

# Canadian *HabitatMatters* 2009 Annual Report

The North American Waterfowl Management Plan is an international partnership that began in 1986. It is a formal commitment by Canada, the United States and Mexico to conserve and protect valuable wetland and associated upland habitat to sustain abundant waterfowl populations.



Spring-time  
at the Marsh –  
Green-winged Teal  
Artist: Pierre Girard  
Ste-Anne-de-Sorel, Quebec

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Often compared to tropical rain forests in terms of their biological diversity and the vital role they play for a healthy planet, wetlands are one of North America's most valuable and productive ecosystems. They provide critical environmental, social and economic benefits, and generate billions of dollars in economic returns annually. Not only are wetlands crucial habitat for wildlife, they also help filter our water and moderate the effects of drought, floods, climate change and erosion as well as providing a priceless resource for outdoor recreation and educational activities.

In Canada, wetlands are essential to the life cycle of dozens of species of waterfowl and over 600 species of plants and animals, including many species at risk. Unfortunately, up to 70 per cent of Canada's wetlands have been lost in the more populated areas of the country and losses will continue without ongoing education and funding.

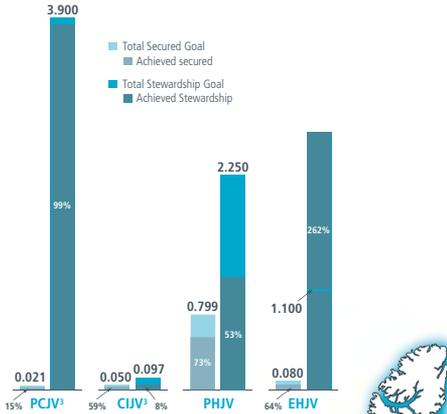
To combat wetland loss and maintain healthy and abundant continental waterfowl populations, the North American Waterfowl Management Plan (NAWMP) was launched in 1984. NAWMP is a tri-national partnership to conserve high priority wetlands and associated upland habitats for the benefit of waterfowl and other wetland-dependent wildlife. The partnership is comprised of federal, state, provincial and municipal governments, nongovernmental organizations, industry and private individuals. Through sound science, diverse partnerships and a landscape approach, NAWMP has become one of the most successful conservation initiatives in the world – to date over 3 billion dollars has been invested across the continent to secure over 5.2 million hectares (13 million acres) of wetlands.



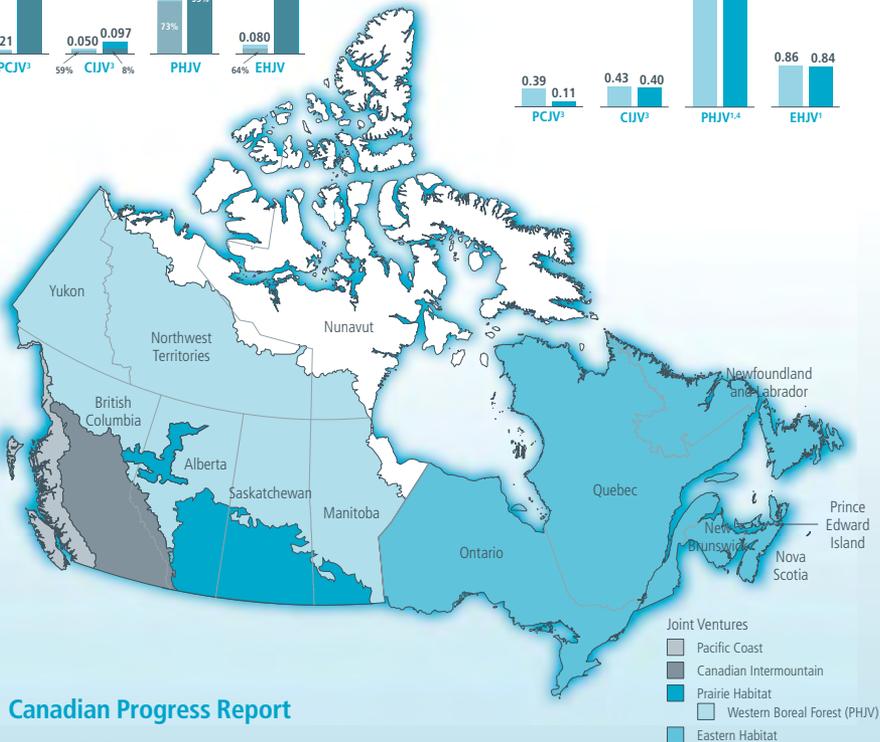
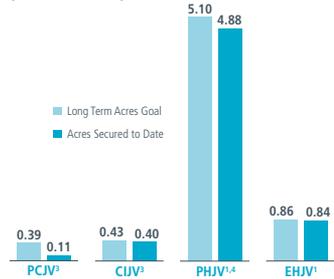
North American Waterfowl  
Management Plan  
Plan nord-américain de  
gestion de la sauvagine  
Plan de Manejo de Aves  
Acuáticas Norteamérica

# National Overview

## Joint Venture 2007-2012 Implementation Plan Goals and Accomplishments<sup>1</sup> (millions of acres)



## NAWMP and NAWCA-Funded Habitat Secured in Comparison to Long Term Implementation Plan Goals 1986-2012<sup>2</sup> (millions of acres)



## Canadian Progress Report

Accomplishment Goal: 6.4 million secured acres<sup>5,6</sup>

Canadian achieved to date: 5.8 million acres (92%)<sup>6</sup>

Expenditure Goal = 2.6 B \$Cdn.<sup>5</sup>

Expenditure to date: 1.4 B \$Cdn. (54%)<sup>6,7</sup>

1. Includes revised habitat objectives for the 2007-2012 implementation plan window.
2. Reported acres correspond to period acres only.
3. The PCJV and CIJV Implementation Plans are under development.
4. Secured acres include habitat conserved prior to 1986.
5. Goals are based on 2004 NAWMP Update.
6. Data includes PHJV, PCJV and EHJV only.
7. Includes securement, enhancement and management costs.

**M**uch of the catalyst for NAWMP's success can be attributed to the North American Wetlands Conservation Act (NAWCA) passed by U.S. Congress in 1989. For 20 years, NAWCA has provided a funding mechanism for on-the-ground wetland conservation that advances NAWMP objectives. The Act requires that the U.S. federal funding granted to each project must be matched dollar-for-dollar by funding from other sources. For example, for every dollar of NAWCA funding that Canada receives, at least the same amount of funding must be provided from another U.S. non-federal source. NAWMP has benefitted enormously from NAWCA and other U.S. and Canadian funding sources for two decades, and in 2009, reached a milestone 20<sup>th</sup> anniversary.

In Canada, NAWMP goals and objectives are achieved through seven joint ventures across the country. These joint ventures are led by Management Boards and Committees and include all levels of government, nongovernmental organizations, industry, aboriginal communities and landowners. The Pacific Coast, Canadian Intermountain, Prairie Habitat and Eastern Habitat Joint Ventures are partnerships for implementing habitat conservation programs and projects across Canada. In addition, the Arctic Goose, Black Duck and Sea Duck Joint Ventures are international and research-based and critical to effectively managing priority NAWMP populations.

The extended values of NAWMP's wetland conservation initiatives are endless – other migratory birds and wildlife as well as other plant and animal species, including species at risk, benefit immensely.

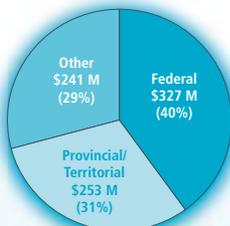
Much of the catalyst for NAWMP's success can be attributed to the North American Wetlands Conservation Act (NAWCA) passed by U.S. Congress in 1989.

Under the guiding umbrella of the North American Wetlands Conservation Council Canada (NAWCC Canada), NAWMP partners meet regularly to discuss issues of national importance. In February, 2009, NAWCC Canada hosted a National Wetlands and Climate Change Workshop for joint venture partners. The Workshop provided an opportunity for Canadian climate change experts to discuss the science of global climate change and the impacts climate change is having on Canadian wetland ecosystems. NAWCC Canada endorsed the principle that Canadian joint ventures need to consider the potential impacts of climate change in their planning to effectively achieve NAWMP goals. The Eastern Habitat Joint Venture (EHJV) Science Committee began such work in November, 2009, by hosting a Climate Change Adaptation Workshop that gathered joint venture partners and other experts to discuss current climate change scenarios and how to best advise the EHJV Board on future climate change issues and strategies.

The extended values of NAWMP's wetland conservation initiatives are endless – other migratory birds and wildlife as well as other plant and animal species, including species at risk, benefit immensely. People also receive tremendous economic, social, cultural and recreational benefits. To date, over 3.9 million hectares have been conserved in Canada alone – and 1.62 billion dollars have been invested to conserve important wetland and migratory bird habitat. However, with the ever-increasing environmental challenges and threats, such as habitat and biodiversity loss and climate change, wetlands are becoming even more vulnerable.

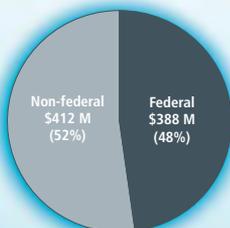
This publication of Canadian Habitat Matters highlights Canada's NAWMP challenges and accomplishments for 2009. NAWCA funding and the continued support of all U.S. and Canadian partners is essential for the conservation of wetlands that support waterfowl and other wetland-associated migratory birds in North America.

## Total NAWMP and NAWCA Contributions to Canada 1986-2009 (\$Cdn.)



**Total Canadian Contributions \$822 M (51%)**

**Total Overall Contributions to Canada \$1.62 B**



**Total U.S. Contributions \$800 M (49%)**

**Countries other than Canada and the United States: \$189,700.**

### Terminology used in this report

**Securement:**

The protection of wetland and/or upland habitat through land title transfer or binding long-term (minimum 10-year) legal agreements with a landowner.

**Enhancement:**

Actions carried out on secured wetland and/or upland habitats to increase their carrying capacity for wetland-associated migratory birds and other wildlife.

**Management:**

Activities conducted on secured wetland and/or upland habitats to manage and maintain their carrying capacity for wetland-associated migratory birds and other wildlife.

