

**PhD Dissertation**  
**Department of Environmental Science and Policy**  
**College of Science**  
**George Mason University**

**Candidate:** Bernadette Rigley

**Defense Date and Time:** Wednesday, September 24, 2025 at 2:00pm

**Defense Location:** Smithsonian Conservation Biology Institute, SMSC Room 104 and virtual on Zoom

**Title:** Grassland birds on working landscapes: habitat use, movement, demographics, and survival

**Dissertation Director:** Dr. David Luther

**Committee:** Dr. Amy Johnson, Dr. Brian Evans, Dr. Elizabeth Freeman, Dr. Kathleen Hunt

**ABSTRACT**

Grassland birds rely primarily on surrogate habitats such as hay fields and pastures, making their conservation closely tied to the way these lands are managed. I used an interdisciplinary approach, combining multiple technologies and field methods, to examine how habitat use, movement, demographics, and survival of obligate grassland birds are shaped across the annual cycle. Results show that practices such as delayed haying and stockpiling can improve grassland bird survival, providing opportunities for agricultural landscapes to function as population sources. This work highlights how modest adjustments in management timing and approach can benefit both grassland bird conservation and agricultural production.