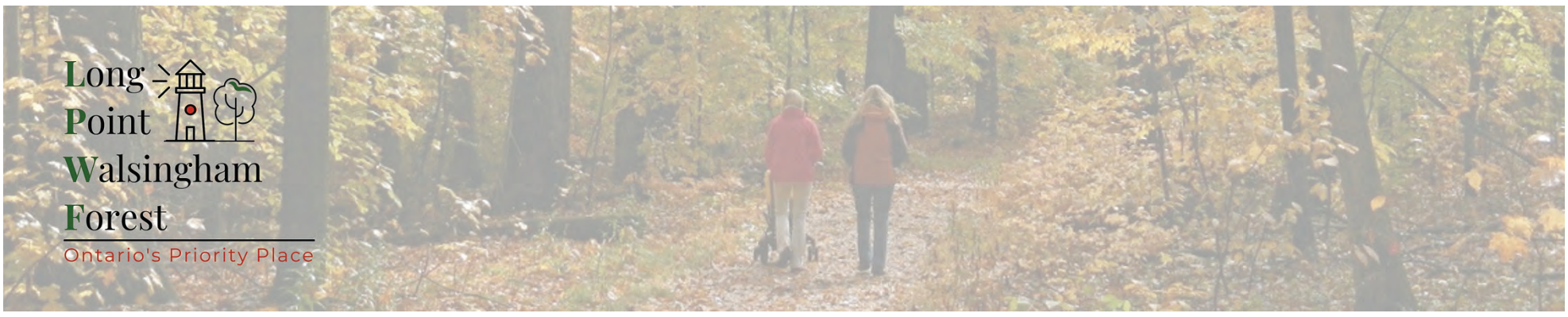


INTRODUCING

Long Point Walsingham Forest Priority Place

Ontario's Priority Place for Species at Risk conservation

Located on the north shore of Lake Erie, Norfolk County is renowned for its fertile agricultural land, forests, beaches and coastal dunes, tallgrass communities and wetlands. The vision for the LPWF Priority Place is to create healthy, resilient, and connected ecosystems that support biodiversity, productive landscapes, and a thriving community. *Photo: Leanne Gauthier-Helmer.*

In August 2017, Long Point Walsingham Forest (LPWF) was selected by the federal government as Ontario's 'Priority Place' for species at risk conservation.

Located entirely within Norfolk County, LPWF is 86,715 hectares large and includes the longest freshwater sand spit in the world, Long Point. Long Point is an internationally recognized Ramsar site (wetlands of international importance), an international Monarch Butterfly Reserve, a UNESCO World Biosphere Reserve, and the first globally significant Important Bird Area in Canada.

LPWF also includes the Norfolk Forest Complex, which is also recognized as an Important Bird Area. Over 400 species of birds have been recorded in the Long Point area.

While LPWF makes up less than 1% of Canada's total land area, it was selected as Ontario's priority place for the following reasons:

1) its high concentration of biodiversity, including over 80 species at risk;

2) the significant threats to its biodiversity; and

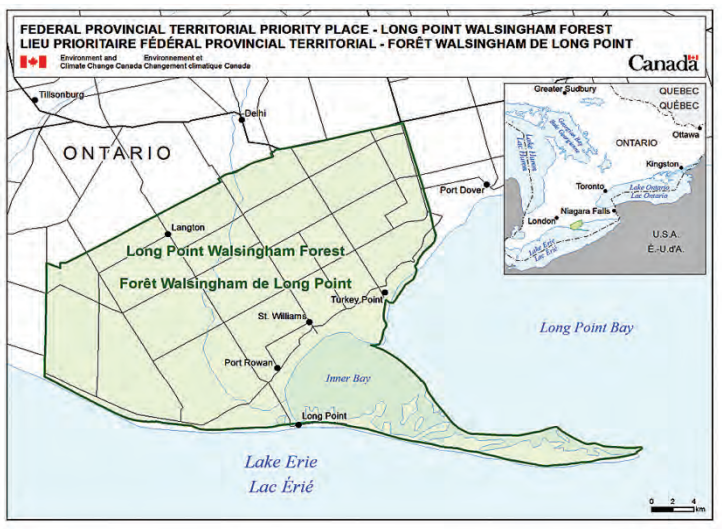
3) its highly engaged local conservation community.

The land cover in LPWF includes agriculture, forests, beaches and coastal dunes, tallgrass communities, and wetlands.

LPWF has retained much of its natural integrity due to the conservation and stewardship initiatives spearheaded by private landowners, conservation authorities, not-for-profit organizations, and government.

This conservation community has been addressing the numerous threats affecting species at risk and their habitats in LPWF.

These threats include land use changes, fire suppression, roads, and invasive species.



Boundaries of the Long Point Walsingham Forest Priority Place.

What is a "Priority Place" anyway?

In Budget 2018, the Government of Canada invested a historic $1.35 billion to support work with other governments, Indigenous groups, non-profit organizations, and others in nature conservation.

This funding will support Canada in reaching its biodiversity goals, which are to protect a quarter of its lands and a quarter of its oceans by 2025, to create healthier habitats for species at risk, and to improve its natural environment.

The federal government, in collaboration with the provinces and territories, has agreed to implement the Pan-Canadian Approach to Transforming Species at Risk Conservation in Canada.

This new approach will shift from a single-species conservation approach to one that focuses on multiple species and ecosystems. Efforts will be concentrated on priority places, species, sectors and threats across Canada, thus enabling conservation partners to work together and achieve better outcomes for species at risk.

A portion of this funding supports conservation efforts in 11 priority places identified across Canada. Priority places are areas with significant biodiversity, concentrations of species at risk, and opportunities to advance conservation efforts.

In each priority place, the federal and provincial or territorial governments will collaborate with partners to develop and implement a conservation action plan coordinating actions to address the greatest threats to species at risk. Such actions include habitat stewardship, habitat restoration, and education and outreach.

This project was undertaken with the financial support of:
Ce projet a été réalisé avec l'appui financier de :
Environment and Climate Change Canada
Environnement et Changement climatique Canada

May 2021

Long Point Walsingham Forest
Ontario's Priority Place

The Long Point Walsingham Forest Priority Place Collaborative

The LPWF Collaborative is a partnership of over twenty non-government and government organizations that are committed to improve biodiversity conservation in LPWF through the coordinated identification and implementation of priority conservation actions.

The Collaborative has developed an Integrated Conservation Action Plan (ICAP) which identifies the highest priority actions for improving ecosystem health and conserving species at risk.

The knowledge and expertise of the Collaborative is integral to fulfilling the vision of the LPWF ICAP, which is to create healthy, resilient and connected ecosystems that support biodiversity, productive landscapes and a thriving community.

Within the Collaborative, there are five subset committees called "working groups". Each working group is implementing conservation actions that address priority threats to species at risk and their habitats. The priority threats and important habitats and species include:

- Threats: Roads, Invasive species, Agricultural Runoff, Fire Suppression and Logging and Wood Harvesting
- Important Habitats and Species: Coastal Wetlands and Inner Bay, Open Country, Forests and Treed Swamps, Watercourses and Riparian Areas and Amphibians and Reptiles

Environment and Climate Change Canada has invested approximately $4.5 million in federal funding to conservation projects in LPWF from 2018-2021. The Collaborative has matched that investment with approximately $6.6 million.

Road Ecology Working Group

Members: Ontario Road Ecology Group, Long Point World Biosphere Reserve Foundation, and Canadian Wildlife Service

Goal: Reduce wildlife road mortality by enhancing road infrastructure to facilitate safe movement of wildlife across the landscape.

For additional information, or to get involved, please contact:
Mandy Karch, Executive Director, Ontario Road Ecology Group
ontarioroadecologygroup@gmail.com

Invasive Species (Phragmites australis) Working Group

Members: Nature Conservancy of Canada, Ontario Ministry of Natural Resources and Forestry, and Canadian Wildlife Service

Goals:

1. By 2025, 90% of the vegetation in the Coastal Wetlands and Beaches and Coastal Dunes ecosystems is native.
2. Maintain and improve the riparian zone so that 75% is vegetated with native plants

For additional information, or to get involved, please contact:
Eric Cleland, Director, Nature Conservancy of Canada
eric.cleland@natureconservancy.ca

Agricultural Runoff Working Group

Members: ALUS Norfolk Inc., Norfolk County, Long Point Region Conservation Authority, Carolinian Canada Coalition, Long Point Basin Land Trust, Ontario Ministry of Agriculture, Food and Rural Affairs, and Canadian Wildlife Service

Goals:

1. Maintain and improve the riparian zone so that 75% is vegetated with native plants
2. By 2025, at least 50% of surface water samples meet the provincial water quality objective for phosphorus (0.03 mg/L for streams and rivers).

