Canadian HabitatMatters

2008 Annual Report

Northern Wetland –
Lesser Scaups, from the
2009 Canadian Wildlife Habitat
Conservation Stamp Series
Artist: Robert Bateman

CONTENT:

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.

Wetlands are one of the most biologically diverse ecosystems on the planet – one quarter of the world's wetlands are found in Canada. These wetlands provide essential habitat for wetland-associated migratory birds, especially North American waterfowl, and many other animal and plant species. As part of Canada's commitment to ensure healthy waterfowl populations for future generations, conservation partners teamed up with the United States and Mexico to create one of the most successful conservation initiatives in the world – the North American Waterfowl Management Plan (NAWMP).

Through sound science, partnerships and a landscape approach, Canadian partners have secured 2.9 million hectares (7.3 million acres) of important wetland and associated upland habitat thanks to the generous on-going support received from NAWMP and NAWCA partners in Canada and the United States, including the North American Wetlands Conservation Act (NAWCA) fund. A total investment of $1.5 Billion CDN to date has enabled Canadian partners to continue to work towards ensuring North American waterfowl and other wetland-associated migratory bird populations remain healthy and abundant throughout their breeding, nesting, staging or wintering cycles.

This report highlights Canada's 2008 NAWMP/NAWCA accomplishments.

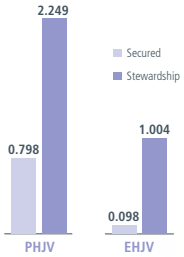
North American Waterfowl Management Plan
Plan nord-américain de gestion de la sauvagine
Plan de Manejo de Aves Acuáticas Norteamérica

Published in 2009

National Overview

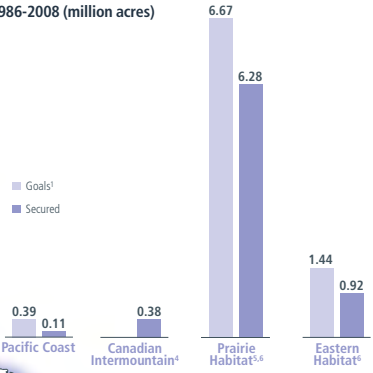
Updated PHJV and EHJV Implementation Plan Goals[6]

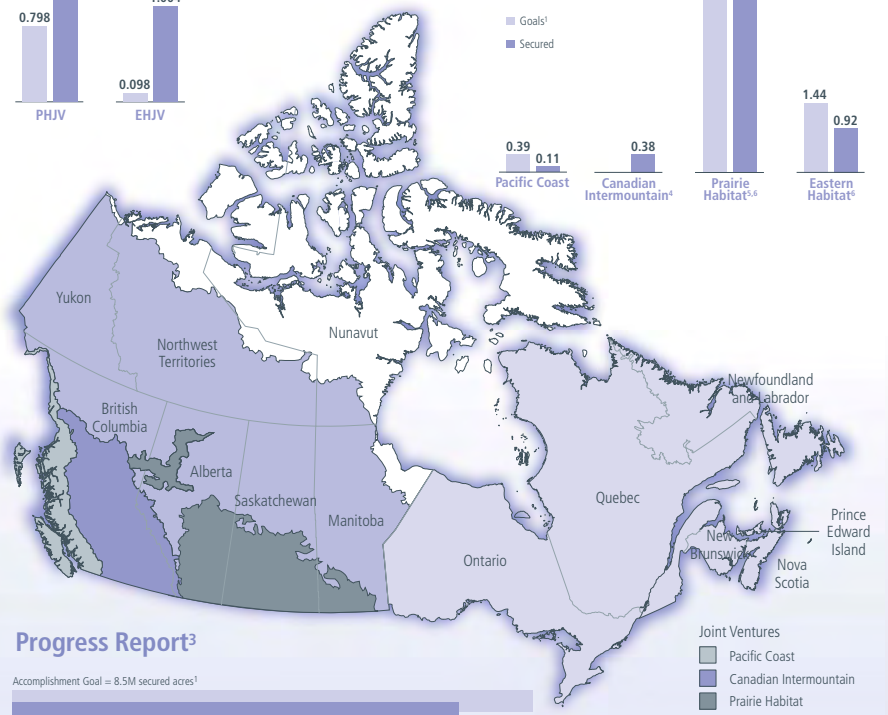
For 2007-2012 (million acres)



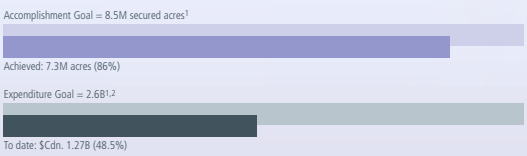
NAWMP and NAWCA-funded Habitat Conserved

For 1986-2008 (million acres)





Progress Report[3]



1. These goals are based on the 2004 NAWMP Update.
2. Based on $Cdn. = $U.S. 0.93. Includes securement, enhancement and management costs.
3. Data includes PHJV, PCJV and EHJV only.
4. Habitat goals are being developed on a focus area-specific basis within the CIJV.
5. Secured acres include habitat conserved prior to 1986.
6. New habitat objectives have been developed for the PHJV and EHJV and will be reported on in the next *Canadian Habitat Matters* Annual Report.

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) conservation 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 directly result in sustainable land use that conserves habitats for waterfowl and other wildlife. Stewardship results are tracked as influenced acres, not secured acres, as there are no legal land agreements or the agreement is less than 10-years duration.

Across Canada, 2008 marked a year of accomplishment. Almost every Joint Venture in Canada completed new 5-year North American Waterfowl Management Plan (NAWMP) implementation or strategic plans. The plans will serve as tools for measuring and attaining planning objectives and goals. For example, some Joint Ventures have set habitat objectives and population goals and their plans describe the programs and strategies they will undertake to achieve their goals. All plans are based on the most up-to-date science and incorporate results and recommendations from the final report of the NAWMP Continental Assessment.

The Prairie Habitat Joint Venture (PHJV) released its 5-year (2007 to 2012) implementation plan in 2008 and the Eastern Habitat Joint Venture (EHJV) Board endorsed all six provincial implementation plans with the comprehensive EHJV Plan coming soon. Both the Pacific Coast Joint Venture (PCJV) and Canadian Intermountain Joint Venture (CIJV) are currently undertaking their implementation planning.

Each of the three Species Joint Ventures released new strategic plans to guide their NAWMP implementation until 2012/2013. The Black Duck Joint Venture (BDJV) Strategic Plan now includes program-specific implementation plans to help ensure that NAWMP goals are met. In addition to updating strategic plans, the Arctic Goose Joint Venture (AGJV) created a new website (www.agjv.ca) that includes links to their new strategic plan, current issues and the popular Snow Goose Cookbook. The Sea Duck Joint Venture (SDJV) sponsored the Third International Sea Duck Conference in November 2008. Held in Quebec City, it was a very successful event with over 66 speakers and 48 poster presentations, including plenary speakers from Finland, Iceland and Alaska.

Other major Joint Venture accomplishments in 2008 include the contributions made by PCJV partners to the production of an extensive science-based assessment of the current condition of biodiversity in British Columbia. This important report draws attention to wetland ecosystems in peril and calls for urgent action to reduce wetland loss.

