



Report to: Environmental Issues Committee

Meeting Date: TBD

SUBJECT: Markham Trees for Tomorrow Fund: Funding Report 2016
PREPARED BY: Nory Takata, Parks Planner - Operations Ext. 3226

RECOMMENDATION:

- 1) That the funding application for 10,000 Trees for the Rouge in the amount of \$19,000, for their 27th Annual Wildlife Habitat Restoration Project in the South-east section of Milne Park be approved;
- 2) And that the funding application for Friends of the Rouge Watershed in the amount of \$19,500 to support their 2016 Restoration Project proposal to restore more than 2 hectares of new forest cover by planting 3,500 trees and 1,000 shrubs at 3 sites in the Rouge Watershed be approved;
- 3) And that the funding application for Evergreen in the amount of \$24,000, for their Watershed Champions: Community Greening Initiative, be approved;
- 4) And that the funding application for LEAF (Local Enhancement and Appreciation of Forests) in the amount of \$16,700 to support LEAF's Backyard Tree Planting Program be approved;
- 5) That the total amount of \$79,200 be funded from the 2016 Markham Trees for Tomorrow Capital Project account #700-101-5399-16171;
- 6) And that Staff be authorized and directed to do all things necessary to give effect to this resolution.

PURPOSE:

The purpose of this report to the Environmental Issues Committee is to provide funding recommendations for the 2016 funding cycle of Markham's Trees for Tomorrow Fund.

BACKGROUND:

Established in 2007, Markham's Trees for Tomorrow Program was developed to meet Mayor Frank Scarpitti's pledge that more trees would be planted over the four years of his first term in office than were planted in the preceding ten. Fulfilling this commitment would require planting more than 75,000 trees in the four years spanning from 2007 to 2010. Amongst the program's many facets, the Trees for Tomorrow Fund that was brought forward in 2009, was the primary instrument behind achieving this goal. In the nine complete years since the Trees for Tomorrow Program's inception, more than 328,000 trees have been planted in Markham. Of this total, well over 50% were planted in large scale restoration projects, smaller scale community tree planting and greening initiatives that received partial funding support from the Trees for Tomorrow Fund.

In addition to the typical benefits accrued via this sort of partnership through funding support such as: direct leveraging by funding from other sources, economy of scale efficiencies and various in-kind contributions and donations; the project and program partners have helped to:

- Increase and sustain volunteer participation numbers of 3,000 or more volunteers annually
- Expand volunteer activities beyond tree planting to include post-planting maintenance and invasive species removals
- Perform outreach and provide public education to increase community engagement, raise awareness and appreciation about the benefits of trees
- Restore more than 145 hectares of future woodland habitat in Bob Hunter Memorial Park and other sites within the study area of Rouge National Urban Park
- Restore 38 small, medium and one large naturalization site through the planting of native trees, shrubs and wildflowers as per site specific planting prescriptions, across Markham's Park system

OPTIONS/ DISCUSSION:

In 2015, 21,433 trees were planted in Markham. Of this total, 55% of the trees planted are directly attributable to the Trees for Tomorrow Fund, the majority of which will help to provide 3.97 hectares of additional woodland habitat upon grow out. Despite the nearly complete cessation of tree planting in Rouge Park since 2014, Markham's tree planting numbers over this two year period still exceed the annual tree planting goal of 18,750 trees.

FINANCIAL CONSIDERATIONS

The following chart shows the recommended expenditures from the 2016 Markham Trees for Tomorrow capital budget (account 700-101-5399-15224):

Markham Trees for Tomorrow Funding 2016	
<i>Markham Trees for Tomorrow Funding 2016 Approved Budget</i>	\$120,000
<i>Funding Recommendations for 2016</i>	
10,000 Trees for the Rouge – 27 th Annual Habitat Restoration Project	\$19,000
Friends of the Rouge Watershed - Habitat Restoration Project	\$19,500
Evergreen – Urban Stewards: Community Greening Initiative	\$24,000
LEAF – Backyard Tree Planting Program	\$16,700
Total	\$79,200
Markham Trees for Tomorrow: Funds Remaining	\$40,800

**Funds remaining will support community tree planting projects and Trees for Tomorrow events in the Fall and other Trees for Tomorrow projects in 2016.*

Attachment 1

Trees for Tomorrow Fund Spring 2016 Project Summaries

1. 10,000 Trees for the Rouge: 27th Annual Habitat Restoration Project, requesting \$19,000

10,000 Trees for the Rouge's 27th Annual Habitat Restoration Project will help to restore woodland habitat, increase tree canopy and native species biodiversity within the Rouge Watershed in the south east section of Milne Dam Conservation lands. This planting will help to restore more than 2 hectares of woodland habitat, increase tree canopy and enhance native species biodiversity through the planting of 4,900 native trees and shrubs. This annual tree planting event attracts over 2,000 volunteer participants in a given year, the value of which cannot be adequately measured by monetary value alone.

Deliverables include:

- Increase area of significant woodlands, biodiversity and connect forest fragments;
- Offset tree canopy loss due to Emerald Ash Borer in Milne Park lands;
- Displace invasive, non-native vegetation;
- Engage more than 2,000 community volunteers; enrich volunteer experience with education.

A detailed project description and budget are appended for review. The total project cost is \$154,175 and the amount requested from the Trees for Tomorrow Fund is \$19,000.

Requested funding of \$19,000 from the Markham Trees for Tomorrow Fund would be allocated as follows:

• Native Trees and Shrubs	\$10,000
• Supplies, planting equipment, tools & transportation	\$ 5,220
• Food for Volunteers	\$ 600
• Follow up monitoring, maintenance and infill planting	\$ 1,900
• <u>Event support, promotion and insurance</u>	<u>\$ 1,380</u>
Total	\$19,000

Recommendation: that the funding application for 10,000 Trees for the Rouge in the amount of \$19,000 to conduct their 26th Annual Habitat Restoration Planting Project be approved.

2. Friends of the Rouge Watershed Habitat Restoration Project, requesting \$19,500

Friends of the Rouge Watershed's Habitat Restoration Project will help to restore approximately 2 hectares of forest cover at three different sites within the Rouge Watershed in Markham. Friends of the Rouge Watershed restoration projects have always involved a large number of school groups during class time by using the tree planting activity for a unit about habitats in the science curriculum.

Deliverables include:

- Plant 4,300 native trees and shrubs; 700 native wildflowers and sow 10 kg. of native wildflower seed;

- Involve 500 Markham students through a series of planting events, with educational component included; and
- Provide follow up maintenance, monitoring and invasive species removal upon completion of spring planting season.

A detailed project description and budget are appended for review. The total project cost is \$74,500 and the amount requested from the Trees for Tomorrow Fund is \$19,500; funding from other sources is \$55,000.

The requested funding of \$24,000 from the Markham Trees for Tomorrow Fund would be allocated as follows:

• Native trees and shrubs	\$ 6,000
• Native wildflowers / wildflower seed mix	\$ 2,450
• Supplies, tools & transportation	\$ 7,650
• Volunteer refreshments/first aid kits	\$ 100
• <u>Project Management, promotion and insurance</u>	<u>\$ 3,300</u>
Total	\$ 19,500

Recommendation: that the funding application for Friends of the Rouge Watershed in the amount of \$19,500 to support their 2016 Habitat Restoration Project be approved.

3. Evergreen: Watershed Champions - Community Greening Initiative, requesting \$24,000

Evergreen has helped to build and sustain volunteer participation as a partner through the Trees for Tomorrow Program. In this role, Evergreen has increased our capacity to conduct Community Planting Events and provide key after care maintenance through additional stewardship events when the spring planting season has concluded. Stewardship activities have been expanded to include invasive species removals or control measures (seed head removal) to help reduce the local impacts and spread of these species in some key watershed areas. An educational component helps to enrich the volunteer experience at all events.

Deliverables include:

- Plant 550 native trees and shrubs, 100 native wildflowers and support all aspects of a minimum of 4 spring / fall planting events;
- Organize and support 5 Volunteer Stewardship Events;
- Involve 400 volunteers; and
- Continue to increase volunteer base that is reflective of Markham's diversity;

The plantings and events will take place at the following park locations: Austin Drive, Willow Heights, Fairtree Pond and Hillmount Park. A detailed program description and budget are included for review (Appendix 2). Total project cost is \$43,000 and the amount requested from the Trees for Tomorrow Fund is \$24,000. Funding from other sources is \$19,000 and 800 volunteer hours are estimated for in-kind project support.

The requested funding of \$24,000 from the Markham Trees for Tomorrow Fund would be allocated as follows:

• Native trees, shrubs, and planting supplies	\$ 9,900
• Native wildflowers	\$ 600
• Volunteer supplies, refreshments and tools	\$ 1,650
• Transportation	\$ 1,600
• <u>Project Management</u>	<u>\$ 10,250</u>
Total	\$ 24,000

Recommendation: that the funding application for Evergreen in the amount of \$24,000 to continue with the Watershed Champions: Community Greening Initiative for 2016 be approved.

4. LEAF: Backyard Tree Planting Program – requesting \$16,700

LEAF's subsidized Backyard Tree Planting Program is a high quality, full service tree planting program. Beyond the significant cost savings to residents wanting to plant new trees on their properties, this program offers residents whose Tree Removal Permit conditions include the replanting of new trees on their properties some welcome relief from the much higher costs to be paid for trees planted by commercial landscape contractors.

LEAF's Markham Tree Tours and Tree Tenders Volunteer Workshops serve both to promote their Backyard Tree Planting Program as well as to help increase the level of awareness, appreciation and engagement of the community in support of our efforts to enhance Markham's Urban Forest.

Deliverables include:

- 65 household consultations to help residents select 'the right tree for the right place';
- Provide education on tree care 'best practices' and benefits of the urban forest;
- Plant 100 native trees; 50 native shrubs and deliver 5 native garden kits;
- Organise and conduct Markham tree tours; and
- Offer Tree Tenders Workshop to Markham residents; support other Markham events.

LEAF's application includes a detailed program description and budget for review. Total project cost is \$49,200 and the amount requested from the Trees for Tomorrow Fund is \$16,700. Funding from other sources is \$15,000

The requested funding of \$16,700 from the Markham Trees for Tomorrow Fund would be allocated as follows:

• Consult, supply, deliver and plant 100 trees	\$ 16,200
• <u>Supply, deliver and plant 50 shrubs</u>	<u>\$ 500</u>
Total	\$ 16,700

Costs related to tree planting include: consultation, transportation, tree supply and delivery, planting, homeowner education, program promotion and follow up inspection.

Costs related to shrub planting include: supply and delivery of 50 native shrubs, planting of 25 shrubs and homeowner education for planting techniques and post-planting maintenance.

Recommendation: that the funding application for LEAF in the amount of \$16,700 to continue to offer the Backyard Tree Planting Program in 2016 be approved.

ATTACHMENT 2

Application Form

For Office Use Only - Project No.:

Group Information			
Name	10,000 Trees for the Rouge		
Address	508 Gardenvue Square, Pickering, ON L1V 4R7		
Phone	(905) 420-4118	Fax	N/A
Email	robert@tufftechbags.com; c29wong@gmail.com	Website Address	www.10000trees.com
Charitable/Non Profit Organization registration # (if applicable)	Our Group has a bank account in the name of our organization		
87456 0303 RT0001	Yes <input checked="" type="checkbox"/> No		
Briefly describe what your group does:			
<p>The mandate of 10,000 trees for the Rouge is the creation of wildlife habitat through the planting of native trees and shrubs.</p> <p>10,000 Trees for the Rouge has been planting native trees and shrubs in the Rouge watershed for the past 25 years, many of those plantings occurring in Markham. We are constantly growing and is recognized as one of the best tree-planting groups in Canada.</p> <p>The group, which is all volunteer, dedicates their time and efforts to restoring natural habitats to a high level of ecological function. The main planting event is held in late April, and attracts public participation of over 2000 community members, as well as media and political attention. Smaller plantings are carried out in the Fall, and consist primarily of maintenance plantings.</p> <p>Monitoring and maintenance of plantings continues through the growing season, and all sites are monitored until our Registered Forester declares that the planting is in a "free to grow" stage. Maintenance of past plantings is part of our system, but the amount of maintenance is entirely dependent on funding. To date, our group has been responsible for planting approx. 185,200 native trees and shrubs, helping to restore some 181 acres back to natural habitat.</p>			
Project Manager		Additional Contact	
Name	Robert Roszell	Name	Marshall Buchanan
Title	Chairman	Title	Registered Professional Forester
Phone (work)	(905) 420-4118	Phone (work)	(613) 649-2190
Phone (home)	(905) 420-4118	Phone (home)	(613) 649-2190
Email	robert@tufftechbags.com;	Email	moonlightcrofters@gmail.com
Project Summary			
Title	27 th Annual Wildlife Habitat Restoration Project		
Location of Project	Milne Park Conservation Area, City of Markham		
Name of Registered Owner of the Lands	City of Markham		
Address of Registered Owner of the Lands	101 Town Centre Blvd., Markham Ontario		
Contact Name for Registered Owner of the Lands	Toronto and Region Conservation Authority (contact: Nory Takata)		
Phone # Registered Owner of the Lands (905) 477-7000 x 3226	Duration (months, maximum 12 months)		7
Request for	Spring Funding \$19,000	Fall Funding	Either
Start Date of Project	April 1, 2016	End Date	October 31, 2016



101 Town Centre Boulevard,
Markham, Ontario, L3R 9W3

Markham Trees for Tomorrow Fund

Applicant's Guide and Application Form

What is the Markham Trees for Tomorrow Fund (MTTF)?

