City of Maple Ridge

COUNCIL WORKSHOP AGENDA
December 8, 2020
11:00 a.m.
Virtual Online Meeting including Council Chambers

The purpose of the Council Workshop is to review and discuss policies and other items of interest to Council. Although resolutions may be passed at this meeting, the intent is to make a consensus decision to send an item to Council for debate and vote or refer the item back to staff for more information or clarification. The meeting is live streamed and recorded by the City of Maple Ridge.

REMINDER: Council Meeting – December 8, 2020 at 7:00 p.m.

1. APPROVAL OF THE AGENDA

2. ADOPTION OF MINUTES

- Council Workshop Meeting – November 10, 2020
- Special Council Workshop Meeting – November 17, 2020

3. PRESENTATIONS AT THE REQUEST OF COUNCIL

4. UNFINISHED AND NEW BUSINESS

4.1 Employment Lands: Consultation Outcomes and Possible Next Steps for the Yennadon Lands

Staff report dated December 8, 2020 recommending that the Yennadon Lands Concept #2 - Neighbourhood Innovations Village be endorsed and that an Official Community Plan Amending Bylaw to designate the Yennadon Lands for Employment be prepared.

4.2 Metro Vancouver Regional Industrial Land Strategy

Staff report dated December 8, 2020 recommending that the Metro Vancouver Regional Industrial Lands Strategy recommendations be endorsed and the resolution be forwarded to Metro Vancouver.

4.3 Review of Residential Water Metering - Background and Considerations

Staff report dated December 8, 2020 recommending options for residential water metering to be analyzed by using Metro Vancouver's triple-bottom-line analysis tool.

4.4 Public Hearing Policy No. 3.17

Staff report dated December 8, 2020 recommending that Public Hearing Policy No. 3.17 to provide guidance and clarity on the process and correspondence submission for Public Hearing be adopted.

5. CORRESPONDENCE

The following correspondence has been received and requires a response. Staff is seeking direction from Council on each item. Options that Council may consider include:

a) Acknowledge receipt of correspondence and advise that no further action will be taken.
b) Direct staff to prepare a report and recommendation regarding the subject matter.
c) Forward the correspondence to a regular Council meeting for further discussion.
d) Other

Once direction is given the appropriate response will be sent.

5.1 Bill C-213 *The Canada Pharmacare Act*

Email dated November 26, 2020 from Peter Julian, MP, New Westminster-Burnaby seeking formal endorsement of Bill C-213, the *Canada Pharmacare Act.*

6. BRIEFING ON OTHER ITEMS OF INTEREST / QUESTIONS FROM COUNCIL

7. MATTERS DEEMED EXPEDIENT

8. NOTICE OF CLOSED COUNCIL MEETING

The meeting will be closed to the public pursuant to Sections 90 (1) and 90 (2) of the *Community Charter* as the subject matter being considered relates to the following:

Section 90(1)(a) Personal information about an identifiable individual who is being considered for a position as appointed by the municipality.

Section 90(1)(e) The disposition of land if the council considers that disclosure might reasonably be expected to harm the interests of the municipality.

Any other matter that may be brought before the Council that meets the requirements for a meeting closed to the public pursuant to Sections 90 (1) and 90 (2) of the *Community Charter* or *Freedom of Information and Protection of Privacy Act.*

9. ADJOURNMENT

APPROVED BY:

DATE: Dec 3/2020

PREPARED BY: A Sauvt

DATE: Dec 3, 2020

CHECKED BY: Eni Mark

DATE: Dec 3/20

2.0 Adoption of Minutes

City of Maple Ridge

COUNCIL WORKSHOP MINUTES

November 10, 2020

The Minutes of the City Council Workshop held on November 10, 2020 at 11:02 a.m. virtually and hosted in Council Chambers at City Hall, 11995 Haney Place, Maple Ridge, British Columbia for the purpose of transacting regular City business.

PRESENT	*Appointed Staff*
Elected Officials	A. Horsman, Chief Administrative Officer
Mayor M. Morden	D. Boag, General Manager Parks, Recreation & Culture
Councillor J. Dueck	C. Carter, General Manager Planning & Development Services
Councillor K. Duncan	C. Crabtree, General Manager Corporate Services
Councillor C. Meadus	S. Nichols, Corporate Officer
Councillor G. Robson	D. Pollock, General Manager Engineering Services
Councillor R. Svendsen	T. Thompson, Chief Financial Officer
	Other Staff as Required
ABSENT	C. Goddard, Director of Planning
Councillor A. Yousef	V. Richmond, Director of Parks & Facilities
	A. Rieu, Planner 1
	M. Vogel, Computer Support Specialist
	L. Zosiak, Manager of Community Planning
	Also in Attendance
	G. Miller, Pitt Meadows Airport Society

Note: These Minutes are posted on the City Web Site at www.mapleridge.ca

Note: Due to COVID Councillor Duncan participated virtually.

1. *APPROVAL OF THE AGENDA*

R/2020-439
It was moved and seconded

That the agenda of the November 10, 2020 Council Workshop Meeting be approved as circulated.

CARRIED

2. *ADOPTION OF MINUTES*

2.1 Minutes of the November 3, 2020 Council Workshop Meeting

R/2020-440
It was moved and seconded

That the minutes of the Council Workshop Meeting of November 3, 2020 be adopted as circulated.

CARRIED

3. *PRESENTATIONS AT THE REQUEST OF COUNCIL*

3.1 Pitt Meadows Regional Airport Overview

- Guy Miller, General Manager

Mr. Miller provided a two-year in review presentation and responded to questions from Council.

4. *UNFINISHED AND NEW BUSINESS*

4.1 Lougheed Transit Corridor Concept Plan

Staff report dated November 10, 2020 recommending that the Lougheed Transit Corridor Concept Plan be endorsed.

The Manager of Community Planning provided a detailed presentation and staff responded to questions from Council.

R/2020-441
Moved and seconded

That the Lougheed Transit Corridor Concept Plan, as presented in the November 10, 2020 report, as Appendix A, be endorsed.

CARRIED

4.2 Bill 15 Changes to the Agricultural Land Commission Act

Staff report dated November 10, 2020 recommending that an amendment to Fees and Charges Bylaw No. 7575-2019 to establish a fee for exclusion applications be prepared, that a Council Policy for processing of applications for exclusion from the Agricultural Land Reserve be prepared and that until a Council Policy is endorsed, applications for exclusion be evaluated and based on merits be forwarded to the Agricultural Land Commission.

A. Rieu, Planner, provided a detailed presentation and staff responded to questions from Council.

R/2020-442
Moved and seconded

1. **That staff prepare an amendment to Fees & Charges Bylaw No. 7575-2019 to establish a fee for exclusion applications; and**

2. **That staff prepare a Council Policy for the Processing of Applications for Exclusion from the Agricultural Land Reserve; and further**

3. **That as an interim measure until the above noted Council Policy is endorsed, applications for exclusion for remnant parcels, properties within a Council-endorsed area planning process or other policy based criteria will be evaluated and based on merits may be forwarded to the Agricultural Land Commission.**

CARRIED

4.3 Recreation Facilities Gap Analysis

Staff report dated November 10, 2020 providing outcomes resulting from a recreation facilities gap analysis on needed or desired facilities to better support the full spectrum of organized sports within Maple Ridge.

The Director of Parks and Facilities spoke to the staff report and provided a detailed presentation. Staff responded to questions from Council.

5. *CORRESPONDENCE*

6. *BRIEFING ON OTHER ITEMS OF INTEREST/QUESTIONS FROM COUNCIL*

8. *MATTERS DEEMED EXPEDIENT*

9. *ADJOURNMENT* – 2:00 p.m.

M. Morden, Mayor

Certified Correct

S. Nichols, Corporate Officer

City of Maple Ridge

SPECIAL COUNCIL WORKSHOP MINUTES

November 17, 2020

The Minutes of the Special Council Workshop held on November 17, 2020 at 11:00 a.m. virtually and hosted in Council Chambers at City Hall, 11995 Haney Place, Maple Ridge, British Columbia for the purpose of transacting regular City business.

PRESENT	*Appointed Staff*
Elected Officials	A. Horsman, Chief Administrative Officer
Mayor M. Morden	D. Boag, General Manager Parks, Recreation & Culture
Councillor J. Dueck	C. Carter, General Manager Planning & Development Services
Councillor C. Meadus	C. Crabtree, General Manager Corporate Services
Councillor G. Robson	S. Nichols, Corporate Officer
Councillor R. Svendsen	D. Pollock, General Manager Engineering Services
Councillor A. Yousef	T. Thompson, Chief Financial Officer
	Other Staff as Required
ABSENT	C. Goddard, Director of Planning
Councillor K. Duncan	R. Stott, Environmental Planner 2
	M. Vogel, Computer Support Specialist
	Also in Attendance
	A. Whittaker, Senior Planner and Associate, Eco Plan International

Note: These Minutes are posted on the City Web Site at www.mapleridge.ca

Note: Due to COVID Councillor Yousef participated virtually. Councillor Meadus was absent at the start of the meeting.

1. APPROVAL OF THE AGENDA

2. UNFINISHED AND NEW BUSINESS

2.1 Green Infrastructure Management Strategy Update

Staff report dated November 17, 2020 providing an introduction to a presentation to be given by Eco-Plan International.

R. Stott provided a summary presentation on the background of Council decisions to date on the topic of Green Infrastructure and introduced Ms. Whittaker.

Anne Marie Whittaker, Senior Planner & Associate, Eco Plan International, provided a detailed presentation and staff responded to questions from Council.

Mr. Stott advised that a report would be coming in the first quarter of 2021 on the findings of the internal working group and review of the City's areas.

9. **ADJOURNMENT**– 12:11 p.m.

_____
M. Morden, Mayor

Certified Correct

_____
S. Nichols, Corporate Officer

4.0 Unfinished and New Business

MAPLE RIDGE
British Columbia
mapleridge.ca

City of Maple Ridge

TO:	His Worship Mayor Michael Morden and Members of Council	MEETING DATE:	December 08, 2020
		FILE NO:	2016-195-CP
FROM:	Chief Administrative Officer	MEETING:	Workshop

SUBJECT: **Employment Lands: Consultation Outcomes and Possible Next Steps for the Yennadon Lands**

EXECUTIVE SUMMARY:

At the July 14, 2020 Council Workshop meeting, three preliminary land use concepts were presented to Council for comment and input (Appendix A). The three preliminary concepts were informed by the outcomes of the site analysis, along with Council's vision for the Yennadon Lands. The "big idea" established early on as a framework for the preliminary Concepts is to create a complete neighbourhood, where residents and future business owners can live, work and play within a five to ten minute walk or bicycle ride of their residence. In the presentation to Council, staff noted that these are preliminary, high level concepts that will likely evolve as more detailed assessments are conducted. At that meeting, Council recommended that Concept #2 – Neighbourhood Innovations Village, illustrated in the Yennadon Land Preliminary Concepts presentation, be referred to the public for comment.

Through October 2020, staff in collaboration with the consultant, conducted a consultation process that consisted of a Landowners Workshop, a Virtual Public Open House, and a Community Survey. A copy of the engagement materials and the verbatim responses are available in Appendix B. Through the consultation process, a number of key messages have come through regarding future re-designation of the Yennadon Lands. These are discussed in detail within this report but highlights include:

- Many comments question the suitability of the proposed employment land use at this location.
- Many comments in support of employment opportunities at this location.
- Many comments sharing the types of jobs, employment opportunities and community services that participants wished to see on the Yennadon Lands.
- Several responses expressed concern regarding the development impacts on the environment, aquatic and riparian health, as well as wildlife.
- Concerns were also expressed regarding infrastructure impacts and how levels of service will be managed.

It is important to acknowledge that many of the issues identified during the public consultation process may only be, or be best, addressed through the future development application process. The re-designation process, in which Area Plan policies and Development Permit Area Guidelines would be prepared, provides the time and opportunity to determine the most appropriate approach to address these issues in order to support an employment future in this area.

In the pursuit of additional employment land opportunities in Maple Ridge, the Yennadon Lands are identified as a feasible location. The re-designation of the Yennadon Lands to an employment future is anticipated to garner significant community comment. This report goes through what was heard from the various consultation activities and outlines possible next steps for Council to consider.

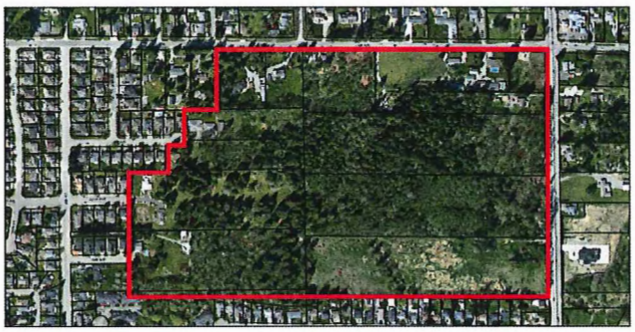
RECOMMENDATIONS:

1. **That the Yennadon Lands Concept #2 – Neighbourhood Innovations Village be endorsed; and**

2. **That staff be directed to prepare an Official Community Plan Amending Bylaw to designate the Yennadon Lands for "Employment" and to create accompanying policies and design guidelines.**

1.0 CONTEXT:

1.1 The Yennadon Lands (128th Avenue and 232nd Street)



The Yennadon Lands are comprised of 13 properties. They range in size from 0.5 ha (1.5 acres) to 4 ha (10 acres). The total land area is 25.4 hectares (63 acres). The subject properties are located outside of and adjacent to the City's Urban Area Boundary, but are largely within the Region's Urban Containment Boundary (see Section 5.1 for additional details and Appendix B for a map of the area).

The existing uses on the lands range from single-family use to vacant underutilized lands, according to BC Assessment data. The properties abut urban single-family development on the west and south boundaries; Agricultural Land Reserve to the east and north, and suburban single family lots on the north side of 128th Avenue. A historic commercial node as well as Yennadon Elementary School are located within 200-400 m of the subject properties.

Currently, the subject properties are designated Agricultural in the OCP and are zoned RS-3 (One Family Rural Residential) and RS-2 (One Family Suburban Residential). All of the properties, except one property located near the northeast corner of the area, are located outside the Agricultural Land Reserve. The majority of these properties are designated General Urban in the Regional Growth Strategy.

1.2 Suitability of the Yennadon Lands for an Employment Future

The Yennadon Lands were identified as a potential location for future employment uses in the City's Commercial & Industrial Strategy, with the Strategy recommending that planning for the additional supply of employment land should begin now in order to best satisfy future demand in an increasingly competitive region. This area aligns with the intent of the current Official Community Plan policies for inclusion as employment lands, as the lands are generally flat, have access to an arterial and collector roadway, and servicing runs adjacent to the properties.

It is noted in the Commercial & Industrial Strategy that a mixed employment campus-style business park could be a suitable form of development in this area. The Strategy recommends development with a key focus on restricting heights, while also encouraging building forms and uses that are in keeping with the surrounding residential context. It was originally noted that the Yennadon Lands could eventually serve the needs of the technology sector, light manufacturing companies, and professional offices, all of which offer a high employment density.

1.3 Work To Date

At the May 10, 2016 Council meeting, staff were directed to initiate a process to redesignate 13 subject properties, generally located at 128th Avenue and 232nd Street (hereafter referred to as the Yennadon Lands – See area map in Appendix A), towards an employment land use designation. The direction was in keeping with the City's Commercial & Industrial Strategy: 2012-2042, which could facilitate the creation of a unique opportunity for a campus-style business park in the future.

On April 16, 2019 staff provided Council with a general update on an Employment Lands Process underway in the City of Maple Ridge, which included a focus on the suitability of the Yennadon Lands for future employment purposes. At that meeting, the Yennadon Lands were referred back to staff to meet with the landowners to assess their future interest in the lands.

A Landowners Workshop was held at Yennadon Elementary School on June 6, 2019 from 6 – 8pm. Twelve letters were sent out to the landowners, representing all 13 properties, inviting them to attend. At the Workshop, 18 people attended, representing 11 of the properties.

On June 18, 2019, staff provided a verbal update to Council on the outcomes of the June 6, 2019 Workshop with Yennadon Landowners, namely that there were strong levels of support for an employment future – although some expressed interest only in the OCP amendment and not in redeveloping their properties in the short term.

At the June 18, 2019 Council Workshop meeting, Council directed: 1) staff to undertake an employment land use re-designation process and consultation strategy for the Yennadon Lands; and 2) that any new applications, or those already in-stream that have not reached third reading, be deferred until any potential OCP amendments are presented at Public Hearing and given third reading, with the exception of applications that propose future employment land uses.

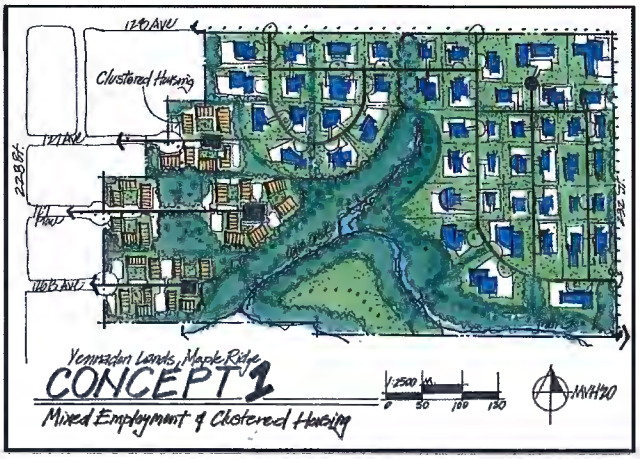
At the March 31, 2020 Council Workshop meeting, staff provided an update on the Yennadon Lands Re-designation process, including the proposed community engagement process that was postponed due to the pandemic. At that meeting, Council directed that the previously endorsed Yennadon Lands process be revised and that staff work with the consultant to prepare some preliminary land use concepts for Council to review prior to proceeding with public consultation.

At the July 14, 2020 Council Workshop meeting, staff in collaboration with a consultant, presented three preliminary land use concepts for Council to review. The three preliminary Concepts were informed by the outcomes of the site analysis, on transportation/access, site servicing, environmental features, stormwater management, and parks/trails/recreation requirements for future development within the area.

Being mindful of Council's vision for the Yennadon Lands, the "big idea" that was established early on as a framework for the preliminary Concepts, is to create a complete neighbourhood where residents and future business owners can live, work and play within a five to ten minute walk or bicycle ride of their residence. The employment area should be uniquely smaller scale to fit with the surrounding neighbourhood, offering a variety of smaller lots. Staff noted that these are preliminary, high level concepts that will likely evolve as more detailed assessments are conducted. The development application process will further refine the land use boundaries.

The three concepts are summarized on the following pages. Full-sized map concepts are found in Appendix A.

