

## Purpose of Today's Presentation

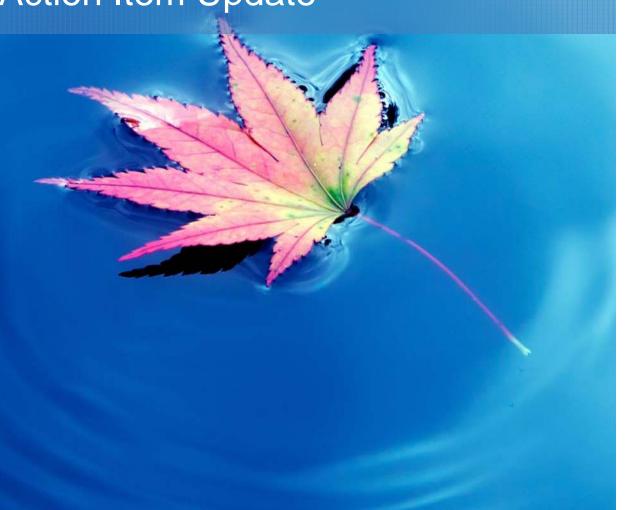
PART 1

Provide an update on all Urban Forest Strategy Action Items

PART 2

Focus on Action Items 2.1 - 2.4 for Approval

# Part 1 Urban Forest Strategy Action Item Update







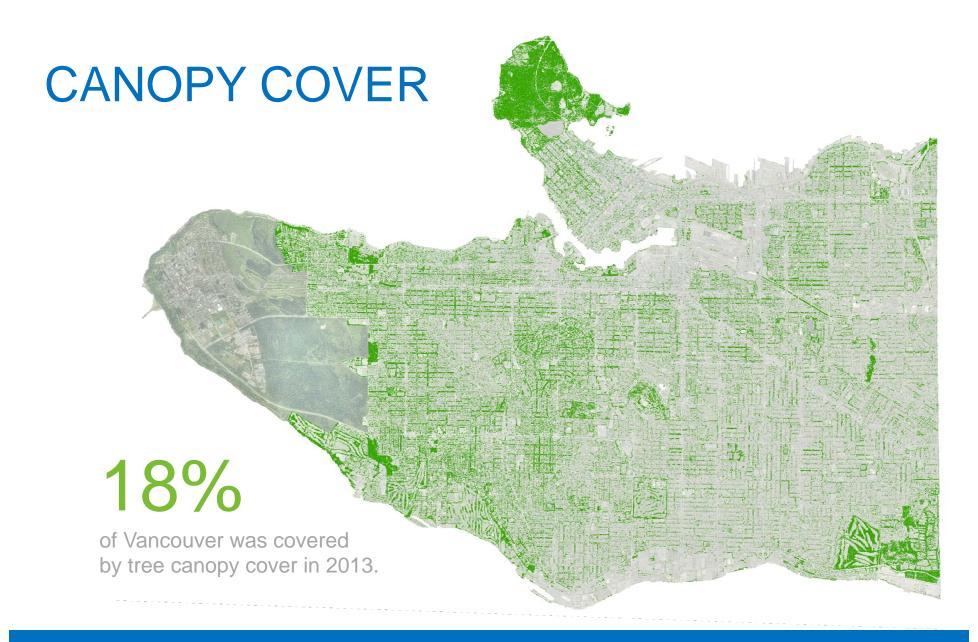
# Part 1 Urban Forest Strategy Action Item Update

