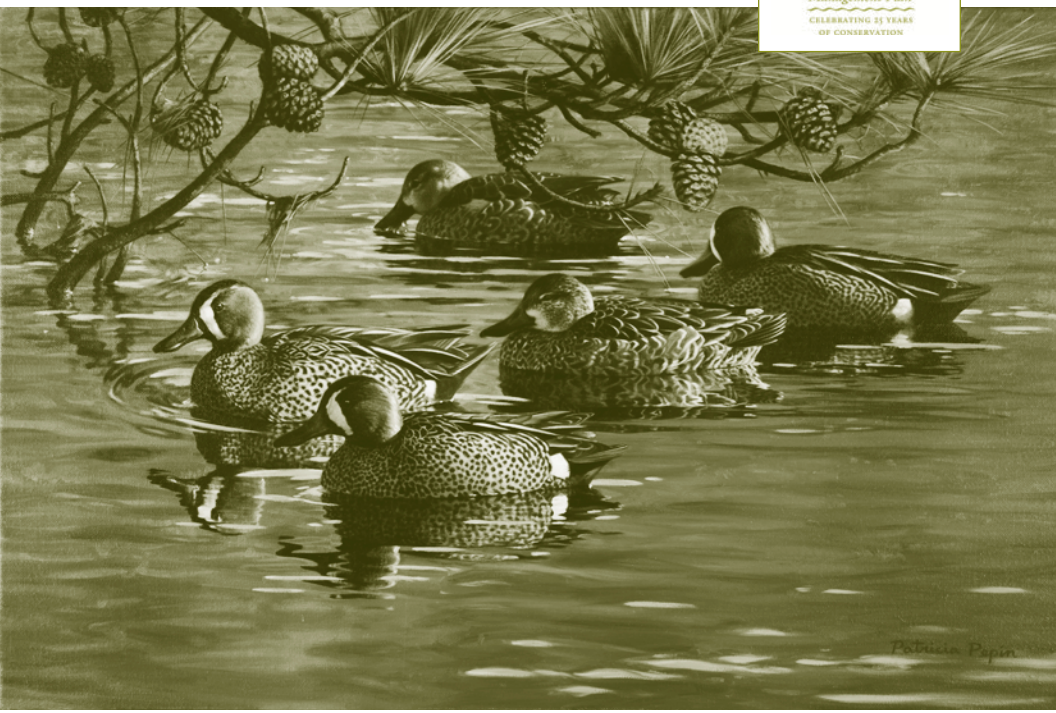
Canadian HabitatMatters

2011 Annual Report

North American Waterfowl Management Plan
CELEBRATING 25 YEARS OF CONSERVATION



Title: "Evening Repose" Blue-winged Teal, from the 2012 Habitat Conservation Stamp Series. Image courtesy of Wildlife Habitat Canada.
Artist: Patricia Pepin, Bromont, Quebec

As waterfowl migrated between their breeding grounds and wintering grounds during 2011, partners across Canada celebrated the 25th anniversary of the North American Waterfowl Management Plan (NAWMP). A look back provides us with an opportunity to reflect on our achievements, recognize our founding members and their magnificent vision, and redouble our efforts to meet the challenges that lie ahead.

Signed on May 14, 1986, as a cooperative, continental partnership to address plummeting waterfowl populations through coordinated science and innovative habitat programs, the NAWMP was an entirely new approach to conservation. Today, the transformative nature of the NAWMP is well understood. Working in partnerships has become second nature: collaborating on the "big picture" rather than focusing on one jurisdiction has become a common way of life. But prior to the 1980s, most bird and habitat conservation programs were locally based and locally funded with few resources to make a big difference. It was the NAWMP program that "broke new ground" on continental partnerships and planning.

Today, we look to that legacy of 25 years of collaborative efforts and remarkable gains on the ground as we rise to meet the ongoing challenges of continental waterfowl and habitat conservation. The platform of science, planning, and program delivery that defines the NAWMP also provides a base from which we can become even more effective in sustaining landscapes and bird populations for the benefit of all.

CONTENTS:

North American Waterfowl Management Plan

Plan nord-américain de gestion de la sauvagine

Plan de Manejo de Aves Acuáticas Norteamérica

Published in 2012

National Overview

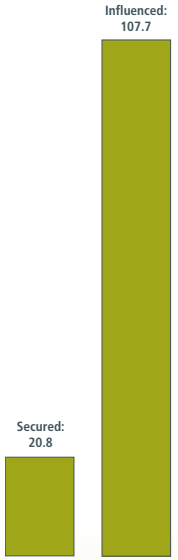
The successful implementation of the NAWMP in Canada has been enabled by the continuous support of partners in both Canada and the United States, including federal, provincial, and state governments, non-governmental organizations, and individuals. In particular, funding received under the United States' 1989 *North American Wetlands Conservation Act* has been integral to the success and longevity of the NAWMP in Canada. This support has resulted in the securement of 20.8 million acres (8.4 million hectares) of wetlands and associated uplands during the Plan's first 25 years.

Despite the phenomenal success of the NAWMP, tremendous challenges lie ahead for migratory birds and their habitats. Significant environmental, societal, economic, and political changes have occurred in North America since the Plan's launch in 1986, altering the landscape in which partners operate. In response to these changes and to ensure continued success, the partners in Canada are preparing to align their strategic planning with the NAWMP Revision. Canadian partners support a holistic approach to waterfowl management through identifying linkages among species, habitats, and human elements, while recognizing the continually changing environment in which partners implement the NAWMP.

In Canada, joint ventures will collectively need to conserve well over 16 million acres (6.5 million hectares) of habitat during the next 20 years in order to attain the original NAWMP population goals. Ongoing funding at a minimum of current levels, plus inflationary costs, will be critical to achieving these goals. Additionally, all partners will seek mechanisms to halt continued wetland and associated habitat loss and to conserve existing habitat through policy and non-traditional programs. Success is required on many fronts for the NAWMP to succeed.

With a firm grasp of our roots and an eye toward the challenges of the future, we can forge ahead with new ideas and new approaches to finish the job that began in 1986. Understanding where we have come from, what we are doing, and how we chart a clear path for the future are key to the success of the NAWMP.

Total NAWMP Accomplishments in Canada 1986-2011 (millions of acres)



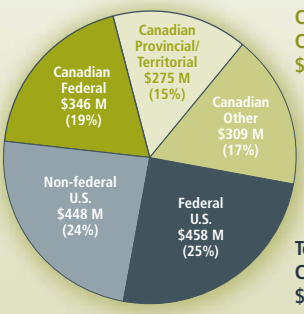
Totals include acres from Habitat Joint Ventures and Western Boreal Forest region

NAWMP Expenditures in Canada by Activity 1986-2011

$1.8 Billion ($CAD)

1 Coordination, communication, policy, crop damage compensation and prevention
2 Banding, surveys & research

Total Contributions ($CAD) in Support of the NAWMP in Canada (1986-2011)



Total Canadian Contributions $930 M (51%)

Total Overall Contributions to Canada $1.84 B

Total U.S. Contributions $906 M (49%)

Terminology used in this report

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.

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

Influence
Direct actions taken by landowners, land managers, or conservation agencies that protect or enhance wetland or associated upland habitats without legal or binding agreements. These direct actions result in applied land-use changes.

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.

Habitat Joint Ventures

The Canadian Habitat Joint Ventures integrate planning, science, governance, partnerships, and management to achieve NAWMP goals in Canada through a programmatic approach. The scientific work of NAWMP partners over the past 25 years has substantially increased the understanding of relationships between habitats and breeding waterfowl populations. Correspondingly, the tools used to identify target habitats have evolved and improved program delivery.

Continual improvement of the science and models relies on the high quality of data from avian monitoring programs in the United States and Canada. Joint ventures will continue to implement more accurate and efficient programming through use of these long-term monitoring datasets and through engagement of modelling expertise in the Canadian Wildlife Service and the U.S. Fish and Wildlife Service.

In British Columbia, the Pacific Coast and Canadian Intermountain Joint Ventures use **duck abundance surveys and models** to identify high-value landscapes. The Fraser River delta and east coast of Vancouver Island have been identified as having the highest abundance and density of wintering waterfowl in the Pacific Coast Joint Venture. For the Canadian Intermountain Joint Venture, the Cariboo-Chilcotin region has the highest densities of wetlands and breeding waterfowl as well as a high risk of habitat loss. The Okanagan region is also a target landscape because of its high risk and degree of habitat loss.

