Sheeprock Sage-grouse Management Area Translocation Field Update

March 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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Purpose

In 2015 the West Desert Adaptive Resources Management Local Working Group (WDARM) and its state and federal partners launched and ambitious conservation strategy to ensure the future of the greater sage-grouse (*Centrocercus urophasianus*; sage-grouse) population inhabiting 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 by the WDARM include wildfire, invasive species (annual grasses and forbs), potential loss of riparian or mesic areas, predation, habitat fragmentation, dispersed recreation, and conifer encroachment. To mitigate these threats, WDARM and the partners have implemented an aggressive "all hands-all lands" habitat and predation management effort that has been combined with sage-grouse augmentations. Since 2016, we have translocated 146 sage-grouse that were captured on the West Box Elder and Parker Mountain SGMA's. In 2020, no additional sage-grouse have been translocated. This year we are continuing to monitor previously-translocated and resident sage-grouse to evaluate how the SGMA population is responding to habitat and predation management. We are also 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 is impacting sage-grouse habitat-use and are also surveying OHV users to determine their specific recreation needs and motivations for coming. Because of the Governor Herbert's COVID-19 directives, we are postponing the OHV surveys until further notice.

Technicians and Training

In February, we hired three technicians for the 2020 field season beginning on March 2. Those hired include J. Coburn Blunt (New Hampshire), Adam Cupito (Ohio), Zack Petrie (New Jersey). Zack is the crew leader for the 2020 team this year. 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.

COVID-19 Update

We have embraced the Governor's and Utah State University's (USU) directive regarding the COVID-19 Pandemic. We have filed a field research plan with USU and received approval to conduct our field work. The approval of our plan was contingent on our work being restricted to a

remote field site. Our crews have self-isolated at the USU Tintic Field Station which will be our base of operations. We do not have any contact with any outside technicians or workers, so we are adhering to the social distancing, use of PPE, handwashing, and strict personal hygiene.

As mentioned previously, all research involving human subjects has been suspended until further notice. The research involving OHV recreation is included in this because we interview campers and fill out a survey based on their questions. We are following USU guidelines on this and will commence once we have received permission.

2019-2020 Late Fall/Winter Locations

In early 2019, agencies a part of the WDARM local working group expressed an interest that we add the fall and winter maps showing grouse movements onto our update to have that information before the annual report. Because meetings have been postponed due to the virus, I have added this winter's locations. There were five GPS-marked grouse that were alive from October 2019 to March 2020, and many were older transmitters, so there appear to be fewer locations for this winter compared to the previous winter. Below are those maps:

