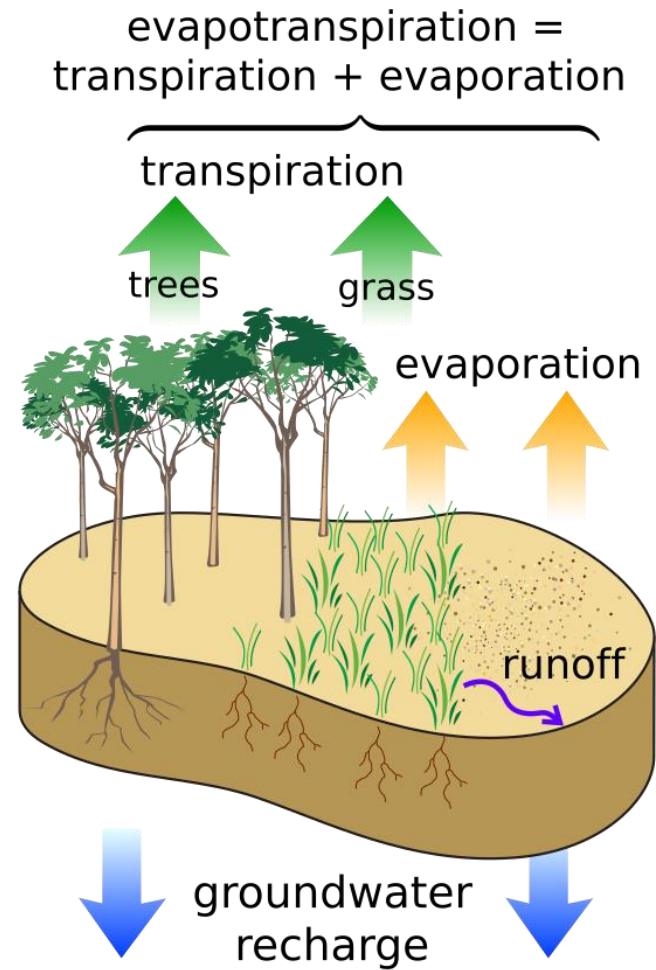# Urban Forest Master Plan

Council – March 25, 2025

Presentation by Planning Services

Benefits of Urban Forest

- Air Quality

- Temperature Mitigation

- Carbon Storage

- Stormwater Runoff

- Biodiversity