**Stewardship:**

Activities that promote or result in voluntary adoption of sustainable land use practices that conserve habitats for waterfowl and other wildlife. Stewardship acre accomplishments are tracked as **influenced** acres rather than secured acres because there are no legal land agreements or the land agreement is less than 10 years in duration.



Acquisition of the Chemainus Estuary protects 210.5 hectares (520 acres) of agricultural fields, intertidal flats and forested areas that are crucial for many species of waterfowl, including American wigeon, northern pintail, greater scaup, bufflehead, green-winged teal and ring-necked duck.

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# Habitat Joint Ventures

## The Pacific Coast Joint Venture

The Pacific Coast Joint Venture (PCJV) includes the coastal ecosystems of Washington, Oregon, northern California and British Columbia (B.C.) as well as the entire states of Alaska and Hawaii. Within B.C., the PCJV is comprised of 27,000 kilometres (17,000 miles) of inlets, bays, islands, straits and fjords, creating a diversity of near-shore, intertidal and forested habitats, including highly productive estuarine habitat.

Although less than three per cent of the B.C. coast is made up of estuarine habitat, it provides critical staging, feeding and roosting areas for millions of wintering and migratory waterfowl, such as trumpeter swans, Wrangel Island snow geese, black brant, American wigeon, northern pintail, greater scaup, bufflehead, green-winged teal and ring-necked duck.

Alarming, current estimates indicate that close to half of B.C. estuaries are threatened and subject to habitat loss, pollution, alteration, resource extraction, freshwater diversion, sea level rise, debris and invasive species. As a result, PCJV partners, supported by funding under the North American Wetlands Conservation Act (NAWCA), are being proactive in securing and restoring vital estuarine habitat.

In 2007, Ducks Unlimited Canada (DUC) and Environment Canada collaborated on a project that ranked 442 B.C. estuaries based on size, habitat, vegetation, waterbird use and herring spawning grounds. The 25 top-ranked estuaries included some of the province's best known estuaries such as Fraser Delta, Cowichan and Courtenay as well as several that are less known such as the Chemainus

(Vancouver Island), Homatko (Central Coast), Kitsalut (North Coast) and Naden River (Queen Charlotte Islands – Haida Gwaii). The results of the rankings provide direction on where to target funding for essential habitat acquisition and restoration work.

Considered a PCJV milestone, PCJV partners purchased the highly ranked Chemainus Estuary located on southern Vancouver Island in March 2009.



## Joint Venture Fast Facts

**Scope:** The Canadian portion of the Pacific Coast Joint Venture (PCJV) includes nearly 22 million hectares (over 54 million acres) of landscape, 457,646 kilometres (284,000 miles) of seascape and 30,285 kilometres (19,000 miles) of shoreline.

**Major Habitat Types:** The B.C. coast is a myriad of inlets, bays, islands, straits and fjords, rising to a diversity of near-shore, wetland, intertidal and forested habitats. Variations in altitude create widely contrasting ecological zones within the region ranging from mild, humid, coastal rainforest to cool boreal forest and alpine conditions at higher elevations.

**Notable Waterfowl Species:** Over one million waterfowl winter along the B.C. coast, 50 per cent of the Pacific Coast trumpeter swan population and over half the Wrangel Island snow goose population as well as other species such as American wigeon, northern pintail, greater scaup, bufflehead, green-winged teal, etc.

**Provinces and States:** The PCJV is an international joint venture that includes B.C., Alaska, Washington, Oregon, California and Hawaii.



The Chemainus Estuary (pictured) received an important "Class 1" ranking in 1989 by Ducks Unlimited Canada and the Canadian Wildlife Service.

© Ducks Unlimited Canada

Alarming, current estimates indicate that close to half of B.C.'s estuaries are threatened and subject to habitat loss, pollution, alteration, resource extraction, freshwater diversion, sea level rise, debris and invasive species.

In combination with the nearby Cowichan Estuary and freshwater lakes, the Chemainus acquisition now forms a habitat of international importance to waterfowl and other birds using the coastal migration corridor along the Pacific Flyway.

Purchased from the Catalyst Paper Corporation, with a partial land donation, the acquisition of Chemainus Estuary protects 210.5 hectares (520 acres) of agricultural fields, intertidal flats and forested areas. On average, 1,000 waterfowl per day have been reported during the migration and wintering periods. Great blue heron, bald eagle and many species of mammals are also abundant and contribute to the estuary's rich biodiversity.

Partnership was essential in the conservation securement of the Chemainus Estuary and was made possible through contributions from the B.C. Trust for Public Lands Partnership (Environment Canada, B.C. Ministry of Agriculture and the Integrated Land Management Bureau, B.C. Ministry of Environment, Union of B.C. Municipalities, Habitat Conservation Trust Foundation, DUC, The Land Conservancy of B.C., Nature Conservancy of Canada, The Nature Trust of B.C., Pacific Salmon Foundation), Catalyst Paper Corporation and international partnerships under NAWCA and the U.S. Fish and Wildlife Service.

For more information, contact Barry Smith, Pacific Coast Joint Venture Co-Chair, (604) 940-4677, [barry.smith@ec.gc.ca](mailto:barry.smith@ec.gc.ca), [www.pcjv.org](http://www.pcjv.org).

Although they represent only 2.3 per cent of B.C.'s coastline, estuaries like Chemainus (pictured), support millions of wintering and migratory waterfowl.

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## Contributions (\$CAN)

	2009	Total (1991-2009)
U.S. Federal	56,266	21,682,964
U.S. Non-Federal	142,834	20,947,799
Canadian	3,283,793	132,408,595
Countries other than Canada or the U.S.		6,500
<b>Total</b>	<b>3,482,893</b>	<b>175,045,858</b>

## Accomplishments (Acres)\*

	2009**	Existing (1991-2009)
Secured	625	111,580
Enhanced	45	91,270
Managed	***	90,367
Influenced	2,118,463	3,863,492

\* Secured, enhanced and managed acres are not additive. Acres are first secured, may then be enhanced and are subsequently placed under management. Influenced acres are mutually exclusive of secured, enhanced and managed acres.

\*\* 2009 acres reported correspond to period acres.

\*\*\* All existing acres shown are managed each year.

### Joint Venture Fast Facts

**Scope:** 50 million hectares (123.5 million acres).

**Major Habitat Types:** The Canadian Intermountain is a landscape of widely varying elevation and climatic conditions. This has resulted in a tremendous diversity of habitat types including desert, grasslands, shrub-steppe, riparian, wetlands, dry and moist coniferous forests and alpine tundra. Over 60 per cent of the area is forested, with over 5 per cent covered by lakes and wetlands, 1 per cent in open native grasslands and the remaining area in other non-forested habitat (including urban, agriculture, alpine, rock and ice).

**Notable Waterfowl Species:** Approximately 60 per cent of the global Barrow's goldeneye population, and 5 to 10 per cent of the global population of harlequin ducks breed in the CIJV. During migration, up to 8 million waterfowl use the CIJV wetlands.

**Provinces:** British Columbia and Alberta.



## The Canadian Intermountain Joint Venture

The Canadian Intermountain Joint Venture (CIJV) is one of Canada's most ecologically diverse landscapes. Spanning over half the Province of British Columbia (B.C.), the region includes deserts, moist coniferous forests and alpine tundra, but none of these are as vital to the delivery of the North American Waterfowl Management Plan's (NAWMP) objectives as its 150,000 wetlands. Cumulatively, these wetlands sustain a breeding waterfowl population of approximately 1.6 million birds, which represents nearly 70 per cent of the provincial waterfowl breeding population, as well as a significant proportion of the Pacific Flyway birds.

Unfortunately, there are considerable threats to most of these wetlands because they are located within a resource-based economic region. The CIJV landscape sustains a growing human population through a managed "working" landscape. Resource-based industries include crop-agriculture, ranching, forestry, energy, mining, tourism and recreation – all of which require intensive use and development of some of the most waterfowl-productive landscapes.

**Wetlands within the CIJV planning area sustain a breeding waterfowl population of 1.6 million birds.**  
© Ducks Unlimited Canada

To address the development pressure on wetlands, CIJV partners used North American Wetlands Conservation Act (NAWCA) funds in 2005 to establish the Crown Land Wetland Program (CLWP). The B.C. Ministry of Forests and Range, Ducks Unlimited Canada (DUC), the B.C. Cattlemen's Association and local ranchers initiated the program and are now cooperatively working towards the enhancement and conservation of priority wetlands on Crown lands. The CLWP promotes the adoption of environmentally sustainable grazing management practices where poorly managed grazing has impacted B.C.'s waterfowl habitat and biodiversity. Encouraged practices included the installation of fencing, stock watering and water storage, such as the restoration of altered wetlands with engineered water-control structures on wetlands.

The Cariboo-Chilcotin priority area was selected in 2009 for CLWP delivery because it supports the highest densities of breeding waterfowl within the CIJV. It is estimated that over 135,000 breeding duck pairs rely on wetlands within this landscape – equivalent to roughly 17 per cent of the CIJV breeding population in an area representing 6 per cent of its landbase. Waterfowl species include the typical "prairie duck" community (mallard, blue- and green-winged teal, northern shoveler, northern pintail, American wigeon, gadwall) as well as a number of diving ducks such as bufflehead and ring-necked duck.

One of the CLWP's initial projects involved construction of 12 kilometers (7.5 miles) of fence north of Alberta and River Lakes in the central interior of B.C. This project was led by the B.C. Ministry of Environment, in partnership with DUC, Environment Canada's Habitat Stewardship Program, the B.C. Conservation Framework Fund, the B.C. Ministry of Forests and Range, the Canoe Creek Indian Band and Crown range tenure holders. The fences created two pastures to allow better management of livestock grazing via rotation along the lake chains, thereby enhancing habitat values on approximately 1,468 hectares (3,628 acres) of wetland complexes surrounded by prime grassland and forested areas.