Trees provide substantial environmental, social and economic benefits to our community. In addition to providing measurable improvements to air quality and reduction of atmospheric carbon, trees help to prevent soil erosion, reduce energy consumption and provide habitat for wildlife. With the Markham Trees for Tomorrow program, more than 90,000 trees will be planted by 2014. This fund provides grants for tree planting projects to an upset limit of \$30,000.

Who Can Apply?

- Markham Community Groups
- Non Governmental Organizations
- Public Agencies

All plantings must be on publicly owned and accessible lands in the City of Markham.

What are the Program's Requirements?

Applications will be considered by the Environmental Issues Committee for recommendation to General Committee and Council.

All applications must:

- involve the active participation of community volunteers
- identify other sources of funding raised by the applicant

All applications must include:

- **detailed site plan** prepared by a landscape architect or certified forester, describing existing site conditions, any necessary site preparation prior to planting and how the site is to be accessed before, during and after the planting
- **detailed planting plan** prepared by a landscape architect or certified forester, including: species list, planting specifications and cost estimate; and briefly state the rationale behind species selection, planting densities and distribution within the context of the planting site; start and end date for the project
- **detailed event planning logistics** such as: locations of pathways; staging areas for the temporary placement of trees, mulch and other supplies; parking and traffic control requirements
- **written commitment** to monitor and provide follow up maintenance to ensure long term success for the project

What are the Funding Criteria for an Application?

- applicants can request a maximum of \$30,000 from the MTTF per project per year for projects that will be completed within that same one-year time frame (12 months from issuance of cheque)
- only materials and equipment costs (not consulting services) are eligible for funding from the MTTF
- any groups that received funding for projects which have not been completed to the satisfaction of the City are not eligible for future funding
- funding will not be granted where projects have been commenced.

When are the application deadlines?

Applications must be submitted by February 12, 2016 for Spring funding.

How Do I apply?

- Step 1 Contact the Parks Planner** about your proposed project and to request an application form. (Telephone: 905-477-7000 ext. 3226 e-mail: ntakata@markham.ca)
- Step 2 Complete the Application Form.** Please ensure that it is legible and signed.
- Step 3 Prepare required supporting information**, such as illustrations and maps and attach them to the application form. In the event the Registered Owner of the lands is an entity other than the City of Markham, a letter must accompany the application stating that: the Owner consents to this application; acknowledges that the proposed project complies with all its applicable policies and requirements; and, that the writer has the authority to give its consent. Sufficient and complete information must be provided with the application for the Environmental Issues Committee to make a decision.
- Step 4 Submit your application to the Parks Planner, Operations, City of Markham, 101 Town Centre Boulevard, Markham, Ontario, L3R 9W3.**

Application Checklist

Please ensure that your application is complete. Are the following included in your submission?

- A complete and signed application form, including all budget and funding details
- All supporting documentation such as a detailed site plan, species list, planting specifications etc.
- Consent letter from registered owner, if applicable

What will happen next?

The Environmental Issues Committee will review all applications taking into account the established objectives and criteria described above. They may choose to grant the right to the applicant to present their proposal, if requested. They will determine which projects should be funded and how they should be funded (in a single payment or in phases) and make a recommendation to General Committee and Council.

How will I be notified?

An acknowledgement will be sent upon receipt of an application. If your project is approved for funding, you will be contacted. If your application is not approved, you will be informed in writing.

What happens after the Project is completed?

Upon completion of the project and no later than 12 months from delivery of the funding, you are required to submit your project report. Include a project summary and photos so we can review and promote your project, together with the completed consent forms permitting use of your photographs by the City (copy attached).

What does a Project Report Contain?

- accounting of how all funding has been spent
- original copies of paid invoices
- photographs for review and promotion of the project
- completed consent form for use of photographs

A project format will be provided to assist you in preparing the report

Please provide a detailed description of your project in the following space. Please attach additional pages if necessary to fully explain your project. This description should include:

- ❖ Description of the Project Team
- ❖ Project overview and detailed project plan (include work plan with timelines; detailed site and planting plans; monitoring and follow up maintenance schedules)
- ❖ Identify and where possible quantify the environmental benefits associated with the project
- ❖ Who will maintain and monitor the project after completion? (please provide contact information)
- ❖ How will you promote the MTTF fund with this project?
- ❖ Describe other funding sources/in kind support
- ❖ Will there be an educational sign component? If so, please describe

Project Team - is composed of dedicated volunteers who represent a wide range of occupations, teacher, professional writer, scout leader, landscape worker, business people, engineer, web designer, arborist, and a registered forester. Most have over 10 years, and some over 20 years of experience in implementing these kinds of projects.

Public Relations Committee; Sponsors, and politicians at all levels, are invited to attend the event, and take part in the ceremonial tree planting. All the local media, print, radio, and television, are contacted approx. one month prior to the event, and again the week of the event. We often give interviews to the local media, where there is an opportunity to recognize the city of Markham, TRCA, and the Rouge Park.

Volunteer Committee A flyer for the event is designed and posted online, and mailed out digitally or by paper to approximately 900 planting volunteers on our mailing list. We are in the process of establishing a web base for our volunteers, so that we can reduce our reliance on paper in the future and make use of digital resources. The flyer is also sent to church groups, scouting groups, and schools, and is posted in local community centres and libraries.

Fundraising Committee; Searches to find new funding sponsors, both monetary and in kind, and prepares fundraising applications and final reports.

Landscape Committee; Works with our forester on the design of the site. Once species are selected, then tenders with detailed tree specifications are sent to suppliers. The committee is responsible for organizing the stock on site, and ensuring that the trees and shrubs are distributed to the correct planting locations. Planting managers are trained in advance on proper tree planting techniques, and on planting day, they lead groups of volunteers to specific areas, and then both instruct the volunteers, and oversee the plantings.

Site Preparation Committee; Ensures that equipment and services are on site. Equipment, (shovels, buckets, signs, tents, water pumps, hoses, tree guards, tables etc.) are purchased as necessary, and kept in working order. Safety services are looked after. St. John Ambulance is contacted, and police are hired to direct traffic. Portable washrooms are arranged, as well as a free lunch for the volunteers. At the end of the day, the committee is responsible for the clean up of the site.

Work Plan See Work Plan - Table 2

Site Plan See Site Plan including Map and Species List – page 4 & 5

Environmental benefits; The trees that we plant will clean the air, and filter run-off water before it enters our rivers. By increasing forest cover, we will be encouraging the return of forest interior dwelling wildlife that has been extirpated from the area. This biodiversity will increase as the forest matures.

Maintenance; This is under the direction of our forester, Marshall Buchanan. His contact information is on the lead sheet.

Promotion of MTTF; This will be done through our flyer, (see under "Volunteer Committee", above), our site sign, and through photos taken on planting day being posted on their website. The local papers, and sometimes larger daily papers, often run articles and pictures of our event. Our own website also carries pictures and information, and acknowledges the support of Markham Trees for Tomorrow Fund.

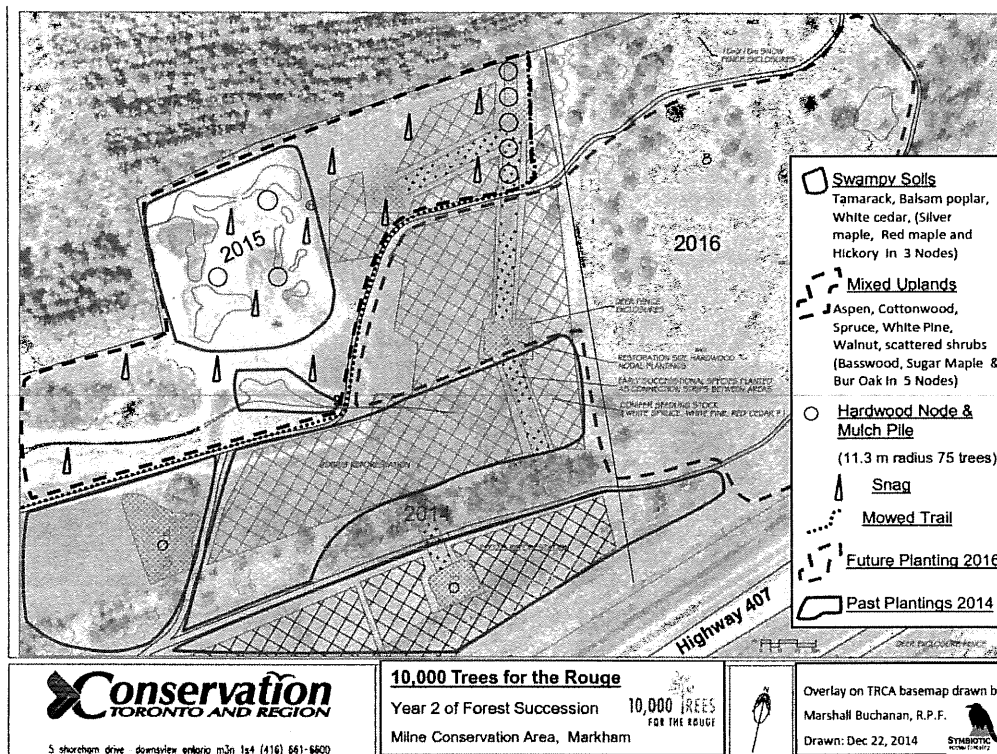
Funding sources; See Source Contributions - Table 1

Educational signage; Posters are used on site to instruct in proper tree planting. This reinforces the hands-on instruction provided by our trained planting managers. As well, a sign in each area indicates what plant species are being planted there.

Please also provide a cost summary including (please use attached budget forms on pages 4 and 5 to this application to provide details of the costs)

Total Project Cost	\$154,175	Amount requested from the MTTF	\$19,000
Amount from other sources	\$135,175	In- Kind support hours	7,209

2016 Site Plan Including Map and Species List



Common Name	Latin name	Total per Species	Grand Total
Coniferous Trees (45%)			2,200
Eastern white cedar	<i>Thuja occidentalis</i>	150	
White Spruce	<i>Picea glauca</i>	700	
Tamarack	<i>Larix laricina</i>	350	
Eastern red cedar	<i>Juniperus virginiana</i>	500	
White pine	<i>Pinus strobus</i>	700	
Deciduous Trees (35%)			1,700
Cottonwood	<i>Populus deltoides</i>	500	
Aspen, largetooth	<i>Populus grandidentata</i>	500	
Basswood	<i>Tilia Americana</i>	100	
Red maple	<i>Acer rubra</i>	100	
Silver maple	<i>Acer saccharinum</i>	75	
Sugar maple	<i>Acer saccharum</i>	200	
Bur Oak	<i>Quercus macrocarpa</i>	150	
Bitternut Hickory	<i>Carya cordiformis</i>	50	
Black walnut	<i>Juglans nigra</i>	25	
Shrubs (20%)			1000
Sumac	<i>Rhus typhina</i>	200	
Chokecherry	<i>Prunus virginiana</i>	200	
Hawthorn	<i>Crategeus crus-galli</i>	150	
Serviceberry	<i>Amelancier laevis or canadensis</i>	150	
Nannyberry	<i>Viburnum lentago</i>	100	
Grey dogwood	<i>Cornus racemosa</i>	100	
Red Osier Dogwood	<i>Cornus stolonifera</i>	100	
Total			4,900

BUDGET FORM – HUMAN RESOURCES (Volunteers)

Service	Details		In- Kind Value (in hours worked)
	Number of People	Estimated Time for Each hour)	
(e.g. Volunteer planters)	10	10	100
Executive meetings	10	20	200
Training planting managers	50	2	100
Volunteers to plant trees	2000	3	6000
Volunteers to mulch trees	100	2	200
Accounting	1	24	24
Fundraising	3	40	120
Food preparation	5	10	50
Site preparation	35	10	350
Road and tree signs	5	4	20
Forestry consultant	1	65	65
Database/website management	2	40	80
Total	2212	220	7209

BUDGET FORM

Materials, Supplies and Equipment	Cost			MTFT	Other
	# of units	Unit Cost \$	Total Cost \$		
Buses for volunteers	8	330	2640	530.00	2110.00
Deer fencing, 10m. squares	3	1000	3000	1800.00	1200.00
Equipment rental			1000	640.00	360.00
Food for BBQ lunch			600	600.00	0.00
Habitat structures	8	200	1600	800.00	800.00
Maintenance contractor	1	785	785	700.00	85.00
Police	1	450	450		450.00
Replacement trees	200	8	1600	1200.00	400.00
Shrubs	1000	2.5	2500	2000.00	500.00
St. John Ambulance	1	400	400	0.00	400.00
Stakes	100	2.5	250	250.00	0.00
Temporary site signs			100	100.00	0.00
Tree guards	1000	1	1000	1000.00	0.00
Trees	3900	8	31200	8000.00	23200.00
Water and irrigation supplies			100	100.00	0.00
Crests	50	3	150	150.00	0.00
Toilets/Washstands	3 + 2		850	330.00	520.00
Truck rental	1	600	600		600.00

Other Expenses

(e.g. Printing Brochures)	100	0.50	50.00	25.00	25.00
D & O + Liability Insurance	2		2900	750.00	2150.00
Database/website	1	150	150	50.00	100.00
Flyer, stamps, photocopying, developing	1		500		500.00
Total			52,375.00	19,000.00	33,375.00

How did you organization hear about the MTF? (Please check one)

City Website ☐ Newspaper advertisement ☐ Word of mouth ☐ Other ☒

Upon completion of this Project please submit your project report, as well as original invoices, photos and records to Parks Planner, Operations, City of Markham, 101 Town Centre Boulevard, Markham, Ontario, L3R 9W3. Telephone 905-477-700 ext.3226 Fax 905-940-1550. Photos may be posted on the City's website.

