

King Township Forest Study

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Presentation Outline

1. Why is the forest important
2. Introduction to the Forest Study
3. Research findings
4. Forest management recommendations



King Township's Forest

Forests provide a host of benefits to the public:



Provide environmental services, e.g., reducing stormwater runoff



Improve livability



Improve mental and physical health



Provide habitat and resources for wildlife



Reduced summer temperatures and UV protection

Threats to the Forest

Several threats to the health of our forests have emerged over recent years:



Climate change impacts, e.g., increasing temperatures and heat



Extreme weather events, e.g., ice storms

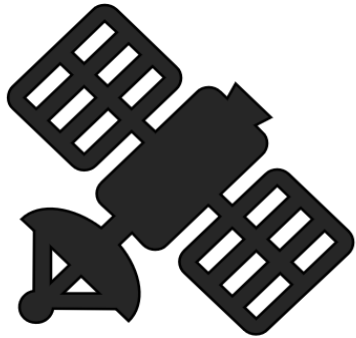


Urbanization and individual tree removal

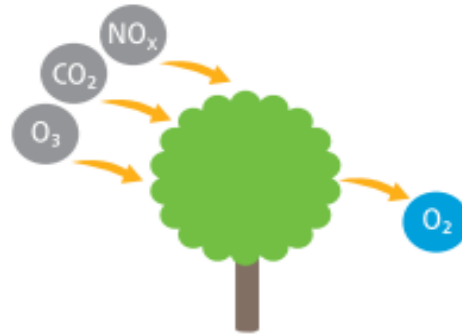


Invasive species, e.g., emerald ash borer beetle killed most ash trees

What is the King Township Forest Study?



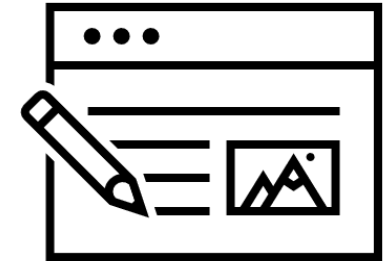
Assessments through satellite imagery, GIS tools, and field surveys



Tells us what King has and where it is, and quantifies services



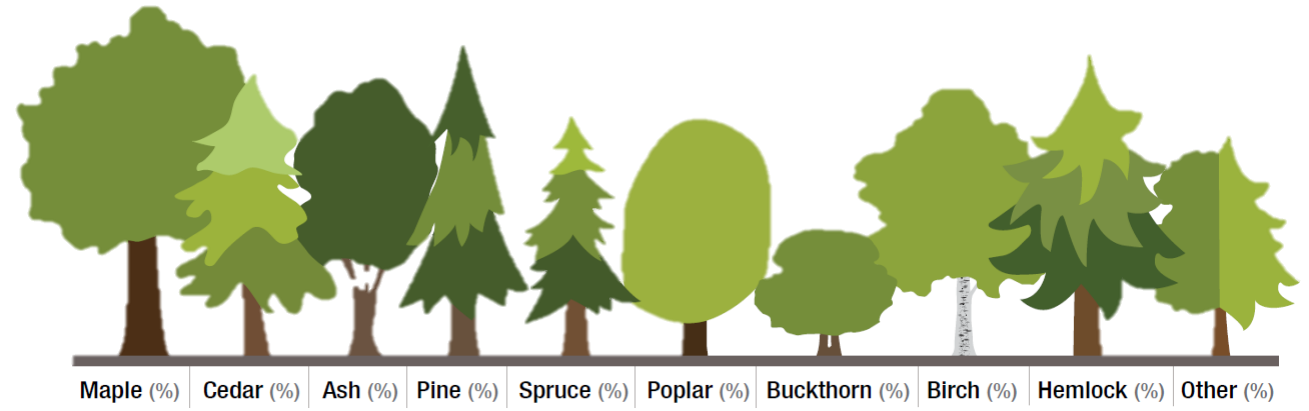
Tells us about the factors that may impact the forest negatively



Management recommendations & communication

King Township Forest Study Objectives

- Quantify and characterize existing distribution, structure and function of the forest

