



Hamilton

INFORMATION REPORT

TO:	Chair and Members Public Works Committee
COMMITTEE DATE:	April 4, 2016
SUBJECT/REPORT NO:	Rare Turtle Recovery, Wildlife Corridor Issues and Roads of Issue at Cootes Paradise (PW16024) - (City Wide) (Outstanding Business List Item)
WARD(S) AFFECTED:	City Wide
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SIGNATURE:	

Council Direction:

At the September 2, 2014 Public Works Committee meeting, a delegation by Tys Theysmeyer of the Royal Botanical Gardens (RBG), respecting Endangered Turtles and Wildlife Corridors, was received and the following direction was given to staff:

“That staff consult with the Royal Botanical Gardens in formulating a report about measures to address concerns respecting Rare Turtle Recovery, Wildlife Corridor Issues and Roads of Issue at Cootes Paradise.”

Information:

The purpose of this information report is to provide Council with an update on the development of a comprehensive Endangered Turtles and Wildlife Corridors Strategy. This project was brought to the Public Works Committee by the RBG following completion of a five year study on the declining turtle populations within Cootes Paradise and Grindstone marsh (Burlington). The turtle population in the area is estimated at half of what it was in the 1980s. This is due to vehicle collisions, loss of habitat, poaching, climate change, nest predation, and roadside mowing. Two turtle species have disappeared completely from the area, but five species continue to be found in Cootes Paradise. One of the surviving species, the Blanding’s Turtle, is internationally rare and of the highest priority for conservation. The RBG has indicated key focus areas for which support is needed from the City of Hamilton to protect the turtle population:

SUBJECT: Rare Turtle Recovery, Wildlife Corridor Issues and Roads of Issue at Cootes Paradise (PW16024) - (City Wide) - Page 2 of 4

- Water quality improvements from the urban area of Hamilton and the Dundas wastewater plant and canal
- Mitigation of contaminants in the western portion of the Old Desjardin Canal
- Relocation of the Dundas Community Garden behind Olympic Arena off of RBG property
- Reduction of speed limit from 80km/hr to 60 km/hr on Cootes Drive
- Undertaking of a roadside mowing regime along Cootes Drive
- Wildlife corridor work such as a future bridge modification and/or barrier fences
- Non-native plant control/removal of Phragmites along Cootes Drive
- Establishment of a wildlife corridor committee to examine road kill locations as they relate to City of Hamilton's Natural Heritage Plan

In order to formulate a project plan, the Endangered Turtles and Wildlife Crossing Stakeholder Working Group was formed in January 2015. The group meets quarterly or as needed and consists of staff from the City of Hamilton, Royal Botanical Gardens, Hamilton Conservation Authority (HCA), and Conservation Halton. The current status of the key focus areas are described in more detail below:

Water Quality

The RBG has indicated that they would like to see water quality improvements in Cootes Paradise marsh and mitigation of contaminants in the western portion of the Old Desjardin Canal. Contaminants can promote non-native plants like phragmites which negatively affects the turtles' food source. Poor water quality can also harm the aquatic ecosystem.

Many of the water quality issues are also being dealt with through the Hamilton Harbour Remedial Action Plan (HHRAP), which is a community-based project planned to improve water quality and habitat in Hamilton Harbour, the watershed and Cootes Paradise marsh. The HHRAP is expected to be complete by 2020.

In planning capital upgrades for the Dundas wastewater treatment plant that protects Cootes Paradise from the impact of municipal wastewater, the City will address water quality concerns by considering HHRAP targets and timelines. Continued support of wastewater system improvements and further efforts to identify and mitigate storm water contaminants will resolve the water quality impairments. A study involving multiple HHRAP partners summarizing the contaminants and environmental condition will be completed in early 2016.

Dundas Community Garden

The current location of parts of the Dundas Community Garden is the preferred nesting ground for the turtles of Cootes Paradise marsh. The turtles lay eggs in the sunny south-facing plateau overlooking the marsh, with the open garden soil further enhancing nesting opportunities.

In May 2015, the RBG, with the support of the Ministry of Natural Resources and Forestry, constructed two artificial turtle nesting beds on the RBG property adjacent to the garden.

Gardeners were made aware of the turtle nesting issues and asked to not disturb eggs, with several gardeners actively assisting in stewarding turtle nesting activity. Talks regarding the possible relocation of the Dundas Community Gardens will continue for the 2016 season.