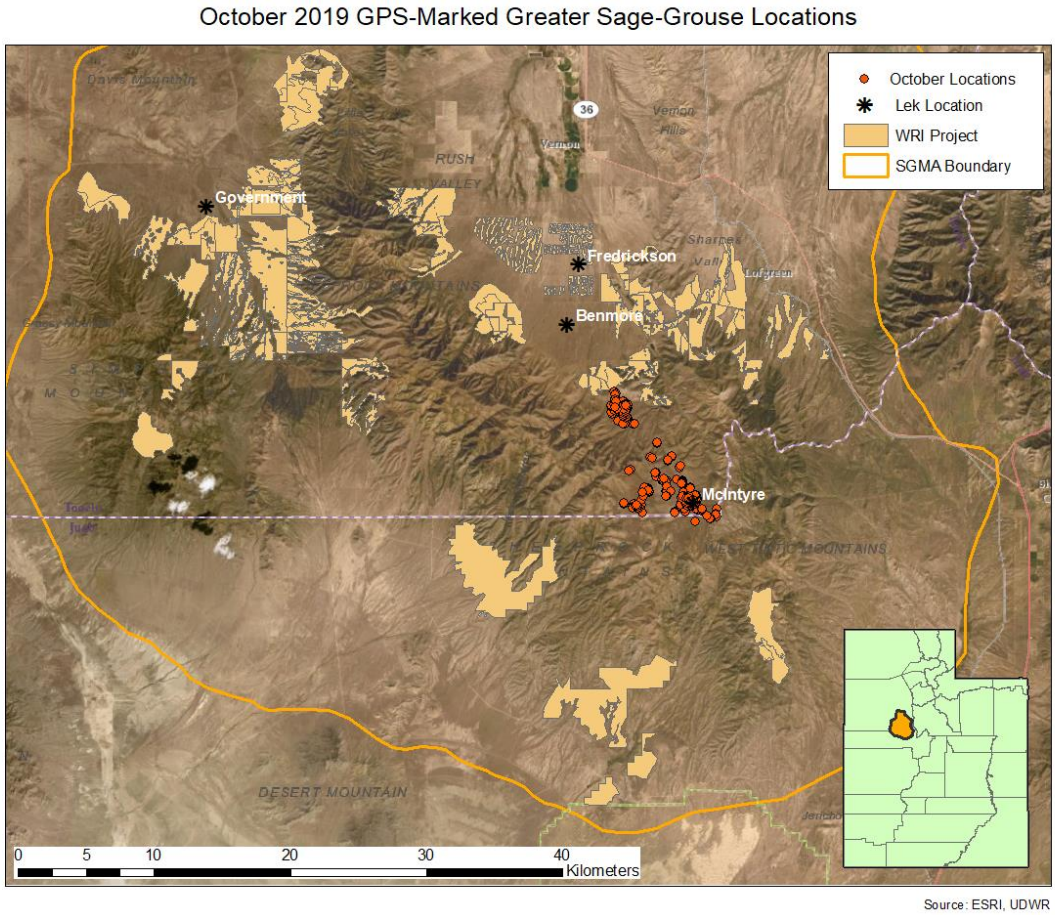

Figure 1: Locations of GPS-marked greater sage-grouse (*Centrocercus urophasianus*) in October 2019, Sheeprock Sage-Grouse Management Area, UT

