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County Commissioners Reaffirm Support for Utah Sage-grouse Plan to USFWS Leadership

By David Dahlgren, Utah State University

The Utah Governor's Public Lands Policy Coordination Office (PLPCO), Utah Division of Wildlife Resources (UDWR), Utah State University (USU) Extension Community-based Conservation Program, and the Box Elder and Rich County Coordinated Resources Management (CRM) sponsored a field tour of the West Box Elder and Rich Sage-grouse Management Areas (SGMA) on September 3-4, 2013 for Region 6 and Utah US Fish and Wildlife Service (USFWS) Leadership, the Bureau of Land Management (BLM), The Nature Conservancy (TNC), and other partners. The USFWS participants included Noreen Walsh, Region 6 Director; Mike Therabault, Assistant Director for Endangered Species; Pat Diebert, USFWS Sage-grouse Coordinator; and Larry Crist, Utah State Director. The purpose of the field tour



Photo courtesy of Todd Black.

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was to: 1) demonstrate the scale of incentive-based conservation actions being implemented as part of the Utah Governor's Sage-grouse Conservation Plan to benefit sage-grouse in both counties on private and public lands, 2) to review planned habitat management actions, and 3) to connect policy makers with elected officials and landowners who have embraced the Utah Plan and ultimately will be most affected if sage-grouse are listed for protection under the Endangered Species Act.

The first day was spent touring the West Box Elder SGMA with Box Elder County Commissioner LuAnn Adams, Diane Tanner (CRM coordinator and landowner), Greg Sheehan (UDWR Director), Jason Robinson (UDWR Upland Game Coordinator), Troy Forrest (Utah Department of Food and Agriculture), Terry Messmer and yours truly as guides. We first stopped at local rancher and CRM Co-chair Ken Spackman's hay fields to discuss the importance of privately-owned mesic agricultural areas to sage-grouse broods. Ken is also the founding chair of the local sage-grouse working group. We discussed the Park Valley population and current research by USU graduate students Brian Wing and Avery Cook. The tour bus continued through Pinyon-Juniper (PJ) treatments occurring in the southern fluvial flows along the Raft River Mountains. These PJ dominated areas are being converted back to sagebrush landscapes, and sage-grouse have immediately used the restored areas. We continued through the Lynn Pass to overlook the Cotton-Thomas Basin, a large and intact high elevation sagebrush area key to the local sage-grouse population. Jay Tanner, a local rancher and chairperson of the local sage-grouse working group and CRM, met

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COUNTY COMMISSIONERS REAFFIRM SUPPORT, CONT.

us to help elucidate the importance of this area to both wildlife and the livestock operation in the area. Rain prevented a lengthy discussion, so we drove to Grouse Creek (truly “a place like no other” as noted on a road sign as we entered the valley) and finished our discussions under the pavilion at the rodeo grounds. We learned about the results of a “green stripping” study completed by USU, UDWR, and BLM on Badger Flats to avoid catastrophic fire disturbance to critical sage-grouse winter and breeding habitat. Elaine York (TNC), discussed an effort by TNC to map at-risk habitats across the Great Basin to help prioritize green-stripping projects to prevent wildfires.

The group stayed in Logan for an overnight stop, where we were briefed by Utah Department of Agriculture and Food (UDAF) range experts Troy Forrest and Bill Hopkins (Grazing Improvement Program – GIP) on the upcoming Three Creeks Project where new range management is being implemented to help restore watershed, range, and wildlife values to the BLM Three Creeks allotment. The next morning we drove around Bear Lake and toured parts of the Three Creeks area to see in person the landscape and need for improved conservation actions. The grazing model used historically by Desert Land and Livestock (DLL) will be implemented on a large scale on largely public and some private pastures in the Three Creeks area, effectively creating a landscape allotment with improved rest periods provided by the new grazing regimes. USU is currently monitoring sage-grouse vital rates on both DLL and Three Creeks, and preliminary results from the last two years were presented by USU graduate student Seth Dettenmaier. We ended the tour with a lunch in the Woodruff Park where all three Rich County Commissioners and Todd Black (DLL Wildlife Manager) joined the group. The Commissioners resoundly endorsed the Utah Plan and reaffirmed their support for the effort. This support included funding for a technician to monitor sage-grouse as part of the current USU study. Todd Black and Larry Crist discussed the efforts of DLL and the USFWS to implement a landscape conservation agreement which may serve as a template for other Utah SGMAs. Noreen Walsh and Larry Crist expressed their appreciation on behalf of the USFWS for the tour and all the work being done. They were interested in learning more about the role of incentive-based conservation and how it is being applied in other SGMAs. Additional tours are being planned for other SGMAs in the early 2014.

