
## 2020 Climate Action Plan

# Phase One Climate Action Implementation Strategy

December 2020

## Introduction

On July 21, 2020 Port Moody Council adopted the Climate Action Plan, an integrated plan that outlines a strategy for how the City and Community will reduce greenhouse gas (GHG) emissions and prepare for future climate changes. Following adoption of the Plan, staff have reviewed information and assembled a Phase One Climate Action Implementation Strategy, highlighting actions to initiate and undertake in the first and second year of Plan implementation. The following document outlines the strategy including:

- Description of the phase one actions such as divisions responsible for implementing and key performance indicators;
- Anticipated timelines of action initiation and current status;
- Estimated funding needs and staff time for each action; and
- Significance of the phase one actions.

## Phase One Implementation Highlights

Highlights of phase one actions include:

42% (23 out of 54) of the Climate Action Plan's actions will be initiated within the first two years of implementation, with actions initiated in each Focus Area;

48% (11 out of 23) of the phase one actions will require additional funding;

52% (12 out of 23) of the phase one actions are already funded or do not require additional funding;

30% (6 out of 20) of the 2021 initiated phase one actions have been incorporated in the 2021 municipal budget;

10% (2 out of 20) of the 2021 initiated phase one actions will come forward as separate funding requests outside of the municipal budgeting process;

23,100 hours of lead staff time are anticipated to undertake the phase one actions;

4 new staff will be required to implement phase one actions and support ongoing climate action:

- 2 seasonal staff under the Environment and Parks division;
- 1 temporary full time staff under the Infrastructure Engineering Services division; and
- 1 temporary full time staff under the Policy Planning division.

60% (14 out of 23) of the phase one actions are already underway.

## Supporting the Climate Action Plan Vision

The Climate Action Plan outlines the following vision that will guide action and implementation:

> ***"Port Moody is a resilient community that honours climate justice, leading the urgent response to climate change through collective action."***
>
> ***-Climate Action Committee***

In order for Port Moody to achieve this vision, action needs to start now. In June of 2019 the City of Port Moody joined many other local governments in declaring a climate emergency, bringing to light the need to take accelerated action on climate change. The resolution called for the City to ramp up its climate actions in line with efforts to limit global warming to 1.5°C and endorsed bold actions that were embedded, along with their sense of urgency, into the Climate Action Plan carbon neutral, resilient modelling.

The phase one actions will take the first step to achieving the Plan's vision by tackling deep GHG emissions reductions and setting the stage to prepare our community for future climate scenarios. Staff are confident that based on the information and technology available today, that the actions in the Phase One Climate Action Implementation Strategy will set the stage for Port Moody to achieve the Climate Action Plan vision and goals.

Figure 1 below demonstrates the framework that will govern implementation of the Climate Action Plan. The framework ensures that the vision remains the guiding principle for taking action and that the goals and targets are revisited frequently to ensure that the actions align and are achieving results as intended.

Overlaid on the framework are guiding principles representing values that underpin the vision defined in the Plan, seeking to ensure that they are integrated with, and enhance, other community priorities. These guiding principles were developed from the values expressed during development of the Climate Action Plan from the community and other stakeholders. The guiding principles will be discussed at the outset of initiating each action and revisited throughout implementation. The guiding principles are to:

- Embed equity considerations at all steps of action implementation to understand and dismantle barriers for those disproportionately impacted by climate change and/or by the actions in the Climate Action Plan;
- Apply a low carbon resilience lens to streamline priorities, resources, and harmonize co-benefits;
- Demonstrate proactive climate leadership as a municipality and enable leaders in the community;
- Actively engage through meaningful collaboration, partnerships and communication; and
- Remain accountable by providing transparent information, continuing to measure and report out on information, and making adjustments where needed.

**Figure 1: Implementation Framework**


## Moving Forward with Climate Action

Implementation of the Climate Action Plan is completed through a phased approach determined by years of action initiation. These phases are intended to mobilize bold climate action within the next decade, with implementation continuing until all actions in the Plan are executed. The phases are indicated by time horizons of approximately two or three years and consistent with the municipal budgeting process, staff work planning, funding opportunities and new information that may inform decision-making and action updates. Action initiation is heavy in phase one to maximize the possibility of realizing emissions reductions and increasing resiliency within the next decade, remaining consistent with the latest climate science. Changes to the phases are anticipated as implementation occurs and new information informs updates to the process. The proposed implementation phases are as follows:

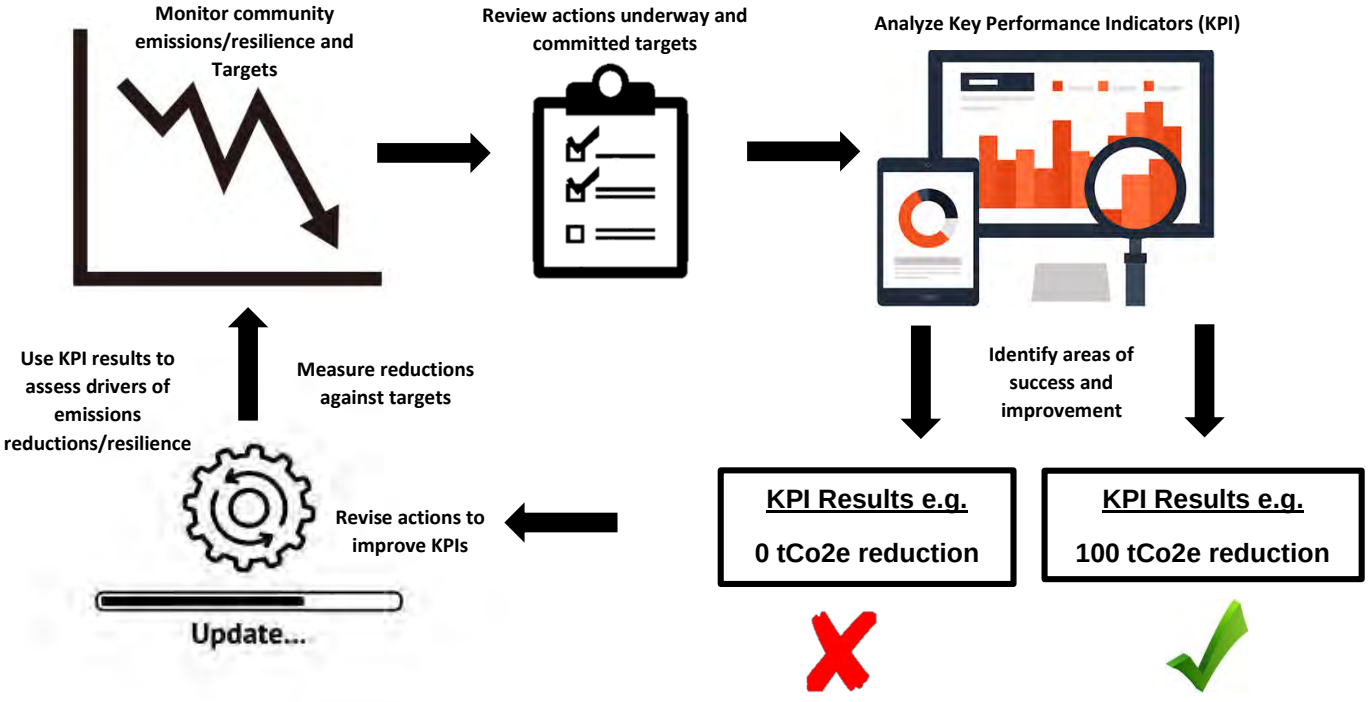
**Figure 2: Climate Action Plan Implementation Phases**

## Achieving Climate Goals and Targets

The carbon neutral scenario presented in the Climate Action Plan is modelled based on policy direction in Port Moody and in other levels of government. This means that the scenario relies on these policy directions becoming a reality and depends on monitoring to confirm success. It has proven difficult and unreliable to model emissions reductions from each individual action in Port Moody that will contribute to this scenario as this would require detailed information currently not available to the City, many assumptions, and would require constant updating to remain relevant. Rather, sector level GHG reduction targets have been established based on the Climate Emergency Declaration and actions were laid out in the Plan that enable and are anticipated to result in reductions to meet these targets.

Emissions reductions from changes in GHG emissions and climate resilience will continue to be monitored at the community level by updating the community energy and emissions inventory when new data becomes available (currently every 4 years for transportation data, annually for utility data), monitoring changes in GHG emissions levels over time, and gathering data to better understand community resilience to climate change impacts. Changes in data over time will be compared against the targets in the Climate Action Plan and key performance indicators (KPI) of the actions underway to determine areas of success and inform adjustments. This approach will provide a clear and measurable picture of how goals and targets in the Climate Action Plan are being achieved. Figure 3 illustrates this process.

### Figure 3: Continued Monitoring Progress




Some phase one actions include well-defined strategies and are underway, while for others the City must first gain a fuller understanding of the related barriers and opportunities to determine how best to proceed. In all cases, KPI's have been established for each action. The KPI's will provide an indication of whether the action is on the right track to achieving its intended outcome and if adjustments are needed. The table below outlines the sector level targets in the Climate Action Plan that staff will

continually measure against using the community emissions inventory and KPIs to determine if Port Moody is on track to achieving the Plan's vision.

| Sector / Focus Area | Targets |
|---|---|
| Buildings | • By 2030, all new and replacement heating and hot water systems are zero emissions<br>• By 2030, all oil and propane heating and hot water systems are replaced with zero emission systems<br>• By 2050, all buildings have replaced heating and hot water with zero emission systems |
| Transportation and Mobility | • Residents walk, cycle or take transit for 40% of trips by 2030 (up from 17% in 2017)<br>• 40% of passenger vehicles, and 25% of commercial vehicles are electric by 2030 |
| Waste Reduction and Management | • Minimize waste going to landfill and achieve zero emissions from waste before 2050 |

The scope of the targets and goals in the Climate Action Plan address emissions from both the community at large and City operations. While GHG inventories are well established to inform mitigation targets, records of data to support resilience focused measurement are not yet well understood. Measuring the success of climate resilience focused actions is best represented through the goals outlined in the Climate Action Plan. As action KPIs and external data help provide greater clarity on resilience indicators, such as human vulnerability to extreme heat, this information will be used to inform resilience focused targets in future updates to the Climate Action Plan. Staff will continue to stay informed on new research surrounding the development of consistent and measurable resilience metrics and data, such as research from health authorities, education institutions, and different levels of governments.

