Steve Shypowskyj

From: Rick Froese [redacted]
Sent: January 4, 2025 12:10 PM
To: William C. Steele; Mayor; Mark Bagu; Dave Elliott; Tim Hoyle; Gary Bruno; Frank Danch; Ron Bodner; Monique Aquilina; Eric Beauregard; City Clerk; Steve Shypowskyj
Cc: [redacted]
Subject: City of Port Colborne Waterfront Road Allowances
Attachments: Anne Yagi's Letter of Support - Dec. 23, 2024.pdf

Dear City of Port Colborne Mayor & Councilors,

The Lorraine Bay community takes exception to the City of Port Colborne's Waterfront Road Allowance Study Recommendations on Report # 2024-143. Our concerns were expressed by the many conversations we had at the City's Open House, with Councillors and the numerous emails that were submitted.

The Lorraine Bay community has long been dedicated to the preservation of our unique and cherished environment. We have coexisted with the Fowler's Toad for well over 100 years until the toad population was recently washed out by fall storms during high-water levels. The water levels in the great lakes are managed by the International Joint Commission which needs to take responsibility for the catastrophic effect this had on the Fowler's Toad population in our bay.

Lorraine Bay is classified as a Type 2 Fowler's Toad habitat which reflects differences such as limited habitat and breeding pools. The pools that have been identified are located at the two drain locations which are regularly "cleaned out" by City Contractors to prevent upstream flooding as required by the Drainage Act. This activity will always have a negative impact on the toad population in our bay.

The Lorraine Bay Association in collaboration with Anne Yagi, the chair of the Fowler's Toad Recovery Implementation Team is proposing a stewardship approach to the Fowler's Toad habitat on Lorraine Bay in order to help the population recover.

Background – From Anne Yagi, Chair of the Fowler's Toad Recovery Team:

The Fowler's Toad Recovery Team includes researchers, landowners, managers, government, non government and public interested in the conservation of the Fowler's Toad. They meet to bring forward questions, concerns and ideas for the species recovery.

The focus of the recovery team is to help implement approved recovery actions as described in the species recovery strategy through the application of science-based actions using a stewardship and education approach. Stewardship is the cornerstone of the Endangered Species Act (RSO 2007) because it is understood that people can make a difference in the successful recovery of a species at risk and that punitive-regulatory approaches are not always necessary to achieve the goal of recovery.

The purpose of the Endangered Species Act (ESA) is,

1) To identify species at risk using the best available scientific information including community knowledge and aboriginal traditional knowledge.
2) To protect species that are at risk and their habitats, and to promote the recovery of species that are at risk.
3) To promote stewardship activities to assist in the protection and recovery of species that are at risk.
2007, c.6, s.1.

The Lorraine Bay Association proposes to work with Anne Yagi from the Fowler's Toad Recovery Team to develop a science-based stewardship plan on Lorraine Bay. See Anne Yagi's letter of support attached.

This plan would be based on education and surveys to understand where the Fowler's Toad breeds and actions that promote co-existence and recovery of toad populations.

Recommended actions –
1) Education by the Recovery Team to identify the toad and potential breeding ponds
2) Monitor breeding sites, toadlet status and potentially fence off areas when toadlets emerge from breeding ponds.
3) Restrict vehicular use of the beach during night since the toad is nocturnal.
4) Drive along the water's edge during the day since the toad burrows into loose sand during the day.

The Lorraine Bay Association asks to have Road End Report # 2024-143 amended to accommodate our proposal and remove the recommendations to install locked gates and restrict vehicles at Lorraine Bay road ends.

Feel free to contact us if you have any questions.

Sincerely,
Rick Froese
Lorraine Bay Association - Road Ends Contact
[redacted]

Motherease™ [redacted]

Lorraine Bay Vehicle Access on Beaches

Anne Yagi [redacted]
To: Rick Froese [redacted]

Mon, Dec 23, 2024 at 11:51 AM

Dear Mayor and Councilor's for the City of Port Colborne

I have met with the Lorraine Bay Association to discuss the City's plans to remove vehicle access privileges. I prepared a written review of the City's plan and offer a compromise solution involving a stewardship approach.

