



Interim Report to the
Ontario Wildlife Foundation

Submitted by



ONTARIO TURTLE CONSERVATION CENTRE

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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 July, 2022, the Ontario Wildlife Foundation partnered with OTCC through a donation of \$7,500,00 to support the health, protection and conservation of Ontario's native turtles.

In 2022, OTCC admitted a record number of injured turtles throughout a very long season. This resulted in record numbers of eggs to incubate and hatchlings to headstart over the winter. Our field work completed its 11th season radiotracking juvenile Blanding;s. Your funding was invaluable in helping us to meet the demands of this challenging year. The following is an interim report and provides an overview of activities your generosity supported:

A. Project Components

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

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, but they are also 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). With road mortality second only to habitat loss as a reason for population declines, the work we carry out in our hospital is vital.

As of the beginning of December 2022, 1863 injured turtles have been admitted to OTCC this season. This is an increase of over 300 turtles compared to 2021. We expect this momentum to continue due to increased public awareness resulting from education and communications initiatives.



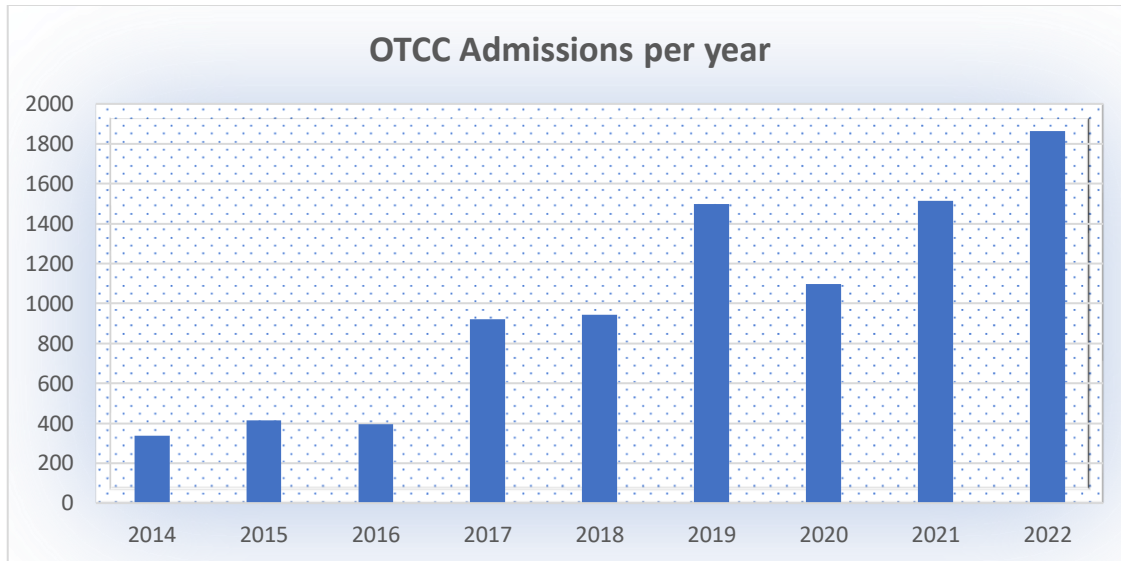
Above: This Blanding's turtle sustained a fractured shell while crossing the road. Daily nursing care will ensure she returns to her wetland home.



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.

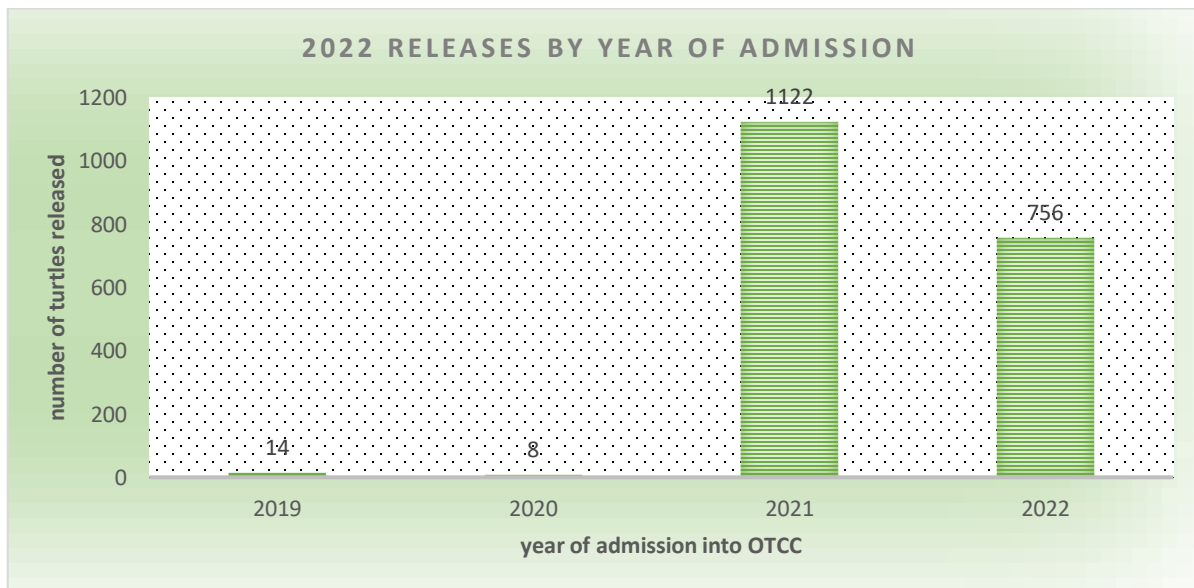
Above right: One of OTCC's veterinary technicians works through admissions and performs triage. Technicians ensure that each turtle admitted receives medication and care that prepares them for surgery by OTCC veterinarians.