## Phase One Action Identification Process

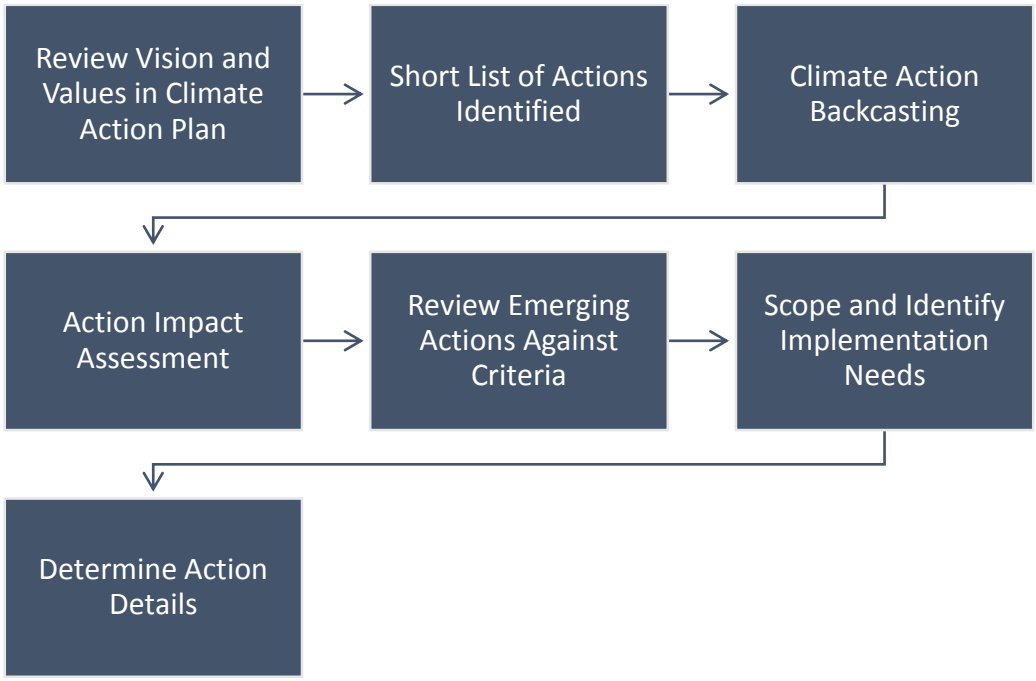
Throughout the summer and fall of 2020, the staff climate action working group met several times to review information and compile key actions from the Climate Action Plan for the first two years of Plan implementation. Many of the actions that emerged in the first phase are those that are already underway and act as enabling measures needed to empower future actions to meet the City's climate goals. This process was supported with expert guidance and resources from Simon Fraser University (SFU) Adaptation to Climate Change Team (ACT) (Appendix 1). At a high level, this process involved identifying actions that emerged by performing climate action backcasting, where the vision, goals, and targets of the Climate Action Plan were used to understand critical milestones for action implementation. Next, actions were reviewed against the criteria listed below. From there, staff provided information on scope, resourcing, costs, key performance indicators and other details to better understand how the actions will be implemented. Actions were evaluated against the following criteria:

## Phase One Climate Action Criteria

- The urgency to be initiated in order to realize benefits and meet targets, goals and commitments in the Climate Action Plan, Climate Emergency Declaration and other City strategic plans;
- The potential to result in a high level of impact on reducing greenhouse gas (GHG) emissions and increasing climate resilience;
- The opportunity to access internal and external resources and funding to carry out the action(s); and
- The ability to integrate well with existing departmental work plans, priorities, and alignment with Council and community goals captured in the Climate Action Plan.

To complete this work the staff climate action working group in collaboration with ACT used online collaboration software to organize actions in three sessions. The following process took place:

**Figure 4: High Level Phase One Action Identification Process**




1. Policy Planning staff identified a preliminary list of actions based on City and community values and priorities identified in the Climate Action Plan that formed the basis of phase one actions.
2. The staff climate action working group gathered for the first workshop session that involved:
    a. Reviewing commitments in the Climate Action Plan, community priorities expressed through public engagement and overlapping priorities in other City strategic plans;
    b. Performing climate action backcasting;
    c. Discussing the preliminary list of actions including adding or removing actions based on the criteria; and

    d. Carrying out an action impact assessment to determine the potential level of impact of each action on reducing GHG emissions and/or preparing for future climate changes in addition to the level of effort to undertake the action.
3. The staff climate action working group gathered for the second workshop session that involved:
    a. Summarizing the first session outcomes;
    b. Compiling a list of phase one actions based on staff climate action working group input and first session outcomes;
    c. Another review of the list of phase one actions against the criteria; and
    d. Identifying timelines to initiate actions based on work plans and available resources.
4. The third staff climate action working group session involved meeting with divisions responsible for implementing phase one actions. During this time responsible division staff provided information on scope, estimated budgets, resourcing, and identified draft key performance indicators in order to implement the actions.
5. Staff synthesized this information into the Phase One Climate Action Implementation Strategy.

Based on efficiencies in resourcing and scope of work discovered through the workshop sessions, several actions were combined as follows:

| Original Action | Combined Action |
|---|---|
| Develop a resilient, zero-emissions plan for all new buildings that includes addressing indoor air quality and climate risks where possible. | Develop a resilient, zero-emissions plan for all new and existing buildings that includes addressing indoor air quality and climate risks where possible. |
| Develop a resilient, zero-emissions plan for all existing buildings that includes addressing indoor air quality, and climate risks where possible. | |
| 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 and identify and improve the capacity of multi-purpose areas within civic facilities and parks that could be converted to cooling, warming, and emergency support centres when needed. |
| Develop an extreme weather response plan with a focus on supporting the most vulnerable populations. | |

The process above resulted in identifying 23 phase one actions out of a total of 54 actions in the Climate Action Plan. These actions represent the values and priorities of various groups expressed throughout development of the Climate Action Plan including:

| Group | Aligned Priorities Gathered From |
|---|---|
| Council | Climate Action Plan<br>Climate Emergency Declaration<br>Council Strategic Plan<br>Other City Strategic Plans (e.g. Master Transportation Plan, Parks and Recreation Master Plan etc.) |
| Climate Action Committee | Monthly meetings where climate action priorities and values are discussed<br>Climate Action Plan development engagement process |

| | |
|---|---|
| Community / Stakeholders | Climate Action Plan<br>Climate Action Plan development engagement process |

Acknowledging the dire need to cut global GHG emissions in half by 2030 in order to maintain global temperature increase to 1.5°C this century, the phase one actions align by concentrating on the urgency communicated through the latest climate science, community priorities, and Council commitments. The carbon neutral scenario modelled in the Climate Action Plan represents the bold actions adopted in the Climate Emergency Declaration and other policy commitments necessary to achieve deep emissions reductions and build community resilience. Although the carbon neutral scenario presents a pathway to zero based on what we know today, the reality is the pathway to zero is not linear. Technology disruption, changing political and regulatory landscapes, shifting community and City values, and action implementation will present significant challenges that are not represented in this scenario. Therefore, Port Moody must commit to flexibility and being adaptive in undertaking climate action. Staff have built processes into the Climate Action Plan and its implementation that will implant this necessary level of flexibility.

## Annual Reporting

Each spring, staff will revisit the scope and status of their responsible actions to determine next steps in order to complete the action(s). Spring provides an ideal opportunity to integrate action needs into the municipal budgeting process and allows sufficient time to plan for the upcoming year. Each fall, staff will provide an update to Council on implementation of the Climate Action Plan that will include a review of the year coming to a close and any new information and expectations for the upcoming year. Information in the annual update will include:

- Status of implementation of the current phase actions;
- Progress of key performance indicators and update on progress towards achieving Climate Action Plan goals and targets;
- Summary of financial and resourcing implications for the current phase actions;
- Anticipated completion dates for the current phase actions; and
- Additional information as available.

Key information from the annual reporting will be communicated to the public through the City's web site. As the phase one actions are initiated by the lead divisions, appropriate communication strategies, feasibility studies and other strategies will be developed if required for the action.

During the final year of each implementation phase, staff will undertake a process to pull together actions for the next phase of implementation and bring forward an implementation strategy for the upcoming implementation phase.

## Ongoing Management of Implementation

Monitoring of implementation is crucial in determining the success of actions and measuring progress towards meeting commitments in the Climate Action Plan. Tracking progress will be carried out largely by the staff climate action working group. This group will develop and lead monitoring and evaluation programs to help ensure that the actions in the Plan are implemented and are achieving results as intended. Ongoing monitoring and evaluation will serve two important purposes. First, it will help keep track of where the community is with respect to its emission reduction and resilience goals. Second, it

will help track implementation progress and flag when actions may be redundant or require changes. In order to lead implementation of the 10 actions outlined in Phase one to be lead by Policy Planning, provide ongoing project management and monitoring of the Climate Action Plan, and carry out already existing and ongoing sustainability initiatives, a new position is required to support the Policy Planning division as a full time temporary 1 year position with the possibility to extend. Funding exists to partially support this position.

Implementation of the Climate Action Plan will be monitored using Envisio project management software (Appendix 2). Lead divisions responsible for implementing priority actions will provide monthly updates to the Climate Action Plan lead staff. Staff have also established draft key performance indicators that will be integrated into Envisio. In the fall of each year as a part of the annual reporting, staff will summarize the previous year Climate Action Plan implementation and present to Council for their information.

### Climate Action Plan Renewal

Port Moody is committed to a plan renewal initiated in the fifth year of implementation. Since the Plan's actions focus on the next decade and society is rapidly shifting to enable swift action, it is important to review the Plan at the critical five-year junction when the majority of actions are approaching maturity. During phase 3 of implementation, staff will refrain from initiating new actions and shift focus to refreshing the Climate Action Plan with the goals of:

- Demonstrating achievement/progress towards the Plan's goals;
- Incorporating any new climate science and projections available;
- Re-assessing climate risks and vulnerabilities;
- Updating financial considerations for actions identified;
- Evaluating greenhouse gas reductions;
- Aligning with other important policy and guidance documents at the City;
- Informing the next segment of implementation phases; and
- Encompassing ideas and work from partners and the community.

