



Environmental Assessments & Approvals

November 6, 2019

AEC 18-156

The Preserve at Georgian Bay Inc.
377 Burnhamthorpe Road East, Suite 117
Mississauga, Ontario
L5A 3Y1

Attention: John Sorokolit

Re: **Bartlett Boulevard (Collingwood) - Spotted Turtle Reported 2019**

Dear Mr. Sorokolit:

It has come to our attention that the Ministry of Natural Resources and Forestry (MNRF), Midhurst District (G. Findlay) was advised of an observation of a Spotted Turtle (Endangered) made on May 15, 2019 at/in the vicinity of 162 Bartlett Boulevard. We understand that the turtle observed was a sub-adult based on size reported and review of a photo by a recognized species expert (Dr. J. Litzgus). The following material represents our interpretation of the observation in the context of species ecology and past efforts by Azimuth and others to identify habitat of Spotted Turtles in the general area of the Consulate Lands located east and west of Silver Creek and adjacent lands.

Spotted Turtle Habitat

In 2006/07, Azimuth embarked on a targeted search effort for Spotted Turtles located on the Consulate Lands during early spring when Spotted Turtle are known to aggregate – conditions improving probability of detection. The search methodology and locations to search were informed by input by a species expert. Search effort involved multiple observers (field assistance by staff from the MNRF [Midhurst District], NVCA, County of Simcoe and Town of Collingwood). Azimuth also searched wetlands on adjacent lands located east of Princeton Shores Boulevard and south of Highway 26 having standing water and hence having potential to contain Spotted Turtles (multiple observers, same season and approach). The attached sketch shows areas searched intensively for Spotted Turtles (i.e., multiple observers, multiple times). Other areas of wetlands on the Consulate lands not intensively searched were the subject of ongoing field studies and



hence scrutinized for Spotted Turtle as well. Most areas of wetland dried down early in the season providing no habitat for turtles. Wetlands south of Bartlett Boulevard in the vicinity of 162 Bartlett where the juvenile Spotted Turtle was reported were searched intensively as follows: multiple observers on five different days for a total search effort of 25.6 person-hours (as per Stantec – *Spotted Turtle Habitat on the Consulate Property, East of Silver Creek*. October 5, 2006 – copy attached).

The results of field studies lead to the capture and marking of 6 Spotted Turtles (5 females, 1 male) (Azimuth. *Memorandum Re: Spotted Turtle Significant Habitat Delineation – Consulate “West Lands”, Town of Collingwood, County of Simcoe*. Submitted to the MNR. Project No. AEC 05-205 Date June 6, 2008). All turtles were observed on the Consulate Lands west of Silver Creek. No Spotted Turtles were observed on Consulate Lands located east of Silver Creek including the wetlands searched intensively located in proximity to Bartlett and Princeton Shores Boulevards, and none was observed in multiple wetland areas searched on adjacent lands including those south of Highway 26.

Azimuth radio-tagged and tracked the movements of all 6 Spotted Turtles from April 2006 through July 2007. Population estimates derived from mark-recapture data indicated that the population was relatively small and hence that the movements of the 6 turtles were representative of a high proportion of the population. The results of radio-tracking revealed areas of habitat use for aestivation (summer “hibernation”), aggregation (mating habitat), winter hibernation and nesting habitat as shown on attached Figure 1 (from Azimuth 2008). All areas of Spotted Turtle habitat were on lands located west of Silver Creek (Figures 2 & 3 attached).

Stantec’s letter report (attached) summarized expert opinion related to habitat characteristics of lands in the vicinity of Bartlett Boulevard (Area 3 of Stantec report) and elsewhere east of Silver Creek. Dr. Litgus concluded that Area 3 did not provide spring aggregation (mating habitat), wintering or nesting habitat for Spotted Turtles. The potential of Area 3 to function as summer aestivation/hibernation habitat was investigated through radio-tracking as described above. The results of these studies indicated no movements by Spotted Turtles east of Silver Creek and hence no function of Area 3 or other lands east of Silver Creek as habitat used by Spotted Turtles as summer aestivation/hibernation habitat. Therefore, field studies and expert assessment of site conditions confirmed that lands east of Silver Creek and more specifically in the vicinity of 162 Bartlett Boulevard where the species was reported in 2019 do not support critical habitat functions required to satisfy life history requirements of Spotted Turtles. Recent field studies by Azimuth (*Existing Conditions Update, Bridgewater [formerly The*



Preserve] Development, Parts of Lots 48, 49 and 50 Concession 11, Town of Collingwood, Simcoe County. July 16, 2018) indicated that habitat conditions in the vicinity of Bartlett Boulevard/Area 3 have not changed since original Spotted Turtle work was done and hence expert opinion with respect to habitat function remain valid. As per Stantec's report, the ponding of water in the Area 3 wetland is the result of a culvert for a drainage ditch under Bartlett Boulevard. This culvert is perched and hence the recent rise in lake levels is unlikely to result in any backwatering effect in Area 3 that would change habitat conditions related to ponding, just as the recent extreme low water levels had no apparent impact on habitat conditions of Area 3.