The Prairie Habitat Joint Venture has estimated duck populations and partitioned them by species using long-term spring waterfowl survey data. The **Waterfowl Productivity Model** has been developed to estimate the impact of landscape change on priority duck species' productivity. The model combines estimates of the average nesting population and nesting propensity and then estimates nesting habitat preference, landscape-scale habitat availability, and nest survival rates. Using these estimates, the model identifies program target areas by evaluating comparisons of alternative conservation actions at both the local and regional landscape scales. See page 9 for a map of priority and target landscapes in the Prairie Habitat Joint Venture.

Buffalo Lake moraine, Alberta.
Ducks Unlimited Canada

The Eastern Habitat Joint Venture is composed of the Ontario, Quebec, and Atlantic regions. A **Conservation Planning Tool** was developed for southern Ontario and used to identify the eight most cost-effective and valuable watersheds for breeding waterfowl. Detailed restoration and securement plans have been developed for each of these watersheds. In Quebec, **decision support and planning tools** were developed to identify and rank priority areas and then classify the twenty ecoregions according to habitat values and pressures. Conservation programs focus on the highest priority ecoregions, which are those with the highest habitat values and the greatest pressures. In the Atlantic region, **long-term conservation strategies** focus on priority areas to conserve and restore coastal and agricultural landscapes. See page 10 for a map of target program areas in the Eastern Habitat Joint Venture.

Mallard in flight.
Ducks Unlimited Canada

Pacific Coast Joint Venture

www.pcjv.org

As 25 years of successful NAWMP partnerships were celebrated, the PCJV in British Columbia (B.C.) renewed several of its early partnerships, as well as continued to work closely with more recent partners.

Improving Water Management

In 2011, PCJV partners, led by Ducks Unlimited Canada (DUC), replaced water control structures for three wetland enhancement projects that had been completed in the 1980s:

- Echo Valley farm, conserved by DUC, is 154 acres (62 hectares) and one of the largest potato farms on Vancouver Island. Water level management for crop production and migratory bird habitat has been practiced on this farm since the 1950s. A crew replaced several water control structures and enhanced dikes bordering the property to improve the farmer's ability to manage water levels. In summer, the farmer now is able to regulate irrigation to increase crop production, and once fall harvest is complete, the water control structures help create a wetland habitat that is extremely popular with wintering and migrating birds, particularly Trumpeter Swans.
- In the B.C. Lower Mainland, the 95-acre (38.5-hectares) Minnekhada Marsh is managed as part of the Metro Vancouver Regional Park system. This wetland provides habitat for a diversity of waterfowl and is visited by many local residents using the park trails. Water control structures were reconfigured and dike upgrades were completed to improve water management capacity, as well as reduce long-term management costs. This rebuild also improved habitat for Western Painted Turtles, which are listed as "endangered" under Canada's *Species at Risk Act*.
- On Vancouver Island, the Nanoose Bay Unit of the Qualicum National Wildlife Area contains a wetland adjacent to a tidal area that provides not only important wintering and migrating waterfowl habitat but also habitat for salmonids. The wildlife area is owned by The Nature Trust of B.C. and leased to Environment Canada's Canadian Wildlife Service. Work in this area was done to diversify habitat and included replacing a water control structure, upgrading a berm, and removing invasive plants.

Wildlife Management Areas

The Province of B.C. designates wildlife management areas (WMAs) under its *Wildlife Act* to prioritize conservation and management of wildlife, fish, and their habitats. Other permitted land uses can be identified in consultation with conservation groups and other stakeholders. B.C. has 28 WMAs encompassing 580,000 acres (235,000 hectares) and two of the newest ones will benefit waterfowl in the PCJV.

The Province has designated 1,861 acres (753 hectares) as the Pemberton Wetlands Wildlife Management Area, which encompasses several freshwater wetlands and riparian areas near the Upper Lillooet River and Green River. These areas provide habitat for salmon and other fish species, waterfowl, songbirds, moose, beaver, otter, and black bear. The area also provides habitat for waterfowl species listed by the Province "at risk," including Trumpeter Swans and Harlequin Ducks.

The Province also designated Roberts Bank as a WMA. This area covers 21,508 acres (8,704 hectares) of intertidal and nearshore subtidal habitat in the Fraser River delta, which itself has been designated by BirdLife International as an Important Bird Area (IBA) that provides critical life history functions for a wide variety of bird species. Trumpeter and Tundra Swans, Lesser Snow Geese, Black Brant, and Arctic Brant all winter in the estuary, and Great Blue Herons feed year-round in the intertidal marshes. Roberts Bank is the stopover for up to five million birds that migrate along the Pacific Flyway, and it is a wintering area for the highest number of waterfowl and shorebirds in Canada. The surrounding sections of the estuary (Boundary Bay, Sturgeon Bank, and the South Arm Marshes) are already WMAs.

Conserving and Managing Shorebird Habitats

Bird Studies Canada and the Canadian Wildlife Service have been working with a group of shorebird specialists between Alaska and Peru to design and establish a

A work crew at Minnekhada Marsh.
Ducks Unlimited Canada

The Minnekhada Marsh.
Ducks Unlimited Canada

Looking across McPhee Meadows to the Puntledge River.
Rupert Wong, Nature Conservancy of Canada

The Puntledge River as it bends its way around the McPhee Meadows.
Ian Moul

DID YOU KNOW?

Scope: In B.C., 54 million acres (21.9 million hectares) of landscape, 113.2 million acres (45.8 million hectares) of seascape, and 30,285 kilometres (19,000 miles) of shoreline. The PCJV is an international joint venture that includes portions of B.C., Alaska, Washington, Oregon, California, and Hawaii and covers Bird Conservation Region 5. The PCJV falls within the North Pacific Landscape Conservation Cooperative's geographic area.

Major Habitat Types: The B.C. coast is a complex of inlets, bays, islands, straits, and fjords rising to a diversity of near-shore, intertidal, and forested habitats. The coastline has over 440 estuaries, which contain tidal wetlands and adjacent floodplain habitats. Generally, intertidal areas are provincial Crown lands, but many floodplains are privately owned and often highly modified for agricultural and other human uses. These modified landscapes can provide significant habitat and food supply for migrating and wintering waterfowl.

Key Waterfowl Species: Over 1.2 million waterfowl winter along B.C.'s coastline and another 400,000 in its estuaries. Key species include the Wrangel Island Snow Goose (nearly half of the population) and the Pacific Coast's Trumpeter Swan (half of the population), American Wigeon, Cackling Goose, and the Western High Arctic Brant.

Since the PCJV was Established in 1991:

- The Pacific Estuary Conservation Program – adopted as the securement arm of the PCJV – was a first recipient of the Ramsar Wetland Conservation Award in 1999 and the Canadian Council on Ecological Areas award in 1996.
- In response to the need to conserve biologically important estuaries under increasing development pressure, the PCJV identified, mapped, and prioritized 442 estuaries for conservation.
- The Conservation Areas Database was created to spatially identify all areas under conservation within the PCJV and CIJV.

Lesser Yellowlegs.
Jared Hobbs

hemisphere-wide project to address management issues for Western Sandpipers and Dunlins. The project aims to survey range-wide winter and migration stopovers in order to improve conservation planning and management of key shorebird habitats throughout the Pacific Flyway. The project links with existing regional initiatives (e.g., B.C. Coastal Waterbird Survey, Pacific Shorebird Survey in California, and shorebird monitoring in Colombia and other South and Central American nations) and is funded by the U.S. Forest Service International Program's support to Bird Studies Canada and several collaborating partners (Point Reyes Bird Observatory Conservation Science, Asociación Calidris in Colombia, BirdLife International, Centro de Investigación Científica y de Educación Superior de Ensenada in Mexico, Panama Audubon, and the Canadian Wildlife Service).

The Nature Conservancy of Canada has also continued habitat enhancement and restoration activities on its broad spectrum of properties within the PCJV. Of note is the major earth-moving project on the Ocean Blue property, a former cedar mill site on the Campbell River estuary, to re-establish estuary connections and fish access to a stream that had been buried by mill waste. The restoration will greatly benefit many waterfowl species that use the area and has already seen salmon retuning to the stream.

Habitat Association Modelling

Three PCJV partners – Bird Studies Canada, the Canadian Wildlife Service, and DUC – are continuing their collaborative project to develop habitat association models for non-breeding populations of about 60 coastal and marine bird species, including about 30 waterfowl species that use the B.C. coast. When complete, these species–habitat models will directly support NAWMP and NAWCA goals by prioritizing key habitats and will feed into the development of the PCJV Implementation Plan. PCJV partners will then use the work to inform land acquisition and management activities for waterbird conservation in B.C.

