



# **Climate Change Adaptation Strategy 2020 Progress Update**

Regular Park Board Meeting  
January 18, 2021



## Objective

- ≈ *Progress update on Climate Change Adaptation Strategy (Dec. 2018)*

## Outline

- ≈ *Background*
- ≈ *Progress Highlights*
- ≈ *Next Steps*

# Carbon Action

## MITIGATION

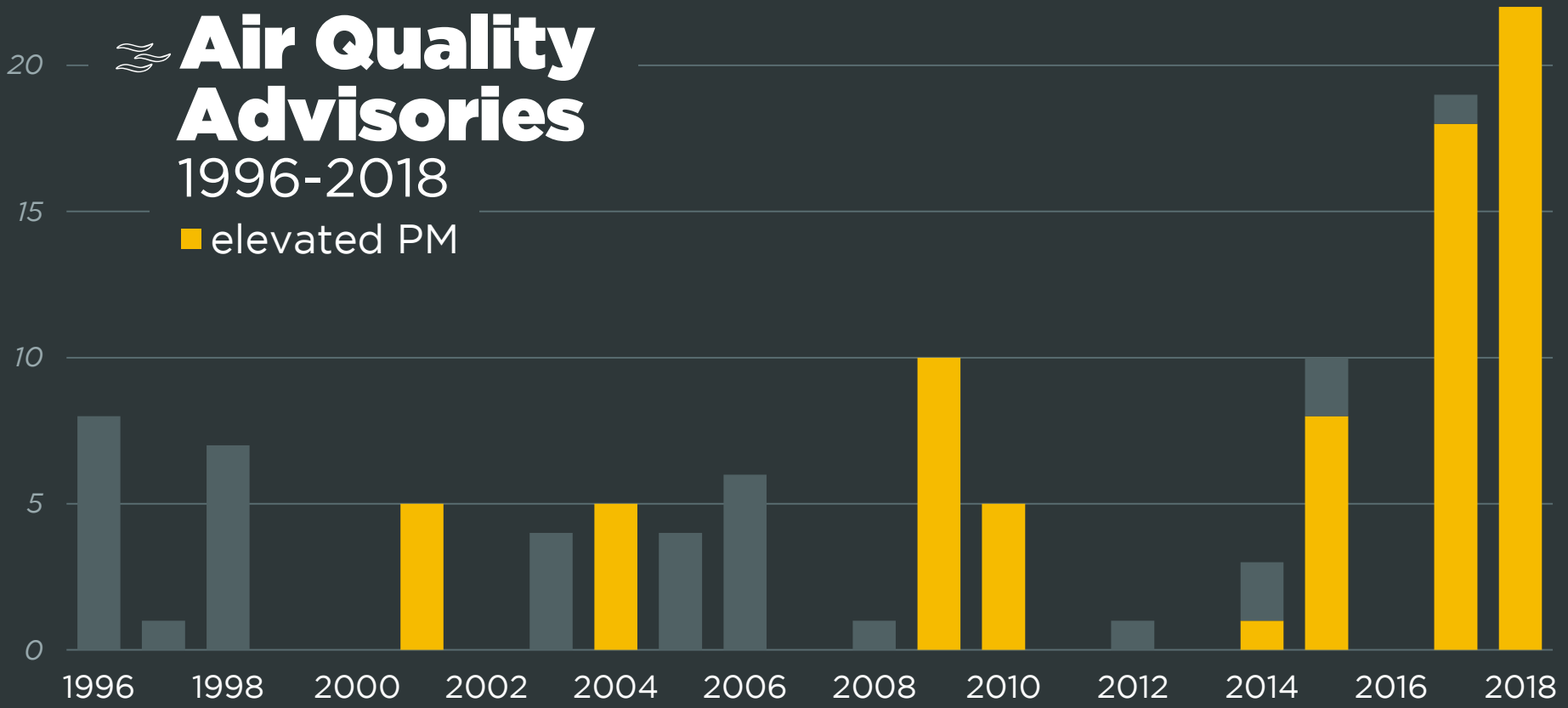
*Avoid the  
unmanageable*

## ADAPTATION

*Manage the  
unavoidable*

# Air Quality Advisories 1996-2018

■ elevated PM



# ≡ Adaptation Cost vs Benefits

**\$1** spent in  
preparation

**saves**

**\$4**

≡ *Global Commission  
on Adaptation*

**\$5**

≡ *The Economist*

**\$6**

≡ *Federation of  
Canadian Municipalities*

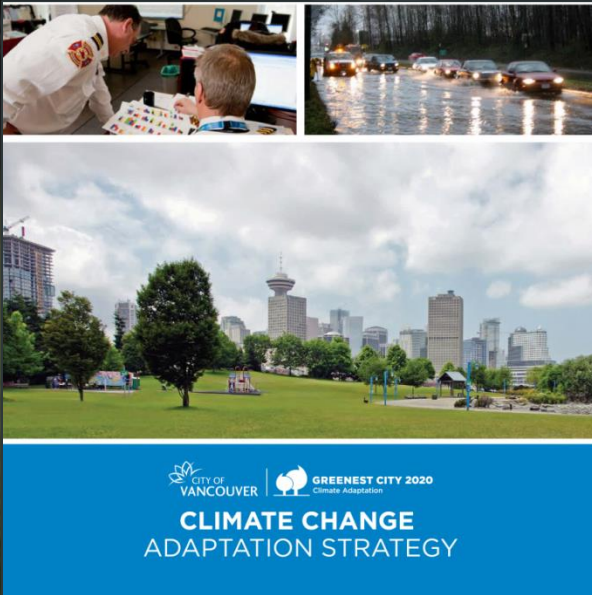


**Climate change  
disproportionally impacts  
individuals, groups and neighbourhoods**

source: *Community Health and Climate Change*, Vancouver Coastal Health