Concept #1 – Mixed Employment and Clustered Housing

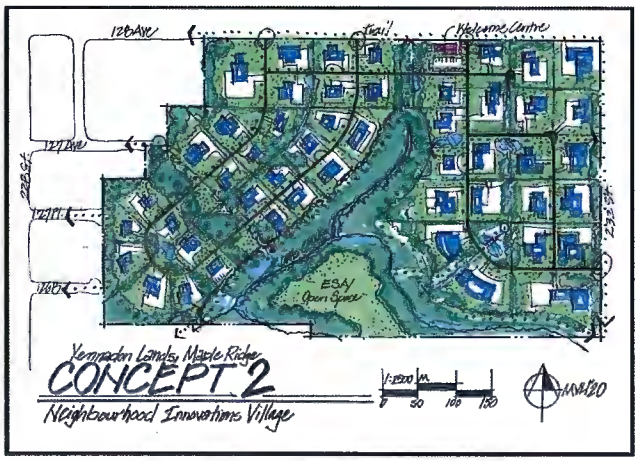


Concept #1 follows Council direction from 2016 that completes the residential development on the west edge of the Yennadon Lands. This design integrates the existing property line patterns and logical subdivision pattern of properties.

This Concept illustrates clustered residential development on the majority of the three western properties with a few employment lots on the northern most parcel extension (on to 127th Avenue). These clustered residential developments could take a form that integrates a central common area as well as peripheral outdoor parking. These units would cater to a more mature adult or single / young family market, as there are large gaps for these users in the housing market. The clustered nature of the housing would also allow for the conservation of open space as well as tree strands resulting in a central nature conservation park feel.

For Concept #1, approximately 20% of the land use is residential and 80% employment, other than the conservation areas.

Concept #2 – Neighbourhood Innovations Village



Concept #2 illustrates an exclusive employment development concept with an eco-business emphasis that conserves green space and trees, reflective of the identified protected resources. With this concept, there is an attempt to align the new properties with existing property subdivisions where possible.

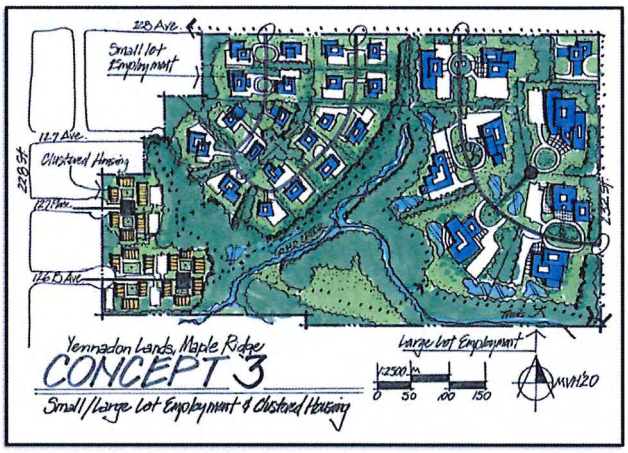
This concept illustrates a green buffer from the existing residential homes on the west edge and shows a looped street with smaller business lots and a nature park that connects to the adjoining west community.

The smaller flex-lot configuration (with lots ranging in size from 0.1 to 0.4 ha (.25 – 1.0 ac)) extends through the development and similar to Concept 1, provides an appropriate scale and size of building that matches the residential scale of the surrounding neighbourhoods.

The interconnected trail network (common to all concepts) is punctuated by a welcome/interpretative centre along the south side of 128th Avenue, which can highlight the "green" eco-business practices that develop here and steward the area's natural assets.

For Concept #2, approximately 100% of the land is employment, other than the Welcome Centre.

Concept #3 – Small / Large Lot Employment and Clustered Housing



Concept #3 is the hybrid concept, since it provides some clustered housing on the west edge, creates small lot employment use in the west sector, and includes more conventional large lot employment in the east area (less sensitive to traffic and circulation). The concept development does not follow the existing lot pattern and would probably need to be assembled by one or more developers.

The employment lot sizes vary from 0.2 – 1.6 ha (0.5 – 4.0 ac) with the larger employment parcels in the east sector.

The larger employment parcels provide an option for more extensive building footprints and greater concentration of uses on the Yennadon lands. The extensive building areas would normally require larger parking areas that could accommodate daily parking needs, as well as loading for tandem truck traffic that, in this case, has a separate street network with access from only 232nd Street and 128th Avenue.

For Concept #3, approximately 12% of the land use is residential with 32% 'small lot' employment and 56% 'large lot' employment, again, with significant environmental preservation.

At the July 14, 2020 Council Workshop meeting, Council expressed interest in Concept #2 – Neighbourhood Innovations Village and directed staff to bring that concept to the public as part of the public consultation process. Public consultation was undertaken through early Fall 2020 and outcomes are discussed in Section 2.1 below.

1.4 Yennadon Lands Process in 2020

With increasing interest in the Yennadon Lands Re-designation process, staff have been fielding questions from interested community members, relevant professionals and landowners since the end of 2019. An e-mail distribution list has been established for interested community members to register, who will receive regular updates throughout the process. Additionally, regular updates are provided on the project website.

1.4.1 Background Review & Site Analysis

Throughout early 2020, staff reviewed background information relevant to the Yennadon Lands Re-designation process. MVH Urban Planning & Design Inc. has been contracted to assist with the community engagement process. Staff have set up an Interdepartmental Working Group (IWG) to inform this planning process and to assist the consultant with the community engagement activities.

The IWG and consultant team met to review the initial site assessment and to construct the framework that will form the preliminary concepts. Following further work by the land use consultant, the IWG have reviewed and provided feedback on the preliminary concepts. To assist with the development of these concepts, the City has engaged Rollo & Associates to conduct a high-level feasibility study of the preliminary concepts, as well as ENKON Environmental to assist with some environmental reconnaissance work of the Yennadon Lands.

1.4.2 Initial Environmental Assessment

Environmental staff initiated conversations with staff from the Ministry of Forests, Lands, Natural Resource Operations and Rural Development regarding the applicability of the *Water Sustainability Act* on the Yennadon Lands. Following a joint site visit on September 29, 2020, the Ministry has indicated that much of the Yennadon Lands will require regulation under the *Water Sustainability Act* with strong collaboration with the City of Maple Ridge.

Following the site visit, comments were provided by the Ministry that set out guidance and suggested conditions to ensure future development applications are in compliance with the *Water Sustainability Act*. The Ministry recommends the City prepare a comprehensive Environmental Protection Plan and Integrated Stormwater Management Plan for the Yennadon Lands. The recommendation also states that future development applications include a detailed assessment of headwater areas, micro wetlands, and other surrounding water features so future development can mitigate and avoid impacts to streams, ponds, wetlands, and surrounding riparian habitat that directly contribute to the health and connectivity of these ecosystems. These are standard City processes with OCP assessment work.

The Ministry does note that there is the potential for flexibility by the Province to work with the City and landowners to responsibly manage, integrate and implement best practices around some of the existing outlying wetland areas that have been historically disturbed. These details would be worked out, through future development applications, as they would be required to undergo the municipal rezoning process, at which time an applicant would need to undertake more detailed studies of the area. Environmental impacts to the site will be assed on the backs of applications.

1.4.3 Initial Financial Feasibility Analysis

Rollo & Associates were retained by the City to prepare a Financial Feasibility Analysis of concepts for the Yennadon Lands. Specifically, Rollo & Associates asked to assist staff in understanding the market realities surrounding the future development of the Yennadon Lands, including the relative economic performance of four different industrial and residential land use options (three prepared by MVH Urban Planning & Design Inc. and one proposed by the City, namely a six storey office / light industrial development). GPRA has also had discussions with local industry experts, including realtors, developers, and other industry professionals familiar with the Yennadon Lands and Maple Ridge to inform the analysis

Based on the financial feasibility and discussions with developers, Rollo concluded that there was likely demand for all the uses that were requested to be modelled apart from the six storey office/light industrial development. Feedback received suggested that the market had yet to emerge for six storey form in Maple Ridge or Pitt Meadows, but certainly could in the next decade as availability of industrial lands grows increasingly scarce.

Therefore, each of the Concepts demonstrates the capacity to support a land value in excess of what would be construed to be fair market value for the Yennadon Lands, thus they are all economically feasible.

1.4.4 Public Consultation Process

Taking place through early Fall 2020 and the current COVID-19 pandemic, the Yennadon Lands Public Consultation process consisted of a Landowners Workshop, a Public Open House, and a community survey.

a) Landowners Workshop

On Wednesday, September 30, 2020, staff held a virtual Yennadon Lands Landowner Workshop from 6:30 – 8:30pm online via Zoom. The landowners were invited to the Workshop through a mailed invitation sent to the addresses registered on title. Eleven landowners registered for the event and eight were able to attend the event. The consultant, Michael Von Hausen, presented the three preliminary land use concepts to the participants of the Landowners Workshop. Staff, including the

Acting Manager of Infrastructure and Development and Project Planner, were available following the presentation to answer the questions the participants had.

b) Virtual Public Open House

On Wednesday, October 7, 2020, the City hosted a virtual Yennadon Lands Public Open House from 6:30 – 8:30pm online via Zoom. Promotion of the Open House took place through regular City channels, including through the local newspaper, the City's website, and the Yennadon lands e-mail distribution list, as well as a mail-out to all residents within 100m of the Yennadon Lands. Ninety-seven people registered for the Open House and 89 attended.

The consultant, Michael Von Hausen, presented the three preliminary land use concepts to the participants of the Landowners Workshop. Staff, including the Manager of Community Planning, Acting Manager of Infrastructure and Development, Environmental Planner, and Project Planner, were available to respond during the extensive Question & Answer period.

c) Community Survey

Supporting the community outreach initiatives was an online community survey. The survey was used to assess the comfort level with the proposed preliminary concepts. The Yennadon Lands Open House Survey was available online from October 8th until October 29th. The survey was promoted through regular City channels including social media, with posts on October 19 and October 28, the project website, and reminders through the e-mail distribution list. Of the 160 submitted surveys, 157 were completed in full.

A copy of the engagement materials and the verbatim responses are available in Appendix B.

2.0 DISCUSSION:

2.1 Public Consultation Outcomes – What was Heard

2.1.1 Landowner Workshop

Through this Landowner Workshop, staff heard continued support for an employment future for the Yennadon Lands. While all concepts received acknowledgement and levels of support, Concept #1 and #2 were more often cited. It was also raised that these concepts were developed pre-covid and may need to be adjusted to reflect the changing nature of the market.

Questions were raised regarding the capacity of the existing Yennadon Elementary School and the potential impacts that may be experienced should the residential portion be constructed. On a similar note, interest in including a wider range of housing types, such as forms amenable to seniors or new home buyers was expressed. There were also many questions regarding how the re-designation process may unfold as well as process timelines.

It is important to note that some landowners expressed an interest in hearing what the community wished to see at this location. Many of the landowners registered for the Open House in addition to the Landowners Workshop. As Zoom includes a chat feature, a copy of the questions and comments submitted through the chat are also included in Appendix B.

2.1.2 Open House Feedback

Key messages heard during the Open House event, through the verbal questions and Zoom chat feature, include several concerns, questions, and other comments. Each type of comment is summarized on the following page.

Concerns regarding:

- Environmental impacts from any form of development on the Yennadon Lands. Many indicated a preference for the area to remain as-is or conserved as green space.
- Groundwater and how it can be handled effectively.
- Existing wildlife corridors and a belief that any development will impact these and the animals that use them.
- Existing levels of infrastructure servicing and traffic patterns.
- Existing traffic flow issues with the location of the Yennadon Elementary School and school capacity.

Questions about:

- What is meant by 'employment' and why the City is interested in locating this use on the Yennadon Lands.
- What type of businesses may locate here in the future.
- The changing nature of the workforce and market given the COVID-19 pandemic and if the proposed concepts are sufficiently reflective of these needs.
- How the future users and/or residents of the area will be able to move about given the current capacity challenges on both 128th Avenue and 232nd Street.
- The possible timelines, for both the process as well as until construction may take place.

Other comments included:

- Queries about the public notification process for the Open House as well as the re-designation process at large.
- Interest in the ability to incorporate green or sustainable building designs into the future developments (i.e. sustainable water management techniques, solar panels, etc.).
- The level of environmental and wildlife impact with the integrated trail network proposed in all three concepts.
- The need for another school in the area to serve the Yennadon and Silver Valley areas.
- Acknowledgement and understanding of the importance of diversifying the tax base and increasing job opportunities in the City.

As Zoom includes a chat feature, a copy of the questions and comments submitted through the chat are also included in Appendix B.

2.1.3 Community Survey

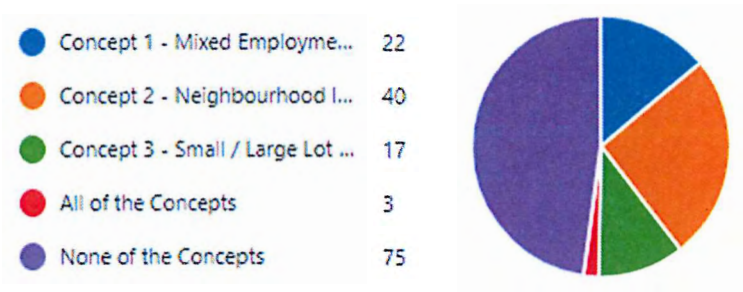
The Yennadon Lands Open House Survey was available online for a period of three weeks. During that time, 160 participants viewed the survey with 157 completing it in full. Copies of the Information Boards presented at the Yennadon Lands Virtual Open House on October 7, 2020 were available online, and some were imbedded within the survey as this information formed the basis for many survey questions. Participants were asked to familiarize themselves with the concepts before beginning the survey.

a) Question 1 & 2– Which concept do you like? And why?

The first question asked participants directly which Yennadon Lands Concepts they preferred. Participants could choose any of the three Concepts, All of the Concepts or None of the Concepts. The option with the highest number of responses (75 individual responses or 48%) indicated 'None of the Concepts'. The option with the next highest number of responses was Concept 2 – Neighbourhood Innovations District (40 individual responses or 25%), followed by Concept 1 – Mixed Employment and Clustered Housing (22 individual responses or 14%) and then Concept 3 – Small / Large Lot

Employment and Clustered Housing (17 individual responses or 11%). Only three (2%) survey respondents indicated that they liked all of the concepts. Figure 1 illustrates the results graphically.

Figure 1 – Breakdown of Question 1 of the Yennadon Lands Open House Survey



The second survey question asked participants to expand on why they chose the option that they did. Of the 157 survey respondents to Question 1, 146 participants responded to Question 2. An expanded summary of the comments, including the full verbatim comments, are available in Appendix B. Key messages identified through this question include:

- Identified a need for additional employment opportunities in Maple Ridge.
- Indicated interest in in having access to additional community services in the Yennadon Lands area, such as additional child care spaces, walkable coffee shops and small grocery stores, as well as general shops.
- Some respondents articulated the merit of incorporating some residential development along the western side of the Yennadon Lands to soften the buffer between the existing residential use and potentially expand the type of housing already available in the area today.
- Interest was also expressed in further exploring the possibility of integrating a live / work component within the Concepts to further address requests for residential, but also boutique and resident-focused services.
- Concern stated that the existing Yennadon Elementary School is at capacity and as such there are related traffic implications.
- Many expressed that an employment future was not considered suitable for this location, citing the existing residential neighbourhood, Yennadon Elementary School as well as Maple Ridge Park along 232nd Street just north of the site as a rationale.
- Concern for the environment, specifically including the protection and enhancement of existing wildlife corridors, throughout the area. Stories of experiencing wildlife in the area, were shared, as well as impacts from storm events, particularly during wetter months.

b) Question 3 – How could the concept or concepts be improved?

The third survey question asked participants on how the concept or concepts could be improved. Of the 157 survey respondents to Question 1, 122 participants responded to Question 3. An expanded summary of the comments, including the full verbatim comments, are available in Appendix B. Key messages identified through this question include:

- Suggest finding other suitable places for employment opportunities in Maple Ridge outside of the Yennadon Lands. A few noted that the concept principles were supportable, but the general location was not.
- Plan for a more residential future in this location and incorporate apartment uses, including rental units, and housing forms with smaller footprints, to incorporate more affordable housing options than those currently found in the Silver Valley Area.

- Acceptance that residential development can be increased elsewhere within the City, while employment development is restricted to areas that are flat. However, it was acknowledged that it is important to encourage and regulate an aesthetically pleasing development that inspires people to visit, but that does not feel industrial.
- A desire that the area 'have some soul' by utilizing thoughtful site and building design, including human-centered building heights and designs, pedestrian-walkways, the preservation of green space, and an appropriate mix of services and uses. Interest was also expressed in green building and/or sustainable building techniques, including rainwater harvesting that would be integrated into design elements of the site plan.
- A desire that future development in this area reduce or mitigate the potential impacts on the existing neighbourhood, while also brining a range of services that would benefit current residents.
- Suggestion to increase the level of environmental preservation and protection above and beyond what is illustrated in the three concept plans.
- Calls for ensuring appropriate and progressive drainage techniques are implemented, citing familiarity with existing conditions in and around the Yennadon Lands, as well as with concerns of a changing climate and potential increased impacts on these lands.
- Desire to see increasing general infrastructure services in the area, particularly on transportation and access challenges, as existing service levels would not be able to incorporate future planned uses.
- Calls for exploring alternative access options, in the hopes of reducing traffic impacts on 128th Avenue and 232nd Street, and increasing the level of cycling infrastructure to include separated and segregated lanes on both sides of these two roads.

c) Question 4 – Any other comments to share?

The last question regarding the Yennadon Lands Concepts asked survey respondents for any other comments that they wished to share. Of the 157 survey respondents to Question 1, 95 participants responded to Question 4. An expanded summary of the comments, including the full verbatim comments, are available in Appendix B. Key messages identified through this question include:

- Suggestions on how to expand the public notification process for this area, as well as expressing interest for further consultation on the proposed development of the Yennadon Lands.
- Articulated the importance of meeting the needs of current residents before further development takes place, specific reference was made to community amenities as well as infrastructure issues.
- Reaffirmed the importance in seeing road improvements around the area., given the traffic / parking concerns throughout the area and how it is already compounded by the local elementary school and that it could be made worse should the Yennadon Lands develop.
- Articulated the importance of locating more employment-generating opportunities within Maple Ridge, but not necessarily on the Yennadon Lands.
- Reaffirmed the importance of developing in balance with nature and the environment.
- Expressed interest in having the area designated as a park.
- Reaffirmed importance in incorporating other community amenities into the area, including parks, schools and other recreational facilities.
- Expressed a desire in having the proposed trails accessible for all ages as well as for cyclists.
- A desire to see local businesses encouraged to locate into the area.
- Recognized the possible tax implications of broadening the non-residential tax base in Maple Ridge, but also questioning how proposed development may impact the assessment value of the existing residential neighbourhoods.

The survey also provided the opportunity for respondents to indicate if they wished to be included on the Yennadon Lands Re-designation Email list. Over 100 of the survey respondents indicated that they wished to be kept informed. As such, their emails were included on the distribution list and a notification was sent to those on list that this topic is on the December 8, 2020 Council Workshop agenda.

d) Letters to the City

In addition to the comments received through the community survey, emails were received through the employmentlands@mapleridge.ca mailbox regarding the Yennadon Lands. Copies of some of these letters are included in Appendix B.

