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

Accomplishment Report

2009-2010

Photo by Todd Black

November 2010

Accomplishment Report

2009-2010

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

Submitted to

Michael, J. Styler, Executive Director, Utah Department of Natural Resources

Jim Karpowitz, Director, Utah Division of Wildlife Resources

Submitted by

**Noelle Cockett, Vice President for University Extension and Agriculture,
Utah State University, Logan**

Staff Members

**Terry A. Messmer, Lorien Belton, Todd Black, S. Nicole Frey, Rae Ann Hart
Utah Community-Based Conservation Program, Jack H. Berryman Institute
Department of Wildland Resources, Utah State University, Logan.**

November 2010

Preface

This report summarizes the 2009 and early 2010 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 discusses 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 2009-2010, 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. Please note that if a strategy or an action number is missing from this report or no comments are reported under a specific strategy; it means that no action(s) were reported during the period towards its completion. 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 actions 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 2009-2010, additional emphasis was placed on identifying population and habitat conditions and issues specific to each LWG conservation area.

Each LWG plan contains 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. All 10 Utah LWGs have completed sage-grouse conservation plans. These plans and summaries of LWG activities can be found on-line at www.utahcbcp.org.

In 2010, the USUEXT/UDWR LWG partnership (Utah Community-based Conservation Program) was recognized by the Utah Center for Rural Life at Southern Utah University with a 2010 Utah Rural Honors Award. The award was presented by Gov. Gary Herbert at the 2010 Utah Rural Summit, held in Cedar City, Utah on the SUU campus. The award recognizes the unique partnership for engaging Utah rural communities in proactive efforts to conserve sage-grouse and other sagebrush obligate species.

Staff

Project Director:

Terry A. Messmer, Professor and Associate Director, Jack H. Berryman Institute, UMC 5230, Utah State University, Logan, Utah 84322-5230. Phone 435-797-3975, Fax 435-797-3796, E-mail terry.messmer@usu.edu

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).

Todd Black and Lorien Belton, Community-based Conservation Extension Specialists, Utah State University, Logan.

David Dahlgren, Post-Doctoral Fellow, and Rae Ann Hart, Program Assistant, 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 $136,000 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 $300,000 were entered into in 2009-2010 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.

