



Heart Lake Road Ecology Monitoring Project



Phase II – Project Findings – Total Fatalities

Heart Lake Wildlife Mortalities



 **Toronto and Region Conservation Authority**
for The Living City

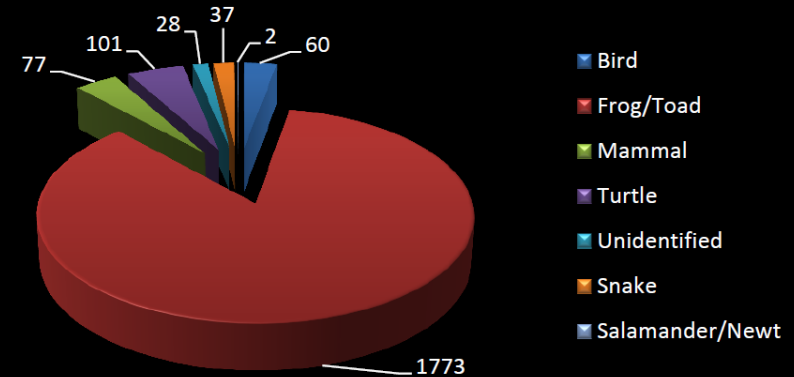
Date: 12/23/2013

Wildlife Type

- Bird (60)
- Frog/Toad (1454)
- Invertebrate (2)
- Mammal (76)
- Salamander/Newt (2)
- Snake (36)
- Turtle (100)
- Unidentified (27)

Disclaimer:
The Data used to create this map was compiled from a variety of sources & dates. The T.R.C.A. takes no responsibility for errors or omissions in the data and retains the right to make changes and corrections at anytime without notice. For further information about the data on this map, please contact the T.R.C.A. GIS Department. (416) 661-6600.
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Total WVC's Phase II, 2013



Total: 2,078
Frog/Toad: 1,773
Turtle: 101
Mammal: 77
Bird: 60
Snake: 37
Unknown: 28
Salamander/Newt: 2

Phase II - Project Findings, Frog/Toad

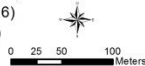
Heart Lake Frog Mortalities



Date: 1/24/2014

Frog Species

- American Toad (61)
- Green Frog (180)
- Leopard Frog (460)
- Spring Peeper (38)
- Gray Treefrog (9)
- Unknown (1016)
- Wood Frog (9)



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Total Frog/Toad Fatalities: 1,773

Toad: 61

Green Frog: 180

Leopard Frog: 460

Spring Peeper: 38

Gray Treefrog: 9

Unknown: 1,016

Wood Frog: 9



Phase II – Project Findings, Turtle

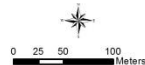
Heart Lake Turtle Mortalities



Date: 1/23/2014

Turtle Species

- Midland Painted Turtle (76)
- Snapping Turtle (15)
- Unknown (10)



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Total Turtle Fatalities: 101

Midland Painted: 76

Snapping Turtle: 15

Unknown: 10



Phase II – Project Findings, Mammals

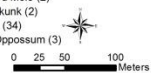
Heart Lake Mammal Mortalities



Date: 1/23/2014

Mammal Species

- Gray Squirrel (6)
- Red Squirrel (2)
- American Mink (1)
- House Cat (1)
- Deer Mouse (2)
- Star-nosed Mole (2)
- Eastern Chipmunk (2)
- Muskrat (7)
- Eastern Cottontail (2)
- Raccoon (13)
- Unknown (34)
- Virginia Opossum (3)



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Total Mammal Fatalities: 77



Phase II – Project Findings, Bird

Heart Lake Bird Mortalities



Total Bird Fatalities: 60



Phase II – Project Findings, Snakes

Heart Lake Snake Mortalities



Date: 1/24/2014

Snake Species

- Eastern Garter Snake (16)
- Eastern Milk Snake (2)
- Northern Red-bellied Snake (2)
- Unknown (17)