2.2 Integrating an Yennadon Lands Concept Plan into the Official Community Plan

2.2.1 Addressing Key Messages

Through the public consultation process, a number of key, consistent messages were heard from the community. Often contradictory, the comments highlight the range of opinions and perspectives on the future of the Yennadon Lands.

It is important to acknowledge that many of the issues identified through the public consultation process may only be, or be best, addressed through the development application process. Through these initiatives, the City has tools available to work on these challenges, including servicing and infrastructure capacities. The re-designation process and the development application process provides the time and opportunity to work through the identified impacts through the development and eventual implementation of design guidelines and site planning principles.

In the pursuit of additional employment land opportunities in Maple Ridge, the Yennadon Lands are identified as a likely and feasible opportunity. The re-designation of the Yennadon Lands to an employment future will garner opposition and community comment. Through the re-designation process, there will be opportunity to recognize and speak to the importance of the issues identified and held by some residents.

2.2.2 Yennadon Lands Area Plan Content

At the July 14 Council Workshop Meeting, staff were tasked with bringing forward an Official Community Plan Amending Bylaw for Council consideration following the close of the public consultation process. Noting the feedback and comments received through the public consultation process, a framework of the material intended to form the Official Community Plan Amending Bylaw is outlined below:

Intent

- Recognize the intent to create a complete neighbourhood where Maple Ridge residents can live, work, and play in and around the Yennadon Lands, as well as the overall importance of encouraging job-intensive employment opportunities in Maple Ridge.
- Recognize the changing nature of the employment market to incorporate a range of job-generating activities, but also encourage human-scale development and green building trends, where appropriate and financially feasible. This may include the development of a flexible employment zone that will be able to reflect market needs and regulate the intensity and density of future employment uses.

Land Use

- Develop a new land use designation for an employment future specific to the Yennadon Lands area. It is anticipated that this designation will be bolstered with specific Yennadon Lands Development Permit Guidelines. The intent of the new land use designation is to be a flexible

designation, open to employment generating uses that can be supported with the sensitive integration of other community amenities, including local services such as café's and child care services.

- Prepare the Yennadon Lands for an employment future by undertaking the required land use amendments as well as beginning the necessary processes with other government agencies, including:
    - Re-designating the Yennadon Lands in the City's Official Community Plan;
    - Adjusting the City's Urban Area Boundary to include the Yennadon Lands;
    - Excluding the remaining property from the Agricultural Land Reserve;
    - Adjusting the regional Urban Containment Boundary to include the Yenndaon Lands; and
    - Expanding the Fraser Sewerage Area to include the Yennadon Lands.

  These processes will include preparing a bylaw amendment to the Maple Ridge Official Community Plan (discussed in more detail below), an exclusion application to the Agricultural Land Commission, and an application to Metro Vancouver and the Greater Vancouver Drainage & Sewerage District Board to adjust their respective boundaries.

Environment & Green Space

- Identify the legislated environmentally protected sensitive areas, such as streams, wetlands, and riparian habitat through existing legislation, bylaws, and/or policies.
- Encourage the retention and integration of significant green spaces, such as wildlife hubs and corridors, healthy mature tree stands, or unique natural features that are not already protected through thoughtful site design, mitigation, and integrated strategies.
- Confirm the intent of the City to work with the Ministry of Forests, Lands, Natural Resource Operations and Rural Development to develop a comprehensive Environmental Protection Plan and Integrated Stormwater Management Plan for the Yennadon Lands. This work would consider the enhancement, restoration and compensation for the Yennadon Lands at large, and undertake further ground-truthing investigation, on a site-by-site basis, as development applications come forward. The primary intent of an Environmental Protection Plan and Stormwater Management Plan is to jointly maintain the ecological function and natural functions of the area while effectively dealing with water management issues associated with development of this area. Upfront work in this area should help expedite development applications through the Official Community Plan and re-zoning process.

Local Community Services

- Support the inclusion of some community level services, including the provision of childcare spaces and general services (i.e. coffee shops, cafes and/or small eating establishments), as well as recreational opportunities, where appropriate.
- Incorporate an interconnected pathway and trail system to connect with the surrounding neighbourhoods. Pedestrian, cycling and equestrian service needs will be considered through this process, recognizing that existing levels of service standards associated with these forms of mobility, during re-development, will be upheld. Existing levels of services will be upheld or improved where possible.

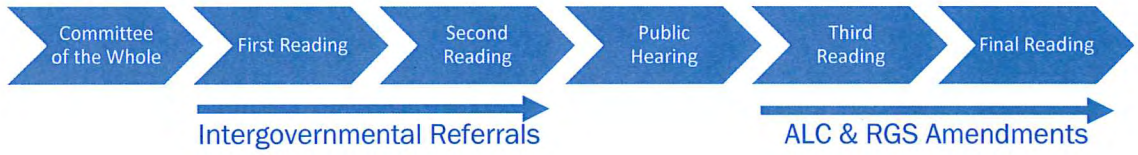
Infrastructure & Servicing

- Ensure that infrastructure upgrades will take place in accordance with the development application process.

2.2.3 Official Community Plan Bylaw Amending Process

Following Council comment on the outcomes of the public consultation process and Council direction, the draft Official Community Plan Amending Bylaw will be prepared reflecting Council's comments and brought forward to an upcoming Committee of the Whole Council Meeting. The Official Community Plan Amending Bylaw would then proceed through the regular re-designation process, outlined in Figure 2.

Figure 2 - Regular OCP Amending Bylaw Process



At this time, development applications that propose employment land uses are able to come before Council. Should Council endorse a Concept Plan for the Yennadon Lands Area, development applications would be able to continue to proceed through the development application process that align with an endorsed concept. When that occurs, through these site-specific development applications, additional studies typically found through the municipal rezoning process may take place. Such studies may include geotechnical assessments, ground-water impact assessments, servicing and infrastructure studies, agricultural impact assessments, environmental impact assessments, where development may encroach into some Environmentally Sensitive Areas as well as significant tree and habitat balance assessments.

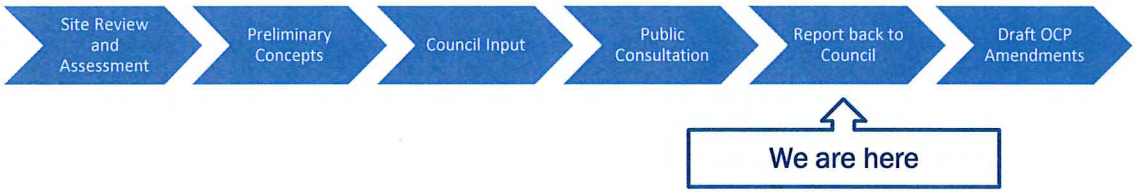
As well, future development applicants will likely be required to obtain a development permit to regulate the form and character of new buildings, as it is anticipated that Development Permit Area Guidelines specific to the Yennadon Lands will be developed in conjunction with the Yennadon Lands re-designation process. The intent of these guidelines would be to shape the form of development to reflect Council and community comments while remaining flexible and open to a range of uses. If directed, both the land use re-designation and Development Permit Area Guidelines would be brought before Council as one package in order to expedite the review process and ensure development applications move expeditiously through the municipal approval processes. In the meantime, the existing form and character guidelines would be applied for industrial or commercial development applications.

2.2.4 Next Steps

As discussed in earlier reports, the general steps of the Yennadon Lands Re-designation process would be to review suitable and sensitive employment land uses, discuss possible employment visions with the community, and outline the potential land use policy and regulatory amendments necessary to implement the Yennadon Lands concept.

At the July 14 Council Workshop Meeting, staff were tasked with bringing forward an Official Community Plan Amending Bylaw for Council consideration, following the close of the public consultation process. Noting the feedback and comments received through the public consultation process, a framework of the material intended to form the Official Community Plan Amending Bylaw is outlined in Section 2.2. above and continue to follow the re-designation planning process outlined in Figure 3 on the following page. The draft Official Community Plan Amending Bylaw will be prepared reflecting Council's comments and brought forward to an upcoming Committee of the Whole Council Meeting.

Figure 3 – Revised Yennadon Lands Employment Re-designation Process



3.0 STRATEGIC ALIGNMENT

Implementing strategic plans related to local infrastructure and the economy, including the City's commercial and industrial land base, is a Council priority as established under its Growth pillar of the 2019-2022 City of Maple Ridge Strategic Plan.

4.0 POLICY IMPLICATIONS

The proposed land use re-designation of the Yennadon Lands to an employment future is supported through the recommendations of the Commercial & Industrial Strategy and the existing industrial policies in the OCP. OCP policies 6-41 and 6-42 speak to identifying additional employment lands within the City and set out compatibility criteria used to determine feasibility of new employment land. Specifically, the subject properties align with the intent of the current OCP policies for inclusion as employment lands, as the lands are generally flat, have access to an arterial and collector roadways, and development servicing is located adjacent to the properties.

5.0 INTERGOVERNMENTAL IMPLICATIONS

5.1 Metro Vancouver

The Regional Growth Strategy (RGS), titled "Metro Vancouver 2040: Shaping Our Future", manages growth by establishing growth boundaries throughout the region. The Yennadon Lands are largely located within the Region's Urban Containment Boundary, and are largely located outside of the Region's Fraser Sewerage Area, which delineates properties that are able to connect to the regional sanitary system (see Appendix D for the Region's Urban Containment Boundary). An application by the City, to the Greater Vancouver Sewerage & Drainage District Board, is required to achieve regional approval to include the Yennadon Lands within the Fraser Sewerage Area for more intensive employment activities to take place at this site. The intent is to support urban level of servicing and an application to the Board will be considered through this process.

Staff note that the potential for an adjustment to the City's Urban Area Boundary was contemplated during the previous Regional Growth Strategy review in 2006 and the lands were therefore, designated as General Urban by the Region (i.e. the majority of the Yennadon Lands are within the Region's Urban Containment Boundary). However, two properties in the northeast corner of the Yennadon Lands are outside of the Region's Urban Containment Boundary. These properties will require a land use designation change at the Metro Vancouver level, as well as an adjustment to the Urban Containment Boundary to permit employment uses.

As Metro Vancouver is undertaking a review of the Regional Growth Strategy, Metro Vancouver staff have requested that minor amendments to the Regional Plan be held until the regional planning process has been complete. As such, the current development application at 12791 232nd Street (at first reading) is not encouraged to proceed with a minor amendment to the Regional Plan in advance of the Yennadon Lands Re-designation Process.

Council-endorsement of a Yennadon Lands Concept Plan will be used as the spring-board for these future conversations, as Metro Vancouver has indicated support for the City's intent to provide additional employment lands in the region.

5.2 Agricultural Land Commission

In 2004, the Agricultural Land Commission permitted 12 of the 13 Yennadon Land properties to be removed from the Agriculture Land Reserve. This was a voluntary process, so only those property owners that chose to participate went through the exclusion process. As such, one property in the northeast corner (23154 128 Avenue) of the Yennadon Lands area will need to go through the ALC exclusion process to permit employment uses on that site. In accordance with the latest provincial changes in Bill 15, the current owner will have to request the City to make this exclusion application on their behalf.

6.0 INTERDEPARTMENTAL IMPLICATIONS

Community Planning staff have been working collaboratively with our Development & Environment colleagues as well as with Engineering, Parks, Recreation & Culture, Building and Economic Development staff, on the pursuit of employment opportunities on the Yennadan Lands. It is anticipated that these departments will continue to be involved throughout the Yennadon Lands Re-designation process. Additionally, staff from the Communications Department will continue to provide support with community outreach and communication initiatives.

7.0 FINANCIAL IMPLICATIONS

The ongoing pursuit of employment lands, specifically with the Yennadon Lands, is included in the Planning Department 2021 Work Program. While it is expected that much of the planning work will be completed in-house, outside consultant resources will be required to assist with the creation of the land use concepts, including Development Permit Guidelines. Such consultant work will be accommodated through budgets approved through the 2021 Business Planning process.

8.0 ALTERNATIVE RECOMMENDATION

Should Council not wish to move forward with the proposed recommendations, the following alternative recommendation has been identified for Council consideration:

1. **That further work, as directed, take place on the development of a Concept Plan for the Yennadon Lands.**

CONCLUSION:

The Yennadon Lands were identified as a potential location for future employment uses in the City's Commercial & Industrial Strategy. This area aligns with the intent of the current Official Community Plan policies for inclusion as employment lands, as the lands are generally flat, have access to an arterial and collector roadway, and servicing runs adjacent to the properties. As such, staff initiated a public consultation process to explore community comment on three preliminary land use concepts.

Through October 2020, staff in collaboration with the consultant, conducted a consultation process that consisted of a Landowners Workshop, a Virtual Public Open House, and a Community Survey. The re-designation of the Yennadon Lands to an employment future will garner opposition and community comment. This report goes through what was heard from the various consultation activities and outlines possible next steps for Council to consider in the pursuit of additional employment land opportunities for Maple Ridge.

"Original signed by Amanda Grochowich"

Prepared by: **Amanda Grochowich, MCIP, RPP**
Planner 2

"Original signed by Chuck Goddard"

Reviewed by: **Charles R. Goddard, BA, MA**
Director of Planning

"Original signed by Christine Carter"

Approved by: **Christine Carter, M.PL, MCIP, RPP**
GM, Planning & Development Services

"Original signed by Al Horsman"

Concurrence: **Al Horsman**
Chief Administrative Officer

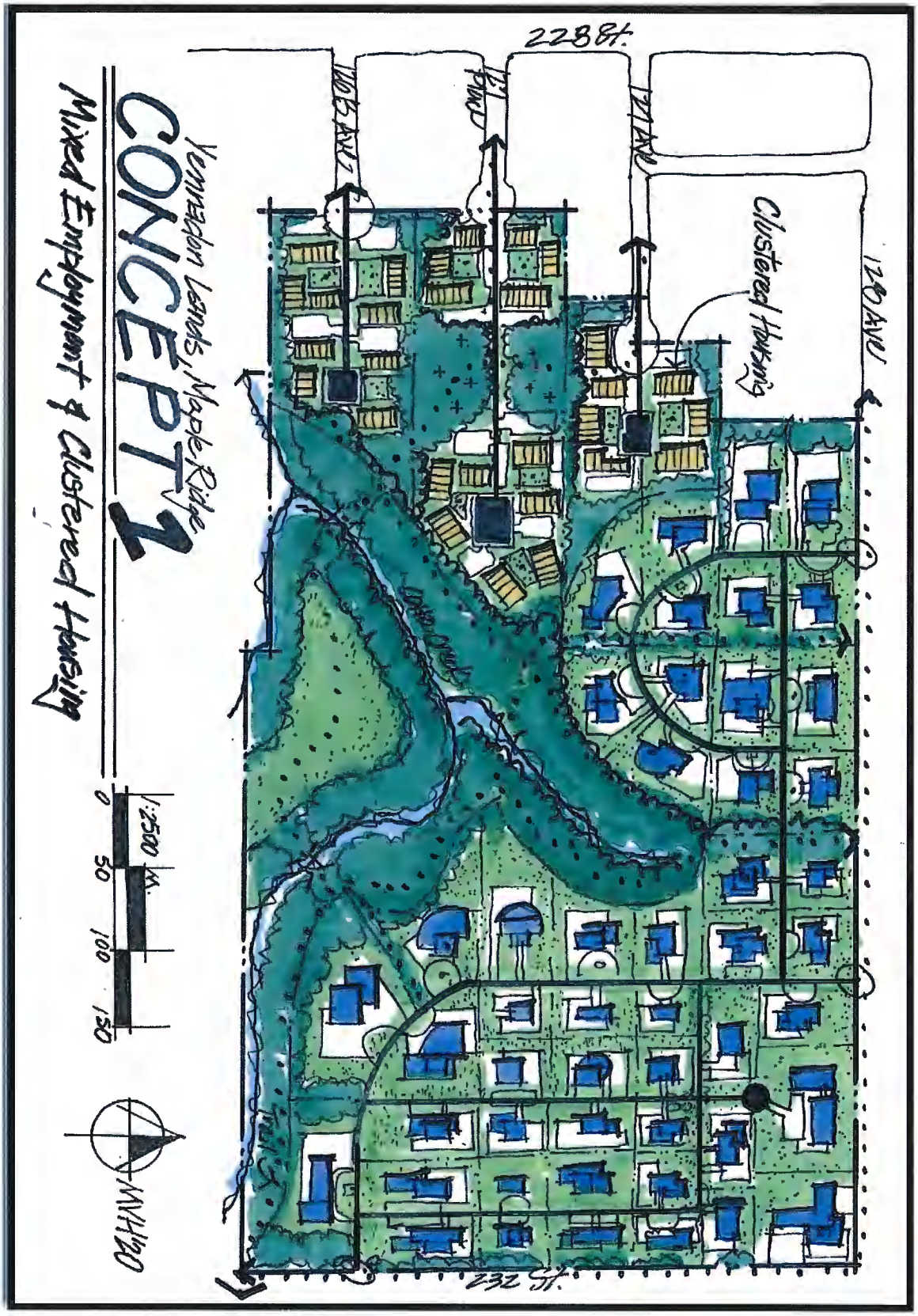
Appendix A: Yennadon Lands Preliminary Concepts