Engage

- Background
- Action Item Update:
  - PROTECT
  - PLANT
  - MANAGE
- Next Steps

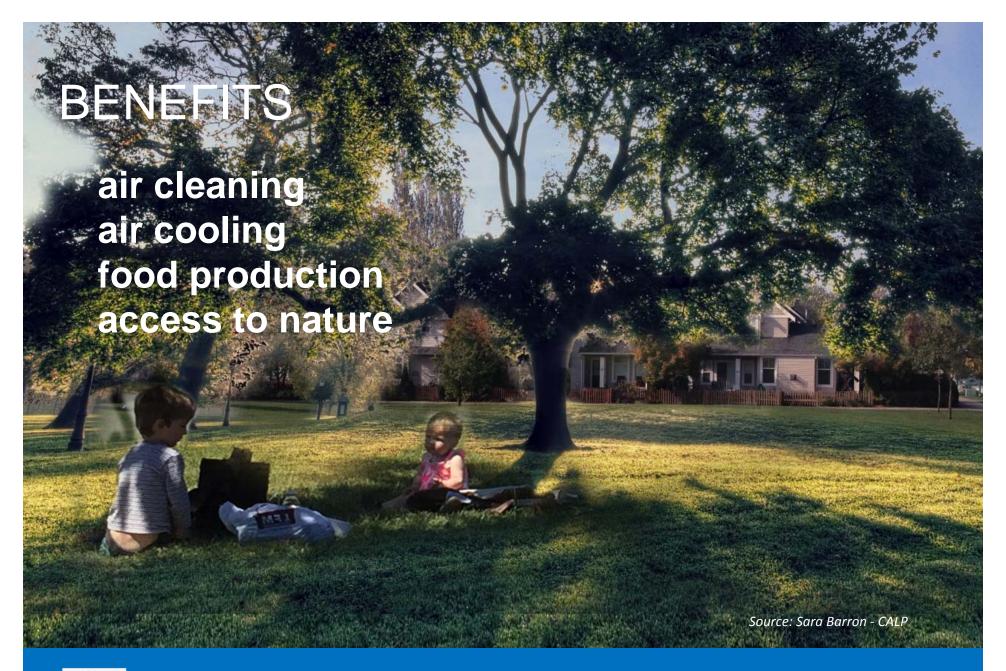






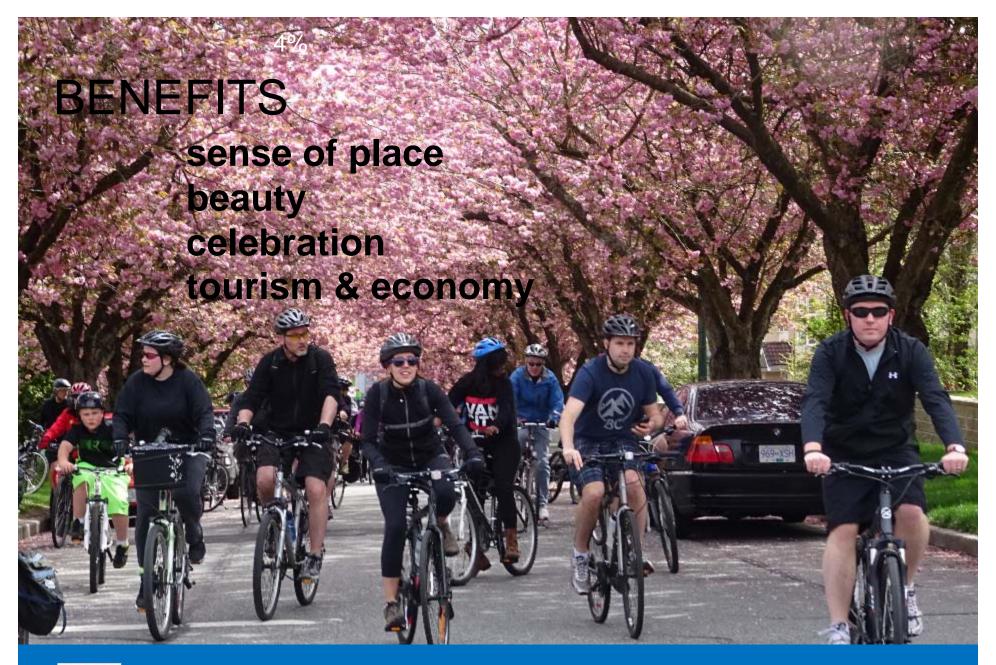


















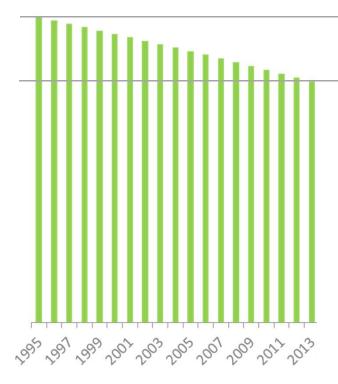




# **CANOPY COVER DECLINE**



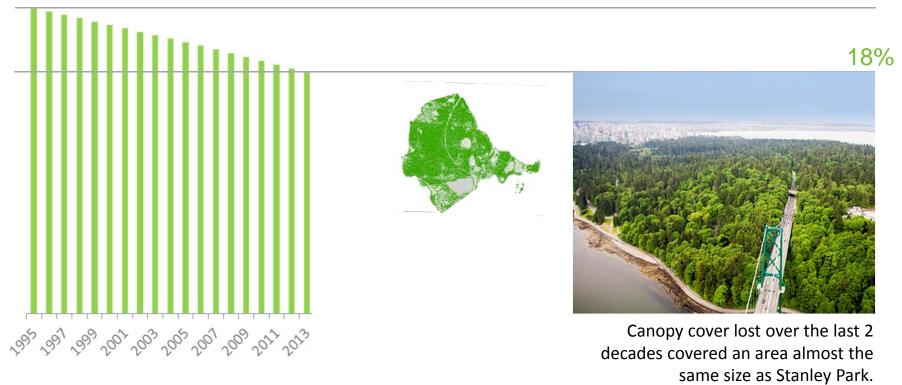
18%





# **CANOPY COVER DECLINE**

22.5%



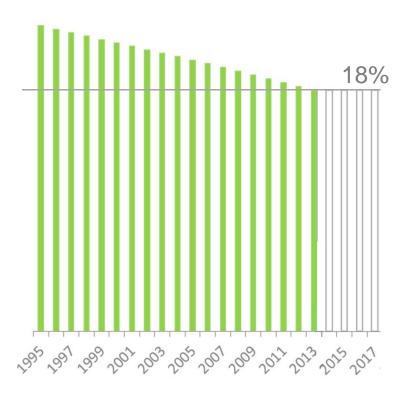






Goal: Stop canopy decline

Target: 18% canopy cover by 2017

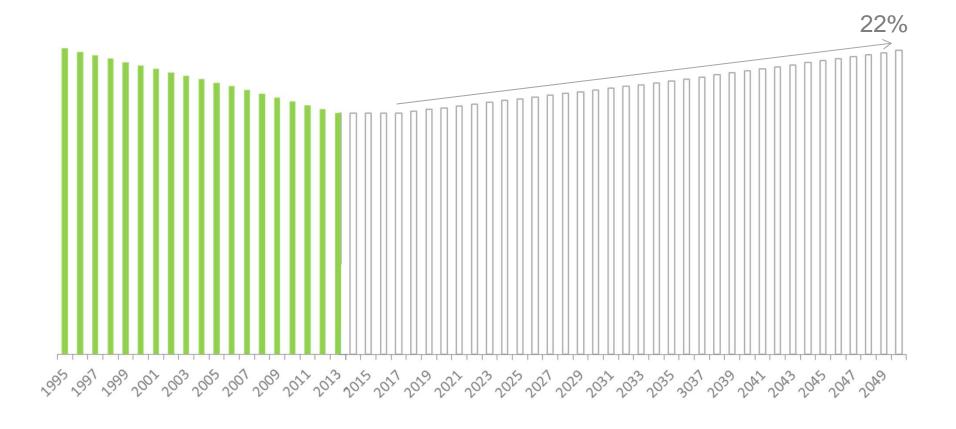






Goal: Grow our canopy

Target: 22% canopy cover by 2050

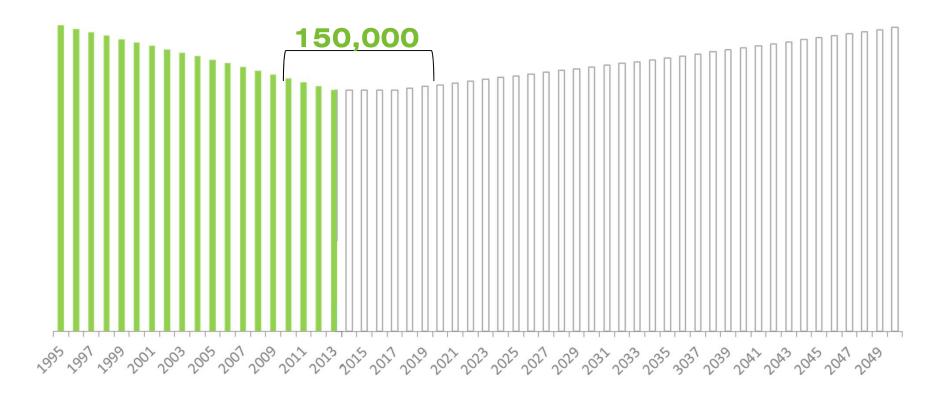




Goal: Grow our canopy

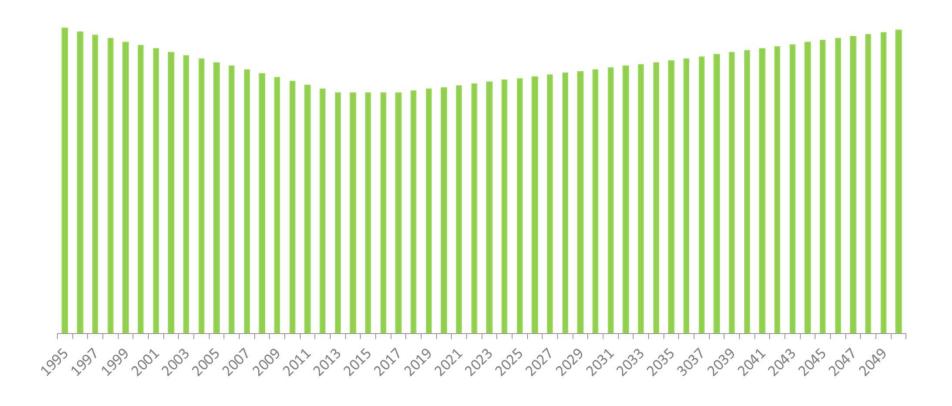
Target: Plant 150,000 new trees

by 2020





Goal: Manage as vital living asset



# 7 ACTION ITEMS – April 2014

#### **PROTECT**

- 1. Amend Section 4.5 of the Protection of Trees By-law
- 2. Retain more trees on Development Sites
- 3. Create a Public Tree Retention/Removal Framework

#### **PLANT**

- 4. Expand Park Planting Programs
- 5. Expand Private Property Planting Programs

#### **MANAGE**

- 6. Update our Street Tree Management Plan
- 7. Create Street and Park Succession Plans



# 10 ACTION ITEMS – Today

#### **PROTECT**

- 1. Amend Section 4.5 of the Protection of Trees By-law
- 2. Retain more trees during development
- 3. Create a Public Tree Retention Framework

#### **PLANT**

- 4. Expand Private Property Planting & Stewardship Programs
- Expand Park Planting Programs
- 6. Create Street Tree Cooling Networks

#### **MANAGE**

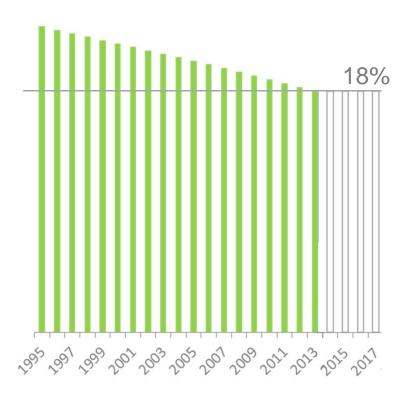
- 7. Street Tree Soil Volume Standards
- 8. Street and Park Tree Management Plan
- 9. Updated Inventory System and Data
- 10. Monitoring and Adaptation Frameworks





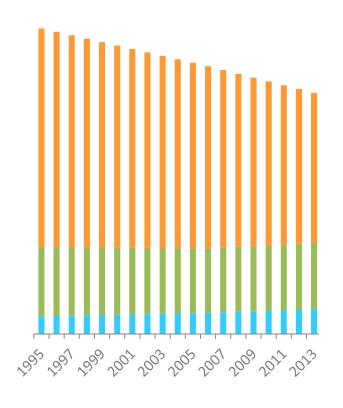
Goal: Stop canopy decline

Target: 18% canopy cover by 2017





### CANOPY COVER DECLINE



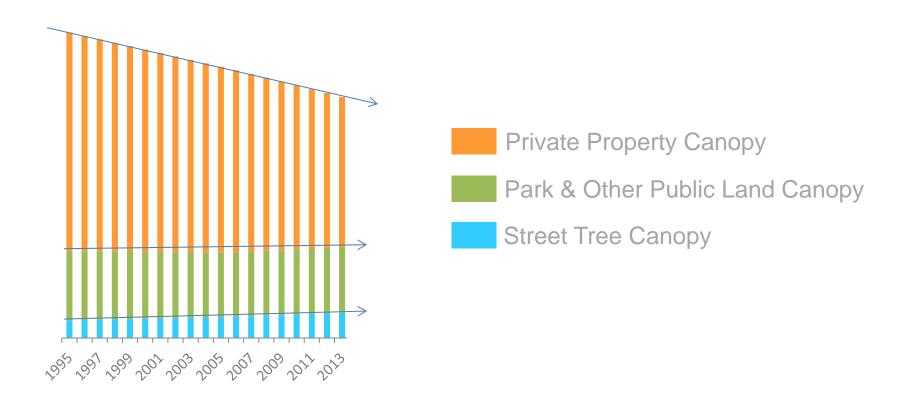








### CANOPY COVER DECLINE







## **PROTECT**

Goal: Stop canopy decline

Target: 18% canopy cover by 2017



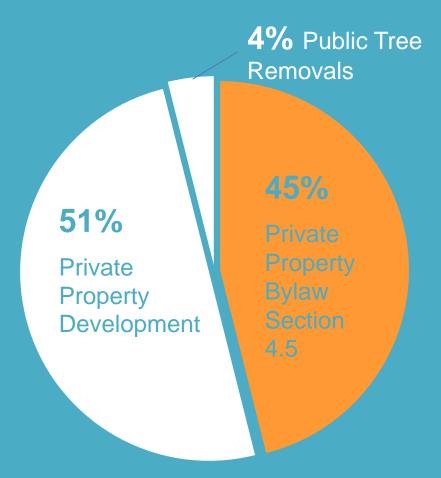
Reasons for Canopy Cover Loss 1995-2013





## **PROTECT**

1.0 Amend Section 4.5 of the Protection of Trees By-law



Reasons for Canopy Cover Loss 1995-2013







Status:

Complete

**Target:** 

18% canopy by 2017

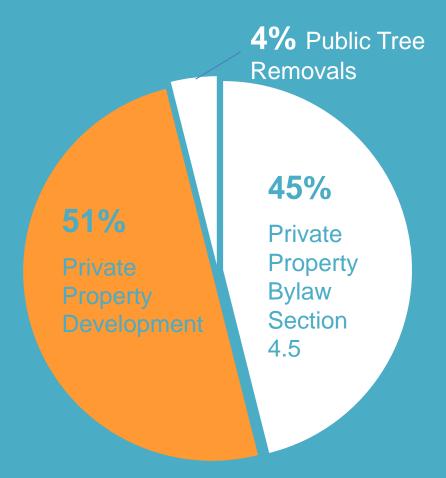
Partners: Residents





### **PROTECT**

- 1.0 Amend Section 4.5 of the Protection of Trees By-law
- 2.0 Retain more trees during development



Reasons for Canopy Cover Loss 1995-2013







#### Status:

Included in Report for Approval by Council

#### **Target:**

18% canopy by 2017

#### **Partners:**

Residents
Development
community





# 2 5 Model long term effects of development on canopy cover

average canopy
loss for different types
of landuse

options
for change

city-wide
canopy

#### Status:

Completed by end of 2016

#### **Target:**

18% canopy by 2017

#### **Partners:**

UBC Department of Urban Forestry





# 2.6 Track canopy cover during permit process

%

of site covered by tree canopy before construction



%

of site projected to be covered by tree canopy

10-15 years after construction

Status:

Completed by Spring 2016

**Target:** 

18% canopy by 2017

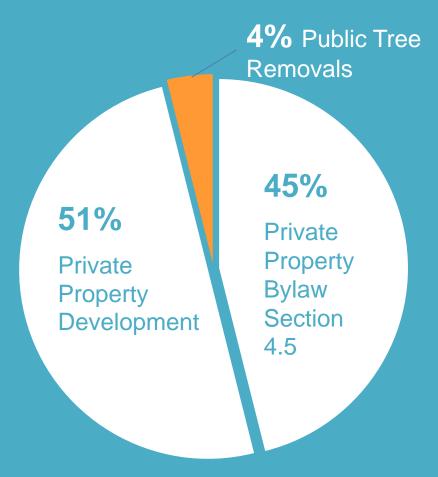
**Partners:** 

Development community



# PROTECT Action Items:

- 1.0 Amend Section 4.5 of the Protection of Trees By-law
- 2.0 Retain more trees during development
- 3.0 Create a Public Tree Retention Framework



Reasons for Canopy Cover Loss 1995-2013





# 3.0 Create a Public Tree Retention Framework

Process and criteria to inform decisions on street and park tree removal requests.

