

Climate Change Action Plan - General Recommendations

General Recommendations Concerning the Design Specifications & Requirements Manual

The following recommendations all apply to sections within Chapter 12 of the City of London's "Design Specifications and Requirements Manual".

It is recommended that:

1. The **native or non-native column** of Appendix 5 ("Approved Street Trees") be modified to include the country or region in which non-native approved species are considered native. Doing so will help ensure that species selection is sensitive to the Ontario context, particularly with regards to the importance of native species to our local ecosystems, the risk of invasion by non-native species and to our changing climate which will cause many species from the United States to expand their range northwards into our area.

Non-native species should be broken into "Continental Non-Native" (which could potentially expand their range naturally into London, and support wildlife species which may likewise migrate north) and "Non-Continental" (which would not naturally do so). If there is uncertainty about this categorization in the literature (for example, the range of Manitoba Maple within Canada), it should be noted.

2. Given the great cost a municipality may incur when **invasive species** spread into natural areas, invasive species currently listed in Appendix 5 which lack a natural (native) population within North America, (i.e., labelled "*non-continental, invasive*" in the species list) be placed in a new appendix, and only be allowed to be used as replacement trees for City street tree planting. (I.e., a non-invasive species must be tried in any given location before a non-continental invasive will be considered). Even then, invasive species should not be allowed as replacements if the first tree was not regularly watered.
3. Appendix 5 ("Approved Street Trees") be modified to include a column to reflect **sex of trees** (monoecious, partially or fully dioecious), so that pollen-free trees can be identified and used in areas with a high incidence of respiratory illness (hospitals, retirement homes)
4. Appendix 5 ("Approved Street Trees") be modified to include a column to reflect each species' **OPALS rating**, so that the relative allergenic potential of different species can be determined by guidelines users
5. In light of growing concerns around food security, which are expected to increase as climate change progresses, **more edible fruit trees** should be added to Appendix 5 ("Approved Street Trees")

6. Appendix 5 (“Approved Street Trees”) be modified to include a column listing each species’ **fruit size**. A local food security group likely exists which could be approached to help provide this information for use in the table.
7. The City of London seek to implement these recommendations in time for the Spring, 2017 tree planting tender.

Beyond the proposed changes to the Design Specifications & Requirements Manual, it is further recommended that:

8. Urban Forestry engage in purposeful testing of **additional native Ontario tree species** for their use as street trees and their inclusion in Appendix 5 (Approved Street Trees) of the Street Tree Guidelines (for example, Chinquapin Oak).
9. Given the enormous risk climate change poses to London’s trees and forests, the time it takes any given tree to reach seed-bearing age and the slow rate of natural range expansion for most species, the City of London create local guidelines for **assisted migration**. These guidelines should give consideration to:
 - The climate scenario (RCP 2.6, 4.5, 6.0 or RCP 8.50) to be used, and how often this should be re-evaluated based on global success or failure to reduce greenhouse gas emissions (it being noted that the absolute best-case scenario that should be considered given available technology, progress on reducing emissions, and on global commitments should be the RCP 2.6 scenario, which equates to 3 degrees of warming for Canada).
 - The time frame for migration, and if different types should be used over the course of the coming decades and the timing of different approaches, in light of the time it takes a tree to reach seed-bearing age
 - The type of stock (e.g., seed may be preferred over importing southern stock so as to reduce the risk of disease)
 - The type of migration (“genetic”/population migration vs. assisted range expansion or long-distance migration – see: <http://www.nrcan.gc.ca/forests/climate-change/adaptation/13121>)
 - The potential for introduction of disease where one new species may be an alternate host for a disease that could affect our native species
 - How migration species or individuals could best be incorporated into the urban forest

10. A “**Climate Change Sister City**” initiative be established, either as a project of the Forestry department, or by partnering with an appropriate community partner to carry out the initiative, it being noted that TD Green Streets or the Federation may be a suitable source of funding for this project (*see attached draft proposal*).
11. The City make active use of climate change projections to anticipate **future budget needs**, both for urban forestry and other departments. (For example, estimating how much emergency tree trimming might need to be increased each year to make up for the expected increase in severe storms, or determining how many extra trees will need to be planted from increased deaths due to drought or pests).
12. Residents concerned about food security should be permitted to make **special requests to plant fruit and nut trees** in the boulevard in front of their homes, in the case where a street tree is not already present but site dimensions and conditions would support one.
13. For **dioecious species** (those species which have separate “male” trees and “female” trees), the City request that nurseries provide only female trees (which do not produce pollen) wherever practical.