



AGENDA
ENVIRONMENT COMMITTEE

Wednesday, July 15, 2020, 3:00 P.M. - 5:00 P.M.

Board Room, Service and Resource Centre,
411 Dunsmuir Street, Nanaimo, BC

Pages

1. CALL THE MEETING TO ORDER:

[Note: This meeting will be video recorded for the public.]

2. INTRODUCTION OF LATE ITEMS:

3. ADOPTION OF AGENDA:

4. ADOPTION OF MINUTES:

a. Minutes

1 - 6

Minutes of the Special Environment Committee Meeting held in the Boardroom, Service and Resource Centre, 411 Dunsmuir Street, Nanaimo, BC, on Wednesday, 2020-JUN-03 at 3:00 p.m.

5. REPORTS:

a. Climate Change Resilience Strategy

7 - 25

To be introduced by Rob Lawrance, Environmental Planner.

Purpose: To present an overview of the City Climate Change Resilience Strategy for information purposes.

Presentation:

1. Rob Lawrance, Environmental Planner.

Recommendation: That the Environment Committee receive the report and presentation titled, "Climate Change Resilience Strategy", dated 2020-JUL-15, for information purposes.

b. CleanBC Home Renovation Rebate Program Update

26 - 28

To be introduced by Rob Lawrance, Environmental Planner.

Purpose: To inform the Committee on the CleanBC Home Renovation Rebate Program in order to discuss developing a promotion program in the Fall.

Recommendation: That the Environment Committee receive the report and presentation titled, "CleanBC Home Renovation Rebate Program Update", dated 2020-JUL-15, for information purposes.

c. Verbal Update Regarding REIMAGINE NANAIMO Process

To be introduced by Chris Sholberg, Community Heritage Planner.

6. OTHER BUSINESS:

7. ADJOURNMENT:

MINUTES
ENVIRONMENT COMMITTEE MEETING
BOARD ROOM, SERVICE AND RESOURCE CENTRE
411 DUNSMUIR STREET, NANAIMO, BC
WEDNESDAY, 2020-JUN-03, AT 3:00 P.M.

Present: Councillor B. Geselbracht, Chair
Councillor T. Brown (joined electronically)
E. Boulanger (joined electronically 3:50 p.m.)
D. Chen
H. DesRoches (joined electronically)
J. Lesemann (joined electronically)
L. McCunn (joined electronically)
W. Wells (joined electronically)

Absent: L. Frey

Staff: J. Rudolph, Chief Administrative Officer
D. Lindsay, General Manager, Development Services
B. Sims, General Manager, Engineering and Public Works (joined electronically)
J. Holm, Director, Development Approvals
L. Bhopalsingh, Manager, Community Planning
D. Mousseau, Manager, Engineering & Environment (joined electronically)
R. Lawrence, Environmental Planner
C. Sholberg, Community Heritage Planner (joined electronically)
S. Snelgrove, Recording Secretary

1. CALL THE SPECIAL ENVIRONMENT COMMITTEE MEETING TO ORDER:

The Special Environment Committee Meeting was called to order at 3:02 p.m.

2. INTRODUCTION OF LATE ITEMS:

- (a) Agenda Item 5(a) Climate Action Integration within the Reimagine Nanaimo Process
– change presenter to David Reid, Lanarc.

3. ADOPTION OF AGENDA:

It was moved and seconded that the Agenda, as amended, be adopted. The motion carried unanimously.

4. ADOPTION OF MINUTES:

It was moved and seconded that the Minutes of the Open Meeting of the Environment Committee held in the Boardroom, Service and Resource Centre, Nanaimo, BC, on Wednesday, 2020-MAR-11 at 5:00 p.m. be adopted as circulated. The motion carried unanimously.

5. REPORTS:

(a) Climate Action Integration within the Reimagine Nanaimo Process

Introduced by Rob Lawrance, Environmental Planner.

Presentation:

1. David Reid, Lanarc, provided a presentation regarding the integration of climate action within the Reimagine Nanaimo process. Highlights included:
 - Rebranding “City Spark” to “Reimagine Nanaimo”
 - Six integrated plans will be reviewed including the Official Community Plan; Parks, Recreation and Culture Plan Update; Active Transportation Plan; Climate Action Plan; Economic Development Plan and Water Supply Strategic Plan
 - Adapting to unexpected changes such as climate change and economic changes related to COVID-19
 - C2MP consulting team are specialists in climate action and will participate in future meetings
 - C2MP has developed a web based, integrated tool for exploring and evaluating municipal climate action scenarios and will evaluate what mix of options are the best for Nanaimo
 - The engagement program builds off of the work completed by the Community Engagement Task Force final report
 - Timeline:
 - Options to achieve climate targets and other objectives will be addressed in the Fall
 - Options will be technically evaluated and shared with the community in the late Fall to Winter
 - Draft recommendations will be brought forward in the Spring
 - Phase two will be to explore options
 - Phase three is to develop plans
 - Will have a range of participation from stakeholders and the general public
 - Engagement will be balanced between print and digital with a primary reliance on digital
 - Engagement tools to be used include: webpages, moderated social media, video shorts, media releases, photo contest, Get involved Nanaimo site, e-notifications, mail outs of statistically valid and community questionnaires, Vancouver Island University and School District 68
 - Encouraging this group to use their networks and word of mouth for engagement
 - Climate action integrated with land use, active transportation, transit and technology

Committee discussion took place regarding:

- Focus on green house gas emissions and broadening the focus beyond Green House Gases (GHG)
- Core functions of water supply and waste management through the Regional District of Nanaimo (RDN)
- Importance of understanding governance role of the City as some aspects do not fall within the control of the City of Nanaimo
- A fundamental piece of the Official Community Plan (OCP) Update is sustainable service delivery
- Council's strategic plan includes consideration of completing a natural asset inventory
- Current OCP has climate change aspects addressed throughout the document
- Information presented to the public discussing targets and the consequences of targets
- Defining the indicators to measure success
- Having climate reduction targets in addition to GHG emission reductions and not solely focused on GHGs