I can confirm that the Fowler's toad Recovery Implementation Team fully supports stewardship actions to mitigate potential impacts to Fowler's toads inhabiting the Lorraine Bay beaches. We are prepared to work with the Lorraine Bay association in this regard.

I am available to discuss stewardship options at your convenience.

Sincerely,

Anne Yagi, M.Sc., EP, CERP

Chair of the Fowler's toad Recovery Implementation Team (since 2010)

And Past Co-Chair of the Fowler's toad National Recovery Team (since 2002)

President 8Trees Inc.

[redacted]

I respectfully acknowledge the sacred land in which I live and operate is situated upon the traditional territories of the Attiwonderonk (Neutral), Anishinaabeg, Mississauga, Ojibwe/Chippewa, and Haudenosaunee peoples. This territory is covered by the Upper Canada Treaties and is within the land protected by the Dish with One Spoon Wampum agreement. I am grateful to live on this sacred land.

Technical Memo Lorraine Bay September 23.pdf
6038K

Technical Memo Dated September 23, 2024

To City of Port Colborne Mayor, Staff and Council

The Fowler's toad Recovery Implementation Team is a group of people including researchers, landowners, managers, government, nongovernment and public interested in the conservation of the Fowler's toad, an endangered species in Canada. We meet annually or more often when issues arise. Everyone interested in Fowler's toad recovery is welcome to attend meetings and bring forward questions, concerns, and ideas for the species recovery.

Our focus is to help implement the government's approved recovery actions as described in the species recovery strategy (RS; Green *et al.* 2011) through the application of science-based actions using a **stewardship and education** approach (See Stewardship Guide). Stewardship is the cornerstone of the Endangered Species Act (RSO 2007) because it is understood that people can make a difference in the successful recovery of a species at risk and that punitive-regulatory approaches are not always necessary to achieve the goal of recovery.

The purpose of the Endangered Species Act (ESA) is,

1) To identify species at risk using the best available scientific information including community knowledge and aboriginal traditional knowledge.
2) To protect species that are at risk and their habitats, and to promote the recovery of species that are at risk.
3) To promote stewardship activities to assist in the protection and recovery of species that are at risk. 2007, c.6, s.1.

The Lorraine Bay Association and other residents near Sherkston and Cedar Bay have brought some concerns to my attention as the Recovery Team Chair. They have also provided me with several documents produced by the City of Port Colborne with respect to the shore lands under the City's ownership or management. The recommendations in the City's reports focus on the punitive aspects of the Endangered Species Act and do not mention the intent of the ESA's stewardship approach. In the case of the small areas of beach access points we recommend a stewardship approach and offer our services to help develop this approach into a stewardship plan for City staff and MECP review and approval. Accessing the beach will not always harm Fowler's toads and their habitat. Mitigation approaches are often acceptable to allow beach access and can be determined on a case-by-case basis.

Please see attached some examples of stewardship in action and how these can be implemented at access points.

Sincerely,

Anne Yagi, MSc., EP, CERP
Chair of the Fowler's Toad Recovery Implementation Team

A Suggested Stewardship approach to Managing Potential Impacts on Fowler's Toad at Municipal controlled Beach Access points

Prepared by
The Fowler's Toad Recovery Implementation Team

The Problem from a Resident's perspective
Landowners have always enjoyed the privilege of accessing the beach at Weaver and Lorraine Roads on a seasonal basis to put their boats or other watercraft in Lake Erie for the summer and remove them in the fall season. There is no public boat launch facility nearby and there is no practical alternative option for area residents.

Most of the shoreline, other than the road right of way access points are privately owned with posted "no trespass" signage. Most of the lots extend into the water especially during times when Lake Erie water levels are elevated. Shore walls that front each home, also limit the ability for landowners to access the beach and lake below for the purpose of watercraft access.

