

A decorative graphic featuring a large teal ring in the top left, a large yellow ring in the bottom right, and several smaller circles in shades of green, orange, and pink. Dashed lines in teal and yellow connect some of the circles, creating a circular path around the central text.


Main Mall Tree Inventory

Jane Ho
April 6, 2018

Tree Inventories



Provide insight of the urban forest condition on Main Mall. The data can help to inform the development of UBC's Urban Forest Management Plan!



**UBC Vancouver Campus
Tree Inventory Handbook**

Date: September 29th, 2017

Prepared by Elliot Bellis, Thomas Ikeda, Alice Miao,
and Alexis Naveau



Prior Research

The UBC Student Tree Inventory Team

- Inventories trees in the Stadium Neighbourhood
- Developed a protocol for conducting tree inventories at UBC

How Did I Inventory?

Tree Tag

Tree ID number based on the previous tree inventory conducted in 1998



GPS Coordinates

The longitude and latitude of each tree found using the Avenza Maps™ application on an android device



DBH (mm)

Diameter of the trunk measured at approximately 1.3m from the base of the tree using D-tape



Groundcover

Visual estimate of percent vegetation cover within 1m from all sides of the tree



Crown Width (m)

Crown width was measured by pacing from the north to south side of the tree and then from the east to west side of the tree. Crown width was recorded as the average of both measurements



Tree Height (m)

The Nikon Laser Rangefinder Forestry Pro was used to measure tree height



Crown Height (m)

The Nikon Laser Rangefinder Forestry Pro was used to measure crown height. The height is measured from the top of the tree to the lowest branch

Probability of Failure

Likelihood that a tree will fail or die. The 5 level rating system follows the tree risk assessment that was done by last year's tree inventory team. The rating system is based off of ISA's Tree Health and Risk Assessment



Inventoried Area

- Iconic part of the UBC Campus image
- All red oaks (*Quercus rubra*) except for one white oak
- Earliest red oaks were planted in the 1920s

Nitobe
Memorial
Garden

David Lam Library

UBC Sauder
School of Business

Beaty Biodiversity
Museum

Forest Sciences Centre

The University
of British
Columbia

UNIVERSITY HILL

University Blvd

Wesbrook Mall

Urgent Care Centre
- UBC Hospital

Wesbrook Mall

Wesbrook

Summary of Field Measurements

x89

Tree Height

The tallest tree 37.6m
The shortest tree 6.8m
Average 20.8m

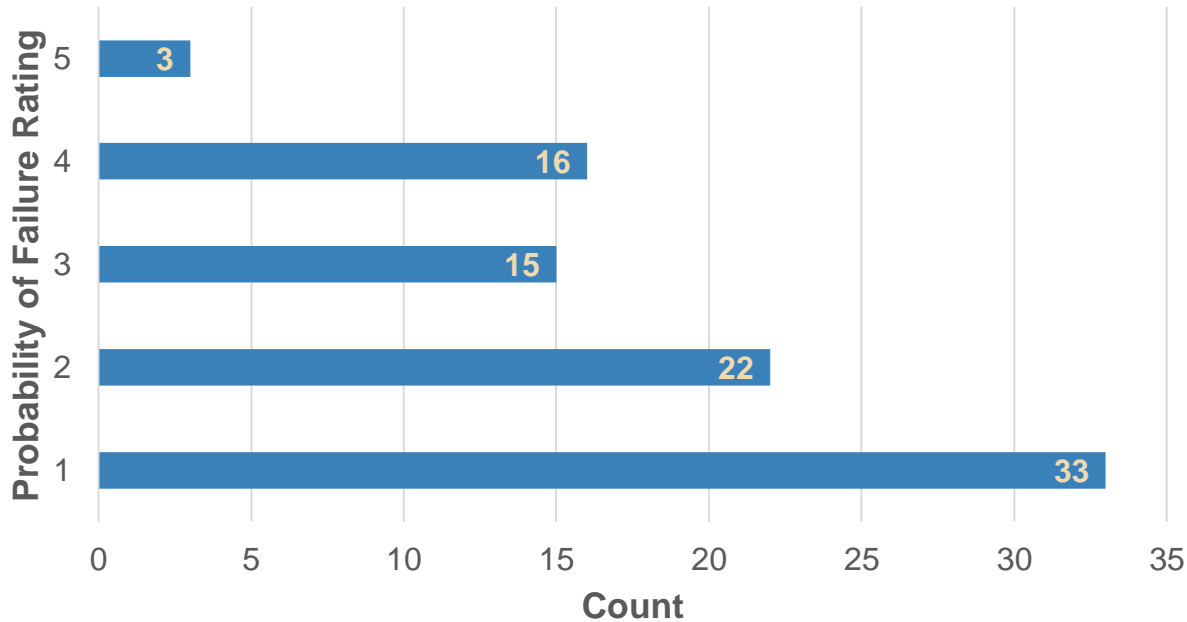
Crown Ratio

Greatest 96.8%
Least 37.8%
Average 85.8%

DBH

Greatest 126.1mm
Least 9.1mm
Average 67.1mm

Number of trees in each probability of failure class



major cracks



mechanical damage



pathogens



Recommendations

1. Aerate the soil to reduce compaction
2. Maintain good communication with utility vehicles operators, arborists, contractors
3. Apply mulch – trade offs
4. Fertilize – depending on soil/foliar analysis
5. Prune broken/split branches hanging over benches and walkways

A decorative graphic consisting of a large, light blue dashed circle that frames the central text. Various colored circles (teal, yellow, green, orange, pink) are scattered around the perimeter of the dashed circle, some overlapping it. The colors include teal, yellow, green, orange, and pink.

Special Thank You...

Owen Croy

Zach Wirtz

Dr. Sheppard

Dr. Konijnendijk and Sara Barron

UBC SEEDS

Michael Pang



References

Lilly, Sharon J., and Peggy Currid. *Arborists' Certification Study Guide*. International Society of Arboriculture, 2010.

UBC Campus and Community Planning. *"The Red Oaks of Main Mall."* The Red Oaks of Main Mall, The University of British Columbia, 2017, planning.ubc.ca/vancouver/planning/policies-plans/trees/red-oaks-main-mall.

Photos by Jane Ho