September 2023

nawmp.wetlandnetwork.ca

# HabitatMatters

## 2023 Canadian NAWMP Report

"Boreal Mist—Ring-necked Ducks" from the
2023 Canadian Wildlife Habitat Conservation Stamp series.

*Artist: Isabelle Collin*

*North American Waterfowl Management Plan*

*Plan nord-américain de gestion de la sauvagine*

*Plan de Manejo de Aves Acuáticas Norteamérica*

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We would like to acknowledge that the lands on which the North American Waterfowl Management Plan is implemented in Canada are the traditional, treaty and unceded territories of First Nations, Inuit and the Métis Nation. The act of acknowledging the land, and the signed treaties where applicable, is an expression of respect and gratitude for the land. This action is to remind us that our places of work, where we live and where we gather are on the lands of First Nations, Inuit and the Métis Nation and is a recognition that we are all accountable to these relationships on a daily basis.

# About the NAWMP

The North American Waterfowl Management Plan (NAWMP) is an international partnership to restore, conserve and protect waterfowl populations and associated habitats through management decisions based on strong biological foundations. The ultimate goal is to achieve abundant and resilient waterfowl populations and sustainable landscapes. The NAWMP engages the community of users and supporters committed to conserving and valuing waterfowl and wetlands.

In 1986, the Canadian and U.S. governments signed this partnership agreement, laying the foundation for international co-operation in the recovery of declining waterfowl populations. Mexico became a signatory to the NAWMP with its update in 1994. As a result, the NAWMP partnership extends across North America, working at international, national and regional levels on a variety of waterfowl, habitat management and people issues.

Since its creation, the NAWMP's partners have worked to conserve and restore wetlands, associated uplands and other key habitats for waterfowl across Canada, the United States and Mexico. The partners have had wide-ranging influence: shaping land-use and public policies, integrating science and monitoring systems into planning, and delivering habitat programs. The results of these efforts are notable. Many waterfowl populations have increased substantially since 1986, and NAWMP partners continue to collaborate with other bird conservation initiatives.

Hooded Merganser.

*Jean-Maxime Pelletier*

In Canada, NAWMP partner activities are directed by public–private Joint Venture partnerships, which focus on areas or species of concern identified in the NAWMP. Each Joint Venture includes a range of partners, from federal, provincial and local governments to conservation organizations. Strategic and Implementation Plans, developed based on the NAWMP's goals as well as on pressures specific to the Joint Ventures, form the basis of each Joint Venture's programs and individual projects.

## Terminology used in this report

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

**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.

**Enhancement**
Actions carried out on 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.

# National Overview

Mallard.
*Jean-Maxime Pelletier*

## Accomplishments by Habitat Joint Ventures (1986–2023)

**23.6**
million acres of habitat secured
(9.5 million hectares)

Involves the protection of habitat through land title transfer or binding legal agreements with landowners (10-year minimum).

**215.0**
million acres of habitat influenced
(87.0 million hectares)

Involves direct actions that protect or enhance habitat without legal or binding agreements. These actions result in applied land-use change.

**4.1**
million acres of habitat enhanced
(1.7 million hectares)

Involves actions that increase habitat carrying capacity for waterfowl and other wildlife.

## Accomplishments by Habitat Joint Ventures (2022–2023)

**120.5**
thousand acres of habitat secured
(48.8 thousand hectares)

**1,703**
thousand acres of habitat influenced
(689.4 thousand hectares)

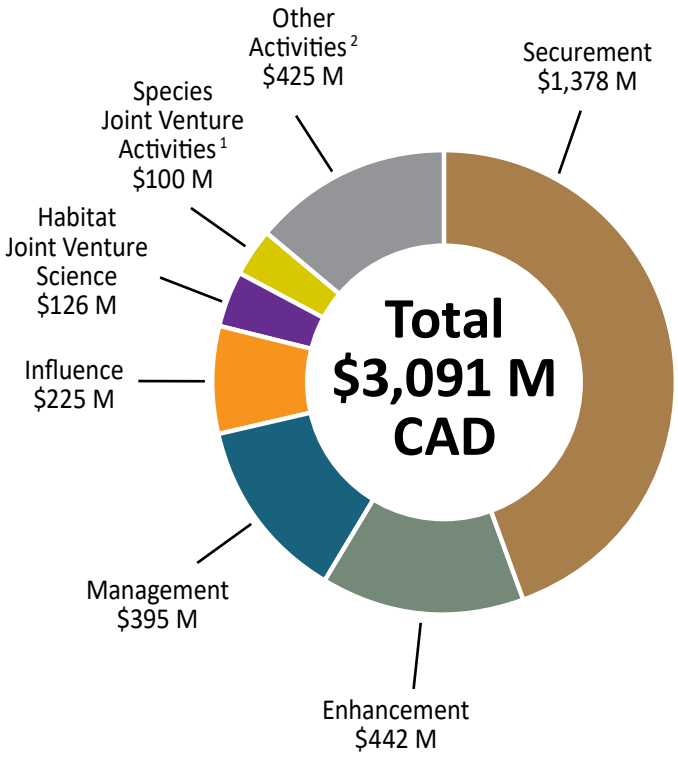
**371.4**
thousand acres of habitat enhanced
(150.3 thousand hectares)

Note: Managed acres are no longer reported in *Habitat Matters* to avoid redundant data, as all managed acres occur on secured land.

1986–2023 consists of the January 1, 1986, to March 31, 2023, time frame. 2022–2023 consists of the April 1, 2022, to March 31, 2023, time frame.

# Expenditures

By activity (1986–2023)



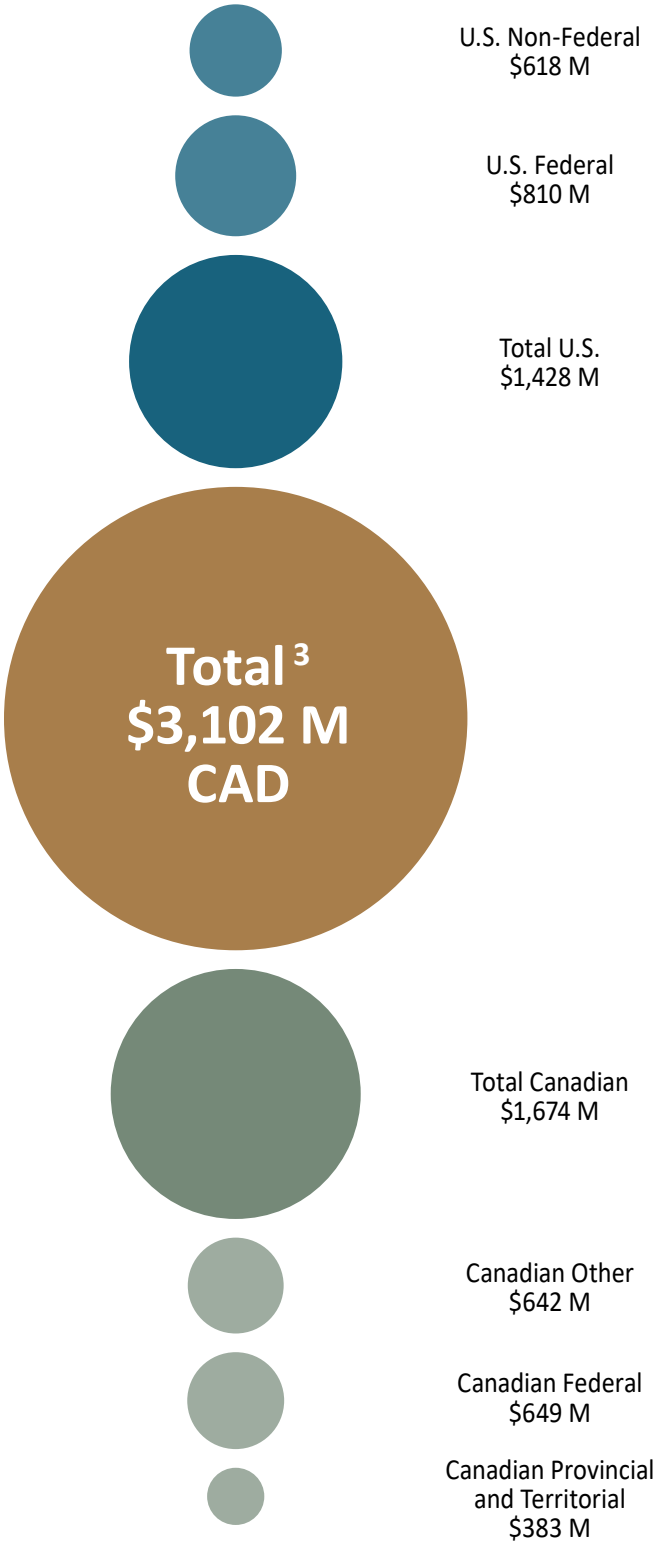

1 Banding, survey, research, observation and management.

2 Coordination, communication, policy, crop damage and compensatory mitigation.

The successful implementation of Canada's NAWMP program has been, and continues to be, enabled by the support of partners in both Canada and the United States, including federal, provincial/territorial and state governments, non-governmental organizations and individuals. In particular, funding received under the United States' *North American Wetlands Conservation Act* remains integral to the success and longevity of the Canadian program.

# Contributions

In support of the NAWMP in Canada (1986–2023)




3 Includes $0.31 M in international contributions.

1986–2023 consists of the January 1, 1986, to March 31, 2023, time frame.

# International Partnerships—Getting More Done Together

Trumpeter Swans against a backdrop of coastal mountains in the Fraser Valley, British Columbia.

*Lindsay Lalach*

> Great accomplishments are rarely achieved in isolation, but are instead the result of synergistic partnerships working to reach a shared goal.

Great accomplishments are rarely achieved in isolation, but are instead the result of synergistic partnerships working to reach a shared goal. This has been the foundation of the North American Waterfowl Management Plan (NAWMP) since 1986, and its success is a testament to the power of working together for nature. NAWMP partnerships have grown to include the numerous varied and dedicated people and organizations—land managers, Indigenous Peoples, all levels of government, Habitat Joint Ventures, Flyways, non-profits—working within and across Canada, the United States and Mexico to restore, conserve and protect waterfowl and their habitat.

This vast network of partnerships has achieved unparalleled success over the last 37 years in the recovery of declining waterfowl populations and wetland habitats. The past five years have seen some of the strongest support from federal, provincial and state governments in Canada and the United States. Partnerships and funding have been increasing in Canada, which is the custodian of a quarter of the world's wetlands and associated waterfowl.

Wetlands are critical for maintaining the quality of the environment, international or transboundary resources such as water and wildlife, and inland and ocean fisheries, among many other things. Canadian wetlands provide crucial habitat for waterfowl and other migratory birds.