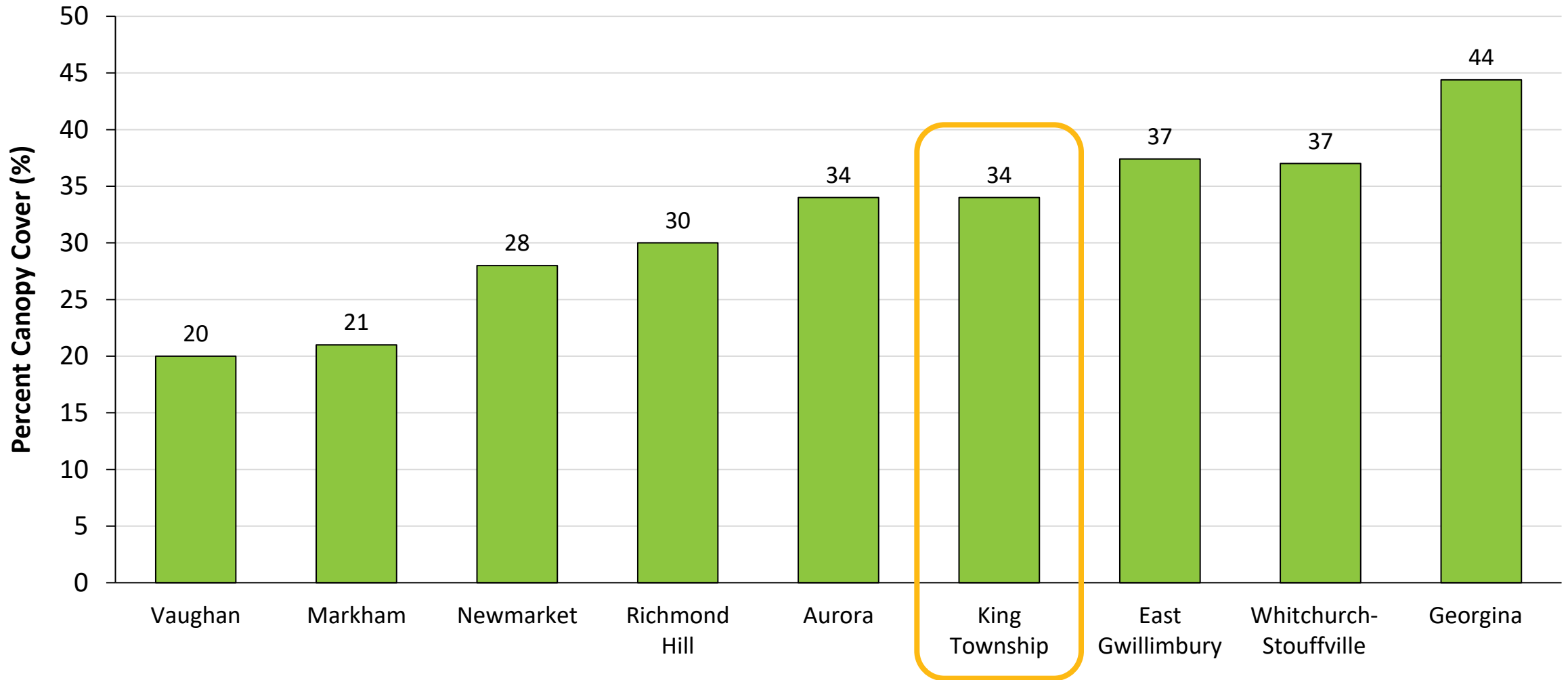


- Quantify and characterize key factors relating to forest health
 - Soil condition
 - Invasive species
- Assess vulnerability of tree species to climate change
- Update and develop management recommendations
- Develop communication factsheets for the public

