

# Urban Forest Assessments

Peel Urban Forest Working Group

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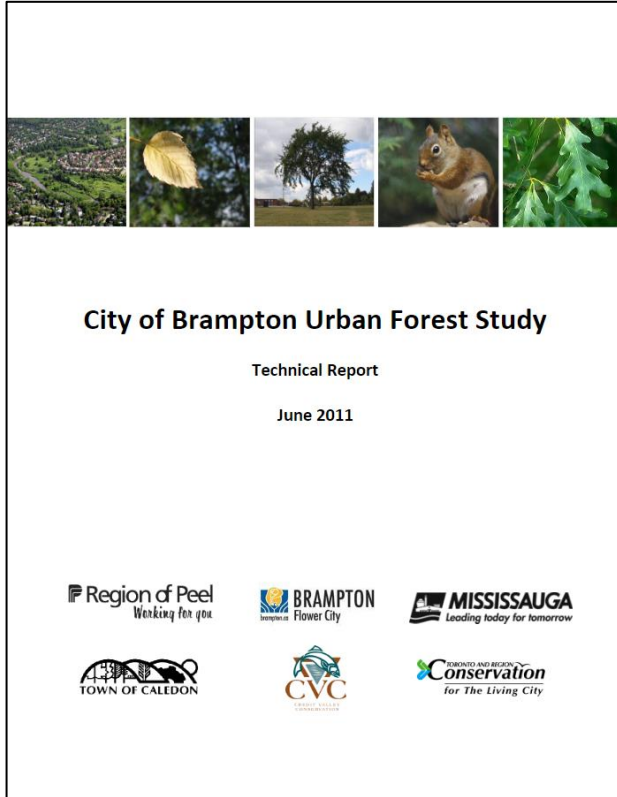
# Presentation Outline

- Overview of Urban Forest Assessments
- Looking Back (2008 – today)
- Looking Forward (Next steps)
  - Peel Region Urban Forest Strategy Update
  - Canopy Assessment
  - iTree ECO

# Urban Forest Assessments

	Urban Tree Canopy (UTC)	Inventories	iTree ECO modeling
Output	<ul style="list-style-type: none"><li>• Canopy cover %</li><li>• Spatial dist. of canopy</li></ul>	<ul style="list-style-type: none"><li>• Inventory of street trees and/or park trees</li></ul>	<ul style="list-style-type: none"><li>• Urban Forest Structure</li><li>• Ecosystem Services</li></ul>
Inputs	<ul style="list-style-type: none"><li>• Sat. imagery</li><li>• Lidar</li></ul>	<ul style="list-style-type: none"><li>• Aerial imagery</li><li>• Field data</li></ul>	<ul style="list-style-type: none"><li>• Sample</li><li>• Plot-based field work</li></ul>

