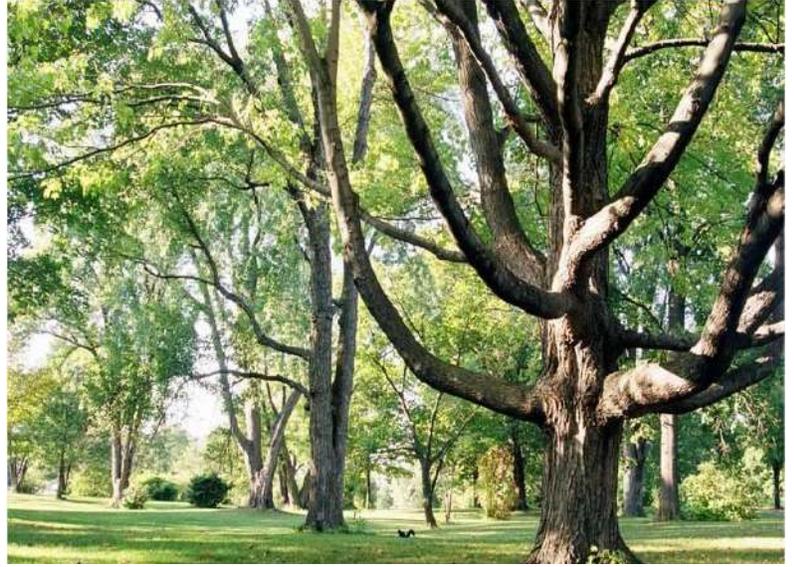


# FOREST LAKE ESTATES



## Tree Preservation and Planting Program: Conservation Easement Agreement Information

Prepared by: Sunset Lakes Developments

# TABLE OF CONTENTS

Tree Preservation Plan for Forest Lake Estates	3
Tree Planting and Conservation Plan	5
Benefits of Tree Planting	9
Guide to Tree Planting	10
Maintaining Your Trees	10
List of Nursery and Tree Movers	13
Preferred Tree Coverage List	14
Forest Lake Estates Lawn Care & Weed Control	17
Management Recommendations and Mitigation Measures	21
Septic System Information	22
Working to Protect your Drinking Water Sources	25
Water Conservation in the Yard	26
If You Own Land Along or Around Water	27
More Water Saving Tips	28
Design Review Application	29
Examples of Tree Plan Submissions	30
Submission #1	30
Submission #2	31
Submission #3	32
Bibliography	33

# TREE PRESERVATION PLAN FOR FOREST LAKE ESTATES

## Tree Preservation Plan for Forest Lake Estates

1. The subdivision will be founded on the community concept of homes, trails and lifestyle within a forested area. This will be made known to perspective purchasers prior to purchasing through marketing, website, information brochures. The individual owner will have .2 ha of the .4 ha for the construction of a home, septic system, driveway, rear and front yards. This portion of the lot will also contain the requirement to plant or save 20% of the lot area in tree canopy cover at tree maturity. The rear of the lot will contain a unique feature. Both the homeowner and the community owners association will be stewards of the forest and the water features.
2. The specific legal requirements will form part of the Agreement of Purchase and Sale.
3. The covenants will be registered on title.

At the time of home construction all homes must submit and obtain a design review approval by the Owners Association. The application form posted on the website requires that information be provided including

- Copies of all elevations, floor plans, site plan, specifications and tree planting and conservation plan
- Prior to the release of the security deposit the owner/builder must submit a copy of the Certificate of Well Compliance, Well Record, Certificate of Completion, Occupancy Permit and Asbuilt drawing (confirming tree planting among other things).

A copy of the Design Review Application is attached.

### ***(Sample Covenants below)***

***Purchasers are advised of the following.***

- (a) The owner must preserve and plant as required to maintain a minimum of 20% tree canopy coverage for the developable portion (front) of the lot. A list of suitable trees includes Red Oak, Bur Oak, American Basswood, Red Maple, Sugar Maple, White Cedar, Balsam Fir and Trembling Aspen. Replanting of Ash trees should be avoided due to potential future damage from the Emerald Ash Borer.***
  - (b) The rear half of the lot is identified in the Conservation Easement Agreement and by registered survey. This portion of the lot is to remain fully tree covered, except where there is a water retention feature. The owner, his successors and assigns agrees not to remove any trees without the written consent of the owners association and to plant new replacement trees from the list in paragraph 3(a) above.***
- 4) Prior to construction of a residence each homeowner will submit a design review application which will show the designated tree planting and saving areas.
  - 5) Conservation Easement

(a) The rear portion of the lot dedicated for tree conservation and water retention as specified will also be identified by a separate survey part or block on a reference plan and a Conservation Easement Agreement will be conveyed to the

Forest Lake Estates Owners Association. The "OA" will have the power to (1) enforce the covenants and (2) enforce the legal provisions of the easement and (3) to access the property for the purpose of planting or replanting where necessary.

### **Conservation Easement Agreement**

All restrictions or prohibitions will be laid out in the registered Conservation Easement Agreement including

- (i) Restricting the cutting down of trees. No logging or forestry activities. Dead or dangerous trees can be removed and replaced however no tree cutting can be done except with the written consent of the Owners Association.
- (ii) Prohibiting any structures or land development,
- (iii) Prohibiting any excavation or removal of resources like sand, rock, gravel and other aggregates from the land.

(c) The easement will also be combined with an easement over the stormwater management pond for maintenance and access to the pond by the owners association.

The owners association will be funded by annual dues payable to the owners association by each household similar to other currently operation O.A.'s throughout the Village of Greely.

# TREE PLANTING AND CONSERVATION PLAN

Tree planting and conservation will be undertaken by a lot-by-lot basis using the following guidelines:

1. Typical Lot. Tree planting conservation plan on figure 1 attached showing the areas if a typical lot after allowing for house, yard, driveway, septic area and street.

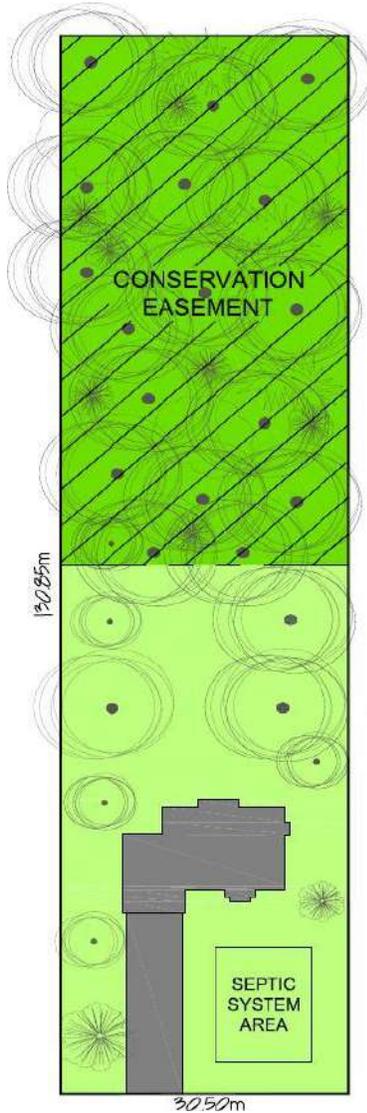


Figure 1

2. Restrictive Covenants registered on title to each lot require:
  - a. The owner to submit for approval a detailed site plan with the application for design review approval. Tree conservation and planting will be addressed as part of the review No tree in excess of 100mm in diameter can be removed after construction of the home except for driveway, septic, and living area. No trees in the conservation easement area can be removed except with written consent of the Owners Association.
3. Tree conservation and planting guidelines:
  - a. Maintaining existing trees:
    - Retain all existing trees whenever possible on the developable portion of the lot. Ensure that trees onsite are protected from grade change, equipment damage and root compaction during construction. If the trees have too much fill built up around them, they will not survive more than five years after construction. If equipment has been driving over the root system, then aeration of the soil to relieve compaction should be undertaken. If there has been damage to the tree trunk by equipment, the area should be cleaned, and torn bark removed.
    - Existing trees have successfully established their root systems in the soil on site whereas trees introduced to the site may have been grown in a different type of soil and will undergo planting shock and adjustment to the new soil conditions.

- b. Pruning, watering, staking and mulching:

- Pruning of trees should be kept to the minimum. Removing foliage will reduce photosynthesis and the production of food for the tree. The reasons for pruning are to improve structure by removing weak branches, removing dead or diseased branches and removing crossing or rubbing branches. Pruning to develop the structure of the tree should be done on the tree as soon as possible. Pruning a young tree for structure will help it develop better and faster and will create less damage by keeping the pruning cuts small.

