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2016 SAGEBRUSH ECOSYSTEM CONSERVATION CONFERENCE: WHAT THE PARTICIPANTS LIKED AND WANT TO SEE IN FUTURE CONFERENCES

The 2016 *Sagebrush Ecosystem Conservation: All Lands, All Hands* Conference - sponsored by the Western Association of Fish and Wildlife Agencies, the Great Basin Environmental Consortium, and Utah State University, was hosted by the Hilton Hotel, in downtown Salt Lake City, Utah, February 23-26, 2016. The purpose of the conference was to continue sharing the latest information and to plan for the conservation, restoration, and maintenance of resilient sagebrush ecosystems throughout the Great Basin and beyond.



More than 500 people attended the 3-day conference and another 300 viewed it online. Subsequent to the conference, participants were asked to evaluate and comment on the sessions. More importantly, participants they were asked to elaborate on their information needs for future conferences.

Of the survey respondents, 95% expressed satisfaction with the conference, of these 65% percent were extremely satisfied. The session which respondents rated as the most useful in terms of new information included, 1) Conifer Expansion- Science and Management 2) Brome Grasses – Impacts and Management, 3) Putting Resilience and Resistance Concepts into Practice, 4) Native Plants and Seed Strategies, 5) Hydrology of Sagebrush Systems, 6) Managing Wildlife, and 7) Landscape Conservation Design. Of all the sessions, the poster session was rated highest overall in terms of useful and new information.

Most of the respondents (66%) liked the shorter 1 ½ hour sessions featured by the conference because it increased the overall diversity of the topics that could be presented. Sixty percent of the respondents cited the broad diversity of the topics presented as one of the best liked features of the conference format.

Topics suggested for future conferences included multi-species management, how to initiate collaborative groups, how to increase seeding success, biological control of cheatgrass, mesic areas restoration and logistics, and the development of multi-agency collaborative spatial/tabular databases. Respondents were also interested in learning more about restoration cases studies – what worked, and just as important – what did not work.

Most of the participants registered online and were satisfied with the overall process. As part of the conference planning, potential participants were sent weekly updates regarding the emerging sessions and speakers. Most appreciated these updates as they provided important contemporary information which helped them decide if they would register for the conference.

We also asked those who participated online about their overall experience. Online participants that had strong internet signals were

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pleased with the process. If internet signals were spotty, reception was impacted. Regardless of those who web streamed, most (88%) indicated they would be interested in future conferences. Ninety-five percent of the respondents who participated on-site expressed an interest in attending future conferences.

PLEASE NOTE: Recorded sessions are now available at <http://sagebrushconference2016.org>. Registered meeting participants have been sent a password to view recorded sessions. Those who could not attend the conference can now register, free of charge, on the conference website and will be sent a password. We wish to thank all conference sponsors for their support in making the conference possible and the recorded proceedings available to everyone.

SHEEPROCK SAGE-GROUSE MANAGEMENT AREA (SGMA) SAGE-GROUSE TRANSLOCATION LAUNCHED

By Melissa Chelak, Graduate Research Assistant, Utah State University



The West Desert Adaptive Resources Management Local Working Group (WDARM) met on July 6, 2015, to discuss the continued Sheeprock SGMA sage-grouse population declines and develop strategies to reverse the trends. The strategies identified by WDARM included expanded efforts to remove conifer from sagebrush habitat, increase mesic areas for brood-rearing, increased predator management, particularly of red fox and corvids, better management of dispersed recreation, and the translocation of genetically similar sage-grouse from adjacent areas into the population. The WDARM recommended the translocation effort should also include research designed to also learn more about population vital rates, how resident and translocated sage-grouse birds use marginal seasonal habitat, and identifying the potential travel corridors used to connect the leks. Answering the latter question will require deploying global positioning system (GPS) radio transmitters.



