AGENDA
SPECIAL COUNCIL MEETING

Monday, June 22, 2020, 1:00 P.M. - 4:00 P.M.
SHAW AUDITORIUM, VANCOUVER ISLAND CONFERENCE CENTRE
80 COMMERCIAL STREET, NANAIMO, BC

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Pages

1. CALL THE MEETING TO ORDER:

2. INTRODUCTION OF LATE ITEMS

3. APPROVAL OF THE AGENDA:

4. MAYOR'S REPORT:

5. PRESENTATIONS:

a. Maffeo Sutton Park Re-Opening 5

Richard Harding, General Manager, Parks, Recreation and Culture, to provide Council with a verbal presentation regarding the re-opening of Maffeo Sutton Park.

6. CONSENT ITEMS:

a. Finance and Audit Committee Meeting 2020-JUN-17

1. Recommendations re: Fire Station No. 1 6 - 13

[Note: Staff report and presentation attached for information only.]

1. That Council direct Staff to proceed with the Fire Station No. 1 project.

2. That Council amend the 2020-2024 Financial Plan to increase the budget in year three (2022) by $3M from $3,740,269 to $6,740,269 with the additional funding from the General Capital Reserve and the General Asset Management Reserve.

2. Recommendation re: Supporting Arts & Culture: Implementation of Nanaimo Art Gallery Phased Development Plan

1. That Council include the following items in their review process of the 2021-2025 Budget considerations:

1. Allocation of $50,000 per year in additional operating funding of the Nanaimo Art Gallery in the 2021-2025 Financial Plan;

2. Allocation of $10,000 per year in funding to the Nanaimo Art Gallery in the 2021 2025 Financial Plan for capital expenditures at the Arts Centre at 150 Commercial Street; and amend the 2014-2023 Co-Management Agreement with an execution date after the Provisional 2021-2025 Financial Plan has been adopted by Council; and

3. Allocation of $25,000 in the 2021 budget for the development of a feasibility report on the concept of an Arts Centre and Nanaimo Art Gallery's Phase 3 facility project.

3. Recommendation re: Community Program Development Grants

1. That Council approve the request from the Nanaimo Science and Sustainability Society (NS3) for a Community Program Development Grant in the amount of $1,000 to assist in funding The Great Pumpkin Toss event for children and families; and $10,000 to the Salish Storm Hockey Association for a low-barrier Intro to Hockey Program for Indigenous Children.

4. Recommendation re: Province of BC Local Government Infrastructure Planning Grant Program

1. That Council approve submission of an application to the Local Government Infrastructure Planning Grant program for $10,000 for the Water Supply Strategic Plan project.

5. Recommendation re: Consideration of New Permissive Tax Exemption Application and PTE Cash Grant Funding Request - Clay Tree Society

1. That Council:

1. Award a Permissive Tax Exemption for the 2021 tax year to Clay Tree Society at 838 Old Victoria Road; and,

2. Award a PTE Cash Grant to Clay Tree Society in the amount of $5,000 for their 2020 Property Taxes for their newly purchased property at 838 Old Victoria Road.

## 7. REPORTS:

a. Municipal Security Issuing Resolution Fire Station No. 1 14 - 21

To be introduced by Sheila Gurrie, Director, Legislative Services.

*Purpose: To seek Council's approval for borrowing two million (the second draw) from the Municipal Financial Authority (MFA) for Fire Station No. 1 (a project previously approved by Council) in 2018.*

Recommendation: That Council approve borrowing two million ($2,000,000) from the Municipal Finance Authority of British Columbia, as part of the 2020 fall Borrowing Session and as authorized through "Fire Station #1 Borrowing Bylaw 2018 No. 7257";

And That the Regional District of Nanaimo be requested to consent to the City of Nanaimo borrowing the two million ($2,000,000) over a 20-year term and include the borrowing in a Security Issuing Bylaw.

b. Plan to Restore Old City Quarter Security and Pride of Place 22 - 36

To be introduced by Dale Lindsay, General Manager, Development Services.

*Purpose: To provide Council with a framework and funding strategy for restoring security in the Old City Quarter and seek direction on a preferred option.*

Delegation:

1. Darren Moss, Representative and Member of the Old City Quarter Neighbourhood Association

Recommendation: That Council provide direction with respect to a framework and funding strategy for restoring security in the Old City Quarter.

c. ReImagine Nanaimo: Demographics and Land Inventory/Capacity Analysis Summary 37 - 187

To be introduced by Dale Lindsay, General Manager, Development Services.

*Purpose: To provide Council with a summary of the findings of two key background documents (Demographics Report – Population, Housing and Employment Projections, and Land Inventory/Capacity Analysis Report) related to the ReImagine Nanaimo (Coordinated Strategic Policy Review 2020-2021) process.*

Presentation:

1. Lisa Bhopalsingh, Manager, Community Planning.

d. Climate Change Resilience Strategy 188 - 275

To be introduced by Dale Lindsay, General Manager, Development Services.

*Purpose: To present to Council the Climate Change Resilience Strategy for adoption.*

Presentations:

Introduced by Rob Lawrance, Environmental Planner.

1. Lisa Westerhoff, Integral Group and Tamsin Mills, Resilience Consulting.

Recommendation: That Council adopt the Climate Change Resilience Strategy and direct Staff to prioritize actions in this report and begin implementation of the strategy.

e. Reallocation of Street Space 276 - 284

To be introduced by Bill Sims, General Manager, Engineering and Public Works.

*Purpose: The purpose of this report is to provide preliminary information to Council regarding the motion put forward at the Special Council Meeting, held 2020-JUN-08 to review opportunities to reallocate street space, in favour of active transportation and place making.*

f. Departure Bay Road Summer Traffic Calming Update 285 - 290

To be introduced by Bill Sims, General Manager, Engineering and Public Works.

*Purpose: To provide Council with information about the planned design for the seasonal traffic calming on Departure Bay Road near the beach.*

## 8. BYLAWS:

## 9. NOTICE OF MOTION:

## 10. OTHER BUSINESS:

## 11. AGENDA PLANNING:

a. Agenda Planning: 291 - 297

To be introduced by Sheila Gurrie, Director, Legislative Services.

*Purpose: To provide Council the opportunity to have a round table discussion in order to review and prioritize topics for Special Council Meetings, or future Governance and Priorities Committee Meetings.*

## 12. ADJOURNMENT:

NANAIMO CHILD DEVELOPMENT CENTRE
Opening Doors®

1135 Nelson Street
Nanaimo BC V9S 2K4
Telephone: 250-753-0251
Fax: 250-753-5614
info@nanaimocdc.com
www.nanaimocdc.com

**Statement for June 22nd, 2020 Nanaimo City Council**

In 2015, Scott Bradford, the former Executive Director of the Nanaimo Child Development Centre spearheaded the concept of creating an inclusive playground for the City of Nanaimo and began doing preliminary research. A partnership was put together which included: The City of Nanaimo, Nanaimo Association for Community Living, Nanaimo Child Development Centre, Rotary Clubs of Nanaimo & Lantzville, and Pacificsport.

The vision was a gathering place for children and adults to play and engage with their natural surroundings in a safe, inclusive space that was accessible and welcoming to people of all ages and abilities.

In 2018, the NCDC was successful in accessing a grant from the Children's Health Foundation of Vancouver Island for $100,000 for this project.

AT NCDC we are incredibly thankful to the City of Nanaimo and the Children's Health Foundation for investing in this exciting project. We sincerely express our appreciation and gratitude to everyone who was and is part of this initiative to create accessibility, celebrate inclusion and build our community."

The benefits of the new playground will extend to people of all ages and abilities. Inclusive spaces benefit the entire community. Adults with mobility limitations can swing and engage in active play with their children, rather than watching from the sidelines and grandparents feel confident with stable ground surfaces.

Participation in playgrounds leads to the development of social and emotional skills that can have a lifetime of impact. When children play, they learn to build relationships with peers, solve problems, experiment, invent and generate ideas. Mental and physical health is also improved and there is a proven reduction in the risk of many health conditions. The creation of this accessible play space will provide the opportunity for all children to experience these benefits.

Thank you to the City of Nanaimo and all of the other partners for realizing our vision and making this essential investment in our community

Dominic Rockall
Executive Director

*The NCDC provides support, assessment and therapeutic services to approximately 1,800 children and their families in Ladysmith, Nanaimo, Lantzville, Gabriola Island and Protection Island areas each year. The NCDC offers specialized assessments to children who live in the areas listed above as well as Duncan, Ucluelet, Tofino, Parksville and Qualicum Beach, who are thought to have Complex Developmental & Behavioural Conditions.*

CITY OF NANAIMO
THE HARBOUR CITY

# Staff Report for Decision

File Number: D641

DATE OF MEETING JUNE 17, 2020

AUTHORED BY MIKE STRAIN, SENIOR PROJECT MANAGER

**SUBJECT FIRE STATION NO. 1**

## OVERVIEW

### Purpose of Report

To obtain Finance and Audit Committee approval to increase the budget for the Fire Station No. 1 project.

### Recommendation

That the Finance and Audit Committee recommend that Council direct Staff to:

1. Proceed with the Fire Station No. 1 project; and,
2. Amend the 2020-2024 Financial Plan to increase the budget in year three (2022) by $3M from $3,740,269 to $6,740,269 with the additional funding from the General Capital Reserve and the General Asset Management Reserve.

## BACKGROUND

Replacement of the existing Fire Station No. 1 was recommended in the 2017 Business Case Report, "Renovation vs. Replacement" and was endorsed by Council at the May 8, 2017 Council meeting. The project scope and budget were set from this report. The scope identified a 1583m$^2$ facility and a corresponding $17 million overall project budget. Electorate approval to borrow up to this amount was subsequently received in 2018. The new facility is intended to be a post-disaster structure housing, in addition to central fire fighting forces, Fire Administration, Fire Dispatch, and the City's Emergency Coordination Centre.

A public tender was issued in January 2020, following a third party estimate of construction cost that indicated affordability within the current budget. In March 2020, overlapping with the project's tender period, COVID-19 was declared a Pandemic by the World Health Organization and varying degrees of States of Emergency where being declared by governments across the world, including British Columbia. In April 2020, the City extended the tender close date to May 12, 2020 and issued an instruction to bidders to assume that safe work restrictions currently in place, due to COVID-19, would persist for the duration of the contract.

On May 12, 2020, 9 tenders were received, an excellent response. The lowest bid price was $15.4 million, with three others within 3% of this figure, indicating a high degree of accuracy in pricing, and a tight specification. Clearly, bidders understood the project's scope and design. Unfortunately, the lowest bid price was $2.8 million higher than can be afforded within the $17 million budget. The tender is open for the City's acceptance until August 10, 2020.

## DISCUSSION

The Project Team implemented all possible measures of diligence during the design and tender period to keep the project within scope and budget. Examples include:

- Re-planning the delivery strategy to avoid the need for a temporary fire station (approx. $1.5 million savings).
- Revisiting and challenging the entire space needs assessment and project functional requirements.
- Implementation of the Project Management Framework, complete with cost estimates of increasing accuracy and a stage gate prior to tender.
- Engagement of an independent cost consultant to advise on costs from the start of design through to tender.
- Two value engineering exercises to reduce costs and optimize the design.
- Implementation of an integrated design process involving fire fighters and dispatchers through the development of functional requirements and design.
- Engagement of an Architect with extensive experience in fire station design.
- Engagement with the construction community, well in advance of the tender, to advertise the project and to attract interest.

As a result of the above measures, the demolition and construction costs per square metre are 10% less than anticipated in the original business case, and other project costs ($4.4 million) remain in line with the 2017 business case ($4.5 million).

During the tender, bidders were instructed to allow for COVID-19 restrictions, to continue through the duration of the contract. Any changes to the restrictions would be subject to negotiation in the future. The cost consultant indicated that the 'COVID premium', seen across building projects in the lower mainland, could be up to 20% for complex projects such as this one. There was no extension to the construction schedule to accommodate issues arising from the pandemic, which may have added some additional cost pressure.

While the longer term impact of the pandemic on the construction industry remains unclear, Staff believe that the coincidence of the pandemic with the tender period, may have resulted in a 'COVID premium', driven by a number of factors aside from this future uncertainty, including:

- Supply chain disruption
- Labour availability and resultant cost pressures
- Labour productivity and resultant schedule pressures
- Uncertain Health & Safety overhead (likely to gain clarity in coming weeks)

The low tender price would require an increase to the budget of $3 million, approximately 18% higher than the approved budget of $17 million and would bring the revised project budget to $20 million. This includes contingency to deal with the cost of post-contract risks retained under contract, a necessity when dealing with a project of this magnitude.

## OPTIONS

1. That the Finance and Audit Committee recommend that Council direct Staff to:

    1. Proceed with the Fire Station No.1 project; and,
    2. Amend the 2020-2024 Financial Plan to increase the budget in year three (2022) by $3 million from $3,740,269 to $6,740,269 with the additional funding from the General Capital Reserve and the General Asset Management Reserve.

    - A competitive price has been received for this project, it is ready for construction, and the additional budget will allow it to move forward and open as planned in the fall of 2022.
    - Is the most cost certain approach.
    - This option will address the pressing need to replace the aging facility at the end of its useful life and provide safety and certainty for Fire operations.
    - This avoids necessary minimum building expenses (estimated $1.5-2M) to ensure the building remains useable for several critical functions.
    - The facility houses several critical functions ensuring the safety and well being of our citizens: Fire Administration, Dispatch and crews along with the City's Emergency Coordination Centre.
    - Additional funding will be required, and is proposed as follows:
        i. Up to $1.5 million from Asset Management Reserve.
        ii. Up to $1.5 million from General Capital Reserve.
        iii. Savings in other general projects funded from general revenue in 2020 to be used first.

2. That the Finance and Audit Committee recommend that Council direct Staff to cancel the tender and revise the design to retender in the future.

    - Canceling the project would cause the project to lose momentum. There is no guarantee that a better price will be achievable in the future, and there is a risk that pricing may increase. There is $1.6 million in sunk costs to date.
    - The schedule to address building deficiencies would be delayed by a year or more
    - The City may suffer damage to its reputation as a tendering authority, and the market may choose to not engage to the same degree next time as a result of lost credibility.

3. That the Finance and Audit Committee recommend that Council direct Staff to cancel the tender and completely reconsider the project as part of a larger precinct strategy.

    - This would avoid spending funds now and creates an opportunity for a more integrated 'Responder Precinct' including RCMP, social housing, and BCEHS.
    - Necessary intermediate expenses to replace or upgrade the roof, boiler, dismantle the hose tower and seismic retrofits are estimated to be $1.5 – 2 Million
    - This option would likely delay the replacement of the Fire Station for a minimum of four to five years. The existing station is past its useful life, does not meet current life safety or seismic codes, and is an ongoing maintenance cost.

**SUMMARY POINTS**

- An additional $3 million is required to proceed with the Construction of the Fire Station No. 1 project as planned.
- The Fire Station No. 1 project is shovel-ready with a competitive lump sum price open for acceptance by the City.
- Proceeding with the project addresses the pressing need to replace the aging facility at the end of its useful life.
- The fire station has been carefully designed and redesigned to meet functional requirements of this critical service, with careful attention to cost and schedule.
- The pandemic is believed to have impacted the construction market for complex projects such as this one.

**Submitted by:**

Mike Strain
Senior Project Manager,
Engineering Projects

**Concurrence by:**

Karen Fry,
Fire Chief,
Nanaimo Fire Rescue

Bill Sims
General Manager,
Engineering and Public Works

Laura Mercer,
Director,
Finance

Jake Rudolph
Chief Administrative Officer

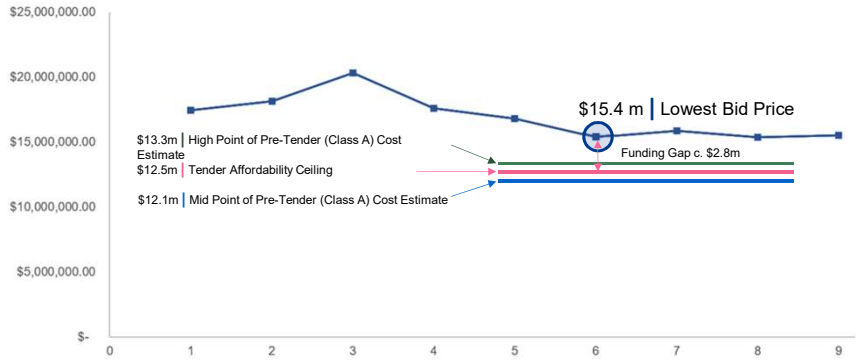
# Fire Station #1 Project

Project Cost Update

June 17, 2020

CAPEX I PROJECT I ADVISORY

## Tender Prices



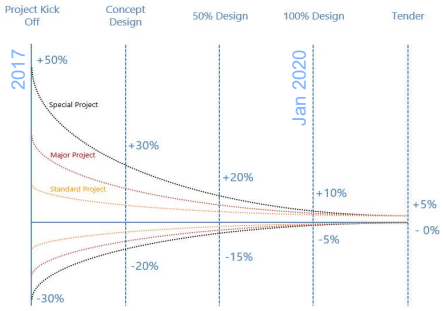

**9 Bids**
Submitted

**4 Bids**
Within 3.5%

CAPEX I PROJECT I ADVISORY

# Construction Cost Estimation

- A baseline cost estimate was developed in 2017 by a professional quantity surveyor – this was the basis of the $17M Budget
- The construction cost estimate was updated at each of 3 stages of project development.
- Each estimate indicated the project was likely affordable (in a pre-pandemic market).




*Extract from City of Nanaimo Project Management Framework, showing degree of confidence that should be communicated alongside the Project Budget at each stage of project development*

NB: the City's Project Management Framework requires that, should the forecast cost of a project vary as the project progresses, there are two options: mitigate cost (which has already been done to deal with GFA and escalation cost pressures), or otherwise secure an increase in the Approved Project Budget.

CAPEX I PROJECT I ADVISORY

# What's changed since 2017?

1. **Escalation**
   10% Additional

   Construction cost escalation to date has been around 10%> than forecast in 2017

2. **GFA ($M^2$)**
   1/3 Increase

   The actual space program required to provide a functional facility was identified as being larger than assumed in 2017

3. **COVID-19**
   Cost of Restrictions Continuing Included

   Budget did not include costs associated with the impacts of the Pandemic

CAPEX I PROJECT I ADVISORY

## How have we mitigated cost pressure?

1. **Cost / $m^2$**
   over 10%

- Total Project Cost / m2 is down over 10%
- Construction Rate unchanged at $7,100/m^2$
- Total Project Soft Costs down $100k

2. **Site Planning**
   Avoided Significant Unnecessary Costs

Innovative Site Development Strategy implemented to avoid requirement for a temporary fire station during construction

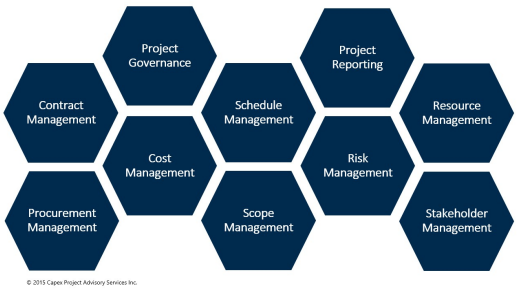
3. **Competition**
   Secured a competitive market price

Market Engagement Strategy attracted a great deal of interest and price competition, demonstrated by number and distribution of tender prices

CAPEX I PROJECT I ADVISORY

## Best Practice Delivery

- Steering Committee
- Stage Gate Process
- Cost Consultant (QS)
- Value Engineering
- Market Engagement




- Site Development Strategy
- Engagement of an Architect Specializing in Fire Station Design
- Validation of Functional Program

CAPEX I PROJECT I ADVISORY

# Schedule

COVID-19

Supply chain disruption

Labour availability

Labour productivity

Health & Safety overhead

- The Project is on schedule, despite the Pandemic
- The tender documents require the General Contractor to manage the risk of late delivery even if the restrictions continue to be in place for the duration of the project
- This has undoubtedly put upward pressure on the tender price but brings greater time and cost certainty

CAPEX I PROJECT I ADVISORY

# Summary

- The Project is on-time but is over-budget despite the application of project control and governance best practices.
- A firm and competitive Tender is open for acceptance which provides a good degree of certainty that the new facility will be occupied by the summer of 2022 within a re-baselined budget of $20m.
- To defer and re-tender the Project at a later date means that it will no longer be delivered in 2022, while at the same time deterring future tender participation and providing no guarantee or likelihood of reducing cost.

CAPEX I PROJECT I ADVISORY

CITY OF NANAIMO
THE HARBOUR CITY

# Staff Report for Decision

File Number: GOV-03 – B7257

DATE OF MEETING JUNE 22, 2020

AUTHORED BY Karen Robertson, Deputy City Clerk

**SUBJECT** **MUNICIPAL SECURITY ISSUING RESOLUTION FIRE STATION NO. 1**

## OVERVIEW

**Purpose of Report**

To seek Council's approval for borrowing two million (the second draw) from the Municipal Financial Authority (MFA) for Fire Station No. 1 (a project previously approved by Council) in 2018.

**Recommendation**

That Council approve borrowing two million ($2,000,000) from the Municipal Finance Authority of British Columbia, as part of the 2020 fall Borrowing Session and as authorized through "Fire Station #1 Borrowing Bylaw 2018 No. 7257";

And That the Regional District of Nanaimo be requested to consent to the City of Nanaimo borrowing the two million ($2,000,000) over a 20-year term and include the borrowing in a Security Issuing Bylaw.

## BACKGROUND

At the February 19, 2018 Council meeting, staff was directed to conduct an Alternative Approval Process to obtain approval of the electors to borrow up to $17M for Fire Station No. 1 through "Fire Station #1 Borrowing Bylaw 2018 No. 7257". Approval of the electors was obtained, the bylaw was adopted, and the Certificate of Approval for the Bylaw was received from the Ministry of Municipal Affairs and Housing on 2018-JUN-13.

To avoid paying interest on money that is not needed immediately, the Municipal Finance Authority (MFA) has a process in place (through the passing of a Security Issuing Resolution) whereby municipalities can take draws (as needed) on the amount approved under the bylaw. In 2018, Council did its first draw and passed a resolution to borrow $3,235,354. These funds were used towards the detailed design and now the City is moving forward with awarding the tender for construction.

## DISCUSSION

As noted in the background section of the report, Council passed a resolution in 2018 to borrow $3,235,354 to commence detailed design of the project. Projected funding requirements for 2020 require the City to undertake its second borrowing in the amount of two million ($2,000,000) to proceed to the construction phase. This will bring the total borrowing for the project to date to $5,370,000. This includes $5,235,254 in new borrowing and the allocation of $134,646 of debt funding remaining from the 2007 borrowing for Fire Station #4.

## OPTIONS

1. That Council approve borrowing two million ($2,000,000) from the Municipal Finance Authority of British Columbia, as part of the 2020 fall Borrowing Session and as authorized through "Fire Station #1 Borrowing Bylaw 2018 No. 7257";

   And That the Regional District of Nanaimo be requested to consent to the City of Nanaimo borrowing the two million ($2,000,000) over a 20-year term and include the borrowing in a Security Issuing Bylaw.

To meet MFA's fall borrowing opportunity, the City must pass the resolution and forward it to the Regional District of Nanaimo (RDN) for consideration by the Board at its July 28, 2020 meeting. From there, the RDN would make an application, on the City's behalf, for a certificate of approval from the Ministry before the August 10, 2020 fall borrowing deadline.

- **Budget Implication: Borrowing to support building Fire Station No. 1 was previously approved by Council in 2018 through "Fire Station #1 Borrowing Bylaw 2018, 2017".**

2. That Council deny approval of borrowing from the Municipal Finance Authority of British Columbia

- **Budget Implication: The project would be put on hold and further direction from Council would be required.**

## SUMMARY POINTS

- The next step in the process to replace Fire Station #1 and obtain borrowing is for Council to pass a Municipal Security Issuing Resolution.
- All long-term financing under Section 179 of the *Community Charter*, must be done through a regional district, and the Municipal Finance Authority of BC.
- As this resolution is a requirement for continuing with the project, if Council chose to not pass the recommendation, the project could not proceed.

## ATTACHMENTS:

Fire Station #1 Borrowing Bylaw 2018 No. 7257

**Submitted by:**

Karen Robertson
Deputy City Clerk

**Concurrence by:**

Sheila Gurrie
Director of Legislative Services

Laura Mercer
Director of Finance

CITY OF NANAIMO

BYLAW NO. 7257

A BYLAW TO AUTHORIZE THE BORROWING OF UP TO $17,000,000 FOR THE RECONSTRUCTION OF FIRE STATION NUMBER 1 ("FIRE STATION #1")

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WHEREAS it is deemed desirable and expedient to reconstruct Fire Station #1 on the lands in the City of Nanaimo with civic address 666 Fitzwilliam Street, as shown outlined on the plan attached to this Bylaw Schedule "A", to buildings, works, fire prevention and fighting and emergency operations facilities to serve the City of Nanaimo;

AND WHEREAS the estimated cost of reconstructing Fire Station #1, including expenses incidental thereto, is the sum not exceeding $17,000,000 of which the sum of $17,000,000 is the amount of debt intended to be created as a result of borrowing authorized under this bylaw;

NOW THEREFORE the Council of the City of Nanaimo in open meeting assembled enacts as follows:

1. This bylaw may be cited as "FIRE STATION #1 BORROWING BYLAW 2018 NO. 7257".

2. The Council is hereby empowered and authorized to undertake and carry out or cause to be carried out the reconstruction of Fire Station #1 and services generally in accordance with general plans on file in the municipal office and to do all things necessary in connection therewith and, without limiting the generality of the foregoing:

   (a) to borrow upon the credit of the Municipality a sum not exceeding $17,000,000;

   (b) to acquire all such real property, easements, rights of way, licenses, rights or authorities as may be requisite or desirable for or in connection with the reconstruction of Fire Station #1;

   (c) site preparation, environmental site remediation, installation of all ancillary road works, on-site and off-site services and utilities, furnishings and equipment for use in connection with Fire Station #1.

3. The maximum term for which debentures may be issued to secure the debt created by this bylaw is twenty (20) years.

PASSED FIRST READING: 2018-FEB-19
PASSED SECOND READING: 2018-FEB-19
PASSED THIRD READING: 2018-FEB-19

APPROVED BY THE INSPECTOR OF MUNICIPALITIES: 2018-MAR-19

Notice of the alternative approval process was published on the 29th day of March, 2018 in the *Nanaimo News Bulletin*, on the 3rd day of April, 2018 in newspapers circulating in the City of Nanaimo, pursuant to Section 94 of the *Community Charter*.

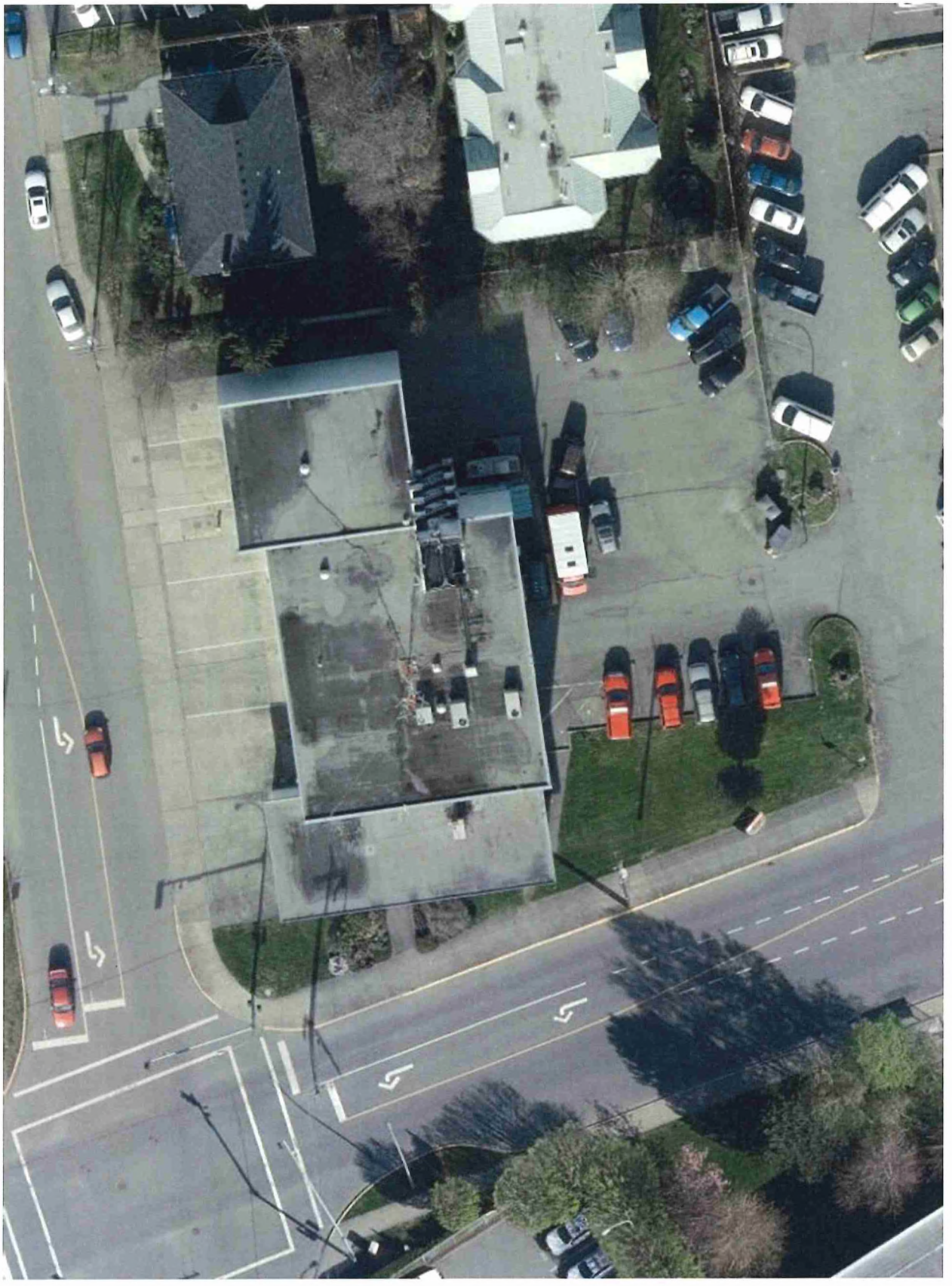
RECEIVED APPROVAL OF THE ELECTORS
BY ALTERNATIVE APPROVAL PROCESS 2018-MAY-07

ADOPTED: 2018-MAY-14

MAYOR

CORPORATE OFFICER

SCHEDULE "A"



BRITISH COLUMBIA

# *Statutory Approval*

***Under the provisions of sections*** 179

***of the*** Community Charter

***I hereby approve Bylaw No.*** 7257

***of the*** City of Nanaimo ,

***a copy of which is attached hereto.***

***Dated this*** 19 ***day***

***of*** March ***, 2018***

**Deputy Inspector of Municipalities**

BRITISH COLUMBIA

# *Certificate of Approval*

Under the authority of the *Local Government Act*, I certify that Bylaw No.7257, cited as the "Fire Station #1 Borrowing Bylaw 2018 No. 7257" of the City of Nanaimo has been lawfully and validly made and enacted, and that its validity is not open to question on any ground in any court of British Columbia.

*Dated this* 14th *day of* June *, 2018*

*Deputy Inspector of Municipalities of British Columbia*

# Staff Report for Decision

DATE OF MEETING June 22, 2020

AUTHORED BY BILL CORSAN, DIRECTOR, COMMUNITY DEVELOPMENT

**SUBJECT** **PLAN TO RESTORE OLD CITY QUARTER SECURITY AND PRIDE OF PLACE**

## OVERVIEW

**Purpose of Report**

To provide Council with a framework and funding strategy for restoring security in the Old City Quarter and seek direction on a preferred option.

**Recommendation**

That Council provide direction with respect to a framework and funding strategy for restoring security in the Old City Quarter.

## BACKGROUND

Prior to the COVID-19 pandemic, safety and security in the downtown core was top of mind for Council and the general public. The 2019-2022 Strategic Plan (amended 2020-MAR-02) includes a commitment to proactively address social disorder issues, enhance public safety, and advocate for support to ensure our community is a safe place for all residents. Specific actions include working with the RCMP, Bylaw Services, and community and neighbourhood block watch programs to reduce social disorder issues and enhance public safety.

Property owners and businesses in the Old City Quarter (OCQ) were struggling with public disorder issues prior to March 2020. The situation has grown worse during the pandemic. Several of the property owners have hired private security to protect their property, City Bylaw Officers have been redeployed to address social disorder issues, and the RCMP Bike Squad have increased their presence in the downtown.

A group of property owners from the OCQ provided a letter to Council on 2020-MAY-19 outlining their concerns about security in their neighbourhood and presented a possible solution outlined in a Terms of Reference (Attachment A).

The letter was received by Council at the 2020-MAY-25 Regular Council meeting, with the resulting motion:

> *"That Staff work with the Old City Quarter Business Improvement Association and the Old City Quarter Health and Safety Alliance to develop a framework and funding strategy for restoring security in the Old City Quarter and that Staff prepare a report for Council."*

The motion carried unanimously.

Staff met with representatives of the OCQ on 2020-JUN-02 to discuss the proposed framework and discuss funding options.

**Proposed Framework**

The program envisioned by the OCQ property owners includes the following:

- Duration: 2020-JUN-15 to 2020-DEC-31 (pilot project);
- Area: Old City Quarter as defined by the Business Improvement Association (BIA);
- Security: Three evening safety officers would patrol the neighbourhood from 10:00 p.m. to 6:00 a.m., seven days a week;
- Clean Up of Public/Private Property: The OCQ will contract with the John Howard Society to provide an on-call clean-up service for public and private property within the OCQ;
- Ambassadors: Summer students would be hired to play an ambassador role and help re-establish street activity;
- Helpline: The OCQ would establish a "helpline" for residents of the OCQ to call and report safety concerns, or for removal of debris on private or public property. Calls received relating to security from the helpline would be sent to the RCMP or Bylaw Services and would be addressed in context of other City commitments. The Helpline – Lines of Communication is presented in Attachment C. The helpline would record and document incidents that would provide data to inform future decision making around resourcing for the neighbourhood.
- Monthly Reviews: The OCQ will meet with Bylaw Services and the RCMP on a monthly basis to review the program and adjust service levels.

**Funding Strategy**

The budget (Attachment B) for the proposed pilot project is $195,000. The OCQ proposes the costs be split 30% by the property owners, with the City providing the remaining 70% as a one-time grant of $136,500.

Funding for the pilot program could come from Council's Strategic Infrastructure Reserve Fund. This reserve fund receives annual contributions from Casino and Fortis revenues. With the COVID-19 pandemic, it is uncertain what funds will be received in 2020 and the foreseeable future. The opening balance at 2020-JAN-01 of the Strategic Infrastructure Reserve Fund was $3,090,982 and has $2,369,869 in commitments for 2020. Therefore, approximately $721,113 is available to fund this program.

A letter of support for the initiative has been provided by the Old City Quarter Health and Safety Alliance Initiative (Attachment D).

## DISCUSSION

There are a number of broader issues Council needs to consider in supporting the OCQ Initiative.

**Broader Safety Issues in the Downtown Core**

The pilot program, as presented, would focus on the OCQ. Other areas of the downtown face similar challenges and could benefit from additional security, including properties on Commercial Street, Front Street, and Victoria Crescent.

**Existing Security Services in Downtown Core**

The City currently contracts with Footprints Security to provide security in the downtown core. The security is focused on the Harbourfront, Vancouver Island Conference Centre, and Bastion Street Parkades. This contract provides security from 3:00 p.m. to 7:00 a.m., seven days a week. The total cost to the City for this level of security in 2019 was $138,778.

In addition, private landowners are paying for security of their premises, such as the Coast Hotel, Nanaimo Port Authority, and Coastal Community Credit Union. There may be an opportunity to coordinate the downtown security patrols to reduce the overall costs.

**Increased Investment by Council in Police and Bylaw Staff**

Council has allocated resources for three new RCMP officers in 2020. In total, 148 RCMP officers are assigned to the City of Nanaimo. The Bike Squad has a team of eight officers dedicated to the downtown core. Council employs ten bylaw officers to enforce City regulations. In the long run, Council may wish to invest in additional police or bylaw enforcement resources to help address the concerns of the OCQ property owners.

**Recent Council Investments in Cleaning**

At the 2020-MAY-25 Council meeting, Council received a presentation on the Social Disorder Response Team. This is a coordinated effort with Staff from Public Works, Bylaw Services, and Facility and Parks Operations, providing a timely clean-up service for abandoned homeless camps and refuse left on City rights-of-way. Council has allocated $187,000 to fund the Social Disorder Response Team (five days a week) through 2020-DEC-31. The City also contracts through a grant in the amount of $45,000 with the John Howard Society to provide clean-up services in the downtown core.

**Next Steps**

The program presented by the OCQ is a pilot project ending 2020-DEC-31. If there is a desire by Council to extend the program into 2021, Staff would need to evaluate other models. One option is to introduce a Business Improvement Association levy that is only applied to commercial properties. Another option is to investigate if a Local Service Area bylaw is viable. Details on these options will be brought to Council in the fall of 2020 for consideration if Council decided to advance the OCQ pilot project.

## OPTIONS

1. That Council direct Staff to work with the Old City Quarter Business Improvement Association to implement a pilot program for additional security and cleaning in the Old City Quarter until 2020-DEC-31.

    - Advantages: The OCQ pilot project would be managed by the Old City Quarter Business Improvement Association and would not require additional Staff resources. The program includes a partial cost share from some of the property owners in the business improvement area. The program could be operationalized quickly. The

approach outlined by the OCQ provides a holistic neighbourhood approach to addressing safety and cleanliness on both public and private land.
- Disadvantages: As a pilot program, there would be a need to evaluate the success of the program in the fall of 2020 to determine if it would be continued, renewed, or revised for 2021. Once the program is established, there may be an expectation that the level of service continue. Council may also receive concerns the program is focused strictly on the OCQ and not the wider downtown or other neighbourhoods in the city experiencing security challenges.
- Financial Implications: The pilot project is expected to cost $195,000, with the City contributing a one-time grant of $136,500 to the Old City Quarter Business Improvement Association. The funding would be drawn from the Strategic Infrastructure Reserve Fund.

2. That Council direct Staff to increase the existing budget for nighttime security in the downtown core until 2020-DEC-31.

   - Advantages: The existing contract for nighttime security in the City-owned parkades would be expanded to include the broader downtown. This could be implemented in a timely manner using the existing security contract.
   - Disadvantages: Expanding the program to the entire downtown will increase the City's security costs. The program would focus on public lands, and not private property. The program would not include the helpline, additional cleaning, and the ambassador program proposed by the OCQ. The OCQ could fund these separately.
   - Financial Implications: The City is currently paying $138,778 per annum for downtown security. Two additional security officers working from 10:00 p.m. to 6:00 a.m. would cost an additional $83,200 until 2020-DEC-31. The funding would be drawn from the Strategic Infrastructure Reserve Fund.

3. That Council direct Staff to continue to provide the same level of security and cleaning for the downtown core.

   - Advantages: The City is already spending $138,778 on nighttime security in the downtown core. Council recently invested an additional $187,000 for the Social Disorder Response Team. In addition, the City contracts with the John Howard Society for clean up in the downtown and City parks for $45,000 per annum. Not participating in the pilot program would enable Council to preserve resources.
   - Disadvantages: A number of property owners are concerned about safety in the downtown core and are anxious to find a solution. Not moving forward with an option may be viewed negatively by some members of the public.
   - Financial Implications: There would be no additional financial costs to the City by following this option.

**SUMMARY POINTS**

- The COVID-19 pandemic that started in March of 2020 has negatively impacted the downtown core of Nanaimo.
- Prior to the pandemic, safety and security in the downtown core was top of mind for Council and the general public. Council's 2019-2022 Strategic Plan notes a commitment to public safety.
- A group of property owners from the Old City Quarter wrote to Council on 2020-MAY-19 requesting help from the City in restoring security and pride of place in their downtown neighbourhood.
- Council directed Staff at the 2020-MAY-25 meeting to return with a Staff report outlining a framework and funding strategy to restore security and pride of place in the Old City Quarter.
- The proposed pilot program would include the introduction of private security patrols working from 10:00 p.m. to 6:00 a.m. to protect property, a central helpline for residents/businesses to call to report concerns, a summer ambassador program, and enhanced cleaning services provided through the John Howard Society during the day.
- Costs for the pilot program, which would operate until 2020-DEC-31, are estimated to be $195,000, with the City providing a one-time grant of $136,500 to the Old City Quarter Business Improvement Association to manage the project.
- The program, if approved by Council, could be implemented in a timely manner.
- Council should be cognizant that approval of an enhanced level of service in one area of the downtown core may require the program to be expanded more broadly.
- Other options for Council's consideration include increasing funding for just nighttime security in the downtown core, or continuing to operate at the current level of service.

**ATTACHMENTS:**

ATTACHMENT A: 2020-MAY-19 Letter to Mayor and Council from OCQ
ATTACHMENT B: OCQ Security & Pride of Neighbourhood Pilot Budget 2020-JUN-03
ATTACHMENT C: OCQ Lines of Communication & Response diagram
ATTACHMENT D: Letter dated 2020-JUN-01 from the Old City Quarter Health and Safety Alliance Initiative

**Submitted by:**

Bill Corsan
Director, Community Development

**Concurrence by:**

Dale Lindsay
General Manager, Development Services

Laura Mercer
Director, Finance

# ATTACHMENT A

418 Fitzwilliam Street
Nanaimo, BC V9R 3A1

May 19, 2020

City of Nanaimo
455 Wallace Street
Nanaimo, BC V9R 5J6

**Attention: Mayor and Council**

Dear Sirs, Mesdames;

**RE: Urgent Request to Appear As Delegation**
**Plan to Restore Old City Quarter Security and Pride of Place**

We are writing to request to appear before Council to identify concerns, and solutions related to a recent sharp increase in the presence and impact of homelessness within the Old City Quarter. Since the middle of March, as part of the changes brought about by COVID 19, there have been very few residents, and no business activity, on downtown streets. At the same time, the homeless population has continued to grow in this neighbourhood resulting in a rapidly deteriorating environment for residents and commercial tenants of the Old City Quarter. We are now hearing from these residents and tenants that they no longer feel safe in and nor do they enjoy the changing character of the neighbourhood. Directly related to these impacts, we are seeing that both new and longer term community members are choosing to leave. We feel that this represents the undoing of many years of determined community effort to revitalize the Old City Quarter and all of downtown Nanaimo.

As representatives of the property owners in the Old City Quarter, we are not prepared to allow this negative trend to continue and have developed an action plan intended to reverse these impacts. Recognizing that safety, security and pride of place are responsibilities that requires collaborative action we are asking for the City's support and assistance. As a coalition of property owners working together with the existing OCQA BIA, we are prepared to step forward to administer program and to shoulder our fair share of the costs. But the need is urgent and we desperately need to implement at least some portions of this initiative by early June

Given this urgency, we ask that you please accommodate us as a delegation at your Council meeting on May 25, 2020 where we will outline the action plan and how the City and property owners can work together to make a difference.

Understanding Council's policy on late delegation requests, we have attached a draft Terms of Reference for the program we are proposing. We prefer to be present in person to address any questions that may come up, however, if our request to appear as a delegation is not approved, we request that Council consider making a motion to direct staff to work with us to further develop the framework and funding strategy for the program we have outlined and report back to Council for the June 15th Council meeting. Below are a few questions, and our thoughts on these questions, that may come up as you review the program:

1) **How will this fit into the overall homeless strategy the City began working on earlier this year:** Recognizing that this program can only be a piece of the overall strategy, it is intended to provide residents, tenants and downtown users a consistent point of contact where they can be heard, supported and see results to improve their downtown experience and pride of place. The program will lighten the load on RCMP and Bylaw officers so they can focus on the more extreme cases as a partner

to the program. Through consistently logging of calls and case resolutions, the data gathered will further inform the larger strategy the City if working towards.

2) **Why only the OCQ and not all of downtown?:**
   While we would agree a more cohesive approach throughout the downtown would be beneficial, we have limited the pilot version of this program to the OCQ for 3 reasons:
   - The OCQ is currently the only BIA that has the ability to collect a special levy from property owners to participate in the cost of the program with the City;
   - As a volunteer led initiative, we only have capacity to take on a portion of the downtown at this time;
   - Before growing the program, we feel it is important to pilot it at a smaller scale so it can be quickly adjusted to suit feedback as it is received. Once stabilized, the model could be scaled to take on other portions of the downtown.

Thank you for your time in considering our requests. Please feel free to contact any one of us should you wish to discuss in advance of May 25.

Digitally signed by Doug Backhouse
DN: cn=Doug Backhouse, o, ou, email=douglas.backhouse@gmail.com, c=CA
Date: 2020.05.19 21:03:15 -07'00'

Yours truly

Monica Briggs


| Monica Briggs | Doug Backhouse | Darren Moss | Bob Moss |
|---|---|---|---|
| monicab@zorkin.com | douglas.backhouse@gmail.com | darren@tectonica.ca | bob@tectonica.ca |
| KGZ Development Corp. | Wesley Square Properties | Cardea Residences | Cardea Residences |

**Appendix A: Draft Terms of Reference**

# Restoring security and pride of place for residents and businesses

(Second draft – May 12, 2020)

1. **Situation and Objectives:**
    - Many residents and businesses have located in the Old City area of Nanaimo because they have appreciated the central location and the vibe that creates a unique neighbourhood
    - During the last year, and particularly since February, 2020, the population of homeless citizens in the neighbourhood has appears to have steadily increased
    - Particularly since February 2020, the homeless citizens have become increasingly determined to stake their ground on both private and public property
    - The residents, business owners and business clients are increasingly uncomfortable with the increasing presence of the homeless together with the lack of respect shown to those residents, business owners, employees and business clients.
    - Property owners are now receiving increasing concerns from their tenants about their safety some noting that they intend to leave the neighbourhood if the situation does not change quickly.
    - Some businesses and government departments have chosen to relocate to out of the Downtown for security reasons with TD Auto Finance and BC Assessment being recent examples
    - It has taken many years and a determined effort to build the appeal of this neighbourhood and it will be quick decline unless we act expeditiously
    - While City bylaw enforcement and RCMP presence is evident, the results have not been satisfactory to our tenants.
    - The property owners have decided to take the following action to protect their tenants and the reputation of the neighbourhood.

2. **Night Security:**
    - Implement a neighbourhood wide night security patrol which will react quickly to observed security concerns and to messages of concern from tenants and property owners.
    - This will be implemented prior to the end of May 2020 using a qualified security company selected by the property owners.
    - The initial patrol hours will be 11:00 pm to 7:00am each night.
    - The patrol will include not less than two qualified members and preferably three
    - While the members of the patrol will respect the rights of homeless citizens and other citizens who create a security threat, they will be instructed to take a firm approach moving them off private property and away from threatening positions on public property while recording the incidents digitally.
    - Members of the patrol will be uniformed and equipped with communication devices allowing real time communication with tenants and property owners who have security concerns.
    - The messaging to and from the patrol members will be managed by a call centre which will log each message together with the action taken so that we will have a clear record of daily activities
    - the members of the patrol will be provided with a base location to use as an office within the neighbourhood.

- the activity of this night security patrol will be reviewed and coordinated with the RCMP so as to make efficient use of the combined resources

3. **Day Patrols and Clean-Up:**
    - Homeless citizen activity on private property and at threatening positions on public property is still a concern for tenants and visitors during daytime hours.
    - We will endeavor to engage members of the John Howard workforce to patrol the neighbourhood, primarily to provide clean up services but also to respond to concerns raised by tenants and owners, and to record those behaviors of concern.
    - The members of the day patrol will coordinate with City Bylaw Officers and the RCMP to help resolve concerns
    - Day patrol members will have uniforms identifying them and will be supplied with communication devices allowing immediate messaging with the call centre and real time communication with tenants and property owners who have security concerns.

4. **Ambassadors:**
    - as businesses open up following the COVID 19 pandemic, we will introduce neighbourhood ambassadors to help reestablish street activity and of pride of place for tenants and businesses alike
    - This will be a short term program using summer students working in pairs
    - They will have uniforms identifying them and their primary role will be to engage with customers and business owners to share information
    - These ambassadors will not be responsible for security but will report any concerns to the call centre.

5. **Tracking and Record Keeping:**
    - Recording and compiling information relating to incidents of concern will be a key objective of our program.
    - While there have been many casual reports of concerning incidents from different sources, we will compile a specific list of reported activity, times and resolutions in order to obtain a more complete picture of the challenge we are facing.
    - We will encourage all tenants and property owners to report incidents of concern
    - These reports will be made available to the property owners and the City

6. **Next Steps:**
    - The property owners recognize that this program is a necessary form of triage and not a permanent solution.
    - The need to commence this program is urgent but we recognize that the specific actions will need to be amended ‘on the fly’ as we observe results.
    - The property owners will work with the City and Provincial Government to help expedite a more permanent solution with will involve providing alternate living locations for the homeless citizens.

7. **Budget and Finance:**
    - the property owners are obtaining proposals from security companies and input from various sources to develop a budget

- it is likely the initial budget will be in the range of $25,000 to $30,000 per month for the initial 6 month period
- Neighbourhood safety and security is primarily the responsibility of the City of Nanaimo and we expect the City to partner in this initiative sharing at least 50% of the cost.
- in the interest of implementing the program expeditiously and effecting a quick change for our tenants, the property owners are prepared to share up to 50% of the cost
- We propose that the portion attributable to the property owners be shared by all property owners in the neighbourhood except single family residences and based on the assessed value of their property
- We ask that the City implement an interim special levy as part of the property tax process with proportionate share of property owner cost to be based on assessed value

# ATTACHMENT B

**OCQ Security & Pride of Neighbourhood Pilot Budget**

Date: June 3, 2020

| **Expenses** | Jun-2020 | Jul-2020 | Aug-2020 | Sep-2020 | Oct-2020 | Nov-2020 | Dec-2020 | **Total** |
|---|---|---|---|---|---|---|---|---|
| Advertising | $ 4,000.00 | $ 1,500.00 | $ - | $ - | $ - | $ - | $ - | **$ 5,500.00** |
| Telephone Line | $ 50.00 | $ 50.00 | $ 50.00 | $ 50.00 | $ 50.00 | $ 50.00 | $ 50.00 | **$ 350.00** |
| Call Centre | $ 600.00 | $ 850.00 | $ 1,000.00 | $ 1,250.00 | $ 1,250.00 | $ 1,250.00 | $ 1,250.00 | **$ 7,450.00** |
| Nightime Security | $ - | $ 23,064.00 | $ 23,064.00 | $ 22,320.00 | $ 23,064.00 | $ 22,320.00 | $ 23,064.00 | **$ 136,896.00** |
| Day Time Clean up | $ 1,550.00 | $ 2,900.00 | $ 3,100.00 | $ 3,100.00 | $ 3,100.00 | $ 3,100.00 | $ 3,100.00 | **$ 19,950.00** |
| Disposal Fees | $ 500.00 | $ 1,000.00 | $ 1,000.00 | $ 1,000.00 | $ 1,000.00 | $ 1,000.00 | $ 1,000.00 | **$ 6,500.00** |
| Contingency | $ 668.29 | $ 1,400.00 | $ 1,400.00 | $ 1,400.00 | $ 1,400.00 | $ 1,400.00 | $ 1,400.00 | **$ 9,068.29** |
| Sub Total | $ 7,368.29 | $ 30,764.00 | $ 29,614.00 | $ 29,120.00 | $ 29,864.00 | $ 29,120.00 | $ 29,864.00 | **$ 185,714.29** |
| GST | $ 368.41 | $ 1,538.20 | $ 1,480.70 | $ 1,456.00 | $ 1,493.20 | $ 1,456.00 | $ 1,493.20 | **$ 9,285.71** |
| **Total** | **$ 7,736.70** | **$ 32,302.20** | **$ 31,094.70** | **$ 30,576.00** | **$ 31,357.20** | **$ 30,576.00** | **$ 31,357.20** | **$ 195,000.00** |

| **Expenses** | | Jun-2020 | Jul-2020 | Aug-2020 | Sep-2020 | Oct-2020 | Nov-2020 | Dec-2020 | **Total** |
|---|---|---|---|---|---|---|---|---|---|
| Property & Business Owners | 30% | $ 2,321.01 | $ 9,690.66 | $ 9,328.41 | $ 9,172.80 | $ 9,407.16 | $ 9,172.80 | $ 9,407.16 | **$ 58,500.00** |
| City Grant | 70% | $ 5,415.69 | $ 22,611.54 | $ 21,766.29 | $ 21,403.20 | $ 21,950.04 | $ 21,403.20 | $ 21,950.04 | **$ 136,500.00** |
| **Total** | | **$ 7,736.70** | **$ 32,302.20** | **$ 31,094.70** | **$ 30,576.00** | **$ 31,357.20** | **$ 30,576.00** | **$ 31,357.20** | **$ 195,000.00** |

| **Cashflow** | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
|---|---|---|---|---|---|---|---|---|

**Asumptions**

1) 24 person hours of private night time security per day 7 days a week (Except June)

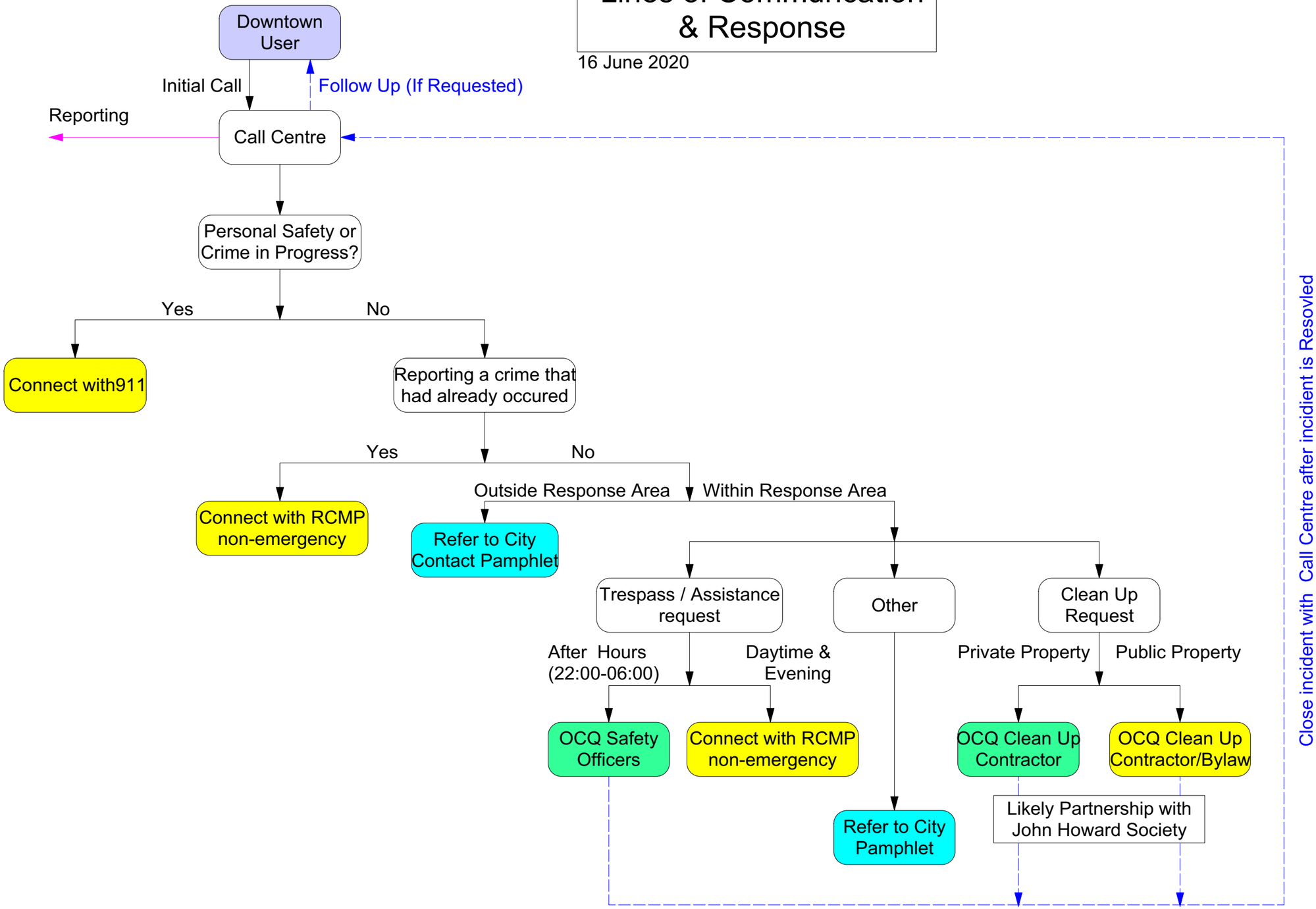
2) 4 person hours of private security per day 7 days a week (Except June)

3) All administration and reporting during pilot period to be provided on a voluntary basis

# ATTACHMENT C

## Lines of Communcation & Response

16 June 2020



**ATTACHMENT D**

HEALTH AND SAFETY ALLIANCE INITIATIVE

June 1, 2020

To: Old City Quarter Commercial Property Owners/Representative:
Bob Moss
Darren Moss
Doug Backhouse
Monica Briggs
(via email)

cc. Bill Corsan,
Director, Community Development
City of Nanaimo
(via email)

Subject: Letter of Support

Upon receipt of copies of the written letter and proposal submitted to the City of Nanaimo Council, as requested at that time by Council, and following a meeting with the proponents of the proposal, members of the Old City Quarter Health and Safety Alliance Initiative have agreed to provide this Letter of Support for the items as described in the document "**Restoring security and pride of place for residents and businesses-May 12th Draft**".

The innovative ideas as presented in the document hold much potential for the building of positive and productive collaborative efforts towards improving the situation that currently exists in Nanaimo's Old City Quarter. Especially noteworthy is the willingness of these commercial property owners to contribute direct financial support in order to assist in establishing a "pilot" phase that could facilitate early implementation and associated evaluative steps to determine the effectiveness of the proposed strategies, as well as to provide building blocks to enhance and/or improve the innovations and collaborative possibilities and processes arising from them.

Thank you for your collective willingness to engage in the dialogue, planning and allocation of resources necessary to move forward with action together on behalf of our community.

Sincerely,

Gloria Wells, Chair
Old City Quarter Health and Safety Alliance Initiative

# Delegation Request

**Delegation's Information:**

Darren Moss has requested an appearance before Council.

City: Nanaimo
Province: BC

**Delegation Details:**

The requested date is June 22, 2020.

The requested meeting is:
Special Council

Bringing a presentation: Yes

Details of the Presentation:

Summary of Old City Quarter led neighbourhood support program

CITY OF NANAIMO
THE HARBOUR CITY

# Information Report

DATE OF MEETING June 22, 2020

AUTHORED BY CHRIS SHOLBERG, COMMUNITY HERITAGE PLANNER AND KARIN KRONSTAL, SOCIAL PLANNER

**SUBJECT** **REIMAGINE NANAIMO: DEMOGRAPHICS AND LAND INVENTORY/CAPACITY ANALYSIS SUMMARY**

## OVERVIEW

**Purpose of Report:**
To provide Council with a summary of the findings of two key background documents (Demographics Report – Population, Housing and Employment Projections, and Land Inventory/Capacity Analysis Report) related to the ReImagine Nanaimo (Coordinated Strategic Policy Review 2020-2021) process.

## BACKGROUND

At the Regular Council Meeting held 2020-FEB-24, Staff provided a progress update on the Reimagine Nanaimo Coordinated Strategic Policy Review 2020-2021 project, including a draft Terms of Reference for the overall process. Council endorsed the following motion:

> *"That Council receive the report titled "Coordinated Strategic Policy Review 2020-2021 Status Update" dated 2020-FEB-24, and adopt the attached Coordinated Strategic Policy Review 2020-2021 Terms of Reference."*

Following this direction from Council, Staff have since proceeded with the implementation of various aspects of the Terms of Reference, including working toward the completion of two key background documents:

- Demographics Report – Population, Housing and Employment Projections; and
- Land Inventory and Capacity Analysis Report

The focus of the Reimagine Nanaimo process is a comprehensive update of a number of key strategic planning policy documents. Central to this undertaking is an update of Nanaimo's 2008 Official Community Plan (OCP), the 2005 Parks, Recreation and Culture Plan, and the creation of an Active and Sustainable Transportation Plan.

Planning and engagement on these plans will be done as part of a broader process that involves coordinating engagement to inform the review and update of other strategic plans, including the Economic Development Strategy, Water Supply Strategic Plan, and Climate Action Plan.

Data contained within these two reports will help to inform and underpin policy contained within all six of the plans that form the focus of the strategic policy review, and in particular, are a key analytical tool upon which to guide updates of the OCP and other strategic documents.

## DISCUSSION

For Council's reference, the completed Land Inventory/Capacity Analysis Report is included as Attachment A. While summarized here, completion of the Demographics Report – Population, Housing and Employment has been delayed and the full report will be provided to Council in a few weeks' time.

Due to the considerable amount of data provided in each report, the following key highlights and recommendations are included for Council's reference.

### Demographics Report – Population, Housing and Employment

The purpose of this report is to provide projections about the future growth of Nanaimo to support effective planning of future infrastructure, land use, public facilities, transportation networks, and other long-term services.

The projections contained in this report build on work previously completed for the Regional District of Nanaimo (RDN). However, the RDN work has been extended in several ways:

- The timeframe for the Nanaimo projections has been extended to 2046;
- The city-wide Nanaimo projections have been broken down and allocated to 16 Planning Areas within the city; and
- The projected mix of housing structure types has been updated to reflect recent market activity, which suggests a significantly higher share of apartment development as part of total housing growth, rather than the extrapolation of past trends used in the RDN work.

In other respects, the underlying assumptions and methodologies are the same.

*Population Projections*

The projections use two growth scenarios that have the same assumptions for fertility and mortality, but alternative assumptions for future net migration.

1. Baseline Scenario – This scenario suggests Nanaimo's growth from 2016 to 2046 will average 0.86% per year. In terms of actual population increase each year, this scenario calls for an annual increase of 1,070 people per year, with an estimated total Nanaimo population of 126,629 in 2046.

2. High-Growth Scenario – The City's estimated average growth under this scenario is 1.20% per year to 2046 and the average annual increase in population is 1,580 people per year, with an estimated total Nanaimo population of 141,883 in 2046.

*Housing Projections:*

Based on the population projects noted above and a number of other factors, such as Household Maintainer Rates and developable land capacity, the following total housing unit estimates were established:

3. Baseline Scenario – Total housing unit projections for the city will increase from 39,170 in 2016 to 54,143 in 2046 – a total growth rate of 38%.

4. High-Growth Scenario – Total housing unit projections for the city will increase from 39,170 in 2016 to 60,158 in 2046 – a total growth rate of 54%

*Employment Projections*

Employment projections for Nanaimo are adapted from an earlier 2020 employment projections analysis prepared for the RDN in support of the RDN's Regional Growth Strategy: Sharing Our Future 2041.

Nanaimo's analysis uses similar growth assumptions and methodology to first prepare projections for the city of Nanaimo as a whole, which accounts for about two-thirds of total RDN employment, and then adapting the city-wide projection.

5. Baseline Scenario, total job projections for the city will increase from 46,193 in 2016 to 58,483 in 2046 – a total growth rate of 27%.

6. High-Growth Scenario, total job projections for the city will increase from 46,193 in 2016 to 63,844 in 2046 – a total growth rate of 38%.

**Land Inventory/Capacity Analysis Report**

The intent of this study is to provide the City with a better understanding of growth trends (up to 2046) affecting land use patterns, the impact of these trends on demand for development land, and the capacity of the available land to meet projected demand while ensuring alignment with conservation and sustainability objectives.

*Report Highlights and Recommendations*

For quick reference, report highlights can be found listed in Attachment B – Land Inventory/Capacity Report Highlights.

The report groups the key recommendations by land use type (residential, commercial, industrial, and institutional), which are summarized below.

*Residential Land Use*

1. Based on housing demand projections contained within the Demographic Report, the city is likely to have enough land (an additional 253 hectares) to fulfill future demand in all future land use scenarios except in a high-growth, low-density scenario. It is anticipated a high-growth scenario demanding up to 607 ha of additional residential land is unlikely to occur, based on recent market trends and City goals of higher-density, sustainable development formats. The most notable demand shortage in this scenario would be among single-detached homes. Despite this potential shortfall, the consultant believes the city has enough land to accommodate all projected housing demand; however, much of this land is located within areas zoned for a mixture of uses, such as the corridors and commercial areas. Additionally, the Oceanview and Sandstone lands represent a large chunk of potential residential supply.

There will be a major shift away from how Nanaimo has developed in the past where single-family housing has been the predominant form of residential development, shifting into denser forms of development, including ground-oriented units and apartments. Growing demand is immediately evident among townhomes and four- to six-storey wood-frame apartments due to consumer preferences, along with the economic feasibility of wood-frame versus high-rise development.

In areas where development is not occurring, the City should consider partnerships that could act as an anchor or catalyst for residential development. For example, the University Urban Node may require a custom zone to allow for a wider variety and higher density of uses than indicated by adjacent Corridor 2 and 3 zones, depending on the outcome of their feasibility analyses.

2. The City should also consider allowing for greater maximum buildings heights so that variances are not required. Wood-frame structures can be up to six storeys or approximately 60 feet (18.3 metres) in building height. The National Building Code and B.C. Building Code are making provisions to allow construction with encapsulated mass wood construction up to 12 storeys in height.

3. It is also suggested to conduct a city-wide parking study and, if possible, reduce parking requirements, especially for affordable housing projects. Continual investment in public transportation while creating complete and walkable communities may help to justify lower parking ratios.

4. Finally, it is recommended the City increase the maximum allowable density for multi-family residential so that proponents can include more floor area in their developments without having to provide amenities as part of density bonusing. The City will need to decide whether a greater number of residential units is a satisfactory trade-off for the loss of amenities.

*Commercial Land Use*

5. The City is expected to have a sufficient amount of land designated to permit commercial uses to accommodate future projected demand. Rather than looking for ways to provide more land for commercial uses, the City should identify a strategy to support the overall health of its existing retail nodes, particularly within Downtown and South Nanaimo.

6. Strong focus should be paid towards the retail environment within Downtown Nanaimo. The vitality of any city's downtown is highly reliant on a vibrant and diverse retail experience with a significant foot traffic.

7. Aside from the addition of residential supply within Downtown, the City should consider "quick fix" interim projects and events designed to animate the downtown and encourage better place making. Pop-up shops, food trucks, farmers markets, winter markets, music shows, artistic installations, outdoor kiosks, and similar items can be highly beneficial in attracting footfall and encouraging frequent repeat visitation.

8. Additional emphasis should be put towards the overall design of ground floor commercial units referring to the design and development principles outlined in Section 3.1.5. of the

report (e.g., direct, street-level access, patio/exterior display areas, and impactful signage). For example, the "Starbucks Effect" refers to the positive impact a popular café with an active frontage, outdoor seating areas, and large windows can have when compared to less dynamic, larger tenancies, such as a bank or pharmacy. In many cases, this effect alone has been enough to help save adjacent suffering retailers due to the anchor effect and the ability of such a tenancy to alter consumers' overall perception of a certain part of town.

9. Another key challenge facing many retailers is lack of suitable staff due to low unemployment rates and an aging population. The City could consider partnering with local academic institutions and retailers to create a retail training program that may help to supply more staff.

10. It is imperative to ensure commercial activity is not too spread out, particularly through the corridor areas, and the City should instead promote and support the infill of existing retail nodes as a way of cultivating a critical mass and mix of offerings. The City should encourage density levels and a wide variety of permitted uses within these areas, while potentially limiting commercial uses in some parts of the Corridor-designated lands. More specifically, the City should focus on creating more pedestrian connections between the growing residential areas surrounding the existing Urban Nodes due to the physical barrier created by existing seas of parking. This could include pedestrianized pathways with weather protection, landscaping, bike paths and facilities, public gathering areas, and similar features that would encourage nearby consumers to walk rather than drive to these retail centres.

11. The one retail format noted as lacking in the city is small-scale convenience nodes within neighbourhoods. Best practices suggest there should be a convenience node within a five-minutes walk of most residents, yet there are many gaps throughout Nanaimo. The City could designate small parcels of land suitable to accommodate 5,000 – 10,000 square feet of commercial floor space within areas lacking true convenience nodes.

12. Finally, many of the non-profits groups within Nanaimo have expressed concern regarding the availability of affordable space, many of which are at risk of losing their space as new development occurs. Although this demand may not be substantial in terms of the overall scale in relation to market office space demand, it is important for the City to consider options for these indispensable user groups. There is a clear surplus of available lower-quality Class B and C office space within the city that new market office users are unlikely to desire, yet may still be suitable for non-profit groups. To accommodate the needs of these groups, the City could consider the reuse and revitalization of older, persistently vacant buildings with sharing-space models for groups that are expected to be compatible with one another. Additional assistance for these groups could be financial assistance and help negotiating favourable leases with landlords, the later of which has been brought up as an issue that many non-profit groups have experienced.

*Industrial Land Uses*

13. It is important for the City to create new industrial supply as the amount of vacant industrial land is not expected to fulfill future demand by 2041. The industrial land capacity analysis demonstrates that the usable, vacant, industrially-zoned land within the City's Urban Containment Boundary is insufficient to satisfy demand projections, even under the status-quo scenario. As such, it is imperative the City examine potential solutions to create new industrial supply.

14. Within the Boxwood area, the development of the 11 hectares of vacant lots south of Nanaimo Parkway should be encouraged. This area has already proven to be a popular industrial node, with ongoing construction and strong absorption of new supply.

15. In addition to the vacancies within Boxwood, there are some lots over 2 ha that have remained vacant over the past decade. The owners of these lots should be engaged to identify, where possible, ways to incentivize the development of this land.

16. The Sandstone light industrial lands represent a potential long-term influx of supply. In the meantime, the process of considering Oceanview for industrial development should begin, including an assessment of the total amount of space within the area that is viable for industrial use.

17. Another factor to assess is the potential intensification of existing industrial land, primarily among light industrial uses. Intensification could range from higher ceilings with racking for distribution centres, to investments in automation and the development of multi-level buildings. Due to tight supply constraints in many port cities throughout North America, there has recently been a growing trend of multi-level light industrial buildings being constructed in Vancouver, Seattle, San Francisco, and New York. In order to support developers if they wish to construct multi-level industrial buildings, the City should reassess any potential barriers to such development including:

    - Permitting new industrial uses, such as e-commerce, last-mile delivery, and integrated work-spaces;
    - Discontinuing or limiting non-industrial uses to a secondary scale that only supports primary industrial activities; and
    - Adjusting density caps, such as building setbacks, height limits, floor area ratios, and site coverage maximums.