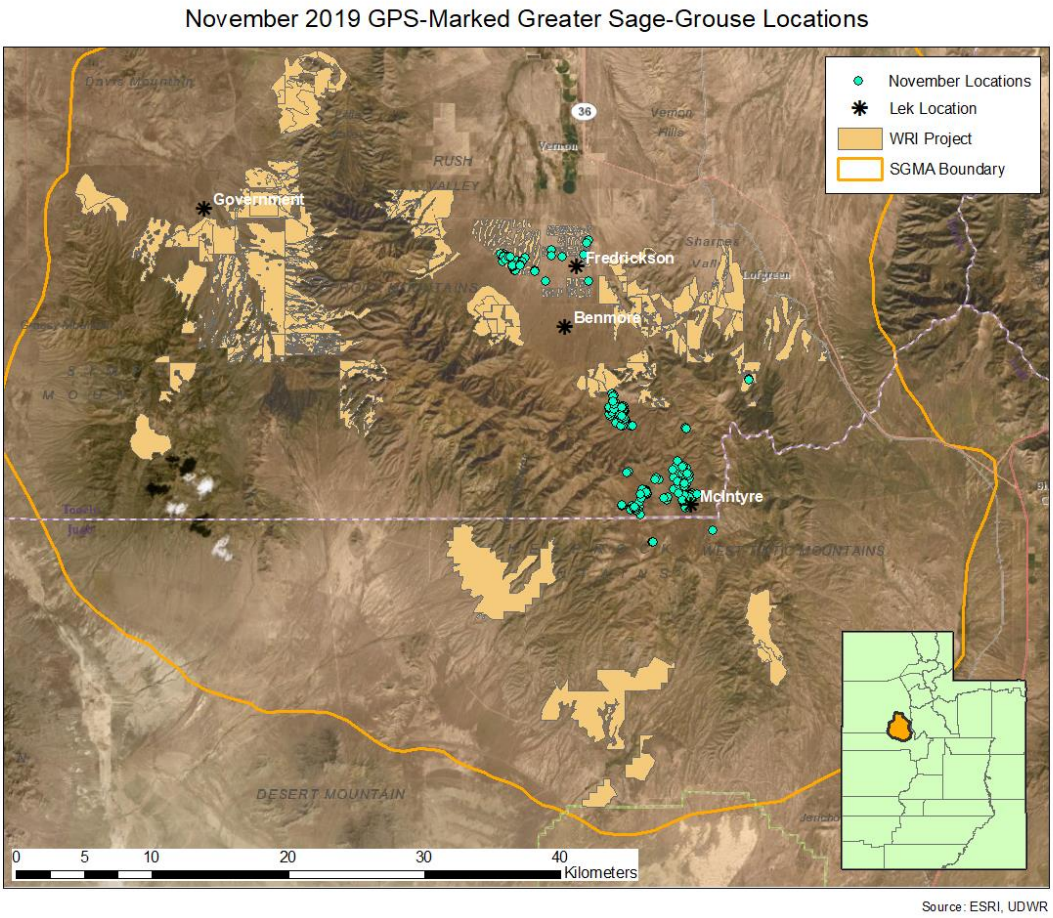

Figure 2: Locations of GPS-marked greater sage-grouse (*Centrocercus urophasianus*) in November 2019, Sheeprock Sage-Grouse Management Area, UT

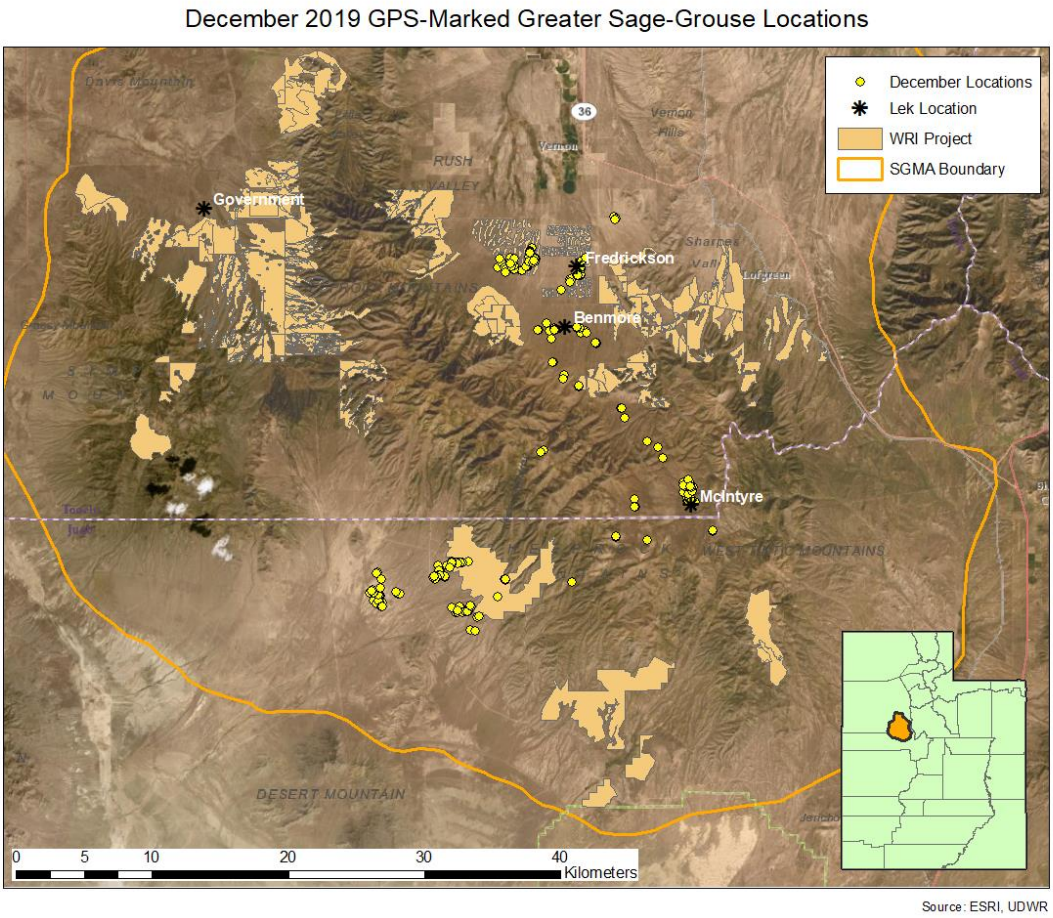

Figure 3: Locations of GPS-marked greater sage-grouse (*Centrocercus urophasianus*) in December 2019, Sheeprock Sage-Grouse Management Area, UT

