



City of
Tukwila
Washington
**Urban
Tree
Canopy
Assessment**

December, 2012



City of Tukwila, Washington

Urban Tree Canopy Assessment

September, 2012

Prepared for:

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Executive Summary

Trees and urban forests are vital to the health and sustainability of any community. Located in the lushly forested Pacific Northwest, Tukwila recognizes the benefits of trees and the value of urban tree canopy. While trees have been long appreciated for their contributions of shade and beauty to our landscapes, science and technology have now made it possible to quantify the environmental benefits to energy savings, cleaner air and water, carbon dioxide reduction, property values, and socio-economics. The Center for Urban Forest Research (CUFR) estimates that over a 40-year period 100 urban trees in the Pacific Northwest provide \$202,000 in benefits (Trees in Our City).

Tukwila has been a Tree City, USA for over ten years, developing many programs to restore and maintain the community forest, including sensitive areas restoration, planting trees in parks, and street tree planting, among others. These activities show that the City of Tukwila has made a commitment to protect and manage the community's tree resources. As a part of this commitment, and as preparation for updating the City's Comprehensive Plan to improve urban forest management, the City contracted with Davey Resource Group in June 2012 to carry out an urban tree canopy assessment. The purpose of the assessment is to quantify and map existing urban tree canopy as well as impervious surface, open water, pervious surface, and bare soil.

To accomplish this, high-resolution aerial imagery and infrared technology was used to remotely map tree canopy and land cover over the city limits. The results of the study provide a clear picture of the extent and distribution of urban tree canopy over the Tukwila area. The data developed during the assessment will become an important part of the City's GIS database and provides a foundation for developing community goals and urban forest policies. The primary purpose of the assessment was to establish a benchmark value to measure the success of long-term management strategies over time.

The assessment determined that Tukwila has a current overall average tree canopy cover of 25%, and impervious surface of 51% (Table 1). This may be influenced by the fact that, unlike many communities, Tukwila features more acres of commercial and industrial zoned land than residential areas. While these businesses are vital to the economic well-being and sustainability of the community, commercial and industrial zones are simply less conducive to developing and maintaining tree canopy than residential zones. The residential zones host a range of 33% - 51% canopy across 1,869 acres, while the industrial and commercial zones have a range of 9% - 49% canopy across 2,780 acres.

Land Cover Class	Acres	Percent
Canopy	1,615.77	25%
Impervious	3,241.86	51%
Pervious	1,131.67	18%
Bare Soil	1,07.6	2%
Open Water	299.21	5%
Total	6,396.11	100%

Table 1 – Percent Land Cover Class Citywide