In the CIJV, the Nature Conservancy of Canada announced the largest private land purchase, for conservation purposes, in Canadian history. The securement of a historic 55,000 hectares (136,000 acres) bordering the Creston Valley Wildlife Management Area will ensure the long-term integrity of the critically important Creston Valley wetlands.

The PHJV held a major Science and Policy Forum in April 2008 as well as a Boreal Forest Forum in December 2008; both brought together scientists, policy makers and other experts to address conservation issues. The Science and Policy Forum focused on issues affecting wetlands in prairie agricultural landscapes. The Boreal Forum raised awareness of the conservation issues facing the Western Boreal Forest, an area that provides critical habitat for millions of waterfowl that depend on its vast wetland complexes to breed, stage and moult. Ducks Unlimited Canada has been instrumental in influencing the protection of millions of hectares of these important boreal wetlands.

Also in 2008, the EHJV reviewed its programs that assess waterfowl responses to the Joint Venture's habitat conservation programs and found that agricultural habitats in Atlantic Canada were under-represented by current surveys. In response, an additional survey was conducted in 2008 in New Brunswick and Nova Scotia. Initial survey results indicate that agricultural landscapes in these provinces provide important habitat for breeding waterfowl.

The federal grant funds received through the 1989 North American Wetlands Conservation Act, and the matching U.S. non-federal funds, have been key to the Canadian NAWMP program's success and longevity.

The Joint Venture plans are based on the most up-to-date science and incorporate results and recommendations from the final report of the NAWMP Continental Assessment.

The U.S. and Canadian North American Wetlands Conservation Councils and the International North American Waterfowl Management Plan Committee (Plan Committee) met concurrently in Prince Edward Island in July 2008. The meeting provided an excellent opportunity to present both Dr. Steve Wendt (Canadian Wildlife Service, retired) and Dr. Michael Anderson (Ducks Unlimited Canada) with the prestigious 2007 International Canvasback Awards and to receive deserving accolades from many colleagues in attendance. The award recognizes their commitment and international contributions to NAWMP efforts.

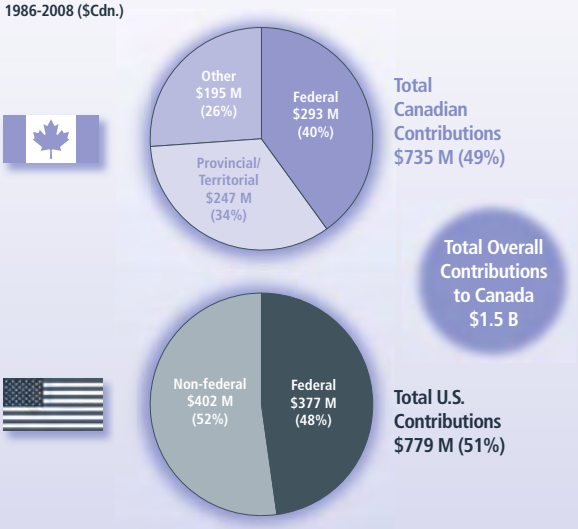
It was the first time in recent years that NAWCC (Canada) and the Plan Committee met jointly, responding to the recommendations of the 2007 NAWMP Continental Assessment Final Report (the U.S. Council previously met with the Plan Committee in 2007). In their joint session, the two groups focused their discussions on policy and science. The Plan Committee provided NAWCC (Canada) with an overview of four new working groups that were formed in response to the NAWMP Continental Assessment Final Report with an in-depth look at the current undertakings of the Science Working Group and Policy Working Group. Members of NAWCC (Canada) Staff from the PHJV shared the outcomes and recommendations resulting from the PHJV Policy and Science Forum that was held in April 2008.

During the Plan Committee meeting, the EHJV, BDJV and SDJV were the first Canadian Joint Ventures to report to the Plan Committee on their progress toward achieving the objectives of NAWMP as recommended by the NAWMP Contintental Assessment Final Report. In addition, the CIJV, PCJV and PHJV reported to NAWCC (Canada) on their progress in addressing NAWMP Continental Assessment Final Report recommendations. These were followed by a report from the EHJV at the October NAWCC (Canada) meeting. Having received reports from all of the Habitat Joint Ventures, NAWCC (Canada) discussed how it could move forward some of the Assessment recommendations nationally and agreed to focus on three priority areas: communications, policy and science.

As Canadian NAWMP partners embark on the 23rd year of this extraordinary continental partnership program, we acknowledge the many achievements and contributions of our national and international partners to further the conservation of wetlands, waterfowl and other wetland-associated migratory birds. Canadian accomplishments for 2008 are highlighted in this *Canadian Habitat Matters* Annual Report. The federal grant funds received through the 1989 North American Wetlands Conservation Act and the matching U.S. non-federal funds have been key to the Canadian program's success and longevity. Canadian NAWMP partners are grateful for this support and look forward to celebrating the 20th Anniversary of NAWCA in 2009.

Total NAWMP and NAWCA Contributions to Canada

1986-2008 ($Cdn.)



Countries other than Canada and the United States: $173,800.

Joint Venture Facts

Size: The British Columbia (BC) portion of the Pacific Coast Joint Venture (PCJV) includes 218,980 square kilometres (136,000 miles) of landscape, 457,646 kilometres (284,000 miles) of seascape and 30,285 kilometres (19,000 miles) of shoreline.

Major Habitat Types: The BC coast is a complex 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 BC coast, 50 percent of the Pacific Coast trumpeter swan population and over half the Wrangel Island snow goose population.

Provinces and States: The PCJV is an international Joint Venture that includes BC, Alaska, Washington, Oregon, California and Hawaii.

Habitat Joint Ventures

The Pacific Coast Joint Venture *www.pcjv.org*

Biodiversity in British Columbia, including the species and habitats of the Pacific Coast, is globally significant, owing to its extraordinary variety and the degree to which it still remains largely intact. Waterfowl, and the wetlands on which they depend, are key features of BC biodiversity. In July 2008, Pacific Coast Joint Venture (PCJV) partners, along with other contributors working together under the banner of "Biodiversity BC," released a comprehensive, science-based assessment of the current condition of biodiversity in the province, titled *Taking Nature's Pulse: The Status of Biodiversity in British Columbia*. The landmark 268-page report describes the status of terrestrial, freshwater and estuarine biodiversity in the province, and paints a compelling picture of the incredible diversity of species and ecosystems found there. At the same time, the report highlights the urgent need for action to forestall the loss of habitats and species as threats such as ecosystem conversion, alien species and increasingly, climate change, become more prevalent.

Some of the key findings of the Biodiversity BC report reinforce what PCJV partners have understood and promoted regarding wetland conservation:

- Estuaries are of concern in BC because of their rarity and the level of human impacts they are currently experiencing. Even though they make up only 2.3 percent of the BC coastline, estuaries are used by 80 percent of all coastal wildlife, including significant numbers of migratory waterfowl like trumpeter swans, Wrangel Island snow geese and black brant;
- The Fraser Delta provides a vital stopover point for many species of waterfowl and other migratory birds along the Pacific Flyway, including almost the entire global population of western sandpipers (up to 1.2 million birds annually);
- Both localized and widespread threats, including wetland conversion and degradation, urban and industrial pollution, oil spills and sea-level rise linked to climate change, challenge our ability to sustain BC's coastal biodiversity; and
- Gaps in our knowledge of biodiversity in BC create major challenges for effective conservation action.

