Local Enhancement & Appreciation of Forests

Not-for-profit community organization dedicated to the protection and improvement of our urban forest.

Started 1996

- Madame Chair, members of the committee, thank you for the opportunity to speak today.

- My name is Janet McKay and I'm the founder of a not-for-profit community organization called LEAF – Local Enhancement and Appreciation Forests.

- Our journey began in 1996, and has always been focused on engaging the community in urban forest stewardship. We are very excited that the City of Toronto is developing a strategy for private property tree planting and I'm here to day to share with you a bit about our experience and lessons learned over 20 years.

- As you may know, our first ever program, still operating today, is a Subsidized Backyard Tree Planting Program. Each year, for 20 years, we patched together small grants and bits of funding to keep the program growing. Last year, faced with waning funds from other partners, we received a grant from the City of Toronto for the first time.

2016 Results

$50,000 – City contribution matched 2:1

$70,000 – Participant revenue (property owners who purchased trees/shrubs)

$30,000 – Corporate and Federal Government

Total - $150,000

Planted 800 trees and shrubs

Total cost - $187.50 per item

City contributed $62.50 per item

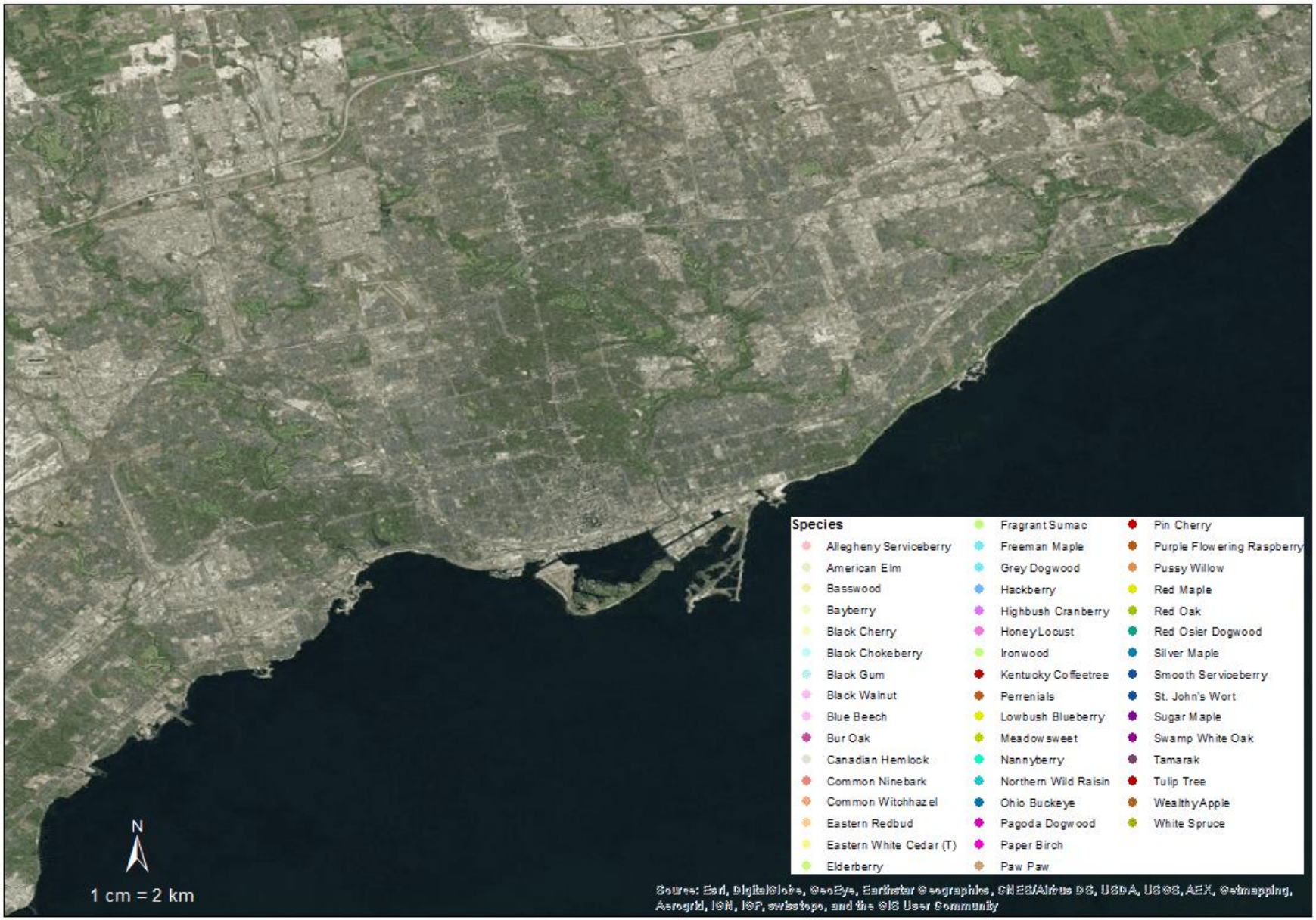
- With support from Toronto City Council in the amount of $50,000, we were able to continue to offer this valuable program to residents in 2016.