- Water is critical for successful tree growth. There are correct and incorrect methods of watering. Frequent, shallow watering encourages surface roots and soil compaction, which will make the tree more susceptible to drying out during periods of drought. The best method of watering is infrequent, deep soakings that will encourage deeper root growth, less compaction and healthier trees that can survive periods of drought. The best time to water is during the morning when evaporation is minimized. It is best to let the hose trickle water onto the root area for a longer period of time instead of using a sprinkler. Remember, you can over-water the tree or underwater the tree, but the result will be the same – loss of your tree. Good water management is critical to the success of your tree. Staking a tree is not always necessary. Staking a tree too tightly will cause more damage than not staking a tree at all. Trees that are not staked produce a better root system, a better trunk taper and a structurally stronger tree. If the tree cannot remain upright by itself, then staking will have to take place. When the tree is staked, it should have some movement in the wind and should not be tightened to the point of being rigid. Tree staking can be done with one, two or three stakes.
- Mulching the soil around the base of trees is beneficial. The mulch will reduce water evaporation from the soil, reduce soil erosion and improve soil aeration. The soil will remain cooler in the summer and protect the root system from summer heat. Mulch should be kept away from the tree trunk in order to prevent rot and fungus. The mulch layer should be 3 to 4 inches in depth and not any deeper. More mulch is not better and will cause problems with tree health and growth.

c. Managing Common Pests:

- Pest infestations are common throughout all tree plantings. The best way to fight pest infestation is to keep your trees as healthy as possible. All healthy trees have a better chance to withstand levels of infestation without the need to treat with pesticides. If the infestation is heavy enough to defoliate the tree, then remedial action may be required. Deciduous trees can withstand defoliation and still survive, although in a weakened condition, but coniferous trees must not be defoliated. Defoliated conifers cannot survive and will not send out new needles. Conifers only produce leaves on the previous years' growth and if that is lost, the tree will die. Deciduous trees will refoliate after an attack, but the tree will be under stress.
- A well-diversified planting with numerous different types of trees will help reduce the impact of serious insect infestation. Monoculture planting, the planting of only one type of tree, must be avoided. Most trees are subject to insect infestations, but some are more susceptible than others. Careful selection of species can reduce the impact of insect damage.
- Caterpillars are the most common types of pests in trees. Forest tent caterpillars, Eastern tent caterpillars, Gypsy moth and Pine sawfly are all prevalent in this area. If the infestation threatens the tree, action should be taken. Tree collars are successful with many types of caterpillars. Removing the tent in the evening when the caterpillars are inside can control Eastern tent caterpillars in the spring. Remove the tent by hand and dispose of the caterpillars. Do not burn the tent while it is on the tree because this will damage the tree. The use of Bacillus, an organic/non-chemical spray, is very successful against all species of caterpillars.
- Aphids are also a prevalent pest. This pest can be treated with applications of soapy water sprayed every ten days until the pest is not threatening the plant. The introduction of Lady Bugs will also reduce the aphid population. Lady Bugs are currently available at some Nurseries.

d. Indicators of stress and vigour of the vegetation:

- Trees always indicate when there are problems. Stress is the term used to describe the condition which causes the health of the tree to decline. Signs of stress might include reduced growth rate, abnormal foliage colour, vigorous suckering or leaf wilt or drop.
- The most common stress for trees is caused by a lack of watering during periods of drought. The leaves will wilt and begin to grow brown and crisp, indicating a need for water.
- Some trees will develop a yellowing of leaves with the veins remaining green. This description indicates the tree has an iron deficiency and requires an application of iron to correct the deficiency. This deficiency is also an indication of a tree planted in the wrong type of soil.
- If the tree shows a lack of vigour in its growth, the tree could be suffering from nutrient deficiency and may require a fertilization application. Trees do not require annual fertilization. Young trees should not be fertilized when they are first planted but may require an application of fertilizer a few years after planting. Fertilization should only be a response to stress and not a programmed activity.
- Decline in growth can also be an indication of soil compaction. This problem can occur as a result of heavy equipment around the root zone during house construction or continuous, shallow watering with sprinklers can cause it. Compaction must be corrected by aerating the root zone.

e. Root feeding:

- Trees require certain nutrients in order to sustain a healthy growth rate. In most conditions the nutrients are available naturally in the soil. Fertilizing a tree should not be a regular activity but should be used as a correction if nutrient deficiency is a problem. Root feeding is done by drilling holes or using a root feeder on the end of a garden hose beyond the drip line (limit of branching) of the tree canopy. Do not fertilize during periods of drought or in the middle of summer. Fertilizer uptake is greatest during periods of active root growth, so applications are most effective during the spring and fall.

4. Tree Planting:

a. Tree selection:

- Selection of the right tree for your site condition is the most important decision to ensure success of tree planting. The tree must be matched to the site conditions. The soil conditions, size of property, reason for planting and available light are all considerations that must be made before selecting a tree to plant. A local Nursery will be able to assist in the selection of tree. Please consult preferred tree species listed for Emerald.
- If a tree grows best in light, sandy soil then it should not be planted in heavy wet clay conditions.
- If the lot size is small, then a large growing deciduous tree will not be a good selection. If there is a septic system on site then a small, shallow rooted tree will be required for the site instead of a large shade tree with an extensive root system that could invade the septic system.
- Some trees must not be planted due to root system growth and soft, poorly structure branching. All varieties of Popular, Manitoba Maple, Silver Maple, and all varieties of Willow

are not recommended to be planted. All of these trees can cause problems with extensive root growth, size of trunk and limb growth and poor structure.

- Planting for screening and privacy will require the planting of conifers. Cedars planted in hedging or in groupings, Pines or Spruces planted in groupings or in rows are recommended.
- Planting for shade will require a deciduous tree. The size of the tree will depend on the size of the lot. The type of shade, filtered or full, will also dictate the type of tree selected.

b. Planting:

- Trees are available for purchase in three forms: bare root, balled and burlapped or containerized. All trees, no matter how they are purchased, should be planted in the hole to the level they were planted at in the nursery. Do not plant the tree deeper than it has been grown.
- If a container-grown tree is purchased, check that the root system is not growing in circles before purchase. If roots are growing in circles, the plant will develop girding roots and will eventually die. Remove the container just before planting.
- If a ball and burlap tree is purchased, place the tree in the planting hole and position it in the middle and straight. Place some soil in the hole to keep it straight, cut the ropes off and remove as much of the wire basket as possible. After the basket is removed, fold the burlap back from the top and sides of the tree. Do not leave the burlap on the top of the ball of the tree.
- Plant the tree in the site soil that is dug out of the planting hole. Dig the hole wider than the root ball and only as deep as the root system requires. Once the tree is positioned at the correct depth and is straight, backfill the hole to the halfway point, compact the soil by walking around the root ball and then fill the hole with water. After the water has been absorbed, complete the backfilling and water again.
- If the tree is not firmly positioned after planting, it may require staking. Place the stake outside of the ball, container or root mass on the side of the tree that receives the wind. Make sure that the tree is not staked too tightly, the trunk should move slightly with the wind.
- Do not prune branches from the tree when it is planted. The only branches that should be removed are any that are broken.
- Add a 4-inch layer of organic mulch to the base of the tree, but keep the mulch away from the trunk. The mulch will help reduce evaporation of moisture from the root zone.
- Remove any wrapping that is on the trunk of the tree at planting time.
- If the tree has been staked, remove the tie and stake after the first year of growth or when the tree is firmly rooted. Do not leave the tie in place longer than a year because it will start to impact the bark of the tree.

c. Maintenance:

- The most important maintenance is to ensure that the tree receives regular amounts of water. If rainfall is not sufficient, the tree should be watered every five to seven days.
- Remove any crossing branches that develop when they are small.
- Do not fertilize the tree in the first year. The root system is limited at planting time and fertilization is not recommended. If the tree requires fertilizer after it is established, use a controlled release fertilizer in the spring or fall. The fertilizer should be applied only if it is required. There should not be a need to fertilize a tree every year.

“The arboricultural recommendations of this report, if followed, will ensure that the development takes place in an effective manner with an overall enhancement of the environment.” - **WILLIAM STRUGNELL, Arborist**

## **BENEFITS OF TREE PLANTING**

There are many benefits to tree planting and conservation in our community, both for the environment and for us as residents. From an environmental standpoint, trees improve groundwater quality, reduce flooding, prevent soil erosion, act as windbreakers, improve air quality, compensate potential grounds of global warming, and provide habitat, food and protection for local birds and wildlife. As residents, trees help protect well water quality, provide shade and privacy, improves the chances of observing wildlife, and adds real estate and aesthetic value to the property.

### **Air Quality**

Urban forests provide benefit to the environment through air pollutant uptake and reductions in atmospheric carbon dioxide, otherwise known as the greenhouse effect. One fully-grown tree can produce enough oxygen for four people, and over a span of fifty years, a single tree can remove 60,000 pounds of air pollution. Trees remove air pollution by lowering air temperature through its respiration, and by containing the pollutants such as carbon monoxide, nitrogen dioxide, and sulphur dioxide. Street dust can be reduced by 25% with a single row of trees. Each healthy tree can decrease airborne dust particles by as much as 7,000 particles per litre of air. In this manner a tree acts as a purifier and air conditioner.

### **Water Quantity & Quality**

Studies have demonstrated that urban forests help reduce the quantity of stormwater flows and improve the quality of stormwater runoff. Trees function as holding and confinement basins by catching rainfall and reducing run-off. Based on a 25mm rainfall, approximately 25% of the rain is intercepted and retained in the mulch layer. The actual runoff quantity benefits depend on the type of tree, the density of its canopy, the level of maintenance and the time of year. Water quality benefits by having pollutants eliminated by uptake and storage, the prevention of soil erosion, and reducing the overall quantity of stormwater runoff. Trees along waterways can eliminate over 75% of the nitrates in the ground water before the pollutants are able to reach the waterways.