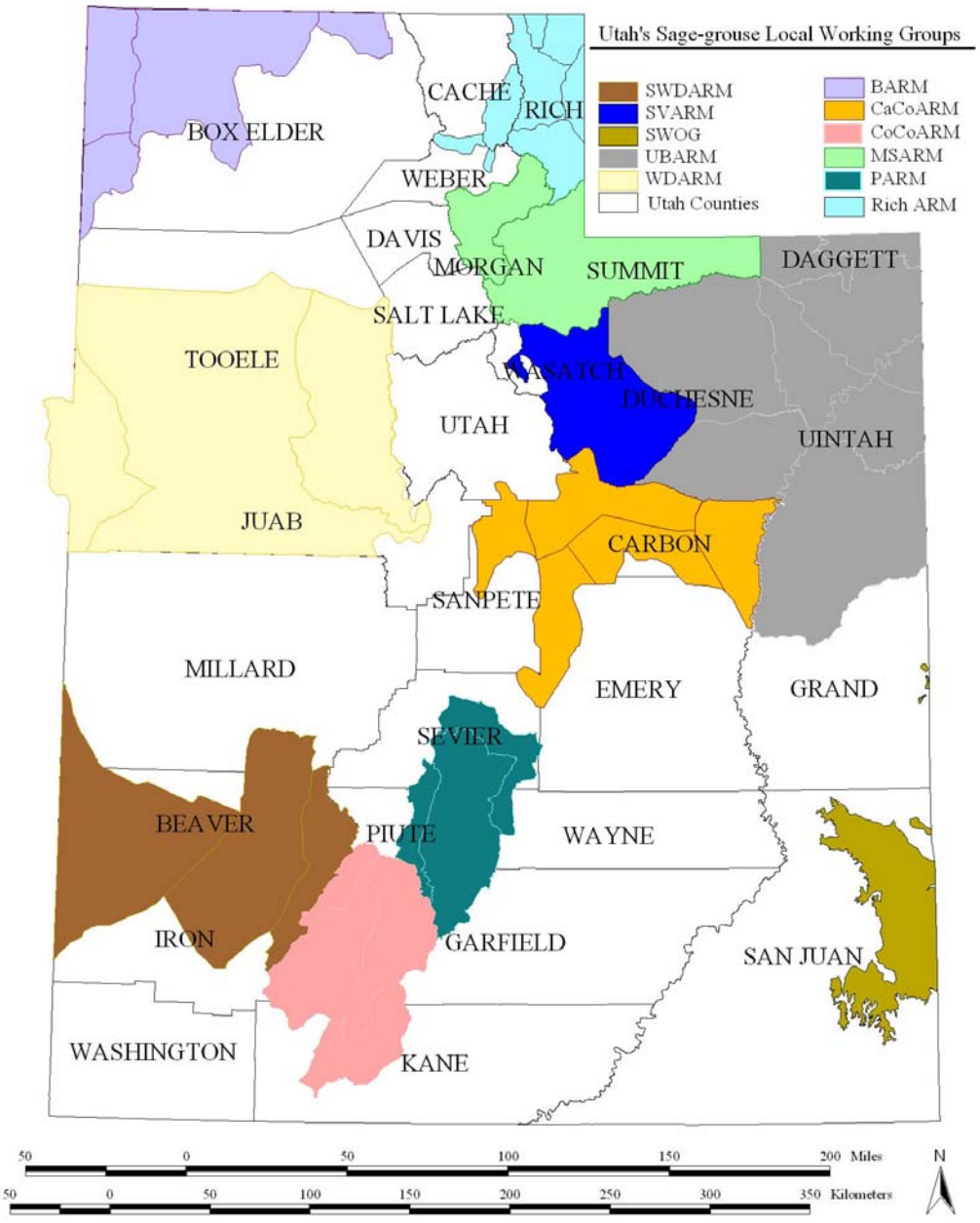

Figure 1. Utah Sage-grouse Conservation Areas, Utah Strategic Management Plan for Sage-grouse (UDWR 2009). (Note this report summarizes conservation actions completed to benefit greater sage-grouse. Thus it does not include Gunnison sage-grouse conservation actions. This species inhabits San Juan County).

Box Elder County Adaptive Resources Management (BARM) Sage-Grouse Local Working Group

The West Box Elder Adaptive Resource Management Plan (BARM) Sage-grouse Local Working Group was organized in 2001. The group is facilitated by Mr. Todd A. Black. The BARM is comprised of state and federal agency personnel, representatives from local government, non-profit organizations, academic institutions, private industry, and private individuals.

Figure 2. The Box Elder Adaptive Resource Management (BARM) Sage-grouse Local Working Group Conservation Area consists of 1,702,251 acres located in northwestern Utah.

In 2009 and 2010, BARM met formally three times to discuss strategies and actions and review research findings. Additionally, BARM members participated in two field tours where BARM members reviewed habitat improvement projects in and around the Park Valley area.

The information below summarizes efforts made by BARM and its partners to mitigate threats and implement conservation actions identified in the Box Elder Adaptive Resources Management Greater Sage-grouse Local Conservation Plan, October 2006. This adaptive plan remains in effect until the year 2016. BARM partners reported on specific actions completed or addressed in 2009-2010 and identified steps to be taken to implement addition actions into subsequent years of the plan. The "key ecological aspects (KEA)" were not changed during this reporting period. The BARM will re-assess KAE's in the fall of 2010 to determine if changes are warranted. For a complete list of threats identified by the BARM group, see page 64 of the conservation plan located on line at http://utahcbcp.org/files/uploads/BARMSAGRPlan_Final.pdf

Conservation Strategies and Actions: 2009-2010 Accomplishments

1. **Strategy**: By 2016, identify P/J stands within the resource area that encroaching in key sage-grouse habitat.
   1.1. Action: Revisit and make recommendations to retreat as needed P/J removal sites.

