

**Sheeprock Sage-grouse Field Update- June 7, 2016**  
**Submitted by: Melissa Chelak**  
**Graduate Research Assistant**  
**Utah State University**

Population Dynamics and Seasonal Movements of Translocated and Resident Greater Sage-Grouse of the Sheeprock Sage-grouse Management Area (SGMA)

**Purpose and Background:**

The greater sage-grouse population in the Sheeprock SGMA has been declining, with 23 males being counted on leks in 2015. This research in addition to evaluating the effect of sage-grouse translocations on increasing the resident population, will be investigating resident and translocated sage-grouse responses to on-going and planned management actions. Sage-grouse translocations have been used to augment declining populations in the Strawberry Valley SGMA. However, this is the first research that will deploy global positioning system (GPS) transmitters on translocated and resident sage-grouse. We will provide all of the information we collect on sage-grouse movements and nest and brood success to managers to help guide management planning and implementation.

**Survival:**

There were 4 mortalities detected throughout the month of May; however, one GPS male had a mortality in April after being translocated into the Benmore lek, but his transmitter was not retrieved until early April. Of these mortalities, 4 have appeared to be avian predators, and one seemed to be a mammalian predator. We conducted a telemetry flight June 1, 2016 and discovered 3 additional birds that were transmitting mortality signals. In searching for two of them, one appeared to have fallen off of a male, and another was transmitting near many burrowing holes near the McIntyre lek. We will be trying to hone in on this transmitter and see if it can be retrieved from the burrows. In total, 8 mortalities were detected this month: 3 males and 5 females.

**Nesting Update:**

During May, we located 4 nests: 1 for a resident female in McIntyre, and 3 for translocated females located in McIntyre as well. The resident female hatched on May 24<sup>th</sup> with 5 chicks and is currently brooding around the lek area in McIntyre. One of the translocated hens hatched on May 30<sup>th</sup> with 5 chicks as well in an area behind the McIntyre lek. One other translocated hen is still nesting, and another GPS translocated hen was incubating and had a nest depredated. Upon going and checking the nest, she had three eggs. After her nest failed, she went to the lek and is now on the same ridge as where her previous nest was on May 30<sup>th</sup>. The nesting season appears to be delayed compared to other study areas in Utah.

**Movement Notes:**

The data collected from the GPS transmitters has shown that many of the birds were moving around the general area between all three major leks, but have started to localize throughout mid-

May. Our birds with VHF collars are showing a similar trend well. For the translocated birds that have not initiated nests, they are seen in the same general area and have often been seen flocking with residents. In the flight on June 1<sup>st</sup>, one female resident bird was found to have travelled 35 miles south of the Benmore lek— her lek of capture—near Delta, UT. Her signal was transmitting a live signal, and I will be travelling south at the beginning of this next week to locate her and find her status. After the flight, 5 birds— 4 females and 1 male— have yet to be found since the translocation.

### **Landowners:**

We thank the landowners who allowed us access to their properties to capture 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, the BLM, the West Box Elder CRM, the Parker Mountain and West Desert Adaptive Resources Management Local Working Groups, the Jack H. Berryman Institute, the Quinney Professorship for Wildlife Conflict Management, the DWR, and the US Geological Service for funding, encouragement, and project support.

### **Other Notes:**

We met with the BLM on 2 June 2016 to discuss the deployment of traffic counters in the area. The BLM is interested in developing a recreation management plan to assist in sage-grouse conservation. Some of the areas near the leks are experiencing a lot of traffic as the camping season is in full swing. Because we still have some males and females visiting the leks during this time and are experiencing a delayed nesting season, dispersed recreation may be altering bird behavior and movements. Deploying the traffic counter in areas of high use, coupled with our field observations may provide insights into potential conflict areas and how best to manage them.