

## **Morgan-Summit Sage-Grouse Field Update – AUGUST 1, 2016**

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Habitat Use Patterns and Vital Rates of the Morgan-Summit SGMA Greater Sage-grouse Population: Conservation Implications for Managers

### **Purpose and Background:**

I am gathering seasonal movement data for greater sage-grouse in Morgan and Summit counties and determining survival rates, nest success rates, and brood success rates. I am also collecting vegetation data around nest, brood, and random sites. All of this information will give us a good baseline to understand the ecology of this population. To do this, I marked 36 sage-grouse (31 hens, 5 males) in 2015 and 4 additional females in 2016. Of the 31 hens marked in 2015, 10 were marked with global positioning system (GPS) backpacks and 21 were marked with very high frequency (VHF) radio collars. The 4 hens captured in 2016 were marked with VHF radio collars. All males were marked with VHF radio collars.

### **Survival:**

Currently, 18 marked birds that were fitted with VHF radio collars are alive and accounted for. Four hens died in the last 2 weeks and I was able to recover all 4 radio collars. Nine of the 11 GPS transmitters are still alive. One GPS hen died last week and I was able to recover the transmitter without any trouble. One of the GPS transmitters has been collecting and sending periodic Doppler locations indicating that she is alive and moving around. This transmitter was attached to a hen on Ensign Ranches in July 2015. The GPS locations were good for about a month and I have only received spotty Doppler data ever since. I can tell from the engineering data that the battery voltage is low but it is starting to show more regularly. This means her radio signal may be transmitting more regularly as well. We think the transmitter is either malfunctioning or the hen has preened her feathers so the solar array is partially covered and the unit is not able to charge enough to take GPS locations. I am working with Wayne Smith (graduate student on DLL) to try and locate the bird to get a visual and assess what's going on. Capturing her during daylight hours will be very difficult.

### **Brooding Update:**

To determine brood success, we follow brooding hens until the chicks are 50 days old. At that time, we locate and flush the hen and then circle the location for 20 minutes to flush any chicks that are with her. If at least 1 chick survives we consider that a successful brood. This year, 19 of

37 nests hatched successfully. Of those 19 broods, 10 have been successful so far. Because of the late re-nest attempts this year I still have 1 brooding hen that is scheduled for her 50 day flush/count on August 12<sup>th</sup>.

### **More Monitoring**

We would like to continue monitoring all marked birds through the life of their transmitters. We think they will all last through the 2017 breeding season. I will have completed and defended my thesis by then so we are brainstorming ideas about how to pull that off financially since a technician (or 2) will need to be hired. We will also need to make sure it works for the landowners in the area since we will need ongoing access to their properties. There's a lot to consider but we are trying to make it happen to gather another year of data for a more robust dataset of this population of sage-grouse.

### **Landowners & Managers:**

I want to acknowledge each of you for the role you have played in making this study happen. The landowners have been great to work with. I appreciate each of them and their willingness to let me do this study on their properties. It has been personally rewarding for me to build relationships with each one of them and to gain their trust. This was a part of the study that really intrigued me and I am happy things are working out. I also really appreciate the help I have received from many individuals at the Utah DWR. The relationships you have already established with landowners, county officials, and livestock producers have been instrumental in gaining access to properties and working in a productive atmosphere. I also want to acknowledge the folks at East Canyon State Park for allowing us to live there during the 2 field seasons. They have been really amazing and I am grateful for the friendships I have made with Chris Haramoto and his staff.

### **Thesis Work and a Job**

Now that this 2<sup>nd</sup> field season is coming to an end, we are busy doing data entry. That should be completed in the next 2 weeks and then it's time to compile and organize the data and start writing my thesis. I will keep you informed as things progress and I will let you know once I set a defense date.

I'll be looking and applying for biologist positions in the next month or 2. Please let me know if you think I would be a good fit for any job openings you're aware of. I would love to work for the Utah DWR and I am also open to other opportunities with federal agencies or other groups in need of a hard-working, positive, motivated individual who loves what he does and enjoys

working with people. I'm excited to see where this takes me and my family for the next chapter of our life.

**\*\*Other Notes:\*\***

- 1) If you missed any previous monthly field updates they can be found online at the Morgan-Summit page of the Utah Community-Based Conservation Program website. <http://utahcbcp.org/htm/groups/morgan>  
Look under "Reports and Publications", scroll down to "2015 Notes from the Field" and click on the date of the update you'd like to read.