   BARM members continue to work on identifying areas where P/J is encroaching and working with the Watershed Restoration Initiative (WRI) to secure funding and to reduce this threat.

2. **Strategy:** By 2011 make an assessment of cheat grass and other non-desirable species in sage-grouse habitats.

2.1. Action: Review and monitor all vegetative sampling by all partners (range trend crew completed surveys in 2006 and again in 2011).

BARM data suggested that cheatgrass is increasing in abundance and at higher elevations. This could be in response to observed increases in average temperatures.

2.2. Action*:* Avoid using fire in sage-grouse habitats prone to invasion by cheatgrass or other invasive weed species.

No fires were used for habitat restoration in areas where cheatgrass was present in 2009-2010.

2.3. Action*:* Evaluate all wildfires and prescribed burns and reseed with appropriate species to prevent establishment of cheatgrass and other invasive weed species.

Lynn seeding area was evaluated and BLM will take action in 2010 to complete the reseeding.

2.4. Action*:* Work with and identify other partners (County, Utah Department of Transportation, and private industry) to establish fire breaks in key areas to protect important sage-grouse habitat.

BARM partners met with BLM to discuss areas to establish fire breaks to protect key wintering and lekking areas for sage-grouse in and around Badger Flats, Dairy Valley, and Curlew Junction.

2.5. Action*:* Treat areas where undesirable vegetation has become, or is at risk of becoming, a factor in sage-grouse habitat loss or fragmentation.

No action taken in 2009-2010.

2.6. Action*:* Work with existing weed management programs to control noxious weeds in the Resource Area.

BARM members continue to work with County weed boards in identifying any areas of concern.

2.7. Action*:* Identify large areas of introduced plant species that are not meeting sage-grouse habitat needs and reseed with native species where appropriate.

No action taken in 2009-2010.

2.8. Action*:* Identify areas where pinyon or juniper trees are encroaching on good quality sagebrush habitat and treat as needed.

See strategy 1 action 1

2.8. Action*:* Manage fire, transportation, and vegetation treatments to minimize undesirable vegetation where possible.

No action taken in 200-2010.

3. **Strategy**: By 2011, complete an assessment on the condition of available water sources and identify potential new water improvement/development projects.

3.1. Action*:* Manage vegetation and artificial structures to increase water-holding capabilities of likely habitat.

No action taken in 2009-2010.

3.2. Action*:* Install catchment structures to slow run-off, hold water, and eventually raise water tables.

BARM members were assigned areas within each of their respective jurisdictions to identify potential areas and will report in late2010.

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

No action taken in 2009-2010.

3.3. Action*:* Locate projects to minimize potential loss of water table associated with wet meadows.

BARM members were assigned areas within each of their respective jurisdictions to identify potential areas and will report in late2010. This report will be included in our 2011 summary.

3.3. Action*:* Identify key elements of various water projects by developing partners to work cooperatively to maintain existing water sources.

No action taken in 2009-2010.

4. **Strategy**: By 2011, identify key public, private, and Utah School and Trustlands Administration (SITLA) lands in the Conservation Area (specific locations to be selected) that are protected and/or managed so as to conserve/improve sage-grouse nesting habitat.

4.1. Action*:* Encourage use of BARM defined desired conditions for state, private, and federal lands and influence management actions in order to move toward those conditions.

BARM partners discuss these areas as projects come up.

4.2. Action: Support partner efforts for special designations that protect sage-grouse nesting habitat on public, private, and SITLA lands.