To initiate the research phase of the Sheeprock SGMA sage-grouse population recovery effects, we have successfully translocated sage-grouse that were captured and radio-marked in Park Valley (Box Elder SGMA) and Parker Mountain (Parker Mountain SGMA) to the Sheeprock SGMA. The goal for the 2016 translocation was to move 40 sage-grouse this spring into the Sheeprock SGMA — 30 females and 10 males—split between the Box Elder and Parker Mountain SGMA. The goal was achieved on April 8, 2016, with the release of radio-marked sage-grouse that had been captured on the Parker Mountain SGMA. The number of sage-grouse by sex to be translocated in 2016 was approved by the Utah Wildlife Board.

Teams representing the Utah Division of Wildlife Resources (DWR), Bureau of Land Management (BLM), and Utah State University (USU) convened on the evenings of March 9-10, 2016 in Park Valley to begin spring trapping of greater sage-grouse for translocation to the Sheeprock SGMA. Twenty sage-grouse were captured from the two nights of trapping (11 females and 9 males). Of the 11 females captured, 9 were fitted with very high frequency (VHF) necklace-style radio-collars and 2 with a global positioning system (GPS) GSM back-pack style transmitter. Of the 9 males captured, 6 were fitted with VHF radio-collars and 3 with GPS back packs.



On April 8th, the translocation effort on Parker Mountain yielded 21 birds—19 females and 2 males. Of the 19 females captured, 6 were fitted with GPS PIT transmitters and the rest were fitted with VHF transmitters. We are monitoring the survival and location of the translocated birds on a weekly basis.

We thank the landowners who allowed us access to their properties to capture and release birds. We also are indebted to the dozens of volunteers who have helped with the translocation effort. We particularly thank Jason Robinson and Avery Cook, DWR, for coordinating the effort through the public review process and the logistics required to complete the translocation. We also thank the Utah Public Lands Policy Coordination Office, BLM, West Box Elder CRM, Parker Mountain and West Desert Adaptive Resources Management Local Working Groups, Jack H. Berryman Institute, Quinney Professorship for Wildlife Conflict Management, DWR, and U.S. Geological Service for funding, encouragement, and project support.

Top photo shows Melissa Chelak holding a recently caught sage-grouse. Middle photo shows GPS unit placed on bird. All photos courtesy of Melissa Chelak.

THE SCIENTIFIC BASIS FOR UTAH'S SAGE-GROUSE MANAGEMENT AREAS (SGMAs)

Just this last month, the Utah Community-Based Conservation Program led by Dave Dahlgren, published a paper in *The Wildlife Society Bulletin* that demonstrates the scientific basis for Utah's Sage-grouse Management Areas (SGMAs). They concluded that their results offer a framework to provide more certainty to sage-grouse management decision-making in Utah and other areas with isolated or fragmented habitats. Increasing the usable habitat space in SGMAs would translate into increased sage-grouse occupancy with potential long-term benefits to population stability and growth.

The Utah Greater Sage-grouse Conservation Strategy (Utah Plan), published in 2013, synthesized Utah Division of Wildlife Resources (UDWR) sage-grouse lek location data and raw seasonal movement information obtained by two decades of research by Utah State University (USU) and Brigham Young University (BYU) to initially delineate 11 SGMAs. The SGMAs delineated in the Utah Plan were believed to provide the greatest opportunity for high-value, focused conservation efforts for the species in Utah. The U.S. Fish and Wildlife Service had previously emphasized the need to focus conservation efforts on protecting and enhancing the priority habitats as the essential mechanism for species conservation. The Utah approach recognized and accepted current land uses and identified potential future uses which may conflict with species conservation.

Dahlgren and his team conducted a comprehensive evaluation of Utah's SGMAs. The team was not only interested in mapping Utah's seasonal movements, but also in learning how Utah might be better able to manage the SGMAs to ensure overall population stability. Based on their scientific review, they concluded that Utah's SGMAs encompass > 90 percent of Utah breeding populations, seasonal movements, and the landscapes that provide the greatest potential to increase sage-grouse populations through habitat protection and enhancements. The SGMAs incorporated sage-grouse radio-telemetry location data collected from 13 study areas from 1998 to 2013 to determine seasonal movements across populations. The research methodologies were consistent with range-wide protocols.

