



ILLINOIS NATURAL  
HISTORY SURVEY

T E C H N I C A L   R E P O R T

Waterbird Abundance on Pools 12, 13, and 14 of the Mississippi River

Aaron P. Yetter,  
Joshua D. Stafford,  
and  
Randolph V. Smith

Division of Ecology & Conservation Sciences  
Section for Field Stations & Ecosystems Science

Prepared for: U.S. Fish & Wildlife Service

Project Name: Waterfowl Surveys, Pools 12-14, Mississippi River  
Grant Agreement No.: 301817J122

1 September 2007 through 31 December 2007  
Job Performance Report

INHS Technical Report 2007 (70)  
Date of issue: 20 December 2007

**Project Title:** Waterfowl Monitoring on Pools 12, 13, and 14 of the Upper Mississippi River

**Objectives:**

1. Obtain the number (index) of waterfowl occurring in specified areas of Pools 12, 13, and 14 of the Upper Mississippi River on a weekly basis (9 flights) during the period of 8 October through 7 December 2007
2. Survey results shall be provided to the Refuge Project Officer in weekly reports, utilizing electronic data sheets provided by the Service
3. Provide the Service Project Officer with survey data sheets including: observer, location, date, weather conditions, numbers of all species of waterfowl and American coots observed (Additional data on numbers of white pelicans, double-crested cormorants, great blue herons, and bald eagles should also be provided as time permits)

**Methods:**

We conducted approximately-weekly inventories of wetland birds on Pools 12, 13, and 14 of the Upper Mississippi River using a fixed-wing, single-engine aircraft at altitudes of ~ 150 ft and speeds of ~ 175 mph with one observer and pilot (Havera 1999:186, Stafford et al. 2007). Aerial surveys were conducted between October 12 and December 4, 2007. We estimated avian abundance while flying ¼ mile transects (1/8 mile on each side of the transect line) at predetermined locations between Clinton and Dubuque, IA. All data were summarized and distributed electronically to the project officer within 24 hrs of flights.

**Results:**

We completed 7 of 9 (78%) aerial inventories of the specified areas of the Upper Mississippi River. Surveys were flown on Oct. 12, 23, and 29; Nov. 13, 23, and 27; and December 4. We failed to conduct two inventories. The Oct. 15-19 flight was cancelled due to high winds (30 mph gusts), and the second cancelled flight (Nov 5-9) was missed due to weather, pilot availability, and personal matters (funeral).

We documented that the majority of waterfowl observed during surveys were concentrated on lower Pool 13 and lower Spring Lake. To a lesser extent, other concentration areas were Wise Lake, Green Island, Pleasant Creek, and Elk River refuges. Waterfowl generally avoided areas of Pool 12 (Deadmans, Kehough Slough, and Galena refuges) and Pool 14 (Beaver Island Refuge). We can only speculate on the distribution of waterfowl using these refuges, however, food availability and human disturbance are likely factors.

**Literature Cited:**

Havera, S.P. 1999. Waterfowl of Illinois: status and management. Illinois Natural History Survey Special Publication 21.

Stafford, J.D., M.M. Horath, A.P. Yetter, C.S. Hine, and S.P. Havera. 2007. Wetland use by mallards during spring and fall in the Illinois and Central Mississippi River Valleys. *Waterbirds* 30:394–402.

**Submitted by:**

---

Aaron P. Yetter  
Research Scientist  
Illinois Natural History Survey

Date: 20 December 2007.