SOURCE CONTRIBUTIONS – TABLE 1

Sponsor	Purpose	Cash Donation	In-kind
Town of Markham	Plant material, maintenance, irrigation supplies, picnic tables, pylons, refuse pick-up, mulch, toilets, washstands, buses	19,000.00	7,500.00
Region of York	Plant material, tree guards	5,000.00	
TD Friends of the Environment	Plant material, maintenance, tree guards	11,875.00	
Thompson Reuters	Buses, truck rental, insurance, website, police/ambulance services	5,000.00	
Helen McCrea Peacock Foundation	Plant material, cover crop, fencing, tree stakes	4,000.00	
Stantec	Plant material	3,500.00	
Subaru	Plant material	3,000.00	
Milliken Mills Lions	Toilets, washstands, shovels, buckets, flyer printing	1,000.00	
10,000 Trees Volunteers	Administration, fundraising, tree ordering, site staking, healing in trees, tree planting, mulching		79,300.00
Toronto Region Conservation Auth.	Administrative support, site prep, cover crop, coarse woody debris		5,000.00
Symbiotic	Site surveys, mapping, fundraising, reporting & ecological planning		4,000.00

6 th Pickering Amberlea Venturers	Install snags, site staking, unload trees		1,800.00
Agincourt Rotary	Food & beverage service, barbecues		2,000.00
Metro Toronto Zoo	Storage space		1,200.00
John Johnson Landscaping	2 ATVs & trailers		1,000.00
Sub-totals		\$52,375.00	\$101,800.00

WORK PLAN – TABLE 2

April - October	Work Plan
Project Start April 1st 2016	<ul style="list-style-type: none"> Erect snags and distribute coarse woody debris on site
Mid -April	<ul style="list-style-type: none"> Cultivate site and sow cover crop of low growing white clover to suppress weeds, improve site fertility and provide forage for bees
	<ul style="list-style-type: none"> Install temporary fencing to protect trees from deer browsing
April 22-23	<ul style="list-style-type: none"> Receive trees, distribute, and heel in place
	<ul style="list-style-type: none"> Instruct planting managers on site layout and planting methods
Planting Day April 24	<ul style="list-style-type: none"> Supervise and coordinate volunteers to get trees and shrubs planted
	<ul style="list-style-type: none"> Install tree guards to reduce damage from meadow voles
	<ul style="list-style-type: none"> Mulch trees with wood chips
	<ul style="list-style-type: none"> Fertilize trees in protected areas to reduce transplant shock
	<ul style="list-style-type: none"> Photograph site
May	<ul style="list-style-type: none"> Monitor trees & shrubs to verify initial viability, that buds flushed and leaves emerged (i.e. trees were alive)
	<ul style="list-style-type: none"> Monitor for insect herbivory (caterpillars etc.)
	<ul style="list-style-type: none"> Monitor site for wildlife use
June	<ul style="list-style-type: none"> Mulch trees again to ensure they are protected from summer drought conditions
	<ul style="list-style-type: none"> Complete fertilizing and water if necessary
	<ul style="list-style-type: none"> Photograph site
July - August	<ul style="list-style-type: none"> Conduct regeneration survey
	<ul style="list-style-type: none"> Monitor site for wildlife use
	<ul style="list-style-type: none"> Photograph site
September - October	<ul style="list-style-type: none"> Replant areas where survival was poor

Applicant's Signature

I hereby make application for funding from the Markham Trees for Tomorrow Fund, declaring that all information contained herein is true and correct and acknowledging that the City of Markham will assess this application based upon the information contained in this application.

If approved for funding I further acknowledge and agree:

1. to comply with all relevant policies and secure all permits required for this project and acknowledge that the City bears no responsibility or has any liability in any manner with respect to this project.
2. that the City reserves the right to review communications and communication materials to be presented to the public to ensure compliance with City policies, including the City's Communication Standards.
3. to promote the Markham Trees for Tomorrow Fund on any communication materials, or signage associated with this project and will provide a detailed report on the project outlining how the funds were used to support the project upon completion of the project and no later than 1 year from receipt of the funding.
4. to allow the City of Markham to use the project name and any images associated with the project to promote the Markham Trees for Tomorrow Program.
5. to return all unspent funds to the City of Markham upon completion of the project.
6. that there shall be no personal benefit directly, or indirectly, from this funding and I will notify the City of any conflict of interest situation should it arise in carrying out of the project.
7. permit the City of Markham to claim ownership of all carbon credits and other measurable ecological services resulting from the project.

Signature



Title: Chairman

Printed Name

Robert Roszell

Date

February 18, 2016

In the event the Registered Owner of the lands is an entity other than the City of Markham, a letter must accompany the application stating that: the Owner consents to this application; acknowledges that the proposed project complies to all its applicable policies and requirements; and, that the writer has the authority to give its consent.

Submission of this application form does not guarantee approval of your application.

Personal information contained herein is subject to the Municipal Freedom of Information Act and the Personal Protection and Electronic Documents Act. The information collected may be used for promotional purposes. Completion of this form constitutes consent by the applicant to these terms and uses.

OFFICE USE ONLY				
Date Application Received			New Applicant?	Yes No
Approved/Not Approved	Yes	No		
Acknowledgement Letter Sent?	Yes	No	Date Sent	
Letter of Approval or Rejection Sent?	Yes	No	Date Sent	
Final Report Received?	Yes	No	Date Received	
Photos Received?	Yes	No	Date Received	
Consent for Photographs received	Yes	No	Photos posted on website?	Yes No

Markham Trees for Tomorrow Fund


Photo Consent and Release Form

I, Robert Roszell hereby permit and authorize the
(Print in full – first, middle initial & last name)
City of Markham (the "City") to take my photograph/image.

I acknowledge and agree that the City may publish or use the image for any City purposes by any means whatsoever including, but not limited to electronic or digital means. I acknowledge that the Town may not be able to control the distribution or use of the image by other than Town representatives.

I agree that this Consent and Release is given in perpetuity and for no consideration, credit, acknowledgment or financial recompense, now and in the future.

I hereby hold the City harmless for any claims, actions, debts, damages, injuries or losses that may arise or be incurred as a result of the taking, use, publication or distribution of the image and I agree to indemnify the City against any third party claims, actions, damages, injuries or losses brought or assessed against or incurred by the Town for the use of the image(s).

Contact Information					
Signature			Date	February 18, 2016	
Address	508 Gardenvue Square				
City	Pickering	Province	Ontario	Postal Code	L1V 4R7
Telephone	(905) 420-4118			Email	
City of Markham:					
City Representative		Date			

ATTACHMENT 3

Application Form

For Office Use Only - Project No.:

Group Information			
Name	Friends of the Rouge Watershed		
Address	2259 Meadowvale Road		
Phone	416 208-0252	Fax	
Email	info@frw.ca	Website Address	www.frw.ca
Charitable/Non Profit Organization registration # (if applicable)	Our Group has a bank account in the name of our organization		
88878 1028 RR0001	Yes	No	
Briefly describe what your group does:			
<p>Friends of the Rouge Watershed (FRW) works with youth and community volunteers to protect, enhance and restore watershed, ecosystem and community health. To accomplish this, we form conservation partnerships with schools, community and faith organizations, businesses, municipalities, provincial and federal agencies and community leaders.</p> <p>FRW: 1) encourages a community, ecosystem and watershed approach to environmental planning and protection; 2) provides educational nature walks, school field trips, presentations and community events; 3) trains and coordinates thousands of youth and community volunteers to plant thousands of native trees, shrubs and wildflowers to restore forest, wetland and meadow habitat; 4) conducts follow-up watering, mulching & maintenance of plantings to achieve an 80 to 90% survival rate; and 5) conducts watershed and ecosystem monitoring and information sharing.</p>			
Project Manager		Additional Contact	
Name	Jim Robb	Name	Leigh Paulseth
Title	General Manager	Title	Environmental Projects Coordinator
Phone (work)	416-208-0252	Phone (work)	416-208-0252
Phone (home)	647-891-9550	Phone (home)	
Email	jimrobb@frw.ca	Email	leigh@frw.ca
Project Summary			
Title	Restoring Forests and Habitat in Markham, 2016		
Location of Project	Please see attached maps of 3 Markham sites		
Name of Registered Owner of the Lands	City of Markham		
Address of Registered Owner of the Lands	Markham		
Contact Name for Registered Owner of the Lands	Nory Takata 905-477-7000 ext.3226		
Phone # Registered Owner of the Lands	905-477-7000 ext. 3226	Duration (months, maximum 12 months)	9
Request for	Spring Funding <input checked="" type="checkbox"/>	Fall Funding	Either <input type="checkbox"/>
Start Date of Project	Apr. 3, 2016	End Date	Dec. 10, 2016



101 Town Centre Boulevard,
Markham, Ontario, L3R 9W3

Markham Trees for Tomorrow Fund Applicant's Guide and Application Form

What is the Markham Trees for Tomorrow Fund (MTTF)?

Trees provide substantial environmental, social and economic benefits to our community. In addition to providing measurable improvements to air quality and reduction of atmospheric carbon, trees help to prevent soil erosion, reduce energy consumption and provide habitat for wildlife. With the Markham Trees for Tomorrow program, more than 90,000 trees will be planted by 2014. This fund provides grants for tree planting projects to an upset limit of \$30,000.

Who Can Apply?

- Markham Community Groups
- Non Governmental Organizations
- Public Agencies

All plantings must be on publicly owned and accessible lands in the City of Markham.

What are the Program's Requirements?

Applications will be considered by the Environmental Issues Committee for recommendation to General Committee and Council.

All applications must:

- involve the active participation of community volunteers
- identify other sources of funding raised by the applicant

All applications must include:

- **detailed site plan** prepared by a landscape architect or certified forester, describing existing site conditions, any necessary site preparation prior to planting and how the site is to be accessed before, during and after the planting
- **detailed planting plan** prepared by a landscape architect or certified forester, including: species list, planting specifications and cost estimate; and briefly state the rationale behind species selection, planting densities and distribution within the context of the planting site; start and end date for the project
- **detailed event planning logistics** such as: locations of pathways; staging areas for the temporary placement of trees, mulch and other supplies; parking and traffic control requirements
- **written commitment** to monitor and provide follow up maintenance to ensure long term success for the project

What are the Funding Criteria for an Application?

- applicants can request a maximum of \$30,000 from the MTTF per project per year for projects that will be completed within that same one-year time frame (12 months from issuance of cheque)
- only materials and equipment costs (not consulting services) are eligible for funding from the MTTF
- any groups that received funding for projects which have not been completed to the satisfaction of the City are not eligible for future funding
- funding will not be granted where projects have been commenced.

When are the application deadlines?

Applications must be submitted by February 19, 2016 for Spring funding.

How Do I apply?