- Overall Well-Being

evapotranspiration =
transpiration + evaporation

transpiration

trees   grass

evaporation

runoff
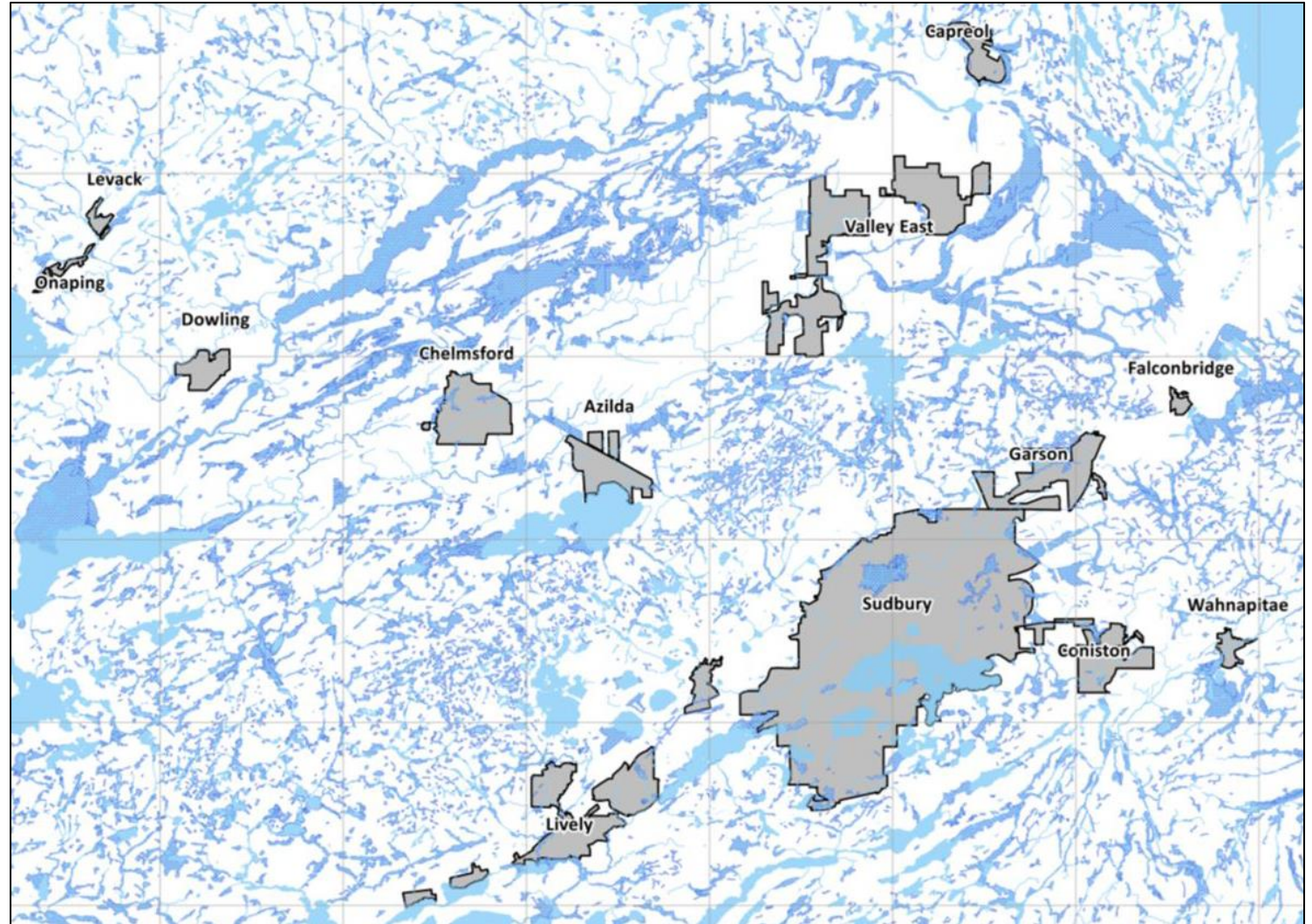
groundwater
recharge

Source: Wikipedia

Page 3

- Deforestation
  - Logging
  - Prospecting
  - Mining