They discovered that the seasonal movements of Utah's sage-grouse populations reflected availability of habitat space. Populations occupying smaller isolated habitats moved shorter distances from breeding to summer habitats than populations occupying larger contiguous habitats; however, these same smaller population moved farther than larger populations from high elevation breeding to lower elevation winter habitats. The seasonal movement distances for Utah sage-grouse populations were generally less than those reported range wide but were reflective of localized and naturally non-contiguous nature of many sagebrush habitats in the southern Great Basin and Colorado Plateau. These results validate the emphasis of the Utah Plan on habitat objectives designed to increase available habitat (i.e., usable space).

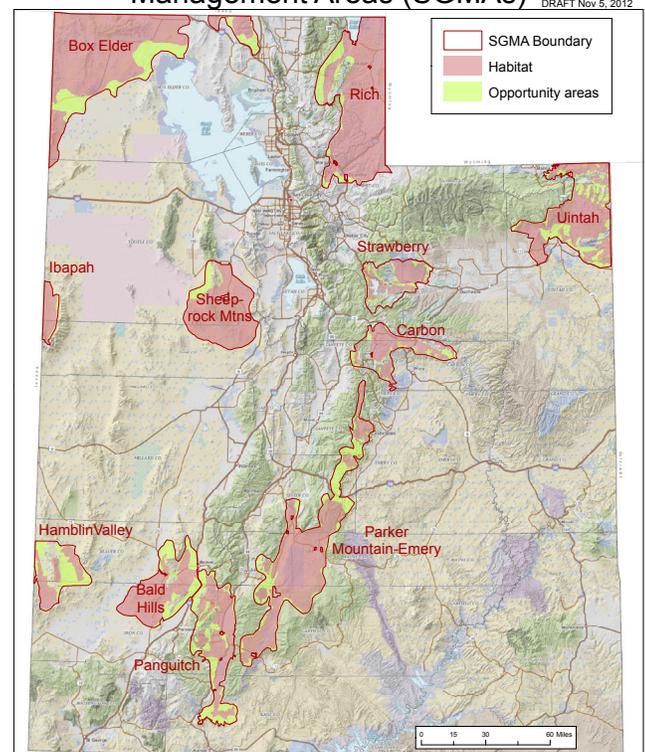
Unlike other states, Utah's SGMAs boundaries did not rely solely on lek locations to define priority habitats. There is no doubt leks provide a reasonable focal point for sage-grouse management, but for this assumption to be valid, all leks would need to be identified to increase certainty in conservation actions. Total detection of existing leks in a specific area will remain problematic because of access issues and logistical constraints. In every Utah SGMA, previously undiscovered leks have been found every time new research projects have been initiated.

However, it is important to note that Dahlgren and his team cautioned that because sagebrush systems respond over long time frames to restoration efforts and sage-grouse populations are cyclic with relatively slow growth rates compared with other gallinaceous birds, it may take several breeding cycles before population-level effects due to management actions become noticeable. The USFWS will re-evaluate its decision to not list sage-grouse for Endangered Species Act protection as part of a 5-year status review; therefore, more information will be needed to better understand the effects of this management strategy on stabilizing sage-grouse populations.

Citation: Dahlgren, D.K., T.A. Messmer, B.A. Crabb, R.T. Larsen, T.A. Black, S.N. Frey, E.T. Thacker, R.J. Baxter, and J.D. Robinson. 2016. Seasonal Movements of Greater Sage-grouse Populations in Utah: Implications for Species Conservation. *Wildlife Society Bulletin* DOI: 10.1002/wsb.643. The paper is available at https://www.researchgate.net/profile/David_Dahlgren/contributions or <http://utahcbcp.org/html/publications>.