- Step 1 **Contact the Parks Planner** about your proposed project and to request an application form. (Telephone: 905-477-7000 ext. 3226 e-mail: ntakata@markham.ca)
- Step 2 **Complete the Application Form.** Please ensure that it is legible and signed.
- Step 3 **Prepare required supporting information**, such as illustrations and maps and attach them to the application form. In the event the Registered Owner of the lands is an entity other than the City of Markham, a letter must accompany the application stating that: the Owner consents to this application; acknowledges that the proposed project complies with all its applicable policies and requirements; and, that the writer has the authority to give its consent. Sufficient and complete information must be provided with the application for the Environmental Issues Committee to make a decision.
- Step 4 **Submit your application to the Parks Planner, Operations, City of Markham, 101 Town Centre Boulevard, Markham, Ontario, L3R 9W3.**

Application Checklist

Please ensure that your application is complete. Are the following included in your submission?

- A complete and signed application form, including all budget and funding details
- All supporting documentation such as a detailed site plan, species list, planting specifications etc.
- Consent letter from registered owner, if applicable

What will happen next?

The Environmental Issues Committee will review all applications taking into account the established objectives and criteria described above. They may choose to grant the right to the applicant to present their proposal, if requested. They will determine which projects should be funded and how they should be funded (in a single payment or in phases) and make a recommendation to General Committee and Council.

How will I be notified?

An acknowledgement will be sent upon receipt of an application. If your project is approved for funding, you will be contacted. If your application is not approved, you will be informed in writing.

What happens after the Project is completed?

Upon completion of the project and no later than 12 months from delivery of the funding, you are required to submit your project report. Include a project summary and photos so we can review and promote your project, together with the completed consent forms permitting use of your photographs by the City (copy attached).

What does a Project Report Contain?

- accounting of how all funding has been spent
- original copies of paid invoices
- photographs for review and promotion of the project
- completed consent form for use of photographs

A project format will be provided to assist you in preparing the report

Please provide a detailed description of your project in the following space. Please attach additional pages if necessary to fully explain your project. This description should include:

❖ **Project Overview (Attachments: Planting Spreadsheet, Site Maps and Workplan)**

This project will involve 600 student, community and corporate volunteers in the planting of 4,500 native trees and shrubs, 700 native wildflowers and 10 kg of native seed to restore approximately 2 ha (20,000 m²) of public land at three Markham sites (maps attached) to a beautiful and diverse young forest and wildflower meadow habitat.

❖ **Project Team**

Leigh Paulseth is FRW's Environmental Projects and Volunteer Coordinator. She has a B.Sc. in Conservation Biology and a Master's in Resource and Environmental Management. Jim Robb, FRW's General Manager has University of Toronto Forestry and Environmental Science degrees and more than 27 years of experience coordinating successful ecological protection, education, monitoring and restoration work.

❖ **Measureable Project Environmental Benefits**

The involvement and education of 600 youth, community and corporate volunteers will foster the environmental knowledge, responsibility and stewardship necessary to improve watershed, ecosystem and community health.

Forest Regeneration: 20,000 m² ha of public parkland planted with 4,500 native trees & flowering shrubs
Meadow Restoration: 700 native wildflowers and 10 kg native wildflower seed for beauty and pollinator health
Enhanced Hydrology: 4 million litres/year reduction in runoff
School Involvement: 400+ student volunteers involved and educated
Other Involvement: 200 community and corporate volunteers involved and educated
Education: 7+ educational nature walks for schools
Nesting Boxes: 4+ bluebird nesting boxes erected
Species at Risk: 1 endangered species planted (dense blazing star)
Monitoring: 2 before and after surveys (amphibians, turtles, butterflies)
Debris Clean-up: 20+ bags of litter removed
Media Events: 1 media releases for large community and corporate plantings
Youth Employment: 2 seasonal youth staff to help mulch, water & maintain trees
Youth Education: 2 co-op students / 2 international student volunteers

The 2009 Report "Estimating Ecosystem Services in Southern Ontario" completed for the Ontario Ministry of Natural Resources estimates that near urban forests provide \$15,000 to \$25,000 /ha/year of valuable services in terms of flooding and erosion control, water quality, air quality, climatic, recreational, aesthetic and biodiversity services. Thus, Markham's one year \$19,400 investment in this project will lead to a perpetual annual ecological services dividend of a larger amount.

❖ **Project Maintenance and Monitoring**

FRW summer staff will mulch, water, weed and maintain the plantings and maintain the deer fencing for the first year at least. After a few years, the planted trees and wildflowers will be free to grow without much ongoing maintenance. The long term maintenance of the tree and wildflower plantings and wetlands will be the responsibility of Markham. However, the plantings involve hardy native species on public parklands and the benefits should be perpetual and largely self sustaining once the trees are free-to-grow.

❖ **Promoting the MTFT Fund**

FRW will acknowledge the MTFT Fund support at our planting and education events with school, community and corporate partners and through media releases, flyers, newsletters and our website. FRW events attract many dignitaries and good media coverage. FRW will also highlight this project through:

- a) public nature walks and tours with Councillors, MPPs, MPs and other dignitaries;
- b) displays and power-point shows given to the public, our partners & dignitaries.
- c) articles and photos in local newspapers and Councillor, MPP and MP newsletters.

❖ **Describe other funding sources/in kind support**

The 1900 hours (\$20,900) of in-kind volunteer support is summarized in the Human Resources Budget Form. The \$55,000 total of other cash funding includes Deloitte Canada (\$5K pending), TD FEF (\$9.9K pending) Great Lakes Funding programs (\$18K pending) and Ontario Trillium Fund (22.1K pending).

❖ **Will there be an educational sign component?** Yes. Portable FRW Sign with Partners.

Please also provide a cost summary including (please use attached budget forms on pages 4 and 5 to this application to provide details of the costs)

Total Project Cost	\$74,500	Amount requested from the MTTF	\$19,500
Amount from other sources	\$55,000	In- Kind support hours	1,900

BUDGET FORM – HUMAN RESOURCES (Volunteers)

Service	Details		In- Kind Value (in hours worked)
	Number of People	Estimated Time for Each hour)	
(e.g. Volunteer planters)	10	10	100
Markham and York Region Students	400	2.5	1000
Deloitte and Corp. Volunteers	200	2.5	500
FRW Co-op, Intern and International students	10	25	250
Other FRW Volunteers	15	10	150
Total	635		1900

BUDGET FORM

Materials, Supplies and Equipment	Cost			MTFT	Other
	# of units	Unit Cost \$	Total Cost \$		
native deciduous trees (contrn & plugs)	1500	6.5	9,750	2,000	7,750
white pine, cedar & spruce (2+2 BR)	2000	2	4,000	2,000	2,000
native shrubs (contrn and plugs)	800	6	4,800	2,000	2,800
native wild flowers (plugs and contrn)	700	2.5	1,750	1750	0
native wildflower, tree and grass seed kg	10	100	1,000	700	300
Tree guards (\$.75)	1500	0.7	1,050	750	300
T Bars and Fencing to prevent deer damage	600	4.5	2,700	3,000	300
Porta Toilets	2	300	600		600
Public Liability Insurance	0.5	3000	1,500	700	800
Rental Trucks for Tree and Flower Pick-up	2	500	1,000	500	500
Gloves, shovels, planting equipment, supplies	150	10	1,500	1,000	500
FRW truck and 2 trailers for mulch, water, etc	0.5	8700	4,350	2,400	1,950

Other Expenses

(e.g. Printing Brochures)	100	0.50	50.00	25.00	25.00
Communications and Printing	600	1	600	300	300
Planting Maintenance to get 80+% survival hrs)	600	14	8,400		8,400
Volunteer Training, Coordination, Safety (hrs)	700	21	14,700		14,700
Ed. & Restoration Plans, Approvals, Implement.	400	24	9,600		9,600

Purchasing, book-keeping and audit	200	21	4,200	1,500	2,700
Office rent, equip., phones, website, etc	0.3	5000	1,500	800	700
First Aid, Beverages and Hospitality	600	1.5	900	100	800
Total			74,500	19,500	55,000

How did you organization hear about the MTF? (Please check one)			
City Website <input type="checkbox"/>	Newspaper advertisement <input type="checkbox"/>	Word of mouth <input checked="" type="checkbox"/>	Other <input type="checkbox"/>
<p>Upon completion of this Project please submit your project report, as well as original invoices, photos and records to Parks Planner, Operations, City of Markham, 101 Town Centre Boulevard, Markham, Ontario, L3R 9W3. Telephone 905-477-700 ext.3226 Fax 905-940-1550. Photos may be posted on the City's website.</p>			

Applicant's Signature

I hereby make application for funding from the Markham Trees for Tomorrow Fund, declaring that all information contained herein is true and correct and acknowledging that the City of Markham will assess this application based upon the information contained in this application.

If approved for funding I further acknowledge and agree:

1. to comply with all relevant policies and secure all permits required for this project and acknowledge that the City bears no responsibility or has any liability in any manner with respect to this project.
2. that the City reserves the right to review communications and communication materials to be presented to the public to ensure compliance with City policies, including the City's Communication Standards.
3. to promote the Markham Trees for Tomorrow Fund on any communication materials, or signage associated with this project and will provide a detailed report on the project outlining how the funds were used to support the project upon completion of the project and no later than 1 year from receipt of the funding.
4. to allow the City of Markham to use the project name and any images associated with the project to promote the Markham Trees for Tomorrow Program.
5. to return all unspent funds to the City of Markham upon completion of the project.
6. that there shall be no personal benefit directly, or indirectly, from this funding and I will notify the City of any conflict of interest situation should it arise in carrying out of the project.
7. permit the City of Markham to claim ownership of all carbon credits and other measurable ecological services resulting from the project.

Signature

Leigh Paulseth

Title

Environmental Projects Coordinator

Printed Name

Date

Leigh Paulseth

Feb. 19 '16

In the event the Registered Owner of the lands is an entity other than the City of Markham, a letter must accompany the application stating that: the Owner consents to this application; acknowledges that the proposed project complies to all its applicable policies and requirements; and, that the writer has the authority to give its consent.

Submission of this application form does not guarantee approval of your application.

Personal information contained herein is subject to the Municipal Freedom of Information Act and the Personal Protection and Electronic Documents Act. The information collected may be used for promotional purposes. Completion of this form constitutes consent by the applicant to these terms and uses.

OFFICE USE ONLY					
Date Application Received			New Applicant?	Yes	No
Approved/Not Approved	Yes	No			
Acknowledgement Letter Sent?	Yes	No	Date Sent		
Letter of Approval or Rejection Sent?	Yes	No	Date Sent		
Final Report Received?	Yes	No	Date Received		
Photos Received?	Yes	No	Date Received		
Consent for Photographs received	Yes	No	Photos posted on website?	Yes	No

FRW Work Plan Markham TFT 2016

Attached please find a planting spreadsheet with species and numbers for each site. These plantings will make progress towards Markham's Greenway and forest cover objectives.

1) Rouge River between Kennedy Rd Bypass, Main Street, Hwy 7 and Unionville Gate

This Rouge River riparian area has several large openings which were identified for planting by Markham. FRW will plant trees to expand forest cover while leaving 5 metre set-backs from trails throughout the site. The river has wide meanders and the plantings will slow erosion.

This site will be planted by approximately 3 school groups in the spring, 2 school groups in the fall and one corporate group in the fall. The school groups will be one bus load or 50 students per day. Plantings will occur from 9:30 to 11:30 in the morning and then the students will go by bus to BHMP or Milne Park for lunch and a walk and educational program in the afternoon. Access for the bus would be at Unionville Main Street, Meadowbrook lane and Unionville Gate.

2) Milne Park Southeast

In the fall of 2014 and 2015, FRW planted a several metre wide strip north of the Hwy 407 fence for a distance of approximately 600 metres. Deer and meadow vole damage was heavy in the cold and snowy winter of 2015. In the fall of 2015, FRW erected a seven foot tall 150 m long deer exclusion fence to protect approximately 1/3 of the site from deer browse damage. In 2016, we plan to double the area protected and replace killed or damaged trees.

This site would be planted by approximately 2 school groups in the spring and one in the fall. Plantings would occur from 9:30 to 11:30 in the morning and then the students would have lunch on-site and a walk and educational program in the afternoon. FRW would meet the bus at Rouge Haven Way and students would be led to the site via Princess Street and the Markham Yard.

3) North of 407, south of Cornell Ponds and East of Ninth Line

This planting site is a an open field and long berm north of Hwy 407 and south of the Cornell ponds. This site has been partially planted in the past and it would benefit from improved stocking to reduce the increasingly intrusive noise levels from increasing traffic on Hwy 407. FRW would leave minimum 3 metre set-backs from the trails.

This site would be planted by school groups with approximately one bus load or 50 students per day; approximately 3 planting days in the spring and 2 days in the fall. Plantings would occur from 9:30 to 11:30 in the morning and then the students would go by bus to BHMP or Milne Park for lunch and a walk and educational program in the afternoon. Access for the bus and student drop off and pick-up would be at Woodway Lane and Outer Banks Drive or Welland Rd.

