

West Box Elder Sage-Grouse Report – July 2016

Greater Sage-grouse Responses to Pinyon - Juniper Removal in the Box Elder Sage-grouse Management Area (SGMA)

Background and Purpose

I am researching and gathering habitat use and movement data in regards to the past and present pinyon-juniper removal projects within the Park Valley area of the Box Elder Sage-grouse SGMA. Currently, I have 13 global positioning system (GPS) transmitters deployed and 3 more will be deployed by late spring, making a total of 16. One of the GPS transmitters requires the bird wearing it to come within range of a cell phone tower to download the location data. The transmitters have been deployed in close proximity to juniper treatment areas. The location data collected from transmitters will help us refine conifer removal strategies and placement, and also allow us to develop a metric to measure and mitigate greater sage-grouse response to landscape features and changes within the SGMA.

With the other 13 GPS transmitters, data downloads are being gathered every 4 hours on a 24 hour cycle throughout the study period. This larger data set will allow us to research and observe more closely sage-grouse utilization of treatment areas in reflection to overall population fitness at the landscape level. Also, a sample size of +/- 20 very high frequency (VHF) collars will be maintained for sample size robustness across the study area.

Trapping

We are still trapping to deploy the remaining 1 new GPS transmitters and redeploy 3 mortality recovered transmitters; however, trapping has become slow and females are very tough to locate. We will watch for random females that may have broods in the areas we are interested in studying and try to deploy the remaining GPS transmitters on these females.

Any GPS transmitters recovered during the field season will be refurbished and redeployed as quickly as possible to ensure we are maximizing their capabilities relative to their cost. If possible, the last few GPS transmitters will be deployed in close proximity to new and existing juniper removal areas in hopes of documenting bird movements within those areas. Recently, permission was given to trap the Morris's property north of Kelton. Though vegetation is high, we will try to get 1 to 2 GPS transmitters out in this area by the conclusion of the field season to collect bird movements in these eastern juniper removal areas. Also, I will continue trapping after the conclusion of the 2016 field season as needed to deploy or re-deploy any GPS transmitters and augment the existing VHF radio-marked birds' sample size.

Nesting and Brooding

Nesting has concluded for the 2016 field season, with 19 females (6 GPS and 13 VHF birds) initiating nests. To date, 6 nests have been predated across the study area. Predation type was undetectable, but my suspicion is ravens played a part in 3 and a mammal predator in 1. In all six cases, none of the hens were killed.

Currently, 7 females have broods (3 GPS and 4 VHF females). Of the 2 VHF females that re-initiated nests, the Dry Basin female was successful but the Chicken Ridge female's nest failed. This was really cool to document due to nest re-initiations being uncommon throughout the Box Elder SGMA. Fifty day flushes will begin next week to determine brood success for 2 VHF females; hopefully they are successful.

Mortality

For this field season, 4 GPS and 3 VHF females have been killed, with GPS transmitters and VHF radio-collars recovered in all 7 cases. Three more VHF collars are still transmitting mortality signals, 2 south of Lynn Reservoir and 1 in east of Grouse Creek, but we have not recovered the radio-collars at this time because of priority being put on live birds. Of the observed mortalities, 3 females showed avian predation signs. Predation causes remain unknown for the other 4.

Grouse Movements

Birds are really spread-out over the landscape now with brooding females moving into wet meadow areas and higher/cooler summer pastures. At the end of last week, 2 VHF females are brooding in Dove Creek Pass and upper Clark's Basin. The VHF female that was brooding on top of the Black Hills has now moved over to Lynn Valley just south of the Reservoir. The GPS female that hatched south of the Pipeline moved her brood around 23 km in a 4 to 5 day period to the wet meadows and pastures south of Park Valley! The week she moved her chicks north was hot and it was exciting to capture her movement data and see the path she choose to get her brood their summer site. Northeast of Park Valley, 1 GPS is brooding. Lastly, the 1 VHF female in Dry Basin has moved to the Muddy Creek area of Meadow Springs and the 1 GPS female in Dry Basin has moved west into the Buck Pasture area.

All radio-marked females have now been located. One of the VHF females that were missing all season was detected on June 2nd in a remote basin on top of the Grouse Creeks. I determined that she was indeed brooding, but unfortunately she was killed last week.

Vegetation Surveys

Nest vegetation surveys have concluded for the 2016 field season and brood vegetation surveys will be conducted until the last 50 day flush is done. To date, we are keeping up on the vegetation surveys; however brooding females are now spread out across the study area. The flush of vegetation growth is very high for the 2016 field season and it will be interesting to see how this affects overall nest and brood success.

West Box Elder Landowners

I must say that I am very appreciative for the amount of continued cooperation, interest and trust that has been given to my technicians and I this field season; be reassured, it is not taken lightly. I am aware that we are guests and my technicians are reminded frequently of this privilege we have. Furthermore, I have really enjoyed getting to know all the different landowners within my study area and learning about their knowledge of the landscape, both past and present.

Without hesitation, please contact me if you want to know anything about what we are observing on your property, or if you just have general questions. If I do not have the answer, I will do my best to find it out for you.

Best,

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