Production and Survival of Elk Calves in Response to Habitat Improvement in Northwest Montana: Methodology [TWS]

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The purpose of my study is to learn the effects of winter range habitat improvement on elk (*Cervus elaphus*) pregnancy rates and calf survival in the Southfork of the Flathead river. Habitat enhancement is often done to mitigate losses to wildlife. The enhancement at Firefighter Mountain, completed in the summer of 1996, was done to mitigate the loss of elk winter range that resulted from the construction of Hungry Horse Dam. Determination of pregnancy uses a radio-immuno assay of fecal steroids. These assays successfully determined pregnancy in 10 elk during my first field season. Vaginal implants are being used to find out timing and location of birth sites in adult cow elk. Previous use of vaginal implants by researchers on ungulates has met with mixed and often poor results. Recently, a new type was developed for white-tailed deer (*Odocoileus virginianus*) and used with high success. This new design has been adopted and adjusted for elk. The implants consist of an inert plastic base from a progesterone implant, designed for domestic swine, attached to a radio transmitter. Although my sample size was small (n=5), retention rates were 100%, and I could determine time and place of parturition. Preliminary results are positive on the effectiveness of these methods.