ATTACHMENT 4

Application Form

For Office Use Only - Project No.:

Group Information			
Name	Evergreen		
Address	Centre for Green Cities, Suite 300, Evergreen Brick Works, 550 Bayview Avenue, Toronto, ON, M4W 3X8		
Phone	416-596-1495 x 360	Fax	416-596-1443
Email	jkelly@evergreen.ca	Website Address	www.evergreen.ca
Charitable/Non Profit Organization registration # (if applicable)	Our Group has a bank account in the name of our organization		
BN 131815763 RR0001	<div style="display: flex; justify-content: space-around;"> <div>Yes <u>X</u></div> <div>No <u> </u></div> </div>		
<p>Briefly describe what your group does:</p> <p>Evergreen is a national charity that inspires action to green cities. Through our core programs: Greenspace (restoring and revitalizing public landscapes); Children (providing children with nature-focused play and learning opportunities); Food (supporting a local, healthy and sustainable food system); and CityWorks (inspiring green design technologies and innovation in the built environment), we provide individuals with the practical tools and knowledge needed to improve the health of our communities.</p> <p>Our Greenspace program is a national service that works with communities across the country to conserve natural and cultural landscapes, restore degraded environments, and protect open spaces for recreation, education and enjoyment. What started as a small urban tree-planting initiative in 1991 has grown into a national program that supports and encourages the protection, restoration and stewardship of Canada's public lands.</p> <p>Responding to climatic change and an increase in severe local weather events causing flooding, Evergreen has incorporated water quality monitoring and urban watershed education into our community greening program in an effort to raise public awareness of the important role natural systems play in mitigating property and infrastructure damage. Our Uncover Your Creeks (UYC) program engages community members in urban watershed restoration and education at different sites across the GTA. In 2015, we monitored watersheds in Toronto, Mississauga, Richmond Hill, Scarborough and Markham. Through riparian restoration, stewardship and monitoring, volunteers learn about watershed health, surface water quality and local biodiversity. Sampling from the middle branch of the Rouge River, we held six UYC events at Austin Drive Park in 2015. Along with our planting and stewardship activities, participants had an opportunity to test specific water quality parameters that provided an indication of the overall health of the River system and the important role watersheds play in creating healthy and resilient ecosystems. The community showed significant interest in this new program opportunity and we engaged groups such as the <i>Heritage Lion's Club</i>, <i>Immigrant Youth Centre</i>, <i>407 ETR</i> and the <i>Centre For Dreams</i>.</p> <p>If approved, funds from the <i>Markham Trees for Tomorrow</i> grant will be used to support our existing watershed-focused community program within the City. Since 2008, in partnership with the City of Markham, Evergreen has engaged more than 3,580 volunteers in community greening initiatives, which has resulted in nearly 8,000 native trees and shrubs and over 3,000 wildflowers planted in parks throughout the municipality. Furthermore, volunteers have made a significant effort to control the spread of herbaceous invasive species (notably Garlic Mustard, Dog Strangling Vine, Canada Thistle and European Buckthorn) within city parks, resulting in healthier ecosystems that allow for greater species diversity.</p>			
Project Manager		Additional Contact	
Name	Jill Kelly	Name	Cam Collyer
Title	Project Manager, York Region	Title	Program Executive Director
Phone (work)	416-596-1495 x 360	Phone (work)	416-596-1495 x 228
Phone (cell)	416-899-5439	Phone (cell)	647-400-4022
Email	jkelly@evergreen.ca	Email	ccollier@evergreen.ca
Project Summary			

Title		Watershed Champions: Community Greening Initiative	
Location of Project		City of Markham	
Name of Registered Owner of the Lands		City of Markham	
Address of Registered Owner of the Lands		101 Town Centre Boulevard, Markham, ON, L3R 9W3	
Contact Name for Registered Owner of the Lands		Nory Takata, Parks Planner, City of Markham	
Phone # Registered Owner of the Lands		905-477-7000	Duration (months, maximum 12 months) 8
Request for	Spring Funding <input checked="" type="checkbox"/>	Fall Funding <input checked="" type="checkbox"/>	Either <input type="checkbox"/>
Start Date of Project	April 1, 2016	End Date	December 31, 2016

Please provide a detailed description of your project in the following space. Please attach additional pages if necessary to fully explain your project.

- ❖ Description of the Project Team
- ❖ Project overview and detailed project plan (include work plan with timelines; detailed site and planting plans; monitoring and follow up maintenance schedules)
- ❖ Identify and where possible quantify the environmental benefits associated with the project
- ❖ Who will maintain and monitor the project after completion? (please provide contact information)
- ❖ How will you promote the MTTF fund with this project?
- ❖ Describe other funding sources/in kind support
- ❖ Will there be an educational sign component? If so, please describe

Project Objective:

Through our *Watershed Champions: Community Greening Initiative*, we intend to provide demonstrable, widespread and lasting environmental benefits to the community by addressing a number of environmental issues affecting the City of Markham. Specifically, our program will increase the urban tree canopy, enhance local biodiversity, create vibrant wildlife habitat, and mitigate impacts from herbaceous invasive species within naturalized areas across the city. Building on the success of last year, we will continue with our *Uncover Your Creeks* program within Austin Drive Park. This program builds on the foundations of Evergreen's core greening initiatives by educating community members on urban watershed health through water quality testing and riparian stewardship. By engaging individuals in the aforementioned hands-on greening activities we are not only improving the health of the local environment, we are also helping to strengthening the ecological literacy of local residents. Furthermore, the native trees and shrubs planted as a result of these initiatives will improve the vitality of the community at large, reduce maintenance costs, and contribute to climate change mitigation measures, all of which are objectives outlined in Markham's 2011 Greenprint Sustainability Plan.

Project Overview:

The presence of accessible and vibrant green space influences the health and quality of life in our communities. Public open spaces are areas for recreation, food growing and community building. In the midst of rapid urban intensification, sustaining a connection with nature is of vital importance if we are to move towards a sustainable future. Building on the momentum of the past 7 years, Evergreen will continue to engage diverse individuals through hands-on naturalization projects within Austin Drive Park and approved open spaces across the municipality. Growing steadily since 2008, our program offerings have more than doubled in order to meet the demands for public and stakeholder participation within the City. In 2016, we plan to sustain this level of profile while further promoting the social, cultural, and economic benefits associated with conserving our local watershed and its natural systems. Intensified efforts within Austin Drive Park will also provide an opportunity for individuals to become familiar and identify with a specific site, helping to create a sense of belonging to the natural world while witnessing the tangible improvements they are making in the community.

Building on past successes, Evergreen aims to work directly with community, social service and cultural groups, such as the *Centre for Immigrant & Community Services*, *Heritage Lions Club*, *Markham Chinese Baptist Church* and the *3rd Unionville Scouts*, as well as local schools in delivering water quality monitoring, restoration plantings and stewardship events in Austin Drive Park and throughout the City of Markham. We will collaborate with City staff and Toronto and Region Conservation Authority (as needed) to develop concise restoration plans that will see up to **550 native trees and shrubs** and **100 native wildflowers** planted in open spaces throughout the City. Plans for the spring and fall include 4 planting events at Austin Drive Park and 1 planting event at Willowheights Park. As in previous years, education will be a prominent component of our programming – with educational tutorials and interactive activities (including water quality sampling) offered to community members participating at our events. Our 2016 workplan/timeline, as well as proposed planting location maps with species lists are included in this application as an attachment.

The environmental benefits of our *Community Greening Initiative* include:

- Improving water quality, reducing soil erosion and mitigating flooding associated with severe weather events. Impermeable surfaces in our cities, such as concrete and asphalt, prevent rain water from draining into soil and waterways. Our streets act as tributaries washing particulates, pesticides, heavy metals and other pollutants into our sewers and stormwater management ponds. By planting up to **550 trees and shrubs** in riparian areas, we will promote soil-based water filtration, reduce urban run-off; and help establish 'natural' erosion and flood control measures.

- Enhancing local biodiversity and creating wildlife habitat by planting up to **550 native trees and shrubs** and **100 native wildflowers**.

- Increasing the urban tree canopy by planting native trees and shrubs that will support in-fill efforts resulting from the 2013 Ice Storm and invasive Emerald Ash Borer infestation.

- Controlling the spread of herbaceous invasive species. Selective invasive species removal and restoration encourages greater native species diversity, resulting in healthy ecosystems that provide an abundance of habitat.

- Improving air quality. Trees and shrubs help to clean the air by trapping and retaining airborne pollutants such as carbon monoxide, sulfur dioxide, and nitrogen dioxide. Reports have shown that 85% of harmful pollutants can be filtered out of the air in areas that host an appropriate mix of trees and shrubs (Bolund and Hunhammar, 1999).

- Counteracting 'urban heat island effect' and climate change. Trees provide the highest cooling effect in comparison to other mitigation efforts. University of Manchester studies revealed that a mere 10% increase in the amount of green space maintained in an urban centre reduced surface air temperatures by as much as 4°C. Furthermore, healthy forests play an important role in mitigating the effects of climate change by absorbing and storing significant amounts of carbon dioxide and other harmful pollutants on an annual basis; as well as mitigating damaging impacts from increased flooding.

Evergreen realizes that tree planting alone is not enough. To create healthier, more resilient and sustainable cities, a greater sense of ecological literacy must be promoted and instilled in Canadians. Realizing this, the primary goal of our *Watershed Champions: Community Greening Initiative* will be to promote environmental awareness and watershed health amongst the community of Markham. We will strive to strengthen our existing community partnerships while seeking new opportunities that will allow us to connect and engage individuals of all ages and cultures.

Sustainability Plan:

To promote the health and growth of the stock we plant, Evergreen will engage volunteers in **5 stewardship events** (including water quality sampling and monitoring) throughout the year. Additionally, water quality sampling will take place monthly between May and October along the Rouge River in Austin Drive Park. Results will be shared with City staff, as requested, to drive future aquatic stewardship. Furthermore, collected terrestrial monitoring data will be used to assess the overall health of our community plantings and will help guide our future restoration initiatives. During these stewardship events, program participants will be educated first-hand on the environmental pressures our urban watersheds face, notably invasive species, habitat loss, water pollution and climate change and will work collectively to improve the health and quality of these natural systems. After the 2016 project is complete, Evergreen will continue to work with City staff and raise supplemental funds to support on-going stewardship initiatives, as needed. Also, funds from a portion of this grant will assist in long-term capital investments such as equipment and supply costs that will support our continued work in Markham. Evergreen estimates that an average of 3-5 years of regular stewardship/maintenance is required to ensure that community planted stock reaches a level of maturity where it will require little care in order to survive. Seasonal maintenance and long-term stewardship activities will be assessed and managed by the Project Coordinator.

Project Team:

Jill Kelly, Project Manager, York Region

The day-to-day management and coordination of the *Watershed Champions: Community Greening Initiative* will be conducted by Jill Kelly. As project manager, Jill will:

- Work with municipal and institutional partners to assess and establish suitable restoration/stewardship sites;
- Oversee the development of a detailed workplan for the 2016 season;
- Oversee the planning, organizing and execution of restoration, stewardship, and monitoring events throughout the municipality;
- Assist with the development of educational/interpretive programs and outreach content;
- Program budgeting and reporting;
- Identification of potential funders and preparation of additional funding proposals, as required;
- Oversee the promotion of the program through our community networks, social/cultural groups, local schools and corporations; and
- Manage project administrations and communications.

Jill joined Evergreen's Greenspace team in the fall of 2010. With a background in Environmental and Resource Studies, she previously worked as a project manager for a private environmental consulting firm based out of Markham. In her current role, Jill oversees the hands-on restoration and stewardship initiatives throughout York Region.

Lorraine Chung, Project Coordinator, York Region

Event planning and on-the-ground programming will be conducted by the Project Coordinator. Specifically, Lorraine will:

- Coordinate and facilitate community restoration, stewardship and water quality monitoring events;
- Manage, coordinate and educate volunteers at all community events;
- Develop communication and promotional materials (i.e. event flyers, social media posts, etc.);
- Outreach/network and engage local residents, community groups, corporations and schools; and
- Perform program related administrative duties (health and safety reports, statistical data collection, etc.).

Lorraine earned a BSc. in Marine and Freshwater Biology at the University of Guelph and completed a post-graduate program at Niagara College for Ecosystem Restoration. She previously worked as an Environmental Technician in Alberta at the NGO Eagle Point-Blue Rapids Parks Council and at Rouge Park (prior to the land becoming part of Parks Canada). In March 2013, she became project coordinator for the Greenspace department. Her primary responsibilities are coordinating and facilitating greening initiatives across York Region.

Cam Collyer, Executive Director, Community Programs

The overarching management of the 2016 program will be undertaken by Cam Collyer. Cam oversees Evergreen's national suite of community programs that connect Canadians with nature. This includes our award-winning national school ground greening program as well as our initiatives that engage Canadians in restoring health to public lands and communities. Cam is on the board of directors of Green Teacher magazine, Green Schoolyards America and is a co-founder of the International School Ground Alliance. Cam is a regular presenter at conferences, universities and in the media on topics of school ground greening, environmental education, and the connection between people and nature. He possesses extensive experience in program and partnership development, and will provide strategic oversight for the project team.

