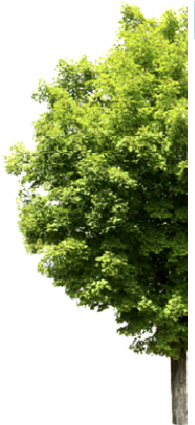


Urban Forests Creating Healthy Cities: Benefits, Geography, and You

HOUSE LAB | UTM Department of Geography | Tenley Conway and Tooba Shakeel



1 Benefits of Urban Trees

Neighborhood Trees Provide Environmental Services

- Filter air pollution
- Reduce heating and cooling costs
- Store carbon
- Reduce storm water runoff

Access to Trees Provide Social and Economic Benefits

- Increases property values
- Supports social interactions
- Creates recreational opportunities

Views of Trees Promote Health and Well-being

- Reduced stress-levels
- Faster recovery from illness and injuries
- Support cognitive development in children

2 Mississauga's Trees

Based on 2011 report by the Toronto & Region Conservation Authority

There are over **2 million trees** within Mississauga
 Tree canopy covers **15%** of the city
 Half of all trees are located on **residential property**

108 species of trees are present in the city,
 3 most common species are:



These trees provide significant environmental services annually:

Carbon storage = \$285,000
 Pollution removal = \$4.8 million
 Residential Energy Savings = \$1.2 million

3 Drivers of Urban Tree Patterns

House Lab Research in the Greater Toronto Area

A. Municipal Policy

- Larger municipalities have more developed urban forestry policy
- Street tree programs are associated with more trees on the ground

B. Neighborhood Characteristics and Vegetation Extent

- Wealthier neighborhoods have resident associations more involved in managing the urban forest
- Neighborhood wealth, land use composition, and road density are related to the extent of vegetation

C. Neighborhood Characteristics and Species Diversity

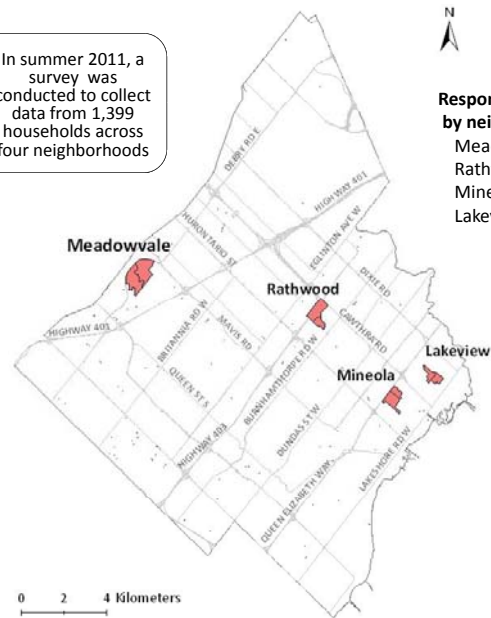
- Neighborhood wealth, housing type, and ethno-cultural composition are related to number of species present

4 Research: Mississauga's Residents

Key Questions:

1. What is the amount of tree cover on residential yards?
2. Are there relationships between the amount of tree cover present and household-level demographics, property characteristics, and municipal policy support?

In summer 2011, a survey was conducted to collect data from 1,399 households across four neighborhoods



Response rate by neighborhood:
 Meadowvale: 44%
 Rathwood: 41%
 Mineola: 54%
 Lakeview: 52%

5 Key Findings: A look at Mississauga's Yards

Table 1: Variables related to property-level tree density (# of trees/unit of area) by neighborhood. *indicates the strength of relationship

VARIABLE	STANDARDIZED COEFFICIENTS			
	All	Lakeview	Meadowvale	Mineola
Household Income			-0.332**	0.401**
Property size	-0.138			-0.395**
Type of house (attached)			-0.229*	
Responsible of yard work (resident)	0.210**			
Attitudes towards trees (PCA)	0.229**		0.269*	
Attitudes towards municipality (PCA)		0.386**		
Ethnicity: Caribbean	0.152*		0.259*	
Ethnicity: British Isles		0.320*		
Ethnicity: Other			0.313**	
R ²	0.121	0.218	0.306	0.232

Table 2: Survey respondents' support regarding their municipality's role in tree management

POLICY STATEMENTS	RESPONDENTS WHO AGREED
Municipality should ...	
<i>plant more trees</i> in neighbourhood	46%
encourage residents to plant trees on their own properties, by	
a) <i>providing information</i> about planting and care	62%
b) <i>providing trees at a reduced cost</i>	65%
protect trees by <i>not allowing</i> people to cut down trees on their properties	42%

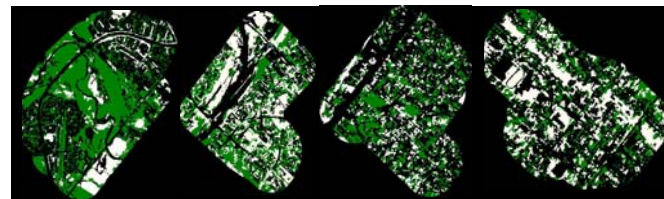


Table 3. Tree canopy cover calculated using remote sensing

	Meadowvale	Rathwood	Mineola	Lakeview
Canopy Cover	44%	30%	31%	20%
Accuracy	80%	71%	80%	85%

6 Discussion and Conclusion

- The majority of respondents prefer trees in their yards and have positive attitudes towards trees
- There is an inconsistent relationship between property-level social and economic variables and tree density between neighborhoods
- Most people are looking for support from their municipality with regards to planting information and reduced tree cost
- Further research is needed into the relationship between tree cover and property-level social, economic, spatial variables.

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