### **Energy Savings**

The east, west, and south walls of your home receive the most sun, therefore planting deciduous trees around the house will provide shade, and in turn reduce cooling bills in summer months. They can reduce up to 50% of the energy consumption of air conditioners. By planting a row of conifers on the north side, you will reduce heating bills by the windbreak provided by the trees. By slowing the strong winter winds, this windbreaker may help reduce heating costs by 20-40%. By acting as barriers to snow drifts, trees can lower winter plowing costs and reduce vehicular accidents in snow covered conditions.

### **Natural Habitat**

Trees provide living space and a source of food for birds and other local wildlife.

### **Property Value**

Trees create a pleasant and relaxing environment. Some related benefits include noise reduction and absorption. Strategically planted trees can muffle urban noise almost as effectively as stone walls. They provide beautiful colours to fall landscapes and provide excellent garden mulch. On average, trees increase property values up to 20%.

## GUIDE TO TREE PLANTING

It is a good idea to begin by drawing a plan of your property with dimensions in order to determine the area available for planting. It is beneficial to plan in stages, beginning near the home and extending your gardens each year. Trees should not be planted where their branches will interfere with overhead wires, or overshadow or block windows. Trees should also not be planted where their roots will damage foundations, driveways, or sidewalks. Roots of willows and poplars spread to find water and are inclined to clog water and sewer pipes.

By using native species, you will increase the probability of success and decrease the amount of time and maintenance that your trees will require. Native species require less watering and can sustain periods of drought. They are also more prepared to combat pests, and therefore reduce the need for pesticide use.

The standard planting time is usually during the fall after the leaves have fallen or in early spring before the buds appear. This is a period of cool weather which allows the tree to situate their roots before the spring rains and summer heat activate new growth. Ash, birch, elm, poplar, and willow trees are better planted in the spring. Conifers can be planted early in the spring up until four weeks after the first bloom of deciduous trees. Alternatively, conifers can be planted in the fall, from the first week of August to the last week of October.

When handling seedlings, it is important not to allow the seedling to dry out and to transport them carefully, avoiding temperature extremes. Seedlings should be planted promptly and the roots should not be trimmed or pruned. The gel applied to the seedlings roots is there for its protection and to assist it in adapting to its new location. Seedlings should be planted deeply into the soil to give greater exposure and more water content. Seedlings which have been frozen in the pack should not be planted because the freezing has caused irreversible damage to the root system.

When planting your tree, you should dig a hole at least twice the size of the root ball of the tree, planted on existing soil level. If using a plastic pot, remove the container without disturbing the root system and fill the remainder of the hole with rich soil. If using a burlap or wire basket, place the ball at the bottom of the hole and fill with rich soil. Untie the burlap and spread it out without removing it. In the case of a wire basket, bend it away from the tree. When using a fibre pot, cut away the bottom of the pot and put the tree and remainder of the pot in the bottom of the hole. Slit the side of the pot from top to bottom and finish filling the hole. The remainder of the pot will rot away in time.

## MAINTAINING YOUR TREES

To reduce the amount of time you spend on maintaining your trees, it is important to choose a species native to your area. Generally, conifers have an improved chance of survival and require less maintenance than deciduous trees. In the first few years after planting, seedlings need watering, weeding and rodent control, as well as staking. If mulch is developed under the tree, more rainfall will be kept.

If the soil is sandy and allows water to drain easily, you may need to soak the tree twice a week for the first three months and weekly thereafter for the first year. Peat moss and sandy soil mixtures at the time of planting would help in water retention. During the tree's second year, the tree should be watered twice monthly during spring and summer. If the soil contains clay, you may want to provide lighter watering to avoid flooding. For conifers, extra watering before winter will help protect the tree from drying.

Staking is suggested for trees that are taller than one meter, but only when the tree is unstable, to prevent it from being dislodged. It is important to ensure that the stake ties do not damage the bark and that the stakes are removed after two or three growing seasons.

Deciduous trees should be pruned in the late fall or early spring, for structure and the removal of dead or crossing branches, while they are dormant, with the exceptions of birch and maple, which require pruning when the leaves are full grown. Conifers are pruned to increase density and direct new growth. Spruce and firs must be pruned in late spring after the new growth has started.

## TYPES OF TREES

To give you some ideas, a few types of trees and their descriptions are listed below:

### Red Maple

The Red Maple is a deciduous tree, which means that it loses its leaves in the winter months, and blooms in mid-spring. It is recognized by its production of brilliant and impressive fall colours. The Red Maple can grow to a height of 18-19 metres with a spread of 12-13 metres.

It is a fast-growing, low maintenance species, favours sunlight but tolerates shade, and prefers soil that remains moist with pH levels below 7.

### Red Oak

The Red Oak is also a deciduous tree, known for its strength and spectacular fall colours ranging from yellow-brown to russet-red and bright red and bears acorns. It grows to a height of 25-27 metres with a spread of 13-14 metres. The Red Oak prefers sunlight with moderate shade and well-drained soils.

### Shagbark Hickory

The Shagbark Hickory is another deciduous tree which can be found in Southern Ontario, along the St. Lawrence River and into Quebec. It can grow to a height of 23 metres with a spread of 17 metres. The Shagbark Hickory's favourite soil is moist and rich and prefers to spend its time in the sun.

### Honeylocust

Another deciduous tree is the Honeylocust. This tree is actually quite rare to be growing wild in Ontario, but is found in plenty of garden species. The Honeylocust has many recognizable features such as long, sharp thorns and very unique seed pods. It should be planted in an area with full sun exposure.

### American Beech

The American Beech is a deciduous tree with bluish grey bark that darkens with age and large oval leaves. The American Beech is a large tree and can grow up to 18 metres high and 15 metres wide. It requires moist, well drained and rich soil and should be planted in a shaded area.

### Black Walnut

The Black Walnut is a deciduous tree that is usually recognized by its dark, thickly rigid bark and coarse branches. It can grow up to 20 metres tall and 16 metres wide. The Black Walnut prefers moist, well-drained rich soils and full sun exposure.

#### Little Leaf Linden

The Little Leaf Linden is another deciduous tree and grows at a medium rate – meaning its height increases 13-24” per year. It can grow to 13 metres high and 9 metres wide. It enjoys both full sun and partial shade, therefore should have four hours minimum of direct sunlight each day.

## LIST OF NURSERIES AND TREE MOVERS

**Greenlife Wholesale Nursery**  
1776 Manotick Station Road  
Greely, Ontario  
(613) 692-3047

**Peter Knippel Inc. Garden Centre**  
4590 Bank Street  
Ottawa, Ontario  
(613) 822-2282

**Richmond Nursery Inc.**  
5740 Old Richmond Road  
Richmond, Ontario  
(613) 838-2282

**Integrated Forestree Services Inc.**  
6200 Old Richmond Road  
Richmond, Ontario  
(613) 838-5717

**Green Thumb Garden Centre**  
17 Tristan Court  
Nepean, Ontario  
(613) 228-0224

**Meadow Greens Nursery**  
4239 Gregoire Road  
Russell, Ontario  
(613) 445-3042

**Trillium Tree Experts**  
247 Westbrook Road  
Carp, Ontario  
(613) 831- 4475

**Greely Tree Services**  
5775 Bank Street  
Greely, Ontario  
(613) 574-0247

**Hacket & Hill Tree Specialties**  
4709 Albion Road  
Ottawa, Ontario  
(613) 899-9292

**Ashgrove Tree Service**  
1863 Salebarn Road  
Greely, Ontario  
(613) 821- 9292

**Manotick Tree Movers Inc.**  
1966 Carsonby Road West  
North Gower, Ontario  
(613) 489-1116

**A Paul's Seasonal Maintenance**  
5381 Downey Road  
Gloucester, Ontario  
(613) 224-6000

**Algonquin Landscaping Ltd.**  
6078 Fourth Line Road  
North Gower, Ontario  
(613) 489- 2888

## PREFERRED TREE COVERAGE LIST



### 1. Norway Maple

Maturity Height = 15m & Canopy Diameter = 12m  
 Canopy Area = 113m<sup>2</sup>  
 Typical lot area = 2000m<sup>2</sup>  
 $30\% \times 2000 = 600\text{m}^2$   
 $600\text{m}^2 / 113\text{m}^2 = 5.3$   
 Norway Maple Trees per lot



### 2. Red Maple

Maturity Height = 15m & Canopy Diameter = 12m  
 Canopy Area = 113m<sup>2</sup>  
 Typical lot area = 2000m<sup>2</sup>  
 $30\% \times 2000 = 600\text{m}^2$   
 $600\text{m}^2 / 113\text{m}^2 = 5.3$   
 Red Maple Trees per lot



### 3. Sugar Maple

Maturity Height = 21m & Canopy Diameter = 13m  
 Canopy Area = 133m<sup>2</sup>  
 Typical lot area = 2000m<sup>2</sup>  
 $30\% \times 2000 = 600\text{m}^2$   
 $600\text{m}^2 / 133\text{m}^2 = 4.5$   
 Sugar Maple Trees per lot



### 4. Grey Birch

Maturity Height = 9m & Canopy Diameter = 4.5m  
 Canopy Area = 16m<sup>2</sup>  
 Typical lot area = 2000m<sup>2</sup>  
 $30\% \times 2000 = 600\text{m}^2$   
 $600\text{m}^2 / 16\text{m}^2 = 37.5$   
 Grey Birch Trees per lot