    The heavy industrial areas within Nanaimo are less viable for intensification as they are more land-intensive, requiring large areas for truck loading, vehicle parking, and the outdoor storage of equipment and materials.

18. The City could also consider the amalgamation of land outside of the Urban Containment Boundary for industrial use as identified in report Section 4.3. (existing industrial lands south of the city boundary along the Island Highway). These potential sites represent an additional 44 ha of land suitable for industrial use.

*Institutional Land Uses*

19. The City is facing a few key challenges regarding demand for institutional land over the short- and long-term, primarily relating to the shortage of public school classrooms and challenges regarding the aging student population. Although growth in the school-aged population is expected to level off within 5-8 years, an immediate shortage of elementary school classrooms has been identified, with secondary schools expected to reach capacity in the coming years. The City will need to work closely with School District 68 as they develop their new long-range facilities plan in identifying the future land needs and potential locations for new or expanded school sites. Although the consultant has identified only a limited amount of vacant land currently zoned for community services, it is understood schools are generally permitted within Neighbourhood and Corridor-designated areas. It will be important to consider setting aside a portion of this land for future institutional development.

20. It is also imperative the City examine the growing land demands for seniors' housing and care facilities. As the population continues to age, the shortage of available space will continue to become more of an issue, as will the supply of staff suitable to provide quality care for these individuals. The City should work with the Island Health to further identify future land requirements based on internal projections.

## CONCLUSION

The highlights and recommendations outlined in this report will be considered as part of the overall strategic policy review and update process.

## SUMMARY POINTS

- To provide Council with a summary of the findings of two key background documents (Demographics Report – Population, Housing and Employment Projections, and Land Inventory/Capacity Analysis Report) related to the Reimagine Nanaimo (Coordinated Strategic Policy Review 2020-2021) process.
- The focus of the Reimagine Nanaimo process is a comprehensive update of a number of key strategic planning policy documents. Central to this undertaking is an update of Nanaimo's 2008 Official Community Plan, the 2005 Parks, Recreation and Culture Plan, and the creation of an Active and Sustainable Transportation Plan.
- Data contained within these two reports will help to inform and underpin policy contained within all six of the plans which form the focus of the strategic policy review, and in particular are a key analytical tool upon which to guide update of the Official Community Plan.

## ATTACHMENTS

ATTACHMENT A: Land Inventory/Capacity Analysis Report
ATTACHMENT B: Land Inventory/Capacity Analysis Report Highlights

**Submitted by:**

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Accelerating success.

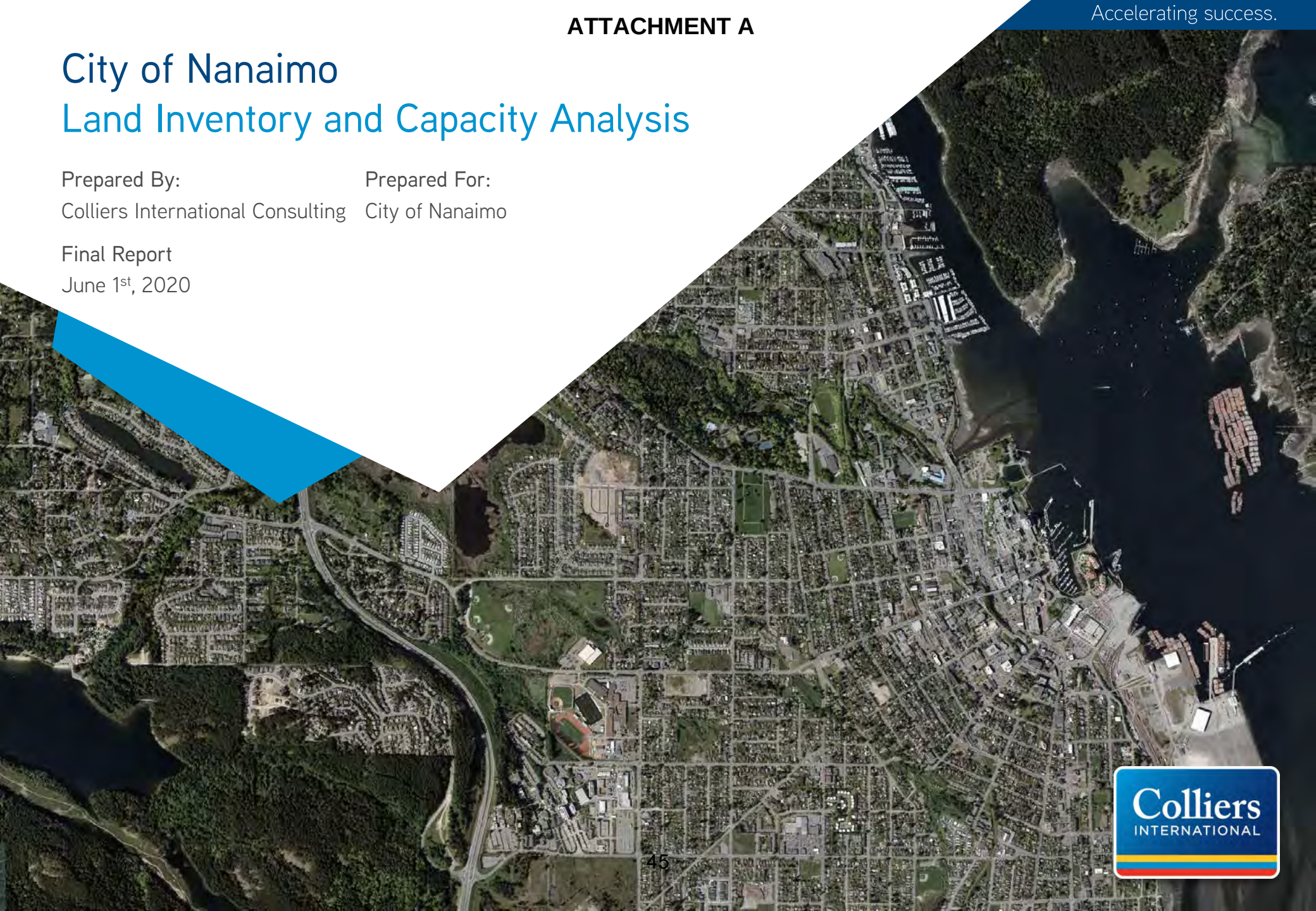
# City of Nanaimo

## Land Inventory and Capacity Analysis

Prepared By:
Colliers International Consulting

Prepared For:
City of Nanaimo

Final Report
June 1st, 2020



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# Notice

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This document is only intended for the use of the City of Nanaimo.

## Study Objectives

Colliers International Consulting was retained by the City of Nanaimo to conduct a land inventory and capacity analysis to support a comprehensive update to the City's Official Community Plan. The intent of this study is to provide the City with a better understanding of growth trends affecting land use patterns, the result of these trends on demand for developable land, and the capacity of the developable land to meet projected demand while ensuring alignment with conservation and sustainability objectives.

## Methodology and Limitations

This study relies on data from multiple sources including Colliers International, Statistics Canada, BC Stats, the Conference Board of Canada, Vann Struth Consulting Group, and PiinPoint. The quality of the assumptions made in the background data therefore place limitations on the study's findings, but Colliers has tried to ensure that assumptions are based on up-to-date and reliable market intelligence. The data used in this report was generated prior to the emergence of COVID-19 as a major global economic threat. While Colliers sees this as a generation defining crisis, in the fullness of time we expect to see a return to the real estate market patterns highlighted in this report. However, should market conditions change significantly once the economy has settled into the "new normal" over the coming months, the study's data and conclusions should be re-examined.

# 1 Nanaimo Profile

## Population

- The City of Nanaimo is expected to grow at an annual rate of 1.4% to reach a population of between 126,629 (baseline growth scenario) to 141,883 (high growth scenario) by 2046.
- This growing population is expected to continue aging, with the higher growth rates occurring among the 75 to 84 and 85+ age groups.
- The aging population is expected to result in higher demand for healthcare, seniors housing, and other services related to older age groups.
- Recent growth has primarily been occurring in North Nanaimo and closer to Downtown when compared to Southern Nanaimo which is relatively less dense than other areas of the City.

## Employment

- Most of Nanaimo's major employment sectors have recently been growing, including those reliant on heavy and light industrial space. Like many urban areas, Nanaimo is transitioning from a resource and commodity-based economy towards a service-based knowledge economy.
- Particularly strong employment growth has recently occurred among the construction industry, coinciding with the recent boom in residential construction throughout Nanaimo.
- Industrial land is one of the key pillars of a strong economy, and the slow employment growth of related sectors such as transportation and warehousing is more indicative of a lack of employment lands to support these activities rather than a lack of market demand.

# 2 Residential

## Market Analysis

- The housing market has seen strong growth from migration into Nanaimo from homebuyers priced out the Capital Regional District and Metro Vancouver.
- Benchmark pricing for single family homes, townhouses, and apartments have all increased in the last 5 years which has sparked development interest in certain areas of the City.
- In the rental market, a growing population and large renter segment has driven vacancy rates down and rental rates up. As an affordable form of housing, Council has approved many rental project applications to add much needed supply to the stock.
- While single family homes are the predominate building type, multi-family developments have exceeded that of single family in building permit value and housing starts. Condominium apartment units are quickly absorbed into the market and have become an attractive product in the marketplace.

## 2 Residential (cont.)

### Land Inventory

- The City of Nanaimo has a total of 4,165 hectares of land designated to permit residential uses, of which 674 hectares are currently not occupied.
- Of this 675 hectares, Colliers has identified approximately 592 hectares that appear to be developable for residential use, with an additional 81 hectares of land currently in various stages of the construction process.
- When broken down by OCP designation, approximately 216 hectares of land is within the Neighbourhood designation, accounting for 36.5% of the total inventory of developable land. Most of the single-family land within the City is developed, with a large portion of the remaining land located on more challenging sites due to geographical, accessibility, and servicing issues.
- There is an additional 52 hectares of land (8.8%) within the Corridor designated areas, 8 hectares (1.4%) within Urban Nodes, and an additional 316 hectares within Sandstone, Oceanview, and the Snuneymuxw land (located adjacent to VIU south of Fifth Street).
- Due to the relatively low utilization of many single-family sites throughout the City, particularly in the South, there could also likely be the opportunity for infill development and the introduction of more secondary suites.

### OCP Analysis

- Directing development to Urban Nodes and Corridors has seen some success. Development proposals have been received in Woodgrove and Downtown Urban Nodes, potentially resulting in 462 multi-family units ranging from affordable seniors housing, rental, and condominium units. The 5 approved projects have an average of 123.1 units per hectare and floor area ratio (FAR) of 1.19.
- However, there has been less development interest in the Hospital, University and South Nanaimo Urban Nodes due to a lack of amenities and lower sale price / rental rate.
- There has been considerable development interest on lands designated as Corridor. Corridor designated lands are better situated for multi-family development due to their proximity to arterial roads, commercial centres, shopping, services, and amenities.
- These projects could potentially deliver nearly 1,900 units of rental housing, student housing, and condominium units. While generally smaller in size, the nearly 20 projects approach an average of 110.2 units per acre and 0.93 floor area ratio.

## 2 Residential (cont.)

### Demand Analysis

- Colliers utilized the housing projections recently completed by Vann Struth Consulting Group in April 2020 to project future housing demand by structure type and baseline vs high growth scenarios.
- By 2046, they estimate that the City is likely to experience demand for an additional 2,782 to 4,050 single family houses, 4,041 to 4,926 ground-oriented units, and 8,148 to 12,011 apartments.
- Colliers assessed the following four scenarios to project future residential land demand:
    - Scenario 1 – Baseline growth, high density
    - Scenario 2 – High growth, high density
    - Scenario 3 – Baseline growth, low density
    - Scenario 4 – High growth, low density
- Based on this analysis, these projections are expected to result in demand for an additional 253 to 607 hectares of residential land by 2046.
- It should be noted that, in Colliers estimation, future single-family demand may be slightly overestimated particularly in scenario 4. For example, single-family housing starts and completions have slowed in recent years as housing affordability has narrowed the pool of buyers for this product type, and single family homes sit longer in the standing inventory when compared to condos which have been absorbed at a relatively faster rate.

### Capacity of Residential Land to Fulfill Demand by 2041

- The City is expected to have enough capacity within its vacant and developable land to support future growth in all scenarios except Scenario 4.
- Although scenario 4 is unlikely based on recent market trends and City goals of higher density, sustainable development formats, this potential demand gap could realistically be fulfilled through the intensification of underutilized residential land.
- When assessing the overall utilization of each planning area, it becomes clear that many of the southern planning areas of the City, such as Harewood, Chase River, South End, and Vancouver Island University present more opportunities for development when compared to northern planning areas such as Newcastle and North Slope.
- It also becomes clear that there is ample opportunity for higher density forms of development when compared to single-detached homes. For example, the redevelopment of existing shopping centres into mixed-use formats is a trend occurring throughout Canada. This would provide significant capacity for apartments that is not solely demonstrated by examining vacant and developable land.

## 2 Residential (cont.)

### Summary and Recommendations

- Colliers projects demand for an additional 253 to 607 hectares of residential land by 2046, with the overall capacity of existing zoned land varying based on residential subcategory.
- The analysis demonstrates that, based on housing demand projections completed by Vann Struth Consulting Group, the City is likely to have enough land to fulfill future demand in all scenarios except scenario 4 (high growth, low density).
- Scenario 4 is unlikely to occur, however, based on recent market trends and City goals of higher density, sustainable development formats. The most notable demand shortage in this scenario would be among single-detached homes.
- Despite this potential shortfall, Colliers believes that the City has enough land to accommodate all projected housing demand, however much of this land is located within areas zoned for a mixture of uses such as the corridors and commercial areas.
- Additionally, the Oceanview and Snuneymuxw lands represent a large chunk of potential residential supply. Regardless, there will be a major shift away from how Nanaimo has developed in the past where single-family housing has been the predominant residential development, shifting into denser forms of development including ground-oriented units and apartments.
- Growing demand is immediately evident among townhomes and 4-6 storey woodframe apartments due to consumer preferences along with the feasibility of woodframe rather than high rise development.
- In areas where development is not occurring, the City should consider partnerships that could act as an anchor or catalyst for residential development. For example, the University Urban Node may require a custom zone to allow for a wider variety and higher density of uses than indicated by adjacent COR 2 and 3 zones, depending on the outcome of their feasibility analyses.
- The City should also consider allowing for greater maximum building heights so that variances do not have to be sought out. Wood-frame structures can be up to 6 storeys or approximately 60 ft (18.3 m) in building height. The National Building Code and BC Building Code are making provisions to allow construction with encapsulated mass wood construction to up to 12 storeys in height.
- It is also suggested to conduct a citywide parking study and, if possible, reduce parking requirements especially for affordable housing projects. Continual investment in public transportation while creating complete, walkable communities may help to justify lower parking ratios.
- Finally, the City should increase the maximum allowable density so that proponents can include more floor area in their developments without having to provide amenities as part of density bonusing. The City will need to decide whether a greater number of residential units is a satisfactory trade-off for the loss of amenities.

# 3 Commercial

## Provincial Trends

- Year-over-year retail sales growth has been slowing at a notable rate, dropping from 9.2% to 2.1% between 2017-2018. Based on an assessment of the latest available data in 2019, this has continued with 1.1% year-over-year growth up to October 2019.
- Slowing retail sales growth could be caused by a variety of factors, including shifting demographics, the rise of e-commerce, and broader economic conditions such as the impact of a slowing housing market on consumers' perceived wealth which can reduce retail spending.
- Despite slowing retail sales as a whole, overall performance varies widely when broken down by individual retail category.
- The highest performing retail subcategories over the past year are primarily experience oriented, with full service and limited service restaurants registering sales growth of 3.9% and 3.8%, respectively. This is particularly evident for healthy, quick-service restaurants in the 1,000 to 2,000 sf range, upper-tier casual restaurants, and food halls.
- Conversely, grocery sales have slowed in recent years resulting in store closures and the emerging trend of smaller, more refined grocery store footprints with a larger amount of prepared foods.
- Due to the overall aging of the population and growing awareness of health issues, health and personal care stores experienced the largest overall sales growth during this period of nearly 6%.
- Overall, the slowing retail marketplace and growth of e-commerce has resulted in store closures, the overall reduction of store footprints, and the redevelopment of large retail properties to add on-site residential or office uses.
- The impact of ecommerce varies based on retail category, with convenience, price, and selection being major factors determining whether a consumer decides to purchase goods in-store or online.
- Resilient retail categories include food services, health and personal care, service commercial, fitness, value and athleisure apparel (Lululemon, Reigning Champ, etc.), entertainment, and other similar uses that are difficult to replicate online. Struggling retail categories include electronics, books, media, toys, homeware, furniture, department stores, and mid-market apparel.
- Changing demographics and the rise of e-commerce have resulted in a rapid evaluation of the mall experience and the traditional "anchor tenant". Consumers are now more than ever focused on the experience and what they can share on social media, rather than what they can buy at the local department store.

# 3 Commercial

## Design and Planning Principles

- Retail performance is linked to some common retail design and planning principles, particularly the inclusion of active and transparent storefronts, and human scale development.
- Finally, retailer preferences are also important to consider. Generally, there is strong tenant demand for retail units with:
  - Direct, street level access
  - 800 – 1,000 sf units
  - Min 20-foot frontages
  - Min 14-16-foot heights
  - Rectangular units
  - Patio/exterior display areas
  - Impactful signage

## Nanaimo Office Dynamics

- The City of Nanaimo currently has a relatively soft market for traditional office space, with new office-only product primarily being purpose built and a lack of demand restricting the *build it and they will come* approach.
- Moving forward, it is expected that the City will experience gradual population-based demand growth rather than a significant influx of demand generated from the relocation of major regional office headquarters or a rapidly growing tech sector.

## Land Inventory

- The City of Nanaimo has a total of 915 hectares of land designated to permit commercial uses, concentrated within Downtown and North Nanaimo. Corridor designated lands account for the largest amount of total supply (50.6%), followed by Urban Nodes (40.1%).
- Of this total inventory, Colliers has identified 61 hectares of land as vacant and developable, 480,000 square feet of currently vacant commercial floorspace, 24 hectares of land in various stages of the development process, and 39 hectares of land designated for commercial use within the Sandstone Master Plan.

## Assessment of 2008 OCP

- There has been approximately 30 hectares of new commercial land developed over the past decade. 55.2% of this development has occurred in Corridor OCP areas, followed by 16.8% within Neighbourhood Commercial areas, 15.9% within City Commercial Centres, and 12.1% within Urban Nodes.
- The scale of development within the Corridor areas is logical as it encompasses a larger overall land area than other designations, and it encourages mixed-use development which is often more financially viable when compared to standalone commercial developments.

## 3 Commercial (cont.)

### Demand Analysis

- To project future commercial land demand, Colliers utilized a proprietary demand model which is based on socioeconomic variables, provincial data, commercial industry benchmarks, and commercial development trends.
- The first step in gauging potential future support for commercial uses is to delineate primary (City of Nanaimo) and secondary (RDN) trade areas and examine the population projections within.
- The combined trade areas and inflow demand is expected to generate a total of $3.12 billion and $3.47 billion in captured spending by 2041.
- Colliers estimates that this will result in demand for an additional 610,000 to 780,000 square feet of retail floorspace, 127,000 to 160,000 square feet of service commercial floorspace, and 1.1 to 1.4 million square feet of traditional office floorspace.
- Utilizing industry standard commercial and office floor area ratios, this translates to demand for 29 to 38 hectares of commercial land by 2041.

### Capacity of Commercial Land to Fulfill Demand by 2041

- To estimate the City's future commercial land capacity, Colliers assumed that 80% of vacant units and sites under construction will be absorbed first, followed by vacant and developable land, and finally, the commercial land within Sandstone.
- This analysis demonstrates that the vacant units and land under construction represent enough supply to last until 2024-2025 in the high growth scenario. The vacant and developable land would add another 6 years of supply being absorbed by 2031, and finally the Sandstone commercial lands represent enough additional supply to fulfill total citywide demand by 2041 in both the baseline and high growth scenarios.

### Summary and Recommendations

- The City of Nanaimo is expected to have a sufficient amount of land zoned to permit commercial uses to accommodate future projected demand.
- Over time, as the trade area population base grows and household incomes increase, demand triggers for higher quality international tenants may occur. Rather than resulting on a significant net increase in total floor area demand, the growing spending power of these trade areas will result in higher quality retailers and less turnover.
- The City also has a large amount of land currently being used by car dealerships. It is expected that their land requirements may gradually decline over the long-term due to shrinking vehicle expenditures and the rise of alternative modes of transportation.

## 3 Commercial (cont.)

### Summary and Recommendations (cont.)

- Rather than looking for ways to provide more land for commercial uses, the City should identify a strategy to support the overall health of its existing retail nodes, particularly within Downtown and South Nanaimo.
- It is imperative to ensure that commercial activity is relatively concentrated, particularly through the corridor areas, and the City should instead promote and support the infill of existing retail nodes as a way of cultivating a critical mass and mix of commercial offerings.
- Strong focus should also be paid towards the retail environment within Downtown Nanaimo. The vitality of any City's Downtown is highly reliant on a vibrant and diverse retail experience along with a strong amount of footfall.
- Finally, many of the non-profit groups within Nanaimo have expressed concern regarding the availability of affordable space, many of which are at risk of losing their space as new development occurs.
- To accommodate the needs of these groups, the City could consider the reuse of older persistently vacant buildings with sharing space models for groups that are expected to be compatible with one another. Additional support for these groups could include assistance negotiating favourable leases with landlords.

## 4 Industrial

### Market Analysis

- Nanaimo's population is becoming increasingly educated and its workforce is moving away from a traditionally resource-based economy to more diversified service and manufacturing based industries.
- Investments in Nanaimo's key transportation infrastructure, notably the Nanaimo Port and Nanaimo Airport combined with the City's central location on Vancouver Island are likely to contribute to growing demand for industrial land in the area.
- Significant investment in the Nanaimo Port combined with the Vancouver Island Foreign Trade Zone designation make Nanaimo a regionally significant city for domestic and international trade .
- Despite the expansion of employment in the industrial sector, little supply is being created with the majority of development occurring in the residential housing market.
- With little to no industrial vacancy in Greater Victoria and Metro Vancouver, industries are increasingly drawn to Nanaimo due to comparably lower cost of living and doing business. This is further demonstrated by industrial land values reaching $1 million per acre.
- Without new industrial supply, new businesses may choose to locate elsewhere, and existing businesses may be limited in their ability to expand or be forced to relocate due to rising costs and limited capacity.

## 4 Industrial (cont.)

### Land Inventory

- The City of Nanaimo has a total of 661 hectares of land designated to permit industrial uses, concentrated primarily within the Duke Point and Northfield/Boxwood areas.
- This land can be further broken down into the two OCP subcategories. Industrial uses account for the majority of land supply (60.2%) with users typically being more land intensive. Light industrial uses account for the remaining 39.8% of total supply.
- Of the total inventory, Colliers has identified 64 hectares of vacant and developable land, with an additional 10 hectares of land with construction occurring within.
- There is also another 53 hectares of land designated for light industrial uses within the Sandstone Master plan, although development is expected to occur over the long term.
- Finally, the land in the Duke Point area designated for Oceanview Golf Resort and Spa may be better suited for industrial use due to the heavy industrial uses within Duke Point and the water proximity.
- In total, accounting for Oceanview and Sandstone, there is approximately 731 hectares of land within the Urban Containment Boundary that is or could be dedicated for industrial use.

### Assessment of 2008 OCP

- Over the past decade, approximately 6 hectares of new industrial supply has been developed in industrial and light industrial OCP areas. Nearly 70% of this development has occurred within the Boxwood Industrial area, primarily due to the availability of developable land and proximity to Nanaimo Parkway.
- This scale of development is likely not indicative of total annual demand during the past decade, but rather, is the natural development of some of the last remaining developable industrial land within the City. It is expected that the remaining vacant supply be a result of their size, slope, configuration, and accessibility rather than any hindrances from the OCP itself.

### Demand Analysis

- To estimate the future demand for industrial land within the City of Nanaimo, Colliers assessed two scenarios with a combination of the Historic Extrapolation and Constant Share projection methodologies.
- The first scenario (Status Quo) examines future industrial demand under the assumption that Nanaimo's industrial growth will resemble historical patterns and its positioning relative to the broader economic region will remain unchanged over the next two decades.
- The second scenario (High Growth) assumes that Nanaimo will continue to gradually become a major industrial centre within Vancouver Island due to many of the factors outlined in this report.

## 4 Industrial (cont.)

- Colliers estimates that the City will experience demand for a total of between 592 hectares (Status Quo) and 672 hectares (High Growth) of industrial land by 2031. By 2041, this demand is expected to grow to between 641 hectares (Status Quo) and 727 hectares (High Growth).

### Capacity of Industrial Land to Fulfill Demand by 2041

- The analysis demonstrates that industrial land currently under construction and vacant lots over 2 hectares represent enough supply to last until 2023 in the High Growth scenario.
- The Sandstone lands would add another 6 years of supply, being completely absorbed by 2029, and finally the Oceanview lands would add 8-9 years of additional supply lasting until 2037-38.
- This analysis suggests that the complete utilization of all usable vacant and potential industrial supply within the urban containment boundary could represent approximately 18 years of industrial supply in the High Growth scenario.

### Summary and Recommendations

- The usable vacant industrially zoned land within the City's Urban Containment Boundary is insufficient to satisfy demand projections even under the Status Quo scenario. As such, it is imperative that the City examine potential solutions to create new industrial supply.
- Within the Boxwood area, the development of the 11 hectares of vacant lots south of Nanaimo Parkway should be encouraged. This area has already proven to be a popular industrial node with ongoing construction and strong absorption of new supply.
- In addition to the vacancies within Boxwood, there are a large number of lots over 2 hectares that have remained vacant over the past decade. The owners of these lots should be engaged to identify, where possible, ways to incentivize the development of this land.
- The City should also consider designating Oceanview for industrial development, including an assessment of the total amount of space within the area that is viable for industrial use.
- Another factor to assess is the potential intensification of existing industrial land or underutilized commercial land, primarily among light industrial uses. Intensification could range from higher ceilings with racking for distribution centres, to investments in automation and the development of multi-level buildings.
- The heavy industrial areas within Nanaimo are less viable for intensification as they are land-intensive requiring areas for truck loading, vehicle parking, and the outdoor storage of equipment and materials.
- Despite expected push back from the RDN, the City could also consider the annexation of land outside of the municipal boundary for industrial use. Suitable areas for annexation would include land adjacent to Duke Point or farther south towards South Wellington and Cassidy.

# 5 Institutional

## Market Analysis

- The Nanaimo-Ladysmith School District 68 is expected to experience a shortage of space to accommodate both elementary and secondary students.
- As a result, the recently approved SD 68 Capital Plan includes work to expand École Hammond Bay and prepare Cilaire and Pleasant Valley elementary schools to deal with earthquakes.
- Additionally, the District is in the process of developing a new long-range facilities plan, anticipating the need to identify capital expansion priorities as a result of projected capacity shortfalls.
- The VIU Trust is currently considering the development feasibility of three key sites within the existing campus deemed as excess land.
- The population of Nanaimo residents aged 75 years and over is projected to grow by an annual rate of approximately 5% to reach a total population of 20,650 by 2041. This is the fastest growing age group within the City.
- This has already resulted in recent growth in demand for healthcare services, seniors housing, and seniors support workers. This has resulted in shortages and challenges providing basic care for seniors.

## Land Inventory

- The City currently has a total of 202 hectares of land zoned to permit institutional uses, only 6 hectares of which appears to be vacant. In total, there is approximately 65 hectares of land (32.3%) used by elementary schools, 42 hectares (20.6%) used by Vancouver Island University, 32 hectares (15.8%) used by secondary schools, and 28 hectares (14.1%) used for healthcare purposes.
- It should be noted that many institutional uses such as schools are also permitted within other mixed-use land use designations such as the corridor, commercial centre, and neighbourhood areas.
- As such, the City will need to examine the vacant land within all these areas to balance the needs for additional institutional lands with other land uses through consultation with School District 68, Vancouver Island University, Vancouver Island Health Authority, and related groups.

## Summary and Recommendations

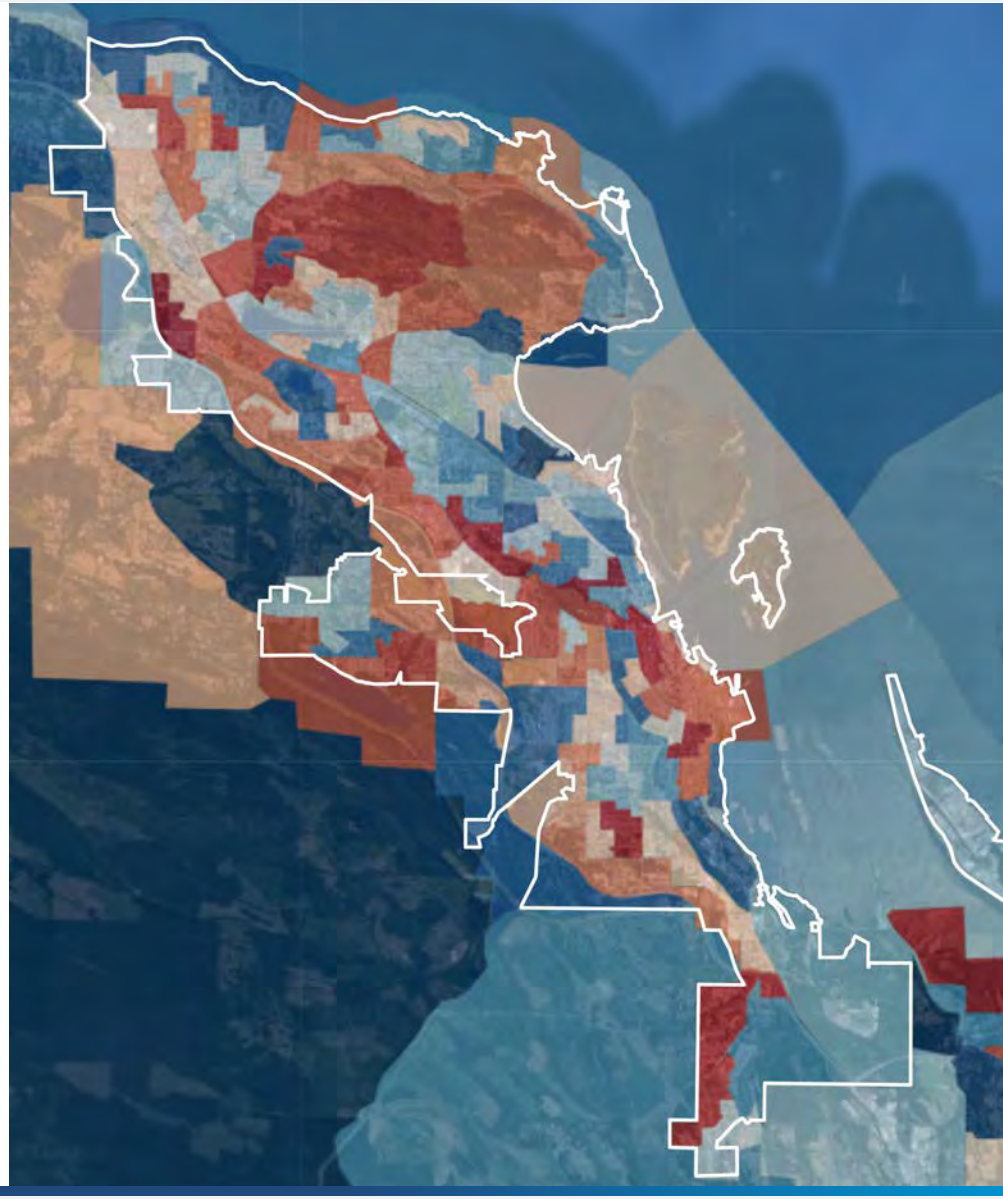
- The City will need to work closely with SD 68 as they develop their new long-range facilities plan in identifying the future land needs and potential locations for new or expanded school sites.
- It is also imperative that the City examine the growing land demands for seniors housing and care facilities. As the population continues to age, the shortage of available space will continue to become more of an issue, as will the supply of staff suitable to provide quality care for these individuals.

# 1 | Nanaimo Profile

The City of Nanaimo has grown at an average rate of 2% over the past decade, with an additional 16,000 residents living in the City between 2006-2016.

## 1.1 Population Density and Recent Growth

- As the first step of a forward-looking land capacity analysis, it is important to generate an understanding of historical growth patterns and their implications on future land uses.
- Over the past 10-15 years, the City has been growing at a modest rate. During this period, the population has grown by approximately 16,000 representing an annual average growth rate of 2% which is similar to regional and provincial averages.
- The heatmap to the right displays population growth over the past five years overlaid on top of existing population density broken down by dissemination area. Polygons displayed in dark red indicate high population growth rates (>10%), and high-density levels (>4,000 people per $km^2$). On the other side of the spectrum, polygons displayed in dark blue indicate low population growth rates (at or below 0%), and low-density levels (<500 people per $km^2$).
- This analysis demonstrates that population growth has primarily occurred in Central and Northern Nanaimo, which is correlated to population density levels along with commercial and personal services.
- Conversely, Southern Nanaimo has experienced less population growth during this period, and as such, has lower density levels and the potential for more infill development moving forward.

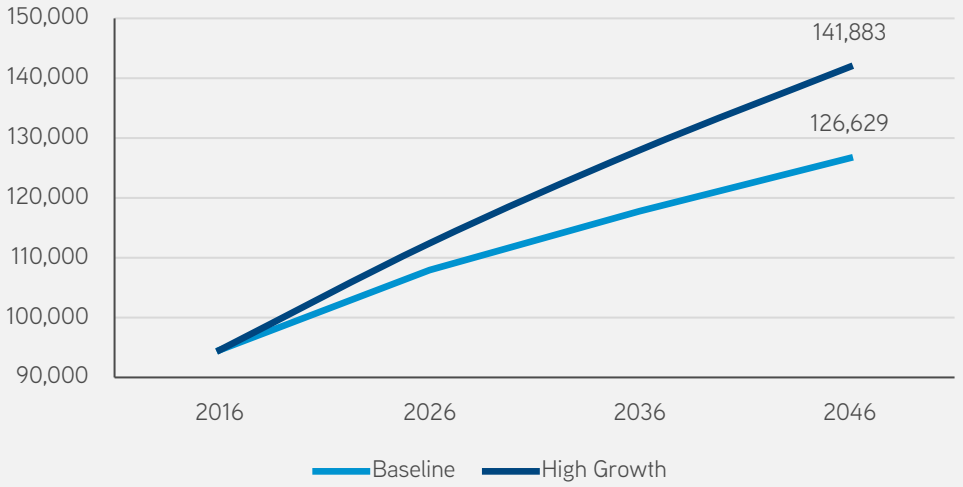


The City of Nanaimo is expected to grow at an annual rate of 1.1% to 1.7% to reach a population of 126,629 to 141,883 by 2046.

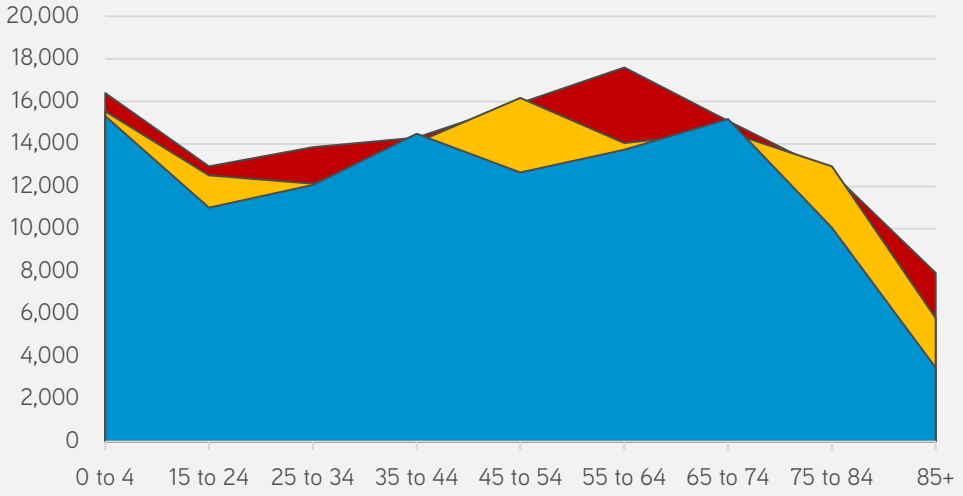
## 1.2 Population Projections

- Due to the long-term nature of the Official Community Plan, it is important to use accurate population projections as they feed into many components of the land demand and capacity analyses.
- Colliers used the population projections within the Housing Capacity and Gap Analysis (2019) created by City Spaces and Vann Struth Consulting Group for the Regional District of Nanaimo.
- These population projections were generated using the cohort component model that considers demographics and expected patterns of migration into and out of the region, along with fertility and mortality rates. Colliers has assessed the methodology and assumptions used in these projections and agrees with their overall validity.
- The baseline growth scenario assumes future net migration will resemble patterns observed between 2006 and 2016, whereas the high growth assumes migration will gradually increase at a modest rate.
- As identified to the right, the City of Nanaimo is expected to grow at an annual rate of 1.1% (baseline scenario) to 1.7% (high growth scenario) to reach a total population of between 126,629 and 141,883 by 2046.

### City of Nanaimo Population Projections (2016-2046)




### Baseline Projections by Age Group (2026,2036,2046)

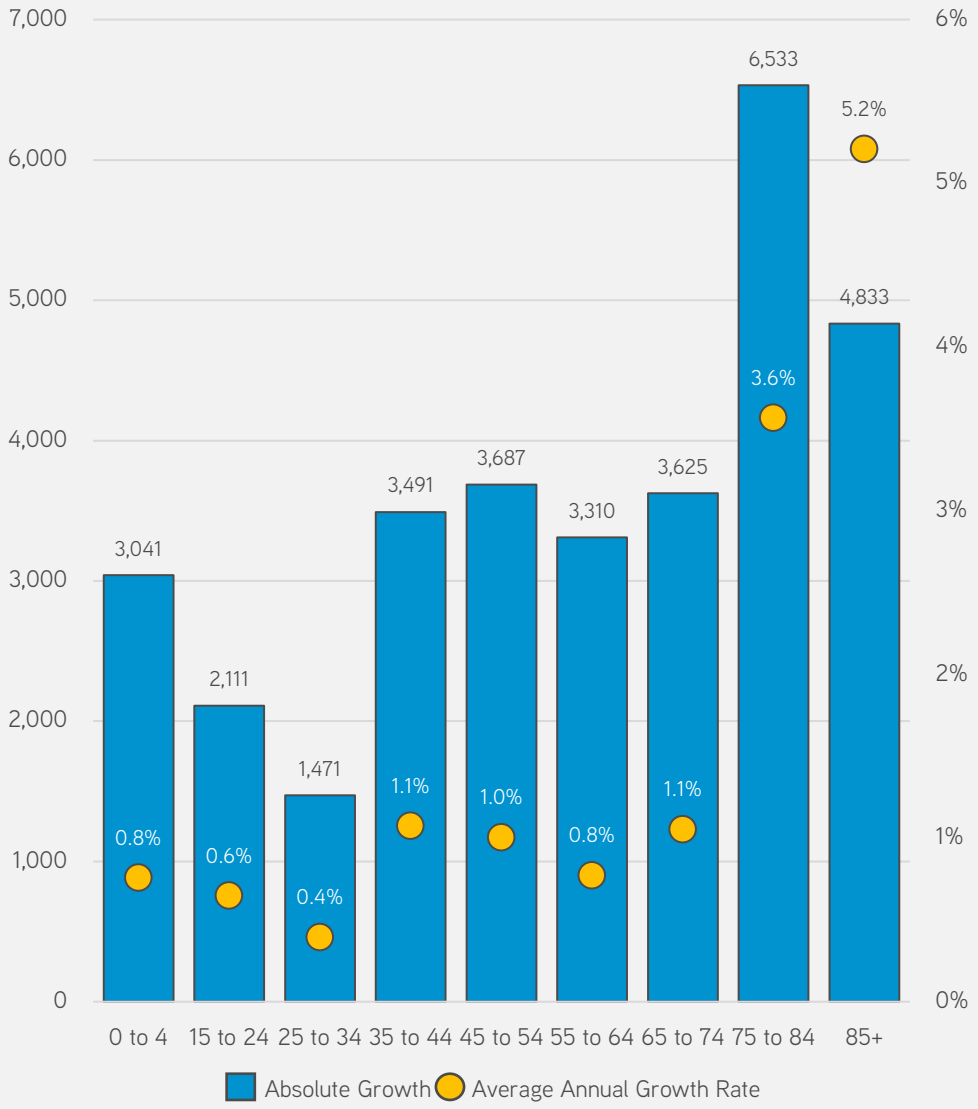


The City of Nanaimo is expected to continue aging, with the largest population growth rates among the 75 to 84 and 85+ age groups.

## 1.2 Population Projections

- The population projections were further broken down into specific age groups to demonstrate how the City's population will age over the next two decades.
- The City is expected to continue aging, with the largest amount of growth within the 75 to 84 and 85+ age groups, growing at respective annual rates of 3.6% and 5.2%.
- Overall, by 2046 the City can expect to have approximately 15,000 more people aged over 65. Strong growth is also expected to occur within the 35 to 54 age group, consisting of approximately 7,000 more residents by 2046.
- The aging population is expected to result in higher demands for health care, seniors housing, and other services related to older age groups, whereas the growth within the 35 to 64 age groups is expected to contribute to demand for single and multifamily homes, traditional commercial services, population-based office tenants, and industrial/light industrial businesses.

Population Growth by Age Group (2016-2046)



Most of Nanaimo's major employment sectors have recently been growing including those reliant on heavy and light industrial space.

## 1.3 Employment Growth Sectors

- Nanaimo's centralized location on Vancouver Island has helped the City continually evolve into an important retail, service, transportation and distribution node for central and northern Vancouver Island.
- The largest number of jobs are provided within retail sectors, followed by healthcare, accommodation/food services, construction, and education services.
- The next three categories of labour by occupation (Business, Finance, Administration; Education, Law & Social, Community and Government Services; Management Occupations) fall into professional services and cumulatively account for the largest number of occupations in Nanaimo.
- Sales and service occupations make up 27% of all jobs in Nanaimo, and trades, transport & equipment operators account for 14.5% of all occupations.
- Between Census periods, the largest amount of growth occurred in the Manufacturing sector, followed by Primary industries (agriculture, forestry, fishing, and hunting), and construction.
- It is expected that employment growth in the construction sector since the 2016 Census has exceeded previous years, demonstrated by the record scale of ongoing construction during this period.

**Industrial Employment by Sector – City of Nanaimo (CA)**

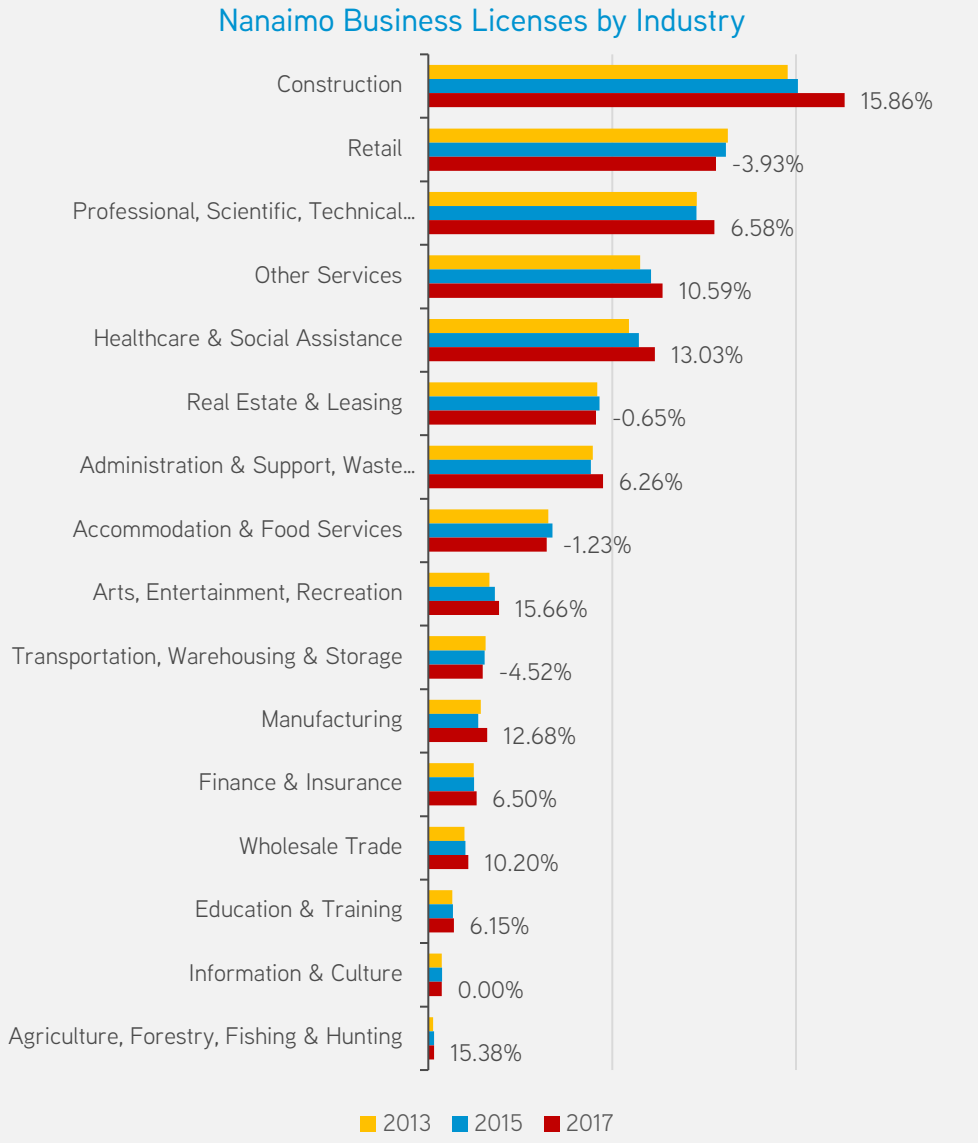
| Employment Subcategory | 2011 | | 2016 | | Growth (2011 –16) | |
|---|---|---|---|---|---|---|
| | Jobs | Share | Jobs | Share | Jobs | Growth |
| Retail Trade | 7,310 | 14.8% | 7,380 | 14.4% | 70 | 1% |
| Construction | 4,415 | 8.9% | 4,645 | 9% | 230 | 5.2% |
| Transport/Warehousing | 2,510 | 5.1% | 2,495 | 4.8% | -15 | -0.6% |
| Wholesale Trade | 1,665 | 3.4% | 1,315 | 2.6% | -350 | -21.0% |
| Manufacturing | 1,670 | 3.4% | 2,420 | 4.7% | 750 | 44.9% |
| Primary Industries | 1,220 | 2.4% | 1,390 | 2.7% | 170 | 13.9% |
| Mining, Oil & Gas | 370 | 0.75% | 400 | 0.78% | 30 | 8.1% |
| Total Labour Force | 50,620 | | 52,265 | | 1,645 | |

- Like many urban areas in British Columbia, Nanaimo is transitioning from a resource and commodity-based economy towards a service-based knowledge economy.
- This diversity in economic activity strengthens Nanaimo's mid island location, distances the economy from volatility, and provides the opportunity for growth among subsectors relatively new to the island market, many of which may be suited for light industrial buildings.

Nanaimo businesses have experienced strong growth in recent years, particularly in industries related to construction, professional, and health services.

## 1.3 Employment Growth Sectors

- In addition to examining employment data, the growth in the number of total businesses by subcategory is also indicative of their overall health and prospects.
- Since 2013, the construction industry has experienced that strongest overall growth in terms of the number of total business licenses (15.86%). This follows the assumptions regarding employment growth in this sector since 2013, with the growth of businesses coinciding with the boom of construction primarily in the residential sector.
- Strong growth has also occurred in the Arts, Entertainment, and Recreation (15.66%), Healthcare and Social Assistance (13.03%), and Manufacturing (12.68%) sectors.
- Conversely, there has been negative overall growth in terms of the total number of businesses in the Accommodation and Food Services (-1.23%), Retail Trade (-3.93%), and Transportation and Warehousing (-4.52%), and sectors.
- Industrial land is one of the key pillars for a strong economy, and the slow employment growth of related sectors such as transportation and warehousing is more indicative of a lack of employment lands to support these activities rather than a lack of market demand for such uses.

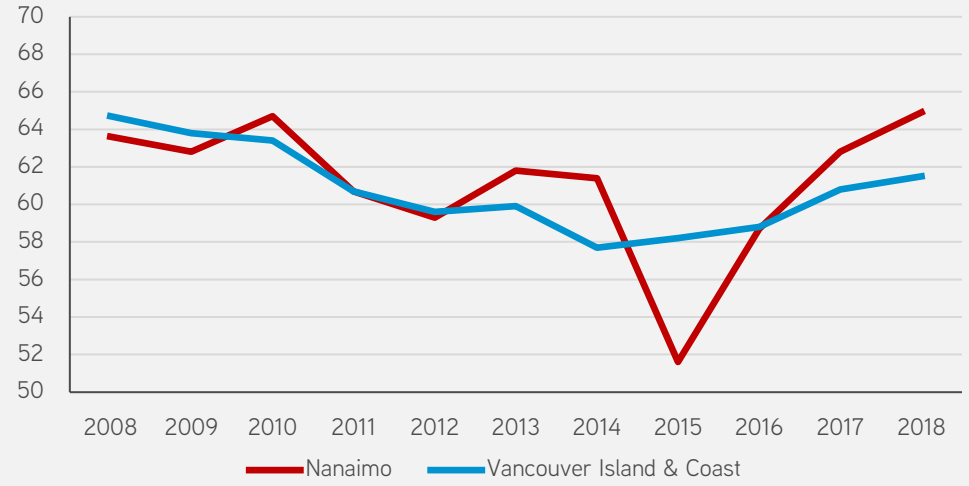


Since 2011, the adult working population is becoming increasingly educated with participation rates increasing every year since 2015.

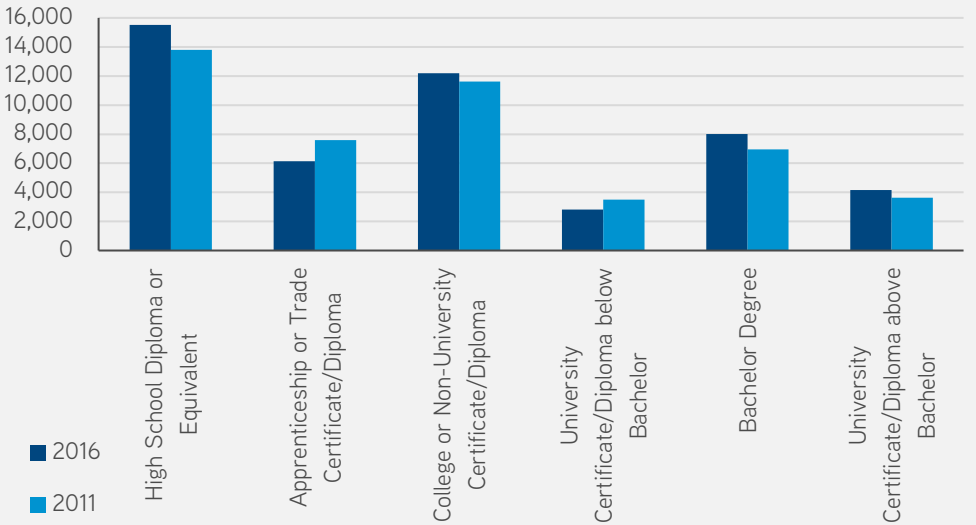
## 1.4 Labour Participation and Education

- Over the next 10 years, there is a forecasted 1.1% growth rate with 153,800 new jobs expected in the Vancouver Island & Coast Economic Region.
- In 2015, this region accounted for 14% of provincial employment in the Goods producing sector (agriculture, forestry, mining, oil and gas, fishing, hunting & trapping, utilities, construction and manufacturing).
- Indicating a strengthening economy, the labour force participation rate has been increasing at a steady rate since a significant dip in 2014-2015.
- The labour force participation has been coinciding with Nanaimo's economic expansion and growth in key employment sectors. Since 2016, Nanaimo's labour force participation rate has been higher than the Vancouver Island & Coast region.
- In addition to the growing labour force participation, the attainment of post secondary degrees has also been increasing in Nanaimo since 2011. This is expected to continually have a positive overall impact on Nanaimo's employment sectors that require further education.

Labour Force Participation Rate (%)




Educational Attainment in Nanaimo, aged 25 to 64 years



The 2008 Official Community Plan includes several new strategies to respond to growth challenges and facilitate a vibrant and attractive City.

## 1.5 Planning Context

### Official Community Plan - planNanaimo (2008)

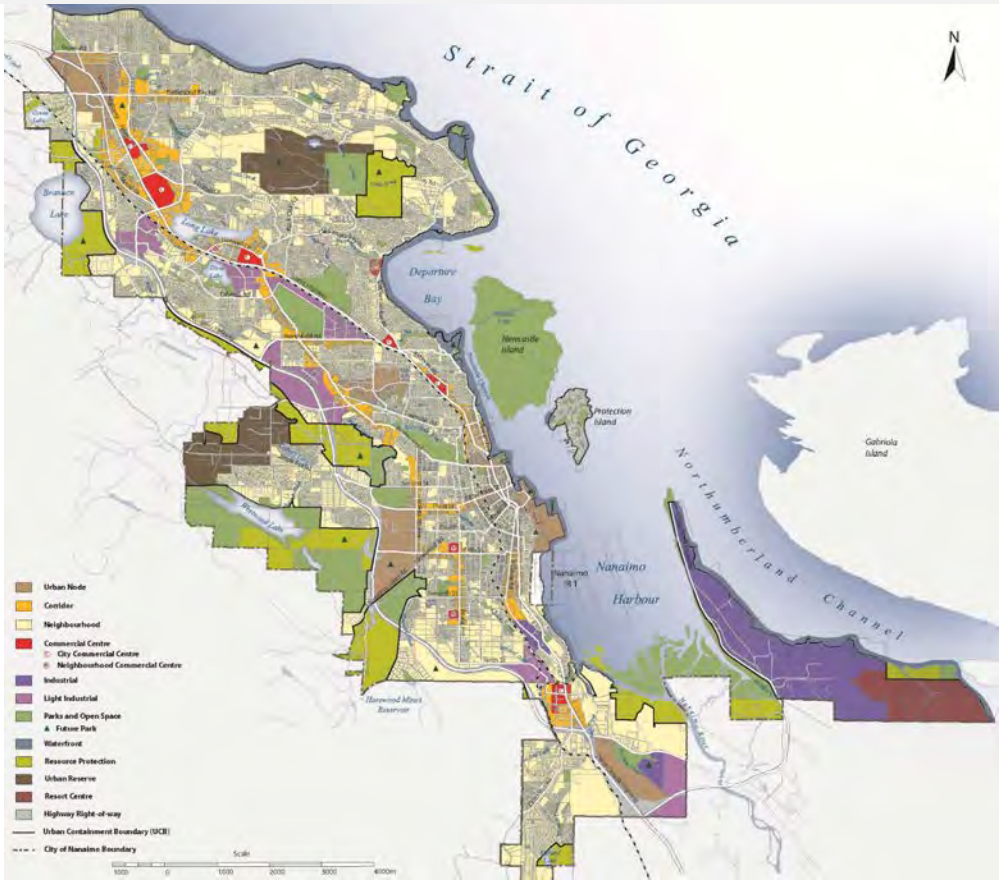
- City Council adopted the Official Community Plan in September 2008 providing several new strategies and land use designations to respond to growth challenges over the following decade and fulfill the goal of building a more sustainable community.

- As the City is currently in the process of updating the OCP, this report will examine if real estate development over the past decade has followed the goals outlined in specific land use designations. Analysis will focus on the Urban Node, Corridor, Industrial, and Light Industrial designations, as defined below and on the following page.

*Urban Node*

- Commercial, service, and high-density focal points for Nanaimo with residential density of 50-150+ units/ha and heights up to and including high-rise buildings.

- There are five urban nodes within the OCP including Downtown Centre, Woodgrove, South Nanaimo, Hospital, and University, each envisioned as developing into a complete community with a broad range housing options along with commercial and open space uses.




City of Nanaimo OCP Land Use Map (2008)

The 2008 Official Community Plan includes several new strategies to respond to growth challenges and facilitate a vibrant and attractive City.

## 1.5 Planning Context

### Official Community Plan - planNanaimo (2008)

*Corridor*

- Multi-unit residential development, public amenities, and commercial services in mixed-use developments with residential density of 50-150 units/ha and heights of 2-6 storeys.
- These are the linear focal areas that bisect Nanaimo, with goals of a broad approach where they evolve into mixed-use linkages between Urban Nodes, contributing to a vibrant economy and street life.

*Industrial*

- This designation applies to industrial park areas and is intended to recognize Nanaimo's historic role as a major industrial centre while also diversifying the industrial land base with new uses that positively impact the economy of the City.
- Uses within this designation include processing, manufacturing and assembly operations, storage, warehousing, and distribution. As a result of the urbanization of Nanaimo and the desire to maintain natural areas, there are no future sand or gravel extraction areas identified in the plan.
- General retail uses within the industrial areas will only be permitted when they are needed as services to employees in the area such as food & beverage and convenience retailers.

*Light Industrial*

- The OCP identifies that retail, office, and residential uses have encroached into existing industrial areas creating supply shortages and increased traffic, parking, and pedestrian conflicts.
- Additionally, due to the nature of Nanaimo's evolving economy, traditional definitions of industrial uses may not be appropriate, and as such, the OCP provided greater flexibility for addressing the type of uses permitted in industrial areas.
- Permitted uses within Light Industrial designates areas must:
  - generate limited shopping and retail traffic;
  - require large enclosed display and storage areas;
  - have a public retail sales area for products created on site;
  - require access to major roads for supply and distribution;
  - not be a shopping designation or primary retail use;
  - not require large customer parking lots; and
  - not include use of hazardous materials.

The 2008 Official Community Plan includes several new strategies to respond to growth challenges and facilitate a vibrant and attractive City.

## 1.5 Planning Context

### Official Community Plan - planNanaimo (2008)

*Light Industrial (Cont.)*

- These uses include, but are not limited to processing, manufacturing and assembly, storage, warehousing, distribution, equipment sales and repairs, printing and reproduction, construction, wholesale, transportation, communications related businesses, and auto parts retailers.
- To support local entrepreneurs, the City also accommodated small lots and the development of small-scale incubator facilities in all Light Industrial areas.

*Neighbourhood*

- Designated for a mixture of housing types including single family homes and ground oriented, multiple family units with densities ranging from 10-50 units/ha and heights from 2-4 storeys.

*Commercial Centre*

- Within Corridor designated areas, Commercial Centres are existing concentrations of commercial uses generally characterized by the provision of retail services as a standalone format but may also include a significant component of surrounding residential, amenity, and public uses.

*Urban Reserve*

- Recognized for future growth, with Area Plans being required prior to future development to address timing and servicing of development, land use and densities, and environmental protection issues.

*Resource Protection*

- Addresses the protection and preservation of environmentally sensitive areas and agricultural lands located adjacent to existing urban areas.

*Waterfront*

- Applied to ocean and foreshore areas and providing for marinas, ocean-focused industrial uses, as well as commercial, residential, recreation, open space, and pedestrian activity.

*Resort Centre (Oceanview)*

- Designated as a primarily recreational area with supporting residential neighbourhoods and accommodations in close proximity to small-scale commercial uses.

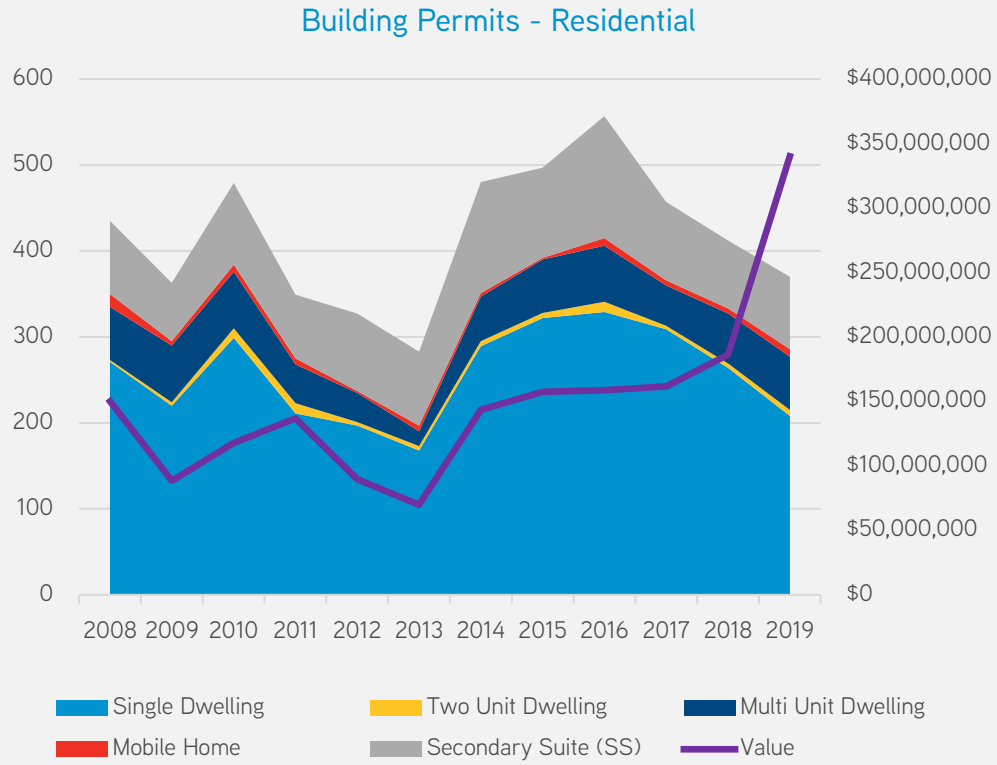
# 2 | Residential

Large multi-family projects have been approved by Council in 2018 and 2019 and should produce a significant amount of units in the near future.

## 2.1 Market Analysis

### 2.2.1 Historical Residential Building Permits

- Single family dwellings have consistently been the largest number of residential building permits between 2008 and 2018; composing around 60% of total building permits in this 10-year period.
- The periods 2011 to 2013 experienced a fall in all building permits, with the steepest decline in Multi Unit Dwellings and the most gradual decline in Single Dwellings.
- The value of permits, which is a reflection of the cost of construction and size of project, increased in 2014 and dramatically in 2019 to $340 million. Whereas there were more permits and smaller projects in the past, large multi-family projects are now dominating the residential development sector.




**Residential Building Permits**

| | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Single Dwelling | 271 | 220 | 299 | 211 | 197 | 168 | 289 | 322 | 329 | 309 | 264 | 208 |
| Two Unit Dwelling | 2 | 4 | 11 | 12 | 4 | 5 | 6 | 6 | 12 | 4 | 5 | 7 |
| Multi Unit Dwelling | 62 | 66 | 66 | 45 | 34 | 17 | 52 | 62 | 65 | 47 | 58 | 62 |
| Mobile Home | 15 | 5 | 8 | 7 | 2 | 7 | 4 | 2 | 9 | 6 | 6 | 9 |
| Secondary Suite (SS) | 85 | 68 | 95 | 74 | 90 | 86 | 129 | 105 | 142 | 91 | 79 | 84 |
| Alteration | 183 | 207 | 198 | 196 | 232 | 188 | 219 | 234 | 218 | 249 | 209 | 218 |
| Value | $150,089,567 | $88,424,133 | $117,756,760 | $136,800,033 | $89,560,272 | $69,711,300 | $143,590,785 | $157,450,510 | $158,664,364 | $161,699,321 | $186,135,742 | $340,010,849 |

Apartment units are a growing dwelling type whether they are as secondary suites, low-rise, mid-rise or high-rise units.

## 2.1 Market Analysis

### 2.2.2 Housing Stock by Type

- The City of Nanaimo had close to 40,000 occupied private dwellings in 2016. This represents an 8% increase over the previous census in 2011, and 2,960 net additional units.
- According to Census data, single detached houses are the predominant form of housing in the city, comprising 54% of the total housing supply. Low-rise apartments of less than five storeys follow as a distant second, representing 18% of the housing supply.
- The greatest change from 2011 was the sharp increase in the number of apartment or flats in a duplex which grew by 1,915 units or 66.7% over five years.
- These could be attributed to the number of secondary suites in the City (classified under "Apartment or Flat in a Duplex"), which have been legalized since 2005. Half of new homes are built with secondary suites, and suites in existing homes can be legalized or authorized, contributing to this stock.
- Nevertheless, the number of apartment units is expected to increase in the housing stock as evidenced by the number of building permits for multi-family dwellings in recent years.

| City of Nanaimo Dwelling Types | 2011 | | 2016 | | |
|---|---|---|---|---|---|
| | Number | Percentage | Number | Percentage | Change (2011-16) |
| Total number of occupied private dwellings by structural type of dwelling | 36,205 | | 39,165 | | 8.2% |
| Single Family Detached | 21,335 | 59% | 21,245 | 54% | -0.4% |
| Semi-Detached and Rowhousing | 3,330 | 9% | 3,790 | 10% | 13.8% |
| Apartment or Flat in a Duplex | 2,870 | 8% | 4,785 | 12% | 66.7% |
| Moveable or Other | 905 | 2% | 895 | 2% | -1.1% |
| Apartment < 5 Storeys | 6,655 | 18% | 7,215 | 18% | 8.4% |
| Apartment >= 5 Storeys | 1,110 | 3% | 1,240 | 3% | 11.7% |

- Owners comprised 68% of the nearly 40,000 households, showing the City's propensity towards home ownership. While a minority 32% of the population rents, the tight rental market has caused vacancy rates to drop and rental rates to rise.
- The dual effect of high rental revenue and municipal policies to create rental housing has caused significant increases in construction for this housing product.

The City's housing stock is fairly distributed along the age categories for period of construction, with 67.5% of the population owning their homes.

## 2.1 Market Analysis

### 2.2.3 Housing Stock by Age

- Most of Nanaimo's housing stock was constructed after 1981 (56.6%), indicating that buildings are not yet at the end of their useful life cycle and will remain in the housing stock for several decades.
- The period between 2011 and 2016 showed a moderate number of home construction with 875 fewer dwellings constructed than the same period in 2006 to 2011.
- Only 14.4% of the City's housing stock was made prior to 1960. Older housing is typically less expensive to rent and provides an important source of affordable housing.

### 2.2.4 Housing Stock by Tenure

- In 2016, 67.5% of households in Nanaimo consisted of homeowners. This was a decrease from 2011, in which 71.8% of households were recorded as owning their home.
- While a minority 31.5% of the population rents, the tight rental market has caused vacancy rates to drop and rental rates to rise. The dual effect of high rental revenue and municipal policies to create rental housing has caused significant increases in construction for this housing product.

**Occupied Dwellings by Period of Construction (2016)**

| | Number | Percentage |
|---|---|---|
| Total number of occupied private dwellings by period of construction | 39,165 | 100.0% |
| 1960 or before | 5,630 | 14.4% |
| 1961 to 1980 | 11,350 | 29.0% |
| 1981 to 1990 | 5,965 | 15.2% |
| 1991 to 2000 | 7,765 | 19.8% |
| 2001 to 2005 | 2,420 | 6.2% |
| 2006 to 2011 | 3,455 | 8.8% |
| 2011 to 2016 | 2,580 | 6.6% |

| Housing Tenure | 2011 | | 2016 | |
|---|---|---|---|---|
| | Number | Percentage | Number | Percentage |
| Total number of households | 36,205 | | 39,165 | |
| Owner | 25,990 | 71.8% | 26,445 | 67.5% |
| Renter | 10,210 | 28.2% | 12,720 | 32.5% |

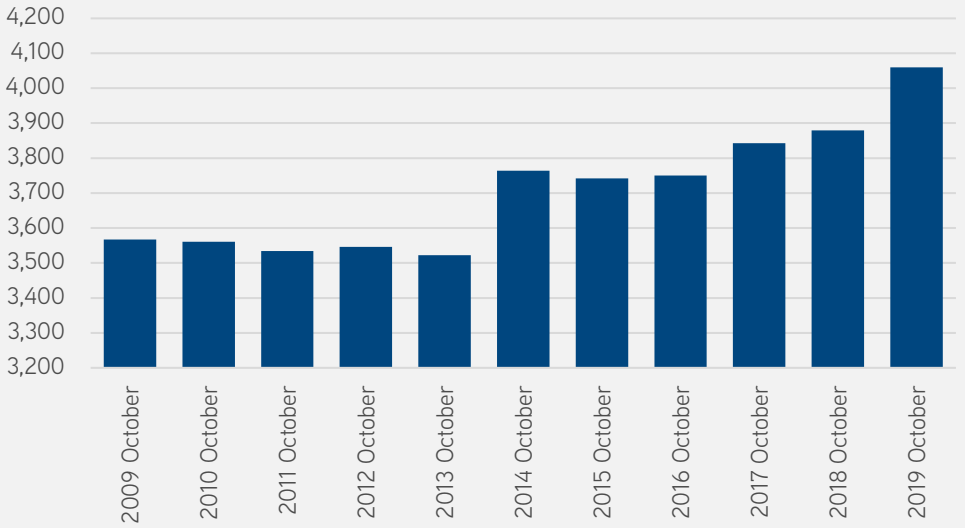
Strong demand for rental housing continues to result in low vacancy rates and allow rental rates to rise even as the number of rental units grows.

## 2.1 Market Analysis

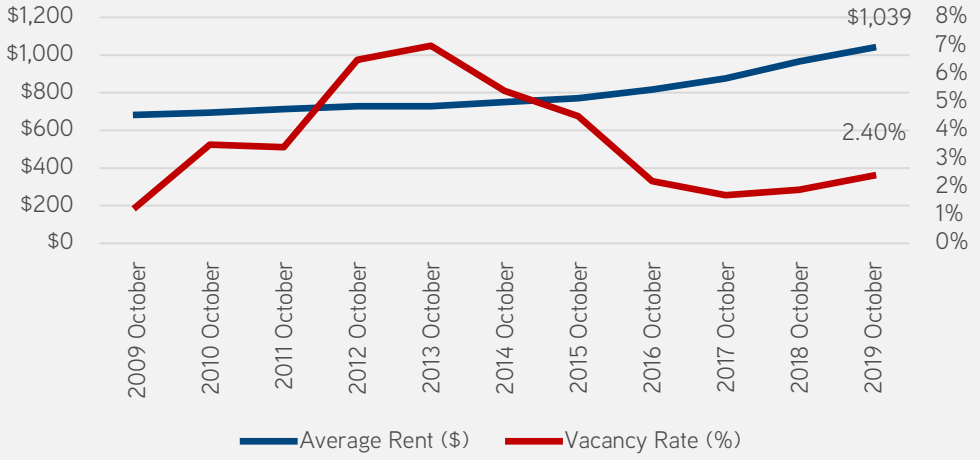
### 2.2.5 Rental Market

- There were 4,060 units in the City's purpose-built rental stock in October 2019. The rental housing stock has increased by an average of 1.3% since 2009.
- With the rise in housing prices and increasing homelessness, the City has taken significant measures to augment the supply of housing including a new Affordable Housing Strategy and numerous approvals of multi-family condo, rental and affordable housing projects.
- There is strong demand for rental housing in Nanaimo as evidenced by the declining vacancy rate with the concurrently increasing number of units in the rental universe. The vacancy rate reached 2.4% in 2019 and has been below 3% since 2015, the rate commonly believed to be a balanced rental market.
- The rental rates have increased an average of 3.3% annually which have caused much interest in the development community to build and hold rental property in Nanaimo.

