

Seattle Urban Forestry Commission

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December 13, 2018

Samuel Assefa and Nathan Torgelson, Directors
Office of Planning and Community Development – City Hall
Seattle Department of Construction and Inspections - SMT
Seattle, WA 98124

RE: Input to Green Factor Director's Rule 2018

Dear Sam and Nathan,

The Urban Forestry Commission (UFC) is pleased to see the continued revisions to Green Factor and appreciates the opportunity to provide input.

Among the proposed changes, the UFC would like to make several observations and recommendations to the score sheet and Director's Rule (DR) to increase their effectiveness.

Tree size (Rule II - Standards for Green Factor Landscape Elements; B – Plantings; 4 – Trees; a. Size Categories):

- Align tree size categories to SDOT's classification (which uses larger overall tree canopy spread for each category, for example Green Factor considers a small tree to be between 8-15 ft; while SDOT considers a small tree to be between 15-30 ft).
- Create a new category for trees smaller than 15 ft in spread and for columnar trees and give them a small multiplier.
- Create a uniform tree size classification across City departments. The lack of alignment between tree size categories established by SDOT and Green Factor could cause confusion.

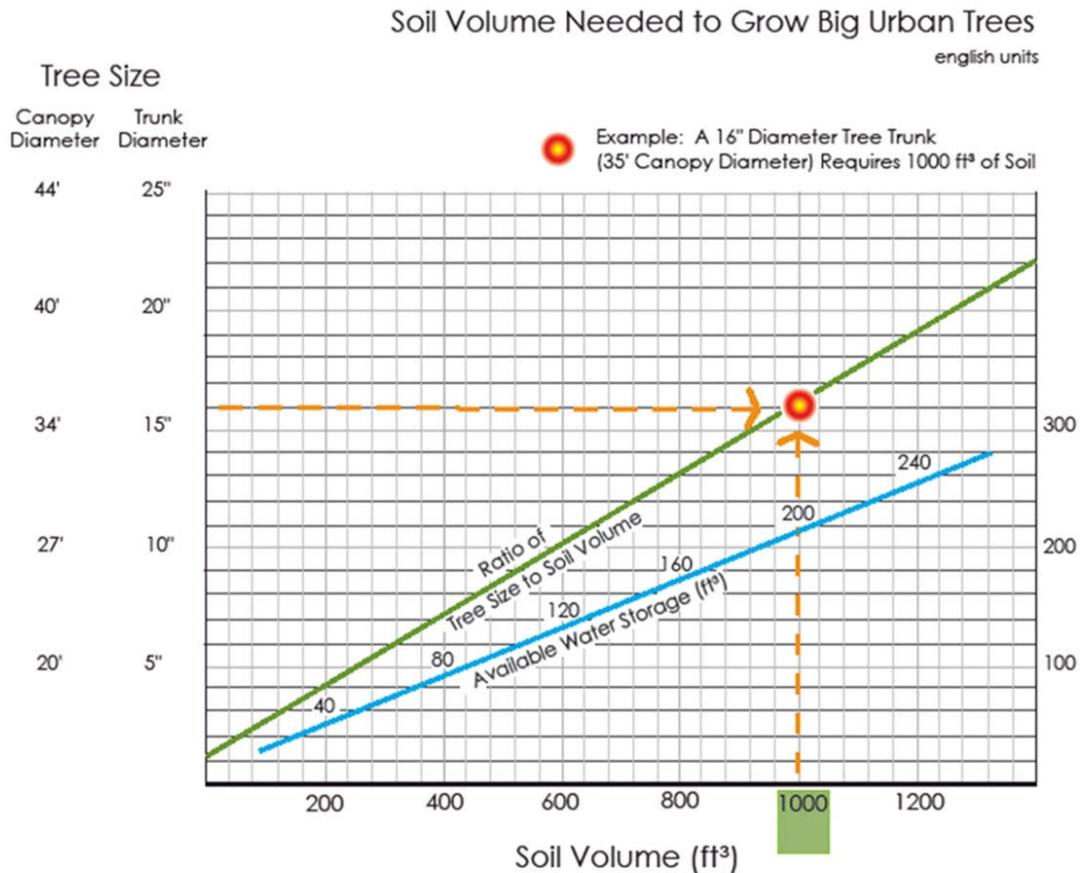
Minimum soil volume (Rule II – Standards for Green Factor Landscape Elements; B – Plantings; 4 – Trees; e – Soil requirements; Table A):

- The UFC recommends using higher soil volumes in accordance with [James Urban's recommendations](#) (in his book *Up by Roots*), particularly in street rights-of-way where soil conditions tend to be highly compacted and of poor quality. His minimum recommendation for large trees is 1,000 cubic feet (CF) of soil. Urbans' suggested soil

volumes range from 1 CF of soil per square foot (SF) of canopy (at maturity) to 3 CF of soil per SF of canopy. It is recommended that Green Factor pursue a minimum soil requirement of 2 CF per SF of tree canopy; proposed volumes under table A indicate a requirement shy of 1 CF per SF of canopy.