The findings of *Taking Nature's Pulse* will be powerful tools in the ongoing effort to improve wetland conservation planning in BC and to promote more efficient acquisition and management of private lands with unique ecological values. The Province of BC has already begun to respond to the Biodiversity BC report through the development of a provincial conservation framework; a rigorous science-based

Ninety-five percent of the Canadian and U.S. Pacific brant population winters within the PCJV.
Ducks Unlimited Canada

Surf scoters can, at times, be the most numerous wintering seaduck in the PCJV.
Ducks Unlimited Canada

> … estuaries are used by 80 percent of all coastal wildlife, including significant numbers of migratory waterfowl like trumpeter swans, Wrangel Island snow geese and black brant.

process for ranking and prioritizing species and ecosystems for action. The full Biodiversity BC report is available online at www.biodiversitybc.org, while additional background on the Conservation Framework may be found at www.env.gov.bc.ca/conservationframework.

PCJV partners will be looking to the specific findings of *Taking Nature's Pulse* and to the Conservation Framework rankings for coastal bird species as they embark on their own wetland implementation planning process. The PCJV Implementation Plan will build on the existing Strategic Plan (2003) and will address the major elements identified in the 2007 North American Waterfowl Management Plan Strategic Habitat Conservation Framework: biological planning, conservation design, habitat delivery, monitoring and research. Implementation planning is being led by the PCJV Technical Committee, whose members comprise many of the same experts that contributed to the Biodiversity BC report. The resulting implementation plan will include both priority and general waterfowl and other migratory bird population and habitat targets for priority waterfowl species, in addition to other bird species as knowledge permits. The planning process will also assist with the process of identifying science gaps and options for beginning to address them through research. The outcome will be a comprehensive plan that will be used to inform wetland habitat securement and management decisions in the PCJV for years to come. The PCJV is grateful for the support from its many funding partners, including funds received through the U.S. North American Wetlands Conservation Act.

For more information, contact Laura Maclean, Pacific Coast Joint Venture Coordinator, (604) 666-2241, laura.maclean@ec.gc.ca, www.pcjv.org.

Snow geese fill the air above agricultural fields in the Fraser Delta.
Dan Buffet,
Ducks Unlimited Canada

Contributions ($CN)

	2008	Total (1986-2008)
U.S. Federal	169,294	2,1626,698
U.S. Non-Federal	120,109	20,804,965
Canadian	865,550	129,124,802
Total	1,154,953	171,556,465

Accomplishments (Acres)

	2008	Total (1986-2008)
Secured	956	111,168
Enhanced	415	91,225
Managed*	1,749	89,205
Total**	956	111,168

* New acres under management shown for 2008; all acres shown under total column are managed each year.

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

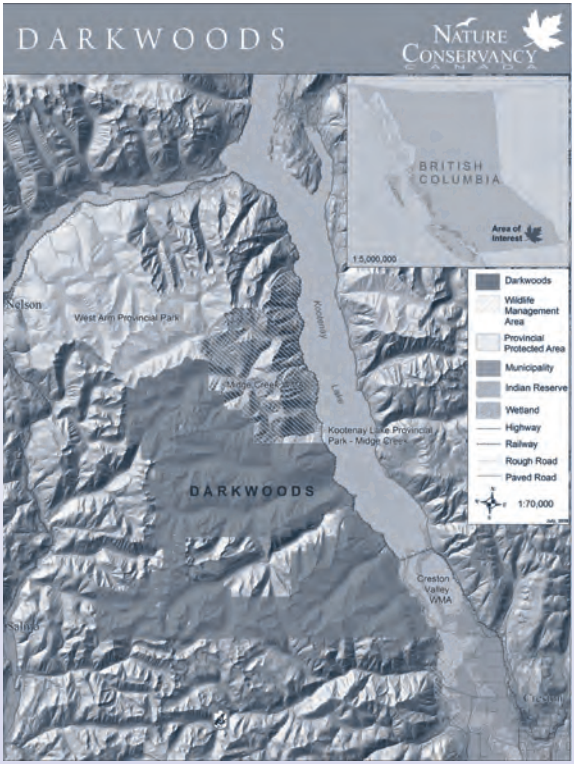
An extensive series of seasonally and permanently flooded wetlands provide habitat for numerous waterfowl and other wildlife species in the Creston Valley Wildlife Management Area.
Ducks Unlimited Canada

Canadian Intermountain Joint Venture
www.cijv.ca

The Canadian Intermountain Joint Venture (CIJV) boasts over 150,000 wetlands within its 3.5-million-hectare (8.6-million-acre) planning area, but perhaps none as captivating as those found within the Creston Valley Wildlife Management Area (CVWMA). Established under British Columbia legislation in 1968, the CVWMA protects 6,880 hectares (17,000 acres) of floodplain along the Kootenay River valley, south of Kootenay Lake and north of the Canada and U.S. border. In the early 1970s, Ducks Unlimited Canada (DUC) installed a series of water control structures, pumps and dykes to transform the Kootenay River flats from a seasonally flooded delta system into a unique complex of highly productive habitats that now support diverse waterfowl and other wildlife species. Altering the water regime in the valley resulted in the creation of a series of permanent and seasonally flooded wetlands, in addition to new upland nesting meadows. In 1994, the CVWMA was designated as a Ramsar Wetland of International Importance in recognition of its significant habitat value to wetland-associated wildlife.

The considerable investment in habitat management made by numerous government and non-government partners in the CVWMA over the intervening years has paid off – the number of nesting duck species has more than doubled and nesting colonies have expanded throughout the entire marsh complex. A communal heronry of over 100 nests has been identified, while the resident population of eagles and ospreys continues to grow. The CVWMA is home to British Columbia's only breeding colony of Forster's terns and its largest breeding colony of black terns, in addition to providing habitat for over 50 terrestrial vertebrate species considered at risk in the province.

Maintaining the habitat value of the CVWMA over time is not without its challenges, necessitating ongoing attention to the management of water levels, noxious weeds, encroaching woody vegetation and public access, amongst other issues. Perhaps the greatest challenge is keeping up the infrastructure associated with the extensive network of over 29 kilometres (18 miles) of dykes and 25 water control structures that allow managers to control water levels. Several decades after it was first installed, this infrastructure began to fail and required replacement. In 2008, DUC invested $115,000, including $20,000 of North American Wetland Conservation Act (NAWCA) funds, to replace and repair aging water management infrastructure in the CVWMA, helping to ensure that the wetland complexes can continue to support viable populations of waterfowl and other wildlife species into the future. The CIJV Implementation Plan, currently under development at the Technical Committee level, will highlight the importance of not



The Nature Conservancy of Canada's 2008 acquisition of the Darkwoods property will benefit the Creston Valley wetlands by providing a buffer and additional habitat connectivity with upland areas.
Nature Conservancy of Canada

To discourage predation, great blue herons nest mostly in large colonies, often located on islands or in wooded swamps such as those found in the Creston Valley Wildlife Management Area.
Frank Leung

only funding the acquisition and protection of new wetlands, but of ensuring that adequate resources are available to sustain the effective functioning of existing properties.