Habitat Acquisitions

The Nature Trust (TNT) of B.C. acquired two important properties in 2011:

- McPhee Meadows, purchased with the City of Courtenay, is an 11.4-acre (4.6-hectare) floodplain surrounded by riparian habitat that is designated by the Province of B.C. as a "sensitive ecosystem." This riparian area has a varied forest structure of Red Alder and Black Cottonwood and provides important wildlife trees for cavity nesters.
- A 54.4-acre (22-hectare) parcel of land on Salt Spring Island completes a continuous protected area in Burgoyne Bay. The property is bordered by the Burgoyne Bay and Mt. Maxwell Provincial Parks as well as the Mt. Maxwell Ecological Reserve. The area protects remnants of Garry Oak woodlands, which are in the Coastal Douglas-fir biogeoclimatic zone, one of the rarest and most threatened in B.C. TNT received funding support from Environment Canada through the Natural Areas Conservation Program (facilitated by Nature Conservancy of Canada), the Province of B.C., and several private donors.

The PCJV is Canada's only international habitat joint venture; partners continue to work closely with one another as well as with U.S. counterparts to conserve important coastal habitat along the Pacific Coast.

For more information, contact Tasha Sargent, Pacific Coast Joint Venture Coordinator, (604) 940-4703, tasha.sargent@ec.gc.ca.

Contributions ($CAD)*

	2011	Total (1986-2011)
Total	6,187,773	322,004,450

Accomplishments (Acres)**

	2011***	Total (1986-2011)
Secured	681	115,771
Enhanced	193	91,483
Managed	2,566	94,787
Influenced	10,124	3,878,354

* Contributions include U.S. federal, U.S. non-federal, Canadian, and other countries.

** 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.

*** 2011 acres reported correspond to period acres.

American Wigeon.
Jared Hobbs

Partners have worked together to enhance habitat values on the Haines Lake grasslands.
King Campbell, Ducks Unlimited Canada

Canadian Intermountain Joint Venture

www.cijv.org

Although the Canadian Intermountain Joint Venture (CIJV) is Canada's most recently formed joint venture, it celebrated many successes and exciting projects as the 25th anniversary of the NAWMP was celebrated. The CIJV partners use funds from a variety of Canadian and U.S. sources to help achieve the NAWMP habitat goal of maintaining or restoring traditional distributions of waterfowl in North America, as well as the broader goal of habitat conservation for all bird species. The CIJV pursues both direct programs that secure and restore key breeding habitats for priority species and indirect programs, such as stewardship, that support habitat management.

Less than five percent of B.C.'s lands are publicly held and these lands have high value, limiting the extent of direct programs within identified CIJV focal areas. Therefore, on-the-ground conservation is often achieved via stewardship to influence land use and management of key habitats. In addition, the CIJV has developed decision-support and policy tools to assist various levels of government in efforts to conserve, restore, and manage wetlands and associated ecosystems. These indirect approaches are very cost effective at supporting waterfowl populations and conserving habitat when acquisition is not a viable option. Indirect programs can also lay the foundation for future land securement through covenants (easements) and acquisition by highlighting the importance of particular areas.

Habitat Acquisitions

Nature Conservancy of Canada (NCC), B.C. Region, acquired two significant wetland properties in 2011:

- Marion Creek Benchlands is a 505-acre (204-hectare) parcel, in the East Kootenay region of B.C., adjacent to NCC's Thunderhill Ranch. It has an extensive Interior Douglas-fir forest with wetlands and shallow waters. It also has a small, cold spring with a variety of plants, as well as open grassland – a rare ecosystem in B.C. This parcel of land not only protects important water bird habitat, but also contributes to connectivity with neighbouring conservation properties for ungulates and carnivores and prevents further fragmentation of the area by subdivision and development.
- Dalton's Hideaway, also in the Interior Douglas-fir ecological zone (but far removed from Marion Creek), is 160 acres (65 hectares) of mainly riparian forest and associated wetlands on the meandering Klinaklini River in the west Chilcotin region. It is the last private property before the river passes through the Coast Mountains, and it protects aspen woodlands, Bull Trout habitat, and connectivity for carnivores along the valley. These wetlands are used by breeding waterfowl and water birds and have supported Trumpeter Swans during fall migration. Dalton's Hideaway is in the Tatlayoko

DID YOU KNOW?

Scope: An area of 123.5 million acres (50 million hectares) in the central/southern interior of B.C. and the eastern rocky mountain portion of Alberta, and covers Bird Conservation Regions 9 & 10. The CIJV falls within the Great Northern Landscape Conservation Cooperative's geographic area.

Major Habitat Types: The CIJV encompasses a diverse landscape from valley bottom to mountain top: grasslands, dry and moist coniferous forests, riparian areas and wetlands, alpine tundra, and even pocket desert. Climate change and greater human pressure on water sources are increasing the importance of wetlands in maintaining biological diversity, particularly in semi-arid landscapes.

Key Waterfowl Species: Twenty-four waterfowl species breed in the CIJV with an estimated population of 1.45 million birds, representing 70% of B.C.'s and roughly 4% of Canada's breeding waterfowl population. The CIJV supports 20–25% of the world's breeding population of Barrow's Goldeneye, 1–2% of the continental population of Mallard, over 15% of the continental breeding population of Hooded Merganser, and 5% of the continental breeding population of Ruddy Duck.

Since the CIJV was Established in 2003:

- Over $43 million have been invested into habitat projects to secure and/or enhance over 500,000 acres (over 200,000 hectares) of wetlands and other habitats.
- The CIJV has achieved its goal of maintaining the current breeding population of 1.45 million waterfowl, which is thought to reflect 1970s levels for most species and habitats, except in some agricultural lands and urban areas. The challenge now will be maintaining habitat.
- The CIJV has worked successfully with local governments, using tools such as *The Green Bylaws Toolkit* (developed by JV partners), to achieve some measures of habitat protection in areas where land acquisition is not a viable option.

Wetlands of the Clearwater Wetlands and Wildlife Corridor Project.
Jason Hollinger, The Land Conservancy of B.C.

Long-billed Curlew.
Jared Hobbs

area, where NCC has several ranching properties that are actively managed for biodiversity, while still allowing some hay production and cattle grazing.

The Land Conservancy (TLC) of B.C., through a strategic land acquisition and a significant financial donation, has created a permanent wildlife corridor across the southern portion of Wells Gray Provincial Park in B.C. In addition to the wildlife corridor, this acquisition and associated donation will protect over 70 acres (28 hectares) of wetlands and assist in the protection of a 10-acre (4-hectare) meadow that is home to Canada's most diverse population of Moonwort Ferns (*Botrychium spp.*). Over 130 bird species, including 33 species of waterfowl and other water birds, and more than 200 plant species have been recorded on these properties. This corridor will also benefit the park's large mammals – moose, wolf, deer, cougar, black bear, and grizzly bear – that must currently travel across the Clearwater River valley during spring and fall through private lands that lack wildlife conservation agreements. The creation of this corridor is of utmost importance, since the private lands in this area are undergoing significant development pressure. TLC continues to fundraise to complete further acquisitions for this project.

Habitat Management and Restoration

NCC continues to do habitat management and restoration work on the properties it owns and/or manages (they purchase some and lease others). The Frolek Ranch, a conservation partnership between NCC and the Frolek family since 2008, contains some of the most intact grasslands in B.C.'s Thompson-Nicola valley. These grasslands, which provide important habitat for a vast number of endangered species – including Long-billed Curlew and Burrowing Owl – are among the most threatened ecosystems in B.C. due to the ease with which they can be developed. As part of the ongoing restoration of the property, a fence was recently installed around a portion of a lake and two wetlands to protect waterbird nesting and feeding habitat from grazing cattle.

A wetland that will benefit from the fencing along Haines Creek.
Ducks Unlimited Canada

Ducks Unlimited Canada (DUC) had another successful year with the Crown Range Program in the CLJV. Using funds from the Habitat Conservation Trust Foundation and Wildlife Habitat Canada and working with local ranchers and a First Nations' contractor, DUC conducted much-needed upgrades to three kilometres (1.8 miles) of fencing that runs along Haines Creek in the Chilcotin region. The project will allow improved control and distribution of grazing livestock across three range units and thereby result in the restoration of wetland and upland habitats for waterfowl and other wildlife.

Tracking Wetland Status

Two of the CLJV's partners, DUC and the Canadian Wildlife Service, have begun a collaborative project with the Intermountain West Joint Venture (IWJV) to assist organizations and others working in wetland conservation by identifying and piloting a methodology to track the status of wetlands over time. As land use and climate change could alter the landscape, the absence of a clearly defined process to monitor the status of wetlands and understand where and why they are lost and degraded limits our ability to effectively protect and restore wetlands. The project will be piloted in the East Kootenay region and will use high-resolution, optical satellite images and remote sensing analyses to determine changes in wetland boundaries over time. If successful, further pilot areas may be chosen. This project is funded by the Great Northern Landscape Conservation Cooperative (GN LCC).

