



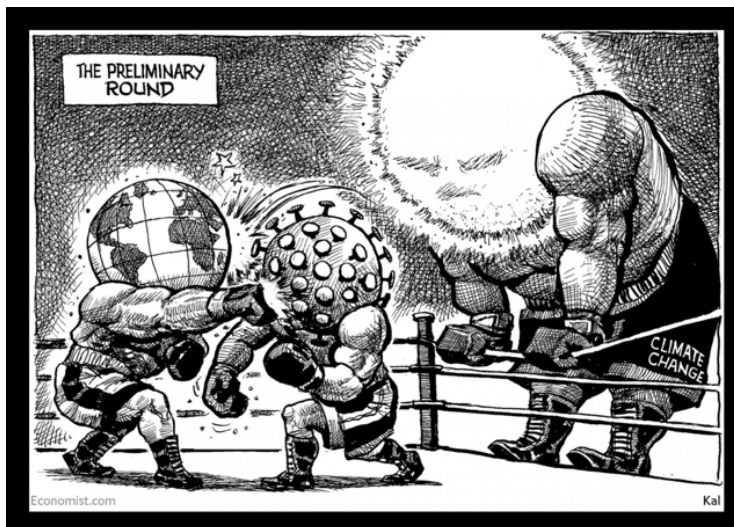
## Topics Covered

- Global Climate Change
- Local Climate Change projections
- Plan development process
- What's in the Plan
- Putting the Plan into Action
- Next Steps

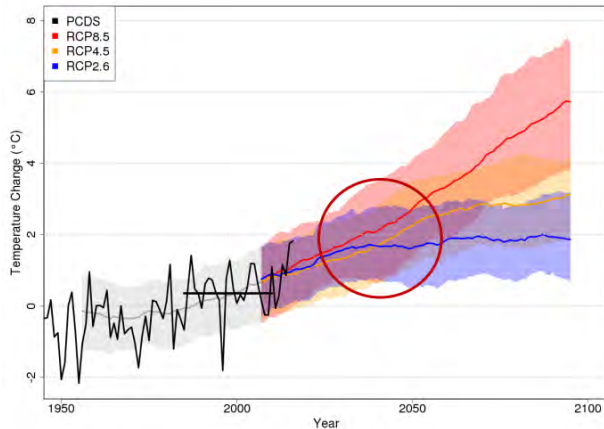


# Global Climate Change

## Climate Change and Emerging Infectious Disease

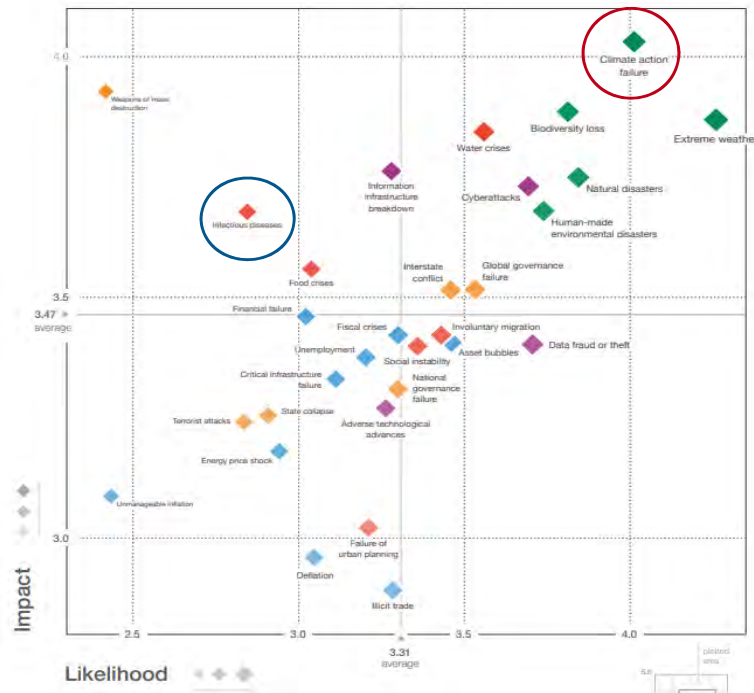


## Global Temperature Change Projections



Source: Pacific Climate Impacts Consortium

- Anthropogenic global warming of 1°C to date
- On track to reach 3°C
- Significant climate impacts with 1.5°C warming and beyond



