Distribution
of the
Black Cherry (Prunus Serotina Ehrh.)
in the
Beaver Pond Forest

1. Introduction

This submission deals with the results of a survey of the distribution of the Black Cherries (Prunus Serotina Ehrh) in the Beaver Pond Forest For the purposes of this submission the Beaver Pond Forest is considered to consist of the treecover on the KNL lands north of the Beaver Pond, as far as the Canadian National Railways tracks. The western boundary is deemed to be the Goulbourne Forced Road, excluding the private lands owned by others in the corner formed by the Goulbourne Forced Road and the CNR track. The eastern boundary consists of the Kizzel Creek as it runs north from the south eastern tip of the Beaver Pond north to the CNR track

2 The Kanata Official Plan

Within the section on Urban Development Concepts, the "Kanata Official Plan consolidated 2000". states, with respect to the Natural Development Areas and the Black Cherries therein , the following:

(a) Two categories of Natural Environment Area are distinguished. Category A refers to large ecosystems such as the Kanata Pond/Kizell Creek Drainage Area and the deciduous forest on the Goulbourn Forced Road. Category B refers to the mica quarry, Marchwood Canyon and the Lismer Pines. Only the Category A Natural Environment Area are shown on Schedule "B"

and,

(b) The boundaries of the Natural Environment Area as identified on Schedule "B" shall take into consideration the location of the Black Cherry trees on the north side of Kanata Pond, existing foliage boundaries and topography. With respect to the Category B Natural Environment Area, subdivision agreement provisions shall be used to ensure the preservation and maintenance of these features as the adjacent lands are developed. Safety measures may be required and will be specified in the subdivision agreement.[1]

Regarding Permitted Uses the Kanata Official Plan states the following:

(c) The Natural Environment Area shall also include the Black Cherry trees on the north side of Kanata Pond, existing foliage boundaries and natural topographic features in

[1] **Kanata Official Plan consolidated 2000**, Section 5 Urban Area Development Concepts, 5.3 Marchwood and Lake sided, 5.3.5. Natural environment Area, 5.3.5.2. Category a and b.

the area, pursuant to the 40% open space agreement between Council and the developer.[2]

2. Purpose of the Survey

The assessment aimed to

- determine the presence of the Black Cherry trees in the Beaver Pond Forest by location and size;
- determine the nature of the tree cover in which the Black Cherries occurred by identifying major associated tree species.

3. Methodology of the Survey

The survey was carried out as follows:

- **Black Cherries:** Transects were run by a 2- person crew at 50 metres intervals throughout the Beaver Pond Forest, proceeding from east to west. The transects were run at right angles to CNR track. Diameters of live Black Cherries were measured, and the UTM coordinates of the location of the trees were recorded (using a Magellan GPS 2000 XL navigator). Each tree was assigned a number. To avoid double counting the tree stump was sprayed with red paint and a numbered. metal tag with its identification number buried among the roots. The location of the Black Cherries was subsequently plotted on appropriate maps using Fugawi GPS Mapping software
- **Associated Species:** Upon completion of the mapping the forest cover containing significant populations of Black Cheery were sampled for species composition by applying the variable probability sampling with the aid of a metric scale Spiegel-Relaskop. Fifty ??? point sample were taken and their locations plotted

4. Survey Results - Discussion

4.1 Black Cherries

Map # 1 shows the distribution pattern of the Black Cherry trees throughout the tree cover north of the Beaver Pond. It does not depict every individual cherry tree. Because of the map's scale many trees, in particular the juvenile trees, often overlap when plotted. It is only in Appendix 1, that each single Black Cherry can be traced by size and location.

The Black Cherry component of the Beaver Pond forest can be broken down in five distinct populations. These are shown on Map 2 as areas #1, #2, #3, #4, and #5. Areas #1 and #5 have Black Cherry populations that are re-establishing themselves on lands that were more than 4

[2] **Kanata Official Plan consolidated 2000**, Section 6.4 Natural Environment Areas, 6.4.2. Permitted Uses - Policies

Table1 : Number of Black Cherry Trees in the Beaver Pond Forest						
diameter class	**area 1**	**area 2**	**area 3**	**area 4**	**area 5**	**Beaver Pd Forest**
c.m.	**Number of Trees**					
2	0	9	-	-	7	16
4	13	28	16	4	33	94
6	15	17	9	11	45	97
8	9	10	-	10	28	57
10	5	7	5	10	6	33
12	8	2	6	7	4	27
14	4	8	1	9	2	24
16	6	9	7	3	4	29
18	7	6	3	1	3	20
20	2	8	17	1	4	32
22	3	10	9	4	5	31
24	-	3	6	-	3	12
26	-	2	8	4	5	19
28	1	3	5	1	2	12
30		-	4		6	10
32		2	3		4	9
34		2	1		1	4
36		-	1		5	6
38		1	2		2	5
40		-				
42		2			1	3
44						
46						
48					1	**1**
50					1	**1**
52						
54						
56						
58						
60					1	**1**
TOTAL	**78**	**130**	**103**	**65**	**173**	**549**

map of areas 1-5 missing may have to be redone

the of the more mature and permanent tree cover on the slope along the north shore of the Beaver Pond. Area # 2 occupies a transitional position on both sides of the highest part of the ridge along the northern ridge..

Table 1 summarizes the Black Cherry populations by 2 cm. diameter classes for the five areas described above and for the Beaver Pond Forest as a whole.. The total number of Black Cherries recorded during the survey amounts to 549 trees. The Black Cherries are distributed among the 5 populations as follows: slightly over 14% in area 1; close to 24% in area 2; close to 19% in area 3; less than 12% in are 4; and more than 31% in area 5. The Black Cherries in area contain a high proportion, 47 to 49 percent. of the smaller sized and juvenile trees These are trees with diameters less than 10 cm at breast height. Area 3, making up the centre of the Beaver Pond Forest has a low proportion of small and juvenile trees, only 24 %. Because of the rocky landscape with shallow soils which causes stunted growth the smaller and young Cherry trees, slightly over 38%

4.2 Tree Cover

Point samples were taken at randomly selected location throughout the forested parts of areas #2, #3 and #4. No point samples were taken in areas #1 and #2 were tree cover is in the early stages of recovery. Nor were point samples taken in the central part (between areas #1 and #2). There is closed tree cover in this area, hard maple and black ash stands as well what appear to be small mature white pine plantations

Table 2 Composition of Associated Tree Cover				
Ash				
Basswood				
Beech				
Birch white				
Birch yellow.				
Cherry black.				
Elm white.				
Hickory bitternut				
Ironwood				
Maple hard				
Maple soft.				
Oak red.				
Oak white.				
Poplar				
Total hardwoods.				
Balsam fir				
Cedar				
Hemlock				
Pine white.				
Hemlock .				
Total softwoods				