E. Boulanger joined the meeting electronically at 3:50 p.m.

- Regional Growth Strategy including targets and indicators
- Climate change adaptation and resilience underpinning the Official Community Plan review process
- "15 minute Neighbourhood" where residents can recreate, work and have service needs met all within a fifteen minute walk
- Using terms that resonate with the public and how they are presented
- Communication of indicators over time and opportunity to have discussions to make sure the City is addressing the broad spectrum of sustainability within the framework

It was moved and seconded that the Environment Committee receive the report titled "Climate Action Integration within the Reimagine Nanaimo Process" dated 2020-JUN-03. The motion carried unanimously.

(b) Climate Resiliency Public Engagement Working Group

Rob Lawrance, Environmental Planner, spoke regarding:

- The City has been working on a Climate Resiliency Strategy for the last two years which was centred around City staff, departments and infrastructure
- The working group will review how to prepare for climate change in the future
- Staff have a number of actions and recommendations prepared to take to Council
- Questions remain regarding how the City engages with the community and the communication the City is proposing
- Working group must be limited membership as it cannot have a quorum of committee members
- Determine how to work with stakeholders, build capacity and move forward

Committee discussion took place regarding:

- Importance of receiving input from the community
- Previous communication and how to communicate issues to the public
- Coordination with the OCP engagement process
- Working group to determine if there are specific environmental events to coordinate responses for, such as high heat events, localized forest fires and if the services the City offers can be better coordinated
- Methods to share foundational environmental information with the public to avoid being alarming but to translate science based data into understandable information
- Avoiding consultation burnout with the public
- Empowering residents and sharing ideas of what a family unit can do to take action and make an environmental difference
- Committee members interested in joining the working group can email Councillors Brown and Geselbracht

E. Boulanger disconnected at 4:25 p.m.

It was moved and seconded that the Environment Committee recommend that Council support establishing a working group in order to prepare a plan on how the City can communicate and engage with the public on the issue of climate resiliency. The motion carried unanimously.

E. Boulanger reconnected at 4:26 p.m.

(c) BC Energy Step Code Rezoning Policy

Jeremy Holm, Director, Development Approvals, spoke regarding:

- The BC Energy Step Code Rezoning Policy was adopted in July 2018
- The Step Code is developed by the Province and is a voluntary incremental incentive program municipalities can either require or use as an incentive to augment requirements of the BC Building Code for increased building efficiency
- Province adopted timeline for implementation of step code
- Net zero for new builds by 2032
- Council introduced incentives into the Zoning Bylaw
- If adopted by Council the policy would require a property to exceed minimum requirements in the building bylaw by one step
- Policy allows for incremental increase in energy efficiency requirements in the building bylaw
- Options for the committee include endorsing the policy or providing recommendations and revisions

Committee discussion took place regarding:

- Acceleration of adoption time
- Energy that could be generated from the design of buildings

- Minimizing the amount of energy needed to function through better building design
- Energy consumed is offset by production
- Many approaches available to use to achieve net zero buildings
- Idea to incrementally build up capacity in buildings to reach net zero by 2032
- Costs of buildings increasing due to Step Code

It was moved and seconded that the Environment Committee endorse the draft BC Energy Step Code Rezoning Policy. The motion carried unanimously.

(d) Green Fleet Strategy

Introduced by Bill Sims, General Manager, Engineering and Public Works.

Presentation:

1. Bill Sims, General Manager, Engineering and Public Works, advised:
 - Transportation accounts for large majority of City's GHG emissions
 - Demonstrating leadership by greening the fleet
 - Designed to reduce emissions, manage costs and expenses and improve efficiency
 - Council directed a fleet review in June 2019
 - The City has approximately 450 pieces of equipment
 - Fleet rating of silver as a benchmark for City's fleet
 - Promotes lower fuel use, emissions and downtime
 - Cornerstone of strategy- reducing fuel consumption, use of alternative fuels, and electric vehicle charging infrastructure
 - Overview of City's GHG targets vs. actuals
 - Co2 emission distribution across City vehicles with 22% of fleet using alternative fuels and 29% using bio diesel

Committee discussion took place regarding:

- Compressed Natural Gas (CNG) vs. Liquefied Natural Gas (LNG) and LNG distribution network

It was moved and seconded that the Environment Committee receive the Green Fleet Strategy Presentation for information. The motion carried unanimously.

6. OTHER BUSINESS:

(a) Councillor Geselbracht re: Performance Indicators

Discussion took place regarding:

- Opportunity for the committee to have input and discussion on performance indicators for each category of the Environmental Framework
- Determining indicators

It was moved and seconded that draft environmental indicators for each category of the Environmental Framework be brought forward to the committee for review and comment. The motion carried unanimously.

7. ADJOURNMENT:

It was moved and seconded at 5:00 p.m. that the meeting terminate. The motion carried unanimously.

CHAIR

CERTIFIED CORRECT:

CORPORATE OFFICER

DATE OF MEETING JULY 15, 2020

AUTHORED BY ROB LAWRENCE, ENVIRONMENTAL PLANNER

SUBJECT CLIMATE CHANGE RESILIENCE STRATEGY

OVERVIEW

Purpose of Report:

To present an overview of the City Climate Change Resilience Strategy for information purposes.

Recommendation

That the Environment Committee receive the report and presentation titled, "Climate Change Resilience Strategy", dated 2020-JUL-15, for information purposes.

BACKGROUND

Climate resiliency refers to the ability of a socio-ecological system to not only absorb the shock and stress caused by climate change but to maintain its function and adapt and renew itself into a system better prepared for future climate impacts.

