

**A COMPARISON OF THE EFFECTS OF BURNING, HAYING, AND MOWING AS MANAGEMENT TECHNIQUES ON PLANT AND ANIMAL SPECIES IN A PRAIRIE RECONSTRUCTION**

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*Abstract:* Fire is an effective management tool for reconstructed prairies. However, due to safety concerns, road departments are reluctant to use fire. Therefore, alternative techniques to manage right-of-way reconstructed prairies, such as mowing or haying, need to be considered. The goal of this study is to determine if mowing and/or haying can be used to manage vegetation in lieu of fire for right-of-way prairie reconstructions. This study examines and compares the effects of four management techniques on plant and animal species in a tallgrass prairie reconstruction. The management techniques, control/no vegetation manipulation, mowing, haying, and burning, were replicated a total of six times using a split block design on a research site near the Plainfield exit off Iowa 218. The entire area was seeded in 2006 with a seed mixture containing 53 native species (11 grasses, 38 forbs, and 4 sedges). Mowing and haying treatments were initiated in the summer of 2009 and burning will begin in the spring of 2010. Preliminary small mammal sampling indicated significantly higher ( $p= 0.003$  and  $p= 0.001$ ) catch per unit effort in the control plots when compared to mowed and hayed plots, and significantly higher ( $p= 0.04$ ) catch per unit effort in mowed plots relative to hayed plots. This is probably due to there being ample cover in control plots, some cover in the form of thatch in the mowed plots, and virtually no standing vegetation or thatch in the hayed plots. Vegetation and small mammal results from summer 2010 will be reported.