- Regreening
  - VETAC
  - Regreening focuses on large parcels and rural areas

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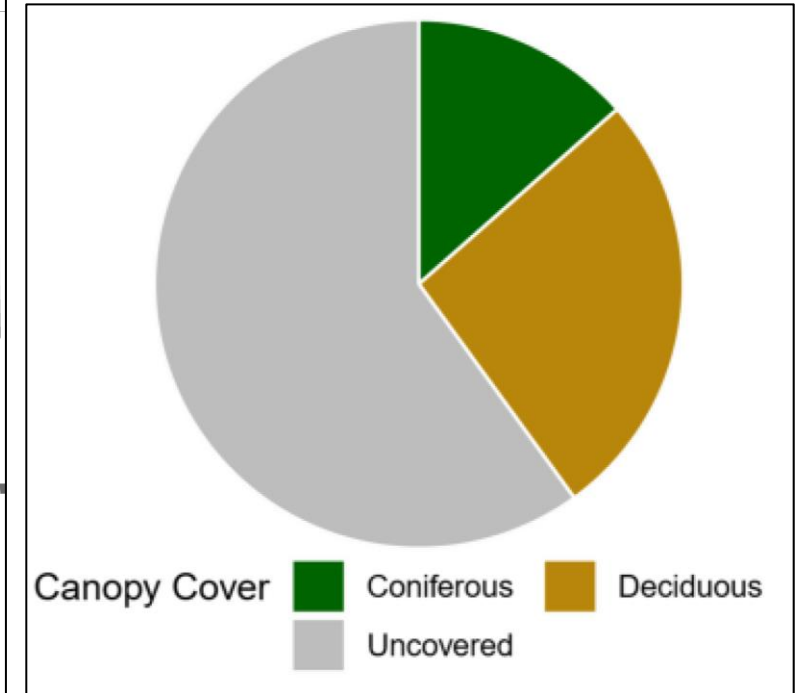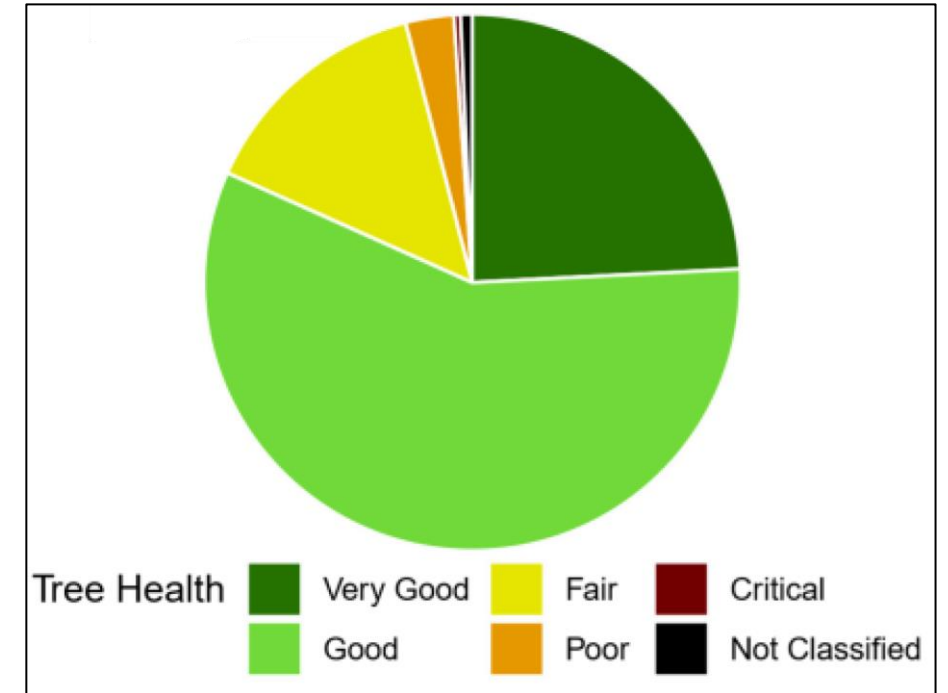
- Includes only urbanized settlement areas

