

DRAFT RECOMMENDATIONS REGARDING URBAN FORESTRY METRICS FOR CITY-OWNED TREES:

Much of London's understanding about the state of the urban forest derives from an understanding of planting numbers (which are relatively easy to collect), or changes in canopy cover over time. Since changes in canopy cover are the result of an unknown mix of tree planting, growth, removals and mortality it is difficult to understand what impacts tree maintenance regimes, tree removals, and species selection are having on London's trees, including city-owned trees.

Not understanding the relative importance of each of those factors marks a relatively major gap in our understanding of what is happening in the urban forest, and makes it difficult to judge the impacts of many of the actions laid out in the Urban Forest Strategy.

As such, it is recommended that the City collect three critical pieces of data during city tree removal and replacement:

- 1) The maximum species size for each City tree that is removed (e.g., sugar maples might be considered "large" trees while serviceberries would be considered "small"), using a standardized system of classification. We would recommend that used in "Trees in Canada" by Farrar (2017).
- 2) The size category of species being used for its replacement (very small, small, medium, or large)
- 3) The age of tree when it comes down to assess the impacts of maintenance strategies and species selection (e.g. are trees living longer, or dying sooner?)

And that the City then uses that data to analyze and report on, as a part of an annual Urban Forest Strategy update:

- 4) The conversion rate between size classes during replacement plantings (e.g., are we planting with successively smaller species of trees, so that even when all trees are replaced, the city will still lose canopy and shade cover?)
- 5) Changes to tree mortality over time, related, wherever possible, to changes in maintenance practices, pests or diseases, or other major events.

The species of the tree being removed, their replacements, as well as the species of any newly planted non-replacement trees are already collected, as these are a part of the City's street tree inventory. We recommend this data be further "put to good use" by also including in that update:

- 6) An analysis to changes in species composition in municipal tree plantings over time (e.g., are we planting proportionately greater or fewer invasive species? What about species that will be poorly adapted to a warmer climate?)