



# Wetlands Working Group

The Wildlife Society

Newsletter, Volume 6, Issue 1  
April 2016

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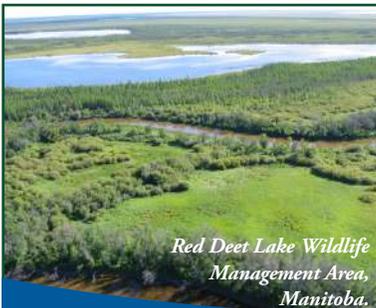
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### Wetlands in the News



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## *Celebrating 100 Years of Migratory Bird Conservation*

### *Part 1: Canada*

*To honor the 100th anniversary of the Migratory Bird Treaty, this year's WWG newsletters will highlight wetlands of international importance across North America!*

**The Migratory Bird Treaty in Canada** was enacted with the passage of the Migratory Birds Convention Act (MBCA) during 1917; subsequent updates occurred during 1994 and 2005. It is the responsibility of [Environment and Climate Change Canada](#) to develop and implement policies and regulations to ensure the protection of migratory birds, their eggs and their nests. Check out their website for more information about the [MBCA in Canada](#).

Canada's diverse habitats support about 450 species of native birds, the majority of which are protected under the MBCA. Through bird-watching, and subsistence and recreational hunting, native birds are an integral part of Canada's heritage. Migratory birds also play important ecological and biological roles in the environment. A recent report, [The State of Canada's Birds 2012](#) shows that bird populations in Canada are changing. Although some bird species are doing well, many others are declining. As we celebrate the successes of international bird conservation, it is important to recognize continued and new threats to migratory bird populations.

The feature article in this newsletter explores the diverse wetlands within the Canadian Boreal Forest. It emphasizes the importance of international wetland conservation through ducks banded in Canada's boreal forest and subsequently recovered throughout the four major flyways in the United States and Mexico.

Thank you to all of the WWG members for your work to protect, restore, and manage wetlands for migratory birds and other wildlife! We hope you enjoy these issues featuring international wetlands and bird conservation!

First signed by the United States and Great Britain (on behalf of Canada) during 1916, the Migratory Bird Treaty protects birds that migrate across international borders. Mexico signed the treaty during 1936.

# Canada's Boreal Forest Wetlands

by Chris Smith & Dale Wrubleski, Ducks Unlimited Canada

**The Boreal Forest** - On a global scale, the boreal forest circles the northern hemisphere immediately south of the Arctic Circle, covering approximately 1.89 billion hectares (Brandt et al. 2013) and is one of the world's largest biomes. In Canada, it stretches from Yukon across to Newfoundland and covers over 580 million ha or almost 60% of the country's land mass (Anielski and Wilson 2009). This emerald crown is situated between the Arctic tundra to the north and the temperate and deciduous forests to the south (Figure 1). The boreal forest takes many forms across the continent, but is generally dominated by conifers, particularly spruce, with varying amounts of deciduous trees interspersed throughout. Discontinuous permafrost (soil that remains at or below 0°C for two or more years) is found throughout the northern edge of the forest. Canada's boreal forest is largely Crown (public) land managed by government, with some managed by First Nations.



*Fen complex in the boreal forest of Canada.*

**Boreal Forest Wetlands** - The boreal forest has an abundance of lakes and rivers, with wetlands being a dominant feature. Boreal wetlands fall under two main categories: 1) organic wetlands (peatlands) - comprised of bogs and fens; and 2) mineral wetlands - comprised of swamps, marshes and open water areas less than 2 meters deep. Peatlands are deep organic wetlands that have more than 40 cm of peat and mineral wetlands have less than 40 cm (National Wetlands Working Group 1997). Peatlands dominate the boreal forest and represent about 86% of the wetlands found within the region. The largest contiguous peatland in Canada covers an area of 30 million hectares in the Hudson Bay Lowlands of Ontario and Manitoba, and

considered to be the largest wetland in North America (Abraham and Keddy 2005).

**Boreal Wetlands and Ecosystem Services** - Boreal wetlands provide a wide range of ecosystem services. Given the large area of peatlands, carbon storage, which is largely subsurface within peatlands, is estimated to be 136.7 billion tonnes (Tarnocai 2006). Boreal wetlands support a wide range of additional ecosystem services, including groundwater recharge, water flow regulation, contaminants absorption and filtering, erosion protection, and fish and wildlife habitat. The value of ecosystem services provided by the boreal forest is estimated at Cdn\$700 billion annually, with wetlands contributing to a large part of these services (Anielski and Wilson 2009).