After the Plan renewal is complete and any updates are integrated into the Climate Action Plan, implementation will proceed. Implementation of actions already initiated prior to the renewal will continue during the renewal period.

## Climate Action Committee Role

Port Moody's Climate Action Committee is a civic committee composed of members of Council, the community, and members of other civic committees with a diverse set of skills and a common interest in taking action on climate change in our community. The Climate Action Plan is a community plan that was initiated by the Climate Action Committee, and has seen active participation by the Committee throughout its development, including developing the vision for the Plan and evaluating draft actions for inclusion in the Plan.

Staff will continue to work with the Climate Action Committee and report back to the Committee regularly with implementation updates for phase one priority actions. Updates will include key information on status of implementation, key tasks, and tracking progress.

Staff envision that the Climate Action Committee's role throughout implementation will be to:

- continue communication around each phases climate action areas beyond City communication channels;
- participate in the planning and execution of climate action events;
- provide advice and recommendations on ways in which Port Moody can achieve carbon neutrality in corporate operations and community energy and emission programs for residents and businesses, specifically through the reduction of Greenhouse Gas (GHG) emissions;
- provide leadership in the community by exemplifying climate action in members' daily lives where possible; and
- Other roles as identified by the Committee.

The Committee's role and contributions will be discussed during the Committee's annual work planning sessions. Highlights of the Committee's contributions will be included in annual reporting to Council.

## Summary of Priority Action Details

### Priority Actions Summary

| Buildings | | | Requires Additional Funding |
|---|---|---|---|
| 1. | Perform comprehensive climate audits on all civic facilities and prioritize upgrades where feasible and highest risk. | Community Development<br>Policy Planning | Yes |
| 2. | Revise the City's Sustainability Report Card to include performance measures to reduce operational and embodied GHG emissions and climate risks. | Community Development<br>Policy Planning | Yes |
| 3. | Develop a resilient, zero-emissions plan for all new and existing buildings that includes addressing indoor air quality and climate risks. | Community Development<br>Policy Planning | Yes |
| 4. | Initiate/continue discussions with federal and provincial governments to advocate for authority, financing tools, benchmarking, and other policies essential for achieving zero emissions buildings. | Community Development<br>Policy Planning | No |
| **Transportation and Mobility** | | | |
| 5. | Develop a community zero-emissions mobility strategy. | Community Development<br>Policy Planning | Yes |
| 6. | Conduct a utilization assessment of the City's fleet and identify opportunities to increase efficiency and reduce GHG emissions. | Engineering and Operations<br>Solid Waste, Fleet & Shared Services | No |
| 7. | 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. | Engineering and Operations<br>Infrastructure Engineering Services | Yes |
| **Waste Reduction and Management** | | | |
| 8. | Initiate/continue discussions with Metro Vancouver to advocate for initiatives and policies to reduce waste, increase diversion rates, and increase reporting and awareness on waste generation. | Engineering and Operations<br>Solid Waste, Fleet & Shared Services | No |
| **Land Use and Growth Management** | | | |
| 9. | Encourage density and mixed-use neighborhoods around transportation hubs through the Official Community Plan and development applications. | Community Development<br>Development Planning | No |
| 10. | Require developers to include comprehensive transportation demand management (TDM) strategies in proposals for new large development projects. | Engineering and Operations<br>Infrastructure Engineering Services | Yes |

| | | | |
|---|---|---|---|
| 11. | Continue to work with the Fraser Basin Council on the Lower Mainland Flood Management Strategy and public education on flood risk. | Community Development<br>Policy Planning | No |
| 12. | Develop a sea level rise strategy to assess and respond to coastal flooding, coastal squeeze, shoreline erosion and inundation. | Community Development<br>Policy Planning | Yes |
| | **Emergency Response and Human Health** | | |
| 13. | 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. | Community Development<br>Policy Planning | Yes |
| 14. | Develop an extreme weather response plan with a focus on supporting the most vulnerable populations and identify and improve the capacity of multi-purpose areas within civic facilities and parks that could be converted to cooling, warming, and emergency support centres when needed. | Community Development<br>Policy Planning | Yes |
| | **Infrastructure** | | |
| 15. | Incorporate climate change considerations into integrated stormwater management process and planning. | Engineering and Operations<br>Infrastructure Engineering Services | No |
| | **Natural Environment** | | |
| 16. | Continue to increase public awareness and engagement with environmental programs | Community Services<br>Environment and Parks | No |
| 17. | Develop an Urban Forest Management Strategy | Community Services<br>Environment and Parks | No |
| 18. | Implement strategies to protect, restore, and connect ESAs city-wide | Community Services<br>Environment and Parks | Yes |
| 19. | Develop climate resilient landscaping strategies for public lands | Community Services<br>Environment and Parks | Yes |
| 20. | Improve Standards for Erosion and Sediment Control for new developments and City projects. | Community Services<br>Environment and Parks | No |
| 21. | Develop and implement a natural assets management plan with consideration of a carbon budget. | Finance and Technology<br>Finance | No |
| | **Organization Wide** | | |
| 22. | Develop policy and procedures to embed climate mitigation and adaptation considerations throughout day-to-day City business. | Community Development<br>Policy Planning | No |
| 23. | Integrate climate budgets in the municipal budget process. | Finance and Technology<br>Finance | No |

## Summary of Department/Division Actions and Staff Hours

| Department & Division | Number of Actions | | | Anticipated Lead Staff Hours |
|---|---|---|---|---|
| | 2021 | 2022 | Total | |
| **Community Development** | **8** | **3** | **11** | **1,320** |
| Policy Planning | 7 | 3 | 10 | 1,240 |
| Development Planning | 1 | 0 | 1 | 80 |
| **Engineering and Operations** | **5** | **0** | **5** | **9,030** |
| Solid Waste, Fleet & Shared Services | 2 | 0 | 2 | 1,050 |
| Infrastructure Engineering Services | 3 | 0 | 3 | 7,980 |
| **Community Services** | **5** | **0** | **5** | **960** |
| Environment and Parks | 5 | 0 | 5 | 960 |
| **Finance and Technology** | **2** | **0** | **2** | **240** |
| Finance | 2 | 0 | 2 | 240 |
| **Total** | **20** | **3** | **23** | **23,100** |

## Summary of Action Status

| Department & Division | Action Status | | |
|---|---|---|---|
| | Underway | Not initiated Yet | Total Actions |
| **Community Development** | **5** | **6** | **11** |
| Policy Planning | 4 | 6 | |
| Development Planning | 1 | 0 | |
| **Engineering and Operations** | **4** | **1** | **5** |
| Solid Waste, Fleet & Shared Services | 2 | 0 | |
| Infrastructure Engineering Services | 2 | 1 | |
| **Community Services** | **3** | **2** | **5** |
| Environment and Parks | 3 | 2 | |
| **Finance and Technology** | **2** | **0** | **2** |
| Finance | 2 | 0 | |

## Budget Implications Summary

Summary of anticipated new budget implications. Includes full amount estimations, **not** including possible grant funding. Staff are actively pursuing grant opportunities to offset costs where possible.

| Department & Division | Capital Budget | | | Operational Budget | | | TOTAL COSTS |
|---|---|---|---|---|---|---|---|
| | 2021 | 2022 | Total | 2021 | 2022 | Total | |
| **Community Development** | **$ 98,000** | **$ 195,000** | **$ 293,000** | **$ 98,000** | **$ 98,000** | **$ 196,000** | **$ 489,000** |
| Policy Planning | $ 98,000 | $ 195,000 | $ 293,000 | $ 98,000 | $ 98,000 | $ 196,000 | |
| Development Planning | $ - | $ - | $ - | $ - | $ - | $ - | |
| **Engineering and Operations** | **$ 1,827,700** | **$ 1,747,700** | **$ 3,575,400** | **$ -** | **$ -** | **$ -** | **$ 3,575,400** |
| Solid Waste, Fleet & Shared Services | $ - | $ - | $ - | $ - | $ - | $ - | |
| Infrastructure Engineering Services | $ 80,000 | $ - | $ 80,000 | $ - | $ - | $ - | |
| Project Delivery Services | $ 1,747,700 | $ 1,747,700 | $ 3,495,400 | $ - | $ - | $ - | |
| **Community Services** | **$ 60,000** | **$ 95,000** | **$ 155,000** | **$ -** | **$ -** | **$ -** | **$ 155,000** |
| Environment and Parks | $ 60,000 | $ 95,000 | $ 155,000 | $ - | $ - | $ - | |
| **Finance and Technology** | **$ -** | **$ -** | **$ -** | **$ -** | **$ -** | **$ -** | **$ -** |
| Finance | $ - | $ - | $ - | $ - | $ - | $ - | |
| **TOTAL COST** | $ 1,985,700 | $ 2,037,700 | **$ 4,023,400** | $ 98,000 | $ 98,000 | **$ 196,000** | **$ 4,219,400** |

## Summary of Costs by Year (operational and capital combined)

| Department & Division | 2021 | 2022 | Total |
|---|---|---|---|
| **Community Development** | **$ 196,000** | **$ 293,000** | **$ 489,000** |
| Policy Planning | $ 196,000 | $ 293,000 | |
| Development Planning | $ - | $ - | |
| **Engineering and Operations** | **$ 1,827,700** | **$ 1,747,700** | **$ 3,575,400** |
| Solid Waste, Fleet & Shared Services | $ - | $ - | |

| | | | |
|---|---|---|---|
| Infrastructure Engineering Services | $ 80,000 | $ - | |
| Project Delivery Services | $ 1,747,700 | $ 1,747,700 | |
| **Community Services** | **$ 60,000** | **$ 95,000** | **$ 155,000** |
| Environment and Parks | $ 60,000 | $ 95,000 | |
| **Finance and Technology** | **$ -** | **$ -** | **$ -** |
| Finance | $ - | $ - | |
| **TOTAL COST** | **$ 2,083,700** | **$ 2,135,700** | **$ 4,219,400** |

## 2021 Actions Requested Through Municipal Budget

| No. | Action | Funding Request |
|---|---|---|
| 1. | Perform comprehensive climate audits on all civic facilities and prioritize upgrades where feasible and highest risk. | $20,000 |
| 2. | Revise the City's Sustainability Report Card to include performance measures to reduce operational and embodied GHG emissions and climate risks. | $3,000 |
| 3. | Develop a resilient, zero-emissions plan for all new and existing buildings that includes addressing indoor air quality and climate risks. | $50,000 |
| 14. | Develop an extreme weather response plan with a focus on supporting the most vulnerable populations and identify and improve the capacity of multi-purpose areas within civic facilities and parks that could be converted to cooling, warming, and emergency support centres when needed. | $25,000 |
| 18. | Implement strategies to protect, restore, and connect Environmentally Sensitive Areas (ESA) city-wide | $40,000 |
| 19. | Develop climate resilient landscaping strategies for public lands | $20,000 |
| **Total amount included in 2021 budget** | | **$158,000** |

Two actions coming forward separately and 2 new positions not currently funded represent approximately $1,925,700 in outstanding funding requests for 2021 that will come forward with additional details. 2022 costs will be incorporated into the 2022 municipal budgeting process. Staff are currently pursuing $46,000 of grant funding at this time and will continue to pursue grant opportunities as they become available.