- Includes all trees on public and private lands

- Data collected 2022
  - Reflective of Emerald ash borer

Where We Are - Dowling Tree Composition

Legend
- Coniferous Tree Cover
- Deciduous Tree Cover
- No Tree Cover

Highway 144

Canopy Cover
- Coniferous
- Deciduous
- Uncovered

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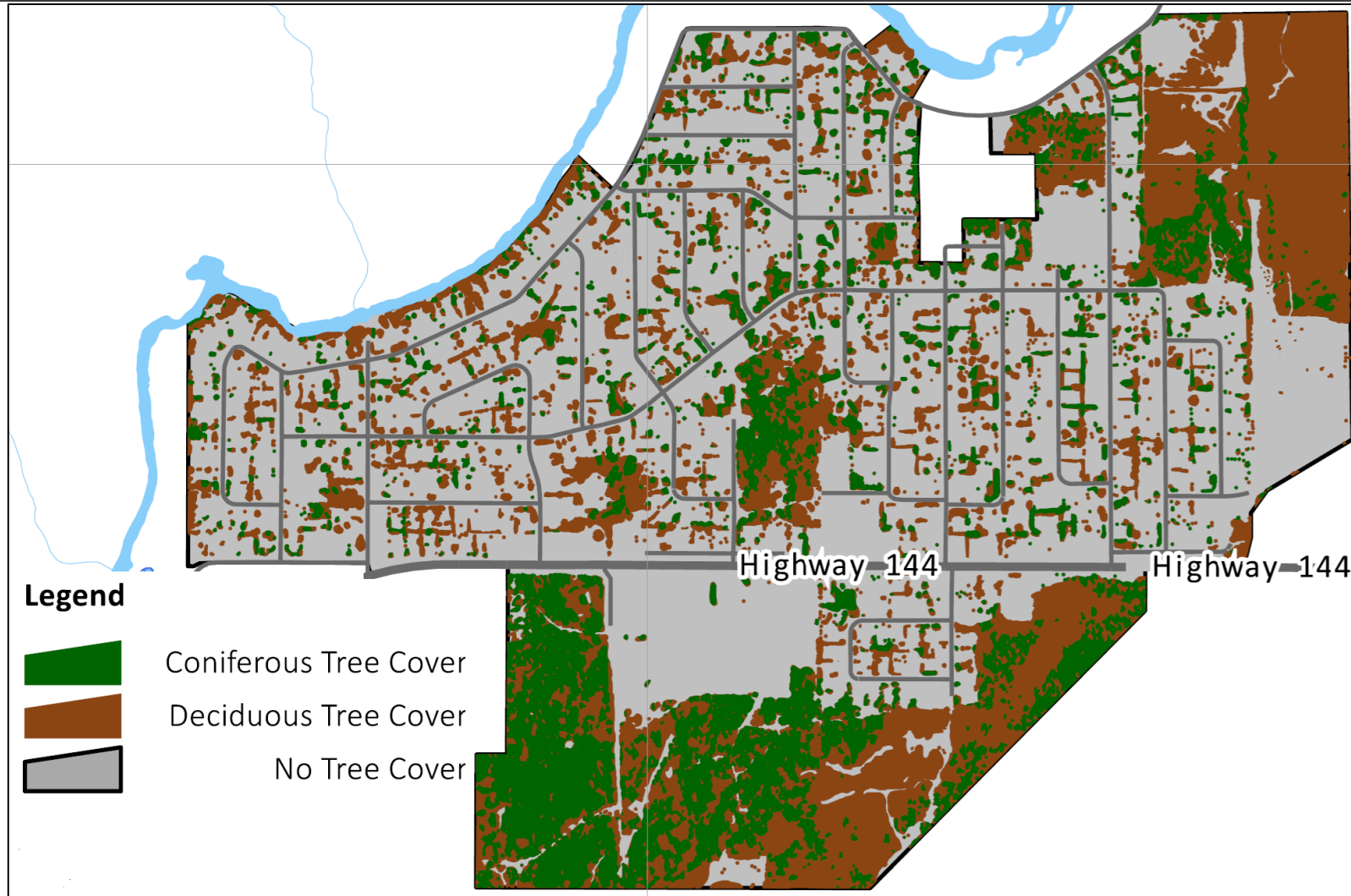
Where We Are - Dowling Tree Health

Canopy Health
- ■ Shadow/Not Classified
- ■ Critical
- ■ Poor
- ■ Fair
- ■ Good
- ■ Very Good
- □ Dowling Boundary

Arlington Drive East

Arlington Drive West

Highway 144   Highway 144

Tree Health
- ■ Very Good   ■ Fair   ■ Critical
- ■ Good   ■ Poor   ■ Not Classified