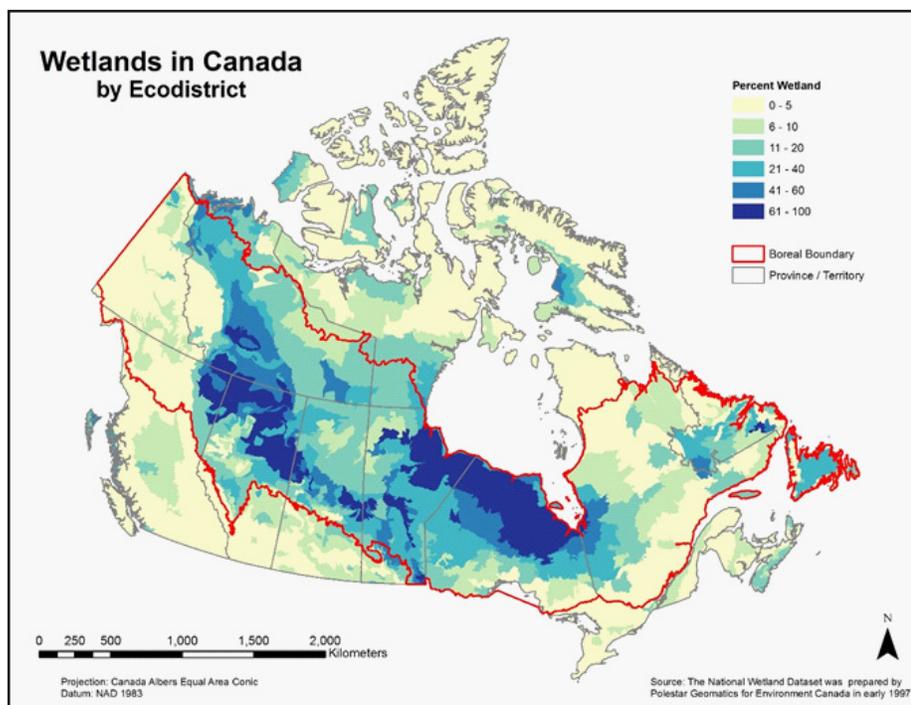


Figure 1. Canada's boreal forest and distribution of wetlands.



*Lake Winnipegosis Salt Flats Ecological Reserve freshwater coastal wetlands, Manitoba.*

# Canada's Boreal Forest Wetlands (continued from page 2)

## Linkage of Boreal Ducks to Other Countries

- Approximately 40% of the ducks in North America rely on the Canadian/U.S. boreal forest and its wetlands for critical and key breeding habitat, a number similar to the U.S. and Canadian prairies combined (PHJV 2014). Given the large expanse, boreal ducks typically occur in lower densities than in the prairies. These 15 million boreal ducks include 23 species, of which at least 10 have more than half of their continental breeding population in the boreal forest, some of which are considered below population objectives including scaup, scoter and widgeon (DUC 2015). The importance of the boreal to continental duck populations is shared by many countries and is best depicted by Figure 2 which outlines where birds banded in the Canadian boreal are retrieved.

**Current Threats** - Although still largely intact, development in the boreal is increasing and attractive to an array of industries due to its rich natural resources. Most obvious are the extensive forestry operations in the southern boreal, followed by petroleum extraction (exploration, oil wells, pipelines, oil sands development), hydroelectric infrastructure, mining, and the extraction of horticultural peat. Although an understanding of the implications of these developments on boreal wetlands is in its' infancy, a key concern is the cumulative effects of these changes and how they can interrupt this highly connected system of wetlands (e.g. flow). Overarching is the unknown implication of climate change predicted to result in a northern shift of southern plant communities and development, permafrost melting and unknown changes in aquatic ecosystems (Gingras et al. in press).