Public Safety

Vehicular/Pedestrian Conflicts

Tree Health/
Structure

Tree Ecosystem Value

#### **Status:**

Completed

#### **Target:**

18% canopy by 2017

#### Partners:

Park Board Engineering Utility Providers

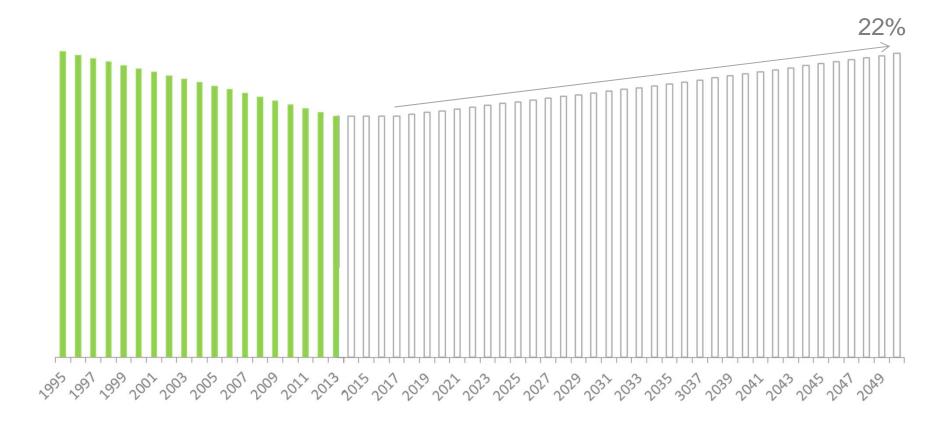






Goal: Grow our canopy

Target: 22% canopy cover by 2050

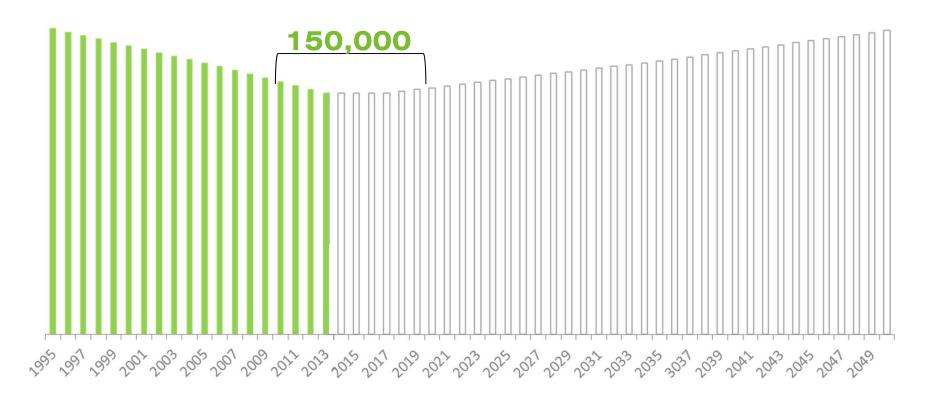




Goal: Grow our canopy

Target: Plant 150,000 new trees

by 2020







PLANT 150,000 new trees by 2020







# PLANT 150,000 new trees by 2020

Create Street TreeCooling Networks

14%

streets

5. Expand ParkPlanting Programs

33% park & other CoV land

53% private property



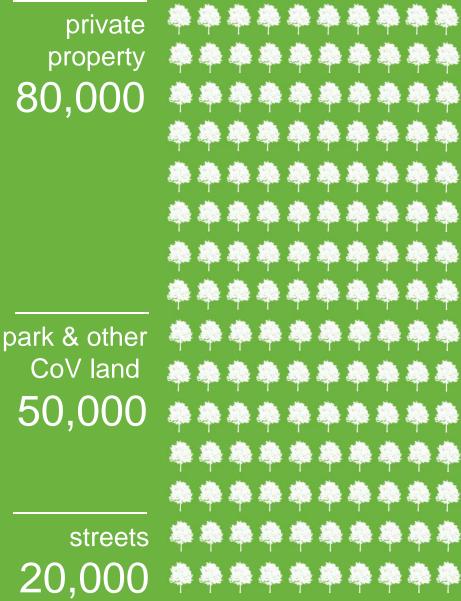


4. Expand Private Property Planting & Stewardship Programs

# **PLANT** 150,000 new trees by 2020

= 1,000 trees

private property 80,000



CoV land

50,000





# **PLANT**

2015

🜲 = 1,000 trees

private property 80,000



park & other CoV land 50,000





# **PLANT**

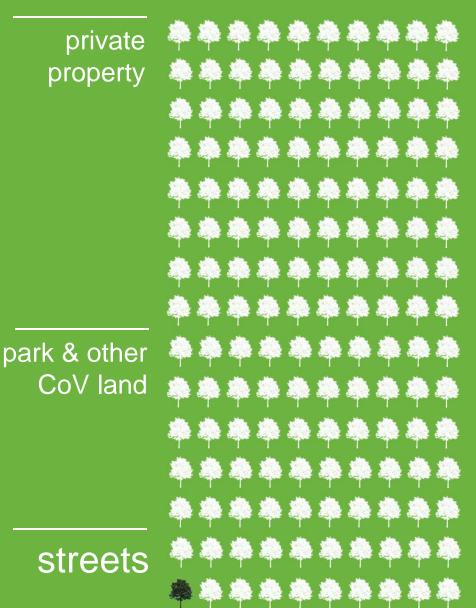
2010

= 1,000 trees

= planted

= to plant

property



streets





# **PLANT**

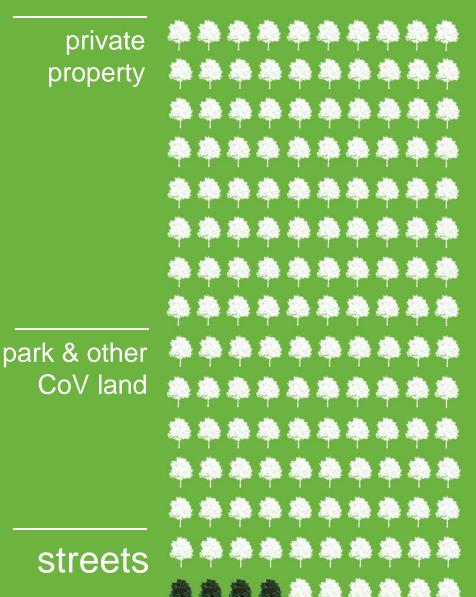
2011

= 1,000 trees

= planted

= to plant

property



streets





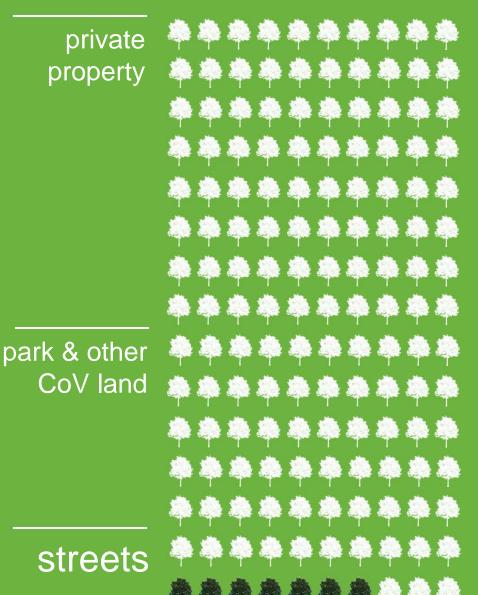
2012

= 1,000 trees

= planted

= to plant

property







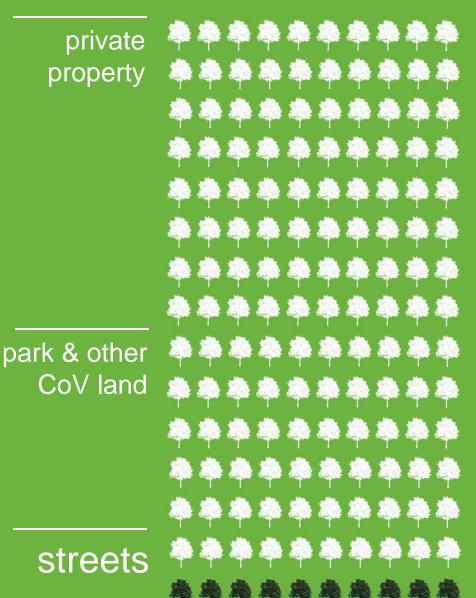
2013

= 1,000 trees

= planted

= to plant

property







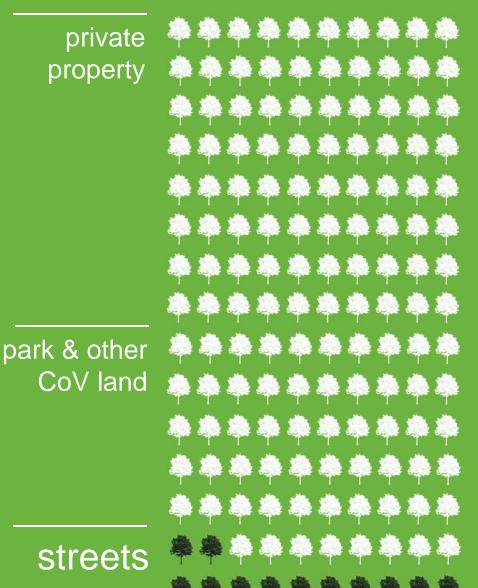
2014

= 1,000 trees

= planted

= to plant

property







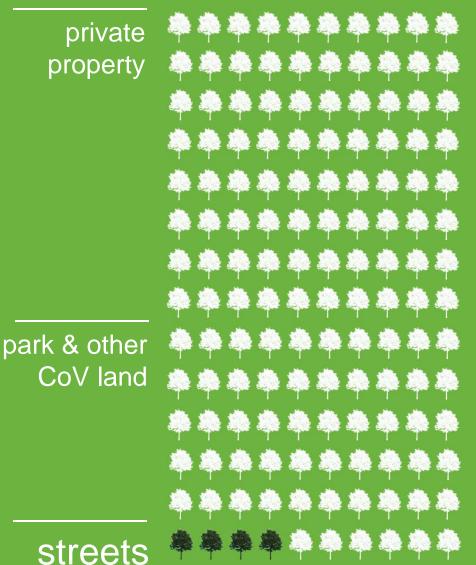
2015

= 1,000 trees

= planted

= to plant

private property



streets 14,000