Source: World Economic Forum  
Global Risk Report 2020



## Adapting to Climate Change

Public Safety Canada estimates that **every dollar invested in reducing vulnerability to climate impacts saves \$3 to \$5 in recovery costs.**



## Local Climate Change Projections

## Summary of Predictions

Hotter summers

Warmer, wetter winters

Increased intensity and frequency of precipitation

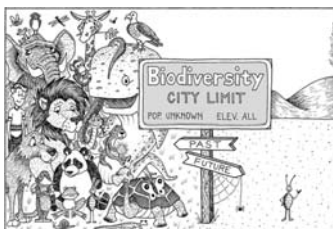
Sea level rise

## Some Impacts to Expect



More need  
for cooling

Drought



Loss of  
biodiversity

Flood  
damage to  
private and  
public  
property







# WE ARE LIVING IN A **CLIMATE EMERGENCY**

**Limit Warming to 1.5°C**

- **Cut emissions by almost ½ by 2030**
- **Achieve carbon neutrality by 2050**
- **Bold actions starting now**

## Port Moody's Climate Objective

### Carbon Neutrality by 2050

Technically  
achievable  
but pushes  
the limits

Requires mix  
of tools,  
partnerships,  
trial-and-error

Relies on  
action from  
**EVERYONE**

## Port Moody Climate Action Plan

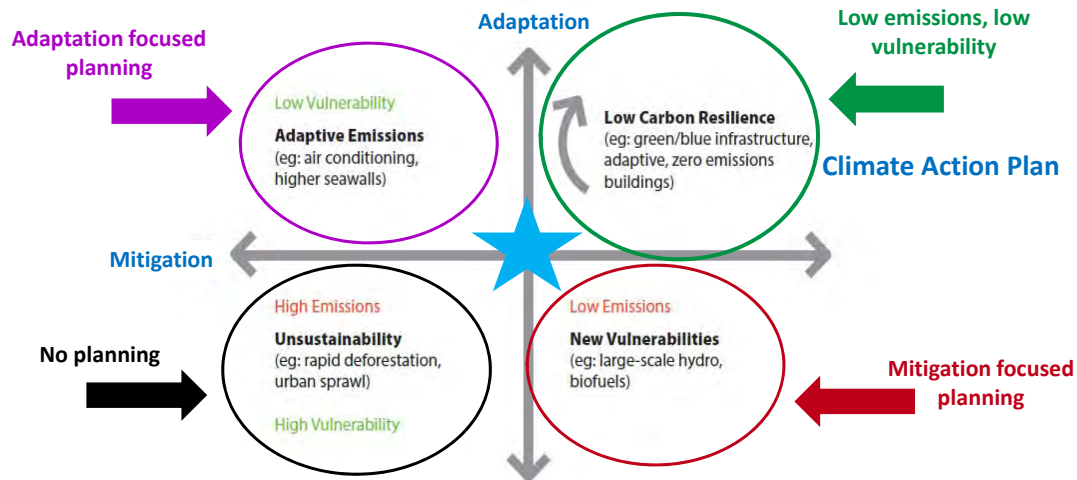
This Plan sets out to achieve carbon neutrality and increase resilience to a changing climate in Port Moody

