

LANDSCAPE-SCALE NESTING BEHAVIOR OF GREATER SAGE-GROUSE IN NORTH-CENTRAL MONTANA^{TWS}

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The long-term decline of greater sage grouse (*Centrocercus urophasianus*) over much of their historic range is a concern of managers of sagebrush (*Artemisia* spp.) habitats. Because sage grouse range widely across expanses of sagebrush habitats, and due to the extent of public land holdings in north-central Montana, conservation or recovery efforts for sage grouse are likely to be applied at the landscape scale (rather than the scale of the nest-site, for example). Much of current management focus center on the area around leks because leks appear to be the center of year-round activity. Therefore, it is important to understand where sage grouse nest and rear their broods in relation to leks. As part of a larger doctoral research project, 247 female sage grouse were radio-marked during springs 2001-2003 to estimate reproductive parameters. With the resultant wealth of GPS locations on sage grouse nests, the spatial relationship between nests and leks can be quantified. In general, sage grouse in this study nested further away from leks than expected, though distances varied among four study sites. Renesting attempts within a year were generally close to the first nest location (within several hundred meters). Finally, individuals tracked in successive years typically nested within several hundred meters of the previous year's nest location. Though habitat conservation and enhancement efforts must target more land than first expected, individual birds exhibit some degree of nest-area fidelity. Focusing on particular geographic areas centered on leks may be an effective strategy.