practices to benefit riparian areas

11.3. Action: Modify or adapt pipelines or developed springs to create small wet areas

11.4. Action: Locate projects to minimize potential loss of water table associated with wet meadow

11.5. Action: Protect existing wet meadows and riparian areas where necessary

11.6. Action: Manage vegetation and artificial structures to increase water-holding capability of areas.

Various riparian condition improvement projects were done in the area, but none specifically for sage-grouse.

12. Strategy: Minimize the amount of quality sage-grouse habitat eliminated by residential and commercial **land development** consistent with private property rights.

12.1. Action: Participate with County land use decision makers in identifying key sage-grouse habitats

12.2. Action: Maintain sagebrush environments of sufficient size and shape around developments in sage-grouse habitat.

12.3. Action: Encourage the voluntary use of conservation easements and other land protection vehicles with willing sellers in sage-grouse habitats

12.4. Action: Educate rural residents about the importance of good grazing management in keeping small tracts weed free and capable of providing wildlife habitat

Development is a major threat to sage-grouse in the Morgan/Summit area, particularly in Summit County. The large proportion of private lands in the area makes regulating development in the name of sage-grouse challenging. One key success in this area was an easement finalized in the Henefer Area where the remnant sage-grouse populations exist. The two-part Taylor Hollow Ranch easement includes approximately 3000 acres of actively used sage-grouse habitat, as well as an historic lek. Although both Morgan and Summit counties have open-space zoning requirements, and provisions that require developers to consider impacts to wildlife, a currently proposed large development has the potential to take out an entire lek. UWDR is working to address the issue. Work is currently underway at a statewide level to get sage-grouse information to counties to assist with planning/zooming/development efforts that can protect key areas.

13. Strategy: **Encourage monitoring programs** that are consistent with NRCS practices and Connelly et al. (2003).

13.1. Action: Coordinate with MSARM partners to facilitate data collection

13.2. Action: Schedule and/or advertise educational opportunities, disseminate printed materials

13.3. Action: Coordinate with academic institutions to utilize students in monitoring efforts

13.4. Action: Hold annual field tours of habitat improvement projects

No sage-grouse specific field tour was held in 2008; however the group will begin meeting again in 2009, possibly including a field tour to help generate renewed interest in sage-grouse conservation efforts in the area, particularly among private landowners. Monitoring related to future projects will be discussed once the group begins meeting again.

14. Strategy: Improve efforts to **increase size of sage-grouse population** in the Resource Area.

14.1. Action: Explore possibility of initiating translocations of hen sage-grouse from other areas within Utah with stable or increasing populations

14.2. Action: Continue existing predator management activities as called for by UDWR, USDA-WS, and other participating agencies and organizations

No translocations have occurred in the area. Also see Strategy 5.

15. Strategy: Provide for a level and **system of domestic livestock grazing that maintains and improves both the long-term stability of sage-grouse populations** and habitats and the livestock industry in the Resource Area.

15.1. Action: Coordinate grazing management with livestock operators to reduce resource and timing conflicts on leks and prime nesting habitat when possible

15.2. Action: Apply grazing management practices to achieve desired conditions including maintenance of residual herbaceous vegetation appropriate for the site

15.3. Action: Encourage implementation of grazing systems that provide for areas and times of deferment while taking into consideration the resource capabilities and needs of the livestock operator

NRCS/DWR biologists work with private landowners both proactively and when the opportunity arises to recommend grazing practices that will reduce the impact to sage-grouse populations. No active grazing changes specifically related to sage-grouse were implemented in 2008.

Major Needs and Challenges

MSARM's primary current need is a renewed coordination effort to re-start meeting and discussing sage-grouse focused project ideas beyond what the partners accomplish on their own outside the group. There is strong interest from several key individuals in getting the group back together soon. One key issue of immediate concern is a potential housing development which if completed could destroy a lek.

Summary of Sage-grouse Conservation Threats

In 2007, MSARM identified and ranked major threats to sage-grouse conservation in the conservation area (Table 4). This threat ranking will be used by MSARM to prioritize conservation actions. The threat rankings will be reviewed in 2009 to ensure immediacy.

Table 4. Relative importance/contribution of threats to sage-grouse populations in Morgan-Summit Adaptive Resources Management (MSARM) Sage-grouse Local Working Group Conservation Area. (L = low; M = medium; H = high; and VH = very high).

Threat	Aspects of Sage-grouse population in the MSARM Resource Area							
	Reduced Population Size	Population Distribution	Reduced Nesting Habitat Quality	Reduced Brood-rearing Habitat Quality	Reduced Summer/Fall Habitat Quality	Reduced Winter Habitat Quality	Reduced Connectivity of Seasonal Habitat Types	Reduced Connectivity of Populations & Sub-populations
Drought and Weather	M	M	H	H	H	L	M	L
Existing and New Fences	L	L	L	L	L	L	L	L
Home and Cabin Development	H	H	M	M	M	M	H	VH
Power lines and Other Tall Structures	M	H	H	H	H	M	H	H
Renewable and Non-renewable Energy Development	M	M	M	M	M	M	M	M
Roads	M	H	H	H	H	M	H	H
Vegetation Management	M	H	M	M	M	H	M	L
Hunting	L	L	-	-	-	-	-	-
Fire	L	L	L	L	L	L	L	L
Livestock Grazing	L	L	L	L	L	L	L	L
OHV Recreation	M	M	H	H	H	VH	M	M
Invasive/Noxious Weeds	-	-	L	L	L	L	L	-
Parasites and Disease	M	M	-	-	-	-	-	-
Predation	VH	VH	H	H	M	M	M	M
Pinyon-Juniper Encroachment	M	M	M	L	L	M	M	M