- we raised an additional $100,000 in cash contributions from other sources to match the grant 2:1

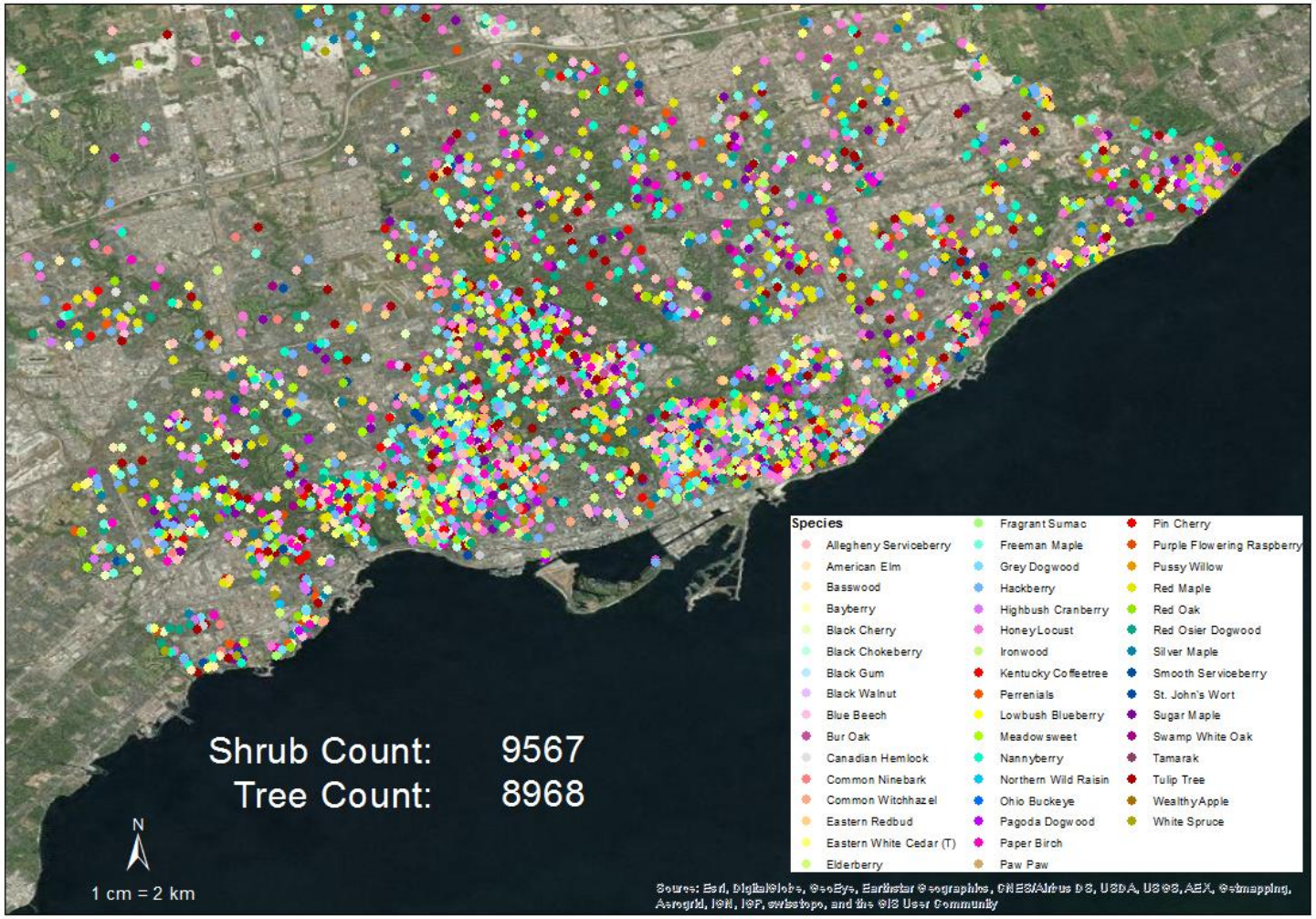
- With this total funding of $150,000 we planted 800 trees and shrubs on private property in 2016. Our program is quite intensive, working with the property owner to ensure the right tree, in the right place, planted in the right way and provided the right care. Trees are 6 to 8 feet in height and delivery/planting services are provided.