### 5. Shagbark Hickory

Maturity Height = 21m & Canopy Diameter = 12m  
 Canopy Area = 113m<sup>2</sup>  
 Typical lot area = 2000m<sup>2</sup>  
 $30\% \times 2000 = 600\text{m}^2$   
 $600\text{m}^2 / 113\text{m}^2 = 5.3$   
 Shagbark Hickory Trees per lot



### 6. American Beech

Maturity Height = 18m & Canopy Diameter = 12m  
 Canopy Area = 113m<sup>2</sup>  
 Typical lot area = 2000m<sup>2</sup>  
 $30\% \times 2000 = 600\text{m}^2$   
 $600\text{m}^2 / 113\text{m}^2 = 5.3$   
 American Beech Trees per lot



7. American Mountain Ash  
 Maturity Height = 6m & Canopy Diameter = 4.5m  
 Canopy Area = 16m<sup>2</sup>  
 Typical lot area = 2000m<sup>2</sup>  
 $30\% \times 2000 = 600\text{m}^2$   
 $600\text{m}^2 / 16\text{m}^2 = 37.5$   
 American Mountain Ash Trees per lot



8. Black Cherry  
 Maturity Height = 9m & Canopy Diameter = 9m  
 Canopy Area = 63.6m<sup>2</sup>  
 Typical lot area = 2000m<sup>2</sup>  
 $30\% \times 2000 = 600\text{m}^2$   
 $600\text{m}^2 / 63.6\text{m}^2 = 9.4$   
 American Beech Trees per lot



9. White Oak  
 Maturity Height = 19m & Canopy Diameter = 19m  
 Canopy Area = 283m<sup>2</sup>  
 Typical lot area = 2000m<sup>2</sup>  
 $30\% \times 2000 = 600\text{m}^2$   
 $600\text{m}^2 / 283\text{m}^2 = 2.1$   
 White Oak Trees per lot



10. Red Oak  
 Maturity Height = 19m & Canopy Diameter = 14m  
 Canopy Area = 154m<sup>2</sup>  
 Typical lot area = 2000m<sup>2</sup>  
 $30\% \times 2000 = 600\text{m}^2$   
 $600\text{m}^2 / 154\text{m}^2 = 3.89$   
 Red Oak Trees per lot



11. Bur Oak  
 Maturity Height = 18m & Canopy Diameter = 24m  
 Canopy Area = 452m<sup>2</sup>  
 Typical lot area = 2000m<sup>2</sup>  
 $30\% \times 2000 = 600\text{m}^2$   
 $600\text{m}^2 / 452\text{m}^2 = 1.3$   
 Bur Oak Trees per lot



12. American Basswood  
 Maturity Height = 20m & Canopy Diameter = 12m  
 Canopy Area = 113m<sup>2</sup>  
 Typical lot area = 2000m<sup>2</sup>  
 $30\% \times 2000 = 600\text{m}^2$   
 $600\text{m}^2 / 113\text{m}^2 = 5.3$   
 American Basswood Trees per lot



13. White Cedar  
 Maturity Height = 10m & Canopy Diameter = 3.4m  
 Canopy Area = 9m<sup>2</sup>  
 Typical lot area = 2000m<sup>2</sup>  
 $30\% \times 2000 = 600\text{m}^2$   
 $600\text{m}^2 / 9\text{m}^2 = 66.7$



14. Balsam Fir  
 Maturity Height = 15m & Canopy Diameter = 6.7m  
 Canopy Area = 35m<sup>2</sup>  
 Typical lot area = 2000m<sup>2</sup>  
 $30\% \times 2000 = 600\text{m}^2$   
 $600\text{m}^2 / 35\text{m}^2 = 17.1$

$600\text{m}^2 = 66.6$  White  
Cedar Trees per lot

$35\text{m}^2 = 54.5$  Balsam  
Fir Trees per lot



#### 15. Trembling Aspen

Maturity Height =

18m & Canopy

Diameter = 24m

Canopy Area =

$452\text{m}^2$

Typical lot area =

$2000\text{m}^2$

$30\% \times 2000 = 600\text{m}^2$

$/ 452\text{m}^2 = 1.3$

Trembling Aspen

Trees per lot

# FOREST LAKE ESTATES LAWN CARE AND WEED CONTROL

## Weed Control Program

### **GOOD LAWN CARE PRACTICES:**

One of the primary ways that a weed-free lawn can be maintained easily, cheaply and with a minimum of effort is through good lawn care practices which encourage the natural vigorous growth of turfgrass. Most weeds cannot compete with dense, healthy turf. The most important practices for weed control are detailed below.

### **MOWING:**

Regular mowing induces the sod to become thick and dense. Grass should be cut at a height of 2.5" to 3"; any shorter may cause an invasion of weeds. In addition many weeds cannot survive having their tops repeatedly cut off.

### **AERATING:**

Aerating removes plugs of dirt from the lawn so that air, water and nutrients can reach the roots. Over time, soil can become hard and compacted; therefore, by aerating regularly (spring and fall) you will loosen up the soil and feed the roots. Aerators can be rented from a rental company or you can hire a landscape company to do this for you.

### **FERTILIZING:**

According to the Ontario Ministry of the Environment, late summer or early fall is the best time to apply fertilizer. They can also be applied in the early spring.

In order to minimize any adverse affects on the lakes, use "organic" fertilizers (meaning most of the nitrogen is water insoluble).

The following brands of fertilizers may be used if necessary. Follow the manufacturer's instructions with respect to quantities:

- CANAGRO VIGORO Natural Fertilizing 5-4-7
- NUTRITE Vitroorganic 8-2-0
- CIL Mother Earth 100% organic Summer Lawn Food 8-2-0
- SO-GREEN Envirosoft 6-2-0
- MILGANIT Green & Fairway Fertilizer 6-2-0

**Tip:** Leave your lawn clippings on the lawn after you mow — they make an ideal (and free) fertilizer. As they break down they release nitrogen into the soil. Use compost or all-organic fertilizer in the fall to feed the roots of your lawn.

### **DETHATCHING:**

Excessive thatch can lead to poor grass growth and weed encroachment. Dethatch in the spring.

### **WATERING:**

During a period of drought, to prevent weeds from becoming established it is important to give one weekly soaking. Frequent light waterings encourage germination of shallow rooted weeds such as crab grass and creeping bent grass.

### **RESEEDING:**

Reseed sparse areas before weeds become established.

### **PULLING BY HAND:**

If there are only a few weeds, pulling them by hand or with hand tools may be preferable to other methods of weed control. This not only gets rid of the immediate problem but also prevents those plants from producing seeds resulting in more weeds later in the season or in the following years.

## **HERBICIDES:**

On April 22, 2009, Ontario's ban on cosmetic pesticides came into effect. The use of pesticides to control pesky weeds and insects for purely cosmetic reasons is an unnecessary risk to our families and pets, especially when you can have a healthier lawn and garden without chemicals.

The Ontario government listened to medical experts – like the Canadian Cancer Society – who have made a convincing case for reducing our exposure to pesticides, particularly children who are generally more susceptible to the potential toxic effects of pesticides.

While it means that many herbicides, fungicides and insecticides can no longer be sold or used for cosmetic purposes on lawns and gardens, you can still have a beautiful lawn and garden using natural methods and greener alternatives. Gardeners can still purchase and use certain lower risk pesticides and biopesticides to manage weeds, insects and plant diseases. The biopesticides are those designated by Health Canada's Pest Management Regulatory Agency. Lower risk pesticides have characteristics such as low toxicity to humans, minimal impact to the environment, and act in a non-toxic way in controlling intended pests. You can view a list of these products in their entirety on the ministry's website at [www.ontario.ca/pesticideban](http://www.ontario.ca/pesticideban). To search for a specific product, use the new database on the ministry website: <http://app.ene.gov.on.ca/pepsis>.

Under provincial pesticide legislation, a pesticide must be registered under the Pest Control Products Act administered by Health Canada's Pest Management Regulatory Agency and classified for legal sale and use in Ontario. These pesticides must only be used according to label directions.

Tip: Corn Gluten Meal is also a great way to keep lawn weeds at bay. Available at most garden centres, it works to inhibit growth during seed germination. Apply in the early spring and wait at least 4 weeks before over-seeding.

## **GARDENS:**

There are no herbicides available for weed control in established gardens and flower beds without the risk of damaging or killing desirable flowers and shrubs. Usually one must resort to pulling by hand, hoeing, competition and/or mulching.

## **HOEING:**

A single hoeing will kill most annual weeds by cutting off all weeds to just below the ground surface. Perennial weeds are more persistent but repeated hoeing throughout one growing season will kill most and repeated hoeing into the second season will kill the rest.

## **COMPETITION:**

Planting flowers and shrubs closer together than usually recommended may interfere with their shape and productivity, however, by shading the soil it can reduce the number of late germinating weeds.

## **MULCHING:**

Mulch, particularly when used with landscape fabric, is effective in preventing weed growth. It also conserves moisture and moderates soil temperatures. Mulches can be organic (such as bark or wood chips) or inorganic (such as stones, pea gravel or brick rubble).

## **FERTILIZER FREE GARDENS**

The following expands upon information previously distributed concerning "fertilizer free gardens" and provides an extended plant list.

On all lots, but particularly waterfront lots, it is encouraged that "fertilizer free gardens" be planted. Unlike lawns and most other garden plants, the plants listed below require little topsoil and no fertilizers to grow. Keep in mind that on waterfront lots, mature height of plants within 75 ft. of the water must be less than 3 ft.