For additional information, or to get involved, please contact:
Stephanie Giles, Program Coordinator, ALUS Norfolk Inc.
alusnorfolk@alus.ca

Open Country Working Group

Members: Nature Conservancy of Canada, Natural Resource Solutions Inc., Tallgrass Ontario, St. Williams Conservation Reserve, Ontario Plant Restoration Alliance, ALUS Norfolk Inc., Long Point Basin Land Trust, Ontario Nature, and Canadian Wildlife Service

Goal: Maintain existing Open Country habitat and restore additional areas, prioritizing sites where: existing habitat patches can be increased in size, habitat patches >=5 ha can be created, patch connectivity is best achieved and/or there are opportunities for long-term management.

For additional information, or to get involved, please contact:
Kristen Bernard, Program Director – Southwestern Ontario, Nature Conservancy of Canada
kristen.bernard@natureconservancy.ca

Forests and Treed Swamps Working Group

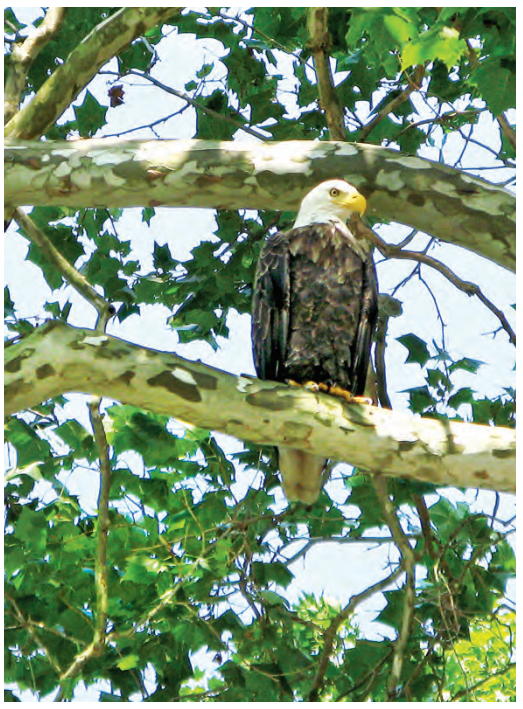
Members: ALUS Norfolk, Birds Canada, Canadian Wildlife Service, Long Point Basin Land Trust, Long Point Region Conservation Authority, Long Point World Biosphere Reserve Foundation, Nature Conservancy of Canada, Norfolk County, Norfolk Woodlot Owners Association, St. Williams Conservation Reserve

Goal: Maintain existing 2018 Forests and Treed Swamps cover and where possible increase/improve interior forest habitat and connectivity through additional forested acreage and forested corridors by 2050.

For additional information, or to get involved, please contact:
Ian Fife, Ontario Forest Birds Program Coordinator
ifife@birdscanada.org

The next few pages will provide information on the collective actions that working group members are undertaking to meet the conservation goals set by the Collaborative in the ICAP.

American Bullfrog.
Photo: Darren Helmer



Bald eagle perched in a Sycamore tree.
Photo: Brian Craig

The importance of biodiversity and protecting Species at Risk in the Priority Place

Although we might not always recognize it, plants and animals play a huge role in keeping our environment healthy and balanced.

Biodiversity is a term used broadly to describe the enormous variety and variability of life on Earth. It can also be used more specifically to refer to all of the species in one region or ecosystem.

The term "ecosystem" refers to groups or plants, animals, and other organisms that are found in the same area and interact with each other. These interactions form the environments we know and recognize, such as the different forests, wetlands, and other ecosystems around Norfolk County.

Balance within these ecosystems requires the continuation of these interactions, and the decline or loss of one species often triggers the decline or loss of others. This is why it is important to preserve biodiversity and all species, especially threatened or endangered Species at Risk.

When ecosystems are functioning well, they provide us with important benefits, including clean air, clean water, and fertile land to grow healthy food. They can also help mitigate the effects of climate change. For example, ecosystems such as forests, wetlands, and grasslands absorb and store carbon dioxide and greenhouse gases from the atmosphere.

The Long Point Walsingham Forest Priority Place is an incredibly biodiverse area. It is located in a part of Canada referred to as the Carolinian Life Zone.

This fragile ecoregion is found in both the eastern United States and southern Ontario. It is characterized by mixed leaf forests, although deciduous (broad leaf) trees predominate.

While this vegetation zone takes up less than 1% of Canada's total land area, it contains a greater number of plant and animal species than any other vegetation zone in Canada!

Preserving the biodiversity of the Priority Place is essential to ensure that the benefits we receive from healthy and functioning ecosystems are preserved for future generations.

Mating Monarch butterflies.
Photo: Brian Craig

Trout lily (Erythronium americanum).
Photo: Emily Sykes

Long Point Walsingham Forest
Ontario's Priority Place

Road Ecology Working Group

Road ecology is the study of the interactions between the environment and roads. Roads and traffic pose a risk to biodiversity and cause habitat fragmentation. The collaborative Road Ecology Working Group aims to reduce road mortality of Species at Risk and improve habitat connectivity in the Long Point Walsingham Forest.

The priorities of this group are to:

- Increase awareness on the threat of roads to wildlife and engage the local community in stewardship efforts
- Collaborate with Norfolk County to incorporate road ecology guidelines in municipal operations
- Install and maintain dedicated road mitigation infrastructure (e.g. fencing, ecopassages) for Species at Risk amphibians and reptiles

Partner organizations within this group include: Ontario Road Ecology Group (OREG), Norfolk County, Eco-Kare International, Long Point World Biosphere Reserve Foundation, and Canadian Wildlife Service as well as local community and naturalist groups.

You can participate in efforts to mitigate the threats of roads to wildlife by following the tips below and reporting wildlife/road interaction sightings to iNaturalist: https://inaturalist.ca/projects/wildlife-on-roads-in-ontario.

Your good driving habits can help protect Species at Risk

The network of roads that crisscross Southern Ontario is constantly growing as development expands. While these roads are important in our daily lives, they alter the landscape and have a significant impact on biodiversity.

"Roads are a primary threat for many species," says Mandy Karch, Executive Director of the Ontario Road Ecology Group (OREG) and chair of the Road Ecology Working Group. Apart from mortality due to collisions, roads fragment and alter the habitats they cut through and cause pollution from things like exhaust, chemicals, and road salt, as well as light and noise pollution. Wildlife such as turtles and snakes are often drawn to roads to bask on the surface due to the heat that roads absorb and because of nesting substrate found on road shoulders, putting them at increased danger to be hit.

Painting of a Blanding's Turtle being carried across a road while a snake, frog and snapping turtle wait their turn, by Long Point artist Cindy Presant. *Photo: ECCC*

Norfolk County was selected as a Priority Place largely due to the well-known biodiversity here, and some of its most significant Species at Risk, primarily turtles and other reptiles and amphibians, directly feel the impact from roads and traffic.

Altering road infrastructure to consider the local ecology is an important step to reduce wildlife mortality and habitat fragmentation. The Long Point Causeway Improvement Project, which began back in 2006, involved installing 4.5 kilometers of exclusion fencing to keep wildlife off the roads and special culverts to allow them to pass safely under the road. Researchers have found these measures led to nearly 89 percent fewer turtles making it onto the causeway. Because of the clear success of this project in reducing road mortality of wildlife, the Road Ecology Working Group is looking to install infrastructure at other hotspots in the Priority Place.

There are also a lot of individual actions anyone can do anytime they drive to help.

"The public is a key partner in determining how roads and traffic affect biodiversity," says Karch. "Motorist behaviour, such as driving speed and attentiveness, tremendously influences whether or not a wildlife/vehicle collision will occur."