In order to effectively address climate change in Nanaimo, the City will need to do more than lower greenhouse gas emissions. It will need to be prepared for the expected changes to our climate. Recognizing this need, staff began work on developing a climate resiliency strategy in late 2017. On June 22, 2020, Council adopted the Climate Change Resilience Strategy.

The objective of the Resilience Strategy is to identify all climate change related vulnerabilities within the City of Nanaimo using the best available data and develop recommendations for the City to address or avoid any climate related risks identified.

DISCUSSION

The Climate Change Resilience Strategy has identified a number of climate change related impacts anticipated for Nanaimo based on provincial modeling. Some of the key expected impacts are:

- Water supply strain from hotter drier weather.
- Property damage from short high-intensity rain and wind events.
- Potential changes in species range for wildlife.
- Heat-related illness exacerbated by aging population and rising homelessness.
- Landslides triggered by saturated soils, leading to damage to infrastructure and homes.

Risk and vulnerability assessments were completed with input from City staff and community stakeholders. From these assessments, a list of prioritized themes (focus areas), objectives, actions and recommendations were developed. They include the following:

1. **Water Supply:** Actions to prepare for a more limited water supply and improve the resilience of existing water infrastructure.
Priority Actions:
 - a. Update the *Water Supply Strategic Plan* to account for climate change, population growth and identify additional sources of drinking water.
 - b. Update the *Emergency Response Plan* for the water treatment plant and water supply infrastructure.
2. **Flooding and Drainage:** Actions to minimize urban and overland flooding resulting from heavy rainfall and to prepare for the impacts of rising sea levels (i.e. shoreline erosions and coastal flooding risk).
Priority Actions:
 - a. Identify, enhance and re-establish overland flow paths, drainage basins and protected right-of-ways on private property.
 - b. Prioritize and accelerate storm water catchment master planning for local water basins.
 - c. Explore the potential for a storm water utility rate to generate revenue as a sustainable funding source to mitigate impacts from climate change.
 - d. Review policies and standards in the *Building and Zoning Bylaws* with consideration of the coastal flood construction levels and other recommendations of the *Sea Level Rise Study*.
3. **Environment, Parks and Recreation:** Action to support Nanaimo's urban forest and natural areas under a changing climate and to help improve the resilience of watercourse and marine ecosystems.
Priority Actions:
 - a. Review and update City planting standards (for both City-led and private developments) to prioritize the use of climate resistant tree species.
 - b. Reduce safety and assess issues by improving tree resilience to storm and wind events along main transportation routes.
 - c. Inventory natural assets that are key to the City and incorporate these into the City asset management program to protect and maintain their function.
4. **Well-being and Preparedness:** Actions to help Nanaimo prepare and respond to climate related events and limit health issues.
Priority Actions:
 - a. Develop an *Extreme Heat Response Strategy* that includes information on cooling spaces that can serve community members during severe heat waves.
 - b. Work with Island Health and other stakeholders to deliver coordinated information on what the public can do during heat waves and poor air quality events.
 - c. Review and update the *North Slope Geotechnical Study* to incorporate climate change impacts and projections and expand these lessons to other steep slope coastal areas (i.e. Cilaire, Stephenson Point).
5. **Land Use and Buildings:** Actions to enhance resilience for new and existing buildings, which would include, public facilities and homes, along with regulations to help limit risk.

Priority Actions:

- a. Develop a coastal development permit area with guidelines for new construction, major renovations and infrastructure placement in areas of risk of coastal flooding.
 - b. Review and update the *North Slope Geotechnical Study* to incorporate climate change impacts and projections and expand these lessons to other steep slope coastal areas (i.e. Cilaire, Stephenson Point).
 - c. Develop a policy to require future climate considerations into new construction projects and rezoning applications (i.e. passive design, future climate modelling).
 - d. Identify forest wildfire risk areas adjacent to residential properties and City infrastructure and establish a wildfire development permit area.
6. **Corporate Governance and Mainstreaming:** Actions to help improve the City's agility to respond and recover from climate related events, along with, guidance on working with neighbouring jurisdictions and common goals.

Priority Actions:

- a. Ensure contingency reserves contain an allowance for recovery from climate related events.
- b. Incorporate climate change resilience into the review and development of asset management plans.
- c. In light of climate projections, review existing servicing agreements between the City, Snuneymuxw First Nation, Regional District of Nanaimo and the District of Lantzville and make appropriate adjustments to ensure consistent service to limit the transfer of risk across jurisdictional boundaries. .]

CONCLUSION

The accompanying presentation intends to provide the Committee with an overview of the process and recommended actions in the Strategy in order to help inform the committee and provide some background in preparation for the upcoming Reimagine Nanaimo OCP review process.

SUMMARY POINTS

- Climate resiliency refers to the ability of a socio-ecological system to not only absorb the shock and stress caused by climate change but to maintain its function and adapt and renew itself into a system better prepared for future climate impacts.
- The objective of the Climate Change Resilience Strategy is to identify all climate change related vulnerabilities within the City of Nanaimo using the best available data and develop recommendations for the City to address or avoid any climate related risks identified.