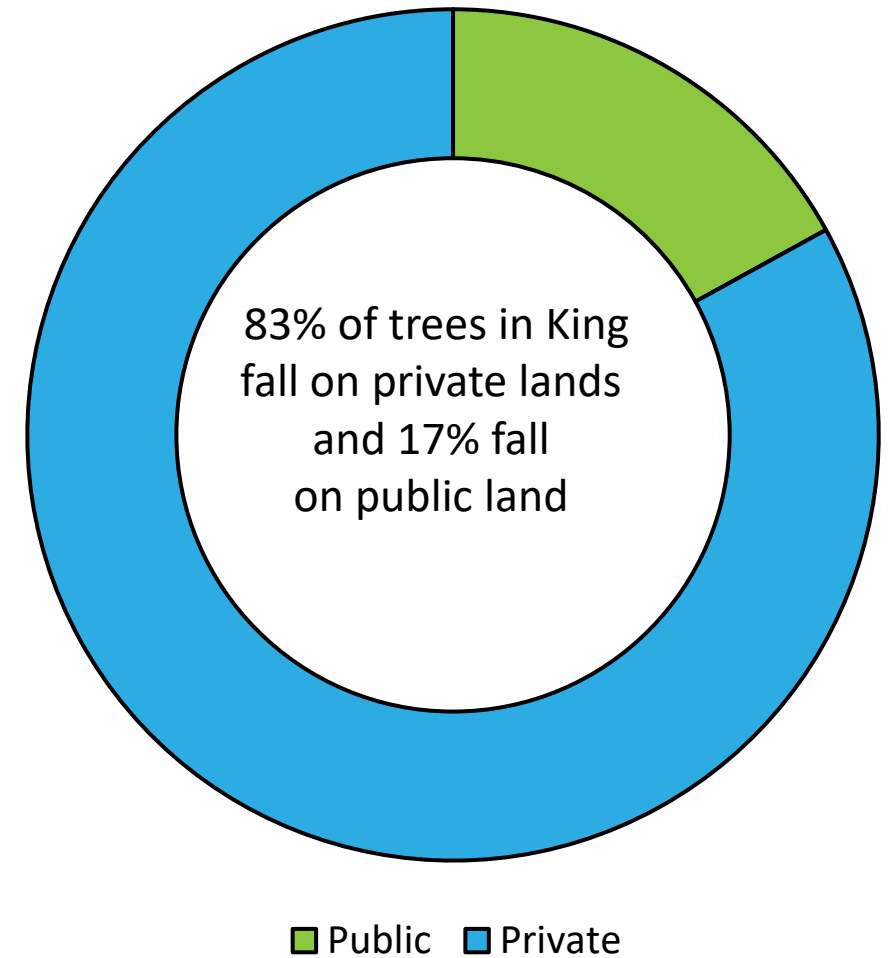