Karch lists some important ways you can help keep wildlife safe while driving:

- ☐ Watch for wildlife, especially when driving on roads that bisect wetland, forest, or field habitat
- ☐ Don't litter! Even biodegradable food items pose a risk as they draw wildlife to the roadside to feed, putting them in danger of a collision
- ☐ If you stop to help a turtle cross the road, always move it in the direction it is heading, and only when safe for you and other motorists. Use a car mat or blanket for snapping turtles if you're unsure how to handle them, and never lift a turtle by its tail.
- ☐ Watch for wildlife crossing signs and obey speed limits. Sufficient reaction time is key to safely avoiding collision with wildlife.

One structure, two purposes...

How well-planned infrastructure can address both biodiversity protection and climate change adaptation goals

Road ecology, the study of the interactions between the environment and roads, offers important land-use planning tools which can help adapt to the effects of climate change.

Climate change is a global issue, which often makes it feel like actions taken locally or individually are insignificant. In reality, we are experiencing the effects on a global and local scale. Even local or small-scale mitigation techniques and technologies can have a cumulative impact.

The climate crisis and the biodiversity crisis are connected. Biodiversity loss – for example, loss of forested land or wetlands – results in emissions of greenhouse gases. Healthy ecosystems, such as wetlands, can help reduce greenhouse gases in the atmosphere by capturing and holding onto carbon. Not only that, but wetlands, such as those found around Norfolk County, can also help buffer the effects of weather events. They can store flood water, recharge creeks during a drought, stop storm surges, and provide fire breaks. But healthy ecosystems require species diversity to properly function.

Turtle using a culvert, allowing it to move through its habitat without the danger of being on a road. *Photo: Rick Levick*

The Road Ecology Working Group is collaborating to protect biodiversity in the Priority Place by mitigating road mortality, which results in installing road infrastructure such as fencing and culverts to both prevent wildlife from being on the roads and to enable them to move through their habitat at safe locations.

While these infrastructure options help mitigate the threats of roads to Species at Risk, they also have the opportunity to mitigate the impacts of climate change. The same culverts which allow species to move under the roads can also help accommodate increased water flows from extreme weather events. These extreme weather events are occurring at an increasing frequency due to climate change.

"Biodiversity-led infrastructure serves multiple objectives and achieves safe, efficient transportation for residents and visitors across the County," says Mandy Karch, Chair of the Road Ecology Working group in the LPWF. "As municipalities assess infrastructure and plan for climate change adaptation strategies, considering road ecology principles and practices are integral to completing an economically and ecologically responsible process."

With this in mind, the Road Ecology Working Group is looking for ways to include wildlife and Species at Risk planning that align with projects or upgrades for Norfolk County road plans. They compare where road upgrades are already needed in Norfolk County with wildlife crossing hotspots in order to recommend road mortality mitigation infrastructure to be included in these upgrades.

This method of allocating funds to install and maintain infrastructure will help preserve biodiversity and mitigate local climate change impacts, and as Mandy Karch says, is data-informed and both economically and ecologically responsible.

Be a citizen scientist in the Priority Place

Driving down roads can provide good opportunities to see wildlife. Unfortunately, these sightings sometimes occur as roadkill.

Some species may be attracted to roads to feed, bask, or nest, which puts animals, especially slow-moving animals such as turtles and snakes, at risk of a collision. The Priority Place is home to many Species at Risk whose populations are decreasing as a result of these collisions.

No single agency is able to monitor the vast road network found in Norfolk County, and this is where the public can play an important part by reporting wildlife or wildlife-vehicle collisions.

"When the public reports wildlife/road interaction sightings (alive or dead), this data can be used to inform and prioritize mitigation strategies that improve the landscape for safe transportation and wildlife protection," says Mandy Karch.

"Concerned residents are dedicated to resolving road ecology issues and help protect local wildlife populations by reporting observed wildlife/road interactions. Surveying a road or simply reporting an opportunistic sighting all contributes important data that helps prioritize and inform the mitigation process and responsible spending of mitigation dollars. This form of data collection is called Citizen Science," explains Karch. "Citizen Science is volunteer-based ecological monitoring that plays a key role in successful conservation initiatives."

Norfolk County resident John Everett safely helping a turtle cross the road near Big Creek marsh. *Photo: John Everett*

Citizen science is a great way for the community to be a part of conservation actions and help shape the landscape for safe wildlife movement.

The best way the public can help is to report your sightings to iNaturalist, a nation-wide citizen science wildlife reporting platform, to the Wildlife on Roads in Ontario project at https://inaturalist.ca/projects/wildlife-on-roads-in-ontario.

If you're interested in doing more as a citizen scientist in Ontario's Priority Place, please contact project partner Kari at Eco-Kare International. Email: wildlifeonroads@eco-kare.com; call or text 705-933-8430.

Long Point Walsingham Forest
Ontario's Priority Place

Invasive Species (Phragmites australis) Working Group

The Phragmites Working Group is a collaborative team targeting the significant threat of the invasive species Phragmites australis throughout the Long Point Walsingham Forest Priority Place (LPWF).

Team members, including: The Nature Conservancy of Canada (NCC), Canadian Wildlife Service (CWS), Ontario Ministry of Natural Resources and Forestry (MNRF), Birds Canada (BC), and the Long Point Phragmites Action Alliance (LPPAA) are addressing priorities such as:

- Implementing a long-term landscape-scale management plan for Phragmites on private and public lands in the LPWF
- Improving habitat through treatment of Phragmites, secondary re-treatment, and removal of dead Phragmites stands
- Enhancing coastal wetlands, shorelines, and riparian areas
- Monitoring Species at Risk encountered and the effects of management on aquatic systems

Success in invasive Phragmites control requires a collaborative approach

Phragmites australis is a tall grass species with origins in Europe believed to be introduced to Canada in the late 1800s. In Ontario, there is also a native species of Phragmites found in similar habitats however it grows in balance with other native vegetation and must be protected as part of any management plans.

The aggressive invasive Phragmites began being monitored by biologists in the wetlands of Long Point over 20 years ago. Since then, the growth and spread of this species at Long Point has been exponential.

Phragmites is an aggressive invader, growing up to 6 metres in height, crowding out native vegetation and reducing biodiversity by producing dense monoculture stands. These stands impact native species, especially Species at Risk, since they provide poor habitat and food for wildlife, and impede the ecosystem from functioning as normal.

The impact of invasive Phragmites on these ecosystems has a direct impact on people too, says Eric Cleland, Director of the Invasive Species Program for the Ontario region at the Nature Conservancy of Canada, "invasive Phragmites can impact critical items in our daily lives like infrastructure, property values, and agricultural productivity, along with the recreational and environmental values that make the Priority Place so important."

Phragmites can be exceptionally tricky to remove once it's become established in an area due to its deep root system and fast spread, but targeting this invasive species is an important task to make sure our wetlands and ecosystems are healthy and functioning.

In 2015, NCC and MNRF spearheaded a gathering of stakeholders: "the presentations and discussions that took place during that gathering formed the groundwork for a coordinated control effort in the Long Point region. This day led to the creation of the Long Point Phragmites Action Alliance," says Cleland.

This collaborative is made up of 29 partnering organizations which include all levels of government, environmental control groups, and local landowners with interests in conserving and managing the diverse wetland habitat within the Long Point region.

"It's critically important to work collaboratively to ensure no populations are left behind," says Cleland, "If one area is left untreated, Phragmites can rapidly re-invade, jeopardizing the whole program. Control at a landscape scale is only feasible where landowners and organizations work together to pool funds, labour, skills, and equipment."

According to Heather Braun, Habitat biologist at CWS, the leadership of the MNRF and NCC has been the key to the success of this program. "The province and NCC have built a program that has gained community support and is resulting in positive changes for wildlife and SAR. We have a goal to manage 90% of the Phragmites in the Priority Place, and I am confident that together we can achieve that goal."

While this work is ongoing, these groups can be proud of what they've accomplished so far. Since 2016, over 1,400 hectares in the Long Point area have undergone invasive Phragmites control in a multi-phase strategy. Despite Covid-19 this work is slated to continue and build in 2021, largely through the Phragmites Working Group, with funding from the Canadian Wildlife Service, MNRF, US Fish and Wildlife Service and several other private supporters.

