

Comstock, B. and J. Sedinger. 2003. Dynamics of Sage Grouse (*Centrocercus urophasianus*) Populations in Response to Transmission Lines in Central Nevada. Progress Report: Year 1. Department of Natural Resources and Environmental Sciences, University of Nevada - Reno.
http://www.ndow.org/wild/conservation/sg/gov/falcon_gonder_report.pdf

Introduction: Sage-grouse populations have been declining in the west over the last four decades (Nevada Sage Grouse Project 2001) although a decline in Nevada's populations is less certain. Sage grouse are an obligate sagebrush species and require this vegetation type for nesting, brood rearing and over-winter habitat (Connelly et al 2000). Habitat loss and degradation are thought to have played a major role in the declines of sage grouse (Nevada Sage grouse project 2001). Transmission lines are hypothesized to restrict birds on leks because they provide sites on which raptors or ravens (*Corvus corax*) may perch (Alstatt 1995). Presence of avian predators in close proximity to leks or nesting areas may directly influence survival or nest success of sage grouse (Hall and Haney 1997). Alternatively, sage grouse may avoid areas where they are exposed to perching avian predators (Hall and Haney 1997). Both mechanisms could affect the dynamics of local populations but may have different implications at the regional scale. Only a single post-hoc study (Hall and Haney 1997) has examined the impact of transmission lines. The study showed generally lower peak lek attendance at leks nearer the transmission line, but the study could not account for confounding factors (that might influence both grouse and transmission lines) nor has it been replicated. The mechanism underlying the relationship detected by Hall and Haney (1997) also has not been determined nor has its consequences for local grouse populations.