Over the next few years, waterfowl brood surveys and vegetation monitoring will determine to what extent these rangeland improvements have benefited waterfowl habitat. It is expected that this project will be a success and become a model for future partnerships and dollar-cost leveraging, and perhaps eventually a demonstration site to promote the value and benefit of better rangeland management, such as increased forage productivity, for other ranchers.





The CIJV is home to 24 waterfowl species, 198 types of landbirds, 17 waterbird species and 18 breeding shorebird species. Birding is a popular pastime – this birder stands atop an esker-type formation at the southeast end of Alberta Lake.

© Ducks Unlimited Canada

Over the next few years, waterfowl brood surveys and vegetation monitoring will determine to what extent these rangeland improvements have benefited waterfowl habitat.

The Crown Land Wetland Program, supported by the North American Wetlands Conservation Act, protects wetlands surrounded by prime grassland and forested areas.

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The CIJV would like to thank its many funding partners and highlight the significant accomplishments made possible by the generous funding support under NAWCA over the past 20 years, including:

- Acquisition of one of the areas of highest wetland density in the CIJV, the Handy Range, totaling 199 hectares (491 acres);
- Purchase of 50 hectares (124 acres) on the edge of Swan Lake to protect one of the most important habitats for staging and breeding waterfowl in the Okanagan Valley with sightings of over 6,000 birds per day during the height of migration;
- Purchase in 2002 of the Quintal project area totaling 65 hectares (161 acres) along the Okanagan River and includes haylands, oxbows and floodplain wetlands; and

- Delivery of the Tunkwa Watershed Project in an area that contains over 280 hectares (692 acres) of wetland habitat within 5,100 hectares (12,602 acres) of rangeland and forests, and is subject to ranching, forestry, angling and outdoor recreation. The project addresses range management practices and water supply management in order to prevent future degradation of wetland habitats.

For more information, contact Blair Hammond, Canadian Intermountain Joint Venture Chair, (604) 940-4658, [blair.hammond@ec.gc.ca](mailto:blair.hammond@ec.gc.ca), [www.cijv.ca](http://www.cijv.ca).

#### Contributions (\$CAN)

	2009	Total (2004-2009)
U.S. Federal	353,226	7,153,710
U.S. Non-Federal	376,538	6,723,248
Canadian	708,912	24,711,963
<b>Total</b>	<b>1,438,676</b>	<b>38,588,921</b>

#### Accomplishments (Acres)\*

	2009**	Existing (2004-2009)
Secured	13,857	395,994
Enhanced	3,376	131,746
Managed	***	341,633
Influenced	3,925	8,156

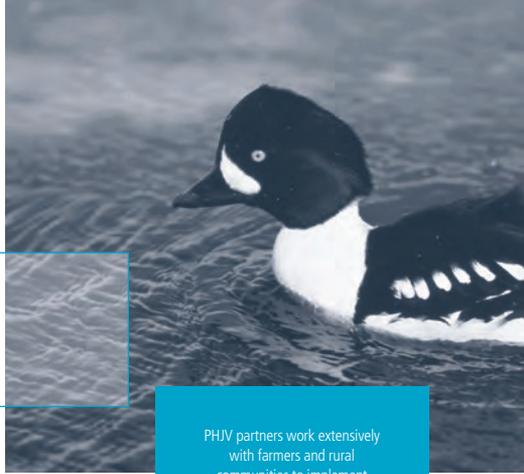
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\*\* 2009 acres reported correspond to period acres.

\*\*\* All existing acres shown are managed each year.

Sixty per cent of the total population of Barrow's goldeneye occur in western Canada and Alaska.

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**PHJV Vision:** healthy prairie, parkland and boreal landscapes that support sustainable bird populations and provide ecological and economic benefits for society.

**PHJV Mission:** to provide leadership to achieve healthy and diverse waterfowl and other bird populations through conservation partnerships. These partnerships strive for sustainable and responsible management of landscapes taking into account social, economic and environmental factors.

PHJV partners work extensively with farmers and rural communities to implement diverse and practical wildlife- and landowner-friendly conservation programs that include land purchases, conservation easements, conservation agreements, cooperative land-use agreements and stewardship incentives.

## The Prairie Habitat Joint Venture (Includes the Western Boreal Forest Program Area)

Canada's Prairie Pothole Region includes the provinces of Alberta, Saskatchewan and Manitoba. It is the breeding ground for half of North America's mid-continental waterfowl population and it also provides important habitat for shorebirds, waterbirds and landbirds. The Prairie Habitat Joint Venture (PHJV) was initiated under the North American Waterfowl Management Plan (NAWMP) to develop and deliver waterfowl conservation programs in the Prairie Pothole Region. Most of the PHJV's working landscape is privately owned and dominated by agricultural use. On average, the region supports approximately 12.5 million breeding ducks annually, making it a high priority for PHJV wetland-conservation projects.

Habitat conservation and restoration initiatives represent some of the many influences that the PHJV has on the prairie landscape. PHJV partners work extensively with farmers and rural communities to implement diverse and practical wildlife- and landowner-friendly conservation programs that include land purchases, conservation easements, conservation agreements, cooperative land-use agreements and stewardship incentives. Understanding and accounting for habitat changes, including wetland and upland habitat loss and degradation is a high priority for the PHJV that is addressed through ongoing landscape-based monitoring, evaluation and adaptive management initiatives. In addition, landscape-scale policies are fundamental to achieving the PHJV's waterfowl and habitat conservation objectives.

Sound waterfowl science is a hallmark of the PHJV. Habitat- and science-based programs help to ensure that North American Wetlands Conservation Act (NAWCA) and other partners' conservation investments continue to improve the knowledge base of North American waterfowl science.

### Manitoba's Broughton's Creek Watershed

The Broughton's Creek Watershed study is a multi-phase research project in southwestern Manitoba that was undertaken to determine the impacts of wetland loss and associated drainage activity in the watershed. It was selected as a study site because the land use and wetland loss are within an area of the PHJV that contains critical breeding grounds for continental waterfowl populations.

Researchers have determined that 70 per cent of the total wetlands in the Broughton's Creek Watershed have been lost or degraded due to drainage between 1968 and 2005. These results were then scaled up to represent all of southwestern Manitoba, determining that wetland drainage has caused:

- An increase in phosphorus loads into Lake Winnipeg equivalent to dumping 10 transport truck loads of commercial agricultural fertilizer or 544,000 bags of lawn fertilizer directly into the lake every year;
- The release of 5 million tonnes of carbon into the atmosphere, the equivalent of putting 169,000 cars on the road for 20 years; and
- An increase in area-contributing runoff into Lake Winnipeg of 451,800 hectares (1,116,160 acres), the equivalent of 10 times the size of the City of Winnipeg.

The Broughton's Creek Watershed Study has resulted in a partnership between Manitoba Water Stewardship, Ducks Unlimited Canada (DUC) and the Manitoba Habitat Heritage Corporation to work with farmers to permanently restore drained wetlands under the Wetland Restoration Incentive Program.

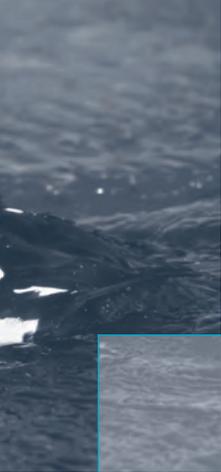
### Alberta's Barrow's Goldeneye Population at Cardinal Lake in the Boreal Transition Zone

Over 60 per cent of the worldwide population of Barrow's goldeneye occurs in Western Canada and Alaska. Results from the Boreal Transition Zone Waterfowl Survey Program found Cardinal Lake, in the Peace Parklands of Alberta, to be among the largest known moulting and staging areas for Barrow's goldeneye. The 4,500 Barrow's goldeneye observed at Cardinal Lake exceeds the entire Eastern North American population of the species.



Financial incentives and legislated protection help ensure wetland retention and restoration.

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Data from studies like Spatial and Temporal Variation in Nest Success of Prairie Ducks (SpATS) help in the development of better decision-making tools for conservation programs under NAWMP.

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### Joint Venture Fast Facts

**Scope:** 641,252 square kilometres (247,588 square miles) for traditional PHJV area of prairie and aspen parklands.

**Major Habitat Types:** The PHJV comprises ecoregions of prairie and aspen parkland. The Western Boreal Forest comprises ecoregions of Boreal Plains, Taiga Plains, Taiga Cordillera and Boreal Cordillera.

**Notable Waterfowl Species:** PHJV – Mallard, gadwall, American wigeon, green-winged teal, blue-winged teal, cinnamon teal, northern shoveler, northern pintail, redhead, canvasback, ruddy duck, wood duck, lesser scaup, ring-necked duck, common goldeneye, bufflehead, merganser (common and red-breasted) and white-winged scoter. Canada geese breed in the PHJV prairie and aspen parklands.

Western Boreal Forest – Mallard, American wigeon, green-winged teal, blue-winged teal, cinnamon teal, northern shoveler, northern pintail, redhead, canvasback, ruddy duck, scaup (greater and lesser), ring-necked duck, goldeneye (common and Barrow's), bufflehead, merganser (common and red-breasted), scoter (surf and white-winged), long-tailed duck, great white-fronted geese and Canada geese.

**Provinces:** Alberta, Saskatchewan and Manitoba.

Today, Cardinal Lake, like many large PHJV wetland systems, is threatened by agricultural and industrial encroachment. Current and/or proposed activities such as western Canada's first nuclear power plant, could adversely affect wetland habitats used by Barrow's goldeneye, other waterfowl and waterbirds.

In 2009, a research partnership including DUC, Simon Fraser University and Environment Canada launched a major initiative to learn more about the moulting and staging ecology of Barrow's goldeneye at Cardinal Lake. Researchers captured and banded nearly 600 Barrow's goldeneye and marked 20 of the birds with satellite transmitters. The information gathered on annual movements and breeding population affiliations will help PHJV partners better understand the Pacific population of Barrow's goldeneye and allow for better management of this species and its habitat.

The Cardinal Lake project is one of a growing number of scientific projects that will help define effective conservation in the northern portion of the PHJV. It will ensure that investment in the Boreal Transition Zone is well-focused, providing maximum benefit to waterfowl and other waterbirds in the region.

