Aerial Inventory Methods for Greater Sage Grouse

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Concern has been expressed over the status and well being of sage grouse (*Centrocercus urophasianus*) populations throughout their range; including southeastern Montana. The potential for large scale energy extraction and development across much of sage grouse range and its effect on sage grouse habitats and populations increases this concern. An accurate inventory of population resources and where these resources exist is critical to assessing population status. Successful mitigation of development impacts cannot occur without a comprehensive population inventory. Prior to 1999 there had been no systematic inventory of sage grouse populations in Southeastern Montana FWP Region 7. Sage grouse population monitoring consisted of annually surveying sage grouse lek activity on four trend areas and opportunistically monitoring incidental "known" leks and noting "new" lek locations. Sage grouse winter area monitoring consisted of noting areas of concentration along seasonally accessible roads. Until 1999 364 lek locations were identified within the 18,000 mi^2 of potential sage grouse habitat in southeastern Montana. Beginning in 1999 systematic inventories for sage grouse were initiated. The region made a priority of locating leks and winter areas in unsurveyed habitat across the region. Aerial survey methods were deemed the most appropriate and efficient approach towards this end. In the past 8 years 90 percent (16,000 mi^2) of the potential sage grouse habitat has been aerially surveyed and the number of known lek locations has increased to 827. Presentation centered on techniques and use of aerial survey for sage grouse population inventory and monitoring.