Rental Universe, City of Nanaimo (Units)




Rental Rate and Vacancy, City of Nanaimo



Single Dwelling building permits consistently compose around 60% of total residential building permits between 2008 and 2018.

## 2.1 Market Analysis

### 2.2.6 Housing Starts

- For the Nanaimo Census Subdivision, there were 810 housing starts in 2019. There was a marked increase in housing starts since 2013, which marked the low point in housing starts from the economic slowdown of 2008. The greatest share of units was for apartments, which outpaced that for single family homes in 2017.
- The number of rental units has shown strong growth since 2015 and surpassed that of homeowner units in 2019. Similarly, condo unit starts nearly doubled that of homeowner units for the same year.
- Stratified properties provide relatively affordable means to owning a home when compared to typical home ownership of fee simple land and building improvement.

Housing Starts by Dwelling Type

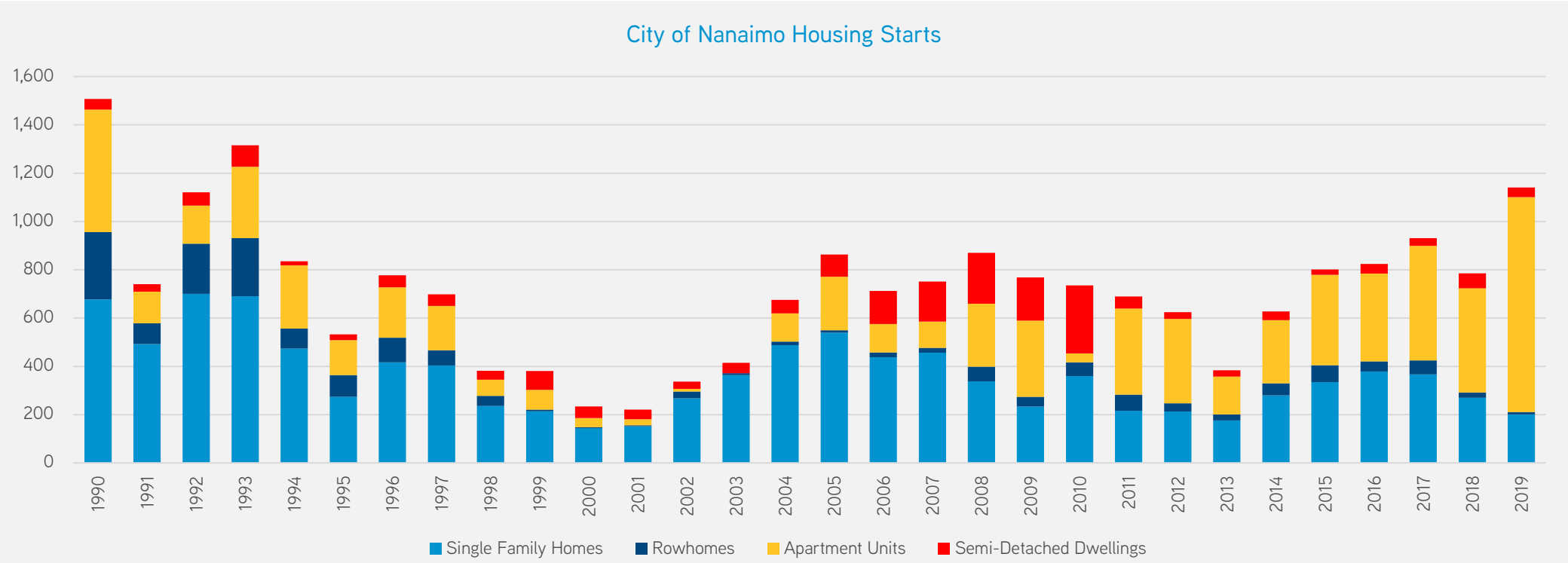
| | Single | Semi-Detached | Row | Apartment | Total |
|---|---|---|---|---|---|
| 2013 | 205 | 28 | 25 | 157 | 415 |
| 2014 | 318 | 36 | 50 | 261 | 665 |
| 2015 | 384 | 22 | 70 | 374 | 850 |
| 2016 | 433 | 40 | 41 | 364 | 878 |
| 2017 | 425 | 32 | 57 | 477 | 991 |
| 2018 | 315 | 62 | 22 | 435 | 834 |
| 2019 | 306 | 40 | 18 | 974 | 1,338 |

Apartment units have overtaken single family homes as the most common unit type in housing starts.

## 2.1 Market Analysis

### 2.2.6 Housing Starts (cont.)

› The number of housing starts grew steadily between 2013 and 2017, with the slight decrease in 2018 made up by a significant uptick in 2019. The number of starts for apartment units has grown and overtaken that of single-family homes as this housing type is more affordable and less land intensive than other dwelling types. The City of Nanaimo has made great strides in understanding their Housing Gap and addressing this through an Affordable Housing Strategy and approving medium to high density rental and condominium projects.



For the Nanaimo Census Subdivision, there were 623 housing completions in 2019, a marked decrease from previous years.

## 2.1 Market Analysis

### 2.2.7 Housing Completions

- Completions lag after starts by 6 months to 3 years and is an indication of new supply available to the population. For the Nanaimo Census Subdivision, there were 623 housing completions in 2019, a marked decrease from previous years.
- The decline is more likely a reflection of limited construction capacity as the number of housing units under construction is at record levels which extends the construction period and causes delays in completions.
- Note that limits to construction capacity will also cause a dampening effect on housing starts.

**Housing Completions by Dwelling Type**

| | Single | Semi-Detached | Row | Apartment | Total |
|---|---|---|---|---|---|
| 2013 | 238 | 40 | 43 | 314 | 635 |
| 2014 | 269 | 41 | 28 | 150 | 488 |
| 2015 | 343 | 36 | 48 | 238 | 665 |
| 2016 | 357 | 26 | 46 | 412 | 841 |
| 2017 | 385 | 32 | 54 | 295 | 766 |
| 2018 | 407 | 40 | 63 | 489 | 999 |
| 2019 | 306 | 44 | 22 | 251 | 623 |

**Housing Completions by Tenure Type**

| | Homeowner | Rental | Condo | Co-Op | Total |
|---|---|---|---|---|---|
| 2013 | 222 | 341 | 72 | 0 | 635 |
| 2014 | 255 | 173 | 60 | 0 | 488 |
| 2015 | 340 | 204 | 121 | 0 | 665 |
| 2016 | 333 | 372 | 136 | 0 | 841 |
| 2017 | 350 | 277 | 139 | 0 | 766 |
| 2018 | 375 | 548 | 76 | 0 | 999 |
| 2019 | 286 | 271 | 66 | 0 | 623 |

Strong demand for new units has resulted in a relatively few number of units left in standing inventory.

## 2.1 Market Analysis

### 2.2.8 Standing Inventory

- In 2019, the amount of inventory in the Nanaimo CSD dipped to its lowest since 2003 at only 36 completed and unabsorbed homeowner and condo units. In particular, there has been strong demand for multi-family condo units due to their lower price point and therefore relative affordability to homebuyers.
- In contrast, there has been a rising amount of inventory in the resale market since 2017 as discussed further in the next slide. The greater overall supply does not seem to have a dampening effect on the absorption of newly completed units.

**Standing Inventory by Dwelling Type**

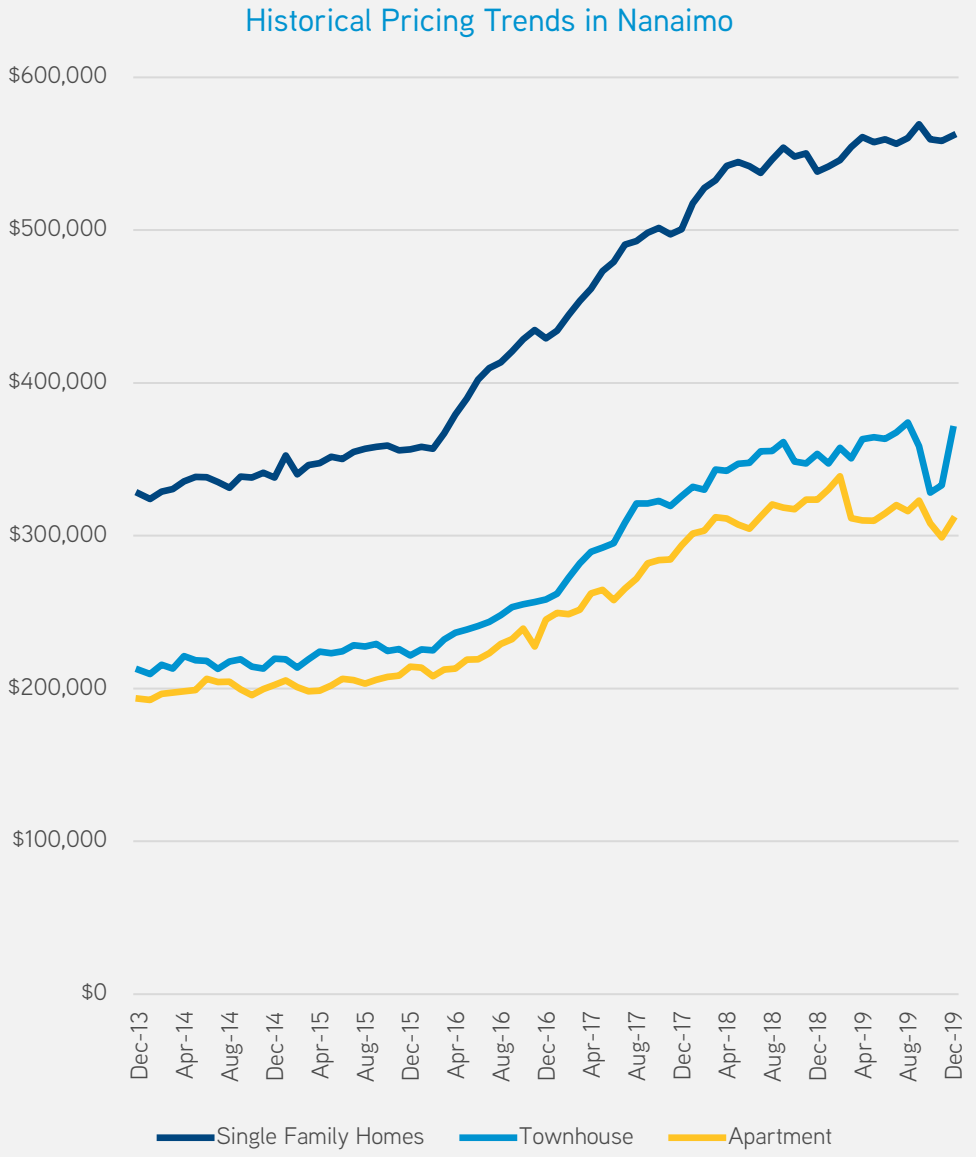
| | Single | Semi-Detached | Row | Apartment | Total |
|---|---|---|---|---|---|
| 2013 | 14 | 4 | 19 | 45 | 82 |
| 2014 | 15 | 6 | 7 | 19 | 47 |
| 2015 | 24 | 3 | 3 | 27 | 57 |
| 2016 | 17 | 4 | 10 | 16 | 47 |
| 2017 | 24 | 2 | 10 | 8 | 44 |
| 2018 | 43 | 7 | 9 | 0 | 59 |
| 2019 | 28 | 4 | 4 | 0 | 36 |

Housing prices have remained flat in 2018 and 2019 as government efforts were successful in cooling demand.

## 2.1 Market Analysis

### 2.2.9 Housing Prices

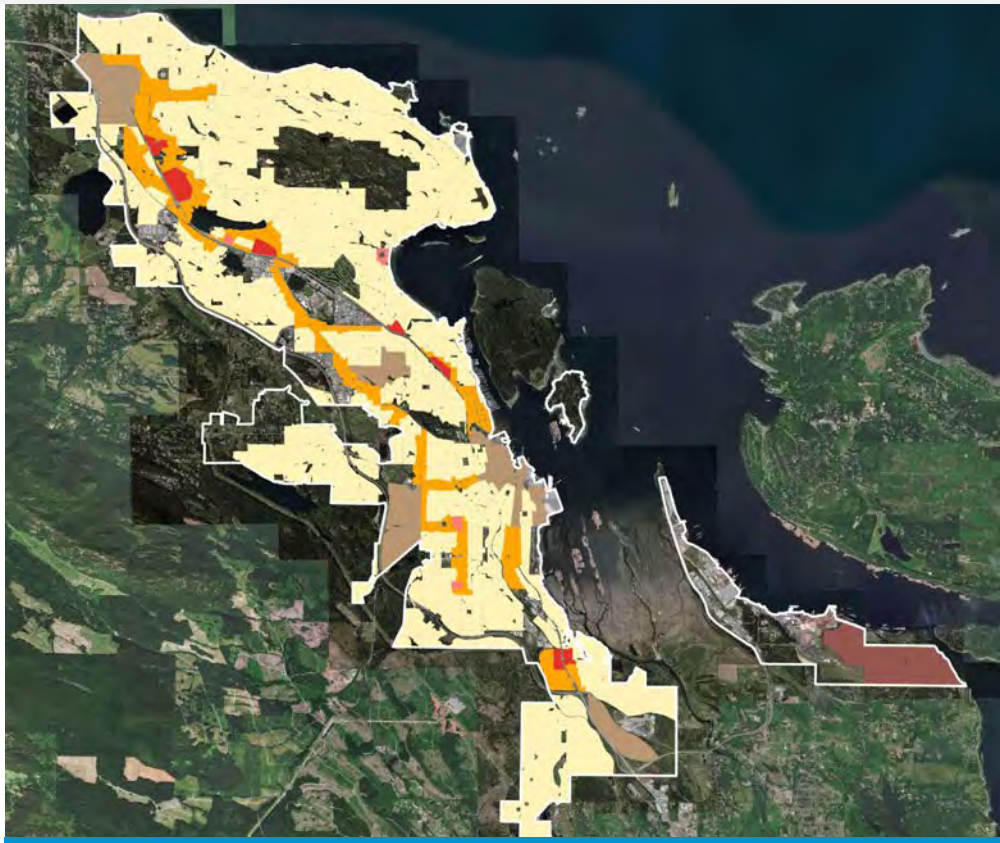
- In December 2019, the MLS® Home Price Index (HPI) benchmark price for single family homes in Nanaimo was $562,000. Townhouses saw an increase in Dec 2019 HPI pricing to $369,700 while benchmark pricing for apartments reached $310,700.
- From Dec 2013 to Dec 2019, prices for single family homes, townhouses and apartments rose by 71.6%, 74.2%, and 60.7%, respectively. Prices increased markedly since 2016 and with growth slowing since Q4 2017 due to government efforts to cool the housing market (the federal stress test and provincial homebuyer taxes).
- In 2018 and 2019 the market was further softened by buyers' "wait and see" sentiment allowing prices to drop before they proceed with a home purchase. The amount of standing inventory increased markedly in 2018 and 2019 as home prices were slow to fall and be corrected.
- Rising home prices are indicative of the strength of demand in the Nanaimo market from population growth due to migration and household formation.



The City of Nanaimo has a total of 4,165 hectares of land designated to permit residential uses in a variety of development formats and density levels.

## 2.2 Land Inventory by OCP Designation

- The City of Nanaimo has a total of 4,165 hectares of land designated to permit residential uses. Approximately 3,163 hectares (75.9%) of land has the Neighbourhood designation, permitting a mixture of housing types including single family homes and multi family units ranging from 10 – 50 units/ha.
- Approximately 370 hectares (8.9%) of land is located within the City's five Urban Nodes. These high-density focal points permit residential densities of 50 – 150+ units/ha and heights up to and including high-rise buildings. Linking these Urban Nodes are the 467 hectares (11.2%) of Corridor designated land. These linear focal areas are envisioned as mixed-use linkages between Urban Nodes, with density levels ranging from 50 – 150 units/ha.
- The City and Neighbourhood Commercial Centre designations total 66 hectares (1.6%) and 13 hectares (0.3%), respectively. While the primary purpose of this land is for commercial, residential uses are permitted on sites that already have commercial components. Finally, there is an additional 86 hectares (2.1%) of developable land within Oceanview, designated as Resort Centre.



| Ref | Category | Description | Hectares |
|---|---|---|---|
| | Neighbourhood | Standalone residential uses. | 3,163 (75.9%) |
| | Corridor | Mixed-use corridors | 467 (11.2%) |
| | Urban Node | High density focal points for Nanaimo | 370 (8.9%) |
| | City Commercial Centre | Mixed-use with retail at grade | 66 (1.6%) |
| | Neighbourhood Commercial Centre | Mixed-use with retail at grade | 13 (0.3%) |
| | Resort Centre | Recreation and residential | 86 (2.1%) |
| | | Total | 4,165 |

Colliers utilized a comprehensive methodology with numerous industry standard assumptions and data sources to identify vacant and developable land.

## 2.3 Vacant and Developable Land

### 2.3.1 Methodology

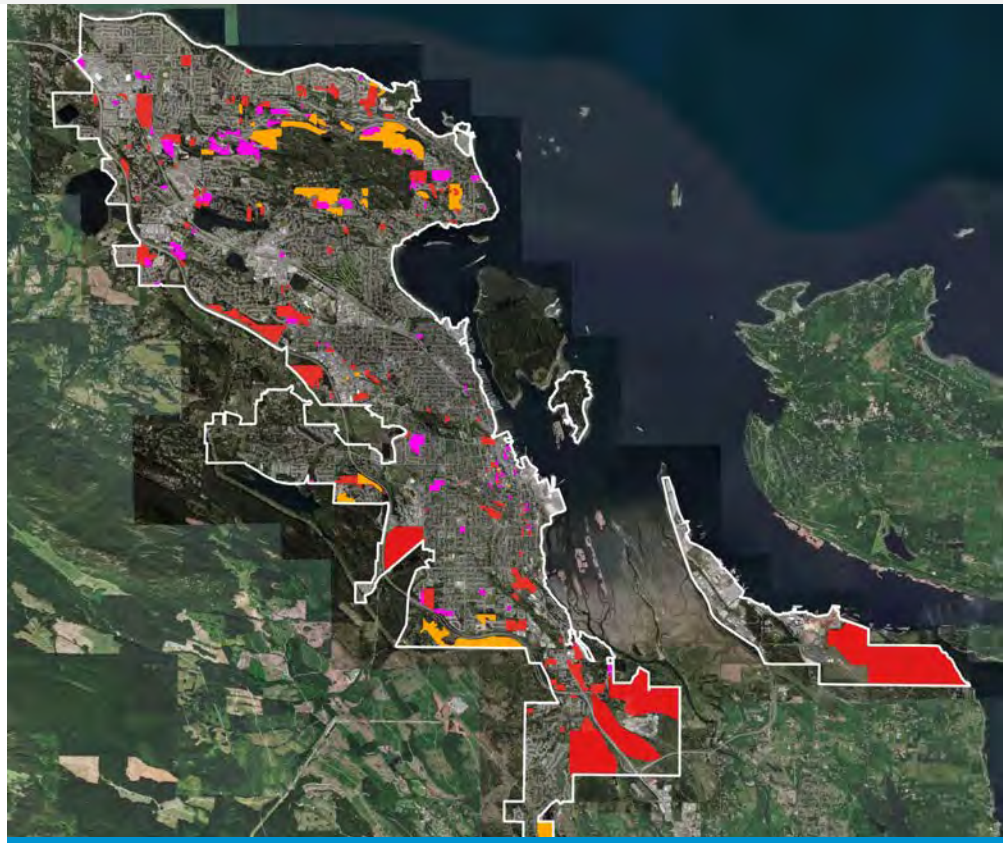
- In order to determine the amount of vacant land that could accommodate projected residential growth, Colliers conducted extensive fieldwork and GIS analysis with a number of data sources including orthographic imagery for the years 2008 and 2019, contour maps, natural feature maps, and recent development applications and approvals.
- Residential land is considered undevelopable in areas where slopes exceed 30%. Using the contour GIS layer, displayed to the right, Colliers identified vacant parcels with slopes exceeding this threshold.
- For vacancies near water features, the following setbacks were used: 30 metres from the edges of the Millstone and Nanaimo rivers, 15 metres from the centerline of other creeks, streams, and lake edges, and 7 metres from smaller creeks and streams.
- Additionally, land parcels currently in various stages of the preconstruction and construction process were identified. It is assumed that over the next 5-10 years that these sites will experience development.
- Ultimately, this layered analysis provides an accurate estimate of vacant land that is either developable or constrained. The same approach was also used for the industrial, commercial, and institutional analyses. The only difference is that these land uses are considered undevelopable with slopes exceeding 10% rather than 30%.

The City of Nanaimo has an estimated 520 hectares of vacant and developable land designated to permit residential uses.

## 2.3 Vacant and Developable Land

### 2.3.2 Vacant, Constrained, and Permitted for Development

- In total, Colliers identified 520 hectares of vacant land within the Urban Containment Boundary designated to permit residential uses. This includes the portions of both Oceanview and Sandstone that have been noted as suitable to accommodate development as well as the Snuneymuxw land just south of Vancouver Island University.
- There is an additional 72 hectares of land within constrained parcels that is estimated to be developable. The majority of the constrained land is located in North Nanaimo within the Long Lake, North Slope, Hammond Bay, and Linley Valley neighbourhoods.
- Finally, 81 hectares of land has been permitted for development. This accounts for 12% of the total vacant inventory and is expected to consist of a wide range of formats from single detached homes to townhomes and apartments. Most of this construction is occurring in North Nanaimo and near Downtown.



| Ref | Category | Description | Hectares |
|---|---|---|---|
| | Constrained | Developable portion of constrained land | 72 (10.8%) |
| | Vacant | Currently vacant and developable land | 520 (77.2% |
| | Permitted | Land permitted for development | 81 (12.0%) |
| | | Total | 674 |

Approximately 216 hectares of vacant and developable land is in the Neighbourhood designation, much of which is in challenging sites for development.

## 2.3 Vacant and Developable Land

### 2.3.3 Developable Land by OCP Designation

- The inventory of vacant and developable land can be further broken down into the OCP Land use Designations as listed to the right. Although most of these designations also permit uses other than residential, they provide a useful picture to inform future planning decisions.
- Approximately 216 hectares of this land is within the Neighbourhood designation, accounting for 36.5% of the total inventory of vacant and developable land that permits residential uses. Most of the single-family land within the City is developed, with a large portion of the remaining vacant land located on more challenging sites due to geographical, accessibility, and servicing issues.
- There is an additional 52 hectares of land (8.8%) within the Corridor designated areas, 8 hectares (1.4%) within Urban Nodes, and an additional total of 316 hectares within Sandstone, Oceanview, and the Snuneymuxw land.

| Ref | Category | Description | Hectares |
|---|---|---|---|
| | Neighbourhood | Standalone residential uses | 216 (36.5%) |
| | Corridor | Mixed-use corridors | 52 (8.8%) |
| | Urban Node | High density focal points for Nanaimo | 8 (1.4%) |
| | Neighbourhood - Sandstone | Neighbourhoods within Sandstone | 131 (22.1%) |
| | Urban Node – Sandstone | Mixed-use urban node | 57 (9.6%) |
| | Resort Centre | Recreation and residential | 86 (14.5%) |
| | Potential | Rural resource land within VIU urban node. | 42 (7.1%) |
| | | Total | 592 |

The City of Nanaimo has an estimated 82 hectares of land appearing to be in various stages of the construction process.

## 2.3 Vacant and Developable Land

### 2.3.4 Land Permitted for Development by OCP Designation

- The inventory of land appearing to be in various stages of the construction process was also broken down into OCP designations. It is assumed that the majority of this land will be developed over the next five years.
- Approximately 57 hectares of this land is within Neighbourhood areas, much of which is expected to include single family homes. Most of this construction is currently occurring in North Nanaimo.
- There is an additional 15 hectares of land within Corridor areas permitted for development, 7 hectares within Urban Nodes, 2 hectares within City Commercial Centres, and 1 hectare within Neighbourhood Commercial Centres. No development is currently occurring in Sandstone or Oceanview.
- It should be noted that a small portion of the land identified as under construction may have already been completed at the time of this analysis. Despite this limitation, it will not impact the overall capacity analyses as it is assumed that all of this land will be absorbed prior to the remaining vacant and developable land.

| Ref | Category | Description | Hectares |
|---|---|---|---|
| | Neighbourhood | Standalone residential uses | 57 (69.5%) |
| | Corridor | Mixed-use corridors | 15 (18.3%) |
| | Urban Node | High density focal points for Nanaimo | 7 (8.5%) |
| | City Commercial Centre | Mixed-use with retail at grade | 2 (2.4%) |
| | Neighbourhood Commercial Centre | Mixed-use with retail at grade | 1 (1.2%) |
| | | Total | 82 |

2,354 new units were approved in Urban Nodes and Corridors in recent years with an additional 389 units in other residential areas of the City.

## 2.4 OCP Assessment

### 2.4.1 Summary

- Since the approval of the Nanaimo OCP, there has been considerable multi-family residential development within Urban Node and Corridor designated lands, while some proposals have also been put forward at sites in Neighbourhood Plans that allowed for higher density residential development, near commercial areas, and in neighbourhood and other land use designations.
- Urban Nodes comprise 540 hectares (58.6 million sf) of land within the City. In the last 5-10 years, multi-family developments took up around 404,000 sf of land across 5 sites, or 0.69% of designated lands. As was desired, developments have greater unit density in urban nodes than in corridors at nearly 123 units per hectare. Developments are denser with projects yielding a total of 481,878 sf in floor area resulting in an average floor area ratio of 1.19.
- Corridors make up 785 hectares (84.5 million sf) of land within the City. There were more development projects within this land use type totaling 1.7 million sf in site area or 2.18% of designated lands. Projects had smaller unit density at 110.2 units per hectare and were also of smaller scale with an average floor area ratio of 0.93.
- Multi-family development projects outside of Urban Nodes and Corridors have higher unit density of 117.4 units per hectare and floor area ratio of 0.97. A focus on residential intensification within Neighbourhood Plans allowed sites to be redeveloped at greater heights, proposing multi-family units as a way to provide housing diversity and intensify land uses.

| OCP Land Use | Designated Land Area (sf) | Land Area (sf) | Gross Floor Area (sf) | Floor Area Ratio | Units | Units per Hectare |
|---|---|---|---|---|---|---|
| Urban Node | 58,557,942 | 403,944 | 481,878 | 1.19 | 462 | 123.1 |
| Corridor | 84,493,670 | 1,845,900 | 1,721,433 | 0.93 | 1,892 | 110.2 |
| Other | N/A | 356,584 | 344,915 | 0.97 | 389 | 117.4 |
| | Total | 2,456,684 | 2,279,213 | 0.93 | 2,445 | 113.2 |

Urban Nodes are meant to be a focal point for residential development and have seen 462 units approved in recent years.

## 2.4 OCP Assessment

### 2.4.2 Urban Nodes

- Urban nodes were created as focal points of higher density that can support amenities and services that would otherwise not be viable in lower density residential neighbourhoods.
- Each urban node has a distinct focus and character, defined by the mix of land uses, gathering places and open space, and attractions that draw people from around the city and region. The character and function of each urban node will be reinforced through new development.
- New development will comprise of the highest density residential development and land uses that reflect the character of that node. Mixed-use development will contain commercial or public space at grade with residential uses in the storeys above.
- Urban nodes will allow for alternate modes of transportation such as walking, cycling and public transit. New development will enable nodes to become complete communities with housing, shopping, employment opportunities and open spaces within each urban node.
- Residential density is envisioned as between 50 to 150+ units / hectare within medium to high density building forms, including highrise towers.

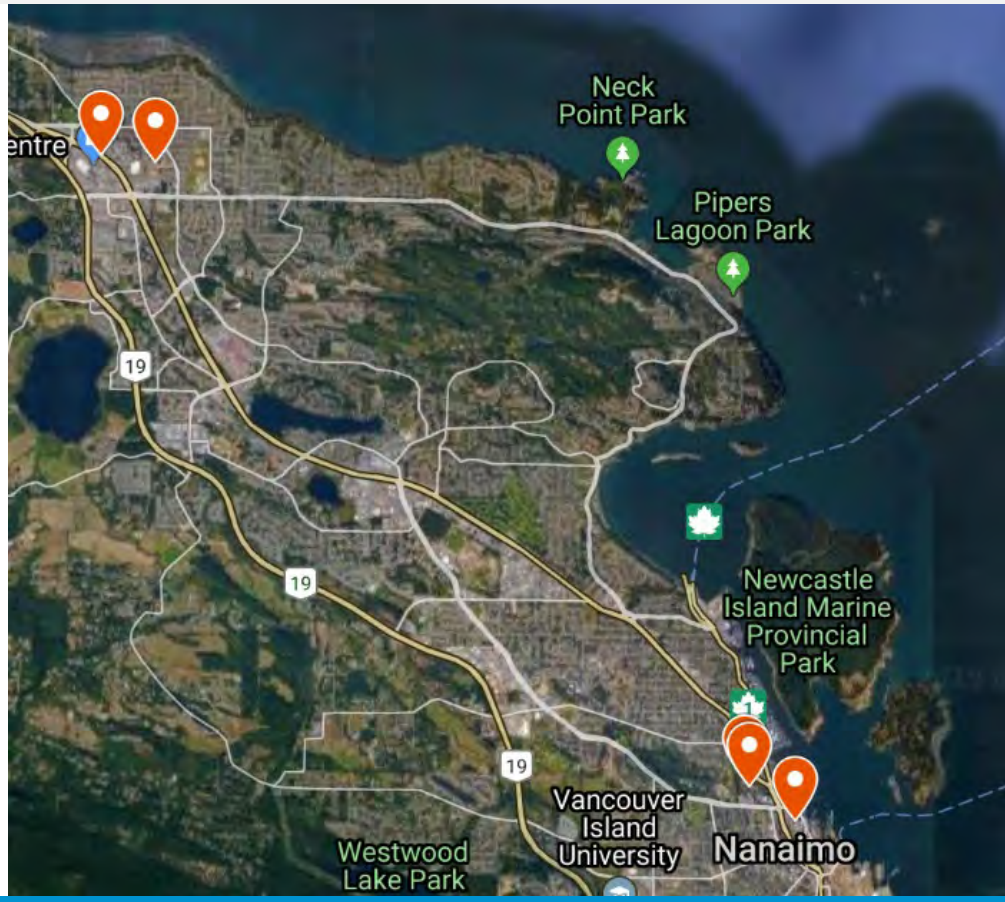
| Category | Description | New MF Units |
|---|---|---|
| Downtown Centre | • Primary urban node of Nanaimo<br>• City-wide and regional centre for arts and culture<br>• Civic facilities, government and professional services<br>• Higher density residential | 250 |
| Woodgrove / North | • Regional commercial centre<br>• Future focus on higher density residential uses | 212 |
| South Nanaimo | • Regional commercial centre<br>• Higher density residential uses | 0 |
| Hospital | • City-wide and regional centre for health services, seniors housing, professional offices<br>• Higher density residential uses | 0 |
| University | • City-wide and regional centre for educational and recreational services, related commercial and professional services<br>• Higher density residential uses | 0 |
| | Total | 462 |

Development has occurred in 2 out of the 5 Urban Nodes.

## 2.4 OCP Assessment

### 2.4.2 Urban Nodes (cont.)

- Downtown Nanaimo has added several projects to the residential landscape, especially higher density and taller built forms. This is in agreement with the envisioned character and residential development outlined in the OCP goals for the Downtown Centre.
- The Woodgrove Urban Node has seen greater interest in development owing to its proximity to the Woodgrove Mall, large format retail and two major highways. Homes in this area are afforded ocean views and are relatively close to recreational opportunities.
- Development proposals were provided with relaxations to maximum building height and parking requirements. If maximum heights were greater, perhaps these projects could have included increased floor area and units. Parking requirements should be reviewed as this creates a barrier to including more units within a development. With the exception of 65-77 Chapel St., all projects were well below the maximum density.




| Address | Neighbourhood | Land Use | Development Type | Site Area (sf) | GFA (sf) | FAR | Storeys | Units | UPH |
|---|---|---|---|---|---|---|---|---|---|
| 6975 Island Highway | Dover | Urban Node | Rental | 141,497 | 120,657 | 0.85 | 4 | 146 | 111.07 |
| 20 Barsby Avenue | Downtown | Urban Node | Condo | 46,070 | 70,719 | 1.54 | 6 | 90 | 210.29 |
| 20 Prideaux Street | Downtown | Urban Node | Seniors Housing | 31,861 | 39,700 | 1.25 | 4 | 50 | 168.92 |
| 65-77 Chapel St | Downtown | Urban Node | Mixed-Use Condo | 46,866 | 199,181 | 4.25 | 24 | 110 | 252.64 |
| 6340 McRobb Ave | Dover | Urban Node | Condo | 137,650 | 51,621 | 0.38 | 6 | 66 | 51.62 |

Catalytic investments are needed in order to make Urban Nodes desirable locations for development.

## 2.4 OCP Assessment

### 2.4.2 Urban Nodes (cont.)

- No multi-family developments were noted in the South Nanaimo Urban Node due to a lack of amenities, primarily older building context, and lack of employment opportunities. However, this area is poised for growth with interest in redevelopment within Corridor lands nearby.
- The University Urban Node saw some development interest for student rental housing within Corridor land designated sites. The Urban Node sites are primarily owned by the large institutional landowners such as the Nanaimo School District and Vancouver Island University (VIU).
- Although there has been no development within the VIU Urban Node, the VIU Trust is currently in the process of conducting development feasibility studies for each of the three excess sites on-campus. It is expected that these three sites will eventually be developed to accommodate residential and retail uses in the long-term.
- In the short term, there is less residential demand in Southern Nanaimo which suppresses rental rates and sale prices, resulting in lack of development interest. Amenities, shopping and services, employment opportunities, and other infrastructure are missing and must be infused into the area through private development or public investment in order for these areas to see uptake in development.

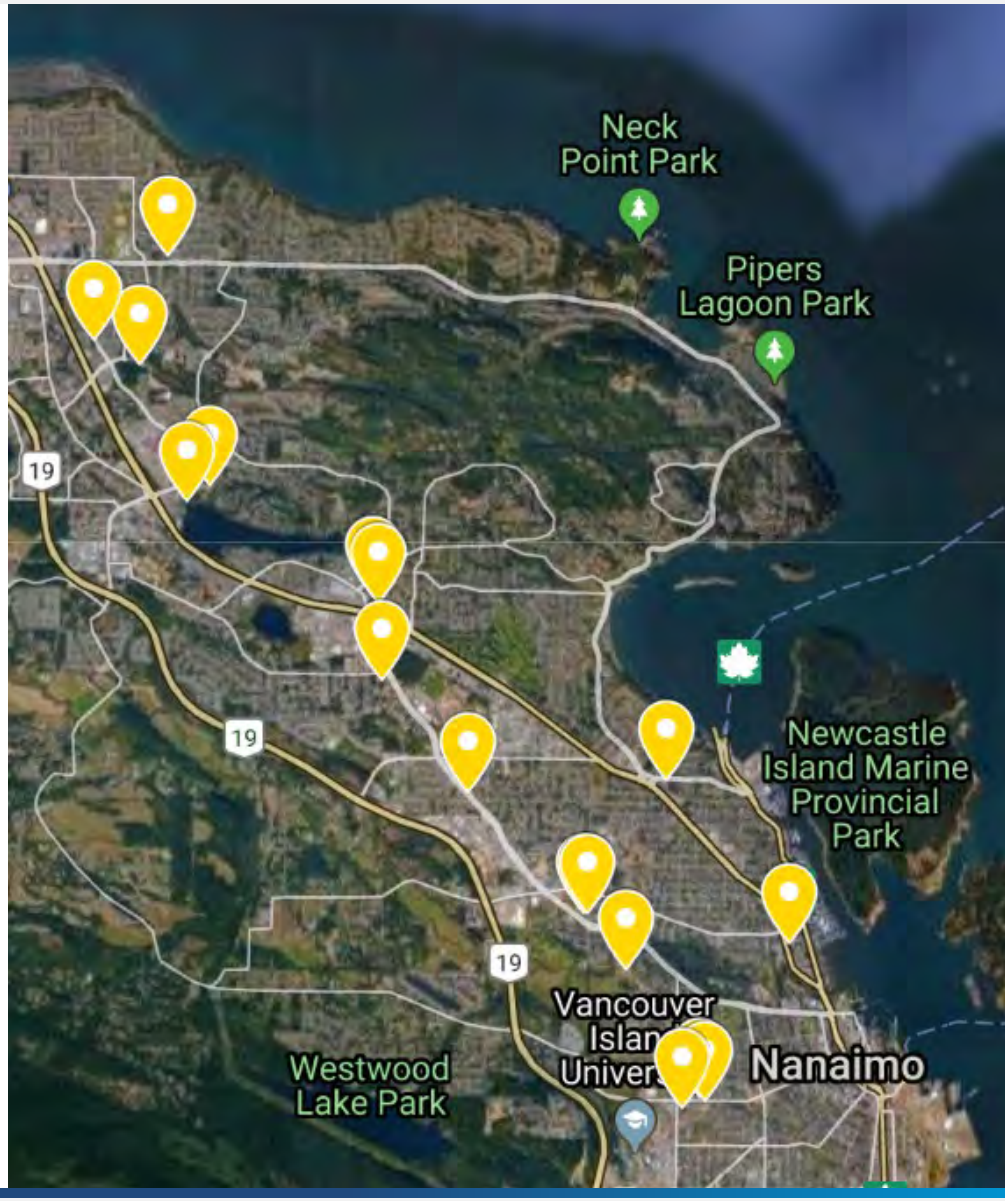
77 Chapel St in the Downtown Urban Node is an amenity rich area and can support higher density development and construction costs.

Many more medium density developments have occurred in Corridors.

## 2.4 OCP Assessment

### 2.4.3 Corridors

- These are the linear focal areas that bisect Nanaimo, with goals of a broad approach where they evolve into mixed-use linkages between Urban Nodes that contribute to a vibrant economy and street life.
- Like the urban nodes, new development in corridors will comprise of mixed-use buildings with commercial or public use at grade and residential uses above. Corridors will be transit-oriented and pedestrian-scaled, developing as a complete community with housing, shopping, and employment opportunities within the corridor.
- Corridors will also have their own distinct character reflected in the unique mix of uses. The character of each corridor will be protected, and new developments will be integrated into existing viewscapes.
- Residential density is envisioned as between 50 to 150 units / hectare within medium density 2 to 6 storey structures.
- No multi-family residential developments were found in Corridor designated land along Fitzwilliam Street, Fifth Street, Bruce Avenue, and Victoria Road. It should be noted, however, that institutional and commercial developments are occurring in these areas.



Medium density development in Corridors could precede higher density development in Urban Nodes.

## 2.4 OCP Assessment

### 2.4.3 Corridors (cont.)

- The majority of developments that have been recently approved are rental projects (16 out of 18) due to the strong demand for rental housing and Council approval of rental projects. Corridors are ideal locations for rental housing with proximity to transit, arterial roads, shops and services.
- While the University District Urban Node did not see development, the Corridor designated lands in the University District neighbourhoods are expected to see around 600 units of student rental and condo housing be built.
- Similarly, the Hospital Urban Node saw no multi-family residential development whereas the Corridor lands in the Northfield neighbourhood are anticipated to deliver 132 rental units in the future.
- Development of South Nanaimo Urban Node as a second regional shopping centre have not yet materialized. In the Harewood Corridor, however, there is interest to build more than 200 units of rental housing in close proximity to the existing Commercial Centre there.
- Corridor development could be much more dense if maximum building heights were increased. Most proposed buildings are only 4 storeys high and have asked for a height variance, whereas wood-frame structures can be built up to 6 storeys in height. In contrast, most developments are below the maximum allowable density and units per acre.

591 Bradley is a 4 to 6 storey structure built on steep slope conditions.

- Many of the projects were on sites with steep slopes or infill land. As the City is built out, less optimal sites are being utilized in development that incur greater development costs, require variances to retaining wall heights, and pose greater site planning constraints.

Nearly 1,900 new units were approved in the last 5 years in Corridor designated sites.

## 2.4 OCP Assessment

### 2.4.3 Corridors (cont.)

| Address | Neighbourhood | Designation | Development Type | Site Area (sf) | GFA (sf) | FAR | Storeys | Units | UPH |
|---|---|---|---|---|---|---|---|---|---|
| 3690 Country Club Drive | Departure Bay | Corridor | Rental | 45,596 | 33,530 | 0.74 | 2 | 36 | 84.98 |
| 3701 Country Club Drive | Departure Bay | Corridor | Rental | 31,842 | 34,390 | 1.08 | 4 | 33 | 111.54 |
| 2379 Browns Lane | Diver Lake | Corridor | Condo | 43,196 | 22,030 | 0.51 | 3 | 27 | 67.29 |
| 6010 Hammond Bay Road | Dover | Corridor | Rental | 43,954 | 54,503 | 1.24 | 4 | 53 | 129.78 |
| 1300 Junction Avenue | Harewood | Corridor | Rental | 190,521 | 201,952 | 1.06 | 4 | 213 | 120.34 |
| 285 Rosehill St | Newcastle / Brechin | Corridor | Affordable Housing | 7,774 | 10,495 | 1.35 | 3 | 23 | 318.44 |
| 2020 Estevan Rd | Newcastle / Brechin | Corridor | Affordable Rental | 42,898 | 71,211 | 1.66 | 5 | 74 | 185.67 |
| 1608 Bowen Rd | Northfield | Corridor | Rental | 31,712 | 39,581 | 1.25 | 4 | 48 | 162.91 |
| 4800 Cedar Ridge Place | Rutherford | Corridor | Rental | 386,188 | 179,262 | 0.46 | 4 | 170 | 47.39 |
| 4979 Wills Rd | Rutherford | Corridor | Seniors Housing | 124,843 | 153,557 | 1.23 | 6 | 160 | 137.96 |
| 6035 Linley Valley Drive | Rutherford | Corridor | Rental | 300,313 | 258,269 | 0.86 | 4 | 251 | 89.97 |
| 5085 Uplands Drive | Rutherford | Corridor | Rental | 39,719 | 54,415 | 1.37 | 4 | 59 | 159.90 |
| 10 Buttertubs Dr | University District | Corridor | Seniors Housing | 122,709 | 119,027 | 0.97 | 6 | 156 | 136.84 |
| 560 Third St | University District | Corridor | Condo | 139,931 | 134,334 | 0.96 | 4 | 181 | 139.22 |
| 525 Third St | University District | Corridor | Student Rental Housing | 193,482 | 199,466 | 0.97 | 4 | 162 | 90.12 |
| 307 Hillcrest Ave | University District | Corridor | Student Rental Housing | 48,976 | 85,708 | 1.75 | 4 | 162 | 356.05 |
| | | | Total | 1,845,900 | 1,721,433 | 0.93 | | 1,892 | 110.23 |

The household maintainer rate methodology was used by Vann Struth Consulting Group to project future housing demand by structure type.

## 2.5 Demand Analysis

### 2.5.1 Methodology

- To assess the future demand for residential land within Nanaimo, Colliers utilized the housing projections completed by Vann Struth Consulting Group in late 2019 which used the household maintainer rate methodology.
- This methodology applies household maintainer rates to age specific population projections to calculate future housing demand by dwelling type. Maintainer rates, as outlined to the top right, measure how the likelihood of forming and maintaining a separate household and the preferred type of housing change over the course of a person's life. For example, this demonstrates that 36.7% of residents aged 35 to 44 were the primary maintainer of a single-family household in 2016.
- Maintainer rates also change over time as Cities grow and evolve. Within the RDN, between 2006 and 2016 the maintainer rates for single-detached homes declined among most age groups. Moving forward, the Vann Struth Consulting Group projected that maintainer rates will continue moving forward at half the rate of the previous decade, which could potentially overestimate the future demand for single family homes by approximately 200 to 500 units.
- These rates are also influenced by the supply of available units. For example, it is reasonable to assume that a portion of the maintainer rates for single-detached units could be absorbed by other ground-oriented uses or large apartments if that is what is available in the marketplace.

RDN Household Maintainer Rates by Age and Structure Type, 2016

| Age of Household Maintainer | Single Family | Ground Oriented | Under 6 Storeys | Over 6 Storeys | Movable Dwellings |
|---|---|---|---|---|---|
| 15 to 24 Years | 3.8% | 2.4% | 4.6% | 0.6% | 0.2% |
| 25 to 34 Years | 23.5% | 7.6% | 7.4% | 1.0% | 0.8% |
| 35 to 44 Years | 36.7% | 6.6% | 5.8% | 0.6% | 1.1% |
| 45 to 54 | 40.3% | 5.7% | 5.3% | 0.9% | 1.9% |
| 55 to 64 Years | 40.9% | 5.2% | 6.1% | 0.9% | 2.2% |
| 65 to 74 Years | 41.6% | 6.9% | 5.8% | 1.0% | 2.6% |
| 75 to 84 Years | 40.1% | 9.0% | 7.6% | 1.4% | 3.6% |
| 85 Years and Over | 27.6% | 8.6% | 9.3% | 2.1% | 2.3% |

Trend in RDN Household Maintainer Rates by Age and Structure Type, 2006 to 2016

| Age of Household Maintainer | Single Family | Ground Oriented | Under 6 Storeys | Over 6 Storeys | Movable Dwellings |
|---|---|---|---|---|---|
| 15 to 24 Years | 0.2% | 0.2% | -0.9% | 0.2% | 0.0% |
| 25 to 34 Years | -2.9% | 2.0% | -1.4% | 0.6% | -0.5% |
| 35 to 44 Years | -1.2% | 1.6% | -0.4% | -0.2% | -0.1% |
| 45 to 54 Years | -1.6% | 1.4% | -0.2% | 0.3% | 0.6% |
| 55 to 64 Years | -1.8% | 0.3% | 0.9% | 0.2% | 0.4% |
| 65 Years and Over | -1.1% | 0.3% | -0.9% | -0.3% | -0.1% |

Colliers estimates that the City of Nanaimo will experience demand for an additional 253 to 607 hectares of residential land by 2046.

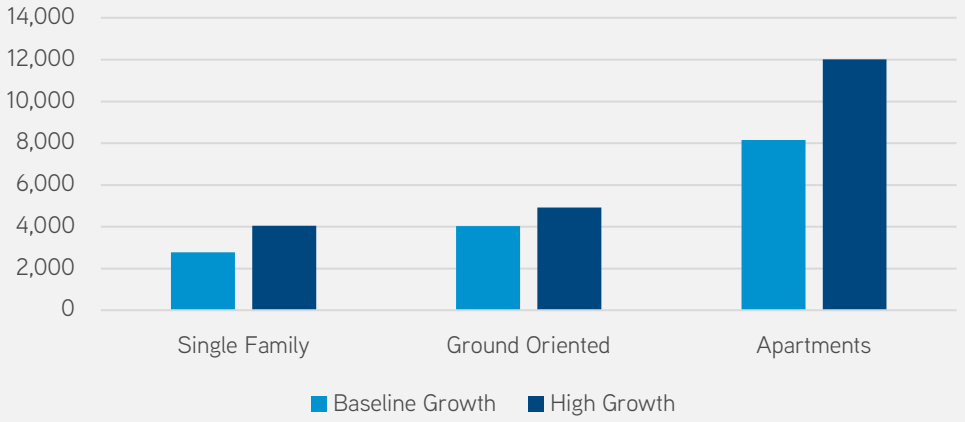
## 2.5 Demand Analysis

### 2.5.2 Residential Demand Projections

- It is projected that the City of Nanaimo will experience demand for an additional 14,971 to 20,987 dwelling units by 2046, respectively, in the baseline and high growth scenarios.
- To convert these projections into land demand by residential subcategory, Colliers utilized a range of assumed density levels (units per hectare) based on observations within the Nanaimo market and expected future development patterns. Ultimately, this results in four future land demand scenarios:
  - Scenario 1 – Baseline Growth, High Density
  - Scenario 2 – High Growth, High Density
  - Scenario 3 – Baseline Growth, Low Density
  - Scenario 4 – High Growth, Low Density
- Estimated density levels are averaged for all future development. For example, there will likely be some higher density apartments built at levels exceeding 200 units per hectare, however the average density across all new apartments would be lower due to the demand for and financial feasibility of wood-frame development.
- Overall, the City can expect demand for an additional 253 hectares (Scenario 1) to 607 hectares (Scenario 4) of land by 2046.

| Projections by Unit Type | Current | 2036 | 2046 | Annual Growth | Total Units | Average UPH | Land Req. |
|---|---|---|---|---|---|---|---|
| Single Family (Baseline) | 23,633 | 26,097 | 26,415 | 0.39% | 2,782 | 10-18 | 155 – 278ha |
| Single Family (High Growth) | 23,633 | 27,058 | 27,683 | 0.57% | 4,050 | 10-18 | 225 – 405 ha |
| Ground Oriented (Baseline) | 7,088 | 10,046 | 11,129 | 1.90% | 4,041 | 60-100 | 40 – 67 ha |
| Ground Oriented (High) | 7,088 | 10,705 | 12,014 | 2.32% | 4,926 | 60-100 | 49 – 82 ha |
| Apartments (Baseline) | 8,450 | 14,175 | 16,598 | 3.21% | 8,148 | 100-140 | 58 – 81 ha |
| Apartments (High) | 8,450 | 16,631 | 20,461 | 4.74% | 12,011 | 100-140 | 86 – 120 ha |
| Total (Baseline) | 39,171 | 50,318 | 54,142 | 1.27% | 14,971 | - | 253 – 427 ha |
| Total (High) | 39,171 | 54,394 | 60,158 | 1.79% | 20,987 | - | 360 – 607 ha |

Additional Dwelling Unit Demand Projections (2016-2046)

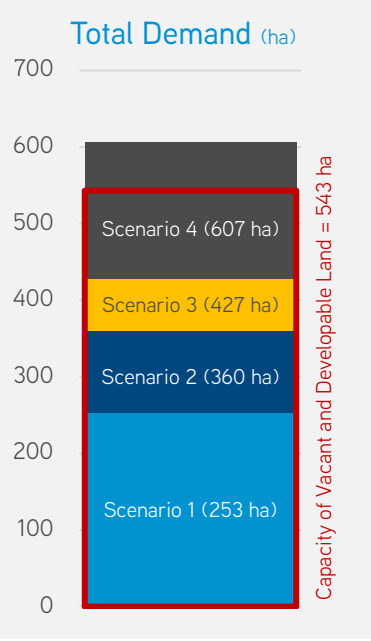


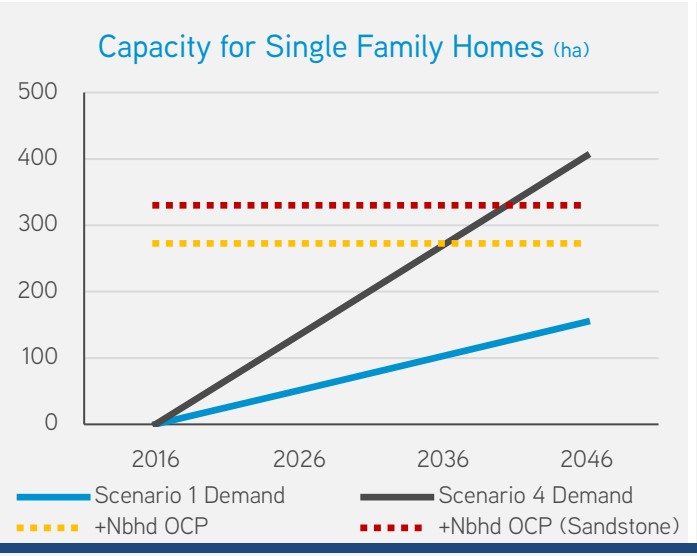
The City is expected to have enough vacant and developable residential land to support future growth in all scenarios except Scenario 4 by 2046.

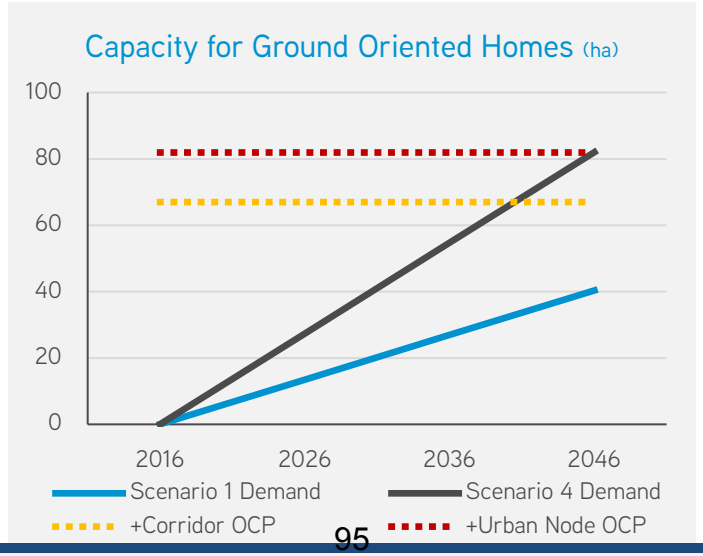
## 2.5 Demand Analysis

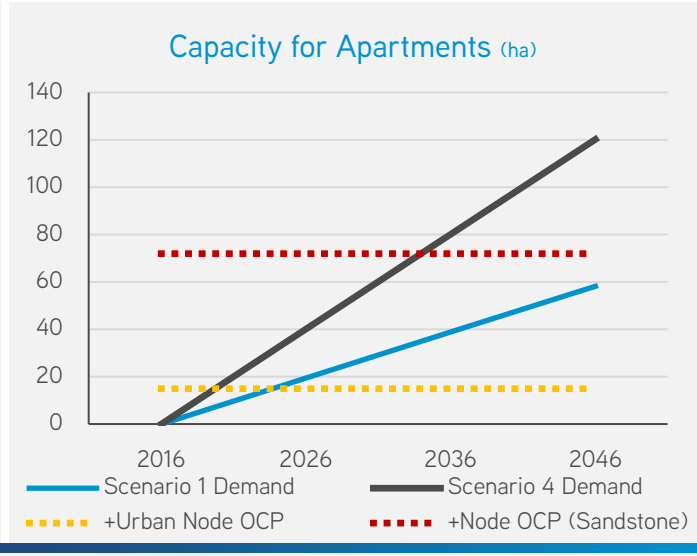
### 2.5.3 Capacity of Vacant and Developable Land to Fulfill Demand

- As outlined in the bar graph to the right, the City is expected to have enough capacity within its vacant and developable land to support future growth in all scenarios except Scenario 4 (high growth, low density). Although Scenario 4 is unlikely based on recent market trends and City goals of higher density, sustainable development formats, this potential demand gap could realistically be fulfilled through the intensification of currently underutilized residential land and/or development within the Snuneymuxw land (adjacent to Vancouver Island University South of Fifth Street).
- It should be noted that these figures do not represent the potential redevelopment of existing shopping centres, a trend that is occurring throughout Canada. This provides for significant additional capacity for apartments that is not demonstrated solely by assessing vacant and developable land. The potential for such development, as well as the infill of other underutilized residential neighbourhoods is outlined on the following page.



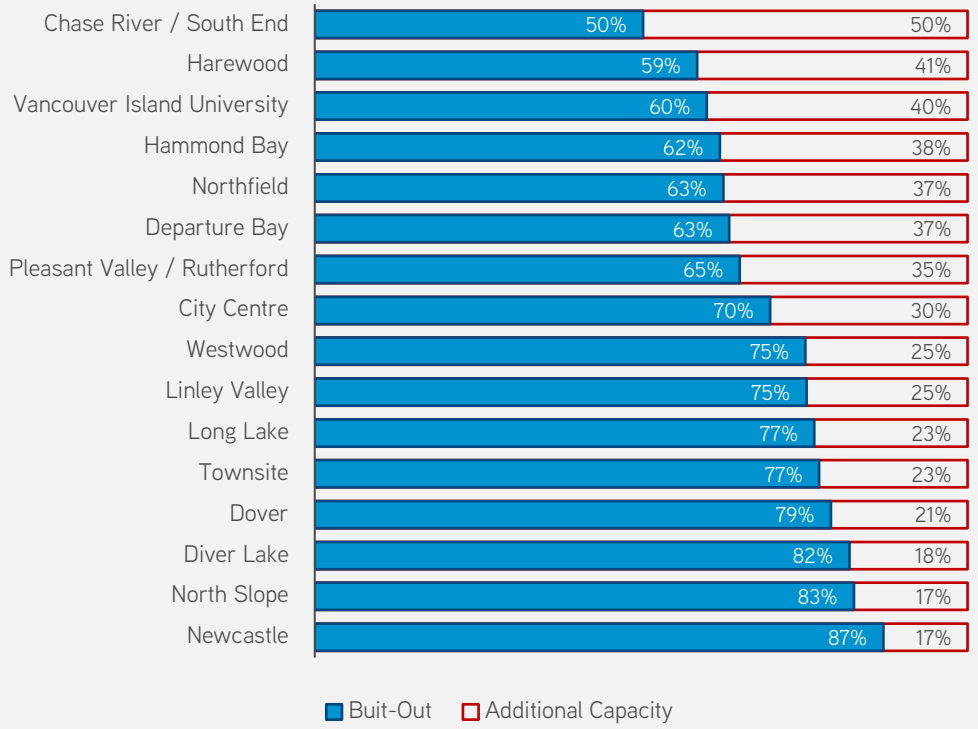
The City is expected to continue experiencing a relative shortage of land for single family uses when compared to higher density housing formats.

## 2.5 Demand Analysis

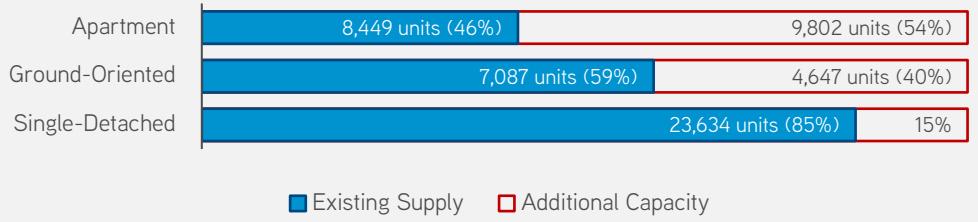
### 2.5.4 Theoretical Capacity to Support Residential Growth by Area

- Based on an analysis of the age, quality, and density of development within land designated for residential use, along observations outlined by Vann Struth Consulting Group Inc., Colliers has assessed the capacity of each planning area to accommodate future residential growth.
- The graph to the top right demonstrates that many of the planning areas in the southern parts of the City, such as Harewood, Chase River, South End, and Vancouver Island University, present more opportunities for residential development on vacant or underutilized land when compared to northern planning areas such as Newcastle and North Slope.
- It also becomes clear that there is ample opportunity for higher density forms of development (apartments and townhomes) when compared to single-detached homes.
- Overall, this analysis demonstrates that the land within the Urban Containment boundary designated to permit residential uses is sufficient to satisfy demand projections with capacity for an additional ~9,800 apartment units, ~4,600 ground-oriented units, and ~3,900 single detached homes.

Potential Capacity by Planning Area




Potential Capacity by Housing Format



The City has the land to accommodate projected housing demand, however much of this land is located within areas zoned for a mixture of uses.

## 2.6 Summary and Recommendations

- Colliers projects demand for an additional 253 to 607 hectares of residential land by 2046, with the overall capacity of existing zoned land varying based on residential subcategory.
- The analysis demonstrates that, based on housing demand projections completed by Vann Struth Consulting Group, the City is likely to have enough land to fulfill future demand in all scenarios except scenario 4 (high growth, low density).
- Scenario 4 is unlikely to occur, however, based on recent market trends and City goals of higher density, sustainable development formats. The most notable demand shortage in this scenario would be among single-detached homes.
- Despite this potential shortfall, Colliers believes that the City has enough land to accommodate all projected housing demand, however much of this land is located within areas zoned for a mixture of uses such as the corridors and commercial areas.
- Additionally, the Oceanview and Snuneymuxw lands represent a large chunk of potential residential supply.
- Regardless, there will be a major shift away from how Nanaimo has developed in the past where single-family housing has been the predominant residential development, shifting into denser forms of development including ground-oriented units and apartments.
- Growing demand is immediately evident among townhomes and 4-6 storey woodframe apartments due to consumer preferences along with the feasibility of woodframe rather than high rise development.
- In areas where development is not occurring, the City should consider partnerships that could act as an anchor or catalyst for residential development. For example, the University Urban Node may require a custom zone to allow for a wider variety and higher density of uses than indicated by adjacent COR 2 and 3 zones, depending on the outcome of their feasibility analyses.
- The City should also consider allowing for greater maximum building heights so that variances do not have to be sought out. Wood-frame structures can be up to 6 storeys or approximately 60 ft (18.3 m) in building height. The National Building Code and BC Building Code are making provisions to allow construction with encapsulated mass wood construction to up to 12 storeys in height.
- It is also suggested to conduct a citywide parking study and, if possible, reduce parking requirements especially for affordable housing projects. Continual investment in public transportation while creating complete, walkable communities may help to justify lower parking ratios.
- Finally, the City should increase the maximum allowable density so that proponents can include more floor area in their developments without having to provide amenities as part of density bonusing. The City will need to decide whether a greater number of residential units is a satisfactory trade-off for the loss of amenities.

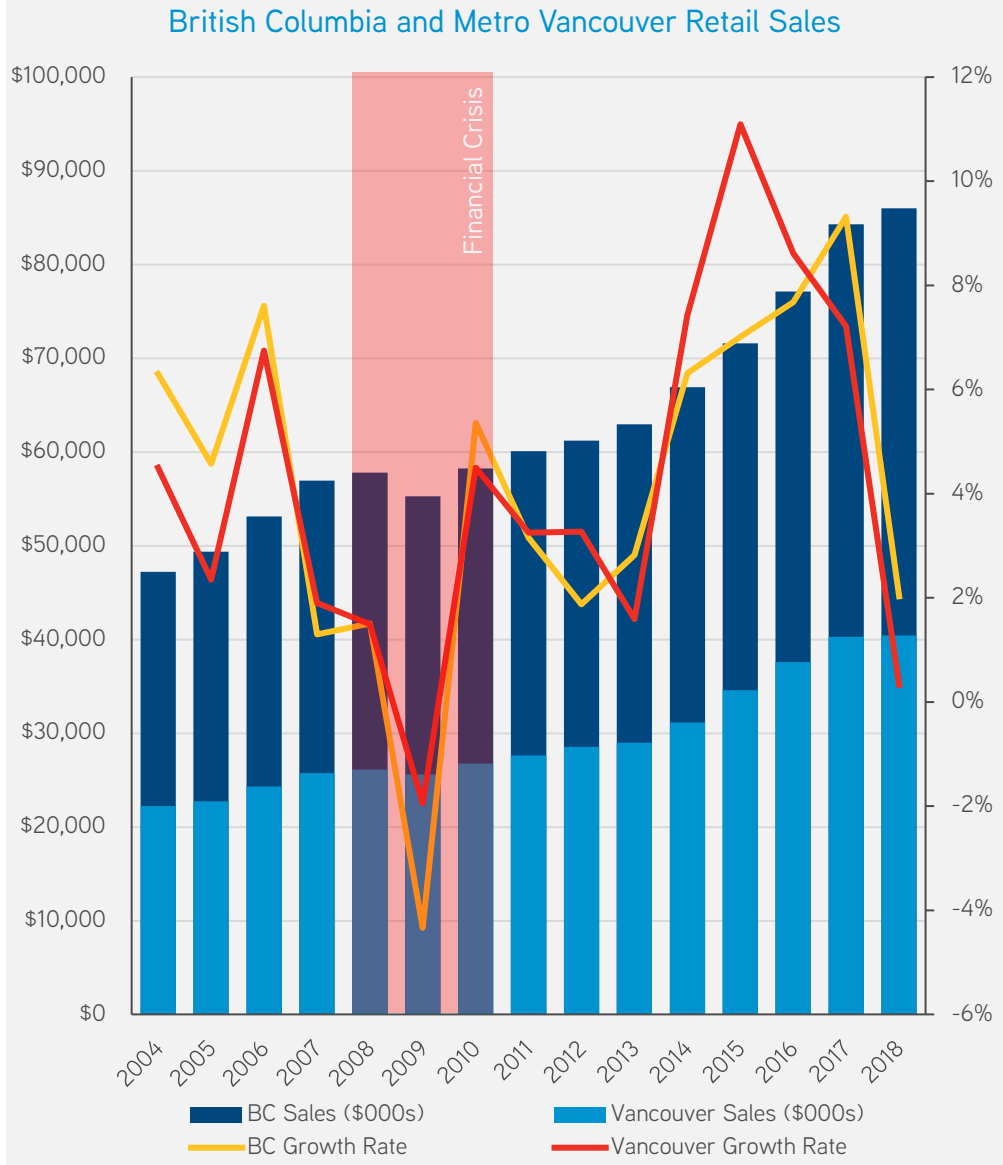

# 3 | Commercial

Year-over-year retail sales growth is approaching 1% within British Columbia, with sales performance varying depending on retail category.

## 3.1 Retail Market Analysis

### 3.1.1 Provincial Retail Sales Performance

- To better understand overall retail performance at a macro scale, the examination of provincial retail sales and retail performance within Metro Vancouver provides a barometer of overall retail patterns likely in Nanaimo as well.
- As of the latest available data provided by Statistics Canada, year-over-year retail sales growth has been slowing at a notable rate, dropping from 9.2% to 2.1% between 2017-2018. Based on an assessment of the latest available data in 2019, this has continued with 1.1% year-over-year growth up to October 2019.
- The slowing retail sales growth could be caused by a variety of factors, including shifting demographics, the rise of e-commerce, and broader economic conditions such as the impact of a slowing housing market on consumer's perceived wealth which can reduce retail spending.
- Despite slowing retail sales as a whole, overall performance varies widely when broken down by individual retail category, as examined on the following page.



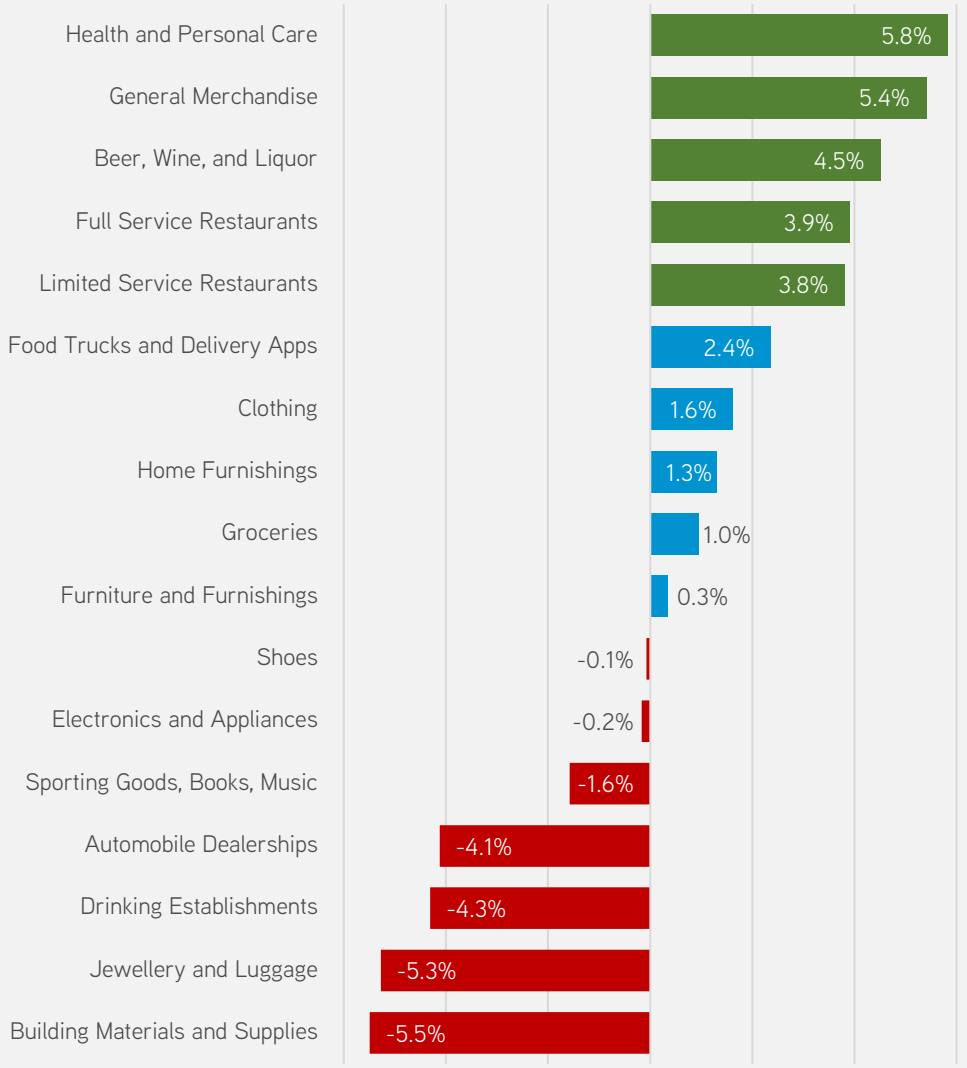
Despite a weakening retail market, specific categories such as experiential food services, health care, and personal care have fared well recently.

## 3.1 Retail Market Analysis

### 3.1.1 Provincial Retail Sales Performance

- The highest performing retail subcategories over the past year are primarily experience oriented, with full service and limited service restaurants registering sales growth of 3.9% and 3.8%, respectively. This is particularly evident for healthy, quick-service restaurants in the 1,000 to 2,000 sf range, upper-tier casual restaurants, and food halls.
- Conversely, grocery sales have slowed recently resulting in numerous closures and the emerging trend of smaller, more refined grocery store footprints with a larger amount of prepared foods.
- Due to the overall aging of the population and growing awareness of health issues, health and personal care stores experienced the largest overall sales growth during this period of nearly 6%.
- Furniture, electronics, and similar retailers have also been impacted by the growth of more affordable online sources such as Amazon, Article, and Wayfair, with slowing amounts of foreign based expenditures potentially negatively impacting automotive and jewelry sales.
- Overall, the slowing retail marketplace and growth of e-commerce has resulted in store closures, the overall reduction of store footprints, and the redevelopment of large retail properties to add on-site residential or office uses.