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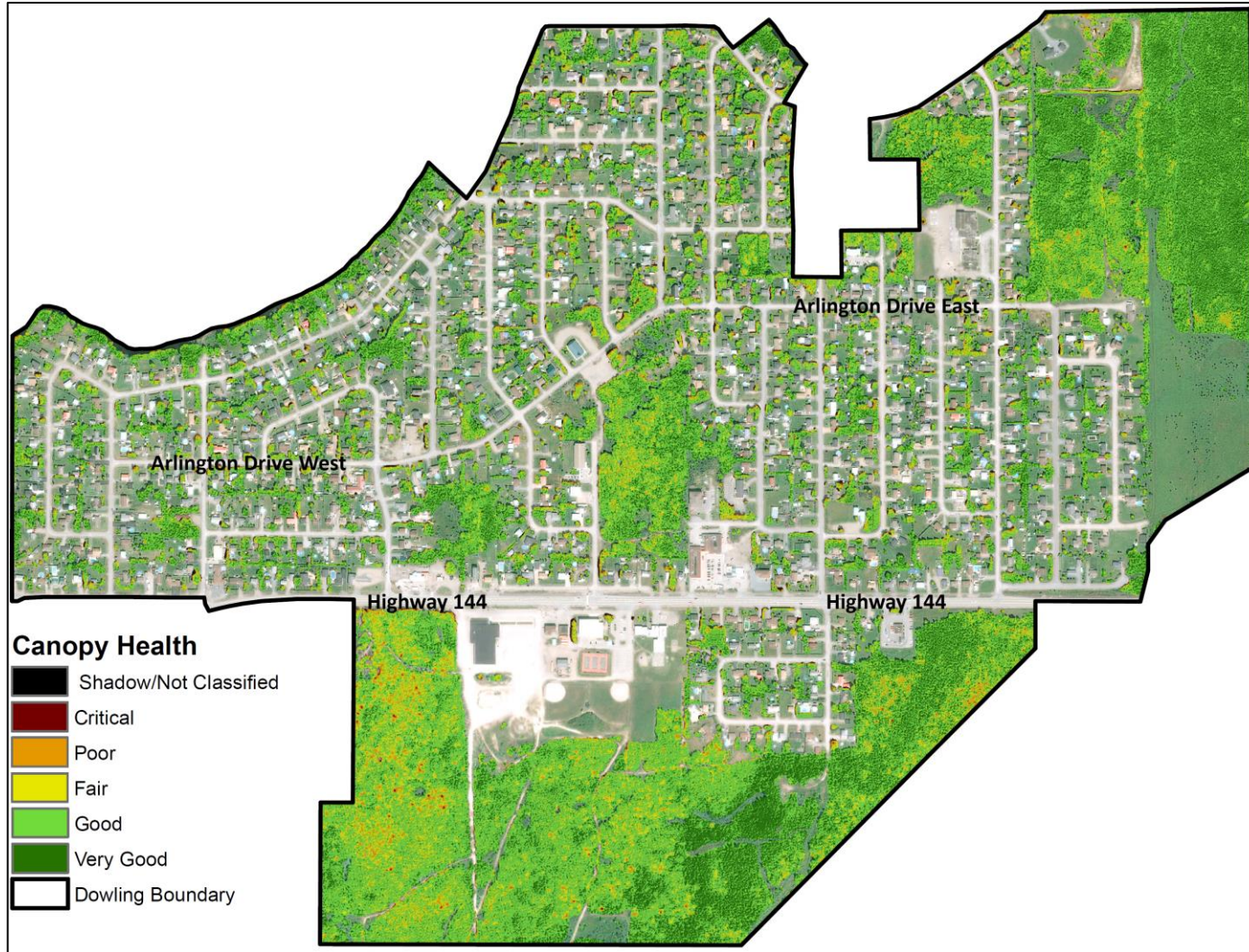
Where We Are - Our Urban Forest Today

- Majority of canopy (85.9%) is in Very Good or Good health

- Very little of canopy (2.0%) in Poor or Critical health

- City-wide canopy cover of 32.6%
  - Ottawa – 31%
  - Vancouver – 31%
  - Toronto – 28%
  - Montreal – under 25%
  - Calgary – 8%

Tree Health	Percentage of Canopy Cover
Very Good	34.5%
Good	51.4%
Fair	5.9%
Poor	1.7%
Critical	0.3%
Shadow/Not Classified	6.1%

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- Key Document & Best Practice Review

- Consultation
  - Internal & External Stakeholders
  - Public Consultation

Where Are We Going? - Vision Statement & Goals

Vision Statement

It's 2050 and the City of Greater Sudbury is known as Northeastern Ontario's greenest city. The City's urban forest has a rich, diverse and healthy canopy, that stores carbon, cools the city, cleans the air, provides habitat for wildlife, makes for walkable streets, and improves our mental health, satisfaction and well-being.

Goals

1. Vegetation Resource: CGS's canopy is 75% or more of what is achievable, and able to tolerate stressors related to historically impacted soils and a changing climate.

