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## HABITAT CHARACTERISTICS OF A SOUTHERN FRINGE GREATER SAGE GROUSE POPULATION: IMPLICATIONS FOR RANGE-WIDE MANAGEMENT

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Range-wide declines in Greater Sage-Grouse (*Centrocercus urophasianus*) populations have prompted extensive research on sage grouse habitat use. However, habitat use information for fringe populations is limited. We examined nest, brood-rearing, and summer habitat use in a fringe sage-grouse population in southern Utah. We tracked 66 birds (17 females, 49 males) via VHF telemetry and surveyed vegetation plots at nest ( $n = 9$ ), brood-rearing ( $n = 13$ ), summer ( $n = 53$ ), and random ( $n = 75$ ) locations in 2011 and 2012. Although hens did not select for measured habitat characteristics (shrub, forb, grass, and bare ground) at nest sites, they did select for higher forb cover at brood-rearing sites as compared with random sites. The canopy cover of forbs and grasses at nest and brood-rearing sites was lower than range-wide habitat recommendations, while the shrub cover was greater. Non-reproductive sage grouse selected for lower shrub but higher forb and grass cover as compared with random sites. Their roost sites were characterized by higher shrub and lower forb and grass cover than range-wide recommendations for productive habitat. Discrepancies between sage-grouse habitat use in this population and range-wide recommendations may be explained by differing ecosystem dynamics in southern Utah, as well as unique habitat use patterns observed in fringe populations. The use of agricultural fields for summer habitat exemplifies a local adaptation to the absence of productive habitat that has unique

management implications. This study highlights the importance of adaptive management techniques that address unique habitat preferences in local populations, particularly for a sensitive species.