



URBAN FOREST STRATEGY Updates

Park Board Committee Meeting
Monday, December 7, 2020



- To acknowledge the achievement of the Greenest City 2020 Goal of planting 150,000 trees
- To update the City of Vancouver's urban forest canopy cover
- To establish a new target for city-wide canopy cover in acknowledgement of Park Board's commitment to equity, nature and mitigation of the climate crisis



Hollow Tree in Stanley Park (ca.1911)

Greenest City 2020 Goals for Urban Forest



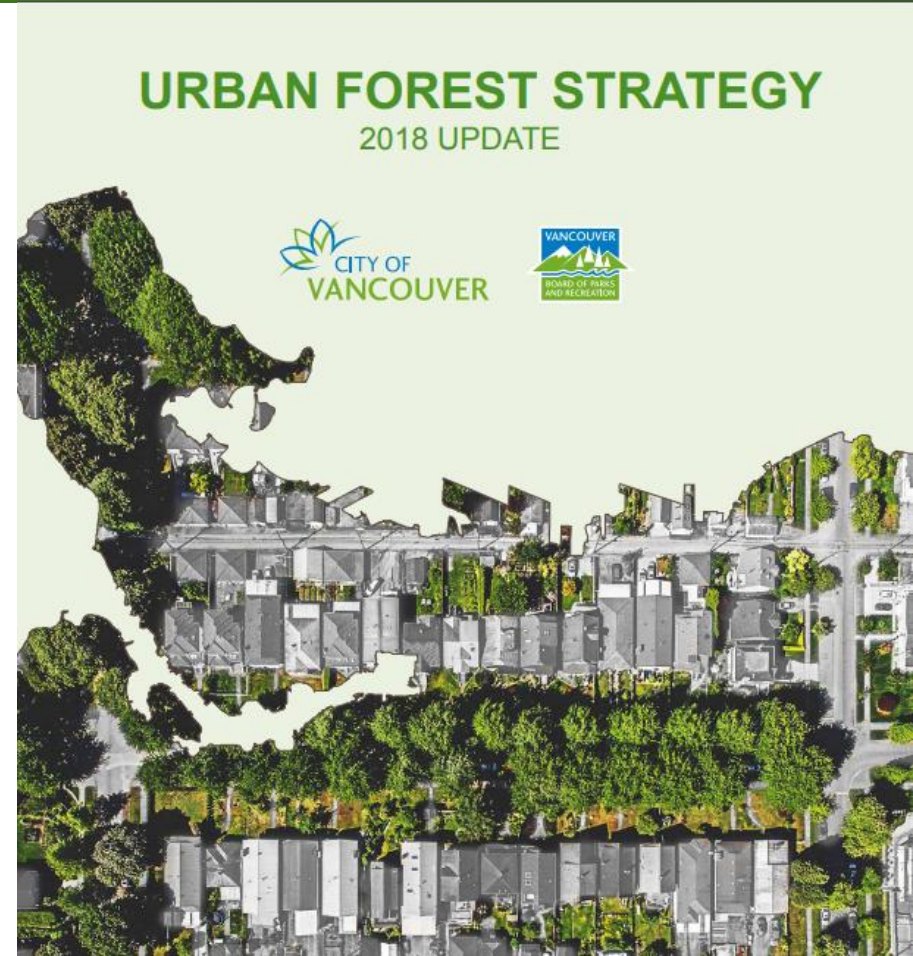
- Goal: plant 150,000 Trees by 2020
- Public Land (streets and parks)
- Private Land (development and Park Board subsidized tree sales)
- To signify this achievement, 11 Douglas firs were planted in New Brighton Park (Nov 27, 2020)



Urban Forest Strategy (2018)

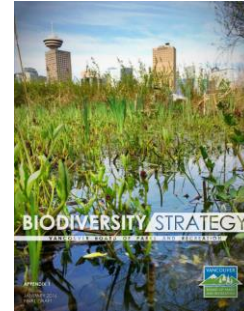


- Acknowledged urban forest canopy cover as preferred metric to gauge extent and value of asset
- Identified urban forest equity as principle to direct future efforts
- LiDAR data from 2013 estimated canopy cover was 18% (2,063 ha)
- Established 22% canopy cover target to be achieved by 2050