Before (left) and after (right) treatment for Phragmites in Turkey Point, showing native species re-establishing. *Photo: NCC*

Innovation in Phragmites control

Organizations in the Long Point area have adopted an integrated approach to Phragmites management involving a wide range of methods, each one required to deal with special circumstances, in an effort to eradicate Phragmites and protect our wetlands.

"An aquatic herbicide is used in the Long Point region under a special permission from Health Canada; this unique tool is not available anywhere else in Canada. Long Point was chosen to pilot this method due to the imminent impacts to wildlife, in particular Species at Risk. An urgent response was required, and aquatic herbicide were chosen because it is the most effective method of control for large scale applications," says Eric Cleland of NCC.

Additional measures, such as rolling, cutting, burning or even a combination of these are often necessary to fully eradicate this aggressive species as part of an integrated pest management program (IPM).

Cleland notes that they're always on the lookout for new control methods. "It's always important. New methods can help reduce the impacts of control, show improved results for people and the environment, and reduce management costs."

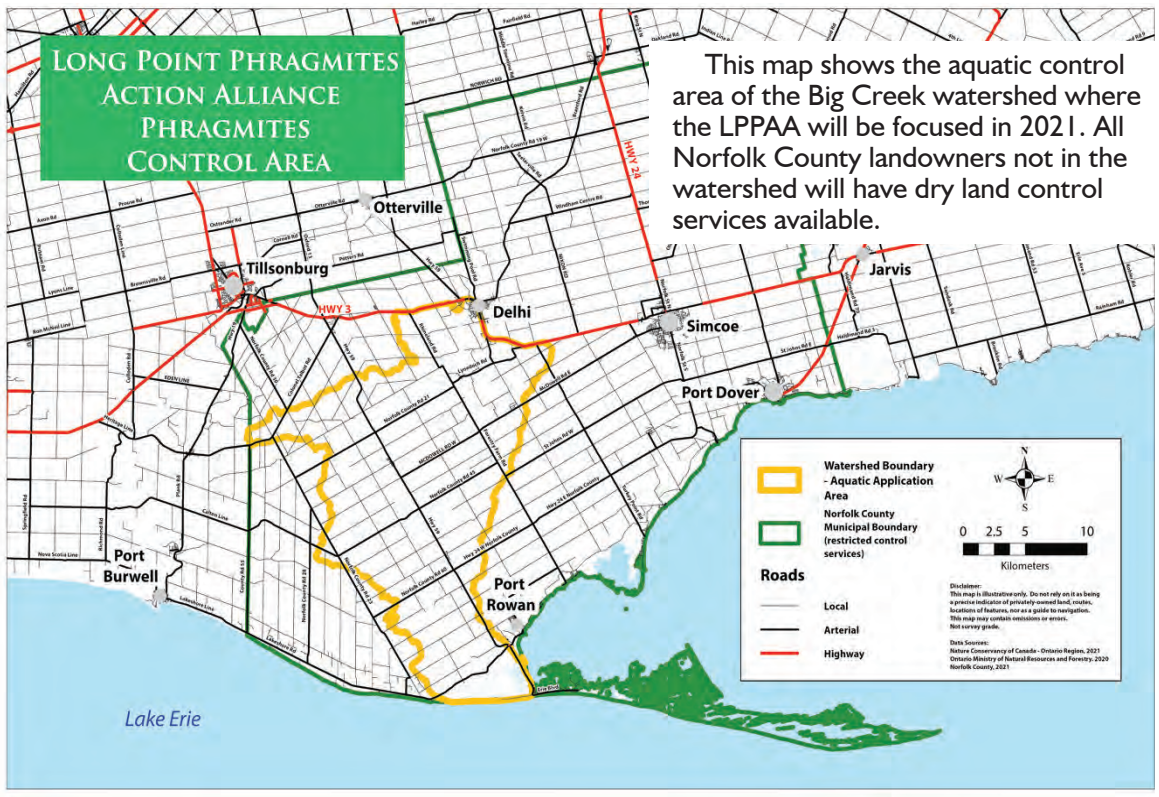
Biocontrol is not necessarily a new method, but it's one that's gaining traction and being investigated for use in the area. It involves introducing a natural enemy of an invasive species to re-establish a natural balance.

"One of the best examples of a successful biocontrol in Ontario is for Purple Loosestrife, where the release of European leaf-eating beetles achieved wide-scale control," explains Cleland. "The beetles are natural enemies of purple loosestrife, and they feed primarily on the plant. This biological control of purple loosestrife can reduce populations by up to 90 per cent and allow native plants to re-establish."

Building on over 20 years of research in the area, two moth species which are natural predators of invasive Phragmites have been found to be promising biocontrol agents. They pose a minimal risk to native species and if successful could offer an additional tool to control Phragmites as part of an IPM.

While no single method can rid our wetlands of invasive Phragmites, it's exciting to see the ongoing research and work being done by dedicated organizations to help mitigate its impact.

Private landowners can help manage invasive species



The Phragmites management program was initiated in the wetlands of Long Point but has since spread into the upper watersheds. In 2019, a subcommittee of the LPPAA developed an implementation plan for the entire Big Creek Watershed focused on engaging landowners and helping to provide them with control services for their properties.

The Big Creek Watershed Control Implementation Plan divides the watershed into 8 sections or "phases". Since it's inception it has been well received, enrolling over 200 parcels and completing control work on over 75 parcels of land with no sign of slowing down.

"Landowners are an important part of Phragmites control for two reasons," says Brett Norman, Invasive Species Program Coordinator at Nature Conservancy of Canada. "For one, landowners can provide access for control of Phragmites on their properties. This ensures that their property is not a seed source for future infestations. Two, landowners can help pass on information. Many people don't know what Phragmites is, why it's bad, or that control services exist. We invest a lot of time working with landowners to ensure they are aware of the issues."

This program allows landowners to tap into the resources needed to target Phragmites, including professional contractor services, specialized equipment, and aquatic herbicides where applicable.

"These services are provided free of charge, allowing landowners to address an issue on their properties that they may otherwise not have the capability to do," says Norman.

The program is now open to anyone who owns land in Norfolk County. Landowners wishing to join the program can do so by emailing the LPPAA at bigcreekphrag@gmail.com or by visiting our website at www.longpointphragmites.ca.

Long Point Walsingham Forest
Ontario's Priority Place

Agriculture Nutrient Runoff Working Group

This collaborative group in the Priority Place is working to keep our water clean by mitigating excessive nutrient runoff into our coastal wetlands and Lake Erie.

The priorities of this group include:

- Restore land with NEW natural features such as suitable wildlife habitat
- Preserve drain corridors through modified practices
- Promote best management practices (BMPs) to landowners
- Increase the number of hectares planted in cover crops

Partner organizations within this group include: ALUS (Alternative Land Use Services) Norfolk, Canadian Wildlife Service, Long Point Region Conservation Authority, Norfolk County Drainage Services, and Carolinian Canada.

We are always looking for interested landowners within the Priority Place. Please contact one of the relevant organizations mentioned in the articles below if you would like more information about getting involved.

WILD AT HEART

ALUS Norfolk helped the Boothbys create a native prairie grass buffer zone between a ravine and an agricultural field.
Photo: the Boothbys

ALUS Norfolk participants Kathryn and Michael Boothby are on a mission to create wildlife habitat

ALUS Norfolk is a non-profit organization that works with farmers on their marginal lands to produce ecosystem services that benefit the farm and society as a whole. ALUS Norfolk participants Kathryn and Michael Boothby have incorporated wildlife corridors, erosion controls, pollinator habitat, wildlife nesting structures, and other conservation features on their cash-crop operation located within Ontario's Priority Place - Long Point Walsingham Forest. Part of the Priority Place funding provided by Environment and Climate Change Canada – Canadian Wildlife Service allows ALUS Norfolk to support restoration and management of natural ecosystems, such as those on the Boothby's farm.

Since joining in 2012, the Boothbys have enrolled over eight of their 51-acres into the ALUS Norfolk program. Their projects produce ecosystem services such as cleaner air, cleaner water and greater biodiversity that benefit the entire community.

"Being involved with ALUS means being part of a like-minded community. You are able to learn from others, and share experiences and challenges," says Kathryn.

