
DRONE TECHNOLOGY FOR MONITORING AND MAPPING IN THE GRASSLANDS OF EASTERN MONTANA

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The Nature Conservancy in Montana has been working to protect wildlife habitat and enhance conservation in the Northern Great Plains for several decades. The foundation of our work has been the Matador Grassbank in south Phillips County. Through the grassbank, ranchers implement conservation practices on their home ranches in exchange for discounted

grazing on the Conservancy's Matador Ranch. One of the conservation practices is the retention of black-tailed prairie dog towns. The southern portion of Phillips County supports among the most acres and largest prairie dog towns in the state. The prairie dog towns in this region of Montana support species of high conservation concern, including two black-footed ferret reintroduction sites, the largest population of mountain plovers, and large numbers of burrowing owls. Discounts for retaining prairie dog towns on grassbank ranches is tiered, based on the size of the town and potential for supporting species of concern. However, precisely mapping towns is challenging when using handheld GPS units and ATV's to traverse the perimeters. Currently, The Nature Conservancy is using drone technology to create more precise and detailed maps. Drones yield detailed imagery which can be incorporated into a GIS, allowing precise mapping of town boundaries. Using drones will enable ranchers and the Conservancy to better understand the expansion or contraction of towns over time. The Matador ranch successfully implemented drone technology as a tool for more efficient and accurate monitoring, and plans to continue incorporating its use in all aspects of conservation and management.