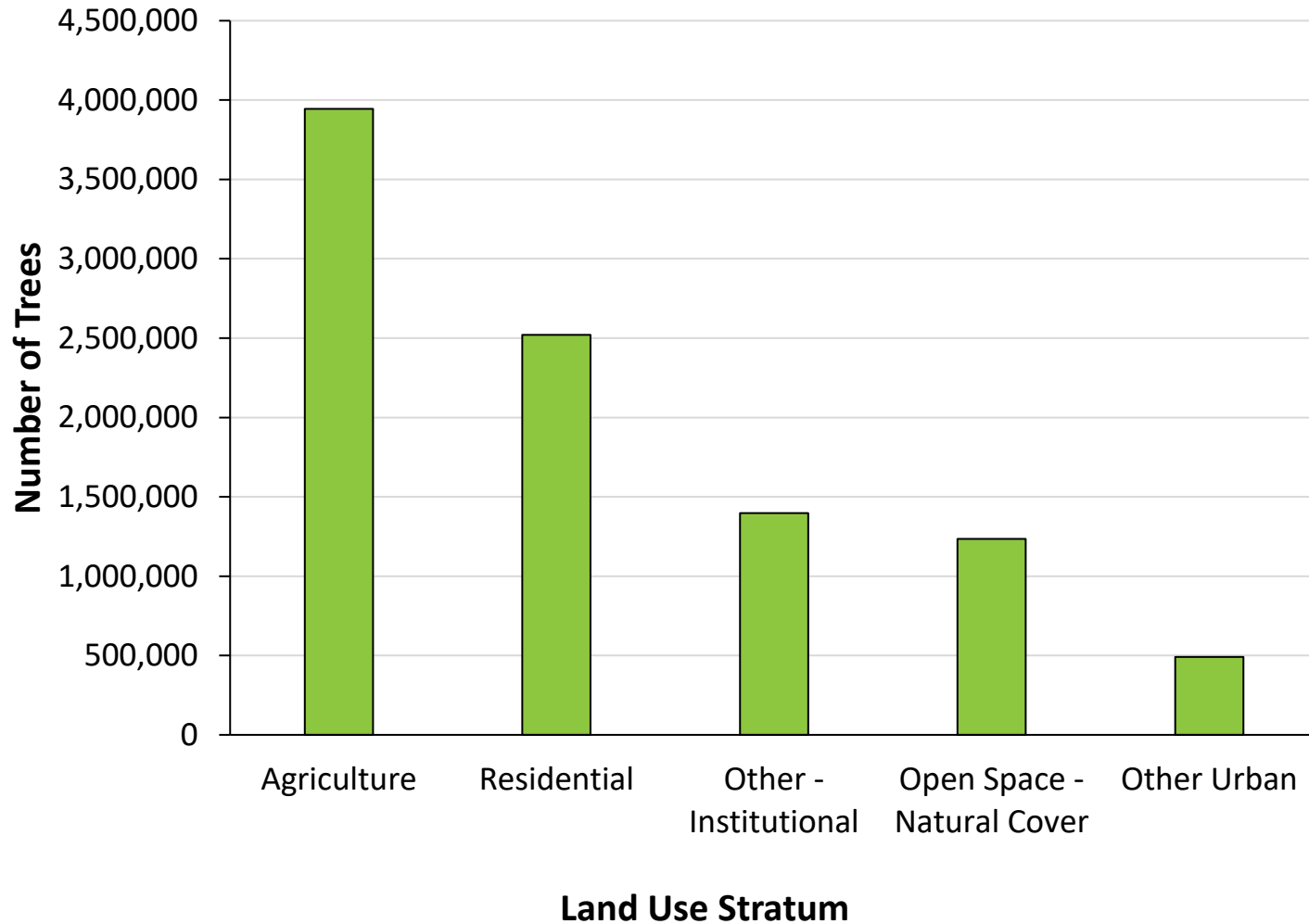
Research Findings



