



Interim Report to the  
**Ontario Wildlife Foundation**

Submitted by



**ONTARIO TURTLE CONSERVATION CENTRE**

HOME OF THE KAWARTHA TURTLE TRAUMA CENTRE

4-1434 CHEMONG ROAD

SELWYN ON, K9J 6X2

Tel: 705-741-5000

E-mail: [info@ontarioturtle.ca](mailto:info@ontarioturtle.ca)

Website: [www.ontarioturtle.ca](http://www.ontarioturtle.ca)



CHARITABLE REGISTRATION # 85752 4409 RR0001

*The Ontario Turtle Conservation Centre respectfully acknowledges that it is situated on the treaty and traditional territory of the Michi Saagiig Anishnaabeg. We offer our gratitude to the First Peoples for their care for, and teachings about, our earth and our relations.*

**The Mission of the Ontario Turtle Conservation Centre (OTCC) is to strengthen and preserve Canada's native turtle population and the habitats in which they live.**

We accomplish this through our:

- leading-edge hospital and rehabilitation centre
- pioneering rearing and release program
- education and training programs designed for stakeholders in conservation (government, veterinary professionals, biologists, Conservation Authorities) and the community at large.
- ongoing field studies addressing species knowledge gaps and informing best practices on threat mitigation.
- Use of data to contribute to the understanding of all turtle species and to global turtle conservation.

We believe that our greatest impact is made by following our core values of:

- **INNOVATION:** We advance conservation by implementing unique strategies and programs.
- **SUSTAINABILITY:** We value long term organizational viability to ensure lasting impacts to Ontario's turtle populations.
- **EXPERTISE.** We are experts in turtle medicine, turtle rehabilitation, egg incubation and hatching, and field data collection; all serving to augment Ontario's turtle populations.
- **EMPOWERMENT.** We are educating and training others to think, speak and act differently to preserve native turtle populations.
- **COLLABORATION.** We seek to foster relationships with conservation partners and communities to maximize our impact. Conservation Partners include the general public, Conservation Authorities, Scientists and Government representatives, both locally and globally.

In Ontario, 75% of our wetland ecosystems have been lost over the last century, with those that remain being fragmented by roads. Southern Ontario has some of the highest concentrations of roads on the planet, with a road located on average every 1.5 km. This area, however, also has the highest density of turtles in all of Canada, with turtles often travelling many kilometres on land. For many turtles, encountering roads is inevitable, and this makes road mortality second only to habitat loss as a cause for population declines. Turtles represent a significant biomass in our wetland ecosystems and play a vital role in keeping them healthy. Vibrant, functioning wetlands are not only essential for turtles, they are important to human health as these ecosystems act as the filtration system for all of the freshwater on our planet. In Canada, all eight native freshwater turtle species are now listed as Species at Risk by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) due to habitat loss and fragmentation, road mortality, fishing by-catching, illegal poaching and disease. This

current situation is critical in terms of potential loss to the biodiversity of our life-sustaining ecosystems.

Ontario Turtle Conservation Centre (OTCC) measurably mitigates threats to Ontario's declining turtle populations through a multi-pronged approach that includes turtle treatment, rehabilitation and release of injured turtles, disease surveillance, head-starting of hatchlings, and field research. In parallel, we continue to address root causes through education, increasing knowledge and understanding, and providing tools for citizen action. All these measures are integral components of a comprehensive action plan to reverse declining turtle populations and conserve our wetland ecosystems. Collaboration across sectors, community involvement and citizen action are key to the organization's effectiveness.

In October 2023, the Ontario Wildlife Foundation partnered with OTCC in supporting the headstarting of hatchlings and our field work project with a grant of 5,000.

Your funding continues to be invaluable in helping us in our mission to strengthen and preserve Canada's native turtle population and the habitats in which they live.

The following provides an overview of activities your generosity supported:

## A. Project Components

### 1. Rehabilitation of Injured At-risk Turtles and Release to Source Wetlands

So far, in 2023, over 1900 injured turtles were admitted to OTCC. This is a slight increase from 2022, making it our busiest season to date. We expect this momentum to continue due to increased public awareness resulting from education and communications initiatives.