One of the Boothbys ALUS projects is a dug-out wetland for amphibians, reptiles, and birds. Another - a prairie grass buffer between a ravine and agricultural field - helps mitigate erosion, reduces sediments and nutrients entering the waterway, and provides habitat for pollinators and grassland birds.

To help declining aerial insectivores, ALUS helped install two dozen nesting boxes for Eastern Bluebirds and Tree Swallows. The Boothby's added Purple Martin housing which now supports 54 breeding pairs.

Even before joining ALUS, the Boothbys worked hard to transform their property into land that also works for wildlife. Kathryn has participated on the boards of several local conservation groups. Indeed, many of their ALUS projects began with assistance from other organizations, such as Long Point Region Conservation Authority, Ontario Power Generation, Norfolk Stewardship Council, Long Point Basin Land Trust, and Ontario Soil and Crop Improvement Association. Additional projects have been supported by Carolinian Canada, Nature Canada, Ducks Unlimited Canada and Environment and Climate Change Canada.

To date over 8,000 trees have been planted. Hundreds of shrubs and wildflowers have been added, and snake nesting structures and brush and rock piles have been created and are used by at-risk reptiles and other species.

Kathryn and Michael Boothby are on a mission to create wildlife habitat on their land that benefits the natural world and ALUS Norfolk is very happy to help.

To learn more about ALUS Norfolk, contact Steph Giles, Program Coordinator at (519) 420-8127.

One of the Boothby's ALUS projects consists of a dug-out wetland, which they now maintain as habitat for numerous amphibian and reptile species, as well as birds. *Photo: the Boothbys*

Municipal drain maintenance to help preserve habitat

Municipal drains are a fixture of rural Ontario's landscape and a vital element of Norfolk County infrastructure. In Norfolk County alone there are approximately 1,000 kilometers of municipal drains, servicing over 60,000 hectares of land and 24,000 residents.

Most municipal drains are constructed to improve agricultural productivity, increase drainage in specific areas, and provide a stormwater management system. By safely transporting surface and subsurface runoff from rainfall events, they also prevent flooding and reduce public health risks. All municipal drains eventually connect with rivers, streams, and lakes, which are important habitat for many endangered or protected species.

Norfolk County Drainage Services has been collaborating with the Agricultural Runoff Working Group to help maintain and restore biodiversity within the Long Point Walsingham Forest Priority Place.

The department is achieving this goal by modifying drainage practices to remove vegetation on only one side where practical during routine maintenance. Part of the funding provided by Environment and Climate Change Canada – Canadian Wildlife Service is then used to restore and enhance drain corridors after the vegetation removal occurs.

Managed vegetation removal along drain corridors helps to maintain flow and access, and identify issues such as blockages or erosion. By minimizing the amount of vegetation removed and enhancing buffers in these areas erosion, sedimentation, and agricultural runoff are reduced. This approach improves bank stability and reduces the demand for drain maintenance. It also allows for more habitat to remain intact, maintaining cover, shade, and food for fish and other species.

In recent years agencies that regulate drainage works have included additional requirements to mitigate or offset any environmental impacts. This partnership allows for some of these requirements to be fulfilled while mitigating costs that would have otherwise been assumed by stakeholders on the drainage systems.

Through this partnership, Norfolk County Drainage Services has preserved over 10 km of drain corridors and restored 20 km of maintained drain corridors across Norfolk County.

For more information or to learn about establishing buffers along the municipal drain on your property, contact Morgan Van Laeken, Drainage Program Coordinator at 519 426 5870 ext. 1118.

Six generations of the Boyd family value farming as a way of life

The Boyd's farm has been in the family since 1865, so they are familiar with the joys and challenges of farming.

Brian Boyd and his son Greg are happy to collaborate with organizations such as ALUS Norfolk and Long Point Region Conservation Authority (LPRCA) to carry out land stewardship.

Brian worked with these organizations to create a wetland on the farm which was then seeded with native grasses, wildflowers, trees, and shrubs to help prevent soil loss and mitigate nutrient runoff into Lake Erie.

"I feel ALUS is well suited for my farms. The wetlands and tree planting projects make good sense on land that can't support grain production," says Brian. "[ALUS Norfolk] understands the importance of achieving a balance between agriculture and conservation".

Brian's son Greg is the sixth generation to farm on the Boyd farm, and he has also incorporated ALUS projects at his own farm. Greg is the owner of Heritage Lane Produce and can be found at numerous farmer's markets within Norfolk and Oxford County. With the Covid-19 pandemic restrictions, Greg was able to transition to customers picking up produce on a weekly basis.

Brian Boyd with his son Greg and grand kids. Greg is the sixth generation to farm on the Boyd farm and is also the owner of Heritage Lane Produce. *Photo: ALUS Norfolk*

Greg has adapted to no-till planting to mitigate soil degradation caused by tillage and has widened grassed waterways to stabilize runoff.

"No-till farming combined with the waterways ability to filter water runoff means that the water entering the drainage network is now clear and free from sediment," says Greg.

ALUS Norfolk and LPRCA are proud collaborators in the Priority Place Agriculture Runoff working group along with other organizations such as Norfolk County Drainage Services, the Canadian Wildlife Service and Carolinian Canada.

Another objective is planting cover crops on farms within the Priority Place.

"Cover crops provide lots of benefits", according to Paul Gagnon, Lands & Waters Supervisor from LPRCA. "They can help limit the amount of erosion that occurs within a given year. They build soil health and minimize weed pressure, ultimately reducing input costs."

Even better, there is financial incentive to sign up. If you are interested in learning more about the cover crop program or to see if you are eligible, please contact Paul Gagnon, Lands & Waters Supervisor with LPRCA at (519) 842-4242 ext. 232.

Brian Boyd's wetland being dug. After the wetland was created, the soils were seeded with a mix of native plant and tree species.
Photo: ALUS Norfolk

Long Point Walsingham Forest
Ontario's Priority Place

Open Country Working Group

The collaborative Open Country working group is working to preserve rare and important tallgrass prairie habitat in the Long Point Walsingham Forest (LPWF) Priority Place.

Open County refers to any vegetation community where the combined cover of trees and shrubs over 1 m tall is less than 60%, excluding agricultural lands. It encompasses tallgrass communities, which support significant biodiversity, and their deep roots prevent soil erosion and help clean the air and water.

Over the next 2 years, the group will be working together to:

- Develop a database on historical and restored tallgrass prairie in the LPWF
- Collaborate on restoration and management activities on private and public lands to improve the condition of tallgrass prairie (like prescribed fire and planting more native flowers)
- Provide opportunities for the public to learn about tallgrass prairie ecosystems and their management
- Support private landowners looking to manage, restore and maintain open country habitat on their lands

Partner organizations within this group include: Natural Resource Solutions Inc., Nature Conservancy of Canada, Long Point Basin Land Trust, St. Williams Conservation Reserve, ALUS Norfolk, Canadian Wildlife Service, and Ontario Nature.

Native wildflowers grow in a field previously cleared through prescribed burning.
Photo: NCC

Prescribed burns a gateway for bringing butterfly species back to Norfolk

The Mottled Duskywing butterfly (Erynnis martialis), an endangered species afforded protection under the Endangered Species Act (ESA), hasn't been spotted in and around Backus Woods and St. Williams Forestry Reserve in Norfolk County since the late 1980s.

Like many butterflies, the Mottled Duskywing is selective about where it lives and what it eats. It relies on New Jersey Tea, a deciduous shrub, as its host plant. Their habitat in Ontario consists of rare and globally important habitats, such as tall grass prairie and oak savanna. Tallgrass prairie is first and foremost a grassland with minimal tree cover. Oak savannas are a grassland that is lightly forested, predominantly with oak trees. Both are dynamic environments with extremely high biodiversity and ecological benefits, however only about 3% of the historical coverage of tallgrass communities remains in Ontario.

The endangered Mottled Duskywing butterfly.
Photo: Jessica Linton

These ecosystems benefit from low intensity fires, which rejuvenate the landscape by restoring nutrients to the soil and clearing away non-native and woody plants encroaching in these ecosystems. This is why prescribed fire is a common management tool done safely by licences professionals in tallgrass prairie habitats.

Due to the loss of this habitat over time in part through fire suppression, species such as the Mottled Duskywing have experienced reductions in populations.