Traffic on Cootes Drive

Every year female turtles carrying eggs are killed by vehicles when crossing Cootes Drive heading toward a dry south-facing slope to nest. A staff sub-committee has been formed to discuss the possible reduction of speed limit, signage and other traffic calming measures for the 2016 season. A community group, Dundas Turtle Watch, will be installing "Turtle Migration" signs along Cootes Drive to notify drivers of the turtle's migrating season. The community group will continue to walk the roadside in an attempt to intercept turtles before they are hit. The longer term goal is to prevent turtles from accessing the road altogether.

There is also on-going monitoring work being conducted in support of turtle recovery efforts. The HCA conducted weekly road mortality surveys, in conjunction with Dundas Turtle Watch, along Cootes Drive from May to October in 2015. Road mortality was documented in order to help identify crossing hotspots and gain a fuller understanding of the impact of Cootes Drive on wildlife.

Roadside Mowing/Street Sweeping

Roadside mowing and street sweeping can be detrimental to the turtle population. Turtles moving across grassy areas during mowing/sweeping can be run over, harmed or killed.

For the past several years the Roads and Maintenance Section, has worked closely with Dundas Turtle Watch to ensure sweeping/mowing is suspended within the sensitive areas of Cootes Drive, Olympic Drive and King Street East during the nesting and hatching periods of the year.

The Working Group will establish a formal policy and schedule for mowing and sweeping which avoids times when turtles are migrating, nesting and hatching.

Phragmites

Phragmites is an invasive and aggressive plant that spreads quickly and grows so thick that it impedes the turtle's movement during migration. It also out-competes native species for water and nutrients which affects the turtle's food source. Phragmites is detrimental to wetland and degrades habitat for a wide variety of wildlife.

In October 2015, the HCA, City of Hamilton and RBG applied an herbicide to the phragmites along Cootes Drive which helped keep the growth to a minimum.

Similar phragmites control efforts will continue in 2016. As well, a working group of representatives from the City, RBG, Hamilton Conservation, and Hydro One has been formed to establish a procedure on roadside spraying of phragmites in this area.

Wildlife Corridor Work

Fences are useful in preventing turtles and other wildlife from crossing the road and potentially getting hit by vehicles. Currently, there is a permanent barrier fence located on the north side of Cootes Drive in Ward 1 and a seasonal temporary barrier fence has been used along the south side of Cootes Drive in Wards 1 and 13.

In 2014 and 2015 HCA staff erected 750 metres of temporary silt fence along Cootes Drive trail (across from RBG lands) during key turtle activity and movement periods to help minimize road mortality for turtles and other species. The fence was designed to guide turtles towards two culverts for safe passage under the road for adult turtles returning to their feeding areas in Cootes Paradise marsh and for baby turtles moving from the nesting areas along Spencer Creek trail to the Cootes Paradise marsh. Erecting and removing a silt fence on a yearly basis is not a viable long-term permanent solution for guiding turtles and other wildlife safely across Cootes Drive. HCA and the City have had preliminary discussions regarding the need for a permanent fence on the south side of Cootes Drive and will continue to work towards a permanent solution in 2016. Installation of several permanent, low profile (small animal) barrier styles have been identified as potential future options.

Other wildlife corridor work, such as bridge modifications, will be included in the scope of the Wildlife Corridor Sub-Committee, as described in more detail below.

Wildlife Corridor Sub-Committee

In 2016, staff will form a Wildlife Corridor Sub-committee, which will provide coordination of activities relating to the reduction of wildlife road mortality. The goal of this sub-committee is to examine road kill locations as they relate to the City of Hamilton's Natural Heritage Plans, Secondary Plans and the Official Plan. The focus of this sub-committee is also to introduce road ecology policies and consider wildlife crossing areas when revising natural heritage system mapping. The sub-committee will be comprised of staff from the City of Hamilton, Royal Botanical Gardens, Conservation Authorities, and Hamilton Naturalists' Club.

The RBG has proposed a planning initiative and framework for their lands at the western edge of the Cootes to Escarpment EcoPark System. The goal is to identify the various uses and challenges at this location and to provide the framework for implementation of longer term plans for the area.

Next Steps

The Endangered Turtles and Wildlife Crossing Stakeholder Working Group will continue to meet in 2016 to discuss the implementation of key focus items. Staff will follow up with an Information Report to Public Works Committee in early 2017.