GREEN CITIES RESEARCH ALLIANCE

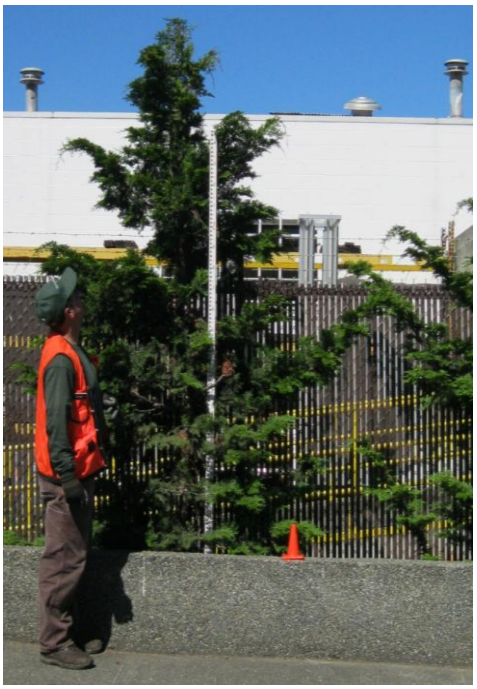
PARTNERING FOR SUSTAINABLE CITIES THROUGH SCIENCE, POLICY, AND CITIZEN ACTION

King County

USDA Forest Service

Pacific Northwest Research Station

Seattle's i-Tree Analysis



Study Goals

- Understand the function and structure of Seattle's urban forest
- Estimate monetary values for the ecosystem services provided by Seattle's trees
- Compare results to two similar studies in King County: King County parklands, and an urban to wildland gradient along the Green-Duwamish River;
- Improve forest assessment tools for use in King County and other Pacific Northwest communities.

Categories of Findings

- Estimated number of trees
- Most common species
- Species size distribution
- Pollution removal value
- Carbon storage
- Carbon sequestration
- Energy saving (in 1 or 2 story residential buildings)
- Avoided carbon emissions from reduced energy use
- Structural value

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Study Approach

Data collection began in Seattle in the summer of 2010 and was completed in the summer of 2011. Data was collected from 223 plots that were randomly selected within each of the City of Seattle's urban forest management units. This approach best allows the results to be used in conjunction with the Urban Forest Management Plan. Data will be analyzed using the i-Tree Eco tool, also known as the UFORE model.

Why is this research important?

Sound science provides a basis for long-term management decisions. This study will provide baseline data which can be used in updating the City of Seattle's Urban Forest Management Plan. Assessments such as this one also help demonstrate the public value that urban forests offer.

Research Sponsors

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