Promotion/Recognition:

Through our efforts we hope to foster a strong connection between local residents and Markham's **Trees for Tomorrow** Program. Upon funding, Evergreen will recognize the City's support through:

- *City of Markham Trees for Tomorrow* logo placement on all event signage, including flyers and banners (if applicable) during the 2016 season;
- *City of Markham Trees for Tomorrow* logo placement on all published material during the 2016 season (including website posts and update reports);
- Blog posts and other social media tools;
- City of Markham acknowledgement in Evergreen's 2016 Annual Report; and
- Scheduled public events posted on Evergreen's online event calendar.

Additional Funding Sources/In-kind Support:

- HSBC (Evergreen HR and material/equipment)
- Bonterra (water sampling material/equipment)
- Mountain Equipment Co-Op (Evergreen HR, rentals)
- 407 ETR (Evergreen HR, equipment, rentals)
- TRCA (in-kind program support and site preparation, as required)
- Community Volunteers (in-kind)
- City of Markham (in-kind HR program support and materials)
- Evergreen (in-kind overhead, administration and communication)

Please also provide a cost summary (please use attached budget forms on pages 6 and 7 to this application to provide details of the costs)

Total Project Cost	\$43,000	Amount requested from the MTF	\$24,000
Amount from other sources	\$19,000	In- Kind support hours	800

BUDGET FORM – HUMAN RESOURCES (Volunteers)

Service	Details		In- Kind Value (in hours worked)
	Number of People	Estimated Time for Each hour)	
Community Stewardship and Restoration Volunteers	400	2	800
Total	400	2	800

BUDGET FORM

Materials, Supplies and Equipment	Cost			MTFT	Other
	# of units	Unit Cost \$	Total Cost \$		
Native Trees and Shrubs (stock, delivery, rodent guards, mulch mats etc.)	550	\$18	\$9,900	\$9,900	-
Native Wildflowers (stock, delivery)	100	\$6	\$600	\$600	-
Volunteer Refreshments	10	\$50	\$500	\$250	\$250
Volunteer Gloves	400	\$5	\$2,500	\$300	\$2,200
Shovels	40	\$20	\$800	\$400	\$400
Buckets	40	\$5	\$200	\$200	-
Rental van	6	\$350	\$2,100	\$1,000	\$1,100
Transportation/Mileage (stewardship events, meetings, site visits)	10	\$80	\$800	\$600	\$200
Stewardship & Water Monitoring Tools (pruners, secateurs, weeders, replacement water sampling vials/bottles)	20	\$15	\$300	\$100	\$200
Stewardship Supplies (yard waste bags, plastic bags, etc.)	200	\$2	\$400	\$400	-
Health and Safety (supplies, kits, insurance)	1	\$250	\$250	-	\$250

Other Expenses

Project Coordination (event planning/delivery, site visits, volunteer management, outreach)	35 days	\$350/day	\$12,250	\$10,250	\$2,000
Project Management	16 days	\$400/day	\$6,400	-	\$6,400
Communications (flyers, event signage, social media)	5 days	\$400/day	\$2,000	-	\$2,000
Overhead and Administration			\$4,000	-	\$4,000
Total			\$43,000	\$24,000	\$19,000

How did you organization hear about the MTTF? (Please check one)

City Website ☐ Newspaper advertisement ☐ Word of mouth ☒ Other ☐

Upon completion of this Project please submit your project report, as well as original invoices, photos and records to Parks Planner, Operations, City of Markham, 101 Town Centre Boulevard, Markham, Ontario, L3R 9W3. Telephone 905-477-700 ext.3226 Fax 905-940-1550. Photos may be posted on the City's website.

Applicant's Signature

I hereby make application for funding from the Markham Trees for Tomorrow Fund, declaring that all information contained herein is true and correct and acknowledging that the City of Markham will assess this application based upon the information contained in this application.

If approved for funding I further acknowledge and agree:

1. to comply with all relevant policies and secure all permits required for this project and acknowledge that the City bears no responsibility or has any liability in any manner with respect to this project.
2. that the City reserves the right to review communications and communication materials to be presented to the public to ensure compliance with City policies, including the City's Communication Standards.
3. to promote the Markham Trees for Tomorrow Fund on any communication materials, or signage associated with this project and will provide a detailed report on the project outlining how the funds were used to support the project upon completion of the project and no later than 1 year from receipt of the funding.
4. to allow the City of Markham to use the project name and any images associated with the project to promote the Markham Trees for Tomorrow Program.
5. to return all unspent funds to the City of Markham upon completion of the project.
6. that there shall be no personal benefit directly, or indirectly, from this funding and I will notify the City of any conflict of interest situation should it arise in carrying out of the project.
7. permit the City of Markham to claim ownership of all carbon credits and other measurable ecological services resulting from the project.

Signature

Title

Cam Collyer

Executive Program Director

Printed Name

Date

Cam Collyer

Feb. 18, 2016

In the event the Registered Owner of the lands is an entity other than the City of Markham, a letter must accompany the application stating that: the Owner consents to this application; acknowledges that the proposed project complies to all its applicable policies and requirements; and, that the writer has the authority to give its consent.

Submission of this application form does not guarantee approval of your application.

Personal information contained herein is subject to the Municipal Freedom of Information Act and the Personal Protection and Electronic Documents Act. The information collected may be used for promotional purposes.

OFFICE USE ONLY				
Date Application Received			New Applicant?	Yes No
Approved/Not Approved	Yes	No		
Acknowledgement Letter Sent?	Yes	No	Date Sent	
Letter of Approval or Rejection Sent?	Yes	No	Date Sent	
Final Report Received?	Yes	No	Date Received	
Photos Received?	Yes	No	Date Received	
Consent for Photographs received	Yes	No	Photos posted on website?	Yes No

Completion of this form constitutes consent by the applicant to these terms and uses.

Markham Trees for Tomorrow Fund

Photo Consent and Release Form

I, _____ Jill M. Kelly _____ hereby permit and authorize the *(Print in full – first, middle initial & last name)* City of Markham (the "City") to take my photograph/image.

I acknowledge and agree that the City may publish or use the image for any City purposes by any means whatsoever including, but not limited to electronic or digital means. I acknowledge that the Town may not be able to control the distribution or use of the image by other than Town representatives.

I agree that this Consent and Release is given in perpetuity and for no consideration, credit, acknowledgment or financial recompense, now and in the future.

I hereby hold the City harmless for any claims, actions, debts, damages, injuries or losses that may arise or be incurred as a result of the taking, use, publication or distribution of the image and I agree to indemnify the City against any third party claims, actions, damages, injuries or losses brought or assessed against or incurred by the Town for the use of the image(s).

Contact Information					
Signature	Jill Kelly	Date	February 18, 2016		
Address	Centre for Green Cities, Suite 300, Evergreen Brick Works, 550 Bayview Avenue				
City	Toronto	Province	ON	Postal Code	M4W 3X8
Telephone	416-596-1495 x 360		Email	jkelly@evergreen.ca	
City of Markham:					
City Representative		Date			

Attachment Checklist

Attachment 1: 2016 Workplan/Timeline

Attachment 2: Tentative 2016 Event Schedule

Attachment 3: Proposed Species Lists and Planting Plans


Attachment 4: Photo Highlights – 2015 *Trees for Tomorrow* Program

**Attachment 1:
2016 Workplan and Timeline**

TIME FRAME	ACTIVITIES
Spring 2016	<ul style="list-style-type: none">-Coordinate with community and program partners to finalize program details (March)-Outreach within the greater community to promote the program and recruit new volunteers (March-April)-Facilitate community restoration planting events, stewardship, and water sampling initiatives (May-June)
Summer 2016	<ul style="list-style-type: none">-Coordinate and lead stewardship, wildflower plantings, and water sampling events in designated parks (June-August)-Outreach within the community to promote the program to recruit volunteers for fall plantings (August)
Fall 2016	<ul style="list-style-type: none">-Facilitate community restoration planting events, stewardship, and water sampling initiatives (September-November)
Winter 2016/17	<ul style="list-style-type: none">-Prepare and provide program activity report to the City of Markham (December)-Secure additional funding sources to supplement our community programs in Markham (January-February)-Collaborate with City staff and the Toronto and Region Conservation Authority (as required) to finalize community restoration and program plans for 2017 (March)

Attachment 2: Tentative 2016 Event Schedule

M A R K H A M TREES for TOMORROW



Date	Time	Location	Description	Partners
Sunday, May 8, 2016	10am-12pm	Austin Drive	Restoration Planting	Unionville Lion's Club
Wednesday, May 11, 2016	6pm-8pm	Willowheights	Restoration Planting	MCBC and Scouts
Saturday, May 14, 2016	10am-12pm	Austin Drive	Uncover Your Creeks and Restoration Planting	Public Event
Wednesday, May 18, 2016	10am-12pm	Austin Drive	Stewardship	Father Michael McGivney Catholic Academy
Thursday, June 9, 2016	4:30pm-6:30pm	Austin Drive	Uncover Your Creeks, Stewardship and Wildflower Planting	Immigrant Youth Centre
Tuesday, July 12, 2016	6pm-8pm	Willowheights	Stewardship	Public Event
Thursday, July 21, 2016	6pm-8pm	Austin Drive	Uncover Your Creeks, Stewardship and Wildflower Planting	Public Event
Tuesday, August 23, 2016	6pm-8pm	Austin Drive	Uncover Your Creeks, Stewardship and Wildflower Planting	Public Event
Saturday, September 24, 2016	10am-12pm	Austin Drive	Uncover Your Creeks and Restoration Planting	Public Event
Saturday, October 15, 2016	10am-12pm	Austin Drive	Uncover Your Creeks and Restoration Planting	Public Event