Most of the following "fertilizer free" plants listed below are native plants and all are very hardy in the Ottawa area. They are commonly found in local nurseries:

**TREES:**

- White Spruce (*Picea Glauca*)
- Norway Spruce (*Picea Albies*)
- Austrian or Black Pine (*Pinus Nigra*)
- White Pine (*Pinus Strobus*)
- Canadian r Eastern Hemlock (*Tsuga Canadensis*)
- Eastern White Cedar (*Thuja Occidentalis*)

**SMALL TREES/LARGE SHRUBS:**

- Amur Maple (*Acer Ginnala*)
- Serviceberry or Shadblow (*Amelanchier Canadensis*)
- Red Osier Dogwood (*Cornus Stolonifera*)
- Russian Olive (*Elaeagnus Angustifolia*)
- Choke Cherry (*Prunus Virginiana*)
- Mountain Ash (*Sorbus Americana*)
- Common Lilac (*Syringa Vulgaris*)
- Nannyberry or Wayfaring Tree (*Viburnum Lentago*)
- High Bush – Cranberry (*Viburnum Tribobum*)

**SMALL SHRUBS/PERENNIALS:**

- Meadow Sweet (*Filipendula*)
- Potentilla or Cinquefoil (*Potentilla Friuticosa*)
- Rugosa Rose (*Rose Rugosa*)
- Raspberry (*Rubus*)
- Arctic Willow (*Salix Purpurea Gracilis*)
- Snowberry (*Symphorecarpos Albus*)

**GROUNDCOVER:**

The following plants are good for shady locations:

- Japanese Spurge (*Pachysandra Terminalis*)
- Periwinkle (*Vinca Minor*)

It is highly recommended that for waterfront lots, instead of a lawn, a “fertilizer free garden” of the following ground cover plants, which thrive in full sun, be grown within 20 ft. of the lake along at least 75% of the length of the shoreline. They will absorb nutrients before they enter the lake, thus minimizing aquatic plant and algae growth. In addition they will minimize soil erosion into the lake. They can also be used for other areas of your garden.

- Adjudge or Boggled (*Adjudge Reptans*)
- Bearberry (*Arctostaphylos Uvaursi*)
- Trumpet Vine (*Campis Radicans*)
- American Bittersweet (*Celastrus Scandus*)
- Virginia Creeper (*Parthenocissus Quinquifolia*)

Landscaping Companies that are 100% pesticide-free:

**Disclaimer:**

The City of Ottawa has striven for accuracy in these listings but recognizes that they may not be complete. To update the listings or to be added to either of the lists, please call 613-724-4227.

The material provided is for information only and should not be construed as professional advice. The listing or omission of companies does not constitute an endorsement or disapproval by the City of Ottawa.

- Appleseed Organic Lawn Care 613-224-7336
- Artistic Citywide Rototilling & Aeration 613-769-7079

- Avant Gardeners 613-839-0280
- B&C Landscaping 613-523-1952
- Forevergreen Canada Inc. 613-730-9595
- Hansen Lawn & Garden Ltd. 613-260-8175
- Natural Choice 1-866-GRUB-GUYS (613-823-9257)
- Nature's Way Design Company – Consultant Services 613-831-1852
- Precision Landscape Group Inc. 613-721-6337
- The Pond Clinic (Turf Grass Alternatives) 613-225-POND (613-225-7663)
- Turf's Up Landscaping & Property Maintenance Inc. 613-596-3127

## 5.0 MANAGEMENT RECOMMENDATIONS AND MITIGATION MEASURES

In accordance with the guidance document (TRCA/CVC, 2014), HDFs classified as valued functions require conservation; these are typically features characterized by valued or contributing hydrology contributing fish habitat and important riparian habitats, and may include seasonal fish habitat with woody riparian cover or general amphibian habitat with wood riparian cover. In this instance, the presence of woodland forest cover in the riparian area, is what drives the classification into valued functions and recommends conservation as a management strategy for all the HDFs identified on-site.

As outlined in the guidance document, conservation management includes: maintaining, relocating, and/or enhancing the existing feature and riparian zone corridor; restoring lost functions through enhanced lot level controls; maintaining or replacing on-site flows using mitigation measures; maintaining or replacing external flows; and feature must remain connected to downstream features.

In addition to the management recommendations for any alterations to the watercourse, the following mitigation measures are provided by GEMTEC in order to minimize or eliminate potential impacts to fish habitat.

- All future development and construction activities within the study area, including ditching, culvert installation, erosion and sediment control and storm water management should be completed in accordance with Ontario Provincial Standard Specification 182 and OPSS 805.
- No in-water work should occur between March 15 and June 30 of any year to protect potential downstream fish habitat beyond the development area.
- When native soil is exposed, sediment and erosion control work in the form of heavy-duty sediment fencing shall be positioned along the down gradient edge of any construction envelopes adjacent to waterbodies.
- The development plan should include lot-side swales and/or road side ditches designed to promote infiltration.
- In order to protect potential downstream fish habitat from contamination, it is recommended that all machinery be maintained in good working condition and that all machinery be fueled a minimum of 30 m from the high water mark.
- Any temporary storage of aggregate material shall be set back from the water's edge by no less than 40 m and be contained by heavy-duty silt fencing.
- Septic systems shall be installed no closer than 30 m from the high water mark of any surface water feature.

## Septic System Information

Taken from "The Living by Water Project"

<http://www.livingbywater.ca/septic.html>

Septic systems are particularly common on rural and cottage properties, therefore it is very important for shoreline residents to have a strong knowledge of them. Waterfront properties, which tend to have wetter soils, can pose extra challenges for septic systems. Soil conditions can make your system less efficient in treating wastewater and allow harmful pollutants to get into the water body you live beside. As a waterfront resident, you must pay particular attention to your septic system. Septic systems are a good way to treat waste – so long as they are functioning properly. If you are not connected to a municipal or private sewage treatment system, you most likely have an on-site septic system to treat the sewage from your household. Although out of sight, please don't put your septic system out of mind! Faulty septic systems can be extremely hazardous since improperly treated effluent can harm both the homeowner's health and the health of the environment. It is in your best interest to maintain your system. If you don't, you risk contaminating your water and, ultimately, your family's health. However, if you, as the homeowner, take responsibility for your own system by properly maintaining it, you should not be forced to deal with such problems.

1. Pumping your tank on a regular basis is the most important step you can take to ensure the health of your family and water body.
  - We recommend that as a waterfront resident you pump out your tank every year. Annual pumping is excellent insurance. A family of four with a 1,000 gallon tank would normally pump every two years. However, for waterfront residents, the more frequent pumping helps rid your tank of phosphorus and nitrogen which can make their way into surface water.
  - While your tank is being pumped, be sure to have your contractor check that the inflow and outlet pipes are free of blockages, and to also check the condition of your distribution box. Concrete distribution boxes tend to corrode, so regular checking is advisable.
  - When pumping, make sure your contractor retains some sludge along the walls in order to provide enough material to restart the septic action.
  - Keep a detailed record of repairs, pumpings, inspections, permits issued, and other maintenance activities.
  - If you have only a septic holding tank, you will obviously need to pump more often, as frequently as every week or two, depending on usage and size of tank.
2. One half of all septic system failures are a result of poor maintenance. Think of your septic system like buying a new car; regular maintenance helps protect your investment. To keep your system trouble-free, follow the three M's — maintain, maintain, maintain!
  - Conserve water
  - Pump your tank regularly
  - Avoid septic stimulators and additives
  - Give your septic system a healthy diet
  - Take precautions to protect your system – don't drive or park vehicles on top of your drainfield
3. Products marketed as septic tank "cleaners," "starters," or "enhancers" are unnecessary, expensive, and can potentially shorten the life of your septic field. They do not replace the need for regular pumping. In some areas, they're illegal! The bacteria in human sewage are sufficient to provide septic action, so you do not need a starter. Nor will your solid sewage disappear because of a "miracle product". You do not want your solids to break up; you want them to settle out to the bottom of your tank. This way, you are making sure that the effluent leaving your tank into the drainfield is as clear as possible. Your solids will accumulate on the bottom of the tank over time, which is why it is important to have your tank pumped out regularly. This is the safest way to have your solid sewage removed. Myths about septic systems have encouraged people to put

hamburger or a dead chicken into their system to increase the presence of bacteria. Not only does this add to the solid waste in your tank, it is completely unnecessary as your system creates more than enough beneficial bacteria on its own.

4. Here are some do's and don'ts:

**DO**

- Ensure the base of the excavated area for the tank is level, free of rocks and has a minimum of 10 cm compacted bedding sand. This prevents settling problems and/or fracture cracks in the concrete caused by the weight of the tank and its contents.
- Keep grass, trees, and shrubs downhill of your drainfield. A thick buffer of shrubs between the field and surface water helps absorb excess nutrients that might otherwise enter the water and cause exaggerated aquatic plant growth.
- After installation, spread your topsoil over the new field and re-vegetate as soon as possible. Let grass grow at least three inches (8 cm) high to promote better absorption of discharge.
- Direct roof, driveway, and other run-off away from your septic tank, distribution box, and drainfield to avoid adding extra water to the soil. If necessary, contour the ground to create shallow ditches or swales.  
**CAUTION:** You may need to spread extra soil over your field after a year or so if it compacts after backfilling. This prevents stormwater and snowmelt from pooling over the drainfield.
- Use heavy duty sewer pipe under any road crossings or parking areas.
- Mark the location of your septic tank and distribution box with a concrete tile or stake for ease of locating in the future. Keep a detailed record of repairs, pumping, inspections, permits issued, and other maintenance activities.
- After the first year or so that your system has been in operation, open and expose the distribution box to check for even distribution of effluent. If the distribution box has sunk or tipped, use "flow levellers".