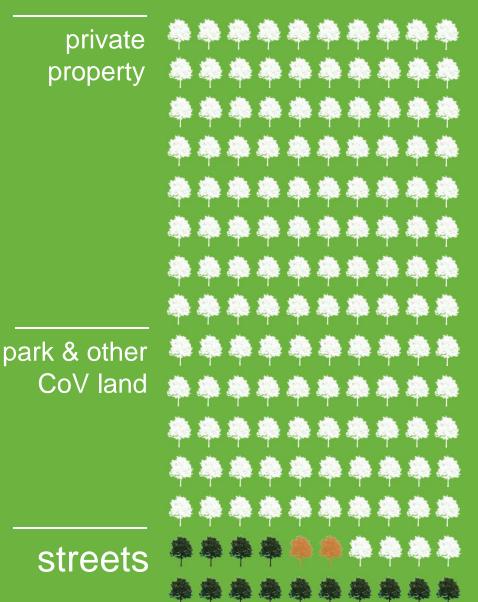
2016

= 1,000 trees

= planted

= to plant

property







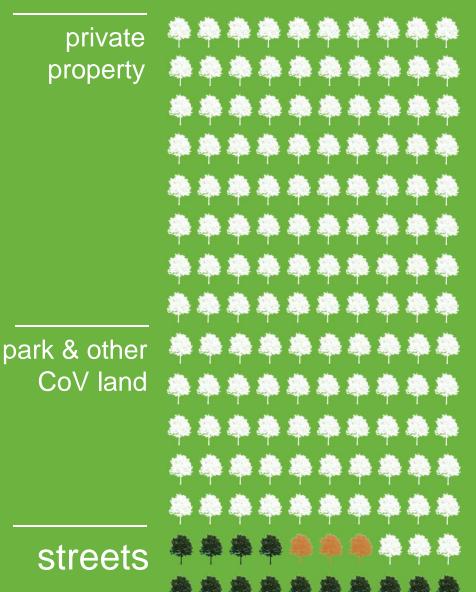
2017

= 1,000 trees

= planted

= to plant

property







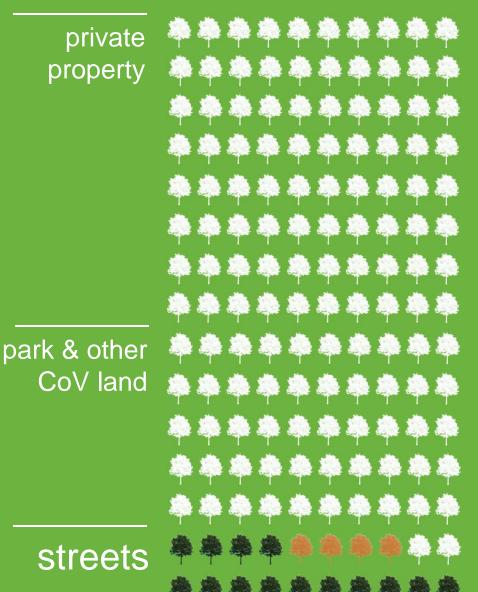
2018

= 1,000 trees

= planted

= to plant

property







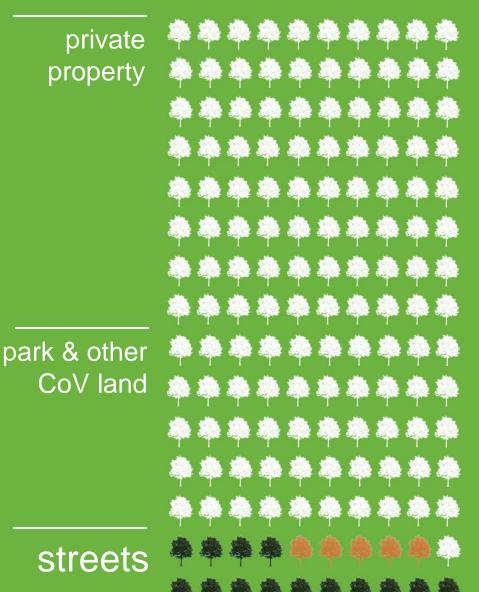
2019

= 1,000 trees

= planted

= to plant

property







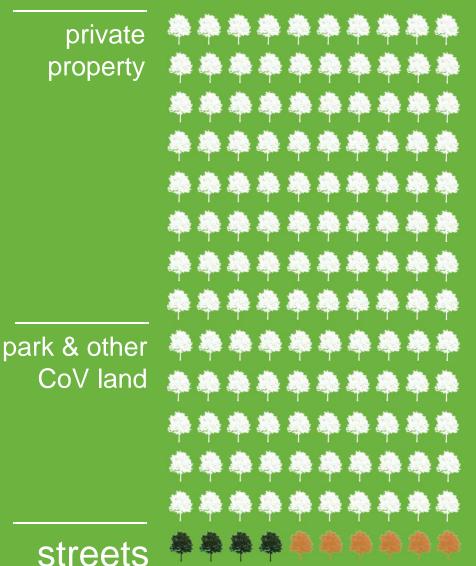
2020

= 1,000 trees

= planted

= to plant

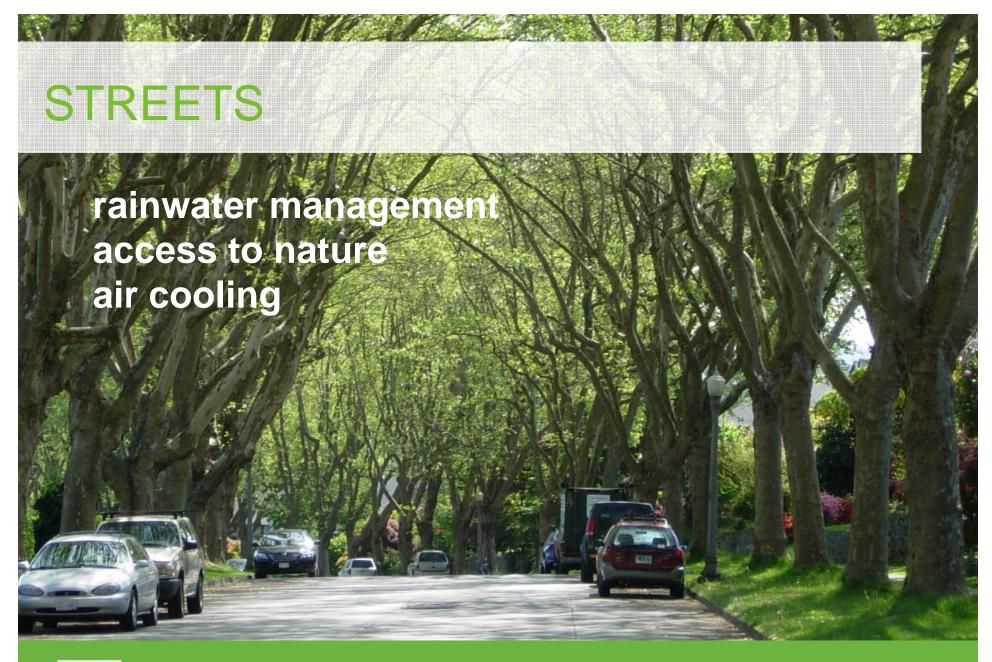
property



streets 20,000

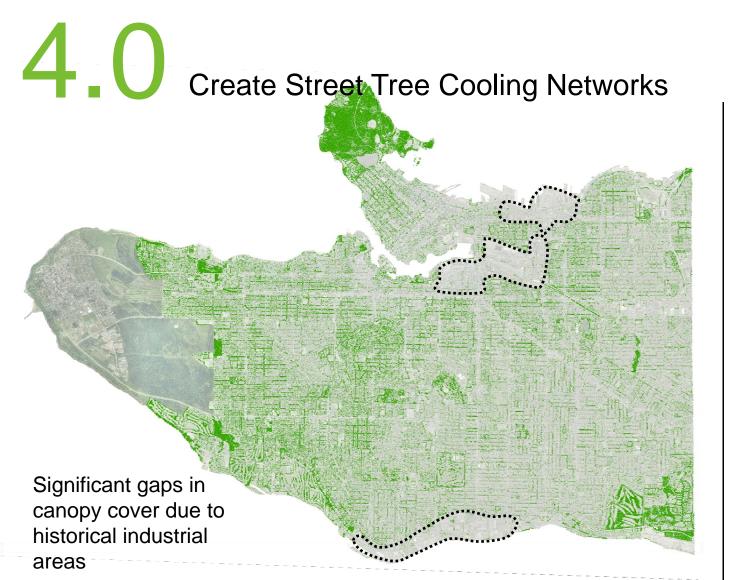












In progress

### **Target:**

Plant 150,000

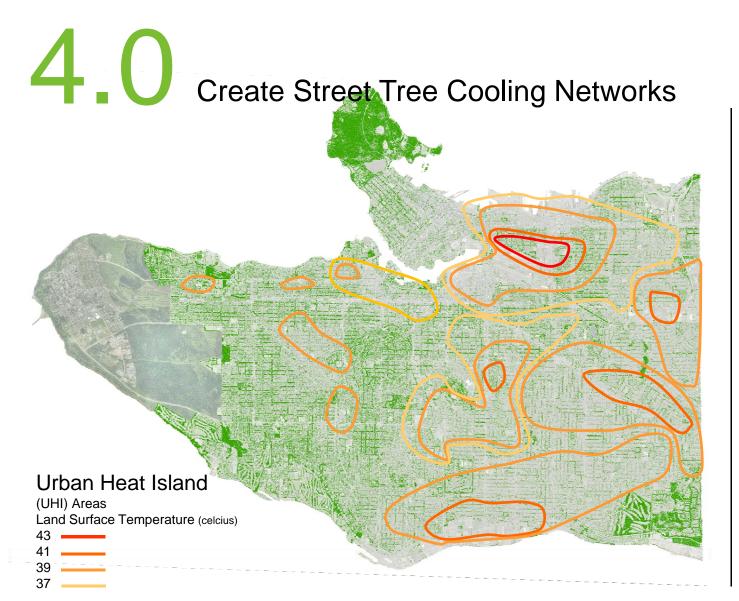
### Goal:

Cool our streets Shade our paths

### **Partners:**







In progress

### **Target:**

Plant 150,000

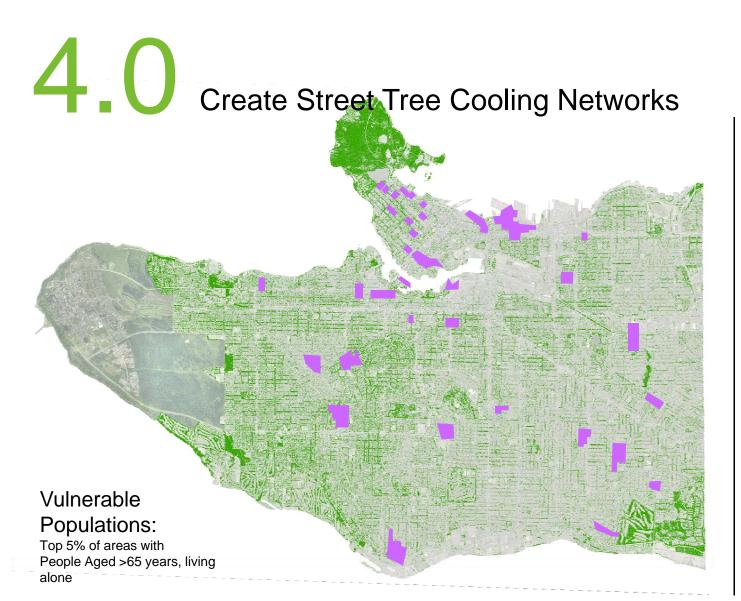
### Goal:

Cool our streets
Shade our paths

### **Partners:**







In progress

**Target:** 

Plant 150,000

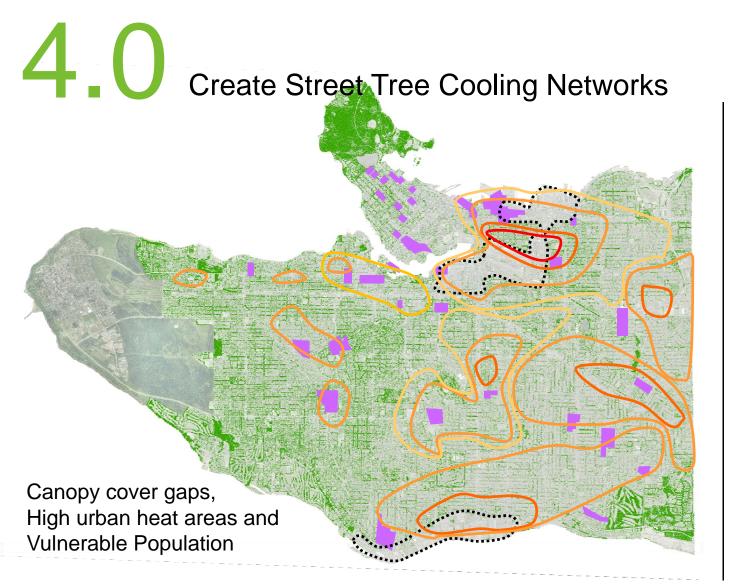
Goal:

Cool our streets
Shade our paths

**Partners:** 







In progress

**Target:** 

Plant 150,000

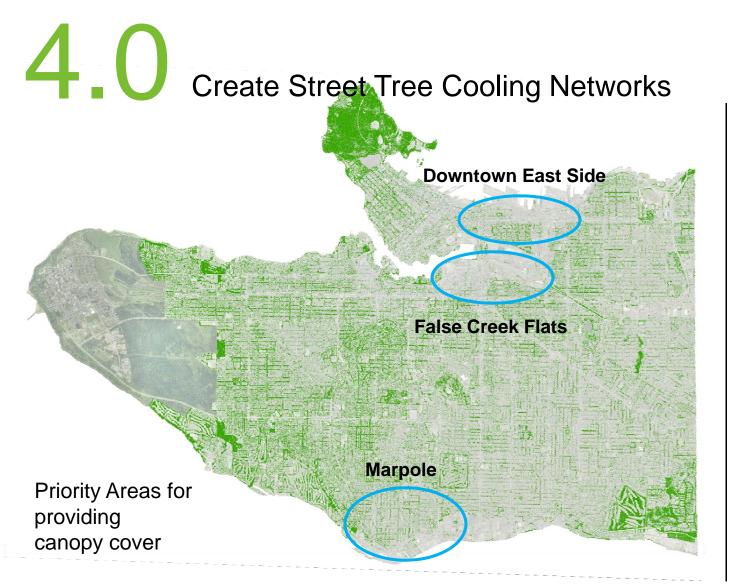
Goal:

Cool our streets Shade our paths

**Partners:** 







In progress

### **Target:**

Plant 150,000

### Goal:

Cool our streets Shade our paths

### Partners:







Status:

In progress

**Target:** 

Plant 150,000

Goal:

Cool our streets Shade our paths

**Partners:** 







### Status:

In progress

### **Target:**

Plant 150,000

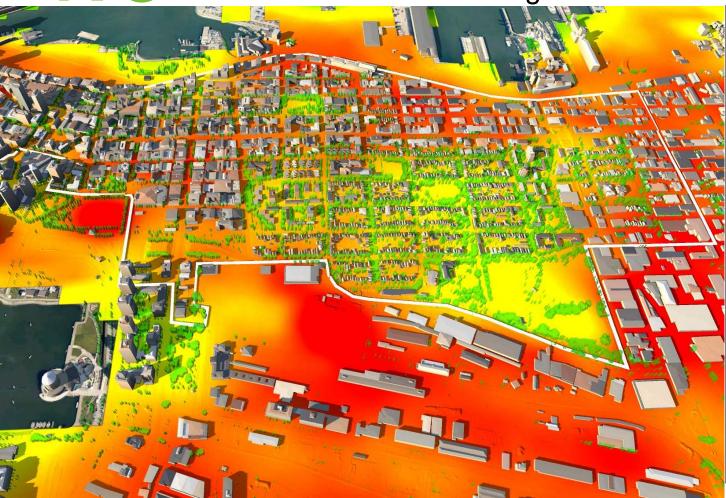
### Goal:

Cool our streets Shade our paths

### **Partners:**







Status:

In progress

**Target:** 

Plant 150,000

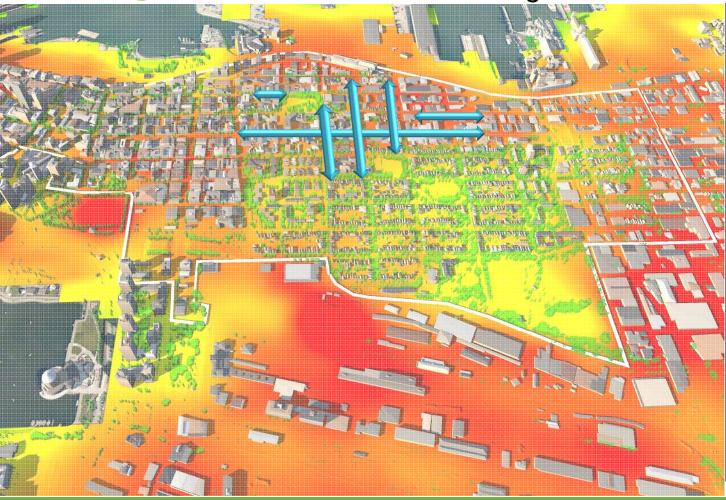
Goal:

Cool our streets Shade our paths

**Partners:** 







Status:

In progress

**Target:** 

Plant 150,000

Goal:

Cool our streets Shade our paths

**Partners:** 











2010

= 1,000 trees

= planted

= to plant

property









# PLANT 150,000 new trees by 2020

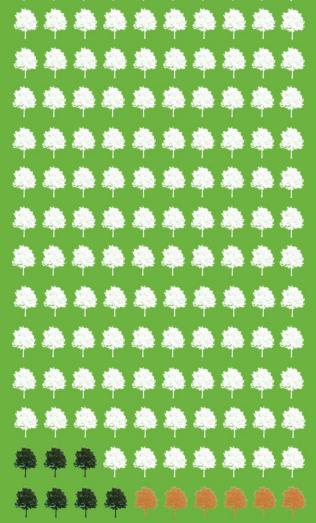
2011

= 1,000 trees

🧸 = planted

🦔 = to plant

private property property



park & other CoV land





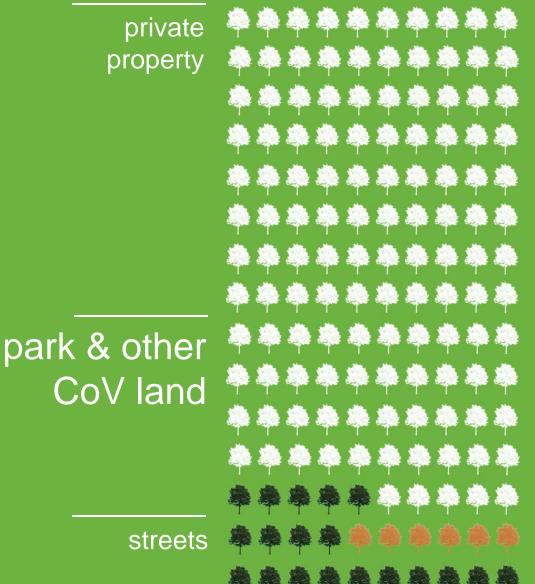
2012

= 1,000 trees

= planted

= to plant

property







2013

= 1,000 trees

= planted

= to plant

property

park & other CoV land







2014

= 1,000 trees

= planted

= to plant

property









2015

= 1,000 trees

= planted

= to plant

property

park & other CoV land 20,000







2016

= 1,000 trees

= planted

= to plant

property

park & other CoV land







2017

= 1,000 trees

= planted

= to plant

property

park & other CoV land







2018

= 1,000 trees

= planted

= to plant

property

park & other CoV land







2019

= 1,000 trees

= planted

= to plant

property

park & other CoV land







2020

= 1,000 trees

= planted

= to plant

property

park & other CoV land 50,000







### PARKS & OTHER COV LAND



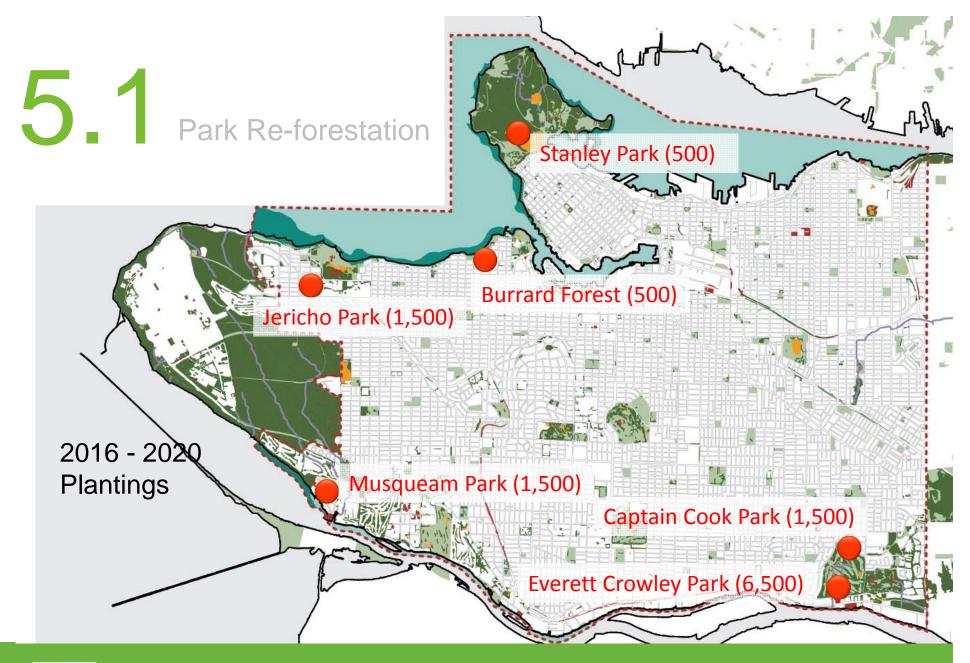










































## 5.3 Celebration Flowering Tree Groves



### Status:

In progress

### **Target:**

Plant 150,000

### Goal:

Celebrate Flowering Trees

#### **Partners:**

Vancouver Cherry Blossom Festival Residents





## 5.4 City-owned Parking Lot Pilots

Parking Lot Canopy Target:

40%



Status:

In progress

**Target:** 

Plant 150,000

Goal:

Grow canopy

**Partners:** 

**Facilities** 





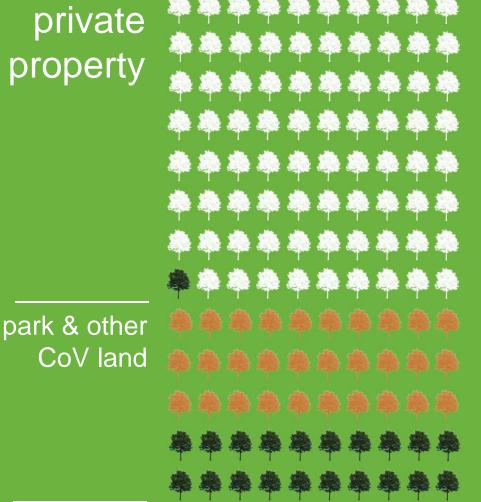
2010

= 1,000 trees

= planted

= to plant

private property







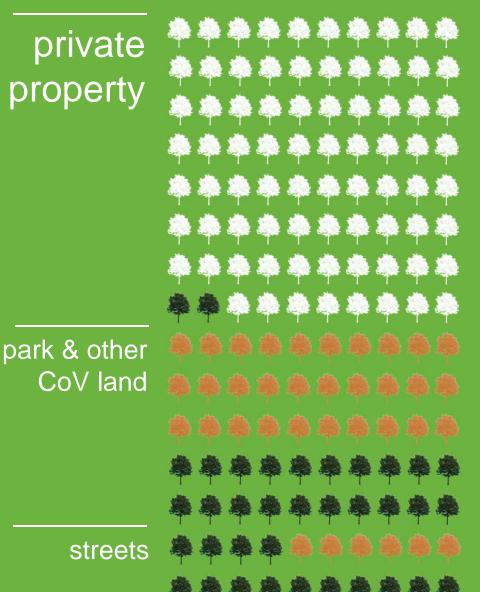
2011

= 1,000 trees

= planted

= to plant

private property







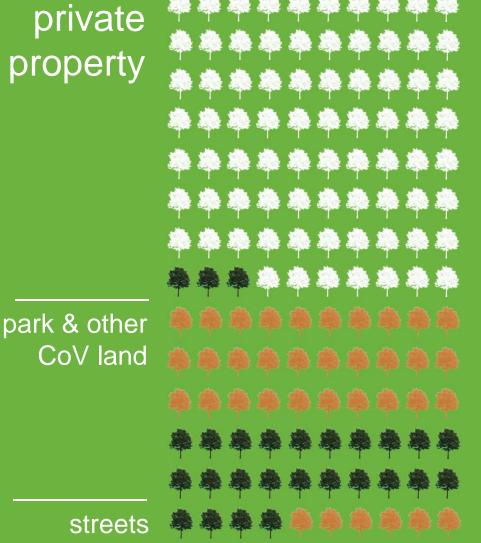
2012

= 1,000 trees

= planted

= to plant

private property







2013

= 1,000 trees

= planted

= to plant

private property







# PLANT 150,000 new trees by 2020

2014

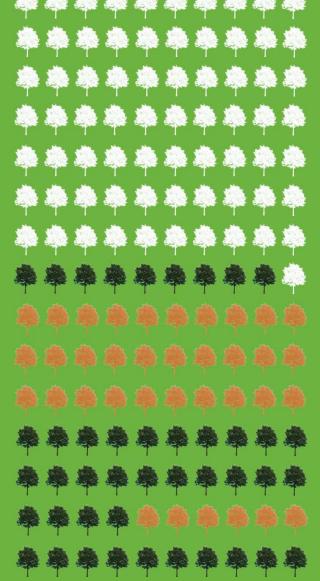
**a** = 1,000 trees

🐞 = planted

🦔 = to plant

private property

park & other CoV land







2015

= 1,000 trees

= planted

= to plant

private property 15,000

park & other

CoV land







2016

= 1,000 trees

= planted

= to plant

private property







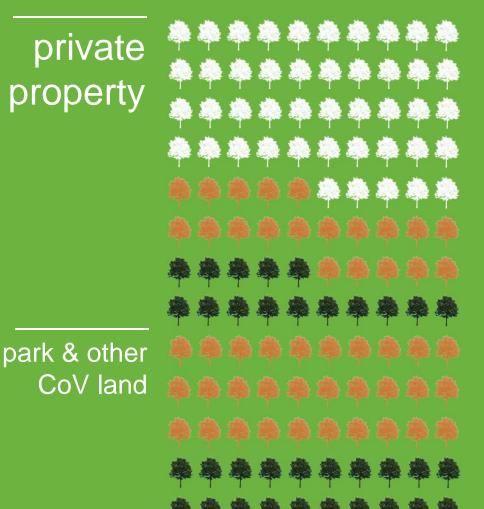
2017

= 1,000 trees

= planted

= to plant

private property







2018

= 1,000 trees

= planted

= to plant

private property







2019

= 1,000 trees

= planted

= to plant

private property







# PLANT 150,000 new trees by 2020

2020

**\*** = 1,000 trees

= planted

🦔 = to plant

private property 80,000

park & other

CoV land





### PRIVATE PROPERTY







### Expand Private Property Planting & Stewardship Programs



#### Status:

Ongoing, next program spring 2016

### **Target:**

Plant 150,000

#### Partners:





## Expand Private Property Planting & Stewardship Programs



#### Status:

Completed by Spring 2016

### **Target:**

Plant 150,000

#### Partner:

David Tracey
Consultant





### 6.1

### Expand Private Property Planting & Stewardship Programs

Help us plant 150,000 trees by 2020

### Plant a tree in your yard today!



7,000 trees by holding 6 annual Park Board sponsored Tree Sales (modeled on the October 3<sup>rd</sup> 2015 Doors Open Tree Sale which sold 1,000 trees in 3 hours).

### Status:

Ongoing, next program spring 2016

### **Target:**

Plant 150,000

#### Partners:







### Status:

Ongoing, next program spring 2016

**Target:** 

Plant 150,000

### **Partners:**





### 6 1 Park Board Tree Sale Events

Incorporate outreach and tree sales into the events, programs and facilities network of our community centres.