In July of 2008, the Nature Conservancy of Canada, a key partner in the CIJV, announced the purchase of the Darkwoods property immediately to the northwest of the CVWMA. At 55,000 hectares (136,000 acres), Darkwoods represents the single largest private land purchase for conservation purposes in Canadian history. The portion of Darkwoods that abuts the CVWMA will help to ensure the long-term integrity of the Creston Valley wetlands by providing a buffer against logging and development impacts while at the same time providing a safe and secure corridor for the movement of wildlife species into and out of the wetland and valley bottom habitats. Darkwoods directly connects to an existing network of parks and wildlife management areas, including the CVWMA, in total creating a contiguous protected area of more than 101,000 hectares (250,000 acres) within the CIJV.

For more information, contact Laura Maclean, Canadian Intermountain Joint Venture Coordinator, (604) 666-2241, laura.maclean@ec.gc.ca, www.cijv.ca.

North American Wetlands Conservation Act funds play a critical role in protecting and ensuring the subsequent management of the more than 150,000 wetlands found throughout the CIJV planning area.
Bruce Harrison, Ducks Unlimited Canada

The considerable investment in habitat management made by numerous government and non-government partners in the CVWMA over the intervening years has paid off – the number of nesting duck species has more than doubled…

Joint Venture Facts

Size: 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. Sixty-three percent of the area is forested, with over five percent covered by lakes and wetlands, one percent 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 percent of the global Barrow's goldeneye population, and 5 to 10 percent of the global population of harlequin ducks breed in the CIJV. During migration, up to 8 million waterfowl from 38 species use the CIJV wetlands.

Province: British Columbia

Contributions ($CN)

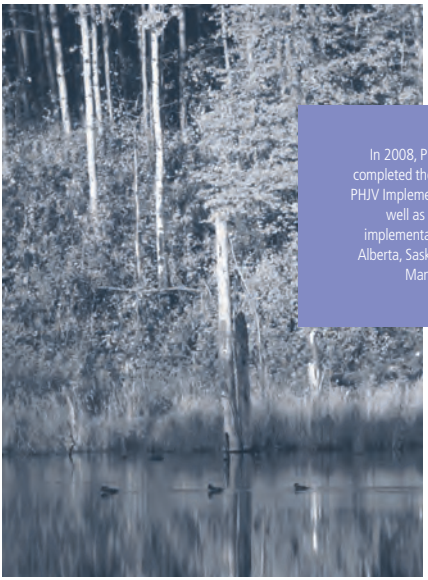
	2008	Total (1986-2008)
U.S. Federal	2,156,639	6,800,484
U.S. Non-Federal	2,146,783	6,346,710
Canadian	13,153,286	30,096,706
Total	17,456,708	43,243,900

Accomplishments (Acres)

	2008	Total (1986-2008)
Secured	9,883	383,951
Enhanced	14,794	128,370
Managed*	66,188	310,482
Total**	9,883	383,951

* New acres under management shown for 2008; all acres shown under total column are managed each year.

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



In 2008, PHJV partners completed the 2007 to 2012 PHJV Implementation Plan, as well as provincial implementation plans for Alberta, Saskatchewan and Manitoba.

The Prairie Habitat Joint Venture Boreal Forum held in December, 2008, was instrumental for the PHJV Advisory Board to set future direction for the Western Boreal Forest (pictured).
Ducks Unlimited Canada

Prairie Habitat Joint Venture (includes Western Boreal Program) *www.phjv.ca*

The Prairie Habitat Joint Venture envisions healthy prairie, parkland and boreal landscapes that support sustainable bird populations and provide ecological and economic benefits to society.

The Prairie Habitat Joint Venture (PHJV) has had an exciting and productive year. In 2008, PHJV partners completed the 2007 to 2012 PHJV Implementation Plan, as well as provincial implementation plans for Alberta, Saskatchewan and Manitoba. The PHJV also hosted two major forums: The PHJV Science and Policy Forum in April, 2008, and the PHJV Boreal Forum in December, 2008.

The 2007 to 2012 PHJV Implementation Plan emphasizes that wetland loss remains a significant challenge that must be addressed to meet North American Waterfowl Management Plan (NAWMP) goals. Between 1985 and 2001, gross wetland loss in prairie Canada has been consistent at 5 percent.

The PHJV science is unequalled, specifically, the development of the spatially explicit Waterfowl Productivity Model (WPM). The WPM was developed directly from data collected during the 11-year PHJV Assessment Study and estimates the total 25-year hatched nest deficit for five of the most numerous dabbling ducks at 149,542. The three Provincial Implementation Plans report that a total of 820,742 hectares (2 million acres) of upland and wetland restoration are proposed from 2007 to 2012. This represents 20.3 percent of the 25-year habitat objective. An additional 754,091 hectares (1.9 million acres) of existing upland and wetland habitat retention is estimated between 2007 and 2012.

To meet WPM habitat objectives, PHJV partners face significant expenses. The 5-year cost estimate for habitat restoration and retention is $54,671,200 and $77,025,500 respectively from direct and stewardship programs. The total cost of all PHJV activities over five years is estimated at $227 million.

Alberta

The Alberta Implementation Plan provides a 5-year roadmap to achieving approximately 20 percent of the 25-year habitat objectives in most areas. The plan emphasizes wetland restoration and wetland retention in response to model outputs.

The 5-year objectives are:

- Restoration of 2,145 wetland hectares (5,300 acres);
- Conversion of 70,577 hectares (174,400 acres) of conventional cropland to winter wheat;
- Restoration of 115,974 hectares (286,600 acres) of cropland conversion to pasture;
- Restoration of 77,295 hectares (191,100 acres) of cropland converted to hay land;
- Restoration of 607 hectares (1,500 acres) of cropland to planted cover;
- Retention of 557,859 wetland hectares (1,378,500 acres) through policy change; and
- Retention of 10,117 upland hectares (25,000 acres).

The estimated cost of achieving the 5-year Alberta Plan including completing all partner direct and extension activities, research/evaluation, policy initiatives, operation and maintenance, communications and coordination, totals $58 million.

Saskatchewan

The Saskatchewan Implementation Plan focuses on previously identified targeted landscapes to best help eliminate waterfowl productivity deficits. The Saskatchewan Implementation Plan used the innovative WPM to generate scenarios of wetland and upland habitat restoration treatments over the 25-year and the 2007 to 2012 periods.

The 5-year habitat objectives for the entire Saskatchewan PHJV Delivery Area emphasize upland restoration and include:

- Restoration of 1,983 hectares (4,900 acres) of wetlands;
- Addition of 140,485 hectares (347,000 acres) of winter wheat;
- Restoration of 200,629 hectares (495,800 acres) of cropland conversion to pasture;
- Restoration of 1,347,846 hectares (3,330,600 acres) of cropland converted to hay land;
- Conversion of 2,590 hectares (6,400 acres) of cropland to planted cover;
- Retention of 15,095 hectares (37,300 acres) of wetlands; and
- Retention of 130,147 hectares (321,600 acres) of upland habitat.

