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NEWS RELEASE

USDA Forest Service

FOR IMMEDIATE RELEASE
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New Computer Model Makes North Vancouver Trees a Higher Priority

Davis, CA, July 9, 2004 – Unlike residents of many warmer cities to the south, people who live in North Vancouver, British Columbia are more interested in sun than shade. So why would they import a computer model to Canada in order to justify trees if people don't want shade?

According to Dave Hutch, project manager for the Street Tree Master Plan, "You can't just say we want to plant trees because they look nice. In order to sell the need for street trees to the public, it is necessary to actually demonstrate that trees provide environmental benefits." And that's where STRATUM comes in.

"We analyzed North Vancouver's street tree data using our new STRATUM software," said Dr McPherson, Director of the Center for Urban Forest Research, a USDA Forest Service facility in Davis, CA. "STRATUM is a new street tree management and analysis tool for urban forest managers. It uses tree inventory data to quantify the dollar value of annual environmental and aesthetic benefits: energy conservation, air quality improvement, CO_2 reduction, stormwater control, and property value increase."

The City put out a request for methodology to get data to support the goals and objectives of their Urban Forest Plan. The best proposal came from LANARC

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Consultants, who partnered with the Center for Urban Forest Research (Center) to provide that data. LANARC, a firm of landscape architects and environmental planners, was interested in exploring the role of the urban forest in environmental sustainability. Their proposal was based on the use of the Center's STRATUM software. Designed to model the benefits and costs of urban street tree populations, this sophisticated computer program can be customized for specific regions. This is the first use in Canada.

LANARC's analysis found that the benefits from street trees in North Vancouver were 5 times greater than the costs of maintaining them. For every dollar that North Vancouver commits to the care and maintenance of its city street trees citizens receive $5 worth of environmental benefits. The City annually spends about $94,000 on its 5,351 street trees, or $17.57 per tree. The return on that investment is $510,391 per year, or $95.38 per tree. That's approximately $25,000,000 over 50 years. Costs for managing street trees include pruning, tree and stump removal, watering, and replacement planting.

STRATUM is an easy to use, computer-based program. It allows any community to conduct a street tree inventory. The baseline data provided can be used to effectively manage tree resources, develop policy and set priorities. Using a sample or an existing inventory of street trees, STRATUM allows managers to evaluate current benefits, costs, and management needs.

STRATUM software was universally praised by those involved in the project. According to David Reid, principle at LANARC, "the experience of the Center staff and the STRATUM software were ideally suited for this project. Support from the staff was really quite excellent." The whole process went smoothly, he reported. "A couple of minor problems that came up were identified early on and fixed within a day." Dave Hutch also

appreciated the consultant's use of STRATUM and the results of the benefit/cost analysis. "We learned we can plant trees with amazing benefits for the future."

STRATUM uses growth models developed for significant urban tree species within various climate zones, along with other regionally specific data: regional climate data, building construction and energy use patterns, fuel mix for energy production, and air pollutant concentrations. This information is used to model the environmental benefits and costs as well as effects on property value. Reports compare canopy cover for different neighborhoods, species diversity, infrastructure conflicts, and species performance.

According to Dr. McPherson, the City of North Vancouver was picked as a candidate for STRATUM because they are an evolving leader in sustainable development. The Department of Engineering, Parks and Environment is responsible for managing the City's Urban Forest. An Urban Forest Master Plan is being completed in several phases. Phase I in 2001 created an inventory of street trees in the City and was used as input for STRATUM. The current Phase II will complete a Street Tree Master Plan. Future Phases will apply to parks and woodland collections in the City.

Prior work by the Center has been completed for several western US Cities, including San Francisco, CA, Longview, WA, and Fort Collins, CO.

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