The BARM group identified the Rosebud/Muddy/Upper Dove Cr./Upper Grouse Cr./Cotton Thomas/Upper Meadow Cr. lek complexes as areas that need special protection and consideration. Almost 80% of all west Box Elder lekking birds and the corresponding nesting occur in an area from Immigration road north to middle/upper Dove Creek, upper Lynn Valley west to Kimbell Cr., north through Cotton Thomas Basin and southwest into the upper Meadow Cr/Joe Dahr Cr. Basin. This relatively small area is the core of the BARMS sage grouse population with corresponding metapopulation extensions into Idaho and NE Nevada.

4.3. Action: Use available grouse and brood telemetry data to identify key nesting/brooding habitat areas within the Grouse Creek sub unit.

Ongoing. USU graduate students are continuing research to identify important areas. This work will be completed by 2012.

4.4. Action: Pursue habitat improvement projects (to meet Desired Conditions) on private and SITLA lands in areas used by sage-grouse for nesting habitat.

All habitat improvement projects are approved and presented to WRI and have BARM support.

4.5. Action: Identify research needs to address sagebrush treatments at 'lower' elevations where the majority of these nesting activities occur.

BARM has identified additional research needs for wintering areas and creating fire breaks and improving wintering habitat in the Badger Flat and Dairy Valley area of the Grouse Creek sub unit and in the Park Valley area.

4.6. Action: Use mechanical or chemical treatments to reclaim and/or reseed areas (when necessary) using suitable seed mixtures.

No action taken in 2009. In the fall of 2010, BLM completed green stripping to mitigate wildfire potential on Badger flats. USU will be evaluating the vegetation and sage-grouse responses in 2011-2013.

4.7. Action: Where economically feasible, restore understory vegetation in areas lacking desirable quality and quantity of herbaceous vegetation.

On going with WRI projects, all WRI funded projects are reviewed by BARM members and re-seeding efforts are a wildlife/sage-grouse approved mix.

4.8. Action: Conduct vegetation treatments to improve forb diversity (e.g., harrowing, aerating, chaining) and reclaim or reseed disturbed area, if needed.

On going with WRI projects, all WRI funded projects are reviewed by BARM members and re-seeding efforts are a wildlife/sage-grouse approved mix.

4.9. Action: Develop management techniques to increase forb diversity and density in sagebrush steppe, within limits of ecological sites and annual variations.

On going with WRI projects, all WRI funded projects are reviewed by BARM members and re-seeding efforts are a wildlife/sage-grouse approved mix.

5. Strategy: By 2011, identify key public, private, and SITLA lands in the Conservation Area (specific locations to be selected) are protected and/or managed so as to conserve/improve sage-grouse lekking areas/habitat.

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

No action taken in 2009-2010.

5.2. Action: Encourage use of defined desired conditions for state, private, and federal lands and influence management actions in order to move toward those conditions.

On-going

5.3. Action: Support partner efforts for special designations that protect sage-grouse lekking habitat on public, private, and SITLA lands.

No action taken in 2009-2010.

5.4. Action: Pursue habitat improvement projects (to meet Desired Conditions) on public, private, and SITLA lands in areas used by sage-grouse for lekking.

No action taken in 2009-2010.

6. Strategy: Minimize the impact of excessive predation.

6.1. Action: Begin site-specific predation management considering all predator species (especially common raven) where necessary and appropriate.

2009 BARM met with USDA Wildlife Services to identify raven routes for WS to place poisoned eggs to help with raven predation on sage-grouse nest. Work will continue in 2010-2011.

6.2. Action: Support efforts of USDA-WS to remove red foxes and ravens in areas used by sage-grouse for nesting and brood-rearing during spring and early summer.

See 6.1

7. **Strategy**: Through 2016, avoid natural resource development within important sage-grouse

use areas. If development does occur, work with industry to minimize impacts.

7.1. Action: Participate in county planning efforts for natural resource exploration and development to ensure that biodiversity impacts are minimized.

