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Forests not just for tree huggers in Vancouver

By WENDY STUECK

New technologies make it easier to measure the benefits of an urban canopy, which include energy savings, pollution control and water management

On a drab stretch of Hastings Street in Vancouver's Downtown Eastside, there's not a tree to be seen amid streets and sidewalks that give a decidedly grey cast to a city that bills itself as the greenest city in the world.

Over the next few years, this and other tree-starved blocks could gain some colour, as the city develops an urban forest management plan and begins planting a planned 150,000 trees by 2020.

And while initial planting is expected to take in spots where it is cheap and easy to plant the trees – not in paved areas that would require expensive overhauls – the city is open to requests, says parks board chairwoman Sarah Blyth.

"If someone came to us and said, 'Hey, it would be great to have some shade in this neighbourhood,' we would definitely be open to speaking about that — with private owners or just seeing where it's needed," said Ms. Blyth. "It would be great if people have ideas where they thought trees should go."

This fall, Vancouver city workers will start planting some 3,000 trees, the first of the planned 150,000 called for in the city's 2011 Greenest City Action Plan.

The cost for the first batch of trees – to be planted on both private and city-owned land – is \$650,000 of the city's budget of about \$1-billion. The investment is geared to more than shade and eye appeal. Vancouver, like other cities around the world, is looking to its urban forest for benefits ranging from energy savings to pollution control.

While such benefits have long been acknowledged, technology is making it easier to measure them – in the process, helping to build a business case for greenery.

"It's getting easier to quantify the environmental services provided by trees, because there are programs that we have been able to plug into that give us that information," said Beth McEwen, manager of urban forest renewal with the City of Toronto, which in 2005 announced plans to boost its tree canopy from about 20 per cent to 40 per cent over the next 50 years.

Toronto used i-Tree – software developed by the U.S. Department of Agriculture's Forest Service – for a 2010 report, Every Tree Counts, which mapped the city's tree cover and calculated what role trees played in, for example, reducing air pollution. Vancouver will be testing the software this fall, but has not done a cost-benefit analysis of its tree-planting target. Still, the city considers it a solid investment.

"There are social and economic benefits – including cleaner air, habitat for wildlife, increased property values and neighbourhood pride, to name a few," Ms. Blyth said.

The parks board is working with city engineering staff to determine where new trees should be planted. Plans call for the first batch, including some fruit and nut trees, to be split roughly equally between parks, streets and private property.

Currently, the city has an estimated 1.6-million trees, including about 140,000 street trees on city property. It has planted, on average, 2,000 trees a year for the past two decades.

Urban trees have popular appeal and are also highly regulated. Most cities have bylaws that protect mature trees from being cut down and dictate how many trees must accompany new development. There is also increasing research and awareness around the role trees play in urban ecosystems and infrastructure, thanks in part to groups like Tree Canada, a non-profit group that will hold its 10th annual urban forestry conference in London this fall.

That wasn't always the case.

For the past decade, Kim Stephens has been talking to municipal staff and politicians in B.C. about "green infrastructure" – using trees and permeable landscaping to help absorb rainwater, restore streams and make neighbourhoods more attractive and possibly healthier.

In recent years, he has found people are more receptive to his pitch.

"We've moved from 'Why should we do things?' to 'How do we do things?'" said Mr. Stephens, executive director of the Partnership for Water Sustainability in B.C., a non-profit agency. "That was a fundamental shift."

In the Lower Mainland, that shift has come in part through test cases such as Univercity, this is correct a 10-year-old housing development at Simon Fraser University that features a stormwater management system that diverts almost all rainwater to the ground rather than into conventional drain pipes or storm sewers.

The system, which Mr. Stephens helped design and implement, has worked as intended, providing reassurance to planners as they weigh cost and liability concerns. Several projects now under way in B.C. feature the same principles on a larger scale.

For the Bowker Creek project on Vancouver Island, local governments have teamed up to restore a heavily urbanized watershed that is home to about 30,000 people and where more than half of the watershed – 56 per cent – is covered with impervious surfaces.

Even with that increased awareness, cities' moves toward building and designing green infrastructure, including the use of trees for stormwater management, remains "painfully slow," said Patrick Condon, a landscape architect at the University of British Columbia.

"I think it's really good to do trees," Prof. Condon said. "It would be better if they were thought of as a direct way to infiltrate stormwater and sequester pollutants."

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