

Sheeprock Sage-grouse Management Area Translocation Final Field Update

June-July 2020

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

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Background

This will be the final field update for the Sheeprock translocation project. This update covers June-July 2020. In 2016 we began a multi-year research project studying greater sage-grouse (*Centrocercus urophasianus*; sage-grouse) population translocations, predation and habitat management the Sheeprock Sage-grouse Management Area (SGMA). The SGMA, located in central Utah, consists of 611,129 acres in Tooele and Juab Counties. Key threats to sage-grouse identified in the SGMA include wildfire, invasive species (annual grasses and forbs), potential loss of riparian or mesic areas, predation, habitat fragmentation, dispersed recreation, and conifer encroachment.

Since 2016, we have translocated 146 sage-grouse that were captured on the West Box Elder and Parker Mountain SGMA's, radio-marked, and released on the Sheeprock SGMA. In 2020, no sage-grouse were translocated, but we did capture and radio-mark additional birds on the Sheeprock SGMA. This year we continued to monitor previously-translocated and resident sage-grouse to evaluate how the SGMA population was responding to the translocations, the habitat and predation management.

We are evaluating if habitat selection and vital rates differ for previously-translocated and resident sage-grouse. In addition, we are studying off-highway vehicle (OHV) use patterns of recreationists in the Sheeprock to learn if current use were impacting sage-grouse habitat-use. We also planned to survey OHV users to determine their specific recreation needs and motivations for coming. Because of the Governor Herbert's COVID-19 directives, and USU's research office directives, we had to cancel our planned 2020 OHV recreationist surveys. We however feel we have data from previous years that represents recreation activity on the SGMA.

Technicians and Training

We hired three technicians for the 2020 field season beginning on March 2. The technicians arrived at the research site in March and have been self-isolating while performing field work. During this time, the technicians received bird handling, telemetry training, vegetation monitoring, vehicle safety training, and COVID-19 mitigation training. They finished field work and departed on July 17th, 2020.

COVID-19 Update

We complied with the Governor's and Utah State University's (USU) directive regarding the COVID-19 Pandemic. Prior to initiating our field work, we filed a field research plan with USU and received approval to conduct our field work.

2020 Captures

We captured and radio-marked nine resident sage-grouse this season. The captured birds include two males (1 Fredrickson male, 1 Government male) and seven females (1 Benmore female, 5 Log Canyon females, 1 McIntyre female). We completed trapping for the 2020 season in mid-April, when the majority of females began nesting.

Lek Counts

We discovered two new leks this year in addition to Little Valley lek becoming an occupied lek again. The new leks include Log Canyon and McIntyre Divide, seen in the map below. Peak number of males counted by lek were: Government Creek 11, Benmore 14, Fredrickson 10, McIntyre 8, Little Valley 7, Log Canyon 5, and McIntyre Divide 4. The total number of males counted for 2020 was 59, up from a peak of 37 last year. However, last year's lek counts were impacted because of limited access. Though the peak lek counts appear higher, we stress that counts and locations fluctuated this year.

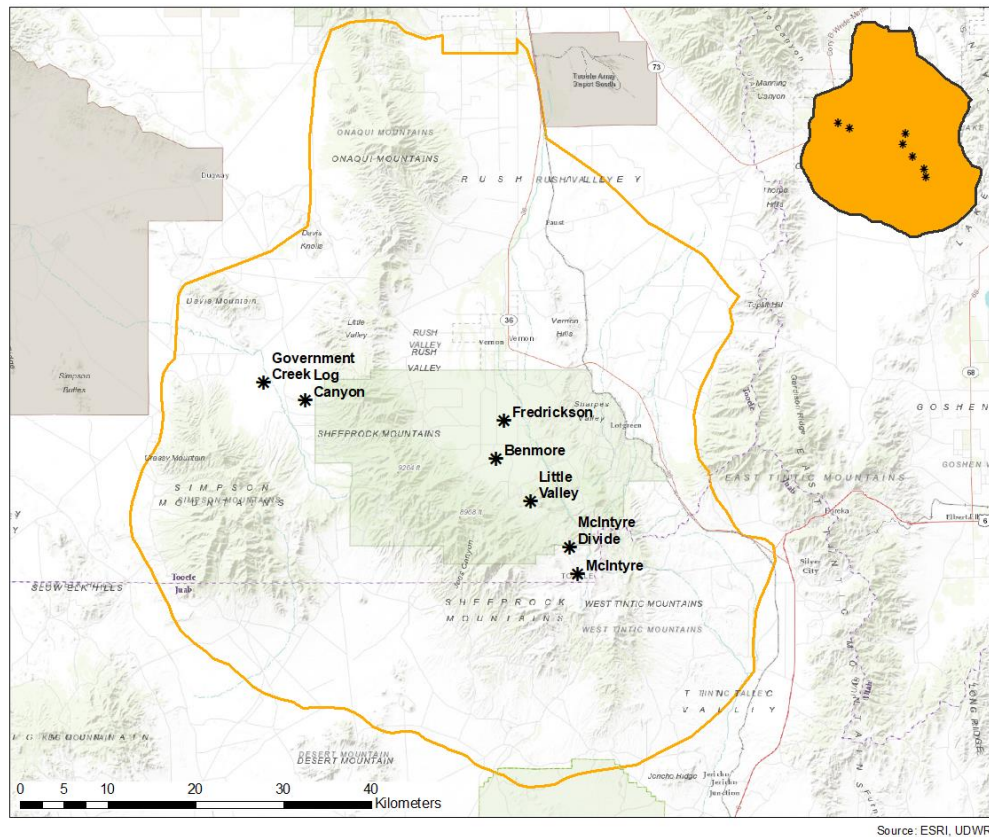


Figure 1. Active lek locations, including the two new (Log Canyon and McIntyre Divide) and recently reoccupied (Vernon Little Valley) leks, in the Sheeprock Sage-grouse Management Area, UT.

Nesting and Brooding

Twelve of the 21 marked females we monitored initiated nests, an apparent nest initiation of 57%. Seven were marked with global-position system (GPS) transmitters: one 2016 female, one 2019

female, and five 2020 females. Five were marked with very-high frequency (VHF) transmitters: one 2018 female, three 2019 females, and one 2020 female. Six of the twelve nests failed, leaving six successful nests. Two nests were predated by avian species, three were mammalian, and one was unknown.

Six nests hatched broods, and three broods successfully reached 50 days post-hatch with chicks: one 2016 female with two chicks, one 2019 female with 3 chicks, and one 2020 female with 2 chicks. All successful broods were located in McIntyre.

Survival

There were three new fatalities in June and July totaling 15 fatalities of the 33 birds monitored. Four were marked with GPS transmitters and eleven were marked with VHF transmitters. We will continue to monitor radio-marked sage-grouse and recover any new mortalities monthly throughout the fall.

Public and Private Partners

As always, we thank the landowners who allow us access to their properties to capture and monitor birds. We also are extremely indebted to the dozens of volunteers who have helped with the translocation effort. We particularly thank Jason Robinson and Avery Cook, UDWR 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 Yamaha Corporation, 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 UDWR, and the US Geological Service for funding, encouragement, and project support.