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

Source: Metro Vancouver
### Adaptation Cost vs Benefits

<table>
<thead>
<tr>
<th>$1 spent in preparation</th>
<th>$4</th>
<th>$5</th>
<th>$6</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Global Commission on Adaptation</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>The Economist</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Federation of Canadian Municipalities</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Climate change disproportionately impacts individuals, groups and neighbourhoods.

source: Community Health and Climate Change, Vancouver Coastal Health
Climate Adaptation in Vancouver

2012

2018

CLIMATE CHANGE ADAPTATION STRATEGY

2018 UPDATE AND ACTION PLAN
CITY OF VANCOUVER | SUSTAINABILITY GROUP
Vancouver’s Priority Climate-Related Hazards

- Poor air quality
- More heatwaves
- Increasing coastal and urban flooding
- Increasing extreme events
<table>
<thead>
<tr>
<th>RISK EVENT</th>
<th>PRESENT-DAY LIKELIHOOD</th>
<th>2050 LIKELIHOOD</th>
<th>CONSEQUENCE</th>
<th>RISK SCORE AND RATING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Severe wildfire season</td>
<td>3</td>
<td>4</td>
<td>4.5</td>
<td>18.0</td>
</tr>
<tr>
<td>Seasonal water shortage</td>
<td>4</td>
<td>5</td>
<td>3.4</td>
<td>16.9</td>
</tr>
<tr>
<td>Heat wave</td>
<td>3</td>
<td>4</td>
<td>3.6</td>
<td>14.5</td>
</tr>
<tr>
<td>Ocean acidification</td>
<td>2</td>
<td>5</td>
<td>2.8</td>
<td>13.8</td>
</tr>
<tr>
<td>Glacier mass loss</td>
<td>1</td>
<td>5</td>
<td>2.5</td>
<td>12.5</td>
</tr>
<tr>
<td>Long-term water shortage</td>
<td>3</td>
<td>3</td>
<td>4.0</td>
<td>12.0</td>
</tr>
</tbody>
</table>

Summary of Risk Assessment Rankings
ACTION PLAN

CORE ACTIONS

ENABLING ACTIONS

STRONG LEADERSHIP, PARTNERSHIP, GOVERNANCE

1. CLIMATE PROJECTIONS AND IMPACTS

2. VULNERABILITY AND RISK ASSESSMENT

3. ACTIONS DEVELOPMENT AND EVALUATION

4. CO-BENEFITS, INTEGRATION, EQUITY

5. IMPLEMENTATION

6. MONITORING

MAINSTREAM EFFECTIVELY

BUILD CAPACITY AND KNOWLEDGE

IMPROVE DATA AND INFORMATION
Progress Update

• 84 Core Actions
• 17 Enabling Actions
• All on track: planning stage, underway or completed
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
FOCUS PROJECT: RICHARD STREET (RAIN CITY)

1.2km stormwater tree trenches

100+ new trees

15M L/yr water treated on site

11M L/yr water diverted from sewers

161,500ft² impervious area managed
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
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
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

Sea2City Coastal Design Challenge
Phase 1 Engagement launch

new St. Paul’s Hospital
adoption of Resilience Rezoning Condition
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
opportunities

urban heat island effect

improve collaboration

multi-hazard approach

mitigation & adaptation

equity lens improvement

overlapping hazards
NEXT STEPS

continue strategy implementation

adaptation & multi-hazard resilience into Vancouver Plan

next refresh 2023 (post-IPCC AR6)
Thank You