#### Status:

Ongoing, next program spring 2016

### **Target:**

Plant 150,000

#### **Partners:**





## 6.2 Birthday Blossoms Tree Sales



Support for the Birthday Blossoms sale of 1,000 cherry trees to residents for planting on private property in Spring 2016.

#### Status:

Ongoing, next program spring 2016

### **Target:**

Plant 150,000

#### **Partners:**

Vancouver Cherry Blossom Festival





## 6.3 Fruit Tree Planting Programs



Each year the Park Board gives fruit trees to schools and community gardens, and works closely with VSB staff and community groups to ensure they are stewarded in their communities. Workshops are provided to gardeners, parents and teachers.

### **Status:**

Next program spring 2016

### **Target:**

Plant 150,000

#### Partners:

Non-profits Residents





## 6.4 Institutional & Corporate Partnerships

### **Institutional Land Partnerships**

**Nursery Coupons** 

### Status:

Ongoing

### **Target:**

Plant 150,000

#### Partners:

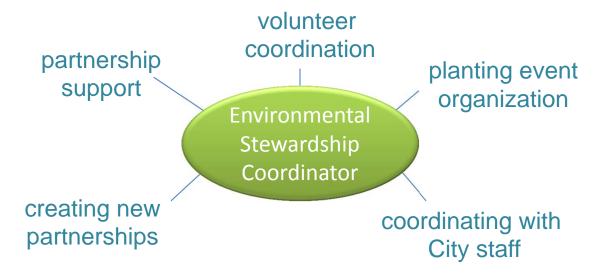
**Corporate Sponsors** Institutions





### 6 5 Create an Environmental Stewardship Coordinator Position

Provide a full-time Park Board position to coordinate the many partners helping to grow our planting and stewardship programs.



### Status:

Position starting Spring 2016

### **Target:**

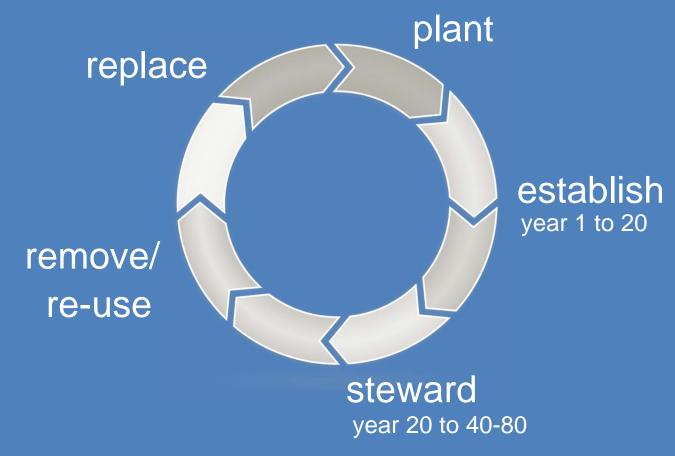
Plant 150,000





### MANAGE

Goal: Manage our urban forest as a vital living asset

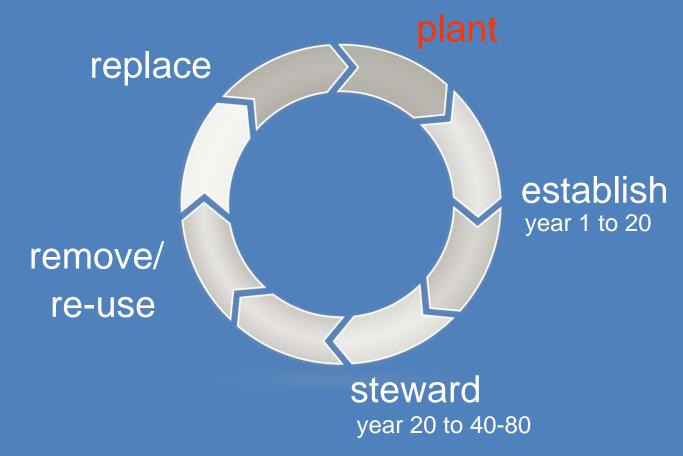






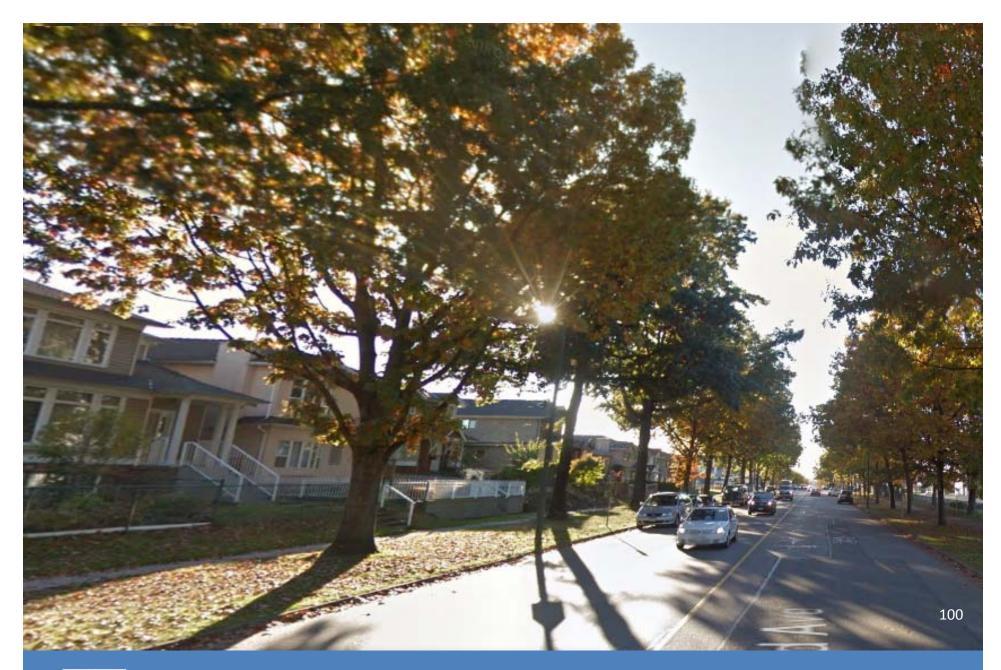
### MANAGE

Goal: Manage our urban forest as a vital living asset



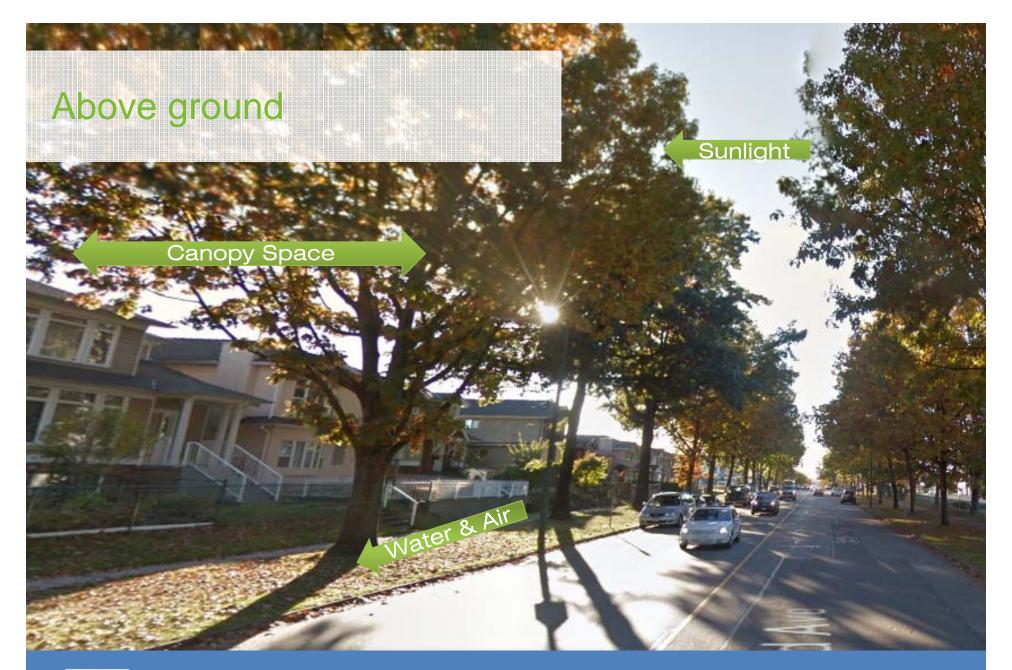






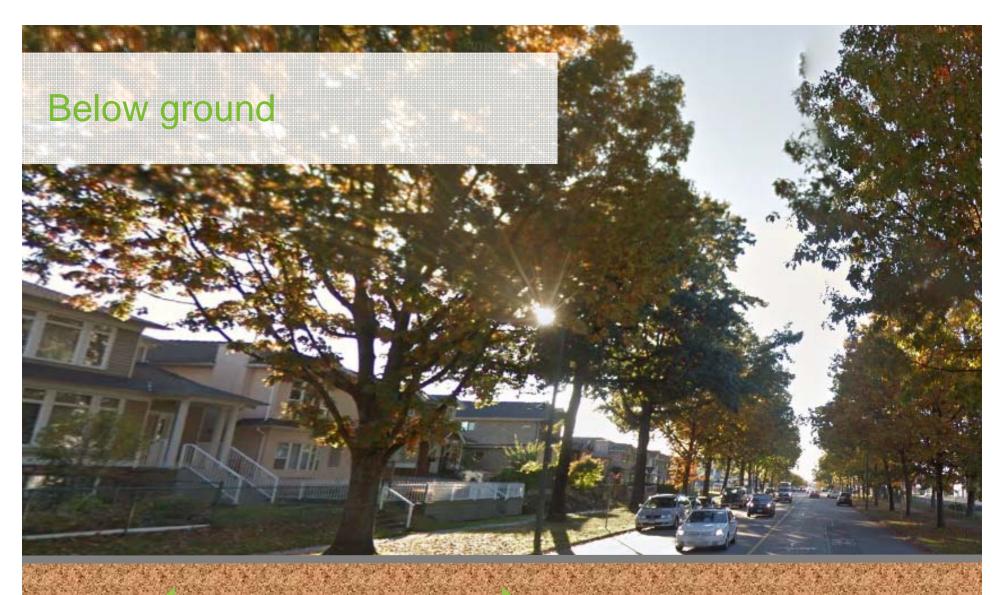






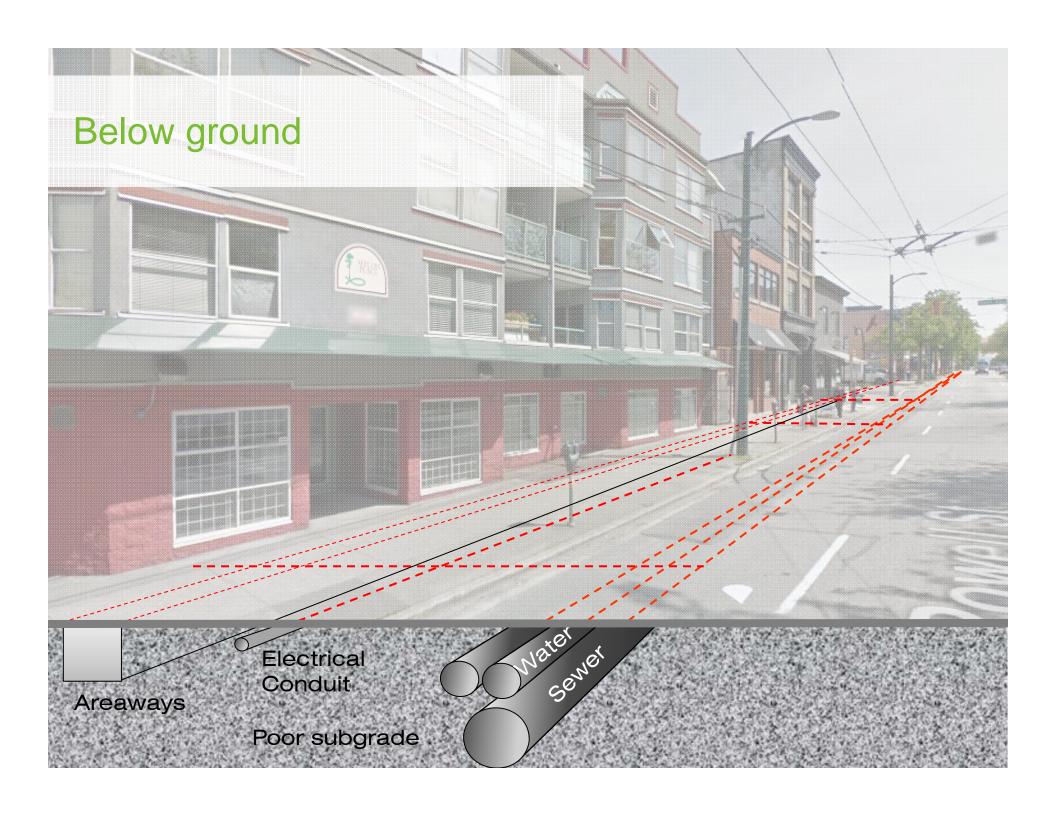






Native soil volume & quality





### 7 O Soil Volume Standards







### **Status:**

Approved by staff

### **Target:**

Grow canopy to 22% by 2020

### Goal:

Maximize canopy Long term tree health

### **Partners:**

### 7 O Soil Volume Standards

Size of Tree

Maximum canopy allowable given above and below ground considerations.