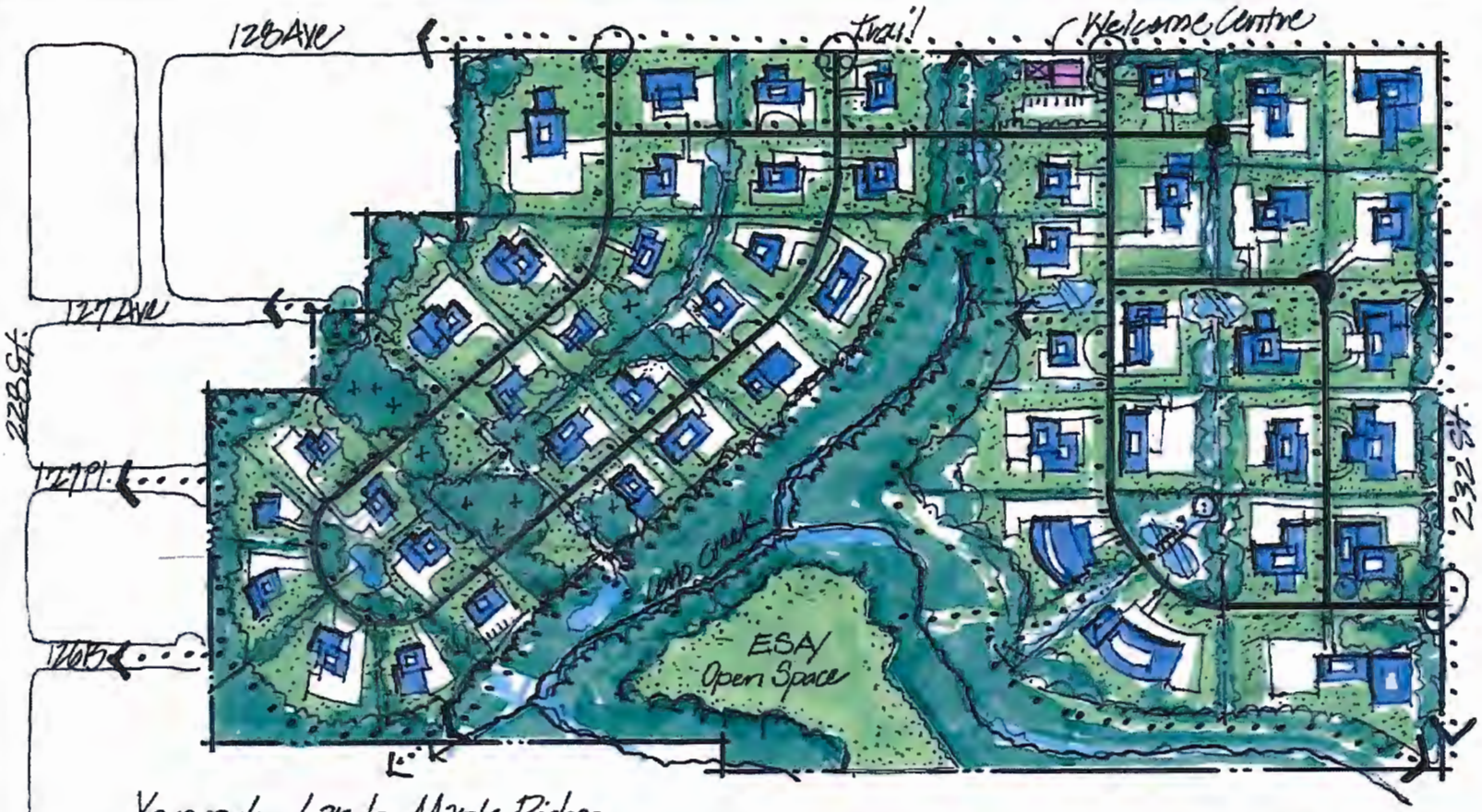
Appendix B: Yennadon Lands Engagement Materials

- Promotion
- Landowner Workshop Materials and Comments (September 30, 2020)
- Open House Materials and Comments (October 7, 2020)
- Survey Results (October 2020)

Appendix C: Copies of Letters submitted to the City re: Yennadon Lands

Appendix D: Urban Area Boundary and Urban Containment Boundary Map


Yennadon Lands, Maple Ridge
CONCEPT 1
Mixed Employment & Clustered Housing
1:2500
0
50
100
150
M.
NAD 83
Clustered Housing
128 AVE
224 ST.
216 ST.
208 ST.
232 ST.
Cliff Creek



Yennadon Lands, Maple Ridge

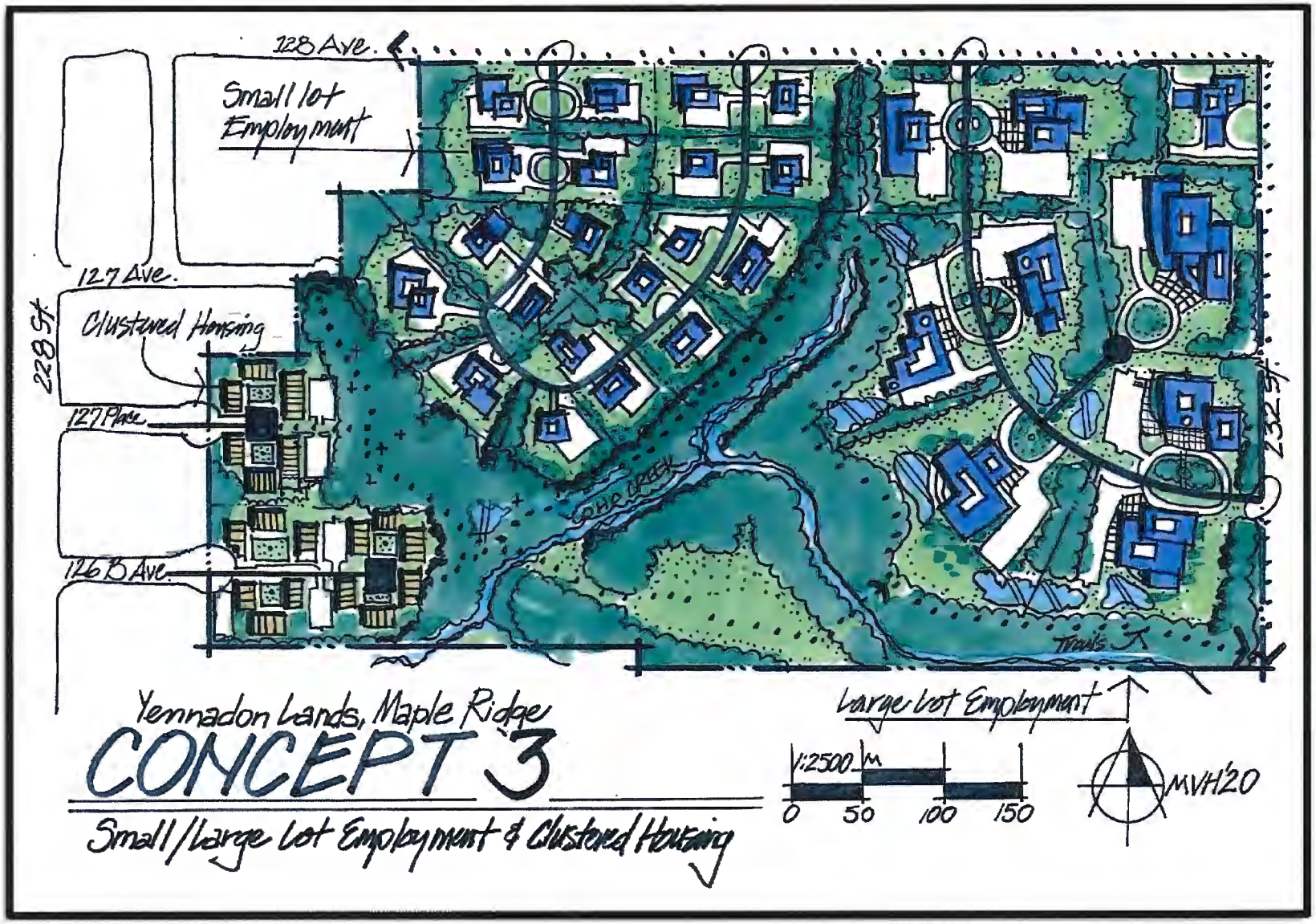
CONCEPT 2

Neighbourhood Innovations Village

1:2500 m

0 50 100 150

MYH'20



Yennadon Lands, Maple Ridge

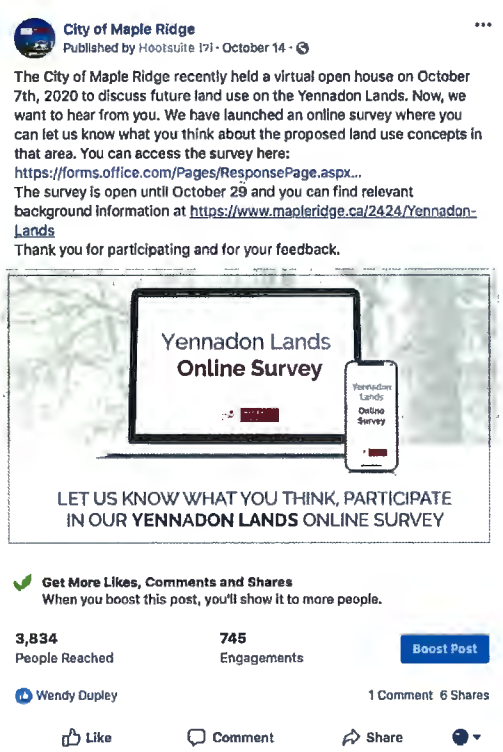
CONCEPT 3

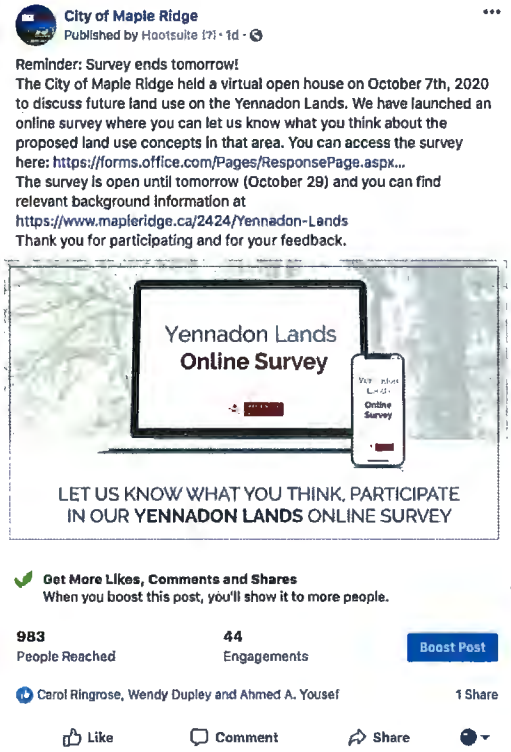
Small/Large Lot Employment & Clustered Housing

Yennadon Lands Engagement Promotion

Newspaper Ad

Social Media Posts





September 18, 2020

Recipient Name
Address
Maple Ridge, BC
postal code

Re: City of Maple Ridge Yennadon Lands Public Consultation Process

Dear Property Owner,

The Yennadon Lands Area Planning process, endorsed by City Council in 2019, is currently underway with the intent of exploring future employment opportunities for the 63 acres bounded approximately by 128th and 232nd (see attached map).

At the July 14, 2020 Council Meeting, Council received three preliminary land use concepts. At that meeting, Council expressed interest in Concept #2 of the Staff Report and directed staff to bring that concept to the public as part of the public consultation process, which will be taking place at the end of September. Noting that these events have been designed with safety in mind and may be re-organized or re-scheduled, subject to any changes made by the Public Health Officer to help mitigate the spread of COVID-19.

As a property owner within this area, the City is inviting you to the following two events:

What: Yennadon Lands Landowners Workshop
When: Wednesday, September 30th, 2020
6:30 – 8:00 pm
Where: Online (Link provided with RSVP)
RSVP: By Tuesday, September 29th, 2020
employmentlands@mapleridge.ca

Yennadon Lands Public Open House
Wednesday, October 7th, 2020
6:30 – 8:00pm
Online (Link provided with RSVP)
By Tuesday, October 6th, 2020
employmentlands@mapleridge.ca

To learn more, and stay updated on this project, please visit: www.mapleridge.ca/2424

If you have any questions regarding the Yennadon Lands Area Planning process, please e-mail employmentlands@mapleridge.ca or call 604-463-5221.

Sincerely,

Amanda Grochowich
Community Planner

September 21, 2020

To Whom It May Concern,

Re: City of Maple Ridge Yennadon Lands Public Consultation Process

The Yennadon Lands Area Planning process, endorsed by City Council in 2019, is currently underway with the intent of exploring future employment opportunities for the 63 acres bounded approximately by 128th Avenue and 232nd Street (see attached map).

At the July 14, 2020 Council Meeting, Council received three preliminary land use concepts. At that meeting, Council expressed interest in Concept #2 of the Staff Report and directed staff to bring that concept to the public as part of the public consultation process, which will be taking place at the end of September. Noting that this process has been designed with safety in mind and may be re-organized or re-scheduled, subject to any changes made by the Public Health Officer to help mitigate the spread of COVID-19.

As a resident or property owner within this area, the City is inviting you to the following event:

What:	**Yennadon Lands Public Open House**
When:	**Wednesday, October 7th, 2020**
	6:30 – 8:00 pm
Where:	**Online (Link provided with RSVP)**
RSVP:	**By Tuesday, October 6th, 2020**
	employmentlands@mapleridge.ca

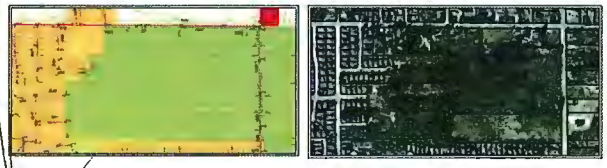
To learn more, and stay updated on this project, please visit: www.mapleridge.ca/2424

If you have any questions regarding the Yennadon Lands Area Planning process, please e-mail employmentlands@mapleridge.ca or call 604-463-5221.

Sincerely,

A Grochowich

Amanda Grochowich
Community Planner



Yennadon Lands

Preliminary Analysis and Design Concepts
Maple Ridge, BC

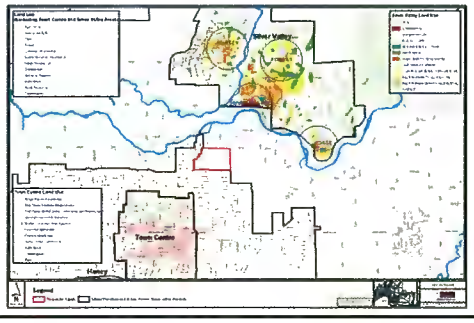
September 30, 2020

MVH Urban Planning & Design Inc.

Site Analysis | Review 3 Concepts | Feedback on Concepts | Next Steps

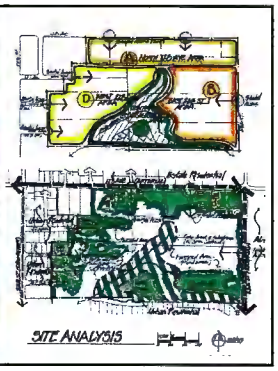
Purpose

Location and Land Use Context



Summary Site Analysis

- 25.4 hectares (63 acres)
- Adjacent to Maple Ridge Urban Area Boundary and within Metro Urban Containment Boundary
- Relatively flat, good major access, and servicing adjacent to property
- 13 properties: residential west and north with one farm property northeast
- Established residential areas adjoining west and south of property
- Coho Creek and associated wetlands create environmental sensitivities central and south area of site
- Potential access points from 232 Street and 128 Avenue



VISION

LIVE, WORK AND PLAY=

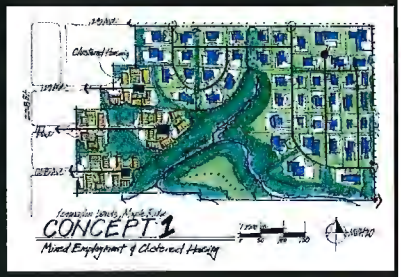
YENNADON

GUIDING Neighbourhood Employment PRINCIPLES

- Mix of Employment Uses
- Neighbourhood Business Scale and Character
- Innovative Incubator Businesses
- Compact Residential Cluster Form
- Environmental Sensitivity and Trail Network

CONCEPT 1
Balanced Mix

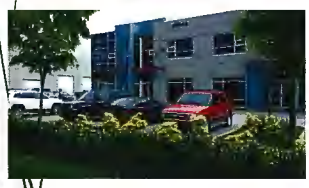
- Develops clustered housing on the west edge of the site with the balance being business uses
- Creates a housing transition to the existing housing on the western edge
- Provides diversity and choice of housing in clusters with a comprehensive trail network
- Integrates property lines with subdivision of properties and creates incentive of higher density to subdivide
- Develops a distinct mixed and scaled development to fit into the neighbourhood with environmental integrity

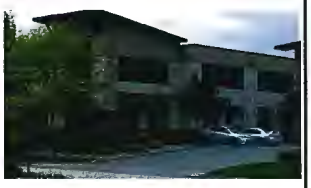


Diversity of Housing:
Courtyard Cluster and Mixed Cluster

Local Business Park Building Form and Character
west side more residential scale, smaller lots and uses

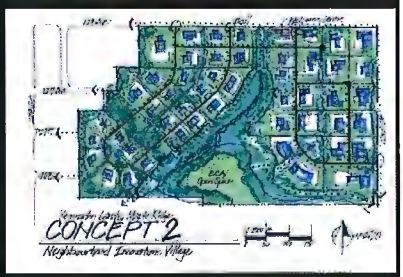
Business Park Building Form and Character
east side concept more conventional larger businesses





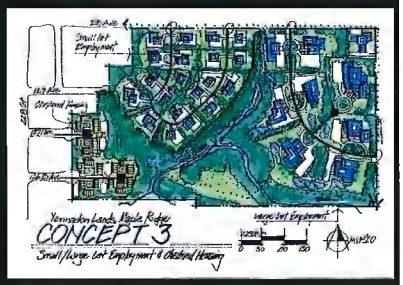
CONCEPT 2
Business Park

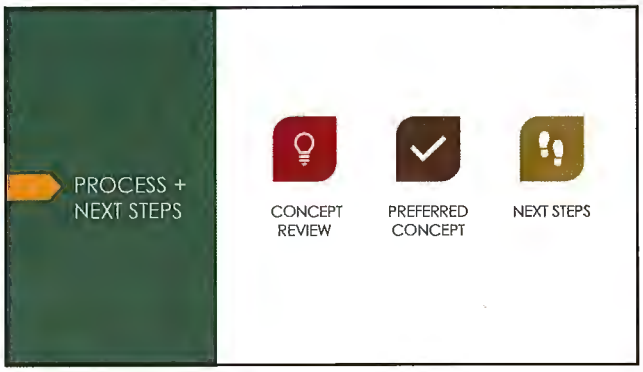
- Excludes residential uses
- Creates a more conventional business park with buffers on west and south edges
- Offers a potential eco-industrial business concept (enviro-friendly)
- Provides flex lots from 0.1–0.4 ha (.25 to 1.0 ac) but flex up to 1.6 ha (4ac)
- Responsive to market
- Presents larger lots on east side with 232 Street access
- Creates "Welcome Centre" for visitors on north edge as trailhead and local economic development showcase



CONCEPT 3
Business Park w/Res

- Reduces the residential cluster uses on west side
- Provides additional green buffer to business uses
- Creates smaller lot west side business cluster
- Provides larger lot eastside business park
- Maintains central environmental area and trail connectivity between neighbours and through site

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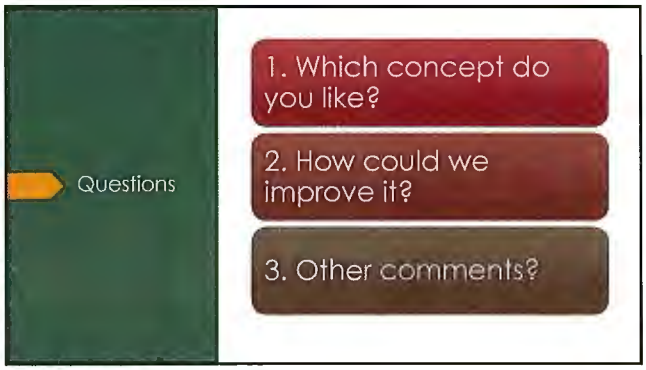
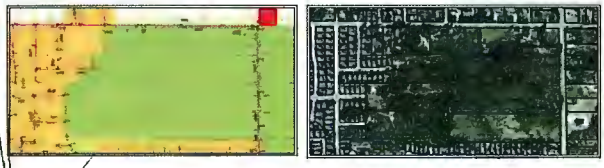

Questions
1. Which concept do you like?
2. How could we improve it?
3. Other comments?