The Open Country Working Group is working with the Ontario Butterfly Species at Risk Recovery Team. This Team is comprised of members from government departments, parks and conservation authorities, conservation organizations, academic institutions, relevant private organizations, as well as expert entomologists and restoration practitioners who are working across the province on the recovery of the Mottled Duskywing butterfly and restoration of the oak savanna and woodland habitats the Mottled Duskywing relies on.

New Jersey Tea is important for pollinators, is a nitrogen-fixer, and is the main food plant for the Mottled Duskywing butterfly.
Photo: Mary Gartshore

In the LPWF, members of the Team are working with the Open Country Working Group to restore and enhance tallgrass prairie habitat on NCC lands identified as great candidate sites for reintroduction of the Mottled Duskywing. The Open Country Working Group, with funding from Canadian Wildlife Service, is actioning several stewardship activities include prescribed burns, conifer plantation management, removal of invasive species, and planting native wildflowers that provide a food source for pollinators. An emphasis has been placed on seeding of New Jersey Tea to support the Mottled Duskywing, although the stewardship activities on these sites within the Priority Place will support many other Species at Risk as well, including other arthropods, migratory birds, snakes, and more.

This project site is considered a significant and exciting part of a larger Mottled Duskywing recovery initiative because it involves creating habitat where it formerly existed, providing opportunities for future recovery activities.

The Recovery Team is planning its first reintroduction of the Mottled Duskywing to Pinery Provincial Park in 2021. This will be the first reintroduction of an endangered butterfly species in Ontario and paves the way for similar recovery activities in Norfolk County in the future.

Not only is this project setting the stage to bring back a species that was previously lost here, but it is also restoring and enhancing globally important ecosystems.

Long Point Basin Land Trust Is Restoring Oak Savannas

In Ontario, oak savannas occur in scattered locations, often as tiny remnants. Most savannas in Ontario have been converted to conifer plantations or other uses.

Long Point Basin Land Trust (LPBLT) was created 25 years ago with the goal to protect nature and biodiversity, which it does through land purchases and donations. To date, LPBLT has acquired ten properties, three of which historically supported dry oak savannas and are currently being restored or enhanced using ECCC funding through the Open Country Working Group.

One property is the 50-acre Stead Family Scientific Reserve, which was formerly 50% in marginal tobacco production and 50% Black Oak Woodland. Ken Stead purchased it to create an oak savanna insect reserve in memory of his father. In 1994, with the help of volunteers from the Norfolk Field Naturalists and funding from Carolinian Canada and TreePlan Canada, locally collected seeds, seedlings, and roots from the woodland edges were planted in the fields. Now, 27 years later, the planted area is a functional Black Oak Savanna with much of the expected native plants and animals returning, and even some surprises worth noting. Bait stations have revealed two new moth species for Canada, the Shivering Pinion (Lithophane querquera) and Roadside Sallow (Metaxaglaea viatica), and the rare Thaxter's Sallow (Psaphida thaxterianus). These discoveries show that Kevin

Local volunteers begin planting acorns in April 1995 at Stead Family Scientific Reserve.
Photo: Mary Gartshore

Costner's quote in the movie Field of Dreams: "if you build it, they will come," can also be applied to ecological restoration. Work continues on the property to remove the invasive exotic Autumn Olive and Eurasian cool-season grasses. In 2018, Ken Stead generously donated this wonderful place to LPBLT as a scientific reserve in honour of his family.

Another oak savanna reserve managed by the LPBLT, Spring Arbour farm, was partially cleared and replanted. Approximately half the property of Spring Arbour farm is open old fields with some regeneration of prairie grasses, Black Oak, American Hazel, Winged Sumac and Shagbark Hickory. Invasive exotic trees and shrubs are being removed and the non-native, cool-season grasses controlled. Once this is complete, new seed will enhance the site. Even now it is a great place to bird watch and there are nice views of the ravines and floodplain below along Venison Creek.

The third oak savanna newly acquired by the LPBLT is a 193-acre Trout Creek Nature Reserve northeast of Pinegrove. It has been used for commercial conifer plantations and forestry in the past. It is mostly overgrown Black – Hill's Oak savanna. This property is adjacent to Norfolk County forests and together they are large enough to protect many significant species. In recent years, we have noted singing Whip-poor-wills and Hoary Bats, Ontario's largest bat. In the openings, understory and edges are remnant populations of oak savanna plants ready to reclaim their place. Trout Creek Nature Reserve has a lot of regenerating Red Maple and White Pine that compete seriously with oak savanna habitats. These stands will be thinned so oaks, New Jersey Tea, Rock Rose, Arrow-leaved Violet and many other oak savanna species can flourish.

Long Point Walsingham Forest
Ontario's Priority Place

Forests and Treed Swamps Working Group

The Forests and Treed Swamps Working Group collaborates to address forest fragmentation, invasive forest species, and degradation of interior treed wetlands to keep these systems well-functioning in the Long Point Walsingham Forest (LPWF) Priority Place.

The priorities of this group include:

- Identify areas of low forest connectivity and improve habitat and increase forest cover through tree planting on private lands
- Implement a project to monitor treed wetland water levels on private and public lands
- Engage woodlot owners, forestry industry, and the public to increase awareness of and practice Species at Risk Best Management Practices
- Develop a model for invasive species control and implement invasive species control on private and public lands

Partner organizations within this group include: ALUS Norfolk, Birds Canada, Canadian Wildlife Service, Long Point Basin Land Trust, Long Point Region Conservation Authority, Long Point World Biosphere Reserve Foundation, Nature Conservancy of Canada, Norfolk County, Norfolk Woodlot Owner's Association, and St. Williams Conservation Reserve Community Council.

An endangered Cerulean Warbler. *Photo: Trish Snider*

Protecting forest birds at risk in the Priority Place

An endangered Prothonotary Warbler. *Photo: Sue Drotos*

The Ontario Forest Birds at Risk program at Birds Canada is very pleased to be a part of Environment and Climate Change Canada's initiative to increase forest cover and connectivity within the Long Point Walsingham Forest (LPWF) Priority Place.

Birds Canada is a non-profit charitable organization with the mission to conserve wild birds through sound science, on-the-ground actions, innovative partnerships, public engagement, and science-based advocacy. The Ontario Forest Birds at Risk program has been operating at Birds Canada since 2011 and completes extensive bird surveys throughout southwestern Ontario as well as in the Frontenac region of eastern Ontario.

Ontario Forest Birds at Risk goals in the LPWF Priority Place are to improve the conservation status of four rapidly declining forest birds in southwestern Ontario's forests: Acadian Flycatcher (Endangered), Louisiana Waterthrush (Threatened), Cerulean Warbler (Endangered), and Prothonotary Warbler (Endangered). Project results are intended to direct conservation and stewardship efforts over the short and long term.

Ontario Forest Birds at Risk's primary project objectives are to:

- ☐ Determine and monitor the location of the four target species at risk in the LPWF Priority Place
- ☐ Search for and monitor nests to determine their outcome for three target species at risk in the LPWF Priority Place;
- ☐ Identify forest health risks to the target species at risk in the LPWF Priority Place
- ☐ Increase key audiences' awareness and understanding of the target species at risk and conservation needs, and to engage landowners and managers in stewardship for species at risk
- ☐ Increase our understanding of Cerulean Warbler habitat preferences in Ontario

The surveys completed by the Ontario Forest Birds at Risk program help landowners and managers make important conservation decisions to protect species at risk populations and habitat. Keeping an eye on these populations also helps track the health of our old-growth forests. All four rapidly declining birds are an indicator for old-growth forests in southwestern Ontario, meaning that seeing these birds indicates that a forest is healthy, diverse, and capable of withstanding some forest health risks such as invasive species.

In addition to bird surveys, The Ontario Forest Birds at Risk program takes advantage of their time in the forest to identify destructive invasive species such as Gypsy Moths and Emerald Ash Borer, and provide information to land owners and managers in taking action against them. These invasive species are devastating our forests throughout southern Ontario. Potential invasive species, such as Oak Wilt and Hemlock Woolly Adelgid, are also surveyed for. These tree diseases are currently ravaging oak and hemlock trees in northeastern North America. If these diseases spread, this would directly affect the Acadian Flycatchers and the Louisiana Waterthrushes that depend on hemlock for nesting and forest cover, as well as the Cerulean Warblers which nest in and around oak trees.