Attachment 3: Proposed Species Lists and Planting Plans

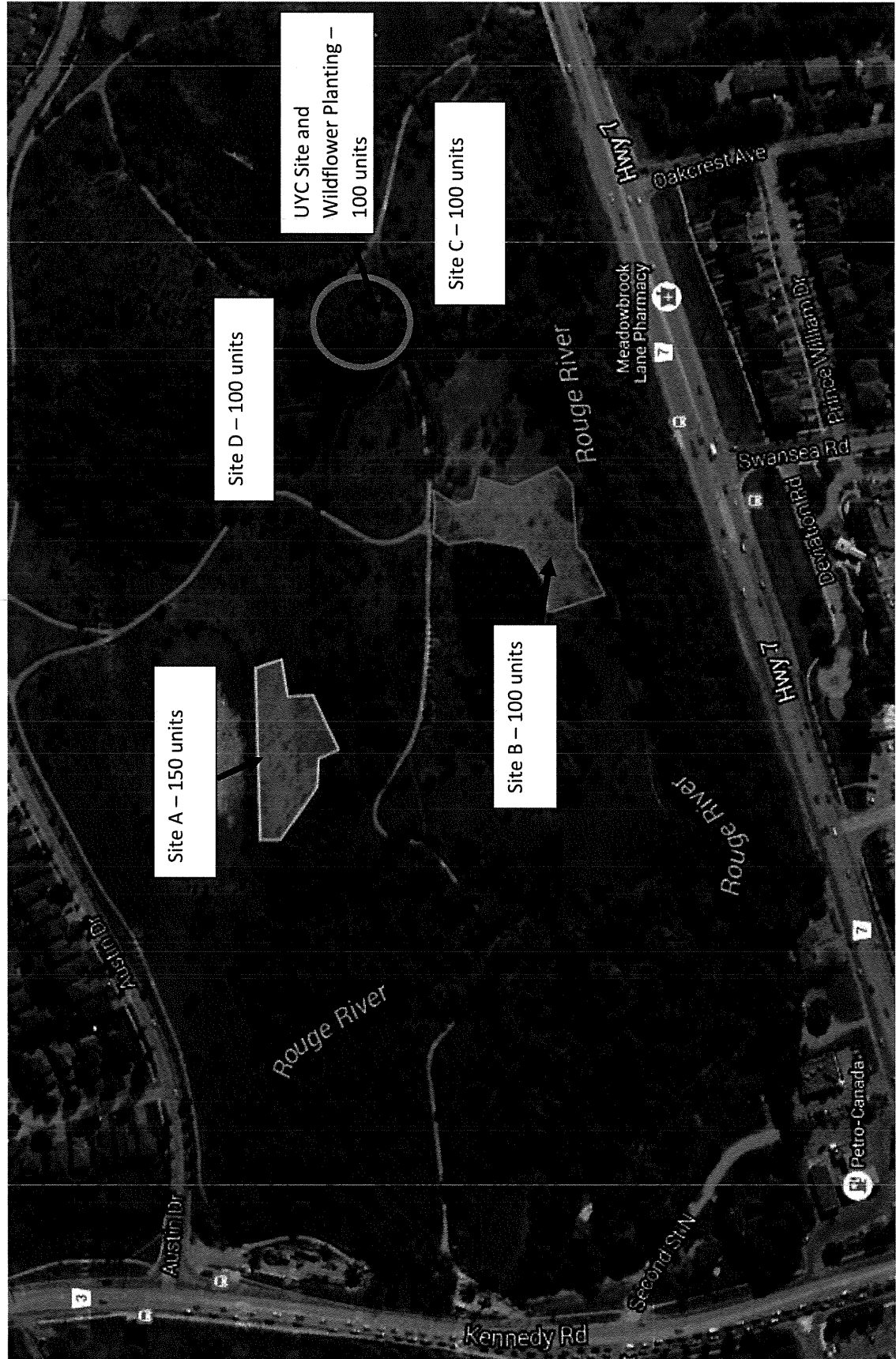
Austin Drive Park

Common Name	Latin Name	Quantity			
Trees		Site A	Site B	Site C	Site D
Eastern Red Cedar	<i>Juniperus virginiana</i> var. <i>virginiana</i>	10	10		
Silver Maple	<i>Acer saccharinum</i>	10		10	
Trembling Aspen	<i>Populus tremuloides</i>	10	10	10	10
Bur Oak	<i>Quercus macrocarpa</i>	10	10		
Upland Willow	<i>Salix humilis</i>	10			
Red Oak	<i>Quercus rubra</i>			10	
White Spruce	<i>Picea glauca</i>				10
Eastern White Cedar	<i>Thuja occidentalis</i>				10
SUBTOTAL		50	30	30	30
Shrubs					
Speckled Alder	<i>Alnus incana</i> <i>rugosa</i>		10	10	
Beaked Willow	<i>Salix bebbiana</i>		10	10	20
Red Osier Dogwood	<i>Cornus sericea</i>	20	10	10	
Fragrant Sumac	<i>Rhus aromatica</i>	20	10	10	20
Meadowsweet	<i>Spiraea alba</i>			10	
Nannyberry	<i>Viburnum lentago</i>	20	10		20
Chokeberry	<i>Aronia melanocarpa</i>	20	10	10	10
Fragrant Raspberry	<i>Rubus odoratus</i>	20	10		
White Elderberry	<i>Sambucus canadensis</i>			10	
SUBTOTAL		100	70	70	70
TOTAL UNITS		150	100	100	100
GRAND TOTAL					450

Austin Drive Park

Common Name	Latin Name	Quantity		
Wildflowers		June	July	August
Red Baneberry	<i>Actaea rubra</i>	10		
Boneset	<i>Eupatorium perfoliatum</i>		10	
Obedient Plant	<i>Physostegia virginiana</i>			10
False Solomon's Seal	<i>Maianthemum stellatum</i>		10	
Blue Vervain	<i>Verbena hastata</i>	10		
Great Blue Lobelia	<i>Lobelia siphilitica</i>		10	
Scarlet Beebalm	<i>Monarda didyma</i>			10
Foxglove Beardtongue	<i>Penstemon digitalis</i>	10		
Maidenhair Fern	<i>Adiantum aleuticum</i>			10
Swamp Milkweed	<i>Asclepias incarnata</i>	10		
SUBTOTAL		40	30	30
TOTAL UNITS		100		

Austin Drive Park Planting Site Map



Willowheights Park

Common Name	Latin Name	Quantity
Trees		
Trembling Aspen	<i>Populus tremuloides</i>	10
Bur Oak	<i>Quercus macrocarpa</i>	10
White Cedar	<i>Thuja occidentalis</i>	10
Eastern Red Cedar	<i>Juniperus virginiana var. virginiana</i>	10
Silver Maple	<i>Acer saccharinum</i>	10
SUBTOTAL		50
Shrubs		
Fragrant Sumac	<i>Rhus aromatica</i>	10
Running Serviceberry	<i>Amelanchier stolonifera</i>	10
Roughleaf Dogwood	<i>Cornus drummodii</i>	10
Nannyberry	<i>Viburnum lentago</i>	10
Narrowleaf Willow	<i>Salix exigua</i>	10
SUBTOTAL		50
TOTAL UNITS		100

Willowheights Park Planting Site Map



ATTACHMENT 5

LEAF's Backyard Tree Planting Program: MTFT Fund Application 2016

1. Description of the Project Team

Janet McKay, Executive Director

Janet has an Honours B.A. in Environment and Resource Management and a certificate in Permaculture Design. She is the founder and Executive Director of LEAF. Janet has over 18 years' experience designing and implementing community-based, urban forest projects that are supported through unique, multi-sector partnerships. She also advocates for urban forests at the provincial level, taking a leadership role in the formation of both the Urban Forest Stewardship Network and the Green Infrastructure Ontario Coalition.

Melissa Williams, Program Manager

Melissa holds a certificate in Urban Forest Conservation Planning and a Master of Arts degree in English literature from the University of Toronto. She is also an ISA Certified Arborist. She has worked at LEAF for 5 years and currently oversees all internal operations. She has extensive experience in program design and partnership development.

Brenna Anstett, Field Operations Coordinator

Brenna holds an Honours Bachelor of Arts degree in Geography and Environmental Governance from the University of Guelph. She is also an ISA Certified Arborist. Brenna has been with LEAF since July of 2013. She oversaw the entire backyard planting operations in 2014 and 2015. Brenna's past experience includes research in dendroclimatology and tree planting projects with the Ausable Bayfield Conservation Authority.

2. Project Overview and Detailed Project Plan

Trees planted in urban areas offer numerous environmental, economic, social and psychological benefits to residents, such as improved air and water quality, increased carbon sequestration, energy savings, habitat enhancement, noise reduction, and even increased property values. In 2011, the City of Markham developed the Greenprint Sustainability Plan, which includes the goal of reaching 30% town-wide tree canopy and vegetation cover by 2025. According to the York Region Urban Forest Study completed in 2012, Markham currently has 18% canopy cover (TRCA, 2012). While the potential exists for the city to increase this percentage, recent threats to the urban forest create additional challenges in meeting this target for growth. For example, the invasive Emerald Ash Borer (EAB) has killed over 17,000 ash trees in Markham over a three-year period (according to the city's website).

Taking this into account, LEAF's Backyard Tree Planting Program offers residents of Markham a convenient, accessible and affordable way to obtain new trees, shrubs and perennials for their yard. Through this program, homeowners purchase native species which will help to both beautify their yards and enhance Markham's overall urban canopy coverage. This project complements the City of Markham's existing strategies by targeting private property while the city focuses its efforts on protecting and enhancing the urban forest on public property through its EAB Management Plan and Urban Tree Recovery Plan.

Through the Backyard Tree Planting Program, residents can purchase trees for the subsidized price of approximately \$150 - \$220. This price includes a yard consultation with a LEAF arborist, a native tree (five to eight feet in height), delivery, and full planting service. Since the goal of LEAF's program is to ensure the right tree gets planted in the right place, we take into account site conditions such as light and soil, so as to help ensure the establishment of large-growing native trees whose dense canopies can provide maximum environmental benefits like air and water quality improvement, heat island and noise reduction and climate change mitigation.

The objectives of our Backyard Tree Planting Program are achieved through the following four steps:

1. Online pre-visit questionnaire to ensure the property owner qualifies for the program, has adequate planting space in their backyard, has realistic expectations of the program and is committed to long-term stewardship and tree/shrub care.
2. On-site consultation with LEAF arborist and property owner to determine the appropriate species and planting locations (taking into consideration sunlight, soil type, yard space, yard conflicts, future yard changes, neighbouring properties and homeowner preferences). In addition to developing a site plan, consultations present an opportunity for LEAF arborists to provide homeowners with customized information suited to their backyard needs (ie. interest in wildlife, eco-friendly gardens, pests and disease, etc.), as well as additional educational materials on EAB and other LEAF programs.
3. Planting and delivery of carefully selected native trees and shrubs by LEAF professionals in the spring and fall seasons.
4. Follow-up survey to assess participant satisfaction and program evaluation and/or follow-up site visit to assess tree and shrub health.

LEAF also offers a Do-It-Yourself Planting Program, which is available to all residents of York Region, including Markham. This program provides educational assistance to homeowners who wish to plant in front or side yards, in addition to backyards, and is an ideal alternative for those who wish to do the planting themselves. LEAF arborists still assist homeowners in selecting native species for their yard; however, the process is completed through an online survey, video series workshop, and personalized species recommendations from a LEAF arborist. Similar to the full service program, prices are subsidized, delivery takes place during the spring and fall planting seasons and follow-up surveys are sent out to assess participant satisfaction and program evaluation.

Through our planting program, we work hard to educate homeowners about how to properly care for their newly planted trees and shrubs, as well as how they can respond to urban forest threats such as EAB. To help with this, we provide residents with resources on proper tree care and maintenance and help them to make informed decisions on treating, removing and/or replacing ash trees on their property. By providing our

participants with the knowledge they need to become urban forest stewards, we are helping them play an active role in replanting and improving Markham's urban forest.

With financial support from both York Region and the City of Markham, LEAF has offered residents of Markham trees, shrubs, Native Garden Kits and Edible Garden Kits through its Backyard Tree Planting Program since 2008. Throughout these years, we have reached 427 Markham homeowners and conducted 349 yard consultations, resulting in the planting and delivery of 667 trees, 449 shrubs, 9 Native Garden Kits (which include a mix of native shrubs and perennials) and 6 Edible Garden Kits (which include a selection of fruit and/or nut bearing trees and shrubs). In addition to providing native species to homeowners, we also visited 56 Markham households in 2015 to conduct follow-up health assessments on trees and shrubs previously planted by LEAF. We evaluated 90 trees and 66 shrubs planted between 2008 and 2014, and found a 100% survival rate for trees and shrubs. Furthermore, of the Markham residents who participated in our program and completed our post-planting survey in 2014 and 2015, 100% indicated that they would recommend our Backyard Tree Planting Program to others. They also rated our overall staff courtesy and knowledge of trees and tree care as excellent and found our program very convenient to participate in.

This positive program feedback, coupled with an anticipated increase in tree and shrub demand resulting from ash tree losses, lead us to believe that LEAF's planting programs will continue to be of significant interest to Markham residents in 2016 and we are confident that our program will continue to satisfy participants who recognize the importance of caring for their trees and shrubs for years to come, thus creating a lasting benefit in their community.

Project Objectives

- Involve 60 households in Backyard Tree Planting Program via consultations, deliveries and planting
- Conduct 60 yard consultations with Markham homeowners to determine the "right tree for the right place"
- Deliver educational messages to 60 households on the importance of proper tree care, ongoing stewardship and the environmental, economic, social and psychological benefits of the urban forest
- Plant 100 native trees
- Plant 50 native shrubs
- Conduct 20 on-site health assessment evaluations of LEAF-planted trees and shrubs in Markham backyards
- Collect 5 client profiles of participants which include answers to interview questions and photos
- Provide a LEAF Planting and Care Guide to all participating households
- Provide locations (by ward) and species for all trees/shrubs planted
- Provide client testimonials, photographs and other pertinent information to promote the project

Together with our tree planting programs, LEAF also has plans to offer a variety of exciting opportunities to learn about and help protect and improve the Markham urban forest in 2016:

1) LEAF plans to host a Tree Tour in one of York Region's municipalities (TBD) that will highlight either edible trees or other interesting aspects of the urban forest. LEAF Tree Tours are guided walking tours through different neighbourhoods that highlight trees of interest along the way and often incorporate education on local tree history and culture. Tree Tours are a great way for Markham residents to engage with tour leaders and

other tour participants to learn about current issues affecting their urban forest, as well as ways to help care for, protect and enhance it.

2) LEAF will also deliver its Tree Tenders Volunteer Training Program in the Town of Richmond Hill in the fall of 2016, which will be available to all Markham residents interested in gaining tree-related knowledge and hands on arboricultural skills. LEAF's Tree Tenders Program is a multi-day course developed to provide individuals with basic arboriculture training through a combination of indoor and outdoor instruction and practical, hands-on activities such as tree planting. This training program is a way for Markham residents to take what they've learned and apply it to their own yards and communities in order to help protect and improve Markham's overall urban forest.

3) LEAF also plans to attend a number of community outreach events in Markham throughout the year, so as to promote our planting and education programs and our partnership with the City's Trees for Tomorrow Fund.