Wood Turtle with a shell fracture



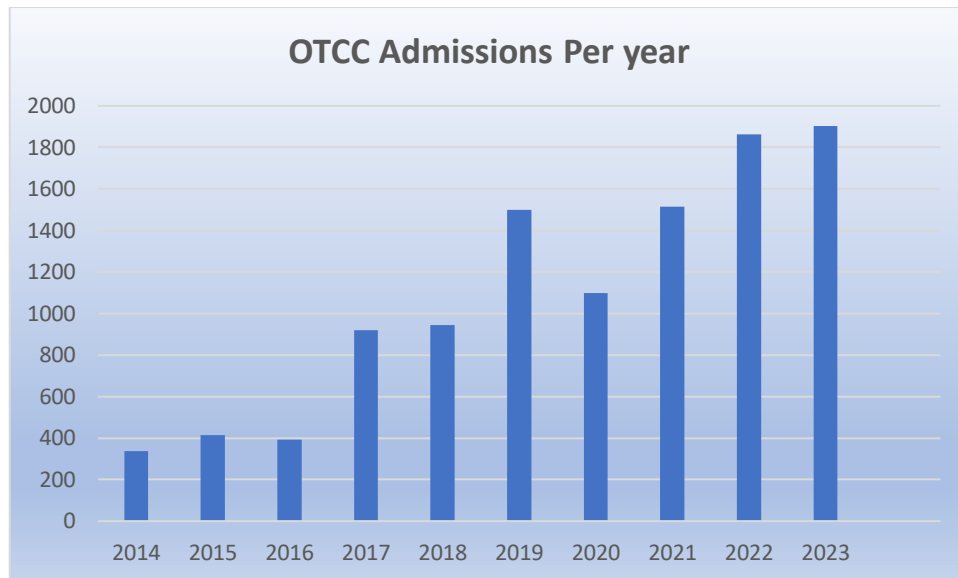
Blanding's Turtle rehabilitating after surgery on a shell fracture



Above left: A snapping turtle receives specialized orthopedic surgery by Dr. Brendon Ringwood, a specialist at the Veterinary Emergency Clinic and Referral Centre. This surgery will enable this turtle to be released in 2023.

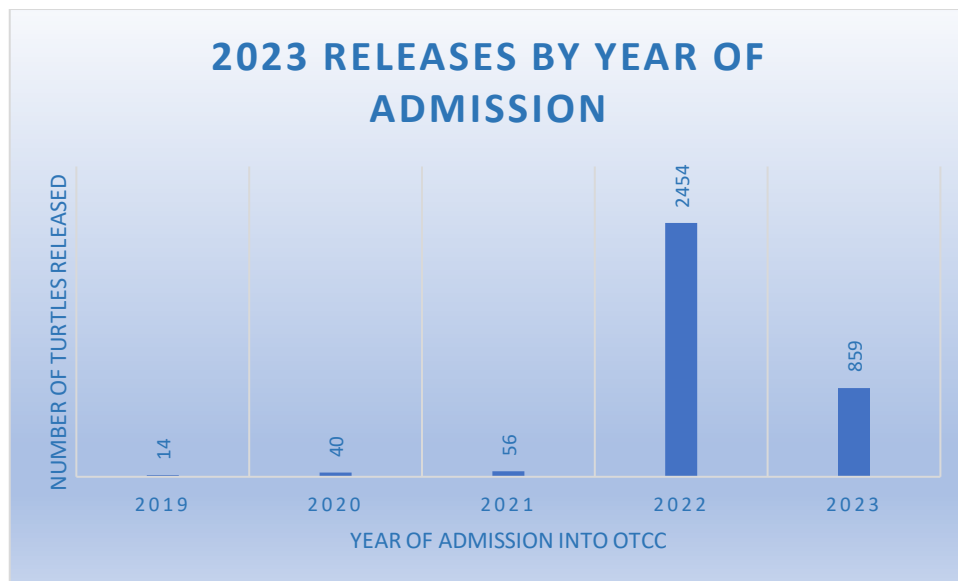
Above right: One of OTCC's veterinary technicians works through admissions and performs triage. Technicians ensure that each turtle admitted receives medication and care that prepares them for surgery by OTCC veterinarians.

OTCC's hospital is the only hospital dedicated to Ontario's native turtles, that is accredited by the College of Veterinarians. It is run by 4 veterinarians who are all very experienced with turtle medicine. It also acts as a referral and teaching hospital for other centres, veterinarians and veterinary technicians.



Above: Annual admissions to the OTCC, 2014-2023. Consistent increases reflect the success of education and outreach to increase awareness.

Some of the turtles admitted were able to be released within a short period of time, while other turtles will need to remain at the centre over the winter. 3423 turtles were released back into their home wetlands in 2023.



Above: Releases in one year often will reflect admissions in the previous year, since overwintering is frequently necessary





We rely on a great many committed volunteers across Ontario for this all to happen. In 2023, we have 1266 turtle taxi volunteers across the province who transport injured turtles to our hospital in Peterborough as well as release rehabilitated turtles back to their home wetlands.