The 5-year Saskatchewan Plan's restoration objectives are roughly 20 percent of the 25-year objectives. The total estimated cost over 5 years is over $121 million.

Manitoba

Manitoba's NAWMP Implementation Plan was developed using two planning tools, the Decision Support System and the WPM. The former provides area-specific waterfowl population estimates (used to identify target landscapes) while the latter provides area-specific estimates of waterfowl productivity based on population, nesting and habitat availability parameters.

The 5-year objectives for the Manitoba Implementation Plan include:

- Restoration of 243 hectares (600 acres) of wetlands;
- Addition of 30,351 hectares (75,000 acres) of winter wheat;

Blue-winged teal
Ducks Unlimited Canada/B. Wolitski

Within the Prairie Habitat Joint Venture wetland restoration and retention projects help maintain healthy waterfowl populations, and also benefit many other species like the yellow-headed blackbird.
Ducks Unlimited Canada

Joint Venture Facts

Size: 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), oldsquaw, great white-fronted geese and Canada geese.

- Restoration of 21,853 hectares (54,000 acres) of cropland conversion to pasture;
- Restoration of 21,853 hectares (54,000 acres) of cropland converted to hay land;
- Conversion of 364.2 hectares (900 acres) of cropland to planted cover;
- Placement of nesting tunnels on 323.8 hectares (800 acres) of wetlands;
- Retention of 9,915 hectares (24,500 acres) of wetlands; and
- Retention of 30,956 hectares (76,500 acres) of upland habitat.

The Manitoba Implementation Plan is a dynamic document that will require ongoing examination in order to remain relevant in a volatile socio-political marketplace. It recognizes that the full range of habitat accomplishments need to be effectively tracked and results compared with objectives throughout the duration of the planning cycle. The total estimated cost over 5 years is over $48 million.

PHJV Science and Policy Forum

In April, 2008, PHJV partners convened a Science and Policy Forum attended by over 100 science, policy and program managers/experts in water stewardship, agriculture, environment and rural economy. The forum considered a range of issues concerning: "*integrating land and water conservation to better retain and restore Canada's wetlands, particularly in the agricultural landscapes of Prairie Canada.*" Key findings outlined in an independent report to the PHJV from Prairie Research Associates identified threats to the retention and reclamation of wetlands including suburban expansion, infrastructure development, cropland expansion, weak legal and policy frameworks and climate change. Other key findings noted the lack of a consistent definition for what constitutes a "wetland", and that market-based approaches (financial incentives and programs) are a promising means for making wetland conservation more attractive to landowners.

A *Prescription for Action on Wetland Conservation* was developed from the recommendations and key findings of the Science and Policy Forum. The document calls for immediate actions to end prairie wetland loss and degradation. Supportive leadership and improved communications with policy makers are two core elements needed to incorporate mitigation and to further wetland policy development in national, regional and provincial water, agriculture and land-use strategies. The foundation for an informed wetland policy requires ongoing investment in a coordinated science program of research and habitat monitoring.

PHJV Boreal Forest Forum

In December 2008, the PHJV gathered approximately 50 scientists, policy makers and industry representatives to discuss conservation issues facing the Western Boreal Forest. The forum highlighted the current roles of PHJV partners in boreal conservation programs and set the stage for partners to determine the level of involvement and mechanisms for management in boreal forest conservation initiatives. Presentations were made by many diverse interest groups including the Pembina Institute, AlPac, Ducks Unlimited Canada, Suncor Energy Inc. and representatives from the governments of Alberta, Saskatchewan and Manitoba.

The Western Boreal Forest Program continues to be successful in protecting vast areas of critical wetland habitat. Over 11,000 hectares (25,000 acres) have been permanently secured and another 14 million hectares (35 million acres) are under 5-year interim protection awaiting permanent designation. An additional 29,015,961 hectares (71.7 million acres) are in various stages of land-use planning to promote beneficial management practices and sustainable land-use in northern Canada.

The PHJV understands its role in the continental success of NAWMP and that U.S. North American Wetland Conservation Act grant and matching non-federal funds help achieve healthy and abundant waterfowl populations throughout North America.

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 ($CN)

	2008	Total (1986-2008)
U.S. Federal	19,755,951	253,009,220
U.S. Non-Federal	10,679,959	258,453,423
Canadian	15,861,588	304,259,574
Countries other than Canada or the U.S.	10,000	59,744
Total	46,307,498	815,781,961

Prairie Habitat Joint Venture Accomplishments (Acres)

	2008	Total (1986-2008)
Secured	168,351	6,280,251
Enhanced	163,049	2,397,021
Managed*	361,115	5,214,927
Total**	168,351	6,280,251

Western Boreal Forest Contributions ($CN)

	2008	Total (1986-2008)
U.S. Federal	3,510,609	18,061,872
U.S. Non-Federal	3,450,464	36,750,703
Canadian	1,222,579	30,682,339
Total	8,183,652	85,494,914

Western Boreal Forest Accomplishments (Acres)

	2008	Total (1986-2008)
Secured***	0	25,002
Enhanced	0	107
Managed*	0	107
Total**	0	25,002

* New acres under management shown for 2008; all acres shown under total column are managed each year.

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

*** 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.

Breeding waterfowl populations across the Eastern Habitat Joint Venture are monitored on an annual basis by the Canadian Wildlife Service using a systematic helicopter survey called the Eastern Waterfowl Breeding Ground Survey

B. Pollard, Environment Canada

Joint Venture Facts

Size: The Eastern Habitat Joint Venture (EHJV) represents one third of Canada's landmass and 65 percent of its human population and includes the provinces of Ontario, Quebec, New Brunswick, Nova Scotia, Prince Edward Island and Newfoundland and Labrador.

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 geese.

2008 Major Accomplishments: A new Coordinator was hired in May 2008. The EHJV is well on its way to completing its new 5-year Implementation Plan with all six provincial implementation plans endorsed by the EHJV Board in 2008.

Eastern Habitat Joint Venture

In 2008 the Eastern Habitat Joint Venture (EHJV) worked on administrative priorities while continuing to make significant strides toward habitat and population goals through strategic land securement, wetland enhancement and stewardship activities. The EHJV Board completed a draft implementation agreement that will guide EHJV operations over the next 15 years. Each province completed individual implementation plans which will be reflected in the 2009 EHJV 5-year Plan.

The 2007 North American Waterfowl Management Plan (NAWMP) Continental Progress Assessment Final Report recommended several focus areas for future EHJV program implementation, including improving the monitoring of waterfowl response to Joint Venture habitat conservation programs. An EHJV review of current assessment programs showed that Maritime Canada's agricultural landscape was under-represented and concluded that an opportunity existed to expand efforts. Staff from the Canadian Wildlife Service (CWS), the three Maritime provincial agencies and Ducks Unlimited Canada (DUC) developed a supplemental survey for Maritime Canada based on their review of other successful EHJV survey programs.