The Problem from the City's Perspective (Port Colborne Operational Manual- Road Ends Dec 2023)
The City is responsible for any harmful impacts to Fowler's toads or other listed species at risk on City owned lands, and as a corporation the City is concerned about a punitive process under the ESA including heavy fines if a Fowler's toad is killed within an access point (road-right of way) or if the habitat is harmed.

ESA Section 9: Harm or Killing of Species at Risk
ESA (2007 RSO)

Prohibition on killing, etc.
9 (1) No person shall,
(a) kill, harm, harass, capture or take a living member of a species that is listed on the Species at Risk in Ontario List as an extirpated, endangered or threatened species.

Species at risk in Ontario are often accidentally killed on roads and there are no fines being laid for these occurrences. For Example, the Massasauga rattlesnake is a threatened species and hundreds are killed on the roads in Ontario every year. Mortality on roads is the highest ranked threat for this species in Canada. In Killbear Provincial Park at least 10 or more Massasaugas are killed every year, and no one is fined. Accidental road mortality is a known threat for most reptiles and amphibians. However, the ESA does not use the "words accidental or intentional" any discretion is at the grace of the officer and there is precedent for not charging when an animal is accidentally killed or harmed.

- Stewardship mitigation is the best approach to lessen mortality from any potential threat.

ESA Section 10: Destruction of Species at Risk Habitat

Prohibition on damage to habitat, etc.

10 (1) No person shall damage or destroy the habitat of,

(a) a species that is listed on the Species at Risk in Ontario List as an endangered or threatened species;

The conversion of land into residential development is the highest ranked threat for species at risk worldwide (IUCN #1 threat). Shore walls (break walls) and the conversion of dunes into human habitation and activities that prevent toads from accessing suitable hibernation habitat is the highest threat for the Niagara population of Fowler's toads.

There are still many recent examples where new shore walls and new homes continue to be built on dunes along Lake Erie. This threat continues today despite the ESA regulations that are in place to protect Fowler's toad habitat. A stewardship approach would either increase toad hibernation habitat by building dunes in suitable areas or it would improve access to the back dune area via accessible toad ramps. Access points may be a good area for toad ramps.

Loss of breeding sites is another highly ranked threat. The temporary and short-term use of vehicles in a restrictive space such as an access point is not the same level of threat because the habitat is not permanently altered or lost. Although the shoreline area is disturbed, the disturbance is temporary, and the impact can be mitigatable through stewardship.

***Fowler's toad Life Cycle* (See Stewardship Guide)**

The Fowler's toad is an amphibian with a complex annual life cycle and short life span of < 5 years. This species has adapted to the Lake Erie environment which is dynamic. Regular habitat disturbances are important to sustain habitat quality and to keep dunes open or sparsely vegetated. Preventing disturbances by overprotecting an area (fencing, shore walls, grassed lawns, reforesting, reducing disturbances) lowers habitat quality for the toad.

- Breeding begins in mid-May and continues to the end of June. Breeding sites are shallow open water areas in rocky pools or at watercourse outlets at the beach. Fish are predators of egg masses and tadpoles; therefore, fish free breeding pools are ideal.
- Eggs hatch into an aquatic stage, tadpole, within 7 days.
- Tadpoles feed in shallow water areas for up to 120 days depending on water temperature and food supply and metamorphose into toadlets.
- Toadlets are < 10mm in length when they first emerge onto land. They are active **day and night** and stay in the vicinity of the breeding site until they reach a size of approximately 30mm and then they become nocturnal and begin to disperse along the water's edge in the months of August and September. **Please Note the City's report is not correct (Page 8 timing of Toadlet Emergence is not June or July).**

- Toads are not long-distance swimmers. They prefer shoreline dispersal and hop along the water's edge.
- Juveniles are typically < 50mm in length, and are 1 to 2 years of age
- Adults are > 50mm in length and are age 2 to 5 years of age. Older toads are extremely rare.
- Juveniles and Adults are nocturnal (active from dusk to dawn), feeding and rehydrating usually occurs every night during the active season. They spend a lot of time at the water's edge at night.
- Hibernation begins in September and continues to Mid-May.
- Toads must hibernate below the frost line and above the water table to survive winter. They do not hibernate in water, and they avoid surface freezing temperatures by digging into the soft dune sand usually at the crest or back dune.