2021 Canopy Cover Percentage

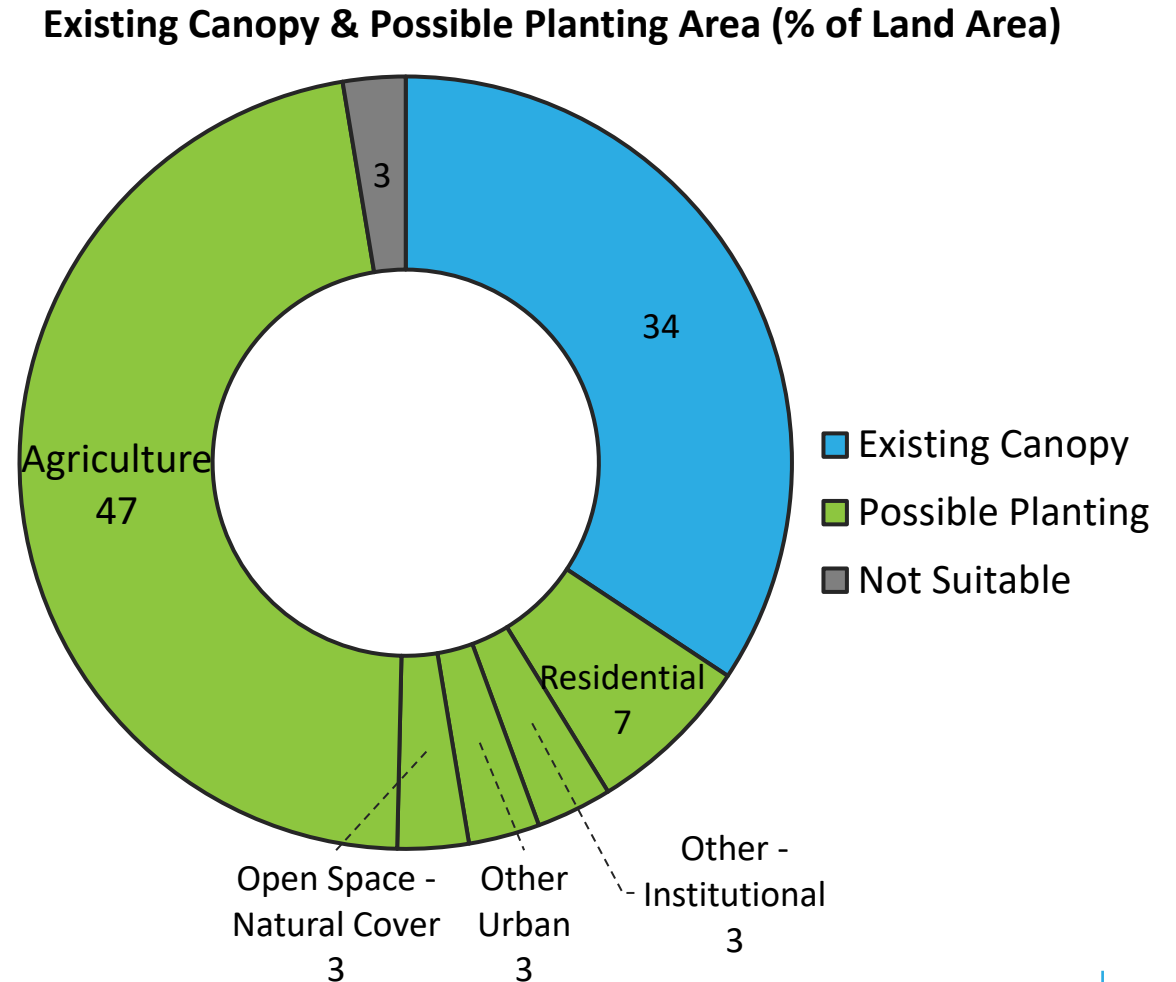


King Township's Tree Population and Distribution



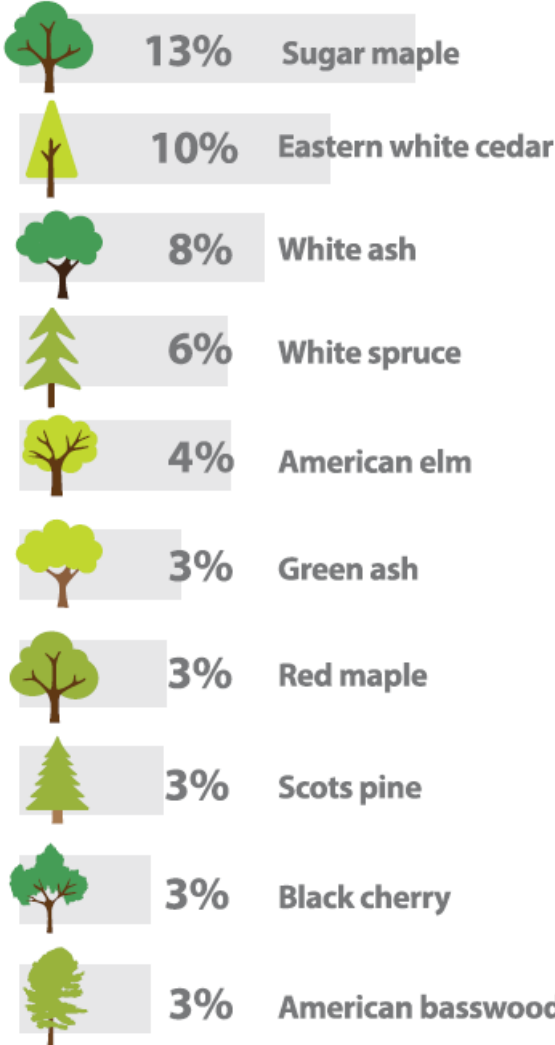
Possible Tree Planting Areas

- Excluding agriculture, 16% of King Township's land area ~ 5,320 ha ~ is possibly available for tree planting
- Low density residential areas have greatest potential ~ 2,280 ha ~, however, there are opportunities in all land uses