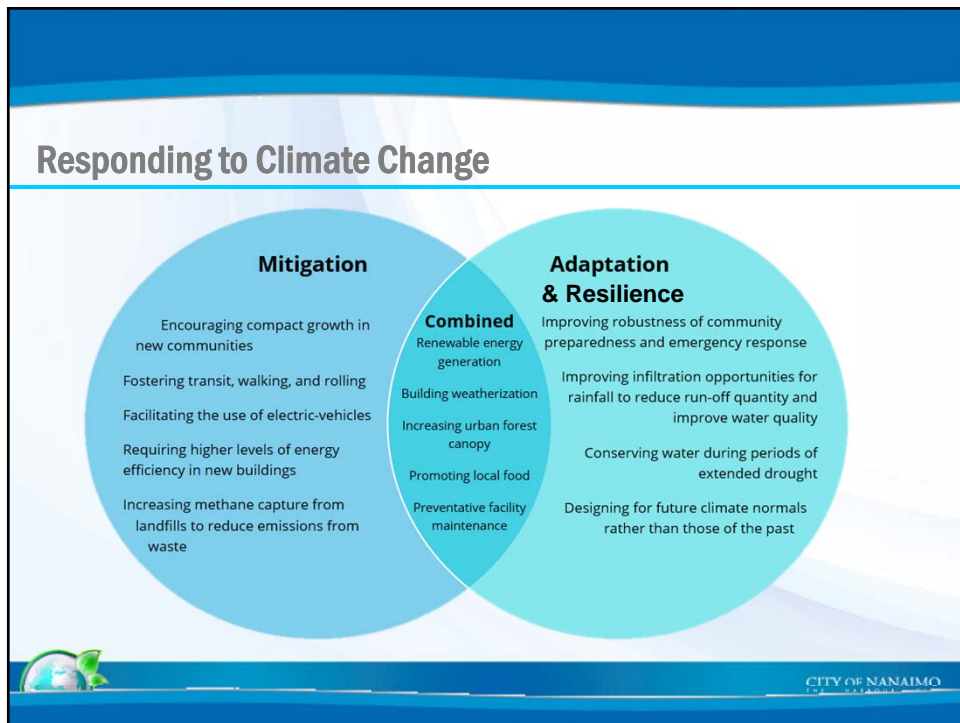
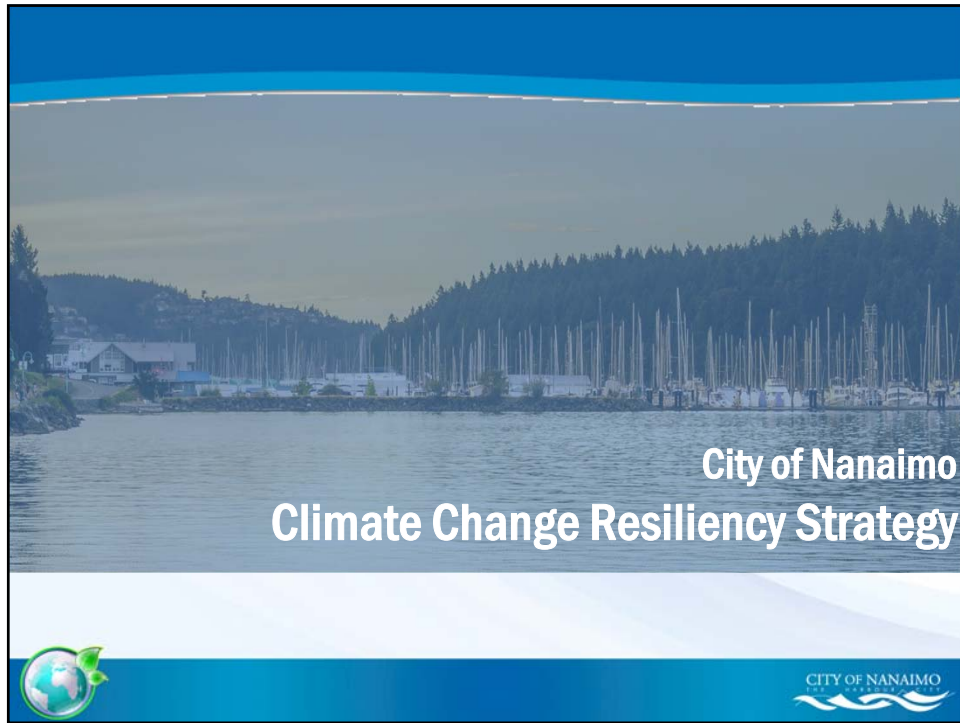
Submitted by:

Rob Lawrance
Environment Planner |

Concurrence by:

Jeremy Holm
Director, Development Approvals

Dale Lindsay
General Manager, Development Services |



Project Overview

Funding:

- Federation of Canadian Municipalities – Climate Innovation Program
- City of Nanaimo - staff time

Timeline:

- 2018: Sea Level Rise Study
- 2019/20: Resiliency Strategy

Objectives:

- Identify local climate change impacts and specify actions to protect residents and municipal assets.