- Since we first started planting in 1996, we have kept a very thorough database of all our trees and shrubs planted. This map shows our efforts over the years.

LEAF Trees and Shrubs – established system for tracking and mapping and extensive data collection **(must be viewed in presentation mode to see animation)**



Cumulative Total 1996-2016



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- We started in south Riverdale, then expanded to Scarborough and then offered the program throughout the City of Toronto after amalgamation. We now have trees in every Toronto ward across the City.

Started as free tree sapling giveaway

Why didn’t that work?

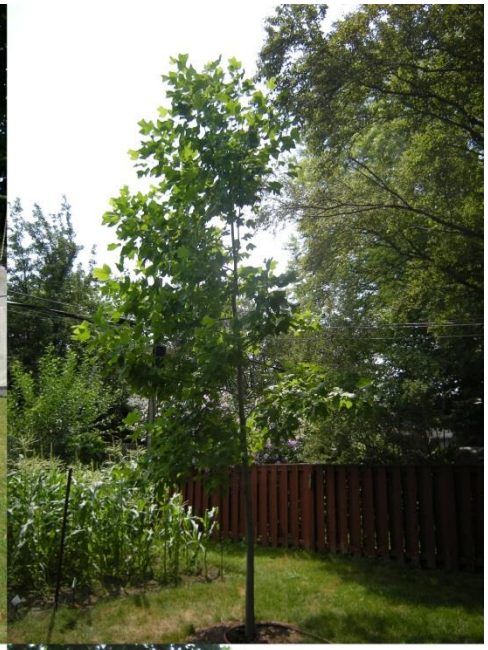
- Follow up results were very poor
- Trees not there
- Still in pot – not planted
- Wrong tree, wrong place

Why evolve to current model?

- Personal relationship building – 5 points of contact
- Right tree in the right place - help property owners through these steps
- Optimize opportunity – prioritize large growing natives
- Emphasis on educating property owners as stewards of the trees
- Ongoing support for proper tree care
- High survival rates over time