### Saskatchewan's Spatial and Temporal Variation in Nest Success (SpATS) Program

One of the PHJV's ongoing research initiatives, Spatial and Temporal Variation in Nest Success of Prairie Ducks (SpATS) examines prairie waterfowl nest success in relation to landscape composition throughout the Canadian Prairie Pothole Region. Building on adaptive management information gained through the PHJV Assessment Study, SpATS was launched in 2002 to track and record nest success data on prairie and parkland habitats.

Under SpATS, study sites reflecting varying waterfowl densities and amounts of perennial cover including hayland, pasture, grassland, trees and shrubs are

randomly selected in order to understand the relationship between nesting success and amounts of perennial cover. Information on waterfowl pairing densities, nest success, duckling survival and predator abundance is gathered, as well as data on vegetation and land-use characteristics of upland and wetland habitats.

Since 2002, nearly 6,000 duck nests have been recorded across the 120 study sites with initial results suggesting a link between perennial vegetation and waterfowl nest success. Information through 2009 indicates that nesting success on prairie sites is meeting or exceeding the levels thought necessary to maintain stable duck populations – between 12 to 20 per cent with nesting success on parkland sites being lower.

A recent review of the program determined that data collected for aspen parkland sites were conclusive. However, SpATS will provide important information in the prairie biome where future research is continuing. During the next few years, SpATS researchers will complete data gathering, habitat mapping and analysis, the results of which will lead to ongoing improvement of NAWMP conservation planning and programs.

The PHJV partnership continues to build on its 23 years of research and program delivery success and is well-positioned to lead through effectively linking science, policy and communications. Throughout the past 20 years of support, NAWCA has been instrumental in ensuring the long-term assessment of the waterfowl value of PHJV habitat programs. This support has led to broad-scale changes in the suite of habitat programs offered by the PHJV. The PHJV strives to maximize the effectiveness of its habitat programs and studies like these are essential to achieve this objective.

For more information, contact Deanna Dixon, Prairie Habitat Joint Venture Coordinator, (780) 951-8652, deanna.dixon@ec.gc.ca, www.phjv.ca.

### Prairie Habitat Joint Venture Contributions (\$Cdn)

	2009	Total (1986-2009)
U.S. Federal	3,817,058	256,826,278
U.S. Non-Federal	4,913,891	261,607,079
Canadian	19,574,051	364,086,608

Countries other than Canada or the U.S. 59,744

Total 28,305,000 882,579,709

### Prairie Habitat Joint Venture Accomplishments (Acres)\*

	2009**	Existing (1986-2009)
Secured	148,916	7,799,951
Enhanced	43,073	2,440,094
Managed	***	6,379,303
Influenced	1,253,454	2,845,975

### Western Boreal Forest Contributions (\$Cdn)

	2009	Total (1997-2009)
U.S. Federal	2,264,768	20,326,640
U.S. Non-Federal	1,908,591	38,744,377
Canadian	1,714,344	32,311,600
Total	5,887,703	91,382,617

### Western Boreal Forest Accomplishments (Acres)\*

	2009**	Existing (1997-2009)
Secured****	0	25,002
Enhanced	0	107
Managed	***	107
Influenced	4,888,435	39,930,961

\* Secured, enhanced and managed acres are not additive. Acres are first secured, may then be enhanced and are subsequently placed under management. Influenced acres are mutually exclusive of secured, enhanced and managed acres.

\*\* 2009 acres reported correspond to period acres.

\*\*\* All existing acres shown are managed each year.

\*\*\*\* Protected area securement in the WBF involves a process whereby targeted lands move through an Interim Protection period (5 years) to perpetual securement. There are currently over 35 million acres under Interim Protection.

Conservation of EHVJ wetland habitat is key to meeting population objectives for the benefit of waterfowl like this young wood duck.

© Ducks Unlimited Canada/  
Ponthieux



Allisary Creek in Mount Stewart, Prince Edward Island, is a 20-hectare (50-acre) NAWMP wetland project created in 1992. This wetland is not only widely used by waterfowl and their broods, it is also a valued asset to the community of Mount Stewart, providing wildlife viewing and educational opportunities.

© Ducks Unlimited Canada

Through significant partnership as well as 70.5 million dollars in funding provided through the North American Wetlands Conservation Act (NAWCA), almost 350 million dollars have been invested in the conservation of wetland habitat for waterfowl and other wetland-dependent species in the EHVJ.

## The Eastern Habitat Joint Venture

The Eastern Habitat Joint Venture (EHJV) is the eastern Canada delivery arm of the North American Waterfowl Management Plan (NAWMP), and comprises one third of Canada's landmass and 65 per cent of its human population. The EHVJ has been actively securing, enhancing and managing wetland and associated upland habitat throughout the provinces of Ontario, Quebec, New Brunswick, Nova Scotia, Prince Edward Island and Newfoundland and Labrador since 1989.

Over the past two decades, the EHVJ has created effective international, national, regional and local partnerships that have brought together more than 150 federal, provincial, state and municipal governments, conservation organizations and corporations for the purpose of wetland conservation. Through these partnerships the EHVJ has supplemented the \$ 70,514,136 in funding provided through the North American Wetlands Conservation Act (NAWCA) for a total of almost 350 million dollars that has been invested in the conservation of wetland habitat for waterfowl and other wetland-dependent species. This investment to date has resulted in the securement of over 526,000 hectares (1.3 million acres), enhancement of 230,598 hectares (569,821 acres), management of more than 400,000 hectares (1 million acres) and placed an additional 8 million hectares (20 million acres) under stewardship.

### Two Decades of Highlights

Hundreds of NAWCA-funded projects are found throughout the southern Ontario landscape. In particular, the 6,000-hectare (15,000-acre) Minesing Wetlands located in Simcoe County was one of the original EHVJ projects in Ontario and has benefited greatly from the long-term efforts of EHVJ partners. Minesing Wetlands, a highly productive and biologically diverse assemblage of fens, marshes, swamps and bogs, was dedicated as a wetland of international importance under the Ramsar Convention on Wetlands in 1996. The wetland provides critical staging and breeding habitat for waterfowl and is home to hundreds of other wetland-dependent plant and animal species, including globally and provincially rare species. The conservation value of the Minesing Wetlands was recognized decades ago and continued efforts today are due in large part to the support of the many EHVJ partners, including the Nottawasaga Valley Conservation Authority. While conservation efforts are ongoing, partners to date have secured over 4,000 hectares (9,884 acres) of the Minesing Wetlands, making it one of the largest protected sites in southern Ontario.

Lac Saint-Pierre, a large complex of rich wetlands and important waterfowl habitat recognized in 1998 as a Ramsar wetland of international importance, is a prime example of the many securement and enhancement projects undertaken in Quebec in the past 20 years. The EHVJ partnership has enabled the development of recreational and educational opportunities through the creation of infrastructure, such as access points and observation towers, to help make Lac Saint-Pierre one of the best known sites

in Quebec for wildlife and recreational activities. These conservation efforts have not only conserved important wildlife habitat, they have also created an economic boom for the communities along the lakeshore.

The legacy of 400 years of landscape change and habitat modification, especially in coastal marshes, has had a huge impact on regional wetland resources. There continues to be a strong focus on working with private landowners, especially in the agricultural and coastal landscapes, as these areas are critical to meeting the needs of waterfowl and other wetland-dependent species. Through the actions of EHVJ partners, and with significant NAWCA funding, the securement, enhancement and management of important properties such as Bird Island off the shore of Prince Edward Island, Grand Lake Meadows, Musquash Estuary and Tabusintac Estuary in New Brunswick, and Belleisle Marsh, Pugwash Basin and Cape Sable Island in Nova Scotia, are now subject to conservation activities that ensure their long-term value to waterfowl and other wildlife.

Although stewardship activities are ongoing across the EHVJ, the Province of Newfoundland and Labrador continues to be a particular stewardship stronghold. In 1993, the Town of Whitbourne was the first community to sign a Municipal Wetland Stewardship Agreement with the provincial government under the EHVJ program. The agreement has enabled the protection and conservation of wetlands within a designated stewardship zone and various management units within the municipality. Community education has increased public awareness and linked the importance of wetland stewardship to the local abundance of waterfowl. Recently, the community of less than 1,000 residents became a true stewardship leader by tripling the size of its former stewardship zone and doubling the acreage associated with its management units. Today there are 18 such stewardship agreements signed across the province.

Southern Quebec's Lac Saint-Pierre wetland complex is one of the province's richest waterfowl habitat areas and supports many species of fish, birds and amphibians. Quebec EHVJ partners have worked extensively at Lac Saint-Pierre to conserve and restore its wetland habitat while also providing public access and education.

© Ducks Unlimited Canada



### Joint Venture Fast Facts

**Scope:** The Eastern Habitat Joint Venture (EHJV) represents one third of Canada's landmass and 65 per cent of its human population.

**Major Habitat Types:** Coastal bays and salt marshes, lakeshore marshes, floodplain wetlands and boreal forest wetlands.

**Notable Waterfowl Species:** American black duck, mallard, ring-necked duck, common goldeneye, common eider, green-winged teal and Canada goose.

**Provinces:** Ontario, Quebec, New Brunswick, Nova Scotia, Prince Edward Island and Newfoundland and Labrador.

### 2009 and Beyond

In 2009, with an overall investment of 31.9 million dollars, the EHJV secured 13,691 hectares (33,831 acres), enhanced 3,211 hectares (7,936 acres), managed 7,704 hectares (19,038 acres) and influenced an additional 230,986 hectares (570,779 acres) through stewardship activities. While the EHJV will continue to work toward achieving its habitat and population goals, partners are aware that innovative partnerships and initiatives will be critical to meeting the challenges ahead. Moreover, adaptation to climate change and other relevant environmental, social and economic concerns will play a role in the implementation of future conservation activities.