Project Timeline

Throughout	Project promotion; project evaluation, monitoring and verification
January – February	Update website and iPad (virtual siting binder) with profiles for new native species offered; order nursery stock for spring planting season; plan and prepare for upcoming planting season
March-December	Respond to program inquiries; process pre-planting questionnaires for new participants; schedule and carry out consultations in backyards with homeowners; process orders for trees, shrubs and kits; send out spring, summer and fall BYTP newsletters to all current and past participants with seasonal tree care tips and information about new product offerings
April – June	Devise efficient planting routes; make notification calls to participants informing them of planting date; carry out delivery/planting
June - August	Send out participant feedback surveys; order nursery stock for fall planting season; schedule and carry out follow up visits of previous plantings to evaluate tree health and provide personalized care and stewardship tips for homeowners
September- November	Devise efficient planting routes; make notification calls to participants informing them of planting date; carry out delivery/planting
November	Send out participant feedback surveys

December	Final project report and evaluation
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Project Evaluation

For the sake of measuring and maintaining both our short and long-term successes, LEAF is committed to using a variety of tools and practices for monitoring, evaluating and improving various aspects of our program. Some of the aspects of our program we feel are important for measuring success include:

- The number of trees and shrubs planted (tracked in our participant database)
- Participant satisfaction with staff courtesy and knowledge, product quality and price and overall program (measured through our post-planting survey)
- The success of educational messaging and materials (measured through our pre-visit questionnaire and our post-planting survey)
- Tree and shrub health and survival rates (measured through site visits following planting)

3. Environmental Benefits of the Project

The City of Markham covers 212 square kilometres of land and is currently home to more than 349,000 residents. It is the 16th largest municipality in Canada, and has experienced rapid growth in recent years. According to Statistics Canada, Markham's population was 300,000 people in 2011, representing a 15.3% increase from 2006. Compared to the national average population increase of 5.9% during that same period, it is clear that Markham represents one of the fastest-growing municipalities in Ontario.

While such a rapid increase in population is important for economic development, it can also lead to a rise in resource depletion and environmental degradation. For example, air and water pollution, ecosystem destruction, loss of biodiversity, and increased pressure on natural and arable lands are some of the negative side effects of such growth. By-products of urbanization such as heat, combustion and chemical emission negatively impact the health of our environment and that of residents living in densely populated areas, yet our urban forest can help to reduce the harmful effects (and associated costs) of city living.

According to the York Region Urban Forest Study (TRCA, 2012), healthy urban forests provide the following environmental benefits:

1. Air Pollution Removal and Improved Air Quality:

With an increase in urbanization comes an increase in poor air quality through the release of air pollutants such as carbon monoxide, nitrogen oxides, sulphur dioxide and ground level ozone. Planting urban trees and shrubs can help improve this air quality through the interception of particulate matter and the absorption of those harmful pollutants. Approximately 830 tonnes of air pollution are removed by trees and shrubs in Markham, Richmond Hill and Vaughan each year, and the value of this service equates to approximately \$7.2 million

annually. Therefore, increasing the urban forest canopy across Markham can help to improve overall air quality, enhance the physical and mental health of residents and result in substantial savings in health care expenditures and damage repairs to municipal infrastructure as a result of air pollution.

2. Carbon Sequestration and Storage:

It has been suggested that planting trees and shrubs in urban areas is a cost-effective means to ameliorate increasing levels of atmospheric CO₂, and in turn, rising temperatures. As such, urban trees and shrubs can play a critical role in improving local air quality in two major ways: (1) they can act as carbon sinks by sequestering (absorbing) atmospheric carbon during photosynthesis and storing it as woody biomass and (2) they are able to reduce or avoid carbon dioxide emissions if planted strategically, by cooling ambient air and allowing urban residents to minimize their annual heating and cooling.

In the City of Markham in a given year, the urban forest accounts for about 226,382 tonnes of total carbon storage, 10,644 kilograms of carbon storage per hectare, 9,089 tonnes of net annual carbon sequestration and 345 kilograms of annual carbon sequestration per hectare. Since there is a positive relationship between a tree's size and the amount of carbon each individual species is able to sequester/avoid over time, it is important that we plant large shade trees that have the best possible chance at reaching maturity so as to increase the overall volume of carbon sequestered/avoided by Markham's urban forest. By strategically planting these trees on private properties, overall annual carbon storage across Markham's urban forest will increase, which can help improve local air quality for residents.

3. Energy Conservation Savings:

Trees can reduce energy use and save us money. Although every property is unique, strategically planting trees has been shown to play an important role in reducing urban energy consumption (especially during peak demand times), and in turn, lowering emissions from power plants and minimizing energy costs for residents. More specifically, planting deciduous trees can help homeowners save energy in the summer by shading homes and air conditioners and planting evergreen trees can provide protection from cold winds and keep homes warm in the winter.

For the City of Markham specifically, planting trees and shrubs will help to avoid the production of 8,100 tonnes of carbon created by power plants each year, which results in a total annual residential energy expenditure savings of \$2,092,700. This total includes savings for natural gas expenditures (\$1,441,000), electricity expenditures (\$576,000) and carbon avoided (\$75,700).

4. Stormwater Management:

During high-intensity storm events in urban areas, a large percentage of rainwater falls on impervious surfaces which then creates considerable volumes of stormwater runoff. This runoff often exceeds the capacity of urban municipal infrastructure which in turn, leads to an increase in soil erosion, property damage and the degradation of local water quality and aquatic habitat. Urban trees and shrubs play a significant role in helping to manage this runoff through leaf and branch interception, root infiltration and overall pollutant filtering, which then contributes to soil stabilization, cleaner water and the recharge of groundwater which serves as municipal

drinking water. Taking these benefits into consideration, planting trees and shrubs would take some of the stress off municipal infrastructure that would otherwise combine storm and sewer overflows, leading to an increase in untreated water in our local rivers and lakes.

An i-Tree Hydro model simulation showed that a loss of existing tree cover in the West Don watershed (11%) would increase total streamflow by 1% and a loss of existing tree cover in the Upper Rouge watershed (27%) would increase total streamflow by 2.9%. With this in mind, an increase in canopy cover in Markham can help to ensure better stormwater management so as to mitigate the effects of development and human activities on the hydrologic cycle.

5. Increased Biodiversity:

With urbanization comes an increase in construction and development, which often prompts the displacement or complete removal of important, local wildlife species. The reduction in insect and animal populations, in response to the loss of key habitat and feeding areas, then leads to an overall decrease in biodiversity. By planting native trees, shrubs and perennials on private properties in Markham, we can help to increase biodiversity as we will be creating safe, protected environments that attract and support a variety of butterflies, birds, bees and other small animals.

4. Ongoing Maintenance and Monitoring Following Project Completion

In order to ensure that trees planted through our program have the best chance at reaching maturity so as to provide maximum benefits to urban residents, we work with our participants to provide their trees with ongoing care, maintenance and monitoring. In doing so, we can ensure that these new additions to Markham's growing canopy get the care they need to survive and thrive for years to come. This is accomplished by the following:

1) Asking participants to contribute to a portion of the cost for their tree and to make a commitment to caring for it. Our program is offered to the residents of Markham at a subsidized rate, rather than free of charge. The reason for this is that we believe a financial contribution will provide homeowners with an incentive to commit to providing ongoing care to their tree.

2) Incorporating tree care education as a vital part of our planting program. LEAF strives to ensure that each of our participants become knowledgeable and enthusiastic tree stewards by emphasizing proper tree care and maintenance methods through one-on-one education, beginning with the pre-visit questionnaire to sign up for the program and continuing through the time of planting. At the site consultation, we provide homeowners with a package of printed materials and we deliver an additional care guide emphasizing the dos and don'ts of watering, mulching, staking, fertilizing and pruning when we return to plant their tree. Furthermore, we send out an e-newsletter to present and past participants three times per year in order to provide ongoing support and additional information and resources on tree care and maintenance.

3) Providing ongoing support for participants. In addition to the support we provide prior to and at the time of planting, we also let our participants know that we are available to answer any questions or concerns they have about their trees and shrubs in future years. LEAF regularly offers presentations, workshops and events to provide further education for interested individuals and our website contains a section dedicated to client resources, providing homeowners with general tree care tips and fact sheets, educational videos and a link to our request for arborist advice form. If needed, LEAF staff will also perform special site visits in order to provide our participants with the highest quality service.

4) Offering a five-year maintenance package for LEAF-planted trees at an affordable price. In 2013, we developed a maintenance package for our Backyard Tree Planting Program participants. This optional service helps ensure that the trees we plant get off to the best possible start in life so that they can continue to grow into large, healthy trees and provide maximum benefits to homeowners and to the community. This package includes a yearly application of mulch, tree health assessments and minor pruning as needed. Furthermore, in year three, four or five of the program, we will conduct structural pruning in order to ensure a strong growing structure and a healthy future.

5) Conducting follow-up visits of past tree plantings to confirm ongoing high quality tree selection and planting practices, sound tree health and high survival rates. Each summer, we conduct follow-up visits at randomly selected homes for past LEAF-planted trees. Our arborists conduct tree health evaluations using indicators developed by Dr. Andy Kenney at the University of Toronto, and we use the information gathered during these visits for ongoing monitoring, evaluation and improvement of our planting programs. Prior to these visits we secure permission to enter homeowner properties and upon completion, we share the results of our assessment with the homeowners, along with personalized advice for their tree(s) and/or shrub(s).

5. Promotion of MTFT Fund

LEAF's residential planting programs would not operate to their fullest potential without the ongoing support of our funding partners. As such, LEAF strives to ensure these partnerships remain mutually beneficial. In order to acknowledge Markham's generous contribution to the continued success of our programs, LEAF will provide recognition through various publications and communication materials, as well as through media coverage. More specifically, LEAF will recognize Markham's support through the following:

- Acknowledgement in LEAF's annual report
- Acknowledgement in the LEAF e-newsletter which currently reaches over 2000 individuals
- Recognition on LEAF's web site which receives about 79,000 unique visits per year
- Logo recognition on LEAF print material distributed at all events, workshops and to Backyard Tree Planting Program participants
- Recognition in press interviews whenever possible
- Social media mentions through Facebook (2,582 likes) and Twitter (8,176 followers) - shared and mentioned where applicable - joint events, tree tours, relevant program highlights, news, etc.
- Invitation to and recognition at special LEAF events including our annual celebration
- Use of LEAF name and logo in the City of Markham promotional/educational materials (terms and conditions to be negotiated)
- Articles and other written/photographic content as requested by the City of Markham (terms and conditions to be negotiated)

6. Other Funding Sources/In-Kind Support

Other funding sources include:

York Region (project management and administration) - \$10,500
Project Revenue (program participant fees) - \$22,000

See attached budget for details.

7. Educational Sign Component

Following on-site consultations, we will display temporary lawn signs in the front yards of participants' homes in

order to highlight LEAF's planting programs and to provide an easy, accessible way for participants to spread the word in their neighbourhood. The signs read "We're planting a tree in our backyard...Get yours today!" and direct individuals to LEAF's website where they can find more information on the Backyard Tree Planting Program and our supporting partners. The signs are then picked up from the participants' homes at the time of planting during the spring and fall seasons.

Proposed Budget - LEAF's Backyard Tree Planting Program - Markham 2016

EXPENSES	Cost Per Tree/Shrub	Number	Total Cost
Project Management			
Program Manager			6500
Adminstration			
Office rent/insurance/bookkeeping/office supplies/phones/internet			4000
Consultations			
Arborist	45		
Arborist Travel Time	17		
Transportation	8		
Education/promotion/tracking/reporting	75		
	145	60	8700
Trees Planted			
Arborist Planting Lead	30		
Seasonal Planting Crew	22		
Cost of Trees	75		
Materials/Tools	3		
Truck Rental & Fuel	23		
Delivery Charges from Nursery	2		
Education/promotion/tracking/reporting	100		
	255	100	25500
Shrubs Planted			
Arborist Planting Lead	15		
Seasonal Planting Crew	10		
Cost of Shrubs	13		
Education/promotion/tracking/reporting	22		
	60	25	1500
Shrubs Delivered			
Arborist Planting Lead	7		

Seasonal Planting Crew	10		
Cost of Shrubs	13		
Education/promotion/tracking/reporting	10		
	40	25	1000
Follow ups			
Arborist	50		
Arborist Travel Time	17		
Transportation	8		
Education/promotion/tracking/reporting	25		
	100	20	2000
Grand Total			49200

100 trees

\$400 - average per-tree cost (including consult)
 \$200 - per tree subsidy
 \$200 - average per tree cost to homeowners

50 shrubs

\$50 - average per-shrub cost
 \$20 - per shrub subsidy
 \$30 - average per shrub cost to homeowners

20 follow up visits

\$100 - per follow up

REVENUE

Homeowner Contributions	Tree	Delivered shrub	Planted shrub	Total
Per tree/shrub homeowner contributions	200	30	50	
Number	100	25	25	
Total Homeowner contributions	20000	750	1250	22000

Total Revenue							
Homeowner contributions				22000			
York Region (Project Management and Administration)				10500			
Markham Trees For Tomorrow contribution				16700			
Total				49200			