2007

2010



2013

2015

Silver maple planted 2012

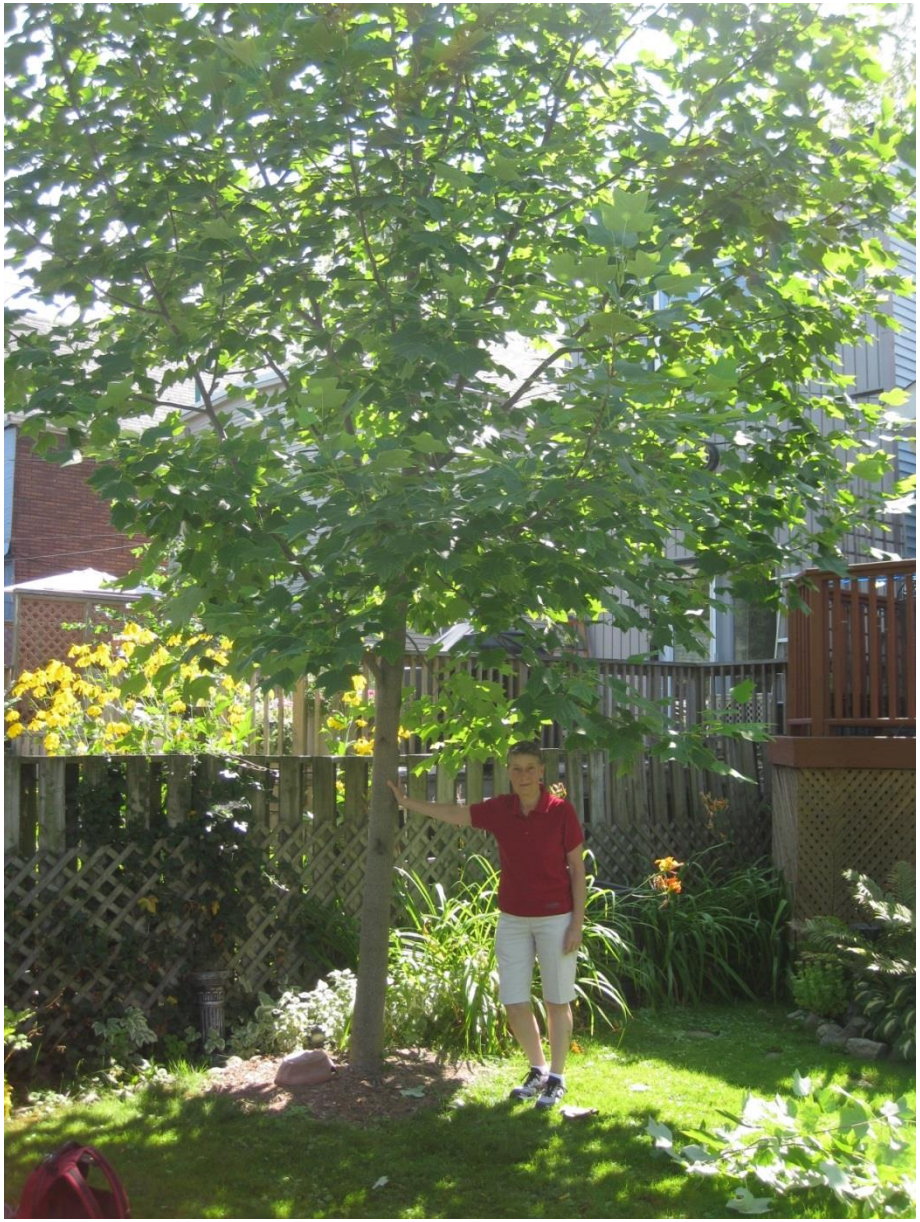
Photo taken 2016

Tulip tree planted 2007
Photo taken 2016 (9 yrs)

White spruce planted 1997
Photo taken 2016 (19 yrs)