# Climate Adaptation in Vancouver

2012



2018



# Vancouver's Priority Climate-Related Hazards



*Poor air quality*



*More heatwaves*









*Increasing coastal and urban flooding*

*Increasing extreme events*



# BC Climate Risk Assessment 2019

RISK EVENT	PRESENT-DAY LIKELIHOOD	2050 LIKELIHOOD	CONSEQUENCE	RISK SCORE AND RATING	
 Severe wildfire season	3	4	4.5	<b>18.0</b>	<b>High</b>
 Seasonal water shortage	4	5	3.4	<b>16.9</b>	<b>High</b>
 Heat wave	3	4	3.6	<b>14.5</b>	<b>High</b>
 Ocean acidification	2	5	2.8	<b>13.8</b>	<b>High</b>
 Glacier mass loss	1	5	2.5	<b>12.5</b>	<b>High</b>
 Long-term water shortage	3	3	4.0	<b>12.0</b>	<b>High</b>

*Summary of Risk Assessment Rankings*

# ACTION PLAN

**CORE** ACTIONS

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**ENABLING** ACTIONS

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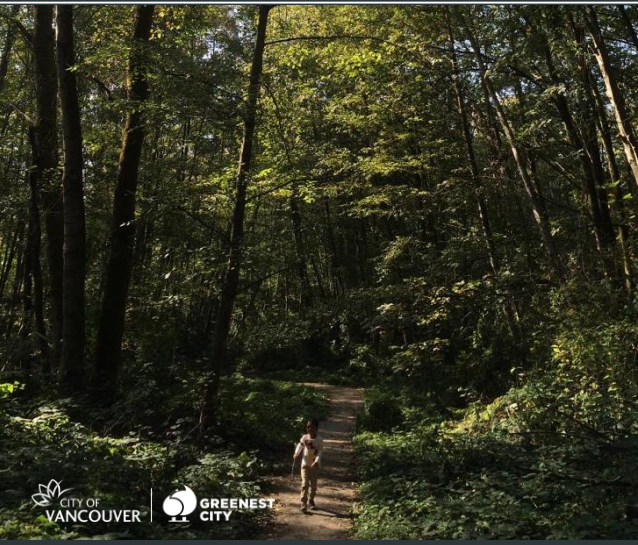