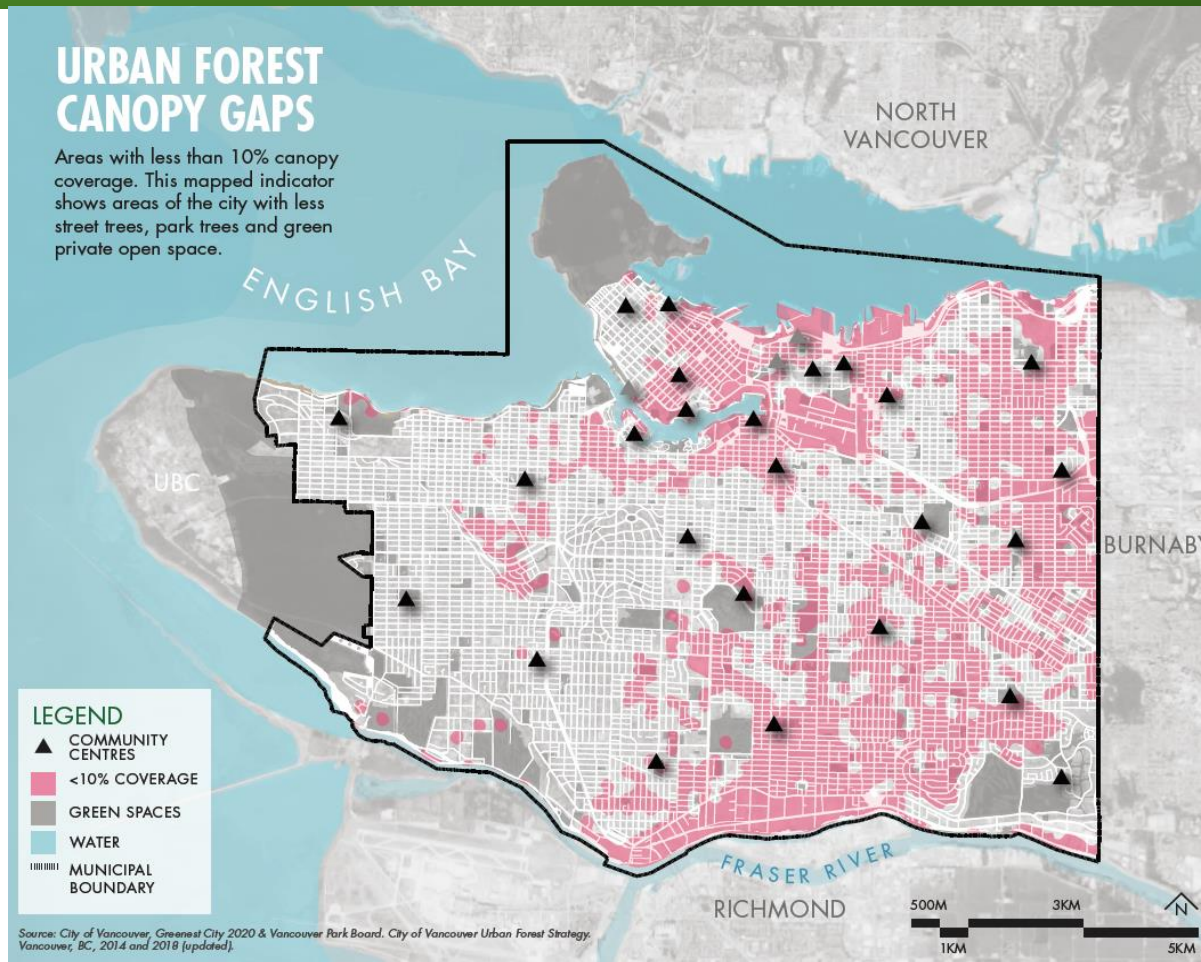
Synergies with Affiliated Plans and Strategies

- VanPlay (2019/2020)
- Bird Strategy (2015)
- Biodiversity Strategy (2016)
- Rain City Strategy (2019)
- Climate Change Adaptation Strategy (2020)
- Vancouver Plan (Ongoing)