BARM members commented on various aspects of the project, see Ruby pipeline EA

7.2. Action: Cooperate with partners (BLM/USFS/SITLA/NRCS) planning efforts to minimize impacts on sage-grouse and sage-grouse habitat.

BARM members commented on various aspects of the project, see Ruby pipeline EA

8. Strategy: By 2016, identify measures to protect key wintering areas available to sage-grouse.

8.1. Action: Use available grouse telemetry data in the Grouse Creek sub unit and local knowledge in other sub units to map these areas.

USU researchers started working on this in 2009 to map these areas and expect to be completed by late 2011.

8.2. Action*:* Work with public and private partners to identify areas through winter locations (Dry Basin, Montgomery Ranch, South Kilgore, Dakes Pass).

Ongoing USU research has identified additional wintering areas. These areas have been mapped. BARM partners met with BLM to discuss areas to establish fire breaks to protect key wintering and lekking areas for sage-grouse in and around Badger Flats, Dairy Valley, and Curlew Junction.

8.3. Action: Use UDWR fixed wing winter surveys for big game to identify areas.

No action taken in 2009 with the UDWR

9. Strategy: By 2009, maintain or increase populations of sage-grouse in the Conservation Area.

9.1. Action: Support continued sport hunting within current UDWR models.

BARM group supports current UDWR harvest recommendations and models.

9.2. Action: BARM group will consider support of any translocation of sage-grouse hens from the Conservation Area.

No birds were translocated in 2009 or 2010.

9.3. Action: Work with UDWR to explore other methods (Selected lek or lek complexes counts and statistical inferences,

Post doc work by USU to explore and evaluate these methods. Results expected by 2012

10. **Strategy**: Increase cooperation and coordination between BARM and other public and private partners.

    10.1. Action*:* Continue with quarterly BARM meetings. Review and assess our local plan and MOU.

    BARM partners meet 3-4 times a year as a group with three meetings and a field tour in 2009-2010. See BARM meeting schedule on the web at http://utahcbcp.org/htm/groups/boxelder

11. **Strategy:** Through the duration of the plan, continue looking at and evaluating current predator management strategies especially in areas used by sage-grouse for nesting and brood-rearing.

    11.1. Action: Modify power lines and wood fence posts (to remove raptor perches) in important sage-grouse areas, where feasible and where predator concerns have been identified.

    USU published results of these monitoring efforts in; http://utahcbcp.org/files/uploads/boxelder/Thacker_Dissertation%20.pdf and http://utahcbcp.org/files/uploads/boxelder/2008BARM__Final.pdf

    11.2. Action: Remove trees, remove/modify raptor perches, and maintain quality sagebrush habitat, where predation concerns on sage-grouse have been identified.

    BLM ongoing lop and scatter and brush hog work east of Badger flat and up Pole Creek and Dry Canyon area.

    11.3. Action: Maintain or increase site-specific predation management to consider all predator species (especially common ravens and red fox) where necessary and appropriate.

    See strategy and action 6 above

    11.4. Action: Initiate research on direct and indirect impacts of predation during each sage-grouse life history phase.

    No action taken to date by any working groups.

    11.5. Action: Coordinate management and research with USDA-WS.

    See strategy and action 6 above

11.6. Action: Support efforts of USDA-WS to remove mammalian predators and corvids in areas used by sage-grouse for nesting and brood-rearing during spring and early summer.

See strategy and action 6 above

11.7. Action: Identify additional sources of funding to continue current predator removal efforts.

Ongoing

Major Needs and Concerns

Wildfire and subsequent invasive species still remain the biggest overall threat to sage-grouse in the conservation area. There are some concerns with the Ruby Pipeline project and how additional fragmentation may affect sage-grouse populations in certain areas. Mitigation measures will be taken by Ruby and monitored by BARM members to determine impacts. Additionally, there are concerns with nest predation and little or no raven control in critical nesting habitat. USU research indicates high nest predation over the past 4 years in the Grouse Creek area. It is believed similar predation rates occur on the Park Valley side of the mountain as well.