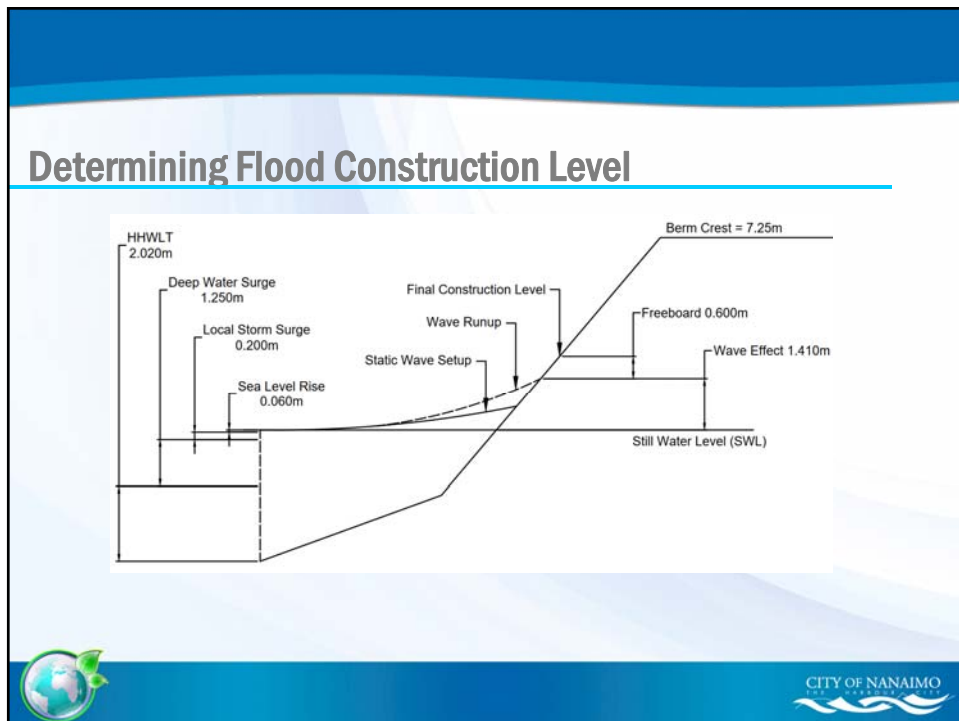






Sea Level Rise Study



Conclusions and Recommendations

The City is not as vulnerable to SLR as other areas of Vancouver Island and the Lower Mainland

Follow-up with 2-D inundation modeling and refine FCL mapping for:

- Departure Bay,
- Downtown,
- Protection Island,

Coastal Hazard Development Permit Area with guidelines for new construction and major renovations.

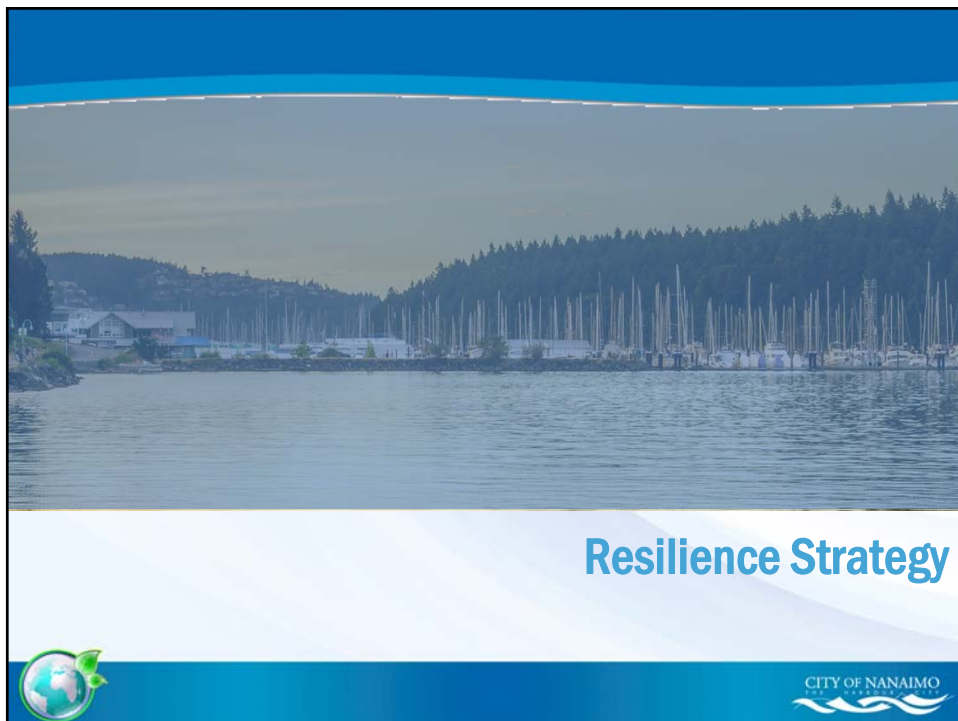
Review Zoning and Building bylaws to update flood hazard requirements.

Review and formalize a **coastal erosion monitoring program**

Green Shores Strategy to identify locations and techniques to install features to respond to coastal flooding and erosion



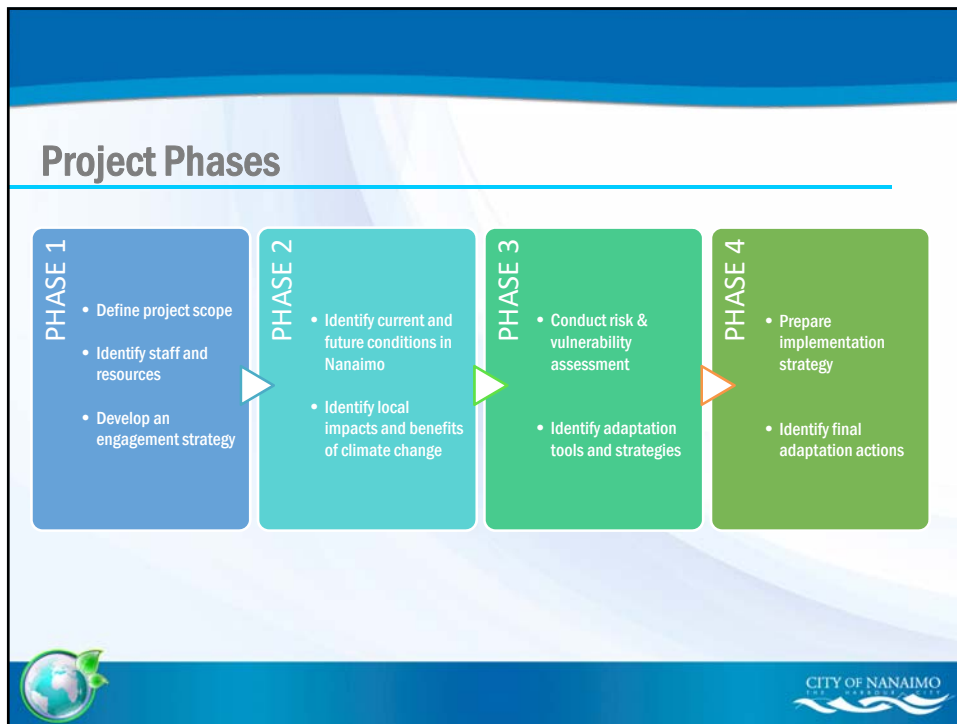
CITY OF NANAIMO
THE COASTAL CITY



Resilience Strategy



CITY OF NANAIMO
THE COASTAL CITY



Engagement

External Stakeholders

Engagement with external stakeholders took place on a *consultative* level of engagement with a focus on receiving feedback throughout the phases of the process.