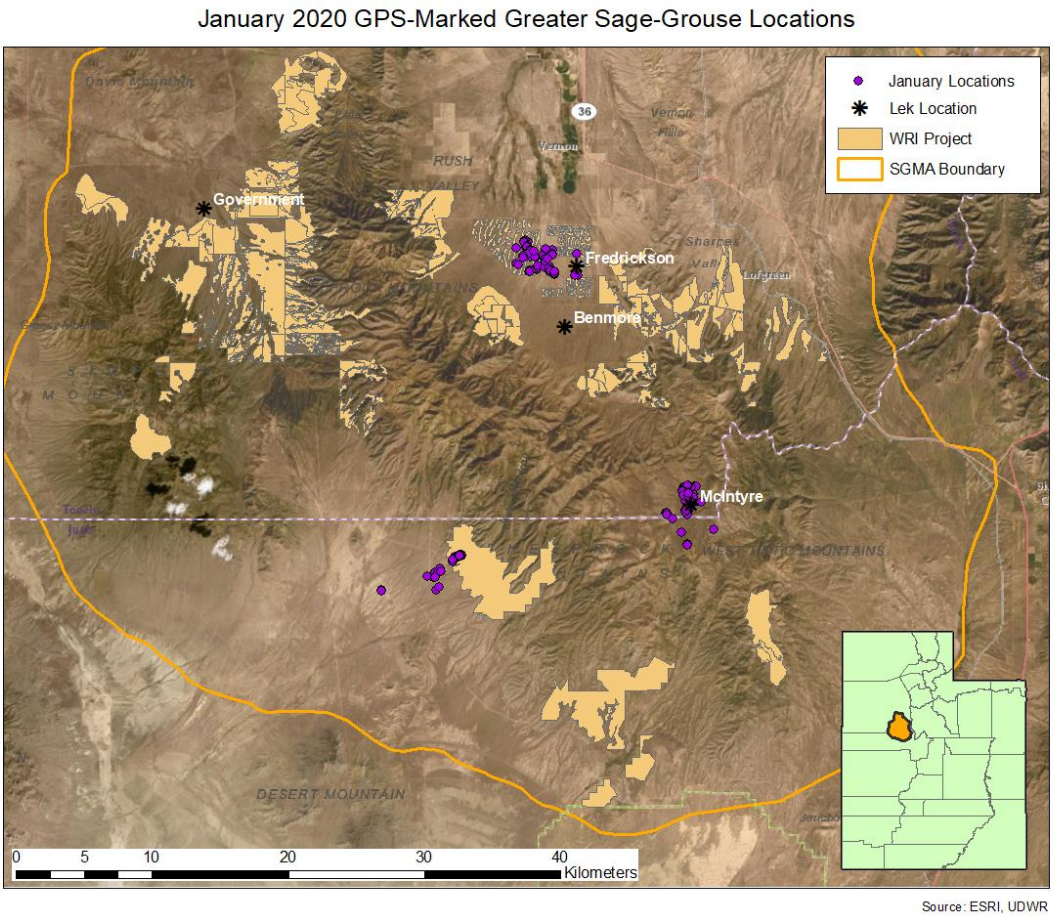

Figure 4: Locations of GPS-marked greater sage-grouse (*Centrocercus urophasianus*) in January 2020, Sheeprock Sage-Grouse Management Area, UT