Yennadon Lands Landowner Workshop

Zoom Chat Comments

We [Property Owners] like Concept 1 or 2.
I'm here for [Property Owner]. He prefers Concept 1
I prefer concept number one.
The mandate is to get more business classified lands but the trend is to be able to live close. 200 employment doesn't allow for people to live close.
Does the council envision something like garrison properties in Chilliwack?
With the pandemic businesses are shutting down. Would there still be a need for the larger business area concept in 2 vs the larger cluster homes in concept 1.
Amanda you mentioned bylaw changes? What would those be? Adhering to the existing property lines I think is good.
With the cluster housing, would our existing area schools handle the additional students. What is the time line for deciding which concept they choose and amending the zoning?
I [Property Owner] like the layout of the park and creek setbacks. Covid has make park and outdoor space very important.
Conversations have always used the description as lower, medium or high density. What is this.
I [Property Owner] have read the report and I think the report is very thorough. Most of my questions / issues are addressed in the report. I'm going to leave the meeting now. Thank you for hosting this session.



Yennadon Lands

Preliminary Analysis and Design Concepts

Maple Ridge, BC

October 7, 2020

Site Analysis

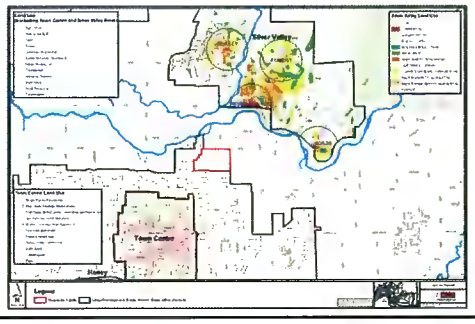
Review 3 Concepts

Feedback on Concepts

Next Steps

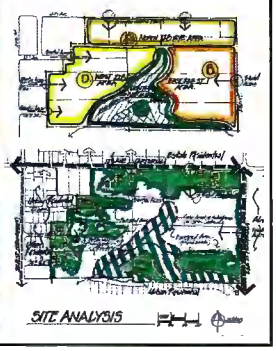
Purpose

Location and Land Use Context



Summary Site Analysis

- 25.4 hectares (63 acres)
- Adjacent to Maple Ridge Urban Area Boundary and within Metro Urban Containment Boundary
- Relatively flat, good major access, and servicing adjacent to property
- 13 properties: residential west and north with one farm property northeast
- Established residential areas adjoining west and south of property
- Coho Creek and associated wetlands create environmental sensitivities central and south area of site
- Potential access points from 232 Street and 128 Avenue



VISION

LIVE, WORK AND PLAY=

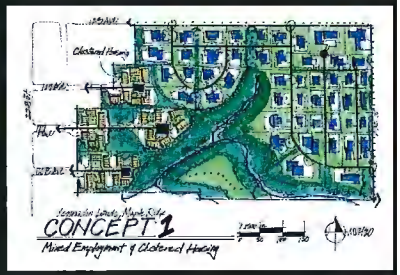
YENNADON

GUIDING Neighbourhood Employment PRINCIPLES

- Mix of Employment Uses
- Neighbourhood Business Scale and Character
- Innovative Incubator Businesses
- Compact Residential Cluster Form
- Environmental Sensitivity and Trail Network

CONCEPT 1
Balanced Mix

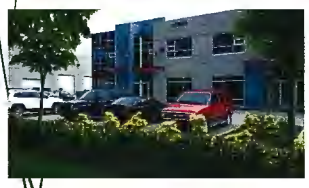
- Develops clustered housing on the west edge of the site with the balance being business uses
- Creates a housing transition to the existing housing on the western edge
- Provides diversity and choice of housing in clusters with a comprehensive trail network
- Integrates property lines with subdivision of properties and creates incentive of higher density to subdivide
- Develops a distinct mixed and scaled development to fit into the neighbourhood with environmental integrity



Diversity of Housing:
Courtyard Cluster and Mixed Cluster

Local Business Park Building Form and Character
west side more residential scale, smaller lots and uses

Business Park Building Form and Character
east side concept more conventional larger businesses



CONCEPT 2
Business Park

- Excludes residential uses
- Creates a more conventional business park with buffers on west and south edges
- Offers a potential eco-industrial business concept (enviro-friendly)
- Provides flex lots from 0.1 - 0.4 ha (.25 to 1.0 ac) but flex up to 1.6 ha (4ac)
- Responsive to market
- Presents larger lots on east side with 232 Street access
- Creates "Welcome Centre" for visitors on north edge as trailhead and local economic development showcase

CONCEPT 3
Business Park w/Res

- Reduces the residential cluster uses on west side
- Provides additional green buffer to business uses
- Creates smaller lot west side business cluster
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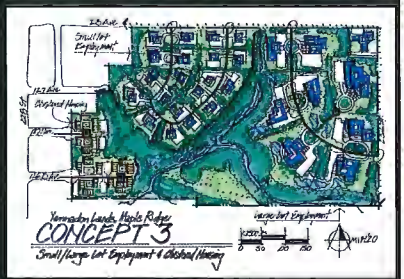

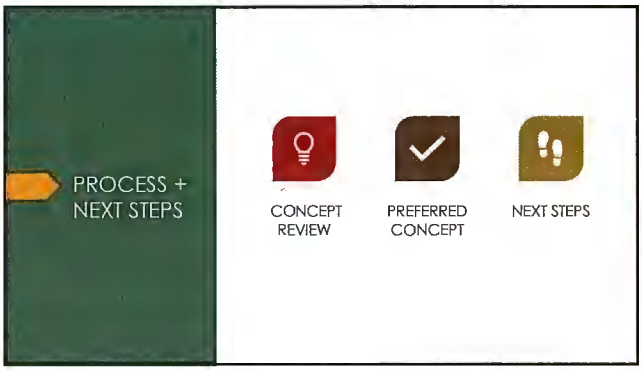
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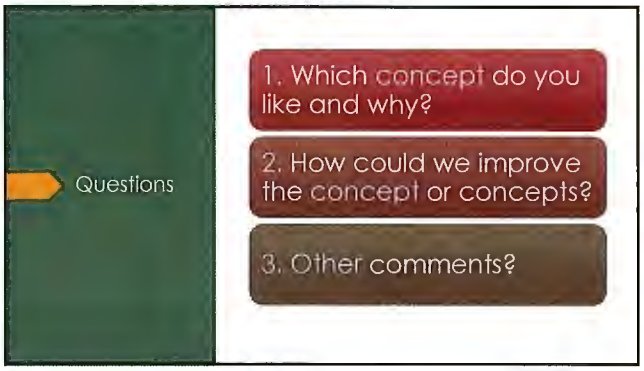
Questions
1. Which concept do you like and why?
2. How could we improve the concept or concepts?
3. Other comments?

Yennadon Lands Open House

Zoom Chat Comments

some of the Yennadon lands accessible off of 228 appear to have houses on them. Are those leaseholds?
I'm very impressed with the consideration of perimeter residents. Well done. I like concept 3 for use balance and interface with existing area. All having the common centre open area around creek is very important
As a local resident can you please speak about how the traffic generated by this change in land use will be accommodate, in particular along 128 ave.
We were told on Sept 21 letter to area neighbors council wanted to go ahead with Concept #2 Yet in the presentation you said that concept #2 had "Very Preliminary concept" How is it that we are to give feedback on no information I live directly on 128th 1 Acre 230/128th and you want an Artirial route?!?!
How will the surrounding areas be supported to address the new proposed development? Schools, childcare, traffic flows, sidewalks, parks, community centre amenities, etc.
I live abutting the proposal for 20 plus years and haven't seen horses here for years and have seen salmon in my backyard a few years ago
I agree 100 % with everything she said!!
I also feel informed and know this isn't going up tomorrow, so this is sufficient notice in my opinion.
Oh lisa there is a incredible amount of concern. you say that you are "early in the process" yet the letter says council wants to go ahead with #2 as of July
Would you kindly respond to the Miss who is speaking that everyone has a mailbox and pick up their mail daily. She is speaking about reaching people through the same channels that have not worked.
what changes will be for home prices in the future?
Just a comment about the process of city staff/council advising about the project. I live on Barnsdale Street and I never received any notification of this project and this project would directly affect us! I also follow the City of Maple Ridge on Facebook and never saw anything about this.
I live on 126 for 23 years and not opposed to this proposal.
I am a sitting director on the Down Town Maple Ridge Business development center and the first I heard of this was the letter I received dated Sept 21. The letter says Council expressed interest in Concept #2 and directed Staff to bring that concept to the public. ... You think people speed down 232 try 128th and they do it to get off 232
The one problem I see with any of the concepts offered is that no mention has been given to the vast amount of this area that is basically a flood plain. With a 30 meter set back, there must be an additional area to conceive the idea of some type of filtration system so the flooding does not impact any of the properties that are already aligning with the creek.
Hello. Not sure if you are able to answer these questions, but 1. Is there a developer that owns the majority of the 13 lots and is it that developer that is driving this development? 2. How do the other owners within the 13 lots feel about this development?
In order for everyone to be notified I would like to suggest a Mailout take place for the postal code area.

Hi. This site that is very close to a school, and large park, and is on a salmon creek, and is in the centre of a residential area seems like a particularly poor choice for an industrial development. Why here and not another site?
What considerations have been made for wildlife corridors? To allow current wildlife to keep using this land for travel, feeding and to have consistent hubs and corridors that are not fragmented - beyond the stream setbacks?
Is there a time frame for the completion of this project if passed by council?
Has the school district be contacted regarding this project and where children will go when/if residential gets put in.
Great Job Michael. Have to sign off for dinner. (Please relay)
can you point to some local examples that are similar to what the concepts embody. rob mentioned newport but I'm not seeing that is what these concepts would build out like. along those lines, is their council appetite for tower condos like
Are there any existing neighborhoods that are similar to what is being proposed in concept 1 or 2? i.e are you able to give us real examples of what the lands could look like?
Sadly, most of the native trees were harvested decades ago. Most of the forest is new growth.
What has/will be done about the underground water that is here on 128th. when my neighbor built his house it changed the flow from north est to north west and my driveway has sank in some spots. I have a LOT of drainage concerns of chewing up 60+acres of wet land
I like the idea of concept 1 with the live work facilities. This concept works well in the UK and allows smaller business to start up and be a real part of the community. I like the incubator idea to allow for smaller business to grow but shouldn't be able to grow to large as I would not want large trucks etc. coming to the area especially with the school and young children in the area.
Is there a time frame for the completion of this project if passed by council? Can someone tell me what happened to the area around Jim Robison Way and the Albion flats as far as commercial/ Industrial plans?
Regarding the questions. Which concept do I like - None. Why? I believe the environment deserves a lot more than 20% of the 63 acres. Not a lot of consideration has gone towards a self-sustaining eco-system such as this. Question 2; You could improve by reducing the impact of any development by reducing the amount of infrastructure that you have planned. More green, more 'already standing' trees rather than replanting. I could go on forever. Question 3; Has any consideration been given to the dozens of various properties throughout Maple Ridge that I 've seen, that are flat, baron, close to proper vehicle roadways, cheaper access to water, sewer, parking and other businesses. There is no need to trample a pristine area that supports not only life of mammals and feathered creatures but serves a serenity to surrounding residents. The last thing we need to see from our back porch is more buildings, cement, pavement, traffic, etc.
how much thought is going into the traffic around this i live 4 houses past yennedon elementary and every week day from 230-300 we essentially lose access to our home from the school traffic alone. why hasn't any consideration to school development in this area, with the growth of residential in this area the schools are being over crowdedthe majority of owners in the area are trades workers who can not work solely in maple ridge and have to travel to many other areas these
Why do we need trails? Those will add negative interactions with wildlife (in which ultimately the wildlife lose) Can we not leave the space for the animals without having to push ourselves on them?
Sadly most of the native trees were harvested decades ago. Most of the forest is new growth.
Saying 50% is just that it does not mean anyone is looking at 50%

How old do you have to be to NOT be New growth?
I agree with you Jodie, the trails are not a good idea
Has anyone considered that if everything goes according to what we all want with regards to 'the plan', that you will see massive amounts of heavy equipment, trucks, semi's, traffic in general when construction starts and will continue for months, maybe even years? This is not to mention the noise, people, dust and chaos that surrounds any construction Who is going to monitor any 'trails'?? Who will stop the fence jumpers, or littering or interference with the nature we are trying to preserve?
Has anyone considered townhouses or single family homes with lots of green space? In the new world people are working from home. What happens if we go through with this and people don't open new business and office/industrial space sits empty. Already offices in downtown Vancouver are down sizing and businesses closing.
I think two of the plans have housing components - likely a good compromise. those homes would be buffeted by the green space?
Do we want an empty business park that is ripe for a new tent city?
You talk about "Not using "industry" use "Employment"... Not "Impact" use "Enhance" ... You talk about "Scale" to reduce Larger traffic, larger trucks, Contained or buffered noise and then in the presentation you talked about businesses being able to purchase the property beside to expand? I have no issue with real mixed concept, small commercial and Residential mix I live on 128th. as a side note I had 3 bears in the yard yesterday Momma and 2 cubs. So what happens to our acreage properties across the street? I really don't want "industrial" on route to one of the largest Parks in the province Golden ears That surely wont spotlight Maple Ridge in a positive light. Keep industry where it fits Not smack in the middle of a established residential area across from 2 schools
how about adding the schools that are needed for the local residents and move the industrial area to the albion land
Nature deserves more than 60% minimum.
I don't think extra housing is what we need. If we, the people, want to live sustainably, we have to keep the population at a peak level that does not interfere with the natural world. There is already so much new housing coming up. The world can't handle extra regular housing. I am not in support of disturbing the forest in the residence, though if you are going to. Make it sustainable businesses. Also think, this is a small part of Maple Ridge, how much money making potential will it really generate? Not much. Stop trying to make money out of everything.
This is an "open" invitation for the neighbourhood to hear and to speak to this development. Why do I get the distinct impression that the City reps are paying us lip service ONLY? Hearing the questions, but not LISTENING. Responding with a scripted response. I am not thinking this is a true forum to actually hear what people think. I believe this is going to go ahead no matter what we say. And what I say is that it should NOT GO AHEAD.
I live on 126 and use 232 egress every day.
IS this a done deal?
I want to encourage everyone in the community to stay engaged on this issue. This is the BEGINNING of the consultation period. You can still call/email/mail the individuals involved at the City. Speak up if this is important to you. The City won't hear us if we don't speak up as a group.
I would not like 126 Ave blocked off I use it daily
these parents park directly on the road of 128th i have had abounded cars on the road of 128 in front of my house
great point about the afterschool care bus (among other great points obv)
We have also been told there will be a Tim Hortons going on 232 and 128 in that empty lot.

Does Maple Ridge have a protection of trees bylaw? I know it's not relevant but I'm just curious.
what is the projected time line on this proposal to start, 5-10 years .?
What about better cycling infrastructure for all ages and abilities so kids can bike to school?
If not a block off, then perhaps a speed bump or two on 126 &/or 230 so to discourage the short-cutters then?
There is a lot of speeding on 126, which is alarming considering the lack of walking/cycling infrastructure on the street
Everyone parks in my driveway.
We live near the corner of 126th and 230th, many of the cars that speed past; don't live on the street, but we see them turning left at the corner of 232nd. Assuming going up to Silver Valley, or to the pub. The amount of trailers, trucks with boats and campers using this street in the summer is crazy. Keeping in mind, with no sidewalks, its an accident just waiting to happen.
still zoned OCP, so long process to re-zone before anything can go in. This is part of the consultation and I think staff are doing a great job listening. Thank you.
I need to put up a gate
Thank you to all City staff for attending. Where is city council?
Just a side note, I did let the Principal and Vice Principal of Yennadon Elementary know of this meeting. I did get a response back that they had no idea about it. Gary, what's OCP?
Old comma proper
Official Community Plan. it's in the library.
OCP = Official Community Plan
Buddy is literally just trying to make money. Do you know by making more and more infrastructure, you are part if the problem of the deforestation of the rainforest, polluting the air, and the extinction of the animals
Do you guys want to go to the sheep?
128 Ave. between 232nd and 227 St. is also part of the 2050 Regional Greenway, which supposedly has mostly separated pathways for walking and cycling. There is only a horse trail on the south side. 2050 Regional Greenway is Metro Vancouver. The route was suggested by Maple Ridge.
Good point Jackie
The route is apparently "operational" (according to Maple Ridge)
This people want to line they're pockets with all the money of us poor citizens
agree with Donna; not opposed to the development as proposed, just concerned about traffic management. imposing Traffic Impact Fees on the development should fund mitigation plans of surrounding infrastructure.
128 Ave. is also part of the bicycle network.
suggestion to council.....mailing a letter to all homes surrounding the development area would be helpful.
Tell me about it
they did mail residents I have one in front of me
i did not recieve any mail about this.... i live 4 houses from yennedon
I didn't get one Joke
i found out from a silver valley facebook group
probably adjoining properties

as is 232nd Street. Both should have separated and segregated infra ON BOTH SIDES of the road. Bi-directional infrastructure puts cyclists in a place where drivers don't expect them.
I saw it om the Silvervalley facebook page
In the spring run off - water from Coho Creek overflows its banks behind my property and encroaches my house and floods my basement. If you divert the water new 232 & 128 into the waterway, it will be devastating to us.. You'll need to factor that into your plans or we will sue the city the next time our basement floods.
oh yes...that is right but I thought it was bcc I registered to be informed. Did you? Maybe that is why some got it and not all..
I did receive a letter dated Sept 21 2020 I posted it on Silver valley facebook site to get more people to see it I live on 128th
I don't have a face books
what about the idea of having installing a living roof on the buildings
The best route to gain the right proportions on this whole idea is to take the development elsewhere.
What is the Albian Flats?
I didn't get an invite either
The flats in albeean
would any sustainable energy be used for example solar panels on roofs?
How do we become ALC interveners?
It better. Fossil fuels are a big no go
To reiterate - we are firmly against any development on the Yennadon lands.
Not all of us
The comments in the survey are super important! Please fill them out!!
well done staff, thank you.
Strongly against development
will there be a schedule posted regarding future meetings?
Thank you council.
Thank you and good night
so people know you can save the chat with the 3 dots on the left of chat
Amanda Grochowich, Planner, agrochowich@mapleridge.ca Krista Gowan, Community Planning, kgowan@mapleridge.ca Lisa Zosiak, Manager of Community Planning, lzosiak@mapleridge.ca Rachel Ollenberger, Manager of Infrastructure Development, rollenberger@mapleridge.ca Rod Stott, Environmental Planner, rstott@mapleridge.ca

Yennadon Lands Open House Survey Results

Question 1 – Which concept do you like?