2. Community Involvement: CGS's management of the urban forest includes meaningful contributions from community members.

3. Resource Management: CGS's urban forest is equitably managed using best practices.

Where Are We Going? - Urban Forest Management Framework

- 28 Key Indicators in Framework

- Vegetation Resource
  - 7 indicators

- Community Involvement
  - 7 indicators

- Resource Management
  - 14 indicators

- Urban Forest Scored Against All 28

| Goal	Key Indicator	Objectives	Performance Level			
			Low	Fair	Good	Optimal
Urban Forest Resource	V1: Relative Tree Canopy Cover	Achieve desired degree of tree cover, based on potential or according to goals set for entire municipality and for each neighbourhood or land use.	The existing canopy cover for entire municipality is <50% of the desired canopy.	The existing canopy is 50%-75% of desired.	The existing canopy is >75%-100% of desired.	The existing canopy is >75%-100% of desired-at individual neighbourhood level as well as overall municipality.
	V2: Age diversity (size class distribution)	Provide for ideal uneven age distribution of all "intensively" (or individually) managed trees-municipality-wide as well as at a neighbourhood level.	Even-aged distribution, or highly skewed toward a single age class (maturity stage) across entire population	Some uneven distribution, but most of the tree population falls into a single age class.	Total tree population across municipality approaches an ideal age distribution of 40% juvenile, 30% semi-mature, 20% mature, and 10% senescent.	Total population approaches that ideal distribution municipality-wide as well as at the neighbourhood level
	V3: Species diversity	Establish a genetically diverse tree population across municipality as well as at the neighbourhood level.	Five or fewer species dominate the entire tree population across municipality.	No single species represents more than 10% of total tree population; no genus more than 20%; and no family more than 30%.	No single species represents more than 5% of total tree population; no genus more than 10%; and no family more than 15%.	At least as diverse as "Good" rating (5/10/15) municipality-wide – and at least as diverse as "Fair" (10/20/30) at the neighbourhood level.
	V4: Species suitability	Establish a tree population suited to the urban environment and adapted to the overall region.	Fewer than 50% of all trees are from species considered suitable for the area.	>50%-75% of trees are from species suitable for the area.	More than 75% of trees are suitable for the area.	Virtually all trees are suitable for the area.
	V5: Publicly owned trees (trees managed "intensively")	Current and detailed understanding of the condition and risk potential of all publicly owned trees that are managed intensively (or individually)	Condition of urban forest is unknown.	Sample-based tree inventory indicating tree condition and risk level.	Complete tree inventory that includes detailed tree condition ratings.	Complete tree inventory that is GIS-based and includes detailed tree condition as well as risk ratings.
	V6: Publicly owned natural areas (trees managed "extensively")	Detailed understanding of the ecological structure and function of all publicly owned natural areas (such as woodlands, ravines, stream corridors, etc.), as well as usage patterns.	No information about publicly owned natural areas.	Publicly owned natural areas identified in a "natural areas survey" or similar document.	Survey document also tracks level and type of public use in publicly owned natural areas.	In addition to usage patterns, ecological structure and function of all publicly owned natural areas are also assessed and documented.
	V7: Trees on private property	Understanding of extent, location, and general condition of privately owned trees across the urban forest.	No information about privately owned trees.	Aerial, point-based assessment of tree on private property, capturing overall extent and location.	Bottom-up, sample-based assessment of trees on private property, as well as basic aerial view (as described in "Fair" rating).	Bottom-up, sample-based assessment on private property, as well as detailed Urban Tree Canopy (UTC) analysis of entire urban forest, integrated into municipality-wide GIS system.

Appendix A

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Recommendation		Implementation Period				Anticipated outcomes
		2024-2029	2029-2034	2034-2039	2039-2044	
1.	Develop an Urban Forest Working Group to formally coordinate activities of department leads.	x				Working Group established early in 2024
2.	Additional canopy be prioritized in dissemination areas with lower median household incomes.	x	x	x	x	Relationship between canopy and median household income flattens. Canopy coverage is meaningfully increased in neighbourhoods that currently have canopy below reasonably achievable levels.
3.	The urban canopy be re-assessed in 2042.				x	Canopy reassessment in ~2042 to inform next 20-year master plan.
4.	Working group established to develop a data collection plan.	x				Data collection standards developed. Process for collecting, storing and synthesizing data established
5.	Working Group to establish planting plans to meet age/species diversity target.		x			Age and species diversity existing conditions is quantified in 2034-2039
6.	Working Group to develop, update and formalize internal practices for site and species selection.	x	x	x	x	As conditions change.
7.	Working group to develop a formal plan for monitoring the use and ecological structure and function of the natural heritage features.	x				Monitoring plan developed in first five-year period, with data collection through the full 20-year period, informing the next urban forest master plan update