**Conservation Initiatives** - Current conservation initiatives can be placed into three primary categories: 1) programs targeted to establish long-term legal protection of areas that include boreal wetlands; 2) land use planning initiatives that direct how the land in the boreal forest will be sustainably managed and protected; and 3) programs that develop best management practices (BMPs) for boreal forest areas where industrial activity is more prevalent. BMPs offer industry a guide to advance sustainable management decisions and wetland conservation. These initiatives vary between

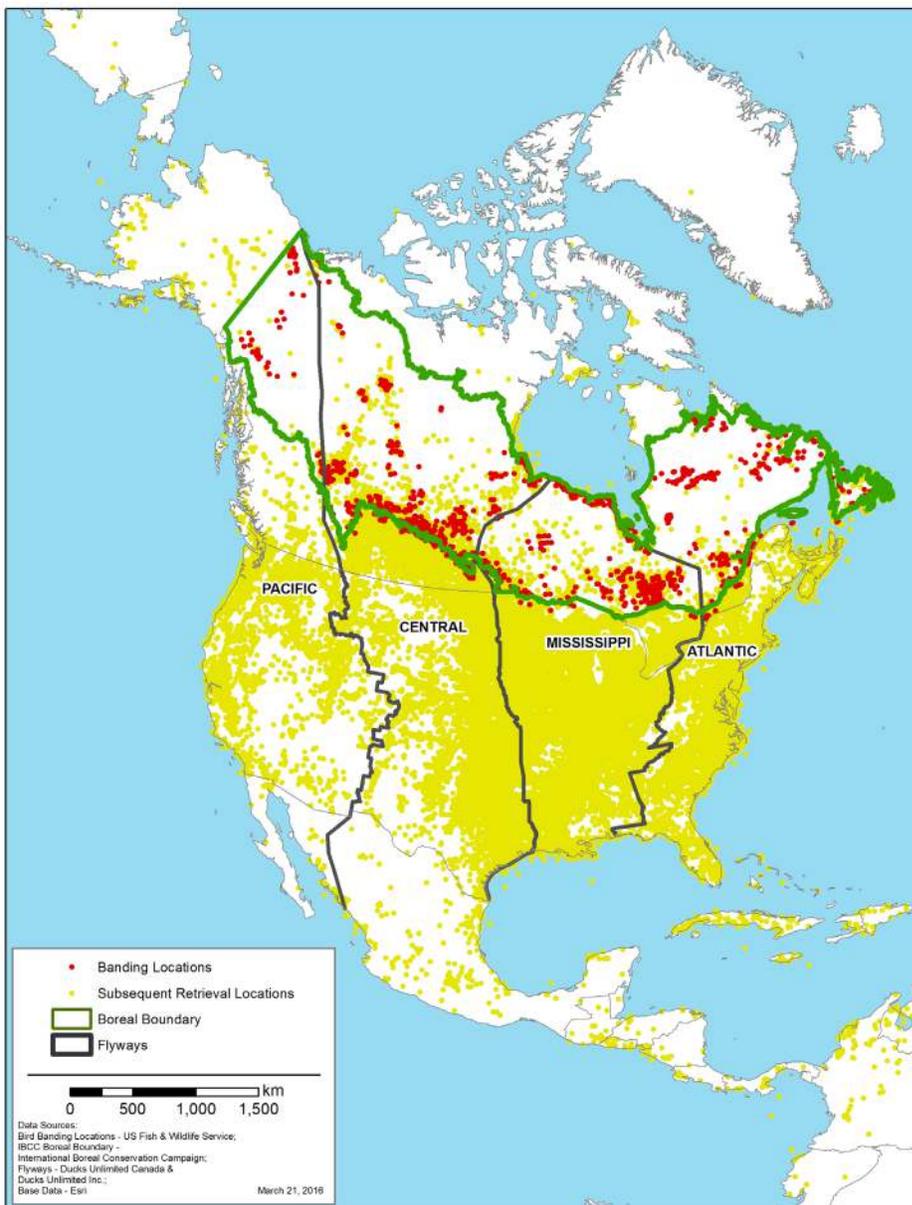


Figure 2. Ducks banded in Canada's boreal forest and band retrievals. Map by DU Canada.



jurisdictions with land-use planning and protected areas emphasized in areas where industrial development has been limited or yet to occur. Overarching all of these initiatives are efforts to establish long-term wetland protection policies that promote wetland conservation in each jurisdiction and across the entire boreal region of Canada. (See page 6 for literature cited; all photos courtesy of Ducks Unlimited Canada).