Stakeholders who participated and who were contacted were:

- *Island Health*
- *Nanaimo Port Authority*
- *Snuneymuxw First Nation*
- *RDN- Planning, Environment and Emergency Planning staff*
- *Ministry of Transportation and Infrastructure*
- *BC Ferries – Brian Green,*
- *BC Hydro – Ted Olynyk*
- *Harmac Paper Products – David Bramley (Environmental Officer)*
- *School District #68*
- *Nature Trust of British Columbia*
- *BC Housing*
- *Vancouver Island University*



Review: High Risk Impacts



Expected Climate Impacts:

- Reduced water availability and strain on water supply from hotter, drier summers
- Impact of short duration/high-intensity rain on storm drains leading to flooding and potential property damage
- Potential changes to tree species' range and increased incidences of mortality, affecting urban forests and vegetation (e.g., cedar, salal)
- Incidences of heat-related illnesses exacerbated by aging demographics and rising homelessness
- Landslides may be triggered by saturated soils, leading to loss of homes and damage to infrastructure (e.g., storm and sanitary sewers)
- Increased stress and anxiety from those impacted, first responders, and supporting community members
- Long-term economic and social impacts, including challenges for the tax base, given expense of continued response and recovery



Strategy Development Process



Strategy Development Process

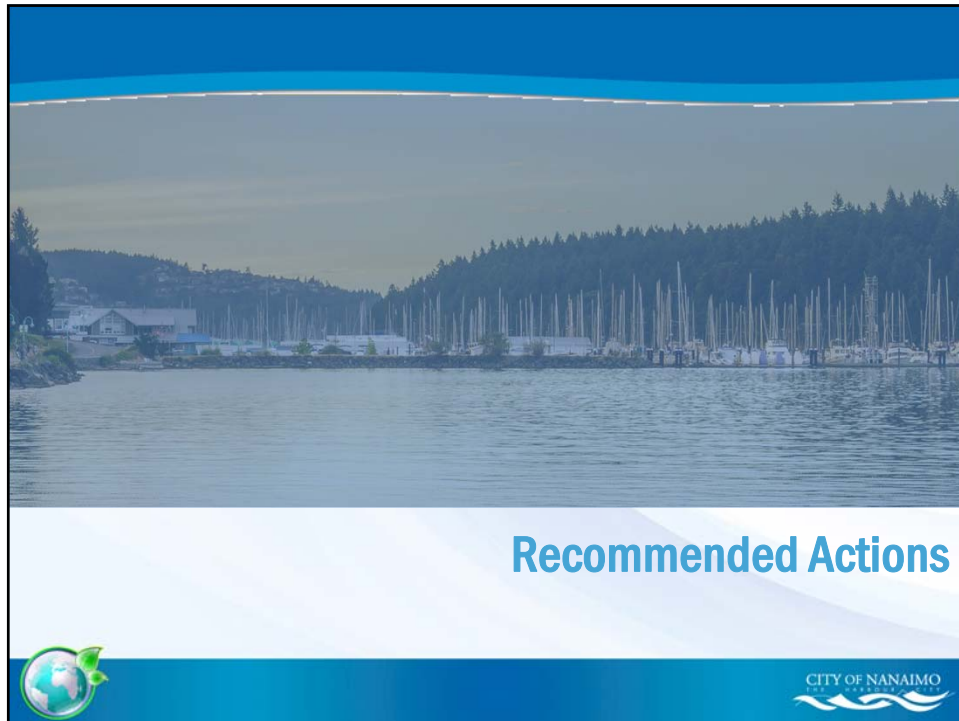
Impacts	<ul style="list-style-type: none"> Impact Statements
Prioritize	<ul style="list-style-type: none"> Vulnerability and Risk Assessment
Actions	<ul style="list-style-type: none"> Quick Wins Brainstorm, Evaluate and Refine Actions
Plan	<ul style="list-style-type: none"> Vision and Guiding Principles Goals and/or Objectives
Implement	<ul style="list-style-type: none"> Implementation Plan (responsibility, timeline, funding) Monitoring and Review Framework



Evaluation & Implementation

Evaluation Criteria					Implementation Planning			
GHG	Resilience	Cost	Effort	Co-benefits	Start Date	Lead Dept.	Resources	Partners
1 - increases GHGs 2 - no impact/no reductions 3 - reduces GHGs	Increases resilience: 1 - slightly 2 - somewhat 3 - significantly	\$ - under \$50k \$\$ - \$50-\$100k \$\$\$ - \$100k - \$500k \$\$\$\$ - over \$500k	1 - significant effort 2 - moderate effort 3 - low effort	1 - slightly 2 - somewhat 3 - significantly	YEAR, or Immediate Ongoing ST (1-2 years) MT (3-7 years) LT (10+ years)	Indicate relevant City of Nanaimo dept	Can be accomplished with existing staff vs. new FTE required	List potential stakeholder partners E.g. District of Nanaimo, Island Health







Water Supply

Objective 1: Prepare for a more limited water supply and improve resiliency of water infrastructure