British Columbia Retail Sales Growth (2018-2019)



The impact of online shopping varies heavily depending on retail category, with some online retailers beginning to open bricks-and-mortar stores.

## 3.1 Retail Market Analysis

### 3.1.2 Impact of Online Shopping

- The impact of ecommerce varies based on retail category, with convenience, price, and selection being major factors determining whether a consumer decides to purchase goods in-store or online.
- Resilient retail categories include food services, health and personal care, service commercial, fitness, value and athleisure apparel, entertainment, and other similar uses that are difficult to replicate online.
- Struggling retail categories include electronics, books, media, toys, homeware, furniture, department stores, and mid-market apparel.
- An interesting emerging trend is the "halo effect", where traditional online only retailers often experience increased revenue when they open bricks-and-mortar stores in regions where online sales are already strong.
- On average, these stores experience a 37% increase in web traffic after opening a store in an area that already has a strong online customer base. This effect is even stronger for emerging or new-to-market brands.
- Within Metro Vancouver, numerous online retailers are beginning to open bricks-and-mortar stores including Warby Parker, Casper Mattresses, Indochino, KOTN, and Herschel.
- The City of Nanaimo can expect a similar trend once the population base grows to the thresholds required by this sort of retailer.

**Strong**

- Food and Beverage
- Health and Personal Care
- Service Commercial
- Fitness
- Value and Athleisure Apparel

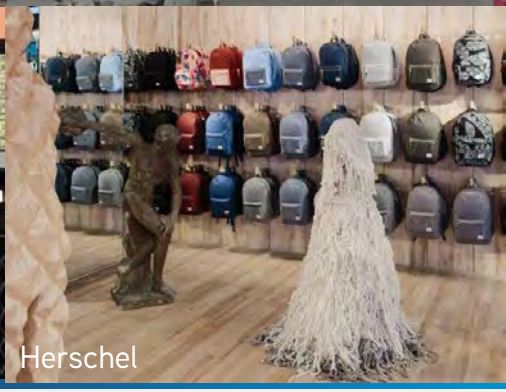
**Weak**

- Electronics
- Books, Media, and Toys
- Mid Market Apparel
- Homeware and Furniture
- Department Stores

Warby Parker

Indochino


KOTN


Herschel

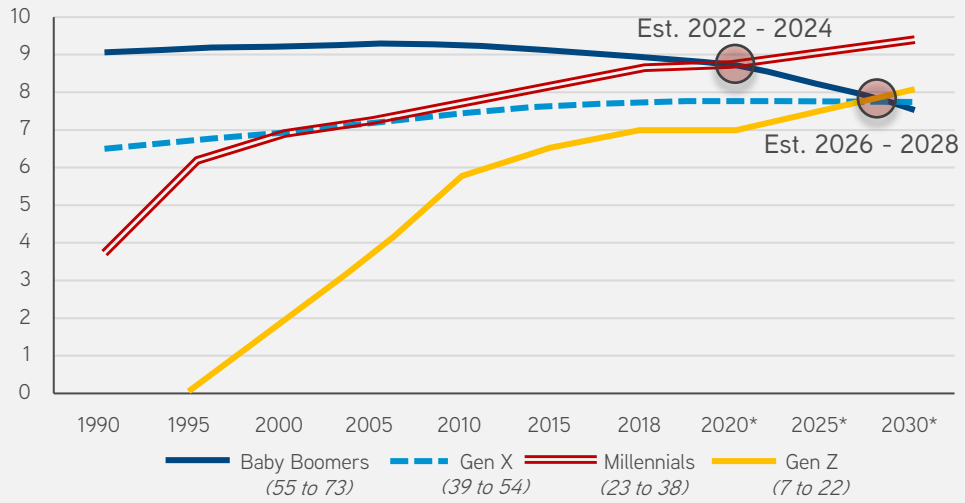
Millennials are expected to significantly impact the retail marketplace as they age into their prime consumption years of 35 to 54.

## 3.1 Retail Market Analysis

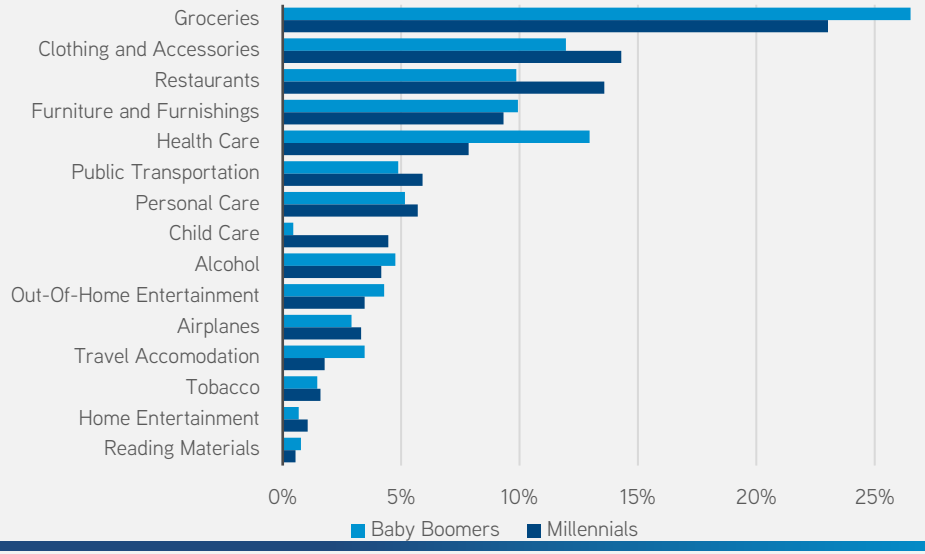
### 3.1.3 Demographics

- Demographics are also an essential component to retail performance. Millennials are set to become the largest population cohort within the Country over the next 5 years, followed by Generation Z.
- Defined as anyone born between 1981 and 1996, millennials are expected to increasingly impact retail as they age into their prime consumption years often defined as ages 35 to 54.
- Recent research indicates that this age group spends relatively more on specific retail categories and less on others when compared to older generations at the same age.
- The graph to the bottom right outlines the proportion of average household expenditures broken down by retail category and age cohort. Millennials spend proportionately more on clothing, restaurants, public transportation, personal care, childcare, airplanes, tobacco, and home entertainment.
- Conversely, baby boomers spend more on groceries, furniture, furnishings, health care, alcohol, out-of-home entertainment, travel accommodation, and reading materials.

Canadian Population by Generation 1990 - 2030 (millions)




Comparison of Spending Habits



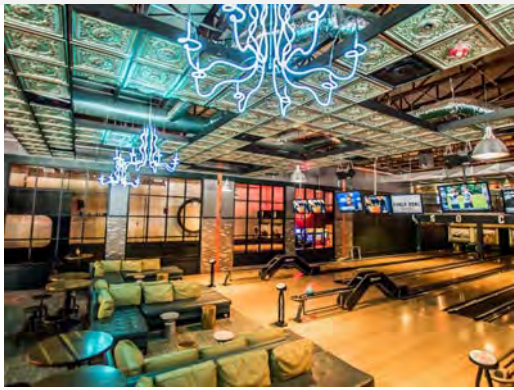
Colliers INTERNATIONAL

Changing demographics and the rise of e-commerce have resulted in a rapid evolution of the mall experience and the traditional "anchor tenant"

## 3.1 Retail Market Analysis

### 3.1.4 The New "Anchor Tenant"

- Changing demographics and the rise of e-commerce have resulted in a rapid evolution of the mall experience and the traditional "anchor tenant". Consumers are now more than ever focused on the experience and what they can share on social media, rather than what they can buy at the local department store.
- In response, malls are making an effort to encourage customers to linger longer, usually resulting in increased retail spending. For example, in recent surveys 75% of respondents indicated that unique dining experiences are worth paying more for.
- Carefully curated, diverse dining experiences that offer consumers a range of unique cuisine options, formats, and price points are essential to a mall's success.
- Additionally, new-to-market entertainment tenants can act as a much stronger anchor than traditional big box stores, increasing the trade area size and potential footfall within a shopping centre.
- Finally, increasingly busy cities facilitate the necessity of tranquil "third places" beyond the home and workplace where people can gather and socialize. Shopping centre owners are beginning to place an emphasis on creating attractive public spaces as new "anchors" where consumers can spend time, socialize, and recharge before more shopping.





Active, transparent storefronts and human scale development are essential principles necessary to facilitate an active and healthy retail environment.

## 3.1 Retail Market Analysis

### 3.1.5 Design and Planning Principles

- Retail performance is also highly dependent on some common retail design and planning principles, particularly the inclusion of active and transparent storefronts, and human scale development.
- Active storefronts that spill out onto the sidewalk help to attract customers and create a more diverse streetscape. Elements such as patios, exterior store displays, and dog-friendly areas help to enhance storefront activity.
- It is also essential to ensure that people can see or perceive human activity beyond the edge of a storefront, resulting in enhanced retail sales, street activity, and overall safety.
- Human scale development refers to the size, texture, and articulation of physical elements that match the size and proportion of the human rather than the vehicle, and equally as important, to the speed at which humans walk. Building details, weather protection, wide sidewalks, street furniture, and protection from traffic are some key human design features.
- Finally, retailer preferences are also important to consider. Generally, there is strong tenant demand for retail units with:
  - Direct, street level access
  - 800-1,000-sf units
  - Min 20-ft frontages
  - Min 14-16-ft heights
  - Rectangular units
  - Patio/exterior display areas
  - Power/venting/HVAC for F&B uses
  - Impactful signage



The City of Nanaimo is expected to experience gradual overall growth in office space demand primarily due to population serving subcategories.

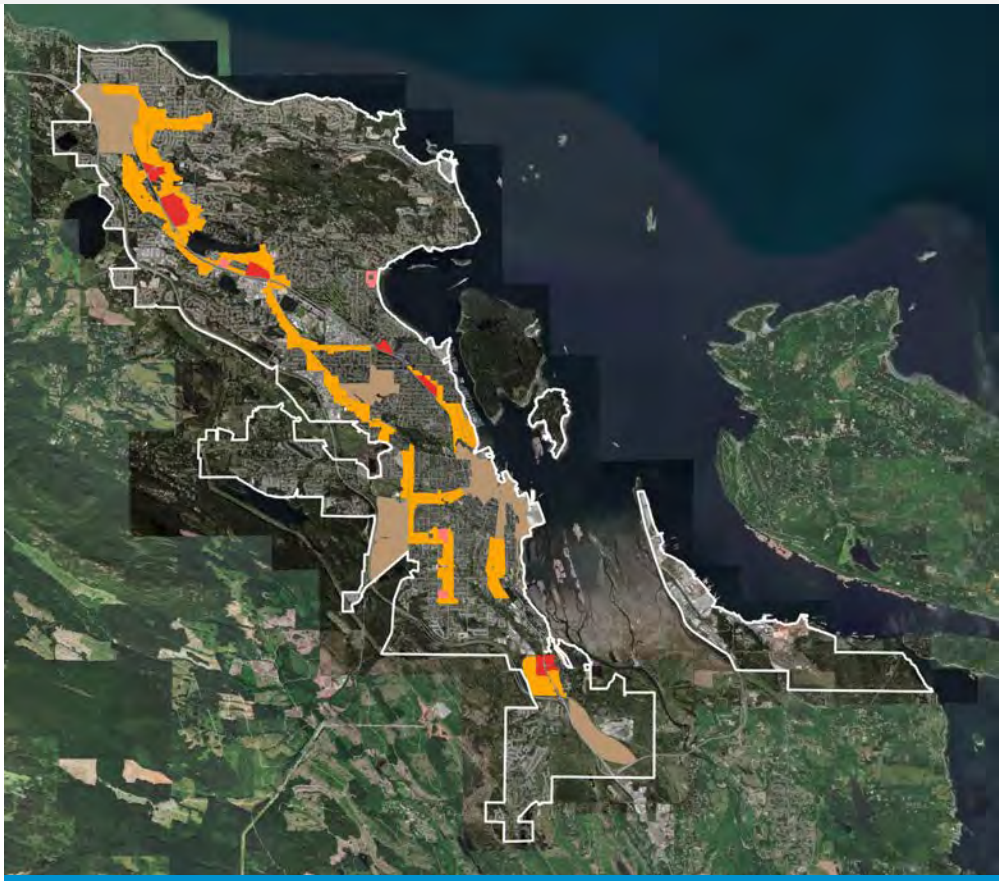
## 3.2 Nanaimo Office Dynamics

- The City of Nanaimo currently has a relatively soft market for traditional office space, with new office-only product primarily being purpose built and a lack of demand restricting the build it and they will come approach.
- Moving forward, it is expected that the City will experience gradual population-based demand growth rather than a significant influx generated from major regional office headquarters or a rapidly growing tech sector.
- Generally, this has resulted in a disconnect between the overall demand for ground level office units compared to second floor units. Throughout the City, the average vacancy rate is estimated at 15% and shrinking slowly, and the majority of these vacancies can be found among older, above ground units in Class C office space closer to Downtown with significantly lower vacancies in the new units in north Nanaimo.
- Class C office spaces are the lowest classification of office building, generally older, in less desirable locations, and in need of more renovations when compared to Class A office spaces which represent the newest and highest quality buildings in the market. Class B office spaces lie in between Class A and C in terms of quality and location.
- As the population grows, there will be a growing demand primarily for service-oriented office tenants who generally prefer the accessibility and visibility of a ground floor unit. Service-oriented office tenants include dental and medical offices, veterinary clinics, insurance, financial services, professional services, and similar uses.
- For existing office space, a range of asking rates exist, varying depending on location, class, and condition. Generally, office space in North Nanaimo is viewed as superior by prospective tenants and can command higher rates when compared to Downtown and South Nanaimo.
- Additionally, the required lease rates to support financially feasible office-only developments are significantly higher than average market rates within Nanaimo of approximately $13-$18 per square foot. Therefore, new office product is more likely to be developed in mixed-use projects.
- The overall perception in the market is that a north Nanaimo office location will be closer to the homes of employees and customers while Downtown locations are viewed as having constraints on parking, issues with the homeless population, and lengthier commute times.
- Many of the non-profit groups within Nanaimo have also expressed concern regrading the availability of affordable space, some of which are at risk of losing their space as new development occurs and creates units that these groups can't afford.
- Although this demand may not be substantial in terms of the overall scale in relation to market office space within the City as a whole, it is important for the City to consider options to accommodate these users.
- This could include the reuse and revitalization of older, vacant Class B and C office space, sharing space models for non-profit groups that would be compatible with one another, subsidized rents, assistance negotiating leases with landlords, and other similar approaches.

The City of Nanaimo has a total of 915 hectares of land designated to permit commercial development as one of the potential land uses.

## 3.3 Land Inventory by OCP Designation

- The City of Nanaimo currently has a total of approximately 915 hectares of land designated to permit commercial uses as one of the land uses. The majority of this supply is located within Downtown and North Nanaimo, with relatively less supply of land within South Nanaimo. It should be noted that this is a substantially larger than the current 324 hectares of land zoned to permit commercial uses.
- This inventory can be further broken down into the following four OCP designations: Urban Node, City Commercial Centre, Neighbourhood Centre, and Corridor.
- Corridor designated lands account for the largest amount of total land supply (50.6%). Commercial services within mixed-use developments are encouraged in these areas, along with new multi-family residential developments.
- The five Urban Nodes account for 40.1% of this total land supply. This includes a large amount of land currently zoned as rural resource within the University Urban Node, with an area plan likely to eventually be initialized and developed by the Vancouver Island University Trust.
- Additionally, approximately 7.1% of this supply of land is designated as City Commercial Centre and only 1.4% is dedicated as Neighbourhood Centre.



| Ref | Designation | Description | Hectares |
|---|---|---|---|
| | Urban Node | High density focal points for Nanaimo. | 377 (40.1%) |
| | City Commercial Centre | City serving commercial. | 66 (7.1%) |
| | Neighbourhood Centre | Neighbourhood serving commercial. | 13 (1.4%) |
| | Corridor | Mixed-use corridors. | 468 (50.6%) |
| | | Total | 915 |

The City of Nanaimo has an estimated 60 hectares of vacant, developable land permitted for commercial development as one of the potential uses.

## 3.4 Vacant and Developable Land

- To assess vacant and developable commercial land, Colliers broke down the land inventory into the following categories: occupied, constrained, vacant, construction process, Sandstone, potential, and existing vacant units.
- Occupied commercial land is defined as designated to permit commercial uses, developed, and currently being used. The City currently has approximately 724 hectares of occupied land under this definition.
- Constrained land is defined the portion of vacant and constrained lots that is estimated to be developable.
- Vacant land is designated to permit commercial use, but isn't occupied by vehicles, structures, or commercial activities. Fieldwork visits, brokerage data, high-resolution orthographic images, and contour maps were used to confirm vacant supply. There is a total of 60 hectares of vacant land within the City under this definition.
- Additionally, there is a total of approximately 4 hectares of vacant floorspace within existing developments, with numerous large-scale vacancies including the Sears in Nanaimo North Town Centre.
- There is also an estimated 24 hectares of land permitted for development, and an additional 42 hectares of vacant land within the University Urban Node that could eventually include commercial uses as a portion of an area plan.

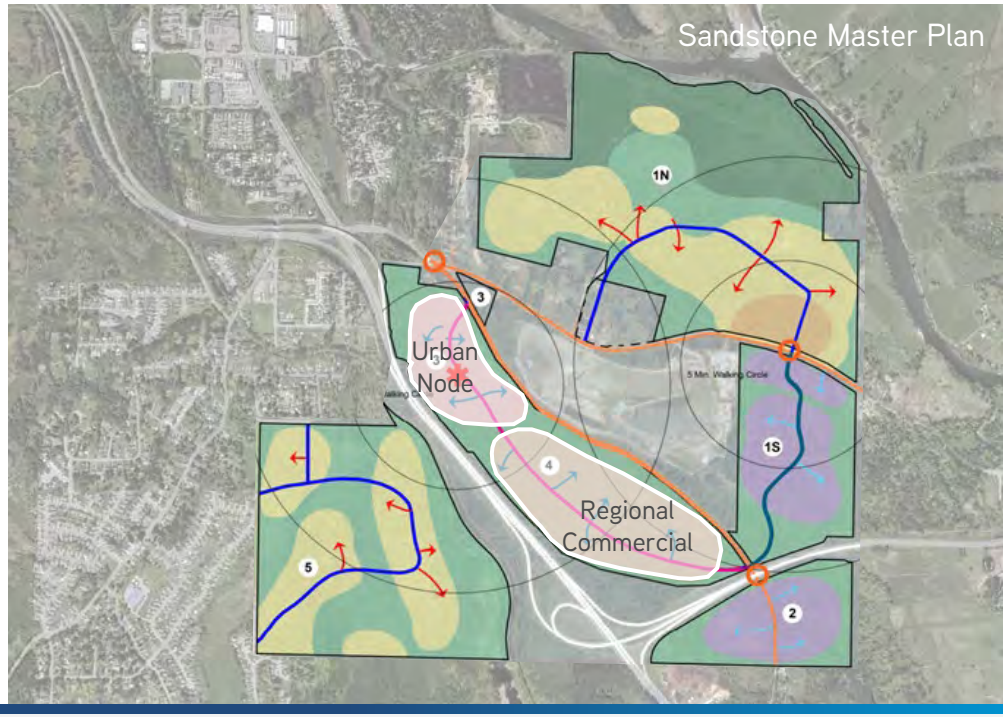
| Ref | Category | Description | Hectares |
|---|---|---|---|
| | Occupied | Currently occupied land. | 724 (81.2%) |
| | Constrained | Developable portion of constrained land. | 0.8 (0.0%) |
| | Vacant | Currently vacant and developable land. | 60 (6.6%) |
| | Permitted | Land permitted for development. | 24 (2.6%) |
| | Sandstone | Urban node and regional commercial centre. | 39 (4.3%) |
| | Potential | Rural resource land within VIU urban node. | 42 (4.6%) |
| | Vacant Units | Vacant units within existing developments | 4 |
| | | Total | 895 |

The City of Nanaimo currently has an estimated 39 hectares of land designated for commercial use within the Sandstone Master Plan.

## 3.4 Vacant and Developable Land

- In addition to the existing vacant units and developable land, there is an estimated 39 hectares of land designated for commercial use within the Sandstone Master Plan.
- This community is envisioned as including a commercial centre with a focus on combining retail and residential zones around a main street concept, along with a regional retail zone which will include big-box style retail stores.
- Although this represents a large potential influx of supply within South Nanaimo which currently has a limited amount of existing commercial supply, development is expected to occur over a lengthy period with completion expected over the next 10-20 years rather than in the immediate future.

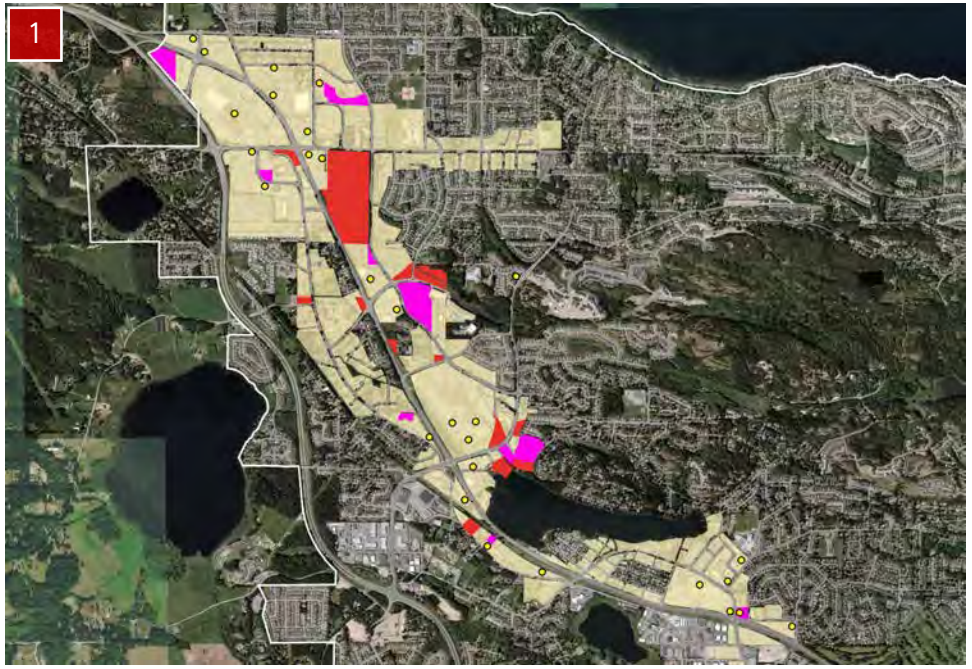
Sandstone Commercial Land

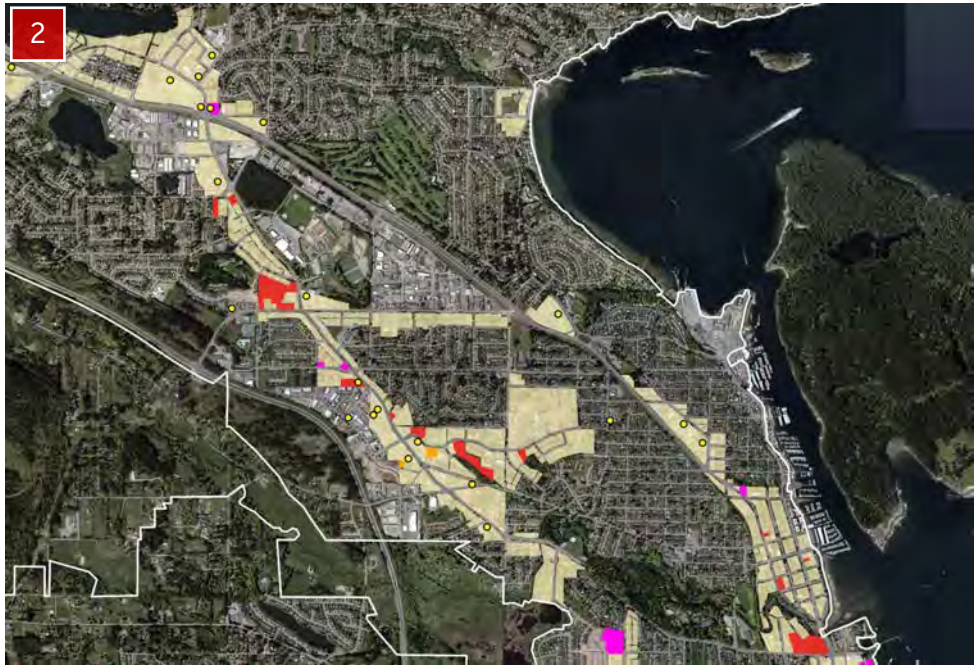



Sandstone Master Plan

North Nanaimo has approximately 46% of the City's vacant land designated to permit commercial uses, and 36% of the City's currently vacant units.

## 3.4 Vacant and Developable Land




**(1) North Nanaimo**

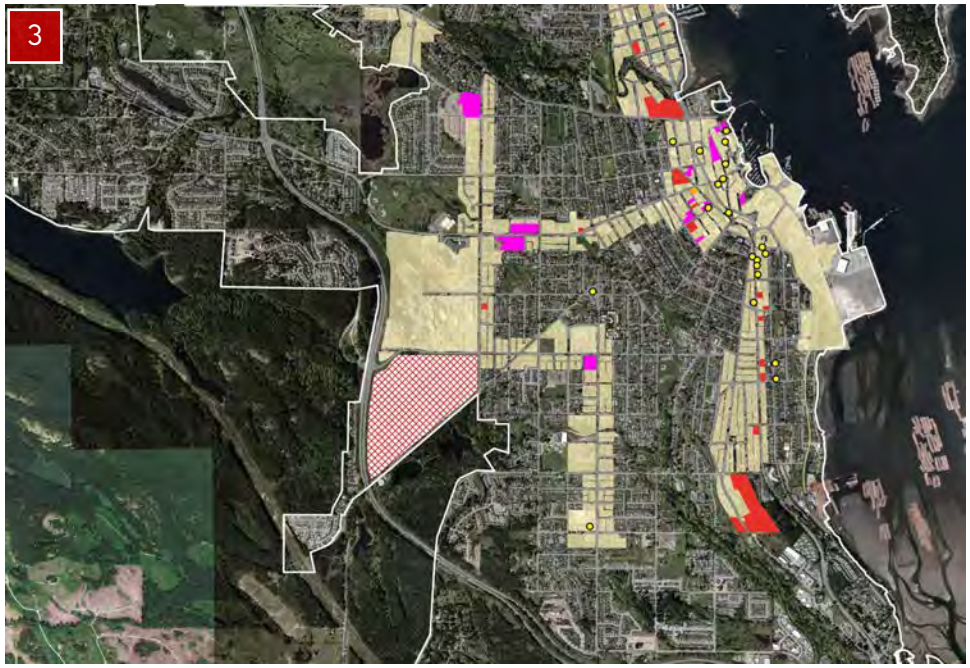
| Ref | Category | Hectares within Subarea | Percent of City Inventory |
|---|---|---|---|
| | Occupied | 259 | 34.9% |
| | Vacant | 28 | 45.6% |
| | Permitted | 15 | 61.0% |
| | Vacant Units | 1 | 36.4% |
| | Total | 303 | 33.2% |

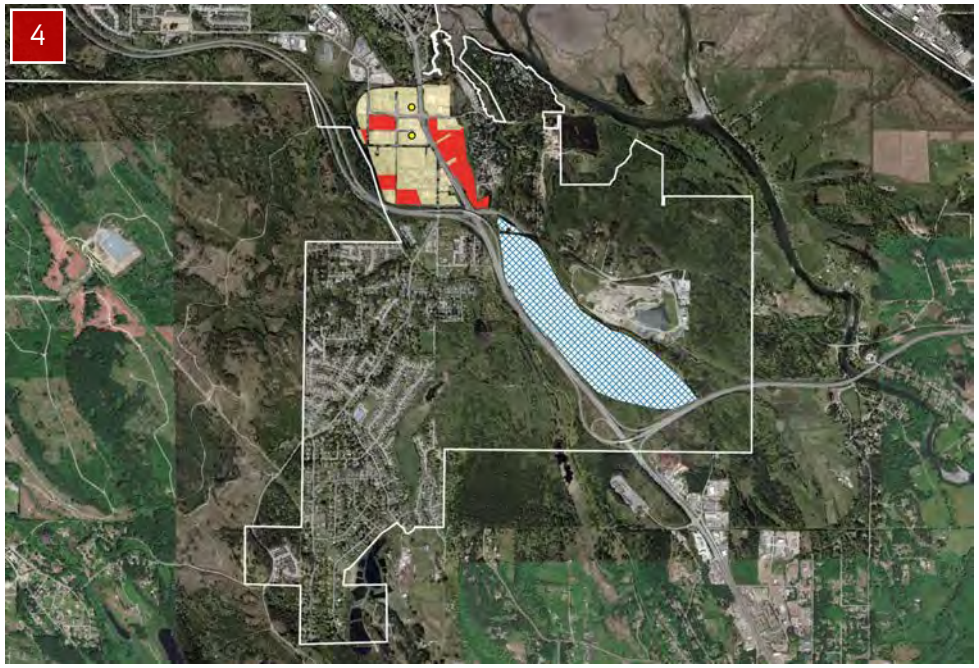

**(2) Island Highway**

| Ref | Category | Hectares within Subarea | Percent of City Inventory |
|---|---|---|---|
| | Occupied | 202 | 27.3% |
| | Vacant | 9 | 15.4% |
| | Permitted | 1 | 5.1% |
| | Vacant Units | 2 | 36.4% |
| | Total | 214 | 23.5% |

Central Nanaimo has approximately 20% of the City's vacant land designated to permit commercial uses, and 16% of the City's currently vacant units.

## 3.4 Vacant and Developable Land




**(3) Downtown / Central Nanaimo**

| Ref | Category | Hectares within Subarea | Percent of City Inventory |
|---|---|---|---|
| | Occupied | 231 | 31.2% |
| | Vacant | 12 | 19.5% |
| | Permitted | 8 | 33.9% |
| | Potential | 42 | 100% |
| | Total | 293 | 32.3% |

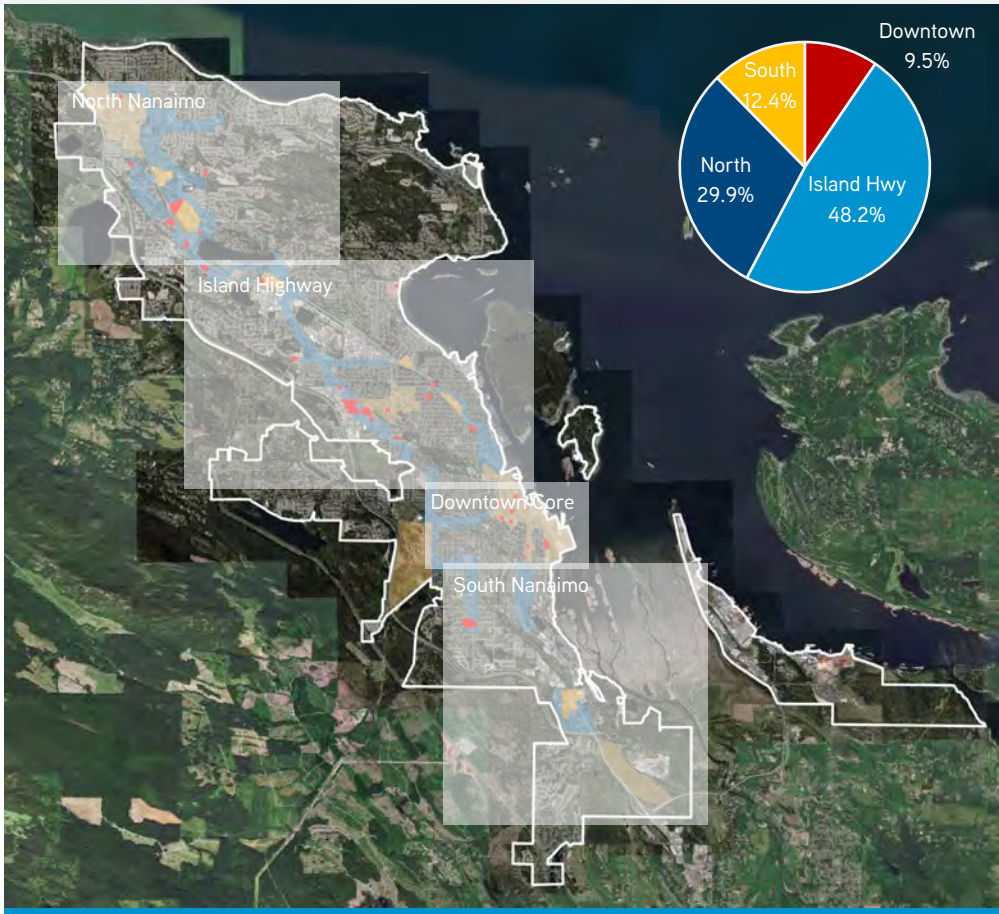

**(4) South Nanaimo**

| Ref | Category | Hectares within Subarea | Percent of City Inventory |
|---|---|---|---|
| | Occupied | 33 | 4.5% |
| | Vacant | 13 | 20.8% |
| | Vacant Units | 0.1 | 2.7% |
| | Sandstone | 39 | 100% |
| | Total | 85 | 9.3% |

There has been approximately 30 hectares of new commercial land developed over the past decade, 55.2% of which was within Corridor OCP areas.

## 3.5 OCP Assessment

- As displayed to the right, Colliers assesses commercial land development within the following 2008 OCP Designations: City Commercial Centre, Corridor, Neighbourhood Commercial Centre, and Urban Node. Since 2008, new commercial land development is displayed in red.
- During this period, development has occurred on 30 hectares of land which was previously vacant. Approximately 55.2% of this development occurred within Corridor areas, 16.8% within Neighbourhood Commercial Centres, 15.9% within City Commercial Centres, and 12.1% within Urban Nodes.
- The scale of development within Corridor areas is logical as they were less built out in 2008 and provided more opportunities for mixed-use developments, which are often more financially viable than standalone, single level commercial developments. Mixed-use development within these areas should however be closely monitored moving forward, ensuring that the further addition of commercial uses do not directly compete with the supply and development within the City's Urban nodes.
- While looking at geographical regions, 48.2% of this development occurred within the Island Highway region, 29.9% within the North Nanaimo region, 12.4% within the South Nanaimo region, and 9.5% within the Downtown.
- The relative lack of development in Southern Nanaimo is likely due to a variety of factors, including less land zoned for commercial uses along with a less dense population base.




| Ref | Description | Hectares |
|---|---|---|
| | New Commercial Supply Developed Since 2008 | 30 |
| | Within City Commercial Centre OCP Designation | 5 (15.9%) |
| | Within Corridor OCP Designation | 16 (55.2%) |
| | Within Neighbourhood Commercial Centre OCP Designation | 5 (16.8%) |
| | Within Urban Node Designation | 4 (12.1%) |

Colliers assessed future commercial demand using a proprietary model based on the commercial expenditure potential from a growing population.

## 3.6 Demand Analysis

### 3.6.1 Methodology and Assumptions

- Colliers International Consulting's proprietary commercial demand model calculates the commercial expenditure potential from a growing population base by assessing socioeconomic variables, provincial data, commercial industry benchmarks, and commercial development trends.
- Expenditures are then split amongst retail categories using the most recent provincial profile of commercial sales data from Statistics Canada. The model uses Personal Disposable Income (PDI) as a basis to calculate the total expenditure potential within a given area.
- First, an average per capita income estimate is calculated by dividing household income projections by household size. Using the differential between trade area per capita incomes and the British Columbia average, Colliers calculates the trade areas delineated for the City of Nanaimo on the following page. This methodology allows for a local PDI but does not rely on specific income data, which can be prone to large degrees of error.
- Since not all disposable income is spent on commercial goods and services, we reduce the PDI by an expenditures to PDI ratio which is an adjusted provincial rate provided by the Conference Board of Canada. Using an algorithm which factors in the reality that higher incomes do not bring about proportionately higher spending, Colliers calculates a PDI ratio for each trade area.
- Market capture rates are then applied to the estimated trade area commercial expenditures based on the competitive regional environment and physical/psychological barriers that affect accessibility. This includes the assumption that market capture rates within bricks and mortar retailers are gradually shrinking among certain commercial subcategories due to the rise of online shopping.
- The resulting potential expenditures are then converted into warranted commercial floorspace using industry-average and market-appropriate productivity rates and the assumption that some commercial tenant types will continue the trend of slightly reducing their overall floor area requirements.
- For the purposes of this study, Colliers provides a study horizon up until 2041 based on the provided population projections. Due to the long-term nature of these projections, and the needs of a land capacity analysis, Colliers projects net future floorspace demand among all commercial categories from the current base year of 2019.

The primary and secondary trade areas are expected to grow to a total population of between 227,856 and 255,688 by 2046.

## 3.6 Demand Analysis

### 3.6.2 Trade Area Population Projections

- The first step in gauging potential future support for additional commercial uses is to delineate appropriate trade areas within which the majority of annual sales are expected to originate.
- Based on Colliers' review of the road network and commercial supply, it is expected that the City will continue to serve as the regional service and market centre for Central Vancouver Island.
- The Primary Trade Area (PTA) includes residents who conduct their day-to-day shopping almost exclusively in Nanaimo. The driving distance of the PTA does not generally exceed 20 to 30 minutes, and therefore only covers the entirety of the City itself. The population within this trade area is expected to grow to between 126,629 to 141,883 by 2046.
- Residents of the Secondary Trade Area (STA) travel to Nanaimo on a more infrequent basis for larger purchases such as appliances, automobiles, recreational sports equipment, clothing, and furniture. The STA includes the remainder of the RDN. The population within this trade area is expected to grow to between 71,507 and 80,454 by 2046.
- Due to Nanaimo's central and accessible positioning along Vancouver Island's major corridor, the City can expect to receive additional inflow demand in the range of 10% up to 15% as it further develops.


Trade Area Population Projections

| Ref | Description | Current | 2036 | 2046 |
|---|---|---|---|---|
| | PTA – Baseline | 94,525 | 117,784 | 126,629 |
| | PTA – High Growth | 94,525 | 127,969 | 141,883 |
| | STA – Baseline | 67,024 | 69,265 | 71,507 |
| | STA – High Growth | 67,024 | 73,739 | 80,454 |
| | Inflow | +10% | +12% | +15% |
| | Total – Baseline | 177,704 | 209,495 | 227,856 |
| | Total – High Growth | 177,704 | 225,913 | 255,688 |

The combined trade areas and inflow demand is expected to generate a total of $3.12 billion and $3.47 billion in captured expenditures by 2041.

## 3.6 Demand Analysis

### 3.6.3 Trade Area Expenditure Potential

- As outlined to the right, Colliers calculates the current and forecasted annual commercial expenditures generated by the population within each trade area in 2031 and 2041 under the baseline and high growth scenarios.
- This is a key step in determining the potential to support new commercial floorspace within Nanaimo. The combined trade areas are expected to generate a total of between $3.98 billion (baseline growth) and $4.34 billion (high growth) in total annual commercial expenditures by 2041.

### 3.6.4 Trade Area Net Sales Capture

- The total trade area expenditure potential must then be converted into the expected spending on commercial goods and services within the City of Nanaimo. As such, category-specific market capture rates are applied, which are based on anticipated consumer patterns given the relative location of existing and future commercial supply and evolving retail trends including the impact of e-commerce.
- In total, the City of Nanaimo can realistically expect to capture a total of between $3.12 billion (baseline growth) and $3.47 billion (high growth) in total commercial expenditures by 2041. This also includes additional inflow expenditures.

| Expenditure Potential | Current | 2031 | 2041 |
|---|---|---|---|
| Primary Trade Area Expenditure Potential | | | |
| Baseline Growth | $1,520,213,263 | $1,963,816,907 | $2,407,420,550 |
| High Growth | $1,520,213,263 | $2,092,089,679 | $2,663,966,095 |
| Secondary Trade Area Expenditure Potential | | | |
| Baseline Growth | $1,203,523,590 | $1,388,575,529 | $1,573,627,468 |
| High Growth | $1,203,523,590 | $1,487,022,149 | $1,770,520,708 |
| Total Expenditure Potential | | | |
| Baseline Growth | $2,723,736,853 | $3,352,392,435 | $3,981,048,018 |
| High Growth | $2,723,736,853 | $3,579,111,828 | $4,434,486,803 |

| Net Sales Capture | Current | 2031 | 2041 |
|---|---|---|---|
| Primary Trade Area Expenditure Potential | | | |
| Baseline Growth | $1,380,489,443 | $1,783,321,179 | $2,186,152,914 |
| High Growth | $1,380,489,443 | $1,899,804,314 | $2,419,119,186 |
| Secondary Trade Area Expenditure Potential | | | |
| Baseline Growth | $715,390,334 | $825,387,653 | $935,384,972 |
| High Growth | $715,390,334 | $883,905,626 | $1,052,420,917 |
| Total Expenditure Potential | | | |
| Baseline Growth | $2,095,879,777 | $2,608,708,831 | $3,121,537,886 |
| High Growth | $2,095,879,777 | $2,783,709,940 | $3,471,540,103 |

Colliers estimates that the City of Nanaimo will experience demand for an additional 29-38 hectares of commercial employment land by 2041.

## 3.6 Demand Analysis

### 3.6.5 Commercial Land Demand Projections

- The projected sales volumes within the City can be converted into warranted floor area (leasable or saleable area) by dividing net expenditures by sector specific sales per square foot productivity targets and assessing retail trends such as the likelihood of retailers to begin reducing their overall footprints.
- Service commercial establishments have also been included in the commercial demand analysis. This includes a portion of office tenants, consisting of service-oriented businesses such as dental and medical offices, vet clinics, fitness centres, salons, childcare, insurance, financial services, and other uses.
- Finally, the remaining office space demand was projected by assessing office employment growth by subcategory, unemployment rates, labour participation rates, market trends, and projected office employment densities.
- By 2041, the City of Nanaimo is expected to experience demand for an additional 610,170 sf to 776,198 sf of traditional retail floorspace, 126,224 sf to 160,299 sf of service commercial floorspace, and 1.1 to 1.4 million sf of traditional office floorspace.
- Utilizing industry standard commercial and office floor area ratios, this translates to demand for between 29 to 38 hectares of commercial land.

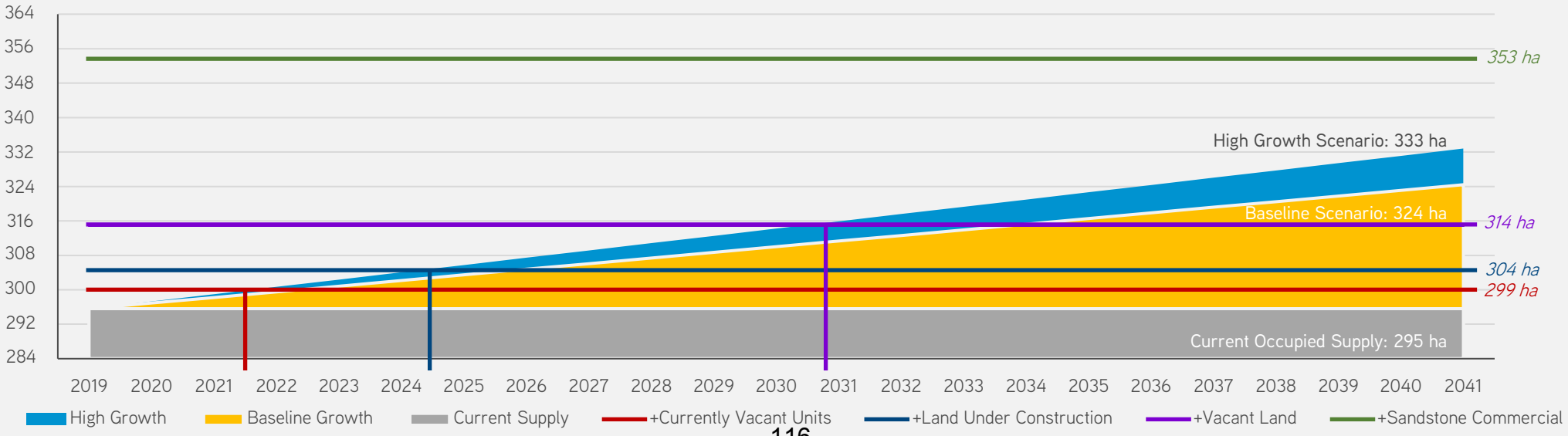
| Expenditure Potential | 2031 | 2041 | Total Additional |
|---|---|---|---|
| Total Traditional Retail Floorspace Demand (sf) | | | |
| Baseline Growth | 3,545,850 | 3,850,935 | 610,170 |
| High Growth | 3,628,364 | 4,015,964 | 775,198 |
| Total Services Floorspace Demand (sf) | | | |
| Baseline Growth | 732,444 | 795,556 | 126,224 |
| High Growth | 749,482 | 829,631 | 160,299 |
| Total Office Floorspace Demand (sf) | | | |
| Baseline Growth | 3,013,975 | 3,484,555 | 1,091,746 |
| High Growth | 3,345,512 | 3,867,856 | 1,403,046 |
| Total Commercial Land Demand (hectares) | | | |
| Baseline Growth | 310 | 324 | 29 |
| High Growth | 314 | 333 | 38 |

Under the high growth scenario, the City of Nanaimo has enough commercial land to fulfill future demand if the Sandstone land is eventually developed.

## 3.6 Demand Analysis

### 3.6.6 Capacity of Commercial Land to Fulfill Demand by 2041

- The graph below demonstrates the capacity of current and potential land within the City of Nanaimo to meet demand projections in both the Baseline and High Growth scenarios. The available supply of additional land is displayed incrementally based on the likelihood and viability of their use, assuming 80% of the currently vacant units are absorbed first. This includes the large Sears and Save-On-Foods vacancies. Only 80% of the currently vacant retail units were used assuming the remainder are not suitable due to their quality or other factors such as accessibility. This will be followed by commercial sites under construction, vacant and developable commercial land, and finally, the designated commercial land within Sandstone.
- This analysis demonstrates that the vacant units and land under construction represent enough supply to last until 2024-2025 in the high growth scenario. The vacant and developable land would add another 6 years of supply being absorbed by 2031, and finally the Sandstone commercial lands represent enough additional supply to fulfill total citywide demand by 2041 in both the baseline and high growth scenarios.



The City of Nanaimo is expected to have a sufficient amount of land designated to permit commercial uses to accommodate future projected demand.

## 3.7 Summary and Recommendations

- The City of Nanaimo is expected to have enough land designated to permit commercial uses to accommodate future demand. This is primarily due to the substantial amount of existing floorspace, the trend for retailers to reduce their overall footprints, ample densification opportunities within existing shopping centres, and a relatively soft office market.
- The surplus of land is particularly evident when accounting for the Sandstone Master Plan. Once the commercial components of this development are completed and tenanted, it will provide a much-needed influx of supply to Southern Nanaimo, yet further saturate the City's overall commercial supply.
- Over time, as the trade area population base grows and household incomes increase, demand triggers for higher quality international tenants may occur. Rather than resulting on a net increase in total floor area demand among specific retail categories, the growing spending power of these trade areas will result in higher quality retailers and less turnover.
- The City also has a large amount of land currently being used by car dealerships. It is expected that their land requirements may gradually decline over the long-term due to shrinking vehicle expenditures and the rise of alternative modes of transportation. These sites may therefore provide future opportunities for intensification. This land, along with other less desirable vacant commercial units could be suited to accommodate light industrial uses.
- The one retail format noted as lacking in the City is small scale convenience nodes within neighbourhoods. Best practices suggest there should be a convenience node within a 5-minute walk of most residents, yet there are many gaps throughout Nanaimo. The City could designate small parcels of land suitable to accommodate 5,000 – 10,000 square feet of commercial floorspace within areas lacking true convenience nodes.
- Aside from this, the City's existing land designated to permit commercial uses is estimated to be more than enough to fulfill future demand. Rather than looking for ways to provide more land for commercial uses, the City should identify a strategy to support the overall health of its existing retail nodes, particularly within Downtown.
- It is imperative to ensure that commercial activity isn't too spread out, particularly through the corridor areas, and the City should instead promote and support the infill of existing retail nodes as a way of cultivating a critical mass and mix of offerings. The City should encourage density levels and a wide variety of permitted uses within these areas, while potentially limiting commercial uses in some parts of the corridors.
- More specifically, the City should focus on creating more pedestrian connections between the growing residential areas surrounding the existing Urban Nodes due to the physical barrier created by existing seas of parking. This could include pedestrianized pathways with weather protection, landscaping, bike paths and facilities, public gathering areas, and similar features that would encourage nearby consumers to walk rather than drive to these retail centres.

The City of Nanaimo is expected to have a sufficient amount of land designated to permit commercial uses to accommodate future projected demand.

## 3.7 Summary and Recommendations

- Strong focus should also be paid towards the retail environment within Downtown Nanaimo. The vitality of any City's Downtown is highly reliant on a vibrant and diverse retail experience along with a strong amount of footfall.
- Aside from the addition of residential supply within Downtown, the City should consider "quick fix" interim projects and events, designed to animate the downtown and encourage better placemaking.
- Pop-up shops, food trucks, farmers markets, winter markets, music shows, artistic installations, outdoor kiosks, and similar items can be highly beneficial in attracting footfall and encouraging frequent repeat visitation.
- Additionally, heavy emphasis should be put towards the overall design of ground floor commercial units referring to the design and development principles outlined in 3.1.5 of this report.
- For example, the "Starbucks Effect" refers to the positive impact a popular café with an active frontage, outdoor seating areas, and large windows can have when compared to less dynamic, larger tenancies such as a bank or pharmacy.
- In many cases, this effect alone has been enough to help save adjacent suffering retailers due to the anchor effect and the ability of such a tenancy to alter consumers overall perception of a certain part of town.
- Another key challenge facing many retailers is lack of suitable staff due to low unemployment rates and an aging population. The City could consider partnering with local academic institutions and retailers to create a retail training program that may help to supply more staff.
- Finally, many of the non-profit groups within Nanaimo have expressed concern regarding the availability of affordable space, many of which are at risk of losing their space as new development occurs.
- Although this demand may not be substantial in terms of the overall scale in relation to market office space demand, it is important for the City to consider options for these indispensable user groups.
- There is a clear surplus of available lower quality Class B and C office space within the City that new market office users are unlikely to desire yet may still be suitable for non-profit groups.
- To accommodate the needs of these groups, the City could consider the reuse and revitalization of older persistently vacant buildings with sharing space models for groups that are expected to be compatible with one another.
- Additional assistance for these groups could be financial assistance and help negotiating favourable leases with landlords, the latter of which has been brought up as an issue that many non-profit groups have experienced.

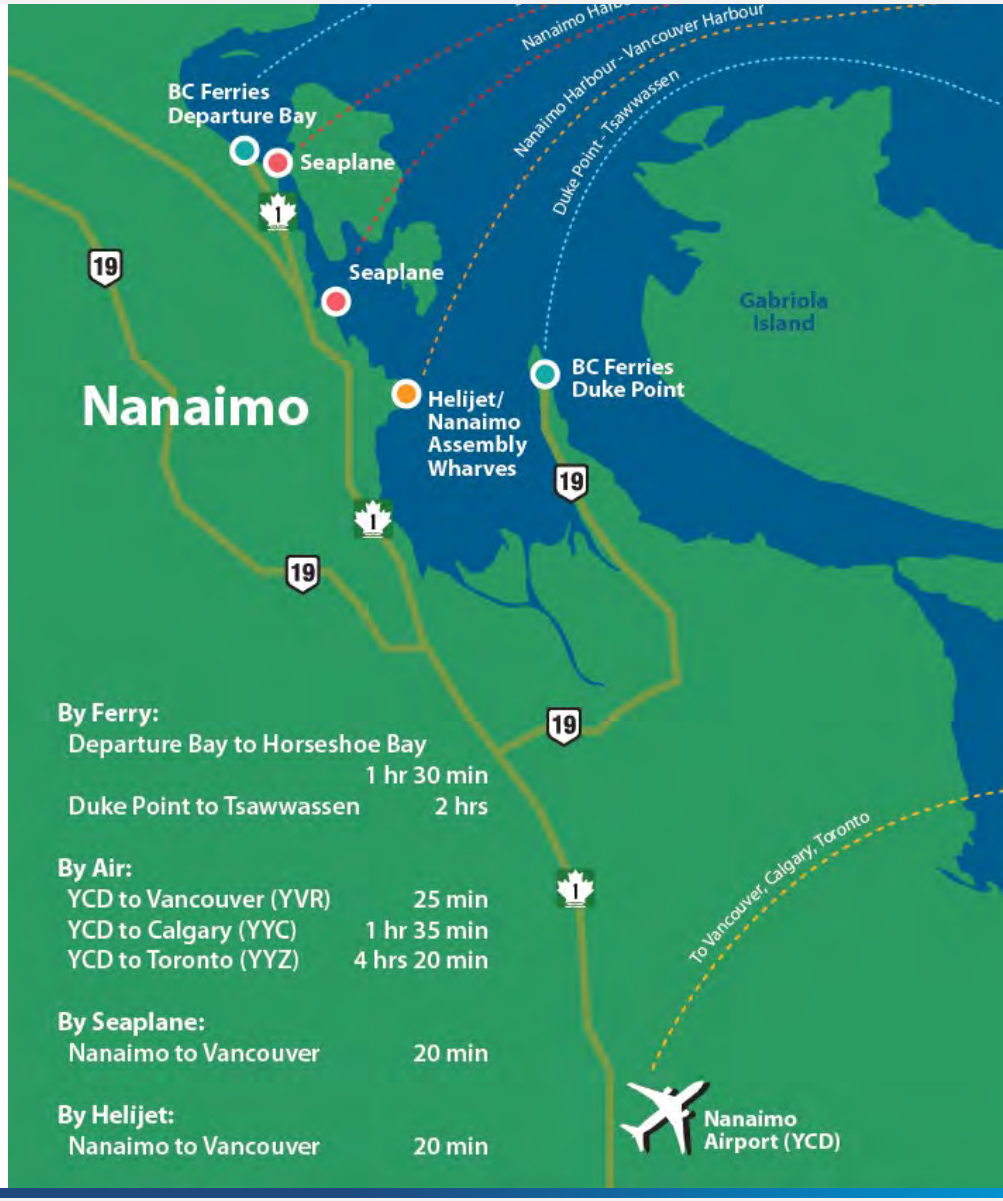

# 4 | Industrial

Existing infrastructure in Nanaimo and investments into improvements and expansions connect the region to many local and international markets.

## 4.1 Market Analysis

### 4.1.1 Nanaimo Transportation and Logistics Infrastructure

- Nanaimo's comprehensive transportation network has been designed to support and promote the growth of existing businesses, facilitate the movement of goods and people, and encourage the establishment of new operations, all contributing to strong and growing demand for industrial land within the area.
- Furthermore, the City of Nanaimo 20 Year Investment Plan and Asset Management Update (2017) projected the investment of $1.1 billion for new and upgraded infrastructure.
- Investment in the Vancouver Island highway network has reduced travel times between Nanaimo and other communities allowing for access to a larger market and workforce area.
- In 2011, the Nanaimo Port Authority opened the $25 million floating cruise ship terminal which has helped to attract tourist spending, and BC Ferries continues to carry a growing number of passengers, personal vehicles, trucks, and commercial vehicles to and from the Lower Mainland.
- As such, Nanaimo is strategically positioned as a transportation hub in a central location, serving as a connection between the Lower Mainland and Vancouver Island, as well as Victoria and cities north of Nanaimo.

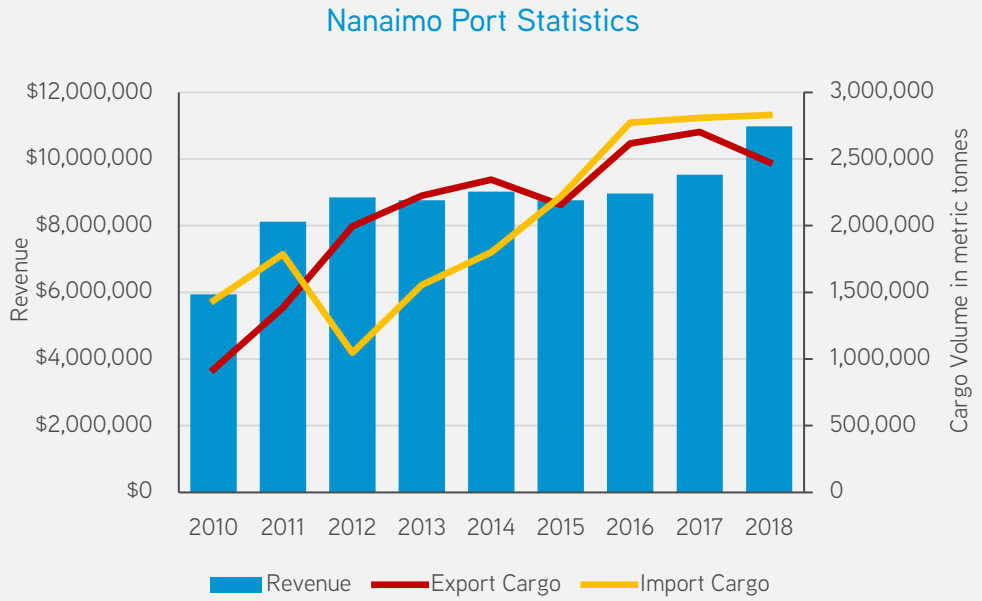


The Nanaimo Port has been expanding following investment into larger and more modern facilities required by a diversified economy.

## 4.1 Market Analysis

### 4.1.2 Nanaimo Port Authority

- The Nanaimo Port is the largest commercial port on Vancouver Island with 4 berths, 36 hectares of paved storage space, covered warehousing space, and barge loading facilities.
- With the diversification of Nanaimo and Vancouver Island's economy away from dependence on natural resources, the port has been shifting its operations to become less reliant on the export of lumber following the 2008/2009 financial crisis. For example, the new $18 million dollar vehicle processing centre makes the Nanaimo Port the only Western Canadian entry point for European automobiles.
- The Port of Nanaimo plays a significant role in the region by providing transportation access and linkages to various markets, customers and suppliers. In addition, it links Nanaimo to mainland British Columbia.
- Following major investments over the past decade, the port has experienced strong growth, particularly in its ability to process and transport shipping containers. Between 2010 and 2016, the port was the fastest growing among all Canadian ports.
- Imports and exports have been increasing steadily since 2012 with the amount of imported products surpassing the amount of exported products as of 2015.




**Port of Nanaimo Cargo Growth**

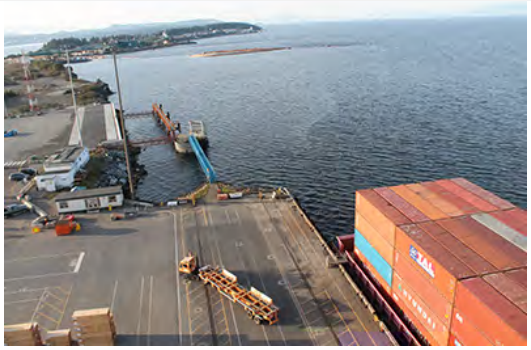
| Cargo Type | 2012 volume in metric tonnes | 2018 volume in metric tonnes | Growth YOY |
|---|---|---|---|
| Forest Products | 1,253,573 | 2,096,062 | 11.2% |
| Logs | 1,153,658 | 2,029,140 | 12.6% |
| Bulk Cargo | 187,611 | 123,371 | -4.9% |
| Project Cargo | 17,051 | 24,526 | 7.3% |
| Containers | 48,128 | 534,768 | 168.5% |
| Chemicals | 32,762 | 44,910 | 6.2% |
| Petroleum | 349,233 | 444,916 | 4.6% |
| Total Volume | 3,042,016 | 5,306,693 | 12.4% |

The federal government is contributing a significant amount of money towards improvements in Nanaimo's port infrastructure.

## 4.1 Market Analysis

### 4.1.3 Duke Point Terminal and Duke Point Expansion

- In addition to relatively recent investments, the federal government is contributing a significant amount of money towards further improvements in Nanaimo's port infrastructure.
- This is specifically due to the opportunities created from Duke Point's deep-sea berths in addition to barge service being increasingly utilized from Vancouver Island to Vancouver for short sea shipping.
- The $90 million expansion of the Port of Nanaimo's Duke Point operations announced early in 2019 is expected to include new equipment and facilities that will make the port even more attractive and efficient for local, national, and international companies.
- This investment is estimated to create 900 jobs during construction, reduce congestion at the terminal, and greatly enhance the capacity to ship and receive goods to and from international markets.
- The expansion is expected to be one of the major contributors to growing demand for supporting industrial land in the Duke Point area and nearby regions of Nanaimo accessible by highway and rail.



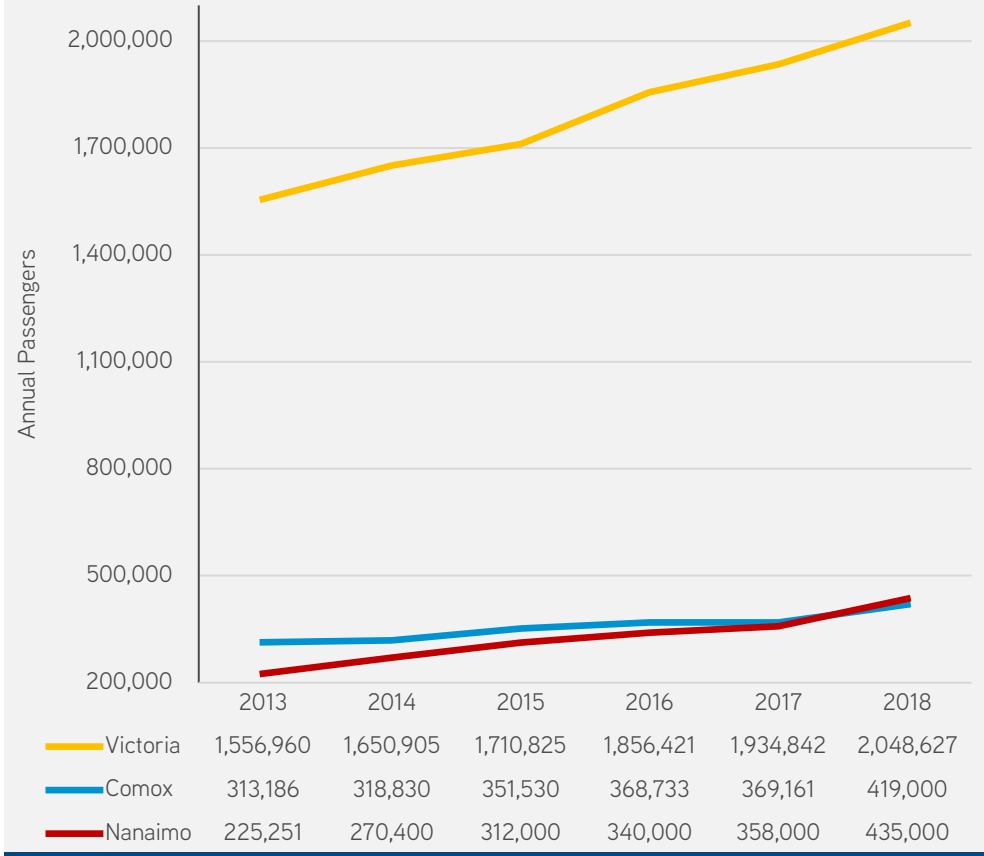

The Nanaimo Airport has been experiencing strong growth through investments in facilities and infrastructure.

## 4.1 Market Analysis

### 4.1.4 Nanaimo Airport

- In addition to port related industrial growth, the Nanaimo Airport is another major potential contributor to future industrial growth within the City of Nanaimo and the surrounding area.
- The Nanaimo Airport is located 18km south of Nanaimo and is adjacent to the Trans Canada Highway 1, the rail line, and is 10 minutes away from ferries and the Nanaimo Port.
- The Nanaimo Airport has one of the largest available land masses for airside and groundside development of any BC airport and is centrally located on Vancouver Island.
- This is the fastest growing airport on Vancouver Island, with average annual airport passenger growth of 14.24% since 2013. Although it transports a similar volume of passengers as the Comox airport, it is expected to continually grow at a faster pace in upcoming years.
- This makes it the second busiest airport on Vancouver Island both currently and in the future, with passenger traffic already 60% higher than past projections for 2019.
- Prime tenants include FedEx, Enex Fuels and Alkan Air, with the airport contributing $464 million to the local economy with 2,755 supported jobs.

Vancouver Island Annual Passengers by Airport




| | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|---|---|
| Victoria | 1,556,960 | 1,650,905 | 1,710,825 | 1,856,421 | 1,934,842 | 2,048,627 |
| Comox | 313,186 | 318,830 | 351,530 | 368,733 | 369,161 | 419,000 |
| Nanaimo | 225,251 | 270,400 | 312,000 | 340,000 | 358,000 | 435,000 |

Growth in Airport Passengers

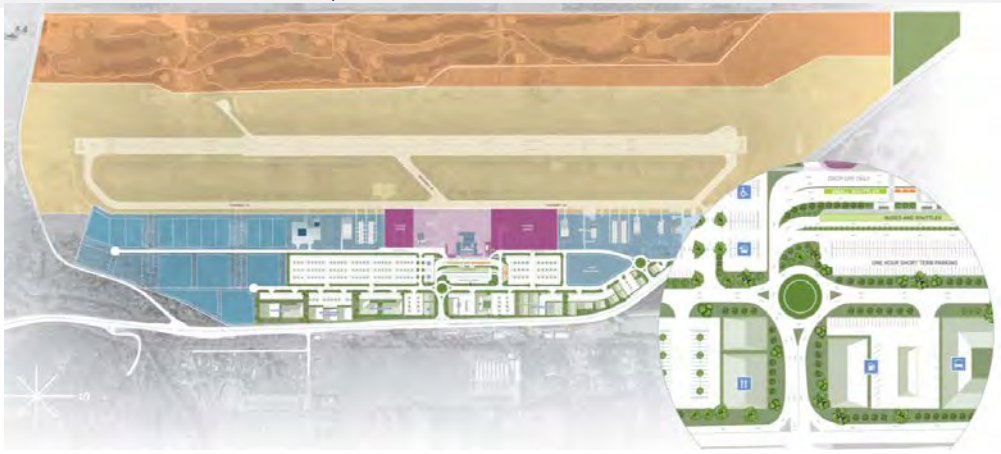
| Airport | 2013-2014 | 2014-2015 | 2015-2016 | 2016-2017 | 2017-2018 |
|---|---|---|---|---|---|
| Nanaimo | 20.04% | 15.38% | 8.97% | 5.29% | 21.51% |
| Victoria | 6.03% | 3.63% | 8.51% | 4.22% | 5.88% |
| Comox | 1.80% | 10.26% | 4.89% | 0.12% | 13.5% |

The Nanaimo Airport is continuing to expand its passenger and groundside commercial & industrial capacities.

## 4.1 Market Analysis

### 4.1.4 Nanaimo Airport

- The recent terminal expansion completed in Fall 2019 added 14,000 square feet of capacity, supporting the goal of remaining as one of the fastest growing airports in British Columbia.
- The Nanaimo Airport 20-year master plan includes an expansion of groundside commercial space, a significant expansion of airside commercial space, additional air terminal reserves, and future aviation space on the golf course east of the site.
- With its unique mix of prime land development opportunities, the Nanaimo Airport offers one of the largest available land masses for airside and groundside development of any BC airport.
- More than 50 hectares of land has been designated as available. In addition, 6 hectares of land was identified as underdeveloped along the northern portion of the taxiway ideal for hangars and flight services. This represents a significant inventory of available land with airside and highway access, suitable for industrial uses.
- The top five development sectors identified by the Nanaimo Airport are hangars (private and corporate), fixed based operators (including aviation fuel suppliers), aircraft sales, flight training, and maintenance repair and overhaul services.



The foreign trade zone status is intended to help businesses facilitate exports, boost the industrial sector, and create jobs for the middle class.

## 4.1 Market Analysis

### 4.1.5 Vancouver Island Foreign Trade Zone

- The Vancouver Island Foreign Trade Zone is committed to aggressively marketing Vancouver Island to attract international trade activity and to expand the production of goods for export, providing streamlined access to government programs to help export products and increase profitability through tax/duty deferral opportunities.
- This is an important designation to help strengthen traditional island industries on the world stage while attracting new manufacturing opportunities and contributing to the overall growth of industrial land demand.
- Nanaimo's growing port, commercial and passenger airport facilities, and university facilities make it an attractive centre for economic development and activity, effectively positioned as a central and accessible node within this Foreign Trade Zone.
- It is expected that Vancouver Island, and Nanaimo in particular, will continue to experience growing industrial-related demand due to factors including the Foreign Trade Zone which is expected to continue supporting the volume of goods produced and exported to serve North America, Latin America, and Asia.

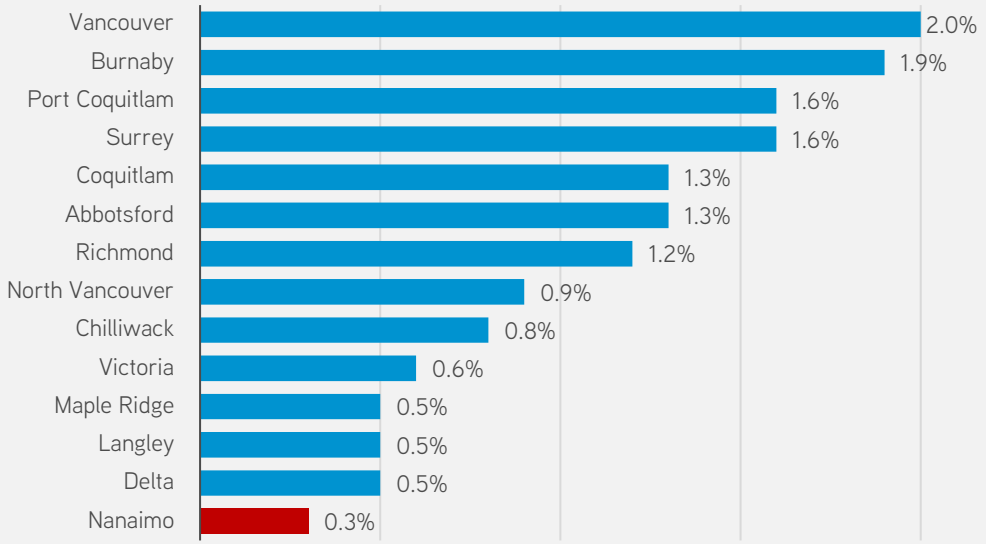
Industrial space is in high demand in Nanaimo due to limited supply and strong demand. Well located industrial land across the region is scarce.

