



## **Agenda Green Committee**

February 20, 2019

5:30 pm

Municipal Operations Centre

408 James Street South, St. Marys

Pages

1. **CALL TO ORDER**
2. **DECLARATION OF PECUNIARY INTEREST**
3. **AMENDMENTS AND APPROVAL OF AGENDA**

### **RECOMMENDATION**

THAT the February 20, 2019 regular Green Committee agenda be accepted as presented.

4. **DELEGATIONS**
5. **ACCEPTANCE OF MINUTES**

### **RECOMMENDATION**

THAT the January 16, 2019 regular Green Committee minutes be approved and signed by the Chair and Committee Secretary.

6. **REPORTS**
  - 6.1 **Town of St. Marys Forestry Program**

J.Kelly to provide the Committee with information regarding forestry management operations within the Town of St. Marys

- 6.2 **PW 12-2019 Forestry Management Plan: Tree Species List**

3

Generate discussion regarding the creation of a revised tree species list for public lands in the Town of St. Marys.

## **RECOMMENDATION**

THAT PW 12-2019 Forestry Management Plan: Tree Species List be received; and

THAT Appendix F – Species List & Planting Conditions be retained for natural areas; and

THAT the proposed modified environment species list be considered; and

THAT Step 3 of creating a revised Tree Species List be initiated.

## **7. OTHER BUSINESS**

## **8. UPCOMING MEETINGS**

10

Review proposed 2019 meeting schedule.

## **9. ADJOURNMENT**

# FORMAL REPORT

<b>To:</b>	Choose an item.
<b>Prepared by:</b>	Morgan Dykstra, Public Works Coordinator
<b>Date of Meeting:</b>	20 February 2019
<b>Subject:</b>	<b>PW 12-2019 Forestry Management Plan: Tree Species List</b>

## PURPOSE

To generate a discussion regarding the creation of a revised tree species list for public lands in the Town of St. Marys. The species list will consider two types of tree streams (1) modified environments (i.e. boulevards, parks and hard surface environments), and (2) natural areas (i.e. woodlands, wetlands, along rivers, and other natural areas that have little to no man-made modifications).

## RECOMMENDATION

THAT PW 12-2019 Forestry Management Plan: Tree Species List be received; and  
THAT Appendix F – Species List & Planting Conditions be retained for natural areas; and  
THAT the proposed modified environment species list be considered; and  
THAT Step 3 of creating a revised Tree Species List be initiated.

## BACKGROUND

The Modernizing Ontario's Municipal Legislation Act, 2017 (Bill 68) received Royal Assent on May 30, 2017. The Act requires municipalities to adopt a policy with respect to how the municipality will protect and enhance the tree canopy and natural vegetation in the municipality by March 2019. Additionally, the Town of St. Marys Strategic Plan defined implementing a forestry and tree management policy as a priority.

In July 2018, the Strategic Priorities Committee and staff discussed the goals, objectives, and outcomes of a forestry management plan for the Town of St. Marys. Ultimately, Council determined that a forestry management plan should only address public trees, not private trees.

Following the guidelines set out by SPC staff composed a draft forestry management plan, the draft addressed how to address trees in modified environments (maintenance practices, planting practices, and the removal of trees), some discussion of natural areas, invasive species, severe weather event policies, and community engagement. The draft policy was distributed to the public for comment from September 24 to October 5, 2018. The draft policy received 14 comments from the public; the comments were taken into consideration when revising the draft forestry management plan.

In October 2018, staff presented to Council a forestry management plan following SPC's guidelines and comments made by the public. The report to Council included a section outlining the key themes of the comments received, staff, applied a combination of "Accepted," "Recommend to be Rejected," and "Next Steps" actions to the comments justification for those actions. Many of the rejected comments refer to items that are not within the scope of a forestry management plan or better related to other Town functions. During the approval process, staff recommended to Council that the Appendix F- Species List & Planting Conditions of the proposed forestry management plan be an interim species list.

The Upper Thames River Conservation Authority recommends the species included in Appendix F for the Upper Thames watershed. The species are adapted to the local climate and are more resilient than non-native species. The original species list is primarily trees that are more suitable for naturalized areas, and are not ideal for modified environments where salt spray is likely. Therefore, developing a species list for park settings and boulevard trees is necessary.