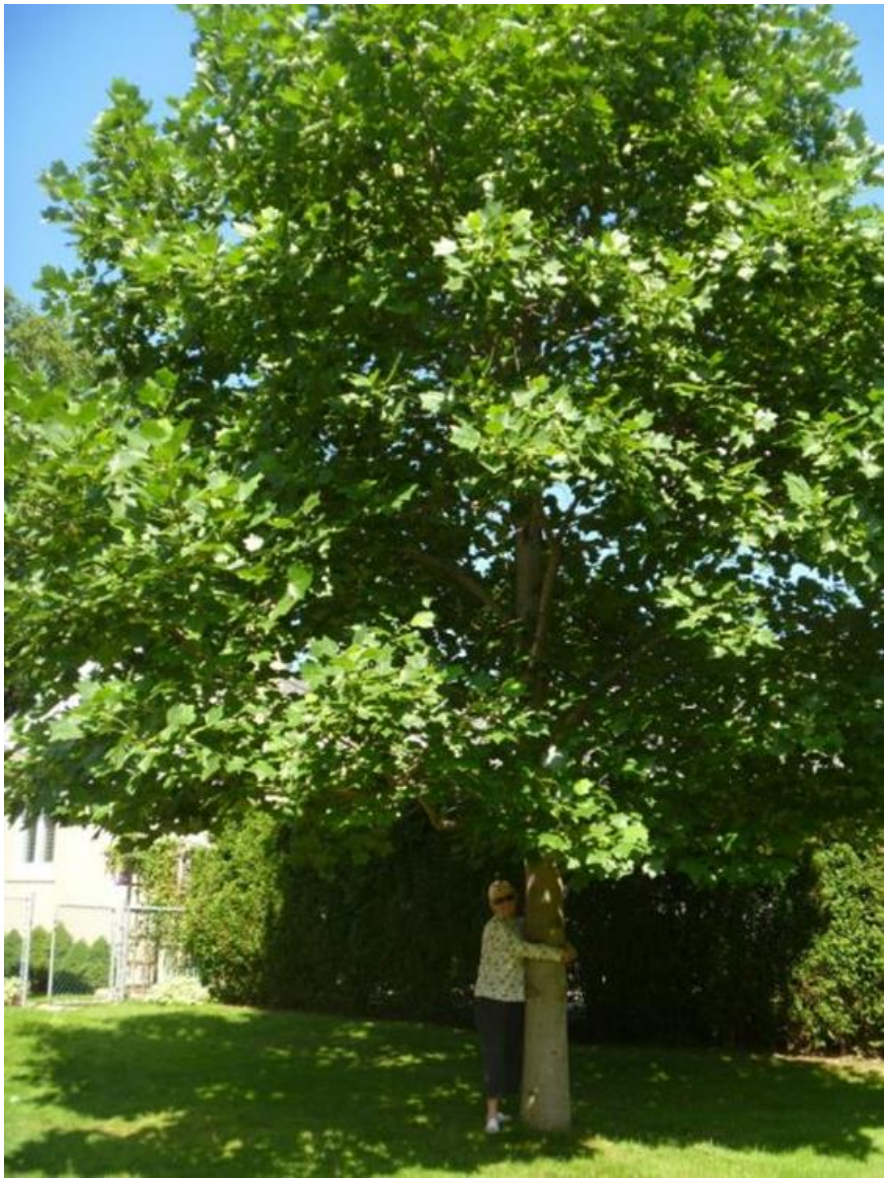
Honey locust planted 2007

Photo taken 2016 – 9 years after planting



Tulip tree
planted 2010

Photo taken
2014



Tulip tree 8 years after planting

Right tree, right place, right care!

LEAF Tree Survival

We conduct rigorous follow up so that we can monitor and continually improve our success. Our survival rate for trees planted in the last 5 years is 95%.

We also engage external researchers in order to provide unbiased survival assessments. In 2010, Ryerson Masters student compared aerial photos to our site maps to determine survival rate of trees planted by LEAF between 1997 and 2000. Of 577 trees planted, **79.6%** were identified in aerial photos 10 years later.

My **Broadleaf Deciduous (Large)** tree with an approximate DBH of **60 cm** growing **adjacent (0 to 6 m)** to and **south west** of my house in **Toronto**.

My Tree's Environmental Benefits

	kWh Saved	Value of Electricity Savings ($)	Sequestered CO_2 (kg)	Avoided CO_2 (kg)	Stormwater Mitigation (l)	Air Pollution Removed (kg)
Over Expected Life (75 yrs)	**4,742**	**612**	**6,385**	**678**	**625,558**	**85**
Over First 40 Years	1,624	210	2,500	232	195,242	29
Over First 10 Years	180	23	210	26	18,560	3
Over Current Life	2,455	317	3,670	351	305,392	45
This Year	82	11	110	12	11,189	1

*This tree will reduce the **instantaneous demand** for electricity this summer by 0.016 kW.*
*At its current age, this tree has a **replacement value** of $11672. The tree's replacement value at 40 years of age is estimated at $8092.*