**DON'T**

- Plant trees or shrubs too close to your field or tank. Roots can cause damage and clog your drainfield (especially willows and poplars).
  - Change your lot's drainage pattern.
  - Bury your drainfield under landscaping materials (such as plastic) or pavement; water must evaporate from the drain field for it to work efficiently.
  - Bury your septic tank under a driveway or deck, making it inaccessible for inspections and pumping.
5. Any of the following indications are signs of possible trouble:
- The lawn over the drainfield has patches of abnormally healthy-looking grass.
  - There are soggy areas, areas with surfacing grey water, or areas with surfacing sewage on or near to the drainfield.
  - The lawn above the drainfield is wet.
  - Sewage begins backing up in the toilet and drains.
  - The sinks, showers and toilets drain more slowly.
  - There is a sewage odour over the area of your drainage field.

Immediately report septic system malfunction to the local office in your area responsible for on-site sewage system permits. While none of us wants to have fingers pointed at us, the alternative of not reporting your problem is potentially far worse. Your delay could cause widespread contamination of drinking water for many people. Local officials will work with you to develop a plan to remedy the situation. Repairs can range from clearing a few lines to replacing entire drainfields and removing contaminated soil. Depending on how long the problem has gone unnoticed and uncorrected, costs can range from a few hundred to thousands of dollars. Prevention of problems is the best alternative!

6. Septic systems thrive on human waste, but some things give them a stomach ache.

**DO**

- Use basket strainers in all your sinks to catch hair – a big problem for septic systems and guaranteed to shorten the life of your field!
- Look for liquid detergents or concentrated detergents that don't have phosphates in them.
- Use a dry well for backflushing water softeners, instead of releasing it into your system.
- Use a lint filter on your washing machine; lint is a major source of solids that clog drainfields, especially from the fibres from synthetic clothing which clog the pores of the soil and do not break down as natural fibres do. A stainless steel filter is available through [www.septicprotector.com](http://www.septicprotector.com).

**DON'T**

- Flush facial tissue, paper towels, coffee grounds, tea leaves, fats or grease, cigarette butts, filters, sanitary napkins, newspaper, disposable diapers, condoms, metal or metal items. All of these items can clog your tank and field.
- Don't use a garburetor. It adds solids which can be flushed into your drainfield.
- Avoid disinfectants like bleach which kill beneficial bacteria in your tank.

**NEVER**

- Never use caustic toilet bowl cleaners and drain cleaners which are very toxic to the beneficial bacteria in your tank. This results in sewage passing through without proper treatment.
- Never pour chemicals like paint, solvents, thinners, nail polish remover, kerosene, antifreeze, gas, or oil down drains; these can seep into ground water and poison our drinking supply.

7. One key to a healthy septic system is to minimize water use in order to keep solid sludge well settled on the bottom of the tank. Excessive water flowing into the septic tank, from overuse of toilets, laundry, dishwasher, showers, and baths, can cause the sludge to be disturbed and allow the solids to pass out of the tank and into your distribution box.

These solids can clog your distribution box, your drainfield pipes and even your drainfield. When this happens, the liquid will not properly drain down through the gravel into the soil. The effluent will then be forced upwards without having gone through the second soil 'friendly bacteria' treatment process and untreated sewage may appear on the ground's surface. Or, your septic system could back up.

- Use low flush toilets and water saving faucets and shower heads.
- Check your plumbing frequently for leaks – a leaky toilet or dripping tap can double the amount of water discharged in a day.
- Spread your laundry throughout the week.
- Add a weight to your toilet's tank to reduce the water volume. Use a plastic bag filled with water. (Avoid bricks as they can disintegrate and clog your plumbing.)

WELCOME TO HALTON-HAMILTON SOURCE PROTECTION REGION

## Working to protect your drinking water sources

Our water resources are vital to all aspects of our lives, including our health. It is important that we ensure there is a clean and abundant source of drinking water – for now and in the future. Ontario's *Clean Water Act, 2006* provides for a community initiative where municipalities, residents, business owners, provincial agencies, conservation authorities and others work together to protect existing and future drinking water sources.

Under the *Clean Water Act*, Conservation Halton and the Hamilton Conservation Authority together form the Halton-Hamilton Source Protection Region. They support a local multi-stakeholder, decision-making Source Protection Committee. Explore our website to learn more about the underlying science and the policies that protect municipal drinking water sources of Lake Ontario and groundwater aquifers, which serve 95% of the residents in the Halton-Hamilton watersheds.



### news

Resources from Public Consultation on Source Water Protection Updates

Article on Protecting Natural Assets through Watershed Management to ensure clean, abundant Drinking Water Sources!

Taps and Towns: Podcast with Carla Coveart on Drinking Water Sources!

[View more news articles](#)

### calendar

[View more calendar events](#)



Have you seen these road signs? They are installed by the Ontario Ministry of Transportation and the City of Hamilton to mark the location of drinking water vulnerable areas and the need to protect drinking water sources. Spills along roads can contaminate our sources of drinking water. If a spill occurs in a vulnerable area, emergency responders will be reminded to inform the Spills Action Centre  
<https://www.ontario.ca/page/report-pollution-and-spills>

This project has received funding support from the Government of Ontario.



# WHAT LANDOWNERS CAN DO TO PROTECT WATER: Quality & Quantity

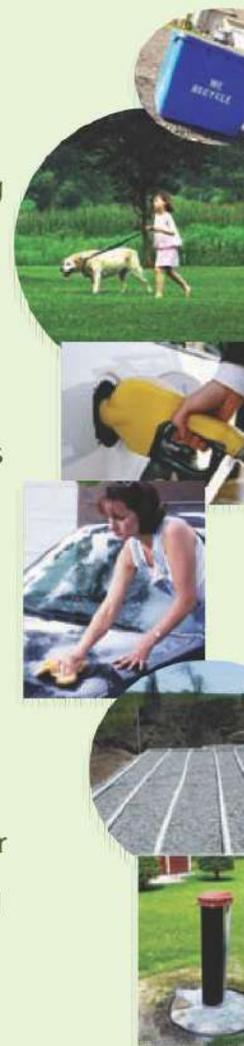
## Everyone, Everyday



### Water Conservation In the Yard:

- Use a rain barrel to catch water from your eavestrough downspout and use this to water your lawn and garden.
- Detect and repair leaks in hoses and sprinklers outdoors.
- Use a broom to clean your driveway – not your garden hose.
- Plant native groundcover, plants and grasses that are heat and drought resistant, require less water and care, and are cheaper to maintain.
- If you do have a lawn, keep it well aerated, mow high and water it only in the early morning or late evening and only as much as needed, which is about 2-3 centimetres per week.
- In the case of walkways and patios, consider using interlocking paving stone to minimize runoff and maximize water retention in the soil.

- **Be an avid recycler.** Recycling paper products, glass, metals and plastics cuts down on pollution and also reduces the amount of water we use. Manufacturing recycled paper uses 58% less water than making paper from virgin wood pulp. Making glass from recycled materials cuts related air pollution 20% and water pollution 50%.
- **Dispose of hazardous waste properly.** Take unused paints, cleaners, pesticides, and medical prescriptions to your local hazardous waste facility. Take used engine oil to recycling facilities. Use drop cloths or tarps when working with hazardous materials such as paints, driveway sealers or wood stain to prevent spills from leaking into the ground. If a spill occurs, clean it up with an absorbent material such as kitty litter or sawdust and scoop the contaminant into a container.
- **Use non-toxic products for cleaning** and environmentally-friendly soaps, shampoos and personal care products. Remember that what you use in your house goes back down your drain.
- **Clean up pet waste** which contains nutrients and pathogens that can run into storm sewers during a rain storm.
- **Prevent pollutants from entering into runoff** by reducing or eliminating the use of pesticides, fertilizers, sidewalk salts and by not over-watering your lawn.
- **Take care when refueling gas tanks** for cars, lawn mowers, chainsaws, weed trimmers or other machinery to avoid spilling fuel on the ground. Also take care when changing engine oil. One litre of gas or oil can contaminate a million litres of groundwater.
- **Take your car to commercial car washes** designed to prevent pollutant runoff from entering storm sewers. Use commercial car washes that use water efficient sprays, reducing their water consumption.
- **Keep your septic system in proper working order** and empty the tank regularly.
- **Protect and maintain your private well.** Wells provide pathways for contaminants to enter the groundwater. If you have a well be sure it is sealed properly and if you own a well you no longer use, have it properly decommissioned by a licensed well technician. Test your well water regularly to ensure the water is safe to drink.
- **Stay informed and get involved** in your local source protection process. To find a Drinking Water Source Protection Planning Region or Area near you go to [www.conservationontario.ca](http://www.conservationontario.ca)



# WHAT LANDOWNERS CAN DO TO PROTECT WATER: Quality & Quantity

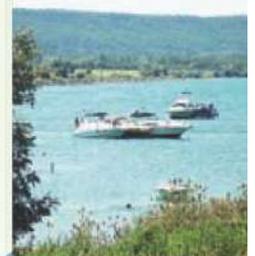
## If you run an Agricultural Operation:

- **Prevent pollutants from seeping into the ground or entering into runoff** by reducing or eliminating the use of chemicals and fertilizers on your land. If you haven't already, consider developing and implementing a Nutrient Management Plan.
- **Manage animal waste on farms** to prevent water contamination. If you operate a farm, contact your local Ontario Soil and Crop Improvement Association (OSCIA) at [www.ontariosoilcrop.org](http://www.ontariosoilcrop.org) or your local conservation authority at [www.conservationontario.ca](http://www.conservationontario.ca) for information about workshops you can take to assist you in developing an Environmental Farm Plan (EFP) for your farm business.
- **Protect the vegetation along the banks of ponds, streams and lakes** to help control erosion, provide food for aquatic life, and maintain cooler water temperatures necessary for some species of fish.
- **Manage livestock grazing.** Overgrazing exposes soil and increases erosion. Keep livestock out of ponds, rivers and streams and other sensitive areas such as wetlands. This not only protects the natural areas around the pasture, but keeps your herd productive and happy. For information on local funding programs to assist you with fencing and other projects contact your local conservation authority.
- **Store chemicals in a dry, properly ventilated and secure area.** Keep chemicals and pesticides away from surface water, wells and other vulnerable areas.
- **Properly install and operate fuel storage tanks** to prevent spills.



## If you own Land Along or Around Water:

- **Maintain a natural shoreline.** A buffer zone covered with native plants reduces the contaminants that enter the water.
- **Confine water access** to 10 percent of your total water frontage.
- **Avoid bringing sand from an outside source** to create any artificial beach areas.
- **Wash your boat on land** using non-toxic cleaners.
- **Use biodegradable soaps** when you wash yourself, your dishes or your clothes and never wash in a lake, river or stream.
- **Keep boat motors properly maintained** or upgrade to a more efficient four-stroke motor if possible.
- **Take care when refueling** boats, lawnmowers or other machinery when you are near or on the water.



# WHAT LANDOWNERS CAN DO TO PROTECT WATER:

Quality & Quantity

## For More

**water saving tips**

these are some great websites you can access:



### **The Groundwater Foundation:**

[www.groundwater.org](http://www.groundwater.org)

### **Environment Canada:**

[www.ec.gc.ca/water/en/info/pubs/e\\_pubs.htm](http://www.ec.gc.ca/water/en/info/pubs/e_pubs.htm)

### **Earth 911:**

[www.earth911.org/water](http://www.earth911.org/water)

### **US Environmental Protection Agency:**

[www.epa.gov/nps/chap3.html](http://www.epa.gov/nps/chap3.html)

### **Water Use it Wisely:**

[www.wateruseitwisely.com](http://www.wateruseitwisely.com)

## **For More Information on Protecting Water in Your Area**

Please contact your local Source Protection Region or Area:



**Conservation  
ONTARIO**  
*Natural Champions*

120 Bayview Parkway, Box 11,  
Newmarket, ON L3Y 4W3  
Tel.: 905.895.0716  
Fax: 905.895.0751  
[info@conservationontario.ca](mailto:info@conservationontario.ca)



# [www.conservationontario.ca](http://www.conservationontario.ca)

For more information on the Source Protection Program, please visit the Ministry of the Environment's website:

[www.ontario.ca/cleanwater](http://www.ontario.ca/cleanwater)

**Emerald Subdivision  
Sunset Lakes Developments  
Design Review Application**

Please complete the Word version of this application and submit to Sunset Lakes Developments at [sunsetlakes@rogers.com](mailto:sunsetlakes@rogers.com) or print, complete and deliver (in person, by mail or fax) a hardcopy to Sunset Lakes Developments, 1705 Old Prescott Road, Greely, Ontario, K4P 1M8. Please allow up to 30 days for a response.

Please ensure that your submissions and supporting documents are on letter or legal size paper, to allow for more efficient communication via e-mail.

Lot: \_\_\_\_\_ Plan: 4M-\_\_\_\_\_ Civic Address: \_\_\_\_\_

Date Submitted by Owner: \_\_\_\_\_ Date Approved: \_\_\_\_\_

Name of Owner: \_\_\_\_\_

Address: \_\_\_\_\_

Email and/or Phone Number \_\_\_\_\_

I hereby apply for design review approval and attach herewith the following documents. I/we acknowledge that we cannot deviate from the design review approval without the written consent of Sunset Lakes Developments.

---

**Signature of Applicant**

**Enclosures:**

- elevations
- floor plans
- site plan
- specifications
- tree planting and conservation plan (Please provide a sketch indicating where on the lot trees will be cleared to make room for the home, well and septic system, as well as identify where trees will be planted after home construction is complete, indicating the type of species where possible)

Post Development Site Visit with OA Representative (mandatory):

Date Scheduled: \_\_\_\_\_ Date Conducted: \_\_\_\_\_ By Whom: \_\_\_\_\_

- Confirm Tree Planting & Conservation Compliance with Approved Sketch

**To be filed by builder:**

- Certificate of Well Compliance
- Well Record (provided by well driller)
- Certificate of Completion (provided by Ottawa Septic System Office)
- Occupancy Permit (provided by City Inspector, City of Ottawa)

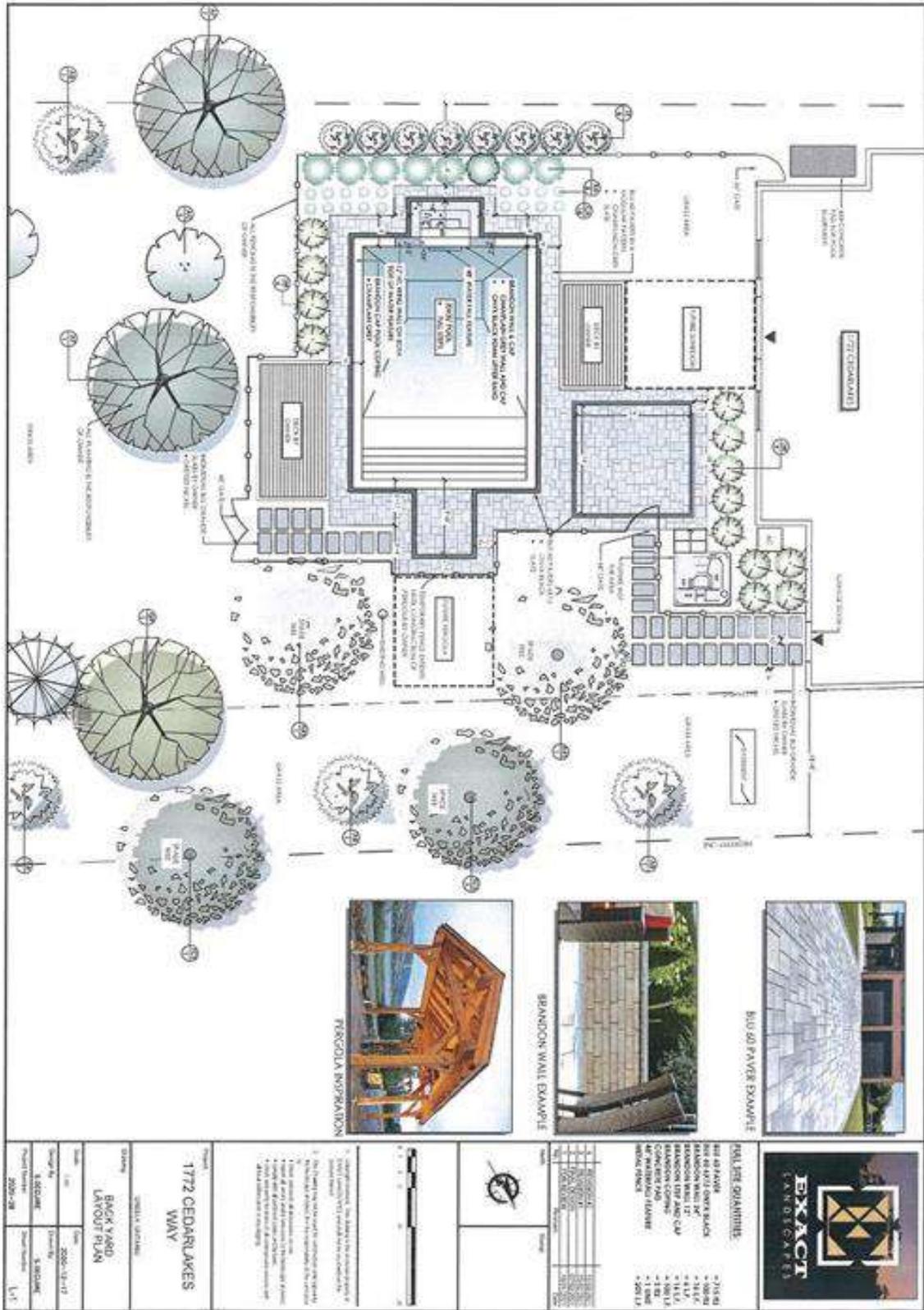
**Please note that your culvert must be installed according to City specifications. The ditch must be left in its original state and no obstructions to the flow of drainage are permitted.**

Reference material with regard to swimming pools, fences, sheds etc. is available on line at