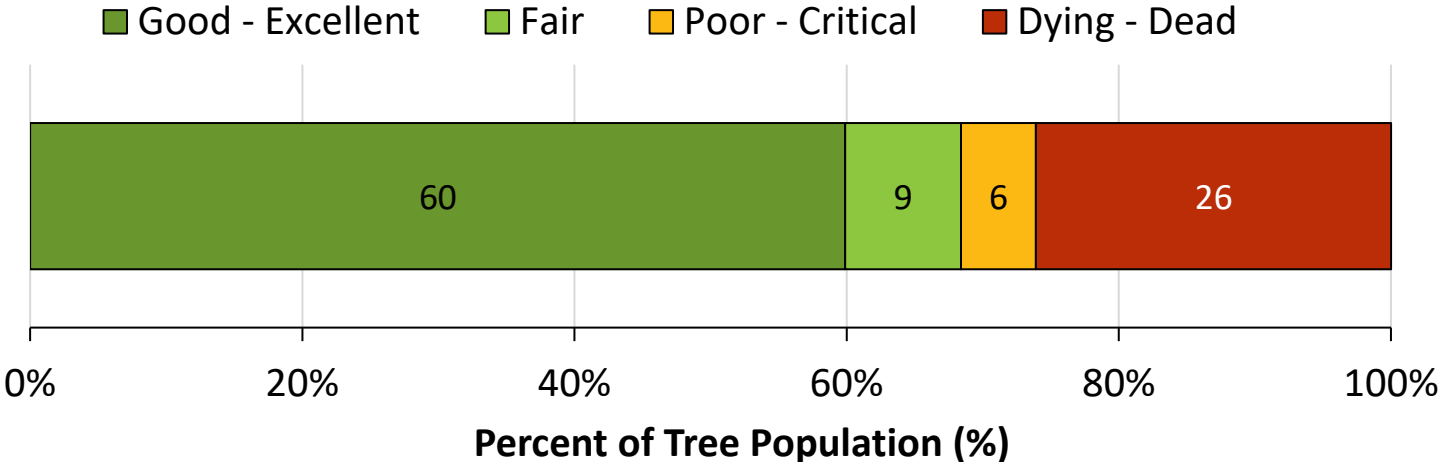


King Township's Tree Population

Top Ten Tree Species (as % of population)