2019 Reporting - Interpretation

The Spotted Turtle reported in the vicinity of 162 Bartlett Boulevard is considered a sub-adult/juvenile. Juvenile dispersal is a common behavior in most wildlife including reptiles - dispersal being defined as movement away from place of birth without return, in contrast to seasonal migration involving movement among habitats used for specialized purposes to satisfy life history requirements – nesting, mating, hibernation, etc. Juveniles undertaking dispersal have no knowledge of the land ahead and hence frequently end up in locations not amenable to survival or successful reproduction. In landscapes presenting a mix of roads, residential lots and expanses of non-wetland areas - dispersal movements may be protracted, as finding suitable habitat for establishment of a home range providing the range of required habitat elements, as well as potential mates, is a matter of chance involving a series of “decisions” with respect to direction of travel, etc. Mortality rates of dispersing juveniles are relatively high as some movement decisions take juveniles into hazardous situations – in the context of turtles notably roads (motor vehicle strikes).

As a sub-adult/juvenile, it is highly likely that the individual observed at 162 Bartlett Boulevard, it is the progeny of the Spotted Turtle population located west of Silver Creek. Thus, it follows that this turtle ended up in the vicinity of Bartlett Boulevard through the process of juvenile dispersal. The reported location is approximately 450m from the edge of Spotted Turtle habitat defined for the Consulate Lands population and approximately 750m from nesting habitat. Movements over this scale are within the range of movements reported for the species. As targeted searches for Spotted Turtle in the wetlands in the vicinity of Bartlett Boulevard revealed none, it appears that if the turtle observed was “settled” (i.e., not actively “on dispersal”), it ended up in habitat devoid of potential mates and devoid of critical habitat elements required by the species (as per expert opinion). Therefore, the observation is not indicative of an area on which the species depends, directly or indirectly, to carry on its life processes such as reproduction, rearing, hibernation, migration or feeding and hence not indicative of



habitat that would be protected under Ontario's *Endangered Species Act*, 2007 (ESA). If the turtle was observed while on dispersal, the observation does not represent habitat necessary for the survival or recovery of Spotted Turtle as the individual would not be settled in a home range satisfying its life history requirements and hence in a location where it would be contributing progeny to Spotted Turtle populations necessary for species maintenance and/or recovery. Further, as a dispersal movement, there is no expectation of this individual returning to the Spotted Turtle habitat/population located west of Silver Creek (i.e., the Bartlett Boulevard area does not represent a migration corridor).

Conclusion

The observation of Spotted Turtle reported for 162 Bartlett Boulevard in May 2019 is indicative of juvenile dispersal from the population located on the Consulate Lands west of Silver Creek. Based on direct knowledge of areas occupied by Spotted Turtle in the general area, expert opinion with respect to the lack of suitable habitat in the vicinity of Bartlett Boulevard and understanding of juvenile dispersal behavior – it is apparent that the observation is not indicative of habitat that would be protected under Ontario's ESA with respect to Spotted Turtle.

Yours truly,
AZIMUTH ENVIRONMENTAL CONSULTING, INC.

Jim Broadfoot, H. B.Sc.
Terrestrial Ecologist

Attachments:

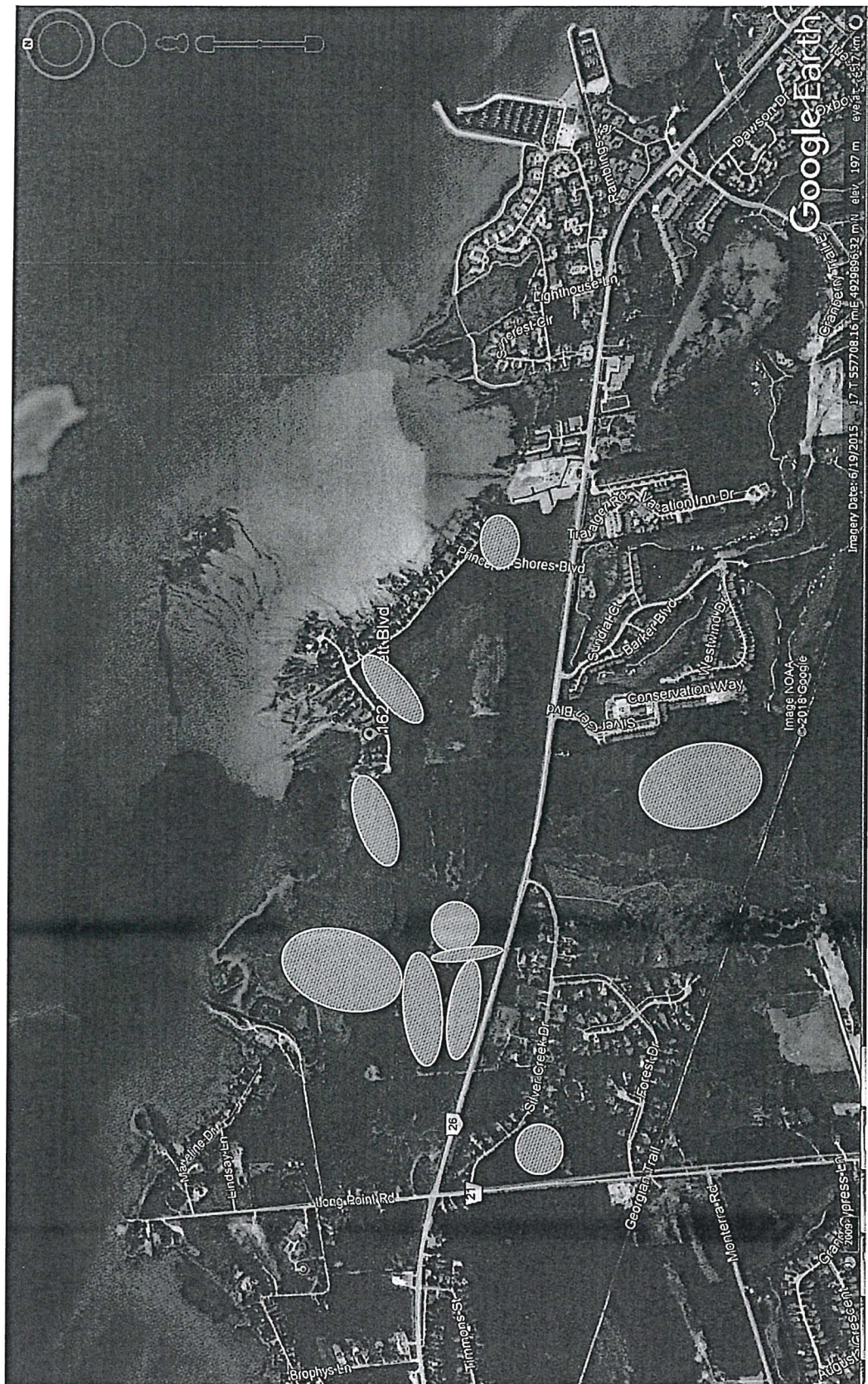
- 1 – Areas searched intensively for Spotted Turtle -2006 through 2007.
- 2 – Spotted Turtle Habitat, Figures 1, 2 & 3 from Azimuth 2008.
- 3 – Stantec 2006 - Spotted Turtle Habitat on the Consulate Property, East of Silver Creek.

Copy To: Colin Travis, Travis & Associates
Paul Neals, Orion Environmental Solutions Inc.



Attachment 1

Areas searched intensively for Spotted Turtle - 2006 through 2007



Areas searched intensively for Spotted Turtle by Azimuth – 2006 through 2007.



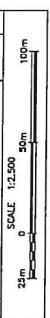
Attachment 2

Spotted Turtle Habitat, Figures 1, 2 & 3 from Azimuth 2008



LEGEND:

- Property Boundary
- Study Area
- ELC Polygons
- Watercourses & Drains
- Surveyed PSW (White)
- Access Roads
- Turtle Nesting Habitat
- Significant Portion of Spotted Turtle Habitat Polygons
- Nesting Habitat
- Hibernation Habitat
- Aggregation Habitat
- Aggregation Habitat (1)

[illegible]

· AZIMUTH ENVIRONMENTAL CONSULTING, INC. ·

SIGNIFICANT HABITAT	THE CONSULATE			Figure No. 3
	Collingwood, ON			
	Date Issued:	February 2008		
	Created By:	PHD		
	Project No.	05-205		
	Reference:	First Base Solutions		



Attachment 3

Stantec 2006 - Spotted Turtle Habitat on the Consulate Property,
East of Silver Creek

Stantec Consulting Ltd.
361 Southgate Drive
Guelph ON N1G 3M5
Tel: (519) 836-6050 Fax: (519) 836-2493
stantec.com