[www.sunsetlakes.ca](http://www.sunsetlakes.ca) (See Important Information – Design Review Information)

Review the Seven Deadly Sins of Home Design at [www.sunsetlakes.ca](http://www.sunsetlakes.ca) (See Important Information – Design Review Information – Seven Deadly Sins of Home Design)

# EXAMPLE OF TREE PLAN SUBMISSIONS #1



# EXAMPLE OF TREE PLAN SUBMISSIONS #2

## DETAILS

POOL 16'x42' WITH 16' FULL SIZE INTERIOR STAIRCASE

LIGHTING USING IN-LITE PRODUCT, QTY=11 LIV BOLLARDS LIGHTING AND QTY= 12 SCOPE UP LIGHTING AS PER CATALOG

PERMACON MEGA SLAB RETAINING WALL LARGE BLOCK 15" H X 48" W X 7" TH PRE-CAST SEE ILLUSTRATED ENGINEERED SPECIFICATIONS NEEDED TO SUSTAIN MOVEMENT TO THE WALL 28" ELEVATION ABOVE PATIO SURFACE WITH 7" BURIED TOTAL HEIGHT OF MATERIAL 35" IN COMPACTED MATERIAL WITH 24FT. STAIRCASE

POOL PATIO AREA AND UPPER WALKWAY TOP AND BOTTOM AREAS, PORCELAIN 24"X48" INSTALLED WITH RAISED LOUNGE AREA MADE WITH POURED CONCRETE FINISH TBSI.

POOL EQUIPMENT AREA WITH EXTERIOR SALT SYSTEM AND ELECTRICAL WEATHER PROOF ELECTRICAL PANEL.

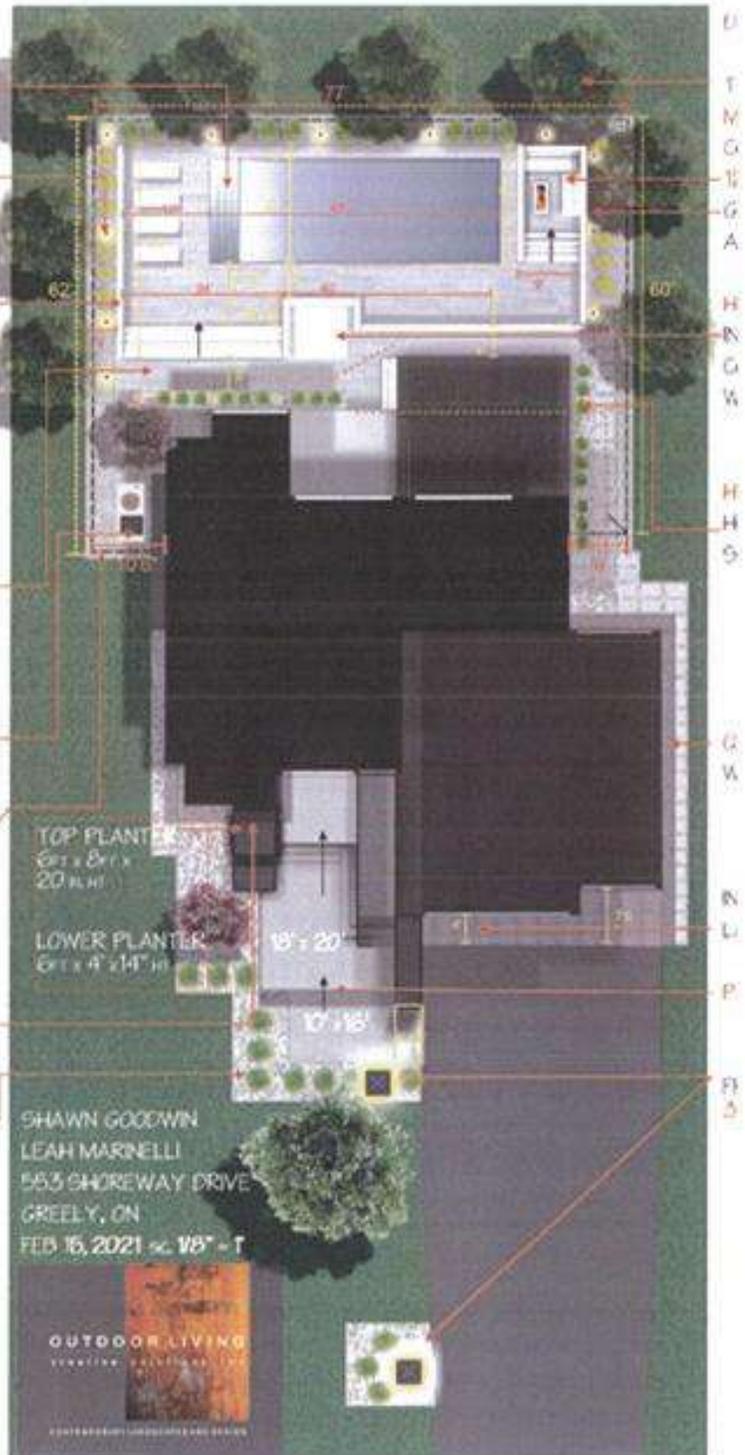
IRON FENCE AS SHOWN IN PHOTOS PREVIOUS SENT WITH 5' HEIGHT FENCE 225 LIN. FT. QTY: 1 - 4' GATE POOL LEGAL ACCORDANCE CITY OF OTTAWA BUILDING PERMIT

FRONT PLANTER AS PER DESIGN, ALUMINUM POWER COAT FINISH COLOUR MATCH TO EXTERIOR DOORS, DESIGNED WITH 2 LEVELS

GARDEN PREPARED WITH WEED BARRIER AND PROPER GRAVEL, FINISHING

### Engineered requirements for all work to be performed

The bearing medium evaluation consists of a silty sand. Excavation of all existing backfill is required as well as loose silty sand below the freshly backfilled areas so that all foundations for the swimming pool and stone walls can sit on high density 95% SPMDD This has to be executed according to the soil testing that was performed in June of 2020, by the Paterson Group Engineers. Sub grade materials will consist of OPSS B2 - 3/4" Granular A crushed stone and compacted with high pressure diesel roller equipment.





## BIBLIOGRAPHY

- “A Guide to Tree Planting.” Tree Planting Guide. <http://www.treecanada.ca/publications/guide.html> (January 28, 2003).
- “A Tree’s Value – Eight Important Points.” Forestry. <http://www.forestry.about.com/library/weekly/aa060400a.html> (January 29, 2003).
- “Alternative Stormwater Management Practices for Residential Projects.” Improving Quality & Affordability.  
[http://www.cmhc-schl.gc.ca/en/imquaf/himu/wacon/wacon\\_027.cfm.html](http://www.cmhc-schl.gc.ca/en/imquaf/himu/wacon/wacon_027.cfm.html)  
(January 29, 2003).
- “An Overview of Canada’s Forests.” The State of Canada’s Forests 2001-2002.  
[http://www.nrcan-rncan.gc.ca/cfs-scf/national/what-quoi/sof/sof02/overview\\_e.html](http://www.nrcan-rncan.gc.ca/cfs-scf/national/what-quoi/sof/sof02/overview_e.html) (January 28, 2003). “Benefits of Planting Trees.” Tree Planting Program. <http://www.greenventure.on.ca.html> (January 29, 2003).
- “Canada’s National and Provincial Trees.” Tree Planting Guide. <http://www.treecanada.ca/publications/canadastrees.html> (January 28, 2003).
- “Drinking Water Source Protection” Government of Ontario  
<https://cleanwatercattaraqui.ca/PDFs/CSPA/WhatCanYouDo/WhatLandownersCanDo.pdf> (February 2009).
- “Facts and Guidelines on Planting Trees.” Forestry. <http://www.forestry.about.com/library/weekly/aa081097a.html> (January 29, 2003).
- “Green Side Up – A Guide to Tree Planting.” Northern Forestry Centre. [http://nofc.cfs.nrcan.gc.ca/publications/treecare/greenside\\_e.php.html](http://nofc.cfs.nrcan.gc.ca/publications/treecare/greenside_e.php.html) (January 29, 2003).
- “If You Own Land.” Taking Action. <http://www.creditvalleycons.com/takingaction/ownland.html> (January 29, 2003). “Planting Instructions.” Tree Planting Program. <http://www.greenventure.on.ca.html> (January 29, 2003).
- “Ten Commandments for Seedling Survival.” Forestry. <http://www.forestry.about.com/library/weekly/aa121299.html> (January 29, 2003).
- “Tree Planting Tips – Caring for Your Trees.” Tree Planting Tips.  
[http://ecokids.earthday.ca/pub/eco\\_info/topics/climate/tree\\_planting/caring\\_for\\_trees.cfm.html](http://ecokids.earthday.ca/pub/eco_info/topics/climate/tree_planting/caring_for_trees.cfm.html) (January 29, 2003).
- “Tree Trivia – Benefits of Urban Trees.” Tree Planting Guide. <http://www.treecanada.ca/publications/trivia.html> (January 28, 2003).
- “Tree Trivia – Why Plant Trees.” Tree Planting Guide. <http://www.treecanada.ca/publications/why.html> (January 28, 2003).
- “Tree Types & Descriptions.” Tree Planting Program. <http://www.greenventure.on.ca.html> (January 29, 2003). “Types of Trees in Ontario.” <https://www.ontario.ca/> (March, April 2018).