Waterfowl Population Assessment: A New Program for Atlantic Canada

Two breeding waterfowl surveys are conducted annually across Eastern Canada. A helicopter survey is led by CWS through the Eastern Waterfowl Breeding Ground Survey, and a fixed-wing aerial survey is led by the U.S. Fish and Wildlife Service (USFWS) in partnership with the northeastern states. Since 2004, this data has been integrated to reflect waterfowl breeding population estimates and trends. The information from these surveys informs the work of both the EHJV and the Black Duck Joint Venture (BDJV). Several other surveys supplement these two main surveys: a long-term waterfowl ground survey has been underway in southern Ontario since 1971 and surveys similar to the Eastern Waterfowl Breeding Ground Survey are carried out in Quebec along the St. Lawrence River shoreline and associated lowlands. The purpose of the latter survey is to determine the distribution and size of waterfowl breeding populations in southern Quebec's agricultural landscapes.

In response to the need for better waterfowl-use information on the agricultural landscapes identified in the EHJV assessment review, an additional survey, based on the surveys carried out in the agricultural zones in Quebec, was developed in 2008 for New Brunswick, Nova Scotia and Prince Edward Island. Using existing land-use data for the three provinces, 1,182 2 x 2-kilometre plots were established and classified as one of three wetland density categories: low, medium or high. In the spring of 2008, 57 of these plots in New Brunswick and Nova Scotia were flown by the Eastern Waterfowl Survey crew.

Initial survey results indicate high, but variable waterfowl use of the agricultural zone which is consistent with the results found in the Ontario and Quebec surveys. American black ducks were the most common species surveyed followed by mallard, green-winged teal, ring-necked duck and American wigeon – these five species account for nearly 85 percent of all breeding pairs. (Table 1).

While review and analysis of the data collected in 2008 is ongoing, this effort clearly identifies the importance of agricultural landscapes for breeding waterfowl in New Brunswick and Nova Scotia. It is anticipated that the Maritime Agricultural Zone Plot Program will become a routine CWS survey and will include additional plots flown on Prince Edward Island. The survey results will better equip EHJV partners to plan effective conservation activities on agricultural landscapes and to monitor subsequent waterfowl response.

Mayor Boyd Noel and the Province's Minister of Environment and Conservation, Charlene Johnson, signing the St. Anthony Coastal Stewardship Agreement that will encourage landowners to minimize negative impacts to 64,000 hectares (158,000 acres) of coastal habitat.

EHJV, Newfoundland and Labrador

EHJV Provincial Program Delivery:

The securement of critical habitat, the enhancement of existing and newly acquired habitat, and the protection of these habitats through on-going stewardship are the main components of the EHJV program. The EHJV provincial highlights follow.

Construction began in 2007 and continued into 2008 at Ruisseau de Feu, Quebec; the project encompasses 120 hectares (296 acres) and one of the last large flood plains existing in north Montreal.

Ducks Unlimited Canada

Each province in the EHJV completed individual implementation plans which will be reflected in the EHJV 5-year plan in 2009.

Table 1:

Results of the Agricultural zone plot surveys flown in New Brunswick and Nova Scotia, 2008.

	Black Duck	Mallard	Green-winged Teal	Ring-necked Duck	American Wigeon
Proportion of total pairs	42.1%	14.7%	13.4%	8.3%	6.5%
Maximum IBP per plot	22.5	11.0	12.0	8.0	4.0
No. plots where encountered	43.0	24.0	31.0	21.0	18.0
Density (per km^2; all plots flown)	1.1	0.4	0.4	0.2	0.2

Ontario: The Ontario Ministry of Natural Resources and DUC are working together with local implementation partners, including the Nottawasaga Valley Conservation Authority, to implement the Ontario Wetland Care Program. The Program will provide $1,000,000 in grants and technical resources to enable rural landowners to maintain and enhance wetlands on their properties. Eligible wetland projects include wood duck nest boxes, livestock exclusion fencing, tree planting for wetland buffers, wildlife corridor planting and wetland restoration. In the first six months of the program DUC negotiated and began implementing 17 local partnership projects.

Quebec: Wetland protection and restoration measures continued, principally along the St. Lawrence River. Construction began in 2007 and continued into 2008 at Ruisseau de Feu, one of the main habitat restoration projects in the province. This project encompasses 120 hectares (296 acres) of the last large flood plain existing in north Montreal. The development and management of 56 hectares (138 acres) of marshland, 14 hectares (35 acres) of swamp, 30 hectares (74 acres) of forested area and the creation of three migratory fishways will complete the restoration of this ecosystem and create high quality habitat for waterfowl, fish and a multitude of other species.

New Brunswick: In 2008, DUC worked with the Province of New Brunswick to acquire 45 hectares (112 acres) of provincially significant wetland property within Grand Lake Meadows and 44 hectares (108 acres) within the Oromocto River floodplain.

The Nature Conservancy of Canada (NCC), in collaboration with a group of local volunteers, opened the Black Beach Trail and Five Fathom Hole Trail interpretive walking trails along the eastern shore of the Musquash Estuary near Saint John. In 2007 the estuary itself was designated a National Marine Protected Area by Fisheries and Oceans Canada and now over 80 percent of the shoreline is in conservation ownership by various agencies and EHJV partners.

Nova Scotia: The Nova Scotia Department of Natural Resources (NSDNR) partnered with DUC and NCC to secure important coastal wetlands in the province. Coastal ecosystems are used as staging and migrating habitat for waterfowl, wading birds and shorebirds and hence, the acquisition has been identified as a priority in Nova Scotia's EHJV Implementation Plan. In 2008, NCC and EHJV partners secured an additional 24 hectares (60 acres) of coastal wetland and upland habitat bordering the provincially significant Pugwash Basin. DUC and NSDNR also acquired a 21-hectare (52-acre) Cape Sable Island property, an internationally recognized Important Bird Area and one of Nova Scotia's finest year-round birding spots.

Prince Edward Island (PEI): Increasing the number of breeding waterfowl through the restoration of degraded wetlands has been identified as a key component of the PEI EHJV Implementation Plan.

Wetland enhancement is part of the Prince Edward Island Farm Wetland Project.

Dale Thompson, PEI Department of Environment, Energy and Forestry

To this end, in 2008 a wetland restoration and biodiversity conservation project was initiated on agricultural lands with funding from Wildlife Habitat Canada. The primary project goal is to address the degradation of small wetlands by working with local farmers and conservation delivery agents to incorporate wetland and wildlife habitat values into agricultural practices and procedures. After potential demonstration sites were identified through completed agricultural biodiversity plans, a total of 12 wetland restoration and farm pond projects were completed in 2008.

Newfoundland and Labrador: Stewardship programs to secure and enhance existing wetlands and the restoration of common eider breeding populations continue to be the main thrusts of the EHJV program in Newfoundland and Labrador. In June, 2008, as part of the province's municipal wetlands stewardship program, the Town of Hawke's Bay signed a stewardship agreement securing 132 hectares (326 acres) of wetland habitat, and influencing an additional 3,575 hectares (8,834 acres) of wetlands and associated uplands. Also in June of 2008, the Town of St. Anthony signed the first-ever coastal stewardship agreement which aims to influence the impact residents have on 25,999 hectares (64,247 acres) of coastal habitat.

The continued financial support from the North American Wetland Conservation Act fund, U.S. non-federal granting agencies and the many EHJV partners is instrumental to EHJV success.