The NAWMP is international in scope, but is implemented at regional and local levels. Several projects featured in this issue of *Habitat Matters* highlight the co-operation between U.S. and Canadian scientists, partners and funders:

- Substantial investments by the U.S. Fish and Wildlife Service (USFWS) through the *North American Wetlands Conservation Act* and by Environment and Climate Change Canada (ECCC), along with matching contributions from corporate, foundation and individual donors, ensured preservation of Alberta's 129-year-old McIntyre Ranch. With over 2,900 acres (1,200 hectares) of wetlands, the McIntyre Ranch provides habitat for provincially rare birds such as Northern Pintail, Cinnamon Teal, Long-billed Curlew and Baird's Sparrow.
- Scientists in British Columbia (B.C.) and Washington State have been working together for the past two years to track the winter habitat use, distribution and movement patterns of Surf and White-winged Scoters in the Salish Sea.
- With financial support from the Canadian and United States governments, Ducks Unlimited Canada (DUC) is working side by side with the Deninu Kųę First Nation and the Fort Resolution Métis Government in the Northwest Territories to establish an Indigenous Protected and Conserved Area in the Slave River Delta and Taltson Watershed. This designated Important Bird Area will offer refuge to over 33 bird species, including Green-winged Teal, Scaup, Greater and Lesser Yellowlegs, Least Flycatcher, Merlin and Caspian Tern.
- The Columbia Wetlands complex in B.C.'s Kootenay region is recognized as a Ramsar Site because of its extraordinary biodiversity. It also provides critical staging habitat for migrating ducks and geese in spring and fall. In a prime example of provincial, national and international players working together, DUC, BC Parks, ECCC, USFWS, Nature Conservancy of Canada and organizations that are members of the Kootenay Conservation Program purchased a 121.58-acre (49.2-hectare) property to add to an existing protected complex within the Columbia Wetlands.
- On the other side of the country, the Black Duck Joint Venture, Atlantic Coast Joint Venture in the United States, Ducks Unlimited Inc., various wildlife agencies and several academic institutions have developed the American Black Duck Decision Support Tool (DST) to estimate habitat needs and prioritize habitat protection and restoration across the Black Duck non-breeding range in eastern North America.

With partnerships at the centre of the NAWMP's success, the involvement of various Canadian partners and communities is vital. Through the Canadian Wildlife Habitat Conservation (CWHC) Stamp program, Wildlife Habitat Canada (WHC) connects Canadian artists and conservationists through wildlife art and a shared goal of protecting waterfowl and associated habitat.

Each year, hunters purchase the Stamp to validate their migratory gamebird hunting permit. Collectors and other conservationists buy the Stamp to support conservation. The design, chosen annually through WHC's art competition, presents original work by a Canadian artist featuring a different species of waterfowl or migratory gamebird in its habitat. Sales from the Stamp are invested directly into Canadian conservation projects working toward NAWMP goals. Since 1985, the Stamp has provided over CA$64 million for more than 1,600 habitat conservation, conservation networking and research projects. In the 2023–2024 grant year, WHC will be supporting partners with another 32 conservation projects across Canada. WHC will continue to work alongside NAWMP partners and the Habitat Joint Ventures as we strive to reach collective goals together.

To learn more about Wildlife Habitat Canada, the CWHC Stamp or WHC grant programs, please visit *www.whc.org*. This program is offered with the financial support of Environment and Climate Change Canada.

**Amie MacDonald surveying waterbirds at Widgeon Marsh Regional Park in British Columbia.**
***Rémi Torrenta***

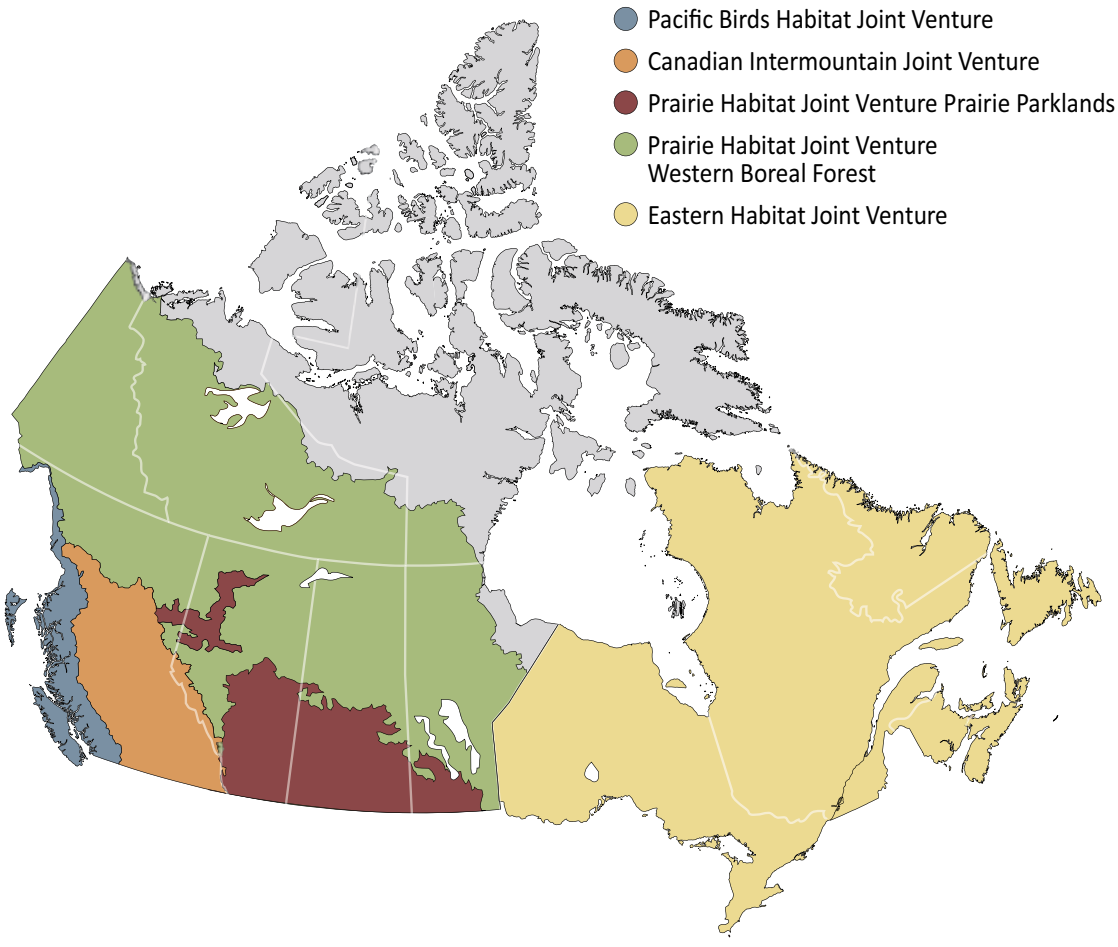
**Lesser Scaup.**
***Jean-Maxime Pelletier***

# Habitat Joint Ventures

View of Cape Pond, an important nesting site for seabirds, shorebirds and waterfowl in the Cape Freels Conservation Area, Newfoundland and Labrador.

*Government of Newfoundland and Labrador, Wildlife Division*

The Canadian Habitat Joint Ventures integrate planning, science, governance, partnerships and management to achieve the NAWMP goals in Canada through a programmatic approach. A science-based Implementation Plan is created to address local, regional and continental goals. Joint Venture partners actively research, monitor and evaluate waterfowl populations and deliver habitat conservation programs at a regional level.



# Canadian Intermountain Joint Venture

The ecologically rich Columbia Lake North – Wetlands property in British Columbia contains a rare riparian wetland complex.

*The Nature Trust of British Columbia*

www.cijv.ca

With an area of 123.5 million acres (50 million hectares), the Canadian Intermountain Joint Venture (CIJV) covers portions of British Columbia (B.C.) and Alberta. The CIJV encompasses a diverse landscape of grasslands, dry and moist coniferous forests, riparian areas and wetlands, alpine tundra and even pocket desert, with 24 breeding waterfowl species. The Joint Venture's estimated 1.45 million birds represent 70% of British Columbia's and roughly 4% of Canada's breeding waterfowl population. The CIJV supports roughly one-quarter of the world's breeding population of Barrow's Goldeneye, along with significant breeding populations of Mallard, Hooded Merganser and Ruddy Duck.

In 2022–2023, CIJV partners have undertaken acquisition projects with a strong focus on conserving freshwater wetlands, one of the four priority habitat types listed in the CIJV Implementation Plan. Priority species known to use freshwater wetlands and associated uplands include American Wigeon, Calliope Hummingbird, Hooded Merganser, Horned Grebe and Western Wood-pewee.

The CIJV is one of the most ecologically diverse regions for migratory birds and at-risk species in Canada. Conservation work continues to further NAWMP goals while also aligning with the Government of Canada's priorities, including protecting 30% of lands and waters by 2030 as part of the Kunming-Montreal Global Biodiversity Framework.

## Conservation of the Columbia Lake North – Wetlands

As part of ongoing conservation efforts in the Columbia Valley, in 2023 The Nature Trust of British Columbia (NTBC) purchased 165 acres (67 hectares) of ecologically important land in the Kootenay region of British Columbia near Fairmont Hot Springs. Known as the Columbia Lake North – Wetlands, the property is located near the north end of Columbia Lake, adjacent to East Side Columbia Lake Wildlife Management Area.

Wetlands provide numerous benefits to the ecosystem, including water purification, flood control, groundwater replenishment and habitat to support biodiversity. The wetlands in the Columbia Valley are of continental significance to waterfowl under the NAWMP and have been designated a Wetland of International Importance (Ramsar Site)—one of only three such sites in British Columbia and 37 in Canada. The ecologically rich property contains a rare riparian wetland complex with open water, marsh, swamp wetlands, willow-dominated riparian communities and pockets of dry forest, including some with old-growth characteristics.

Common Goldeneye.
*Jaden Barney*

The area provides habitat and vital staging areas for several waterfowl species, including American Wigeon, Common Goldeneye and Trumpeter Swan. Barn Swallow and Common Nighthawk, listed as species of Special Concern under Canada's Species at Risk Act (SARA), have been observed on the property. Another species, California Gull, on the B.C. Conservation Data Centre's Red List and at risk of being lost, has been observed nearby. Critical habitat on the property has been designated for the Bank Swallow (SARA Schedule 1, Threatened) and the American Badger (SARA Schedule 1, Special Concern; also on the B.C. Conservation Data Centre's Red List). The conservation area contains a provincially identified ungulate winter range, supporting moose, elk, Mule Deer and White-tailed Deer, and is within an important movement corridor for Grizzly Bear, Mountain Goat, elk, badger and wolverine. Jasper Lament, NTBC Chief Executive Officer, noted that "this property is teeming with life, and the benefits these wetlands and forests provide to our planet are nothing short of awe-inspiring. By protecting the Columbia Lake North – Wetlands, we are able to ensure that the at-risk species within are able to thrive and that its climate benefits continue in perpetuity."

> This property is teeming with life, and the benefits these wetlands and forests provide to our planet are nothing short of awe-inspiring.