"Over the past decade of completing bird surveys, we've seen year after year that private landowners have been the most important contributor to the success of species at risk protection," says Ian Fife of Birds Canada. "Of all four high priority species the Ontario Forest Birds at Risk program has detected, approximately 25% of the species at risk are found in private landowner woodlots and forests."

The Ontario Forest Birds at Risk program completes surveys at no charge, and welcomes any person who wishes to have their woodlot surveyed or who would like to find out more about the Forest Birds at Risk program to contact Ian Fife at ifife@birdscanada.org

Managing invasive species in forested areas

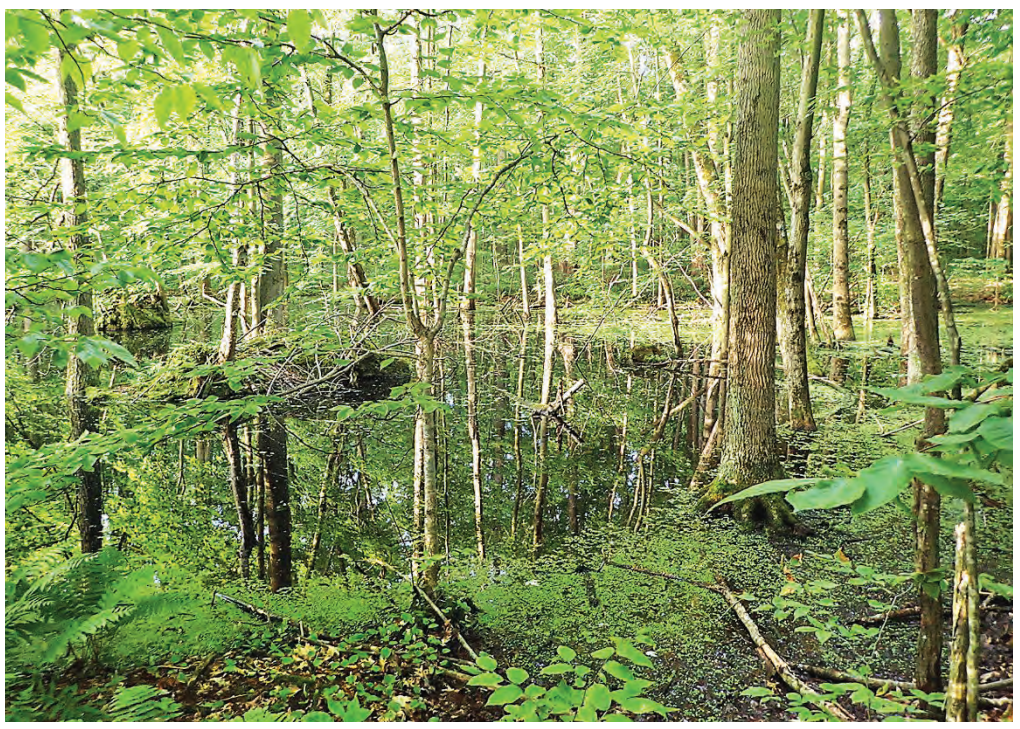
Norfolk County stands out among other southern Ontario regions both in the amount of wooded area and the diversity that comes with being located in the Carolinian forest region. The climate of this region allows the growth of varied and rare species. In fact, there are more rare or threatened species here than in any other Canadian biozone.

Invasive species threaten this important diversity. Most invasive plant species occur because they are introduced as an ornamental plant which then spreads through the natural landscape, overtaking native plants and replacing natural forest diversity with a monoculture, or a single non-native species.

This results in a loss of overall native biodiversity, leading to an increased number of species at risk or a complete loss of important insect and plant life. This is why targeting invasive species in wooded areas is a top priority for the Forests and Treed Swamps Working Group.

"While we strive to maintain the natural and native landscape of Norfolk County, invasive species continue to expand throughout the region. Our goal is to reduce as many invasive species as possible," says Ian Fife, chair of the Forests and Treed Swamps Working Group. "This initiative will be used to target woody stemmed invasive species such as European Buckthorn, Autumn Olive, and Multi-flora Rose to name a few."

Using a portion of the funding received from Environment and Climate Change Canada – Canadian Wildlife Service, the Working Group has conducted surveys to locate invasive species and determine the extent of the invasive species risk. The group has shared the results of these surveys with land managers, giving detailed locations of invasive species in their woodlots. This information will be used to prioritize problem areas where management activities will be conducted using direct application of an herbicide which will not affect other plants. By reducing woody invasive species, the Working Group is helping to restore and maintain the important biodiversity of wooded areas in the Priority Place.



An interior forest wetland in the LPWF Priority Place. *Photo: Brian Craig*

Tree planting to increase forest cover and diversity

Forest ecosystems face pressures from many natural and human stressors, such as invasive species, agricultural production, and climate change. These pressures result in reduced native diversity and fragmented forests, which restrict the movement of plants and animals, and degraded ecosystems that are less suitable for biodiversity.

Trees and forests are one of the most vital responses we have to address climate change by removing carbon dioxide from the atmosphere and storing it in the form of wood and vegetation, a process termed "carbon sequestration."

A priority for the Forests and Treed Swamps Working Group is to engage in actions to increase forest health within the Priority Place. A portion of the funding provided by Environment and Climate Change Canada – Canadian Wildlife Service will be used by this collaborative group to plant trees to increase forest cover and improve habitat.

One goal of the tree planting is to increase forest connectivity. Landscape connectivity broadly refers to the degree to which the landscape facilitates or impedes movement among resource patches. By identifying areas of low forest connectivity, the Working Group can plant native tree species to enhance connectivity and allow increased and easier movement of organisms between forested areas. This is an important factor for maintaining biodiversity.

Planting native tree species is also useful for increasing interior forest cover forest diversity. Interior forests provide unique habitat favored by many important plants and animals since it is more secluded and less vulnerable than forest edges which are close to developed or agricultural land. By increasing forest cover and native tree diversity in interior forest areas, the Forests and Treed Swamps Working Group can help increase biodiversity and improve the functioning of these important forest ecosystems.

A message from

Long Point World Biosphere Reserve

President Rick Levick

We acknowledge that we meet on the traditional territories of the Attawandaron, Haudenosaunee, and Anishinaabe peoples and show respect today to the communities of the Six Nations of the Grand River Territory and the Mississaugas of the Credit whose Treaty lands include the Long Point World Biosphere Reserve.

We should be proud that a significant portion of the Long Point Biosphere Reserve (LPBR) was selected as a "Priority Place" because it recognizes this community's long history of conservation that goes back more than a century to the founding of Canada's first forestry station in St. Williams.

That tradition of conservation continues to the present day through the work of many local agencies and community organizations within their own mandates or as part of collective efforts to preserve this area's significant biodiversity. Two recent examples are the success of the Long Point Phragmites Action Alliance in removing this invasive reed from the Long Point wetlands and the Long Point Causeway Project in significantly reducing reptile road mortality.