## Position Request Summary

| Description | Division | Purpose | Funding Amount |
|---|---|---|---|
| 2 temporary seasonal staff | Environment and Parks | Support implementation of climate resilient landscaping strategies for public lands (seasonally) | Staff and vehicle rental anticipated $55,000 in 2022 |
| 1 temporary full time staff | Infrastructure Engineering Services | Support acceleration of the MTP. Position is required for entire acceleration period (estimated 10 years) | Coming forward as a separate request in 2021 with MTP acceleration costs. Anticipated position $135,000 annually |
| 1 temporary full time staff | Policy Planning | Support ongoing climate action initiatives (1 year term) | Coming forward as a separate request in 2021. Anticipated $98,000 annually |

## Action Classification Summary

See page below for description of action summary

| Focus Area | Quick Wins | Best Bets | Major Projects | Total Actions |
|---|---|---|---|---|
| **Buildings** | 2 | 1 | 1 | 4 |
| **Transportation and Mobility** | 0 | 1 | 2 | 3 |
| **Waste Reduction and Management** | 1 | 0 | 0 | 1 |
| **Land Use and Growth Management** | 1 | 2 | 1 | 4 |
| **Emergency Response and Human Health** | 1 | 1 | 0 | 2 |
| **Infrastructure** | 1 | 0 | 0 | 1 |
| **Natural Environment** | 3 | 1 | 2 | 6 |
| **Organization Wide** | 0 | 2 | 0 | 2 |

Although a large portion of funding still requires a funding source and will be considered by Council at a future date, this outstanding funding represents 2 actions and 2 positions out of 23 actions in phase one. Endorsement of this implementation strategy would result in the immediate undertaking of the remaining 21 actions and 2 positions.

## Action Classification:

**Best Bet:** High potential to reduce greenhouse gas emissions and/or increase resilience and relatively easy to implement.

**Quick Wins:** Average or lower potential to reduce greenhouse gas emissions and/or increase resilience and relatively easy to implement.

**Major Projects:** High potential to reduce greenhouse gas emissions and/or increase resilience and harder to implement.

## Focus Area Legend

| | | | |
|---|---|---|---|
| Buildings |  | Land Use and Growth Management |  |
| Transportation and Mobility |  | Emergency Response and Human Health |  |
| Waste Management and Reduction |  | Infrastructure |  |
| Natural Environment |  | Organization-Wide |  |

## Buildings

### Action 1 - Perform comprehensive climate audits on all civic facilities and prioritize upgrades where feasible and highest risk.

| **Best Bet:** *High potential to reduce greenhouse gas emissions and/or increase resilience and relatively easy to implement.* | |
|---|---|
| **Description** | Implement a program to reduce emissions from civic facilities while ensuring facilities are also prepared for future climate scenarios where possible on an ongoing basis. Consultant assistance is required to manage building data on an ongoing basis through a virtual dashboard, perform climate audits, and recommend initiatives to reduce emissions and prepare for future climate scenarios consistent with budgets. This action will reduce staff time associated with preparing annual reports for the Climate Action Revenue Incentive Program (CARIP). |
| **Significance** | Municipal leadership is important and will be necessary to meet the building related targets in the Climate Action Plan and the Climate Emergency Declaration. This action has the potential to have a large impact on the City's ability to meet Climate Action Charter commitments to become a carbon neutral organization This action is essential to understanding baseline performance of City facilities and to recommend tailored solutions for a diverse portfolio of complex buildings that provide a wide range of community services. This work is underway, demonstrating alignment with existing work plans. Recent opportunities in the industry have provided an opening to move this work forward with high impact on low carbon resilience. |
| **Lead Department/Division** | Lead for phase one is Community Development – Policy Planning division. After phase one (2022), the Facilities division will take the lead and manage ongoing. |
| **Initiation year** | 2020 |
| **Estimated completion** | Ongoing |
| **Estimated Financial Implications** | ***Required Budget****:* New budget request of $50,000 for procurement of assistance and first year setup costs is anticipated. The funding amount will be spread over several years, with $20,000 requested through the 2021 capital department budget.<br>***Funding opportunities*****:** Funding opportunities are anticipated and will be identified by proponents based on scope of work.<br>***Future Implications:*** Ongoing capital and operational building energy and emissions management costs are unknown at this time due to variability in results of climate audits recommendations.<br>***Total City cost****:* $20,000 (2021) and $30,000 in future years for $50,000 total. |
| **Staff Resources** | 80 hours of estimated lead staff time. 60 hours of estimated support time split between 3 key staff. Total staff time for this action is estimated at 140 hours. This action can be accommodated on existing staff work plans. |
| **Status** | Underway. |
| **Draft Key Performance Indicators** | • Percent reduction of annual GHG emissions from civic facilities<br>• Percent reduction of annual energy consumption from civic facilities<br>• Number of climate audit recommendations implemented |

## Action 2 - Revise the City's Sustainability Report Card to include performance measures to reduce operational and embodied GHG emissions and climate risks.

| **Quick Win:** *Average potential to reduce greenhouse gas emissions and/or increase resilience and relatively easy to implement.* | |
|---|---|
| **Description** | Incorporate Civic Committee into a new version of the Sustainability Report Card that is implemented into the Development approvals process. Funding is required to revise the format of the report card that meets feedback and priorities expressed during the committee and staff review period. |
| **Significance** | This work is being completed as directed in an outstanding Council motion, demonstrating alignment with existing work plans. This action is important to continue to encourage higher performing buildings that meet City and community climate action priorities captured in the Climate Action Plan and Climate Emergency Declaration. |
| **Lead Department/Division** | Community Planning – Policy Planning division |
| **Initiation year** | 2020 |
| **Estimated completion** | 2021 |
| **Estimated Financial Implications** | ***Required Budget:*** New budget request of $3,000 for digitization and design that cannot be performed in house is anticipated. This funding amount has been requested through the 2021 capital department budget.<br>***Funding opportunities*:** None available at this time.<br>***Future Implications:*** Unknown<br>***Total City cost***: $3,000 (2021) |
| **Staff Resources** | 60 hours of lead staff time and 20 hours of supporting hours split between 5 staff is estimated. Total staff hours is estimated at 80 hours. Action can be accommodated on existing staff work plans. |
| **Status** | Underway. |
| **Draft Key Performance Indicators** | • Level of satisfaction of tool users (e.g. development community and City Planners). Captured through survey or questionnaire<br>• Increased average score of completed Sustainability Report Cards |

## Action 3 - Develop a resilient, zero-emissions plan for all new and existing buildings that includes addressing indoor air quality and climate risks.

| **Major Project:** *High potential to reduce greenhouse gas emissions and/or increase resilience and harder to implement.* | |
|---|---|
| **Description** | Develop a strategy that outlines a combination of recommendations (i.e. tools, policy etc.) that will result in enabling all new and existing buildings being resilient and zero-emissions within the Climate Action Plan target time lines. After action scoping, staff are confident that the separate actions for new and existing buildings can be completed as one strategy expressed in this action. |

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| **Significance** | This action is imperative to initiate in order to meet the 2030 building related goals and targets in the Climate Action Plan and Climate Emergency Declaration. This action will align with similar work conducted at the provincial and federal levels and has the potential to result in a high impact on low carbon resilience. |
| **Lead Department/Division** | Community Planning – Policy Planning division |
| **Initiation year** | 2021 |
| **Estimated completion** | 2022 |
| **Estimated Financial Implications** | ***Required Budget:*** New budget request of $50,000 for Plan development is anticipated. This funding amount has been requested through the 2021 capital department budget.<br>***Funding opportunities*:** BC Hydro Sustainable Communities Program – 50% of eligible costs up to $50,000.<br>***Future Implications***: Future costs for implementation are unknown due to variability in Plan recommendations and outcomes.<br>***Total City cost*:** $50,000. $25,000 if successful with grant funding. (2021) |
| **Staff Resources** | 200 hours of lead staff time and 105 of supporting hours split between 3 staff are estimated. Total staff hours are estimated at 305 hours. This action can be accommodated on existing staff work plans. |
| **Status** | Not initiated yet. |
| **Draft Key Performance Indicators** | ● Percent reduction of annual community building greenhouse gas emissions. Measured through the Community Energy and Emissions Inventory provided by the Province.<br>● Percent reduction of annual community building energy consumption. Measured through the Community Energy and Emissions Inventory provided by the Province.<br>● Number of annual building permit applications targeting zero emissions and incorporating at least one climate resilience initiative<br>● Number of annual development applications targeting zero emissions and incorporating at least one climate resilience initiative<br>● Number of annual renovation permits targeting zero emissions and incorporating at least one climate resilience initiative |

## Action 4 - Initiate/continue discussions with federal and provincial governments to advocate for authority, financing tools, benchmarking, and other policies essential for achieving zero emissions buildings.