Fowler's toad Surveys

The Fowler's toad is known to occur along Niagara Beaches in Wainfleet, Fort Erie and Port Colborne including Lorraine Bay. The largest numbers of toad observations in the Niagara population are from Nickel Beach to the West of Lorraine Bay. Population estimates from Nickel Beach range from over 800 adult toads with a mean of about 400 adults (from 2002 to 2018). Population declined dramatically from 2018 to 2021 during high lake water levels. Nickel Beach is one of the few remaining areas where the Fowler's toad population persists in Niagara despite record high Lake Erie water levels that increased beach erosion and decreased the quality of breeding sites. This is largely why the Nickel Beach shoreline and dune ecosystem is considered optimal toad habitat because it is more resilient to change. Optimal habitat is partly why toads are concentrated in this area and therefore more vulnerable to human induced threats such as habitat destruction and direct mortality impacts from vehicles on the beach.

The Fowler's toad population is currently at low numbers because it is recovering from the high-water level period when breeding sites were flooded. During lower lake levels, the expectation is that the population will eventually repopulate areas adjacent to Nickel Beach first, provided dispersal corridors remain functional. Lorraine Bay is the next bay east of Nickel beach. There are only a few data points for the Lorraine area. Toads need to swim around an erosive pinch point near Cassidy Point and toads are not great swimmers (See 8Trees 2021 report). We are unsure if the pinch point is still present today.

Dispersal is best along a continuous land area such as a beach or bedrock area. Either the toads are underreported, or they are not abundant in Lorraine Bay. If they are not abundant the ecological functions supported by the habitat may be less than optimal and the risks of harm to an individual toad are much lower than Nickel Beach.

In 2021, standardized Fowler's toad surveys for Lorraine Bay were completed on specific properties with landowner permission. Concurrent sampling was completed at Nickel Beach for comparative purposes. The 2021 data confirms the higher number of occurrences of Fowler's toads along the Nickel Beach shoreline and comparatively less toad observations along Lorraine Beach (Figure 1).

The difference in abundance likely reflects habitat quality differences at each site. Earlier MNRF records concluded Nickel Beach is Type 1 habitat and Lorraine Beach is Type 2 habitat (MNRF 2005).