# Previous Urban Forest Studies



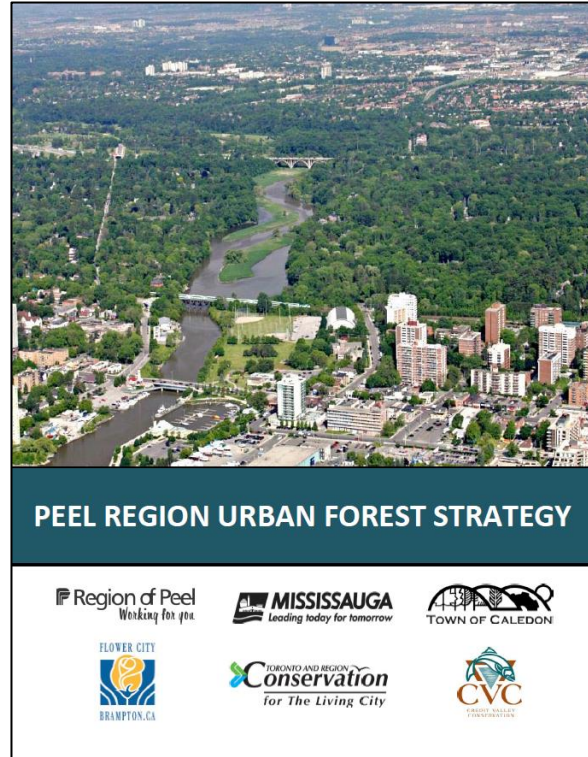
## UTC & iTree ECO

### Scope:

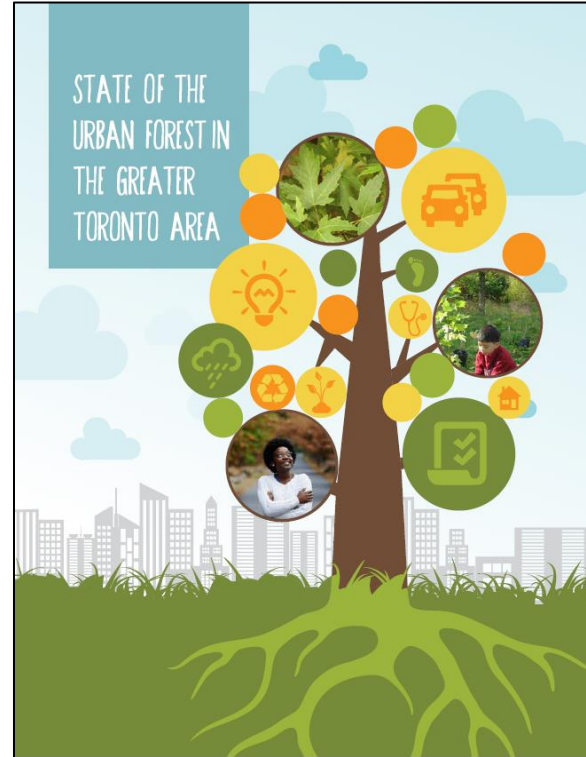
- Brampton
- Mississauga
- Caledon East/Bolton

- Technical Reports ~ 50 pages + appendices
- UTC Imagery: 2007
- Field data collected: 2008
- Reports published: 2011

# Summary Reports



2011



2016

# Peel Urban Forest Strategy

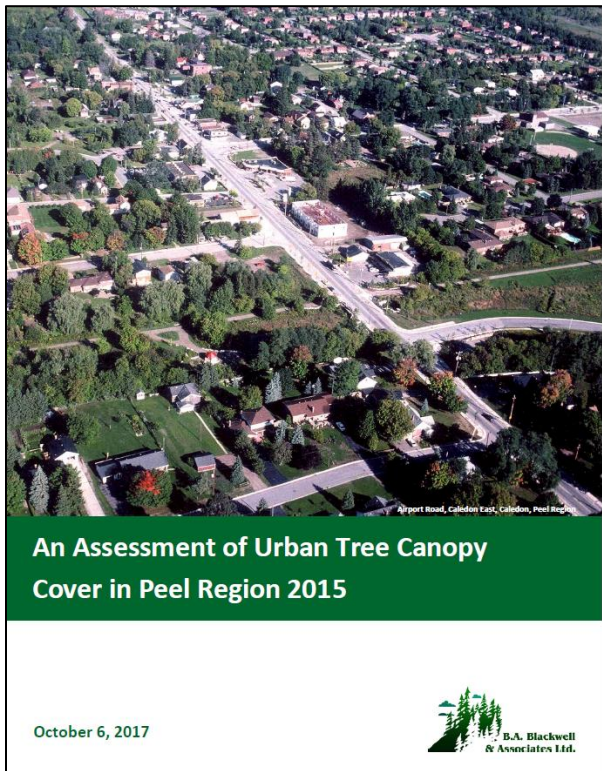
- 8 Goals
- 26 Actions
- Endorsed by Peel Region council on October 13, 2011



**ACTION:** Conduct a comprehensive review of the Strategy at regular five year intervals.

**ACTION:** Monitor the structure, distribution and function of the urban forest using the methods and parameters applied in the baseline assessments conducted in 2008. A suggested monitoring scenario consists of a cover mapping assessment (UTC) at a five year interval and a field-based assessment (i-Tree Eco) at a ten year interval.