| **Quick Win:** *Average potential to reduce greenhouse gas emissions and relatively easy to implement.* | |
|---|---|
| **Description** | Engage in advocacy that has the potential to result in policy changes and regulation necessary to meet building related climate action goals and targets in the Climate Action Plan and Climate Emergency Declaration. |
| **Significance** | This action is already underway, demonstrating alignment with existing work plans. Without Provincial wide policy or authority within local governments, achieving building related targets in the Climate Action Plan and Climate Emergency Declaration will be extremely difficult. Success of this action is key to achieving carbon neutrality. |
| **Lead Department/Division** | Community Development – Policy Planning division |

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| **Initiation year** | 2020 |
| **Estimated completion** | 2021 |
| **Estimated Financial Implications** | ***Required Budget:*** No new budget requests are anticipated for 2021. Project costs are already covered through the BC Hydro Sustainable Communities Program.<br>***Funding opportunities:*** N/A<br>***Future Implications:*** Unknown.<br>***Total City cost:*** $0.00 |
| **Staff Resources** | Estimated 60 hours of lead staff time and 60 hours of supporting staff time split between 2 key staff. Total staff time is estimated at 120 hours. Action can be accommodated on an existing staff work plans. |
| **Status** | Underway. |
| **Draft Key Performance Indicators** | ● Number of organizations supporting advocacy messages<br>● Council support for advocacy<br>● Number of policies altered or created directly or indirectly as a result of advocacy |

## Transportation and Mobility

## Action 5 - Develop a community zero-emissions mobility strategy.

| **Major Project:** *High potential to reduce greenhouse gas emissions and harder to implement.* | |
|---|---|
| **Description** | Develop a community zero-emissions mobility strategy with the goals of:<br>● enhancing zero-emission vehicle infrastructure;<br>● integrating zero emissions mobility with car sharing and public transit;<br>● programs and initiatives to encourage Port Moody businesses to choose zero-emission transportation options (e.g. reduced fee transit passes for employees); and<br>● supporting the uptake of active transportation in support of the Master Transportation Plan.<br>This work requires consultant expertise to inform recommendations. |
| **Significance** | Staff believe undertaking this action will have a significant impact on the ability to achieve transportation related GHG targets and goals in the Climate Action Plan. This action complements acceleration of the Master Transportation Plan has to potential to have a high impact on reducing greenhouse gas emissions from transportation. |
| **Lead Department/Division** | Community Planning – Policy Planning division |
| **Initiation year** | 2022 |
| **Estimated completion** | 2023 |

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| **Estimated Financial Implications** | ***Required Budget:*** New budget request of $50,000 for Plan development from the department's capital budget in 2022 is anticipated.<br>***Funding opportunities*:** BC Hydro Sustainable Communities Program – 50% of eligible costs up to $50,000<br>***Future Implications***: Future costs for implementation are unknown due to variability in Plan recommendations and outcomes.<br>***Total City cost*:** $50,000. $25,000 if successful with grant funding. (2022) |
| **Staff Resources** | 200 hours of lead staff time and 105 hours split between 3 supporting staff is estimated. Total staff hours are estimated at 305 hours. This action can be accommodated on existing staff work plans. |
| **Status** | Not initiated yet. |
| **Draft Key Performance Indicators** | ● Percent reduction of annual community GHG emissions from transportation<br>● Number of public EV Charging Stations (city and private owned)<br>● Percent of zero emissions vehicles registered in Port Moody, measured annually |

## Action 6 – Conduct a utilization assessment of the City's fleet and identify opportunities to increase efficiency and reduce GHG emissions.

| **Best Bet:** *High potential to reduce greenhouse gas emissions and relatively easy to implement.* | |
|---|---|
| **Description** | Assess the City's fleet to improve understanding of how fleet vehicles are used, and explore ways to increase the efficiency of the fleet such as:<br>● Explore fleet optimization to look at occupancy/utilization and inform the number of vehicles needed and selecting the right size vehicle for the task;<br>● switch to zero-emission fuel sources and consider investing in on-site, zero-emission refueling infrastructure;<br>● prioritize the purchase of zero-emission vehicles when replacements are needed; and<br>● create a small motor pool of low/zero-emission vehicles to be used by City staff performing administrative duties or as loaners when fleet vehicles are out of service for repairs. |
| **Significance** | This action is already underway, demonstrating alignment with existing work plans. Undertaking this action has to potential to have a large impact on achieving transportation related targets and goals in the Climate Action Plan and meeting Climate Action Charter commitments to become a carbon neutral organization. This action is expected to elevate the municipality as a leader in fleet management and fleet emissions reductions. |
| **Lead Department/Division** | Engineering and Operations – Solid Waste, Fleet & Shared Services |
| **Initiation year** | 2020 |
| **Estimated completion** | Ongoing |
| **Estimated Financial Implications** | ***Required Budget:*** No new budget requests anticipated in 2021. Initial phases of this action can be accommodated through existing budgets.<br>***Funding opportunities*:** N/A |

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| | ***Future Implications***: Estimated future costs for technology solutions to support fleet optimization and greenhouse gas emission reductions. Costs are unknown at this time.<br>***Total City cost*:** N/A |
| **Staff Resources** | 150 hours of lead staff time and 35 hours split between 4 supporting staff is estimated. Total staff hours are estimated at 290 hours. This action can be accommodated on existing staff work plans. |
| **Status** | Underway. |
| **Draft Key Performance Indicators** | ● Percent reduction of annual GHG emissions from the City's fleet<br>● Percent of zero emission vehicles in City fleet |

## Action 7 – 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.

| **Major Project:** *High potential to reduce greenhouse gas emissions and/or increase resilience and harder to implement.* | |
|---|---|
| **Description** | Increase the funding and implementation of the Master Transportation Plan (MTP) by 15 years, prioritizing projects in the MTP not yet initiated that contribute to meeting climate goals and targets in the Climate Action Plan. |
| **Significance** | Implementation of the MTP is already underway, demonstrating alignment with existing work plans. This action is crucial to continue as acceleration of implementing the MTP will be a vital piece in achieving transportation related targets and goals in the Climate Action Plan and the Climate Emergency Declaration. |
| **Lead Department/Division** | Engineering and Operations – Infrastructure Engineering Services |
| **Initiation year** | 2020 |
| **Estimated completion** | 2030 |
| **Estimated Financial Implications** | ***Required Budget:*** The current annual capital funding for the MTP is $385,000. An anticipated additional funding request of $608,844 annually from a capital funding source is required to accelerate the City portion of the MTP by 15 years (from 2045 to 2030). This would equate to a total yearly funding source of $993,844. This excludes costs required to construct development projects. The full MTP funding requires $31,227,000, however, a portion of the development related projects do not provide a service benefit until development occurs in the area. To include the appropriate MTP projects that support climate action goals in the capital program $1,612,700 is required annually for a total amount of $16,127,000 by 2030.<br><br>MTP anticipated development costs: $19,736,985<br>MTP anticipated City capital cost: $11,490,015<br>Total MTP cost: $31,227,000<br><br>In order to accelerate the MTP projects to meet climate goals by 2030, one new additional temporary full time staff is required for an estimated cost of $135,000 annually to support the position. The position will be required until completion |

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| | of the MTP (anticipated 10 years with acceleration). MTP funding requests will come forward as separate items for Council consideration.<br><br>***Funding opportunities*:** Staff will continue to pursue grant opportunities for the implementation of the accelerated capital plan. As development occurs, staff will require implementation of MTP projects as a part of the development approvals process, where appropriate.<br>***Future Implications***: As technology improves, the City will explore opportunities to expand climate-ready infrastructure.<br>***Total City cost*:** $1,612,700 acceleration costs and $135,000 position costs from department capital budget, both annually. |
| **Staff Resources** | 6,800 hours of two dedicated lead staff time (1,700 annually x 2) and 1,500 support staff hours split between 5 key staff is estimated in phase one. Total staff time is estimated at 8,300 for the first two years of implementation. This action requires a new staff to undertake until completion. |
| **Status** | Underway. |
| **Draft Key Performance Indicators** | • Mode split rations of transportation methods in the community<br>• Percent of community travel by foot, bicycle, or public transit<br>• Sidewalk Network (km); Bicycle Network (km); Transit Network (# stops with benches and/or shelters) |

## Waste Reduction and Management

### Action 8 - Initiate/continue discussions with Metro Vancouver to advocate for initiatives and policies to reduce waste, increase diversion rates, and increase reporting and awareness on waste generation.

| **Quick Win:** *Lower potential to reduce greenhouse gas emissions and relatively easy to implement.* | |
|---|---|
| **Description** | Initiate/continue discussions and participate with Metro Vancouver to advocate for:<br>● a circular economy within the region and participate/collaborate with the integrated solid waste management plan (ISWMP);<br>● Contribute to reductions of methane gas at the landfill through diversion of organics processing;<br>● a regional approach to the elimination of single-items such as plastic bags, beverage cups, straws, utensils, and food containers; and<br>● support requirements for commercial businesses to report on waste generation and how much is diverted from the landfill within the region. |
| **Significance** | This action is already underway, demonstrating alignment with existing work plans. It is important to continue this work due to the high potential to impact regional waste reduction and reuse. |
| **Lead Department/Division** | Engineering and Operations - Solid Waste, Fleet & Shared Services |

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| **Initiation year** | 2020 |
| **Estimated completion** | Ongoing |
| **Estimated Financial Implications** | ***Required Budget:*** No new budget requests anticipated in 2021. This action can be accommodated through existing budgets.<br>***Funding opportunities*:** N/A<br>***Future Implications***: Unknown.<br>***Total City cost*:** $0.00 |
| **Staff Resources** | 900 lead staff hours and 600 supporting hours split between 2 staff is estimated. Total staff hours are estimated to be 1,500 hours. This action can be accommodated on existing staff work plans. |
| **Status** | Underway. |
| **Draft Key Performance Indicators** | • Drop-off facility waste diversion rate (%)<br>• Number of people reached through communication campaigns<br>• Number of staff attending Regional Engineers Advisory Committee – Solid Waste Sub Committee meetings annually |

## Land Use and Growth Management

### Action 9 - Encourage density and mixed-use neighborhoods around transportation hubs through the Official Community Plan and development applications.