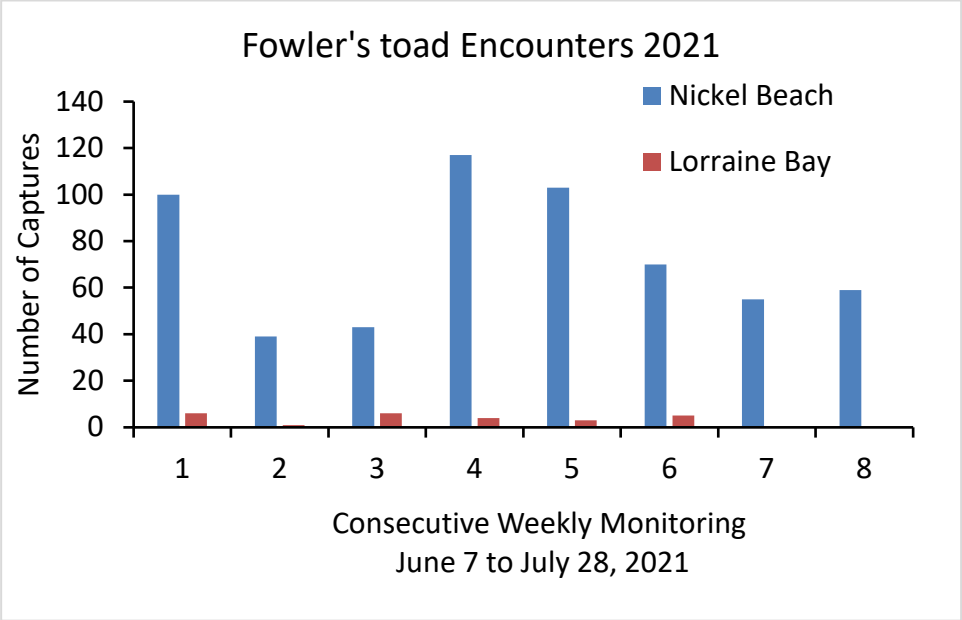

Figure 1. Standard Fowler's toad beach surveys conducted on 8 consecutive weeks from June 7th, 2021 to July 28th, 2021 at both Nickel Beach and Lorraine Bay private lands with landowner permission.

Fowler's toad Habitat along Lorraine Beach

In 2021, breeding was confirmed within Beaverdam Drain at the outlet area on the beach at Weaver Rd. and toad captures were sporadic along the beach- water's edge. Breeding also likely occurs at the Wignell Drain outlet, although we can only confirm American Toad breeding in 2021. Many of the sand dunes here are hardened by shore walls or covered in mowed lawns making them less suitable for toad hibernation. A lack of open dune habitat will limit the number of resident toads.

Lorraine Bay Beach Access Points

There are 3 access points along Lorraine bay beach (West to East Figure 2).

Figure 2 City of Port Colborne Beach Access Point for Lorraine Bay. From West to east they are 1) Wignell Drain 2) Lorraine Rd. 3) Weaver Rd., Google Earth aerial imagery 2023.

1) Wignell Drain (891 Lakeshore Rd) likely contains suitable breeding habitat for the Fowler's toad. Potential hibernation habitat may also exist in the vicinity of the access point. During surveys, in 2021 American Toads were calling from this location, but in previous years both toad species have called from this area (MNRF unpublished data). Toads would also use the areas around the watercourse for daytime refugia, feeding and rehydrating.

- This conclusion differs from the City's assessment because the photos do not show the breeding site, as the focus of the photograph is to the east. In addition, the shoreline changes over time in terms of erosion, deposition of sand and the area is recovering from an exceptional erosion event from 2018 to 2020. This area may look quite different each spring or fall season, the outlet area may be relocated and therefore assuming no breeding habitat is not accurate.

Recommendations:

- Seasonal Beach access should be permitted on the east side of the watercourse and keep any vehicles 10m away from the water's edge during toadlet emergence, which is Mid-August to Mid-September. There is annual variation in the timing of toadlet emergence.
- No vehicle uses at night (From Mid-May to end of June) in the vicinity of the breeding site will avoid impacts to the breeding population.
    - Protection of toadlets emerging from the breeding site would involve a timing restriction from Mid-August (or when they are first observed pending surveys) to mid-September (or when they disperse pending surveys). This would be an all day and night restriction. Once toadlets are

≥ 30mm in length they behave like juvenile toads and are nocturnal. The timing can be refined with surveys. If there are no toadlets then a buffer zone is not needed.

Figure 3. Wignell Drain Beach Access may be suitable on the east side about 10m from the edge of the drain outlet. Photo from City of Port Colborne Operations Report.

2) Lorraine Rd. Access Point: **Does not contain breeding habitat**.

Figure 4. Lorrain Rd Access. Photo from City of Port Colborne Report. Photo from City of Port Colborne Operations Report

- This is a wave uprush erosive area containing rock and sand mixtures. There is no breeding site near Lorraine Rd. Based on Figure 4, it is possible the toads may use the right of way access for movement and dispersal into back dune areas. In addition, the quality of the access point as toad habitat is very poor. Due to the spaces between the large rocks, Fowler's toad may get trapped inside the cavities which is not desirable. They also may use this access ramp to get to the adjacent back shore dune area which may be suitable hibernation habitat. There is no way to confirm this without surveys and monitoring.