## 4.1 Market Analysis

### 4.1.6 Nanaimo Industrial Market Metrics

- Due to many of the factors outlined on the previous pages, Nanaimo has consistently experienced demand from industrial related businesses looking to expand or open new operations in the Nanaimo market.
- As a result, industrial parks are operating at capacity with limited additional land suitable for development. In Q2 2019, the industrial vacancy rate was 0.3% in Nanaimo, lower than Victoria (0.6%), and Metro Vancouver (1.5%).
- The lack of available space is becoming detrimental for the many businesses and industries looking for space in Nanaimo. Due to the amount of inquiries that brokers have been forced to turn down due to lack of available space, the gap between demand and supply is expected to grow.
- Despite growing demand, there has been a notable lack of new industrial supply introduced to the Nanaimo market in recent years. While building permit values remained above $200 million over the past 5 years, residential development accounted for 85% of this total value.
- Industrial building permits account for an insignificant portion of total building permit values, with under 18 permits issued on average per year since 2010. This is indicative of a lack of new supply being introduced into the market, particularly among large-scale industrial lots.

Vacancy Rates by Region, Q3 2019



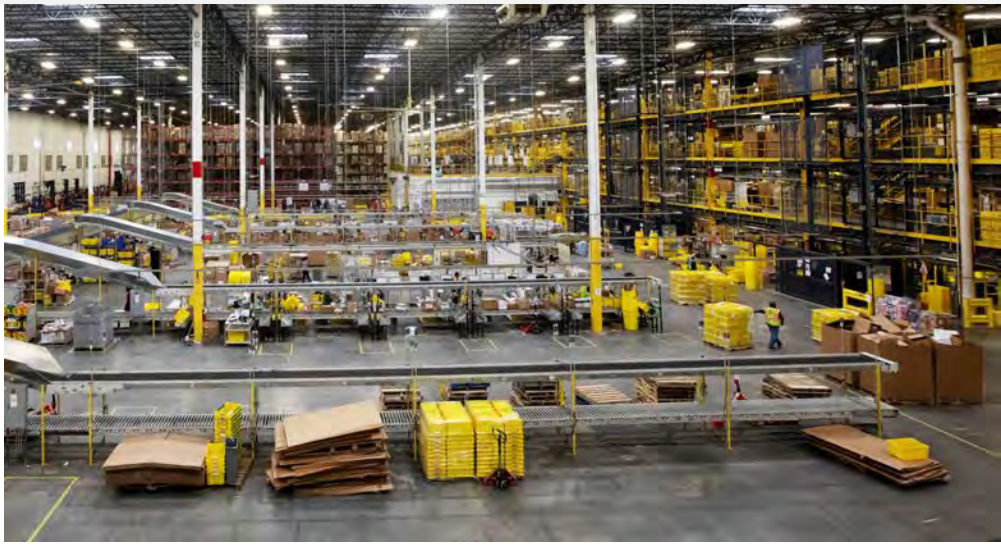

- Further validating the analyses on the previous pages, all of the stakeholders engaged by Colliers that are familiar with Nanaimo's industrial sector reflected the sentiment that there is strong and growing demand for industrial land within the City, and much lower vacancy and underutilization rates than expressed in previous capacity studies.
- This is particularly evident for well-located, larger industrial parcels, resulting from the Duke Point expansion with potential for an expanded logistics based industrial sector.

Nanaimo's increasingly diversified economy, strategic location, and supporting infrastructure has created strong demand for industrial land.

## 4.1 Market Analysis

### 4.1.7 Summary

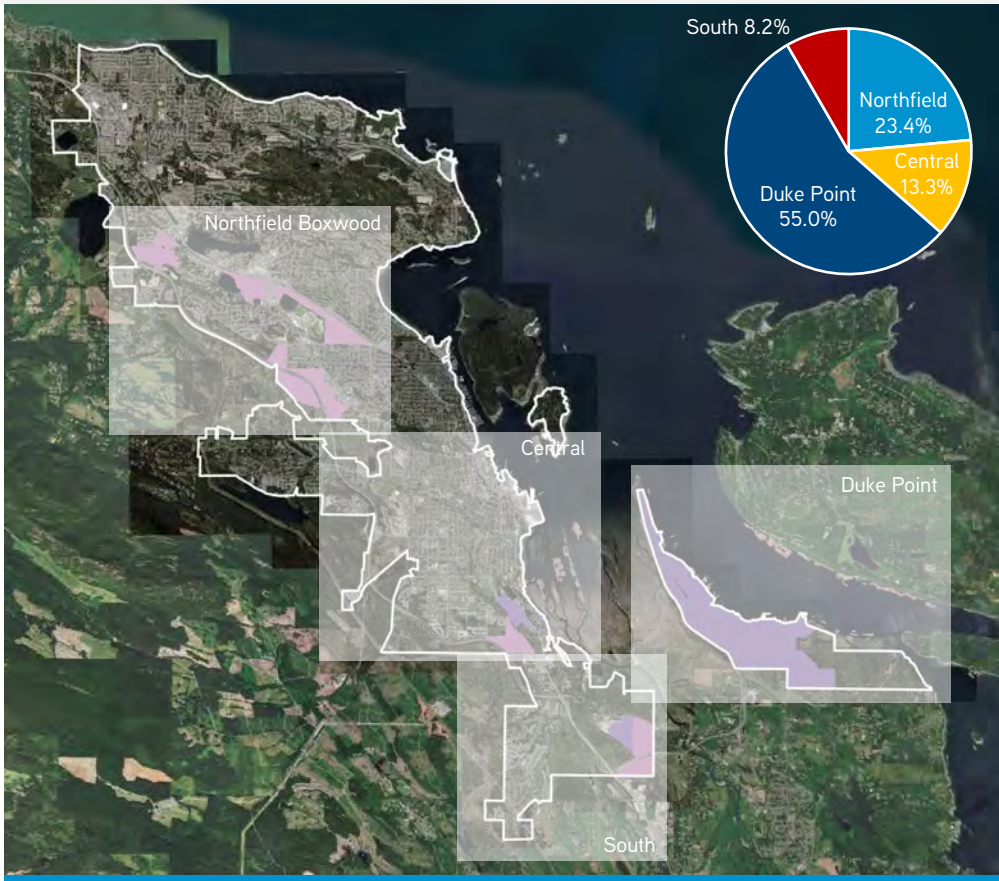
- Nanaimo's population is becoming increasingly educated and its workforce is moving away from a traditionally resource-based economy to more diversified service and manufacturing based industries.
- Investments in Nanaimo's key transportation infrastructure, notably the Nanaimo Port and Nanaimo Airport combined with the City's central location on Vancouver Island make it an attractive place to do business.
- Significant investment in the Nanaimo Port combined with the Vancouver Island Foreign Trade Zone designation make Nanaimo a regionally significant city for domestic and international trade .
- Despite the expansion of employment in the industrial sector, little supply is being created with the majority of development occurring in the residential housing market.
- With little to no industrial vacancy in Greater Victoria and Metro Vancouver, industries are increasingly drawn to Nanaimo due to comparably lower cost of living and doing business.
- Without new industrial supply, new businesses may choose to locate elsewhere, and existing businesses may be limited in their ability to expand and/or be forced to relocate due to rising costs and limited capacity.



The City of Nanaimo has a total of 661 hectares of industrial designated land, primarily within the Duke Point and Northfield Boxwood areas.

## 4.2 Land Inventory by OCP Designation

- The City of Nanaimo has a total of 661 hectares of land designated for industrial uses, as displayed to the right. This supply is distributed throughout Nanaimo, and for the purposes of this analysis Colliers has broken it down into 4 distinct districts: Northfield Boxwood, Central Nanaimo, South Nanaimo, and Duke Point.
- Approximately 55.0% of total supply is located within Duke Point, followed by 23.4% within Northfield Boxwood, 13.3% within Central Nanaimo, and 8.2% within South Nanaimo.
- The land inventory can be further broken down into the two OCP subcategories as defined to the right. Industrial uses account for the majority of land supply (60.2%) with users typically being more land intensive. Light industrial uses account for the remaining 39.8% of total supply.
- The following two pages of this report examine the breakdown of Industrial designations within each of the four districts. Heavy Industrial supply is primarily located within Duke Point, whereas Mixed Light Industrial supply is distributed throughout Northfield Boxwood, Central, and South Nanaimo.




| Ref | Designation | Description | Hectares |
|---|---|---|---|
| | Light Industrial | Mix of technology, research, development, warehousing, and distribution. | 263 (39.8%) |
| | Industrial | Range of heavier industrial uses typically located in industrial parks. | 398 (60.2%) |
| | | Total | 661 |

The Northfield Boxwood area has approximately 70% of the City's Light Industrial supply and 28% of the total industrial land inventory.

## 4.2 Land Inventory by OCP Designation



**(1) Northfield Boxwood**

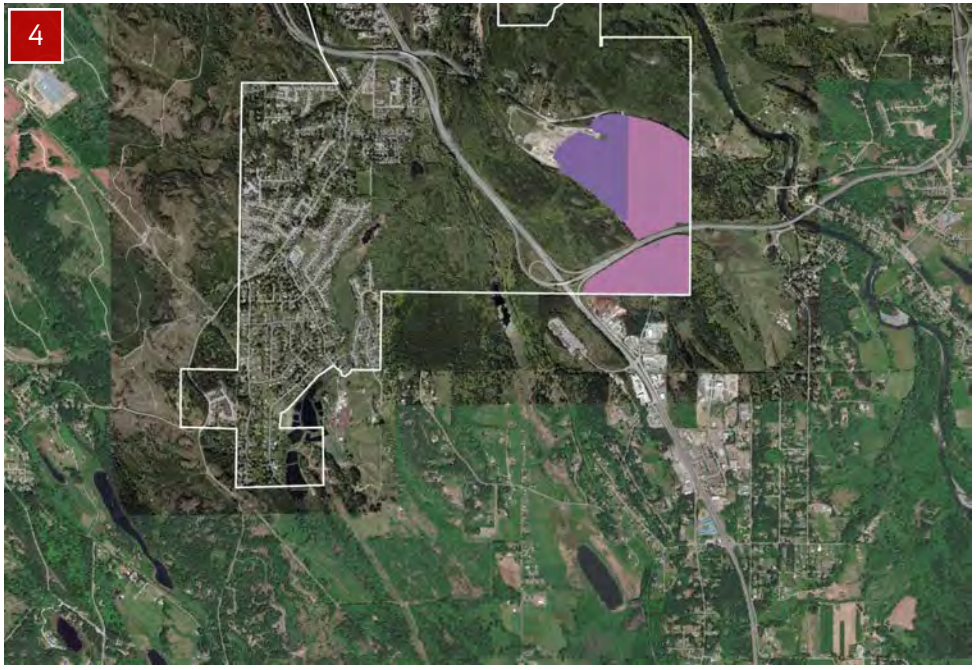
| Ref | Designation | Hectares within Subarea | Percent of City Inventory |
|---|---|---|---|
| | Light Industrial | 185 | 70.2% |
| | Industrial | 0 | 0% |
| | Total | 185 | 27.9% |


**(2) Central Nanaimo**

| Ref | Designation | Hectares within Subarea | Percent of City Inventory |
|---|---|---|---|
| | Light Industrial | 25 | 9.7% |
| | Industrial | 17 | 4.3% |
| | Total | 42 | 6.4% |

Duke Point contains the majority of Heavy Industrial land supply (89.8%), whereas much of South Nanaimo's industrial land is within Sandstone.

## 4.2 Land Inventory by OCP Designation


(3) Duke Point

| Ref | Designation | Hectares within Subarea | Percent of City Inventory |
|---|---|---|---|
| | Light Industrial | 0 | 0% |
| | Industrial | 358 | 89.8% |
| | Total | 358 | 54.1% |


(4) South Nanaimo

| Ref | Designation | Hectares within Subarea | Percent of City Inventory |
|---|---|---|---|
| | Light Industrial | 53 | 20.1% |
| | Industrial | 23 | 5.9% |
| | Total | 76 | 11.6% |

The City of Nanaimo currently has an estimated 63 ha of developable industrial land, with an additional 10 ha of land with construction occurring within.

## 4.3 Vacant and Developable Land

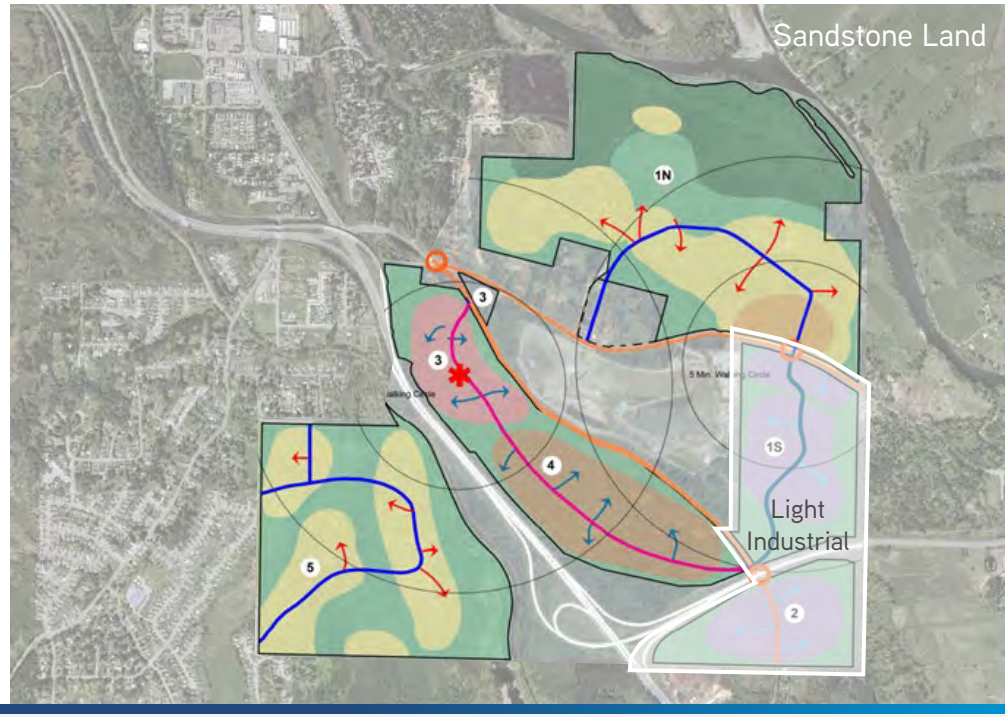
- Through extensive fieldwork and market research, the industrial land inventory can be broken down into the following categories: occupied, constrained, developable, under construction, and potential for future use.
- Occupied industrial land is defined as designated for industrial within the OCP, developed, and currently being used for industrial activities. Business licenses and fieldwork imagery were used to confirm the occupants of each site. The City has approximately 475 hectares of occupied industrial land.
- Constrained industrial land is defined as the portion of these specific lots suitable for development, with the remainder being unsuitable due to slopes exceeding 10% and other geographical restrictions. There is a total of 8 hectares of additional land within these areas that could accommodate future industrial development.
- Vacant industrial land is industrially zoned land that is cleared but not occupied by vehicles, structures, nor appears to be used for industrial activities. This also includes vacant buildings and greenfield sites that are designated for industrial use. There is a total of approximately 55 hectares of vacant and developable land.
- Land defined as under construction is zoned for industrial use and currently being developed but is yet to be tenanted. This land is expected to be absorbed quickly due to the magnitude of industrial demand in the City and lack of new standing inventory. There are currently 10 hectares under construction.

| Ref | Category | Description | Hectares |
|---|---|---|---|
| | Occupied | Currently occupied industrial land | 475 (64.9%) |
| | Constrained | Developable portion of constrained land | 8 (11.6%) |
| | Vacant | Currently vacant and developable land | 55 (7.5%) |
| | Construction | Land with construction occurring within | 10 (13.2%) |
| | Sandstone | Designated as mixed light industrial | 53 (7.3%) |
| | Oceanview | Resort designation but suitable for industrial | 86 (11.7%) |
| | Outside UCB | Identified as suitable for industrial use | 44 (6.0%) |
| | | Total | 731 |

The latest Sandstone Master Plan includes 53 ha designated for light industrial use; however development is expected to occur over the long-term.

## 4.3 Vacant and Developable Land

- In addition to the land that is developable or under construction, there are other large greenfield sites within the Urban Containment Boundary that could be utilized for industrial purposes.
- The existing Sandstone Master Plan includes 53 hectares designated for light industrial uses. Although this represents a large potential influx of supply, it is understood that development timelines are being lengthened for a variety of reasons, including the need for the highways to be redone prior to further development. The industrial land within Sandstone is therefore unlikely to fulfill short term demand.
- Additionally, the land in the Duke Point area previously designated for the Oceanview Golf Resort and Spa is another logical area for industrial development. This region would be particularly suitable for large lot sizes due to the heavy industrial nature of Duke Point and the water proximity. Although this piece of land is 193 hectares in size, it is estimated that approximately 86 hectares would be suitable for industrial development.
- Finally, local stakeholders have identified an additional 44 hectares of land adjacent yet just outside the Urban Containment Boundary that could be suitable for future industrial use.
- In total, accounting for entirety of developable Sandstone and Oceanview land, there is approximately 98 hectares of land within the City of Nanaimo's Urban Containment Boundary that is or could be dedicated for industrial use.

There has been approximately 6 ha of new industrial supply developed over the past decade, with development in nearly all suitable land parcels.

## 4.4 OCP Assessment

### 4.4.1 Overview

- To assess the effectiveness of the 2008 OCP and the likelihood that vacant industrial parcels will be viable for future industrial usage, Colliers conducted fieldwork and examined high resolution orthographic imagery to compare land use changes between 2008 and 2019.
- As displayed to the right, the areas shaded in white are designated for industrial or light industrial uses in the OCP, and the areas shaded in purple display land with new industrial supply added over the past decade.
- During this period, approximately 6 hectares of land has experienced new industrial development. Nearly 70% of this land is within the Boxwood Industrial area, primarily due to the availability of land and proximity to Nanaimo Parkway.
- This scale of development is likely not indicative of total annual demand during the past decade, but rather, is the natural development of some of the last remaining desirable industrial land within the City. It is expected that the remaining vacant supply could be partially caused by other factors such as their size, slope, configuration, and accessibility rather than any hindrances from the OCP itself.
- The following pages display a magnified analysis of the land use changes over the past decade within Shenton Industrial Area, Northfield Industrial Area, Boxwood Industrial Area, and Duke Point.



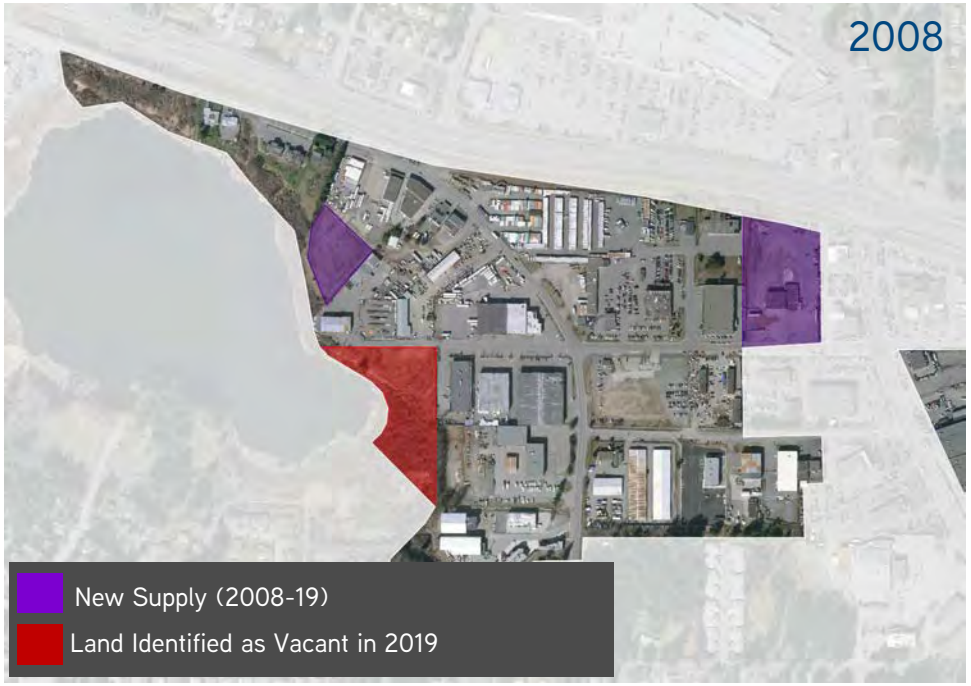
New development in the Boxwood area

An additional 0.4 ha of industrial land has been developed for industrial uses within the Shenton industrial area over the past decade.

## 4.4 OCP Assessment

### 4.4.2 Shenton Industrial Area

- The Shenton Industrial area experienced a minor amount of change over the past decade, with an additional 0.4 hectares of land with development occurring for industrial uses. This relatively minor scale of development was primarily infill of available land rather than due to any restrictions in the OCP.
- As identified below, the land that was designated as vacant in the previous section of this report remained unchanged since 2008. This is likely due to other issues rather than demand, such as the suitability of the land for development and industrial usage.




The Northfield industrial area remains one of the densest industrial areas in the City, with only .05 ha of new supply added since 2008.

## 4.4 OCP Assessment

### 4.4.3 Northfield Industrial Area

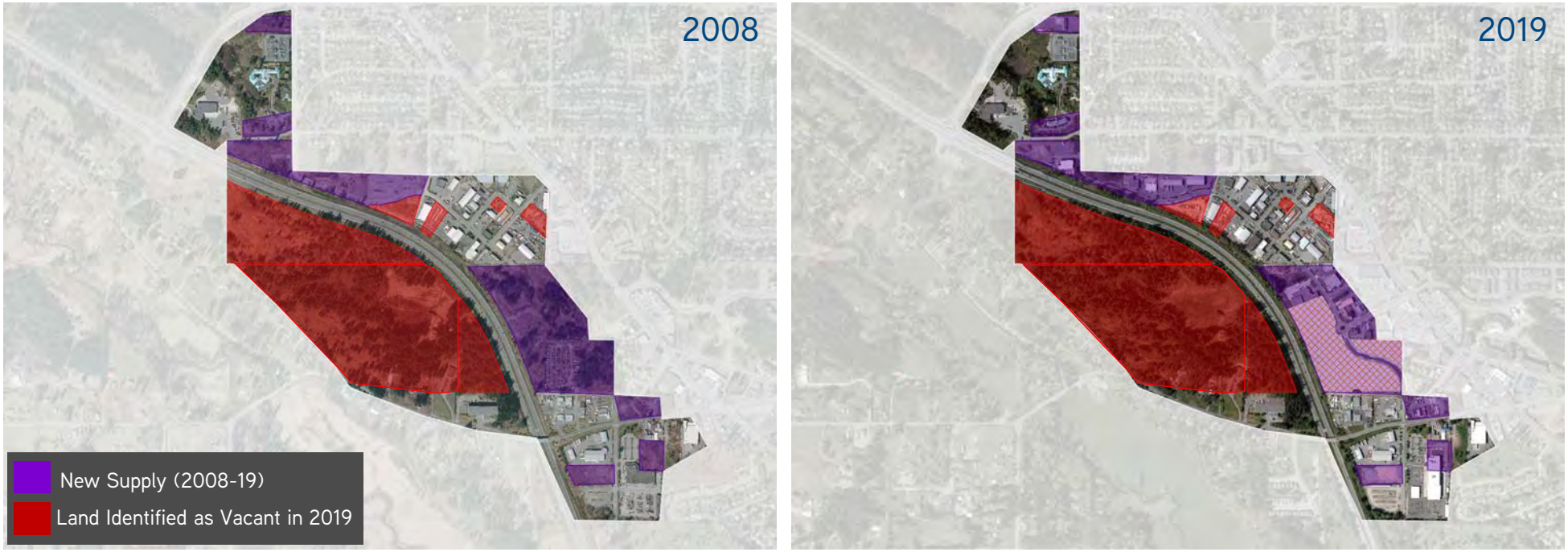
- The Northfield industrial area was one of the densest industrial areas within the City in 2008, and as such, there has been little new development during the past decade. During this period, only .05 hectares of land has seen new supply.
- The current vacancies identified are likely more a matter of older building stock, natural turnover of businesses, and tempered demand for the smaller land parcels in this area when compared to the larger parcels within the Boxwood Industrial area, rather than demand for industrial land in the City as a whole.


Approximately 5 hectares of new industrial development has occurred within the Boxwood industrial area over the past decade, 70% of the City total.

## 4.4 OCP Assessment

### 4.4.4 Boxwood Industrial Area

- The Boxwood industrial area experienced the vast majority (70%) of new industrial land development over the past decade, primarily due to a relatively large amount of available land and accessibility to Nanaimo Parkway. Nearly 5 hectares of land development has occurred in this area over the past decade, including ongoing construction and the additions of Boxwood Road, Dufferin Crescent, and Griffiths Road.
- The 11 hectares of land south of Nanaimo Parkway remains vacant, likely due to a lack of infrastructure and accessibility rather than overall demand. It is expected that development in these areas will occur after the remainder of the areas under construction are completed and leased out.

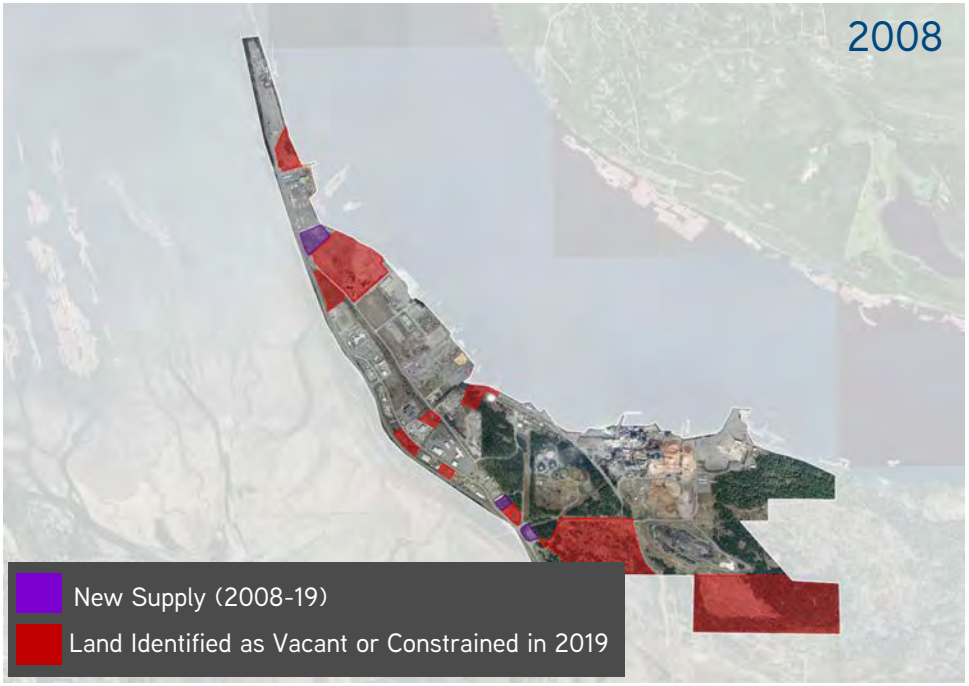


Duke Point has experienced an additional 0.8 ha of industrial development over the past decade, with vacancies due to lack of suitable land.

## 4.4 OCP Assessment

### 4.4.5 Duke Point

- Although Duke Point appears to have a notable amount of land remaining vacant over the past decade with only 0.8 hectares of land experiencing new development during this period, numerous stakeholders have indicated that there is very limited suitable remaining industrial land within this area.
- This is likely due to a variety of factors. First of all, lots smaller than 2 hectares in size are not appropriate for the majority of the heavy industrial uses looking for space in the area, and the larger pieces of land are either being held by owners for their future expansion, or not suitable for major development due to servicing and constraints by natural features and slopes greater than 10%.




Colliers assessed future industrial demand using Status Quo and High Growth scenarios and industrial based employment projections.

## 4.5 Demand Analysis

### 4.5.1 Methodology and Assumptions

- To estimate the future demand for industrial land within the City of Nanaimo, Colliers assessed two scenarios with a combination of the historic extrapolation and constant share projection methodologies.
- Employment projections broken down by industrial subcategory are the most accurate method of understanding future industrial demand, however external factors more difficult to predict such as new regulations or broader changes in the Canadian economy may also impact demand.
- The extrapolation method examines historical population, employment, and industry growth patterns to project future industrial employment, whereas the constant share method incorporates assumptions regarding Nanaimo's relative future growth in comparison to the broader Vancouver Island / Coast economic region.
- The first scenario (Status Quo) examines future industrial demand under the assumption that Nanaimo's industrial growth will resemble historical patterns and its positioning relative to the broader economic region will remain unchanged over the next two decades.
- The second scenario (High Growth) assumes that Nanaimo will continue to gradually become a major industrial centre within Vancouver Island due to many of the factors outlined in Section 4.1 of this report.
- Colliers believes that future demand is likely to exceed the Status Quo scenario, with the High Growth scenario representing the expected upper limit of future industrial land demand.
- To project future employment using both methodologies, Colliers utilized population and employment projections broken down into four broad categories: primary industries, population-based industries, tourism-based industries, and industrial-based industries.
- Primary industries include farms, forestry, fishing, hunting, and mining and oil extraction. Population-based industries include finance, real estate, business services, institutions, and 80% of overall retail trade. Industrial-based industries include manufacturing, wholesale trade, construction, transportation, storage, and utilities. Tourism-based industries include accommodation, food & beverage, other services, and 20% of retail trade.
- Given an analysis of current employment categories within Nanaimo's industrial land, it is assumed that future employment on industrial land will include 100% of industrial-based jobs, 20% of population-based jobs, and 10% of jobs in tourism-based and primary industries.
- These ratios are applied to future employment projections using both the extrapolation and constant share methodologies to estimate the total number of future jobs on industrial land. Based on industrial development best practices, an expected ratio of future industrial employment per acre is applied to the employment projections to estimate future land demand.

Colliers estimates that the City will experience demand for a total of 641 ha (Status Quo) and 727 ha (High Growth) of industrial land by 2041.

## 4.5 Demand Analysis

### 4.5.2 Industrial Demand Projections

- As displayed in the table to the right, Colliers projects industrial land demand within the City of Nanaimo under both the Status Quo and High Growth scenarios up until 2041.
- The High Growth scenario assumes that industrial activity and employment within the City will grow at a relatively faster rate than other industries, and that the overall unemployment rate will slightly decrease over time.
- Based on these calculations, Colliers estimates that the City will experience demand for a total of between 592 hectares (Status Quo) and 672 hectares (High Growth) of industrial land by 2031. By 2041, this demand is expected to grow to between 641 hectares (Status Quo) and 727 hectares (High Growth)
- On the following page, Colliers assesses the capacity of occupied and vacant industrial zoned land to meet future projected demand, along with the estimated remaining years of industrial supply the City can expect in a variety of scenarios including the absorption of Sandstone's light industrial land and the development of the Oceanview land for industrial use.

| Industrial Demand Projections | 2019 | 2031 | | 2041 | |
|---|---|---|---|---|---|
| | | Status Quo | High Growth | Status Quo | High Growth |
| Labour Force[1] | 44,770 | 50,556 | 50,556 | 54,726 | 54,726 |
| Employed | 41,330 | 46,664 | 47,523 | 50,512 | 51,443 |
| Unemployed | 3,440 | 3,893 | 3,033 | 4,214 | 3,284 |
| Unemployment Rate | 7.7% | 7.7% | 6.8% | 7.7% | 6.4% |
| Employment on Industrial Land[2] | 14,854 | 16,771 | 19,009 | 18,154 | 20,577 |
| Industrial Employment Rate[3] | 35.9% | 35.9% | 37.5% | 35.9% | 40.0% |
| Industrial Employment per Acre[4] | 11.5 | 11.5 | 11.5 | 11.5 | 11.5 |
| Occupied Land Supply (Ha) | 475 | | | | |
| Vacant Supply > 1 Ha[5] | 105 | Usable land estimated to be ~36 hectares. | | | |
| Vacant Supply < 1 Ha[5] | 11 | Usable land estimated to be ~10 hectares. | | | |
| Under Construction | 10 | | | | |
| Sandstone Potential[6] | 53 | Usable land estimated to be ~43 hectares. | | | |
| Oceanview Potential[7] | 193 | Usable land estimated to be ~86 hectares. | | | |
| Demand Projections (Hectares) | | 592 | 672 | 641 | 727 |

1) Based on City of Nanaimo Statistics Canada Labour Force Data.
2) 100% of City's industrial-based industries, 20% of the City's population-based industries, 10% of the City's primary industries.
3) Estimate of industrial-related employment compared to total Citywide employment.
4) Estimate of industrial-related employees per occupied acre of industrial zoned land.
5) Assumes the remainder of these parcels are not feasible for industrial development due to the GIS geographical analyses.
6) Assumes 80% of the industrial zoned land would be used for industrial development due to setbacks, roads, etc.
7) Developable area based on discussions with local stakeholders.

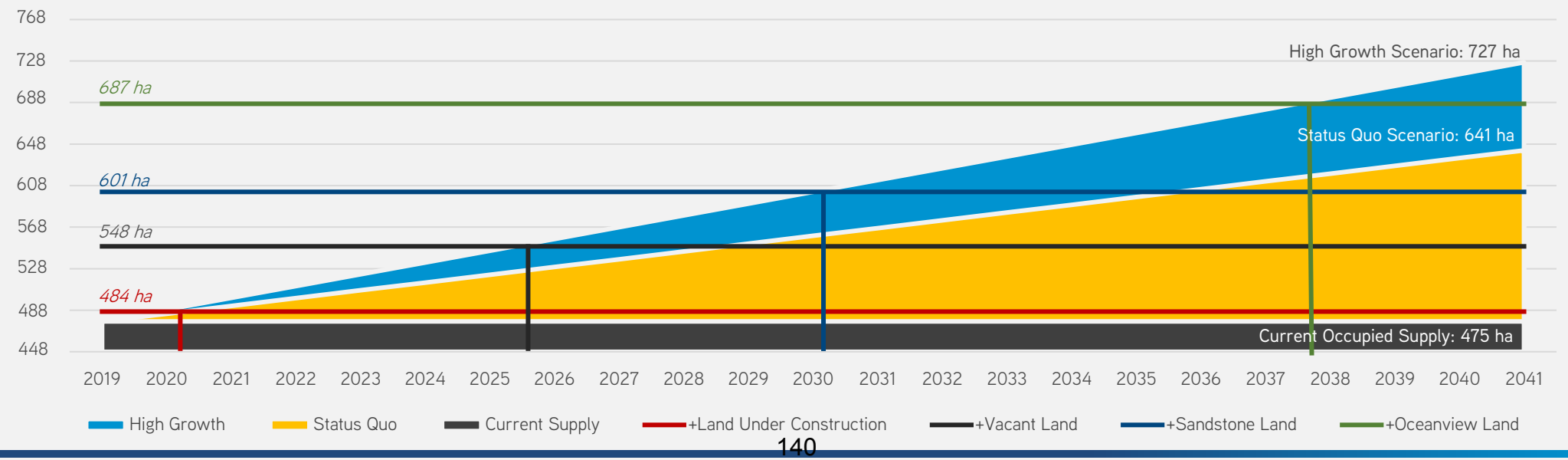
Under the High Growth scenario, the utilization of all developable and potential industrial land represents approximately 18 years of supply.

## 4.5 Demand Analysis

### 4.5.3 Capacity of Industrial Land to Fulfill Demand by 2041

- The graph below demonstrates the capacity of current and potential industrial land within the City of Nanaimo to meet demand projections in both the Status Quo and High Growth scenarios. The available supply of additional land is displayed incrementally based on the likelihood and viability of their use, assuming land over 1 hectare and land under construction will be absorbed first, followed by vacancies under 1 hectare, Sandstone light industrial land, and finally the land within Oceanview suitable for industrial use.

- This analysis demonstrates that industrial land currently under construction and all vacant lots represent enough supply to last until 2025-2026 in the High Growth scenario. The usage of the Sandstone lands would add another 6 years of supply being completely absorbed by 2030, and finally the Oceanview lands would add 7-8 years of additional supply lasting until 2037-38. This analysis suggests that the complete utilization of all usable vacant and potential industrial supply within the urban containment boundary could represent approximately 18 years of industrial supply in the High Growth scenario.



It is important for the City to create new industrial supply as the amount of vacant industrial land is not expected to fulfill future demand by 2041.

## 4.6 Recommendations

- The industrial land capacity analysis demonstrates that the usable vacant industrially zoned land within the City's Urban Containment Boundary is insufficient to satisfy demand projections even under the Status Quo scenario. As such, it is imperative that the City examine potential solutions to create new industrial supply.
- Within the Boxwood area, the development of the 11 hectares of vacant lots south of Nanaimo Parkway should be encouraged. This area has already proven to be a popular industrial node with ongoing construction and strong absorption of new supply.
- In addition to the vacancies within Boxwood, there are some lots over 2 hectares that have remained vacant over the past decade. The owners of these lots should be engaged to identify, where possible, ways to incentivize the development of this land.
- The Sandstone light industrial lands represent a potential long-term influx of supply. In the meantime, the process of considering Oceanview for industrial development should begin, including an assessment of the total amount of space within the area that is viable for industrial use.
- Another factor to assess is the potential intensification of existing industrial land, primarily among light industrial uses. Intensification could range from higher ceilings with racking for distribution centres, to investments in automation and the development of multi-level buildings.
- Due to tight supply constraints in many port cities throughout North America, there has recently been a growing trend of multi-level light industrial buildings being constructed in Vancouver, Seattle, San Francisco, and New York.
- In order to support developers if they wish to construct multi-level industrial buildings, the City should reassess any potential needless barriers to such development, including:
  - Permitting new industrial uses such as e-commerce, last-mile delivery, and integrated work-spaces;
  - Discontinuing or limiting non-industrial uses to a secondary scale that only supports primary industrial activities; and
  - Adjusting density caps such as building setbacks, height limits, floor area ratios, and site coverage maximums.
- The heavy industrial areas within Nanaimo are less viable for intensification as they are more land-intensive requiring large areas for truck loading, vehicle parking, and the outdoor storage of equipment and materials.
- Despite expected push back from the RDN, the City could also consider the amalgamation of land outside of the Urban Containment Boundary for industrial use as identified in report section 4.3. These potential sites represent an additional 44 ha of land suitable for industrial use.

# 5 | Institutional



Colliers INTERNATIONAL

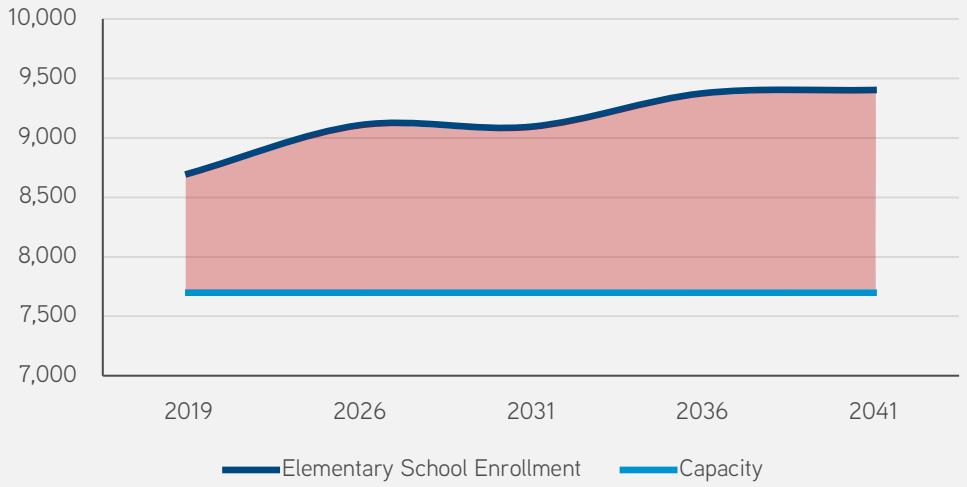
The Nanaimo-Ladysmith School District 68 is expected to experience a shortage of space to accommodate both elementary and secondary students.

## 5.1 Market Analysis

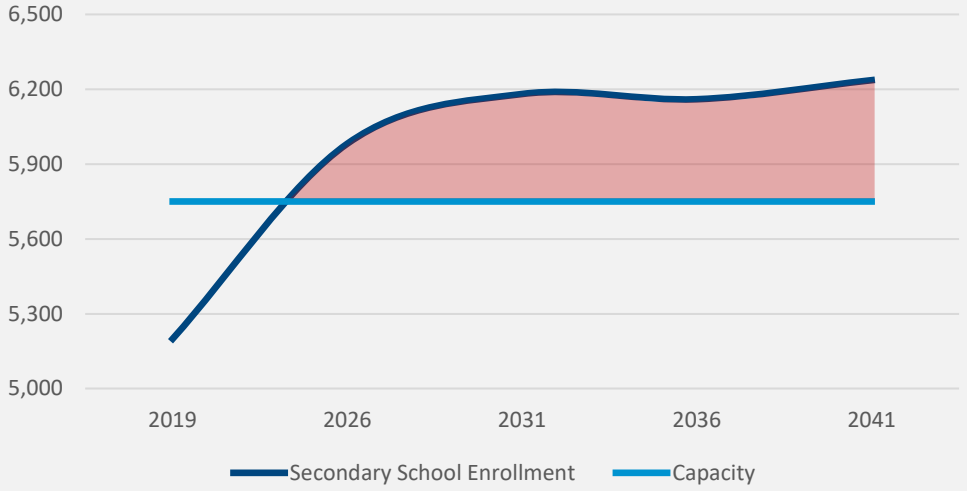
### 5.1.1 Public Schools

- As outlined to the right, School District 68 is expected to experience moderate enrollment growth over the short term, stabilizing in the longer term due to the overall aging of the population. These enrollment and capacity projections are based on data sourced from the Ministry of Education and School District 68.
- Aside from the overall growth of the school-aged population, the relatively recent Supreme Court decision on classroom sizes and composition has resulted in a shortage of space to accommodate students in the short term.
- This is particularly evident for elementary schools, as the district does not have enough space to accommodate current demand according to class size requirements. The district's secondary schools are also projected to reach full capacity over the next few years.
- As a result, the recently approved SD 68 Capital Plan includes work to expand École Hammond Bay and prepare Cilaire and Pleasant Valley elementary schools to deal with earthquakes.
- Additionally, the District is in the process of developing a new long-range facilities plan, anticipating the need to identify capital expansion priorities as a result of projected capacity shortfalls.

SD 68 Elementary School Enrollment Projections (2019-2041)




SD 68 Secondary School Enrollment Projections (2019-2041)



The VIU Trust is currently considering the development feasibility of three key sites within the existing campus deemed as excess land.

## 5.1 Market Analysis

### 5.1.2 Vancouver Island University

- As the overall land demands of Vancouver Island University increase, the VIU Initiatives Trust has identified three sites for potential market development that were deemed as excess to future planned academic use.
- Although this indicates that VIU may not need additional institutional land outside of it's existing area, the development of these sites and their upcoming development feasibility studies should be closely monitored, specifically if the result of these studies indicated the need for more land dedicated towards academic uses that can't be accommodated within the existing campus.
- It is understood that a public request for proposals has been released to identify the forms of property development on each of these sites that best supports the development objectives formed by the Trust.
- Following the study, if development is considered feasible, the project will move into stakeholder consultation and design phases to determine what should be developed, where, and what those developments should look like.

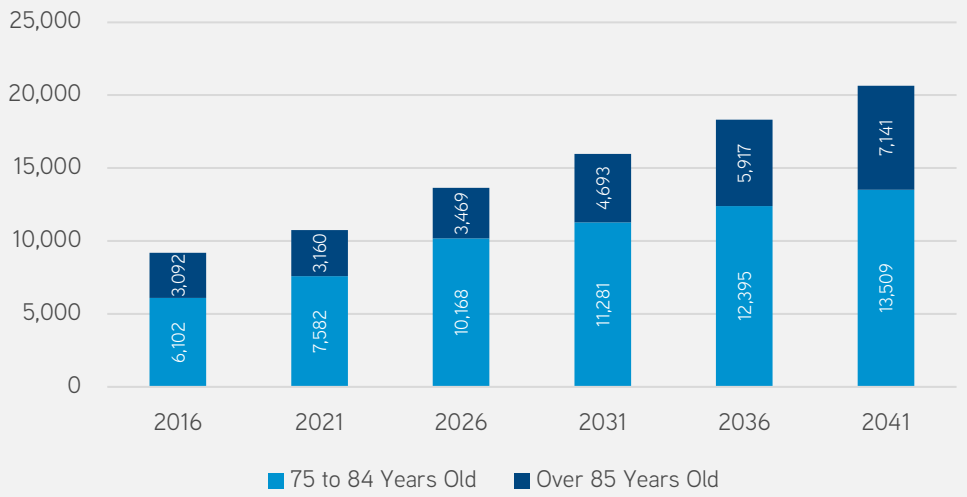
The City is expected to continue experiencing a shortfall in terms of staff and facilities to support the rapidly aging population of the City.

## 5.1 Market Analysis

### 5.1.3 Health Facilities and Seniors Care

- The population of Nanaimo residents aged 75 years and over is projected to grow by an annual rate of approximately 5% to reach a total population of 20,650 by 2041. This is the fastest growing age group within the City.
- This has already resulted in recent growth in demand for healthcare services, seniors housing, and seniors support workers. This has caused shortages and challenges providing basic care for seniors.
- This same pattern is being reflected across the province, with occupancy rates of existing seniors housing and health facilities near or at capacity, and significant industry wide labour shortages.
- In some cases, this has resulted in Island Health being forced to step in and take control of Nanaimo seniors' homes to handle crises that lead to poor staffing levels, such as proper care policies, orientation, and site management.
- Moving forward, the City may need to identify land suitable for additional seniors' care facilities, along with programs or initiatives to encourage the education of more staff direly required in this field.
- Additionally, the Nanaimo Regional General Hospital is the medical service centre for the City and region, employing over 2,000 people and expanding to meet the needs of a growing and aging population.

City of Nanaimo Senior Population Projections

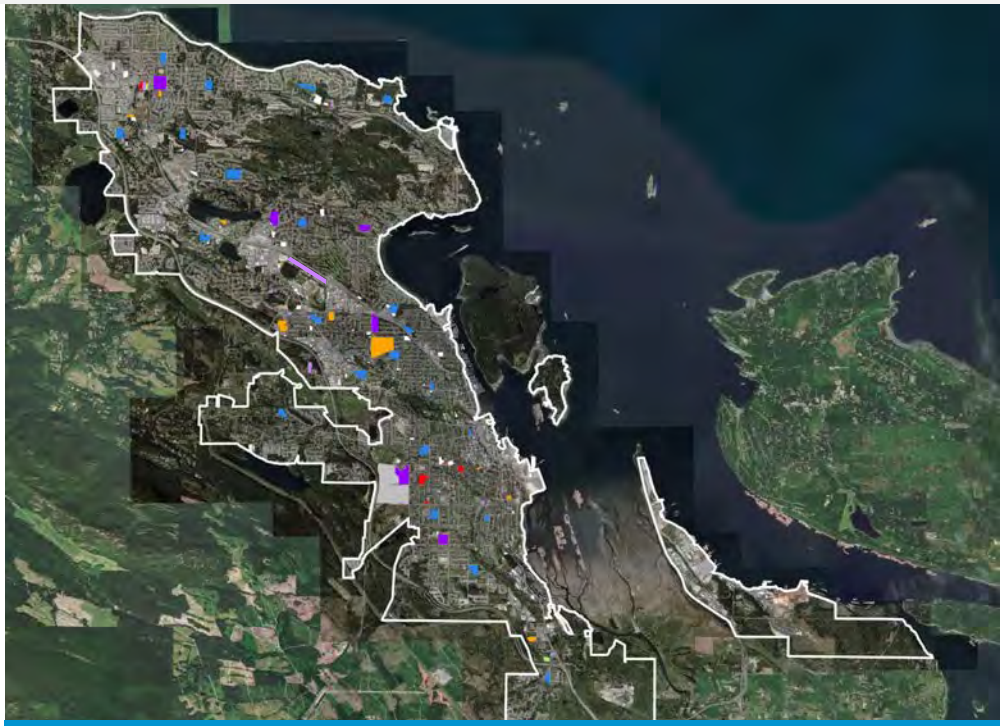



- As a result, the purpose of the recently adopted Hospital Area Plan (HAP) is to complement and complete the evolution of Hospital Urban Node, including more detailed land use designations, transportation enhancements, and an urban design framework.
- Although the hospital area will experience new development and intensification, additional land requirements outside of the HAP boundary were not identified within the documentation or supporting reports.
- As such, it is expected that the Hospital Area Land Use Plan provides sufficient opportunities to meet the future expansion needs of the hospital and related institutional uses preferring a hospital adjacency.

The City currently has a total of 213 hectares of land zoned to permit institutional uses, only 6 hectares of which appears to be vacant.

## 5.2 Land Inventory by Zoning Subcategories

- The City has a total of 202 hectares of land zoned for institutional uses (CS1,2,3), as displayed to the right. For the purposes of this analysis, Colliers has broken down this inventory into the following subcategories: Community, Church, Fire Station, Healthcare, Elementary School, Secondary School, University, and Vacant.
- In total, there is approximately 65 hectares of land (32.3%) used by elementary schools, 42 hectares (20.6%) used by Vancouver Island University, 32 hectares (15.8%) used by secondary schools, 28 hectares (14.1%) used for healthcare purposes, and 20 hectares (10.0%) used by churches.
- Colliers has identified 6 hectares of vacant land that is currently zoned to only permit institutional uses. It should be noted that many institutional uses such as schools are also permitted within other mixed-use land use designations such as the corridor, commercial centre, and neighbourhood areas.
- As such, the City will need to examine the vacant land within all these areas to balance the needs for additional institutional lands with other land uses through consultation with School District 68, Vancouver Island University, Vancouver Island Health Authority, and other similar groups.



| Ref | Category | Description | Hectares |
|---|---|---|---|
| | Community | Cultural, Arts, Library, Social, Childcare | 18 (3.4%) |
| | Church | Land used by churches | 20 (10.0%) |
| | Fire Station | Land used by fire stations | 2 (0.9%) |
| | Healthcare | Hospital, clinics, seniors care | 28 (14.1%) |
| | Elementary School | Public elementary schools | 65 (32.3%) |
| | Secondary School | Public secondary schools | 32 (15.8%) |
| | University | Vancouver Island University | 42 (20.6%) |
| | Vacant | CS zoned land without any development | 6 (2.9%) |
| | | Total | 213 |

The City's public schools are at or near capacity, and the aging population has already resulted in shortages in terms of staff and expansion land.

## 5.3 Summary and Recommendations

- The City is facing a few key challenges regarding demand for institutional land over the short- and long-term, primarily relating to the shortage of public-school classrooms and challenges regarding the aging population.
- Although growth in the school-aged population is expected to level off within 5-8 years, an immediate shortage of elementary school classrooms has been identified, with secondary schools expected to reach capacity in the coming years.
- The City will need to work closely with SD 68 as they develop their new long-range facilities plan in identifying the future land needs and potential locations for new or expanded school sites.
- Although Colliers has identified only a limited amount of vacant land currently zoned for community services, it is understood that schools are generally permitted within Neighbourhood and Corridor designated areas. It will be important to consider setting aside a portion of this land for future institutional development.
- It is also imperative that the City examine the growing land demands for seniors housing and care facilities. As the population continues to age, the shortage of available space will continue to become more of an issue, as will the supply of staff suitable to provide quality care for these individuals. The City should work with the Vancouver Island Health Authority to further identify future land requirements based on internal projections.



# Appendix

# Appendix I | Vacant and Developable Land by Planning Area

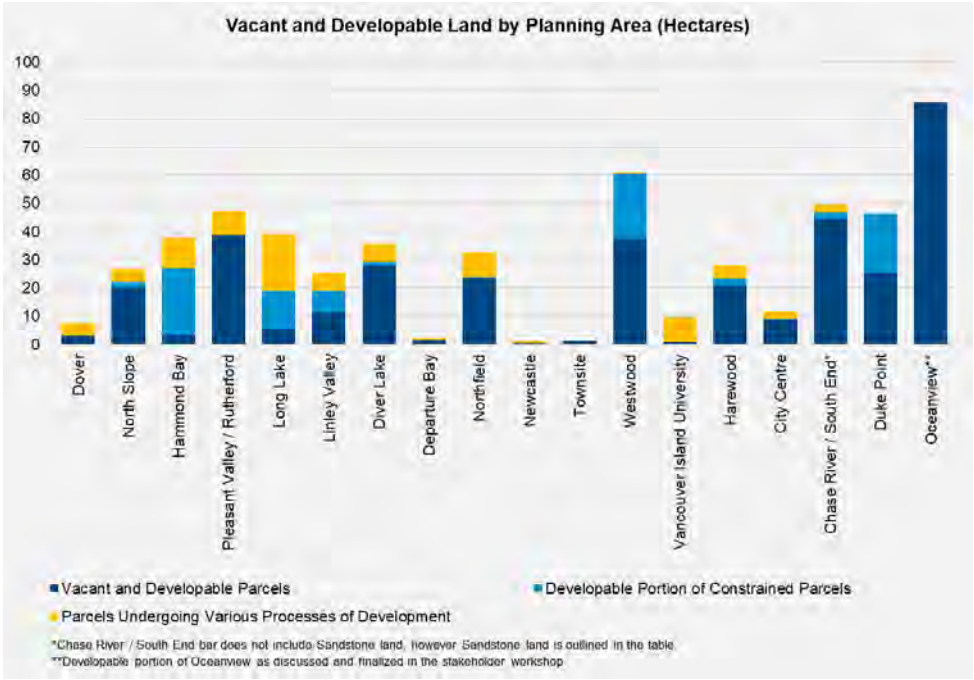
| Planning Area / OCP Designation (Hectares) | Vacant and Developable Parcels | Developable Portion of Constrained Parcels | Parcels Undergoing Various Processes of Development | Total |
|---|---|---|---|---|
| **Dover** | **3.2** | **-** | **4.5** | **7.7** |
| Corridor | - | - | 0.8 | 0.8 |
| Nanaimo North Urban Node | - | - | 3.8 | 3.8 |
| Neighbourhood | 3.2 | - | - | 3.2 |
| **North Slope** | **20.2** | **2.0** | **4.7** | **26.9** |
| Neighbourhood | 20.2 | 2.0 | 4.7 | 26.9 |
| **Hammond Bay** | **3.4** | **23.7** | **10.6** | **37.7** |
| Neighbourhood | 3.4 | 23.7 | 10.6 | 37.7 |
| **Pleasant Valley / Rutherford** | **39.0** | **-** | **8.3** | **47.2** |
| City Commercial Centre | - | - | 2.0 | 2.0 |
| Corridor | 23.2 | - | 4.0 | 27.2 |
| Light Industrial | 0.2 | - | - | 0.2 |
| Nanaimo North Urban Node | 0.9 | - | 0.6 | 1.5 |
| Neighbourhood | 14.7 | - | 1.7 | 16.4 |
| **Long Lake** | **5.6** | **13.5** | **20.2** | **39.3** |
| Corridor | 2.5 | - | 3.3 | 5.8 |
| Neighbourhood | 3.0 | 13.5 | 16.9 | 33.4 |
| **Linley Valley** | **11.6** | **7.5** | **6.4** | **25.6** |
| Neighbourhood | 11.6 | 7.5 | 6.4 | 25.6 |
| **Diver Lake** | **27.9** | **1.3** | **6.5** | **35.7** |
| Corridor | 5.5 | - | 0.3 | 5.8 |
| Light Industrial | 5.1 | 1.3 | - | 6.4 |
| Neighbourhood | 17.3 | - | 6.1 | 23.5 |
| **Departure Bay** | **1.7** | **-** | **0.6** | **2.3** |
| Corridor | - | - | 0.6 | 0.6 |
| Neighbourhood | 1.7 | - | - | 1.7 |

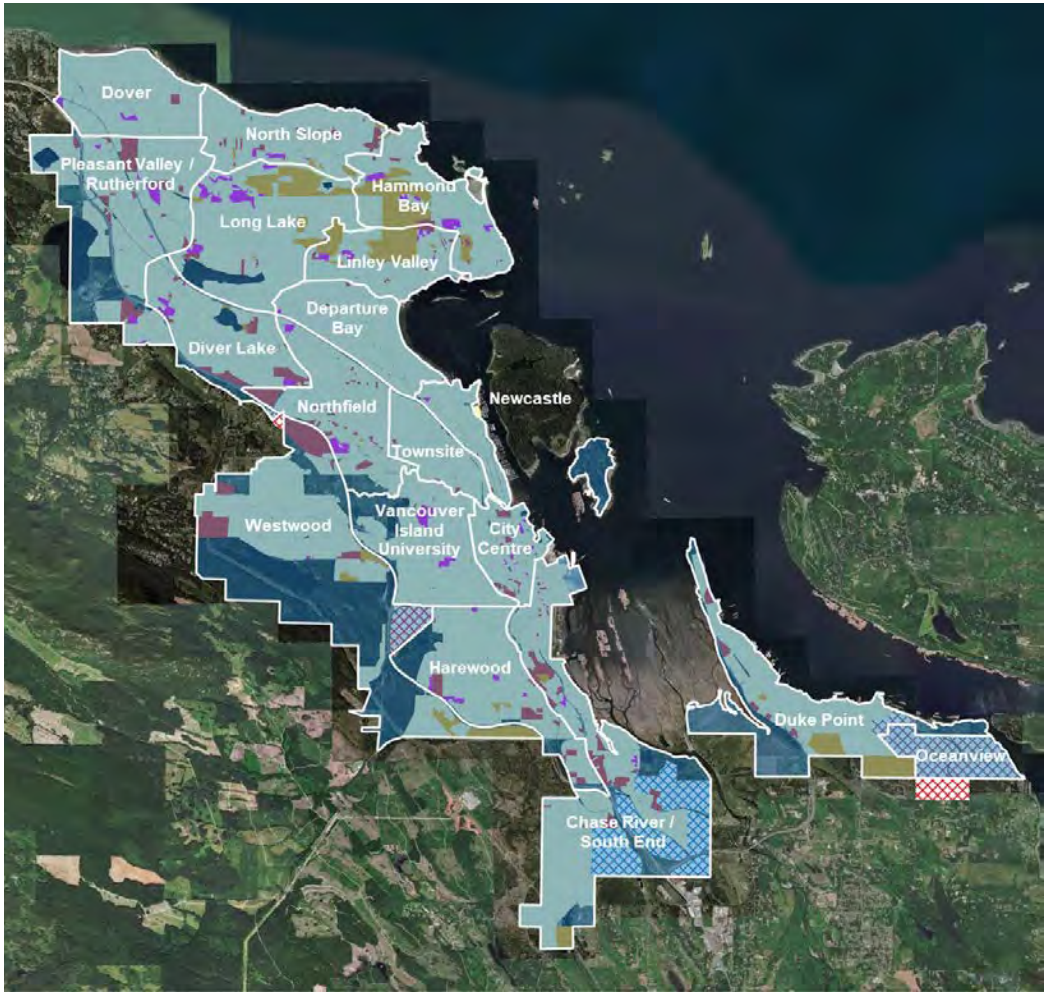
# Appendix I | Vacant and Developable Land by Planning Area

| Planning Area / OCP Designation (Hectares) | Vacant and Developable Parcels | Developable Portion of Constrained Parcels | Parcels Undergoing Various Processes of Development | Total |
|---|---|---|---|---|
| **Northfield** | **23.5** | **0.3** | **8.9** | **32.7** |
| Corridor | 0.9 | 0.3 | 0.3 | 1.5 |
| Hospital Urban Node | 2.5 | - | - | 2.5 |
| Light Industrial | 4.2 | - | 8.6 | 12.8 |
| Neighbourhood | 15.9 | - | - | 15.9 |
| **Newcastle** | **0.5** | **-** | **0.8** | **1.2** |
| Corridor | 0.5 | - | 0.3 | 0.8 |
| Neighbourhood | - | - | 0.5 | 0.5 |
| **Townsite** | **1.3** | **-** | **0.0** | **1.3** |
| Hospital Urban Node | 0.3 | - | - | 0.3 |
| Neighbourhood | 1.0 | - | - | 1.0 |
| **Westwood** | **37.4** | **23.1** | **0.5** | **61.0** |
| Light Industrial | 31.3 | - | - | 31.3 |
| Neighbourhood | 6.1 | 23.1 | 0.5 | 29.7 |
| **Vancouver Island University** | **0.8** | **-** | **8.8** | **9.6** |
| Corridor | 0.3 | - | 5.2 | 5.5 |
| Neighbourhood | 0.5 | - | 3.6 | 4.2 |
| **Harewood** | **21.0** | **2.2** | **4.8** | **28.0** |
| Corridor | 4.7 | - | - | 4.7 |
| Light Industrial | 0.6 | - | - | 0.6 |
| Neighbourhood | 15.7 | 2.2 | 4.0 | 22.0 |
| Neighbourhood Centre | - | - | 0.8 | 0.8 |
| **City Centre** | **8.9** | **0.2** | **2.6** | **11.7** |
| Downtown Urban Node | 4.2 | 0.1 | 2.2 | 6.6 |
| Neighbourhood | 4.7 | 0.1 | 0.4 | 5.1 |

# Appendix I | Vacant and Developable Land by Planning Area

| Planning Area / OCP Designation (Hectares) | Vacant and Developable Parcels | Developable Portion of Constrained Parcels | Parcels Undergoing Various Processes of Development | Total |
|---|---|---|---|---|
| **Chase River / South End** | **285.0** | **1.9** | **3.0** | **289.9** |
| **Neighbourhood** | 24.5 | 0.0 | 2.0 | 26.5 |
| **City Commercial Centre** | 0.5 | - | - | 0.5 |
| **Corridor** | 14.2 | - | - | 14.2 |
| **Downtown Urban Node** | 0.3 | - | - | 0.3 |
| **Industrial** | 5.1 | 1.9 | 1.0 | 8.0 |
| **Sandstone** | | | | |
| **Urban Node** | 56.7 | - | - | 56.7 |
| **Light Industrial** | 53.0 | - | - | 53.0 |
| **Neighbourhood** | 130.7 | - | - | 130.7 |
| **Duke Point** | **25.5** | **20.8** | **-** | **46.3** |
| **Industrial** | 25.5 | 20.8 | - | 46.3 |
| **Oceanview** | **85.8** | **0.0** | **-** | **85.8** |
| **Resort Centre** | 85.8 | - | - | 85.8 |
| **Grand Total** | **602.4** | **96.6** | **91.0** | **790.0** |


Vacant and Developable Land by Planning Area (Hectares)
100
90
80
70
60
50
40
30
20
10
0
Dover
North Slope
Hammond Bay
Pleasant Valley / Rutherford
Long Lake
Linley Valley
Diver Lake
Departure Bay
Northfield
Newcastle
Townsite
Westwood
Vancouver Island University
Harewood
City Centre
Chase River / South End*
Duke Point
Oceanview**
Vacant and Developable Parcels
Developable Portion of Constrained Parcels
Parcels Undergoing Various Processes of Development
*Chase River / South End bar does not include Sandstone land, however Sandstone land is outlined in the table
**Developable portion of Oceanview as discussed and finalized in the stakeholder workshop


Dover
North Slope
Pleasant Valley / Rutherford
Hammond Bay
Long Lake
Linley Valley
Departure Bay
Diver Lake
Northfield
Newcastle
Townsite
Westwood
Vancouver Island University
City Centre
Harewood
Duke Point
Oceanview
Chase River / South End

## Residential Land Recommendations

Sheltair/Vance: The land inventory and capacity analysis has shown that there is sufficient capacity to accommodate projected housing demand for apartment and other ground-oriented units to 2031.

Colliers: Agreed based on the demand projections and inventory of vacant, developable, and underutilized land within this report.

Sheltair/Vance: There is an anticipated shortfall of approximately 1,600 single-detached units based on the practical capacity estimate.

Colliers: The potential shortfall for single-detached homes is only expected under the low-density development scenarios outlined in this report. Despite this potential shortfall, the City has the capacity to satisfy future demand if consumer preferences resemble historical patterns shifting to higher density formats of development.

Sheltair/Vance: Review housing demand again in the next 5 to 10 years to identify changes in housing demand and supply that have occurred.

Colliers: Completed in this report.

Sheltair/Vance: Identify the boundaries of the top of bank for riparian setbacks and update the constrains later in the Residential Build-Out Model.

Colliers: We do not have access to the software to conduct this analysis, however we have the technical ability if the software is purchased.

## Commercial Land Recommendations

Sheltair/Vance: Medium-to-long-term commercial demand forecast should be prepared for the City based on the floor space forecast in the Growth Centre Concept Assessment report prepared by Urbanics and UMA.

Colliers: Completed in this report suggesting the City has enough land permitted for commercial uses to accommodate future projected demand.

Sheltair/Vance: Commercial land inventory be updated regularly to monitor absorption of commercial lands and remaining capacity.

Colliers: Completed in this report.

Sheltair/Vance: Consult with local commercial realtors, the Regional District of Nanaimo, and other appropriate professionals and agencies on a regular basis to review commercial supply and demand trends.

Colliers: Completed in this report.

Sheltair/Vance: Potential for growing conflict in the near future as both commercial and industrial developments compete for a decreasing supply of land suited to their needs.

Colliers: Demand for light industrial space is expected to continue growing significantly moreso than traditional retail space. The City should consider permitting desirable light-industrial uses to operate within commercially designated OCP areas.

## Industrial Land Recommendations

Sheltair/Vance: Depending on future absorption rates for industrial land, it is believed that there is sufficient land that is zoned for heavy industrial to meet demand for the next 10 to 20 (dependent on a land demand forecast).

Colliers: The analysis within this report outlines an imminent need for additional heavy and light industrial supply.

Sheltair/Vance: The supply of light industrial land may be insufficient to meet demand in the next 5 to 15 years, depending on the rate of light industrial demand. This potential shortage of light industrial land will be exacerbated if demand for non-industrial uses, such as large-format retail, is met by using light industrial land.

Colliers: The analysis within this report outlines an imminent need for additional heavy and light industrial supply.

Sheltair/Vance: Ensuring that the City's industrial land based is maintained is important to the continued economic prosperity of Nanaimo, as well as the broader regional economy.

Colliers: Agreed.

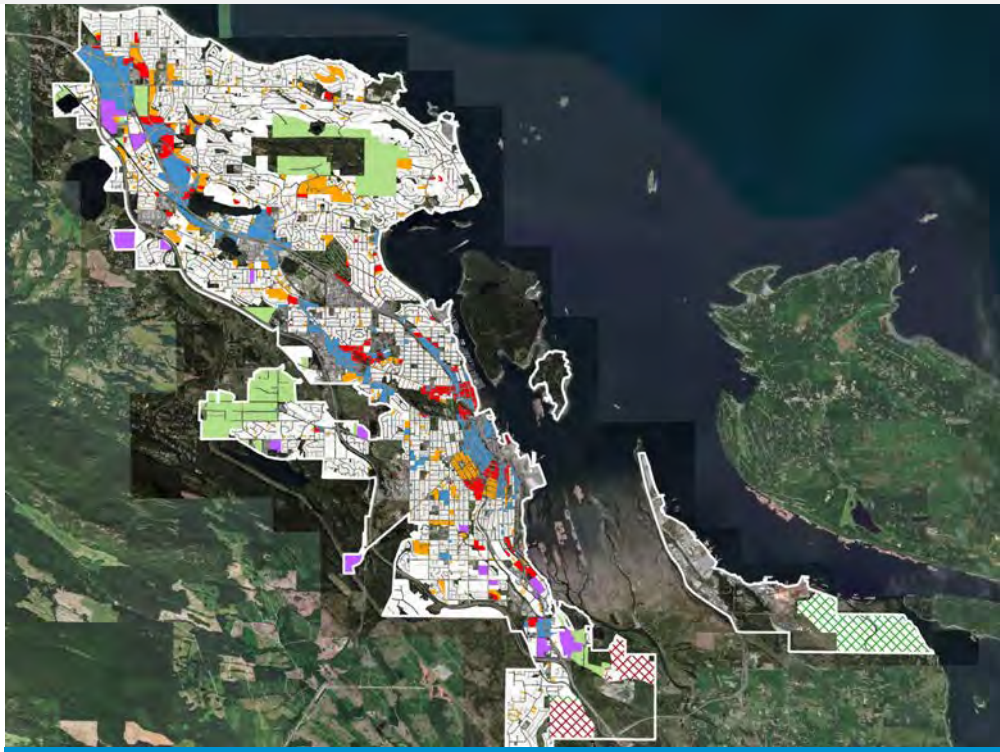
Sheltair/Vance: Detailed assessment be conducted identifying underutilized industrial lands and the barriers to their redevelopment, particularly for light industrial areas inside the Urban Containment Boundary.

Colliers: Completed in this report.

The City of Nanaimo has a total of 10,570 acres of land zoned to permit residential uses distributed throughout the City.

## Land Inventory by Zoning Subcategories

- The City of Nanaimo has a total of 10,570 acres of land within the Urban Containment Boundary zoned for residential uses. Approximately 6,630 acres (62.7%) are dedicated for single family dwellings, 686 acres (6.5%) for ground-oriented dwellings such as townhomes and duplexes, 317 acres (3.0%) for apartments up to 6 storeys, 13 acres (0.1%) for apartments over 6 storeys, and 298 acres (2.8%) for movable dwellings.
- There is also approximately 800 acres (7.6%) of land zoned for a mixture of uses within the corridor, downtown, and commercial centre areas. It should be noted however that not all of this land is used for residential purposes with development only recently beginning in certain areas such as the Woodgrove Urban Centre (CC4).
- Finally, there is another 1,036 acres (9.8%) within the urban and rural reserve, 477 acres within Oceanview which is currently designated as a resort community, and 313 acres within the Sandstone master plan.
- Net of the Urban Reserve, Rural Reserve, Oceanview, Sandstone, and mixed-use land, there is a total of 7,944 acres of land zoned for residential uses only.
- On the following pages, Colliers assesses this inventory to identify the capacity of vacant and developable land to fulfill future residential land demand up until 2041.



