Semiannual Sensitive Species Project Report

(Reports Due January 15th and July 15th)

**Project Title: Effects of Wind Energy Development on Breeding Grassland Birds**

**Project Lead:** Anna Chalfoun

**Completion Date: Year: 2012**

**Semiannual Reporting Period Ending:**

January 14

July 14

**The project is on track to be completed by the stated completion date and all funds will be expended.**

**Events have occurred which will postpone the project’s completion date, compromise the ability to achieve stated project goals, or result in funds not being expended. Explain:**

**Progress Report (Information on the project’s status and accomplishments in relation to stated goals and deliverables):**

This reporting period the PI (Chalfoun) and MS student (Anika Mahoney) completed the first field data collection period ending in mid-August 2011. Methodologies were implemented for avian point count transects, nest searching and monitoring, nestling measurements, and vegetation measurements. Estimates of nest success for our two most abundant species, horned lark and McCown’s longspur, in relation to proximity to nearest wind turbine have been calculated (Figure 1). Due to a constant low probability of daily nest survival of 89% for horned larks across the 500 meter distance measured in 2011, we plan to extend our nest monitoring efforts to greater distances. Extending the distance surveyed will allow us to gauge if proximity to turbines impacts nest survival rates at a greater scale than other metrics of avian population response to turbines, such as density and abundance that has previously been recorded by other researchers. Increasing the distances surveyed requires us to incorporate additional field sites with a greater grassland component at distances greater than 500m. Sites are currently being scouted.

Our study design and initial results were presented as a student work-in-progress poster at the 2011 national meeting of The Wildlife Society and as a student work-in-progress presentation at the 2011 Wyoming state chapter meeting of The Wildlife Society.

In the coming months we will analyze point count data and make any necessary adjustments to surveys that may be indicated by these analyses. We will also begin hiring and preparations for our upcoming 2012 field data collection period.

Figure 1. Daily nest survival rate in relation to distance to nearest turbine, calculated using the logistic exposure method, for McCown’s longspur (MCLO) and horned lark (HOLA) during 2011.