- This conclusion agrees with the City's report in that the access point is not Fowler's toad breeding habitat or hibernation habitat. However, hibernation habitat may be adjacent to this access point and the access may be a suitable pathway for toads to access this area.

Recommendation:

- This is the best beach access point for the neighborhood to use to access the beach and place watercraft into the lake.
- The optimal time frame for boat access is before toads emerge in spring (approximately mid-May) and again after they return to hibernation (approximately mid-Sep). Vehicle access from mid-September to mid-May in any given year will not likely harm toads or their habitat.
- Vehicle access during the day throughout the summer will have a low potential impact here.
- Mitigation can be negotiated with the Ministry of Environment Conservation and Parks (MECP) and may include data collection, exclusion fencing or offsite habitat improvements which can be determined on a case-by-case basis.

3) <u>Weaver Rd. Access point</u>

This is a **confirmed Fowler's toad breeding site** in the drain outlet area (MNRF unpublished data; NHIC 2021 data). The city concluded that this is a **potential breeding site**, but this area is a well-known breeding site for Fowler's toads (See NHIC records from 2001 to 2021).

This is also a Drain maintenance area. There is likely an ESA agreement between the City and MECP, on the timing of when this area can be cleaned out to prevent impacts on the toad. The dredgate from the drain is usually piled on the east side of the drain within the Right of Way. The sand pile contains mixtures of rock and sand. The sand pile is important to keep on site because it helps to replenish the beaches to the east via wind transport.

Figure 5. Weaver Rd. Beaverdam Drain Outlet is confirmed Fowlers Toad Breeding Habitat in the outlet area on the sandy beach. Photo from City of Port Colborne Operations Report.

Recommendation:

- The east side of Weaver Rd Drain outlet is also a suitable beach access point for the neighborhood to use to place watercraft into the lake.
- The optimal time frame for boat access is before toads emerge in spring (approximately mid-May) and again after they return to hibernation (approximately mid-Sep). Vehicle access from mid-September to mid-May in any given year will not likely harm toads or their habitat.
- Protection of the Fowler's toad breeding population would restrict vehicle access at night during the breeding season from mid-May to the end of June in any given year.
- Protection of toadlets emerging from the breeding site would involve a timing restriction from Mid-August (or when they are first observed pending surveys) to mid-September (or when they disperse pending surveys). This would be an all day and night restriction.
- Additional seasonal mitigation (i.e. temporary fencing to keep toads from entering the east side dredgate pile), are possible opportunities to offset potential harmful impacts and extend the access window.
- Toad surveys to confirm the timing of toadlet emergence near the drain may also help extend the access window for Lorraine residents.
- Mitigation and offsetting needs to be negotiated with the Ministry of Environment Conservation and Parks (MECP) but may include data collection, and habitat improvements.

Offsetting or Additional Mitigation Examples

- Mark-Recapture surveys during the active season can confirm the presence of Fowler's toad in a specific area and potentially expand the timing windows for vehicle access during the active season for toads.
- The public can be taught how to properly identify the toads, catch and handle them without injury, complete size measurements and determine their life stages with some training by the recovery team.
- Mark-recapture studies may also confirm whether toads disperse from Nickel beach in the spring to breed at the creek/ drain outlets in Lorraine Bay and when or if they return to Nickel beach for winter hibernation, but this work is not yet done.
- Temporary fence enclosure testing is a technique used to confirm whether toads hibernate successfully in a specific area. The Wignell Drain and Beaverdam Drain outlets are a suitable area to apply this method. Additional methodology to be supplied upon request.
- Habitat improvements can easily be done by the landowners here. Increasing the height of dunes, and toad access into back dune areas via toad friendly ramps, removing mowed lawns and replacing them with native beach grass will allow toads to dig into the back dune areas for hibernation.