# Vice Chair Officer Election: Call for Nominations

Want to join a fun team to advance the mission of the Wetlands Working Group?

The Wetlands Working Group of the Wildlife Society is seeking nominations for open positions of Vice Chair. Our bylaws indicate we need at least 2 people to run for each position so please consider nominating yourself or someone else. The duties are outlined in the WWG Charter, and are summarized as follows:

**VICE CHAIR** — The Chair-elect shall serve as the Vice-Chair and assume the duties of the Chair in the absence of the Chair or upon the inability of the Chair to serve, and shall perform any duties assigned by the Chair. The Chair-elect shall chair the Newsletter Committee (Article VII, Section 2, Clause D). In the event the Chair-elect cannot serve in the Chair's absence, the Executive Board shall appoint a Chair, pro tempore. Upon completion of a full term as Chair-elect, the Chair-elect succeeds to the position of Chair. The Vice Chair shall share promotion and marketing responsibilities (e.g., newsletters) with the Secretary/Treasurer.

Please submit all nominations, including self-nominations, to the Nominations Committee Chair, Ben Wishnek, via email, [ben.wishnek@gmail.com](mailto:ben.wishnek@gmail.com) by July 31, 2016.

Nominations should include name, contact information, and a brief bio.

Join us on Facebook!



<https://www.facebook.com/groups/twswwg/>



Check out our new website!



<http://wildlife.org/wwg/>



We have set up a closed facebook group for WWG members to share wetland-related information. To increase awareness about wetlands and wildlife, the facebook page is visible to the public, but only members can post to the page. To join the WWG group, request to join the group via the group page and after we verify your WWG member status, you are welcome to post wetland-related information.

We look forward to hearing about your wetland-related conservation work, publications, news items and other stories of interest!

## Wetlands in the News

### World Wetlands Day

Why wetlands are important.

### Reshaping the Chesapeake

A cutting edge anti-erosion shoreline project.

### The Great Salt Lake

Will it be reduced to dust?

### Combating pollution

Can a new plastic-eating bacteria help?

### Allegheny County, PA project

mitigates wetland loss.

### Beavers help restore

California wetlands.

### Designation of Wetlands for

### Conservation by WWF

reaches milestone.

### Two Wetland Cases before the Supreme Court in 2016

Murr v. State of Wisconsin & Hawkes Co., et al. v. US Army Corps of Engineers.

### Typhoon-battered village

plants mangrove cover.

### New Publication

Can mangroves keep pace with contemporary sea level rise? A global data review.



Restored mangrove wetland, Yucatan, Mexico. Photo by Adonia Henry.

Click on the light blue hyperlinked text above for links to the original articles.

## Association of State Wetland Managers 2016 Coordination Meeting Update by Jen Chutz

Over 100 wetland professionals attended this year's [Association of State Wetland Managers](#) (ASWM) annual coordination meeting at the beautiful National Conservation Training Center in West Virginia, held March 29-31. A wide variety of topics were covered, including a history and update by the U.S. Department of Justice on the [new Clean Water Rule](#), for which the October 9, 2015 stay is still in effect.

The Army Corps of Engineers (ACoE) discussed several topics including:

- The [2015 Red Book: Synchronizing Environmental Reviews for Transportation and Other Infrastructure Projects](#), which updates the 1988 Red Book;
- The [2016 National Wetland Plant List](#) that will become effective on May 1, 2016; and
- The procedure planned once the [proposed 2017 Nationwide Permits](#) under Section 404 of the Clean Water Act are published to ensure they are in place by March 18, 2017.

The [National Wetland Condition Assessment](#) (NWCA) was another focal point. The Environmental Protection Agency is releasing the NWCA 2011 Final Report very soon while agencies and contractors prepare for the upcoming NWCA 2016 field season.

The USFWS described their recently published [Draft Revised Mitigation Policy](#) to replace the [1981 Mitigation Policy](#), as well as the upcoming Draft Compensatory Mitigation Policy to replace the [2003 Conservation Banking Policy](#) and the [2008 Recovery Crediting Guidance](#). The USFWS also opened up a town hall-style meeting to exchange ideas about the upcoming 2009-2019 [Wetland Status and Trends](#) Report. Wetland mapping was another meeting focus, as several speakers talked about plans for the future of the [National Wetlands Inventory](#), using the new [Cowardin 2.0](#) wetland classification, adding [LLWW](#) (landscape position, landform, water flow path, and waterbody type) and other functional assessments as wetland attributes in GIS, and the potential for semi-automated wetlands mapping.