Recommendation		Implementation Period				Anticipated outcomes
		2024-2029	2029-2034	2034-2039	2039-2044	
8.	Working Group to develop a plan for consulting with green industry.	x				Plan developed early in the 2024 - 2029 period. To include monitoring of the engagement success to inform adaptations to the plan.
9.	Working group to regularly review development policies to ensure consistency with urban forest management initiatives.		x		x	Formal review of policies periodically.
10.	Working Group to develop a plan for consulting with large land holders in the CGS.	x				Plan developed early in the 2024 - 2029 period. To include monitoring of the engagement success to inform adaptations to the plan.
11.	Working Group to develop educational materials to be disseminated and inform the public about best practices for managing street trees.	x	x	x	x	Educational materials to be developed early in the first five-year implementation period, and then updated at least every five years to reflect changing conditions, such as level of stakeholder engagement, or environmental.
12.	Working Group to monitor community level of engagement at approximately five-year intervals	x	x	x	x	Public awareness and appreciation increases. Health of street trees increases.
13.	Working Group to review and pursue funding opportunities	x	x	x	x	Funding opportunities to be reviewed annually.
14.	Working Group to annually review needs and resources and inform council.	x	x	x	x	Communication with council to occur via annual workplans.
15.	Working group to update planting and maintenance procedures to reflect changing conditions or updated best practices.	x	x	x	x	Working group members will update existing or develop new procedures (as appropriate) to provide continuity through staff turnover.

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- UFMP is a 20 Year Plan

- 2025 work plan supports recommendations

- Annual reporting
  - Resource needs
  - Achievements
  - Yearly implementation plan
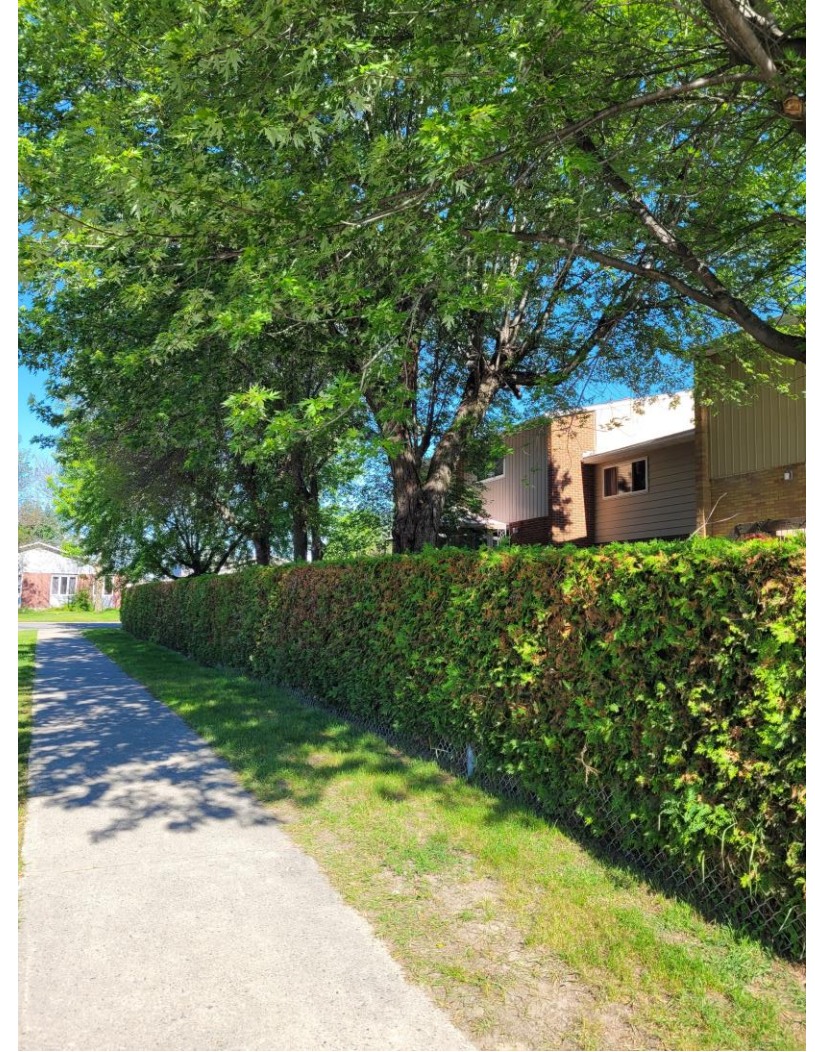
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