These field tours were a success at bringing local issues to a more regional and national perspective. We thank those who attended and presented important information showing the significant collaborative effort in Utah by our local partners and constituents. We look forward to more of these efforts in the future.

FEMALE SAGE-GROUSE RULE THE RANGE

By David Dahlgren, Utah State University

Did you know that sage-grouse often have more females in the population compared to males? Why? Do sage-grouse hens lay more female than male eggs? Or, could it be that females actually have higher survival than males?

A recent paper published in the Journal of Wildlife Management reporting the results of research conducted in Utah seems to suggest the latter may be true. The research conducted on Parker Mountain, Grouse Creek, and Anthro Mountain showed that sex ratios at the egg stage were 1:1, or dead even. So, the sexes start out in balanced proportion for the population, then what happens? In a study conducted during the 1980s in Montana, a researcher was able to show that in dryer sagebrush habitats sage-grouse tended to have more disparity in numbers between the sexes, while in better habitat conditions that disparity gap started to close. The theory behind this is that male sage-grouse tip the scales at 7+ pounds and females at about 3 ½ pounds. It simply takes more resources to make a male than a female sage-grouse. In other words, males just seem to have a harder time surviving than females because of their need to grow that much bigger.

Many state agencies have used sex ratios skewed toward females to help estimate population size for sage-grouse by using lek counts of males and then calculating number of females based on number of males. These estimates have been used for determining the species conservation status and setting harvest regulations. Many western state wildlife agencies, including the Utah Division of Wildlife Resources (UDWR), have assumed a 2:1 female to male ratio for population estimation. Some of the information behind this assumption was based on winter counts of sage-grouse by various biologists and seemed a reasonable place to start. However, critical assumptions need to be tested if we are going to accurately move forward reliable conservation efforts.

In the Utah study, sex ratios were determined at three different stages: at the egg, 42 days post hatch, and fall (harvested wing surveys). Data showed that sex ratios were not skewed until the hunting season (late September and early October). By October sex ratios were approximately 1.5:1 female to male. This is considerably less than previous assumptions, and brings into question the use of a 2:1 sex

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CROSS-BORDER COMMUNICATION FOCUS OF BLUE MOUNTAIN FIELD TOUR

By Lorien Belton, Utah State University

Landowners and agency partners on both sides of the Utah-Colorado border met on Blue Mountain on 24 September 2013 to discuss common needs and interests regarding sage-grouse conservation. Blue Mountain offers a vast sagebrush landscape that straddles the Utah-Colorado state line, just east of Vernal, Utah. Land ownership on the mountain is a mix of public and private land, including part of Dinosaur National Monument. The tour focused on sharing information between the two states and provided a learning opportunity for all attending. Private lands conservation strategies, pinyon-juniper treatments (past and future), and sage-grouse population trends were discussed.

Scott and Alan Chew, ranchers and landowners on the Utah side, led the group in a discussion of historic land use and changes in sagebrush cover, wet meadows, and understory vegetation over the last 40-50 years. The Chews have taken a leadership role in identifying ways to help sage-grouse on Blue Mountain that are compatible with active ranching operations. They also provided tour participants with a map of changes in wet meadow abundance over the years. The resulting conversations produced several project ideas that collaborative teams of agency employees and private individuals will continue developing, and then submit for funding in the upcoming year. Some projects would involve pinyon-juniper removal that could improve water flow to historic wet meadows. Other ideas discussed during the tour include how to focus on historic sage-grouse-use areas while avoiding high eagle-use areas (known to local landowners) when designing conifer-removal projects.

The tour afforded an excellent opportunity for state and federal agency biologists to engage their counterparts in each state to share ideas and opportunities. For example, NRCS Sage-Grouse Initiative team members, as well as BLM and state wildlife agency biologists from both states discussed specific management strategies for enhancing sage-grouse habitat in this area. Brian Holmes, a Colorado Parks and Wildlife biologist, spoke to the group about private lands strategies and opportunities being employed in that state. The Utah participants discussed implementation goals in the Utah plan, proposed projects, and research needs.

In brief, outcomes of the tour included:

- Development of several sage-grouse habitat improvement project ideas
- Identification of possible research funding opportunities for sage-grouse use surveys in and around Dinosaur National Park, including sage-grouse radio-telemetry monitoring studies and increased lek searching efforts (Most known leks are currently close to the road.)
- Increased enthusiasm for future work across state lines

Hopefully, this tour was just the beginning of many conversations between the two sage-grouse local working groups on both sides of the state line. After discussions of techniques and programs used in the area, partners expressed enthusiasm for increased cooperation. In addition to learning more about the area and about the variety of resource conditions on Blue Mountain, tour participants got a chance to connect personally as well: Scott Chew led the group in an entertaining “ice breaker” activity to deepen our connections with one another.