***The focus is on bold actions in the next decade that outline a path towards a carbon neutral, resilient Port Moody***



## Plan Development Process

## Low-Carbon Resilience Framework

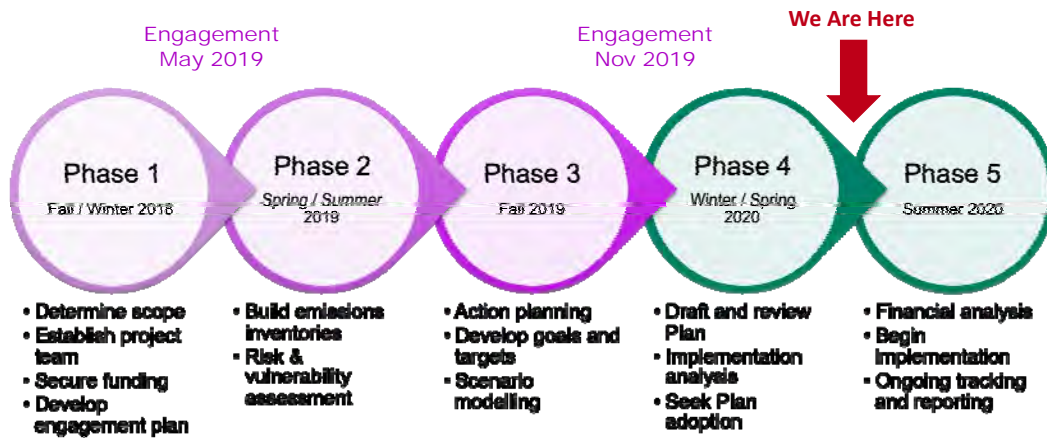


## Climate Action Plan Project Team

<b>Staff interdepartmental working group</b>	<ul style="list-style-type: none"> <li>• Representative from City departments</li> <li>• Key role in development</li> </ul>
<b>Climate Action Committee</b>	<ul style="list-style-type: none"> <li>• Representatives from Council, other Civic Committees, and the community</li> <li>• Key role in development</li> </ul>
<b>Pinna Sustainability</b>	<ul style="list-style-type: none"> <li>• Vancouver-based consultant firm</li> <li>• Technical expertise and strategic guidance</li> </ul>
<b>Simon Fraser University ACT - ICABCCI</b>	<ul style="list-style-type: none"> <li>• Research team exploring low-carbon resiliency</li> <li>• Provides guidance, research, and additional capacity</li> </ul>
<b>Technical Advisors</b>	<ul style="list-style-type: none"> <li>• Fraser Health Authority</li> <li>• Metro Vancouver</li> <li>• Pacific Climate Impacts Consortium (PCIC)</li> </ul>



## Climate Action Plan Development Timeline



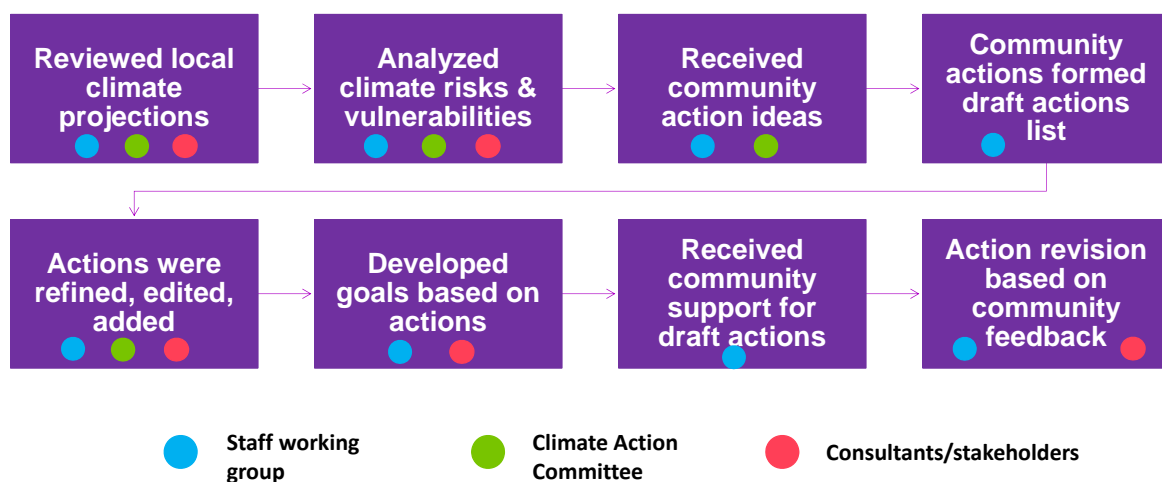
## Risk and Vulnerabilities Assessment Results

ID	Impact Statement	Likelihood	Consequence	Risk Total
1	Increased Interface fire risk: could damage infrastructure, disrupt service, displace people	5.5	4	22
2	Insurance challenges due to prolonged recovery	5	4	20
3	Shoreline habitat squeezed out by rising waters and hardened shorelines	5.5	3.5	19.25
4	Increased shoreline erosion negatively impacts both the aquatic environment and shoreline public amenities	5.5	3.5	19.25
5	Increased strain on emergency services	6	3	18
6	Increased demand on resources during times of response/recovery from events	6	3	18
7	Increased impacts to urban trees and green space resulting in increased resource needs and decreased public amenity	6	3	18
8	Increased landslide risk due to changing rainfall patterns: could damage infrastructure, disrupt service, displace people	5	3.5	17.5
9	Increasing health impacts and shelter needs for the homeless population during long stretches of inclement weather	5.5	3	16.5
10	Sanitary pump station function impacted due to rising water levels, site flooding and saltwater intrusion	5.5	3	16.5
11	Flooding in low lying areas could displace people and disrupt service	5	3	15
12	Decreased durability of infrastructure will shorten lifespans and require increased maintenance	5	3	15
13	Increased stress on native species resulting in shifting species ranges and potential loss of biodiversity	5	3	15
14	Overwhelmed drainage infrastructure due to heavy rainfall increases urban flood risk	5	3	15
15	Gradual inundation of low lying land along the coast over time due to sea level rise	5	2	10