The CLJV is broadening its partnerships in the United States with the IWJV and GN LCC. In addition to the wetland tracking project, the CLJV and IWJV are working together to identify opportunities for other collaborative projects. The CLJV is also sitting as an observer on the GN LCC's steering committee to forge a strong bond between the two and ensure maximum efficiencies and partnership opportunities.

For more information, contact Tasha Sargent, Canadian Intermountain Joint Venture Coordinator, (604) 940-4703, tasha.sargent@ec.gc.ca.

Contributions ($CAD)*

	2011	Total (1986-2011)
Total	2,865,726	43,668,285

Accomplishments (Acres)**

	2011***	Total (1986-2011)
Secured	268	549,462
Enhanced	14,172	155,407
Managed	34,857	569,592
Influenced	163	50,906

* Contributions include U.S. federal, U.S. non-federal, and Canadian.

** 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.

*** 2011 acres reported correspond to period acres.

The wetlands on Marion Creek Benchlands are one of the main features that make this Columbia Valley property an important conservation project for the Nature Conservancy of Canada.
Nature Conservancy of Canada

Summer on the Prairies.
Ducks Unlimited Canada

Lesser Scaup.
Ducks Unlimited Canada

Prairie Habitat Joint Venture

www.phjv.org

As a founding NAWMP joint venture, the Prairie Habitat Joint Venture (PHJV) pays tribute to all partners across the continent for their drive and determination, including the original NAWMP Plan Committee, the original PHJV Board, and many others in both Canada and the United States who went well beyond day-to-day business to achieve something unheard of and truly great. David Ingstrup, current PHJV Chair, noted, *"NAWMP recognized 25 years ago that the environment isn't a jurisdiction, birds aren't citizens of countries, and habitat isn't defined by borders."* The achievements resulting from this visionary thinking were celebrated in three of the provinces within the PHJV.

In Saskatchewan, provincial Environment Minister Dustin Duncan and many members of the NAWMP partnership celebrated with a project dedication on the Kehiew habitat conservation property near Avonlea.

"The Saskatchewan NAWMP partnership is an unprecedented success," Minister Duncan said. "It has allowed conservation and agriculture to work together toward sustainable land management and has resulted in numerous programs to involve private landowners in cooperative land stewardship."

"Over the past 25 years, the NAWMP partnership has played a vital role in bringing together our agencies and providing critical resources for habitat conservation and sustainable agriculture programs in Saskatchewan," said Brent Kennedy, Ducks Unlimited Canada's (DUC) provincial manager of operations for Saskatchewan. "Our achievements today are thanks to the hard work and collaboration of the NAWMP partners together with our partners on the landscape: producers, landowners, and other local stakeholders."

The Kehiew conservation project is located in one of the highest waterfowl production areas on the Canadian Prairies. The project consists of 133 acres (58.8 hectares) of restored grassland and 26 acres (10.5 hectares) of wetlands and is situated in the midst of a high density of small, diverse wetlands found throughout the rolling hills of the Missouri Coteau region in Saskatchewan.

DUC purchased this property along with three other quarters for a combined total of 633 acres (256 hectares). Significant funding for the purchase came from the U.S. Fish and Wildlife Service under NAWCA. The diversity of wetlands and well-sustained prairie grassland supports significant biodiversity. Waterfowl species using the wetland and surrounding upland nesting cover include Mallard, Northern Pintail, Blue-winged Teal, Gadwall, Wigeon, Northern Shoveler, Canvasback, Redhead, Lesser Scaup, and Canada Goose. Many other wildlife species also inhabit the area.

In Alberta, Morley Barrett, past Alberta NAWMP Coordinator, spoke on the origin of the Alberta NAWMP program at a 25th anniversary lunch and celebration. He commented on the success of the unique organizational structure: rather than an independent body, the founders promoted a model where all partners contribute representatives in support of the partnership. This idea set the tone for an enduring and productive quarter century of mutual cooperation.

Dr. Barrett noted that, "today, with the biggest biodiversity program in the prairies, political support, and very solid wildlife programs that include and account for agriculture, NAWMP is one of the most successful conservation programs ever."

"Funding, a plan, and boots on the ground," said Ron Bjorge, Alberta's Director of Wildlife and current Chair of the Alberta NAWMP Board of Directors. He commended the founding Board for their vision. *"Today, we continue to focus on conservation of wetlands and associated habitats, good governance of the partnership, the promotion of beneficial policy, all on a foundation of science. We have much to be proud of, we know what we have to do, and we know how to do it."*

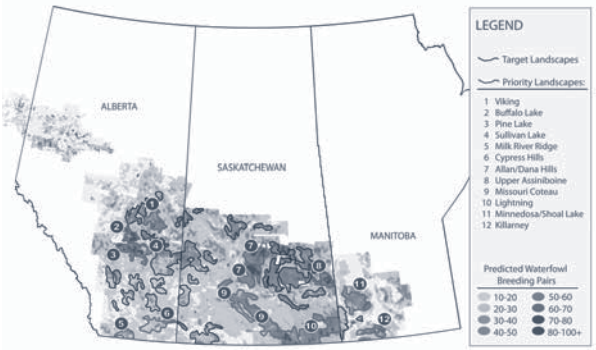
Jamie Fortune, DUC's Acting Chief Executive Officer, praised the benefits of the Alberta NAWMP partnership on the Alberta landscape, saying, "while we face many challenges and competing priorities, Alberta NAWMP will fare well because of the *on-the-ground results* everywhere you go in Alberta."

A great example of on-the-ground conservation in Alberta is the recent purchase of the 2,250-acre (911-hectare) Bullshead Conservation Area in Alberta's Cypress Hills area. This "pintail paradise" was secured through a funding collaboration among DUC, Environment Canada's Canadian Wildlife Service, and the U.S. Fish and Wildlife Service through NAWCA.

In Manitoba, NAWMP partners celebrated by honoring the Manitoba NAWMP "originals," who played a key role in planning and implementation over a quarter century ago. At a reception, Tim Sopuck, current CEO of Manitoba Habitat Heritage Corporation (MHHC, which coordinates NAWMP

Saskatchewan Environment Minister Dustin Duncan and several members of the Saskatchewan NAWMP Partnership celebrated the NAWMP 25th Anniversary project dedication of the Kehiew habitat conservation property in the Missouri Coteau.
Ducks Unlimited Canada

The Bullshead project in Alberta.
Ducks Unlimited Canada



Target and priority landscapes in the Prairie Habitat Joint Venture.

implementation in Manitoba) congratulated the originators for thinking big and for advancing a new way of doing business.

"NAWMP was based on notions we take for granted now but were remarkable for their time: stepping out of our comfort zone to establish working partnerships with farm organizations and thinking really big – at a landscape scale – and not just at a project scale. NAWMP expanded us all," said Sopuck.

Lorne Colpitts, former CEO of MHHC also paid tribute to those active in NAWMP planning and development who have now passed away. They included: A.J. "Sandy" Macaulay, former chief biologist at DUC and first PHJV Coordinator; Rich Goulden, former Assistant Deputy Minister at Manitoba Department of Natural Resources; Bill Poole, former agrologist at DUC; Rod Fowler, former CEO of DUC; and George Hochbaum, former research biologist at Canadian Wildlife Service.

In 2011, MHHC reached the milestone of permanently protecting nearly 100,000 acres (40,500 hectares) of habitat in the NAWMP delivery areas through conservation easements. These easements have been made possible by funding from the Province of Manitoba, Wildlife Habitat Canada, NAWCA, Delta Waterfowl Foundation, and several U.S. states.

The NAWMP has become a model for conservation programming precisely because people thought big; because it was – for its time – outrageous; and ultimately, because playing out across the Manitoba landscape for over two decades, it has been transformative. Looking back, that's not a bad legacy.

In closing, it is difficult to know whether the early visionaries of the NAWMP and the PHJV could have foreseen the success of this Plan. The PHJV has now conserved almost 8 million acres (3.2 million hectares) of habitat through the involvement of approximately 400 partners and 17,000 landowners.

After twenty-five years, the PHJV's vision remains strong, and clear goals and objectives have been established. But the path to that vision is not an easy one. The need for dedicated people willing to move beyond the day to day, willing to take action, push boundaries and make this Plan succeed, is more important than ever before.

The NAWMP and the PHJV are truly models of enduring success. Bring on the future. We are ready!