The Columbia Lake North – Wetlands acquisition has been financially supported by Environment and Climate Change Canada (ECCC), American Friends of Canadian Conservation and Teck Resources.

## Sigi's Parcel acquisition benefits Moberly Marsh wetland conservation

In 2023, Ducks Unlimited Canada (DUC) acquired Sigi's Parcel, 121.58 acres (49.2 hectares) of farmland immediately adjacent to Burges James Gadsden Provincial Park, which is within the Columbia Wetlands. In partnership with BC Parks, DUC has managed a 602-acre (244-hectare) complex in the Columbia Wetlands known as Moberly Marshes since 1971. Sigi's Parcel will add another 114.85 acres (46.5 hectares) to the complex.

Sigi's Parcel is 121.58 acres (49.2 hectares) of farmland immediately adjacent to Burges James Gadsden Provincial Park in British Columbia.

*Ducks Unlimited Canada*

Acquiring Sigi's Parcel presents an opportunity for DUC and BC Parks to restore naturally functioning wetland habitat in Moberly Marshes for the benefit of waterfowl, fish and other wildlife. Currently, a pump and a series of dikes in Burges James Gadsden Provincial Park are being used to facilitate stable water levels to support breeding and migrating waterfowl. However, aging infrastructure and increased regulatory requirements have made operation and maintenance of the system unsustainable. DUC, BC Parks, local First Nations and external consultants agree that the habitat would be improved by naturalizing the site. This will also eliminate long-term management costs and liabilities associated with the current system. The land will be leased to BC Parks for 99 years and included in the park boundary. The collaboration will include the development of a trail network and interpretive signage, promoting public awareness of and appreciation for this significant wetland complex and its invaluable ecosystems.

As mentioned earlier, the Columbia Wetlands complex is recognized as a Ramsar Site because of its extraordinary biodiversity, and the acquisition of Sigi's Parcel is of strategic significance because of its potential impact on habitat preservation. The floodplain marshes in the complex serve as critical habitat for spring and fall migrant ducks and geese, while also providing essential winter habitat for elk, deer and other wildlife species. The area is home to moose, wolves, cougars, coyotes, beavers, River Otter and Grizzly Bear and boasts a remarkable diversity and abundance of amphibians, reptiles, mammals, birds, fish and invertebrates.

A prime example of provincial, national and international players getting more done together, key partners in the acquisition alongside DUC, BC Parks and BC Parks Foundation are ECCC, U.S. Fish and Wildlife Service, Nature Conservancy of Canada (NCC) and organizations that are members of the Kootenay Conservation Program.

> Among the 150 bird species known to use Bonanza Marsh for all or part of their life cycle are several CIJV priority species, such as Green-winged Teal, Hooded Merganser and Virginia Rail.

## Bonanza Marsh conservation

After more than half a century of care by the Alvarez family, the stewardship of a 12-acre (5-hectare) parcel of the Bonanza Marsh wetland complex was entrusted to NCC in 2022. The property is on the northern end of Slocan Lake, at the mouth of Bonanza Creek, comprising 6.2 acres (2.5 hectares) of uplands and 5.7 acres (2.3 hectares) of wetlands. Its protection will help ensure the ecological integrity of the larger wetland complex, including the adjacent Snk'mip Marsh Sanctuary.

The Bonanza Marsh wetlands support a large diversity of waterfowl and shorebirds, which frequent the site for its abundance of aquatic vegetation and insects. The wetlands also provide important resting and feeding sites for migratory birds passing through the Slocan Valley. In the winter, underground springs feed the wetlands and prevent freezing on the surface, making the area a valuable foraging habitat for waterfowl.

Aerial view of the Bonanza Marsh conservation area in British Columbia.
*Ryan Durand*

Among the 150 bird species known to use the marsh for all or part of their life cycle are several CIJV priority species, such as Green-winged Teal, Hooded Merganser and Virginia Rail. Other bird species observed in the marsh include Bald Eagle, Common Goldeneye, Common Merganser, Pileated Woodpecker, Osprey, Red-winged Blackbird, Sora, Spotted Sandpiper and Yellow-headed Blackbird. The property also provides nesting and feeding habitat for other raptors, cavity nesters and songbirds.

The Bonanza Marsh conservation area and Bonanza Creek serve as vital routes for Kokanee Salmon on their return to their spawning habitat. The abundance of salmon in Bonanza Creek attracts Grizzly Bear from the surrounding mountains. The marsh's location on the valley bottom provides continuous wildlife corridors that connect separate Grizzly Bear populations. These corridors are also used by moose, elk, wolverine and other mammals traversing between habitats.

A portion of the project was donated to NCC under the Government of Canada's Ecological Gifts Program, with additional funding from the U.S. Fish and Wildlife Service, American Friends of Canadian Nature Inc., Kicking Horse Coffee and Eric Grace.

*For more information, please contact Andrew Huang, Canadian Intermountain Joint Venture Coordinator, (604) 350-1913, andrew.huang@ec.gc.ca.*

Green-winged Teal.
*Jaden Barney*

## Contributions (CAD)

| | 2022–2023 | Total (2003–2023) |
|---|---|---|
| Total | $12,900,187 | $114,765,831 |

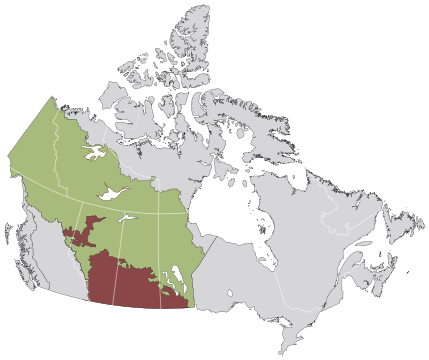
## Accomplishments (Acres)

| | 2022–2023 | Total (2003–2023) |
|---|---|---|
| Secured | 3,758 | 366,810 |
| Enhanced | 0 | 50,898 |
| Influenced | 682 | 206,362 |

Secured and enhanced acres are not additive.
2022–2023 consists of the April 1, 2022, to March 31, 2023, time frame.
2003–2023 consists of the January 1, 2003, to March 31, 2023, time frame.

# Prairie Habitat Joint Venture

McIntyre Ranch, Alberta.
*Leta Pezderic*



www.phjv.ca

The Prairie Habitat Joint Venture (PHJV) delivery area covers two distinct biomes in western Canada—the Prairie Parklands and the Western Boreal Forest (WBF)—and supports approximately 50% of North American breeding waterfowl. One of the continent's first priority landscapes under the North American Waterfowl Management Plan, the PHJV Prairie Parklands encompasses 158.4 million acres (64.1 million hectares) of prairie and aspen parklands in Alberta, Saskatchewan, Manitoba and the Peace Parkland Region of British Columbia. The WBF, which covers parts of British Columbia, Alberta, Saskatchewan, Manitoba, Yukon and Northwest Territories, has been acknowledged under the NAWMP as second only to the Prairie Pothole Region as an important waterfowl breeding area. The PHJV contains a range of wetland types, from small potholes to marshes and bog systems.

Together, the Prairie Parklands and WBF regions of Canada provide habitat for most North American duck species. They also provide habitat for hundreds of priority species identified in the Bird Conservation Region plans. The Prairie Parklands and WBF Implementation Plans highlight linkages between habitats and species.

## Prairie Parklands

### Alberta: McIntyre Ranch conservation made possible through significant partner investments

In a historic conservation achievement, the Nature Conservancy of Canada (NCC) and Ducks Unlimited Canada (DUC) partnered with the Thrall family to conserve the incredible landscape of the Thralls' McIntyre Ranch, which spans over 55,000 acres (about 22,000 hectares). This conservation agreement will maintain the ranch in its natural, healthy and unfragmented state—forever.

Conserving the 129-year-old McIntyre Ranch was a globally significant achievement and is the largest conservation agreement in Canadian history. Substantial investments by the U.S. Fish and Wildlife Service through the *North American Wetlands Conservation Act* (NAWCA) and by Environment and Climate Change Canada (ECCC) through both the Ecological Gifts Program and the Natural Heritage Conservation Program, along with contributions from corporate, foundation and individual donors, made this monumental accomplishment possible. The Thrall family's support of the project was also critical to its success.

Conserving the 129-year-old McIntyre Ranch was a globally significant achievement and is the largest conservation agreement in Canadian history.

"We are grateful to be partnering with NCC and DUC as we work together and share the responsibility to preserve prairie grasslands," said Ralph A. Thrall III, president and CEO, McIntyre Ranching Co. Ltd. "This relationship will help achieve our sustainable ranching practices in conjunction with our 'balance with nature' philosophy. We are proud to play a role in preserving something that is the way that it used to be."

McIntyre Ranch boasts rich biodiversity and represents one of the largest remaining intact tracts of fescue (native) grassland in North America. Located on the western edge of the Milk River Ridge PHJV Priority Area, it contains over 3,000 acres (about 1,200 hectares) of wetlands, which are waterfowl hotspots providing a high number of ecological benefits. As a designated important bird and biodiversity area, these habitats allow a long list of prairie species to thrive, including provincially rare birds such as Northern Pintail, Cinnamon Teal, Long-billed Curlew and Baird's Sparrow.

Conserving McIntyre Ranch will not only protect nature but also help preserve the compelling story of Alberta's rich ranching heritage. The ranch owners are committed to sustainable land stewardship and have maintained its natural values for generations.

This successful PHJV partnership, underpinned by committed, passionate stakeholders, demonstrates the incredible power of collaboration to achieve significant and lasting conservation outcomes for the benefit of us all.

## Manitoba: National and international partners do more for conservation in Manitoba

Conservation efforts in Manitoba have recently benefited from unprecedented levels of financial support from ECCC. This has allowed groups to leverage additional provincial, national and international funds to make on-the-ground gains in habitat conservation. PHJV partners in Manitoba, using ECCC and NAWCA funds, have secured wetland and grassland habitat projects and continue to enhance habitat through a partnership with the Weston Family Prairie Grasslands Initiative, all of which helps achieve PHJV objectives.

Alexander Farm near Lenore, Manitoba.
*Manitoba Habitat Heritage Corporation*


Fast Estate–Dyck revolving land conservation easement in Manitoba.

*Ducks Unlimited Canada*

> Protecting this habitat is extremely important because the risk of wetland loss is high in this area.

**Fast Estate–Dyck revolving land conservation easement**

Located in the rural municipality of Boissevain-Morton, DUC's Fast Estate–Dyck revolving land conservation easement was made possible through a partial donation of the land, along with funding from NAWCA and ECCC. The project restores and protects 164 acres (66 hectares) of grasslands, and protects 146 acres (59 hectares) of intact grassland and wetland habitat, providing excellent waterfowl nesting and wildlife habitat for species like Canvasback, Mallard, meadowlark, beaver and moose. Protecting this habitat is extremely important because the risk of wetland loss is high in this area.