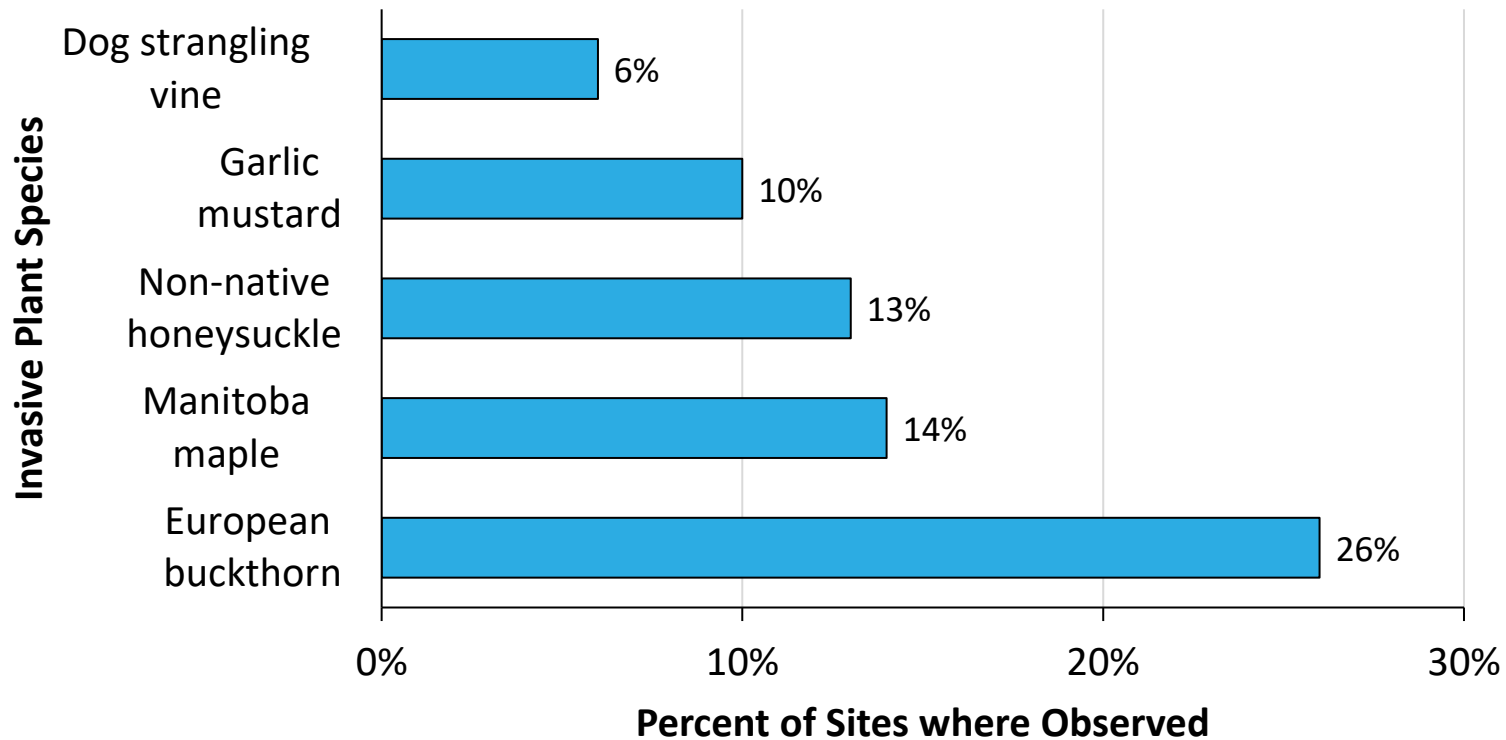


60% of trees are in excellent or good condition.



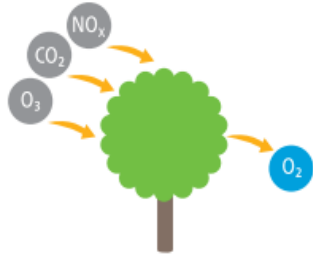
Invasives Species

- Dutch elm, beach bark, and beach leaf diseases are present in King Township
- Oak wilt and hemlock woolly adelgid are emerging concerns

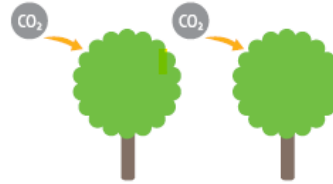


Dog strangling Vine at Cold Creek Conservation Area

King Township's Forest Services and Benefits



468 tonnes/year of air pollution removed



1 million tonnes of carbon stored

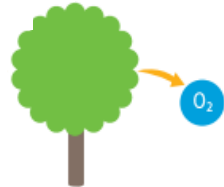
12,800 tonnes/year of net carbon sequestered



140,000 m³/year of avoided runoff



\$440,000 saved from reduced heating & cooling



34,00 tonnes of oxygen /year



Shade reduces UV index by 52% in residential areas

Climate Vulnerability of King's Common Trees

Common Name	Percent of Trees (%)	Vulnerability Score	Tolerances	Sensitivities
Sugar Maple	13	Moderate		<ul style="list-style-type: none"> • Sensitive to drought
Eastern White Cedar	10	High	High resistance to ice damage	<ul style="list-style-type: none"> • At the southern end of their current range
White Ash	8	High		<ul style="list-style-type: none"> • Flood intolerant • Vulnerable to pest/disease
White Spruce	6	High	High resistance to ice damage	<ul style="list-style-type: none"> • Flood intolerant • At the southern end of current range
American Elm	4	Low		<ul style="list-style-type: none"> • Low resistance to ice damage • Vulnerable to pest/disease