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

Contributions ($CN)

	2008	Total (1986-2008)
U.S. Federal	3,401,364	67,366,428
U.S. Non-Federal	3,622,178	66,947,570
Canadian	27,661,632	196,449,524
Total	34,685,174	330,763,522

Accomplishments (Acres)

	2008	Total (1986-2008)
Secured	11,197	918,985
Enhanced	7,559	561,922
Managed*	34,728	616,214
Total**	11,197	918,985

* New acres under management shown for 2008; all acres shown under total column are managed each year.

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

Snow geese are rounded up at Queen Maud Gulf, Nunavut, in preparation for banding and release.
Kiel Drake

Species Joint Ventures

Arctic Goose Joint Venture
www.agjv.ca

The 2007 North American Waterfowl Management Plan (NAWMP) Continental Progress Assessment Final Report recommended four key areas of attention for the Arctic Goose Joint Venture (AGJV): overabundant light goose issue, increased emphasis on brant, climate change and enhanced communications with several audiences.

The update of the AGJV Strategic Plan 2008 to 2012 addresses many of the NAWMP Continental Assessment recommendations. The Strategic Plan includes eight key focus areas:

- Habitat Degradation Caused by Populations of Snow and Ross's Geese;
- Population Status and Assessment of Midcontinent and Tule White-fronted Geese;
- Population Delineation and Population Assessment of Short Grass Prairie, Tall Grass Prairie, Lesser and Taverner's Geese;
- Assessing Impacts of Climate Change and Resource Development on Arctic Geese;
- Population Status, Population Dynamics and Ecology of Brant and Emperor Geese;
- Status Assessment and Population Dynamics of Snow and Ross's Geese
- Population Specific Harvest Estimates; and
- Development/Improvement of Breeding Ground Surveys.

A subcommittee of the AGJV has been compiling banding, survey and other data to prepare a report on the current status of overabundant light goose populations. The report and recommendations are to be provided to the AGJV Management Board in 2009.

Climate change is quickly becoming the most important issue continentally. The AGJV is currently working with the broader goose community to explore using Arctic nesting goose datasets as indicators of climate change.

Captured brant are held in a pen prior to banding and release.
Kathy Dickson,
Environment Canada

Joint Venture Facts

Number of species: 7

Number of populations: 28

Geographic 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.

The AGJV is increasing emphasis on brant continentally by improving collaboration with both the Pacific and Atlantic Coast Joint Ventures and the International Eastern High Arctic Brant Working Group.

Climate change is quickly becoming the most important issue continentally. The AGJV is currently working with the broader goose community to explore using Arctic nesting goose datasets as indicators of climate change. Most AGJV-funded research groups are undertaking research on the effects of climate change on the goose-wetland ecosystems in which they work, including Bylot Island (Greater Snow Goose Project), Akimiski (Hudson Bay Project), Karrak Lake (Queen Maud Gulf Project) and Alaska.

Increased communications with several audiences is the fourth general theme identified by the NAWMP Continental Assessment recommendations. The Strategic Plan's more visually pleasing format and comprehensive compilation of information on 28 of North America's goose populations, combined with clear setting of priorities, provides an important tool for increasing AGJV communications initiatives. In addition to the updated Strategic Plan, the AGJV website (www.agjv.ca) has been launched and will soon be available in French and Spanish. A number of other communications efforts are in the planning stages.

The NAWMP Continental Assessment provided an excellent opportunity for the AGJV to closely examine the focus and approach of the Joint Venture and review past accomplishments. The Assessment commended the AGJV for significant achievements with limited resources. The updated Strategic Plan charts the future challenges for the expanded AGJV.

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

Contributions ($CN)*

	2008	Total (1986-2008)
U.S. Federal	408,338	6,482,213
U.S. Non-Federal	298,800	8,128,825
Canadian	1,218,140	17,792,344
Countries other than Canada or the U.S.	15,000	107,608
Total	1,940,278	32,510,990

* These contributions contain no NAWCA funding.

A nesting female Canada goose takes flight from the AGJV study site along the Polemond River, about 10 kilometres inland from Hudson Bay on the Ungava Peninsula in northern Quebec.
Richard Cotter,
Environment Canada

Following extraction from the net, this male king eider was weighed and measured, banded and implanted with a satellite transmitter for tracking. The whole process takes about 30 minutes and each eider recuperates for an hour before it is released back into the wild.

Lynne Dickson, Environment Canada

Sea ducks are the least studied and known group of North American waterfowl because they breed in low densities in remote parts of the continent.

Dr. Sean Boyd retrieving a male Barrow's goldeneye captured at Riske Creek, British Columbia, using a decoy and underwater mist net setup.

Dr. Dan Esler,
Simon Fraser University

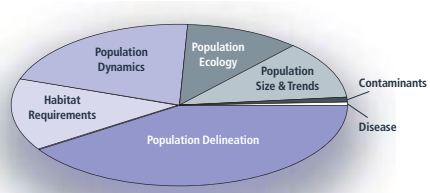
Joint Venture Facts

Size: 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 (Tribe mergini).

2008 Major Accomplishments: SDJV partners hosted Third Sea Duck Conference in Quebec City in November, 2008, and revised the SDJV Strategic Plan, 2008 to 2012.



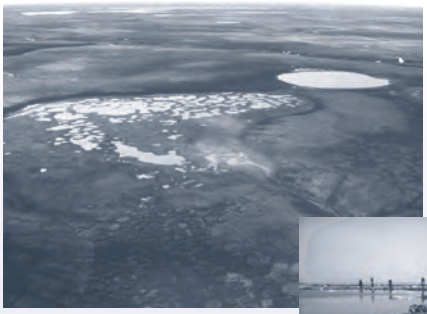
Sea Duck Joint Venture Funding By Activity for 2000 to 2005

Sea Duck Joint Venture
www.seaduckjv.org

Sea ducks are the least studied and known group of North American waterfowl because they breed in low densities in remote parts of the continent. Early Sea Duck Joint Venture (SDJV) efforts focussed on the development of population delineation and monitoring techniques. By 2007, emphasis had shifted to monitoring defined populations, and by 2008, half of the Canadian projects addressed monitoring priorities.

On-going Canadian research projects in 2008 receiving SDJV support included Common Eider Population Dynamics in Newfoundland and Labrador, Ecological and Behavioural Monitoring of Common Eiders in Quebec and the Migration Corridors of Sea Ducks in the Beaufort and Chukchi Seas. New projects included Examination of the Impacts of Avian Cholera on Common Eider Populations in the Eastern Arctic and Determining Annual Cycle Connectivity and Site Fidelity of the Pacific Flyway Barrow's Goldeneye.

Monitoring projects for 2008 included a survey of the Pacific common eider breeding population in Nunavut, a Lake Ontario wintering duck survey and a joint project with the Arctic Goose Joint Venture to survey breeding populations of geese, long-tailed ducks and eiders in Canada's Northwest. Aerial surveys were also carried out to determine the importance of the Ontario side of Hudson Bay for moulting scoters and spring migration counts for scoters and other sea birds were continued at Point Lepreau, New Brunswick.



Aerial view of site on Banks Island, NWT where king eiders were captured in June 2008 and outfitted with satellite transmitters.