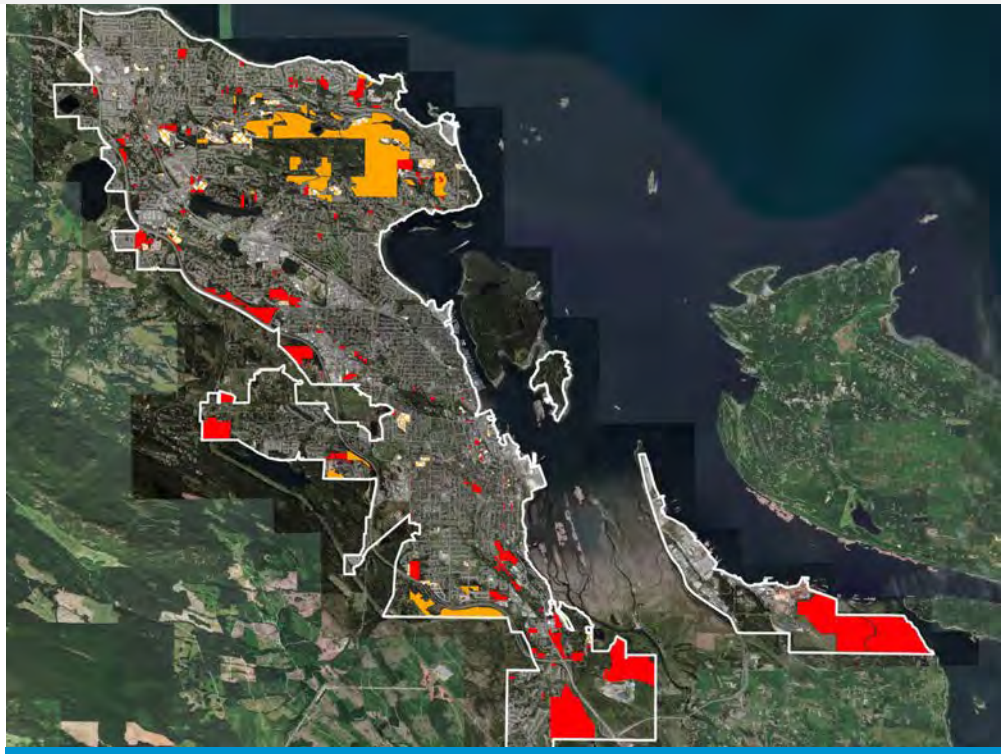
| Ref | Category | Zoning Code | Acres |
|---|---|---|---|
| | Single Family Dwellings | R1/1A/1B/10, AR1, CD10 | 6,630 (62.7%) |
| | Ground Oriented | R1/4/5/6/7/8/10/13/14, CD2/9 | 686 (6.5%) |
| | Up to 6 Storeys | R1/R8/R15, CD1 | 317 (3.0%) |
| | Over 6 Storeys | R9 | 13 (0.1%) |
| | Movable Dwellings | R12 | 298 (2.8%) |
| | Mixed-Use | CC1/2/3/4/5, CD4/5, COR1/2/3, DT | 800 (7.6%) |
| | Urban/Rural Reserve | AR1/2 | 1036 (9.8%) |
| | Oceanview/Sandstone | AR1 | 790 (7.5%) |
| | | Total | 10,570 |

The City of Nanaimo has an estimated 1,360 acres (57%) of vacant and developable land with zoning that permits residential uses.

## Vacant and Developable Land

### Vacant, Constrained, and Under Construction

- In total, Colliers identified 2,390 acres of vacant land within the Urban Containment Boundary zoned to permit residential uses. Approximately 1,360 acres (57.1%) of this vacant land appears to be developable for residential use.
- There is an additional 204 acres of land currently under construction. This accounts for 8.5% of the total vacant inventory and consists of a range of formats ranging from single detached homes to townhomes and apartments. Most of this construction is occurring in North Nanaimo and near Downtown.
- Primarily due to a large amount of lots with slopes exceeding 30%, approximately 826 acres (34.4%) of land has been identified as constrained. It is unlikely that a significant amount of residential construction will occur in these areas. The majority of the constrained land is located in North Nanaimo within the Long Lake, North Slope, Hammond Bay, and Linley Valley neighbourhoods.



| Ref | Category | Description | Acres |
|---|---|---|---|
| | Constrained | Setbacks and slopes exceeding 30% | 826 (34.4%) |
| | Developable | Identified as developable | 1,360 (57.1%) |
| | Under Construction | Land appearing under construction | 204 (8.5%) |
| | | Total | 2,390 |

Approximately 305 acres of vacant and developable land is zoned for single family dwellings, much of which is in challenging sites for development.

## Vacant and Developable Land

### Vacant Land by Subcategory

- The inventory of vacant and developable land can be further broken down into the subcategories listed to the right. Although some of these categories may overlap with one another, they provide a useful picture to inform future planning decisions.
- Approximately 305 acres of this land is zoned for single family dwellings, accounting for 22.5% of the total inventory of developable land. Most of the single-family land within the City is developed, with a large portion of the remaining vacant land located on more challenging sites due to geographical, accessibility, and servicing issues.
- There is an additional 73 acres (5.4%) of developable land for ground oriented uses, 33 acres (2.4%) for apartments up to 6 storeys, 5 acres (0.3%) for apartments over 6 storeys, 5 acres (0.3%) for movable dwellings, 24 acres (1.8%) for mixed-use development, 126 acres (9.2%) in the rural and urban reserve, and 790 acres (58%) within Oceanview and Sandstone.

| Ref | Category | Zoning Code | Acres |
|---|---|---|---|
| | Single Family Dwellings | R1/1A/1B/10, AR1, CD10 | 305 (22.5%) |
| | Ground Oriented | R1/4/5/6/7/8/10/13/14, CD2/9 | 73 (5.4%) |
| | Up to 6 Storeys | R1/R8/R15, CD1 | 33 (2.4%) |
| | Over 6 Storeys | R9 | 5 (0.3%) |
| | Movable Dwellings | R12 | 5 (0.3%) |
| | Mixed-Use | CC1/2/3/4/5, CD4/5, COR1/2/3, DT | 24 (1.8%) |
| | Urban/Rural Reserve | AR1/2 | 126 (9.2%) |
| | Oceanview/Sandstone | AR1 | 790 (58%) |
| | | Total | 1,360 |

The City of Nanaimo has an estimated 204 acres of land appearing to be in various stages of the construction process.

## Vacant and Developable Land

### Land Under Construction by Subcategory

- The inventory of land appearing to be in various stages of the construction process was also broken down into subcategories. It is assumed that the majority of this land will be developed over the next five years.
- Approximately 123 acres of this land is expected to include single family dwellings, accounting for 60.2% of the land currently under construction. Most of this construction is currently occurring in North Nanaimo.
- There is an additional 33 acres (16.4%) of development occurring on land zoned for mixed-use, 29 acres (14.4%) on land zoned for ground-oriented dwellings, 15 acres (7.4%) on land zoned for apartments up to 6 storeys, and 3 acres (1.5%) on land zoned for apartments over 6 storeys. No development is currently occurring within the urban or rural reserve.
- It should be noted that a small portion of the land identified as under construction may have already been completed at the time of this analysis. Despite this limitation, it will not impact the overall capacity analyses as it is assumed that all of this land will be absorbed prior to the remaining vacant and developable land.

| Ref | Category | Zoning Code | Acres |
|---|---|---|---|
| | Single Family Dwellings | R1/1A/1B/10, AR1, CD10 | 123 (60.2%) |
| | Ground Oriented | R1/4/5/6/7/8/10/13/14, CD2/9 | 29 (14.4%) |
| | Up to 6 Storeys | R1/R8/R15, CD1 | 15 (7.4%) |
| | Over 6 Storeys | R9 | 3 (1.5%) |
| | Movable Dwellings | R12 | - |
| | Mixed-Use | CC1/2/3/4/5, CD4/5, COR1/2/3, DT | 33 (16.4%) |
| | Urban/Rural Reserve | AR1/2 | - |
| | Oceanview/Sandstone | AR1 | - |
| | | Total | 204 |

In total, there is approximately 1,564 acres of land within the Urban Containment Boundary either under construction or suitable for future development.

## Vacant and Developable Land

### Total Inventory of Vacant and Under Construction Land

- While determining the future capacity of residential land to fulfill future short- and long-term demand, the total of vacant developable land and land under construction is useful to assess.
- In total, there is approximately 1,564 acres of land within the Urban Containment boundary realistically suitable for future residential development.
- Approximately 428 acres (27.4%) of this land is expected to include single family dwellings, while 102 acres (6.5%) are designated for ground-oriented units, 48 acres (3.1%) for apartments up to 6 storeys, 8 acres (0.5%) for apartments over 6 storeys, and 5 acres (0.3%) for movable dwellings.
- Additionally, mixed-use sites provide another 57 acres (3.6%) of land suitable for a range of housing types, with the understanding that significant portion of these sites will be include other uses such as retail and office floorspace.
- On the following pages, Colliers assesses the future land demand broken down by residential subcategory, and the capacity of the City's residential land inventory to fulfill this demand by 2041.

| Ref | Category | Zoning Code | Acres |
|---|---|---|---|
| | Single Family Dwellings | R1/1A/1B/10, AR1, CD10 | 428 (27.4%) |
| | Ground Oriented | R1/4/5/6/7/8/10/13/14, CD2/9 | 102 (6.5%) |
| | Up to 6 Storeys | R1/R8/R15, CD1 | 48 (3.1%) |
| | Over 6 Storeys | R9 | 8 (0.5%) |
| | Movable Dwellings | R12 | 5 (0.3%) |
| | Mixed-Use | CC1/2/3/4/5, CD4/5, COR1/2/3, DT | 57 (3.6%) |
| | Urban/Rural Reserve | AR1/2 | 126 (8.1%) |
| | Oceanview/Sandstone | AR1 | 790 (50.5%) |
| | | Total | 1,564 |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# ATTACHMENT B

## Land Inventory/Capacity Report Highlights

Population:

1. The city has grown at an average rate of 2% over the past decade, with an additional 16,000 residents living in the city between 2006-2016.

2. The city is expected to grow at an annual rate of 1.1% to 1.7% to reach a population of 126,629 to 141,883 by 2046.

3. The city is expected to continue aging, with the largest population growth rates among the 75 to 84 and 85+ age groups, growing at respective annual rates of 3.6% and 5.2%.

Employment:

4. Most of Nanaimo's major employment sectors have recently been growing, including those reliant on heavy and light industrial space.

5. The largest number of jobs are provided within retail sectors, followed by health care, accommodation/food services, construction, and education services.

6. Nanaimo businesses have experienced strong growth in recent years, particularly in industries related to construction, professional, and health services.

7. Since 2011, the adult working population is becoming increasingly educated with participation rates increasing every year since 2015.

8. Indicating a strengthening economy, Nanaimo's labour force participation rate has been increasing at a steady rate since a significant dip in 2014-2015.

Residential Land:

9. Large multi-family projects have been approved by Council in 2018 and 2019 and should produce a significant amount of units in the near future.

10. Apartment units are a growing dwelling type, whether they are as secondary suites, low-rise, mid-rise or high-rise units.

11. The city's housing stock is fairly distributed along age categories for period of construction, with 67.5% of the population owning their homes.

12. Strong demand for rental housing continues to result in low vacancy rates and allow rental rates to rise even as the number of rental units grows.

13. Single Dwelling building permits consistently compose around 60% of total residential building permits between 2008 and 2018.

14. Apartment units have overtaken single-family homes as the most common unit type in housing starts.

15. There were 623 housing completions in 2019, a marked decrease from previous years.

16. Strong demand for new residential units has resulted in relatively few number of units left in standing inventory.

17. Housing prices have remained flat in 2018 and 2019 as government efforts were successful in cooling demand.

18. The city has a total of 4,165 ha of land designed to permit residential uses in a variety of development formats and density levels.

19. The city has an estimated 520 ha of vacant and developable land designated to permit residential uses.

20. Approximately 216 ha of vacant and developable land is in the Neighbourhood designation, much of which is in challenging sites for development (i.e., dues to geographical, accessibility, and servicing issues).

21. The city has an estimated 82 ha of land appearing to be in various stages of the construction process.

22. 2,354 new units were approved in Urban Nodes and Corridors in recent years, with an additional 389 units in other residential areas of the city.

23. Urban Nodes are meant to be a focal point for multi-residential development and have seen 462 units approved in recent years. This development has been exclusively concentrated in 2 out of the 5 Urban Nodes (Downtown and Woodgrove/North).

24. Nearly 1,900 new units were approved in the last five years in Corridor-designated sites.

25. It is estimated the city will experience demand for an additional 253 to 607 ha of residential land by 2046

26. The city is expected to have enough vacant and developable residential land to support future growth by 2046 except in a high-growth, low-density future land demand scenario.

27. The city is expected to continue experiencing a relative shortage of land for single-family uses when compared to higher-density housing formats.

28. The city has the land to accommodate projected housing demand (9,800 apartment units, 4,600 ground-oriented units, and 3,900 single detached homes); however, much of this land is located within areas zoned for a mixture of uses.

Commercial Land:

29. Year-over-year retail sales growth is approaching 1% within British Columbia, with sales performance varying depending on retail category.

30. Despite a weakening retail market, specific categories such as experiential food services, health care, and personal care have fared well recently.

31. Millennials are expected to significantly impact the retail marketplace as they age into their prime consumption years of 35-54.

32. Changing demographics and the rise of e-commerce have resulted in a rapid evolution of the mall experience and the traditional “anchor tenant”.

33. Active, transparent storefronts and human-scale development are essential principles necessary to facilitate an active and healthy retail environment.

34. The city is expected to experience gradual overall growth in office space demand primarily due to population serving subcategories.

35. The City of Nanaimo has a total of 915 ha of land designated to permit commercial development as one of the potential land uses.

36. The city has an estimated 60 ha of vacant, developable land permitted for commercial development as one of the potential uses.

37. The city has an estimated 39 ha of land designated for commercial use within the Sandstone Master Plan.

38. North Nanaimo has approximately 46% of the city’s vacant land designated to permit commercial uses, and 36% of the city’s currently vacant units.

39. Central Nanaimo has approximately 20% of the city’s vacant land designated to permit commercial uses, and 16% of the city’s current vacant units.

40. There has been approximately 30 ha of new commercial land development over the past decade, 55.2% of which was within Corridor OCP areas.

41. The primary and secondary trade areas are expected to grow to a total population of between 227,856 and 255,688 by 2046.

42. The combined trade areas and inflow demand is expected to generate a total of $3.12 billion and $3.47 billion in captured expenditure by 2041.

43. It is estimated the city will experience demand for an additional 29-38 ha of commercial employment land by 2041 (including demand for an additional 610,170 sf to 776,198 sf of retail floor space, 126,224 sf to 160,299 sf of service commercial floor space, and 1.1 to 1.4 million sf of office floor space).

44. The city is expected to have a sufficient amount of land designated to permit commercial uses to accommodate future projected demand.

Industrial Land:

45. Existing infrastructure in Nanaimo and investments into improvements and expansions connect the region to many local and international markets.

46. The Nanaimo Port has been expanding following investment into larger and more modern facilities required by a diversified economy.

47. The Federal Government is contributing a significant amount of money towards improvements in Nanaimo's port infrastructure.

48. The Nanaimo Airport has been experiencing strong growth through investments in facilities and infrastructure.

49. The Nanaimo Airport is continuing to expand its passenger and groundside commercial and industrial capacities.

50. The foreign trade-zone status is intended to help businesses facilitate exports, boost the industrial sector, and create jobs for the middle class.

51. Industrial space is in high demand in Nanaimo due to limited supply and strong demand. Well located industrial land across the region is scarce.

52. Nanaimo's increasingly diversified economy, strategic location, and supporting infrastructure has created strong demand for industrial land.

53. The city has a total of 661 ha of industrial-designated land, primarily within the Duke Point and Northfield Boxwood areas.

54. The Northfield Boxwood area has approximately 70% of the city's Light Industrial supply and 28% of the total industrial land inventory.

55. Duke Point contains the majority of Heavy Industrial land supply (89.8%), whereas much of South Nanaimo's industrial land is within Sandstone.

56. The city currently has an estimated 64 ha of developable industrial land, with an additional 10 ha of land with construction occurring within.

57. The latest Sandstone Master Plan includes 53 ha designated for light industrial uses; however, development is expected to occur over the long-term.

58. There has been approximately 6 ha of new industrial supply developed over the past decade, with development in nearly all suitable land parcels.

59. An additional 0.4 ha of industrial land has been developed for industrial uses within the Shenton industrial area over the past decade.

60. The Northfield industrial area remains one of the densest industrial areas in the city, with only 0.5 ha of new supply added since 2008.

61. Approximately 5 ha of new industrial development has occurred within the Boxwood industrial area over the past decade; 70% of the city total.

62. Duke Point has experienced an additional 0.8 ha of industrial development over the past decade, with vacancies due to lack of suitable land.

63. It is estimated the city will experience demand for a total of 641 ha to 727 ha of industrial land by 2041.

64. Under a high-growth scenario, the utilization of all developable and potential industrial land represents approximately 18 years of supply.

65. It is important for the City to create new industrial supply as the amount of vacant industrial land is not expected to fulfill future demand by 2041.

Institutional Land:

66. The Vancouver Island University Trust is currently considering the market development feasibility of three key sites within the existing campus deemed as excess land.

67. The City is expected to continue experiencing a shortfall in terms of Staff and facilities to support the rapidly aging population of the city.

68. The city currently has a total of 202 ha of land zoned to permit institutional uses, only 6 ha of which appears to be vacant.

69. The city's public schools are at or near capacity, and the aging school-age population has already resulted in shortages in terms of staff and expansion land.

# Reimagine Nanaimo: Demographics and Land Inventory/Capacity Analysis Highlights

## Demographic Report – Population, Housing, and Employment Projections

Demographic Highlights:

- The city has grown at an average rate of 2% over the past decade, with an additional 16,000 residents living in the city between 2006-2016.
- The city is expected to grow at an annual rate of 1.1% to 1.7% to reach a population of 126,629 to 141,883 by 2046.
- The city is expected to continue aging, with the largest population growth rates among the 75 to 84 and 85+ age groups, growing at respective annual rates of 3.6% and 5.2%.

Demographic Highlights:

- The city's housing supply is estimated to grow from 39,170 units in 2016 to between 54,143 (38%) to 60,158 (54%) in 2046.
- Total job projections for the city will increase from 46,193 in 2016 to between 58,483 (27%) and 63,844 (38%) in 2046.
- Most of Nanaimo's major employment sectors have recently been growing, including those reliant on heavy and light industrial space.

Demographic Highlights:

- The largest number of jobs are provided within retail sectors, followed by health care, accommodation/food services, construction, and education services.
- Nanaimo businesses have experienced strong growth in recent years, particularly in industries related to construction, professional, and health services.
- Since 2011, the adult working population is becoming increasingly educated with participation rates increasing every year since 2015.

Demographic Highlights:

- Indicating a strengthening economy, Nanaimo's labour force participation rate has been increasing at a steady rate since a significant dip in 2014-2015.

# 3 POPULATION & HOUSING PROJECTIONS

## 3.1 City-Wide Results

Population and housing projections for all of Nanaimo are summarized below, followed by a short discussion in the rest of Section 3 on each Planning Area.

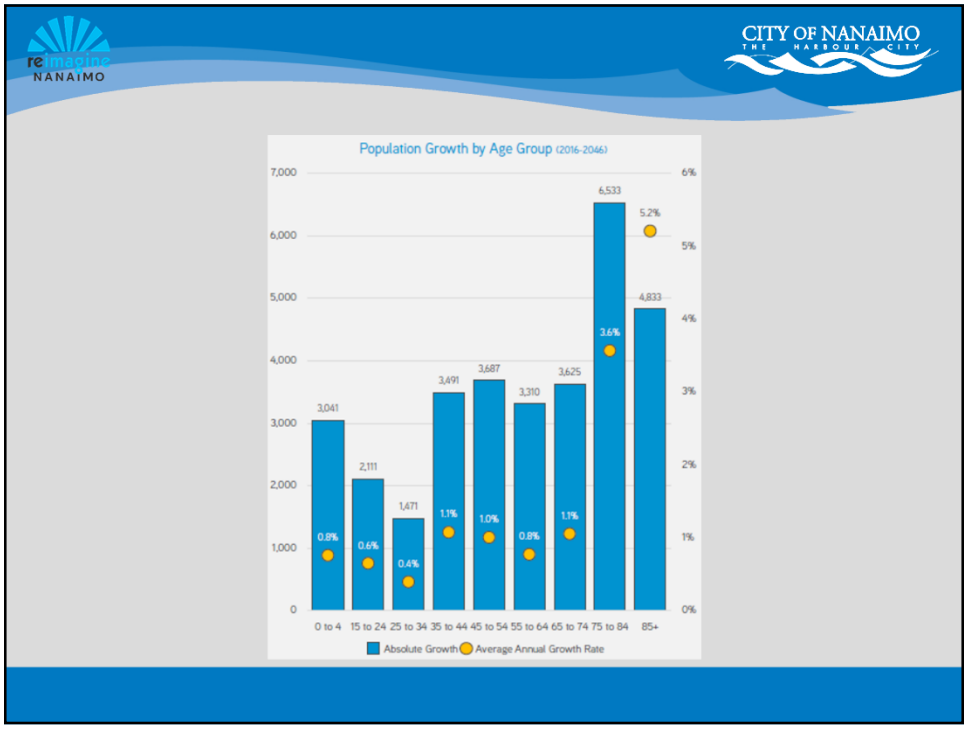
The chart to the right summarizes the land supply data from Colliers. "Available" land refers to either vacant or developable land.

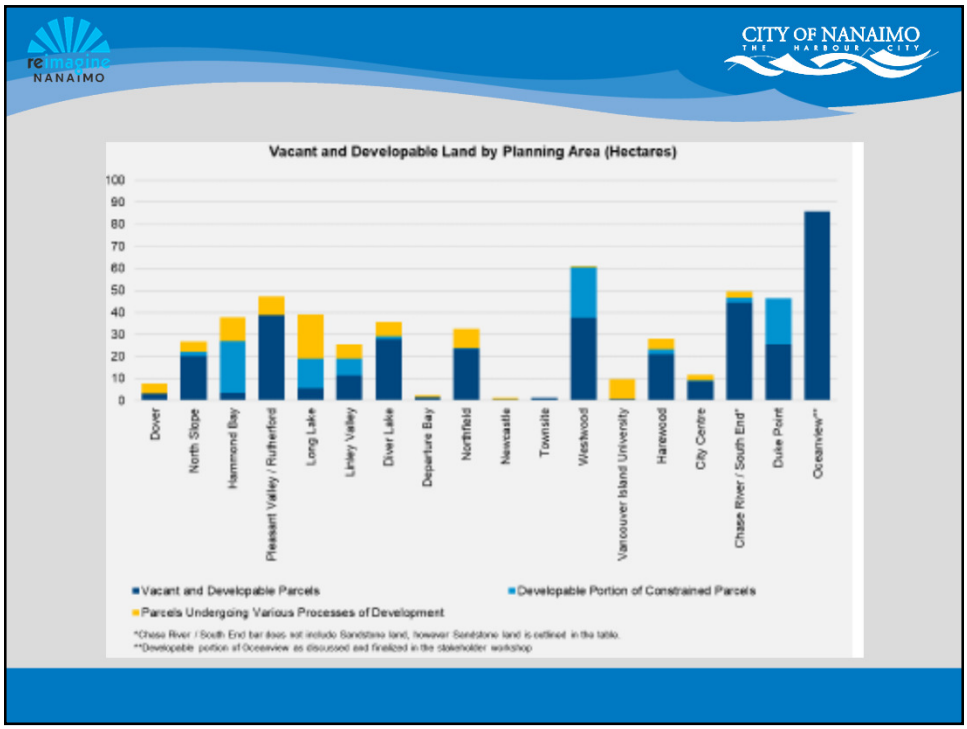

| | | BASELINE | | | | | HIGH-GROWTH | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 2016 | 2026 | 2036 | 2046 | Growth | 2016 | 2026 | 2036 | 2046 | Growth |
| | Population | 94,525 | 107,918 | 117,784 | 126,629 | 34% | 94,525 | 112,391 | 127,969 | 141,883 | 50% |
| | Housing | 39,170 | 45,567 | 50,319 | 54,143 | 38% | 39,170 | 47,289 | 54,394 | 60,158 | 54% |
| | Single-Detached | 23,633 | 25,267 | 26,097 | 26,415 | 12% | 23,633 | 25,724 | 27,058 | 27,683 | 17% |
| | Other Ground | 7,088 | 8,743 | 10,046 | 11,129 | 57% | 7,088 | 9,046 | 10,705 | 12,014 | 70% |
| | Apartment | 8,450 | 11,557 | 14,175 | 16,598 | 96% | 8,450 | 12,520 | 16,631 | 20,461 | 142% |



## NANAIMO

| | BASELINE SCENARIO | | | | | | | HIGH-GROWTH SCENARIO | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2016 | 2026 | 2036 | 2046 | Growth 2016-2046 | Average Annual Change 2016-2046 | % Growth 2016-2046 | 2016 | 2026 | 2036 | 2046 | Growth 2016-2046 | Average Annual Change, 2016-2046 | % Growth 2016-2046 |
| **Population** | 94,525 | 107,918 | 117,784 | 126,629 | 32,104 | 1,070 | 34% | 94,525 | 112,391 | 127,969 | 141,883 | 47,358 | 1,579 | 50% |
| Age 0 to 14 | 13,351 | 15,304 | 15,526 | 16,392 | 3,041 | 101 | 23% | 13,351 | 16,110 | 17,149 | 18,676 | 5,325 | 177 | 40% |
| Age 15 to 24 | 10,834 | 11,003 | 12,524 | 12,945 | 2,112 | 70 | 19% | 10,834 | 11,582 | 13,818 | 14,737 | 3,903 | 130 | 36% |
| Age 25 to 34 | 12,372 | 12,070 | 12,133 | 13,843 | 1,471 | 49 | 12% | 12,372 | 12,647 | 13,428 | 15,763 | 3,391 | 113 | 27% |
| Age 35 to 44 | 10,811 | 14,484 | 14,078 | 14,302 | 3,491 | 116 | 32% | 10,811 | 15,061 | 15,370 | 16,237 | 5,426 | 181 | 50% |
| Age 45 to 54 | 12,228 | 12,654 | 16,166 | 15,915 | 3,687 | 123 | 30% | 12,228 | 13,229 | 17,452 | 17,832 | 5,605 | 187 | 46% |
| Age 55 to 64 | 14,279 | 13,718 | 14,047 | 17,589 | 3,311 | 110 | 23% | 14,279 | 14,288 | 15,311 | 19,464 | 5,186 | 173 | 36% |
| Age 65 to 74 | 11,457 | 15,165 | 14,572 | 15,082 | 3,626 | 121 | 32% | 11,457 | 15,722 | 15,784 | 16,871 | 5,414 | 180 | 47% |
| Age 75 to 84 | 6,102 | 10,051 | 12,935 | 12,635 | 6,533 | 218 | 107% | 6,102 | 10,284 | 13,719 | 13,931 | 7,829 | 261 | 128% |
| Age 85+ | 3,092 | 3,469 | 5,803 | 7,925 | 4,833 | 161 | 156% | 3,092 | 3,469 | 5,938 | 8,372 | 5,280 | 176 | 171% |
| **Housing Unit Demand** | 39,170 | 45,567 | 50,319 | 54,143 | 14,973 | 499 | 38% | 39,170 | 47,289 | 54,394 | 60,158 | 20,988 | 700 | 54% |
| Single-Detached | 23,633 | 25,267 | 26,097 | 26,415 | 2,783 | 93 | 12% | 23,633 | 25,724 | 27,058 | 27,683 | 4,050 | 135 | 17% |
| Other Ground-Oriented | 7,088 | 8,743 | 10,046 | 11,129 | 4,042 | 135 | 57% | 7,088 | 9,046 | 10,705 | 12,014 | 4,926 | 164 | 70% |
| Apartment | 8,450 | 11,557 | 14,175 | 16,598 | 8,148 | 272 | 96% | 8,450 | 12,520 | 16,631 | 20,461 | 12,011 | 400 | 142% |


Population Growth by Age Group (2016-2046)
7,000
6,000
5,000
4,000
3,000
2,000
1,000
0
6%
5%
4%
3%
2%
1%
0%
3,041
2,111
1,471
3,491
3,687
3,310
3,625
6,533
4,833
0.8%
0.6%
0.4%
1.1%
1.0%
0.8%
1.1%
3.6%
5.2%
0 to 4
15 to 24
25 to 34
35 to 44
45 to 54
55 to 64
65 to 74
75 to 84
85+
Absolute Growth
Average Annual Growth Rate


Vacant and Developable Land by Planning Area (Hectares)
100
90
80
70
60
50
40
30
20
10
0
Dover
North Slope
Hammond Bay
Pleasant Valley / Rutherford
Long Lake
Linley Valley
Diver Lake
Departure Bay
Northfield
Newcastle
Townsite
Westwood
Vancouver Island University
Harewood
City Centre
Chase River / South End*
Duke Point
Oceanview**
Vacant and Developable Parcels
Developable Portion of Constrained Parcels
Parcels Undergoing Various Processes of Development
*Chase River / South End bar does not include Sandstone land, however Sandstone land is outlined in the table.
**Developable portion of Oceanview as discussed and finalized in the stakeholder workshop

# Residential Land Use – Inventory/Capacity and Recommendations

## Inventory/Capacity Highlights:

- The city has an estimated 520 ha of vacant and developable land designed to permit residential uses.
- The City's housing stock is fairly distributed along age categories for period of construction, with 67.5% of the population owning their home.
- Apartment units are a growing dwelling type whether they are as secondary suites, low-rise, mid-rise or high-rise units, and have overtaken single family homes as the most common unit type in housing starts.

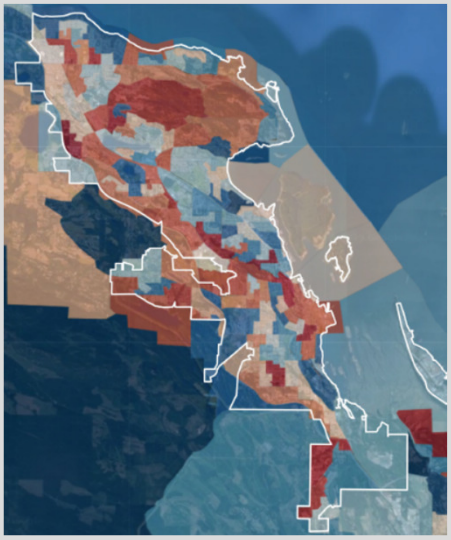
## Inventory/Capacity Highlights:

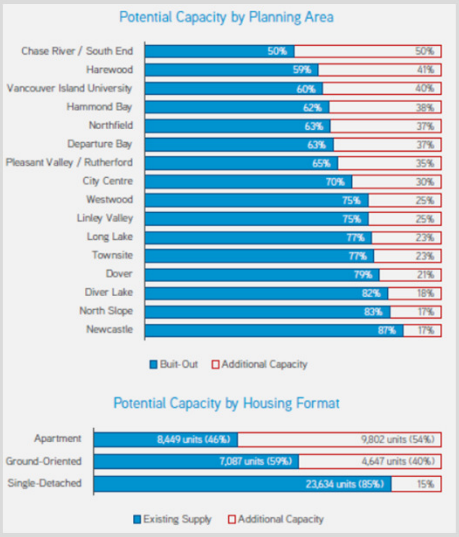
- 2,354 new units were approved in Urban Nodes and Corridors in recent years with an additional 389 units in other residential areas of the city.
- Urban Nodes are meant to be a focal point for multi-residential development and have seen 462 units approved in recent years. This development has been exclusively concentrated in 2 out of the 5 Urban Nodes (Downtown and Woodgrove/North).

## Inventory/Capacity Highlights:

- It is estimated the city will experience demand for an additional 253 to 607 hectares of residential land by 2046.
- The city is expected to have enough vacant and developable residential land to support future growth by 2046 except in a high-growth, low-density future land demand scenario.

Heatmap - Population growth over past five years (dark red is highest growth/dark blue lowest).





**Recommendation Highlights:**

- Based on housing demand projections contained within the Demographic Report (an additional 253 to 607 ha of residential land by 2046), the city is likely to have enough land to fulfill future demand in all future land use scenarios except a high-growth, low-density scenario. In areas where residential development is not occurring, the City should consider partnerships that could act as an anchor or catalyst for residential development.

**Recommendation Highlights:**

- The City should also consider allowing for greater maximum building heights so that variances do not have to be sought out.
- It is also suggested the City conduct a city-wide parking study, and if possible, reduce parking requirements, especially for affordable housing projects. Continual investment in public transportation while creating complete and walkable communities may help to justify lower parking ratios.

**Recommendation Highlights:**

- The City should increase the maximum allowable density so that proponents can include more floor area in their developments without having to provide amenities as part of density bonusing. The City will need to decide whether a greater number of residential units is a satisfactory trade-off for the loss of amenities.

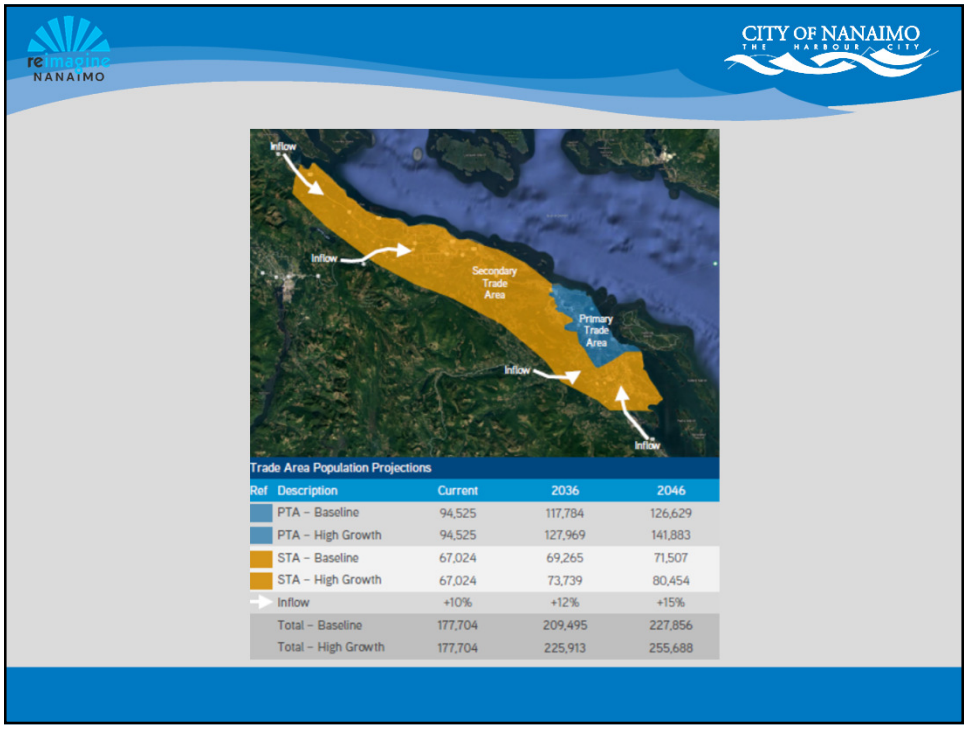
## Commercial Land Use – Inventory/Capacity and Recommendations

## Inventory/Capacity Highlights:

- Most of Nanaimo's major employment sectors have recently been growing, including those reliant on heavy and light industrial space.
- The City is expected to experience gradual overall growth in office space demand.
- The City has an estimated 60 ha of vacant, developable land permitted for commercial development as one of the potential uses.

## Inventory/Capacity Highlights:

- There has been approximately 30 ha of new commercial land development over the past decade, 55.2% of which was within Corridor OCP areas.
- The city's primary and secondary trade areas are expected to grow to a total population between 227,856 and 255,688 by 2046 and generate a total of $3.12 billion and $3.47 billion in captured expenditure by 2041.




Trade Area Population Projections

| Ref | Description | Current | 2036 | 2046 |
|---|---|---|---|---|
| | PTA – Baseline | 94,525 | 117,784 | 126,629 |
| | PTA – High Growth | 94,525 | 127,969 | 141,883 |
| | STA – Baseline | 67,024 | 69,265 | 71,507 |
| | STA – High Growth | 67,024 | 73,739 | 80,454 |
| | Inflow | +10% | +12% | +15% |
| | Total – Baseline | 177,704 | 209,495 | 227,856 |
| | Total – High Growth | 177,704 | 225,913 | 255,688 |

## Inventory/Capacity Highlights:

- The city is expected to have sufficient amount of land designated to accommodate future projected commercial demand including an additional 29-38 ha of commercial employment land by 2041.

| Expenditure Potential | 2031 | 2041 | Total Additional |
|---|---|---|---|
| **Total Traditional Retail Floorspace Demand (sf)** | | | |
| Baseline Growth | 3,545,850 | 3,850,935 | 610,170 |
| High Growth | 3,628,364 | 4,015,964 | 775,198 |
| **Total Services Floorspace Demand (sf)** | | | |
| Baseline Growth | 732,444 | 795,556 | 126,224 |
| High Growth | 749,482 | 829,631 | 160,299 |
| **Total Office Floorspace Demand (sf)** | | | |
| Baseline Growth | 3,013,975 | 3,484,555 | 1,091,746 |
| High Growth | 3,345,512 | 3,867,856 | 1,403,046 |
| **Total Commercial Land Demand (hectares)** | | | |
| Baseline Growth | 310 | 324 | 29 |
| High Growth | 314 | 333 | 38 |

## Recommendation Highlights:

- The City is expected to have a sufficient amount of land designated to permit commercial uses to accommodate future project demand. Rather than providing more land for commercial use, the City should identify a strategy to support the overall health of its existing retail nodes, particularly within Downtown and South Nanaimo.
- Strong focus should be paid towards the retail environment within Downtown Nanaimo. The vitality of any city's downtown is highly reliant on a vibrant and diverse retail experience with a strong amount of footfall.

**Recommendation Highlights:**

- Aside from the addition of residential supply within Downtown, the City should consider "quick fix" interim projects and events, designed to animate the downtown and encourage better place making.
- Heavy emphasis by the City should be put towards the overall design of ground floor commercial units referring to design and development principles, such as direct street access, patio/exterior display areas, active storefronts, outdoor seating areas, large windows, and impactful signage.

**Recommendation Highlights:**

- Another key challenge facing many retailers is lack of suitable staff due to low unemployment rates and an aging population. The City could consider partnering with local academic institutions and retailers to create a retail training program that may help to supply more staff.

**Recommendation Highlights:**

- It is imperative to ensure commercial activity is not too spread out, particularly through the corridor areas, and the City should instead promote and support the infill of existing retail nodes as a way of cultivating a critical mass and mix of offerings, while potentially limiting commercial uses in some parts of the Corridor-designated lands and create more pedestrian connections between the growing residential areas surrounding the existing Urban Nodes.

**Recommendation Highlights:**

- The one retail format noted as lacking in the city is small-scale convenience nodes within neighbourhoods within five-minutes walk of most residents. The City could designate small parcels of land suitable to accommodate 5,000 – 10,000 sf of commercial floor space within areas lacking true convenience nodes.

**Recommendation Highlights:**

- Many non-profit groups within Nanaimo have expressed concern regarding the availability of affordable space. To accommodate the needs of these groups, the City could consider the reuse and revitalization of older persistently vacant buildings with sharing-space models for groups that are expected to be compatible with one another. This could also include financial assistance and help negotiating favourable leases with landlords.

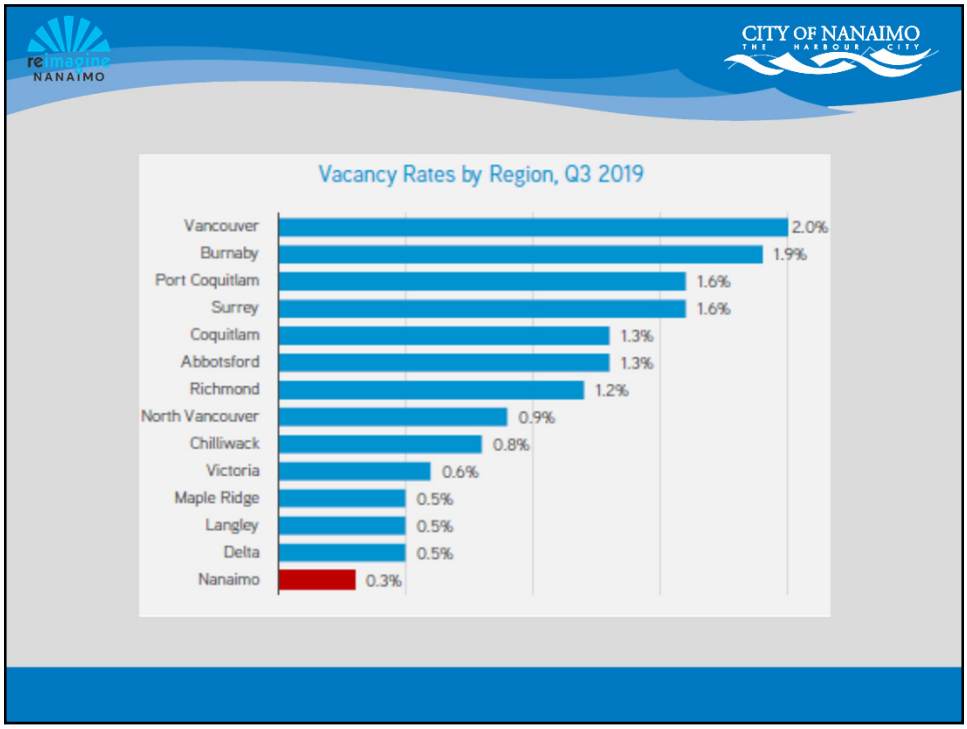
## Industrial Land Use – Inventory/Capacity and Recommendations

## Inventory/Capacity Highlights:

- Industrial space is in high demand in Nanaimo due to limited supply and strong demand. Well located industrial land across the region is scarce.
- The city has a total of 661 ha of industrial-designated land, primarily within the Duke Point and Northfield Boxwood Areas.
- The city currently has an estimated 64 ha of developable industrial land, with an additional 10 ha of land with construction occurring on it.

## Inventory/Capacity Highlights:

- There has been approximately 6 ha of new industrial supply developed over the past decade, with development in nearly all suitable land parcels.
- Under a high-growth scenario, the utilization of all developable and potential industrial land represents approximately 18 years of supply.




**Recommendation Highlights:**

- It is important for the City to create new industrial supply as the amount of vacant industrial land is not expected to fulfill future demand by 2041.
- Within the Boxwood area, the development of the 11 ha of vacant lots south of Nanaimo Parkway (behind Cavalotti Lodge) should be encouraged.
- The owners of industrially-zoned lots over 2 ha in size should be engaged by the City to identify where possible, ways to incentivize the development of this land.

**Recommendation Highlights:**

- The process of considering Oceanview for industrial development should begin, including an assessment of the total amount of space within the area that is viable for industrial use.
- The City should support developers if they wish to construct multi-level industrial buildings by reassessing any potential barriers to such development, including permitting new industrial uses, such as e-commerce, and adjusting density caps, such as building height limits, setbacks, and site coverage maximums.

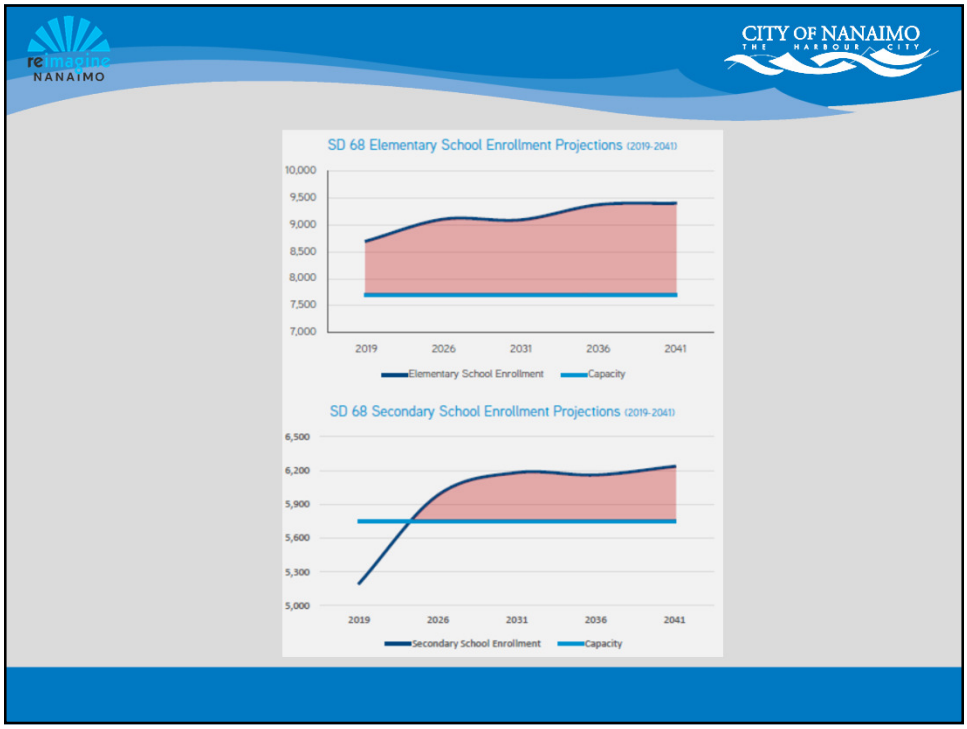
**Recommendation Highlights:**

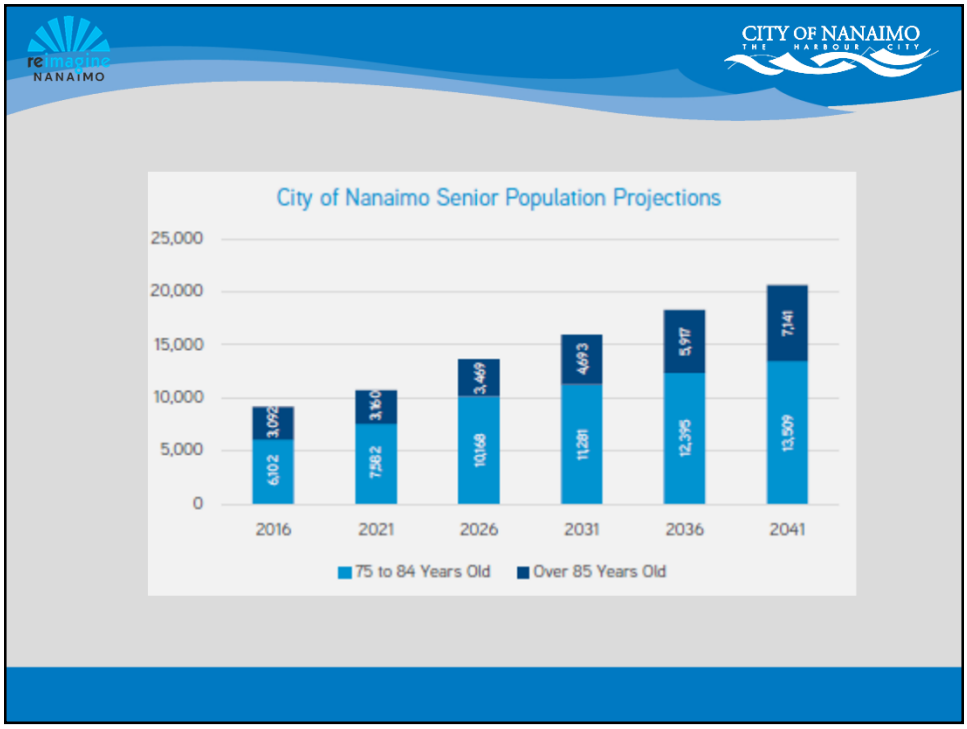
- The City could also consider the amalgamation of land outside of the Urban Containment Boundary for industrial use, specifically 44 ha of existing industrial lands south of the city boundary along the Island Highway.

# Institutional Land Use – Inventory/Capacity and Recommendations

## Inventory/Capacity Highlights:

- The city currently has a total of 213 ha of land zoned to permit institutional uses, only 6 ha of which appears to be vacant.
- The City is expected to continue experiencing a shortfall in terms of Staff and facilities to support the rapidly aging population of the city.
- The Nanaimo-Ladysmith School District is expected to experience a shortage of space to accommodate both elementary and secondary students.


SD 68 Elementary School Enrollment Projections (2019-2041)
10,000
9,500
9,000
8,500
8,000
7,500
7,000
2019
2026
2031
2036
2041
Elementary School Enrollment
Capacity
SD 68 Secondary School Enrollment Projections (2019-2041)
6,500
6,200
5,900
5,600
5,300
5,000
2019
2026
2031
2036
2041
Secondary School Enrollment
Capacity


City of Nanaimo Senior Population Projections
25,000
20,000
15,000
10,000
5,000
0
6,102
3,092
7,562
3,160
10,168
3,469
11,281
4,693
12,395
5,977
13,509
7,141
2016
2021
2026
2031
2036
2041
75 to 84 Years Old
Over 85 Years Old

**Recommendation Highlights:**

- The City will need to work closely with SD 68 as they develop their new long-range facilities plan in identifying the future land needs and potential locations for new or expanded school sites.
- It is also imperative the City examine the growing land demands for seniors' housing and care facilities. The City should work with the Island Health to further identify future land requirements based on internal projections.

## Questions?

CITY OF NANAIMO
THE HARBOUR CITY

# Staff Report for Decision

File Number: ENV1

DATE OF MEETING June 22, 2020

AUTHORED BY ROB LAWRANCE, ENVIRONMENTAL PLANNER

**SUBJECT CLIMATE CHANGE RESILIENCE STRATEGY**

## OVERVIEW

**Purpose of Report**
To present to Council the Climate Change Resilience Strategy for adoption.

**Recommendation**
That Council adopt the Climate Change Resilience Strategy and direct Staff to prioritize actions in this report and begin implementation of the strategy.

## BACKGROUND

Addressing climate change involves more than just lowering greenhouse gas (GHG) emissions, effective climate change action requires both mitigation, or actions to reduce the emission of GHGs into the atmosphere, and adaptation, or actions designed to reduce the negative impacts of climate change. This report introduces the Climate Change Resilience Strategy, a foundational document that focuses on adaptation and preparing Nanaimo for the current and future impacts of climate change.

Nanaimo is currently feeling the effects of climate change. Annual temperatures have risen alongside an increase in the number of extreme weather events, and these are having serious consequences in the region. As an example, the Nanaimo Lakes Fire (August 2018) burned more than 450 hectares, while a recent windstorm (December 2018) left over 150,000 people on Vancouver Island without power. The overall magnitude of these climate-related events, as well as overall changes in climate, are projected to increase over time.

In 2017, the City applied for and received $175,000 in funding to complete a Climate Change Resilience Strategy from the Federation of Canadian Municipalities (FCM) Climate Innovation Program. The program provides funding to communities interested in addressing the impacts of climate change and reducing its effects in communities across Canada. The City also contributed $50,000 funding and Staff time toward the project.

The Climate Change Resilience Strategy's objective is to identify all climate-related vulnerabilities within the city of Nanaimo, up to the year 2100, and recommend best practice action to address or avoid any climate-related risks identified.

Council has directed Staff to accelerate the City's actions on climate change by passing the Climate Emergency Declaration in April 2019. The City has completed a number of projects and initiatives in sustainability action, infrastructure design, and asset and energy management that have helped lower greenhouse gas emissions in the city. Some of these actions have also contributed to Nanaimo's climate resiliency. This strategy focuses on enhancing climate

resiliency initiatives that currently exist and identifying new actions where potential gaps have been identified.

## DISCUSSION

The strategy was developed using the BC Climate Risk Assessment Framework. The methodology followed four general steps outlined below (and as shown on Page 8 of Attachment A). Impacts, risks, and vulnerabilities to the city were identified in a series of workshops with Staff and invited community stakeholders.

**Strategy Development Steps:**

*Step 1*
Understanding Local Context: Staff and the consulting team began by reviewing the City's current policy, operating standards, and practices that relate to climate adaptation. They identified potential gaps and opportunities to enhance resilience throughout the city.

*Step 2*
Identify Climate Risk: Through a series of workshops, Staff and a number of community stakeholders representing a number of key sectors in the community reviewed climate science projections and generated impact statements on how climate change might affect Nanaimo. These statements were meant to be clear and concise statements that identify possible negative or positive effects of climate change on the city. These statements consider discrete events, as well as ongoing weather trends that are sources from regional or provincial climate modelling (as shown on page 48 – 62 of Attachment A).

*Step 3*
Analyze Climate Risk: The impact statements were prioritized in order to focus adaptation planning efforts on the areas of greatest need. This process followed the International Council for Local Environmental Initiatives (ICLEI) Canada's *Building Adaptive and Resilient Communities* (BARC) approach to assess vulnerability by rating two factors: sensitivity and adaptive capacity. Sensitivity is the degree to which people or systems are impacted by changing climate conditions either positively or negatively, whereas adaptive capacity refers to the ability to prepare for these impacts or respond to the consequences. A risk assessment was also performed where risk was evaluated by considering the likelihood of an event and the consequence of that event should it occur.

*Step 4*
Identify and Prioritize Actions: Recommended actions were then developed. By considering the impact statements that were generated in Step 2 and prioritized in Step 3, specific adaptation actions to reduce risk and capitalize on opportunities were developed. This was first done in a workshop setting and then followed up with several sets of review to determine how each action could be effectively implemented and monitored. The finalized adaptation actions were then categorized by themes and objectives, which are introduced on Page 16 of Attachment A. The themes are Water Supply, Flooding and Drainage, Environment and Parks, Well Being and Preparedness, and Corporate Governance.

**Recommended Actions:**

Through the process, over 60 actions were identified and organized under six key themes. The highest priority actions are listed below and are numbered according to how they are found in Attachment A.

1. **Water Supply:**
   a. Objective 1: Actions to prepare for a more limited water supply and improve the resilience of existing water infrastructure.

      **Priority Actions:**
      (1.1.1) Update the Water Supply Strategic Plan to account for climate change, population growth, and identify additional sources of drinking water.

      (1.1.2) Update the Emergency Response Plan for the water treatment plant and water supply infrastructure.

2. **Flooding and Drainage:**
   a. Objective 1: Minimize urban and overland flooding resulting from heavy rainfall.

      **Priority Actions:**
      (2.1.1) Identify, enhance, and re-establish overland flow paths, drainage basins, and protected right-of-ways on private property.
      (2.1.2) Prioritize and accelerate stormwater catchment master planning for local water basins.
      (2.1.3) Explore the potential for a stormwater utility rate to generate revenue as a sustainable funding source to mitigate impacts from climate change.
      (2.1.4) Complete floodplain modeling for major rivers.

   b. Objective 2: Prepare for the impacts of rising sea level and associated erosion and coastal flood risk.

      **Priority Actions:**
      (2.2.1) Review minimum flood construction levels (FCL) and incorporate the results of the Sea Level Rise Study for Nanaimo into the Building and Zoning Bylaws.
      (2.2.2) Develop a framework for a Sea Level Rise Management Plan that includes next steps and timelines.
      (2.2.3) Complete inundation modeling and mapping for areas identified as vulnerable during Phase 1 of the SLR Study (i.e., Departure Bay, Downtown, Protection Island).
      (2.2.4) Review storm / sanitary manholes located in areas at risk of flooding, then outline steps for monitoring and preventative action.

3. **Environment, Parks and Recreation:**
    a. Objective 1: Quantify and manage Nanaimo's urban forests to prepare for climate change.

        **Priority Actions:**
        (3.1.1) Review and update City planning standards (for both City-led and private developments) to prioritize the use of climate-resistant tree species.
        (3.1.2) Reduce safety standards and access issues by improving tree resilience to storm and wind events along main transportation routes.
        (3.1.3) Develop and complete an urban forest inventory and update the Urban Forest Management Strategy using a future climate lens.

    b. Objective 2: Assess and restore Nanaimo's watercourse and marine ecosystems to become biologically diverse and resilient.

        **Priority Actions:**
        (3.2.1) Identify and inventory the City's natural assets and incorporate into the City's asset management program to protect and maintain their function.
        (3.2.2) Enhance watershed storage and impoundment to build resilience for urban streams within the Millstone River catchment area for fish habitat use during low summer flows.

4. **Well-being and Preparedness:**
    a. Objective 1: Work with community partners to minimize health impacts of extreme weather (higher heat days and poor air quality form wildfires) on residents.

        **Priority Actions:**
        (4.1.1) Develop an Extreme Heat Response Strategy that includes information on cooling spaces that can serve community members during extreme heat days.
        (4.1.2) Work with Island Health and other stakeholders to deliver coordinated information on what the public can do during heat waves and poor air quality days.
        (4.1.3) Apply a climate change resilience lens when planning and designing public facilities through considerations such as whether the facility can act as a cooling centre or clean air shelter.

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

        **Priority Actions:**
        (4.2.1) Review and update the North Slope Geotech Study to incorporate climate change impacts and projections and expand these lessons to other steep-slope areas (e.g., Cilaire, Stephenson Point).
        (4.2.2) Review procedures for servicing public infrastructure located on private property, including challenges accessing infrastructure.

c. Objective 3: Improve community capacity and resilience following events by increasing public awareness of climate change, expected impacts, and how the community can prepare.

**Priority Actions:**

(4.3.1) Provide residents, neighbourhoods, and community organizations with opportunities to learn more about climate change mitigation and adaptation efforts, and help facilitate resilience capacity building in the community.

(4.3.2) Support neighbourhood-level organizations that help community members to prepare for climate emergencies.

(4.3.3) Develop a community education program on park use fire and safety awareness.

5. **Land Use and Buildings:**

a. Objective 1: Incorporate resilience into new and existing facilities and support climate change resilience for homes.

**Priority Actions:**

(5.1.1) Develop policy to require future climate considerations into new construction projects / rezoning applications (e.g., passive design, future climate modeling, appropriate shading).

(5.1.2) Include assessments for climate change impacts (e.g., wildfires, flooding, landslips) into City-owned building facility assessments.

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

**Priority Actions:**

(5.2.1) Identify forest interface wildlife risk areas adjacent to residential areas and City infrastructure, and establish a wildfire development permit area (DPA) that includes Firesmart principles.

(5.2.2) Update the Hazard Land and Steep Slope Development Permit Area Guidelines in the Official Community Plan (OCP) and other pertinent bylaws to require geotechnical reports for new construction in areas at high risk of flooding and landslides.

c. Objective 3: Prioritize hazardous areas in the City's property acquisition strategy.

**Priority Actions:**

(5.3.1) Identify hazardous lands and properties at risk from coastal flooding, sea level rise, and landslide risk. Advocate to the Province for support in purchasing these lands as part of the City's long-term property management strategy.

6. **Corporate Governance and Mainstreaming:**
    a. Objective 1: Improve the City's agility in responding and recovering from climate-related events.

        **Priority Actions:**
        (6.1.1) Incorporate climate change resilience into the review and development of asset management plans.
        (6.1.2) Ensure contingency reserves contain an allowance for recovery from climate-related events.

**Communication**

While many actions listed in the Climate Change Resilience Strategy will remain the responsibility of the City to implement, the longer-term success of the strategy will depend on the awareness and participation of the residents, community organizations, and businesses. A key objective is to improve community awareness of future climate impacts and work with the community to build capacity for climate resiliency, especially amongst the most vulnerable. Both community organizations and local businesses play an important role in helping to develop and implement resiliency programs they can take a leadership role in. The City's Environment Committee will be working on developing a communication engagement strategy for how this objective can be implemented.

The Climate Change Resilience Strategy will provide background information and direction on how the City will address climate adaptation that can be used during the Reimagine Nanaimo Official Community Plan (OCP) update in the broader discussion on the role the public can play in raising awareness and better preparing for a changing climate.

**Implementation and Monitoring**

While there are a number of actions that can be implemented relatively quickly, others will require further investigation before being initiated and will be implemented over a longer period of time. Some will be driven by the outcome of the Reimagine Nanaimo strategic policy review and update.

Several actions will require new funding and resources for effective implementation. Staff tasked with implementing these priority actions in the strategy will provide Council with detailed business cases and cost estimates as part of the capital and operating budget process during upcoming budget cycles.

Staff will seek external funding for implementing this strategy as opportunities arise. Funding for climate change adaptation is available for specific projects identified in the strategy (e.g., such as the Disaster Mitigations and Adaptation Fund available through Infrastructure Canada).

The longer-term success of the strategy will also require setting key performance metrics for each of the major theme areas in the strategy to help the City track progress. The Strategy has recommended a number of performance metrics to monitor success of the implementation. Some of the metrics currently exist and others will be established through subsequent work following the adoption of the Climate Change Resilience Strategy.

## OPTIONS

1. That Council adopt the Climate Change Resilience Strategy and direct Staff to prioritize actions identified in this report and begin implementation of the strategy.

    - Advantages: The Climate Change Resiliency Strategy provides clear direction and priority action to reduce the risk from a changing climate. Implementing the strategy is expected to support and improve community health and well being. Taking action helps build public confidence that the City is addressing the impacts of climate change. Risk and liability should decrease through strategic action.
    - Disadvantages: There will be significant cost implications to implementing the recommendations over time.
    - Financial Implications: Several of the actions identified in the strategy are planned and resourced within the existing budgets. Several actions also build on existing initiatives. Those requiring new funding will be identified in reports to Council for consideration as part of the long-term financial capital planning and operational budget process. Staff will seek opportunities to apply for external funding to recover some project costs. Over the longer term, financial reserves will need to be set aside to implement some of the actions. Adoption of the Strategy is anticipated to result in lower longer-term costs that would be expected through a continued reactionary approach.

2. That Council deny adoption of the Climate Change Resilience Strategy.

    - Advantages: Initial cost saving by avoiding implementation.
    - Disadvantages: Climate risks identified in this strategy will not be addressed. Community health and well-being are expected to be negatively impacted. Loss of opportunity for external funding for implementing resiliency actions. Risk and liability may increase by not taking strategic action.
    - Financial Implications: Avoid short-term costs. Significant long-term costs from the impact of cumulative future events potentially will increase. Continued reactionary approach to climate events and is anticipated to result in higher long-term costs to recover in the future.

## SUMMARY POINTS

- Effective climate change action requires both mitigation, or actions to reduce the emission of GHGs into the atmosphere, and adaptation, or actions designed to reduce the negative impacts of climate change.
- The Climate Change Resilience Strategy's objective is to identify all climate-related vulnerabilities within the city up to the year 2100, and recommend best practice actions to address or avoid any climate-related risks that can be identified.
- This strategy focuses on enhancing initiatives where they currently exist and develop new actions where potential gaps have been identified and additional efforts are necessary.

**ATTACHMENT:**

ATTACHMENT A: Climate Change Resilience Strategy.

**Submitted by:**

Rob Lawrance
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**Concurrence by:**

Jeremy Holm
Director, Development Approvals

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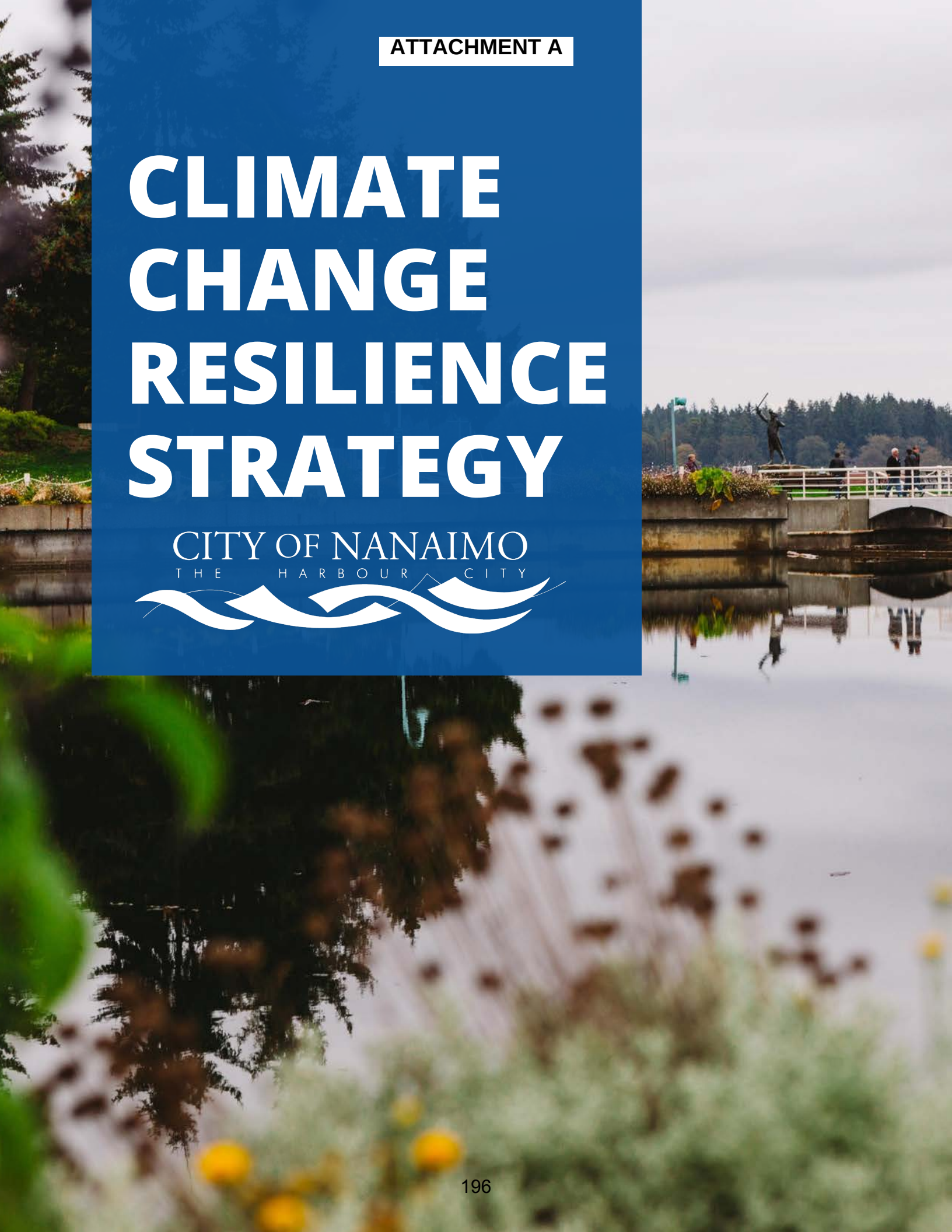
General Manager, Development Services

Laura Mercer
Director, Finance

ATTACHMENT A

# CLIMATE CHANGE RESILIENCE STRATEGY

CITY OF NANAIMO
THE HARBOUR CITY



**Produced for:**

CITY OF NANAIMO
THE HARBOUR CITY

**Produced by:**

INTEGRAL
with **Tamsin Mills Resilience Consulting**

**and supported by:**

Associated Engineering

DIAMOND HEAD


The preparation of this was carried out with assistance from the Government of Canada and the Federation of Canadian Municipalities. Notwithstanding this support, the views expressed are the personal views of the authors, and the Federation of Canadian Municipalities and the Government of Canada accept no responsibility for them

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# Executive Summary

Climate change will have profound and long-lasting implications on both ecosystems and our built environment, as well as serious consequences for our economies, food security, and health. Despite efforts to mitigate the greenhouse gas emissions that are causing climate change, there remains a need to adapt to the global warming that has already begun and will continue into the future. In response, the City of Nanaimo has developed this *Climate Change Resilience Strategy* to help the community prepare for and respond to the adverse effects of climate change, and to take advantage of opportunities.

Nanaimo is already feeling the effects of climate change. Mean annual temperatures have risen alongside an increase in the number of extreme weather events, and these are having serious consequences for our communities. As one example, the Nanaimo Lakes Fire (August 2018) burned more than 450 hectares, while a recent windstorm (December 2018) left over 150,000 people on Vancouver Island without power. The magnitude and seriousness of these climate-related events, as well as overall changes in climate, are projected to increase over time. By 2050, Nanaimo is projected to experience:

- An overall **increase in temperatures** across all seasons, which will have impacts on natural ecosystems, human health, the City's provision of services, and economic development;
- **More days of rainfall** in every season except summer, and **increased precipitation on rainy days**, causing challenges for Nanaimo's stormwater system and leading to local flooding;
- An increase in the frequency and severity of **extreme weather events**, including wildfires and associated wildfire smoke, which will compound with changing conditions; and
- Growing challenges from **sea level rise**, including coastal flooding and damage to public and private buildings and infrastructure, along with increased shoreline erosion.

Fortunately, many efforts that have already been completed or are underway in the areas of sustainability action, infrastructure design, asset management and emergency management already contribute to building Nanaimo's resilience (e.g. the *Community Sustainability Action Plan*, *Urban Forest Master Plan*, and *Water Supply Strategic Plan)*. This Strategy focuses on enhancing these initiatives where they already exist, and developing new actions where additional efforts are needed. Based on a series of workshops with a staff working group and key stakeholders, the Strategy presents over 60 action items spanning six thematic areas:

1. **Water Supply:** Actions to prepare for a more limited water supply over time and improve the resilience of existing water infrastructure.
2. **Flooding & Drainage:** Actions to minimize urban and overland flooding resulting from heavy rainfall, and to prepare for the impacts of sea level rise (e.g. shoreline erosion and coastal flooding).
3. **Environment, Parks & Recreation:** Actions to support Nanaimo's urban forests under a changing climate, and to help improve the resilience of Nanaimo's watercourse and marine ecosystems.
4. **Well-being & Preparedness:** Actions to help Nanaimo prepare for and respond to climate-related events, and to limit the health impacts of extreme weather on residents.
5. **Land Use & Buildings:** Actions to enhance resilience for new and existing buildings, including public facilities and homes, along with regulations to help limit risk.

6. **Corporate Governance & Mainstreaming:** Actions to help improve the City's agility in responding to and recovering from climate-related events, along with guidance on working with neighbouring jurisdictions on common goals.

The actions in this Strategy are accompanied by early implementation details and timelines. However, the success of the above actions will require further resourcing, along with the development of key performance metrics for each major action area to help the City track its progress. By taking bold first steps on these actions, the City of Nanaimo will show leadership on enhancing climate change resilience throughout the community.

# Acknowledgements

The City of Nanaimo's *Climate Change Resilience Strategy* is the outcome of a year-long collaborative effort between a broad range of City staff and senior leadership, City Council, and external stakeholders. We wish to thank everyone involved for their time and contributions – their insights and expertise were invaluable in crafting this document.

***City of Nanaimo Core Project Team***

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- David Stewart, Social Planner
- Brian Zurek, Planner
- Karen Lindsey, Emergency Management Manager

***External Stakeholders***

- Regional District of Nanaimo
- Island Health
- Nanaimo Port Authority
- BC Ferries
- BC Hydro
- Harmac Paper Products

The development of this Strategy was made possible by generous contributions from the City of Nanaimo and the Federation of Canadian Municipalities (FCM), through its Municipalities for Climate Innovation Program.

# 1. Introduction

## The Climate Change Challenge

Climate change represents the greatest challenge facing the modern world. As the climate warms, increasingly negative impacts to ecosystems, human, and built systems are expected to occur as a result of warmer global temperatures, increases in the volume and intensity of precipitation, extreme weather events (e.g. forest fires, droughts) and sea level rise. These changes will have profound and long-lasting implications for communities, as well as serious consequences for economies, food security, and health.

### The Climate Imperative

In October 2018, the Intergovernmental Panel on Climate Change (IPCC) released a report outlining the need to limit global warming to 1.5° Celsius above pre-industrial levels in order to avoid the most severe impacts of climate change[1]. Municipalities around the world, including the City of Nanaimo, have responded by declaring a climate emergency, acknowledging the need to escalate climate actions to limit warming and avoid the most severe impacts of climate change.