## Climate Action Plan Focus Areas

	Mitigation	Adaptation
Organization - wide	●	●
Buildings	● ● ●	● ●
Transportation	● ● ●	
Waste Reduction & Management	● ●	
Natural Environment	● ●	● ●
Infrastructure	●	● ● ●
Emergency Response & Human Health		● ●
Land Use & Growth Management	●	● ● ●

## Modelling and Action Planning

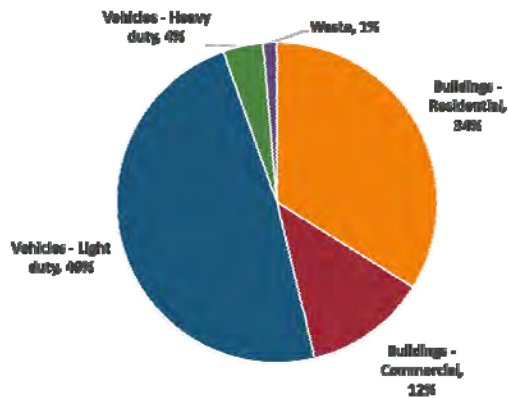




# What's in the Plan

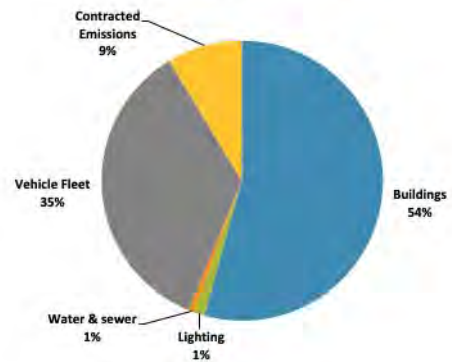
## 2016 Port Moody Greenhouse Gas Emissions