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, 2014-2022. 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, for full recovery. Over 1900 turtles were released back into their home wetlands in 2022, including 14 who have been in our care since 2019.



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. We have approximately 1000 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. To date in 2022, our turtle taxi pick-up volunteers travelled an estimated 157,223 kilometers to bring injured turtles to our Peterborough hospital and this represented approximately 1795 volunteer hours. Our turtle taxi release volunteers travelled an estimated 90,203 kilometers to release rehabilitated turtles back to their home wetlands, which took approximately 1091 volunteer hours. So far in 2022 we have also had 117 volunteers providing care to the turtles, hatchlings and eggs in our centre. Currently there are 55 active weekly turtle care volunteers and 114 on call. Our in-house turtle care volunteer hours from January 2022 to November 2022 totaled 7397 hours.

Above: 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.





Above: a few of the many releases this season!

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!

2. Egg Incubation, and “Headstarting”



Many of the injured turtles are females with eggs. Approximately 7800 eggs were incubated this year (2022) and to date over 2800 have hatched with more to come.

Left:: A clutch of map turtles, hatched at OTCC, bask in the ‘sun’. We hatched 6 of the 8 species of Ontario turtles, at OTCC this season.

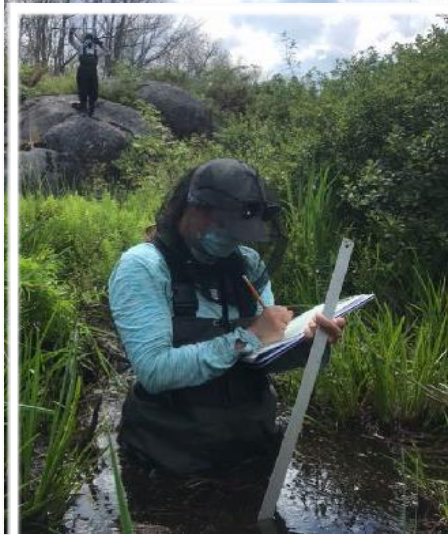
This headstarting program saves these eggs that would otherwise have been lost and gives the hatchlings a ‘head start’ in life. These hatchlings are kept for varying amounts of time before being released back to the mother’s wetlands. This strategy increases the chance of survival of the hatchlings considerably. 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. 2022 marks the 11th season of this research project and we tracked 38 study turtles this 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 takes down notes, while another Technician attempts to get a reading on a turtle, using Radiotelemetry.

Right Field work can be challenging! The turtles like to spend a lot of time in boggy, marshy areas that are very difficult to traverse

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, so we offer a variety of educational opportunities to the general public both virtually and face to face. In 2022 to date, over 1700 individuals have participated in face to face educational tours both at our centre and offsite. Our virtual educational outreach programming has reached over 10,000 individuals so far in 2022. Over 8,000 were students including, 88 classroom presentations.

Right: This shows a Virtual presentation, underway, to a classroom of students. Through a virtual mode, we can widen our reach, and bring the OTCC right into the classroom.

Below: Onsite tour at our outdoor education Centre led by our Education Coordinator Lisa!



Testimonials from Education Participants

September 24th 2022 In-Person Tour

“The entire presentation was amazing! We enjoyed everything. Lisa was an absolutely amazing Educator! There were so many parts of the presentation that were very impactful. As adults it was super informative to learn about the legalities around owning turtles, releasing them, etc. It was also interesting to learn that some of the information that we thought we knew about turtles wasn't entirely true - ex: that snapping turtles don't "bite fingers off" like the media/movies/TV shows show a lot of. The presentation was also so great for the kids! Amelia (6y) knew some things about turtles but it was great for her to learn more and be able to see and identify the different species. Not knowing that all turtles are at risk really made us think about our impact on them and what we can do to help turtles. We can't wait to come up with ways to help turtles and turtles habitats local to us.”

- Nicole

August 17th 2022 In-Person Tour

“Nicole and Kate were great guides. We loved every moment and learned so much. My 7 year old son is very passionate about turtles. It was so inspirational to learn more about these creatures in Ontario. Very informative and the passion and care for the turtles shone through all the staff at the Centre. Thank you for all you do for them!”