1,000 CF of soil is the minimum needed to properly support a mature tree with a 35' diameter canopy, which is a typical sized mature street tree when no overhead powerlines are present. Trees lacking in available growing medium (quality soil) are more susceptible to insect and fungal damage, stunted growth, shorter life spans and increased maintenance. This is most prevalent when trees are planted in 'islands' such as street trees, parking lots, and buffer plantings surrounded by adjacent imperviable surfacing.

Chart 1 (JamesUrban.net/specifications)



- It is recommended to close a loophole in the current DR (DR 2015-30) by stating soils over 48" in depth do not contribute towards meeting the requirements of providing adequate soil volumes for trees. The volume of soil is more clearly tied to the square footage of planting area required on the [GF scoresheet items 4-7](#). Including this ratio of

soil volume to square feet of planting area in the DR would clarify and reinforce the intent. This would eliminate the possibility of achieving required soil volumes for trees on sites by using deep soil wells within undersized planting areas, thus not meeting the intent.

Irrigation (Rule I - General Standards; 5 – Irrigation)

- Establishment of all planting, including drought-tolerant species, requires supplemental water for at least two growing seasons. The UFC recommends increasing the watering requirement to five years minimum for trees and woody shrubs in order to ensure strong plant establishment and healthy, vigorous long-term survival.
- The UFC also would like to point out the current irrigation requirement conflicts with certain projects trying to achieve LEED status. To gain a point under the Landscape Water Use Reduction category for LEED, temporary irrigation systems used for plant establishment are only allowed if removed within one year of installation. A LEED specialist should be consulted to verify the frequency of this situation and provide recommendations on how both requirements can be met.

Structural Soils Systems (Rule II – Standards for Green Factor Landscape Elements; F – Structural Soils Systems):

- Clarify these systems must allow for a continuous feeder root zone between the system and the adjacent planting areas. Credit for these systems should also factor in the volume of soil they provide up to a maximum 48” depth. There are multiple manufacturers of soil cells currently available, with many configurations providing varying levels of soil depth.
- On the Green Factor Score Sheet, the UFC recommends providing more incentive towards the planting of conifers. Conifers typically work harder than deciduous trees when it comes to providing year-around ecological services, wildlife habitat, clean air, and runoff reduction; as well as providing a longer service life (they have longer life spans). A potential way for rewarding more conifers in landscape plans could be heavier weighting of points for conifers over deciduous trees on the score sheet.

Additional recommendations:

1. Change the perception of trees as short-term elements in the landscape whose purpose is to ‘dress-up’ a new project. Urban trees under appropriate conditions can live many decades, even centuries, with their ecosystem and infrastructure values increasing as they mature.
2. Give tree preservation of high-value trees, such as mature conifers and native trees, the highest valuation on the Green Factor Score Sheet. Smaller trees should have lower values.
3. Emphasis should be given to native tree species, whenever possible, to maximize benefits to wildlife habitat.
4. Increase the multiplier to further favor retention of established trees. The value of established tree preservation is much greater than planting new trees. Existing trees have

endured the challenges associated with getting established and are already providing ecosystem services.

5. Eliminate drought-tolerant species from the bonus point table. Since 25% of new plantings already are required to be drought-tolerant.
6. Reduce multiplier for permeable pavement. Currently, permeable pavement gets the same multiplier as a small tree, permeable pavement evaluation is already required for on-site stormwater management, and probably shouldn't get the same benefit since it doesn't provide the same range of ecosystems benefits a tree does.

The UFC appreciates the opportunity to provide input and looks forward to continuing to work together to make improve our city.

Sincerely,



Weston Brinkley, Chair



Michael Walton

cc: Mayor Durkan, Council President Harrell, Councilmember Bagshaw, Councilmember Gonzalez, Councilmember Herbold, Councilmember Johnson, Councilmember Juarez, Councilmember Mosqueda, Councilmember O'Brien, Councilmember Sawant, Jessica Finn Coven, Michelle Caulfield, Mike Podowski, David Driskell, Maggie Glowacki, Chanda Emery, Brennon Staley, Vera Giampietro, Urban Forestry Management Team, Urban Forestry Core Team, Sara Maxana, Aaron Blumenthal, Eric McConaghy, Yolanda Ho, Susie Levy, Daniel Strauss, Amanda Hohlfeld

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