These changes are especially important for Canada. Due to its northern latitude, Canada has already experienced a rate of warming approximately twice the global average – and this trend is expected to continue[2]. Since 1948 (the year Canadian temperature records became available), Canada has warmed by an average of 1.7° Celsius across the country, with northern regions warming by 2.3°C. In a future where global greenhouse gas (GHG) emissions are not substantially reduced, Canada is expected to warm by an estimated total of 6°C by 2100.

The effects of a warming Canadian climate are already becoming obvious. Over the last four years (2016-2019), some of the most serious and costly extreme climate-related events ever recorded have occurred, each resulting in substantial economic loses and even loss of life:

1. **2016 Fort McMurray wildfire:** Over 590,000 hectares of land burned, 2,400 homes and buildings lost, two indirect fatalities, and a cost over $9 billion[3];
2. **2017 Ottawa River flood:** This one-in-100-year flood caused $223 million in insurable damages and forced the evacuation of approximately 850 people[4,5];
3. **2018 Eastern Canada heat wave:** The humidex reached 48°C in Gatineau, Quebec, with 93 fatalities from heat-related complications in the province[6];

[1] United Nations Intergovernmental Panel of Climate Change (IPCC). (2018). *Summary for Policymakers of IPCC Special Report on Global Warming of 1.5°C Approved by Governments*.
[2] Environment and Climate Change Canada. (2019). *Canada's Changing Climate Report.*
[3] University of British Columbia. (n.d.) *Fort McMurray and the Fires of Climate Change.*
[4] Ottawa River Regulation Planning Board. (2017). *Summary of the 2017 Spring Flood.*
[5] Ottawa Business Journal. (2017). *Ottawa-area Flooding Caused $223M in Insurable Damages: Industry.*
[6] Environment and Climate Change Canada. (2019). *Canada's Top Ten Weather Stories of 2018.*

4. **2018 British Columbia wildfire season:** More than 1.3 million hectares of land burned with a cost over $615 million[7] and an unprecedented 22 days of air quality advisories in the Lower Mainland; and
5. **2019 Ottawa River flood:** Following several rounds of heavy rain, the Ottawa River reached levels even higher than in 2017, forcing more than 6,000 residents from their homes and leading to the death of two people[8].

The effects of a warming climate are also making themselves known on **Vancouver Island**. Mean annual temperatures have risen alongside an increase in the number of extreme weather events. In August of 2018, the Nanaimo Lakes Fire burned more than 450 hectares, prompting the Regional District of Nanaimo (RDN) to declare a State of Emergency[9]. That December, a windstorm affecting Vancouver Island left over 150,000 people without power, forced the cancellation of ferry service, damaged the City of Nanaimo's water treatment plant, and caused the death of one person[10].

These events, coupled with scientific evidence of increasing warming, shows us that despite efforts at curbing our GHG emissions, climate change is already here. Released in 2019, the IPCC's *Special Report for Policymakers*[11] noted that global average temperatures have already increased and will continue to rise for the next several decades[12]. The evidence is clear: countries, cities, and communities around the world must be prepared to respond to the needs and challenges of climate change.

## Responding to Climate Change

Addressing the climate change challenge involves more than just preparing for the changes to come. Effective climate action requires both **mitigation**, or actions taken to reduce the emission of GHGs into the atmosphere, and **adaptation**, or actions designed to reduce the negative impacts of climate change and take advantage of opportunities. **This Climate Change Resilience Strategy focuses on adaptation: preparing Nanaimo for the current and future impacts of climate change.**

**Resilience** is a broad term that refers to the capacity of a system to absorb disturbances and recover well. More specifically, resilience to climate change includes climate change adaptation and the ability of systems to anticipate, prepare for, and respond to the adverse effects of climate change.

[7] BC Wildfire Service. (2018). *Wildfire Season Summary.*
[8] CBC News. (2019). *From floods to fires to weird Arctic weather, Environment Canada releases top 10 weather stories of 2019.*
[9] Nanaimo News Now. (2018). *The Nanaimo Lakes wildfire.*
[10] Times Colonist. (2018). *Storm aftermath: Thousands without power, Nanaimo water plant damaged, woman killed by tree.*
[11] IPCC. (2018). *Summary for Policymakers of IPCC Special Report on Global Warming of 1.5°C Approved by Governments.*
[12] NASA. (2019). *2018 Fourth Warmest Year in Continued Warming Trend, according to NASA, NOAA.*

However, some actions can achieve both mitigation and adaptation goals (see Figure 1 below), and the most effective response to climate change is one that integrates both mitigation and adaptation. Under this approach, resources are allocated to benefit both mitigation and adaptation objectives, simultaneously decreasing the *causes* of climate change while adapting to the *effects*. For example, increasing the number of trees planted in a city helps to mitigate climate change because trees absorb carbon dioxide ($CO_2$) and provide shade to nearby buildings, reducing indoor temperature and lessening demand for mechanical cooling. Urban forestry also contributes to adaptation by helping to absorb stormwater before it can lead to flooding, reducing local temperatures in the summer, and providing shady refuges.

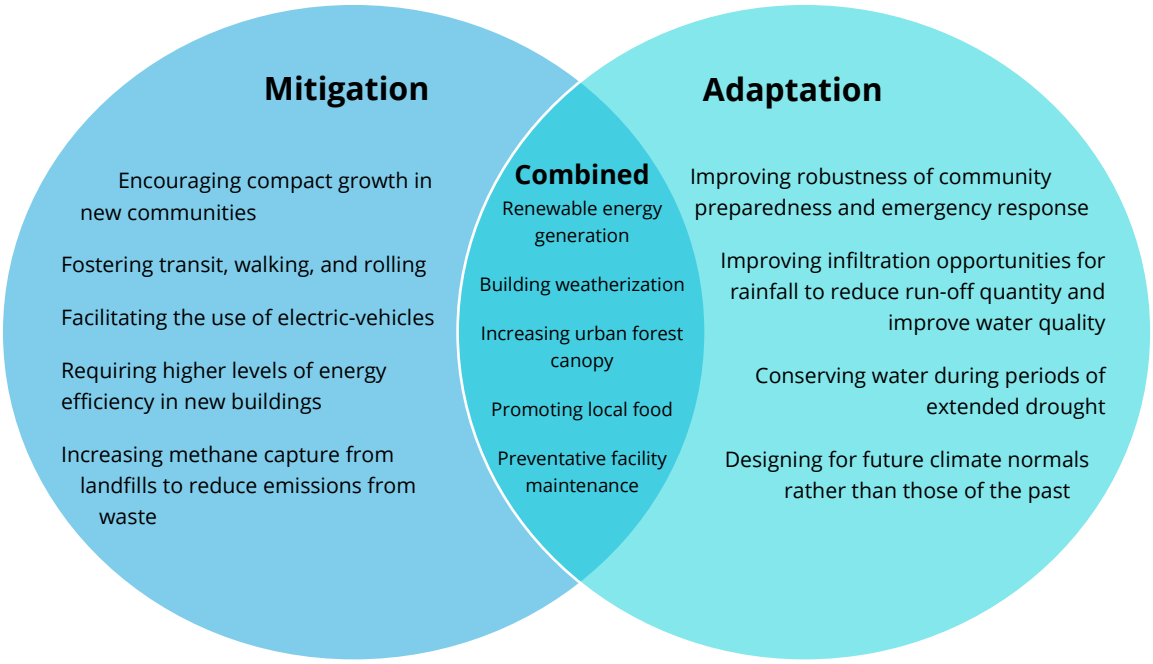



*Figure 1: Examples of climate change mitigation and adaptation actions*

Though the changing climate presents significant challenges for the Vancouver Island region, it also offers a number of opportunities. These include:

- Lower heating costs overall
- A longer growing season, more arable land, and the possibility of new agricultural crops
- Increased opportunities for active transportation (e.g. biking, walking, etc.), and
- The potential for increased tourism given Nanaimo's increasingly temperate climate.

In addition, climate action can often help support or advance other community goals and objectives (often called **co-benefits**), such as protecting and preserving green spaces and sensitive areas, increasing community and neighbourhood level preparedness and connection, and ensuring housing meets the needs of the whole community.

## The Role of the City

The City of Nanaimo's role in building community-wide climate change resilience is one of both a leader and a partner.

As a **leader**, the City will demonstrate climate action in its own internal policies, programs, and facilities. It must continue to implement mitigation actions as well, and incorporate the newest scientific information and best practices into future decision making.

As a **partner**, the City will continue to build relationships with local businesses, community organizations, and other stakeholder groups, as well as other levels of government. These will help to ensure information and resources are shared, and goals and objectives are aligned, in turn maximizing the impact and effectiveness of resilience-building actions and strategies.

### Stakeholders and partners involved in the development of this Strategy include:

- Regional District of Nanaimo
- Island Health
- Nanaimo Port Authority
- BC Ferries
- BC Hydro
- Harmac Paper Products

### Other key stakeholders for future collaboration include:

- Snuneymuxw First Nation
- School District 68
- Vancouver Island University
- Nanaimo Chamber of Commerce
- Vancouver Island Homebuilders Association
- City Neighbourhood Association Network

The City will also act as a partner to its residents, as members of Nanaimo's communities have their own insights and experiences to share, and have a huge stake in the success of this Strategy. To this end, the City will educate and engage residents on relevant community issues, and incorporate their feedback and concerns into resilience planning. The City will also provide residents the tools and information they need to help increase their own resilience, both at home and across the community.

## Report Contents

This report is a roadmap for improving climate change resilience in Nanaimo. It identifies climate-related risks specific to the local context and then outlines specific adaptation actions to address those risks. It also includes preliminary guidance on how to carry out those adaptation actions.

**Section 1** **provides background information on the climate change imperative, past and projected impacts, and responses to climate change.**

**Section 2** **provides a review of Nanaimo's past and present plans, strategies, policies, and initiatives associated with climate change mitigation and adaptation.**

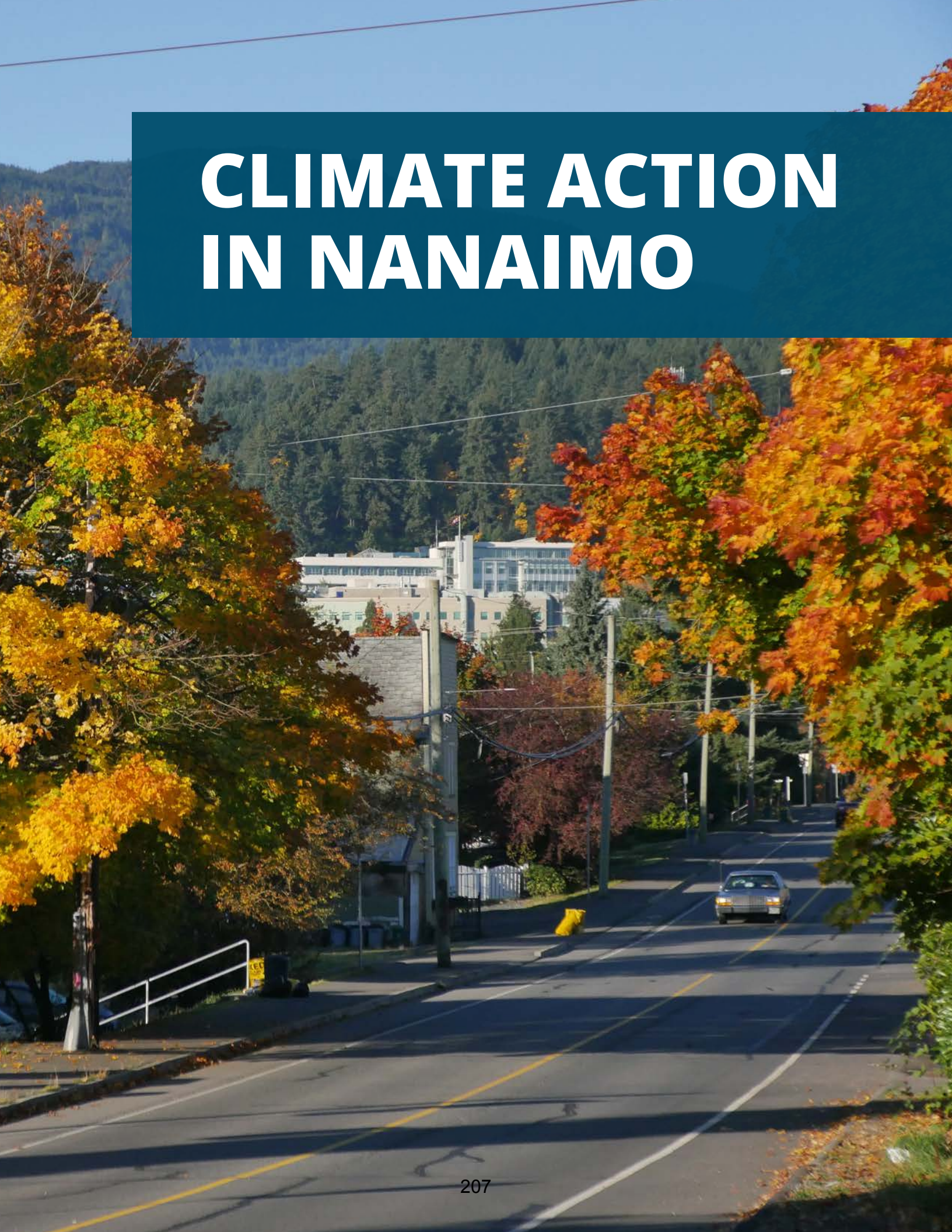
**Section 3** **provides a review of the climate science and projected impacts for Nanaimo, and identifies specific risks and vulnerabilities.**

**Section 4** **sets out adaptation actions to improve resilience, including both "quick start"/immediate-priority actions and longer-term projects. It also introduces the many co-benefits of adaptation for the City and its community members.**

**Section 5** **provides a guideline for carrying out the above adaptation actions, including guidance on implementation, with roles and responsibilities for different actors, as well as guidance on monitoring, including targets and metrics.**

The *Climate Change Resilience Strategy* will be reviewed and updated at 5-year intervals to incorporate leading science and the changing needs of Nanaimo residents. Actions included in this Strategy include processes as well as outcomes, both of which can be updated as new information and practices become available.

# CLIMATE ACTION IN NANAIMO



# 2. Climate Action in Nanaimo

The City of Nanaimo is not starting from scratch on climate change resilience. Nanaimo has long been a leader in environmental sustainability, using its municipal powers to develop and enforce a number of environmental policies and bylaws. Many efforts that have been completed or are underway in the areas of sustainability action, infrastructure design, asset management and emergency management already contribute to building the community's resilience. This Strategy focuses on building on and enhancing these actions, as well as identifying gaps for new action planning.

For example, policies such as the **Community Sustainability Action Plan** already set the stage for addressing climate change. As a signatory of the **BC Climate Action Charter**, the City has also committed to significant greenhouse gas emission reductions and the creation of a complete, compact, and more energy efficient community. **PlanNanaimo**, the City's *Official Community Plan* (OCP), establishes policies on energy and emissions management that align with the Charter. It also sets a goal of protecting and enhancing the environment through the preservation of sensitive areas and the promotion of urban forests and greenways. Finally, it includes policies to protect life and property from natural hazards such as steep slopes and flooding.

The City of Nanaimo has also completed initial work in a **Sea Level Rise Study**, in which maps were developed to show where new construction should be limited to remain above future flood levels along the coastline. The study identifies areas of higher erosion risk, potential impacts to storm and sanitary sewer infrastructure, and vulnerable areas of the City to explore in further depth.

Aside from those noted above, there are many other policies that are already underway that do not address climate change adaptation explicitly, but nevertheless improve the city's resilience to a changing climate:

- The City is a participant in the Federation of Canadian Municipalities' (FCM) **Leadership in Asset Management Program** and has explored the **Municipal Natural Asset Initiative**. The existing asset management program can incorporate a climate lens.
- The City has signed onto the Global Covenant of Mayors (GCoM) **Showcase Cities Program**, in order to share training opportunities and experiences among staff from 40 Canadian municipalities, working towards meeting ambitious climate adaptation and mitigation targets.
- The **Urban Forest Management Plan** explicitly recognizes climate change already and can be adapted to ensure ecosystem services are maintained under new climate "normals".
- The **Waterfront Walkway Implementation Plan** includes new sea level rise projections in planning.
- The City's **Manual of Engineering Standards and Specifications** used for infrastructure design and construction recognizes projected changes in rainfall and sea level with climate change.
- The **Water Supply Strategic Plan** was updated to include potential impacts from climate change.
- Nanaimo has several emergency response plans and recognizes major natural hazards through emergency management and planning.

# Developing the Strategy

This Strategy was developed following the *BC Climate Risk Assessment Framework*[13] adapted for the context of local government adaptation planning (see Figure 2 below). Impacts, risks and vulnerabilities to the City and its community were identified in a series of workshops with a staff Working Group and key stakeholders. The methodology followed four general steps, outlined below, with further details on the process provided in **Appendix B**: Methodology.

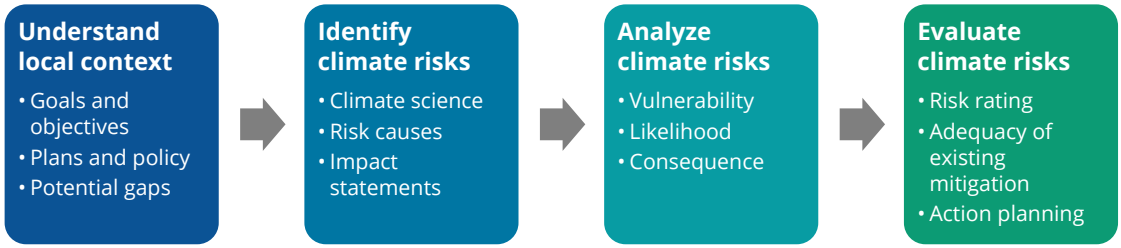



*Figure 2: BC Climate Risk Assessment Framework (graphic adapted from the Province of BC)*

## Step 1

Step 1 involved developing an understanding Nanaimo's specific context, including local goals, objectives, and operating principles. To achieve this, the project team reviewed the City's existing policies, plans, programs, and projects that relate to climate change adaptation, and then identified potential gaps and opportunities to enhance resilience throughout the city.

## Step 2

Step 2 included workshop participants using future climate projections to generate impact statements of how climate change might affect Nanaimo. These are meant to be clear and concise statements that identify the possible negative or positive effects of climate change that are expected locally. Important to note is that this considers both discrete events and ongoing changes. For example, intense rainfall events (discrete) are expected to cause local flooding that damages infrastructure and disrupts transportation. More positively, warmer winters (ongoing) will lead to longer growing seasons and possibly create new opportunities for agriculture.

[13] Government of BC. (2019). *Strategic Climate Risk Assessment Framework for British Columbia.*

## Step 3

Step 3 saw the impact statements from Step 2 prioritized in order to focus future adaptation planning efforts on the areas of greatest need. This process followed the International Council for Local Environmental Initiatives (ICLEI) Canada's *Building Adaptative and Resilient Communities* (BARC)[14] approach to assess **vulnerability** by rating two factors: **sensitivity** and **adaptive capacity**. Sensitivity is the degree to which people or systems are impacted by changing climate conditions, either positively or negatively, whereas adaptative capacity refers to the ability to prepare for these impacts or respond to the consequences.

Step 3 also included a risk assessment. **Risk** was evaluated by considering the **likelihood** of an event and the **consequence** of that event should it occur. In other words: risk = likelihood x consequences**.** For the purposes of this project, likelihood was rated for both current risk and projected to 2050.

## Step 4

Step 4 focused on adaptation action planning. By considering the impact statements that were generated in Step 2 and prioritized in Step 3, participants brainstormed specific adaptation actions to reduce risk and capitalize on opportunities. This was first done in a workshop setting and then followed up with several sets of review to determine how each action could be effectively implemented and monitored. The finalized adaptation actions were then categorized by themes and objectives, which are introduced in **Section 4**.

[14] ICLEI Canada. (2017). *BARC Program.*

# 3. The Impact of Climate Change in Nanaimo

## Climate Science Projections

To understand how changes in climate will affect Nanaimo, it is important to first understand a few key terms.

- **Weather** refers to the atmospheric conditions at a specific location at a specific time – in other words, what is typically found in a weather report. These conditions generally occur over a short time period and change frequently.
- **Climate** refers to the longer-term trends in atmospheric conditions over years or decades.
- **Climate change** refers to changes in climate variables over long time periods that have been observed and are projected to occur in the future (30-year periods typically).

To identify how these factors will impact Nanaimo, specific (i.e. quantitative, statistical) regional climate data was used to representative more general climate measures. For example, to capture temperature changes, the project team considered statistics such as days below 0°C and extreme heat days above 25°C. For extreme wind events, statistics for frequency of 70+km/h wind gusts were analyzed, and so on. As no single comprehensive study of projected climate change measures exists for Nanaimo, multiple regional climate change projections were sourced from reputable organizations, such as the Pacific Climate Impacts Consortium (PCIC), Prairie Climate Centre, and Institute for Catastrophic Loss Reduction (ICLR).

All climate projections were based on the **Representative Concentration Pathway** 8.5 (RCP8.5) climate scenario[15] (**Figure 3**). This pathway assumes a 'business-as-usual' future in which little action is taken to reduce greenhouse gas emissions at a global scale, and is recommended by most

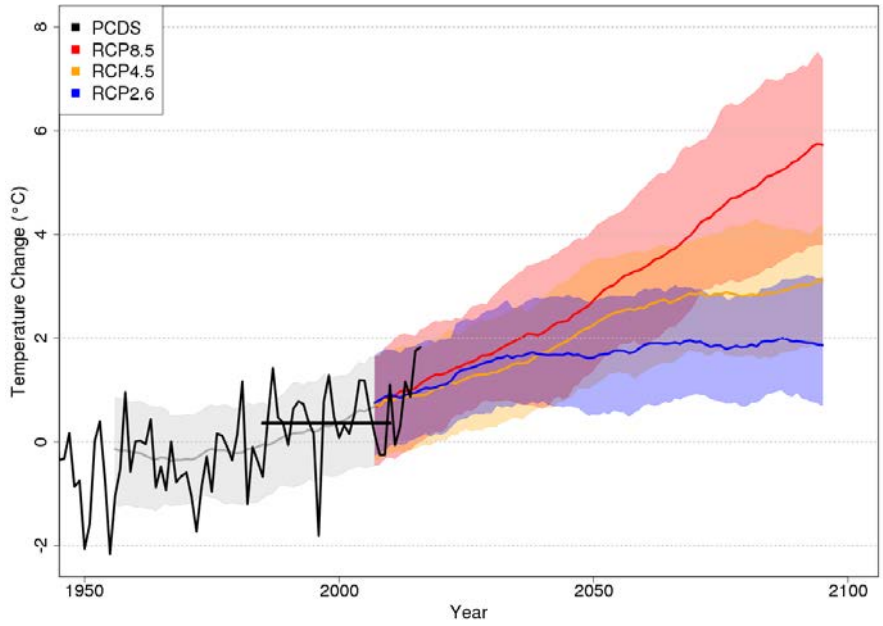



*Figure 3: Representative Concentration Pathways (RCP) showing temperature change under different greenhouse gas concentration scenarios based on mitigation action (figure courtesy of PCIC)*

[15] United Nations Intergovernmental Panel on Climate Change (IPCC). (2013). *Anthropogenic and Natural Radiative Forcing. In: Climate Change 2013: The Physical Science Basis.*

institutions for climate change adaptation planning. This conservative approach is necessary to address any eventuality. While mitigation action is taking place both locally and globally, we are also already essentially "locked-in" to a certain degree of climate change regardless of what path we take, and will need to prepare accordingly.

The changes anticipated for Nanaimo under RCP8.5 to 2050 and beyond are summarized below in four general categories: changes in temperature, changes in precipitation, extreme events, and sea level rise. Detailed projections are available in **Appendix C**: Detailed Climate Projections for Nanaimo, with the full climate science review and historic baseline assumptions provided in **Appendix D**: Climate Science Review.

## Changes in Temperature

Nanaimo can expect an overall increase in temperatures across all seasons, with an average increase of 1.6°C by the 2050s. Other projected changes are noted below:

- The hottest daytime temperature in the summer is going to be closer to 35°C by the 2050s, as compared to a baseline of 31°C (1971–2000).
- The number of days above 25°C in a year are projected to double by the 2050s.
- Cooling degree-days (a measure of demand for air-conditioning in a building) is going to almost double by the 2050s.
- Winter days and nights are going to get warmer, with frost-free days and growing season length both increasing significantly.
- Heating degree-days (a measure of demand for heating in a building) are going to decrease, reflecting a decrease in overall residential heating needs during the fall to spring months.

The impacts to *ecosystems* associated with increasing temperatures include changes to species' natural ranges, increased opportunities for invasive species, and added stress to natural systems as a result of prolonged heat and drought. *Human health* impacts from these changes include an increase in heat-related illness and smoke from wildfires are already increasing and water supply pressures during long dry, hot summers are a rising across Canada. Increasing temperatures and a longer growing season also provide *economic* opportunities such as new crops and/or increased productivity for agriculture, lower winter heating bills, and possibly new opportunities for summer tourism and recreation.

## Changes in Precipitation

Nanaimo is expected to see more days of rainfall overall in every season except for summer, and the amount of precipitation on rainy days is projected to increase more than 1.25 times by 2050 compared to the historic baseline (1980–2007). Other precipitation changes for Nanaimo include:

- The maximum amount of rain over a consecutive five-day period is projected to increase from 177mm historically (1971–2000) to 218mm in the 2080s.
- Despite increases in the intensity and frequency of rain, the frequency and length of dry spells (or days without rain) in summer months will steadily increase.
- Snowfall during the winter and spring is projected to decrease 60% by 2050 and almost 80% by 2080.

Heavy rainfall will challenge Nanaimo's stormwater system, and can lead to localized flooding that damages buildings and infrastructure, especially when it continues over numerous days. Nanaimo

will also face increased river flood risk, especially when heavy rain and melting snow coincide. Furthermore, heavy rainfall will increase slope instability and the risk of landslides, and can also increase sedimentation that damages infrastructure and aquatic habitats.

## Increase in Frequency & Severity of Extreme Events

Expecting the unexpected will become the norm in Nanaimo, with more extreme weather anticipated over time. Specifically:

- Increased temperatures and decreased summer precipitation are anticipated to see wildfire risk grow between 1.5–2 times by 2050, and up to 2.5 times by 2080 compared to the period from 1976 to 2005.
- Smoke from wildfires both locally and across the province are likely to engulf Nanaimo on a semi-regular basis.
- Greater amounts of energy in the atmosphere are projected to cause more frequent and intense wind events, as seen in the storm of December 2018.

These extreme events will interact with other climatic changes and likely become more challenging to deal with over time. For example, periods of drought will increase wildfire risk and make those fires more difficult to fight, and severe wind gusts will increase the possibility of coastal flooding through storm surge.

The impacts of extreme events can be wide-ranging and severe, from power outages and damage to trees and buildings from wind gusts, to significant physical and mental health hazards during extreme climate events, such as wildfire smoke, especially for vulnerable individuals. It is anticipated that emergency operations centres will need to be activated more frequently, and responding to these events will be costly and labour-intensive for the City and other organizations.

## Sea Level Rise

Global average temperature increases are driving **sea level rise** (SLR) by causing glaciers and ice sheets to melt, releasing water that was previously held on land into the ocean. On top of this, the warming atmosphere is causing ocean temperatures to increase and sea water to expand, driving further sea level rise. As an oceanside city, Nanaimo is on the front lines of this change.


*Figure 4: Recommended sea level rise allowances from present day to 2100 (figure adapted from the Province of BC)*

In 2013, the Province published a guidance document for coastal flooding that recommended taking the following numbers into account for sea level rise: 0.18m to 2018, 0.5m for 2050 and 1m for 2100[16] (**Figure 4**). Note that the east coast of Vancouver Island is uplifting due to tectonic activity, and so a minor reduction to these numbers was applied through the development of this Strategy.

As highlighted in City of Nanaimo *Sea Level Rise Study*, our sea level rise estimates will continue to change as modelling techniques for geology and ice sheet movement improve over time. They will also evolve depending on climate mitigation efforts around the world, possibly accelerating further if drastic action is not taken. For this reason, planning for coastal flooding in Nanaimo will require a careful eye on sea level rise projections.

In considering how Nanaimo's coastline will be affected by sea level rise over time, it is important to look at the different components that contribute to overall water levels. Beyond sea level rise projections, these include:

- Tides, including exceptionally high **king tides**, which are gravity-driven and not a climate-related phenomenon;
- Storm surge, a local rising of the ocean driven by pressure changes in the atmosphere and strong wind gusts; and
- Wave height, which is related to winds strength and direction, along with shoreline characteristics.

**Figure 5** summarizes these factors, showing current high tide conditions, current conditions during high tide and a storm, and future conditions at high tide during a storm, respectively. As base water levels continue to increase with sea level rise, it will no longer take a combination of coinciding events to cause coastal flooding at high tide.

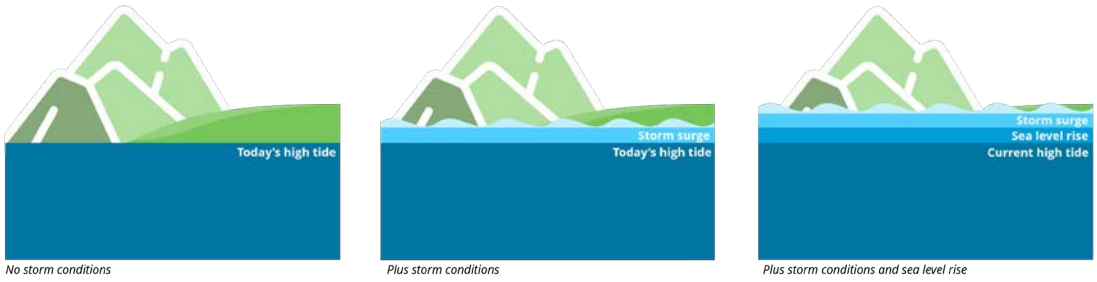



*Figure 5: Components of sea level, including wind and waves, storm surge, and climate-related sea level rise*

Potential impacts of sea level rise include coastal flooding with damage to public and private buildings and infrastructure, coupled with possible interruption of services, and storm and sanitary sewer backup. Sea level rise will also cause increased shoreline erosion in areas that are already vulnerable (e.g. in the north end between Departure Bay and Hammond Bay Roads and along the North Slope[17]), while initiating erosion in areas that were previously safe. As discussed in the **Sea**

[16] Province of BC. (2011). *Sea Level Rise Adaptation Primer.*

[17] City of Nanaimo. (2005). *Steep Slope Development Permit Area Guidelines.*

**Level Rise Study**, long-term sea level rise has the potential to cause the loss of low-lying waterside land, specifically in the areas of Departure Bay, Downtown, and Protection Island.

## Impacts & Opportunities

The climate change projections presented above will present a wide range of consequences for the City of Nanaimo and the people who call it home. Climate change will also present a multitude of challenges for infrastructure, buildings, local economic development, and the provision of essential services. For City management and operations, climate change will also likely increase strain on contingency budgets and pose difficulties managing the renewal of infrastructure.

Participants involved in the planning process for the Strategy identified over 80 impacts for Nanaimo, many of which were challenges with a small number of potential opportunities (e.g. longer growing seasons). Through the risk and vulnerability assessment conducted with City staff and other stakeholders, these impacts were prioritized to address critical areas and make the most of Nanaimo's resources.  below provides a brief summary of the key impacts identified through this process that were carried forward to adaptation action planning, categorized by general theme. Note that this is not a comprehensive list, but rather a representative snapshot of the type of impacts that were considered.  The City has a record of all potential impacts discussed, which can be carried forward in future planning endeavours.

*Table 1: Key climate-related impacts that were used to develop adaptation actions for Nanaimo*

| Projected Climate Trends | Water Supply / Flooding & Drainage | Environment, Parks & Recreation | Well-being & Preparedness | Land Use & Buildings | Economic Development & Corporate Governance |
|---|---|---|---|---|---|
| **Hotter, drier summers** | Strain on water supply | Greater risk of wildfire<br>Added stress on local fish populations<br>Added stress on local forests | Increased incidence of heat-related illness and stress, especially among vulnerable residents | Increased cooling demands with implications for energy cost and emissions | Challenges for the tourism industry and/or cancellation of events due to poor air quality |
| **Warmer winters and overall temperature increases** | | Changes to tree species' range and increased incidences of tree mortality | | | Opportunities for agriculture with longer growing season |
| **Increased intensity and frequency of precipitation** | Increased flooding from overwhelmed stormwater drainage infrastructure, rivers and creeks | Degradation of riparian areas due to rainfall, high subsequent flow, erosion, etc.<br>Increased landslide risk in areas that may damage public infrastructure | | Increased erosion in steep slope areas<br>Increased likelihood of landslide triggered by saturated soils | |
| **Increase in extreme events** | Increased demand on resources during times of recovery<br>Damage to infrastructure causing service disruption | Potential damage and blocked access from fallen/dead trees, severe erosion and landslip | Increased stress and anxiety, especially for those most vulnerable<br>Access challenges and safety risk for first responders | | Increased demand on resources, including the City's contingency fund<br>Long-term economic impacts given expense of continued response and recovery<br>Disruption of transportation service and supply chains |
| **Sea level rise** | Further undermining of areas already vulnerable to shoreline erosion<br>Impacts to storm and sewer infrastructure as sea levels and water tables rise | Loss of wildlife habitat in the estuary through coastal squeeze | Risks to public safety at the waterfront during high tide and storms over time | Risk to some low-lying and waterside areas<br>Increased damage to public and private shoreline infrastructure (docks, marinas, etc.) | |

# 4. Adaptation Actions

While many efforts are being made to mitigate climate change, some degree of climate change is inevitable. Nanaimo and its residents need to identify and implement a set of actions that will help them prepare for the impacts to come. This Strategy sets direction in six action areas, with economic considerations factored into each area:

1. Water Supply
2. Flooding and Drainage
3. Environment, Parks and Recreation
4. Well-being and Preparedness
5. Land Use and Buildings
6. Corporate Governance and Mainstreaming

The Strategy proposes between one and three objectives for each key area. Within each objective, both priority and additional supporting actions are listed. Technical details and implementation guidance for City staff are included in the companion document to this report.

# WATER SUPPLY

# Theme 1: Water Supply

The July 2019 *Preliminary Strategic Climate Risk Assessment for British Columbia*[18] rated seasonal water shortages as one of the high risks from climate change facing the province. Hotter, drier summers are projected to offset expected increases in annual rainfall, creating stresses on our water supply. Compounded by a significant decrease in snowpack by 2050, less water will be available for public, especially toward the end of hot summers. Significant population growth is also projected for both the province at large and for Nanaimo specifically, which will translate into an increase in the demand for water.

In addition to potential water supply issues, water infrastructure itself can also be at risk from climate change. In 2018, a storm in Nanaimo caused a chain of events resulting in the disruption of the water supply. Investing in resilient infrastructure and redundancies to cope with increased extreme events in the future is therefore key to overall resilience.

## Objective 1: Prepare for more limited water supply over time and improve the resilience of the existing water supply infrastructure.

| PRIORITY ACTIONS | |
|---|---|
| 1.1.1. | Update the *Water Supply Strategic Plan* to account for climate change and population growth, and identify additional sources of drinking water |
| 1.1.2. | Update the *Emergency Response Plan* for the water treatment plant and water supply infrastructure |
| **Additional Actions** | |
| 1.1.3. | Continue and enhance water conservation and efficiency programs to avoid costly new infrastructure such as dams |
| 1.1.4. | Establish a water governance committee or board to guide water sharing arrangements with neighbouring communities and First Nations groups |
| 1.1.5. | Collaborate with the Province and local conservation partners to identify locations where water can be seasonally held and released during periods of low flow |

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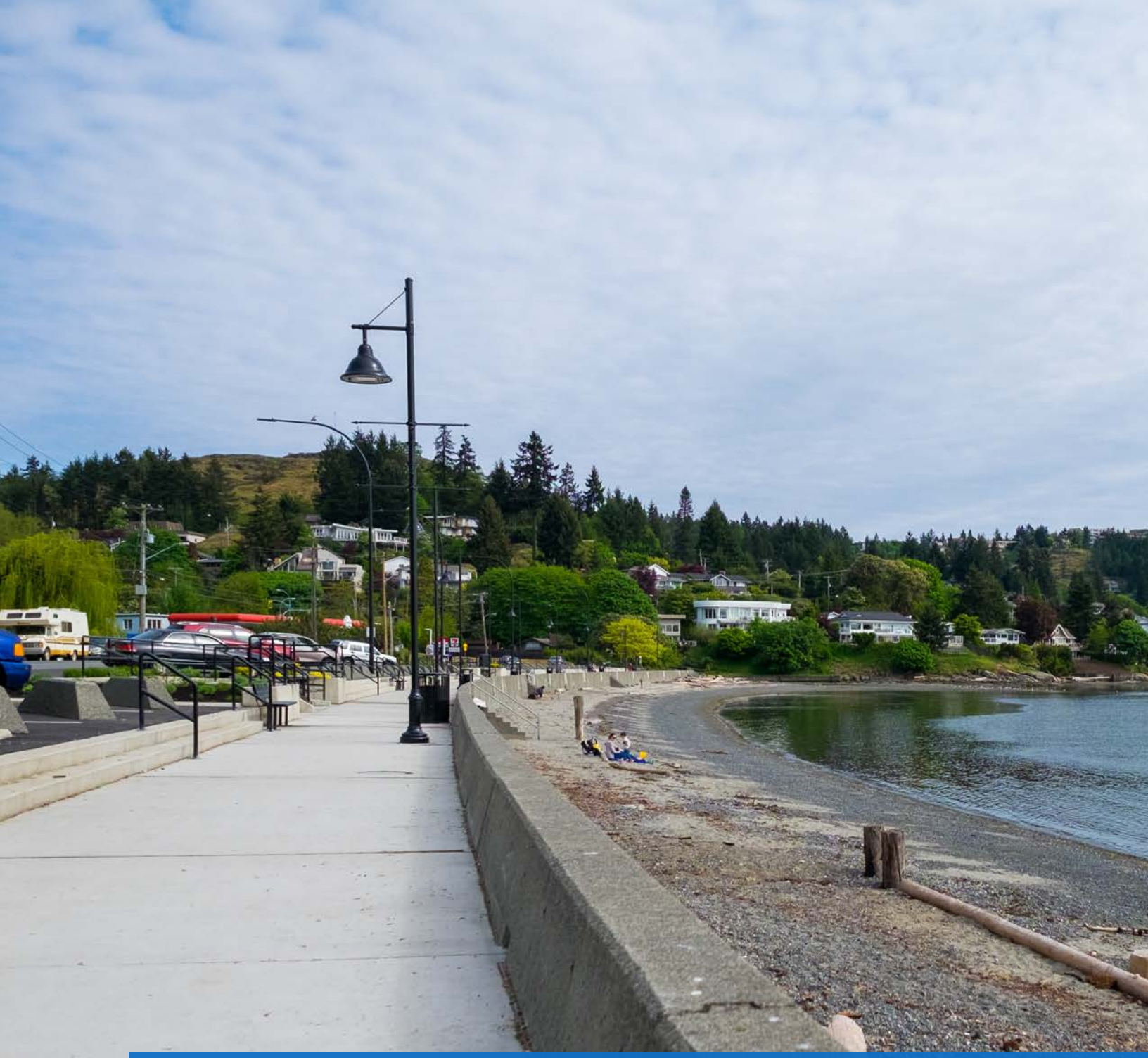


# FLOODING & DRAINAGE

# Theme 2: Flooding & Drainage

Climate change will bring both more annual rainfall overall, as well as an increase in the intensity and frequency of rainfall when it does occur. Heavier rainfall on the wettest days or when it falls for several consecutive days can lead to localized flooding once soils are saturated, drainage infrastructure exceeds its capacity and rainfall flows over storm drains. At the same time, river flow patterns are set to change as snowpack declines over time and rainfall increases, changing floodplains making low areas at higher risk of flooding. Lastly, sea level rise is anticipated to continue for centuries, posing significant flood risk along the coastlines. Indeed, the 2011 provincial flood hazard guidelines now include a requirement for cities to plan for 0.5m of sea level rise by 2050, and 1m of sea level rise by 2100.

Responding to these anticipated changes includes the need to better understand current and future flood risks by including a climate lens on any infrastructure renewal projects, providing clear information to the public on what they can do to reduce their risk from any impacts, and reviewing associated regulations and policies.

## Objective 1: Minimize urban and overland flooding resulting from heavy rainfall

| PRIORITY ACTIONS | |
|---|---|
| 2.1.1. | Identify, enhance and establish overland flow paths, drainage basins and protected right-of-ways on private property |
| 2.1.2. | Prioritize and accelerate stormwater catchment master planning for local water basins |
| 2.1.3. | Explore the potential for a stormwater utility rate to generate revenue as a sustainable funding source to mitigate impacts from climate change |
| 2.1.4. | Complete floodplain modelling for major rivers |
| 2.1.5. | Purchase a computerized maintenance management system (CMMS) |
| **Additional Actions** | |
| 2.1.6. | Continue to update design requirements for on-site water retention and peak flow capacity to account for increased frequency and volume of rainfall |
| 2.1.7. | Incorporate natural systems that help control stormwater flows (e.g. bioswales) into capital project planning |

## Objective 2: Prepare for the impacts of rising sea level and associated erosion and coastal flood risk

| PRIORITY ACTIONS | |
|---|---|
| 2.2.1. | Review minimum flood construction levels (FCL) and incorporate the results of the *Sea Level Rise FCL Study* for Nanaimo into the *Building and Zoning Bylaw* |
| 2.2.2. | Develop a framework for an *Sea Level Rise Management Plan* that includes next steps and timelines |
| 2.2.3. | Complete inundation modelling and mapping for areas identified as vulnerable during Phase 1 of the SLR Study (i.e. Departure Bay, Downtown, Duke Point and Protection Island) |
| 2.2.4. | Review storm/sanitary manholes located in areas at risk of flooding, then outline steps for monitoring and preventative action as water levels rise |
| **Additional Actions** | |
| 2.2.5. | Develop a green shores strategy to help protect waterfront properties from flooding risk, while also protecting and restoring habitats |
| 2.2.6. | Develop and formalize a coastal erosion monitoring program |

# ENVIRONMENT, PARKS & RECREATION

# Theme 3: Environment, Parks & Recreation

Warmer annual temperatures, fewer frost days, a longer growing season and other changes have significant implications for many species' ranges (including pests and diseases), as well as for ecosystems more generally. Increased disturbances from extreme events (e.g. extreme heat events, storms) are also expected to impact natural systems.

At the same time, natural areas such as forests, parks, and wetlands can help buffer the impacts of climate change. Urban forests improve stormwater management by absorbing and transpiring water, while also providing much-needed shade during hot summer days. Parks and natural areas help to filter and clean stormwater and are generally at low risk of flooding. Protecting and expanding these natural assets is key to improving Nanaimo's resilience.

## Objective 1: Quantify and manage Nanaimo's urban forests to prepare for a changing climate

| | |
|---|---|
| **PRIORITY ACTIONS** | |
| 3.1.1. | Review and update City planting standards (for both City-led and private developments) to include climate-resilient tree species |
| 3.1.2. | Reduce safety and access issues by improving tree resilience to storm and wind events along main transportation routes |
| 3.1.3. | Develop and complete an urban forest inventory, and update the *Urban Forest Management Strategy* using a future climate lens |
| **Additional Actions** | |
| 3.1.4. | Develop appropriate tree planting targets and schedules to replace trees lost during storm events and from overall climate warming |
| 3.1.5. | Conduct park condition assessments in all City parks and develop adaptation measures to address climate impact risks (e.g. drought stress, heat events, wildfire smoke, storm damage, flooding) |
| 3.1.6. | Continue to refer to and implement the City's *Community Wildfire Protection Plan* (CWPP) |
| 3.1.7. | Identify and develop guidelines for fuel management zones within high-use parks |

## Objective 2: Assess and restore Nanaimo's watercourse and marine ecosystems to become biologically diverse and resilient

| PRIORITY ACTIONS | |
|---|---|
| 3.2.1. | Inventory City natural assets (e.g. Wexford Creek, Buttertubs Marsh, Park Avenue Wetland) and incorporate into the City's asset management program to protect and maintain their function |
| 3.2.2. | Enhance watershed storage and impoundment to build resilience for urban streams within the Millstone River catchment area for fish habitat use during low summer flows |
| **Additional Actions** | |
| 3.2.3. | Prioritize ecological restoration along riparian areas within the City to build resilience and protect habitat corridors, work with community stewardship groups and volunteers where possible |
| 3.2.4. | Where feasible, design and install green infrastructure (e.g. bioswales, bioponds, retention tanks) that will improve water quality and potentially provide low summer flow into fish bearing streams |
| 3.2.5. | Coordinate with the RDN to complete a detailed watercourse habitat health assessment for urban watercourses within the city, including diversity maintenance and invasive species control targets |

# WELL-BEING & PREPAREDNESS

# Theme 4: Well-being & Preparedness

It is important to keep a focus on not only maintaining, but enhancing community well-being in the face of climate change impacts. Impacts to our health are growing as summers grow hotter and poor air quality advisories associated with province-wide wildfires increase in number. However, these risks can be reduced by improving neighbourhood-level resilience, as neighbours who are aware, prepared and connected to each other tend to do much better when faced with climate-related shocks or stresses.

In addition to supporting neighbourhood resilience, the City of Nanaimo will also work to enhance the city's general preparedness for changes in risks from extreme weather events. As risks of flooding are addressed specifically above, this includes addressing changes to wildfire and landslide risk and improving overall public awareness of extreme weather.

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

| | |
|---|---|
| **PRIORITY ACTIONS** | |
| 4.1.1. | Develop an *Extreme Heat Response Strategy* that includes information on cooling spaces that can serve community members during heat waves |
| 4.1.2. | 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 |
| 4.1.3. | Apply a climate change resilience lens when planning and designing public facilities, through considerations such as whether the facility can act as a cooling centre or clean air shelter |
| **Additional Actions** | |
| 4.1.4. | Train outdoor staff (e.g. Bylaw, Parks, Public Works) to provide community members with information about options available to them during extreme events, such as public cooling centres |
| 4.1.5. | Expand the *Blue Community* program to increase public water fountains and water bottle filling stations, and investigate the potential of mobile options |

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

| | |
|---|---|
| **PRIORITY ACTIONS** | |
| 4.2.1. | Review and update the *North Slope Geotech Study* to incorporate climate change impacts and projections, and expand these lessons to other steep slope areas (e.g. Cilaire, Stephenson Point) |
| 4.2.2. | Review procedures for servicing public infrastructure located on private property, including challenges accessing infrastructure |
| **Additional Actions** | |
| 4.2.3. | Review and update engineering standards to better account for utility service elevations, retaining walls, and backyard easements |
| 4.2.4. | Develop a proactive *Upper Nanaimo River Debris Management Plan* that accounts for climate change projections |

## Objective 3: Improve community capacity and resilience following events by increasing public awareness of climate change, its expected impacts and how the community can prepare

| | |
|---|---|
| **PRIORITY ACTIONS** | |
| 4.3.1. | Provide residents, neighbourhoods, and community organizations with opportunities learn more about climate change mitigation and adaptation efforts, and help facilitate resilience capacity building in the community |
| 4.3.2. | Support neighbourhood-level organizations that help community members to prepare for climate emergencies |
| 4.3.3. | Develop a community education program on park use fire safety and awareness |
| **Additional Actions** | |
| 4.3.4. | Establish an outreach program to contact property owners with overland flow paths and provide education on how to maintain these paths while still enjoying their property |
| 4.3.5. | Work with the Vancouver Island Real Estate Board and other stakeholders to develop a resilience awareness program for homeowners |
| 4.3.6. | Educate current homeowners on requirements to maintain infrastructure to prevent damage (e.g. check and clean storm drains and private drainage infrastructure prior to rain events) |
| 4.3.7. | Establish partnerships with landowners willing to use their property to showcase climate resilience actions to neighbouring residents |


# LAND USE & BUILDINGS

# Theme 5: Land Use & Buildings

As noted above, climate change will have a significant impact on the magnitude and frequency of hazards such as wildfires and flooding events. Often in the way of these hazards are the buildings and facilities in which we live, work and recreate, which need to be protected to ensure both the health of occupants and the investment itself are safeguarded. This may require changes to the City's procurement strategy, but will also include updating performance standards, regulations or policies for new and existing buildings to ensure they are resilient to the shocks and stresses associated with climate change.

## Objective 1: Incorporate resilience into new and existing facilities and support climate change resilience for homes

| PRIORITY ACTIONS | |
|---|---|
| 5.1.1. | Develop policy to require future climate considerations into new construction projects / rezoning applications (e.g. passive design, future climate modelling, appropriate shading) |
| 5.1.2. | Include assessments for climate change impacts (e.g. wildfires, flooding, land-slip) into City-owned building facility assessments |
| **Additional Actions** | |
| 5.1.3. | Remove regulatory restrictions on the placement of heat pumps, and provide education to homeowners on the benefits of heat pumps for improved energy efficiency and added cooling to stay comfortable in the summer months |

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

| PRIORITY ACTIONS | |
|---|---|
| 5.2.1. | Identify forest interface wildfire risk areas adjacent to residential areas and City infrastructure, and establish a wildfire Development Permit Area (DPA) that includes FireSmart principles |
| 5.2.2. | Update the *Hazard Land and Steep Slope Development Permit Area Guidelines* in the *Official Community Plan* (OCP) and other pertinent bylaws to require geotechnical reports for new construction in areas at high risk of flooding and landslides |
| **Additional Actions** | |
| 5.2.3. | Develop a climate adaptation assessment checklist for rezoning and development permits |
| 5.2.4. | Develop a sea level rise DPA with guidelines for new development/renovation and infrastructure placement in areas at risk of coastal flooding up to 2100 |
| 5.2.5. | Apply a climate adaptation lens to the natural hazard, steep slope and environmentally sensitive DPAs during the OCP refresh |

## Objective 3: Prioritize hazardous areas in the City's property acquisition strategy

| PRIORITY ACTIONS | |
|---|---|
| 5.3.1. | Identify hazardous lands and properties at risk from coastal flooding, sea level rise and landslide risk, and advocate to the Province for support in purchasing these lands as part of the City's long-term property management strategy |
| **Additional Actions** | |
| 5.3.2. | Coordinate with other authorities/stakeholders/levels of government for property acquisition partnerships |


# CORPORATE GOVERNANCE & MAINSTREAMING

# Theme 6: Corporate Governance & Mainstreaming

Improving our overall resilience means changing not just the things that we do, but how we do them: the way we approach a problem, our processes and procedures, and the way we make decisions. Incorporating a "climate lens" into the City's decision making and program development processes will exponentially improve the community's resilience by ensuring the impacts of a changing climate are considered before major investments are made or programs are developed. Corporate champions will be key to continuing the successful implementation of the Strategy and working with partners ensures resilience is built in partnership with key stakeholders.

## Objective 1: Improve the City's agility in responding and recovering from climate-related hazard events

| | |
|---|---|
| **PRIORITY ACTIONS** | |
| 6.1.1. | Incorporate climate change resilience into the review and development of asset management plans |
| 6.1.2. | Ensure contingency reserves contain an allowance for recovery from climate-related events |
| **Additional Actions** | |
| 6.1.3. | Establish a *Family First Policy* to support City staff within the *Emergency Response Plan* |
| 6.1.4. | Review large capital infrastructure investments using a Public Infrastructure Engineering Vulnerability Committee (PIEVC) (or similar) assessment method |
| 6.1.5. | Review corporate business practices and plans to facilitate recovery (e.g. fast-tracking permitting processes during periods of recovery) |
| 6.1.6. | Assess the potential economic benefits to the City as a result of climate change to help offset costs |
| 6.1.7. | Explore partnership opportunities with School District 68 and other organizations having facilities that could support extreme weather shelters and/or backup recreational uses |

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

| PRIORITY ACTIONS | |
|---|---|
| 6.2.1. | Continue to work with Snuneymuxw First Nation (SFN) and other regional partners on the Nanaimo Estuary Management Committee and the Nanaimo River Watershed Roundtable to support climate adaptation initiatives that conserve and enhance habitat and protect property within the watershed |
| 6.2.2. | Share information and collaborate with the Regional District of Nanaimo (RDN), neighbouring municipalities and SFN on implementation of sea level rise mapping and other resilience strategies |
| 6.2.3. | Review existing servicing agreements between the City, SFN and District of Lantzville in light of climate projections and make appropriate adjustments to ensure consistent service and limit the transfer of risk across jurisdictional boundaries |
| 6.2.4. | Partner with neighbouring jurisdictions and other municipalities to advocate for increased funding programs for climate change resilience |

# IMPLEMENTATION & MONITORING

# 5. Implementation & Monitoring

The actions presented in above have been accompanied by some early implementation details and timelines. However, more complex actions will first require the development of their own project and work plans as a first step. Some actions may require further investigation before they can be initiated, while others will be driven by the initiation of another process, such as a refresh of the City's OCP. Many actions will also rely on collaboration with community partners and residents, as enhancing overall community resilience depends on increasing awareness and supporting action by everyone.

The implementation of this Strategy will be coordinated through the Development Services department and overseen by the continued engagement of the City's Project Working Group. The Strategy will be reviewed at five-year intervals in order to assess impacts and actions against new climate science, incorporate new best practices and take advantage of new opportunities. Reviewing the Strategy in lock step with the IPCC's reporting cycle also helps to ensure a streamlined process as each new report triggers a new set of climate projections. The next IPCC synthesis report (AR6) is due in June 2022: allowing time for downscaled, local climate projections to be created, a review of Nanaimo's *Climate Change Resilience Strategy* could occur towards the end of 2022 or early 2023. A full refresh of the Strategy is recommended on a 10-year review, or in conjunction with OCP updates.

To maximize efficiency, the actions presented in this Strategy build on existing initiatives as much as possible. However, there are several actions that will require new funding and staffing resources for effective implementation. Now that the City has identified priority actions and timelines, the next step in implementation is to identify appropriate resourcing. Actions can either be separated into capital and operating needs and prioritized during upcoming budget cycles, or presented as emerging needs that require new resourcing as soon as possible. Fortunately, external funding for climate change adaptation is available and can be sought for specific projects (e.g. the *Disaster Mitigation and Adaptation Fund* available through Infrastructure Canada[19]).

The *Climate Change Resilience Strategy* should also itself be used as a basis for the review or development of other City plans and policies to ensure the integration of the actions into City planning processes. Integrating strategies and prioritizing adaptation actions that drive co-beneficial outcomes is key to improving overall climate change resilience. An important upcoming opportunity for the integration of the actions in this Strategy is the update to the *Official Community Plan*.

[19] Infrastructure Canada. (2019). *Disaster Mitigation and Adaptation Fund.*

# Measuring Progress

Measuring adaptation to climate change is challenging for a number of reasons, especially considering the difficulty in defining success: is it an outcome that can be achieved, or an ongoing set of processes? The time horizons necessary to understand whether actions have successfully reduced risk can also be very long, such as with sea level rise, and baseline conditions can change during this time. Furthermore, estimates of outcomes that would have transpired without any adaptation action are difficult to measure and often inaccurate (e.g. the cost of implementing flood mitigation measures compared to the avoided cost of flood damage). Adaptation indicators are also frequently only proxy measures, as it is challenging to measure the true goal and identify when measures have negative unintended consequences[20].

Considering the factors above, good adaptation indicators are generally:

1. Linked to goals and objectives;
2. Allowing of adaptive and flexible planning;
3. Inclusive of both process (progress in implementing actions) and outcome (the change being made); and
4. Easy to measure and relatively accurate.

Indicators that will be explored to track Nanaimo's progress in improving resilience are presented in **Table 2** below. City staff will identify which of these indicators best fit with existing and anticipated monitoring plans and resourcing, and select appropriate targets based on local experience and expertise.

[20] Urban Sustainability Directors Network (USDN). (2016). *Climate Adaptation Framework and Indicator Evaluation.*

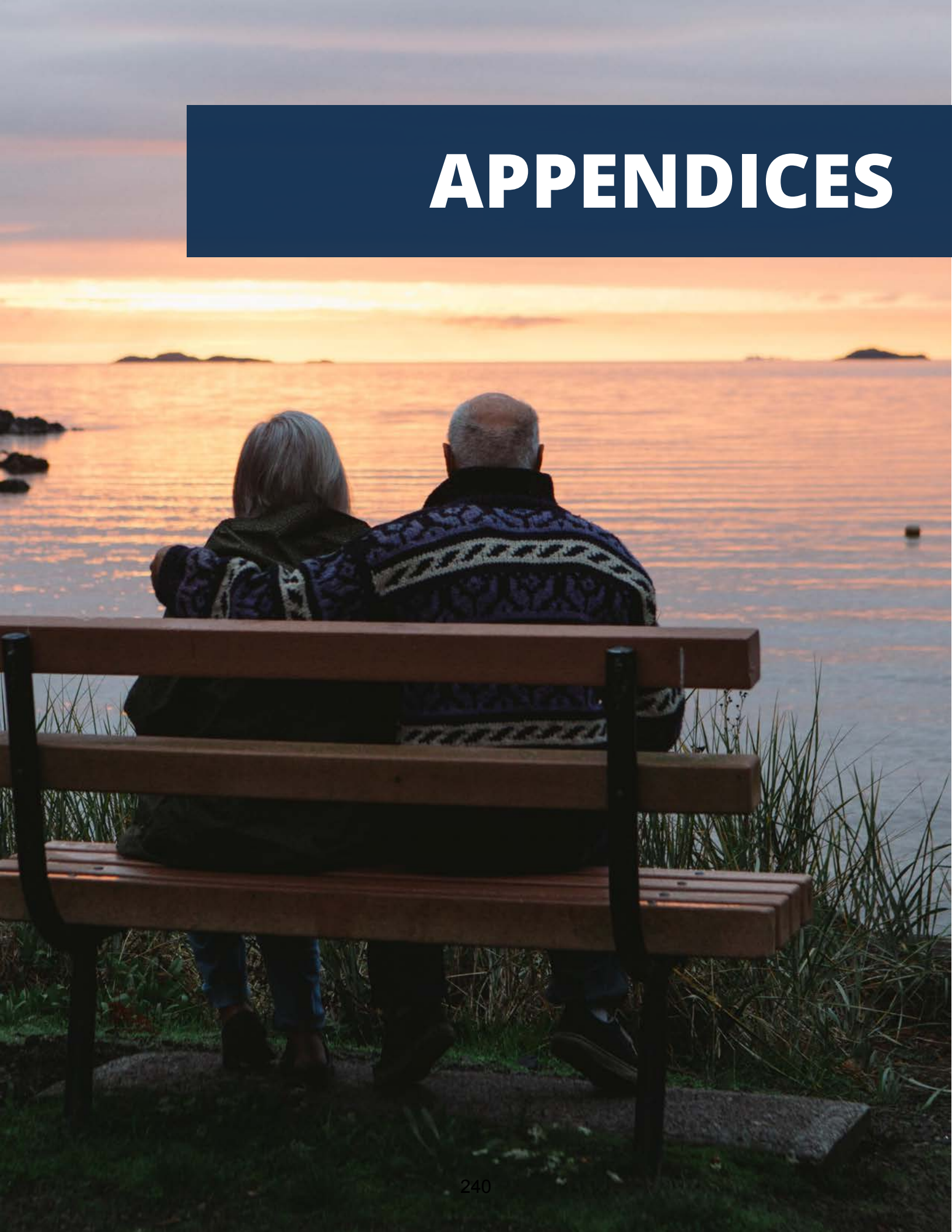
*Table 2: Potential indicators for adaptation actions listed in this Strategy*

| Action Area | Indicator | Description |
|---|---|---|
| **Water Supply** | **Growth in volume of water stored (% from baseline)** | Choose a year as baseline and measure the growth in water stored and available for public use. Set a target to a certain year. |
| | **Per capita water use** | Litres of water used per capita. Develop a target reduction by a certain year. |
| **Flooding and Drainage** | **Number of complaints registered in Tempest CMMS** | Complaints made for flooding by the public. Set a target for a decrease in number or percentage by a certain year. |
| | **Value of assets in unprotected future floodplain** | Calculation of the value of assets in the floodplain for the year 2100. Target of what will be protected by a certain year by flood management planning. |
| **Environment, Parks and Recreation** | **Urban trees captured in a tree inventory (%)** | An annual or bi-annual target could be set until the inventory is complete |
| | **Canopy cover** | This is percentage of land covered by canopy. Requires a LiDAR or other study first to set the baseline and subsequent measurements |
| | **Riparian restoration projects (#)** | Set a target for a specific year |
| **Well-being and Preparedness** | ***Heat Response Plan* complete and implemented** | This is a one-time progress indicator. Set a date to complete it by. |
| | **Cooling centres available during extreme heat (#)** | Set a number to achieve by a certain date. |
| **Land Use and Buildings** | **DPAs adopted and guidelines for areas at coastal risk completed (% or #)** | This is a one-time progress indicator. Set a date to complete it by. |
| | **City owned facilities assessed for resilience (% or #)** | Buildings audited for resilience criteria through a facilities conditions assessment. Set a target annually or monitor percentage of full portfolio annually. |
| **Corporate Governance and Mainstreaming** | **Asset management planning includes a well integrated climate lens** | By 2025. Success could be rated by what the Province has outlined for climate and asset management. |
| | **Capital infrastructure projects assessed for climate risk (% annually)** | Set a target of the percentage desired in 5 years, 10 years, etc. |

# 6. Next Steps

Several changes in climate have been noted for the City of Nanaimo based on a range of reputable data sources. We recommend that further analyses and impact modelling build from this initial desktop review to better delineate local climate parameters and understand priority impacts. This could potentially include further analysis of climate parameters for the City of Nanaimo, or more detailed hydrological, groundwater and wildfire impact modelling to address specific climate impact risks. In addition, in light of rapidly improving climate data and information sources, we recommend maintaining a curated climate data guide for reference in evolving adaptation planning efforts.

# APPENDICES



# Appendix A: Acronyms & Glossary

## Acronyms

**BARC:** Building Adaptive and Resilient Communities

**CMMS:** Computerized maintenance management system

**$CO_2$:** Carbon dioxide

**CWPP:** Community Wildfire Protection Plan

**DPA:** Development Permit Areas

**FCL:** Flood construction level

**ICLEI:** International Council for Local Environmental Initiatives

**ICLR:** Institute for Catastrophic Loss Reduction

**IPCC:** Intergovernmental Panel on Climate Change

**HRVA:** Hazard, Risk and Vulnerability Assessment

**GCoM:** Global Covenant of Mayors

**GHG:** Greenhouse gas

**LiDAR:** Light Detection and Ranging

**OCP:** Official Community Plan

**PCIC:** Pacific Climate Impacts Consortium

**PIEVC:** Public Infrastructure Engineering Vulnerability Committee

**RCP:** Representative Concentration Pathways

**RDN:** Regional District of Nanaimo

**SFN:** Snuneymuxw First Nation

**VIU:** Vancouver Island University

## Glossary

**Adaptation:** Adjusting decisions, activities, and actions based on observed or expected climate conditions, with the goal of moderating the negative impacts of climate change and capitalizing on beneficial opportunities.

**Adaptive capacity:** The ability to prepare for these impacts or respond to the consequences.

**Base year:** A starting point for making comparisons, which can be used for factors such as GHG emissions, temperatures, and rainfall.

**Climate:** Longer-term trends in atmospheric conditions over years or decades.

**Climate change:** Variations in climate over long time periods that have been observed and are projected to occur in the future (30-year periods typically).

**Co-benefits:** Improvements to the community that occur alongside climate mitigation and adaptation actions, such as improved public greenspace or enhanced public transportation.

**Consequence:** The potential damage, disruption, or strain experienced should a climate-related event occur. Consequence can range from minor (inconvenience) to severe (e.g. loss of life).

**Extreme weather:** Unpredictable, unexpected, and severe weather for a given location, including occurrences such as heat waves, droughts, storms, and tornados.

**Flood construction level (FCL):** The minimum height that new development is required to build to in order to protect the it from risk of flooding.

**Greenhouse gas (GHG):** Gases that trap heat in the atmosphere and contribute to climate change by absorbing infrared radiation (e.g. carbon dioxide, chlorofluorocarbons, methane).

**Green shores strategy:** An approach to shoreline management that uses natural materials to dissipate wave energy, reduce storm surge and lessen flooding, while also protecting and restoring habitats.

**Impact statement:** A brief summary of potential climate-related impacts to a given climate projection, which should be specific and actionable.

**Likelihood:** The expected return period or probability of the hazard event or trend occurring.

**Mitigation:** Measures taken to limit GHG emissions and associated global warming.

**Natural assets:** Environmental features and ecosystems that provide people with vital services, such as aquifers, forests, streams, and riparian areas.

**Resilience:** The capacity of a social, environmental, or economic system to cope with a hazardous event, trend, or disturbance, by resisting or changing in a way that maintains an acceptable level of functioning and structure.

**Risk:** A function of likelihood that a climate-related event will take place, and the consequence of that event should it occur.

**Sensitivity:** The degree to which people or systems are impacted by changing climate conditions, either positively or negatively.

**Storm surge:** A local rising of the ocean driven by pressure changes in the atmosphere and strong wind gusts.

**Vulnerability:** The degree to which a system is susceptible to, and unable to cope with, adverse effects of climate change, including climate variability and extremes.

**Weather:** The atmospheric conditions at a specific location at a specific time, which generally occur over a short time period and change frequently.

# Appendix B: Methodology

The methodology used to develop this project aligns closely with the *BC Climate Risk Assessment Framework* that was published half-way through this project. In a broad sense it follows risk assessment steps as outlined by the International Standards Association and many others. It borrows from the currently under development modernization of the *Hazard, Risk and Vulnerability Assessment* (HRVA) process and the ICLEI (Local Governments for Sustainability) *Building Adaptive and Resilient Communities* (BARC) process tools.

## Establishing Context

Several technical memos were developed as background material for the Strategy development process. These included a climate science memo and a baseline assessment memo. The former laid out climate projections anticipated to 2050 and 2080 based on the IPCC Representative Concentration Pathway 8.5 (RCP8.5) climate scenario. The Baseline Assessment summarized a comprehensive review of City of Nanaimo plans, policies, bylaws and standards for existing climate change resilience building efforts, gaps and opportunities. Both of these documents were used throughout the process (a summary of the projection memo was used at each workshop).

## Impact Generation

In a workshop setting with staff and stakeholders, the concept of an impact statement was reviewed. An impact statement includes the climate-related shock or stress (i.e. heavier rainfall, increased frequency of heatwaves, coastal flooding) and the effect it may have (leads to property damage or illness or service disruption, etc.). Participants engaged through a world café style workshop to develop context-specific impact statements across climate projections. Scenarios for 2050 were used to initiate brainstorming and attempt to place participants in a different climate future. Through this process, participants generated a total of 85 impacts. Following the workshop, redundancies and overlaps were reconciled and clarifications made, bringing this number to 64 impacts. There was an opportunity to add impacts as they came up throughout the process.

## Vulnerability Assessment

Again in workshop setting, staff completed a rating of vulnerability for all the impacts. Vulnerability was rated using ICLEI BARC proxies for sensitivity and adaptive capacity as detailed below. Staff worked in groups first individually rating impacts and then discussing ratings. A second group reviewed the ratings for any major differences in ratings. Following the workshop, staff reviewed the overall ratings of vulnerability and highlighted any to move up or down in rating.

## Sensitivity Rating

If the impact occurs, will it affect functionality (the ability of the system / asset / group of people to serve its purpose or provide the use it is designed for)?

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| **No:** | **Unlikely:** | **Possibly:** | **Likely:** | **Yes:** |
| **Functionality will stay the same** | **Functionality will likely stay the same** | **Functionality is likely to get worse** | **Functionality will get worse** | **Functionality will become unmanageable** |

## Adaptive Capacity Rating

Can the system / asset / group of people adjust to the projected impact with minimal cost and disruption?

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| **No:** | **Unlikely:** | **Possibly:** | **Likely:** | **Yes:** |
| **Will require substantial costs and intervention** | **Will require significant costs and intervention** | **Will require some costs and intervention** | **But will require some slight costs and intervention** | **Little to no costs or intervention will be necessary** |

| | SENSITIVITY | No | Unlikely | Possibly | Likely | Yes |
|---|---|---|---|---|---|---|
| ADAPTIVE CAPACITY | | S1 | S2 | S3 | S4 | S5 |
| No | AC1 | | | V4 | V5 | V5 |
| Unlikely | AC2 | | | V3 | V4 | V5 |
| Possibly | AC3 | | | V3 | V4 | V4 |
| Likely | AC4 | | | | V3 | V3 |
| Yes | AC5 | | | | V3 | V3 |

## Risk Assessment

In workshop setting, staff risk rated only those impacts that received a V3 rating or higher. Nanaimo's HRVA risk scale was used for rating the impacts in order to help place anticipated future risk of these impacts relative to other non-climate related risks (train derailment, traffic accident etc.). The HRVA modernization effort currently underway was used, with likelihood rated for the future (2050) as well as current likelihood rated (based on past experience). The likelihood rating in Nanaimo's current HRVA for climate-related events (wildfire, extreme weather, etc.) was input for associated impacts as the "current likelihood" rating.

## Consequence / Impact

Consequence score is based on the severity of the consequence to people, property and the environment. Rank consequences anticipated from the impact statement.

| Score | Consequence / Impact on People, Property and Environment |
|---|---|
| 4 | **Catastrophic:** Multiple fatalities, municipal evacuation, widespread long-term environmental impact, no or minimal stakeholder confidence |
| 3 | **Severe:** Multiple serious injuries or one fatality or adverse long-term health impact, severe medium-term environmental impact, release requiring significant clean up, widespread reduction in stakeholder confidence |
| 2 | **Moderate:** Serious injury, minimal property damage, release with minimal short-term adverse effects on the environment, moderate reduction in stakeholder confidence |
| 1 | **Minor:** Minor injuries, minimal impact if any on public, equipment or property damage, environmental impacts confined locally, minimal or no reduction in stakeholder confidence |

## Likelihood

Likelihood score is based on the expected return period or probability of the hazard event or trend occurring in Nanaimo. We will rank likelihood based on past experience and events and the probability of them occurring in the future given climate change projections.

| Score | Qualitative Description | Recurrent Impact | Single Event |
|---|---|---|---|
| **4** | **Frequent or almost certain:** Exposure will occur if not attended to and will result in repeated incidents | Monthly to 2 years | More likely than not - >50% chance |
| **3** | **Moderate or likely:** Exposure to hazard is common in the region and has happened infrequently in towns | 3 to 10 years | As likely as not – 50/50 chance |
| **2** | **Unlikely or improbable:** Exposure to hazard is conceivable but unusual, unlikely in the region but heard of similar incidents | 101 to 199 years | Unlikely but not negligible |
| **1** | **Highly unlikely or rare:** Exposure to the hazard is rare for this region | > 200 years | Negligible probability |

## Action Planning

Workshops were held with staff and stakeholders with specific expertise to generate the first round of action ideas to help prepare for these risks and minimize the associated impacts. Impacts rated high and medium for risk were the focus of action planning, but low risk impacts were reviewed for actions that were complementary or straightforward. Overall, 36 impacts were included for action planning, and evaluation was carried out looking at the benefit or impact to resilience, cost, and co-benefit potential. Several further rounds of review and an additional workshop were carried out to help finalize actions and add implementation details.