Overall, meeting together to learn about the similar challenges in each state and the varied opportunities for addressing them opened many doors.



Blue Mountain tour participants. Photo courtesy of Natasha Gruber.

UPCOMING EVENTS

LWG	Date	Time	Place
CaCoARM	November 6, 2013	9 AM	UDWR Office in Price
CCARM	December 11, 2013	10 AM	Garfield County Extension Office
MSARM	November 13, 2013	10 AM	Fire Station in Wanship
PARM	November 7, 2013	10 AM	Loa Courthouse
Rich County CRM Board Meeting	November 21, 2013	1 PM	Senior Citizen Center in Randolph
SWARM	December 3, 2013	10 AM	Iron County Extension Office
SVARM	November 13, 2013	2:30 PM	Wasatch County Health Building in Heber
UBARM	November 19, 2013	10 AM	Uintah County Health Building in Vernal
WDARM	November 21, 2013	1 PM	Tooele County Health Building in Tooele
West Box Elder CRM	November 19, 2013	6 PM	Park Valley School

Utah's Local Working Group Sage-grouse Summit is currently being planned for February 2014. Watch for more details.

If it's not good for communities, it's not good for wildlife.

NEW RESEARCH PROJECT MAY PROVIDE NEW INFORMATION ON SAGE-GROUSE AND TALL STRUCTURES



Sage-grouse strutting near power lines. Photo courtesy of Cheyenne Burnett.

By Nicki Frey, Utah State University

The Energy Policy Act of 2005 required all state and federal agencies to grant utilities access permits to promote reliable, renewable energy production and transmission. Contemporary transmission of energy relies largely on above ground electric-utility structures and transmission lines. The construction, operation, and maintenance of these tall structures (e.g. power lines) and the associated activities in sage-grouse (*Centrocercus* spp.) habitats was identified as a conservation threat by the U.S. Fish and Wildlife Service in their decision to designate greater sage-grouse (*C. urophasianus*; sage-grouse) as a candidate species for protection under the Endangered Species Act of 1973. The Utah Wildlife in Need Foundation (UWIN) facilitated a public input process in 2010 to assess stakeholder contemporary knowledge regarding the effects of tall structures on sage-grouse. Stakeholders reviewed published information to evaluate the scientific basis for the potential impacts of tall structures on sage-grouse. They concluded there were no peer-reviewed, experimental studies reported in the scientific literature that specifically documented increased avoidance or predation on sage-grouse because of the construction, operation, and maintenance of tall structures.

Regions of Southern Utah, in the area we call the Bald Hills, is zoned for several renewable energy development types: solar, wind, and geothermal. A few years ago, the Bureau of Land Management and Rocky Mountain Power (RMP) began discussions regarding building a new energy transmission line through the Bald Hills region. This transmission line would parallel an older line. To ensure the best management practices as part of project mitigation would be effective, they needed the most up-to-date information available. Enter Utah State University (USU) and the Southwest Desert Local Working Group. Because of research projects recently completed by graduate students in my lab, we had excellent baseline data about sage-grouse vital rates and habitat-use. To further our knowledge and study of the area, USU recently entered into a contract with RMP to study sage-grouse responses to the new transmission line construction and the off-site habitat mitigation planned in the area. This project will be a collaborative process, involving many members of the Southwest Desert Local Working Group. Using data from the Bald Hills project, we'll be able to conduct a before and after analysis of sage-grouse movements and habitat use to address the research needs identified by UWIN.

FEMALE SAGE-GROUSE RULE THE RANGE, CONT.

ratio in management and conservation of sage-grouse. By using the 2:1 sex ratio, we may have been actually overestimating the size of sage-grouse populations in Utah.

Although we can no longer use the 2:1 sex ratio to estimate population size using leks counts, there is no doubt female sage-grouse that survive long enough to produce several broods over their lifetime remain paramount in conservation of the species. This research has helped clarify an important assumption and provided accurate data-driven scientific information to managers and policy makers.

Research Citation: Guttery, M. R., T. A. Messmer, E. T. Thacker, N. Gruber, and C. Mae Culumber. 2013. Greater sage-grouse sex ratios in Utah: Implications for reporting population trends. *The Journal of Wildlife Management*; DOI: 10.1002/jwmg.620

Utah's Community-Based Conservation Program Mission

Utah's Community-Based Conservation Program is dedicated to promoting natural resource management education and facilitating cooperation between local communities and natural resource management organizations and agencies.

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