# Canopy Cover Update



UTC

Scope: All Peel Region

- Technical Report ~ 75 pages
- UTC Imagery: 2015
- Reports published: 2017

# Next Steps: Urban Forest Strategy Update?

Considerations:

- Update or new strategy
- 5 year review not completed
- The urban forest studies informed the strategy



# Next Steps: Canopy (UTC) Assessment?

Considerations:

- LIDAR
- Issues and opportunities for change assessments
- 2021 is six years since last assessment



Mississauga, 2014

# Next Steps: iTree ECO assessment?

Considerations:

- Ecosystem service estimates based on structure
- Pros/cons
- New data opportunities
- Communications format

# i-Tree Eco

## Pros

- Encourages collaboration
- Comparable between cities
- Used in over 100 countries
- Community wide information (including private property)
- More accurate ecosystem service estimates

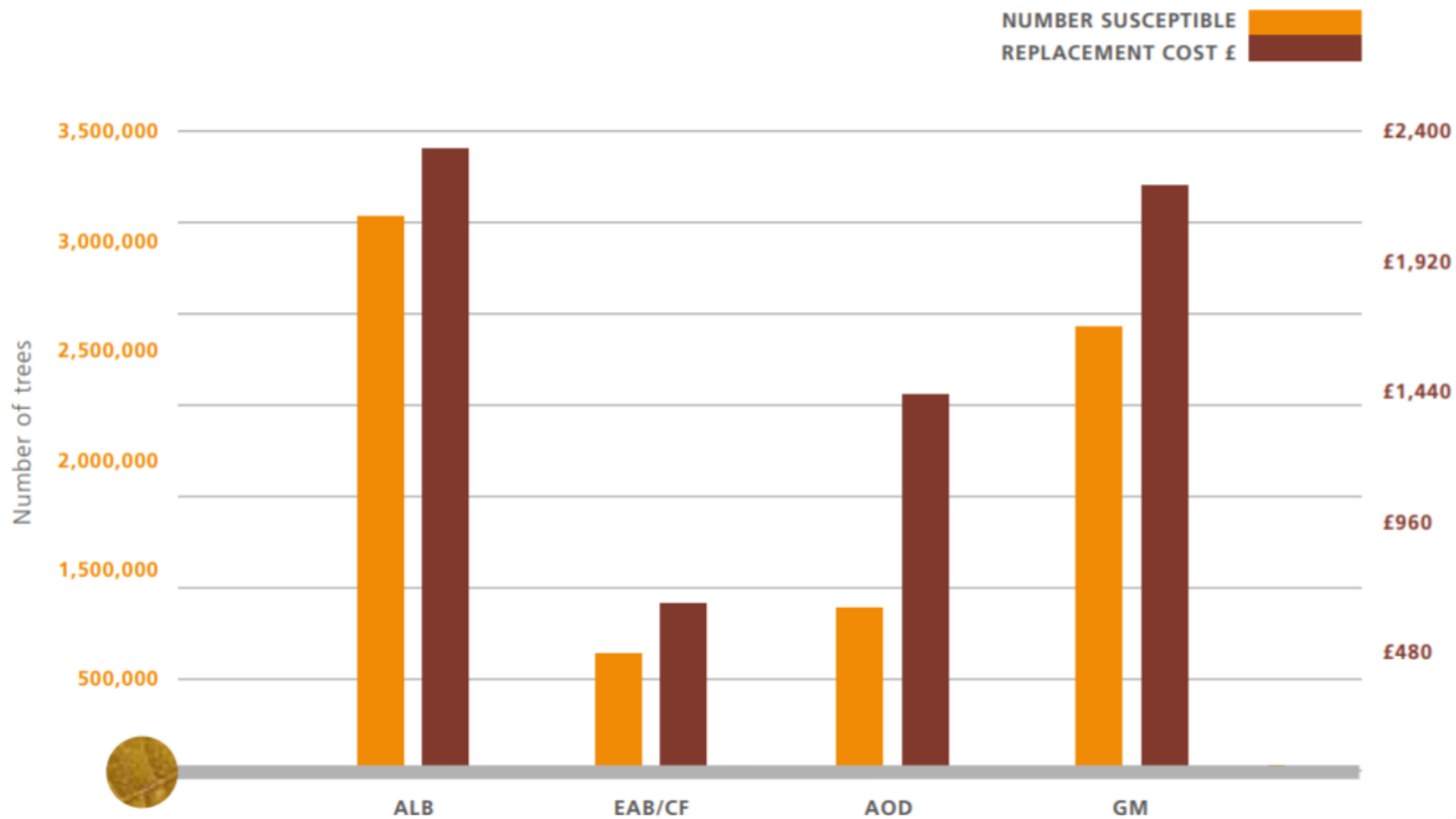
## Cons

- Debate over valuations and methods used
- Under utilized data - Information overload
- Lack of social/cultural services
- Not spatial
- Cost