### Atlantic Habitat Partnership Initiative

In May 2009, Environment Canada entered into a five-year agreement with Ducks Unlimited Canada (DUC) to invest in the new Atlantic Habitat Partnership Initiative (AHP). The AHP is designed to maintain critical wetland infrastructure across the Atlantic provinces for many years to come. To facilitate the

implementation of the AHP, DUC has in turn entered into agreements with New Brunswick, Nova Scotia and Prince Edward Island and is working toward a similar agreement with Newfoundland and Labrador. These funding agreements enable DUC to maintain or replace existing water-control structures on wetlands and to maintain the ecological benefits that these areas provide for Atlantic Canadians. DUC wetland projects are designed for a productive life span of 25 to 30 years, and therefore the agreements have to be periodically renewed. Many of the projects that will benefit from this initiative have either surpassed or are approaching the end of their normal operational lifespan. Germantown Marsh in New Brunswick, Sheffield Mill's in Nova Scotia, Mount Mellick in Prince Edward Island and Lethbridge Gully in Newfoundland and Labrador have all had reconstruction work completed under the AHP in 2009.

Similar agreements have also been signed between DUC and the Quebec Ministry of Natural Resources and Wildlife and between DUC and the Government of Canada through the Southern Ontario Development Project. These agreements are excellent examples of the NAWMP and EHJV partnership and the commitment to securing funds that augment NAWCA investments for the collaborative conservation of wetland habitat in eastern Canada.

### Far North Initiatives

In June, 2009, the Ontario Ministry of Natural Resources introduced proposed legislation that would permanently protect at least half of Ontario's Far North by establishing a network of conservation lands while allowing for sustainable development of the region's natural resources. By protecting at least 22,500,000 hectares (55,598,710 acres) – an area spanning the width of Northern Ontario, from Manitoba to the west and to James Bay and Quebec in the east, including the Boreal Forest – the proposed Far North Act would safeguard habitat for over 200 species of wildlife, and protect critical breeding habitat for tens of thousands of North America's waterfowl.

To date, the EHJV has undertaken only a few projects in the Boreal landscape as the more populated and settled southern Canadian landscapes have had higher risks of loss and degradation, and have therefore been identified as EHJV priority areas. As the EHJV pursues the development of its climate change strategy, the Ontario initiative and a fledgling Far North initiative in Quebec will expand the horizons of the EHJV, NAWCA, NAWMP and the North American Bird Conservation Initiative into the Boreal Forest.

For more information, contact Patricia Edwards, Eastern Habitat Joint Venture Coordinator, (506) 364-5085, [patricia.edwards@ec.gc.ca](mailto:patricia.edwards@ec.gc.ca), [www.ehvjv.ca](http://www.ehvjv.ca).

### Contributions (\$CN)

	2009	Total (1986-2009)
U.S. Federal	3,272,487	70,638,915
U.S. Non-Federal	3,740,051	70,687,621
Canadian	23,143,229	220,310,472
Total	30,155,767	361,637,008

### Accomplishments (Acres)\*

	2009**	Existing (1986-2009)
Secured	33,831	1,381,958
Enhanced	7,936	569,858
Managed	***	1,063,994
Influenced	1,205,897	20,828,116

\* Secured, enhanced and managed acres are not additive. Acres are first secured, may then be enhanced and are subsequently placed under management. Influenced acres are mutually exclusive of secured, enhanced and managed acres.

\*\* 2009 acres reported correspond to period acres.

\*\*\* All existing acres shown are managed each year.

The Far North of Ontario and Quebec contain millions of hectares of boreal forest, peatlands, wetlands and the largest intact forest in Canada, as well as one of the most southerly areas of tundra in the world.

Canadian Wildlife Service



#### Joint Venture Fast Facts

**Species:** Greater white-fronted goose, emperor goose, snow goose, Ross's goose, brant, cackling goose and Canada goose.

**Number of populations:** 28

**Scope:** Spans the entire continent and other circumpolar countries.

**Over 1 million** northern nesting geese have been banded on their breeding grounds from 1989 to 2008.



# Species Joint Ventures

## Arctic Goose Joint Venture

Coastal marshes are among the richest and most productive habitats in the Arctic and sub-Arctic, and support a wide variety of wildlife, including seven species of geese and hundreds of species of other migratory birds. A high priority for the Arctic Goose Joint Venture (AGJV) is to understand and quantify the impacts of large populations of snow and Ross's geese on these important coastal marsh wetlands.

The 2008-2012 AGJV Strategic Plan focuses on addressing information gaps, identifying areas of focus and delineating management issues by population. The direction and priorities outlined in the Strategic Plan align with the Continental Assessment goals of the North American Waterfowl Management Plan (NAWMP).

Camp at La Perouse Bay  
near Churchill, Manitoba.  
Michael A. Johnson





Snow geese are one of seven species of geese identified as an AGJV priority. Snow geese migrate in very large, high-flying, noisy flocks.

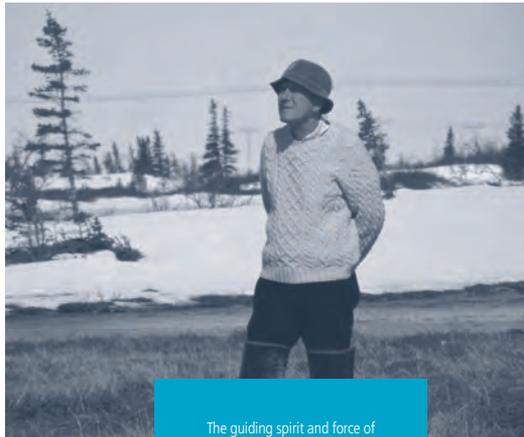
Jeff Coats

The Hudson Bay Project (HBP), a collaboration between researchers at the University of Toronto, American Museum of Natural History, Ontario Ministry of Natural Resources and other partners including the Environment Canada, U.S. Fish and Wildlife Service, Central and Mississippi Flyways, Wapusk National Park and Trent University, has been an important priority of the AGJV since 1992. Formed to investigate the impact of "too many geese" on Arctic and near-Arctic nesting grounds, the HBP expanded based on over 20 years of research examining the ecological processes involved in goose and plant interactions at La Pérouse Bay, Manitoba. The AGJV has been a funding and supporting partner of the HBP since 1996.

The HBP built upon information gathered from the La Pérouse Bay studies to assess the causes and potential solutions for the cumulative damage caused by overconsumption of Arctic habitat by geese. This information was central to the AGJV's 1997 Arctic Ecosystems in Peril report, which presented the case for policy and regulation changes to protect Arctic wetlands. The findings of the report were acted on by the Canadian Wildlife Service, U.S. Fish and Wildlife Service and U.S. Congress. Presentations on research and testimonials made during stakeholder consultation sessions and court proceedings helped to advance unprecedented new regulations intended to control goose numbers and to help halt or reverse habitat degradation.

Dr. Robert Jefferies, a lead investigator of the AGJV's Hudson Bay Project, passed away in July 2009.

Dr. Robert Rockwell



The guiding spirit and force of the Arctic Goose Joint Venture's Hudson Bay Project (HBP), Robert Jefferies, passed away suddenly in 2009. "Dr. Bob" was the lead investigator of the HBP with long-time colleagues Robert Rockwell and Ken Abraham, and carried out studies of plant ecology, soil nutrition, community dynamics and the role of geese in structuring coastal ecosystems for 30 years. He was an outstanding researcher, teacher and mentor to 25 graduate students, most of whom studied aspects of the Arctic goose-plant system. Together with colleagues and students, he published over 100 peer-reviewed articles and books. He was also part of the International Panel on Climate Change team that was recognized with the 2007 Nobel Peace prize for its work on the impacts of global climate change. Dr. Bob leaves a huge void in the waterfowl science and management community. He will be sorely missed.

Findings from the HBP and several other studies continue to provide important information on light goose overabundance. A new AGJV report, following on the Arctic Ecosystems in Peril report series, will be completed in 2010-2011.

For more information, contact Deanna Dixon, Arctic Goose Joint Venture Coordinator, (780) 951-8652, [deanna.dixon@ec.gc.ca](mailto:deanna.dixon@ec.gc.ca), [www.agjv.ca](http://www.agjv.ca).

**Contributions (\$CN)\***

	2009	Total (1989-2009)
U.S. Federal	525,981	7,008,194
U.S. Non-Federal	333,430	8,462,255
Canadian	1,176,095	18,968,439
Countries other than Canada or the U.S.	15,890	123,498
<b>Total</b>	<b>2,051,396</b>	<b>34,562,386</b>

\* These contributions contain no NAWCA funding.



A large mist net is used to catch eiders for collecting blood samples at East Bay, Southampton Island in the Canadian Arctic.

Grant Gilchrist, Canadian Wildlife Service

## Sea Duck Joint Venture

Sea Ducks breed in low densities in remote parts of the continent making research a challenge. Through the Sea Duck Joint Venture (SDJV), researchers are learning more about the ecology, population dynamics and threats to the health of this least understood group of ducks. In 2009, a total of 12 sea duck projects received SDJV funding in Canada.

Three on-going research projects received continued SDJV support including defining migration corridors of sea ducks in the Beaufort and Chukchi Seas, determining annual cycle connectivity and site fidelity of the Pacific Flyway Barrow's goldeneye and population delineation of black scoters on the Atlantic coast.



Environment Canada contractor Maire-Mellis Kalamaras holds a king eider drake after banding at East Bay, Southampton Island, in the Canadian Arctic.

Grant Gilchrist, Canadian Wildlife Service



### Joint Venture Fast Facts

**Scope:** Includes all of Canada and the United States.

**Major Habitat Types:** Coastal waters for migration and wintering, boreal forest and tundra for nesting.

**Notable Waterfowl Species:** 15 species, 20 recognized populations of sea ducks (*Trife mergini*): Common eider, king eider, spectacled eider, Steller's eider, black scoter, white-winged scoter, surf scoter, Barrow's goldeneye, common goldeneye, bufflehead, long-tailed duck, harlequin duck, common merganser, red-breasted merganser and hooded merganser.

**2009 Major Accomplishments:** Establishment of technical sub-committees on Population Objectives, Population Delineation and Population Monitoring. Reports from these committees provided the scientific foundation for the development of a three year Implementation Plan for consideration by the Management Board during March 2010 meeting.