2016 Sources of Community Emissions



Total 2016 emissions = 103,000 tonnes of CO<sub>2</sub>e

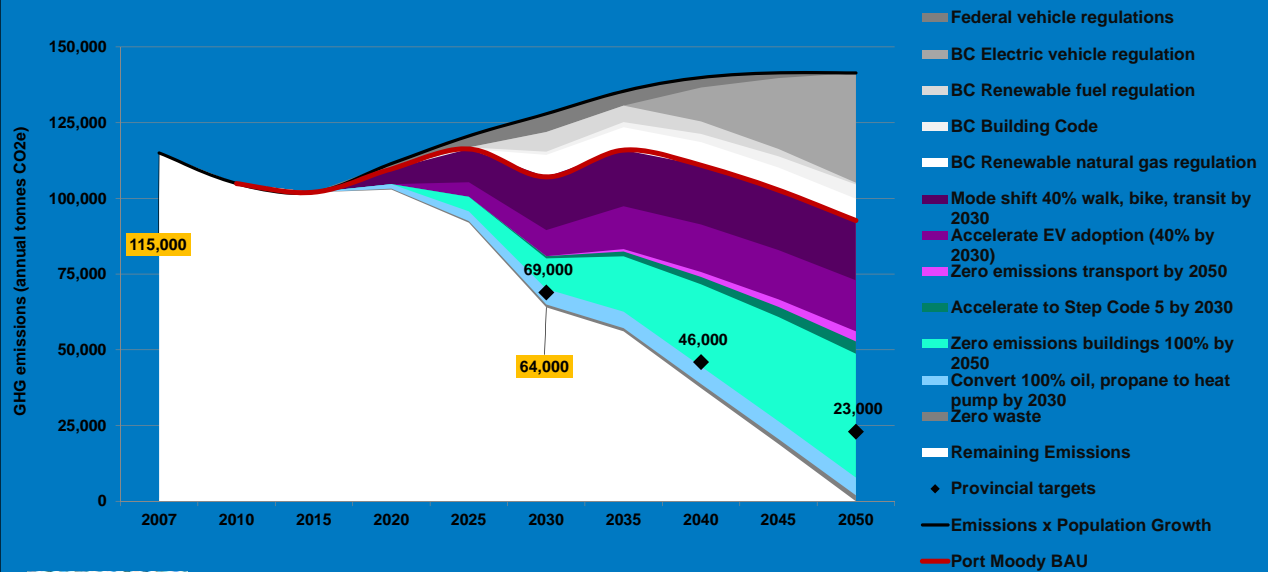
2016 Sources of Corporate Emissions



Total 2016 emissions = 1,830 tonnes of CO<sub>2</sub>e



## Port Moody Greenhouse Gas (GHG) Emissions Forecast



23

## Organization-Wide Actions

Develop policy and procedures to embed climate mitigation and adaptation considerations throughout day-to-day City business.

Review existing City regulations and initiatives with a climate lens

Integrate climate budgets in the municipal budget process.



## Natural Environment

Develop climate resilient landscaping strategies for public lands

Develop a green infrastructure policy and program

Implement strategies to protect, restore, and connect Environmentally Sensitive Areas city-wide.

Develop and regularly update the invasive species management program

Develop an urban forest management strategy

Continue to increase public awareness and engagement with environmental programs

Continue to partner with local stewardship groups

Develop and implement a natural assets management plan with consideration of a carbon budget.



## Infrastructure

Work toward water usage metering on all properties through a phased program.

Incorporate climate change considerations into the City's water distribution and wastewater collections systems

Incorporate climate change considerations into integrated stormwater management process and planning.

Implement effective utility management principles for the management of the water distribution and wastewater systems (e.g. municipal metering of sanitary, effective utility management principles).

Incorporate climate risks into asset management planning.

Enhance public engagement and education on water conservation and flood preparedness



## Emergency Response and Human Health

Ensure City departments are adequately staffed and equipped to respond to extreme weather events.

Access grants to support emergency preparedness and ensure City financial reserves are consistently available in the case of extreme events.

Identify and prepare public properties to act as emergency support centres as needed.

Develop an extreme weather response plan with a focus on supporting the most vulnerable populations.

Continue to inform and facilitate community education about preparedness across hazards, and build stronger connections with community associations and businesses with the aim of improved preparedness for extreme weather events.

Build partnerships and collaborate on connecting those most vulnerable to the impacts of climate change to available services (e.g. access to inclement weather shelters).



## Land Use and Growth Management

Encourage density and mixed-use neighborhoods around transportation hubs through the Official Community Plan and development applications.

Create and implement a policy to encourage development of complete, compact communities that enable the residents' easy access to "daily needs".

Require developers to include comprehensive transportation demand management (TDM) strategies in proposals for new large development projects.

Apply a climate risk lens to a review of existing hazard mapping and associated Development Permit Areas.

Target park acquisition on an ongoing basis to support the Parks and Recreation Master Plan recommendations with a climate lens.

Improve standards for erosion and sediment control for new developments and City projects.

Develop a sea level rise strategy to assess and respond to coastal flooding, coastal squeeze, shoreline erosion and inundation.

Continue to work with the Fraser Basin Council on the Lower Mainland Flood Management Strategy and public education on flood risk.





## Buildings

- Perform comprehensive climate audits on all civic facilities and prioritize upgrades where feasible and highest risk.
- Develop and implement a green buildings policy for the construction and renovation of City-owned facilities.
- Develop a strategy and adopt the BC Energy Step Code in advance of the provincial timeline.
- Revise the City's Sustainability Report Card to include performance measures to reduce operational and embodied GHG emissions and climate risks.
- Develop and implement a green buildings rezoning policy for development applications.
- Develop a resilient, zero-emissions plan for all existing buildings that includes addressing indoor air quality, and climate risks where possible.
- Develop a resilient, zero-emissions plan for all new that includes addressing indoor air quality and climate risks where possible.
- Initiate/continue discussions with federal and provincial governments to advocate for authority, financing tools, benchmarking, and other policies essential for achieving zero emissions buildings.
- Explore opportunities for partnerships and financing strategies to support residents and business owners to address climate action for buildings.
- Explore the feasibility of creating a renewable energy hub where the City could generate or partner with organizations to produce renewable energy, and use this energy to power buildings and equipment.