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Total Snake Fatalities: 37

Eastern Garter: 16

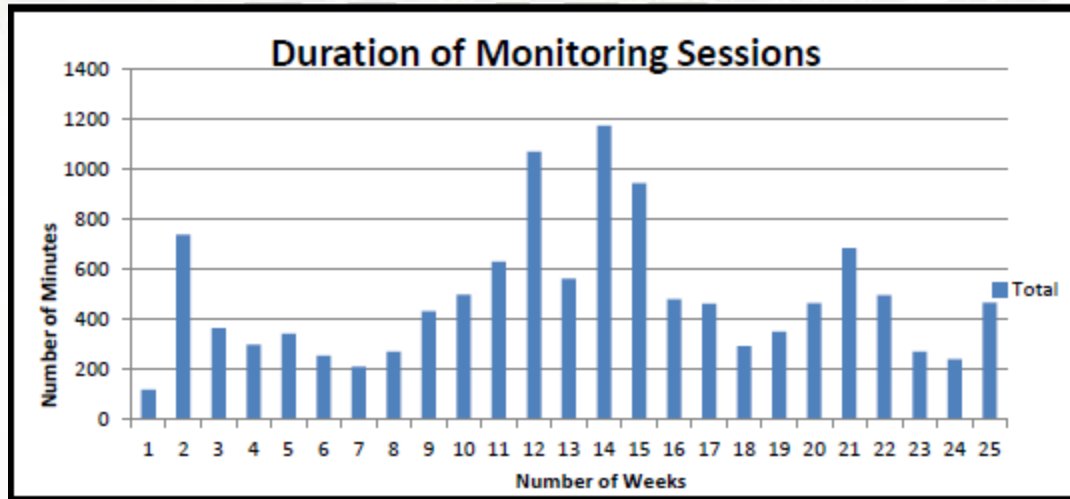
Eastern Milk (SAR): 2

Northern Red-bellied: 2

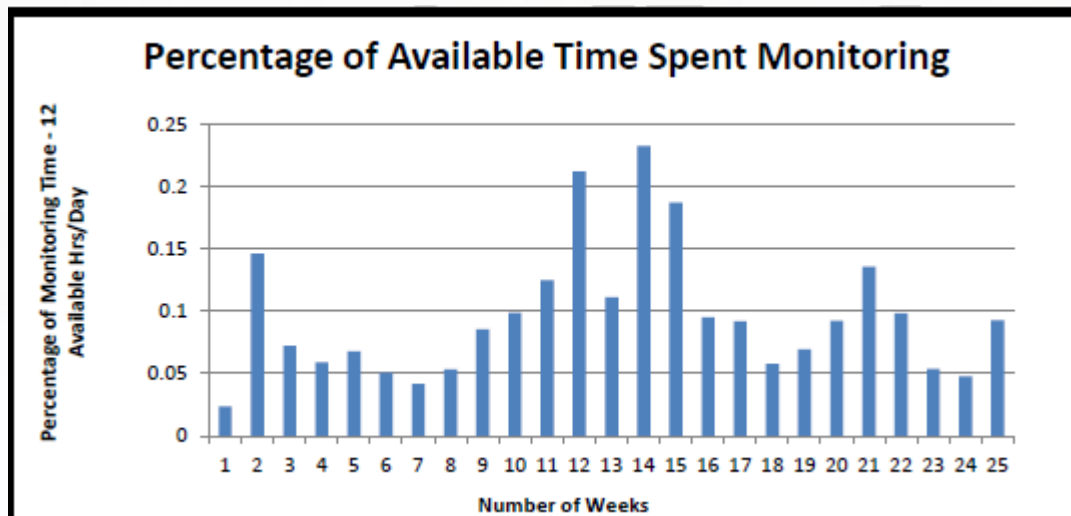
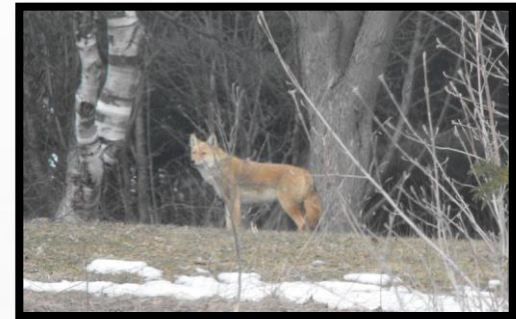
Unknown: 17



