

## Urban Forests; Progress and Challenges

On December 12<sup>th</sup>, 2018 the Eastern Ontario Model Forest and the Ottawa chapter of the Canadian Institute of Forestry hosted its Christmas Forest Lecture on the subject of urban forests. This article is based on that event.

To set some larger context, the southern half of Canada is largely a forest nation. This statement includes all the lakes and wetlands that are associated with our forests. Our forests have supported and nurtured the people who have lived here for thousands of years. They continue to do so to this day, witness to all the changes in recent centuries culminating in modern forestry practice on our Crown forests that are the envy of the world. Just to quote a simple statistic, whereas Canada has 9% of the world's forests, it has 37% of the world's third party certified sustainably managed forests according to the most recent State of the Forests report by the Canadian Forest Service.

Whereas historically the people of this land lived "on the land", amongst the trees, rivers and lakes, and increasingly on farms too, with the growth of towns and cities following the influx of immigrants over the last 400 years, people increasingly moved off the land. According to Statistics Canada's 1861 census 14% of Canadians lived in cities. Now more than 80% live in cities. Removed from forested land; many largely ignorant about these environments.

However. They still live in treed environments; the "urban forests" that are a feature of every community across the land, except for those in areas north of the tree line. For much of the history of treed urban areas, there was little attention paid to them. They were "just there".

Mike Rosen, President of Tree Canada, spoke of Eric Jorgensen of the University of Toronto Faculty of Forestry. He was the pioneer who really developed the whole idea of "urban forestry" in the 1970s. He developed course material and forestry students took courses in the discipline. Mike spoke of Andy Kenney, a long time urban forestry practitioner at UofT as being a leader in modern urban forestry.

Why all this developing interest? Mike described a number of approaches that selected communities across the country have taken. Halifax, for instance was "built into the forest" he said, and today has 43% tree cover. The city website, on its urban forest web page (<https://www.halifax.ca/transportation/streets-sidewalks/urban-forestry>) makes clear the importance of city trees. Click on "The exponential benefits of trees". These benefits include air purification, storm water absorption, shade and evaporation to ameliorate the "heat island" effect of urban areas. The benefits in dollar terms are, for Halifax, \$8 in return for every \$1 spent in urban forest expenditures. And big trees are exponentially more beneficial than small trees.

To cite a personal example, where my wife and I live, there is huge silver maple city tree on the west side of our house, providing shade later in the day. On the south side and south east side of the house are two very large maples; a sugar maple and Norway maple, that provide shade during the earlier part of the day. Result? We do not need to have air conditioning. It is a dollar saving to us personally and an energy saving to the environment; less CO<sub>2</sub> into the atmosphere.

He spoke of another example. Toronto plants 100 thousand trees per year. Its urban forestry budget equals \$25 per city inhabitant. It has on staff 15 foresters and an entomologist. In its urban forest strategic plan the city estimates the “structural value” of the forest at \$7 billion. There are 10 million trees, combined public and private ownership. Currently the percent of tree cover is about 27%; the city has an objective of increasing that to 40%. This will require over 300 thousand trees to be planted every year. The estimated yearly value of ecological goods and services is \$28,2 million and carbon storage value of \$25 million.

James Lane, Program Manager, Green Infrastructure at the Regional Municipality of York, spoke of the York Regional forest, north of Toronto. The area includes a number of municipalities. The forest, made up of a number of separate tracts totals 2,200 ha in size. It is FSC certified, since the year 2000. As pointed out in the forest management plan “FSC certification through its rigorous principles and criteria/regional standard combined with an independent, third party audit allow the Region to demonstrate to the public that the forest is being managed in a responsible and sustainable manner.”

James recounted the time when an irate member of the public objected to some clear cutting of red pine that was in decline. The fact that the forest was managed according to FSC principles, plus having an FSC auditor available to testify to that was instrumental in turning a problem into a triumph.

What James emphasized was the importance of communication. In plain English. Foresters have a language all their own. So, instead of reforestation (plain enough?), use “plant small trees” type of terminology. In preparing the management plan a number of groups were involved; various public user groups, elected officials (very important), NGOs, corporate interests, farmers, police.

Elements of success: gaining public support; providing information; be credible by doing what you say you will. Turn challenges into opportunities. How problems are rectified can create a large positive image. Finally, a strong corporate culture of support is key. Over the years the council has moved from a view of trees as “nice to have” to “trees as need to have.

There is a recognition of the value of forest cover; “green assets” valued at \$480 million. They remove 6 tonnes of CO<sub>2</sub> per year. It is seen as “putting down roots for the future”.

What is the situation in Ottawa/Gatineau? Two people spoke to that. Genevieve Mercier, Senior Environmental Strategy and Programs Officer at the National Capital Commission (NCC) and Martha Copestake, a planning forester at the City of Ottawa.

There is a large area involved in the larger amalgamated Ottawa. There is the “urban forest”, but also in the larger outlying areas a number of forests such as Torbolton that has the characteristics of a county forest. In addition the NCC has both a large natural park, Gatineau Park; over 36 thousand ha and the Green Belt around the south border of urban Ottawa; almost 6 thousand ha. This comprises forest land, wetlands and farmland.

Similarly to the other urban areas described, there is full recognition of the multiple values and benefits of the urban treed environment. The Ottawa/Gatineau area is especially forest “rich” by having the NCC as holder and manager of Gatineau Park and the Green Belt. These areas provide huge recreational benefits to citizens and visitors alike, while also being a rich biodiverse environment.

Both the NCC and the City of Ottawa have recently completed strategic plans. The NCC “Sustainable Development Strategy” covers all of the NCC’s extensive operations, but also includes “sustainable forestry” for part of its holdings. It is a protection oriented strategy covering the cultural and natural heritage of the region. It is the product of very wide public participation, involving 30 stakeholders and hundreds of members of the public. Long term goals include sustainably managed lands and forests, healthy wildlife populations, and pristine lakes and rivers. Similarly Ottawa has developed a strategic plan, which also featured a very large number of stakeholder and citizens in its preparation.

There are multiple challenges to urban trees. Difficult growing conditions for one. Environmental threats for another. Witness the huge loss of trees due to the emerald ash borer. The recent cluster of tornadoes destroyed a large number of trees, completely changing the look of some neighbourhoods, even if some houses survived. These kind of events can skew urban tree planting and management activities by changing the focus of management and funds to deal with such unforeseen emergencies.

But in spite of this Ottawa, Gatineau and the NCC are cooperating in moving forward with urban tree improvements. For instance the communities are conducting a tree canopy assessment working with the University of Vermont’s Spatial Analysis Laboratory.

In conclusion, what we heard during this seminar was:

- A huge increase in institutional, both political and expert staff interest in urban forests

- A well developed understanding of the many ways that urban tree cover benefits citizen health and well being, as well as providing a number of economic benefits to communities
- Good messaging to help urban dwellers understand how trees contribute to their well being and also how to personally take advantage of these opportunities.

Tony Bull December 17, 2018