Question 2 – Please tell us why?

The second survey question asked participants to expand on why they chose the option that they did. Of the 157 survey respondents to Question 1, 146 participants responded to Question 2.

Summary Comments:

a) Need for Additional Employment Opportunities & Interest in Community Services

Many survey respondents clearly indicated that they felt Maple Ridge was in need of more employment opportunities, including quality business parks and employment lands, as it was felt that there is currently significant amounts of land intended for residential development. For many, it was felt that the smaller and flexible employment lot size could be supportable as the village commercial / cottage industry style development could be facilitated under that form.

General acknowledgement that providing employment opportunities that could get people out of their cars and not commute on a daily basis in Maple Ridge, as well as the Yennadon Area, would be ideal. Furthermore, there was a strong message that there is a dearth of services in the Yennadon and Silver Valley areas – calls for community services, in addition to or incorporated with the overall development intent of the Yennadon Lands, included requests for additional child care spaces, walkable coffee shops and small grocery stores, as well as general shops.

Some respondents did articulate the merit of possibly incorporating some residential development along the western side of the Yennadon Lands to soften the buffer between the existing residential use and potentially expand the type of housing available in the area. Interest was also expressed in further exploring the possibility of integrating a live / work component within the Concepts to further address requests for residential, but also boutique and resident-focused services.

Comments received also indicated a strong acknowledgement that the existing Yennadon Elementary School is at capacity and as such there are related traffic implications. Many called for another elementary school to be incorporated into the Yennadon Lands Plan (and/or within the Silver Valley Area) in order to address existing concerns regarding traffic and capacity. In addition, there were some requests for increased programmed recreational opportunities for the area, outside of the trail network included in the Plan.

At the same time, there was a strong message from the survey respondents that an employment future was not considered suitable for this location. Many cited the existing residential neighbourhood,

Yennadon Elementary School as well as Maple Ridge Park along 232nd Street just north of the site as reasons why an employment future was not a good fit at this location. Many extended that line of thought and called for a solely residential future for the area.

In addition to the key messages and themes above, there was an underlying thread regarding current and anticipated development trends and population density of the City. This was often in general, but also specific to the level of service and capacity of transportation corridors and services.

b) Environmental Protection and Preservation

Another very strong message reflected the community's concern for the environment, including the protection and enhancement of existing wildlife corridors, throughout the area. Many long-term residents share their stories of experiencing wildlife in the area, as well as impacts from storm events, particularly during wetter months. Given these experiences, many called for stronger environmental protections and efforts, than those identified in the Concept Plan, to conserve green space.

c) Other Questions & Comments

In addition to the key messages and themes above, survey respondents identified many ongoing questions that will be explored through the Yennadon Lands Re-designation Process, as well as through the future development application rezoning process. These questions ranged in scope and spectrum, and included:

- What type of businesses would locate there?
- What sort of buildings would be constructed for both employment and potential residential uses?
- What road access and traffic mitigation efforts would be included?
- What other forms of environmental preservation and protection could be included? and
- What the market could look-like in a post-COVID world?

Verbatim Comments:

Please tell us why?:
Maple Ridge needs more quality business parks
Employment lands is the key MR has plenty of Residential
I don't think the area is suitable to industrial/light commercial zoning as it's within a heavily populated residential area with schools and one of the busiest Parks in the whole province. Not once did we hear that 128th Ave is going to be upgraded to accommodate the heavy truck traffic this will bring to the area .
Feels that it complies with the Employment Land Strategy and provides for a variety of lot sizes
I like the idea of Concept 2, however, there are too many unanswered questions including what "industrial" buildings and activities will be allowed. The sketches are a little too vague to make a decision at this point.
The site is surrounded by residential neighborhoods, the only true major road access is 232nd. Anything larger and more industrialized would overwhelm the adjacent roads. It maintains a good amount of green space and access
interferes with the wild life
I like light industry and it is needed. I like 20% residential because housing is still needed and lots of places have mixed use. I also like concept 2 but not concept 3 because concept 3 has the big lots and I don't think the big buildings should be there.

Your Concept #2 Neighbourhood Innovations village is an INCREDIBILY misleading way for saying industrial park with No residantail consideration
Mixed employment and residential with a Fort Langley type vibe would keep our neighborhood as it should be. Provides employment and business opportunities, encourages visitors/tourism.
I feel that the concepts are not truly reflecting the work and planning that needs to go into this development. I would like to see a large percentage of the trees and nature preserved. More than 20% as previously stated. I am concerned for all the different species of animals, reptiles, critters, creatures, birds that live back there. I just don't feel confident in any of the concepts proposed last night. I do not see the need for "light" industrial in the part of our town. Like it was mentioned over and over again at the public consultation, the traffic is horrendous and this will further add to the problem.
I am not in favour of a business park within our residential area.
None of the concepts have enough land set aside to protect existing habitats. 20% is insufficient. 50% should be the goal. And setbacks/wooded borders between existing residential properties and the development lands should be wider.
The concepts are vague in pertinent information regarding the number of Industrial buildings on-site, square footage, number of stories, no identification of Industrial usage. No identification of housing clusters, be it Townhomes and or Condominiums. Detailed further information is necessary for citizens who will be directly impacted by these plans. The city has a responsibility to do due diligence in providing awareness of this project to the citizens who will be affected by this project. To date, past communication efforts have failed. I strongly urge the committee to briefly outline this proposal and submit it to every mailbox in the surrounding area. Currently, the community voice is silent.
My first choice would be to preserve the land as is. My concerns about so much development in the lowermainland, range from an increasing of the heat-island effect, drastically changing hydrology (and its effect on forest health & streams), paving (impermeable surfaces) & storm water runoff and the detrimental effects of big rain events and the negative effects on our creeks, to the cutting down of trees - and the massive loss of biomass, carbon storage and ecosystem services that cannot be replaced quickly enough by replanting. Once lost, forever lost. Once paved and developed the landscape will forever be changed and we'll never get these things back. Intact biodiversity, wildlife connectivity as well as preservation and integrity of the riparian area is first choice. Has covid not imparted the importance of nature and intact outdoor spaces? In these times the importance of preserving and putting a check on development should be very closely considered.
1) 128 Ave will not support heavy vehicles. I frequently walk on the pathway that was put in years ago. The city never maintains that pathway and its over grown in some areas causing people to walk on 128 Ave which isn't very wide. 2) 128 Ave and 232 Street is almost impossible to navigate around the two schools getting out around 2:30 and then at 4 pm it's another nightmare. 3) There's an overwhelming amount of wildlife that lives in that area. 4) Being a firefighter that lives in the area I know that industrial doesn't always bring in the best clientele
THIS IS AN ENTIRELY INAPPROPRIATE LOCATION FOR INDUSTRIAL ZONING
The location is great for employment: close to the Town Centre and residential areas, and close to Silver Valley. Also great for regional access via Abernathy. This location will enable more people to use active transportation to go to work. We really need to get people out of their cars if we don't want to be able to manage all the traffic that's generated by ever more homes.
Moved to area for sole reason of being away from city centre and businesses. Greenbelt/nature is very important for residents in area.
There should be a larger wildlife corridor available next to the creek (Minimum of 60 m) and the conservation area increased to include more of the the trees to the north and west of the wetlands.

My take on clustered housing is that it would include a community (possibly gated) with smaller one level homes for the 55 plus group which is growing rapidly. This is why I have chosen #1 over #2. Don't want industrial or large lot employment unless it is a small grocery outlet serving Silver Valley like the one on 240th and Dewdney.
Allowing only 20% for a self-sustaining eco-system, is not enough. You cannot 'section' off treed areas only around the waterways and yet cut them off from other sections - nature does not 'read' signs.
I understand and support the need for economic development in Maple Ridge, but I am concerned that this land is not the best location for these types of developments, especially the businesses. This is a residential area on all but one side/232 St, and a development of this size would significantly increase traffic on the smaller neighbourhood roads like 228 St. and 128 Ave, rather than encourage traffic to use Abernathy. In addition, the land in question is itself a sensitive waterway and helps feed a salmon-bearing stream, Coho Creek, that feeds into the S. Alouette River. One small branch of this creek begins on this patch of land. Coho salmon can be found in Coho Creek east of 228 St. leading into these lands, in addition to an assortment of wildlife like brown bear, deer, herron, wood ducks, coyote, frogs, and numerous larger, older native conifers. Because of its location, much of the area is poorly-drained, with a solid sub-clay layer that means there is extensive standing water through much of the year. Take a walk through the property in MArch and see how moist much of the centre of this proposed area is. With extensive industrial development of this property, not only in the added buildings, but additional paved area, the water that can now sit in pools on the forest floor and slowly feed into the creek all year will be pouring off of pavement and roofs and into a sensitive streamway in the winter, which will then have less to feed it in the summer. Not only would there be flood control challenges for the tenants, as well as existing neighbouring properties having to manage outflow, but the flow into this salmon-bearing stream would be significantly altered. I believe there are numerous other areas within Maple Ridge that can be suitable to more industrial development of this kind. However, if development is done here, it will be important to ensure that not only are the two waterways within this area of land are preserved, but that the development around them is done in a way that takes into account the unique features of this piece of land, season water flows, and how to best filter the surface waters from these developments before they reach the waterways. Not only after development, but during.
I feel it's what the community needs
This is a neighbourhood and it would be more ideal to model after something like Osprey Village or Fort Langley. Many of us agree that we need and want commercial, but the word "industrial" even light industrial is a slippery slope. A small warehouse style commercial space where a local artisan creates their goods, sure, but a mechanic would need to be situated away from some of the neighbourhood elements.
Far too populated stop building
the city desperately needs more light industrial and this is perfect area for it
I don't feel it is the right area for industrial use.
We have enough homes, I need somewhere to shop and go to for a local coffee shop
I like to promote small business in village settings
We need more commercial space for Silver Valley
This creates an employment centre embedded within the City that reduces the need for people to commute. This is how job creation lands should be done rather than acres of industrial miles from homes.
Just another full on traditional business park does not seem like the right choice. Are all the other ones in Maple RIdge utilized fully? (No) Mixed work/live buildings would be great like in Fort Langley's river side development. With retail we could take advantage of traffic to Golden Ears and

Silver Valley etc. Diversify shopping. Include some little cafes and services like Pitt Meadows little village near the water. Be innovative and think smaller scale. Support cottage industries.
We have enough residential housing going into the area. We need to have more commercial/industrial options
I like the idea of the larger buffer area between the residential and business areas.
The tranquility of the land behind our home will be lost. This is too much development for such a small area, which is right in the middle of a residential neighbourhood.
It would be great as a parent to have a new neighbourhood to explored with trails and small shops. Bringing in more local businesses and employment.
Need more businesses and amenities less dense housing
Adds housing and room for shops and restaurants something like new port village Port moody
Provides business and employment opportunities while preserving neighbourhood character and green space.
It would nice to have an area of mom and pop shops. There is no room for more residential unless more schools and parks were added. I dont like the larger stores as it would increase truck traffic and more parking areas which is an eye sore.
I live on 235 Street and 128 Avenue. In order for me to get groceries, grab an ice cream, meet a friend for coffee, go to a bakery I need to get in my car. I want to live in an area with the opportunity to not drive, to socialize and run errands and have my teenagers have a safe environment to do the same.
Yennadon is a family/nature/quiet area as we all know it, more housing and family than employment in this area
It would allow for a Balance if daytime and nighttime traffic
I like the idea of supporting smaller mom and pop shops
1. Maple Ridge has already overdeveloped in terms of residential buildings. We do not have the road infrastructure to accommodate even higher density, especially in this area. 2. Your plan for businesses are not ones that the residents of this area have been asking for. They want closer amenities, such as grocery shopping, not an industrial park weirdly shoehorned into a residential area.
The road infrastructure does not support any industrial business. There are other locations in Maple Ridge for Industrial Buildings, along River Road, 256th Street to name someone me.
We need some businesses in the area, to help lower local taxes, keep income in the area, reduce commute to other communities
This area has a high density of traffic due to Golden Ears access and is elementary school adjacent. Additional land use that increases traffic congestion without complimentary diversion or access elsewhere is short sighted.
We DO not need more houses!! The “employment ” would not benefit all those who live near, only a small population of people who work in industrial style places. Would be so ugly. No more houses, Build more schools!
There's too much residential density already in the area. Maple Ridge is full of people that commute elsewhere to work, we have done a terrible job of inviting (and providing incentives for) businesses to set up in our city and create jobs here. Other cities have embraced the 21st century, partnering to bring in the necessary communications and technology infrastructure to attract business.
Having no planned commercial spaces in the area, this concept would integrate commercial buildings more organically than a more traditional business park
Build a soccer, baseball or tennis arena.
This is a residential area with pretty high traffic already, we don’t need additional business traffic
I think it should a new restaurant like earls or something and another gym.

We need jobs and shopping
To busy already don't need more chaos.
We need more employment opportunities and commercial in Maple Ridge. Too many housing projects with little done to improve traffic flow
Best suited for an area that is residential The area is not the right place for Lite industrial or clustered housin
If I am correct in thinking, it will create a little hamlet of business and housing, keeping traffic at a minimum going to downtown
We need to stop building houses, townhouses and condos otherwise we will end sup like Langley with so much traffic
We do not need more residential housing. We need commercial/industrial buildings that will help lower property taxes
Enough housing & local traffic already
As much as more housing is appreciated, there are not enough schools with capacity to support more students. Having an innovations village will provide jobs to local residents, as well as much needed businesses.
I like the idea of bringing employment opportunities into the area
The green belt is a nice feature and it's the best of both worlds offsetting employment and housing
I believe that this development plan should also be done in conjunction with a traffic improvement plan, currently there are schools zones that are ignored by many drivers and bumper to bumper traffic during the morning and afternoons with school, and in the summer with all of the vehicles going to golden ears or people tubing the river.
Not proper infrastructure in place. Too close to the school
I do not like this area for commercial or industrial period
More amenities for that area should decrease traffic congestion if the right businesses are brought in.
Not the right area for light Industrial and cluster homes have parking issues
Leave the Neighbourhood 1+ acre parcels!
No industrial, no residential, commercial that responds to the growing needs of silver valley
You have not addressed the increase in commercial truck traffic in the residential area. From these proposals it would be a scar in the neighbourhood . Why hasn't the City opened up the old prison lands to development that could handle this type of commercial development.
Our schools are full we have no room for families moving into the area. 232nd is already a parking lot at school drop of and pick up times and in the summer traffic is terrible on that stretch. We also need local jobs and services closer to home to reduce overall traffic concerns
We need less BC boxes, Silver Valley is already a residential subdivision. More commercial is desperately needed
This is an ecological corridor with many sensitive habitat areas. It's great that waterways and fish will be protected, but the habitat of other wildlife (deer, bears, bobcats, pollinators, multitudes of bird life) also needs to be protected. The concepts need to do much, much more to conserve healthy tree clusters, wetlands, and meadows.
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More green buffer space and higher density housing. Other concepts are overweight in a category.
We need more commercial /industry (jobs)
try to keep the greenspace/waterways included and trees

A mixed use neighbourhood would bring more resident-centric businesses (coffee shops, gyms, restaurants, etc) to the area and promote people walking around out of their cars. A business only area would probably not be very vibrant and would die down after business hours. Not a great community space which is desperately needed in yennadon.
I like adding housing and small commercial. Commercial would serve the many people living in silver valley. This is NOT the place for an industrial park.
Concept -1 provides opportunity to have residential home lots for more owners and thus there is no complaints that certain owners got disadvantaged by the assignment of their lands to a lesser valued Industrial class. The lot on 12639 232 St(the one on south-east corner of the Yennadon lands) has its west side 2.5 acres not designated at all or appears to be green space while there is enough green space provided everywhere already ! This lot should not be penalized while this 2.5 acre on the west side can be easily be classed as residential subdivision of 10 or more lots by providing access from south side subdivision or by building a bridge over the creek, which appears to be narrow and shallow, from east side to west side of the lot.
None of the concepts go with the neighbourhood. A retail mall would be more supported. Your proposal is basically putting an industrial park in the middle of the city.
We need commercial development in area: there's too much housing, need stores, there's no infrastructure based on ratio
Finish proper secondary road access in/out of Rockridge area that we have been waiting for 20 years.
There is a very sensitive creek system in this area and if house is worked safely with this in mind then adding some forms of business could work providing something closer to the housing presenting less traffic up into town and employment for locals
If Council is truly wanting employment lands then keep it 100% employment lands. This also has the lowest impact on existing neighborhoods.
Of course I would be happier if the land stayed as is. But to be fair, if I had to pick a concept it would be the 2nd one.
I don't think there should be walking paths would be a disruption to the wildlife and would not be a supervised area. who would be responsible for the upkeep?
I think that this area should be designated residential housing except for the area on 232nd from 128th south to Abernethy. 232nd St should also be increased to 4 lanes from 128th up to Dewdney Trunk Rd. We need more housing in this area as it is a great area for families. We need to protect our creeks and wildlife and not introduce industrial into this area.
Greatest density of employment to residential while preserving the residential look and feel.
This is a QUIET residential area with so much wildlife (Bears, Bobcat, Owls, Hawks, Deer, Blue heron). This is going to rip the neighborhood into a noisy, busy and CONFUSED area. I do not see a proper densification that fits the real feel of this area. Obviously there is more of a financial tax push to over-use this site instead of a clear vision for a healthy community
perfect opportunity to build a sustainable neighbourhood with trails/parks, light commercial (ie: Dr. offices, grocery, daycares) and alternative transportation lanes. An industrial park proposal at the north end of a large residential area is not ideal for traffic flow and volumes. Plenty of areas to expand or redevelop/rezone in Haney, and to the west where major arteries can provide better transportation needs.
There is too much development in Maple Ridge
Seems to be the most friendly to the environment
North east areas of Maple Ridge lack business opportunity and stores
NO to Supportive Recovery Housing.
Yennadon Lands development is reduced to ONLY 50 acres. Coho Creek and Tributaries conservation area is 13 acres that reduces the gross development to ONLY 50 acres

industrial land is in short supply. with four more years of NDP the removal of land from ALR is highly unlikely.
destruction of nature and wildlife habitat
will destroy a beautiful environment
WE DO NOT WANT THIS HABITAT WHICH IS HOME TO MANY ANIMALS TO BE DESTROYED
We need more local jobs
None of the concepts provide any benefit to the current residents. We do not need a trail to an industrial park, housing, or a business park. There are many business parks in Pitt Meadows/Maple Ridge that have vacancies, and housing nearby. There is no way to ensure that any of the businesses that may setup in this "park" will hire employees from the area, and if they are an existing business moving, their employees already likely live elsewhere. There are many reasons why people live where they do: schools, split/blended families, lifestyle and amenities, affordability, and work location for one or two income providers. This idea of living next to work is a nice sentiment, but it is too simplistic and the employees and owners aren't going to end up living a 5 minute walk away. A couple of small retail shops on 232st could be beneficial to the neighborhood
With an ELEMENTARY SCHOOL right across the street on 232 and 128 traffic is busy enough right now. Bringing in more trucks is a terrible idea and takes away from the community feel. An industrial park does not belong in this spot!
While harder to attract initial occupants, the nature of the commitment should provide more long term stability and sustainability for the area. It also provides an opportunity for an anchor employer that can save the greater East Maple Ridge area. A sort of flagship employer further enables services associated with handling the needs of those in clustered housing or employed in the area (restaurants, personal services, shops etc).
In the presented concepts, there was not enough percentage of the development allocated for green/environmental space. I would expect to see at least 40% of the land protected, given the amount of wildlife that lives in the area. I also am overwhelmingly against any 'light industry" or 'large commercial' development for this area. With the proximity to the elementary school, and the Alouette River, as well as being at the footsteps of Golden Ears, any 'industry' type development would be completely misaligned with the neighborhood.
We need a new school
Mixed housing and employment would fit more with a neighbourhood feel, and at least based on the drawing seems to preserve more of the big tree stands. One of my biggest concerns is increased traffic to an already congested and largely residential area, particularly with an elementary school so close. Also I am concerned about noise and the type of industry that would be going through, and having mixed use would hopefully keep noise and truck traffic to the least possible. I don't think large lot employment as in concept 3 fits the neighbourhood well at all. It's too residential and close to a school.
We have way too much housing in the area, and an overloaded elementary, no high school, not enough access, almost 0 amenities, we need businesses not houses
Concept 2 with large concrete traditional business park buildings is not a reflection of existing surrounding neighbourhoods
This is a residential neighborhood and should stay that way
None of these plans speak to the future of electric vehicles
As mentioned on the City of Maple Ridge website, the heritage of Yennadon is a major recreation centre with one of the largest parks in the province of British Columbia being the Golden Ears Provincial Park. The area of Yennadon must remain true to its roots, as a recreational area not to be ruined by industrial business parks with loading bays and trucks blocking traffic making deliveries and loading products.