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

Prairie Habitat Joint Venture Contributions ($CAD)*

	2011	Total (1986-2011)
Total	52,847,034	985,483,522

Prairie Habitat Joint Venture Accomplishments (Acres)**

	2011***	Total (1986-2011)
Secured	112,780	7,445,663
Enhanced	45,649	2,516,028
Managed	474,850	7,167,593
Influenced	1,571,970	3,081,721

Western Boreal Forest Contributions ($CAD)*

	2011	Total (1986-2011)
Total	7,028,893	106,052,867

Western Boreal Forest Accomplishments (Acres)**

	2011***	Total (1986-2011)
Secured****	0	11,238,929
Enhanced	0	107
Managed	0	107
Influenced	11	40,349,436

* Contributions include U.S. federal, U.S. non-federal, Canadian, and other countries.

** 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.

*** 2011 acres reported correspond to period acres.

**** 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 40 million acres under Interim Protection.

DID YOU KNOW?

Scope: The PHJV encompasses 158.4 million acres (64.1 million hectares) in the traditional area of prairie and aspen parklands. It includes Alberta, Saskatchewan, Manitoba, and the Peace-Parkland Region of British Columbia and covers Bird Conservation Region 11. The Western Boreal Forest program falls under the purview of the PHJV and includes parts of British Columbia, Alberta, Saskatchewan, Manitoba, the Yukon, and the Northwest Territories.

Major Habitat Types: The PHJV comprises ecoregions of prairie and aspen parkland with wetland habitats ranging from small potholes and sloughs to larger lake, marsh, and bog systems. The Western Boreal Forest encompasses wetland types within the ecoregions of Boreal Plains, Taiga Plains, Taiga Cordillera, and Boreal Cordillera.

Key Waterfowl Species: In the PHJV, notable waterfowl species include 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 species include 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 (White-winged and Surf), Long-tailed Duck, Great White-fronted Goose, and Canada Goose.

Since the PHJV was established in 1986:

- The PHJV has conserved over 10 million acres (4 million hectares) of habitat through the involvement of approximately 400 partners and 17,000 landowners.
- Over 51 million acres (20 million hectares) of habitat has been conserved in the Western Boreal Forest region.

Alberta NAWMP Alumni attending the 25th anniversary event. Left to right: Gordon Kerr, Gord Edwards, Morley Barrett, John Hermans, Ian Rudland, Brent Markham.
Ducks Unlimited Canada

The Thiffault Wetland at Matchedash Bay is now a biodiverse permanent wetland that is home to waterfowl, marsh birds, and amphibians.
Ducks Unlimited Canada

The habitat restoration work undertaken at Matchedash Bay included a combination of managed wetlands such as the diked Brereton Wetland (right side of photo) and the unmanaged Grey's Marsh (left side).
Ducks Unlimited Canada

Eastern Habitat Joint Venture

www.ehjv.ca

In 1989, partners of the newly formed Eastern Habitat Joint Venture (EHJV) initiated five First Step NAWMP Projects: Matchedash Bay, Ontario; Baie-du-Febvre, Quebec; Grovepine–Big Brook, Prince Edward Island; Grand Lake Meadows, New Brunswick; and Salt Marsh Protection, Nova Scotia. For the NAWMP's 25th anniversary, we highlight the continuing evolution of three of these projects to demonstrate the NAWMP's legacy.

Ontario: Matchedash Bay

In the 1980s, Matchedash Bay, in the southeastern corner of Georgian Bay, was typified by extensive cattail marshes, deep water, and areas that flooded seasonally. It was an important staging area for migrating waterfowl, shorebirds, and other passerines, as well as habitat for a range of fish, amphibians, and reptiles. Much of the bay was identified provincially as either significant wetlands or an Area of Natural and Scientific Interest. The bay also held attractive potential for marina and housing developments and other activities not compatible with wetland conservation.

The overarching objective of the Matchedash Bay project was to protect the existing wetland and natural heritage features and augment them with strategic restoration and long-term management. Specific goals were to secure and manage 4,239 acres (1,715 hectares) of wildlife habitat; restore and develop 3,527 acres (1,427 hectares) of habitat for waterfowl and other wetland-dependent species; and maintain and enhance 1,091 acres (442 hectares) of habitat for staging waterfowl. The wetland restoration would also provide water and soil conservation benefits to area landowners.

Since the project began in 1989, over 2,130 acres (860 hectares) of wetland and upland habitat have been protected and restored by Ducks Unlimited Canada (DUC). Additionally, since the 1970s, the Province of Ontario has protected a further 1,840 acres (745 hectares) within the Matchedash Provincial Wildlife Area. Examples of work include restoring stagnant ponds with water control structures and native plants; establishing native grasslands in upland areas; rejuvenating oak savanna using prescribed burns; and continuing property acquisition. As recently as 2010, federal and non-governmental organization (NGO) partners replaced infrastructure at early restoration sites. A 2001 report* indicated that "although initially established as a 15-year venture, it has been acknowledged since the first review of the (NAWMP) Plan in 1993–94 that completion of the NAWMP objectives at Matchedash Bay would take at least until 2010."

Today, the Matchedash-Tiny-Marl (MTM) Conservation Association and its partners (DUC and the Ontario Ministry of Natural Resources) implement biological inventory and monitoring, management of three Provincial Wildlife Areas (including Matchedash Bay), controlled hunting, outdoor recreation, and education programs. The predominant activities of the area describe a NAWMP success story: bird watching; photography; botany; hunting; fishing; trapping; canoeing; and boating. (For more about the MTM Conservation Association, see *www.tinymarsh.on.ca*).

Quebec: Baie-du-Febvre / Lac Saint-Pierre

The floodplains of Lac Saint-Pierre were recognized as a Ramsar site in 1988, and the region was designated a UNESCO World Biosphere Reserve in 2000. Located on the south shore of Lac Saint-Pierre along the St. Lawrence River, the Baie-du-Febvre is recognized as one of Quebec's most important spring staging areas for waterfowl, including thousands of Snow Geese as well as Canada Geese, American Black Duck, Mallard, Pintail, American Wigeon, Gadwall, Northern Shoveler, and Wood Duck. The flooded areas also provide habitat for shorebirds, amphibians, reptiles, and fish.

The Baie-du-Febvre project was developed to prevent extensive agricultural use from reducing the quality and quantity of waterfowl and fish habitat. The goals were to secure 1,450 acres (587 hectares) of prime floodplain habitat and restore and enhance another 1,240 acres (501 hectares). Activities such as creating permanent wetlands, open-water ditches, and pools have maintained – and in some cases increased – breeding and migrating populations of waterfowl, fish, and other wildlife, while enabling some agricultural uses to continue.

* Wilson, W.G. and E. D. Cheskey, 2001. Matchedash Bay Important Bird Area Conservation Plan. Canadian Nature Federation, Bird Studies Canada, Federation of Ontario Naturalists. 28 pp.

Target program areas in the Eastern Habitat Joint Venture.

Aerial view of Commune Baie-du-Febvre after restoration.

Quebec Ministry of Natural Resources and Wildlife

Aerial view of Commune Baie-du-Febvre before restoration.

Ducks Unlimited Canada

Over time, some wetland segments deteriorated and no longer fulfilled their wildlife habitat potential, so in 2008, DUC and the Quebec Ministry of Natural Resources and Wildlife began an enhancement project to address sediment accumulation and proliferation of dense emergent vegetation. They replaced water control structures, re-profiled embankments, and installed fish ponds. Between 2008 and 2010, the two organizations restored 47 acres (19 hectares) at a cost of approximately $725,000 CAD. This project prompted local partners to update the site's conservation plan as part of the broader conservation and implementation plan for the Lac Saint-Pierre region.

The EHJV's 22-year investment in Baie-du-Febvre has enabled a harmonious balance to be struck among wildlife, agriculture, and recreational pursuits.

Atlantic: Grand Lake Meadows, New Brunswick

Grand Lake Meadows (GLM), the largest inland wetland complex in New Brunswick, consists of over 12,500 acres (5,050 hectares) of mixed sedge meadows, flooded rushes, hardwood swamps, and peat bogs. The area is significant for migratory birds, supporting eight species of waterfowl that breed in the wetlands and one of the largest documented populations of Yellow Rail in North America. The meadows are adjacent to the Portobello Creek National Wildlife Area and together these areas provide over 19,760 acres (8,000 hectares) of contiguous floodplain habitat.

The initial goals of the GLM project were to secure 3,100 acres (1,255 hectares) of floodplain habitat to support existing breeding and migrating wildlife populations; develop suitable portions to increase wildlife production; and eventually secure the remainder of the GLM area. A later objective was to declare the area as a provincial Wildlife Management Area complete with a management plan, allowing for the construction of additional impoundments, nesting structures, and public access for interpretation.