- **Update Water Supply Strategy Plan** to include climate change impacts and implement additional watershed storage projects (\$\$\$\$/\$-LT)
- Work with Province and conservation partners to identify locations where **water can be seasonally held and released during summer low flow** to improve resiliency of urban streams (\$\$\$/\$T)
- **Update Emergency Response Plan** for water treatment plant / water infrastructure (\$\$/ST)
- **Establish a water governance committee** to addressing increasing demand from neighbouring communities and First Nations for water (\$/LT)

Flooding and Drainage

Objective 1: Minimize Urban Overland flooding resulting from heavy rainfall

- Identify, enhance and establish new **overland flow paths, drainage basins and protected right-of-ways** on private property (\$\$\$\$/\$-LT)
- Prioritize and accelerate **storm water catchment master planning** and implement infrastructure upgrades (\$\$\$\$/\$-ST)
- Explore **developing a storm utility rate** to generate revenue as a sustainable funding source to mitigate impacts from climate change (\$/\$-MT)



Flooding and Drainage

Objective 2: Prepare for the impacts of sea level rise, including associated erosion and coastal flood risk

- Review the minimum flood construction levels (FCLs) and **incorporate the results of Nanaimo's sea level rise FCL Study into the Building and Zoning Bylaws** (\$/\$-MT)
- **Complete inundation modeling** and mapping for areas identified as vulnerable in the SLR Study (Departure Bay, Downtown, Protection Island) (\$/\$-MT)
- Review and formalize a **coastal erosion monitoring program** (\$/\$-MT)



Environment, Parks and Recreation

Objective 1: Quantify and Manage Nanaimo Urban Forests

- Improve **tree resilience** to storm and wind events **along main transportation routes** (\$\$/MT)
- Develop appropriate **tree planting targets** and schedules to replace trees lost during storm events (\$\$/MT)
- Develop guidelines for **fuel management zones within high use parks** (\$\$/MT)
- **Conduct Park condition assessments in all City Parks** and develop adaptation measures to address climate impact risks (\$/S-MT)
- Review and update **City Tree Planting Standards** (for City and private developments) to include climate resilient tree species (\$/ST)
- Develop a **community education program** on park use fire safety and awareness (\$/MT)



Environment, Parks and Recreation

Objective 2: Assess and restore Nanaimo's ecological diversity, focusing on the City's urban watercourse and marine foreshore

- Assess, identify and implement **additional water storage and impoundment** opportunities as a way to build resistance for urban streams within the Millstone River catchment area for fish habitat use during low summer flows (\$\$/ST)
- Coordinate with the RDN to **complete a detailed watercourse habitat assessment** for urban watercourses within the City (\$\$/MT)
- **Identify and inventory key City natural assets** and incorporate into City's asset management program in order to protect and maintain their function (\$\$/ST)
- **Prioritize ecological restoration along riparian areas within the City**, as a way to build resilience and enhance habitat corridors (\$\$/MT)



Well Being and Preparedness

Objective 1: Work with Community Partners to minimize health impacts of extreme weather (higher heat days and poor air quality from wildfires) on residents

- Develop an **Extreme Heat Response Strategy** (\$\$/M-LT)
- **Apply a resiliency lens when planning and designing public facilities.** Consider whether the facility can act as a cooling centre or providing a space with clean air during periods of low air quality from forest fires (\$\$/MT)
- **Expand Blue Community Program** to increase public water fountain and water bottle filling stations (\$\$/ST)
- Work with Island Health and other community stakeholders to put forward **coordinated and consistent messaging on limiting exposure to high heat and poor air quality events** (\$/ST)



Well Being and Preparedness

Objective 2: Improve knowledge, capacity and response plans to deal with increasing risk of landslides and wildfires

- Review existing practice around servicing **public infrastructure located on private property** (\$\$/M-LT)
- Review and **update the North Slope Geo-tech Study** to incorporate known climate projections (\$\$/MT)

Objective 3: Improve community capacity and resilience to extreme events by increasing public awareness of climate change, expected impacts and how to prepare for them

- Work with community stakeholders to support neighbourhood-level organizations in **building resident awareness around climate emergency preparedness** (\$\$/ST)
- Establish an outreach program for property owners of overland flow paths and provide awareness training to maintain these structures (\$/MT)



Land Use and Buildings

Objective 1: Improve resilience planning for new and existing City facilities and residential development

- Provide information to homeowners on the **benefits of heat pumps** for improved energy efficiency and home comfort. **Review and revise any regulatory restrictions** (\$/MT)
- Include assessments for climate change impacts (e.g. wildfires, flooding, land-slip) into City-owned **building facility asset assessments** as well as mitigation action (\$/MT)
- **Require future climate considerations** into new construction projects / rezoning applications (e.g. passive design, future climate modeling, appropriate shading, etc.) (\$/MT)



Land Use and Buildings

Objective 2: Ensure development regulations and guidelines incorporate anticipated changes to climate-related natural hazards

- Develop **guidelines for new development / renovation and infrastructure placement** in areas at risk of coastal flood up to 2100 (\$\$/ST)
- **Update the Hazard Land and Steep Slope Development Permit Area Guidelines** and other pertinent bylaws to indicate need for preparation of geotechnical reports for new construction to ensure capturing current knowledge of future landslide / flood risk (\$/ST)
- Develop a **climate adaptation assessment checklist for rezoning and development permits** and for a climate adaptation DPA. Provide incentives for development in higher risk areas to offset costs of response (\$/ST)



Corporate Governance

Objective 1: Improve the City's agility in respond and recover from climate related hazard events

- Ensure contingency **reserves contain an allowance for recovery** from climate related events (\$\$\$/MT)
- Incorporate climate resiliency into the review and development of **asset management plans** (\$/ST)
- Review **large capital infrastructure investments** using a Public Infrastructure Engineering Vulnerability Committee (PIEVC) assessment method (\$\$/ST)



Corporate Governance

Objective 2: Work with neighbouring jurisdictions to support climate resilience and limit transfer of risk across jurisdictional boundaries