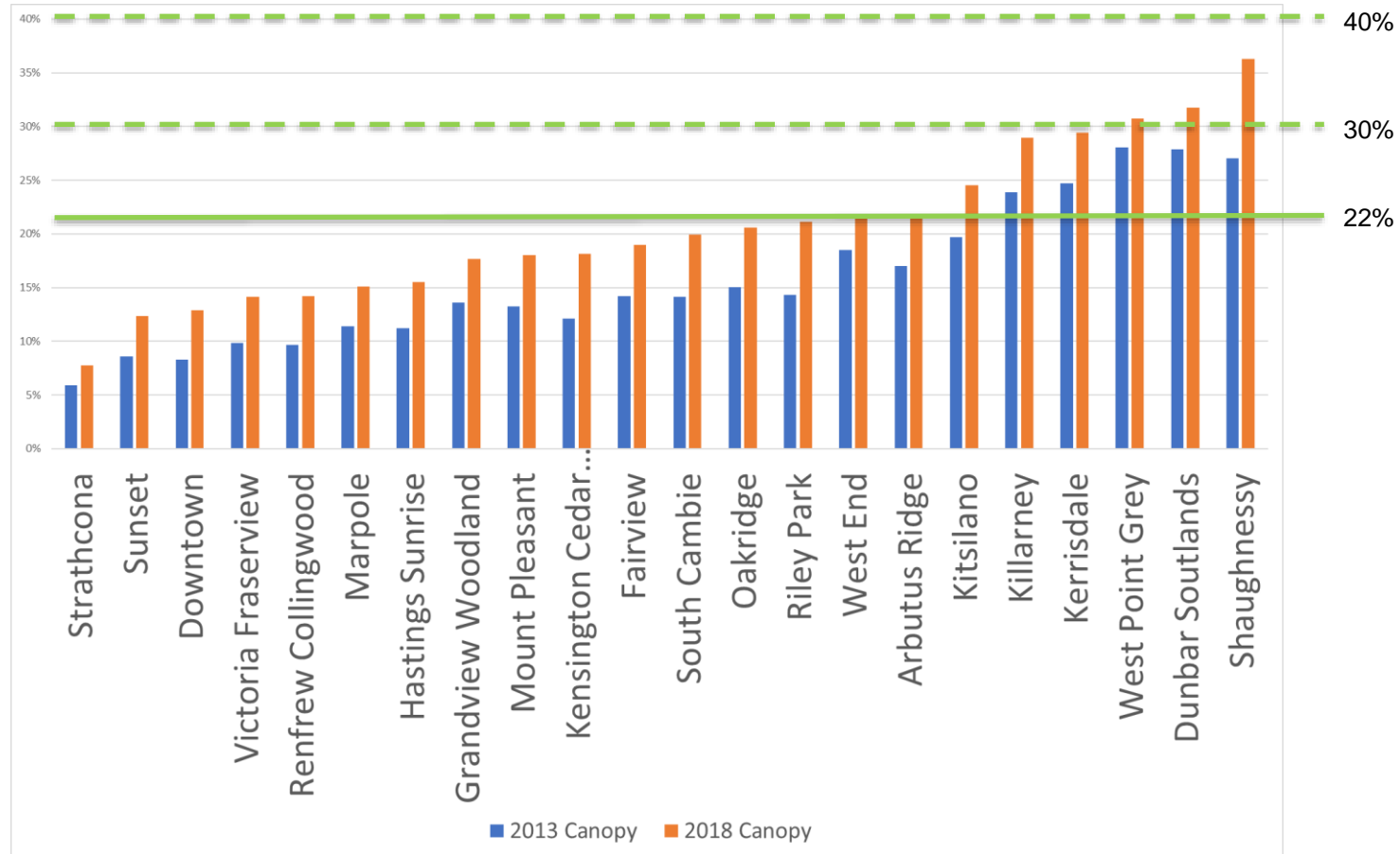


Urban Forest Equity (per VanPlay)

- Canopy deficient blocks & neighbourhoods:
- Downtown; Strathcona, Renfrew-Collingwood; Sunset; Victoria-Fraserview; Marpole; Hastings Sunrise; Grandview Woodland



Canopy Deficient Neighbourhoods



Preliminary Canopy Cover Measurements (LiDAR)

- In 2018, LiDAR was used again to measure and track progress in canopy cover
- Results received in Fall 2020 indicate 23% canopy cover

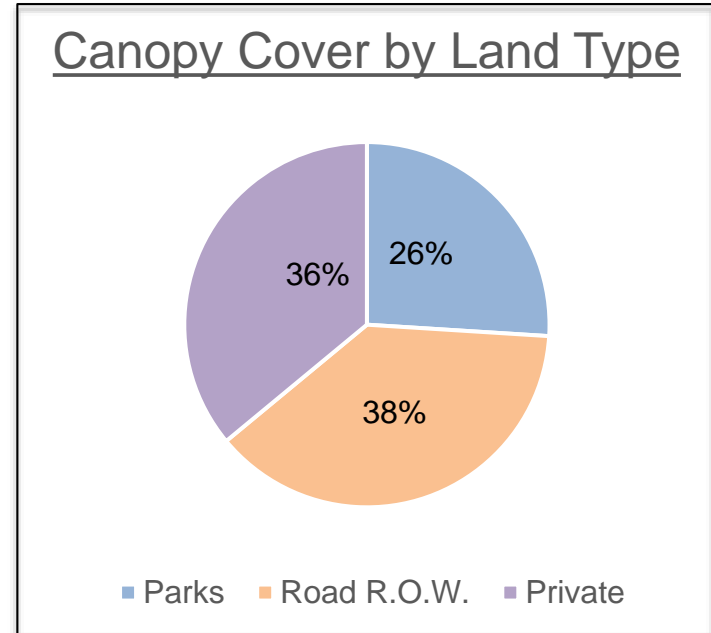
Year	Canopy Area	Canopy Percent
2013	2063 ha	18%
2018	2645 ha	23%