In 1996, the New Brunswick Department of Transportation announced that the twinning of the Trans-Canada Highway would be routed through the GLM and would infill approximately 140 acres (57 hectares) of wetland, nearly half of which had been purchased under the NAWMP. A mitigation/compensation team of EHJV partners successfully negotiated an agreement with the Province that included the EHJV acquiring 820 acres (332 hectares) of wetlands and 216 acres (87 hectares) of floodplain island habitat in and around the GLM.

In 2003, the GLM was designated a provincial Protected Natural Area. To date, approximately 65 percent (~8,030 acres or 3,250 hectares) of the GLM has been secured through acquisition. This project has demonstrated the commitment and determination of the NAWMP partnership in the EHJV.

The future holds challenges and threats to the conservation of waterfowl and their habitats, but given past experience, the NAWMP partnership is ready for the challenge.

For more information, contact Patricia Edwards, Eastern Habitat Joint Venture Coordinator, (506) 364-5085, patricia.edwards@ec.gc.ca.

Contributions ($CAD)*

	2011	Total (1986-2011)
Total	25,366,961	430,820,514

Accomplishments (Acres)**

	2011***	Total (1986-2011)
Secured	16,334	1,406,757
Enhanced	13,509	599,249
Managed	108,117	1,277,147
Influenced	33,495,862	60,359,462

* Contributions include U.S. federal, U.S. non-federal, and Canadian.

** 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.

***2011 acres reported correspond to period acres.

DID YOU KNOW?

Scope: The EHJV contains 780 million acres (315 million hectares) and spans the six provinces of Ontario, Quebec, New Brunswick, Nova Scotia, Prince Edward Island, and Newfoundland and Labrador, encompassing one-third of Canada's landmass. It includes six of twelve Canadian Bird Conservation Regions: 3,7,8,12,13 and 14.

Major Habitat Types: The EHJV supports 30% of Canada's wetlands, including more than 120 million acres (48 million hectares) of fresh and tidal wetlands. Important habitats include coastal bays and salt marshes, lakeshore marshes, floodplain wetlands, and boreal forest wetlands.

Key Waterfowl Species: Thirteen priority waterfowl species contribute to a significant portion of the continental populations, and an additional four species are significant provincially. The 13 species include American Black Duck, Mallard, Ring-necked Duck, Common Goldeneye, Common Eider (3 races), Green-winged Teal, and Canada Goose (5 populations). The habitat within the EHJV supports 95% of the continental population of American Black Duck and 80% of the southern race of Common Eider. The Atlantic and North Atlantic populations of Canada Goose are important birds for hunters in the Atlantic Flyway and breed exclusively within the EHJV.

Since the EHJV was Established in 1989:

- Wetland policies, designed to protect provincial wetland habitats, have been developed in New Brunswick, Prince Edward Island, and Nova Scotia.
- The Municipal Stewardship Program in Newfoundland and Labrador has successfully negotiated 28 stewardship agreements offering protection to 35,000 acres (14,200 hectares) of inland and coastal wetlands and influencing a further 400,000 acres (161,900 hectares).
- The provinces of Ontario and Quebec have both established initiatives (*Far North Act* and *Le Plan Nord*, respectively) in central Canada's boreal forest designed to balance socio-economic interests with the protection of habitat and natural resources.

Aerial view of the Moose Ridge project near McGowan's Corner in the Grand Lake Meadows, New Brunswick.

Kevin Connor, New Brunswick Department of Natural Resources

Rush Lake in the Grand Lake Meadows, New Brunswick.

Rob Capozi, New Brunswick Department of Natural Resources

American Black Ducks.
Ducks Unlimited Canada

Species Joint Ventures

Lesser Snow Goose.
Jared Hobbs

Species joint ventures are international in scope, spanning North America and including circumpolar countries. These joint ventures focus on critical science needs to inform the management of over 20 species (50+ populations) and their related habitats. Additionally, research directed through the species joint ventures addresses questions for other bird species that share the habitats.

Black Duck Joint Venture

www.blackduckjv.org

The need for a joint venture dedicated to American Black Ducks was identified and recommended in the original 1986 NAWMP. The 1986 Plan and the 1998 and 2004 updates have influenced the directions and goals of the Black Duck Joint Venture (BDJV) since its establishment in 1989. Collectively, the BDJV and the associated habitat joint venture partners within the range of black ducks have made important advances, but much work remains to be done.

Part of the BDJV's current research focus aims to support habitat joint venture conservation efforts within the Mississippi and Atlantic Flyways. Recently, the BDJV has supported graduate student Kurt Anderson, a biologist with Ducks Unlimited Inc. (DUI), in his research to determine the migration ecology of black ducks as a first step to evaluating migratory stopover habitat use. Migration has profound consequences for the conservation of black ducks, yet the transition between wintering and breeding areas remained virtually unknown – until now.

DUI researchers captured 68 adult female black ducks during the winters of 2007–2008 and 2008–2009 in Delaware, New Jersey, New York, Ohio, and Virginia and outfitted the birds with solar-powered satellite transmitters. Thirteen black ducks provided data during the fall migration, and 32 during the spring migration. The data enabled researchers to track the birds' migration routes, identify major migratory stopovers, and examine habitat use.

Results from this study indicate that:

- The single most important migration route extends along the Atlantic coast from eastern Canada to Virginia. This corridor is followed by more than 50 percent of black ducks wintering in New Jersey, as well as a large proportion of those wintering on the Delmarva Peninsula. Nine black ducks carrying transmitters followed this route during spring migration.
- Other important migration routes are along the Hudson River Valley and St. Lawrence River and from Ontario and western Quebec through New York to Chesapeake Bay.

DID YOU KNOW?

Scope: The BDJV includes the Canadian provinces of Ontario, Quebec, New Brunswick, Nova Scotia, Prince Edward Island, and Newfoundland and Labrador, and fourteen eastern U.S. states.

Species: The American Black Duck population is estimated to be stable at 549,000 birds. The NAWMP population goal is 830,000.

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

Since the BDJV was Established in 1989:

- Over $4.3 million from the BDJV and its partners have supported research on black duck ecology and management.
- The BDJV has successfully developed cooperative banding and survey programs, which support the international harvest management of American Black Ducks.

Releasing American Black Ducks during the migration study.
Richard B. Smith, Ducks Unlimited Inc.

A satellite transmitter attached to an American Black Duck.
Jacob Bowman,
University of Delaware

- Most black ducks captured in Ohio followed a route in the Mississippi Flyway through Michigan, passing through Lake St. Clair, Saginaw Bay, and/or St. Marys River, before crossing into Ontario.
- Two black ducks captured on the western shore of Chesapeake Bay crossed into the Mississippi Flyway by migrating north through the Great Lakes region, but none of the black ducks captured in Ohio crossed into the Atlantic Flyway.
- Black ducks nesting in Ontario and Quebec began migrating south on October 25, on average, and arrived at their wintering grounds on December 4. Those birds breeding in Labrador departed around October 5 and arrived at their wintering grounds on approximately November 18.
- Spring departure dates varied by state, from March 28 to May 22. Black ducks captured in the Mississippi Flyway migrated 806 kilometres (501 miles), on average, and arrived at their breeding grounds about two weeks earlier (April 30) than Atlantic Flyway migrants, which travelled about 1,350 kilometres (843 miles), had more (but not longer) stopovers, and arrived around May 17.

Over the years, specific actions identified for the BDJV under the NAWMP have included:

- Protecting approximately 130,000 acres (52,600 hectares) of breeding, migrating, and wintering habitat;
- Determining the important factors influencing population status and dynamics with an emphasis on habitat requirements/availability;
- Initiating expanded breeding population surveys;
- Increasing habitat carrying capacity;
- Developing and using adaptive resource management tools to ensure that habitat work addresses the priority conservation needs of waterfowl; and
- Improving knowledge of the links between habitat dynamics and waterfowl population resources to design and deliver more effective waterfowl conservation programs.

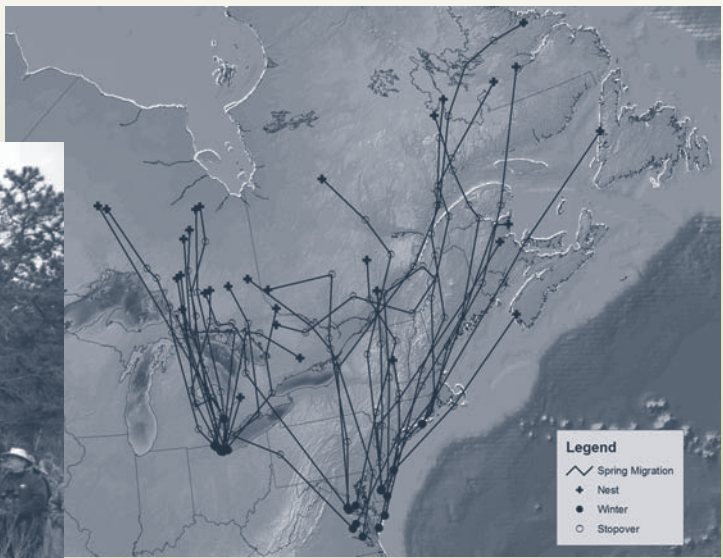
Once the outcomes of this work are connected to other BDJV research efforts, our hope is to model the habitat requirements of black ducks across their entire range. For more information on this migration project, please visit *www.ducks.org/related/black-duck-study*.