## Transportation and Mobility

- Conduct a utilization assessment of the City's fleet and identify opportunities to increase efficiency and reduce GHG emissions.
- Accelerate and fund implementation of the Master Transportation Plan projects to reduce GHG emissions by 2030, including accelerating alternative transportation goals, and initiatives focused on transit, transit-oriented development, and paths and trails.
- Develop a community zero-emissions mobility strategy.
- Identify and implement policies to support the highest and best use of City-owned parking and curb space.
- Develop business license requirements and regulations through street and traffic bylaws that support low-emission ride-hailing services and autonomous vehicles.
- Consider creating pedestrian priority zones in key areas.
- Work with Port Moody schools to engage in School Travel Planning.
- Advocate for significant policy changes that reduce emissions including the Province (Right-to-Charge legislation), Metro Vancouver (tolls, congestion charging, TDM), TransLink (zero emission fleet), ICBC (alternative insurance), car-sharing services and the Port of Vancouver.
- Create public education campaigns to increase awareness of zero-emission transportation, including active options and zero-emission vehicle options.



## Waste Reduction and Management

Develop a zero-waste strategy for City facilities and City events.

Develop a community- and commercial-focused zero-waste strategy.

Initiate/continue discussions with Metro Vancouver to advocate for initiatives and policies to reduce waste, increase capture of methane at landfills, and increase reporting and awareness on waste generation.

Work with partner organizations on public education campaigns to increase awareness of waste reduction tools, programs and information.

## Leading up to 2030...



**Adding/replacing**  
~1,000 passenger  
and commercial  
vehicles with  
electric models per  
year



Residents walk  
cycle or take transit  
for **almost 1/2** of  
total trips taken



**Retrofitting** ~150  
residential and ~8  
commercial buildings  
per year to have zero  
emissions heating  
and hot water

## This Also Looks Like



All **new** buildings are net-zero energy ready (highest Step Code steps) by 2030



All **new** heating and hot water systems generate zero emissions starting in 2025



**Transitioning** ~70 homes a year off of oil heating and propane by 2030



**Zero waste** is sent to the landfill by 2050

## Big Messages

### By 2050...

- Every new building needs to be zero carbon
- Every existing building needs to be zero carbon
- Every new or replacement vehicle needs to be zero emissions
- Majority of the travel in our community needs to be by active methods or public transit
- Nothing is sent to landfills





# Putting the Plan into Action

Focus Area	No. of Actions
Organization wide	3
Natural Environment	8
Infrastructure	6
Emergency Response & Human Health	6
Land Use & Growth Management	8
Buildings	10
Transportation & Mobility	9
Waste Reduction & Management	4
Total actions	54

## Action Status

40 planned actions (74%)

13 Underway (24%)

1 Completed (2%)

## Summary of Estimated Resourcing Needs

Category	Value
<b>Actions</b> (completing actions as worded)	<b>\$15.6 million</b>
<b>Resourcing</b> (11 new positions for 10 years)	<b>10.6 Million</b>
<b>Total value</b>	<b>\$26.2 million</b>

\*As actions are prioritized, there will be greater clarity on budget and staff time required in the short term

## Climate Action Opportunities and Benefits

By continuing and increasing investment in climate action we are helping the economy by transitioning to a clean, healthy, and resilient community.

Opportunities and Benefits of Climate Action		
Social	Economic	Environmental
Community cohesion/equity	Stable job creation	Improves air quality
Skill development	Less vulnerable investments	Improves micro-climate
Supports mental health	Innovation	Efficient use of resources
Enhances leisure, recreation	Reliable, clean energy	Improves water quality and access
Better food security	Enhances tourism	Enhances biodiversity
	Cost savings	

## Implementation and Funding

- Pending Council endorsement of the CAP, staff will report back with a 2-year implementation plan:
  - Priority actions for first 2 years
  - Staffing needs
  - Detailed costs (e.g. actions, staffing, external funding opportunities etc.)



## Next Steps

## Next Steps

- ❖ Seek Council endorsement of the draft Climate Action Plan
  - June 2020
- ❖ Prepare Implementation and Funding Strategy
  - Seek Council endorsement in Fall 2020
- ❖ Develop and initiate ongoing tracking and reporting
  - Fall/Winter 2020



# Thank You