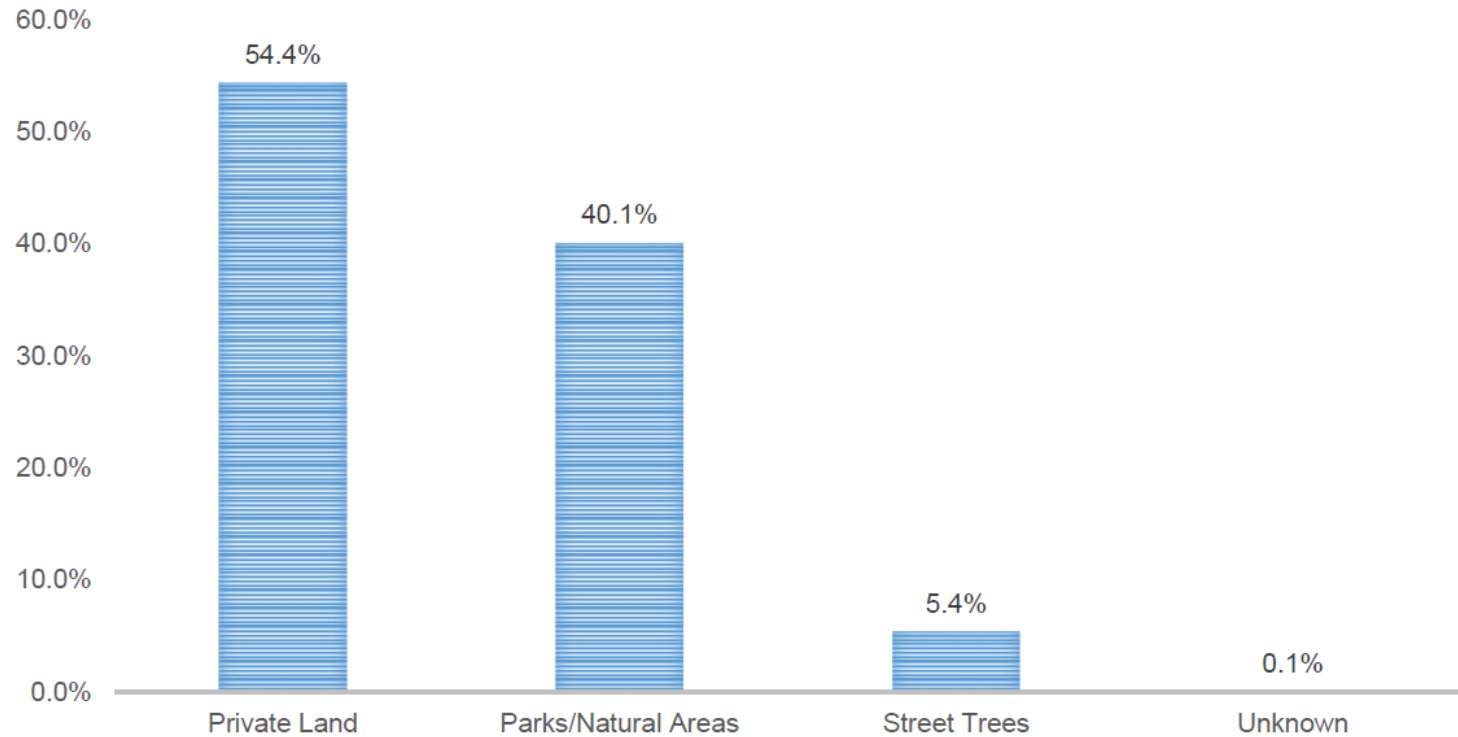


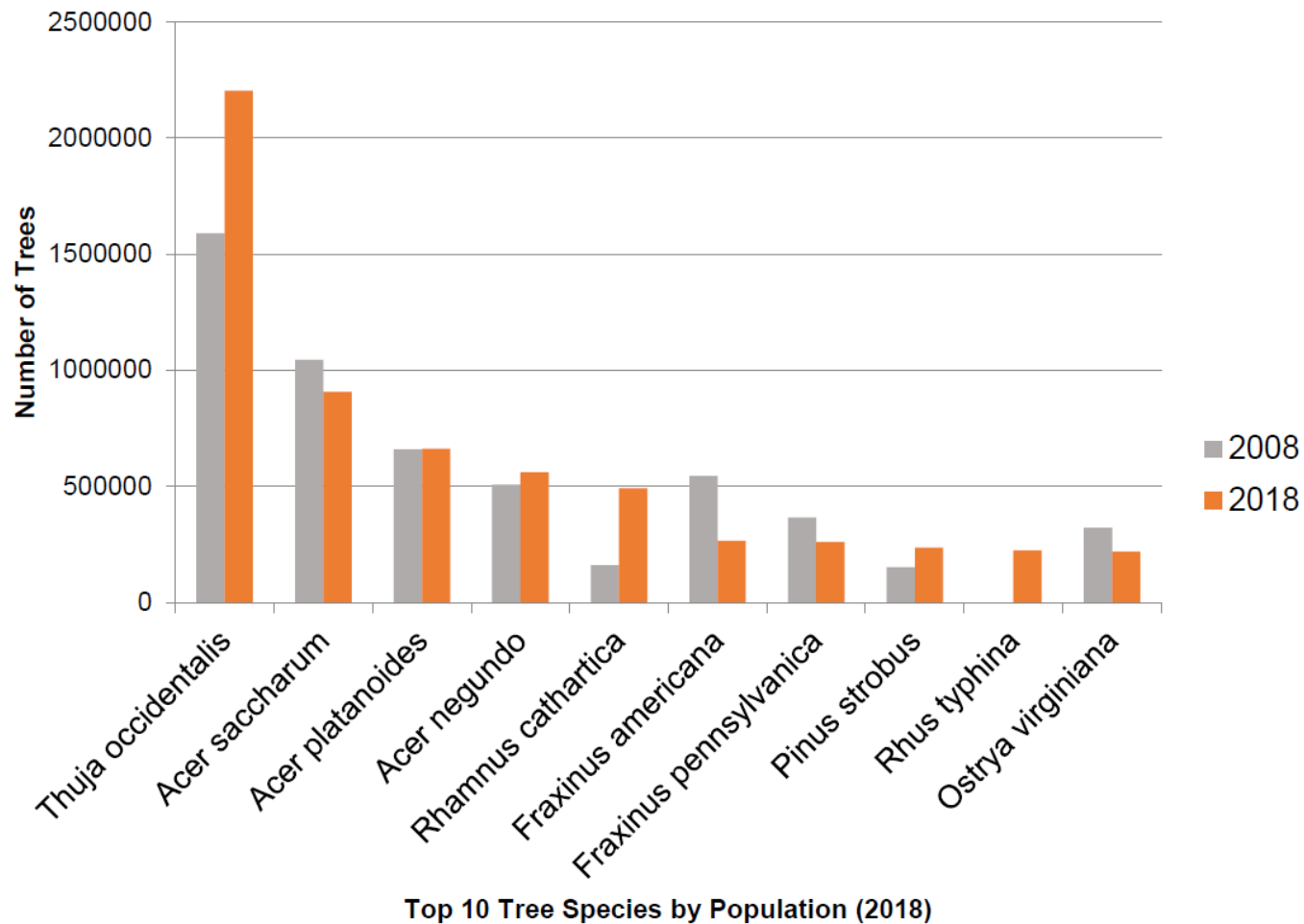
# New Data & Analysis Opportunities

- Soil – Compaction, salinity, and moisture
- Invasive Species – % cover and presence/absence
- Hydrological modeling – Relationship between trees & stormwater
- Climate Change Vulnerability – Use Best Practice report
- Structure and diversity changes



## LOCATION OF TREES IN THE CITY (%)





# Discussion

- Canopy Assessment
- iTree ECO
- Peel Region Urban Forest Strategy Update





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