We have 119 volunteers providing care to the turtles, hatchlings and eggs in our centre in 2023, as well as 157 on call. Our in-house turtle care volunteer hours from January 2023 to October 2023 totaled 8154 hours.

Left: We are even lucky enough to have volunteers with private planes, who bring turtles to the OTCC. Below: decals on the plane show the various charities that these amazing volunteers help out.



A few of the many releases in 2023





Given the unique life cycle of turtles, with each adult being vital to the population due to their late maturity and low recruitment into the adult population, our rehabilitation work is having a tangible and significant impact. Research that we co-authored in the Journal for Nature Conservation in 2021 demonstrates that rehabilitation and release of injured adults can have a positive impact on populations.\* The conservation of our turtle populations directly improves the ecological health and functioning of our life-sustaining wetlands and shorelines across Ontario and beyond. In the Durham, Haliburton, Kawartha, and Pine Ridge regions alone, the area of wetlands positively impacted by OTCC currently exceeds 1500 square kilometres.

\*James E. Paterson, Sue Carstairs, Christina M. Davy. "Population-level effects of wildlife rehabilitation and release vary with life-history strategy" Journal for Nature Conservation, Volume 61, June 2021



*Did you know that a snapping turtle needs to live to approximately 60 years of age, and produce around 1500 eggs, to even have a hope of replacing herself!*

A hatching blanding's turtle



## 2. Egg Incubation, and “Headstarting”

Many of the injured turtles are females with eggs. 7120 eggs were/are being incubated in 2023. So far, 3182 have hatched with more hatchings to come.

This headstarting program saves these eggs that would otherwise have been lost and gives the hatchlings a ‘head start’ in life. These hatchlings are kept for varying amounts of time before being released back to the mother’s wetlands. This strategy increases the chance of survival of the hatchlings considerably due to their larger size when released. In addition, it helps to augment the population of the specific location, thus helping to mitigate turtle mortality.



Above left: A clutch of snapping turtles that have just hatched- they will now be placed in water, in one of OTCC’s hatchling Rooms (Above right). Each clutch is kept separately, and kept in ideal ‘summer’ conditions, to maximize growth and health.

### 3. Field Studies – Radiotracking post-released Blanding’s turtles

Our conservation field studies include a long-term project in which we use radio tracking (telemetry) to follow a group of headstarted juvenile Blanding’s turtles, which were hatched from turtles admitted to OTCC’s hospital, alongside a group of wild-hatched juvenile Blanding’s turtles of similar size. In this way, we can compare their behaviour, growth, and overall survival to determine best practices for headstarting, and to confirm that this is a viable conservation strategy in its own right.



Having a ‘control’ group of wild-hatched juveniles makes this study unique and allows a side-by-side comparison. 2023 marks the 12th season of this research project. In 2023, we tracked 35 study turtles through the summer.

We have shown that the headstarted turtles are adding to the subadult population similarly to the wild-hatched turtles. Our long-term goal is to follow them to sexual maturity to ensure that they are able to add to the adult population. We are also evaluating which methods are best for maximizing ‘success’. Since OTCC headstarts thousands of hatchlings, we need to make sure that they have the maximum chance of success once released. While

in the field, we also conduct population surveys on all species of turtles at the study site. This allows us to form a report of the status of all turtle species at the site. In addition, we make observations on all incidental species of plant and animal life, as well as human activities, that can then be provided to the authorities, to help in the successful management of the whole area.

\*S.Carstairs, J.E. Paterson, K.L. Jager, D. Gasbarrini, A.B. Mai and C.M. Davy “Population reinforcement accelerates subadult recruitment rates in an endangered freshwater turtle” Animal Conservation 2019, The Zoological Society of London



Above – A field technician attempts to get a reading on a turtle, using radiotelemetry.

Left – a Blanding’s turtle is being examined by a field technician while a second technician takes notes.



#### 4. Education and Stewardship

Education is an important part of our multi-pronged approach to conserve and protect Ontario's wetlands. We believe knowledge leads to action and stewardship, which helps to mitigate the threats to Ontario's at-risk turtle populations.

We offer a variety of educational opportunities to the public both virtually and face to face. This programming includes our "Turtle encounter" and behind the scenes tours as well as our new multi-generational "Wildlife Conservation Through the Ages" program. As of November 2023, our educational programming reached 8568 individuals through 309 events. We have also participated in various outreach events, from environmental symposiums, watershed festivals, fundraisers, and seasonal fairs, to an IMAX film premiere for the Ontario Science Centre.

