

2025-2026 UPDATES



RESEARCH PARTNERSHIPS GET RESULTS

New research, led by PHJV partners at Environment and Climate Change Canada and the University of Saskatchewan, demonstrates the importance of retaining wetlands in areas of high agricultural intensity.

Wetlands are important sources of food for aerial insectivores - birds that use insects as their prey. This study focused on Tree Swallows in Saskatchewan, utilizing an eight-year data set from eight sites that represented a gradient in agricultural intensity and wetland availability. The authors found that Tree Swallow fitness (the reproductive success of breeding birds) was negatively affected by agricultural intensity, but that wetlands helped alleviate these negative effects, especially at heavily cropped sites.

Climate Change in Boreal Habitat

A major project in the Western Boreal Forest will help us predict how bird distribution and abundance may shift under climate change.

This project develops projections of wetland distribution and abundance using a coupled Weather Research and Forecasting (WRF) regional climate model and the Noah-MP land surface model. These models, set to look ahead to year 2100, will provide insights into wetland hydrology in response to regional climate. The model will be validated at key locations in Alberta and the Northwest Territories to ensure that the models reflect real-world conditions before being applied across Canada and Alaska's boreal forest.

This project includes engagement with Indigenous communities, agencies, NGOs and industry.

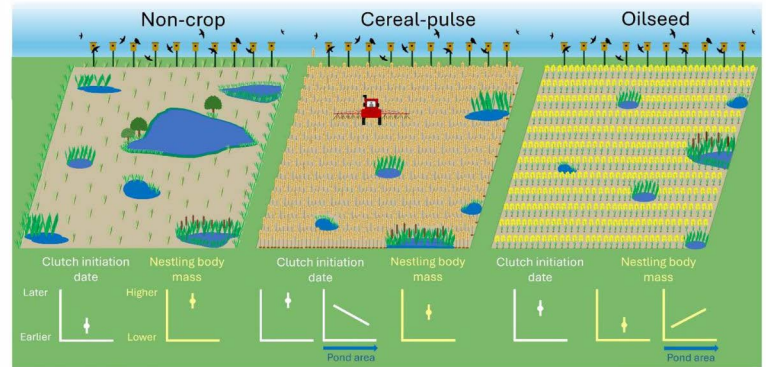


Fig. 1 Tree Swallow fitness in response to wetland availability. Image courtesy of McKellar et al 2025.

Modelling for Conservation

The Science Committee has developed multiple models to inform conservation priorities for birds in the Prairie Pothole Region:

- New distribution models for the PHJV's seven priority duck species.
- Updated waterfowl target landscapes that reflect the new distribution models, highlighting areas with highest total duck densities and disproportionately important for individual species.
- Version 2 of the grassland, shorebird, and waterbird models that include more refined data and Bird Conservation Regions that can be integrated or separated.
- Updated priority areas for all birds that can be compared with Waterfowl Target Landscapes to determine overlap.

FLYING FORWARD

The Prairie Habitat Monitoring Program will be releasing wetland change rates for 2011-2021. This will inform the next phase of the PHJV Implementation Plan.