- Continue to work with Snuneymuxw First nation and other regional partners on the Nanaimo Estuary Management Committee and the Nanaimo Watershed Roundtable to support climate adaptation initiatives that conserve and enhance habitat and protect property within the watershed (\$/ST)
- **Share information and collaborate** with the Regional District of Nanaimo (RDN), neighbouring municipalities and Snuneymuxw First Nation (SFN) **on sea level rise planning and other resiliency strategies** (\$/ongoing)
- **Review existing servicing agreements** between the City, SFN and Lantzville in light of climate projections and make appropriate adjustments to **ensure consistent service and limit the transfer of risk across jurisdictional boundaries** (\$/ongoing)



Implementation and Monitoring

Action Area	Indicator
Water Supply	Growth in volume of water stored (% from baseline)
	Per capita water use
Flooding and Drainage	Number of complaints registered in Tempest CMMS
	Value of assets in unprotected future floodplain
Environment, Parks and Recreation	Urban trees captured in a tree inventory (%)
	Canopy cover
Well-being and Preparedness	Riparian restoration projects (#)
	<i>Heat Response Plan</i> complete and implemented
Land Use and Buildings	Cooling centres available during extreme heat (#)
	DPA's adopted and guidelines for areas at coastal risk completed (% or #)
Corporate Governance and Mainstreaming	City owned facilities assessed for resilience (% or #)
	Asset management planning includes a well integrated climate lens
	Capital infrastructure projects assessed for climate risk (% annually)



Questions / Discussion



DATE OF MEETING JULY 15, 2020

AUTHORED BY ROB LAWRENCE, ENVIRONMENTAL PLANNER

SUBJECT CLEANBC HOME RENOVATION REBATE PROGRAM UPDATE

OVERVIEW

Purpose of Report:

To inform the Committee on the CleanBC Home Renovation Rebate Program in order to discuss developing a promotion program in the Fall.

Recommendation

That the Environment Committee receive the report and presentation titled, "CleanBC Home Renovation Rebate Program Update", dated 2020-JUL-15, for information purposes.

BACKGROUND

The CleanBC Better Homes Rebate Program is a program coordinated by the Province of BC to help accelerate home energy retrofits and reduce energy use by providing incentives for high efficiency heating equipment and building envelope improvements. Both BC Hydro and Fortis BC are also offering support and incentive funding as part of the program.

As part of the effort to implement the City's Climate Emergency Declaration, Council directed \$100,000.00 from the City of Nanaimo Emission Reduction Reserve Fund towards the CleanBC Better Homes Rebate Program. The province administers the program and reports to the City quarterly on the program uptake.

DISCUSSION

To date, media attention toward the program has been muted since attention has been focused on the COVID-19 pandemic. City staff will be looking into developing a more targeted campaign in the fall that will complement the Provinces program.

Staff are interested in hearing from the committee towards the fall regarding what the City should consider when developing its own marketing strategy on building energy efficiency incentives and the rebates currently offered in light of the current and potential health restriction that has impacted public movement and access to City facilities.

Rebate Program Top-Ups

The City is participating in the following CleanBC rebates:

Fuel Switch Heat Pump

The Fuel Switch Heat Pump top-up is a rebate for participants that switch from a fossil fuel (oil, natural gas or propane) heating system to an electric air-source heat pump. The City has committed to a \$350 top-up. Participants either can install a fully electric heat pump system or install a dual-fuel heat pump system with back up fossil fuel heating (i.e. a furnace). This municipal top-up is in addition to up to \$3,000 in rebates currently available through the CleanBC Program.

Electric Service Upgrade

The Electric Service Upgrade rebate is an additional \$500 for participants upgrading their electrical service to 100, 200 or 400 amp service and switching from a fossil fuel (oil, natural gas or propane) space or a water heating system to an electric air-source heat pump or heat pump water heater.

Electric Heat Pump Water Heater

The Heat Pump Water Heater top up is a \$350 rebate from the City for residents that switch from a fossil fuel (oil, natural gas or propane) water heating system to an electric heat pump water heater.

Contractor Participation Incentive

The Contractor Participation Incentive is a \$50 top-up available to the contractor for installing a qualifying heat pump for space or domestic hot water heating in homes that are fuel switching from natural gas, oil or propane. Contractors are a key stakeholder in the rebate process as 60% of rebate applicants hear about the program from their contractor. The contractor also supports homeowners with required paperwork and the application process. The City's contribution would be matched by the Province.

EnerGuide Home Evaluation

The City of Nanaimo currently has an EnerGuide Home Evaluation Rebate that provides a \$150 rebate toward the cost to complete a Home Energy Efficiency Assessment. This rebate is in addition to a \$300 rebate available from the Province to help cover the costs of a home energy evaluation.

CONCLUSION

The City's participation in the CleanBC Home Renovation Rebate Program offers a great opportunity to leverage City funds with the province to encourage homeowners to switch out fossil fuel intense heating systems for electric heat pumps and to learn more about energy efficient upgrade opportunities for their home.

The information in this report is provided as background to the committee. Staff will be preparing a draft City communication plan in the fall to help promote the program in Nanaimo. Staff will be asking for input from the Committee before moving on with implementation.

SUMMARY POINTS

- CleanBC Home Renovation Rebate Program is a program coordinated by the Province of BC and intends to help accelerate home energy retrofits and reduce energy use by providing incentives for high efficiency heating equipment and building envelope improvements.
- To date, media attention toward the program has been muted since attention has been focused on the COVID-19 pandemic. Looking forward, City staff will be looking into developing a more targeted campaign in the coming fall that will complement the provinces program.
- Staff would like to develop a targeted public awareness campaign, in light of current and future health restrictions, and are looking for input on how best to frame and develop this with input from the environment committee.

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