A total of five new research projects were launched in 2009 including studies of moulting Barrow's goldeneye in Alberta and Quebec, the impact of avian cholera outbreaks on nesting northern common eider colonies, use of stable isotopes to determine linkages between breeding sites and moulting areas for common eiders on the Atlantic coast and moulting ecology of scoters on the Pacific coast.

The four monitoring projects for 2009 included a joint project with the Arctic Goose Joint Venture to survey breeding populations of geese, long-tailed ducks and eiders in Canada's central Arctic, breeding pair surveys for scoters and other waterfowl in Hudson Bay Lowlands, development of breeding survey for scoters in Labrador and black and surf scoter moulting surveys for Hudson/James Bay.

The work of the sub-committees during 2009 underlined the importance of having well-delineated populations as the basis for developing monitoring plans, establishing population objectives and interpreting

harvest data. To that end, the SDJV has developed an initiative (2010-2012) to complete population delineation for long-tailed ducks and the three species of scoters breeding and wintering in the eastern half of North America.

For more information, contact Patricia Edwards, Sea Duck Joint Venture Coordinator, (506) 364-5085, [patricia.edwards@ec.gc.ca](mailto:patricia.edwards@ec.gc.ca), [sdjv.ca](http://sdjv.ca).

### Contributions (\$CN) \*

	2009	Total (1998-2009)
U.S. Federal	337,087	2,583,443
U.S. Non-Federal	84,942	334,396
Canadian	1,032,649	6,600,199
Total	1,454,678	9,518,038

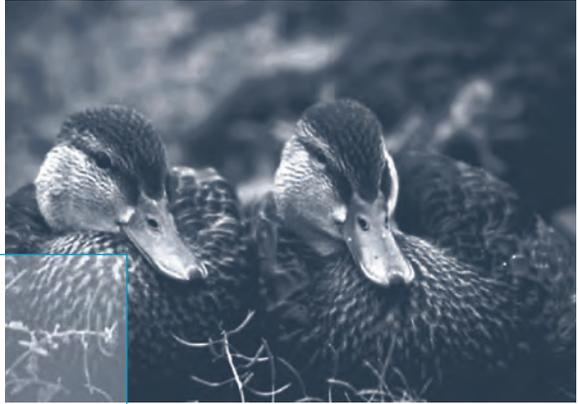
\* These contributions contain no NAWCA funding.



Malcolm McAdie, Doctor of Veterinary Medicine, works in a "MASH"-style tent implanting satellite radio transmitters in Barrow's goldeneye.

Sean Boyd, Environment Canada

The spatially explicit black duck habitat model will ultimately enhance the ability of habitat managers to target conservation actions to benefit black ducks (pictured) and evaluate the response of the black duck population.



American Black Duck  
© Ducks Unlimited Canada

### Joint Venture Fast Facts

**Scope:** Six Canadian provinces (Ontario, Quebec, New Brunswick, Nova Scotia, Prince Edward Island, Newfoundland and Labrador) and 14 Eastern U.S. States.

**Current Integrated Population Estimate:** 463,600

**NAWMP Population Goal:** 640,000

**Current Population Status:** Stable

**Major Habitat Types:** Salt water marshes, brackish and freshwater impoundments, riverine and estuary marshes, woodland wetlands, shallow lakes and boreal bogs.

### BDJV Partners Thank Ken Ross

BDJV partners recently honoured Ken Ross for his 20 years of dedication to the joint venture, part of which was spent serving as the Canadian Technical Committee Co-Chair. Ken has been active in the BDJV since its inception in 1989 and has played a lead role in advancing the science of black duck monitoring and conservation. In appreciation of his accomplishments, the BDJV Management Board Co-Chairs presented Ken with a black duck decoy at his final meeting in November 2009.

## Black Duck Joint Venture

The Black Duck Joint Venture (BDJV) supports research on multiple aspects of black duck ecology with the goal of gathering information that is applicable to the development and implementation of management plans by associated habitat joint ventures, regulatory committees, wildlife agencies and nongovernmental organizations.

Since October 2008, researchers and managers in eastern Canada have been working to develop a spatially explicit black duck habitat model with support from the BDJV, the Eastern Habitat Joint

Venture, Ducks Unlimited Canada, the Nova Scotia Department of Natural Resources, the New Brunswick Department of Natural Resources, the Prince Edward Island Department of Environment, Energy and Forestry, the Canadian Wildlife Service and Mount Allison University. The results of this project will assist conservation planning and delivery by:

- identifying key landscape and wetland-level factors determining usage by breeding black ducks; and
- producing a comprehensive, maritime-wide prediction surface to support the identification of high quality habitat.

Preliminary results include the development of a predictive usage model for the maritimes, based on total square kilometers of wetland area, mean river density, wetland diversity (derived from the Shannon Diversity Index) and a modified Golet score (used to index biodiversity value). See Figure. The development of these and other landscape variables was accomplished through geographic information system automation with Poisson regression used to model the response in the number of indicated breeding pairs.

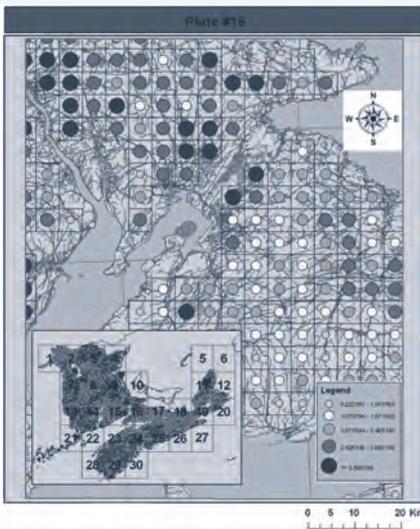
The spatially explicit black duck habitat model will ultimately enhance the ability of habitat managers to target conservation actions to benefit black ducks and evaluate the response of the black duck population. This project is scheduled to be completed by March 2010.

For more information, contact *Brigitte Collins*, Black Duck Joint Venture Coordinator, (613) 949-8264, [brigitte.collins@ec.gc.ca](mailto:brigitte.collins@ec.gc.ca), [www.blackduckjv.org](http://www.blackduckjv.org).

### Contributions (\$Cdn)\*

	2009	Total (1989-2009)
U.S. Federal	15,000	1,550,460
U.S. Non-Federal	231,000	4,259,450
Canadian	493,084	8,485,005
Total	739,084	14,294,915

\* These contributions contain no NAWCA funding.



Model predictions of expected numbers of indicated American black duck breeding pairs.

Expected numbers were classified into quintiles and ordered lowest (blue) to highest (red).

Image courtesy of Dr. David Lieske, Mount Allison University in Sackville, New Brunswick.

Mallard  
© Ducks Unlimited Canada/  
Wolfski



## North American Waterfowl Management Plan

# Value Proposition

**"A world class opportunity for stakeholder investment"**

*"If your mandate is, if you benefit from, or if your actions impact conservation of our continent's wetlands, then the North American Waterfowl Management Plan will be of great interest and value to you."*

### What is NAWMP?

The North American Waterfowl Management Plan ("NAWMP" or "the Plan") is an international action strategy for conserving migratory waterfowl throughout the continent.

The purpose of the Plan is to sustain abundant waterfowl populations while preserving the traditions of wildfowling and achieving broad benefits to biodiversity, ecosystem processes and the people of North America. Plan goals will be accomplished by partnerships that conserve habitats and sustain populations, guided by science.

The Plan is a partnership of federal, provincial/state and municipal governments, non-government organizations (NGOs), private companies and many individuals, all working towards preserving wetlands to benefit waterfowl and other wildlife – as well as people. The Plan's unique combination of science, conservation and partnerships comprises its exemplary conservation legacy.

Plan programs and projects are international in scope, but implemented at regional and local levels. Together they contribute to the protection of habitat and wildlife species across the North American landscape. In fact, the North American Waterfowl Management Plan is considered one of the most successful conservation initiatives in the world.

Governments, communities, industries, NGOs, and public and private organizations operating in today's environment and business climate may realize significant benefits by becoming a NAWMP partner.

### Why Conserve Wetlands?

*Wetlands are vital to the life cycle and conservation of all waterfowl species.*

Wetlands are also nature's "kidneys." They have the amazing ability to remove up to 99 percent of bacteria, up to 94 percent of phosphorus and up to 87 percent of nitrates from the waters that flow into our rivers and lakes. Conserving wetlands means helping to keep our drinking water safe and clean.

Given the value to society as a whole of conserving wetlands, NAWMP's world recognition as a leader in wetland conservation is the key element in our appeal to new partners.

### NAWMP's Dynamic Partnership

*Successful conservation depends on strong partnerships.*

The Plan has pioneered a public-private partnership approach, forging alliances to achieve healthy and sustainable landscapes. Its progress has relied on conservation organizations joining forces with federal, provincial, and state governments, industry,

private companies, individuals and private landowners. These unique partnerships have made the Plan a model for international conservation.

Our world-class public-private partnerships have achieved amazing results. Each partner has a unique interest and benefits directly by being part of NAWMP. While our unique and diverse partnerships have made significant gains, the task of conserving our wetlands is a growing one. Our mission is more relevant today than imagined in 1986.

As government policy emerges to address global warming; wetlands and water conservation; growing demand for energy; needs of species at risk; and carbon sequestration and sustainable resource development, we are seeing new challenges. We also see new opportunities that provide tremendous optimism.

Securing wetland and associated habitats and improving the biological foundations of our work will continue to occur at the project level. However, water, land use and species management strategies occur at the landscape level. Given the NAWMP's expertise and track record over the past 24 years, we are positioned extremely well to be a major partner and beneficiary of these many strategies.

**We are recognized as world class – our challenge is to remain world class.** We will only achieve this by continuing to benefit each partner individually, wetlands and waterfowl resources collectively. This will require not only maintaining current resource commitment levels but also working to increase financial and in-kind contributions.

Our success, coupled with the challenges and opportunities before us, means NAWMP is well positioned to retain and strengthen the commitment of existing partners and expand our partnership base.

### Why Become a Partner with NAWMP?

Society's interest in issues around biodiversity, ecosystem health, water quality, climate change, energy development, sustainable communities, ecological goods and services, and conserving species at risk shows the high value of partnering with NAWMP.