Stantec

October 5, 2006
File: 160960195.200

Jim Broadfoot, Senior Biologist
Azimuth Environmental Consulting, Inc.
229 Mapleview Drive, Unit 1
Barrie ON L4N 0W5

Dear Jim:

Reference: Spotted Turtle Habitat on the Consulate Property, East of Silver Creek

The endangered spotted turtle (*Clemmys guttata*) is known to occur on the Consulate Property west of Silver Creek. Specimens on the west side of the creek have been fitted with radio-tags, and Azimuth Environmental Consulting, Inc. (Azimuth) has been checking the movement patterns of these turtles since May 2006. Azimuth will be responsible for summarizing the results of the radio-telemetry study.

This letter report summarizes the potential for habitat for spotted turtles east of Silver Creek. The information in this letter will be incorporated into an Environmental Impact Study (EIS) for the east side of the property that is being prepared by Azimuth.

Dr. Jacqueline Litzgus, Ontario's foremost expert on the spotted turtle and a professor at Laurentian University, visited the Consulate Property on several occasions and also inspected the east side of the site to comment on the quality of habitat for spotted turtles. This letter incorporates her comments as well as observations from fieldwork completed east of the creek.

Three areas east of Silver Creek were investigated for potential spotted turtle. These areas are shown on Figure 1 and a discussion of their potential to provide habitat for spotted turtles is summarized below.

Area 1

Area 1 was visited on April 25, 2006 by several people. In addition to me, investigators included Dr. Litzgus, Jim Broadfoot of Azimuth, Graham Findlay and Suzanne Robinson of the Ontario Ministry of Natural Resources, Dave Featherstone of the Nottawasaga Valley Conservation Authority, and Gail White of the County of Simcoe.

Area 1 is a white cedar swamp that is immediately adjacent to the east side of Silver Creek. It was examined for its potential to provide winter hibernation sites for spotted turtles. Although the general structure of the swamp was suitable, with presence of numerous upturned roots and

Reference: Spotted Turtle Habitat on the Consulate Property, East of Silver Creek

other areas that could potentially provide hibernacula, the site was too dry. It contained no standing water, which is an essential component of spotted turtle wintering habitat.

Dr. Litzgus also concluded that Area 1 was unsuitable habitat for spotted turtles. This area was not investigated further during the course of the study.

Area 2

Area 2 was also visited on April 25, 2006 by the same group of individuals. This area is immediately north of Area 1 and is a combination of meadow marsh and willow-dogwood thicket swamp. It was originally thought that this area was wetter than it was and that it could have potential to provide spotted turtle spring aggregation habitat or wintering habitat.

On April 25th, it was determined that this area was quite dry. Dr. Litzgus also concluded that this area had no potential to provide habitat for spotted turtles. This area was not investigated further during this study.

Area 3

Area 3 is the flooded area around the drain near Bartlett Boulevard and Princeton Shores Boulevard. This is an area of willow-dogwood thicket swamp, as well as residual white cedar swamp, particularly east of the drainage ditch. As indicated in Table 1, this area was visited several times by multiple observers. A total of approximately 25.6 person-hours were spent in this area on five different days searching for spotted turtles.

This area appears to have been flooded relatively recently as is evidenced by the numerous dead cedar trees in the wetland. The culvert for the drainage ditch under Bartlett Boulevard is perched, resulting in extensive ponding of water. Although this general area was probably always wetland, it is unlikely that it contained as much open water as current conditions and was more likely a cedar swamp. Consequently, it is highly unlikely that this area traditionally supported spotted turtles.

On April 25, 2006, Dr. Litzgus concluded that Area 3 had good potential to support a spring aggregation of spotted turtles. After the second visit on the next day, she concluded that it probably was not a suitable area for spring aggregations of spotted turtles. She noted that there was no suitable nesting or wintering habitat on the Consulate Property for any spotted turtles that potentially inhabited this wetland. If nesting did occur in the general area, it was Dr. Litzgus' opinion that they would nest along the edge of Bartlett Boulevard and that the area of the beach that currently supports houses could potentially have been traditional nesting habitat.

At the end of her April 26th visit, Dr. Litzgus concluded that Area 3 had low potential to support spotted turtles.

The extensive searches in Area 3 did not reveal the presence of any spotted turtles. The water in this area was shallow (mostly under 30 cm in depth), water clarity was excellent, and there were relatively few aquatic graminoid or herbaceous plants present to obscure visibility. The scarcity of aquatic plants also suggests that this wetland is marginal habitat for spotted turtles, as they prefer heavily vegetated areas.

