

URBAN FORESTRY IN ZONE 10

by Ainsley Caldwell, Associate Director/State Forester, Urban Forestry Administration, Washington, DC



Vancouver is in the temperate coastal rainforest, so trees can get enormous. This hollow tree stump in Stanley Park is over 600 years old and big enough to park a small car inside. photo: Bill Stephen.

As a recipient of a Municipal Arborist Exchange award, I had the opportunity to visit the Vancouver, BC, Park Board during the week of June 27, 2004. Urban Forestry Technician Bill Stephen hosted my visit. Bill had visited me in Washington D.C. the previous month to learn about our urban forestry program.

In Vancouver I saw municipal natural resources management as it affects parks, street trees, wildlife, old and second growth forests, coastline, fish spawning habitat, stormwater runoff, and water conservation. The human interactions and challenges of municipal greenscape management were also highlighted: urban renewal, property development, competition for unique habitats, highway construction, and the involvement of politicians and residents.

Some Observations

- *Most of Vancouver is Zone 10. It receives eighty inches of rainfall annually, has cool summers and mild winters, and hosts a tremendous variety of plants, including bananas, palms, and tree ferns.*
- *Green roofs are big in Vancouver—I'll never forget an 18" DBH conifer growing on the roof of a ten-story building.*
- *The Park Board has its own nursery and greenhouses located within the city, something I found very desirable.*
- *Because of the mild climate and abundant water, exotic plants can really thrive. Some of*

the troublesome ones are morning glory, purple loosestrife, and giant hogweed.

- *Because of lush growth on desirable plants, insects and disease pests are a problem. In Vancouver the use of herbicides is highly restricted on both public and private property; therefore, the Park Board has been using a number of IPM solutions to combat outbreaks of birch borers, aphids, leafminers, and other pests. For example, the Board purchases and releases thousands of ladybugs annually to control aphids and uses horticultural soap sprayed from rotary or electrostatic misters.*
- *To a lesser extent, animals are a problem—mainly, herons that tend to roost in a high-use section of Fraser Park. The high volume of heron feces is, in some areas, more than a nuisance, burning leaves and potentially resulting in the death of affected trees.*
- *With the current volume of construction activities, the City of Vancouver and two neighboring municipalities are exploring a joint venture in wood, soil, and construction debris recycling.*

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Vital Statistics, Vancouver, British Columbia

- *Population: 2 million*
- *Street Tree Population: 120,000*
- *Full-time Park Forestry Staff: 50*
- *Management Plan: Yes*
- *Street Tree Inventory: Yes*
- *Pruning Cycle: 7 years*
- *Climate: Zone 8 to 10*

Most Common Trees: Cherry, Norway maple, red maple, littleleaf linden, horsechestnut, European hornbeam, elms, European white beech

Biggest Challenge: Trees that grow so large due to the climate that they quickly outgrow their space, heave sidewalks, and need frequent pruning

Source of Pride: A totally comprehensive, cradle-to-grave urban forestry program that grows its own nursery stock, plants its trees, conducts pruning and maintenance, and manages its own wood waste



Rooftop gardens are common in Vancouver. This rooftop conifer is 18” DBH. photo: Bill Stephen.

- *There are a number of salmon spawning and trout streams within the West Vancouver city limits, and the Board has developed unique private-public partnerships to ensure these habitats are protected and remain productive.*

I am very happy to have been selected for this exchange, and I highly recommend it to others. I was able get a different perspective and see some unique solutions. What I learned was invaluable in my current assignment, mainly involving street trees but also extending to related environmental areas in the District of Columbia. Thank you, Bill Stephen, SMA, and Altec Inc. 🌿

- *The city’s country lanes (alleys) program is noteworthy—it seeks to redesign country lanes to increase pervious surface and reduce stormwater runoff. There are some bioretention ponds, and there is a push for the installation of synthetic temporary curbs with openings that allow runoff to water streetscape plantings before entering the drainage system.*
- *Although Vancouver receives significant rainfall annually, there are many water conservation programs being implemented by the city. In one case, I saw wastewater from a drinking fountain artistically diverted to irrigate plants.*

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A bioretention pond at Granville Island, an old industrial waterfront area revitalized in the 1970s that includes plenty of public spaces. photo: Ainsley Caldwell.



Curb openings simply but elegantly divert stormwater to plantings. photo: Ainsley Caldwell.