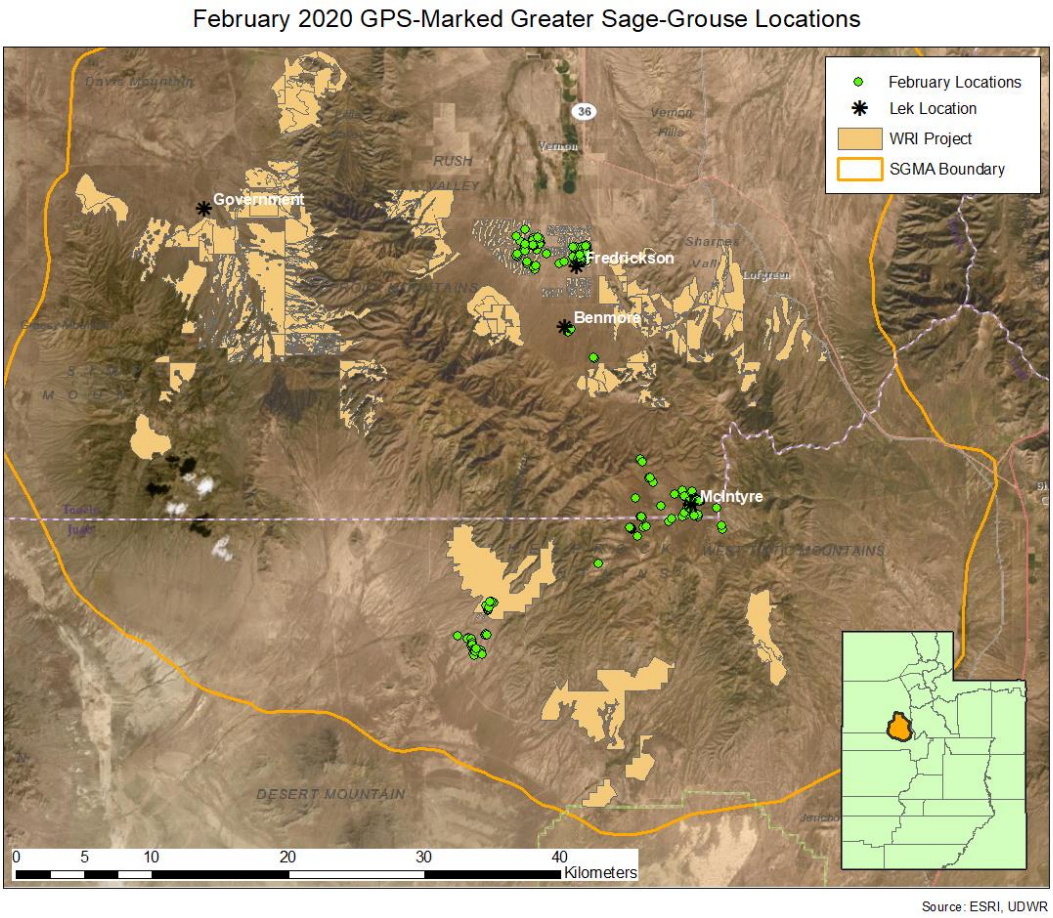

Figure 5: Locations of GPS-marked greater sage-grouse (*Centrocercus urophasianus*) in February 2020, Sheeprock Sage-Grouse Management Area, UT.