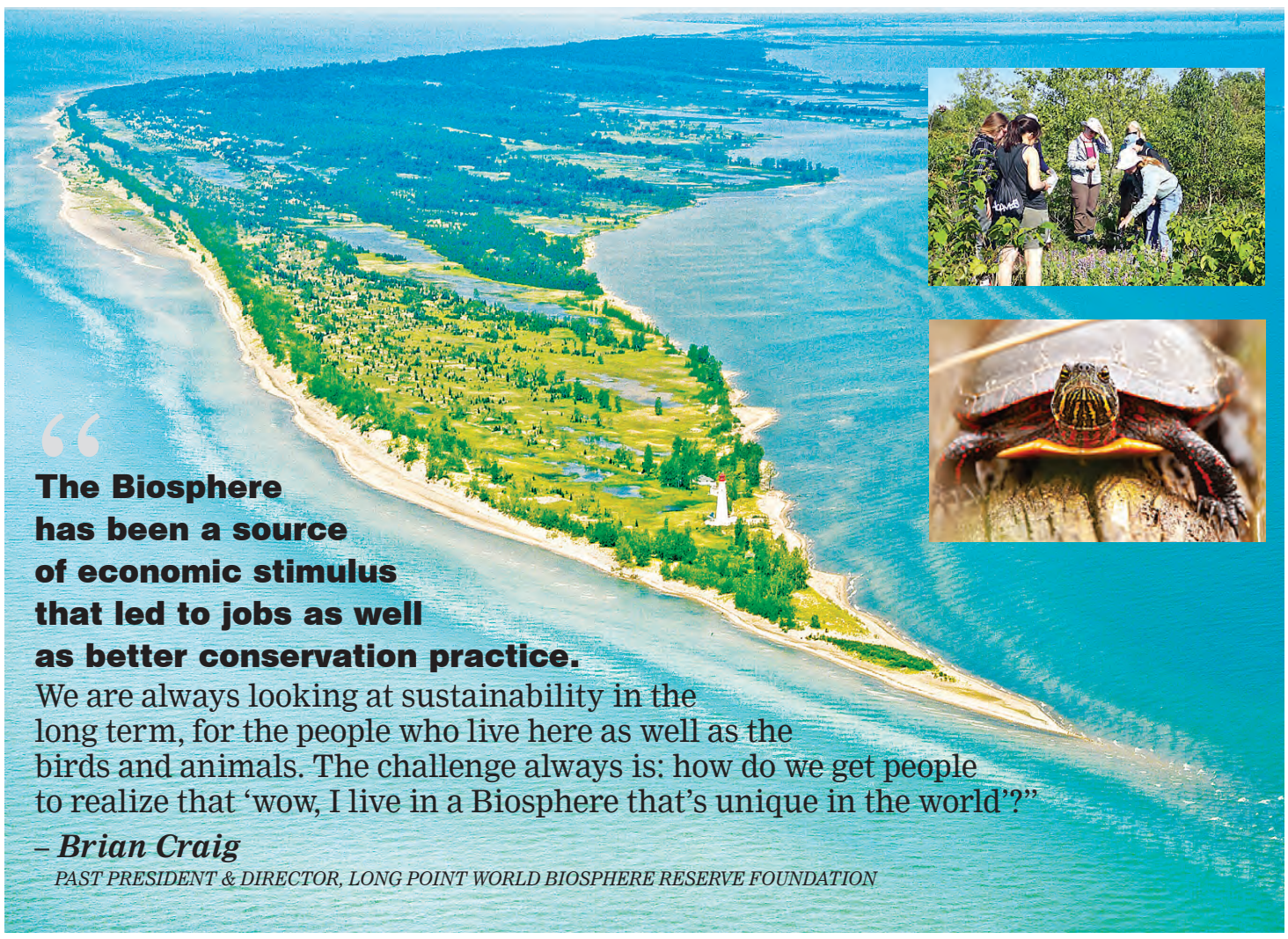
That's probably why the Priority Place project has employed the same cooperative approach by forming Working Groups to tackle the greatest threats faced by the Species at Risk that live here. Together, the member organizations of these Working Groups form the Long Point Walsingham Forest Collaborative.

One of the LPBR's most important roles is fostering collaboration and cooperation among the many groups that recognize and value this area's natural heritage. Our involvement in the LPWF includes engaging in stewardship and outreach activities that help promote the conservation efforts of the Collaborative and generate public awareness and support for the project.

For example, we developed a public database of maps collected from several different agencies and conservation organizations showing many geospatial features of the Priority Place and Norfolk County. We also created a story map in which Maya the Blanding's Turtle explains the threats to her home in the Priority Place. The LPBR developed and manage the Long Point Walsingham Forest Priority Place website, social media content, and print materials including this very newspaper insert.

Our hope is that this insert helps people recognize and celebrate the incredible biodiversity of this area and take pride in this community's long history of preserving it for future generations.

Rick Levick



"The Biosphere has been a source of economic stimulus that led to jobs as well as better conservation practice.
We are always looking at sustainability in the long term, for the people who live here as well as the birds and animals. The challenge always is: how do we get people to realize that 'wow, I live in a Biosphere that's unique in the world'?"

– *Brian Craig*
PAST PRESIDENT & DIRECTOR, LONG POINT WORLD BIOSPHERE RESERVE FOUNDATION

Long Point, the world's longest freshwater sand spit, is home to a wide array of species, biodiverse ecosystems, and incredible scenery. *Photo: John Kindury*

Inset at top: Students from the University of Waterloo get hands-on learning about the important ecosystems in Norfolk County. *Photo: Brian Craig.* Lower photo: Painted Turtle. *Photo: Leanne Gauthier Helmer*

The Long Point Biosphere Reserve

The Long Point Walsingham Forest Priority Place is within the Long Point Biosphere boundaries

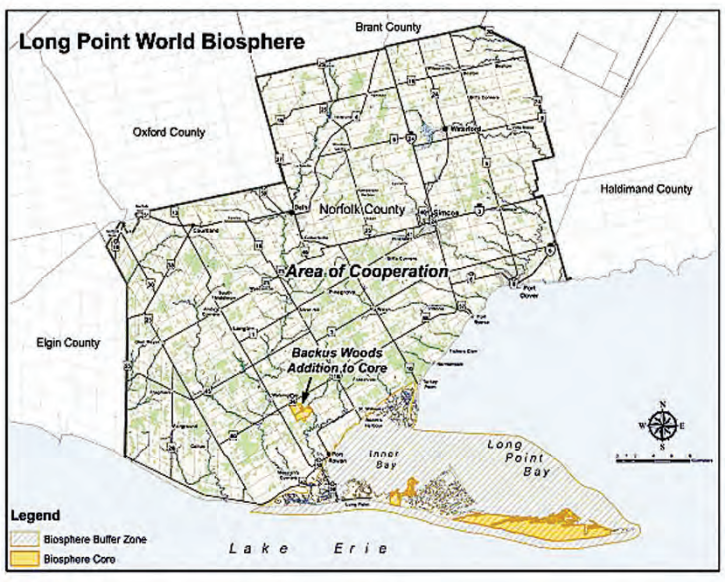
Situated in Norfolk County, Long Point and the surrounding watershed has the largest diversity of plants and animals in Canada and is a world-famous location for migrating birds and rare Carolinian forests. These and other ecological features led to the designation of the Long Point area as a Biosphere Reserve by the United Nations Educational, Scientific and Cultural Organization (UNESCO) in 1986.

Biosphere Reserves are globally important ecosystems that are internationally recognized by UNESCO's Man and Biosphere (MAB) program. Today, there are 701 World Biosphere Reserves spanning 124 countries, with 18 of these in Canada. While the Biosphere Reserve designation does not bring with it any new authorities over lands, water, or resources, its intent is to encourage local communities to combine conservation of biodiversity with sustainable community development.

In August 2017, a significant portion of the Long Point Biosphere Reserve was selected as a "Priority Place" for conservation of Species at Risk by the federal government. The designation as the Long Point Walsingham Forest (LPWF) brings with it funding from the federal government, in collaboration with provincial and territorial governments, to support the conservation work being done locally by various groups and organizations.

The LPWF Priority Place includes the Long Point Biosphere's significant areas: the core areas on Long Point and Backus woods; the buffer zone, which includes the Big Creek National Wildlife Area and the Turkey Point marshes; and the zone of cooperation in the southwestern portion of Norfolk County.

Having multiple designations in one area may seem confusing, especially given that Long Point itself holds even more recognitions as an internationally recognized Ramsar wetland site, an Important Bird and Biodiversity Area, and more. Such recognitions are important avenues to receiving support and funding for conservation activities. More than that, they show broad recognition of the site as important in many ways and to many groups and people. Beyond these designations, Long Point and all of Norfolk County is important to the people who live here, have lived here, or visit here, and who appreciate the natural heritage this place has to offer.



Map of the Long Point Biosphere Reserve, showing the Area of Cooperation (black border), Buffer Zone (red), and the Core areas on Long Point and Backus Woods (orange).

Norfolk County is home to lush Carolinian forests and important biodiversity, and is renowned for great scenery and recreational activities such as kayaking adventures down Big Creek. *Photo: Paddle Tales, photographer Mat Willder.*

This insert was written and edited by Amy Sigvaldason, Priority Place Project Coordinator, Long Point World Biosphere Reserve Foundation, in collaboration with LPWF collaborative members and Environment and Climate Change Canada.