# **Progress Update**

- **84 Core Actions**
- **17 Enabling Actions**
- **All on track: planning stage, underway or completed**



# Progress Highlights





**CLIMATE ROBUST INFRASTRUCTURE**

***Sewer & Rainwater  
Management Plan***  
*underway*


*completed*  
***Southlands Drainage  
Study***

***pump station  
upgrades***  
*underway*

***Groundwater  
Management  
Strategy***  
*scoping/initiation*

*working toward*  
***15% reduction***  
*per-capita potable  
water use by 2030*

***Rain City  
Strategy***  
*Completed*



**1.2km**  
stormwater  
tree trenches

**100+**  
new trees

**FOCUS PROJECT:  
RICHARD STREET  
(RAIN CITY)**



**15M L/yr**  
water treated  
on site

**11M L/yr**  
water diverted  
from sewers



**161,500ft<sup>2</sup>**  
impervious area  
managed



**CLIMATE RESILIENT BUILDINGS**

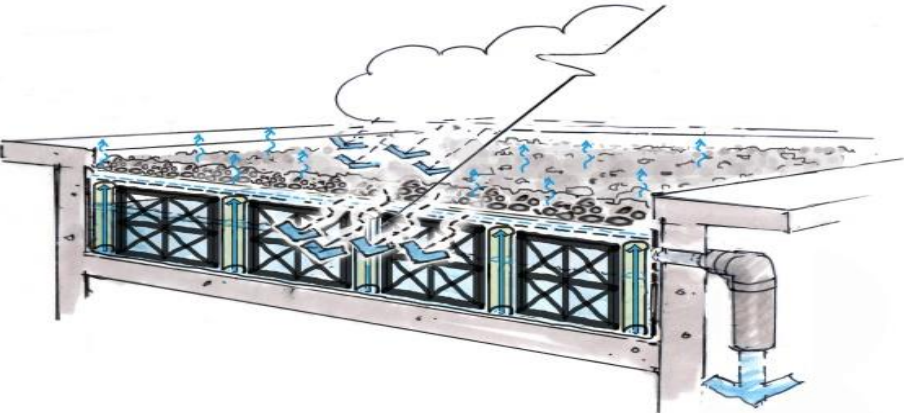
***heat pump  
permitting  
streamlining***

***thermal comfort  
researching enhanced standards  
for 2021 Green Building Policy  
for Rezoning and future code***

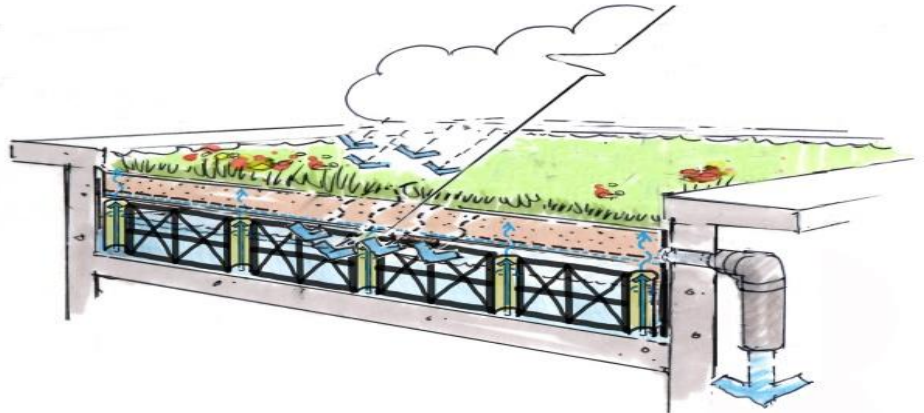
***future climate loads  
incorporated into VBBL***