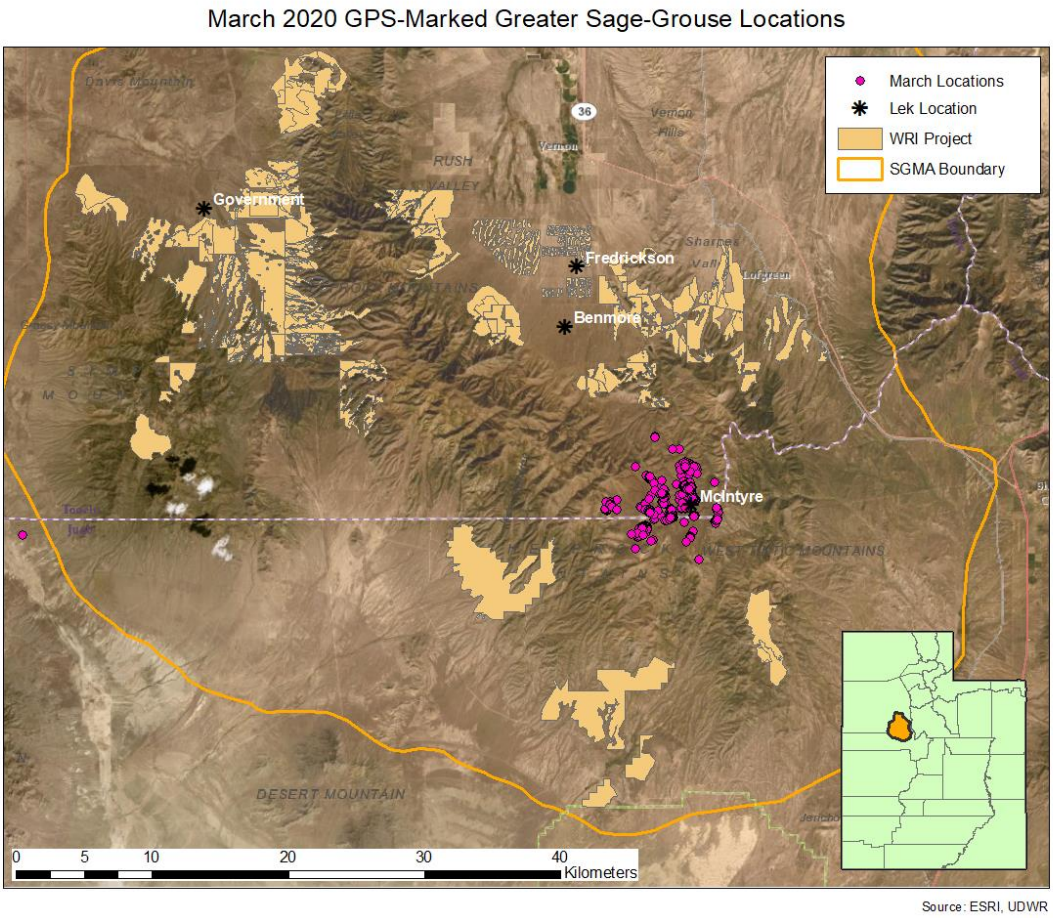

Figure 6: Locations of GPS-marked greater sage-grouse (*Centrocercus urophasianus*) in March 2020, Sheeprock Sage-Grouse Management Area, UT

2020 Capture

We have captured and radio-marked 5 resident sage-grouse to date. The captured birds include two males (1 Fredrickson male, 1 Government male) and three females (1 Benmore female, 2 Government females). We will be continuing to capture resident birds until we have radio-marked 10 resident birds.

Lek Counts

Lek counts across the SGMA have looked promising so far. Government Creek lek had 11 males, though it should be noted that they were spread across a larger area rather than in one central lekking area, Benmore had 14 males, and Fredrickson 10. We have not obtained a count on McIntyre yet. Little Valley lek, which previously had been unoccupied for several years, had 7 males lekking this past month.

Survival

The field season has consisted thus far of two weeks of training and two weeks of mostly trapping resident grouse. We have performed scanning and a few sage-grouse locations and have only detected 1 mortality of a GPS-marked individual in January. Beginning this week in early April, two

of my technicians will be obtaining locations full time and tracking grouse while the other technician and I focus on trapping sage grouse.

Genetic Analysis

Genetic analyses have been postponed this year until further notice. We have partnered with USGS in Fort Collins, Colorado to analyze our resident feathers and all egg shell linings to assess integration of the translocated population into the genetics of the Sheeprocks population. To date, we have analyzed all captured and marked resident feathers and all eggs from 2016-2018. After travel is granted again by the university, we will travel to the lab in Fort Collins and analyze the 2019 and 2020 samples.

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.