



Ducks Unlimited  
Canada

# Wetland & Waterfowl Mapping in Northwestern Ontario

**T**he boreal ecosystem is one of the most important terrestrial environments in the world. Home to nearly four million people in Canada, the boreal wraps the northern hemisphere like a giant shawl patterned with forests, waterways and wetlands. These nature networks filter the largest surface area of freshwater on the planet — a resource that wildlife and people rely on for clean water.

We recognize that natural resource development is on the increase in the boreal region. Companies working in the boreal must meet regulatory requirements to avoid harm, including protections for species at risk, migratory birds and the forest itself. But the wetlands are dispersed and remote — and there is often little information available about them.

Reliable knowledge is the foundation for sustainable land use and we're preparing detailed, accurate wetland maps for the Canadian boreal region. We believe that wetland inventories can make it possible for companies working in the boreal to strategically prioritize conservation in management planning and field operations.

## Wetlands in sustainable forest management

Ducks Unlimited Canada's Enhanced Wetland Classification inventory maps provide partners with valuable tools for working in and around wetlands while supporting our conservation goals. Our mapping and wetland vegetation experts work with forestry companies and other industry partners to improve wetland maps and provide guidance on planning, such as water flow characteristics related to road crossings and construction risk.

Waterfowl in the boreal are found at low densities throughout a vast landscape. Understanding wetland type, extent and ecological characteristics allows integration of habitat conservation into land use decisions.

Forest inventories are a critical tool for effective, sustainable harvest planning and deployment.

We're working with Resolute Forest Products to improve wetland mapping and habitat classifications in two of their forest management areas — Dog River-Matawin and Black

Spruce — and one provincial park, Quetico. All Resolute managed forests in Ontario are certified under the Sustainable Forestry Initiative and the Dog River-Matawin forest is further certified under the Forest Stewardship Council — National Boreal Standard.



*"We all benefit from the boreal forest and its network of wetlands which filter the largest surface area of freshwater on the planet, trapping sediments and pollutants while supplying clean water for communities."*

— KEVIN SMITH  
NATIONAL BOREAL PROGRAMS MANAGER  
DUCKS UNLIMITED CANADA



### Wetland mapping and habitat classifications

- + Our experts will verify the accuracy of wetland classification for the management area, supporting wetland stewardship and identifying wetland types (i.e., marsh classes) that may be underrepresented in the provincial enhanced Forest Resource Inventory (eFRI), used to support management planning.
- + These collaborations allow us to identify opportunities to maintain small wetland habitats and adjacent upland nesting habitats that are so important to waterfowl breeding success.
- + We've developed a conversion chart for boreal wetland classification that supports industry and forest practitioners interpreting the landscape by grouping complex wetland classes into a general, more easily understood framework.



### Waterfowl habitat spatial assessment

- + Our experts are working on developing a preliminary habitat spatial assessment model to create maps of waterfowl habitat potential for forest management and stewardship that ranks the importance of habitats for breeding and staging.
- + We can identify and rank open-water features, called “splash habitats”, that are used by waterfowl during their boreal life cycle, including breeding pair settling, brood rearing and staging.
- + Identifying important wildlife habitat and developing a geospatial map with predicted and ranked waterfowl habitats is of value to many boreal organizations.



### Partners for sustainable forestry

Ducks Unlimited Canada, Resolute Forest Products, Thomson Environmental, Northern Bioscience Ecological Consulting, Confederation College, Lakehead University, Ontario Ministry of Natural Resources and Forestry.

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