For more information, contact Brigitte Collins, Black Duck Joint Venture Coordinator, (613) 949-8264, brigitte.collins@ec.gc.ca.

Contributions ($CAD)*

	2011	Total (1986-2011)
Total	663,526	15,747,121

* Contributions include U.S. federal, U.S. non-federal, and Canadian. These contributions do not contain NAWCA funding.



Black ducks follow migration corridors in the Mississippi and Atlantic Flyways as they travel between breeding and wintering areas.
Ducks Unlimited Inc.

Arctic banding of White-fronted Geese.
Kiel Drake

Arctic Goose Joint Venture

www.agjv.ca
www.pcoa.ca
www.gansodelartico.com

The Arctic Goose Joint Venture (AGJV) marked its 25th anniversary alongside the NAWMP, as it was one of the three joint ventures noted in the original NAWMP Plan and discussed at the first committee meeting in 1986. The AGJV generates scientific information related to populations, management, habitats, and ecosystem impacts throughout the annual life cycles of 28 populations of seven goose species in North America.

Species within the purview of the AGJV are circumpolar and are extremely important to consumptive and non-consumptive users throughout North America and beyond. Current AGJV projects include efforts in Canada, the United States, Mexico, and Russia, and the AGJV also addresses geese in Greenland, Iceland, and Ireland.

One of the AGJV's strengths is its ability to support both long- and short-term data collection that contributes significantly to broad ecosystem issues. Over the years, the information generated through the AGJV has been used to address issues of continental concern, such as overabundant populations of Snow and Ross's Geese, and improve the management of many populations, including Greater White-fronted Geese and Atlantic Flyway Canada Geese.

The overabundance of light geese and the related habitat damage have been an important focus of the AGJV for well over a decade. The AGJV charged an international working group with documenting the overabundance of some populations of geese and the extensive Arctic and sub-Arctic habitat damage related to their overabundance. The AGJV has published a series of reports about this issue. The first report, *Arctic Ecosystems in Peril*, recommended management actions, including the urging of responsible public agencies in Canada and the United States to implement proactive measures to reduce midcontinent white goose populations by about 50 percent. Subsequently, several strategies for reducing populations have been undertaken in both countries.

The AGJV recently endorsed the latest report in this series, entitled *Evaluation of Special Management Measures for Midcontinent Lesser Snow Geese and Ross's Geese*. This report is the result of extensive work by an international working group to document the effects of measures employed since 1999. The report will be distributed to management agencies for their review and consideration early in 2012.

For more information, contact Deanna Dixon, Arctic Goose Joint Venture Coordinator, (780) 951-8652, deanna.dixon@ec.gc.ca.

Contributions ($CAD)*

	2011	Total (1986-2011)
Total	1,480,137	37,945,328

* Contributions include U.S. federal, U.S. non-federal, Canadian, and other countries. These contributions do not contain NAWCA funding.

Ross's Goose.
Jason Caswell

DID YOU KNOW?

Scope: The AGJV spans North America and includes other circumpolar countries. It covers 924 million acres (374 million hectares) and encompasses Bird Conservation Regions 2, 3, 4, 6, 7, and 8.

Species: There are 28 populations among seven species: Greater White-fronted, Emperor, Snow, Ross's, Brant, Cackling, and Canada Geese.

Since the AGJV was Established in 1986:

- The total support of nearly $40 million has resulted in more than 80 projects funded through the AGJV. Funding is primarily devoted to surveys, banding, and research, which have provided the information needed for management agencies to more effectively maintain geese populations near the objectives.

The AGJV bids farewell to both Technical Committee Co-Chairs, Tim Moser (USFWS) and Dale Caswell (CWS), who are retiring. Their leadership in the AGJV will be sorely missed.
Mike Johnson, North Dakota Game and Fish

Early spring flock of Long-tailed Ducks and Scoters.
Tim Bowman,
U.S. Fish and Wildlife Service

Sea Duck Joint Venture

www.seaduckjv.org

In 1998, the Sea Duck Joint Venture (SDJV) became the third species joint venture established under the NAWMP. Sea ducks were not initially afforded special consideration, as most sea duck populations were thought to be relatively stable. Shortly thereafter, however, the eastern population of Harlequin Duck was assessed by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) as Endangered and later as Special Concern, and in 2000, the eastern population of Barrow's Goldeneye was also designated Special Concern. In addition, in the 1990s, Spectacled Eider and the Alaska breeding population of Steller's Eider were each listed by the U.S. Fish and Wildlife Service as Threatened.

These listings, combined with increasing harvest of this poorly understood group of birds, fuelled concern for sea ducks. An analysis of existing surveys and harvest data, as well as data from new studies, revealed population declines in 10 of the 15 North American sea duck species. Subsequently, in 1997, federal, provincial, state, and NGO management agencies proposed forming the SDJV to coordinate the conservation of sea ducks at a continental scale.

The SDJV partners agreed to focus on the conservation needs of all sea ducks in North America and, where possible, to develop partnerships with adjacent circumpolar countries sharing these populations. The mandate of the SDJV was to coordinate the review of species' status and information needs based on available data and to establish immediate research and conservation priorities for each of the 15 species. This work was then to be used to determine long-term conservation strategies.

One of the SDJV's notable successes has been hosting four Sea Duck Conferences and associated workshops in Victoria, British Columbia (2002), Annapolis, Maryland (2005), Quebec City, Quebec (2008), and Seward, Alaska (2011). These conferences have evolved from a predominantly North American to an increasingly international forum with representation from at least 13 countries at the 2011 conference. Both the conferences and the associated workshops have provided venues for researchers from across the Northern hemisphere to exchange information about sea duck biology and management and to foster international collaboration within the sea duck community.

Sea ducks are vulnerable to a continually increasing range of threats, such as nearshore wind farms sited in feeding areas and on migration routes, increased shipping in formerly pristine northern areas, and significant disease outbreaks among colonial nesting eiders. While the SDJV and its partners have learned and accomplished much in 13 years, the NAWMP will continue to play a critical role in the conservation and management of sea ducks.

For more information, contact Patricia Edwards, Sea Duck Joint Venture Coordinator, (506) 364-5085, patricia.edwards@ec.gc.ca.

Contributions ($CAD)*

	2011	Total (1986-2011)
Total	305,148	10,769,514

* Contributions include U.S. federal, U.S. non-federal, and Canadian. These contributions do not contain NAWCA funding.

Logos from the four conferences hosted by the Sea Duck Joint Venture.

DID YOU KNOW?

Scope: All of Canada and the United States.

Species: Twenty-two recognized populations among 15 sea duck species (tribe 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.

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

Since the SDJV was Established in 1998:

- The SDJV has endorsed or funded over 125 projects to study population delineation, migration patterns, habitat use, breeding and survival estimates, diet and energetics, and contaminants and disease.
- Embracing emerging technologies like satellite radio telemetry and genetic techniques has enabled the SDJV to establish affinities among wintering, molting, staging, and breeding sites for 11 species.
- In 2009, the SDJV launched the multi-partner, bi-national Atlantic and Great Lakes Sea Duck Migration Study (www.seaduckjv.org/atlantic_migration_study.html). By 2013, over 250 satellite transmitters will be deployed in Surf Scoter, Black Scoter, White-winged Scoter, and Long-tailed Duck to map annual migration patterns, identify highly significant habitats, and estimate annual fidelity to these sites.