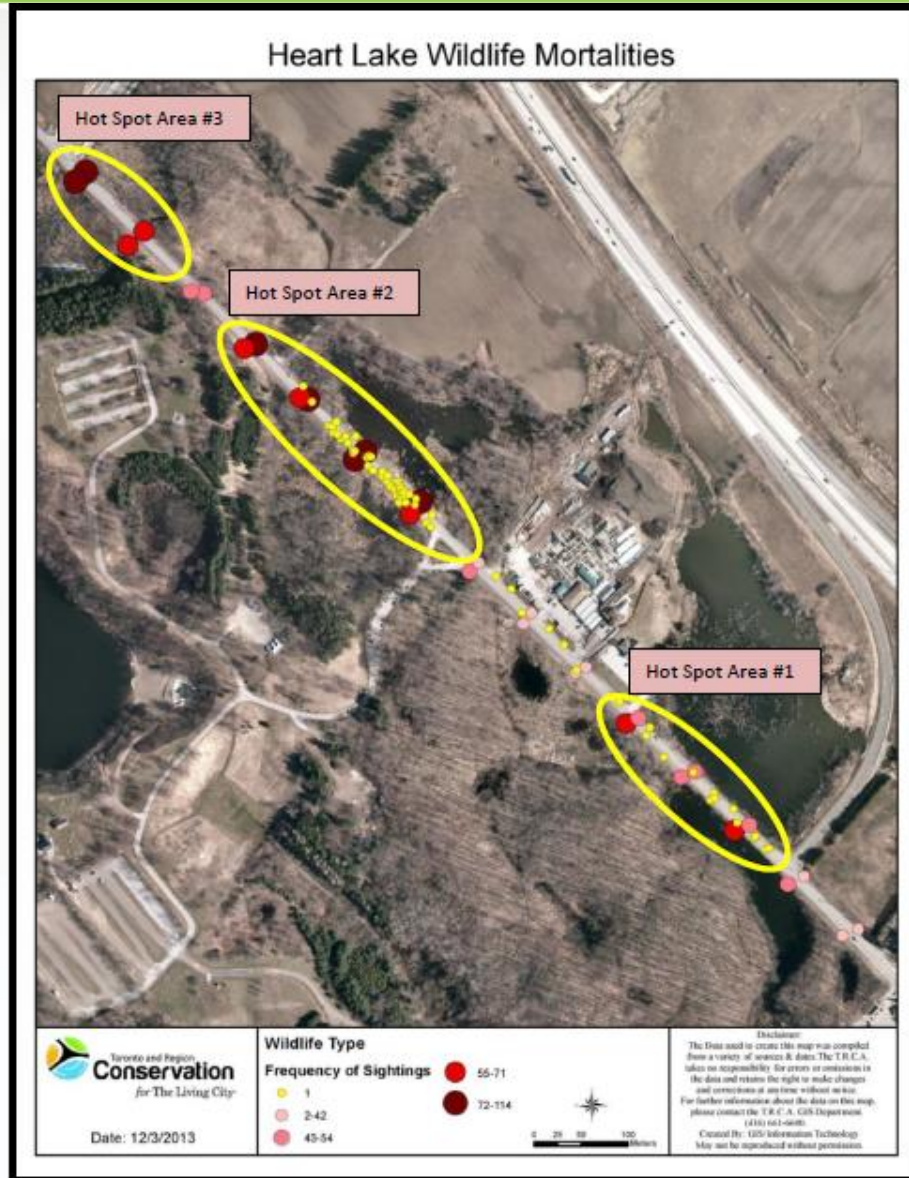
Monitoring Effort



- Volunteers contributed 404 hrs to field data collection
- Represents 2.4% of total available daylight hours



Study Area Hot Spots



- 3 Confirmed hotspots

Mitigation Recommendations

Dedicated Wildlife Passages

Specialized Wildlife Tunnel



Oversized Concrete Culvert



Oversized Steel Culvert



Overhead grate-type road surface covering



Mitigation Recommendations

Wildlife Directional Fencing

Buried Guardrail



Steel Piling



ACO Polymer



Fencing with hardware cloth



Mitigation Recommendations

Turtle Beaches and Basking Areas



Mitigation Recommendations

Signage – Raise Awareness



THIS IS A
**PROVINCIALY
SIGNIFICANT
WETLAND**

"ITS HEALTH IS OUR HEALTH"

PLEASE RESPECT IT

FIND MORE INFO: www.kawarthafieldnaturalists.org

Mitigation Recommendations

Speed Reduction and Traffic Calming



Numbers To Date (2011 & 2013 combined)

- Total WVC's recorded = **3,317**
- Total Frog/Toad WVC's = **2,817**
- Total Turtle WVC's = **195**
- Total Mammal WVC's = **122**
- Total Bird WVC's = **85**
- Total Snake WVC's = **54**
- Total Unknown WVC's = **42**



- Total Volunteer hrs= **850hrs +**
- Total staff time (TRCA & OREG) = **~400hrs +**
- Total amount of garbage removed by staff & volunteers = **2,500lbs +**

Next Steps

- Develop long-term mitigation strategy for Heart Lake Road
- Initiate mitigation in 2014 to install dedicated wildlife passage & directional fencing at Hot Spot #2
- Work with TRCA, OREG and City of Brampton to conduct pre/post monitoring to evaluate success of mitigation
- Continue site assessment to assist City of Brampton staff to implement best practices for reduction of WVCs
- Continue efforts to protect this unique feature – Provincially Significant Wetland complex
- Become leaders in GTA and local municipal champions in the field of Road Ecology



BEPAC Delegation

That committee members receive the Phase II, Heart Lake Road Ecology Volunteer Monitoring Report,
And that,

BEPAC support the mitigation recommendations contained in the report to reduce that will reduce the number of wildlife vehicle interactions along Heart Lake Rd.,

And that,

BEPAC provide direction for Brampton staff to secure funding and work with TRCA to initiate mitigation strategies in 2014. Suggested work for 2014 to include: installation of oversized culvert (minimum 1.5 m dia. or greater) to serve as a dedicated wildlife passage from east to west, at wetland located slightly north of Heart Lake CA (Hot Spot #2 in the report), install road surface grates connected to culvert to provide lighting and air-flow, install permanent wildlife directional fencing.

AND

Work with TRCA staff to monitor and measure success of mitigation installation and develop strategy and designs for remaining hotspots identified in the report.

AND

Develop additional signage along Heart Lake Road to raise awareness of PSW complex, wildlife at risk of fatalities resulting from vehicles and install stop signs at Countryside Drive to reduce speeds (north and south bound traffic) to facilitate traffic calming.