The numerous searches for turtles in Area 3 revealed the presence of snapping turtles (*Chelydra serpentina*), but no other turtle species.

October 5, 2006

Page 3 of 4

Reference: Spotted Turtle Habitat on the Consulate Property, East of Silver Creek

On her final visit to this site on May 26, 2006, Dr. Litzgus amended her conclusions regarding the potential of Area 3 to provide spotted turtle habitat. Her final conclusion was that Area 3 did not provide spring aggregation, wintering, or nesting habitat for spotted turtles.

In that the presence of spotted turtles has been confirmed on the Consulate Property west of Silver Creek, she could not rule out the possibility that spotted turtles would use Area 3 as summer aestivation habitat. Some spotted turtles have been documented moving considerable distances in other regions from spring aggregation habitats to summer aestivation sites. Consequently, Dr. Litzgus wanted to see the movement patterns that the radio-tracked animals exhibited before concluding that Area 3 did not provide any habitat for spotted turtles.

Area 3 is 600 to 700 m away from the spotted turtle spring aggregation site. This is approximately the maximum distance that spotted turtles have been documented moving among habitats. In order to reach Area 3, turtles would have to cross Silver Creek. In that spotted turtles prefer to inhabit lake margins and small ponds where there is no flowing water, Silver Creek may be an effective barrier to spotted turtle movements.

Conclusions

Area 3 as shown on Figure 1 is the only portion of the east side of the Consulate Property that has any potential to provide habitat for spotted turtles. The intensive area searches for turtles found no spotted turtles, and Dr. Litzgus, the spotted turtle expert, concluded that Area 3 did not provide any spring aggregation, wintering, or nesting habitat for spotted turtles.

The only potential for Area 3 to provide habitat for spotted turtles is if turtles from the population west of Silver Creek moved there for summer aestivation. Results from the radio-tracking studies indicate that this has not happened to date (Jim Broadfoot, Azimuth Environmental Consulting, Inc., pers. comm. to A. Sandilands, August 18, 2006). In addition, Area 3 is a considerable distance from the spring aggregation area, approximately the maximum distance that spotted turtles have been documented moving among habitats. The flowing water of Silver Creek, which is between the spring aggregation habitat and Area 3, is probably a barrier to spotted turtle movements.

It is my opinion that there is no habitat for spotted turtles on the Consulate Property east of Silver Creek.

Sincerely,

STANTEC CONSULTING LTD.

Al Sandilands

Al Sandilands
Senior Ecologist
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Fax: (519) 836-2493
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Attachment: Table 1
Figure 1

Table 1 Turtles Observed in Area 3				
DATE	TIME	OBSERVERS	TOTAL EFFORT	TURTLE OBSERVATIONS
April 25, 2006	1500-1620	JB, DF, GF, JL, SR, AS	8 hours	none
April 26, 2006	1430-1610	JB, DF, GF, JL, AS	8 hours, 20 minutes	1 adult Snapping Turtle
May 2, 2006	1435-1508	AS	33 minutes	1 adult Snapping Turtle
May 10, 2006	1300-1335	TE, LM, AS	1 hour, 45 minutes	none
May 26, 2006	1310-1420	BA, TE, JL, LM, SR, AS	7 hours	2 adult Snapping Turtles
TOTALS			25 hours, 38 minutes	2 adult Snapping Turtles

- * BA – Brent Armstrong, Ministry of Natural Resources
 JB – Jim Broadfoot, Azimuth Environmental Consulting, Inc.
 TE – Tracey Etwell, Azimuth Environmental Consulting, Inc.
 DF - Dave Featherstone, Nottawasaga Valley Conservation Authority
 GF – Graham Findlay, Ministry of Natural Resources
 JL – Jacqueline Litzgus, Laurentian University
 LM – Lisa Moran, Azimuth Environmental Consulting, Inc.
 SR – Suzanne Robinson, Ministry of Natural Resources
 AS – Al Sandilands, Gray Owl Environmental Inc.
 GW – Gail White, County of Simcoe



Stantec

--- Subject Lands
— Silver Creek

Metres 0 60 120
Scale 1:6,000

Base Map Source: G2384

PROJECT NAME
SPOTTER TURTLE STUDY
CLIENT NAME
CONSULATE DEVELOPMENT GROUP
DATE INITIATED
AUGUST, 2006
FILE NAME
60960195.cdr

FIGURE NO. 1.0

AREAS INVESTIGATED FOR SPOTTED TURTLES

SCALE
1:6,000
PROJECT NO
160560195
REV NO
0
SHEET NO
1 OF 1
CHECKED BY
APS
APPROVED

DRAWN BY
CEW