The current landowner also recently participated in DUC's Rangeland program, supported through Weston Family funding. Among the positive changes to the management system are a solar-powered watering system that will improve wetland health and habitat, and cross-fencing infrastructure that allows a rotational grazing system, increasing grassland productivity.

**Alexander Farm**

The Alexander project near Lenore, Manitoba, is a fourth-generation cattle farm. The landowners recently signed two conservation easements (CEs) with the Manitoba Habitat Heritage Corporation (MHHC) to preserve the natural ecosystems on their farm. With support from ECCC and NAWCA funding, the CEs protect 544 acres (220 hectares) of wetlands and grasslands. This provides habitat for over a dozen waterfowl species, including Blue-winged Teal, Mallard and Northern Shoveler, and other wildlife, including Sharp-tailed Grouse and grassland songbirds.

Through MHHC's Grassland Stewardship Program, with funding from the Weston Family Prairie Grasslands Initiative, the Alexander farm received support to install new fencing and an off-site watering system to improve grazing management on its beef cattle operation.

Livestock production plays a valuable role in maintaining grasslands and wildlife habitat, enhancing biodiversity, building soil fertility, sequestering carbon and increasing climate change resiliency. These improvements will enhance habitat for wildlife and farm profitability.

Bill and Darla Alexander.
*Manitoba Habitat Heritage Corporation*

## Saskatchewan: Protecting keystone habitats

The agricultural landscape of Saskatchewan benefits from rich soils and long growing days, and the region is renowned for producing wheat, canola and several other economically valuable crops. At the same time, Canadian and U.S. partners in the NAWMP and the PHJV view this province as a keystone habitat to ensure the future of waterfowl.

> Canadian and U.S. partners in the NAWMP and the PHJV view Saskatchewan as a keystone habitat to ensure the future of waterfowl.

The majority of the region is under private ownership, resulting in constant pressure on natural habitats, including wetlands and grasslands. Land values in Saskatchewan have long been lower than in most agricultural regions across Canada. This has driven interest in agricultural expansion by private industry, but also encouraged investment by conservation partners across North America.

In 1997, the *Saskatchewan Conservation Easement Act* made it possible for PHJV delivery agencies working in the province to use CEs to partner with landowners and protect natural values on privately owned lands. As with many new approaches, the CE program started small, with hundreds of acres protected each year in the early days. By 2014, DUC had protected 100,000 acres (40,000 hectares) of wetland and upland habitat in the province using this conservation instrument.

In recent years, the easement program has levelled up thanks in large part to consistent and increased funding from ECCC and NAWCA. Both Canada and the United States have made unprecedented commitments to protect existing habitats, targeting representative areas and waterfowl priorities. But these dollars do not flow without matching funds. Non-governmental organizations, including DUC and NCC, have also brought more funding to the table, from U.S. states, Canadian provinces and private/corporate partners.

Blue-winged Teal.
*Jaden Barney*

Andrew Hak, manager of provincial operations for DUC Saskatchewan, has witnessed first-hand the on-the-ground impact of additional funds. “With the increased investment in our conservation programs in Saskatchewan, we’ve been able to protect more critical wildlife habitat, supporting prairie waterfowl and biodiversity,” Hak said.

On average, DUC’s CE program in Saskatchewan has protected around 20,000 acres (8,000 hectares) per year since 2020, an increase of 25% over the previous decade. The program has just surpassed the 240,000-acre (97,100-hectare) mark, which means the amount of habitat conserved through this tool has more than doubled in recent years, demonstrating the very real implications of amplified interest and investment in conservation on the Canadian Prairies.

## Western Boreal Forest

### Collaboration for conservation

The boreal landscape is rich in pristine forests and wetlands, and a natural destination for thousands of migrating waterfowl each year. Considering the northern location, industrial and other development has historically been limited, but the threat to these landscapes is growing. The Western Boreal Forest has been identified in the NAWMP as one of the most important waterfowl breeding areas in North America. DUC’s National Boreal Program works with local stewards and stakeholders, including Indigenous communities, industry and municipal, provincial and territorial governments, while collaborating with the federal government and other environmental non-profits to ensure a positive impact on the region’s wetlands and waterfowl habitat.

DUC staff are working side by side with the Deninu Kųé First Nation, the Fort Resolution Métis Government and other partners in the Northwest Territories to ensure the health and prosperity of the Slave River Delta and Taltson Watershed.

### Indigenous-led conservation for the future

Indigenous-led land and water stewardship has emerged as a beacon of hope in the face of global climate and biodiversity challenges. DUC has been a devoted supporter of many Indigenous-led conservation initiatives, such as the Seal River Watershed Alliance’s bid to establish an Indigenous Protected Area in northern Manitoba.

At the United Nations 2023 Water Conference in New York City this past March, DUC’s National Manager of Boreal Programs Kevin Smith described another project, where DUC staff are working side by side with the Deninu Kųé First Nation, the Fort Resolution Métis Government and other partners in the Northwest Territories to ensure the health and prosperity of the Slave River Delta and Taltson Watershed, a priority area in the PHJV WBF. The goal is to establish an Indigenous Protected and Conserved Area that would span hundreds of thousands of acres. This designated Important Bird Area offers refuge to over 33 bird species, including Green-winged Teal, scaup, Greater and Lesser Yellowlegs, Least Flycatcher, Merlin and Caspian Tern.

With financial support from NAWCA and ECCC, among other sources, DUC is working alongside these communities to empower Indigenous stewardship of land, water and waterfowl for long-term protection of local landscapes through resource and

Slave River Delta and Taltson Watershed, Northwest Territories.
*Ducks Unlimited Canada*

knowledge sharing. "Given that Canada holds nearly a quarter of the world's fresh water, these solutions have global impact and significance," Kevin Smith said. "Indigenous-led solutions offer hope."

*For more information, please contact Deanna Dixon, Prairie Habitat Joint Venture Coordinator, deanna.dixon@ec.gc.ca.*

## Prairie Parklands Contributions (CAD)

| | 2022–2023 | Total (1986–2023) |
|---|---|---|
| Total | $91,625,655 | $1,611,904,569 |

## Accomplishments (Acres)

| | 2022–2023 | Total (1986–2023) |
|---|---|---|
| Secured | 110,364 | 8,562,120 |
| Enhanced | 359,513 | 3,011,747 |
| Influenced | 436,801 | 7,977,132 |

Secured and enhanced acres are not additive.
2022–2023 consists of the April 1, 2022, to March 31, 2023, time frame.
1986–2023 consists of the January 1, 1986, to March 31, 2023, time frame.

## Western Boreal Forest Contributions (CAD)

| | 2022–2023 | Total (1986–2023) |
|---|---|---|
| Total | $14,624,535 | $188,142,014 |

## Accomplishments (Acres)

| | 2022–2023 | Total (1986–2023) |
|---|---|---|
| Secured | 0 | 12,091,184 |
| Enhanced | 0 | 107 |
| Influenced | 1,022,122 | 122,127,230 |

Secured and enhanced acres are not additive.
2022–2023 consists of the April 1, 2022, to March 31, 2023, time frame.
1986–2023 consists of the January 1, 1986, to March 31, 2023, time frame.

# Eastern Habitat Joint Venture

Leland Wetlands, Ontario.
*Rob MacRae, Nature Conservancy of Canada*

www.ehjv.ca
www.ehjv.ca/fr

The Eastern Habitat Joint Venture (EHJV) contains 780 million acres (315 million hectares) spanning the provinces of Ontario, Quebec, New Brunswick, Nova Scotia, Prince Edward Island and Newfoundland and Labrador. The EHJV supports 30% of Canada's wetlands, including more than 120 million acres (48 million hectares) of freshwater and tidal wetlands. Important habitats include coastal bays and salt marshes, lakeshore marshes, floodplain wetlands and boreal forest wetlands. The EHJV has six priority waterfowl species: American Black Duck, Mallard, Wood Duck, Common Goldeneye, Barrow's Goldeneye and Common Eider (subspecies ***dresseri***), as well as 16 non-waterfowl priority species, including waterbirds, shorebirds and landbirds. The habitat within the EHJV supports 95% of the continental population of American Black Duck and 80% of the Common Eider subspecies ***dresseri***.

## Atocas Bay: A gift of nature that's for the birds

Atocas Bay, in eastern Ontario, is a shining example of how agriculture and wetland restoration can co-exist successfully.

Over the 20th century, 95% of the area's wetlands were lost to farming, but Ducks Unlimited Canada (DUC) recognized Atocas Bay's potential for enhancement, with its low land values, clay soils and undulating topography. DUC could not pass up the opportunity to restore cost-conscious and productive wetlands, and purchased the property in 2001 through the multi-partner EHJV.

Restoration work for the Atocas Bay wetlands was broken into three phases between 2001 and 2008, beginning with biological field and waterfowl surveys, engineering field inspections, design work, permitting and budget approvals. Many of the wetlands were restored, while others were left unaltered to monitor the success rate for waterfowl. Not surprisingly, the restored wetlands were vastly more productive than those left unrestored.

While Phase 1 was underway, DUC purchased two more properties, and another 39 wetland segments were restored. In 2022, an additional 50 acres (20.23 hectares) was acquired with the support of Environment and Climate Change Canada (ECCC) and the Nature Smart Climate Solutions Fund. The property is now more than 2,000 acres (800 hectares) of rolling uplands, wetlands and small lakes. On the newly acquired acreage, DUC restored nine individual wetlands providing both breeding and brood-rearing habitat.

"We're fortunate to be able to secure even more land at Atocas Bay," Mikayla Stinson, conservation specialist for DUC in eastern Ontario, said. "To have this much of a positive impact and to see it first-hand is gratifying. It shows what can be accomplished when people have a shared vision and a common goal."

In total, DUC has restored nearly 300 wetland basins on the site, providing significant benefits to waterfowl, wildlife and the people living in the area. More than 13 species of waterfowl can now be found here, including such NAWMP priority species as Mallard, American Black Duck, Blue-winged Teal, Gadwall and Wood Duck. Atocas Bay is also home to several rare species, including Black Tern and Short-eared Owl. Additionally, the area supports the highest density of breeding Bobolinks across both Ontario and Quebec.

Atocas Bay, Ontario.
*Ducks Unlimited Canada (Ontario)*

Several environmentally friendly agricultural practices have been implemented on the property, including cattle-exclusion fencing around important wetland habitat, rotational grazing, alternative livestock watering sources and delayed haying to reduce wildlife mortality. The Atocas Bay project shows how agriculture and wildlife habitat management can work together while providing carbon sequestration benefits, and contributing to Canada's goals in greenhouse gas emission reduction and land conservation.

> Atocas Bay is a shining example of how agriculture and wetland restoration can co-exist successfully.

This major conservation initiative would not have been possible without the support of a multitude of partners from all levels of government in both Canada and the United States, as well as non-profits.

DUC will continue to showcase this remarkable project to display the benefits of restored wetlands, demonstrate how agricultural stewardship practices can sustain both farming and wildlife, and show how EHJV partners can get more done working together.