### Status:

Approved by staff

### **Target:**

Grow canopy to 22% by 2020

### Goal:

Maximize canopy
Long term tree health

### **Partners:**



### Soil Volume Standards

Size of Tree

Maximum canopy allowable given above and below ground considerations.

Soil Volume Required volume to support canopy size.

### Status:

Approved by staff

### **Target:**

Grow canopy to 22% by 2020

### Goal:

Maximize canopy Long term tree health

### Partners:



### 7 O Soil Volume Standards

### Required volume to support canopy size:

Canopy Size	Minimum Soil Volume
Large (Maple)	30 m3 (single tree) 20 m3 (row of trees)
Medium (Hornbeam)	20 m3 (single tree) 15 m3 (row of trees)
Small (Snowbell)	10 m3 (single tree) 5 m3 (row of trees)

### Status:

Approved by staff

### **Target:**

Grow canopy to 22% by 2020

### Goal:

Maximize canopy Long term tree health

### **Partners:**





# 7 O Soil Volume Standards

Size of Tree

Maximum canopy allowable given above and below ground considerations.

Soil Volume Required volume to support canopy size.

Design Method Design method to meet soil volume requirement will consider above and below ground conditions.

#### Status:

Approved by staff

#### **Target:**

Grow canopy to 22% by 2020

#### Goal:

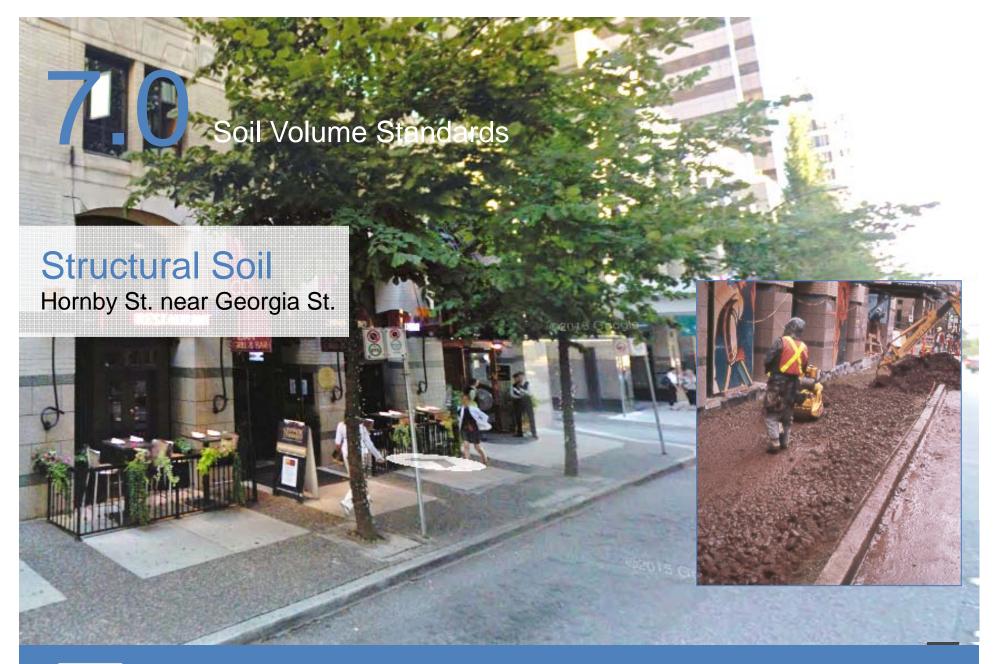
Maximize canopy
Long term tree health

#### **Partners:**

Developers Designers

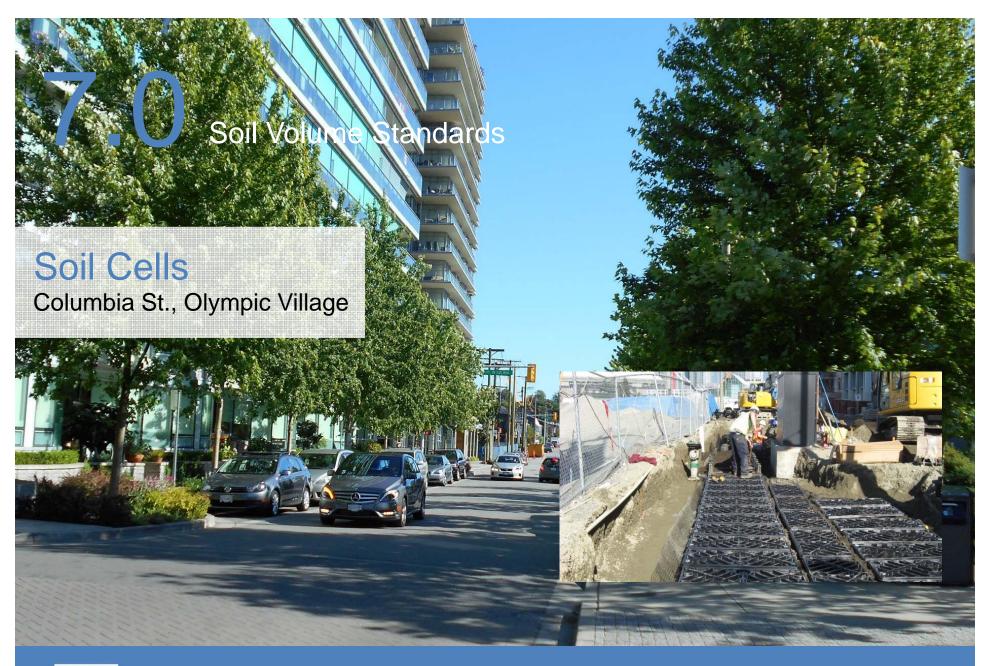








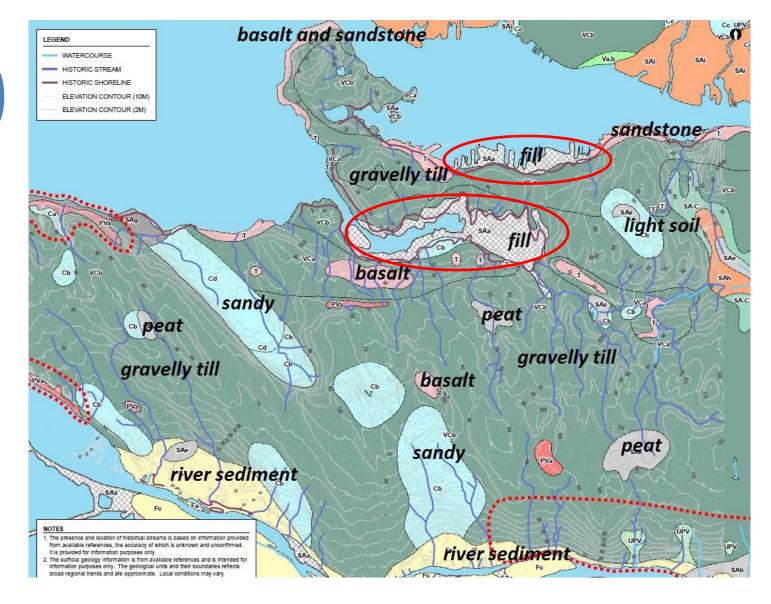








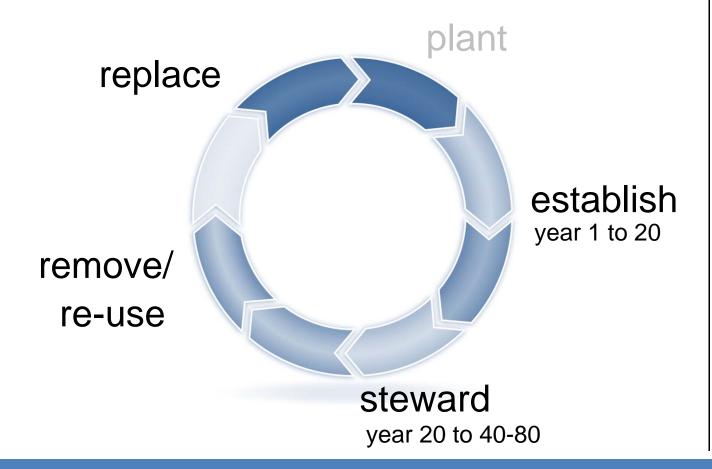
7.0







# 8.0 Street & Park Tree Management Plan



#### Status:

To Park Board for approval Spring 2016

#### **Target:**

Grow canopy to 22% by 2020

#### Goal:

Maximize canopy Long term tree health

#### **Partners:**

8.0

establish Watering



#### Status:

To Park Board for approval Spring 2016

#### **Target:**

Grow canopy to 22% by 2020

#### Goal:

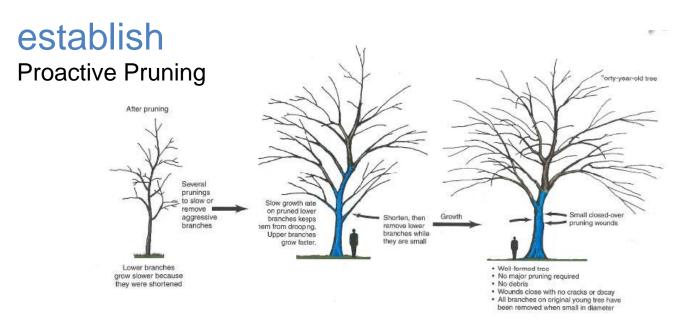
Maximize canopy Long term tree health

#### **Partners:**





# Street & Park Tree Management Plan



Three pruning events within the first 20 years would set the structure of the tree for the rest of its life. Many structural problems that lead to storm damage could be avoided with proactive pruning.

#### Status:

To Park Board for approval Spring 2016

#### **Target:**

Grow canopy to 22% by 2020

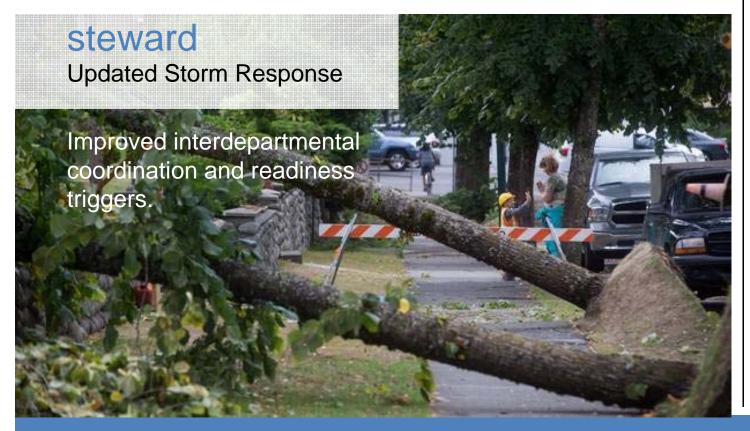
#### Goal:

Maximize canopy Long term tree health

#### **Partners:**



# Street & Park Tree Management Plan



#### Status:

To Park Board for approval Spring 2016

#### Target:

Grow canopy to 22% by 2020

#### Goal:

Maximize canopy Long term tree health

#### Partners:





# Street & Park Tree Management Plan

## replace

Wherever possible, replace with tree species that provide more canopy and are more resilient to climate change and disease.