Additionally, we offered our live-streaming Turtle Webcam which follows our Education Ambassador turtles. Our Turtle Time Video Series covering topics such as egg laying, egg planting, introducing hatchlings to water, turtle nest protectors and many more topics. Our Field diaries video series showcases OTCC's field work with an overview of our field work, head-starting program, radio telemetry, processing turtles (taking measurements), tracking turtles and changing a transmitter.



Left – a multi-generational group in our outdoor education centre.

Below left – Education Coordinator Lisa Browning holding one of our education ambassador Snapping turtles. Photo taken by Meera Sulaiman

Below – a multi-generational group learning about hatchlings.



### Testimonials from Education Participants

#### **Kathy and Alan – Private In-person Tour – 11/11/2023**

Being shown injured and yet enduring turtles, watching hatchlings coming out of their eggs, hearing about your work to save turtles.

Yes! It was such a great presentation! Lisa managed to engage a 4 yr old, adults and seniors, she is such a talented teacher and her enthusiasm for turtle rescue is contagious!

Alan and I, our kids and granddaughter loved loved loved our tour this past Saturday! I was so thrilled at your ability to keep a four year old, adults and seniors all engaged in your teaching! You are really an awesome, talented teacher, Lisa !

We loved seeing the turtles, hearing their life stories, and about the loving care you all have given and are continuing to give each one.

An extra special treat for us was being allowed to see the wee baby turtles breaking out of their shells. What a precious memory to be given!

We are hoping to be able to tour the new facility once it has opened . Kindly add our name/email address to any eblast that you send out- we can't wait!



**Ashley - Sage and Sunshine Culture-Based School**  
**In-person - 07/15/2023**

The children all love turtles. They are one of our 7 Grandfather Teachings (our value system). Turtles represent Truth and remind us to use all the grandfather teachings to live a good life. It was so fun to learn more about them and how we can keep them safe. The presentation increased our sense of connectedness with the natural world by reminding us of what we can do to support our turtle relatives.

**Julie - High School Educator – Virtual Tour – 04/18/2023**

Lisa Browning is a dynamic presenter. She exudes enthusiasm for turtles and their well-being. All of the students were engaged for the entire hour. You can't say that very often. I do believe that they learned a great deal from Lisa's presentation. The students of course loved seeing the educational turtles that couldn't be released (Patty, Angela...).

I teach grade 12 Environment and Resource Management and IB Geography, and I LOVE the natural world. My concern is always regarding the well-being of our environment and biodiversity. This presentation just helped to spread the awareness to more people. I do hope that the more people that are aware of the serious situation that Ontario turtles are presently in, can help improve their situation.

Through our website, Facebook and Instagram, our social media presence, feedback, and interaction is significant. Facebook and Instagram combined had on average over 162,000 unique users viewing content from our pages *per month*.

<https://ontarioturtle.ca/>

<https://www.instagram.com/ontarioturtlecc/>

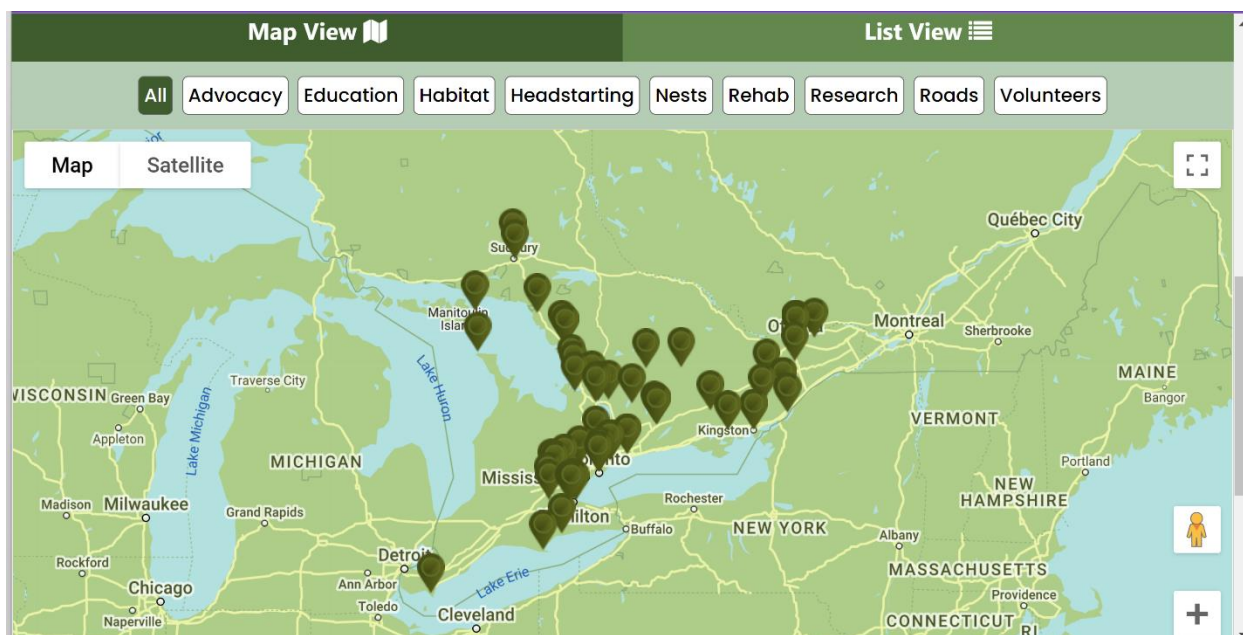
<https://www.facebook.com/OntarioTurtleCC/>