Overall Conclusion

- Harmful vehicle use on beaches happens when
    - vehicles drive on soft sandy beach areas and dunes, or
    - when they drive on beaches at night when toads are moving from dunes to the water's edge to rehydrate and to feed, or
    - when driving next to breeding sites during the day when toadlets are exhibiting diurnal behaviour and are very vulnerable.
- By adhering to seasonal and time of day restrictions, avoiding sensitive habitats (breeding sites, soft sand and dunes) most harmful impacts to Fowler's toads can be avoided.
- Negotiating an agreement with MECP is an important next step. Lorraine Residents can enter into their own stewardship agreement with MECP to mitigate potential impacts, extend timing windows, and allow for some vehicle access during the day in nonsensitive areas once they are defined through additional study.

Further information regarding the Fowler's toad Recovery Implementation Team is available on several web sites including,

1. McGill University, Dr. David Green (Retired) https://www.researchgate.net/profile/David-Green-40
2. Ottawa University, Dr. Julie Lee-Yaw Lab https://www.uottawa.ca/faculty-science/professors/julie-lee-yaw
3. 8Trees Inc. Dr. Katharine Yagi https://8trees.ca/foto-recovery-team/
4. Land Care Niagara https://landcareniagara.com/resource-library/#1628699400898-4dd28e2d-68d5

Additional Information Sources

1. **Fowler's Toad Stewardship Guide**

Yagi, A.R., A. Brant, S. Meyer, D.M. Green, S. Dobbyn, B. Johnson, and R. Tervo†. 2017. The Fowler's toad Stewardship Guide. prepared for Environment Canada Habitat Stewardship Program 61pp. updated version from 2007 http://www.landcareniagara.com/library/Fowlers_Toad_Stewardship_Guide.pdf

2. **Fowlers toad Identification Card**

http://www.landcareniagara.com/library/Fowlers_Toad_ID_Card.jpg

3. **Joad the Fowler's Toad Event Mascot**

This is the Recovery Team's mascot and is available to attend public events at no charge although donations are accepted. See support@8trees.ca

4. **Recovery Strategy for the Fowler's Toad in Canada**

Green, David M., Anne R. Yagi, and Stewart E. Hamill. 2011. Recovery Strategy for the Fowler's Toad (*Anaxyrus fowleri*) in Ontario. Ontario Recovery Strategy Series. Prepared for the Ontario Ministry of Natural Resources, Peterborough, Ontario. vi + 21 pp.
https://www.ontario.ca/page/fowlers-toad-recovery-strategy

5. **COSEWIC Status Report for the Fowler's Toad in Canada**

COSEWIC. 2010. COSEWIC assessment and status report on the Fowler's Toad *Anaxyrus fowleri* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vii + 58 pp.
https://www.canada.ca/en/environment-climate-change/services/species-risk-public-registry/cosewic-assessments-status-reports/fowler-toad-2010.html

6. **Protect your Coast**

https://landcareniagara.com/wp/wp-content/uploads/2019/02/Protect-Your-Coast-with-Beachgrass-2017-2.pdf

7. Fowler's toad Poster (Nickel Beach)

Poster Size and Laminated Hard Copy available upon request

8. Joad the Toad Public Event Mascot (Available to attend public events)

9. Fowler's toad Landowner Contact Brochure (2007 version)

What can you do to help?

1. Learn more about this species and other species at risk and conservation by visiting these Web sites:
   www.landcareniagara.com
   www.speciesatrisk.gc.ca/04_e.cfm
   www.ontarioparks.com/english/rond.html
   www.torontozoo.com/adoptapond
   http://www.redpath-staff.mcgill.ca/green/
   www.conservation-niagara.on.ca
2. Learn how to accurately identify this species and report your observations tothe Ministry of Natural Resources Natural Heritage Information Centre.
   http://nhic.mnr.gov.on.ca/MNR/nhic/species.cfm
3. Participate in dune creation and shoreline naturalization projects. Demonstration areas are in progress at Morgan's Point Conservation Area, Long Beach Area in Wainfleet, Rock Point and James N. Allan Provincial Parks.
4. Come out with us and participate in a "Toading Night" with your Local Recovery Team.