A host of activities directly or indirectly affect waterfowl and wetlands: outdoor recreation, agriculture, government projects, transportation, manufacturing and resource extraction. Organizations or industries that are involved in any of these activities may see significant benefits by becoming a NAWMP partner or supporter.

By participating in NAWMP, you work with a dynamic, continental partner base of federal, provincial and state governments, world-renowned conservation organizations, and thousands of individuals. This includes access to science professionals, funding resources, strategies, techniques, stewardship activities and more.

Gadwall  
© Ducks Unlimited Canada



Additionally, birds are big business. In 2006, 2.3 million people in the United States hunted migratory birds, spending \$1.3 billion on their sport. People who watch birds and other wildlife contributed more than \$46 billion to the U.S. economy in 2006. Waterfowl are the most prominent and economically important group of migratory birds on the North American continent.

One of NAWMP's greatest strengths is the ability of its partners to leverage funding, expanding the Plan's conservation reach. By far, the greatest source of funding across Canada, the United States and Mexico has been, and remains, our partnership's ability to successfully access grants, primarily through the North American Wetlands Conservation Act grants program. Available grant money is effectively matched to fund many of our habitat conservation projects. Often, partners are able to triple or quadruple funding at local project levels.

To date, NAWMP partners have raised over \$3 billion dollars and have conserved more than 13 million acres (5.2 million hectares/52,609 km. sq.). This breaks down to \$1.81 billion and 4.9 million acres (1.9 million hectares/ 19,829 km. sq.) in the United States, and \$1.62 billion and 9.7 million acres (3.9 million hectares/39,254 km. sq.) secured and an additional 67.4 million acres (27.3 million hectares/272,758 km. sq.) influenced in Canada.

For more information about how specific industries and groups may benefit from becoming involved with NAWMP, please see page 7.

### NAWMP Responded to a Critical Need

In 1985, North American waterfowl populations had plummeted to record lows. Historical data indicated that since the first settlers arrived in the continental United States, 53 percent of the original 221 million wetland acres (89.4 hectares/894,355 km. sq.) had been destroyed. The picture was the same across Canada, where wetland losses across settled areas range from 29 to 71 percent.

Recognizing the importance of waterfowl and wetlands to North Americans and the critical need for international cooperation to help in the recovery of these shared resources, the U.S. and Canadian governments developed a strategy to restore waterfowl populations through habitat protection, restoration and enhancement. The NAWMP was born.

In 1998, the Plan's vision was expanded to focus on biologically based planning, refined through ongoing evaluation. Partners would define landscape conditions needed to sustain waterfowl and benefit other wetland associated species. And Plan partners would collaborate with other bird initiatives and reach out to others sectors and communities to forge broader alliances.

The Plan has remained a leading model for other international conservation plans. In large measure, this is because it is a living and evolving document that is updated periodically with engagement of the broad waterfowl conservation community. That important work is getting underway again with a target date of 2011/12 for completion.

Today we face greater pressures on waterfowl populations and habitat than ever before. It is urgent, given these challenges, that stakeholders in waterfowl management review and re-establish their fundamental conservation goals – something that has not been done in a quarter century. This is our opportunity to provide the template for a more coherent waterfowl management system that will in turn enable us to focus on the things that matter most to achieving our renewed conservation goals.

The Plan Committee is committed to accomplishing this revision in a timely manner while using a measured process to ensure that we do not sacrifice stakeholder consultation in this important undertaking.

### NAWMP's Key Achievements

Many of the goals in the original 1986 Plan—for some waterfowl populations, acres of habitat affected, and dollars raised and spent—have been achieved. Other goals remain unattained.

Since 1986, we have invested in excess of \$3 billion and have directly influenced more than 13 million acres of breeding, migrating and wintering waterfowl habitat in Canada and the United States. Nevertheless, habitat loss remains a concern. We have also learned that in many cases, the habitat needs defined in 1986 underestimated what is required to sustain waterfowl populations at 1970s levels.

The initial 15-year planning horizon has been transcended, yet our job is far from done. Conservation accomplishments realized in the Plan's first years could be erased if habitat quantity and quality continue to decline.

So while project-based actions have been successful, focus in many regions of the continent has evolved to include landscape and community based partnership approaches. NAWMP partners continue to play a major role in shaping wetland and wildlife friendly government policy. Our science-based and adaptive management approach remains a cornerstone of all NAWMP activities.

Based on this adaptive management mindset, NAWMP regularly assesses its achievements against its goals. The 2007 NAWMP Continental Progress Assessment, which looked at the extent to which waterfowl populations have benefited through the Plan's accomplishments, is helping us to re-shape our priorities to continue achieving success.

### The Continuing Importance of NAWMP

*NAWMP is more relevant today than ever before.*

While significant waterfowl population and habitat gains have been realized through partnership efforts, continental wetlands are under increasing pressures. A new challenge is conserving the vast boreal forest region of Canada and Alaska that contains 35 percent of the world's wetlands and is home to 12 to 14 million breeding ducks. In some years, this amounts to approximately 40 percent of the continental breeding duck population.



Northern Shoveller  
© Ducks Unlimited Canada/Wolitski

Growing human populations, in North America and around the world, are increasing demands for fresh water, food, fibre, energy and living space, all of which contribute to continued loss and degradation of wetlands. Climate change is having a significant effect on weather patterns, directly affecting habitat quality and population viability. Alternative energy sources like wind power and ethanol fuel crop conversion also can have a direct impact on waterfowl conservation efforts.

Governments, industries, communities and society as a whole are realizing the importance and value of our continent's "natural capital" and the tremendous goods and services we derive from it. Environmental health and sustainability contribute significantly to the quality of life on Earth. This is evident from governments' recent focus on environmental legislation, policy and initiatives such as provincial and state water conservation strategies, landscape approaches to protecting species at risk, and alternative energy development to deal with effects of climate change.

Many resource-based industries are realizing the importance of maintaining a "social license" to operate and are committing to achieve world recognized certification standards, devote more dollars to research, expand partnerships, and place greater emphasis on conservation and stewardship. Communities are placing greater emphasis on maintaining green spaces, conserving water and improving environmental health. The public is practicing greater environmental stewardship with an eye toward conserving natural resources for the next generations.

NAWMP partners are well positioned to take advantage of these demands and interests. Our "niche," of course, is waterfowl population and



Blue-winged Teal  
© Ducks Unlimited Canada/  
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Pintail

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habitat related science, our understanding of wetlands, our diverse partnerships, and our on-the-ground success in conserving and restoring waterfowl populations and habitats. This knowledge base makes NAWMP a respected authority in addressing the challenges ahead.

### What are NAWMP's Key Principles and Priorities?

- Waterfowl are among North America's most highly valued natural resources
- Waterfowl populations should be sustained at objective levels across their natural ranges to provide ecological and socioeconomic benefits
- Protecting North American waterfowl populations and their habitats requires long-term planning and close coordination of management activities across North America
- The Plan is founded on sound science and guided by biologically based planning, both of which are refined with increased knowledge gained through evaluation and research

#### Key priorities directly influence everything we do:

- Improve waterfowl reproductive success in midcontinental prairies—a primary challenge in realizing Plan goals



Gadwall pair

© Ducks Unlimited Canada/Wolitski

- Continue to seek major advances in wildlife-friendly policy and legislation for agriculture, wetland protection, energy, transportation, water availability and climate change
- Expand partnerships, particularly with those organizations whose land management policies and practices can have considerable effect on waterfowl and wetland conservation
- Continue strengthening the Plan's biological knowledge base
- Improve targeting of issues specific to priority species or species groups, such as diving ducks, sea ducks, over-abundant goose species and species of special concern

*New challenges, common interests, and common needs with a broader spectrum of desired outcomes like clean air, clean water, and sustainable food, fiber and energy foretell the benefits of saying YES to a NAWMP partnership.*

### Organizational Structure

*The NAWMP is an international cooperative endeavor involving governments at all levels, indigenous groups, nongovernmental organizations, corporations, and thousands of private citizens.*

Ultimately, success of the Plan depends on effective partnerships among all segments of society that have a role in waterfowl and wetlands conservation.

This effort requires leadership at all levels, including the international Plan Committee and its science support team, regional joint venture management boards, flyway councils, the Mexican Advisory Subcommittee on Waterfowl, and a host of regional and local groups. These institutional arrangements transcend diverse political structures, culture, and language, and have allowed continuous growth of conservation efforts under the Plan for a quarter century.

While the Plan itself is international in scope, it is put into action at the regional level through Joint Ventures—dedicated and diverse coalitions of governments, businesses, conservation organizations and individuals. Joint ventures address local, regional and continental goals for sustaining migratory bird populations. Joint venture partners with a range of biological and conservation planning expertise develop science-based conservation plans, habitat projects and applied research that benefit migratory birds—not to mention many other wildlife populations—across landscapes.

Nearly two dozen habitat joint ventures are at work across the continent, from the Atlantic Coast to the prairie habitat of the Upper Midwest and central Canada to the Sonoran Desert. In addition, three species-specific joint ventures address the needs of the black duck, Arctic nesting geese and sea ducks throughout their international ranges.