This is a general family based neighbourhood. Adding businesses that support the neighborhood ideal works better than the introduction of any industry style of business.
None of the concepts, since the (170 - 230 acres) of additional employment lands by 2040 (one of the short term outcomes of the Commercial & Industrial Strategy) should be obtained instead from areas with good transportation access like closer to the Golden Ears Bridge and Lougheed Hwy.
Seems to make the most sense
Allows employed personnel and owners of business, a convinience to look after the business and also minimum travel. Now, the tend is to not to go shiopping and not to go to the office personally but work or order from home, so less and less need/demand for office space and commercial space. The demand for residence is always there as there is infllux of people into BC as BC seem to have good weather and good economy.
Not enough consideration for the environmental impact to the wetlands and creek areas and lack of a serious plan to mitigate flooding. More land needs to be conserved to deal with both of these issues.
This land should be used for strictly housing.
Employment lands better tax base
Should be solely residential.
There are no visual concepts and imagine what it might look like.
Creates some housing opportunites between residential and business and keeps neighbourhood connectivity and access for existing residents to new businesses. Creates service and shop amentities within reach for Silver Valley residents. One of the buildings should be a new school and built to west coast standards aka covered outdoor areas for dry rain play whoever approved the plans for Yennadon Elementary must be from California, where it never rains as it is the worst architect design for a BC school ever and is newer, with no covered court yards, bike racks not covered, classroom doors not sheltered. Yet school policy is always outside no matter the weather. Normal rules for bc, but the other schools are sheltered and have covered courtyards with 4 square and hop scotch we lack any covered areas for rain protection and shade on hot days. Most schools have the class doors inset and shelterd as well to line up in a dry spot for entry. This is Exteremely Poor planning that this school was built like this in a Maple Ridge rainforest in BC.
The area is beside existing residential areas.
Provides a nice buffer between current houses and light industrial.
This is a major habitat for many species of animals...bear, deer, coho, coyotes, raccoons etc. We are surrounded by residential homes...this is not an area for a business park.
Concept 2 due to the fact i think it has the most flexibility for commercial building and sizes
We need some buisnesses near silver valley as we don't have a lot however, the area shouldn't be turned into a busy commercial area
This concept of having employment space below residential areas works well in other areas in the world. If you go to visit someone who lives there you may be more likely to go into one of the shops etc. If you have small local businesses occupying the space this is more likely to employ local people as who wants to travel from out of the area for a min wage job. Having larger industry in the area will bring people from further away and add to the already congested the roads. During school hrs (7am to 5pm) no one drives at 30.
Wrong area for clustered housing and mixed employment. Adequate access for the increase in traffic coming in and out of the area will never be fully accomplished.
Two reasons. One, what's my place going to be worth when there's an Industrial Park across the street? I was planning to spend some real money on my place, now what's the point? Two, The animals have an Arterial route of their own. I have enjoyed them passing through for most of my

life, as I grew up on Barnsdale Street. Moved away for only a few years but came back to live in the house my uncle built on 128th Avenue in 1990. Bear, Deer, Racoon, Bob Cat, Birds of every description, very sensitive fish habitat in the creeks, the list goes on and on. It is a Wetland. The public probably shouldn't even be in there jogging or what ever. Animals know nothing of collector roads or arterial roads, this is their home. They have their own arterial route that comes up from the South Alouette River, down Barnsdale st. often coming through our yard and crossing 128th Avenue going toward the area in question. Once there they know they are safe from the speeding traffic on 128th Avenue. I have no idea why you want to do this right there. It's a wetland, and as my family have built in the area I know this in itself will likely cause many problems. Don't forget this is a horse town, with many horses on the roads, the increased speeding traffic is going to be a worse killer than it already is. We have been complaining about the close calls to people (and there's been worse to animals), from careless speeding traffic for many years.This goes back decades, and this proposal is not going to make it any better. We've been begging for our city to make the traffic slow down on 128th.
Traffic concerns are major on 128 Avenue: already bumper to bumper during rush hour and before/after school. High tech office space is falling into obsolescence in favour of remote work at home. In a post-covid society, high tech companies have been downsizing office space, not expanding. Nature habitat destruction.
None of the concepts mention, discuss or provide in detail the exterior lighting for the businesses. Neighbouring homes and families will be affected by the bright illumination of an employment business park.
I very much appreciate the effort that has gone into incorporating the natural environment and its ecological features into these concepts with the riparian buffers, but I believe more can and should be done. As a resident of 126 Avenue, I've borne witness for over 20 years to the incredible wildlife that use this natural area as passage and refuge. Black Bears, Black-tailed Deer, Elk, and Bobcats just to name a few, not to mention countless species of birds (many of which brought me great joy to practice identifying during this time of self isolation). I understand the desire to increase business potential in Maple Ridge, but I believe the natural ecosystem present in these properties deserves more consideration and conservation than brought forth in these concepts. The forests, meadows, and wetlands are also essential components of this functioning ecosystem relied upon by countless birds, mammals, amphibians, and pollinators, and will need more protection.
Terrible location to build
I feel it would result in least incremental traffic in the area
None of the plans recognize that the creek and forested areas go far enough to protect the green space - especially along the SW edge. That space is an important habitat corridor that is critically important to fish (salmon), frogs, birds (such as owls) and a wide range of wildlife. That area is not suitable for housing and needs to be protected.
You need to come up with a better infrastructure before any development is considered. This is a residential area and none of your concepts is suitable. You have far too big footprints in mind for this area. Please keep industrial or heavy commercial areas on the outskirts of town.
Safety for our neighbourhoods. The (3) concepts would increase both cars and trucks to a residential area that has two elementary schools within walking distance and would bring an increase of traffic detouring through local residential neighbourhoods, some that do not have sidewalks.
No "Supportive Recovery Housing". No addiction housing/centers. No housing for individuals in substance use recovery programs for alcohol or drug use.
We like the green space provided.
These concepts don't seem to match the description of The 3 concepts on the 'open house' page
if I have to pick concept 3 I want it left a green space.

Question 3 – How could the concept or concepts be improved

The third survey question asked participants on how the concept or concepts could be improved. Of the 157 survey respondents to Question 1, 122 participants responded to Question 3

Summary Comments:

a) Location

One prominent suggestion was to find other suitable places for employment opportunities in Maple Ridge outside of the Yennadon Lands. A few noted that the concept principles were palatable, but the general location was not.

b) Suitability of Future Development

A common suggestion was for the Yennadon Lands to be planned for a more residential future. Building on that theme were a number of subtleties, including the incorporation of apartment housing forms, including rental units, and exploring residential uses with smaller footprints, as possible means to incorporate more affordable housing options than those currently found in the Silver Valley Area. At the same time, there was a call for more single-family homes in order to reflect the existing residential neighbourhood.

Similarly, a key theme spoke to the acceptance that residential development can be increased elsewhere within the City, while employment development is restricted to areas that are flat. However, it was acknowledged, at the same time, the importance of encouraging and regulating an aesthetically pleasing development that inspires people to visit, but that does not feel industrial. Some positive examples that were cited included Osprey Village in Pitt Meadows, Fort Langley, Fremont Village in Port Coquitlam, and Newport Village in Port Moody, as well as the intent of the hamlets established in the Silver Valley Area Plan. Under this theme, survey responses spoke to the need of establishing areas that 'have some soul' and a desire to see this incorporated through thoughtful site and building design, including but not limited to human-centered building heights and designs, pedestrian-walkways, the preservation of green space, and an appropriate mix of services and uses. Interest was also expressed in green building and/or sustainable building techniques, including rainwater harvesting that would be integrated into design elements of the site plan.

c) Provision of Employment Uses and Community Services

A third prominent message spoke to the type of future uses that could locate in the Yennadon Lands under an employment future. A key theme under this thread spoke to the ability of future development to reduce or mitigate their potential impacts on the existing neighbourhood, but also as a call to bring in a range of services that would benefit current residents. Under this thread, a number of requests came through including:

- A neighbourhood-level commercial development, similar to the existing one at 240th and Dewdney Trunk Road, to provide the community with certain services, including a grocery store, coffee shop and other opportunities for small and local businesses.
- That these future services could serve a larger service area than simply Yennadon and Silver Valley residents, such as the residents generally located north of Abernethy, east of 224th, west of Fern Crescent, topped by Silver Valley.
- A preference for encouraging, and prioritizing where possible, small businesses owned and operated by local Maple Ridge residents.

- The desire to see more child care spaces in the area, in addition to more playground and park spaces, another school, more nature trails, and the opportunity for recreational buildings (including a pool and/or fitness centre).
- Interest in exploring a mid-rise office building form as well as a built form that could facilitate the establishment of the education sector (i.e. certification-based and trade accreditation programs) to meet the needs of the Maple Ridge community at large.

d) Environment Protection & Preservation

Another very prominent suggestion was a call to increase the level of environmental preservation and protection above and beyond what is illustrated in the three concept plans. Occasionally in conjunction with reducing proposed development density levels, the theme circled around the acknowledgement of the community and ecosystem benefits provided by the Yennadon Lands in their existing state and the importance of preserving and protecting these environmental services for the Maple Ridge community at large. Linked to this suggestion were concerns and calls for ensuring appropriate and progressive drainage techniques are implemented, citing familiarity with existing conditions in and around the Yennadon Lands, as well as with concerns of a changing climate and potential increased impacts on these lands.

e) Infrastructure Servicing

In addition to calls for appropriate environmental and stormwater management techniques were calls for increasing general infrastructure services in the area. In particular, this focused on transportation and access challenges, citing existing service levels would not be able to incorporate future planned uses. There were also calls to explore alternative access options, in the hopes of reducing traffic impacts on 128th Avenue and 232nd Street, as well as increasing the level of cycling infrastructure to include separated and segregated lanes on both sides of these two roads.

Verbatim Comments:

How could the concept or concepts be improved?
The proposed densities are too high for the area. Reduce the scope and increase natural land preservation.
Maybe better access via 232nd if possible
Some thought should be given to how an land assembly could be accommodated or made easier, given the amount of environmentally sensitive areas
I like the idea of Concept 2, however, there are too many unanswered questions including what "industrial" buildings and activities will be allowed. The sketches are a little too vague to make a decision at this point.
Do not consider 128th on the north of the site as an arterial route. The road is mainly residential, has a sharpe 90degree bend at 228th and cannot be widened. The only true arterial access is 232nd
by finding another place to build
The concepts need to flush out the type of industry and/or employment that each is contemplated. People don't want big loud industries and trucks.
People REALLY need to be informed in real layman's terms of what Concept #1,2,& 3 are Enough of the "Scarce details" crap You are asking people to do a survey. you are misleading the questions, and you are giving ZERO DETAILS on the concept the council says the city should move ahead with!!!!!!!!!

As mentioned above, more than 20% of the forest and nature need to be preserved, the traffic flow and infrastructure needs to be addressed. As well as drainage issues for the creek and surrounding properties.
See above
By providing detailed information. Break-down and build in phases as currently other industrial sites with many building are sitting empty, As are retail spaces in our own Maple Ridge town.
Turn more or all of the lot into protected parkland. The current community and the generations to come will thank-you. If I had to choose one of the options provided, I would rather see something that fosters and adds to the sense of community. Therefore, I am not keen on a business park, tech sector or industrial use. A rec centre or small locally owned businesses, restaurants or local breweries, and/or residential would be preferred. If that is not possible than I would choose whatever plan preserves the most green space.
The industrial component needs to be somewhere else. It doesn't belong in a predominately residential neighbourhood.
RESIDENTIAL ZONING
I think part of the plan should be to provide separated and segregated cycling infrastructure, on both sides of 232nd St and 128th Ave, rather than a bi-directional path on one side of the road, which seems to be the plan at the moment. A bi-directional path is going to put cyclists in dangerous situations when riding in the direction opposite to car traffic, as drivers won't be looking out for them. It's all the more important because we'll see increasing numbers of faster moving e-bikes and -scooters. The general public is unaware of the dangers of these types of facilities. Please, no more bi-directional paths on busy roads with lots of turning movements!
Do not build!
First - These concepts are not acceptable. Second - More conservation area needs to be considered for any concept to meet the current neighbourhood dynamic. The number of species which use this area is quite large and includes water fowl (Heron, Ducks etc.) linked to the wet lands and the large land based animals (Deer, bear etc.) that feed and live in these areas. Once the trees and wetlands are gone, so goes the wildlife habitat. Third - Any concept that does not consider the potential for flooding in the area due to development is also not acceptable. The wetlands are extensive in this area and along with the trees provide a significant flood plain for the control of water through the Coho Creek corridor. I have lived on 126th Avenue since January 1999. The area under consideration has served the current residents well in that it has acted as a major catchment on at least 2 occasions where it has prevented flooding onto the properties to the South. In both cases when the banks of Coho Creek were breached the water proceeded to the north into the wetland area. Fourth - An extensive environmental and hydrology survey needs to be conducted for any alternative concept to be considered. The economic balance between concept and the environment needs to be considered and 20% conservation is not a balance.
Keep it green (open spaces). Don't want a concrete jungle in such a pristine, beautiful area that is Silver Valley.
With half the world under water and the other half on fire, I think we need to remember the diversity this area has and continues to give to surrounding neighbours; beauty, serenity, visiting nature, oxygen, and a view without cement, pavement, people and destruction.
If the development does go forward, I hope that legitimate measures are taken to not only protect the existing waterways, but ensure that stormflow from the developed areas is managed and filtered in a way that ensures the waterways are not overwhelmed in the winter and left dry in the summer.
Only allow small local businesses like coffee shops etc owned by local people
A drawing is somewhat hard to go on, but I just feel that massive attention to aesthetics is needed here to ensure that whatever it ends up as, doesn't feel industrial... like at all.
Stop building

Outer ring of businesses be small shops/commerical then inside industrial. NO DENTIST, MONEY MART, INSURANCE, DOCTORS OFFICES
The village should be safe for residents. NO social housing !!! Seniors residence would be appreciated
This looks great
Stop trying to shoehorn traditional industrial into residential areas.
My only concern is whether there is enough parking
Use less than half of the land currently being considered. Use the land closest to the major road of 232 Street. Close the entrance to 126 Avenue at 232 Street
Ensure small local businesses are given priority over large chain business. Ensure housing is affordable and includes rental properties.
Everyday businesses not major factories. Coffee shops, grocery, hair, etc.
Add play grounds for kids and have at least 2 new day cares.
Incorporate plans for businesses that would serve the neighbourhood itself.
A park would be nice.
I would like to see a character, destination type village. A quaint little place that doesn't feel commercial or strip mall type place. Something like Osprey Village, or Fort Langley. Something that people WANT to go to with some soul. There are thousands of residents nearby with very little choices that are walkable. I would strongly contest any type of large warehouse or typical tacky strip mall design. In fact I would probably sell my house and move if that did happen.
Less employment and more nature, park and residential, or add. A small village of stores like 240th kanaka .
Reduced density. The residential component should be more respectful of the existing residential pattern and density
Provide decently sized green space (i.e. parks with playground equipment for kids). Build a new leisure centre swimming pools ,with gym etc.
Change the proposed businesses to goods & services that the existing residents could actually use, or don't develop! We don't have to pave over every greenspace in Maple Ridge.
Zone it for 4 Storey Apartment Buildings with the ground Floor Commercial use
Additional infrastructure
Next time you hold a meeting, know who would be a potential employer.
Target a percentage of the business park to high tech and green tech companies.
Traffic on 232nd and 128th is already a nightmare due to school drop off and pick up. The safety of pedestrians on this corner needs to be a priority if development goes through
when there is so many homes you need better infrastructure. How about a soccer or baseball arena, like the one in Albion.
Really liked the hamlets design in Silver Valley OCP, and the mixed residential plan reflects similar characteristics
Don't know at this point. Maybe stop building houses on top of each other and defiantly not the right area for a fish plant or any other industrial buildings
More focus on commercial than residental
Larger lots and more green space, NO Industrial
Keep lots of green and trees, we still have a lot if wildlife
Having commercial buildings to bring in jobs would be nice
Need commercial businesses closer to residents
Need playing fields for kids and family, not small spaces, a bigger area!