For more information on funding opportunities and participation awards please contact your local OMNR or Ontario Parks Office

OMNR-Niagara Area Office
Tel: 905-562-1178

Long Point Provincial Park
Tel:519-586-2133

Rondeau Provincial Park
Tel:519-674-1768

FOWLER'S TOAD

Threatened Species

Help Protect Lake Erie Wildlife

Fowler's Toad Recovery Team

Photographs courtesy of Rob Tervo and Dr. David Green

Fowler's Toad Recovery Team — Toads are Cool! — Help Protect Lake Erie Wildlife

Status Designation

The Fowler's toad is a threatened species and is at risk of becoming endangered in Canada. The Fowler's toad Recovery Team is a partnership of individuals from many places who are dedicated to ensuring a future for this species.

Ontario · Environment Canada · toronto zoo · Ontario Parks

Interesting Facts

In Canada, the Fowler's toad inhabits sandy beaches and dunes along the Lake Erie shoreline. They are extirpated from Point Pelee and Pelee Island and now only found in 3 locations in Canada: Rondeau Area, Long Point Area and the Niagara Peninsula.

The habitat of this species is threatened by construction of shoreline break walls, pier structures, destruction of backshore wetlands, intensive beach grooming and cleaning, vehicle use on beaches and sand dune extractions.

Identification

The Fowler's toad is much smaller than the more common American toad. Their colour varies from gray to beige with many darker patches. These patches have numerous small warts within. The belly is white or cream coloured and will have a single dark spot between the forelimbs or no spot at all. In the spring the throat is dark in adult males but remains white in females.

Habitat

Amphibians need both water and dry land to complete their life cycle, and the Fowler's toad is no exception. Important habitats for this species are sandy beaches with dunes which are nearby shoreline feeding areas and breeding sites which are shallow open rocky pools, ponds, wetlands or stream mouths.

Life cycle

The distinctive call of the adult male toad can be heard at night in May and June. Females are silent. You can hear their call at:
http://www.torontozoo.com/adoptapond/

Eggs are fertilized in shallow water areas and hatch in about 1 week. The tadpoles live in these areas 40 to 60 days, and emerge in July and August as toadlets. By the end of the summer, they are called juveniles and are ready to enter into their first winter dormancy period. Juveniles become sexually mature between 1 and 3 years old. Adult toads live 2 to 5 years and most only breed once in their lifetime. Tadpoles and toadlets have a very high mortality rate. Adults have to reproduce in large numbers to sustain a local population.

The Toad Paradox

Lake Erie storms periodically erode beaches and dunes and kill resident toads hibernating there. The toad paradox is that these storms and lake level changes are necessary to keep the shifting dune habitat suitable for the next generation of toads to recolonize the site.

The Human Paradox

People who build their homes on shorelines with dunes and beaches, often build their home on top of the dune and put up a break wall in front of the dune to protect their property. Break walls eventually destroy beaches by permanently locking up sand storage areas, which Lake Erie would have used during the next storm event to naturally restore the beaches. Dunes and beaches are natural sand deposition areas and they are dynamic. Historic air photographs show that our beaches are in decline. The human paradox is the beaches are what attracts us to build along the shoreline and in order to live there we are destroying the beaches.

Dune Formation

There are four criteria needed for sand dunes to actively form along the Lake Erie shoreline.

- An abundant loose sand supply (from beaches, dunes, or shallow sand bars in the lake).
- Energy sufficient to move this sand supply (wind or water).
- An obstacle around which sand accumulates (trees, rocks).
- Dry sand (wet sand is too sticky for wind to move and it is also conducive to excessive plant growth, which stabilizes the dune, making it unsuitable for toads to dig into.

http://www.nps.gov/whsa/Sand Dune Geology.htm

What do Toads and Canaries have in commmon?

Canaries were to miners as toads are to beach lovers. Just as live canaries once provided an early warning system for underground air quality, the presence of Fowler's toads tell the beach lover that all is well along the beach.

Hard Copies are available upon request