Ultimately, Council passed **Resolution 2018-10-30-17:**

**THAT** PW 61-2018 Forestry Management Plan be received; and

**THAT** Council approve By-Law 85-2018 to adopt a Forestry Management Plan; and

**THAT** staff be directed to revise the species list to better determine tree suitability and placement; and

**THAT** the proposed Green Committee pursue community engagement and education opportunities regarding the urban forest.

The next step is to develop a revised species list.

## **REPORT**

As per the direction of Council, staff have initiated Step 1 of developing a revised species list to address modified and environments and natural areas. Staff have prepared a draft species list for the Green Committee's consideration.

### **1. Natural Areas**

Staff recommends that Appendix F - Species List & Planting Conditions of By-law 85-2018 be retained as the species list for natural areas in the Town of St. Marys. As the trees and vegetation outlined in the interim list are specifically for the Upper Thames watershed and therefore, suitable for the area. Since 2016, the Town is actively rehabilitating Sparling Bush, a part of the rehabilitation plan is to expand the bush. During the expansion process, trees that are listed in Appendix F have been planted at the bush perimeter, including but not limited to Kentucky Coffee-trees (*Gymnocladus dioica*) and Tulip trees (*Liriodendron tulipifera*), both trees have thrived.

### **2. Modified Environments**

Staff have drafted a tree species list for the Committee's consideration.

#### *Step 1: Creating a Base List*

The first step in the process is creating a base list of trees that are commonly accepted as native to the area and suitable for urban/modified environments. Staff utilized several resources to build the base species list, they are as follows:

- City of Stratford's Proposed Species List
- City of London's [Tree Planting and Protection Guidelines – Appendix 5](#)
- The City of Guelph's tree lists for "[Urban-tolerant Trees for Small to Mid-sized Plots](#)" and "[Urban-tolerant Trees for Mid to Large-sized Plots](#)"
- The City of Toronto's tree species list: [Every Tree Counts – Help Grow Toronto's Street Tree Canopy](#)
- A list of trees that are native to the Southwest Region: [The Tree Atlas: Southwest Region](#)

#### *Step 2: Evaluation 1*

The second step is to evaluate the trees on the base list, using indicators such as tree hardiness, salt tolerance, nativity, and historical experience.

Hardiness describes a plants ability to survive in certain growing conditions, across Canada, the zones are assigned a hardiness number 0 thru 9, and each species is also assigned a hardiness number. A

species can be planted in any zone that is equivalent to or less than its assigned hardiness. St. Marys is within Zone 6, an evaluation has been completed to determine if the species on the base list comply with hardiness zone.

Consideration of salt tolerance is essential, as the Town's winter maintenance operations utilize salt materials for de-icing, as such, trees chosen for modified environments should have a higher salt tolerance. Salt can be very toxic for species root system if they are salt intolerant; as the sodium ions replace other nutrients plants require and rock salt absorbs water that is usually available to roots, furthermore the roots absorb the chloride ions and transport them to the leaves interfering with chlorophyll production and photosynthesis (Beckerman and Lerner, 2). Salt spray also contributes to adverse effects; the spray can "damage leaves, buds and small twigs which in turn can reduce the plant's cold hardiness, making its tissue more susceptible to freeze damage" (Beckerman and Lerner 2). On the base list, where information is available, a plant's salt tolerance is indicated using a rating system: (T) tolerant, (M) intermediate, (S) sensitive.

The evaluation notes nativity of a species, it is ideal if the tree's chosen are native to the area; however, it is understandable that non-native trees may be planted due to their hardiness, salt tolerance and contribution to species diversity.

The evaluation also indicates experience with certain trees on the base list trees and unique features of the trees that may influence decisions regarding their position on the list.

Based on the following features, staff has divided the base list into three sections for the Committee's consideration: Recommend, To Be Considered, and Not Recommended. Please see **Attachment A: Forestry Management – Modified Environment Tree Species Evaluation**.

Trees that staff recommends usually have the following characteristics: meet salt tolerance requirements, positive reviews in Town and other centers.

Trees for the Green Committee to consider meet some requirements, but other characteristics the Committee needs to account for/

Trees that the evaluation lists as not recommended usually have the following features: are coniferous (provide sightline issues in the road allowance and are more difficult to maintain), are invasive species, produce large fruit or nuts that have been problematic in the past, species that are liable to disease or insect infestation.

