

Refining breeding waterfowl and habitat surveys for Iowa

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Collaborators: Iowa DNR, US Fish and Wildlife Service, USGS-BRD
Duration: January 2016 to May 2019
Objectives:

1. Coordinate with the Iowa DNR to modify the existing Iowa spring waterfowl and habitat survey by expanding the area covered and answering key management questions:
 - a. Is there a difference in duck pair density on managed and public lands?
 - b. Does the creation of managed land influence duck density on surrounding private land?
2. Estimate the number of breeding ducks in the Iowa portion of the Prairie Pothole Region and characterize their distribution.

PROGRESS: The current survey area includes the northern two tiers of counties in Iowa's portion of the Prairie Pothole Region (PPR; Figure 1). However, this area represents only 36% of all wetland basins in the Iowa portion of the PPR. The 64% of remaining wetlands in the PPR are of similar characteristics to those in the survey area and are available to waterfowl as breeding habitat. We hypothesize that wetlands outside the survey area support breeding waterfowl and plan to expand to include the entire PPR in Iowa. The Iowa Department of Natural Resources (IDNR), in cooperation with the Prairie Pothole Joint Venture (PPJV), has identified priority habitat areas for breeding waterfowl in Iowa (Figure 1). These are target areas for land acquisition, wetland restoration on both public and private lands, and public wetland management for waterfowl. In addition to expanding the survey area, we plan to sample wetlands both in and outside habitat priority areas to evaluate the potential impact of these priority areas on breeding waterfowl populations. Each year, the IDNR expends significant resources to manage wetlands to benefit waterfowl and other wetland wildlife, both within and outside the PPJV priority areas. The redesigned survey will stratify our sample of wetlands into classes for managed and non-managed wetlands to provide information on breeding waterfowl densities on both types of wetlands. Our hope is to develop a dynamic model (and associated program) that can be applied by IDNR

IMPACTS: Our team from ISU and Iowa DNR has met with U.S. Fish and Wildlife Service and USGS-Biological Resources Division staff and have been encouraged to implement survey modifications in 2016.

FUTURE PLANS: The current model used to generate breeding waterfowl estimates was developed by the U.S. Fish and Wildlife Service using historic survey data from North Dakota. This model is antiquated, doesn't allow flexibility to address priority questions, and doesn't generate state-level breeding waterfowl estimates. In spring 2016 we'll implement a new survey of breeding waterfowl in the Iowa portion of the PPR.