***green infrastructure  
in private buildings***

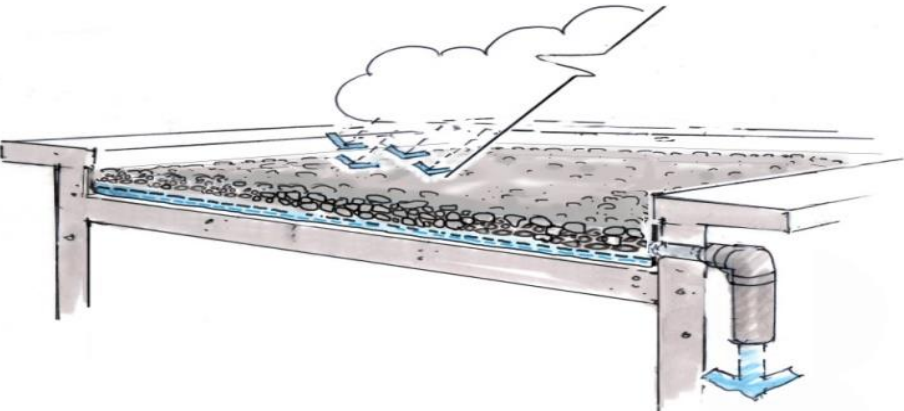
***resilience checklist  
large-site rezoning***



