
****RECREATIONAL AVIATION AND WILDLIFE: THE PHYSIOLOGICAL STRESS RESPONSE IN DEER AND ASSOCIATED USER PERCEPTIONS**

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Backcountry aviation is a popular form of recreation throughout the northern Rocky Mountains; however, it is unclear whether this seasonal disturbance has adverse effects on wildlife. Using stress physiology techniques provides a mechanistic understanding of the effects of disturbance on free-living populations. The analysis of fecal glucocorticoid metabolites (FGM) is an increasingly useful tool in conservation biology as it provides a non-invasive measurement of circulating stress hormones (e.g., cortisol) deposited into the feces. We quantified aircraft activity and human presence in concert with collecting white-tailed deer (*Odocoileus virginianus*) and mule deer (*Odocoileus hemionus*) fecal samples from six backcountry airstrips and six non-airstrip recreational sites ($n=12$) located on public land throughout western Montana and north-central Idaho. By modeling deer FGM levels at these sites, we can evaluate the impacts of backcountry aviation on wildlife stress responses within the greater context of recreation on public lands. We also surveyed recreational pilots who frequent backcountry airstrips in the study area. The main objectives of this human dimensions analysis are to 1) measure attitudes of pilots toward seeing various wildlife species at backcountry airstrips and 2) evaluate scenarios under which pilots might alter their recreational behavior in order to mitigate potential wildlife impacts. This research represents the first attempt to model the endocrine profile of wildlife populations exposed to recreational, backcountry aviation while also providing data on current stakeholder attitudes regarding this topic. In doing so, we can gain an integrated understanding of the factors surrounding recreational aviation and wildlife at backcountry airstrips.