## Cape Freels: A special place in Newfoundland and Labrador

In the province of Newfoundland and Labrador (N.L.), wildlife and wildlife habitats found within municipalities are among those in greatest danger of being degraded or reduced. As its primary contribution to the implementation of EHJV goals in the

Shorebird nesting and foraging habitat in Cape Freels, Newfoundland and Labrador.

*Government of Newfoundland and Labrador, Wildlife Division*

province, the N.L. Department of Fisheries, Forestry and Agriculture created a municipal habitat stewardship program to help municipalities conserve important wildlife habitat found within planning boundaries. The province works with the Stewardship Association of Municipalities Inc., an N.L. EHJV partner, to encourage municipal councils to sign formal habitat conservation agreements, so that when land-use decisions are made, the value of that wildlife habitat will not be forgotten, and future activities will not diminish the land's ability to sustain wildlife.

Since 1993, over 45 N.L. municipalities have signed habitat conservation agreements, becoming important links in the continental chain of conservation. In January 2017, the coastal town of New-Wes-Valley, located on the northwestern coast of Bonavista Bay, signed a habitat conservation agreement to conserve 1,135 acres (460 hectares) of wetland, upland and coastal habitat for waterfowl and other wildlife species. In late 2022, the town approved an expanded agreement to include the Cape Freels Conservation Area, an additional 4,820 acres (1,950 hectares) of significant hyper-oceanic barren habitat for nesting shorebirds, seabirds, waterfowl and some critically listed species of flora and fauna.

Most of the Cape Freels Conservation Area is open shallow water and wetland habitat, dominated by peat bogs, with marshland on the coast and small enclaves of fen habitat throughout. Beaches and sandy dunes are found along the coast. The entire coastal area has been surveyed multiple times through ECCC's coastal waterfowl surveys, winter sea duck surveys and Atlantic Canada shorebird surveys. Data reveal that large flocks of migrating waterfowl like Common Goldeneye, Greater Scaup, Green-winged Teal, Northern Pintail, Red-breasted Merganser and Canada Geese use Cape Freels. The area is a haven for Common Eider, and it is estimated that at one point approximately 9% of the population of wintering Northern Common Eider could be present between Cape Freels and the Wadham Islands. Cape Freels is among the top 10 shorebird migration stopover sites in Newfoundland and Labrador.

Several populations of federally listed at-risk species have been documented using habitat in the area, including Red Knot, Piping Plover, Peregrine Falcon, Short-eared Owl and Bank Swallow, as well as provincially sensitive ranked species such as Rough-legged Hawk, Pectoral Sandpiper and Northern Goshawk. There are at least eight rare plant species with provincial sensitivity rankings in the conservation area.

Through this project, several EHJV partners have worked together to include Cape Freels in the New-Wes-Valley Habitat Conservation Agreement to ensure the environment there will remain intact for generations to come. The partners appreciate the efforts of the Indian Bay Ecosystem Corporation, which has worked to assess this important coastal landscape and build community support for conservation through ECCC's Community-Nominated Priority Places initiative. This work further

strengthens the conversation around habitat stewardship in the area, while helping to achieve Canada's biodiversity and land conservation goals, and conserve habitat for NAWMP priority species.

## Preserving wetlands, bogs and marshes

The Nature Conservancy of Canada (NCC) works to protect wetlands and the species they sustain through landscape-scale conservation planning, and through partnerships and collaboration with governments, conservation organizations and other landowners. Three land purchases in 2022 added to existing natural areas in Prince Edward Island, Ontario and Quebec.

NCC's Haldimand River Nature Reserve in Prince Edward Island is special for its extensive salt marsh and intact riparian areas. With salt marshes making up only 1% of the province's land base, it is vital to protect those that remain. NCC recently added 70 acres (28 hectares) of forest and wetland to the existing 290 acres (117 hectares) of salt marsh and upland forest, secured with funding from the U.S. federal government through the *North American Wetlands Conservation Act* and in partnership with the Government of Prince Edward Island. The nature reserve is a birder's dream. On a paddle up the river you may spot numerous NAWMP priority waterfowl species, as well as Great Blue Heron, Willet and Nelson's Sharp-tailed Sparrow calling from the wetlands.

Common Eider.
*Sydney M. Collins*

> When land-use decisions are made, the value of wildlife habitat will not be forgotten, and future activities will not diminish the land's ability to sustain wildlife.

Hooded Merganser.
*Jean-Maxime Pelletier*

Lac-à-la-Tortue Bog, Quebec.
*Nature Conservancy of Canada*

Wood Duck.
*Nila Sivatheesan, Nature Conservancy of Canada*

In Ontario, NCC announced the protection of 185 acres (75 hectares) of wetlands, forests and granite ridges in the Leland Wetlands area north of Kingston. This is part of the Frontenac Arch Natural Area, 422,550 acres (171,000 hectares) of forests, wetlands and lakes that connect the northern forests of Algonquin with the Adirondacks in New York State. It is an important habitat corridor for migratory birds and wide-ranging animals such as fisher, moose, Black Bear and Eastern Wolf.

Located south of Shawinigan, Quebec, and covering 16,309 acres (6,600 hectares), the Lac-à-la-Tortue Bog is the largest bog in the St. Lawrence Valley. In fall 2022, NCC protected the Lefebvre property, a 210-acre (85-hectare) site that consists entirely of wetland (bog and marshes). The bog contains several ponds and swamps that are home to many waterfowl species, including American Black Duck, Wood Duck, Great Blue Heron and Blue-winged Teal. Several researchers are interested in documenting the ecological services provided by the bog, and projects are underway to better understand how the bog retains water and captures carbon.

All types of wetlands provide these ecological services, contributing to slowing the pace of climate change and improving water quality in communities, as well as offering habitat for waterfowl and numerous other species.

*For more information, please contact Kristin Bianchini, Eastern Habitat Joint Venture Coordinator, (289) 212-2735, kristin.bianchini@ec.gc.ca.*

## Contributions (CAD)

| | 2022–2023 | Total (1986–2023)* |
|---|---|---|
| Total | $52,137,696 | $786,768,949 |

## Accomplishments (Acres)

| | 2022–2023 | Total (1986–2023)* |
|---|---|---|
| Secured | 5,932 | 2,407,203 |
| Enhanced | 7,175 | 713,420 |
| Influenced | 222,518 | 78,219,153 |

Secured and enhanced acres are not additive.
2022–2023 consists of the April 1, 2022, to March 31, 2023, time frame.
1986–2023 consists of the January 1, 1986, to March 31, 2023, time frame.
* Includes first-step projects completed from 1986 to 1988, before the formal recognition of the EHJV in 1989.

# Pacific Birds Habitat Joint Venture

The coastal forests and natural shoreline of Edith Point, British Columbia.

*Emrys Miller*

www.pacificbirds.org

The Pacific Birds Habitat Joint Venture (PBHJV) is an international Joint Venture that includes portions of British Columbia (B.C.), Alaska, Washington, Oregon, California and Hawaii. The B.C. coastline has over 440 estuaries, which are a focus of many PBHJV programs because of their food-rich tidal wetlands and adjacent floodplains. Near urbanized areas, floodplains have often been highly modified and converted to intensive non-forage agricultural crops, resulting in the loss of considerable natural habitat and food supply for wildlife. Throughout the PBHJV, 40 species of ducks, swans and geese occur regularly at various stages of their life cycles, and an estimated one million waterfowl winter along the B.C. coast. The Fraser River Delta in southern British Columbia is the only Canadian Important Bird and Biodiversity Area designated as "in danger" by BirdLife International. This delta supports the highest density of wintering waterfowl in Canada. Key species in the B.C. portion of the Joint Venture include the Wrangel Island Snow Goose (nearly half the population), the Pacific Coast's Trumpeter Swan (half the population), American Wigeon, Cackling Goose and Western High Arctic Brant.

PBHJV projects in 2022–2023 have focused on the conservation of estuaries and nearshore shallow marine areas, both of which are priority habitat types in the PBHJV Implementation Plan. They are known to support priority waterfowl species like American Wigeon, Barrow's Goldeneye, Bufflehead, Harlequin Duck, Mallard and Pacific Brant. Associated uplands are also protected, which demonstrates the benefits of the *North American Wetlands Conservation Act* (NAWCA) to non-waterfowl species as well. For many projects, significant funding came from governments, organizations and individuals in both Canada and the United States, emphasizing that natural benefits know no borders.

Additionally, the achievements of PBHJV and Canadian Intermountain Joint Venture (CIJV) partners are being documented via a bird-monitoring program in targeted regions. The program is designed to assess how both waterfowl and non-waterfowl priority species are responding to the Joint Ventures' conservation efforts.

Shoal Creek Estuary, British Columbia.
*The Nature Trust of British Columbia*

## Shoal Creek Estuary acquisition, Phase 2

In 2022–2023, The Nature Trust of British Columbia (NTBC) acquired a 160-acre (65-hectare) parcel in the Shoal Creek Estuary on the mid coast of British Columbia, 8 miles (13 km) east of Port Neville. This is the second parcel acquired, for a total protected area of 320 acres (130 hectares).

Estuaries are a key habitat area for conservation, supporting 80% of all fish and wildlife in British Columbia, including some of the rarest and most endangered species in the world. The Shoal Creek Estuary is part of the Great Bear Rainforest and consists of tidal flats, mountain slopes and forest, which is regenerating naturally after being logged in the 1990s.

Marbled Murrelet.
*Tom Middleton*

The area is an important stopover on the Pacific Flyway, a major migration route extending along the Pacific coast from Alaska to the southern tip of South America, and is accessible only by water or air. Several bird species listed under Canada's *Species At Risk Act* (SARA) are known to frequent the estuary, including Great Blue Heron, Western Grebe, Barn Swallow and Marbled Murrelet, which are all listed as either of Special Concern or Threatened. Other bird species that depend on the estuary include Black Scoter, Brandt's Cormorant, Double-crested Cormorant, Long-tailed Duck and Surf Scoter. Chum, Coho and Pink Salmon use the estuary for rearing and feeding, in turn attracting Grizzly Bears, assessed as a species of Special Concern by the Committee on the Status of Endangered Wildlife in Canada. Funding for the Shoal Creek Estuary purchase was provided by Environment and Climate Change Canada (ECCC), U.S. Fish and Wildlife Service through NAWCA, Pan American Silver and many other donors in both Canada and the United States.

## Edith Point conservation

Edith Point is an 86-acre (35-hectare) property on the northeast corner of Mayne Island, one of the few large undeveloped waterfront properties remaining in the southern Gulf Islands. In 2022, the family who had cared for it since the 1990s entrusted its conservation to the Nature Conservancy of Canada (NCC). The ecological rationale for conservation was established through plant and wildlife surveys and ecosystem mapping undertaken by the Mayne Island Conservancy, which is also collaborating with NCC on the ongoing stewardship of the conservation area.