**Green Committee Discussion:** Review the Forestry Management – Modified Environment Tree Species Evaluation document. Committee to provide comment regarding the recommended and not recommended species and deliberate on the species that have been designated as to be considered.

### *Step 3: Draft Species List*

Staff will take the recommendations provided by the Committee to curate a draft species list. More research will be completed to determine root structures, and the height of the trees to better identify suitable planting locations.

Contact local nurseries to determine the availability and cost of the trees on the draft species list.

The Town contracts out its forestry contract for the pruning, removal disposal of trees. A new contract has been distributed, and bidding closes, Tuesday, March 5, tentatively, Council will award in March. Once the Contractor has been approved and established, the Town will seek comment from the Contractor regarding the draft species list and suggest planting timelines for the trees.

Depending on timing, staff will present the draft species list to the Green Committee at the Committee's April meeting, seeking its recommendation to submit the species list to Council.

### *Step 4: Community Engagement*

To improve the longevity of newly planted boulevard trees, consider creating an infographic for properties near the young tree. The infographic will request their assistance watering the tree, and provide other additional facts like those noted in the evaluation table.

### 3. Natural/Modified Environments List

Cross-reference trees that appear on both lists to develop a list that contains species that are applicable for natural and modified environments.

## FINANCIAL IMPLICATIONS

No financial implications at this time.

## SUMMARY

The Town of St. Marys requires a revised species list that addresses natural and modified environments. Staff are presenting a base species list with recommendations based on a species salt tolerance, hardiness, and other variables. The Green Committee shall provide comment regarding the trees that are staff are proposing.

## STRATEGIC PLAN

- ☑ This initiative is supported by the following priorities, outcomes, and tactics in the Plan.
  - Pillar #4 Culture and Recreation
    - Outcome: A focused parks strategy
    - Tactic(s): Investigate implementing a forestry management policy for the Town

## OTHERS CONSULTED

Johnathan Hahn, Parks Operator A

Vanni Azzano, Upper Thames Conservation Authority

## ATTACHMENTS

Attachment A - Forestry Management – Modified Environment Tree Species Evaluation

## REVIEWED BY

### Recommended by the Department



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Morgan Dykstra  
Public Works Coordinator



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Jed Kelly  
Director of Public Works



## FORESTRY MANAGEMENT: MODIFIED ENVIRONMENT TREE SPECIES EVALUATION

The Corporation of the Town of St. Marys - Public Works Department

Classification	Salt Tolerance	Native
Recommend	T - Tolerant	N- Native
To Be Considered	M - Intermediate	I - Introduced
Not Recommended	S - Sensitive	NN - Not Native

BINOMIAL NOMENCLATURE	COMMON NAME	SALT TOLERANCE	HARDINESS	NATIVE	COMMENTS
<i>Acer concolor</i>	White Fir	T	2	N	Coniferous (Sighline Issues)
<i>Acer Campestre</i>	Hedge Maple	T, M	5	NN	
<i>Acer x freemanii</i>	Freeman's Maple	T	4	NN	
<i>Acer ginnala</i>	Amur Maple	M, S	3	I	Mixed Salt Rating
<i>Acer nigrum</i>	Black Maple		6	N	Great Lakes Region in moist floodplains
<i>Acer pseudoplatanus</i>	Sycamore Maple	T	8	I	Native to Europe and planted in Southern Canada
<i>Acer rubrum</i>	Red Maple	M,S	6	N	Moist soils - mixed salt rating
<i>Acer saccharinum</i>	Silver Maple	T, M	6	N	Native Invasive
<i>Aesculus flava</i>	Yellow Buckeye		5	N	
<i>Aesculus glabra</i>	Ohio Buckeye		6	N	When brusied, the leaves and bark exude an unpleasant smell
<i>Aesculus x carnea</i>	Red Horse Chestnut	T	6	I	Do we want Chestnut trees in ROW?
<i>Amelanchier spp.</i>	Serviceberry	S	4	N	Edible trees?
<i>Betula papyrifera</i>	Canoe Birch, White Birch	M, T	6-Jan	N	Found in every Canadian province and territory - can be used to make canoes
<i>Betula pendula</i>	European White Birch	M		I	
<i>Betula populifolia</i>	Gray Birch	M	6	N	
<i>Carya corifromis</i>	Bitternut Hickory		7	N	Edible trees?
<i>Carya ovata</i>	Shagbark Hickory	T, M	7	N	Messy bark
<i>Catalpa speciosa</i>	Northern Catalpa	M	5	N	
<i>Celtis occidentalis</i>	Hackberry	S	7	N	Often used as a substitue for elm