| **Best Bet:** *High potential to reduce greenhouse gas emissions and/or increase resilience and relatively easy to implement.* | |
|---|---|
| **Description** | This action involves developing and implementing policies and guidelines approved through the Official Community Plan that encourage density and mixed-use neighbourhoods around transportation hubs. This work will be included in the Official Community Plan update process that is already underway. |
| **Significance** | This work is already underway, demonstrating alignment with existing work plans. In order to achieve targets in the Climate Action Plan and the Climate Emergency Declaration this action is vital as density is directly related to energy consumption and GHG emissions through its influence on transportation behaviour, space heating efficiency and construction efficiency. This work complements actions regarding acceleration of the Master Transportation Plan, transportation demand management strategies, and building emissions management strategies. |
| **Lead Department/Division** | Community Development - Development Planning |
| **Initiation year** | 2021 |
| **Estimated completion** | 2023 |
| **Estimated Financial Implications** | ***Required Budget:*** No new budget requests anticipated in 2021. This action can be accommodated through existing budgets.<br>***Funding opportunities*:** N/A<br>***Future Implications***: Unknown |

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| | ***Total City cost*:** $0.00 |
| **Staff Resources** | Estimated 80 hours of lead staff time. This action can be accommodated on existing staff work plans. |
| **Status** | Underway. |
| **Draft Key Performance Indicators** | • Percent of residents that can easily walk or bike to meet all basic daily non-work needs and have safe pedestrian or bicycle access to transit.<br>• Percent of new multi-family units approved within an 800m distance to transit stations<br>• Percent of new dwellings located within 400m of a frequent transit route, or 800m of a transit station.<br>• Percent of population living within 400m of a frequent transit route, or 800m of a transit station.<br>• Percent of population within 800m of a greenspace. |

## Action 10 - Require developers to include comprehensive transportation demand management (TDM) strategies in proposals for new large development projects.

| **Best Bet:** *High potential to reduce greenhouse gas emissions and relatively easy to implement.* | |
|---|---|
| **Description** | Develop requirements and a process to ensure all new developments have appropriate TDM strategies in place. TDM measures are currently reviewed as part of the traffic impact assessment submitted through the development approvals process. This action would provide staff and applicants with guidance on the City's expectations for TDM strategies. |
| **Significance** | Staff believe that in order to achieve targets in the Climate Action Plan and the Climate Emergency Declaration regarding sustainable transportation, this action is important to initiate. This work complements actions regarding acceleration of the Master Transportation Plan and encouraging density and mixed use neighbourhoods around transportation hubs. |
| **Lead Department/Division** | Engineering and Operations – Infrastructure Engineering Services |
| **Initiation year** | 2021 |
| **Estimated completion** | 2022 |
| **Estimated Financial Implications** | ***Required Budget:*** Estimated new budget request of $80,000 from the departments capital budget in 2021. This funding is anticipated to come forward as a separate request.<br>***Funding opportunities*:** Staff will explore grant opportunities.<br>***Future Implications***: Unknown.<br>***Total City cost*:** $80,000 (2021) |
| **Staff Resources** | 180 hours of lead staff time are estimated and 30 hours of supporting hours split between 3 staff. Total staff time is estimated at 210 hours. |
| **Status** | Not initiated yet. |
| **Draft Key Performance Indicators** | • Percent of new developments that incorporate TDM strategies annually<br>• Percent of developments that are completed within the frequent transit development area |

## Action 11 - Continue to work with the Fraser Basin Council on the Lower Mainland Flood Management Strategy and public education on flood risk.

| **Quick Win:** *Lower potential to increase resilience and relatively easy to implement.* | |
|---|---|
| **Description** | Attend, participate and share information and resources developed by the Fraser Basin Council Lower Mainland Flood Management Strategy (LMFMS) with City staff and the community through various communication channels. |
| **Significance** | This action is already underway, demonstrating alignment with existing work plans. This action is valuable to continue in order to share important information with City staff and the community throughout the development and implementation of the Lower Mainland Floor Management Strategy that has the potential to better prepare the community for climate change impacts. This action enables better scope and decision-making related to Action 12. |
| **Lead Department/Division** | Community Development - Policy Planning |
| **Initiation year** | 2019 |
| **Estimated completion** | Ongoing |
| **Estimated Financial Implications** | ***Required Budget:*** No new budget requests anticipated in 2021. This action can be accommodated through existing budgets.<br>***Funding opportunities*:** N/A<br>***Future Implications***: Unknown.<br>***Total City cost*:** $0.00 |
| **Staff Resources** | Estimated 30 annual hours of lead staff time for attending meetings and sharing information. This action can be accommodated on existing staff work plans. |
| **Status** | Underway. |
| **Draft Key Performance Indicators** | • Number of people reached through campaigns/events annually<br>• Number of LMFMS meetings attended by staff annually |

## Action 12 - Develop a sea level rise strategy to assess and respond to coastal flooding, coastal squeeze, shoreline erosion and inundation.

| **Major Project:** *High potential to increase resilience and harder to implement.* | |
|---|---|
| **Description** | Develop a comprehensive strategy to assess, prepare and respond to sea level rise impacts such as coastal flooding, squeeze, shoreline erosion and inundation. |
| **Significance** | As sea level rise can have great influence over land use in the community, this action is important to initiate in the first phase of implementation to best prepare for and reduce anticipated impacts along Port Moody's shore line. This action has the potential to have a high level of impact on increasing reliance to climate change impacts. |
| **Lead Department/Division** | Community Development - Policy Planning |
| **Initiation year** | 2022 |

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| **Estimated completion** | 2024 |
| **Estimated Financial Implications** | ***Required Budget:*** Estimated new budget request of $100,000 from the department capital budget in 2022.<br>***Funding opportunities*:** Staff will explore partnerships that may provide cost sharing and grant opportunities.<br>***Future Implications***: Potential future costs for implementation of actions from the strategy. Costs are unknown at this time due to the variability in potential recommendations from the strategy.<br>***Total City cost*:** $100,000 (2022) |
| **Staff Resources** | Estimated 300 annual hours of lead staff time and 200 hours of supporting time split between 5 staff. Total estimated staff time is 500 hours. This action can be accommodated on existing work plans. |
| **Status** | Not initiated yet. |
| **Draft Key Performance Indicators** | ● Number of people engaged in sea level rise strategy development<br>● Number of actions implemented from the strategy annually |

## Emergency Response and Human Health

### Action 13 - 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.

| **Quick Win:** *Average potential to increase resilience and relatively easy to implement.* | |
|---|---|
| **Description** | Develop and distribute a community education program that will result in building strong connections amongst neighbourhoods and community members and result in greater preparedness for climate change impacts and extreme weather events throughout the community. |
| **Significance** | This action builds off existing community education and communication campaigns conducted by Fire Rescue. Adding a climate lens to and capitalizing on the effective community outreach conducted by Fire Rescue offers synergies and resource efficiencies. Information sharing is an effective and low cost method of assisting the community to prepare for future climate change impacts and improving resilience through fostering connections. This action complements action 14. |
| **Lead Department/Division** | Community Development - Policy Planning |
| **Initiation year** | 2022 |
| **Estimated completion** | Ongoing |
| **Estimated Financial Implications** | ***Required Budget:*** New capital budget request of $15,000 for development of appropriate communication campaigns, programs, and educational materials is anticipated for 2022. |

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| | ***Funding opportunities*:** Potential future funding opportunity through the UBCM Community Resiliency Investment (CRI) Program. Funding amount is unknown at this time.<br>***Future Implications***: Unknown at this time due to variability in success of campaigns and programs.<br>***Total City cost*:** $15,000 (2022) |
| **Staff Resources** | 60 hours of lead staff time and 60 hours split between 3 supporting staff is estimated. Total staff time is estimated to be 120 hours to develop and implement the action. This action can be accommodated on existing staff work plans. |
| **Status** | Not initiated yet. |
| **Draft Key Performance Indicators** | ● Number of people reached annually with preparedness outreach<br>● Number of organizations partnering on preparedness education and messaging<br>● Social connectedness as measured through local plans and partner organizations such as Fraser Health My Health My Community survey |

## Action 14 - Develop an extreme weather response plan with a focus on supporting the most vulnerable populations and identify and improve the capacity of multi-purpose areas within civic facilities and parks that could be converted to cooling, warming, and emergency support centres when needed.

| **Best Bet:** *High potential to increase resilience and relatively easy to implement.* | |
|---|---|
| **Description** | Develop a plan that will ensure the community and City is prepared for and is able to respond to extreme weather events, which considers assessing civic facilities to provide relief, identifying and supporting vulnerable populations, and developing safety guidelines for City staff working outdoors in extreme weather events. |
| **Significance** | This action is aligned with an outstanding Council motion. Due to opportunities and alignment, this action reflects a combination of developing an Extreme Weather Response Plan and assessing City facilities capacity to act as relief centres. This action is important to initiate in the first phase of implementation due to its high level of impact on creating resilience at a community scale to anticipated climate change impacts. |
| **Lead Department/Division** | Community Development - Policy Planning |
| **Initiation year** | 2021 |
| **Estimated completion** | 2023 |
| **Estimated Financial Implications** | ***Required Budget:*** New funding request of $25,000 for development of the Plan is anticipated. This funding request has been Incorporated in to the department's 2021 capital budget.<br>***Funding opportunities*:** None available at this time.<br>***Future Implications***: Unknown at this time due to variability in outcomes of Plan.<br>***Total City cost*:** $25,000 (2021) |
| **Staff Resources** | 200 hours of lead staff time and 35 hours split between 3 supporting staff is estimated. Total staff time is estimated to be 305 hours to develop and implement the action. |
| **Status** | Not initiated yet. |

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|---|---|
| **Draft Key Performance Indicators** | ● Number of public drinking water fountains and water parks/splashpads<br>● Number of community members engaged in the development of the Plan<br>● Number of recommendations implemented from the Plan |