In addition to its impressive stands of mature Douglas Fir and Arbutus, Edith Point also contains pockets of coastal meadow, a small wetland and over 1.9 miles (3 km)

of natural shoreline. Coastal Douglas Fir forests are home to numerous rare species, including provincially and federally listed at-risk species. A diversity of waterfowl and shorebirds can be seen seeking refuge and foraging on the south shore, with occasional observations of Marbled Murrelet, a species listed as threatened under SARA.

B.C.'s coastlines are part of the Pacific Flyway and are recognized by the NAWMP as important waterfowl areas. During migration, a variety of waterfowl overwinter in the shallow-water marine habitats of southeastern Vancouver Island and the Gulf Islands, including Edith Point. The area is also adjacent to the Active Pass Important Bird and Biodiversity Area, which has nationally significant concentrations of waterbird and seabird colonies.

Great Blue Heron, a priority waterbird species in the PBHJV.

*The Nature Trust of British Columbia*

PBJHV priority species known to occur in waters surrounding the property include American Wigeon, Barrow's Goldeneye, Bufflehead, Harlequin Duck, Long-tailed Duck, Mallard and Pacific Brant. Orcas, Humpback Whales and sea lions can be seen off the north shore, and the coastal Douglas Fir forests are home to the Sharp-tailed Snake and over 100 species of insects. Over 170 species of vascular plants have been documented here, including the rare Seaside Juniper.

The project was supported by funding from ECCC's Ecological Gifts Program and NAWCA, as well as from foundations and individual donors.

## Restoring marsh habitat in Boundary Bay: A "log"-istical mission

In 2023, as part of an initiative to restore tidal wetlands in the Lower Fraser Valley, Ducks Unlimited Canada (DUC) completed an ambitious log-removal project in Boundary Bay, clearing 3.63 acres (1.47 hectares) of marsh and removing 930.97 tons (945.91 metric tons) of log debris. The presence of log debris in the Fraser River Estuary has long been a concern because of the damage it inflicts on marsh vegetation. Log removal has been employed as a strategy for marsh restoration since the mid-1980s. Compared with alternatives such as tidal marsh creation and replanting of degraded areas, it has proven to be a cost-effective and reliable solution.

The presence of log debris in the Fraser River Estuary has long been a concern because of the damage it inflicts on marsh vegetation.

Boundary Bay was chosen as a priority restoration area for several reasons. As part of the Fraser River Delta Ramsar Site, the bay is recognized as a Wetland of International Importance. Its logistical simplicity, including close proximity to the dike and the durability of the dike itself, made it an ideal location, and previous log-removal projects and studies in the vicinity provided valuable references for the project. Boundary Bay is also a salt marsh, making it well suited for carbon storage.

Surveys were undertaken to identify wood with important habitat features, such as large-diameter nurse logs and root wads, to be retained.

*Ducks Unlimited Canada*

The boundary of restored and unrestored areas of marsh midway through log-removal work.

*Ducks Unlimited Canada*

The restoration of tidal marshes in Boundary Bay offers several ecological benefits. The bay is internationally significant as Canada's largest habitat for overwintering waterfowl and birds on the Pacific Flyway, and the project area overlaps with the critical habitat of several species listed under SARA, including Barn Owl, Great Blue Heron, Short-eared Owl, Audouin's Night-stalking Tiger Beetle and Vancouver Island Beggartick, all listed as either of Special Concern, Threatened or Endangered. The project provides an opportunity to enhance these species' habitats and contribute to their conservation. It also aims to re-establish the Seashore Saltgrass – Pacific Swampfire ecological community, which is on the B.C. Conservation Data Centre's Red List and considered at risk of being lost.

To protect the natural habitat, surveys were undertaken before work began to identify wood with important habitat features, such as large-diameter nurse logs and root wads, to be retained. Removal equipment was operated from on top of the logs to minimize damage to the marsh and dike and to avoid disturbing the natural habitat. Following log removal, three separate revegetation treatments were implemented: planting with nursery stock, planting with donor plugs from nearby marsh, and natural recolonization. The success of the different treatments will be used to inform future restoration projects.

The project received funding from both Canada and the United States, through ECCC's Nature Smart Climate Solutions Fund and NAWCA, respectively.

## Bird monitoring on Joint Venture conservation sites

Since 2021, partners of the PBHJV and the CIJV have been working together on a collaborative bird-monitoring program across southern British Columbia, including Vancouver Island, the Lower Mainland, the Okanagan Valley and the Columbia Valley. The objective is to assess how various bird species have responded to decades of habitat conservation work, such as land acquisition and habitat restoration.

Surveys have been undertaken through an all-bird lens, with particular emphasis on wetland and marsh birds. The intention is to quantify the abundance and diversity of bird species in the Joint Venture sites and compare the sites with nearby unprotected control sites. In addition to surveys conducted during the breeding season, Winter Waterbird Surveys have been conducted in the Lower Mainland during the winter months (November to February). This program is designed to assess the conservation value of Joint Venture properties during the non-breeding season, a period that is crucial for many waterbirds. Surveys have followed established protocols used

Bufflehead adults and juveniles.

*Jaden Barney*

> Since 2021, partners of the PBHJV and the CIJV have been working together on a collaborative bird-monitoring program across southern British Columbia… The intention is to quantify the abundance and diversity of bird species in the Joint Venture sites and compare the sites with nearby unprotected control sites.

for the B.C. Marsh Monitoring Program and the Provincial Breeding Bird Atlas and have leveraged relationships between Joint Venture partners, including ECCC, Birds Canada, DUC, NTBC and NCC.

Preliminary results show that Joint Venture sites support a higher abundance and diversity of Joint Venture priority bird species, including Townsend's Warbler, Black-throated Gray Warbler, Long-billed Curlew and Ring-necked Duck, compared with unprotected control sites. Marsh birds such as Pied-billed Grebe, Sora and Virginia Rail were also detected more frequently on Joint Venture sites. Joint Venture sites are benefiting both priority waterfowl and non-waterfowl species, including those of high conservation concern. Further work will create conservation tools that identify all-bird priority areas and on-the-ground conservation actions that most benefit waterfowl, marsh birds, upland birds and other bird groups. This will ultimately inform future investment decisions for managing, maintaining and expanding the protected area network, thereby conserving the most valuable and sensitive wildlife habitat.

*For more information, please contact Andrew Huang, Pacific Birds Habitat Joint Venture Coordinator, (604) 350-1913, andrew.huang@ec.gc.ca.*

## Contributions (CAD)

| | 2022–2023 | Total (1991–2023) |
|---|---|---|
| Total | $19,926,046 | $277,349,337 |

## Accomplishments (Acres)

| | 2022–2023 | Total (1991–2023) |
|---|---|---|
| Secured | 436 | 141,663 |
| Enhanced | 4,035 | 204,073 |
| Influenced | 22,042 | 6,663,779 |

Secured and enhanced acres are not additive.

2022–2023 consists of the April 1, 2022, to March 31, 2023, time frame.

1991–2023 consists of the January 1, 1991, to March 31, 2023, time frame.

**Wood Duck.**
***Jean-Maxime Pelletier***

# Species Joint Ventures

A male Surf Scoter with a GPS tracking antenna and leg band.

*Frank Lin*

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

American Black Duck.
*Sydney M. Collins*

The Black Duck Joint Venture (BDJV) includes partners from the provinces of Ontario, Quebec, New Brunswick, Nova Scotia, Prince Edward Island, Newfoundland and Labrador and 14 eastern states. The American Black Duck (*Anas rubripes*; hereafter black duck) can be found in saltwater marshes, brackish and freshwater impoundments, riverine and estuarine marshes, swamps, shallow lakes and wetlands throughout the boreal landscape. Black ducks are mostly found in the Atlantic and Mississippi Flyways.

Often referred to as "the gold standard of eastern waterfowl," the black duck has tremendous social, economic and cultural value to the people of eastern North America. Historically, it was the most abundant duck species in that region. However, the population declined by more than 50% in traditional wintering areas between the 1950s and 1980s. Although black duck numbers have stabilized, they have not recovered to historic levels and remain below their NAWMP population objective. While no single cause for the decline in black ducks has been identified, a hypothesized cause is the loss and degradation of habitat on migration and wintering areas (i.e., non-breeding habitat). In the heart of the black duck non-breeding range, conservation partners annually invest significant resources to restore and protect wetlands and associated habitats. However, these efforts have largely been opportunistic and lack a strong biological/science basis.

Conservation planning for waterfowl on migration and wintering areas is based on energetics theory. This assumes populations are primarily limited by the availability of energy in the form of food. Greatly simplified, energetics models compare the energy demand that waterfowl place on habitats to the energy supply provided by those habitats. These models can be scaled to the refuge, watershed, province,

country or Joint Venture level, depending on conservation planning need. Areas that are in energy deficit are prioritized for enhancement activities; those that are adequate are prioritized for protection of existing habitat.

Working together, the BDJV, Atlantic Coast Joint Venture in the United States, Ducks Unlimited Inc., various wildlife agencies and several academic institutions invested in a series of field and laboratory studies and modelling efforts to estimate habitat-carrying capacity for non-breeding black ducks using an energetics modelling approach. Concurrently, waterfowl scientists across the continent developed a process for distributing NAWMP continental breeding population goals to migration and wintering areas to develop non-breeding population goals. With funding provided by the BDJV, researchers developed the American Black Duck Decision Support Tool (DST) to estimate the habitat needs across the black duck non-breeding range, and prioritize habitat protection and restoration, including habitats in eastern Canada. The DST identifies target watersheds based on their relative importance to black ducks, and to specific wetland restoration and protection goals, in order to support efforts to achieve the NAWMP population objective for black ducks in eastern North America.

The DST encompasses the southern portion of the Eastern Habitat Joint Venture (EHJV), which is at the northern limit of the black duck non-breeding range and includes Bird Conservation Regions 12, 13 and 14. Although EHJV partners are primarily focused on meeting the needs of breeding waterfowl, they can use the DST to guide their conservation planning and management decisions to provide important non-breeding wetland and associated habitats for black ducks in Canada, while also benefiting a diversity of wetland-dependent species and other NAWMP priority species across a broad geographical area, ultimately helping partners get more done together.

To access the American Black Duck Decision Support Tool and resources, please visit *dabblingducks.ducksgis.org*.

*For more information, please contact Kristin Bianchini, Black Duck Joint Venture Coordinator, (289) 212-2735, kristin.bianchini@ec.gc.ca.*

## Expenditures (CAD)

| | 2022–2023 | Total (1986–2023) |
|---|---|---|
| Banding | $350,085 | $9,698,917 |
| Research | $115,085 | $2,081,119 |
| Surveys | $607,376 | $10,129,936 |
| Conservation Planning | $33,060 | $ 491,312 |
| Communication and Education | – | $ 80,428 |
| **Total** | **$1,105,606** | **$ 22,481,712** |

2022–2023 consists of the April 1, 2022, to March 31, 2023, time frame.

1986–2023 consists of the January 1, 1986, to March 31, 2023, time frame.