**BLUE ROOF**



**BLUE-GREEN ROOF**



**CONVENTIONAL ROOF**







**HEALTHY, VIGOROUS NATURAL AREAS AND GREEN SPACE**

**150,000**  
*trees planted  
since 2011*

**Stanley Park**  
**fire preparedness**  
**and fire fuel management**

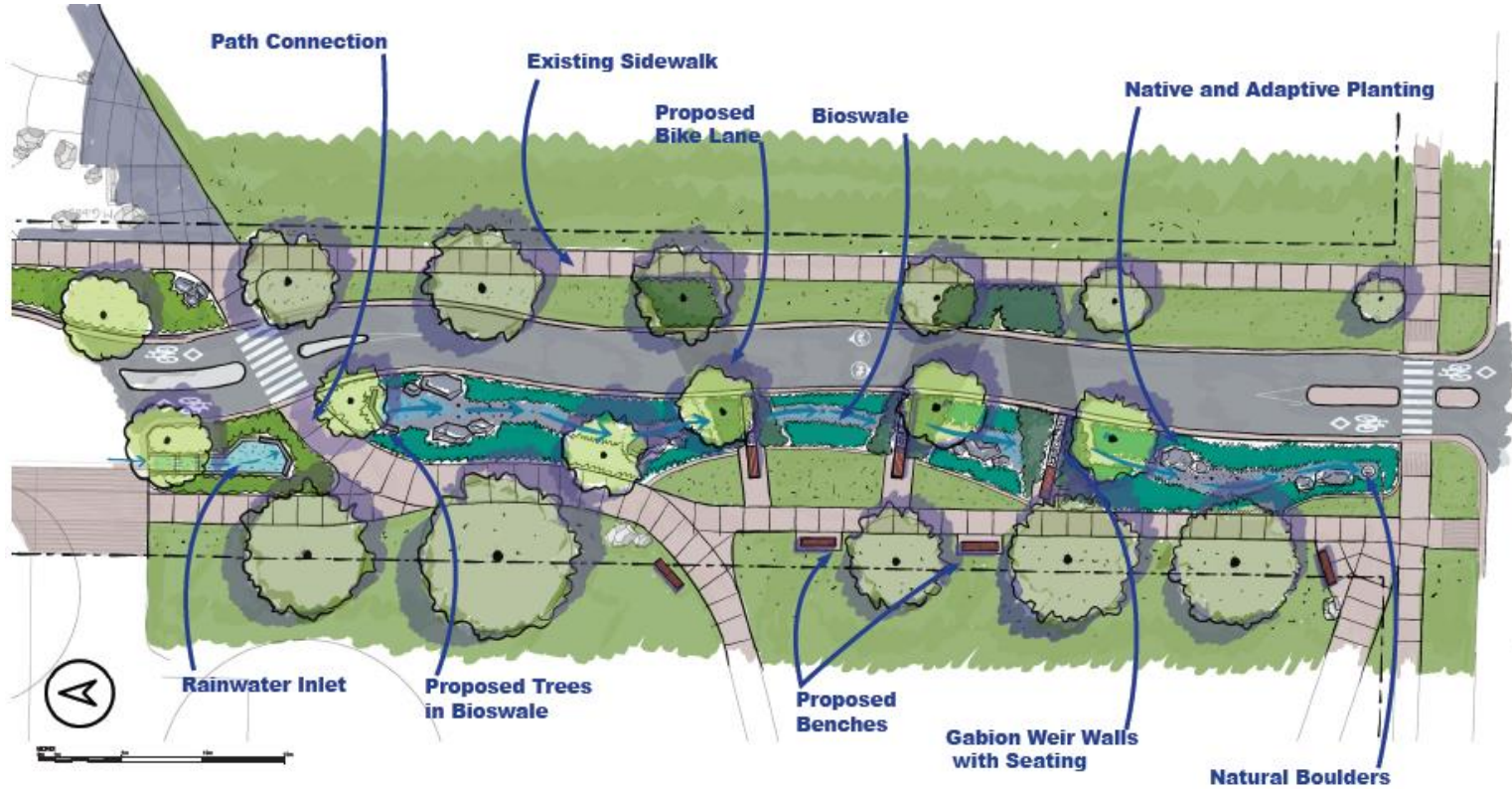
**Retain healthy  
mature trees**

**DTES**  
**street tree  
planting coordination**

**Biodiversity  
Strategy  
implementation**

**forest  
naturalization  
expansion**

# FOCUS PROJECT: PARKS



## Sunset Park Prince Edward Street Bioswale

 **PREPARED, CONNECTED COMMUNITIES**

***universal personal  
preparedness***

***clean air  
spaces***

***life-sized  
board game  
pilot project***

***Evergreen  
engagement project***

***Climate Leaders  
pilot project***

***Cooling  
Non-market housing***



≡ **FOCUS PROJECT: HEAT MAPPING**

*source: Volunteer Crystal Chan*



**COASTAL PREPAREDNESS**

***Shoreline Flood  
Protection  
Guidelines***

***two Engineering Performance  
Criteria Guidelines underway***

***Waterfront Road  
critical infrastructure  
collaboration***

***new St. Paul's  
Hospital  
adoption of Resilience  
Rezoning Condition***

***Sea2City Coastal  
Design Challenge  
Phase 1 Engagement launch***



 **FOCUS PROJECT:  
SEA2CITY DESIGN CHALLENGE**

***urban development and  
ecological revitalization  
in False Creek and Fraser River foreshore***

***to inform next phase of  
Coastal Adaptation Plan***

***guided by  
community values and  
design principles  
in False Creek and Fraser River foreshore***

A map of Vancouver, British Columbia, showing the city's layout and surrounding areas. The map is overlaid with a color-coded NDVI (Normalized Difference Vegetation Index) layer, where green indicates higher vegetation density and yellow/orange indicates lower density. The map is divided into several neighborhood boundaries, each labeled with its name. The text 'OPPORTUNITIES' is written in large, bold, white capital letters at the top center. Three main text blocks are overlaid on the map: 'overlapping hazards multi-hazard approach' in the upper left, 'equity lens improvement' in the upper right, and 'mitigation & adaptation' in the lower left. Another text block, 'urban heat island effect improve collaboration', is located in the lower right. A small white box in the bottom left corner contains the text 'NDVI'.

**OPPORTUNITIES**

***overlapping  
hazards  
multi-hazard approach***

***equity lens  
improvement***

***mitigation &  
adaptation***

***urban heat  
island effect  
improve collaboration***

 **NEXT STEPS**

*continue strategy  
implementation*

*adaptation &  
multi-hazard resilience  
into Vancouver Plan*

*next refresh*  
**2023**  
*(post-IPCC AR6)*



EARTH AND THE OCEAN RESPONDS WITH

 **Thank You**