# Appendix C: Detailed Climate Projections for Nanaimo

| TEMPERATURE CHANGES | Baseline | 2050 | 2080 |
|---|---|---|---|
| **Summer Extreme Temperature**<br>Hottest day time temperature averaged over a thirty-year period | 31°C<br>(*1971-2000*) | 34.5°C | 36.7°C |
| **Freezing Conditions**<br>Number of degrees that a day's average temperature is below 0°C, summed over all the days in a year | 92 degree days<br>(*1981-2010*) | 49 degree days | 30 degree days |
| **Growing Season Length**<br>The number of days per year between the first and last six-day periods with daily average temperatures above/below 5°C | 262 days<br>(*1971-2000*) | 322 days | 349 days |
| **Extreme Heat Events**<br>Days per year above 25°C | 23 days<br>(*1971-2000*) | 54 days | 78 days |
| **Cooling Degree Days**<br>Number of degrees that a day's average temperature is above 18°C, summed over all the days in a year, used as a metric of building cooling requirements | 118 degree days<br>(*1981-2010*) | 323 degree days | 537 degree days |
| **Heating Degree Days**<br>The amount of energy that it takes to heat buildings to comfortable temperatures, calculated by multiplying the number of days that the average daily temperature is below 18°C by the number of degrees below that threshold | 3489 days[21] | -547 degree days | -844 degree days |

[21] Taken from the report: Climate Projections for Metro Vancouver as a proxy

| PRECIPITATION CHANGES | Baseline | 2050 | 2080 |
|---|---|---|---|
| **Extreme Short Duration Precipitation**<br>Maximum volume of rain that falls in one day for a 1 in 50-year return period | 106 mm<br>(*1980-2007*) | 131 mm | 143 mm |
| **Extreme High Precipitation Over 5 Days**<br>Maximum amount of rain over a consecutive 5-day period on an annual basis | 177 mm<br>(*1971-2000*) | 194 mm | 218 mm |
| **Dry Spells**<br>Longest continuous stretch with each day receiving less than 1mm of rain per day | 22 days<br>(*1971-2000*) | 26 days | 29 days |
| **Snowfall**<br>Annual precipitation as snow | 32 mm<br>(*1976-2005*) | 13 mm | 7 mm |
| **EXTREME EVENTS** | **Baseline** | **2050** | **2080** |
| **Wildfire Risk (Increase in Fire Spread Days)**<br>Fire spread days are a measure of days in which wildfire, once initiated, would expand | 1x<br>(*1976-2005*) | 1.5-2x | 2-2.5 x |
| **High Winds**<br>Percent change in annual frequency of hourly 70 km/h wind gusts | 0%<br>(*1976-2005*) | 20% | 25% |

# Appendix D: Climate Science Review

## INTRODUCTION

A clear understanding of expected future climate trends is a key aspect of developing a robust strategy to adapt to future climate impacts. To inform the City of Nanaimo's ongoing *Climate Change Resilience Strategy*, the consultant team completed a review of key regional sources of climate data and information. This review was targeted at information relevant to priority climate impacts for the City and developed from a variety of reputable sources, such as the Pacific Climate Impacts Consortium (PCIC). From these sources, we distilled city-relevant climate projection information.

Where directly relevant information was not available, or required additional analysis that was beyond the scope of the current project, the absence of this data has been noted to guide future refinement. In some cases, large uncertainty existed in the magnitude of future change due to current limitations of climate model projections. These cases are also noted as a way of providing context for any risk-based decision making that could rely on these estimates.

We focused on gaining an understanding of the changes to future conditions that are likely to present the most significant impacts on the City of Nanaimo's infrastructure, public land use, community health and well-being, and environment. Nanaimo climate change will be characterized by change that is consistent with broader regional patterns:

- Sea level will continue to rise despite ongoing land subsidence.
- Temperatures will increase across all seasons.
- Winter precipitation (including extreme precipitation) will tend to increase, while summer precipitation will tend to decrease.
- Simultaneous temperature and precipitation trends will cause notable increases to wildfire risk and decreases to precipitation as snow.

The details of this review, including sources of climate data and particular trends for each potential change in climate, are provided below.

## SOURCES OF NANAIMO CLIMATE INFORMATION

As there is no single comprehensive study that presents projected climate change magnitudes across a consistent set of climate metrics for Nanaimo, multiple regional climate change information sources from a range of reputable providers have been used. This report uses information from data sources that were determined to be most recent and/or relevant to the City of Nanaimo:

- **Nanaimo Regional General Hospital (NRGH) Climate Change Vulnerability Assessment Report (RDH Building Science Inc.).** This provides an assessment of changes to a large number of climate variables developed in concert with climate scientists at PCIC.
- **City of Nanaimo Sea Level Rise Study (Associated Engineering).** This report provides an assessment of sea level flooding potential through to year 2100, including detailed modelling and analysis of storm surge and wave runup.
- **Geological Survey of Canada Open File 7737: Relative Sea-level Projections in Canada and the Adjacent Mainland United States.** This report provides an updated estimate of relative (net experienced) mean sea level changes, and also provides an estimate of upper-bound sea level rise associated with West Antarctic Ice Sheet collapse in the 21$^{st}$ century.
- **Wang et al. Projected changes in daily fire spread across Canada over the next century. Environmental Research Letters, 2017.** This peer reviewed scientific article projects change in daily wildfire spread metrics across Canada in response to climate change, for a series of standardized homogenous fire zones.
- **Chen et al. Possible Impacts of Climate Change on Wind Gusts under Downscaled Future Climate Conditions: Updated for Canada, Journal of Climate, 2014.** This peer-reviewed scientific article provides an estimate of changes to damaging wind gusts using downscaled climate model projections of Canada.
- **Climate Projections for the Cowichan Valley Regional District (Cowichan Valley Regional District).** This report provides projected change values for many climate metrics in the Cowichan Valley region, using data produced by PCIC.
- **IDF-CC V3.0 Tool (Institute for Catastrophic Loss Reduction/Western University).** This online tool provides estimates of future extreme precipitation changes by combining downscaled climate change information from PCIC with historical rainfall observations.
- **The Climate Atlas of Canada (Prairie Climate Centre).** This online tool provides evaluations of climate change based on aggregated downscaled climate information from PCIC for several key temperature and precipitation indices.
- **ClimateBC V5.60 Tool (UBC Centre for Forest Conservation Genetics).** This online tool provides estimates of changes to average climate conditions over British Columbia at high resolution, for a range of temperature and precipitation-dependent variables

New data and information sources will emerge in the future, including a more refined version of PCIC's Climate Explorer, which could be used to refine the analysis of future climate changes in Nanaimo. We recommend that the City of Nanaimo continuously engage with local and provincial climate scientists to maintain a curated database and current summary of all sources to aid in future decision making.

## CLIMATE CHANGE PROJECTIONS

A set of high priority climate change metrics that are likely to impact the City of Nanaimo are summarized below. In all cases (except for sea level rise), future changes were based on the Representative Concentration Pathway 8.5 (RCP8.5) climate scenario[22]. This pathway assumes a "business-as-usual" future in which little action is taken to reduce greenhouse gas emissions at a global scale. It therefore represents a conservative (i.e. worst case) scenario and is recommended by most institutions to be used as a base level set of assumptions to ensure climate planning is robust.

We present information for high-priority climate change metrics below using consistent tables of information that summarize the source of the information, future projection values, and levels of confidence in projection direction and magnitude. Representative levels of change for both the mid-21st century ("mid-term", or 2050) and the end of the 21st century ('long-term", or 2080) have been provided in order to inform any resilience planning that may occur within these general timelines – for example, as determined by expected infrastructure useful lifetimes or long-term natural asset planning. For sea level rise, projected changes are based on an assumed 1.0m of sea level rise over the 21st century relative to the year 2000, as per official provincial guidance[23] (i.e. the British Columbia Ministry of Environment).

| | | | |
|---|---|---|---|
| **Information source** | *This indicates the source of climate projection information* | | |
| **Information description** | *This indicates what the information represents and how it was developed* | | |
| **Representative climate metric** | *This indicates the specific measure/units of climate metric* | | |
| **Representative location** | *This indicates the location/region of the projection information* | | |
| **Baseline/projected change** | **Baseline** | **2050s** | **2080s** |
| | *Average numbers for the recent past numbers* | *Med-term projection estimate* | *Long-term projection estimate* |
| **Projection direction confidence** | *Level of confidence in qualitative "direction" of future trend (e.g. "hotter"/"wetter")* | | |
| **Projection magnitude confidence** | *Level of confidence in quantitative projection values (e.g. "170 mm in 2050 period")* | | |

[22] United Nations Intergovernmental Panel on Climate Change (IPCC). (2013). Anthropogenic and Natural Radiative Forcing. In: *Climate Change 2013: The Physical Science Basis.*

[23] British Columbia Ministry of Environment. (2013). *Sea Level Rise Adaptation Primer.*

## SEA LEVEL RISE

*Potential impacts: Coastal flood damage and interruption of services, storm and sanitary sewer backup*

It is nearly certain that relative sea level (as quantified in Flood Construction Level and other metrics) will increase, despite ongoing upward vertical land movement along eastern Vancouver Island. However, as highlighted in City of Nanaimo Sea Level Rise Study, updated sea level rise estimates from improved understanding (including tectonic, climate and ice sheet modelling) and evolving global carbon emission scenarios will drive changes to quantitative sea level rise estimates over time. The largest uncertainty in 21st century sea level projections stems from potential collapse of the West Antarctic Ice Sheet. In the scenario described in Geological Survey of Canada Open File 7737, this could potentially increase Nanaimo relative sea level rise values by an additional 0.65 m by year 2100. Continued monitoring of changing sea level projections is recommended.

| | | | |
|---|---|---|---|
| **Information source** | City of Nanaimo Sea Level Rise Study | | |
| **Information description** | Flood Construction Level heights resulting from 1-in-200-year peak annual wind speeds were developed via an assessment of all components of the local sea level budget, from global sea level rise to local storm surge effects | | |
| **Representative climate metric** | Flood Construction Level (meters, referenced to CDVD2013 datum) | | |
| **Representative location** | Study Transect 22 (Departure Bay) | | |
| **Baseline/projected change** | **Baseline** | **2050s** | **2100s** |
| | 6.68 m | 7.00 m | 8.10 m |
| **Projection direction confidence** | HIGH | | |
| **Projection magnitude confidence** | MEDIUM | | |

## SUMMER EXTREME HEAT

*Potential impacts: Wildfire risk, heat stress, health impacts, infrastructure stress*

Extreme warm temperature metrics were taken from the recent Cowichan District report despite its southern location. We are confident that equivalent temperature increases in Nanaimo are likely to be similar. Conversely, other available Nanaimo-focussed reports were unclear in their calculation of summer heat metrics (NRGH Climate Change Vulnerability Assessment Report), provided only mid-century projections (NRGH Climate Change Vulnerability Assessment Report), and/or were overly spatially coarse and therefore likely included the effect cooler interior highland temperatures (Climate Atlas of Canada).

| | | | |
|---|---|---|---|
| **Information source** | Climate Projections for the Cowichan District | | |
| **Information description** | Downscaled climate model projections of the Cowichan region, south of Nanaimo, were used to estimate changes to daily summer temperature maximum increases | | |
| **Representative climate metric** | 30-year average hottest daytime high temperature change for RCP8.5 scenario | | |
| **Representative location** | Cowichan District "Developed Areas" (low elevation, coastal) sub-region | | |
| **Baseline/projected change** | **Baseline** | **2050s** | **2080s** |
| | 31 °C (1971-2000) | 34.5 °C | 36.7 °C |
| **Projection direction confidence** | HIGH | | |
| **Projection magnitude confidence** | HIGH | | |

## WILDFIRE RISK

*Potential impacts: interface zone damage, air quality impacts*

We are confident that increased temperatures and decreased summer precipitation (Climate Atlas of Canada) will drive increased local wildfire risk, leading to high direction confidence. Because increased risk holds for the province as a whole, we also have high confidence that increases in smoky conditions in the City of Nanaimo related to fires elsewhere will also occur. However, complex interplay between temperature and precipitation, influence of additional non-climatic factors, and assessment of average spread over large Pacific zone leads to a low magnitude confidence for local Nanaimo region fire risk changes. We recommend further local-scale desktop review and analyses to refine the estimate provided here.

| | | | |
|---|---|---|---|
| **Information source** | Wang et al., 2017 | | |
| **Information description** | Data from climate model projections, weather observations and the national fire database of Canada are combined to estimate future wildfire conditions | | |
| **Representative climate metric** | Realized fire spread days are a ratio of increasing days relative to present, for RCP8.5 scenario; Realized fire spread days are a measure of days in which wildfire, once initiated would expand. When projected into the future, this provides a proxy for risk of dangerous interface fire growth | | |
| **Representative location** | Pacific zone | | |
| **Baseline/projected change** | **Baseline** | **2050s** | **2080s** |
| | 1 (1976-2005) | 1.5-2x | 2-2.5x |
| **Projection direction confidence** | HIGH | | |
| **Projection magnitude confidence** | LOW | | |

## EXTREME SHORT-DURATION PRECIPITATION

*Potential impacts: erosion, riverine flooding, water quality degradation, property damage, risks to public*

The IDF-CC Tool was used to estimate historical and future annual maximum 1-day precipitation changes at the Nanaimo City Yard Environment and Climate Change Canada weather station. Future change is represented as a mean of an ensemble of downscaled and bias-corrected PCIC climate output. The increase in annual maximum 1-day precipitation by the 2050s is consistent with a similar but independent finding within the NRGH Climate Change Vulnerability Assessment Report, providing validation of both results and allowing IDF-CC to extend NRGH Climate Change Vulnerability Assessment Report trends to the 2080s. We attach high direction confidence to projections of increased extreme short-duration precipitation. This direction confidence also holds for hour-scale annual maximum precipitation trends. However, medium/low magnitude confidence in daily/hourly annual maximum precipitation trends reflects inherent difficulty in quantifying the exact magnitude of short-duration local precipitation in climate model simulations.

| | | | |
|---|---|---|---|
| **Information source** | IDF-CC Tool, NRGH Climate Change Vulnerability Assessment Report | | |
| **Information description** | Data derived from observations, climate models and statistical extreme precipitation tools are combined to estimate extreme precipitation trends | | |
| **Representative climate metric** | 1-in-50 year 1-day annual maximum rainfall (mm) for RCP8.5 scenario; This is the maximum volume of rain that falls in one day on a 1 in 50-year return interval (e.g. a 2% annual chance of an equivalent event occurring in a given year) | | |
| **Representative location** | Nanaimo Regional General Hospital | | |
| **Baseline/projected change** | **Baseline** | **2050s** | **2080s** |
| | 106 mm (1980-2007) | 131 mm | 143 mm |
| **Projection direction confidence** | HIGH | | |
| **Projection magnitude confidence** | MEDIUM | | |

## EXTREME PERSISTENT HIGH PRECIPITATION

*Potential impacts: erosion, increased landslide risk, property damage, riverine flooding, water quality degradation, risks to public*

Extreme persistent high precipitation metrics were taken from the recent Cowichan District report despite its southern location, as we are confident that equivalent increases in Nanaimo are likely to be similar. We attach a high level of direction confidence to projections of increased persistent heavy precipitation. However, a medium level of confidence in the magnitude reflects inherent difficulty in quantifying the exact magnitude of local multi-day persistent precipitation event increases in future climate simulations.

| | | | |
|---|---|---|---|
| **Information source** | Climate Projections for the Cowichan District | | |
| **Information description** | Downscaled climate model projections of the Cowichan region, south of Nanaimo, were used to estimate changes in multi-day rain event magnitude | | |
| **Representative climate metric** | 5-day maximum precipitation for RCP8.5 scenario; This measures the maximum amount of rain over a consecutive 5-day period on an annual basis. | | |
| **Representative location** | Cowichan District "Developed Areas" (low elevation, coastal) sub-region | | |
| **Baseline/projected change** | **Baseline** | **2050s** | **2080s** |
| | 177 mm (1971-2000) | 194 mm | 218 mm |
| **Projection direction confidence** | HIGH | | |
| **Projection magnitude confidence** | MEDIUM | | |

## EXTREME PERSISTENT LOW PRECIPITATION

*Potential impacts: Drought, water shortages, agricultural productivity loss*

Extreme persistent low precipitation metrics were taken from the recent Cowichan District report despite its southern location. We are confident that equivalent decreases in Nanaimo are likely to be similar, as both regions follow similar regional trends. We include the entire Cowichan District in our analysis as a proxy for similar regions upland of Nanaimo that provide important water catchment watersheds. We attach a high level of direction confidence to projections of future increased dry spell durations but medium projection magnitude confidence, in light of the difficulty in accurately simulating the length of specific drought-causing atmospheric conditions (e.g. individual high-pressure blocking systems) in future climate model predictions.

| | | | |
|---|---|---|---|
| **Information source** | Climate Projections for the Cowichan District | | |
| **Information description** | Downscaled climate model projections of the Cowichan region south of Nanaimo were used to estimate changes in persistent dry spell conditions | | |
| **Representative climate metric** | Dry spell duration (days) for RCP8.5 scenario; This measure refers to the longest continuous stretch with each day receiving less than 1mm of rain per day | | |
| **Representative location** | Cowichan District (entire district) | | |
| **Baseline/projected change** | **Baseline** | **2050s** | **2080s** |
| | 22 days (1971-2000) | 26 days | 29 days |
| **Projection direction confidence** | HIGH | | |
| **Projection magnitude confidence** | MEDIUM | | |

## SNOWFALL

*Potential impacts: Spring freshet changes, water shortages*

We used precipitation as snow over the annual period (with a natural weighting towards the winter season) as a proxy for the presence of persistent snow occurrence in the Nanaimo region. In practice, snow does not typically linger in Nanaimo proper, although higher elevation inland mountainous areas do accumulate significant snowpack. Changes to this snowpack can potentially cause significant implications for spring freshet and summer water supply. We attach high direction and magnitude confidence to a prediction of strongly decreasing snow presence. More detailed snowpack analysis would better constrain complex elevation impacts on the hydrological response to inland snow melt.

| | | | |
|---|---|---|---|
| **Information source** | ClimateBC V5.60 | | |
| **Information description** | ClimateBC uses a combination of high-resolution provincial temperature and precipitation climatologies and global climate model simulations to provide an estimate of changes to the fraction of precipitation that falls specifically as snow | | |
| **Representative climate metric** | Annual precipitation as snow (mm) for RCP8.5 scenario | | |
| **Representative location** | City of Nanaimo Centre | | |
| **Baseline/projected change** | **Baseline** | **2050s** | **2080s** |
| | 32 mm (1976-2005) | 13 mm | 7 mm |
| **Projection direction confidence** | HIGH | | |
| **Projection magnitude confidence** | HIGH | | |

## WIND GUSTS

*Potential impacts: Storm surge, tree/vertical infrastructure fall-induced damage or damaged to neighbouring structures*

We recommend caution when applying the projected wind gust change projections due to medium/low direction/magnitude confidence. Our suggestion for caution stems from large uncertainties in future wind projections related to difficulty in capturing atmospheric and land-atmosphere interaction dynamics and local wind microclimates. Nonetheless, an assessment of increased wind gust activity is consistent with a general expectation of higher energy atmospheric circulation in response to future warming. We recommend that the City monitor the ongoing emergence of high-resolution atmospheric model frameworks, for potential application to improved City-specific wind gust projections.

| | | | |
|---|---|---|---|
| **Information source** | Chen et al., 2014 | | |
| **Information description** | Downscaled climate model projections were analyzed to assess changes to extreme wind conditions | | |
| **Representative climate metric** | % change in annual frequency of hourly 70 km/h wind gusts for RCP8.5 scenario | | |
| **Representative location** | Pacific Coastal Region | | |
| **Baseline/projected change** | **Baseline** | **2050s** | **2080s** |
| | 0% | 20% | 25% |
| **Projection direction confidence** | MEDIUM | | |
| **Projection magnitude confidence** | LOW | | |

## FREEZING CONDITIONS

*Potential impacts: Agricultural activity, building heating requirements, transportation infrastructure and safety*

High projection direction and magnitude confidence is given to a projection of less freezing degree days. Note that this metric is highly elevation-dependent, such that higher elevation City of Nanaimo areas could experience significantly different magnitudes than lower elevation areas. Nonetheless, the direction of change, towards fewer freezing degree days, will be the same in both cases.

| | | | |
|---|---|---|---|
| **Information source** | ClimateBC V5.60 | | |
| **Information description** | ClimateBC uses a combination of high-resolution provincial temperature and precipitation climatologies and global climate model simulations to provide an estimate of changes to cold winter conditions | | |
| **Representative climate metric** | Freezing degree days, the number of degrees that a day's average temperature is below 0 °C, summed over all the days in a year | | |
| **Representative location** | City of Nanaimo Centre | | |
| **Baseline/projected change** | **Baseline** | **2050s** | **2080s** |
| | 92 degree days (1981-2010) | 49 degree days | 30 degree days |
| **Projection direction confidence** | HIGH | | |
| **Projection magnitude confidence** | HIGH | | |

## GROWING SEASON LENGTH

*Potential impacts: Agricultural productivity*

High projection direction and magnitude confidence is given to increasing growing season length, which is already relatively extensive in Nanaimo due to its low elevation maritime location. Note that this metric is highly elevation-dependent, such that higher elevation City of Nanaimo areas could experience significantly different growing season lengths than lower elevation areas. Nonetheless, the direction of change towards fewer frost days will be the same in both cases.

| | | | |
|---|---|---|---|
| **Information source** | Climate Projections for the Cowichan District | | |
| **Information description** | Downscaled climate model projections of the Cowichan region, south of Nanaimo, were used to assess changes to the length of the full growing season | | |
| **Representative climate metric** | Growing season length, the number of days per year between the first and last six-day periods with daily average temperatures above/below 5 °C | | |
| **Representative location** | Cowichan District "Developed Areas" (low elevation, coastal) sub-region | | |
| **Baseline/projected change** | **Baseline** | **2050** | **2100** |
| | 262 (1971-2000) | 322 | 349 |
| **Projection direction confidence** | HIGH | | |
| **Projection magnitude confidence** | HIGH | | |

## EXTREME HEAT EVENTS

*Potential impacts: Heat stress, health impacts, infrastructure resilience, water quality*

High projection direction and magnitude confidence is given to increasing number of days above 25 °C. Note that this metric is highly elevation-dependent, such that higher elevation City of Nanaimo areas could experience significantly different numbers of days above 25 °C than lower elevation areas. Nonetheless, the direction of change, towards increasing warm summer days, will be the same in both cases.

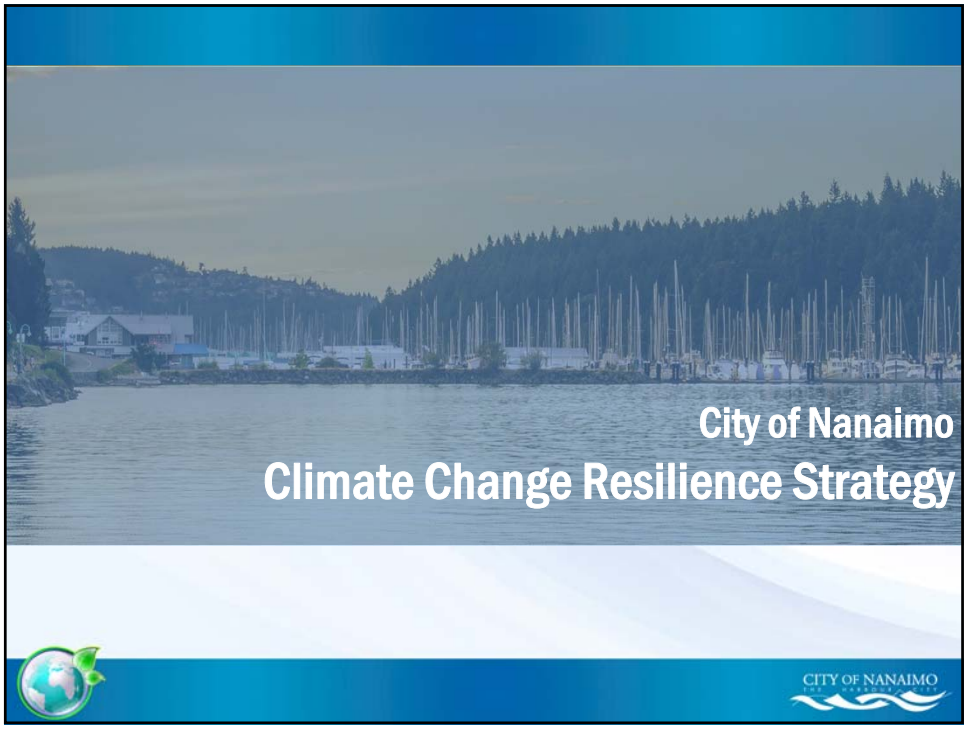
| | | | |
|---|---|---|---|
| **Information source** | Climate Projections for the Cowichan District | | |
| **Information description** | Downscaled climate model projections of the Cowichan region, south of Nanaimo, were used to assess the number of particularly warm summer days | | |
| **Representative climate metric** | Days per year above 25 °C | | |
| **Representative location** | Not listed | | |
| **Baseline/projected change** | **Baseline** | **2050s** | **2080s** |
| | 23 (1971-2000) | 54 | 78 |
| **Projection direction confidence** | HIGH | | |
| **Projection magnitude confidence** | HIGH | | |

## SUMMER WARMTH

*Potential impacts: Building cooling requirements, agricultural productivity*

High projection direction and magnitude confidence is given to a projection of increasing cooling degree days, which provide an integrated measure of summer warmth that relates closely to building air conditioning energy requirements. Note that this metric is highly elevation-dependent, such that higher elevation City of Nanaimo areas could experience significantly different magnitudes than lower elevation areas. Nonetheless, the direction of change towards greater numbers of cooling degree days will be the same in both cases.

| | | | |
|---|---|---|---|
| **Information source** | ClimateBC V5.60 | | |
| **Information description** | ClimateBC uses a combination of high-resolution provincial temperature and precipitation climatologies and global climate model simulations to provide an estimate of changes to the number and intensity of warm summer days that typically require building cooling | | |
| **Representative climate metric** | Number of degrees that a day's average temperature is above 18 °C, summed over all the days in a year, used as a metric of building cooling requirements. | | |
| **Representative location** | City of Nanaimo Centre | | |
| **Baseline/projected change** | **Baseline** | **2050** | **2100** |
| | 118 degree days (1981-2010) | 323 degree days | 537 degree days |
| **Projection direction confidence** | HIGH | | |
| **Projection magnitude confidence** | HIGH | | |




## Project Overview

Timeline:

- 2018: FCL Study (Associated Engineering)
- 2019/20: Resiliency Strategy (Integral)

Objectives:

- Identify expected and current climate change impacts in the city
- Identify City actions to protect residents and municipal assets.

## Climate Mitigation versus Adaptation

Mitigation: Actions taken to reduce the emission of GHGs into the atmosphere

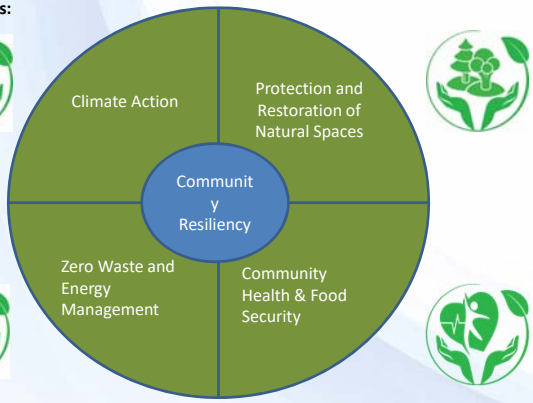
- Community Sustainability Action Plan (2012)
- Nanaimo 2050 Climate Action Plan (2020)

Adaptation: Actions to anticipate and reduce the negative impacts of climate change and take advantage of opportunities

- Climate Change Resilience Strategy

CITY OF NANAIMO

**Environmental Framework Core Principles:**




CITY OF NANAIMO

## Consulting Team

| | |
|---|---|
| Lisa Westerhoff | - Principle |
| Tamsin Mills | - Principle |

INTEGRAL GROUP

with Tamsin Mills Resilience Consulting

Associated Engineering

DIAMOND HEAD

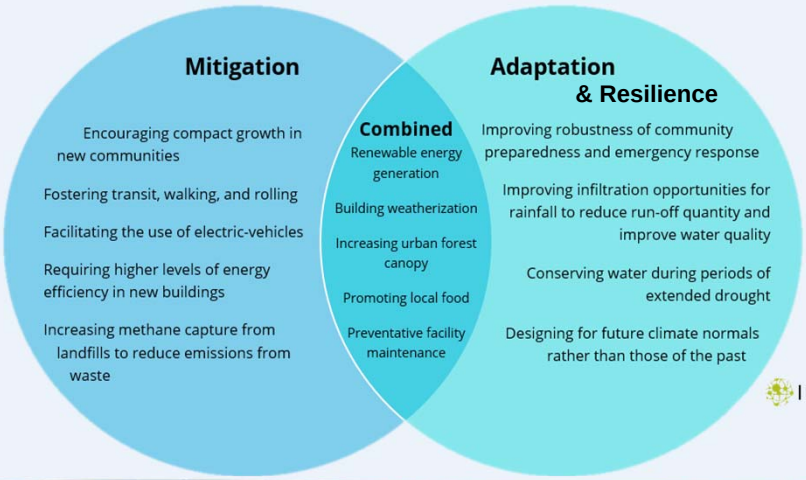
pacificablue consulting

CITY OF NANAIMO

Tamsin Mills and Lisa Westerhoff

# CITY OF NANAIMO CLIMATE CHANGE RESILIENCE STRATEGY

## Responding to Climate Change

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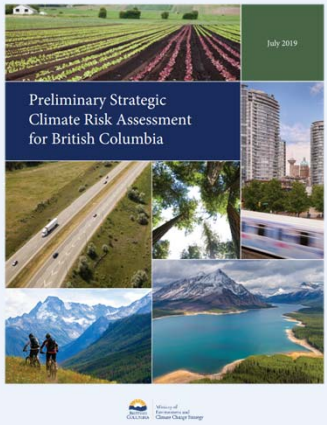
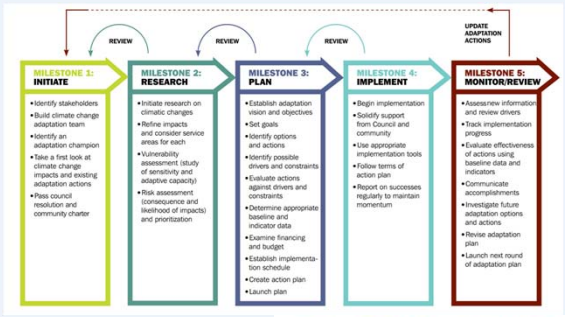
## Responding to Climate Change






## Assessing Risks to Climate Change




ICLEI Local Governments for Sustainability

## Our Process


INTEGRAL

## Our Process

**Climate Projections**

We reviewed **projections** of global climate change downscaled to Nanaimo

| TEMPERATURE CHANGES | Baseline | 2050 | 2080 |
|---|---|---|---|
| **Summer Extreme Temperature** Hottest day time temperature averaged over a thirty-year period | 31°C (*1971-2000*) | 34.5°C | 36.7°C |
| **Freezing Conditions** Number of degree temperature is bel days in a year | | | |
| **Growing Season L** The number of day and last six-day pe temperatures abov | | | |
| **Extreme Heat Eve** Days per year abov | | | |
| **Cooling Degree D** Number of degree temperature is abo the days in a year, cooling requiremen | | | |
| **Heating Degree D** The amount of ene buildings to comfo calculated by mult that the average da 18°C by the numb threshold | | | |

| PRECIPITATION CHANGES | Baseline | 2050 | 2080 |
|---|---|---|---|
| **Extreme Short Duration Precipitation** Maximum volume of rain that falls in one day for a 1 in 50-year return period | 106 mm (*1980-2007*) | 131 mm | 143 mm |
| **Extreme High Precipitation Over 5 Days** Maximum amount of rain over a consecutive 5-day period on an annual basis | 177 mm (*1971-2000*) | 194 mm | 218 mm |
| **Dry Spells** Longest continuous stretch with each day receiving less than 1mm of rain per day | 22 days (*1971-2000*) | 26 days | 29 days |
| **Snowfall** Annual precipitation as snow | 32 mm (*1976-2005*) | 13 mm | 7 mm |
| **EXTREME EVENTS** | **Baseline** | **2050** | **2080** |
| **Wildfire Risk (Increase in Fire Spread Days)** Fire spread days are a measure of days in which wildfire, once initiated, would expand | 1x (*1976-2005*) | 1.5-2x | 2-2.5 x |
| **High Winds** Percent change in annual frequency of hourly 70 km/h wind gusts | 0% (*1976-2005*) | 20% | 25% |

## Our Process

**Climate Projections**

**Impact Statements**

75 Impact Statements

We used projections to develop concise statements that clearly identify the climate-related **effect/hazard** and the **impact** of changes in climate

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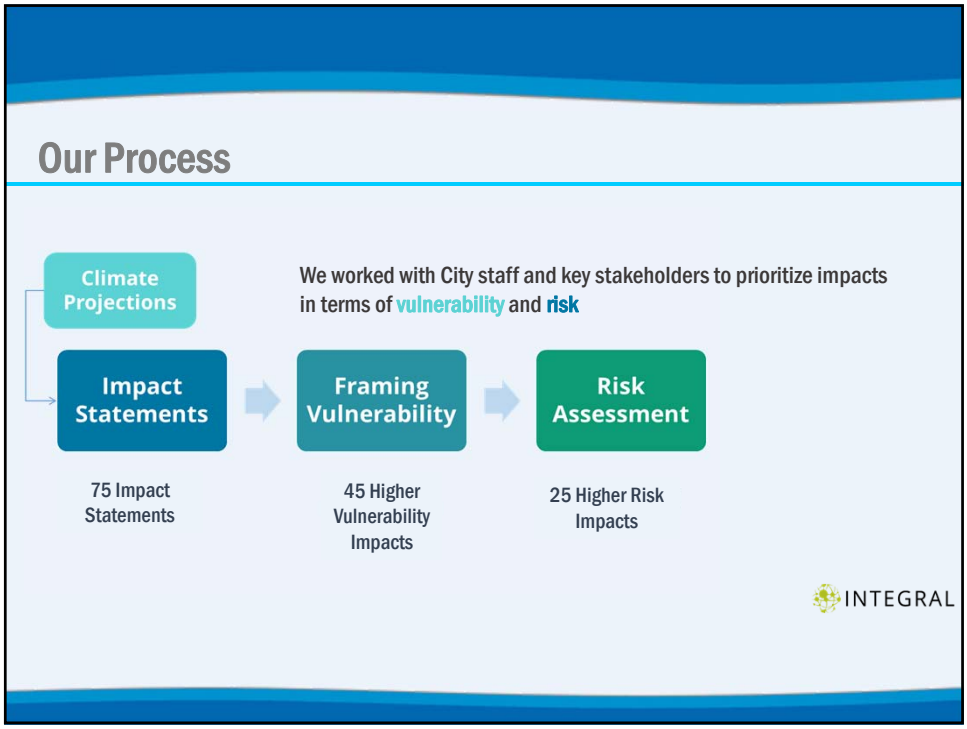
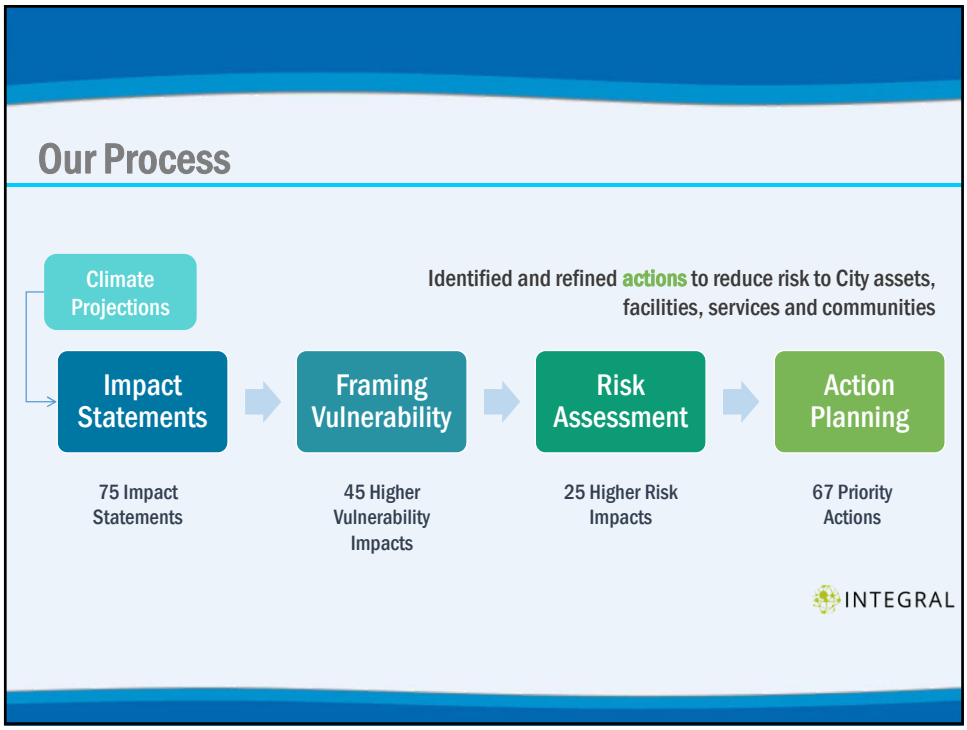

Our Process
Climate Projections
We worked with City staff and key stakeholders to prioritize impacts in terms of vulnerability and risk
Impact Statements
Framing Vulnerability
Risk Assessment
75 Impact Statements
45 Higher Vulnerability Impacts
25 Higher Risk Impacts
INTEGRAL


Our Process
Climate Projections
Identified and refined actions to reduce risk to City assets, facilities, services and communities
Impact Statements
Framing Vulnerability
Risk Assessment
Action Planning
75 Impact Statements
45 Higher Vulnerability Impacts
25 Higher Risk Impacts
67 Priority Actions
INTEGRAL

## Example High-Risk 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

## Themes & Objectives

**WATER SUPPLY**

- Prepare for more limited water supply over time and improve the resilience of the existing water supply infrastructure

**FLOODING AND DRAINAGE**

- Minimize urban and overland flooding resulting from heavy rainfall
- Prepare for the impacts of rising sea level and associated erosion and coastal flood risk

**ENVIRONMENT, PARKS AND RECREATION**

- Quantify and manage Nanaimo's urban forests to prepare for a changing climate
- Assess and restore Nanaimo's watercourse and marine ecosystems to become biologically diverse and resilient

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## Themes & Objectives

**WELL-BEING AND PREPAREDNESS**

- Work with community partners to minimize health impacts of extreme weather (higher heat days and poor air quality from wildfires) on residents
- Improve knowledge, capacity and response plans to deal with increasing risk of landslides and wildfires
- Improve community capacity and resilience following events by increasing public awareness of climate change, its expected impacts and how the community can prepare

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## Themes & Objectives

**LAND USE AND BUILDINGS**

- Incorporate resilience into new and existing facilities and support climate change resilience for homes
- Ensure development regulation and guidelines incorporate anticipated changes to climate-related natural hazards
- Prioritize hazardous areas in the City's property acquisition strategy

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## Themes & Objectives

**CORPORATE GOVERNANCE AND MAINSTREAMING**

- Improve the City's agility in responding and recovering from climate-related hazard events
- Work with neighbouring jurisdictions to support climate change resilience and limit transfer of risk across jurisdictional boundaries

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## Building on Nanaimo's Existing Efforts

- ✓ **Robust Asset Management** planning
- ✓ **Urban Forest Management Plan** recognizes climate adaptation
- ✓ Community-wide programs to increase **tree canopy**
- ✓ **Sea level rise study** already being incorporated (waterfront walkway)
- ✓ **Engineering standards** recognize heavier rainfall and account for it
- ✓ **Water** conservation measures
- ✓ **Complete Street Guidelines** address social cohesion
- ✓ **DPAs** for hazard areas and environmental protection
- ✓ **Community Wildfire Protection Plan**

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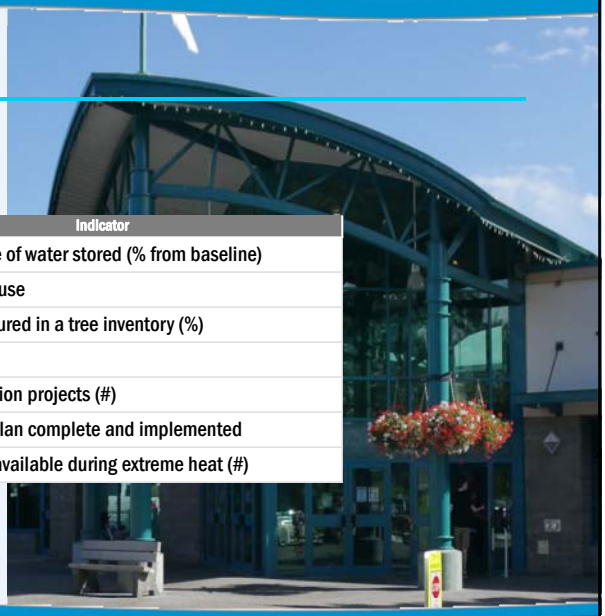
## Monitoring Progress



| Action Area | Indicator |
|---|---|
| Water Supply | Growth in volume of water stored (% from baseline) |
| | Per capita water use |
| Environment, Parks and Recreation | Urban trees captured in a tree inventory (%) |
| | Canopy cover |
| | Riparian restoration projects (#) |
| Well-being and Preparedness | Heat Response Plan complete and implemented |
| | Cooling centres available during extreme heat (#) |

## THANK YOU!

## Implementation & Monitoring

For Each Action

| Evaluation Criteria | | | | | Implementation Planning | | | |
|---|---|---|---|---|---|---|---|---|
| GHG | Resilience | Cost | Effort | Benefits | Start Date | Lead Dept. | Resources | Partners |
| Impact on GHGs | Impact on resilience | Order of magnitude | Level of effort | Complement to other priorities | Short-, medium-, long-term | City department | New or existing | Potential stakeholder partners |

CITY OF NANAIMO
THE HARBOUR CITY

# Information Report

DATE OF MEETING JUNE 22, 2020

AUTHORED BY MADELEINE KOCH, ACTIVE TRANSPORTATION PROJECT SPECIALIST, TRANSPORTATION

**SUBJECT** **REALLOCATION OF STREET SPACE**

## OVERVIEW

**Purpose of Report:**

The purpose of this report is to provide preliminary information to Council regarding the motion put forward at the Special Council Meeting, held 2020-JUN-08 to review opportunities to reallocate street space, in favour of active transportation and place making.

## BACKGROUND

Since a global pandemic and Provincial state of emergency were declared in March 2020, the City of Nanaimo has adapted and expanded many of its services in order to comply with Provincial health orders and recommendations to reduce the spread of Covid-19, including a new program to allow expanded restaurant patios, eliminating parking fees in the Downtown area. The City has also monitored how other communities have responded to the pandemic, and considered which methods could be a good fit for Nanaimo's unique context.

At their Special Council meeting on 2020-JUN-08, Council passed the following motion:

"It was moved and seconded that Council direct Staff to prepare a report with potential options for the re-allocation of roadway space for physically distancing and temporarily using streets for pandemic recovery and response; such items may include pavement to plaza initiatives, slow streets, and pop-up lanes for cycling, rolling and walking."

## DISCUSSION

One of the most important measures for reducing the spread of Covid-19 is "physical distancing" (maintaining a distance of at least 2 metres from people that are not part of one's household). Many densely populated cities with congested pedestrian realms and public transit systems have temporarily reallocated road space for active transportation use to support physical distancing. Nanaimo does not face comparable congestion issues, and the Provincial Health Officer has confirmed there is a negligible risk of transmitting the virus when briefly passing another person outdoors, even within 2 metres. However, there are other reasons to consider these types of initiatives at this time, including:

- Addressing perceived risk and anxieties about using public space;
- Experimenting with measures that could have beneficial impacts outside of the pandemic;
- Participating in what could be a global shift in how active transportation amenities and public spaces are created, used, and valued.

Council have directed Staff to provide potential options for the reallocation of roadway space for initiatives such as pavement to plaza, slow streets, and pop-up lanes for cycling, rolling and walking. The National Association of Transportation Officials (NACTO) has published a guide to using streets for pandemic recovery and response. The guide recommends six principles to guide decision making around Covid-19 response (see Attachment A for details). These include:

- Support the most vulnerable people first
- Amplify & support public health guidance
- Safer streets for today and tomorrow
- Support local economies
- Bring communities into the process
- Act now and adapt over time

The City also needs to consider the following:

- Availability of resources
- Priority connection needs
- Existing policy framework

With these principles in mind, and with consideration of recent input from the community, Staff have identified the following potential options for Council's consideration (see Attachment B for area context):

**Idea #1: Temporary cycling lanes on Departure Bay Road between Montrose Avenue and Hammond Bay Road**

This section of Departure Bay Road has often been identified as a barrier for cyclists to safely access areas of the city south of the Departure Bay area. Staff anticipate a southbound cycling lane could be created by altering street line painting.

Key Considerations:

- Not in current Financial Plan
- Design feasibility would need to be confirmed through further study
- Consultation with the Departure Bay Neighbourhood Association should be carried out
- Residents with frontage on the proposed bike lane should be notified of the proposed project

**Idea #2: "Slow Street" on Georgia Avenue from Fifth Street to Eighth Street**

Significant investments were recently made into the "Georgia Greenway" which created a multi-use path connection through Harewood Centennial Park. Further interventions on Georgia Avenue may enhance active transportation connections between the two major service centres in Harewood.

Georgia Avenue may be a good candidate for a "slow streets" initiative which would limit usage to local traffic only, and emphasize active transportation priority through awareness building, signage, and barricades to discourage through traffic where appropriate.

Key Considerations:

- Not in current Financial Plan
- Consultation with the Harewood Neighbourhood Association should be carried out
- Consultation with Georgia Avenue Elementary School should be carried out
- Residents with frontage on Georgia Avenue should be notified of the proposed project

**Idea #3: Slow streets and/ or "tactical urbanism" interventions on streets and lanes near Haliburton Street**

Haliburton Street was identified as a potential location for temporary active transportation infrastructure. Staff were unable to identify desirable short term options for enhancing active transportation infrastructure along Haliburton Street for the reasons listed under "Key Considerations" below. However, there may be opportunities to enhance the active transportation realm on the side streets and lanes that parallel Haliburton Street, by implementing "slow streets", or by supporting neighbourhood-led/ City supported tactical urbanism initiatives such as art, signage, road painting, plantings etc.

Key Considerations:

- Haliburton Street is partially classified as a Commercial Road, and partially classified as a type of Major Road by the Nanaimo Transportation Master Plan, making it an inappropriate location for a "slow street" initiative that would limit use to local traffic only.
- Haliburton Street currently does not have cycling lanes, but it does have complete sidewalks, including a grassy, treed boulevard on either side of the road, for a total of approximately 4 metres from sidewalk to curb.
- Many residents in this area use on-street parking which could impact the level of community support for reallocating parking spaces on Haliburton Street.
- This neighbourhood has a grid system that provides multiple route choices, and potential locations for temporary interventions.
- Consultation with the South End Community Association would be required to determine if there is interest in community-led tactical urbanism initiatives
- Not in current Financial Plan.

**Idea #4 Implement a Neighbourhood Grant Program**

There may be an opportunity to support tactical urbanism initiatives within neighbourhoods on an ongoing basis, through a neighbourhood grant program that would empower neighbourhoods to enhance usability and vibrancy within the neighbourhood-level public realm.

Key Considerations:

- Victoria's Neighbourhood Grant program is an example of what the City of Nanaimo could consider.
- If this is of interest, Staff can carry out more research and develop a program concept for Council's consideration.
- Development of the program would take a year or more and would require funding through future Financial Plans.

## CONCLUSION

The above ideas are a starting point for Council's consideration, and Council may wish to add additional ideas to this list. Staff will carry out a detailed feasibility and costing review for each of Council's preferred ideas, and will present a recommendation to Council at an upcoming Council meeting. It is important to note that none of the above ideas are part of the current Financial Plan, or Staff work plans, so resourcing these projects will require some creativity.

**SUMMARY POINTS**

- Staff are staying up to date on provincial recommendations for social distancing and are monitoring success stories from other municipalities with consideration for applicability in Nanaimo.
- This preliminary list of options are based on recent input from the community, and a set of principles recommended by the National Association of Transportation Officials
- Next steps will include evaluating the feasibility of each idea based on design considerations, community interest, availability of funding, and Staff resources.

**ATTACHMENTS**

Attachment A – NACTO Principles to Guide COVID-19 Response & Recovery
Attachment B – Context Maps

| **Submitted by:** | **Concurrence by:** |
|---|---|
| Madeleine Koch<br>Active Transportation Project Specialist, Transportation | Poul Rosen<br>Director, Engineering |

# Principles to Guide COVID-19 **Response & Recovery**

Given the serious and acute impacts of COVID-19, cities should establish principles to guide investments and decision making. Each city's principles should be grounded in local context, history, and need, and should be shared publicly, as well as across departments and partner organizations. Below is a **sample approach** that includes six principles that could be used to inform ongoing response and recovery phases.

## 1 Support the most vulnerable people first.

COVID-19 is amplifying existing racial and socioeconomic inequities, and is disproportionately impacting society's most vulnerable. Planners and decision makers should consider systemic inequities, unequal levels of risk and exposure, and disparate financial and social resources available to their residents, and work to ensure that support is provided first to the people who need it most.

## 2 Amplify & support public health guidance.

Physical distancing is a core public health strategy to reduce the transmission and potential resurgence of COVID-19 outbreaks. In particular, increasing the amount of outdoor space available to people can make it easier for them to comply with public health guidance for longer periods of time, aiding in efforts to reduce the spread of the virus. As cities move into long-term recovery phases, streets offer unique opportunities to foster public health and improve health outcomes for everyone.

## 3 Safer streets for today and tomorrow

Especially during periods of COVID-19 outbreak, essential workers need to travel and must be able to do so safely. Emergency street changes must ensure that vehicles travel at safe speeds, even with fewer vehicles on the road. As stay at home restrictions ease, trips will increase. To ensure that recovery does not come with economy-choking gridlock and increased traffic fatalities and carbon emissions, cities must prioritize streets for public transportation, cycling, and walking today.

## 4 Support local economies.

Stores, restaurants, markets, and schools and daycares are essential to our economic health. Unemployment rates have increased dramatically and local businesses have weathered devastating impacts. Ensuring that businesses can re-open safely and that people have job opportunities is key to our overall recovery. As public health restrictions ease, cities must ensure that street design supports economic policy goals by providing space for businesses, schools, and institutions to safely re-open. Without this, broad economic recovery may not be achieved.

## 5 Bring communities into the process.

The rapid project implementation that is necessary during emergency, stabilization, and recovery requires open and frequent communication, transparent decision making with clear metrics and timelines, established channels for feedback, and regular coordination with communities and community groups. Ensuring the voices of a wide variety of local stakeholders is essential to project development and implementation. Local groups can provide key information to make projects better and help disseminate information wider and deeper than government channels typically can.

## 6 Act now and adapt over time.

Action is needed now. Adopting an open and iterative approach to transportation planning will allow for rapid implementation, continuous feedback, and course correction that will enable cities to respond better and faster to future COVID-19 outbreaks. Quick-build strategies today can inform lasting improvements over the course of recovery and beyond. Regular dialogue with local groups can provide essential on-the-ground information about how efforts are working and what should be modified over time.

**Idea #1 Context**

**Temporary Cycling Lane on Departure Bay Road**

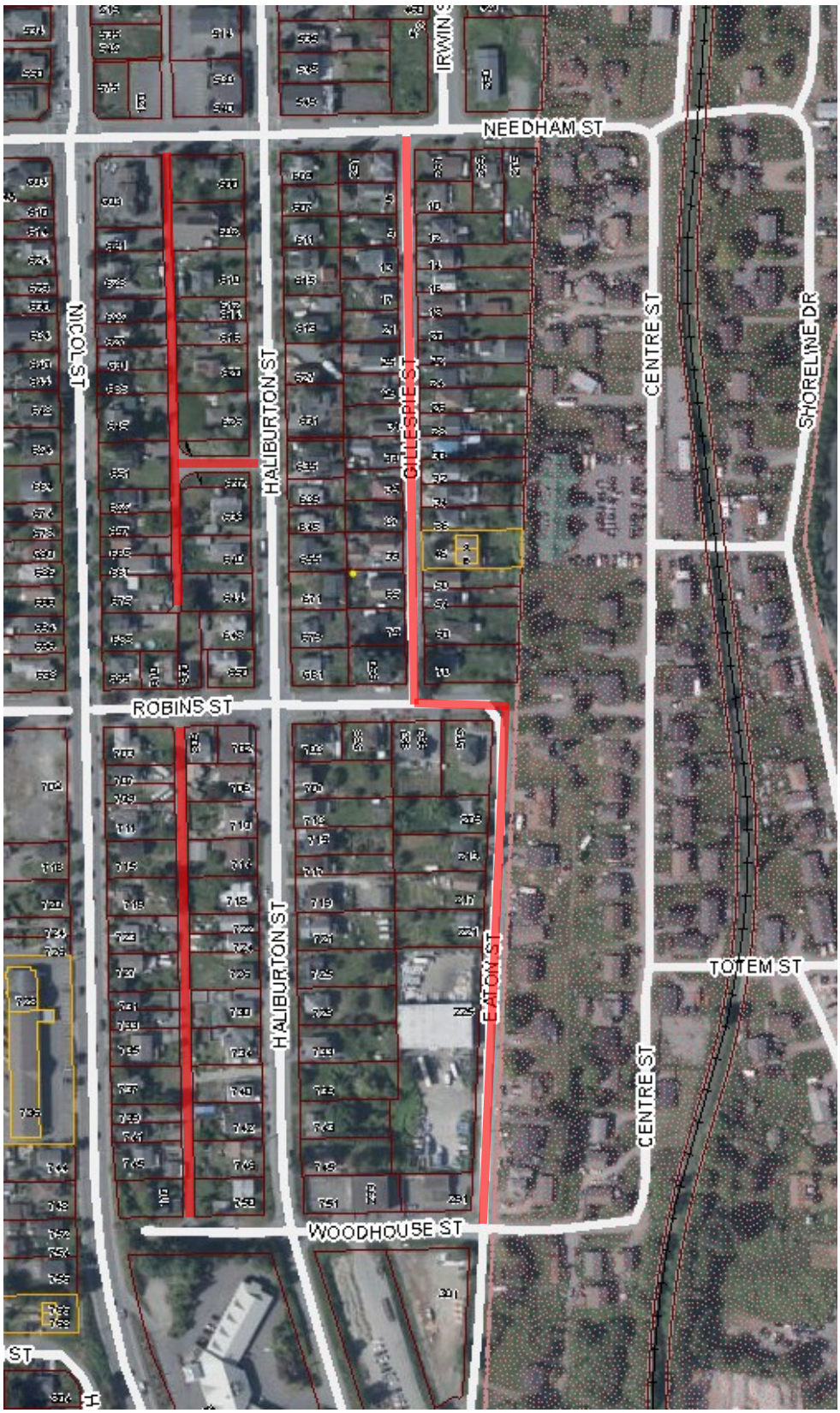
**Idea #2 Context**

**"Slow Street" on Georgia Avenue**

**Idea #3 Context**

**Potential Locations for Temporary Interventions**

Haliburton Neighbourhood South of Needham Street



**Idea #3 Context Continued**

**Potential Locations for Temporary Interventions**

Haliburton Neighbourhood North of Needham Street

CITY OF NANAIMO
THE HARBOUR CITY

# Information Report

File Number 5460.06.33

DATE OF MEETING JUNE 22, 2020

AUTHORED BY BARBARA THOMAS, ASSISTANT MANAGER, TRANSPORTATION

**SUBJECT DEPARTURE BAY ROAD SUMMER TRAFFIC CALMING UPDATE**

## OVERVIEW

**Purpose of Report:**

To provide Council with information about the planned design for the seasonal traffic calming on Departure Bay Road, near the beach.

## BACKGROUND

The City of Nanaimo Traffic Calming Guideline (Attachment A) was created almost 20 years ago to address road safety concerns. The document focuses mainly on managing speed and/or volume concerns within neighbourhoods, however the process outlined within it, has the ability to adapt to the growing and changing needs of the community. The Traffic Calming Guideline has a clear reluctance to applying traffic calming on major roads, however through strategic thinking and careful application there are still ways to achieve the same desired outcome of reduced speeds and increased safety. The primary concern with applying traffic calming on major roads is the introduction of excessive delay to those that have no other choice but vehicle movement, such as transit, emergency services, or goods movement.

In a conventional sense, traffic calming includes signage, horizontal deflections, or vertical deflections. Features like crosswalks are not suitable for traffic calming as they create an expectation for drivers that pedestrians will be present. In high pedestrian areas (all year round) this is appropriate and can enhance road safety. However if crosswalks are installed in areas that do not have high pedestrian demand or only have seasonal pedestrian demand, drivers will become desensitized to the signage and road markings which will ultimately degrade road safety. If traffic calming is to be considered on a major road the preferred options are those that either shrink the travel lane or give the appearance of shrinking the travel lane. This is the least intrusive approach with the greatest impact. Vertical defections or speed humps are not recommended on commuter roads as they tend to cause more problems than they solve.

In 2019, members of the Departure Bay Neighbourhood Association (DBNA) approached the City with a request to seek out a solution to their concerns with traffic patterns on Departure Bay Road. They felt that the speeds were excessive, particularly during the busy summer months with pedestrian and cyclist activity increases. In response to this, Staff proceeded with a trial speed reduction in the beach area. As noted in the December Staff report to Council, the results of this work were ineffective and staff reported that there would be a review and more aggressive approach proposed for the summer of 2020.

## DISCUSSION

In May of 2020, another correspondence was submitted to the City on behalf of the DBNA reiterating concerns with traffic on Departure Bay Road (Attachment B). Within this letter there were a number of suggested action items. Some of the suggestions align with options staff were already considering while others were not appropriate and could not be supported by staff. By this time Staff were already in the process of preparing a plan which included modular traffic barriers which had already proven to be effective as trial or temporary traffic calming by the City of Calgary.

Staff are recommending to move forward with the installation of the Calgary style traffic calming curb because of its ease of use, effectiveness, and adaptability. A photo of the curb in use along the shoulder of a roadway is shown below in Figure 1.

**Figure 1. Traffic Calming Curb in Use**

The planned locations of the traffic calming curbs are at each of the crosswalks on this stretch of Departure Bay Road. The three crosswalks are shown below in Figure 2. Staff anticipate the use of three locations, closely spaced, will have the desired effect of slowing down traffic driving through the area.


**Figure 2. Locations of Crosswalks on Departure Bay Road**

The initial version of the design will include pairs of traffic calming curbs on the centreline at each crosswalk. This layout is shown schematically in Figure 3.

**Figure 3. Layout of Crosswalk with Traffic Calming Curbs**

The seasonal traffic calming is proposed to be installed after informing the neighbourhood and refining the design details. Once installed, it will be monitored for its effectiveness through the collection and comparison of traffic speed and volume data. Should the initial layout not achieve the desired outcome, the layout can be modified until traffic speeds are adequately managed. Modifications could include the addition of more traffic calming curbs and/or adding other features such as delineators epoxied to the asphalt or other in road signage. The traffic calming will remain in place until October 2020.

In addition to the speed concerns raised by the DBNA, there were also request for other enhancements to the pedestrian crossings. In road crosswalk signs will be included as part of this work, however staff have an existing process for prioritizing pedestrian activated beacons and would need to gather more information before making a recommendation as to whether or not they would be appropriate at the requested locations.

## CONCLUSION

It is anticipated traffic calming curbs on approach to each crosswalk will provide the desired speed reduction in traffic. Traffic volume and speed data will be collected regularly to evaluate the effectiveness of the traffic calming layout. If necessary, further modifications may be installed to achieve the desired result. The traffic calming will remain in place until mid-October 2020.

## SUMMARY POINTS

- Summer traffic calming will be installed on Departure Bay Road after informing the neighbourhood.
- Vehicular speeds and volumes will be monitored and the traffic calming features will be adjusted as necessary to be effective.
- The traffic calming will be in place until mid-October 2020.

## ATTACHMENTS:

Attachment A – Letter from Departure Bay Neighbourhood Association

| **Submitted by:** | **Concurrence by:** |
|---|---|
| Barbara Thomas<br>Assistant Manager, Transportation | Poul Rosen<br>Director, Engineering |

# Departure Bay Neighbourhood Association

1470 Bay Street, Nanaimo, BC V9S 2Z7

May 27, 2020

Mayor and Council
City of Nanaimo
455 Wallace St. Nanaimo, BC
V9R 5J6

mayor&council@nanaimo.ca

Departure Bay is unique in Nanaimo, being a popular beachfront and recreational area transected by a busy commuter, transit and emergency response route. It is important that the road allows these competing uses to safely exist. Unfortunately, many drivers travel through this area with little regard for speed limits.

We have written on previous occasions reporting the results of vehicle speed monitoring on Departure Bay Road near Kin Hut. The speed limit at this location is 50 km/h with a precautionary limit of 30 km/h due to the presence of the beach, public park and children's playground. The average speed for all measurements by the DBNA is 53.3 km/h. The highest velocity measured is 97km/h and the number of drivers recorded following the precautionary limit is 4 out of 580. This stretch of road is clearly dominated by vehicles.

Last summer the city traffic department conducted a 40 km/h trial speed limit which resulted in reductions of 1 and 3 km/h depending upon direction of travel. Monitoring done by the DBNA showed similar reductions. The trial was considered a failure.

A trial done by the DBNA consisting of placing traffic cones at the ends and in the middle of the Loat Street crosswalk. We reported average speed reductions of 4 and 7 km/h. On the basis of this last trial the DBNA concluded it is unlikely traffic will slow down unless significant calming measures are employed. The city traffic department has come to a similar conclusion. Installing calming modifications along this waterfront section needs to consider impacts on vehicle users as well as cyclists and pedestrians

We have spent time reviewing calming measures implemented in other areas. Many are simple, inexpensive and can be installed very quickly while others require design by transportation professionals. The following is a list of traffic calming installations we are requesting be implemented along this waterfront road:

- Install precautionary signs mid road at the three existing crosswalks, similar to Fitzwilliam St.
- Install flexible lane dividers down the middle of the road similar to Estevan Road
- Extend curbing at all crosswalks similar to Commercial St.
- Paint a 3 to 4 ft wide "curbside lane" in each direction, full width and preferably green
- Install a fourth crosswalk at the Bay St intersection
- Install pedestrian-controlled warning lights at all crosswalks

Departure Bay Neighbourhood Association

1470 Bay Street, Nanaimo, BC V9S 2Z7

Also, for consideration:

- Paint the entire 400m road length as a crosswalk
- Install raised crosswalks at Loat and Bay Streets
- Install a concrete divider down the middle of the road

The Departure Bay Community Plan identifies this section of road as a residential, commercial and recreational area. Installing the above will slow traffic making this roadway less dominated by motor vehicles. Making this roadway more pedestrian friendly is consistent with this plan.

We trust you will give this request fair consideration.

On behalf of the departure Bay Neighbourhood Association

Respectfully

C. A.(Chuck) Easton

# Governance and Priorities Committee Agenda Planning

| 2020 GPC Dates | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Jan. | Feb. | Mar. | Apr. | May | Jun. | Jul. | Aug. | Sept. | Oct. | Nov. | Dec. |
| 20 | 10 | 9 | | 11 | 8 | 13 | | 14 | 5 | 9 | 14 |
| 27 | 24 | | | 25 | 29 | 27 | | 28 | 26 | 23 | |

## JANUARY

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January 6 – Meeting cancelled
January 20 – Special GPC

## FEBRUARY

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## MARCH

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March 23 – Sp. Council

## APRIL

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April 2 – Meeting Cancelled
April 6 – Meeting Cancelled
April 20 – Sp. Council

## MAY

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## JUNE

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## JULY

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## AUGUST

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## SEPTEMBER

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## OCTOBER

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## NOVEMBER

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## DECEMBER

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| 27 | 28 | 29 | 30 | 31 | | |

- Governance and Priorities Committee Meeting
- Statutory Holiday
- FCM Annual Conference (Toronto)
- Council Meeting
- UBCM Convention (Victoria)
- AVICC Convention (Nanaimo)
- Public Hearing (Special Council Meeting)

Updated: 2020-JUN-17

# Governance and Priorities Committee Agenda Planning

Upcoming Topics

| MEETING DATE | TOPIC | BACKGROUND | FORMAT | OUTCOMES |
|---|---|---|---|---|
| June 22, 2020 ***Special Council Meeting*** | ReImagine Nanaimo: Demographics and Land Inventory/Capacity Analysis Summary | | | |
| June 22, 2020 ***Special Council Meeting*** | Climate Change Resilience Strategy | | | |
| June 22, 2020 ***Special Council Meeting*** | Reallocation of Street Space | | | |
| July 13, 2020 ***Special Council Meeting*** | Governance:<br>• Question period<br>• Correspondence<br>• Proclamations<br>• Other | Deferred from the 2020-JUN-08 Special Council meeting.<br><br>Question period currently on hold due to COVID-19 and Ministerial Order No. M139. | - Round table discussion | Direction to Staff on any changes Council may wish to see implemented in regards to governance processes. |
| July 13, 2020 ***Special Council Meeting*** | Council resolution update | To provide Council an update on the status of Council resolutions/action items | - Staff report | |
| July 13, 2020 ***Special Council Meeting*** | Reopening Strategy/Plan | To provide information on the reopening strategy for City facilities/programs in the wake of COVID-19 | - Information report<br>- Round table | |
| July 13, 2020 ***Special Council Meeting*** | Engineering walkable streets (continued) | | | |

# Governance and Priorities Committee Agenda Planning

| | | | | |
|---|---|---|---|---|
| July 27, 2020<br>***Special Council Meeting*** | Social Procurement | Next steps for Council's review of and details for the Procurement Policy with an increased focus on social, environmental and ethical elements for City purchases that specifically align with the desired outcomes of the Strategic Plan | - Review of first session<br>- Presentation by Staff and Consultant<br>- Round table discussion<br>Determine a more narrow scope of desired social procurement criteria. | Clear direction on updates required to the Procurement Policy with social procurement criteria built in. |
| July 27, 2020<br>***Special Council Meeting*** | Capital projects | | | |
| July 27, 2020<br>***Special Council Meeting*** | Sports venues | | | |
| *(investigating options to engage w/ neighbourhood associations through the use of Get Involved Nanaimo or other form of online communication)* | Neighbourhood Associations – Part 2 | Identified as a priority topic at the GPC meeting held 2020-JAN-20 (session 2 of 2) | - Invite chairs of some associations to attend and be available for the discussion.<br>- Identify what resources are available<br>- Presentation on how neighbourhood associations work in the City and what expectations they have of Council (i.e.: how do they want to be engaged?) | - Formalized process for recognizing neighbourhood associations<br>- Create a new policy and criteria for neighbourhood associations moving forward including how they can be officially recognized.<br>- Defer any financial implications to Finance and Audit Committee |
| *TBD* | Arts & Culture | Brought forward through Council discussion and motion made at the GPC meeting held 2019-OCT-7 | - Invite members from the Arts & Culture community to discuss engagement and communication<br>- Staff report and presentation outlining the process for issuing grants related to the arts and providing an update to the Cultural Plan for a Creative Nanaimo<br>- Round Table discussion | - Discussion<br>- Recommendation to Council or possibly defer to other committee (ie – budget implications deferred to Finance and Audit) |

# Governance and Priorities Committee Agenda Planning

| | | | | |
|---|---|---|---|---|
| *TBD* | Women's Participation on City of Nanaimo Task Forces and Childminding Reimbursement for members of City Committees | Identified as a priority topic at the GPC meeting held 2020-FEB-10 | | |
| *TBD* | Transit | | - Tailored City of Nanaimo conversation around transit delivery (City of Nanaimo residents' perspective and impacts to residents and the City).<br>- How to encourage transit use from a City perspective.<br>- Invite a member of RDN staff speak to Council at the meeting and provide an update of their planning process.<br>- Bus stop locations that make sense<br>- Conversation around covered bus stops<br>- Number of hours that transit operates | - An ask, or assessment, from the City's perspective sent to the RDN after a decision is made at the city level with a recommendation for consideration at the RDN. |
| *TBD* | Crosswalk Safety | Identified as a priority topic at the GPC meeting held 2020-FEB-10 | Crosswalks:<br>-report about flashing lights at crosswalks (are they beneficial, etc.)<br>-Education and information around increasing pedestrian safety at crosswalks<br>-Costs around the lighting at crosswalks. | Could come as a next step:<br>-Professional best practice on what should be at crosswalks and what works best and why, etc.<br>Outcome: -a report that outlines all of the pros and cons of crosswalk lighting and pedestrian safety.<br>Options/costs |

# Governance and Priorities Committee Agenda Planning

Future GPC Topics

- Capital planning process
- 1 Port Drive
- Sports venues and tourism strategies
- Vancouver Island Regional Library overview
- Election signage
- Homelessness and addictions

Deferred to Finance and Audit Committee

- Fees and Charges

# Governance and Priorities Committee Agenda Planning

Previous Topics Covered

- Neighbourhood Associations – Part 1
- Effective Advocacy Strategies
- Coordinated Strategic Policy Review 2020-2021
- Single Use Checkout Bags
- Civic Facilities – conditions, issues, plans and objectives
- Energy and Emissions Management Program
- Advocacy – Part 2
- Coordinated Strategic Policy Review 2020-2021 – Public Engagement Strategy
- Manual of Engineering Standards and Specifications Revision Update

# Upcoming GPC/Special Council Topics

## July 13

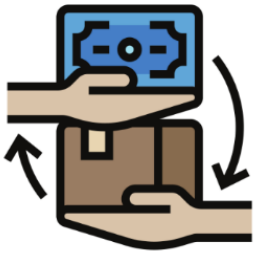
1. Governance
   - Question Period
   - Correspondence
   - Proclamations
   - Other

2. Council Resolution Update (action items)
   - Closed motions
   - Open motions

3. Reopening Strategy/Plan

4. Engineering Walkable Streets (continued)

## July 27



1. Social Procurement

2. Capital Projects

3. Sports Venues