American Black Duck.
*Sydney M. Collins*

# Sea Duck Joint Venture

Project lead Megan Ross sets up a line of decoys to help capture Surf and White-winged Scoters for a GPS tracking study in the Salish Sea.

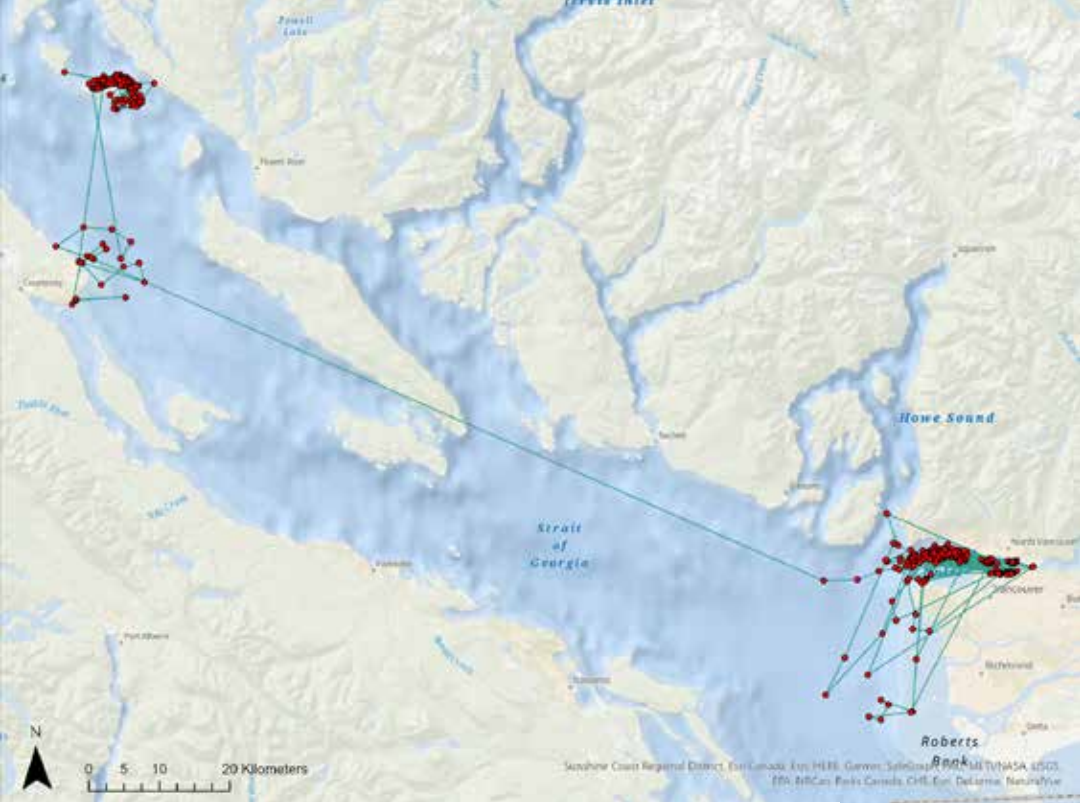
*Environment and Climate Change Canada*

www.seaduckjv.org

The Sea Duck Joint Venture (SDJV) encompasses all of Canada and the United States and focuses on coastal waters for migrating and wintering ducks and on boreal forest and tundra for nesting ducks. The Joint Venture includes all 22 recognized populations among the 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. As a group and depending on the season, sea ducks use all four flyways.

Any plans for sea duck conservation require clear, up-to-date species data. Recent advances in implantable GPS transmitters have given researchers in British Columbia (B.C.) and Washington State (WA) the ability to refine their knowledge of how Surf and White-winged Scoters spend their time in the Salish Sea. Through a partnership between Environment and Climate Change Canada, the Washington Department of Fish and Wildlife, the Pacific Birds Habitat Joint Venture (PBHJV) and the SDJV, researchers are working on a project to describe the distribution, movement patterns and winter habitat use of Surf and White-winged Scoters before the birds depart northward on spring migration in March and April.

Between November 29 and December 10, 2021, 67 Surf Scoters were captured and banded (47 in B.C. and 20 in WA). Of those birds, 28 had small (1 ounce/31 grams) Ornitrack-30 4G transmitters implanted (19 in B.C. and 9 in WA). Over the next five to six months, the birds were tracked as they moved around the Salish Sea. In November and December 2022, another 61 transmitters were deployed: 27 in B.C. (15 White-winged Scoters, 12 Surf Scoters), and 34 in WA (18 and 16, respectively). Preliminary analyses demonstrate the incredible detail of GPS location data compared with previously available technologies.




This map shows how one male Surf Scoter spent the winter in the Salish Sea between December 9, 2021, and March 31, 2022. After the transmitter was attached, the bird was in Burrard Inlet near Vancouver until mid-February. It flew to Courtenay in February, then moved north to Powell River for a month. The bird returned to the Courtenay/Comox area during the herring spawn and stayed there for the remainder of March before flying north to breed.

Real-time data arriving from the transmitters allow researchers to improve their understanding of habitat use and movements during the non-breeding season. For example, the tracking data show birds' daily habits: they tend to spend time closer to shore during the day, while moving farther offshore at night. Data also show that some birds travel well beyond their established home ranges as winter progresses and food resources and/or availability begin to shift.

Pacific Herring spawn events attract thousands of sea ducks, and the Baynes Sound region is one of the most reliable spawn areas from year to year. The first scoter movements to Baynes Sound in 2021 occurred roughly a week before the spawning event was visible to Fisheries and Oceans Canada observers. This suggests that scoters are fully tuned in to the seasonality of their local environment and eager to take advantage of a superabundant food resource. Birds took several different migration routes out of the Salish Sea, and researchers expect to learn more as birds return this fall from their breeding grounds in northern Canada.

The high-resolution spatial data gathered can be used to identify critical habitat features that will inform decision-making on transboundary issues such as aquaculture, conflicting species management (e.g., salmonid habitat and food web enhancements, or Pacific Herring management), environmental assessments (e.g., for oil, gas and other shipping, or for coastal and port development), emergency preparedness (e.g., to assess effects of and responses to oil spills) and conservation planning in the Salish Sea.

In addition to contributing to sea duck science, this project has allowed researchers to establish relationships with regional interpretive centres. One of these is the SeaDoc Society, based on Orcas Island, which supports scientific research into the health of marine wildlife and their ecosystems. Episode 3 of its *Salish Sea Wild* series highlighted the work of Dr. Joe Gaydos, science director of the SeaDoc Society and veterinarian for the Washington team efforts in 2021 (*www.seadocsociety.org/salish-sea-wild*).

New findings from the Surf and White-winged Scoter Salish Sea tracking project will complement efforts by a second SDJV-funded project that brings together a cross-border network of experts to share information on coastal and marine habitat management in the Salish Sea. This project, led by Birds Canada with collaborators in Washington, British Columbia and the PBHJV, will develop habitat models for sea ducks on both sides of the U.S.–Canada border.

*For more information, please contact Margaret Campbell, Sea Duck Joint Venture Coordinator, (867) 334-5379, margaret.campbell@ec.gc.ca.*

## Expenditures (CAD)

| | 2022–2023 | Total (1998–2023) |
|---|---|---|
| Banding | – | $695,345 |
| Research | $546,261 | $ 13,675,948 |
| Surveys | – | $3,630,006 |
| Conservation Planning | – | $1,040,515 |
| Communication and Education | $75,083 | $178,515 |
| **Total** | **$621,344** | **$19,220,329** |

2022–2023 consists of the April 1, 2022, to March 31, 2023, time frame.

1998–2023 consists of the January 1, 1998, to March 31, 2023, time frame.

# Arctic Goose Joint Venture

Karrak Lake Research Station, Queen Maud Gulf Migratory Bird Sanctuary, Nunavut.
*Dana Kellett*

Plan conjoint des OIES DE L'ARCTIQUE
ARCTICGOOSE Joint Venture

www.agjv.ca
www.pcoa.ca
www.ganso
delartico.com

The Arctic Goose Joint Venture (AGJV) covers 924 million acres (374 million hectares) spanning North America and circumpolar countries on other continents. It focuses on 24 populations among seven species: Greater White-fronted, Emperor, Snow, Ross's, Brant, Cackling and Canada Geese. Arctic geese use all four North American flyways and the Western Atlantic Flyway of Europe. Since inception, the scope of the AGJV has aligned with the NAWMP Waterfowl Habitat Areas of Geographic Concern, and the AGJV supports work in all the important arctic and subarctic areas identified for the NAWMP.

Environment and Climate Change Canada (ECCC), along with many other Canadian and U.S. partners, has been supporting world-class ecological research in several arctic camp stations since the late 1980s.

One example is the long-term research project established by Dr. Ray Alisauskas in 1991 at Karrak Lake, Nunavut, to study the population ecology of Ross's Geese and Lesser Snow Geese (hereafter, light geese). Over the years, the scope of the project broadened to include research about other species of migratory birds, small mammals, predators, parasites and habitat. Research at Karrak Lake occurred during the exponential growth and subsequent, ongoing, decline of the nesting colony of light geese there. This provided an important opportunity to detail the environmental factors regulating arctic goose populations, and the interrelationships between arctic geese, their breeding and non-breeding habitats, and other sympatric species. The research was instrumental during the process to designate both Ross's Geese and Snow Geese as overabundant in Canada and the United States, and has been central to continued evaluation of the effectiveness of management actions to reduce overabundant populations. Perhaps most importantly, research at Karrak Lake has resulted in fundamental improvements to programs monitoring migratory birds across North America by demonstrating the importance of a comprehensive approach to measuring demographic contributions to population change, including rates of survival, reproduction and immigration/emigration.

Dr. Ray Alisauskas banding geese at Karrak Lake, Nunavut.

Dr. Alisauskas's program has greatly increased understanding of arctic-nesting geese and the ecosystems they inhabit. Although the light geese populations are still considered overabundant, the recent decline of the mid-continent population suggests the need to identify changing ecological relationships in order to adjust management and conservation planning. The Karrak Lake research station, with its unique array of data from the last three decades, provides a continued opportunity to learn about the reasons for the decline.

Since 1991, the AGJV has contributed funding to at least 10 separate projects at Karrak Lake. The Joint Venture's CA$2.3 million contribution has leveraged an additional CA$4.3 million in matching funds, for a total of CA$6.6 million spent on the AGJV-supported aspects of the research program at Karrak Lake. Long-term support from ECCC and the U.S. Fish and Wildlife Service through the Arctic Goose Joint Venture has been essential to the success of this research.