Lynne Dickson,
Environment Canada

The SDJV partners sponsored the Third International Sea Duck Conference in Quebec City, November 11 to 13, 2008. In addition, the SDJV completed a revised Strategic Plan for 2008 to 2012 that, along with the recommendations coming from the Sea Duck Conference, will direct SDJV activities over the next five years.

For more information, contact Keith McAloney, Sea Duck Joint Venture Coordinator, (506) 364-5036, keith.mcaloney@ec.gc.ca, www.seaduckjv.org.

Contributions ($CN)*

	2008	Total (1986-2008)
U.S. Federal	256,284	2,246,356
U.S. Non-Federal	27,000	245,954
Canadian	790,485	5,571,050
Total	1,073,769	8,063,360

* These contributions contain no NAWCA funding.

The grounds are littered with the remains of common eiders having died from an avian cholera outbreak in East Bay, Southampton Island, Nunavut.

Lucie Parke

Adam Campbell heads down to the wetland to band black ducks at Peter's River, near Bathurst, New Brunswick
Bruce Pollard,
Environment Canada

Adam MacPherson banding a black duck at Norman Young's Pond, near Bathurst, New Brunswick.
Bruce Pollard,
Environment Canada

Joint Venture Facts

Size: Six provinces and 14 U.S. States

Current Population Estimate: 495, 800

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.

The BDJV Strategic Plan recognizes that the black duck has been identified as a species of greatest conservation need in 23 states in the Mississippi and Atlantic Flyways.

Black Duck Joint Venture
www.blackduckjv.org

Since1989, the Black Duck Joint Venture (BDJV) has supported black duck conservation and management efforts in Canada and the United States by establishing and improving population monitoring efforts, facilitating research and communicating results with stakeholders. The BDJV Strategic Plan recognizes that the black duck has been identified as a species of greatest conservation need in 23 states in the Mississippi and Atlantic Flyways. In addition, it is a priority species for the Upper Mississippi River and Great Lakes Region, the Atlantic Coast and the Appalachian Mountain Joint Ventures as well as in the six eastern provinces under Canada's Eastern Habitat Joint Venture.

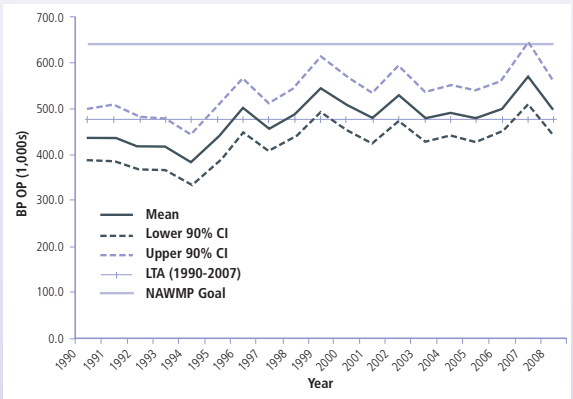
The Strategic Plan identifies priorities over a 5-year timeframe, 2008 to 2013, and includes program-specific implementation plans to ensure the BDJV meets its North American Waterfowl Management Plan goals. The BDJV will continue to develop, refine and implement both breeding population and midwinter surveys which provide important information about trends in both breeding and wintering populations. Recently, new analytical techniques have been developed to improve the precision of population estimates by integrating aerial count data collected using different survey protocols, such as fixed wing transects and helicopter plots. The resulting black duck breeding population estimate in the Eastern Survey area this year was 495,800 ducks. This represents a 16.7 percent decrease from 2007 but remains 4 percent above the 17-year long-term average (Figure 1).

Pre-season black duck banding has taken place annually since the early 1960s as part of the cooperative program supported by the Canadian Wildlife Service, Eastern Canada provinces, the U.S. Fish and Wildlife Service and through cooperating states via the Atlantic and Mississippi Flyway Councils. The BDJV banding program continues to be a high priority as it is a fundamental tool for black duck management. When combined with population and harvest data, banding provides important information about population dynamics and structure, distribution and harvest results. Banding program data is currently being used to develop an adaptive harvest management framework for black ducks.

The BDJV has supported research on multiple aspects of black duck ecology including survival, harvest, productivity, habitat use and carrying capacity and inter-specific competition. Research results have been incorporated into a variety of management activities including the development of population and adaptive harvest management models. Under the BDJV Strategic Plan, improving the understanding of black duck habitat ecology and aiding Habitat Joint Ventures in their strategic habitat conservation delivery are top priorities. These needs are being addressed through the competitive grant program and the development of integrated population/habitat models.

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

Trend in Black Duck Breeding Abundance Based on the Eastern Waterfowl Survey (1990 to 2008)
U.S. Fish and Wildlife Service, Division of Migratory Birds Management



Legend: CI= Confidence Interval
LTA = Long term average

Contributions ($CN)*

	2008	Total (1986-2008)
U.S. Federal	35,500	1,535,460
U.S. Non-Federal	215,000	4,028,450
Canadian	868,864	7,991,921
Total	1,119,364	13,555,831

* These contributions contain no NAWCA funding.

Thank you to all our partners who supported the Canadian program by contributing in 2008:

Canada

Acadia Centre for Estuarine Research
Acadia University
Access Land Services Ltd.
Acquired Land Management Inc.
Action Land Consultants (2001) Ltd.
Advantage Oil & Gas Ltd.
AgraPoint
Agricultural Financial Services Corporation
Agriculture and Agri-Food Canada
Agriculture and Agri-Food Canada-Prairie Farm Rehabilitation Administration
Aguila Exploration Consultants Ltd.
Alberta Conservation Association
Alberta Ecotrust Foundation
Alberta Environment
Alberta Fish and Game Association
Alberta Land and Lease Limited
Alberta Riparian Habitat Management Society – Cows and Fish
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Fisheries and Oceans Canada
Fondation de la faune du Québec
Friends of Cornwallis River Society
Friends of the Nature Conservancy of Canada
Galleon Energy Inc.
GeoTir Inc.
Grande Prairie (City of)
Grande Prairie (County of)
Habitat Conservation Trust Fund
Harvest Energy
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Kings County (Muncipality of)
La Fondation Hydro-Québec pour l'environnement
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MEC Operating Company
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Metcalf Charitable Foundation
MGV Energy Inc.
Minburn 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
Mount Allison University
Mountain Equipment Co-op
MSL Land Services Ltd.
Murphy Oil Company, Ltd.
NAL Resources Limited
Natural Resources Canada – Polar Continental Shelf Project
Natural Sciences and Engineering Research Council of Canada
Nature Canada
Nature Conservancy of Canada
Nature Trust of British Columbia
New Brunswick Department of Environment and Local Government
New Brunswick Department of Natural Resources
Newfoundland-Labrador Department of Environment and Conservation
Niven & Associates Inc.
Northern Scientific Training Program
Northrock Resources Ltd. (Canada)
Northwest Territories Department of Resources, Wildlife and Economic Development
Nova Scotia Agricultural College
Nova Scotia Department of Agriculture
Nova Scotia Environment and Labour
Nova Scotia Federation of Agriculture
Nova Scotia Natural Resources
Nunavut Wildlife Management Board
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Other

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Northern pintail pair

Ducks Unlimited Canada/B. Wolitski

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