Plenary session at the 4th International Sea Duck Conference held in Seward, Alaska, in September 2011.
Tim Bowman, U.S. Fish and Wildlife Service

Thank you to all our partners who supported the Canadian program by contributing in 2011:

Canada

Acadia University
Advantage Oil & Gas Ltd.
Agriculture and Agri-Food Canada – Prairie Farm Rehabilitation Administration
Alberta Environment
Alberta Sport, Recreation, Parks & Wildlife Foundation
Alberta Sustainable Resource Development
AltaGas Services Inc.
Anderson Exploration Ltd.
Antelope Land Services Ltd.
Apache Canada Ltd.
ARC Resources Ltd.
ArcticNet Inc.
Atco Electric Ltd.
Baytex Energy Ltd.
BC Hydro
BC Parks
Bluenose Coastal Action Foundation
Bonavista Petroleum Ltd.
Boyd Petro Search
British Columbia Cattlemen's Association
British Columbia Ministry of Environment
British Columbia Waterfowl Society
Camrose County
Canada Private
Canadian National Railway
Canadian Natural Resources Ltd.
Canadian Superior Energy Inc.
Cavalier Land Ltd.
Cenovus Energy Inc.
Central Global Resources, ULC
Centrica Canada Limited
Challenger Development Corporation
Churchill Northern Studies Centre
Clean Annapolis River Project
Coastal Resources Ltd.
Cochin Pipe Lines Ltd.
Columbia Basin Trust
Comox Valley Farmer's Institute
ConocoPhillips Canada
Cornerstone Agri-Environmental Group Plan
Cornwallis Headwaters Society
Crescent Point Resources Limited Partnership
Crew Energy Inc.
Culane Energy Corporation
Dalhousie University
Delphi Energy Corp.
Delta Waterfowl Foundation
Ducks Unlimited Canada
East Kootenay (Regional District of)
Edwards Land (Calgary) Ltd.
Elfros No. 307 (Rural Municipality of)
Enbridge Pipelines Inc.
EnCana Corporation
EnerMark Inc.
Environment Canada
Evolve Surface Strategies Inc.
ExxonMobil Canada Energy
Fondation de la faune du Québec
Friends of Cornwallis River Society
Galleon Energy Inc.
Grande Prairie (City of)
Habitat Conservation Trust Foundation
Habitat For Humanity
Harvest Energy
Heritage Surface Solutions Ltd.
Horseshoe Land Ltd.
Human Resources and Social Development Canada
Imperial Oil Resources Ltd.
Indian and Northern Affairs Canada
Iron Ore Company of Canada
James Richardson International
Kings Community Economic Development Agency
Kings County (Muncipality of)
Land Solutions Inc.
Landwest Resource Services Ltd.
Lockhorn Exploration Ltd.
LXL Consulting Ltd.
Majestic Land Services Ltd.
Manitoba Conservation
Manitoba Habitat Heritage Corporation
Manitoba Hydro
Manitoba Water Stewardship
Manitoba Wildlife Federation Habitat Foundation
Manitok Exploration Inc.
Maverick Land Consultants Inc.
MEC Operating Company
MGV Energy Inc.
Miniburn County (No. 27)
Minco Gas Co-op Ltd.
Ministère de l'Éducation, du Loisir et du Sport du Québec
Ministère des Ressources naturelles et de la Faune
Ministère du Développement durable, de l'Environnement et des Parcs du Québec
Mistik Management Ltd.
Mountain Equipment Co-op
Musquodoboit Lumber Ltd
NAL Resources Limited
Nanaimo (Regional District of)
Natural Resources Canada
Natural Sciences and Engineering Research Council of Canada
Nature Conservancy of Canada
New Brunswick Department of Environment
New Brunswick Department of Natural Resources
New Brunswick Regional Development Corporation
Newfoundland-Labrador Department of Environment and Conservation
Niven & Associates Inc.
Northrock Resources Ltd. (Canada)
Northwest Territories Department of Environment and Natural Resources
Nova Scotia Crown Share Land Legacy Trust
Nova Scotia Department of Agriculture
Nova Scotia Department of Environment
Nova Scotia Federation of Agriculture
Nova Scotia Natural Resources
Ontario Ministry of Natural Resources
OutSource Seismic Consultants Inc.
Pan Canadian Petroleum Limited
Paramount Energy Trust
Parks Canada
Pengrowth Corporation
Penn West Petroleum Ltd.
Pierce Reston Inc.
PotashCorp
Prairie Mines and Royalty Ltd.
Prince Edward Island Department of Agriculture
Prospect Oil and Gas Management Ltd.
Qualico Developments
Ravenswood Developments Inc.
Remington Development Corporation
Richardson Foundation Inc.
Richland Petroleum Corporation
Rife Resources Ltd.
Rocky View (Municipal District of)
Sabretooth Energy Ltd.
Saskatchewan Crop Insurance Corporation
Saskatchewan Environment
Saskatchewan Watershed Authority
SaskPower
SaskTel
Scott Land and Lease Ltd.
Shell Canada Products Ltd.
Shell Environmental Fund
Signalta Resources Limited
Simon Fraser University
Sobey Foundation
Société de la faune et des parcs du Québec
Société Duvetnor Ltée
Société Protectrice des Eiders de l'Estuaire
Spur Resources Ltd.
St Paul (County of)
Standard Land Company Inc.
Stettler County
Strathcona (County of)
Suncor Energy Inc.
TERA Environmental Consultants
The Donner Canadian Foundation
Thompson & Associates, Inc.
TransAlta Corporation
TransGas Limited
Traverse Landgroup Ltd.
Trident Exploration Corp.
Trilogy Energy Corp.
TriStar Oil & Gas Ltd.
Tula Foundation
Turtle Mountain Conservation District
Twin Butte Energy Ltd.
Université de Sherbrooke
Université du Québec à Montréal
Université du Québec à Rimouski
Université Laval
Upper Souris Watershed Association
Vancouver Foundation
Vancouver International Airport Authority
Vermilion Energy Trust
Viterra
WAM Development Group
Westfire Energy Ltd.
Weyerhaeuser
Wildlife Habitat Canada
Yukon Department of Energy, Mines and Resources
Yukon Department of Environment
Zargon Energy Trust

Other

Wrangel Island Nature Reserve

United States

Alabama Division of Wildlife and Freshwater Fisheries
Alliance Pipeline Limited Partnership
Arizona Game and Fish Department
Arkansas Game and Fish Commission
Atlantic Flyway Council
Bayer CropScience Inc.
Boreal Songbird Initiative
California Department of Fish and Game
Campion Foundation
Cargill Limited
Central Flyway Council
Colorado Division of Wildlife
Davis LLP
Delaware Division of Fish and Wildlife
Delta Waterfowl Foundation
Ducks Unlimited, Inc.
Florida Fish and Wildlife Conservation Commission
Frank J. Chapman Fund
Friends of the Nature Conservancy of Canada
Georgia Wildlife Resources Division
Illinois Department of Natural Resources
Indiana Department of Fish and Wildlife
Iowa Department of Natural Resources
Kansas Department of Wildlife and Parks
Kentucky Department of Fish and Wildlife Resources
Louisiana Department of Wildlife and Fisheries
Louisiana Pacific Corporation
Massachusetts Division of Fisheries & Wildlife
Michigan Department of Natural Resources
Minnesota Division of Fish and Wildlife
Mississippi Department of Wildlife, Fisheries and Parks
Mississippi Flyway Council
Missouri Department of Conservation
National Fish and Wildlife Foundation
Nebraska Game and Parks Commission
Nevada Department of Wildlife
North Carolina Wildlife Resources Commission
North Dakota Game and Fish Department
Oceans North Canada
Ohio Division of Wildlife
Oklahoma Department of Wildlife Conservation
Open Space Institute
Pennsylvania Game Commission
PEW Charitable Trusts
South Carolina Department of Natural Resources
South Dakota Game, Fish and Parks Department
Syngenta Crop Protection Inc.
Tennessee Wildlife Resources Agency
Texas Parks and Wildlife Department
The Nature Conservancy
Transcanada Pipelines, Ltd.
U.S. Fish and Wildlife Service
U.S. Forest Service
U.S. Geological Survey – Biological Resources Division
Utah Division of Wildlife Resources
Utah State University
Vermont Department of Fish and Wildlife
West Virginia Division of Natural Resources
Wisconsin Department of Natural Resources

We thank all our funding partners and apologize if we have inadvertently omitted any contributors from this list.

Background Image:

Canvasback.

Ducks Unlimited Canada

Canadian conservation partners are grateful for the financial support provided under the *North American Wetlands Conservation Act* and by all United States and Canadian partners.

Contacts

For information on NAWMP and NAWCA in Canada, or for additional copies:

NAWCC (Canada) Secretariat
Wetlands Office
Canadian Wildlife Service
Environment Canada
15th Floor,
351 St. Joseph Boulevard
Gatineau, Quebec K1A 0H3
(819) 934-6036
nawmp@ec.gc.ca

To view this publication electronically

nawmp.ca

North American Wetlands Conservation Act Funding

wetlandscanada.org

North American Bird Conservation Initiative

nabci.net

Map of Bird Conservation Regions

http://www.nabci-us.org/map.html

Publication également disponible en français.