*For more information, please contact Deanna Dixon, Arctic Goose Joint Venture Coordinator, deanna.dixon@ec.gc.ca.*

## Expenditures (CAD)

| | 2022–2023 | Total (1986–2023) |
|---|---|---|
| Banding | $250,926 | $19,722,033 |
| Research | $1,746,230 | $26,799,734 |
| Surveys | $206,664 | $11,832,682 |
| Collar Observations | – | $1,324,185 |
| Management | – | $272,992 |
| Conservation Planning | $63,704 | $905,189 |
| Communication and Education | – | $51,882 |
| **Total** | **$2,267,524** | **$60,908,697** |

2022–2023 consists of the April 1, 2022, to March 31, 2023, time frame.
1986–2023 consists of the January 1, 1986, to March 31, 2023, time frame.

Ross's Geese nesting, Karrak Lake, Nunavut.
*Dana Kellett*

# Partners

## Thank you to all of our partners who contributed financially in 2022–2023:

Female White-winged Scoter with a GPS tracking antenna.

*Frank Lin*

### Canadian Agencies

Acadia University
Age of Union Foundation
Alberta Conservation Association
Alberta Environment and Protected Areas
Alberta Sport, Recreation, Parks and Wildlife Foundation
Alberta Treasury Board and Finance
Alberta-Pacific Forest Industries Inc.
ArcticNet Inc.
ATB Financial
BC Hydro
Beef Cattle Research Council
British Columbia Ministry of Agriculture and Food
British Columbia Ministry of Environment and Climate Change Strategy
Calgary (City of)
Canada First Research Excellence Fund
Canadian National Railway
Canadian Natural Resources Ltd.
Carthy Foundation
Dairy Farmers of Canada
Dalhousie University
Delta (City of)
Delta Agricultural Society
Ducks Unlimited Canada
Echo Foundation
Eeyou Marine Region Wildlife Board
Environment and Climate Change Canada
Fisheries and Oceans Canada
Fondation de la faune du Québec
Fonds de Recherche du Québec—Nature et technologies
Forest Products Association of Canada
Gestion J.I.C.A. Inc.
Habitat Conservation Trust Foundation
Hopewell Development Corporation
Iron Ore Company of Canada
Irving Oil Ltd.
Ladco Company Limited
Louise Gendron
Manitoba Finance
Manitoba Forage Council
Manitoba Habitat Heritage Corporation
Manitoba Hydro
MapleCross
McDonald's Restaurants of Canada Limited
Ministère de l'Environnement, de la Lutte contre les changements climatiques, de la Faune et des Parcs du Québec
Ministère des Ressources naturelles et des Forêts du Québec
Moncton (City of)
Mount Allison University
Natural Resources Canada—Polar Continental Shelf Project
Natural Sciences and Engineering Research Council of Canada
Nature Conservancy of Canada
New Brunswick Department of Natural Resources and Energy Development
New Brunswick Department of Transportation and Infrastructure
New Brunswick Environmental Trust Fund
New Brunswick Wildlife Council
New Brunswick Wildlife Trust Fund
Newfoundland-Labrador Department of Fisheries, Forestry and Agriculture
Niskamoon Corporation
Nova Scotia Crown Share Land Legacy Trust
Nova Scotia Department of Environment and Climate Change
Nova Scotia Department of Natural Resources and Renewables
Nova Scotia Habitat Conservation Fund
Nutrien Ag Solutions
Ontario Ministry of Natural Resources and Forestry
Ontario Ministry of Transportation
Ontario Power Generation
Polar Knowledge Canada
PotashCorp
Prairie Mines and Royalty Ltd.
Prince Edward Island Department of Agriculture
Prince Edward Island Department of Environment, Energy and Climate Action
Prince Edward Island Wildlife Conservation Fund
Project Learning Tree
Qualico Developments
Québec (Ville de)
Ravenswood Developments Inc.
RBC Royal Bank
Richardson Foundation Inc.
Richmond (City of)
Rio Tinto Aluminium
Saskatchewan Fish and Wildlife Development Fund
Saskatchewan Ministry of Environment
Saskatchewan Water Security Agency
Saskatchewan Wildlife Federation
Saskatoon (City of)
SaskPower
SaskWater
Scotiabank
Société des établissements de plein air du Québec
South Saskatchewan Community Foundation
TC Energy
Teck Resources
The British Columbia Waterfowl Society
The Calgary Foundation
The Harold Crabtree Foundation

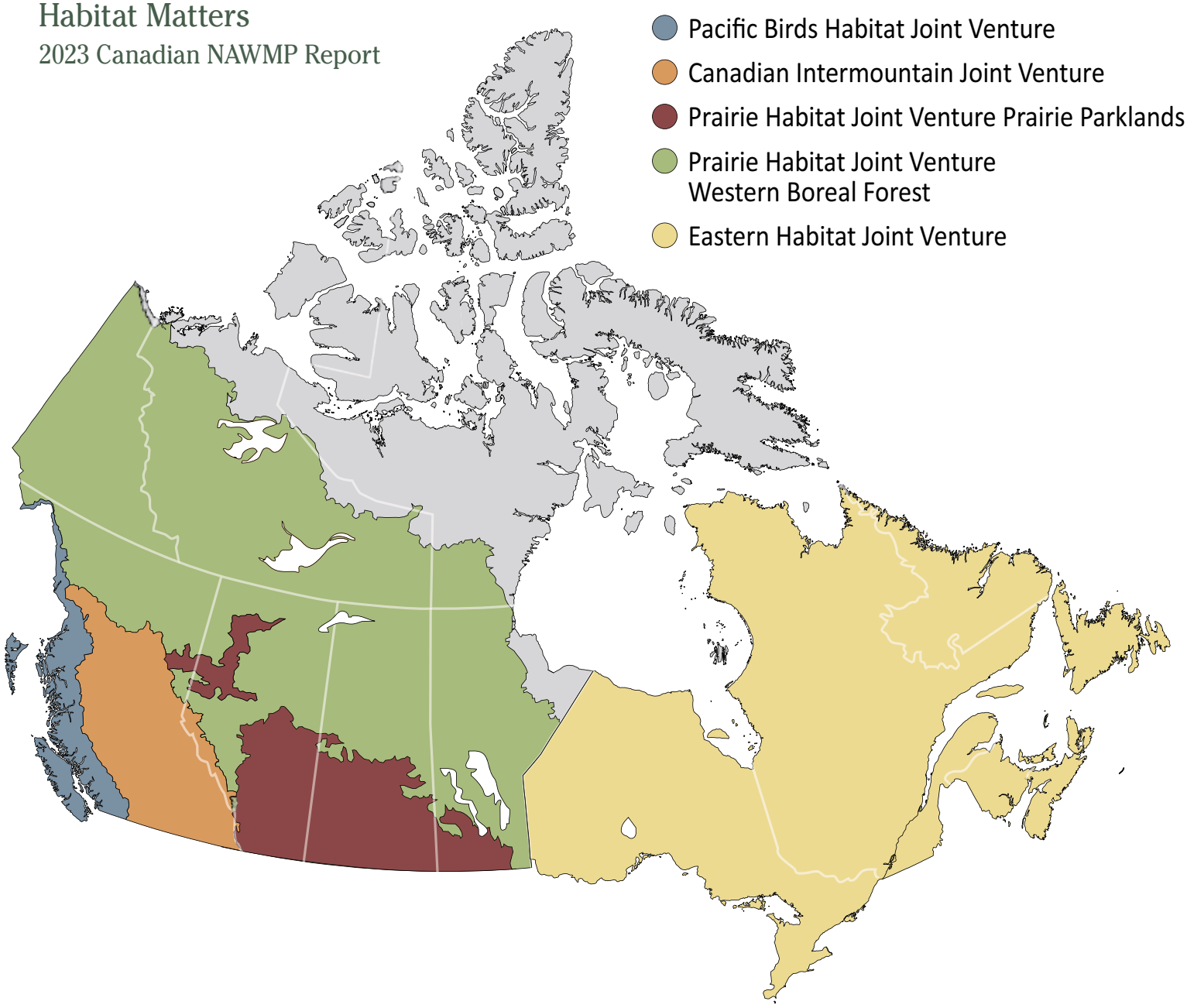
The Nature Trust of British Columbia
Tlicho Government
Université Laval
University of Windsor
Vancouver Foundation
Vancouver Fraser Port Authority
Waterton Biosphere Reserve Association
Weston Family Foundation
Wildlife Habitat Canada
Yukon Department of Energy, Mines and Resources

## U.S. Agencies

Alabama Department of Conservation and Natural Resources
Alaska Department of Fish and Game
American Friends of Canadian Conservation
American Friends of Canadian Nature
Arizona Game and Fish Department
Arkansas Game and Fish Commission
Atlantic Flyway Council
California Department of Fish and Wildlife
Central Flyway Council
Colorado Parks and Wildlife
Colorado State University
Connecticut Department of Energy and Environmental Protection
Delaware Division of Fish and Wildlife
Ducks Unlimited Inc.
Florida Fish and Wildlife Conservation Commission
Georgia Department of Natural Resources
Idaho Department of Fish and Game
Illinois Department of Natural Resources
Indiana Department of Natural Resources
Iowa Department of Natural Resources
Kansas Department of Wildlife and Parks
Kentucky Department of Fish and Wildlife Resources
Louisiana Department of Wildlife and Fisheries
Maine Department of Inland Fisheries and Wildlife
Maryland Department of Natural Resources
Massachusetts Division of Fisheries and Wildlife
Michigan Department of Natural Resources
Minnesota Department of Natural Resources
Mississippi Department of Wildlife, Fisheries and Parks
Mississippi Flyway Council
Missouri Department of Conservation
Montana Department of Fish, Wildlife and Parks
National Fish and Wildlife Foundation
Nebraska Games and Parks Commission
Nevada Department of Wildlife
New Hampshire Fish and Game
New Jersey Division of Fish and Wildlife
New Mexico Department of Game and Fish
New York State Department of Environmental Conservation
North Carolina Wildlife Resources Commission
North Dakota Game and Fish Department
Ohio Division of Wildlife
Oklahoma Department of Wildlife Conservation
Oregon Department of Fish and Wildlife
Pacific Flyway Council
Pennsylvania Game Commission
Rhode Island Department of Environmental Management
South Carolina Department of Natural Resources
South Dakota Game, Fish and Parks
Sustainable Forestry Initiative
Tennessee Wildlife Resources Agency
Texas Parks and Wildlife Department
U.S. Arctic National Wildlife Refuge
U.S. Fish and Wildlife Service
U.S. Geological Survey—Biological Resources Division
Utah Division of Wildlife Resources
Vermont Agency of Natural Resources
Virginia Department of Wildlife Resources
Washington Department of Fish and Wildlife
West Virginia Division of Natural Resources
Wisconsin Department of Natural Resources
Wyoming Game and Fish Department
Wyss Foundation

Greater Scaup.

*Jaden Barney*




**Contacts**

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nawmp.wetlandnetwork.ca

***North American Wetlands Conservation Act* Funding in Canada**
fws.gov/service/north-american-wetlands-conservation-act-nawca-grants-canada

**North American Bird Conservation Initiative**
nabci-us.org

**Map of Bird Conservation Regions**
nabci-us.org/resources/bird-conservation-regions