## Infrastructure

### Action 15 - Incorporate climate change considerations into integrated stormwater management process and planning.

| **Quick Win:** *Average potential to increase resilience and relatively easy to implement.* | |
|---|---|
| **Description** | Incorporate climate change risks into integrated stormwater management planning, and include actions such as:<br>● Restore existing and create new green infrastructure on public and private lands to support managing storm water at its source through collection and infiltration to reduce the system demands and impacts of flooding;<br>● Incorporate updated rainfall projections (IDF curves) and sea level rise models into development and capital investment planning; and<br>● Asses and upgrade, where needed, infrastructure and associated maintenance procedures to ensure they are resilient to future hazards related to climate change. |
| **Significance** | This action is already underway, demonstrating alignment with existing work plans. This action is important to continue to increase the resilience of infrastructure to climate impacts. Climate projections indicate increased rainfall and it is essential to incorporate these projections in the stormwater management process in order to effectively prepare and protect infrastructure and the services they provide. |
| **Lead Department/Division** | Engineering and Operations - Infrastructure Engineering Services |
| **Initiation year** | 2020 |
| **Estimated completion** | Ongoing |
| **Estimated Financial Implications** | ***Required Budget:*** No new budget requests anticipated in 2021. This action can be accommodated through existing budgets.<br>***Funding opportunities*****:** N/A<br>***Future Implications***: Potential future budget implications to carry out this action long term.<br>***Total City cost*****:** N/A |
| **Staff Resources** | 1,000 hours of lead staff time and 375 supporting hours split between 5 staff is estimated. Total staff hours are estimated at 1,375 hours. Action can be accommodated on existing work plans. |
| **Status** | Underway. |

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|---|---|
| **Draft Key Performance Indicators** | • Council adoption of the updated Servicing Bylaw<br>• Number of watersheds completed annually<br>• Ratio of impervious to pervious groundcover on public property (%)<br>• Watershed health (indicated through Adaptive Management Strategy monitoring every 3 years) |

## Natural Environment

## Action 16 - Continue to increase public awareness and engagement with environmental programs

| **Quick Win:** *Lower potential to reduce greenhouse gas emissions and/or increase resilience and relatively easy to implement.* | |
|---|---|
| **Description** | This action involved education and information sharing on climate change and its impacts to the environment helps the community foster better attitudes and behaviours that can aid in efforts to mitigate and adapt to a changing environment. |
| **Significance** | This action is already underway, demonstrating alignment with existing work plans. This action is important to continue to effectively share significant and helpful information with the community that could lead to an increase in climate resilience and enhance protection of the natural environment. |
| **Lead Department/Division** | Community Services – Environment and Parks |
| **Initiation year** | 2021 |
| **Estimated completion** | Ongoing |
| **Estimated Financial Implications** | ***Required Budget:*** No new budget requests for this action are anticipated for 2021. Action can be accommodated through existing budgets.<br>***Funding opportunities*:** N/A<br>***Future Implications***: Unknown.<br>***Total City cost*:** $0.00 |
| **Staff Resources** | 40 hours of staff time are estimated split between one lead and 5 supporting staff. This action can be accommodated on existing work plans. |
| **Status** | Underway. |
| **Draft Key Performance Indicators** | • Dollars spent on environmental outreach events annually<br>• Number of people reached through social media and website annually<br>• Number of people reached through events annually |

## Action 17 - Develop an Urban Forest Management Strategy

| **Major Project:** *High potential to increase resilience and harder to implement.* | |
|---|---|
| **Description** | Healthy urban forests help communities mitigate and adapt to the impacts of climate change. This action focuses on developing a strategy to improve the City's management of urban forest to ensure long-term resiliency and improve canopy cover throughout the community. |
| **Significance** | This action is already underway, demonstrating alignment with existing work plans. This action is important to continue in order to best manage the urban forest, increase resilience to future climate scenarios, and to meet commitments in the Climate Emergency Declaration and the goals in the Climate Action Plan. This action has a high potential to increase resilience to climate change impacts. |
| **Lead Department/Division** | Community Services – Environment and Parks |
| **Initiation year** | 2020 |
| **Estimated completion** | 2022 |
| **Estimated Financial Implications** | ***Required Budget:*** No new funding requests are anticipated for 2021. Action can be accommodated through existing budgets.<br>***Funding opportunities*****:** N/A<br>***Future Implications***: Future costs for implementation are unknown but anticipated due to variability in Plan recommendations and outcomes.<br>***Total City cost*****:** N/A |
| **Staff Resources** | 300 hours of staff time are estimated split between one lead and 7 supporting staff. This action can be accommodated on existing work plans. |
| **Status** | Underway. |
| **Draft Key Performance Indicators** | ● Percent of canopy cover<br>● Number of trees removed annually<br>● Number of trees planted annually, including compensation trees<br>● Completion of an urban forest Management strategy by 2022 |

## Action 18 - Implement strategies to protect, restore, and connect Environmentally Sensitive Areas (ESA) city-wide

| **Quick Win:** *Average potential to increase resilience and relatively easy to implement.* | |
|---|---|
| **Description** | Climate change is resulting in changes to natural areas that provide ecosystem services and support native species. This action aims to protect, restore, and connect ESAs to support biodiversity and maintain and enhance the ecosystem services they provide, through improvements to policy and regulatory tools, and implementation of restoration projects in ESAs on City land. |

| | |
|---|---|
| **Significance** | This action is already underway, demonstrating alignment with existing work plans. This action is important to continue in order to increase resilience to future climate scenarios and achieve the goals outlined in the Climate Action Plan and other City strategic plans. This work has a high potential to result in increasing resilience to climate change in natural areas. |
| **Lead Department/Division** | Community Services – Environment and Parks |
| **Initiation year** | 2021 |
| **Estimated completion** | 2022 |
| **Estimated Financial Implications** | ***Required Budget:*** New budget request estimates of $40,000 in 2021 and $40,000 in 2022 for consultant assistance and implementing ESA strategies. The initial $40,000 has been incorporated in 2021 department capital budget.<br>***Funding opportunities*:** None available at this time.<br>***Future Implications***: Unknown<br>***Total City cost*:** $40,000 (2021) and $40,000 anticipated in 2022 |
| **Staff Resources** | 300 hours of staff time are estimated split between one lead and 6 supporting staff. This action can be accommodated on existing work plans. |
| **Status** | Underway. |
| **Draft Key Performance Indicators** | ● Completion of a minimum of two restoration projects annually<br>● New materials developed and available online<br>● Priority unprotected ESAs are incorporated into the Park Acquisition Plan |

## Action 19 - Develop climate resilient landscaping strategies for public lands

| **Best Bet:** *High potential to increase resilience and relatively easy to implement.* | |
|---|---|
| **Description** | Urban landscaping can play a key role in mitigating and adapting to the impacts of climate change in many ways, including providing habitat for species, absorbent landscaping to manage stormwater, and reducing the heat island effect. This action aims to develop strategies and standards to ensure landscaping on public lands are drought/heat/wind/flood resistant while promoting biodiversity and soil health. |
| **Significance** | This action is important to initiate in the first phase of implementation in order to increase resilience to future climate scenarios and achieve the goals outlined in the Climate Action Plan. This action complements Action 21 by further improving and protecting natural areas around the city. This action has a high potential to increase climate resilience. |
| **Lead Department/Division** | Community Services – Environment and Parks |
| **Initiation year** | 2020 |
| **Estimated completion** | 2021 |
| **Estimated Financial Implications** | ***Required Budget:*** New budget request of approximately $20,000 in 2021. This funding request has been incorporated in the 2021 department capital budget. New budget request of $55,000 to fund a dedicated team for maintenance of infrastructure from the capital budget in 2022 is anticipated. Costs include two seasonal staff for 2 years and truck rental to be assessed for ongoing need nearing 2022.<br>***Funding opportunities*:** None available at this time. |

| | |
|---|---|
| | ***Future Implications***: Unknown.<br>***Total City cost*:** $20,000 (2021) and $55,000 (2022) |
| **Staff Resources** | 160 hours of staff time are estimated split between one lead and 7 supporting staff. This action can be accommodated on existing work plans. |
| **Status** | Not initiated yet. |
| **Draft Key Performance Indicators** | ● Number of landscaped sites that are reviewed and enhanced through a climate resilient-lens<br>● Number of landscaped sites on private land annually<br>● Number of landscaped sites on public land annually<br>● Number of rain gardens annually<br>● Plant survival rate in new installations<br>● Number of natural cooling stations<br>● Number of staff hours spent watering |

## Action 20 - Improve Standards for Erosion and Sediment Control (ESC) for new developments and City projects.

| **Quick Win:** *Lower potential to increase resilience and relatively easy to implement.* | |
|---|---|
| **Description** | More frequent and intense rain events associated with climate change will increase sediment loading from stormwater runoff, impacting water quality in receiving environments. This action aims to review and update the City's Erosion and Sediment Control Standards to meet best practices and ensure ESC plans are prepared to manage intense rain evets. |
| **Significance** | This action is important to initiate in order to increase resilience, reduce risks associated with future climate scenarios such as flooding, and to achieve the Natural Environment goals outline in the Climate Action Plan and other City strategic plans. |
| **Lead Department/Division** | Community Services – Environment and Parks |
| **Initiation year** | 2021 |
| **Estimated completion** | 2022 |
| **Estimated Financial Implications** | ***Required Budget:*** No new budget requests anticipated in 2021. This action can be accommodated through existing budgets.<br>***Funding opportunities*:** N/A<br>***Future Implications***: Development and implementation of the standards may result in increased cost in City projects. Costs are unknown at this time.<br>***Total City cost*:** N/A |
| **Staff Resources** | 160 hours of staff time are estimated split between one lead and 4 supporting staff. This action can be accommodated on existing work plans. |
| **Status** | Not initiated yet. |
| **Draft Key Performance Indicators** | ● Reduction in number of annual ESC fines<br>● Reduction in annual number of call-outs |

| | |
|---|---|
| | • Reduced impacts to watercourses<br>• Reduced annual cost for Operations staff to clean out storm systems |