June 20th 2022 Virtual Tour

“Wow! What an amazing presentation. We have to say that we have NEVER had such an excellent, well prepared and just overall amazing experience in such a presentation. So much information. So well geared to our kindergarten group. Presentation was IMPECCABLE! We will SOOO recommend this presentation to others. Turtles are SO interesting. It's too bad that we don't have such an organisation here in Thunder Bay. The whole presentation had a great impact on how we think about turtles. Seeing this presentation and learning more inspires me to help and be so much more connected to how all life is important. Will definitely pass this information along. Thank You!

- Sue (Kindergarten Educator)

June 1st 2022 Virtual Tour

“Learning that such a high percentage of turtles are injured on the road was eye-opening. We were shocked too to learn that we've lost 75% of our wetlands! We also had no idea of the importance of noting the location where a turtle is found so that it can be returned to its habitat when it is ready to be released. As well, it was helpful to know not to put an injured turtle in the water. Overall, this presentation was a great way for us to learn and be able to spread awareness about the importance of protecting our at-risk turtles! Most of us had never heard of the Ontario Turtle Conservation Centre before and were glad to know we can contact the centre if we come across an injured turtle”.






- Kimberlee

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* in 2022.

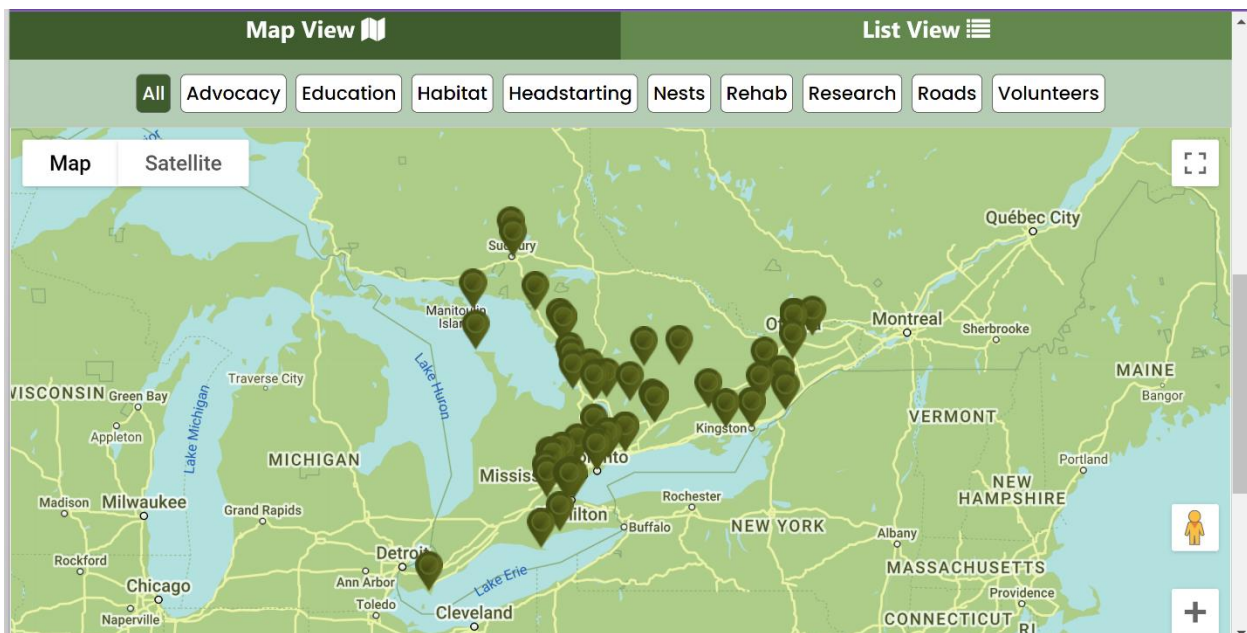
<https://ontarioturtle.ca/>
<https://www.instagram.com/ontarioturtlecc/>
<https://www.facebook.com/OntarioTurtleCC/>

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 Kawantha Turtle Trauma Centre</p>	<p>Turtle Nesting Site 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>Ontario Turtle Conservation Centre</p>	<p>How to build a Turtle Nesting Site on your property</p>	<p>Nest Protection Improving the odds for eggs and hatchlings</p>	<p>Turtle Connections to First Nations Culture</p>	<p>Invasive Phragmites A threat to Ontario's turtle habitats</p> 
<p>Education and Outreach Program</p>  <p>ONTARIO TURTLE CONSERVATION CENTRE</p>	<p>Ecopassages aka Turtle Tunnels!</p>  <p>ONTARIO TURTLE CONSERVATION CENTRE</p>	<p>Poaching Illegal collection and trade of Ontario's turtles</p>  <p>ONTARIO TURTLE CONSERVATION CENTRE</p>	<p>My Turtle Booklet Name: _____</p>  <p>My Turtle Booklet An activity booklet for kids.</p>	
<p>Education and Outreach Program</p>	<p>Ecopassages aka Turtle Tunnels!</p>	<p>Poaching 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 being utilized to support operational expenses of the hospital including: food and supplies for hatchlings, field research supplies

C. Summary

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

We are so grateful to have the generous support of the Ontario Wildlife Foundation as we continue our mission to strengthen and preserve Canada's native turtle population and the habitats in which they live.

Thank you!