### The NAWMP "Value Proposition" to Partners

*Below are some of the ways a NAWMP partnership can benefit a range of potential partners.*

Agriculture—The agriculture industry has had and continues to have the greatest impact on wetlands and wetland conservation and will have the greatest benefit by expanding its involvement in NAWMP, whose NAWMP conservation activities can continue to directly benefit by assisting agricultural partners in:

- offsetting effects of climate change on agriculture production
- conserving water to support agriculture use

- helping farmers qualify for government funding
- helping industry and landowners realize carbon offset credit opportunities
- assisting in realizing opportunities under the U.S. Farm Bill and Canada's agricultural policies
- supporting crop damage programs

Forestry—The habitat of forest ecosystems supports habitats for a variety of wildlife and plants. The forestry industry largely operates on public lands through various forms of land tenure and harvesting rights. Conveyed in these rights is the obligation on the part of the industry to achieve sustainable forest management and operate in a manner that ensures long-term environmental health. Our forests play an important role in climate change and carbon sequestration. Becoming a NAWMP partner would directly benefit this industry by:

- supporting sustainable forest management goals, strategies, plans, research and applied science
- playing a role in maintaining industry access to resources and long-term fibre security
- helping gain public support for the industry
- playing a valuable role in achieving environmental and product certification—benefiting market access
- providing science and support to development of operating guidelines and best management practices
- providing support and complement industry stewardship activities

Energy Sector—Oil and gas, utility, coal, wind and mining industries operating on public and private lands directly and indirectly affect wetland ecosystems through land disturbance, and use, storage and discharge of water. A NAWMP partnership could assist them by:

- providing wetland data and science to assist environmental impact assessments
- supporting on-site habitat management efforts
- assisting in gaining public/community/regulator support for operations
- benefiting marketplace positioning
- mitigating and/or off-setting impacts associated with development

Other Bird and Habitat Conservation Initiatives—Conservationists concerned about other migratory bird groups—landbirds, shorebirds, colonial waterbirds—saw the success of the Plan model and adopted it as they developed strategies for species of concern. Rather than reinvent the wheel, they looked to the joint ventures to help implement their plans. Within their established geographic areas, the habitat joint ventures, when possible, have integrated the conservation of shorebirds, landbirds, and other waterbirds into their planning processes. Established bird and habitat conservation plans and active watershed groups can benefit from establishing or continuing partnership with NAWMP through:

- providing strong watershed data and research
- generating and maintaining ecological goods and services to support viable and prosperous communities
- watershed planning, project assistance, monitoring and reporting
- providing access to grants for work projects

Cities/Municipalities—While necessary, urban growth has significant impacts on wetlands and wildlife habitats. Responsible planning, citizen stewardship and site engineering can mitigate some of these effects. A NAWMP partnership can assist in these efforts through:

- assisting with water storage, storm-water management, sewage treatment and water treatment efforts
- generating and maintaining ecological goods and services that support prosperous communities
- assisting in community development and environmental planning
- complementing environmental stewardship programs and activities

Government Policy Makers – As government policy makers grapple with the challenges of climate change, water conservation, carbon sequestration, balancing environmental quality with sustainable resource development, protecting species at risk, agricultural sustainability, providing ecological goods and services, and tourism and recreation, they may consider a NAWMP partnership, which can benefit policy makers through:

- its track record of achievements in support of related wetland, waterfowl, associated wildlife habitat policy work
- a continental partner base with world class achievements in wetland, waterfowl and related habitat conservation

- access to NAWMP's wealth of science, data and expertise
- playing a significant roll in stakeholder-led award committees
- NAWMP's project achievements and stewardship activities that directly and indirect benefit policy initiatives

### Awards and Recognition

Acknowledging the generosity of our partners is extremely important. To date, this has come largely from our individual partners and, in some cases, our collective partnership base.

NAWMP projects and other efforts have received numerous environmental awards at state and provincial government levels. Individual partners are often recognized within their own organizations and by client groups they serve with certificates, awards, letters of appreciation, plaques, ceremonies, project signage, etc.

Partner and joint venture efforts are recognized nationally and continentally from time to time through NAWMP's prestigious International Camasback and

National Blue-winged Teal awards, project evaluation, publications, letters and media releases. Past award winners include Dow Chemical Company, SaskPower, the Ohio Division of Wildlife, PacificCorp, the Delta Waterfowl Foundation and Anheuser-Busch Companies, Inc. See "attachment" for list of NAWMP Award recipients.

Joint venture communications committees have actively built-in partner recognition as part of their respective communications plans. These cover a wide array of awards and recognition.

### How Can I Become a Partner with NAWMP?

Now that you have seen how partnering with NAWMP can benefit your own industry or organization, please contact us for further discussion. Attached is a list of NAWMP Plan Committee members and joint venture coordinators who manage activities across the continent. Please contact one of them to discuss how you can be involved as a NAWMP partner or supporter.

## NAWMP Award Winners

### International Camasback Award

The International Camasback Award is presented to an exceptional individual, corporation, or organization that has made substantial contributions over a long period of time to the implementation and continuation of the Plan throughout North America.

### Individuals

Gary T. Meyers, United States  
 James Patterson, Canada  
 Harvey Nelson, United States  
 Kenneth Wich, United States  
 Robert Andrews, Canada  
 James McCuaig, Canada  
 Roger Holmes, United States  
 Charles K. Baxter, United States  
 John E. Frampton, United States  
 Rod Fowler, Canada  
 Ken Cox, Canada  
 Dr. George Finney, Canada  
 Duane Shroufe, United States  
 David A. Smith, United States  
 Jerry Serie, United States  
 Dr. Stephen Wendt, Canada  
 Dr. Michael G. Anderson, Canada  
 Lorne Colpitts, Canada  
 Sheila Toote, Canada  
 Rich Goulden, Canada

### Members of Congress

Senator George Mitchell, United States  
 Senator Don Nickles, United States  
 Senator John H. Chafee, United States  
 Representative John D. Dingell, United States

### Government

Inuvialuit Game Council, Canada

### Non-government organizations

Ducks Unlimited, Inc., United States  
 Ducks Unlimited Canada  
 Ducks Unlimited Mexico  
 National Fish and Wildlife Foundation, United States

### Partnerships

Natural Resources Canada-Polar Continental Shelf Project, Canada

### National Blue-winged Teal Award

The NAWMP's National Blue-winged Teal Award (formerly known as the National Great Blue Heron Award) recognizes partners whose activities at the national, regional, or local level result in substantial benefits to waterfowl, other wetland-associated migratory bird populations or wetlands habitats, as a one-time, periodic or ongoing effort.

### Individuals

James D. Range, United States  
 Don Simkin, Canada  
 André Magny, Canada  
 Ross Murphy, United States  
 Kenneth H. Hofmann, United States  
 John Vaughn, Canada  
 Daniel Chapin, United States  
 Governor Arne Carlson, United States  
 Stew Morrison, Canada  
 Mauricio Cervantes Abrego, Mexico  
 Richard Goulden, Canada  
 Michael R. Szymczak, United States  
 Lewis Mithun, United States  
 Arnold Boer, Canada  
 Theresa Dupuis, Canada  
 George Arsenault, Canada  
 Jay Bartsch, Canada  
 Reg Melanson, Canada  
 Len Warren, Canada  
 Dr. Morley Barrett, Canada  
 Ron Reynolds, United States  
 Steve Moran, United States  
 Ian Rudland, Canada  
 Herb Goulden, Canada  
 Bill Gummer, Canada  
 Dennis Sherratt, Canada  
 Gil Henderson, Canada  
 Dave Nomsen, United States  
 Brett Calverley, Canada  
 Ken Ambrock, Canada  
 Donna Stewart, Canada

### Corporate

Transcanada Pipelines, Canada  
 Inco Limited, Canada  
 The Dow Chemical Company, United States  
 Westvaco Corporation, United States  
 Phillips Petroleum Company, United States  
 SaskPower, Canada  
 Northern Indiana Public Service Company, United States  
 Anheuser-Busch Companies, Inc., United States

The Williams Companies, Inc., United States  
 PacificCorp - Utah Power and Light Division, United States

The Iron Ore Company of Canada  
 ConocoPhillips, United States  
 Shelby Lake Farms, LLC, United States

### Members of Congress

Senator Patrick J. Leahy, United States  
 Representative Steven Rothman, United States

### Government

Eastern Irrigation District of Alberta, Canada  
 Ohio Division of Wildlife, United States  
 Illinois Department of Natural Resources, United States  
 Bow River Irrigation District, Canada  
 Western Irrigation District, Canada  
 St. Mary River Irrigation District, Canada  
 Indiana Department of Natural Resources, United States  
 Wellton-Mohawk Irrigation and Drainage District, United States  
 Colorado Division of Wildlife, United States  
 North Dakota Game and Fish Department, United States

### Non-government

The Nature Conservancy, United States  
 The David and Lucile Packard Foundation, United States  
 Delta Waterfowl Foundation, Canada  
 Special Areas Board, Canada  
 Habitat Conservation Trust Fund, Canada  
 California Wildlife Conservation Board, United States

## U.S. Plan Committee Members

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Doug Bliss, Atlantic Regional Director  
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 Canadian Wildlife Service – Environment Canada  
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 Nova Scotia Department of Natural Resources  
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## Mexican Plan Committee Members

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 Director General  
 Dirección General de Vida Silvestre-SEMARNAT  
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Roberto Avina Carlin, Director de  
 Conservación de la Vida Silvestre  
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Eduardo Carrera Gonzalez  
 Ducks Unlimited Mexico, A.C.-President  
 Garza García, Nuevo Leon

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Prairie Farm Rehabilitation Administration  
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National Research Council Canada  
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TriStar Oil & Gas Ltd.  
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Zapata Energy Corporation  
Zarpon Energy Trust

### Other

Wangell Island Nature Reserve

### United States

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Natural Resources  
Anonymous Foundation  
Arizona Game and Fish Department  
Arkansas Game and Fish Commission  
Atlantic Flyway Council  
California Department of Fish and Game  
Canada Foundation  
Central Flyway Council  
City University of New York  
Delaware Department of Natural Resources  
& Environmental Control  
Ducks Unlimited, Inc.  
Five Valleys Land Trust, Inc.  
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Louisiana Department of Wildlife and Fisheries  
Louisiana Pacific Corporation  
Maine Department of Inland Fisheries  
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Maryland Department of Natural Resources  
Massachusetts Division of Fisheries  
and Wildlife  
Michigan Department of Natural Resources  
Minnesota Department of Natural Resources  
Mississippi Department of Wildlife, Fisheries  
and Parks  
Mississippi Flyway Council  
Missouri Department of Conservation  
Montana Fish, Wildlife & Parks  
National Fish and Wildlife Foundation  
Nebraska Game and Parks Commission  
Nevada Department of Wildlife  
New Jersey Division of Fish & Wildlife  
North Carolina Wildlife Resources  
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of Natural Resources  
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Background Image:

American Wigeon

Ducks Unlimited Canada/Wolfski

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