<i>Cladrastis lutea</i>	American Yellow-wood	M	5	I	
<i>Corylus colurna</i>	Turkish Hazel		5	I	Toronto uses it
<i>Fagus sylvatica</i>	European Beech	S	7	I	Salt Rating
<i>Fraxinus quadrangulata</i>	Blue Ash		4	N	Ash tree (EAB concern)
<i>Ginkgo biloba</i>	Ginkgo	M		NN	
<i>Gleditsia triacanthos</i>	Honeylocust	T	5	N	
<i>Gymnocladus dioica</i>	Kentucky Coffeetree	T	5	N	
<i>Juglans nigra</i>	Black Walnut	M	7	N	Historical issues
<i>Juglans regia</i>	English Walnut	M	3,4,5,6,7,8	I	Historical issues
<i>Juniperus chinensis</i>	Pfitzer Juniper	T	4	I	Coniferous (Sighline Issues)
<i>Juniperus horizontalis</i>	Andorra Juniper	T	1,2,3,4	I	Coniferous (Sighline Issues)
<i>Juniperus virginiana</i>	Eastern Red-Cedar	T, M	3,4,5,6,7	I	Coniferous (Sighline Issues)
<i>Liquidambar styraciflua</i>	Sweet Gum		5,6	N	No salt rating
<i>Liriodendron tulipifera</i>	Tulip Tree		3,4	N	No salt rating
<i>Maclura pomifera</i>	Osage Orange		4,5	I	No salt rating
<i>Magnolia acuminata</i>	Cucumber Tree		6	N	No salt rating
<i>Malus</i>	Crab Apple	S			Salt Rating
<i>metasequoia glyptostroboides</i>	Dawn Redwood	S	5,6	NN	Coniferous + salt rating
<i>Platanus x acerifolia</i>	London Plane-Tree	S	6	NN	
<i>Populus canescens</i>	Gray Poplar	T	3	I	
<i>Populus grandidentata</i>	Bigtooth Aspen	T, M	1,2,3,4,5,6,7	N	
<i>Populus nigra</i>	Lombardy Poplar	T, M	3,4,5,6,7,8,9	I	
<i>Populus tremuloides</i>	Quaking Aspen	T, M	All	N	One of the most widely distributed species in Canada
<i>Prunus padus</i>	European Bird Cherry	T, M			
<i>Prunus virginiana</i>	Chokecherry	T, M	All	N	
<i>Pyrus Calleryana</i>	Callery Pear	T, M			
<i>Quercus alba</i>	White Oak	M, S	4	N	oak tree
<i>Quercus bicolor</i>	Swamp White Oak	S	4	N	
<i>Quercus ellipsoidalis</i>	Northern Pin Oak		3	N	No salt rating + and oak tree
<i>Quercus macrocarpa</i>	Bur Oak	M	3,4,5,6,7,8	N	
<i>Quercus meuhelbergii</i>	Chinquapin Oak	S	5,6,7	N	Often grows on limestone
<i>Quercus robur</i>	English Oak	S	4,5,6,7,8	NN	
<i>Quercus rubrus</i>	Red Oak	M, S	2 thru 8	N(SO)	
<i>Robinia pseudoacacia</i>	Black Locust			NA	Tree killer and enables lower invasive vegetation species

<i>Syringa reticulata</i>	Japanese Tree Lilac	M			
<i>Taxodium distichum</i>	Baldcypress		4,5	I	
<i>Tilia americana</i>	Redmond Linden	M	1 thru 7	N	
<i>Tilia cordata</i>	Littleleaf Linden	T	3,4	N	

# 2019 Green Committee Calendar

January						
S	M	T	W	T	F	S
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December						
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Green Committee Meeting  
5:30 pm (Location TBD)  
Statutory & Public Holidays +  
Christmans Break