## Action 21 - Develop and implement a natural assets management plan with consideration of a carbon budget.

| **Major Project:** *High potential to reduce greenhouse gas emissions and/or increase resilience and harder to implement.* | |
|---|---|
| **Description** | Scope a natural asset strategy in order to proceed into development of a natural asset management plan. This action includes exploration of a carbon budget to better understand carbon sequestration and carbon accounting potential. |
| **Significance** | This action is already underway, demonstrating alignment with existing work plans. This action is important to continue in order to increase resilience of natural and man-made assets in addition to understanding natural asset impact on climate mitigation. This action has a high potential to quantify the reduction of greenhouse gas emissions and embed resilience in Port Moody's natural areas. |
| **Lead Department/Division** | Finance and Technology - Finance |
| **Initiation year** | 2020 |
| **Estimated completion** | 2022 |
| **Estimated Financial Implications** | ***Required Budget:*** No new budget requests anticipated in 2021. This action can be accommodated through existing budgets.<br>***Funding opportunities*:** N/A<br>***Future Implications***: Unknown.<br>***Total City cost*:** $0.00 |
| **Staff Resources** | 100 hours of lead staff time and 100 hours of supporting staff time split between 4 key staff are estimated. Total estimated staff time is 200 hours. This action can be accommodated on existing work plans. |
| **Status** | Underway. |
| **Draft Key Performance Indicators** | • Number of actions implemented from the Plan |

## Organization-Wide

# Action 22 - **Develop policy and procedures to embed climate mitigation and adaptation considerations throughout day-to-day City business.**

| **Best Bet:** *High potential to reduce greenhouse gas emissions and/or increase resilience and relatively easy to implement.* | |
|---|---|
| **Description** | Develop a city-wide policy that outlines procedures for considering climate risks, vulnerabilities and the impact on GHG emissions for every new policy, bylaw, strategy, plan, initiative, and capital project. |
| **Significance** | This action is already underway on an ad-hoc basis, demonstrating alignment with existing work plans. Developing a process outlined in a policy with guidelines for adding/reviewing a low carbon resilience climate lens throughout City business will ensure climate action is embedded consistently and efficiently throughout the organization. This action has a high potential to enable low carbon resilience planning and action throughout the organization. |
| **Lead Department/Division** | Community Development - Policy Planning |
| **Initiation year** | 2021 |
| **Estimated completion** | 2022 |
| **Estimated Financial Implications** | ***Required Budget:*** No new budget requests anticipated in 2021. This action can be accommodated through existing budgets.<br>***Funding opportunities*:** N/A<br>***Future Implications***: Unknown<br>***Total City cost*:** $0.00 |
| **Staff Resources** | 50 hours of lead staff time, 45 hours from split between 3 key supporting staff, and 150 hours from broader group of 5 staff from affected departments. Total staff hours is estimated at 245 hours. |
| **Status** | Not initiated yet. |
| **Draft Key Performance Indicators** | • Number of new city policies, bylaws, plans, strategies etc. implemented that include climate risks, vulnerabilities and the impact on GHG emissions |

## Action 23 - **Integrate climate budgets in the municipal budget process.**

| **Best Bet:** *High potential to reduce greenhouse gas emissions and/or increase resilience and relatively easy to implement.* | |
|---|---|
| **Description** | Enabling tools and processes to ensuring that the appropriate financial resources are in place to be able to complete climate actions. |
| **Significance** | This action is already underway, demonstrating alignment with existing work plans. This action is important to continue in order to effectively allocate resources to implement the Climate Action Plan goals and targets, Climate Emergency Declaration, and future climate initiatives. |
| **Lead Department/Division** | Finance and Technology – Finance |
| **Initiation year** | 2021 |
| **Estimated completion** | 2022 |
| **Estimated Financial Implications** | ***Required Budget:*** No new budget requests anticipated in 2021. This action can be accommodated through existing budgets.<br>***Funding opportunities*****:** N/A<br>***Future Implications***: Unknown<br>***Total City cost*****:** $0.00 |
| **Staff Resources** | Total staff time is estimated at 140 hours of lead staff time. Resources can be accommodated through existing staff work plans. |
| **Status** | Underway. |
| **Draft Key Performance Indicators** | • Ability to determine portion of capital and operating budget that is working towards/achieving climate action goals and targets |

## Appendix 1

# Backcasting in Port Moody: Prioritizing Strategies for Climate Action

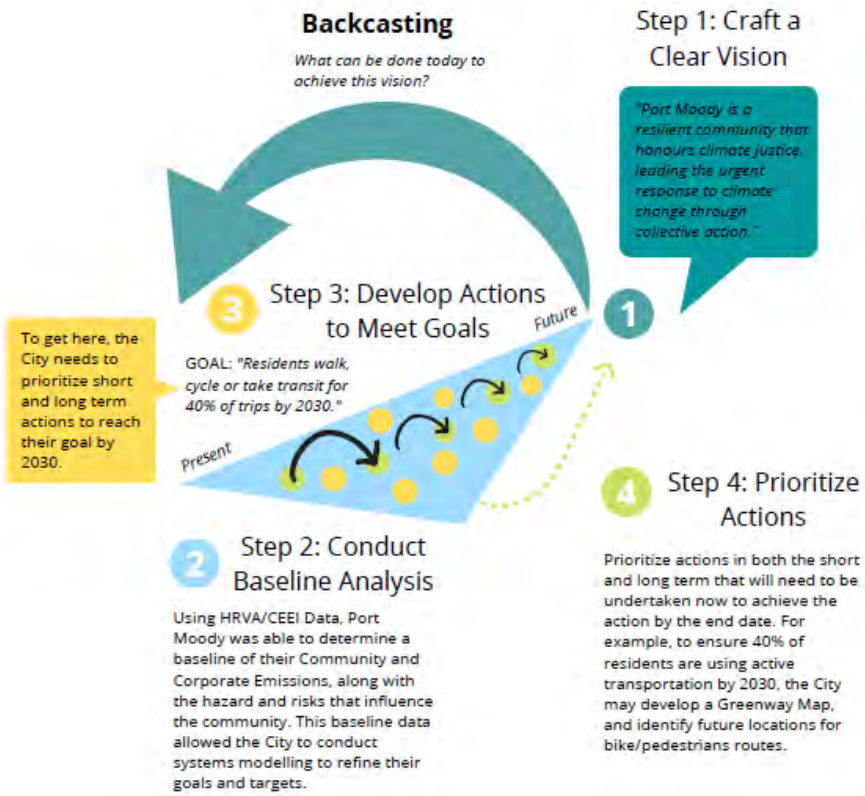



*Diagram Adapted from Natural Step, 2011.*

ICABCCI
Integrated Climate Action for BC Communities Initiative

# Appendix 2 – Envisio Project Management Sample for one Focus Area - Annual Reporting

## Phase One Implementation

**Report Legend** No Update Overdue **Priority**

**Focus Area 1** Progress 0%

Buildings

*Owner: Kate Zanon*

Goal(s): 1 Actions: 4


**Goal(s) 1.1** Progress 0%

Design/construct/renovate buildings that:

- Are durable and more likely to withstand or recover quickly from the anticipated effects of climate change;
- Use relatively little energy to operate; and
- Provide a healthy indoor environment with good air quality

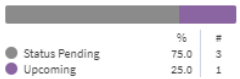
Design/construct/renovate buildings with:

- Materials that are associated with low levels of embodied carbon; and
- Materials that store carbon.

Use sources of energy that produce lower amounts of greenhouse gas emissions and energy systems that are more likely to withstand or recover quickly from disruptive events.

*Owner: Kate Zanon*

Actions: 4




**Actions 1.1.1**

Jun 01, 2020 - Mar 31, 2021 Status Pending Progress 0%

Revise the City's Sustainability Report Card to include performance measures to reduce operational and embodied GHG emissions and climate risks.

*Owner: Mary De Paoli*

**Actions 1.1.2**

Oct 30, 2020 - Dec 31, 2020 Status Pending Progress 0%

Perform comprehensive climate audits on all civic facilities and prioritize upgrades where feasible and highest risk.

*Owner: Laura Sampliner*

**Actions 1.1.3**

Jan 04, 2021 - Dec 31, 2021 Upcoming Progress 0%

Develop a resilient, zero-emissions plan for all new and existing buildings that includes addressing indoor air quality and climate risks where possible.

*Owner: Laura Sampliner*

**Actions 1.1.4**

Jul 01, 2020 - Jul 01, 2021 Status Pending Progress 0%

Initiate/continue discussions with federal and provincial governments to advocate for authority, financing tools, benchmarking, and other policies essential for achieving zero emissions buildings.

*Owner: Laura Sampliner*

**Report Card Average Score**

Increased average score of completed Sustainability Report Cards

*Actions 1.1.1 Revise the City's Sustainability Report Card to include performance measures to reduce operationa...*

**Annual Facility GHGs**

Percent reduction of annual GHG emissions from civic facilities

*Actions 1.1.2 Perform comprehensive climate audits on all civic facilities and prioritize upgrades where feasib...*

**Annual Facility Energy**

Percent reduction of annual energy consumption from civic facilities

*Actions 1.1.2 Perform comprehensive climate audits on all civic facilities and prioritize upgrades where feasib...*

**Climate Audit Implementation**

Number of climate audit recommendations implemented

*Actions 1.1.2 Perform comprehensive climate audits on all civic facilities and prioritize upgrades where feasib...*

**Annual community building GHGs**

Percent reduction of annual community building greenhouse gas emissions. Measured through the Community Energy and Emissions Inventory provided by the Province

*Actions 1.1.3 Develop a resilient, zero-emissions plan for all new and existing buildings that includes address...*

**Annual community building energy**

Percent reduction of annual community building energy consumption. Measured through the Community Energy and Emissions Inventory provided by the Province.

*Actions 1.1.3 Develop a resilient, zero-emissions plan for all new and existing buildings that includes address...*

**Development Permits**

Number of annual development applications targeting zero emissions and incorporating at least one climate resilience initiative

*Actions 1.1.3 Develop a resilient, zero-emissions plan for all new and existing buildings that includes address...*

**Renovation Permits**

Number of annual renovation permits targeting zero emissions and incorporating at least one climate resilience initiative

*Actions 1.1.3 Develop a resilient, zero-emissions plan for all new and existing buildings that includes address...*

**Supporting Organizations**

Number of organizations supporting advocacy messages

*Actions 1.1.4 Initiate/continue discussions with federal and provincial governments to advocate for authority, ...*

**Council Support**

Council support for advocacy

*Actions 1.1.4 Initiate/continue discussions with federal and provincial governments to advocate for authority, ...*

**Altered Policy**

Number of policies altered or created directly or indirectly as a result of advocacy

*Actions 1.1.4 Initiate/continue discussions with federal and provincial governments to advocate for authority, ...*