Tree Benefits Estimator tool developed by LEAF and Ryerson to calculate environmental benefits trees

The estimator is available for public use on our website
www.yourleaf.org/estimator

Environmental Benefits of Trees Planted by LEAF

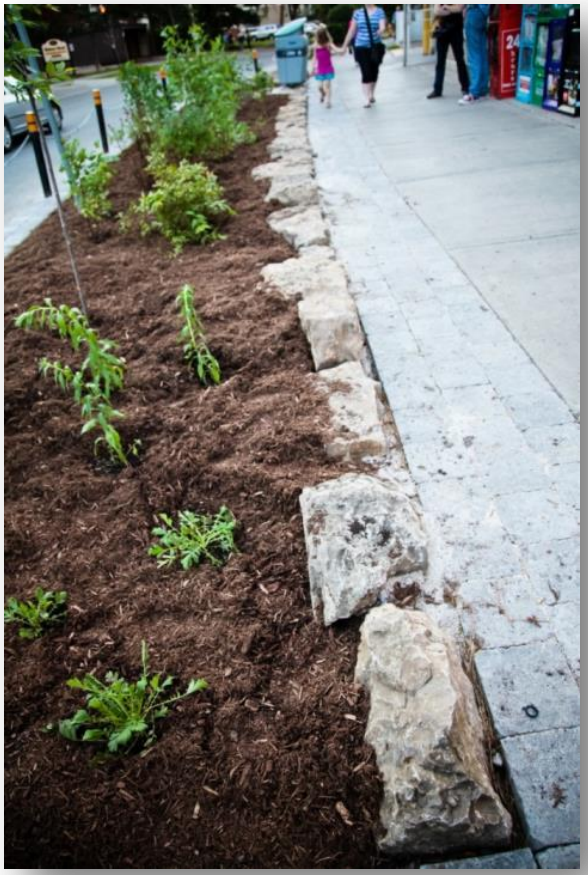
	sequestered C02 (kg)	stormwater mitigation (L)	air pollution removed (kg)
Planted to date in 2017			
small trees (1912)			
over first 10 years of life	30,592	9,319,088	1,912
over first 40 years of life	235,176	77,546,896	19,120
over expected life (55 years)	349,896	127,509,368	30,592
medium trees (2364)			
over first 10 years of life	799,032	51,577,752	9,456
over first 40 years of life	4,841,472	571,572,648	92,196
over expected life (60 years)	7,335,492	1,212,696,540	182,028
large trees (3173)			
over first 10 years of life	666,330	58,890,880	9,519
over first 40 years of life	7,932,500	619,502,866	92,017
over expected life (75 years)	20,259,605	1,984,895,534	269,705
conifer evergreen trees (1526)			
over first 10 years of life	827,092	48,299,426	4,578
over first 40 years of life	5,983,446	396,793,572	35,098
over expected life (75 years)	11,901,274	978,143,110	86,982

All LEAF trees, over their lifetime will provide

sequestered C02 (kg)	stormwater mitigation (L)	air pollution removed (kg)
53,762,213	5,319,540,990	696,422

LEAF Urban Forest Demonstration Gardens

One example of our community engagement programs – maintained by volunteers these public spaces demonstrate the potential that small urban space hold and inspire people to plant in their own yards.



Spadina Subway Station – an area of patchy turf converted into an oasis of native trees, shrubs and perennials in 2010

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Same patch outside Spadina Subway Station in 2017

2014

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Old Mill Station - 2009

Unrealized potential ….

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Old Mill Station Fall 2010

Transformed

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Old Mill Station 2015

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LEAF Evolution – meaningful citizen engagement is key

- 1996 - Backyard Tree Planting Program
- 2006 - Tree Tenders Training and Presentations & Workshops
- 2007 - Tree Tours
- 2009 – LEAF Learning Garden
- 2010 - Urban Forest Demonstration Gardens
- 2013- Adopt-a-Park-Tree
- 2015 - Adopt-a-Street-Tree
- 2015 - Young Urban Forest Leaders