Working with our many conservation partners, we have developed a variety of educational brochures and resources available to the public.

<https://ontarioturtle.ca/ourmission/brochures/>

 <p>ONTARIO TURTLE CONSERVATION CENTRE</p> <p>The only dedicated turtle rehabilitation and conservation centre in Canada Home of the Kamehille Turtle Theatre Centre</p>	<p><b>Turtle Nesting Site</b> on your property</p>  <p>ONTARIO TURTLE CONSERVATION CENTRE</p>	<p>Improving the odds for eggs and hatchlings</p>  <p>ONTARIO TURTLE CONSERVATION CENTRE</p>	<p>First Nations Culture</p>  <p>ONTARIO TURTLE CONSERVATION CENTRE</p>	<p>A threat to Ontario's turtle habitats</p>  <p>ONTARIO TURTLE CONSERVATION CENTRE</p>
<p><b>Ontario Turtle Conservation Centre</b></p>	<p>How to build a <b>Turtle Nesting Site</b> on your property</p>	<p><b>Nest Protection</b> Improving the odds for eggs and hatchlings</p>	<p><b>Turtle Connections to First Nations Culture</b></p>	<p><b>Invasive Phragmites</b> A threat to Ontario's turtle habitats</p>
<p><b>Education and Outreach Program</b></p>  <p>ONTARIO TURTLE CONSERVATION CENTRE</p>	<p><b>Ecopassages</b> aka Turtle Tunnels!</p>  <p>ONTARIO TURTLE CONSERVATION CENTRE</p>	<p><b>Poaching</b> Illegal collection and trade of Ontario's turtles</p>  <p>ONTARIO TURTLE CONSERVATION CENTRE</p>	 <p>My Turtle Booklet Name: _____</p> <p><b>My Turtle Booklet</b> An activity booklet for kids.</p>	
<p><b>Education and Outreach Program</b></p>	<p><b>Ecopassages</b> aka Turtle Tunnels!</p>	<p><b>Poaching</b> Illegal collection and trade of Ontario's</p>		

In partnership with Parks Canada, we established the Ontario Turtle Conservation Network (OTCN). The network facilitates sharing of turtle conservation knowledge among nonprofits, businesses, educational institutions, and grass roots organizations.



Above: A screenshot of the Ontario Turtle Conservation Network, which allows anyone to search 'who is doing what' with regards to turtle conservation, across the province. This allows collaboration between organizations and individuals, and encourages increased stewardship activities.

<https://otcn.ca/>

## B. Financial Summary

The funds provided by the Ontario Wildlife Foundation are allocated as proposed for the Hatchlings, Head-starting and, Field Work Project.

Funds for the project are specifically allocated for egg incubation, hatchling care, and field research equipment . A portion of your funds are already being used to purchase UV light bulbs and food to over winter the hatchlings at our facility. In the spring, the additional funds will be allocated to field work equipment.

## C. Summary

The funding provided by the Ontario Wildlife Foundation has been and continues to be integral to OTCC's conservation work, particularly given the continued unprecedented challenges and increasing demands for turtle rehabilitation.

2024 will see our move to our new state of the art turtle hospital and rehabilitation facility (see photo below of the building to date), and the funds from your foundation will continue to support our day-to-day operations and programing including a larger and expanded egg incubation and hatchling area.

We are very grateful to have the continued, ongoing support from the Ontario Wildlife Foundation.

**Thank You!**