#### Status:

To Park Board for approval Spring 2016

#### **Target:**

Grow canopy to 22% by 2020

#### Goal:

Maximize canopy Long term tree health

#### Partners:





# 9 Updated Inventory System & Data

Geocoding our street and standalone park trees.



#### Status:

Geocoding completed Spring 2016

#### **Target:**

Grow canopy to 22% by 2020

#### Goal:

Maximize canopy Long term tree health

#### Partners:

**Urban Forest Team** Consultants





# 9.0 Updated Inventory System & Data



#### Status:

New System Implemented by end of 2016

#### **Target:**

Grow canopy to 22% by 2020

#### Goal:

Maximize canopy Long term tree health

#### Partners:

Urban Forest Team Consultants





# 9.0 Updated Inventory System & Data



#### Status:

New System Implemented by end of 2016

#### Target:

Grow canopy to 22% by 2020

#### Goal:

Maximize canopy Long term tree health

#### **Partners:**

Urban Forest Team Consultants





# 9.0 Updated Inventory System & Data



#### Status:

New System Implemented by end of 2016

#### **Target:**

Grow canopy to 22% by 2020

#### Goal:

Maximize canopy Long term tree health

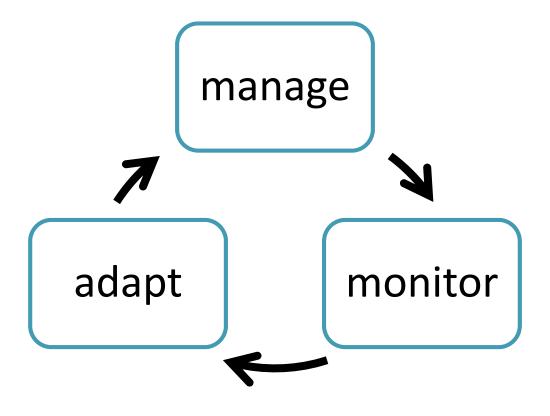
#### **Partners:**

Urban Forest Team Consultants





10.0 Monitoring & Adaptation Frameworks



Status:

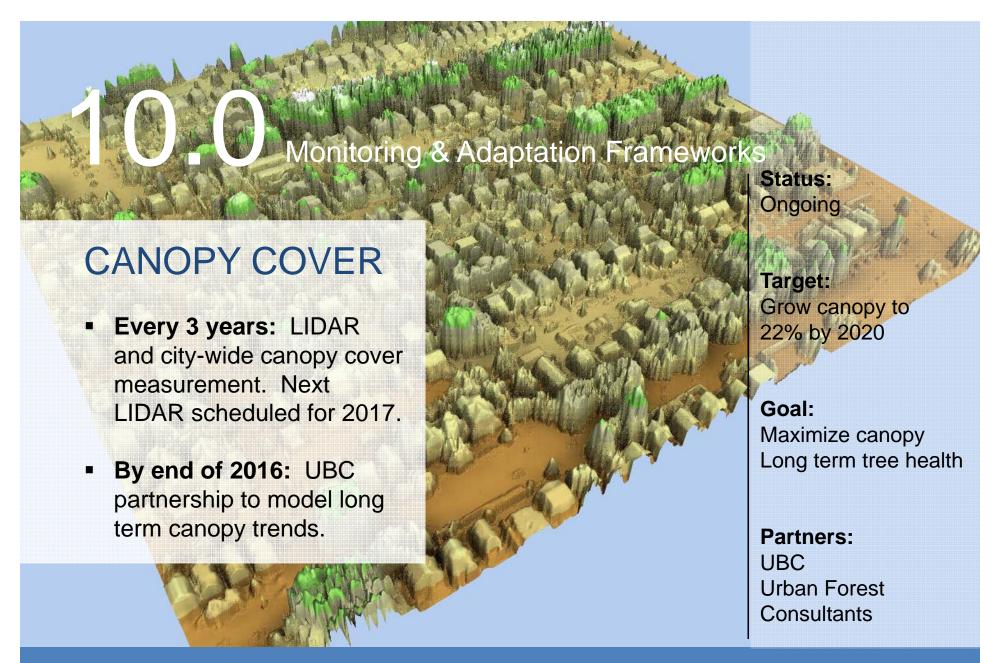
Ongoing

**Target:** 

Grow canopy to 22% by 2020

Goal:

Maximize canopy
Long term tree health







# 10.0 Monitoring & Adaptation Frameworks

# OTHER URBAN FOREST HEALTH INDICATORS:

- Diversity
- Disease
- Climate Change Adaptation
- Age class Distribution

#### Status:

Part of Street and Park Tree Man Plan

#### **Target:**

Grow canopy to 22% by 2020

#### Goal:

Maximize canopy Long term tree health

#### **Partners:**

Experts
Canadian Urban
Forest Network
Universities



# 10.0 Monitoring & Adaptation Frameworks

# SUPPORT & LEARN FROM EVOLVING RESEARCH:

- Designed and administered through the Canadian Urban Forest Network an urban forest management survey (filled out by 12 municipalities across Canada)
- Attended Portland Climate Adaptation Conference
- Hosted western chapter of Canadian Urban Forest
   Network & Tree Canada Conference
- Participating in Metro Vancouver Urban Forest & Climate Change Workshop

#### Status:

Part of Street and Park Tree Man Plan

#### **Target:**

Grow canopy to 22% by 2020

#### Goal:

Maximize canopy Long term tree health

#### **Partners:**

Experts
Canadian Urban
Forest Network
Universities



# Next Steps

### **SPRING 2016:**

- Information Sessions on New Street Tree Standards
- ☐ Street & Park Tree Management Plan to Park Board
- ☐ Arbour Week & education campaign launch
- □ Publish summary document of Action Items

### **ANNUAL UPDATES:**

☐ Urban Forest Strategy Action Item progress reports





# Part 2 Amendments to the Ticket Offences By-Law & the Protection of Trees By-Law





# Part 2 Amendments to the Ticket Offences By-Law & the Protection of Trees By-Law

- Background
- Action Item 1 Update
- Action Item 2 Update
  - CHALLENGES
  - BEST PRACTICES
  - RECOMMENDATIONS
- Next Steps





### **URBAN FOREST STRATEGY**

In April 2014 Council endorsed an Urban Forest Strategy with goals to:

- Protect the urban forest
- ☐ **Plant** and maintain 150,000 trees by 2020
- Manage the urban forest as a vital living asset

An Action Plan was created...



### **ACTION ITEM 1**

- ✓ **Completed:** Council repealed Section 4.5 of the Protection of Trees By-law in April 2014
  - ❖ Issue: Section 4.5 allowed property owners and developers to remove one tree each year regardless of the reason, resulting in over 1,800 trees removed annually
  - Solution: Tree removal now requires validation by way of an arborist report, and staff inspection
  - Monitoring: Over 1,700 inspections were conducted and 700 tree removal requests were denied
  - Result: In total, over **2,500 mature trees** have been saved as a direct result of Action Item 1

## **Goal:** Stop canopy decline

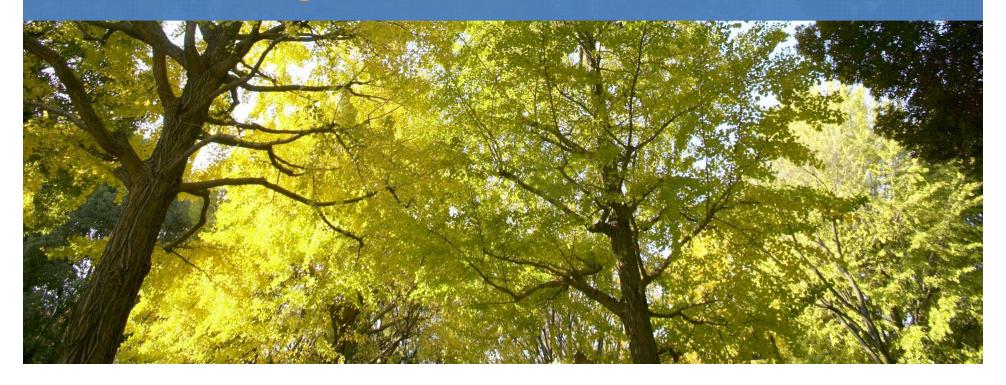
Partners:
Residents
Development
community

**Status:** Enacted





# ACTION ITEM 2 Retain More Trees During Development Challenges & Best Practices



### Challenge: Development Pressure on a Limited Land base

- Citizens value the special streetscapes of *mature trees* and landscaping in their neighbourhoods
- Over last few decades, significant trend towards densification, to meet the needs of a growing and changing population



- New low and mid-scale development, have *larger building footprints*
- Tree loss due to development has increased public perception that the City could still do more



### **Challenge:** Tree Retention Issues

- Retained or relocated trees are not always properly protected and are damaged during construction
  - ❖ In 2015, 188 complaints to 311 about the condition or removal of tree protection barriers on development sites and damage to retained trees







### Challenge: Tree Replacement Requirements

- □ Replacement trees are required with tree permits, however
  25 % 35% of new trees fail within first year
  - Often trees are not planted or not planted in a suitable location, or not planted in accordance with landscape standards



- Often poor quality
- Frequently not maintained
- Some are removed following final inspection



### Challenge: Tree Replacement & Retention Issues

- More inspections are needed to ensure by-law compliance, and quality & longevity of both retained and replacement trees
  - Majority of staff time is spent reviewing tree removal applications and tree planting plans
  - Challenging to allocate time to inspect during and after construction is completed
- Lost opportunities when replacement trees do not fit on newly developed sites
  - Currently no mechanism to collect compensation for these "lost" trees
  - Compensation collected could be used to plant trees elsewhere



### **Best Practices:** A Study of Other Municipalities

- Staff reviewed by-laws, and public planting initiatives of other cities, the most common tools are:
  - Municipal Ticketing Information (MTI) system
  - Collecting cash securities to ensure tree retention and replacement
  - Collecting cash-in-lieu for replacement trees





### **Urban Forest Strategy** Action Item 2:

- 2.1 Amend the Ticket Offense By-law (MTI)
  - To add violations of the Protection of Trees By-law
  - Streamlined, less costly method of enforcement
  - Acts as an immediate deterrent
- 2.2 Amend the Protection of Trees By-law to enable Securities
  - Collect securities to ensure tree replacement
  - Money held by the City for a minimum of one year
  - City can use the money to plant or maintain the tree, if forfeited
- 2.3 Establish Urban Canopy Reserve
  - ❖ Volunteers, in-house, voucher programs, giveaways

#### Goal:

Stop canopy decline

#### **Partners:**

Residents Development community

#### Status:

Included in Report for Approval



### **Urban Forest Strategy** Action Item 2:

#### 2.4 Enable Voluntary Cash-in-Lieu Payments

- Owners may elect to pay to the City an amount equal to twice the value of replacement trees required when these trees can't fit on development site
- Projected that approximately \$265,000 may be collected annually - based on current development volume
- Funds collected would be deposited into the Urban Canopy Reserve and used to fund tree planting initiatives
  - Tree planting in parks, natural areas
  - Support tree planting efforts on private property

#### Goal:

Stop canopy decline

#### **Partners:**

Residents Development community

#### **Status:**

Included in Report for Approval



### **ACTION ITEM 2 - NEXT STEPS**

### ☐ Following Council approval:

- Staff will make the administrative changes in preparation for enactment of applicable by-laws
- By-law amendments will be brought forward for enactment in early 2016
- Staff will receive training
- Public, UDI, Home Builder's Assoc. will be advised of changes

### ☐ Following Council direction:

Request amendments to the Vancouver Charter to enable the collection of securities for *retained trees*, and to authorize *fines greater than \$10,000* 