FEMA reviewed their recently released [guidelines](#) for implementing floodplain management in the wake of the new [2015 Executive Order 13690](#) establishing a Federal Flood Risk Management Standard.

Ducks Unlimited spoke about the variety of migratory bird and hunting policies and funding sources that have worked to conserve and manage wetlands over the years. Programs with a non-regulatory component enjoyed a session held to line out tactics for these type of wetland conservation programs.

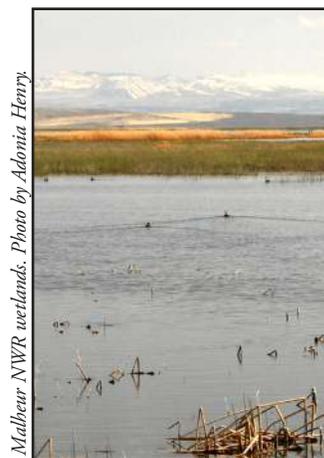
*Continued on page 6*

## U.S. Fish & Wildlife Service Resource Protection Act

by TWS Conservation Affairs Network

The U.S. Fish and Wildlife Service (USFWS) Resource Protection Act would give USFWS the authority to collect compensation for unlawful damages to resources within the National Wildlife Refuge System. Currently, damages to the Refuge System deliberately caused by a third party are restored using general tax dollars from the existing USFWS budget, stripping funds that could otherwise be attributed to wildlife management and conservation programs.

See the [Conservation Affairs Network April 2016 Newsletter](#) for more information on this and other natural resource related policy issues and visit the [TWS Action Center](#) to contact your Representative about the USFWS Resource Protection Act.



### Malheur National Wildlife Refuge Post Occupation

[News from Malheur National Wildlife Refuge](#) - The USFWS is working hard to re-open Malheur National Wildlife Refuge. As a result of the armed occupation of the Refuge, there has been damage to buildings, personal property, and Native American cultural sites. The Refuge Headquarters and Visitor Center are closed and scheduled to re-open for

public use later in the summer, after our work there is complete. However, we encourage you to enjoy the rest of the Refuge, which has been re-opened to visitors!

### Funding for Federal Natural Resource Programs

[News from TWS Conservation Affairs Network](#) - After the release of the President's budget request in early February, Congress has been meeting with leaders of federal agencies to discuss budgets for Fiscal Year 2017. TWS has submitted written testimony on behalf of wildlife professionals for full-funding of natural resource conservation programs.

### Call for Articles: Wetlands at Risk

[News from the IUCN](#) - An open initiative and publication is promoted by the Wetland Thematic Group members (IUCN CEM) to increase

awareness about the most important wetlands under risk in different world regions. Article submission is open for people involved in management, research, conservation, restoration and other issues related to wetlands, belonging or not to the IUCN. See the IUCN [Call for Submitting Articles](#) for more information.



## ASWM Meeting Update (continued from page 5)

ASWM highlighted some of their recent white papers including the "Status and Trends Report on State Wetland Programs in the US" and continued to prove their weight in gold as a medium to bring states, tribes, and federal agencies together to promote and enhance the protection and management of our wetland resources.



### Save the Date! The Wildlife Society 23rd Annual Conference

15-19 October 2016  
<http://www.twsconference.org>

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## STUDENT AWARD

In order to increase student awareness and participation in the WWG, our working group will again fund early registration conference fees (\$275) for one student member of the WWG to attend the 2016 TWS annual conference.

Students interested in being considered for this award will need to submit a CV and a cover letter discussing their interest in wetland research, management, and/or conservation.

Instructions on how to submit an application will be available during May 2016.

## Questions?

Interested in sharing your wetland experiences and contributing to the Newsletter?

## Contact Us!

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## How to Join WWG

When you renew your TWS membership, be sure to sign up for the Wetlands Working Group!

If you're already a member of TWS, you can add membership in the Wetlands Working Group at any time by logging into your account at <http://wildlife.org/>.

Membership dues are only \$5 annually, which helps support activities at meetings and outreach events.



Riparian floodplain wetlands near National Conservation Training Center in West Virginia. Photo by Jen Chutz.