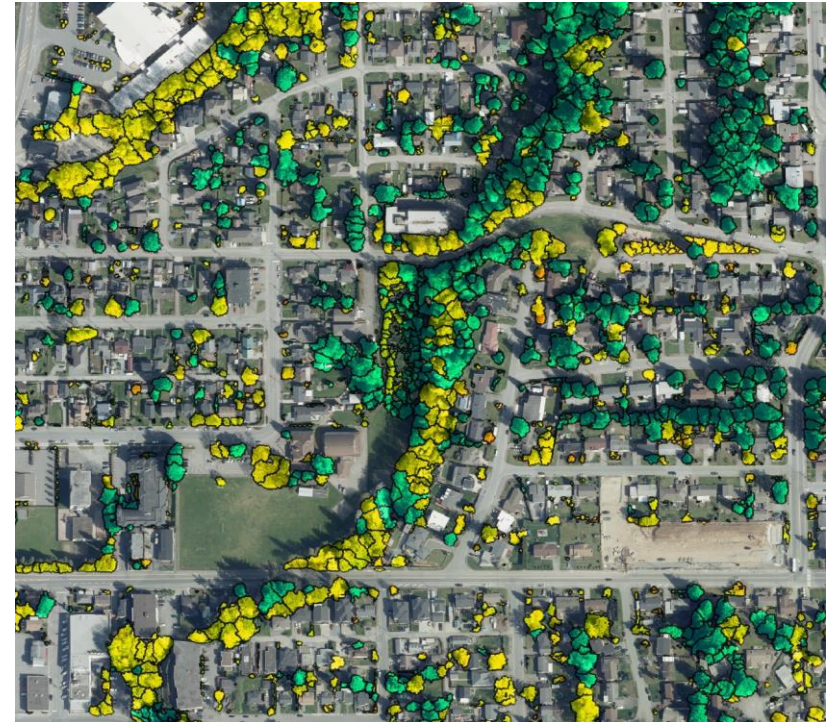
- Staff asked, “Why such a significant increase in canopy over 5 years?”
 - Improved technology in LiDAR imagery and analysis including:
 - Lower density of vegetation points in 2013
 - 2013 inconsistently omitted tall hedge vegetation
 - 2018 is a more complete capture of vegetation extents
 - Seasonality of LiDAR (leaf-on/off) resulted in underestimated deciduous tree cover
 - Canopy Growth and benefits of planting additions

- Cross referenced data using USDA-developed software: iTree Canopy
- Utilized 2013 and 2018 aerial imagery to establish a like-for-like comparison and actual 2013 baseline
- Staff have now established a replicable and standardized methodology for consistent and accurate future canopy measurement

Year	Canopy Area	Canopy Percent
2013	2415 ha	21%
2018	2645 ha	23%



- Based on recent findings, the 22% canopy cover target has been exceeded
- Other municipalities have ambitious targets associated with livability and climate action:
 - Toronto (40%)
 - Portland (33%)
 - Seattle (30%)



 *Deciduous*  *Coniferous*

Canopy Cover Targets

- Establishing 30% urban forest canopy cover by 2050 as a new city-wide target is an ambitious, but achievable goal
- Staff will track progress using ongoing LiDAR measurement every 5yrs and implement adaptive management principles to tailor efforts



street trees (green); park trees (blue); private trees (red)

- Shading/cooling in summer and thermal cover in winter
- Carbon sequestration (C.E. Big Move 6)
- Removing carbon pollution through biosequestration (removal of carbon from the atmosphere to store in earth's natural carbon sinks)
- Retaining and delaying rainfall resulting in reducing peak-flows during storm events thereby increasing the capacity of the storm sewer
- Shoreline and soil stabilization from sea level rise
- Shading and cooling of foreshore and riparian habitats
- Improved air quality
- Provision of habitat for birds, insects and urban wildlife

- Park Board remain committed to planning and maintaining the urban forest including fulfillment of risk management obligations
- Equity and climate action work will guide the upcoming decades of urban forest management
- Ongoing City collaboration will be necessary:
 - If approved, separate targets for private (City Planning jurisdiction) lands to assist in achieving 30% city-wide (embed in Vancouver Plan)
 - New planting sites for street trees in hyper-urbanized areas requires City Engineering collaboration



THAT, in recognition of improvements to previously reported canopy coverage metrics resulting from changes in technology and measurement timing, the Vancouver Park Board approve the updated Urban Forest Strategy, with a new city-wide target of 30% tree canopy cover by 2050, and:

- A. THAT the VanPlay Masterplan be amended to reflect this new target;
- B. THAT Park Board staff work with City of Vancouver staff to incorporate this new target into the Climate Change Emergency Response planning and land use policy, work, and the pending Vancouver Plan; and
- C. THAT staff report back on the implementation of the new canopy cover target on an annual basis;
- D. THAT staff report back on the effect on the tree supply with the recent loss of the Park Board tree farm and explore what steps would be required to replace this lost capacity.