Looking Forward

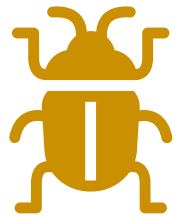
Recommendation Themes



Expand Canopy Cover



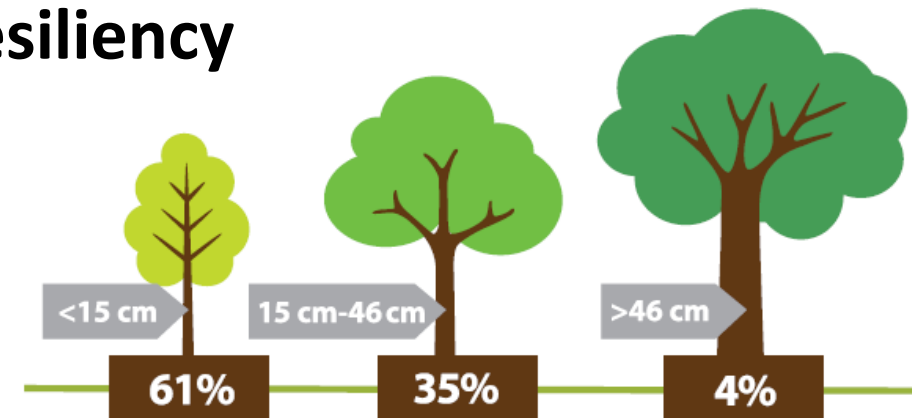
Promote Mature Trees



Invasive Species Management



Promote Climate Change Resiliency



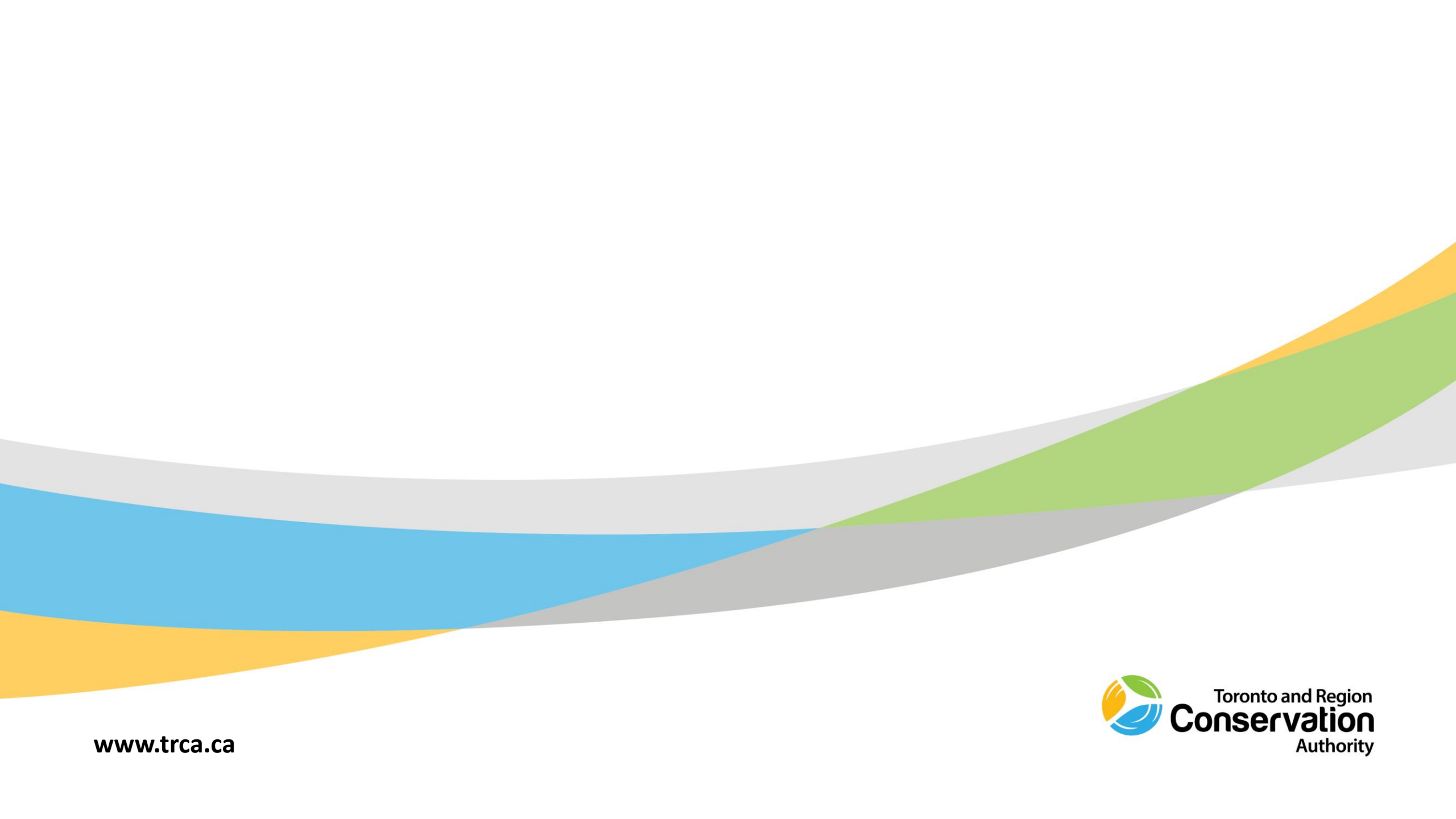
Forest Benefits Factsheet



Scan the QR code to access the King Township Forest factsheets or visit king.ca/treecanopy

Thank you





www.trca.ca