Utah Sage-grouse Management Areas (SGMAs)

DRAFT Nov 5, 2012



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

MORGAN-SUMMIT SGMA SAGE-GROUSE ON THE MOVE

By Brandon Flack, Graduate Research Assistant, Utah State University

I have started my final field season on a 2 year research project where I have been collecting seasonal movement data for greater sage-grouse in the Morgan and Summit Sage-grouse Management Area to determine survival rates, nest success rates, and brood success rates. I am also recording habitat vegetation data around nest, brood, and random sites. All of this information will provide a good baseline to understand the ecology of this population.

To conduct this work, in 2015, we captured and radio-marked 36 greater sage-grouse (31 hens, 5 males). Of the 31 hens, 10 are marked with global positioning system (GPS) backpacks and 21 are marked with very high frequency (VHF) radio collars. The males are marked with VHF radio collars. In 2016, we captured and radio-marked four additional females with VHF radio collars. The overall survival of the radio-marked sage-grouse has been exceptional. Of the 24 active VHF radio collars, 19 survived the winter.

Probably one of the biggest surprises from my research has been the long distance winter movements of some of the female sage-grouse marked with GPS transmitters. During a January radio-telemetry flight, we relocated most the radio-marked birds in the same general areas they used during the summer and fall. We could see sagebrush sticking out of the snow and many of the birds were located on south facing slopes near hill tops. However, two of the GPS marked females flew south in November. One spent the winter just west of Rockport Reservoir and the other was just south of Jordanelle Reservoir. That is a migration of about 30 miles. In recognition of their movements, I named them Amelia (Rockport bird) and Lady Hay (Jordanelle bird) after some famous human female aviators. They both used the same corridor to move south but they moved at different times. In early March, Amelia moved back to the Henefer Divide area and in late March Lady Hay made her way back to the Henefer Divide as well. Again, even though they migrated separately, they used the same migration route to get back to the Henefer Divide.

Most importantly, I appreciate each of the landowners and their willingness to let us do this study on their properties. It has been personally rewarding for me to build relationships with each one of them. This was a part of the study that really intrigued me and I am happy how things are working out. Please contact me by e-mail at bflack13@yahoo.com if you have any questions.

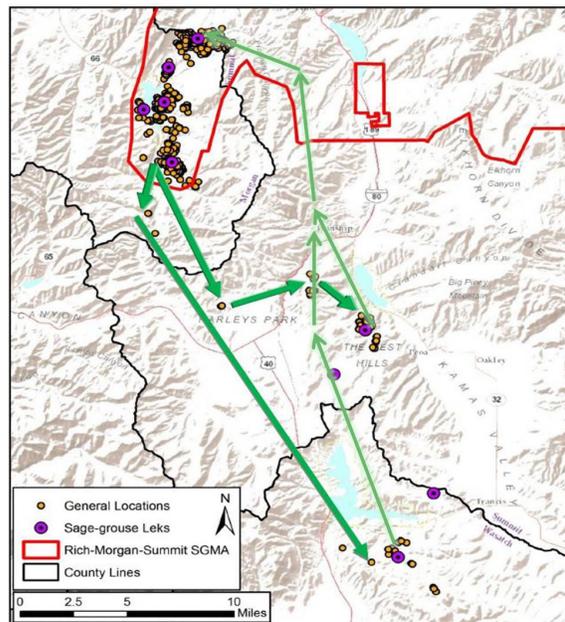
Utah's Community-Based Conservation Program Mission

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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This publication is issued in furtherance of Cooperative Extension work, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Kenneth L. White, Vice President for Extension and Agriculture, Utah State University.



Map on left shows migration route for two hens, Amelia and Lady Hay. Photo above shows Lady Hay with her newly hatched chicks during the Spring of 2015. You can see the GPS transmitter on Lady Hay's back. Chicks are nestled under sagebrush to the right. Map and photo courtesy of Brandon Flack.