I do not support additional housing development without an additional elementary school first being built for Silver Valley students
I'm worried about the amount of traffic brought to the neighborhood. It is already congested during peak times because of the silver valley housing
A traffic plan would need to be implemented as well as improvements to the school zones to make them more visible, ie signs that flash the drivers speed, a pedestrian controlled walk signal at 129 avenue that to allow parents and children to cross safely.
Mix of small village type business would be nice like a coffee shop (not big chain) and some housing for over 55 that are ranchers or ranchers with basements. We don't need industrial here
Single family homes
As long as it includes a grocery store, mid-rid office buildings so that people who live in the area can walk for groceries, walk to work.
Mixed use commercial/residential instead of light industrial
By leaving our neighborhood the way it is.
Address the lack of services from a community that spans from the end of Fern Crescent to 224th, north of Abernathy
Having some small commercial with rental suites above along 232/128 . Leave area mostly residential.
More commercial. The infrastructure, specifically 128 ave and 232 needs to be improved BEFORE ramming this development in this area. We already have congestion issues here because of lack of foresight in building out residential far away from the only school in the area.
It's great that the concepts seek to protect some environmentally sensitive areas, but keeping only 20% of this land for conservation is unconscionable. The wildlife there needs much larger hubs, with continuous and connected spaces, not fragmented ones. We have a very valuable ecological area here, and it would be a great benefit for 75-80% of to be legally protected with Conservation status.
A much larger percentage of this land should be conserved. The wildlife there needs much larger hubs, with continuous and connected spaces, not fragmented ones. We have a very valuable ecological area here, and it would be a great benefit for 75-80% to be legally protected.
This puts too much traffic on 128 and 232, while having a choked northern wildlife corridor. I would suggest widening the streets while proving multiple wildlife overpasses.
Some space for commercial at corner of 128 & 232nd. I live in silver valley we have zero commercial
some clustered housing and village type businesses with lots of trees/green space - nothing higher than 3 floors
Underground parking and pedestrian only walkways between the businesses with green space and seating.
I believe the creek locations and the green space or setbacks at the creeks are not drawn to scale and misrepresents the actual conditions at the site. especially for the lot on 12639 232 St., Request that a more accurate plan be drawn with some contours including contours at the creek, top of the bank for the creeks etc. that will provide an opportunity to look at the lands with accurate information and may be classed more appropriately.
Retail with coffee shops, grocery, etc similar to 240th street
Finish proper secondary road access in/out of Rockridge area that we have been waiting for 20 years.
As above
Only develop the lands with access to 232nd Street.
The more green space, the better.

cut down less of the forest(trees) to protect the wildlife that use this green space and the spawning creek that runs through the property
You need to have a concept 4 option that includes residential only and some commercial on 232nd.
Decrease the requirement for eco-business.
There needs to be a more thorough discussion with the residents of the area to really see what is needed, no one wants a business park in a semi-rural wildlife filled neighborhood. A few useful shops in a less dense setting would be more appropriate- to allow residents to shop in the neighbourhood and stay out of our cars. We do not need a welcome center, this is not needed and is going in the wrong direction.
With the growth of Maple Ridge in the last decade, the OCP doesn't seem to match today's needs for transportation, road infrastructure, alternative transportation lanes or green spaces. Take an opportunity to look at what the future requires for MR and the environment. Reducing vehicle volumes through neighbourhoods, traffic calming, alternative routes and rapid transit is the better option. Providing green spaces for communities to use and come together (Lafarge Lake and Blakeburn Lagoon are great examples).
Leave the land as it is.
outdoor ice skating trails - winter and dance pavilion summer.
Eco conscious designs with neighbourhood feel - Bonson landing in Pitt is exemplary
more industrial use should be creating, housing can be created through increasing density of existing lands. industrial uses require flat land and have no opportunity to increase density vertically.
by not destroying so much of the land
do not develop
More commercial/industrial and less housing
The portion of land reserved for environmental is too small in all three designs, and should be reserved for the wildlife only. These properties provide food and shelter to many bears, coyotes, bobcats, raccoons, deer, hawks, great blue herons, eagles, owls, fish, frogs, etc. Drastically reducing their habitat AND forcing them to share the small remaining space with humans is unfair to them, and will end up with them dead. I am also concerned about litter that people will bring in, as well as security at night when the businesses are closed..
Make it mixed use housing explore other options for industrial that do not surround an elementary school that is already packed with students and chaotic enough at drop off and pickup. Let alone speeding drivers on the road not paying attention to the minimally advised signage informing drivers of the school.
Certain types of employers can be incentivized in the plan in order to guide the sort of growth needed for that specific area, be it retail, technology, trades. It would also be helpful to specifically target employers in the education sector, such as certification-based and trade accreditation to serve the extensive trades-based population of Maple Ridge.
Keep the overall foot print and building size small. Develop a walkable village that provides everyday amenities and services such as a small grocery store, cafes, dentist, dance studio, daycare etc. (NO Tim Hortons or dollar stores. We have too many of them as is!) A development like Newport Village in the Yennadon Lands would create more jobs, allow for a live/work area, and would provide much needed services for the Yennadon/Silver Valley Communities. I feel this style of development could enhance the community, while causing less of an environmental impact.
Add a school
More green space. I am very worried about the impact on development on Coho Creek, and flood risk, and impact on wildlife. Less density or bigger park space would help.

By not existing
Vague question
We have to take care of the species that have lived there forever. Animals and people cannot coexist - look at the number of bears killed when they interact with humans
Provide access from residential subdivision on south and/or west side. Allow building of bridges on small creeks for access with minimal restrictions. Exanmple: 12639 232 St property at South east location can acceess the westerly 30 percent of the lands by crossing a small creek that is small in width and may require one 6 ft diameter culvert with some concrete abutments.
Other then the considerations in 2 above and those raised in my previous submission, the only improvements to any future concept would be to limit development to a strip of land next to 128th Avenue and 232nd Street. The remainder is left as conservation lands.
Use for housing only.
All the area in question or none
See above
We moved to the neighborhood because it's quite and we have a beautiful view of the wild animals and peace and quite away from the city. Its difficult to find something like this its a rare opportunity. I would not be happy with the noise of cars and industrial buildings. I also would not like to see 55+ residential buildings. The traffic and lighting would need to be addressed at 128th and 126th. Both streets are very dark.
Add or change to townhomes or back to back townhomes increasing residential denisty a bit and creating more affordbale housing options than already exist in Silver Valley for families.
Better traffic calming along 128 Avenue
More housing I still think the if maple ridge needs more singje family detached houses. Covid has created a need for home offices and space for families to work and play from home.
Maintain the green space. We also have 3 elementary schools nearby...Yennadon, Yennadon Annex and Harry Hooge...we don't need more traffic on the roads.
I like Concept 2, 2-3 story structures with residential suites on top I think would give the area more flexibility and fulfill the Work, Live, Play concept.
Lots of nature trail
Build more houses and not so many town houses or condos to reduce the amount of people in the area and keep with the design of silver valley
sustainable energy with solar panels on all buildings, perhaps having living walls/roofs which to help with replacing or adding new habitats, collection of rain water to use to water plants etc. in dryer months. At no point was this addressed at the meeting!
Build roads first. Think ahead for the future when planning access to the area. Roads are not even up to date for the amount of people in this area now. History shows it won't be done if this project goes ahead.
The area should be kept as a wetland, as a sanctuary for those animals that would have their home destroyed.
Leave alone or continued residential development. Industrial development would be a disaster here in a post-covid society.
A higher percentage of green space conserved to protect the environmental features present in these properties.
Build it someone else or do something about traffic
I'm happy with concept
Given the diversity and maturity of the trees, the wildlife, and the propensity for the waterways to overflow their banks regularly, a min set back of at least 200 feet from the stream(s) to the north should be enforced. At least 40% of the greenspace overall should not be disturbed and the undisturbed area should be granted legal (preservation) status.

There is nothing wrong with any of the concepts per se, it is just not the right neighborhood where you are planning to develop it.
None
Would prefer more housing clusters less business related
More green space

Question 4 – Are there any other comments you would like to share?

The last question regarding the Yennadon Lands Concepts asked survey respondents for any other comments that they wished to share. Of the 157 survey respondents to Question 1, 95 participants responded to Question 4.

Summary Comments:

a) Public Process and Community Need

- A desire for, and offered suggestions on how to, expand the public notification process for this area, as well as articulating interest for further consultation on the proposed development of the Yennadon Lands.
- Articulated the importance of meeting the needs of current residents before further development takes place, specific reference was made to community amenities as well as infrastructure issues.
- Articulated the importance of locating more employment-generating opportunities within Maple Ridge, but not necessarily on the Yennadon Lands.
- Similarly, expressed interest in a stronger argument for why employment lands are important, particularly for the Yennadon Lands.
- Raised the competing challenges of 'NIMBY' vs 'Build Build Build' mentalities with a request for a long-term vision to prevail – particularly for a development with character.

b) Environmental Protection & Preservation

- Expressed interest in having the area designated as a park.
- Reaffirmed the importance of developing in balance with nature and the environment.
- Raised the question of the cost-benefit analysis of the lost eco-system services relative to development.

c) Infrastructure Servicing & Safety

- Reaffirmed interest and importance in seeing road improvements around the area.
- Reaffirmed the traffic / parking concerns throughout the area and how it is already compounded by the local elementary school and that it could be made worse should the Yennadon Lands develop.
- Raised additional safety concerns of an employment-oriented development locating near residential neighbourhoods.
- Cited the potential impacts that more residential development would have on the local neighbourhood.

d) Community Services and Amenities

- Reaffirmed importance and interest in incorporating other community amenities into the area, including parks, schools and other recreational facilities.
- Expressed interest in having the proposed trails accessible for all ages as well as for cyclists.

- Expressed interest in encouraging local businesses into the area and often offered suggestions as to what types of uses they wished to see and those that should not locate in a future employment development on the Yennadon Lands.
- Recognized the possible tax implications of broadening the non-residential tax base in Maple Ridge, but also offering the question as to what impacts the proposed development may have on the assessments of the existing residential neighbourhoods.

Verbatim Comments:

Are there any other comments you would like to share?
It feels like no thought has gone into the required road improvements required to facilitate this kind of development.
I wonder home owners who purchase Property along 126ave Could collectively purchase land on southern border to retain there view ?(I didn't think so)
A better case should have been made by the consultants regarding the need for employment lands
There needs to be resolution to the parking and traffic issues for Yennadon school before creating more issues in the area, or, maybe the Yennadon Lands can be the solution by providing appropriate parking for the school.
Freemont village in Poco is a good comparison and I think that type of village would be good there. Small business 1500-2000sq ft is a good size. Not loud business, but quiet. That size in demand and I am a business and know this. It has some resident. If concept 3 includes quiet industry, and not big trucks and industrial I would support it too.
If the city doesnt start to bring real details to the table before continuing with moving forward it is fraudulant. There is no consideration to the ground water other then we will deal with it, no details on trafic other then we will get used to it. There is no consideration for the "nature" of this area. There is ZERO reassurance that Industrial isnt going to be a huge manufacturing plant. There is only sugestions of Concept #2 and you provide misleading information and outright lies on what Concept #2 involves
NO industrial or large chain businesses.
I have been a resident of this neighborhood (east 126th Ave) for 20 years. Have raised two children in this house, the beauty of Yennadon lands is one not to be taken for granted. The wildlife in this parcel of land need humans to advocate for them. This world is more than progress and money, we need to be in balance with nature. Maple Ridge council needs to really take the wildlife and what the majority of folks in this neighborhood hope and wish for.
This information should be distributed widely to the residnets who live in the area. I spoke with some of my neighbours and none of them had even heard of the proposal before. I have forwarded the email to the people who live on 128th crescent (my neighbourhood).
Across the street are two Kindergarten classes, less than a block is an elementary school. Parents are unaware of this proposal. Less than a block away is the busiest park in Maple Ridge. Every year over one million visitors travel on 232 to Fern Cresent to Golden Ears Park. 232nd a designated arterially route, yet cars are permitted to park in the right-hand lane. The development rate in our community has occurred without a sense of responsibility to the citizens who live here. I have listened for years of infrastructure plans; the problem; it doesn't get done. Until the infrastructure is in place throughout our community, Council best serves the residents by putting them first and halting further developments. I would suggest Council members get into their cars and drive to Coquitlam, turn around and come to work at City Hall; now, you have some idea of what the people of Maple Ridge go through every day. Is traffic an issue of this development, yes it

is in the loudest terms. This proposal is not a good location for these concepts; it is not suitable for the people who live and navigate 232nd every day, not when there is the land beyond the 240th.
Have you done a cost-benefit analysis in i-tree of the lost eco-system services from developing the land?
I understand there needs to be commercial/ industrial growth to allow residents to work and shop in the same area they live but unfortunately I don't believe this is the solution.
PLEASE DO NOT LET YOUR HUNGER FOR TAX DOLLARS BLIND YOU TO REASON
I like the planned trails. Please make them accessible for all ages all abilities cycling.
Strongly disagree with the development of site; if there is no choice but to build, then would prefer residential housing and small businesses that residents could support (ex. shops, cafes, etc). Large warehouses and business parks are not desired for area.
Safety of the residence of Maple Ridge should also be a primary consideration for any development in the area. Unsafe traffic, both vehicular and transient (more people walking through the area), will increase. Unsafe wildlife corridors will increase the contact between the human and animal residents in the area or at the very least in neighbouring areas. Pollution and its affect on the area should also be another priority for the city of Maple Ridge. Water pollution, land pollution, light pollution, etc. will increase due to any development that does not consider larger conservation areas then those proposed.
What is wrong with commercial/industrial use on the large, vacant land on Dewdney north, between 234th & 236th? Please don't destroy the beauty of Silver Valley..
I cannot speak for everyone but most of my neighbours that back onto Coho Creek, purchased and moved here because of the greenery, animals and fresh air and most were well over a decade ago. We have concerns about the meadow being a flood plain because our yards already take on extra water during rainy seasons. To backfill or to try and improve or change the water flow system in this area will only cause problems for the surrounding residents. So many of us do not understand why there has to be any development in this area when Maple Ridge is littered with flat, baron or unoccupied lands that could serve as 'employment lands'. Yes, these 'other' lands are smaller but have very little, if anything, to contribute to the wellbeing of people or nature. They are prime for commercial industry and have no eco-system to protect. These various properties are more in the 'hub' of businesses that already exist and therefore should be cheaper to develop for sewer, water, electricity, etc. and a lot less fight from surrounding residents. Why not start there and leave a good 80% of the Yennadon Lands to Nature and her wonderous way of survival? We are not the only ones that need those trees and meadow. and a 30 meter buffer just around the waterways, is NOT enough. I understand that in open areas, it would add up to 60 meters plus the waterway itself but for the residents that lay along Coho Creek, we do not have that additional buffer zone. I could probably write a small novel about the activities that is provided from the Yennadon Lands. We have a specially concerned species of bird; The Blue Heron that is a daily traveller and hunter is this area. Seen with a mate most Springs and therefore is probably nesting nearby. We also have Bobcats and Bears with their kids, Deer with their kids, Raccoons, Wood Ducks, Owls, Hawks and dozens of other feathered friends and that is just mentioning the larger species that inhabit this area. A snip-it from the WWF - "Speaking live at the Sept. 28 Leader's Pledge, the Prime Minister joined more than 70 world leaders in committing to "reverse nature loss by 2030." . . . Let maple Ridge be a part of this action and leave Yennadon Lands alone.
I think more housing around there would cause mayhem as we don't have enough roads out from silver valley
I think that some Yennadon residents are being labeled as NIMBY's and those on Facebook maybe aren't getting their point across politely as they could or giving off a feeling of "let''s work together". I get that Maple Ridge needs a higher tax base, but recognize that some of your most expensive homes are up in Silver Valley and if each of those homes value is diminished even slightly, that it a hit for your tax base also.

Build a park. Give kids a place to go. Maple has too many damn people and nothing to do
I understand that this development will go through whether or not you have the support of the community but more thought/research needs to into the road infustruction, the wildlife and school
Please bring in useful companies that we can enjoy
You will need to fight the NIMBY folks who don;t own the land but think it should be left as trees and and open space and the Development community that wants the quick buck of more residential development. This could be a jewel of job creation close to homes. Don't give into the short term perspectives - this is a long term great move for the community. We need jobs and places for modern businesses to set-up shop.
Include some retail space ie: coffee shops/cafe and recreational facilities for all ages. Space alloted for developer to give back to the community.
This Piece of natural land with trees, stream, and all the animals that live there, should not be considered for development. It is imperative to leave these areas as is for the land to provide the ongoing sustenance that it does. Everything works together on that land, and if you remove portions of it, it will no longer survive in the way it is meant to.
No more cluster housing. Too much -no amenities to support those houses. Very congested area with Yennadon drop off and pick up.
No
Concept 1 is second most desirable with Concept 3 not desirable at all.
Please make something of character and vision. Not more typical maple ridge cookie cutter houses or townhouses. And whatever you do.. NO Warehouses!!!
Why bring industrial into such a nice quiet family area
Do not build any more homes without providing schools and parks, its getting ridiculous. Take a look at some of your neibouring city's like Coquitlam. There are lots of parks, schools and other facilities for families like leisure centers (pools). Also the roads in the surrounding areas would need to be larger to accommodate the residents of near area and customers from outside this area visiting the new commercial space. Streets that need to be updated 232nd, 128th, 228th and 132nd all the way to 128th (Abernathy).
Put proper Infrastructure in place prior to allowing such a large scale project into the neighborhood. Traffic is already backed up because of the Elementary School, Rock Ridge and the GE Park
Go back to the drawing board. If you can't answer yes to the question "will this benefit every person in maple ridge?", then the answer is no.
We need a much better diversification of the tax base in Maple Ridge. Building more houses is pointless when our roads are crowded and our schools are full. It's time we stepped up to attract businesses.
Silver Valley is beautiful. Any future commercial development needs to compliment the natural beauty not only for residents to enjoy, but also to attract the thousands of tourists that pass by every summer
Build playgrounds for kids or for seniors to walk. This place is getting too congested to live. Cars and trucks speeding by.
Nope very angry what the city is trying to sneak into the area. Look at Pitt meadows it looks awful with all the industrial buildings. Maybe put them out towards Albion flats better option away from kids and less congestion.
Less houses, more commercial, traffic is getting worse every year because of the current growth in the city being focused on residential only
Think wisely before building
Please no more homes
Access in/out is already awful from this area

If more houses are built, then more schools (elementary and high school) are urgently needed. I live in Rock Ridge and we have many townhouses being built, but no more schools. The traffic jam for Yennadon is unbelievable. On Fern Crescent, it can reach the Eagles Hall in the morning.
I don't think that this is an appropriate place to put a commercial complex, however, I also believe that we have had too much development in Silvervalley and there needs to be a hard look at where all of the children are going to go to school.
You don't have enough schooling in the area and traffic is already an issue especially with one way in and out of the Rockridge area.
Yennadon school will be overflowing if more families move in so the advocacy to add another school or expand Yennadon needs to happen now.
Leave the Neighbourhood alone!
Any development should also include Abernathy Way being widened to four lanes to accommodate the increase in traffic
Traffic concerns would need to be addressed for access to the site so the area does not become more congested.
Buildings should be designed to accommodate dance studios, gyms. Buildings with high ceilings and lots of parking, because you must drive everywhere in this town. It is not pedestrian or cyclist friendly.
During the Oct. 7 Open House, Michael Von Hausen repeatedly acknowledged the value of wildlife areas that should not be disturbed, or should be enhanced. It was also acknowledged that the city does not fully know all the wildlife that is there. Please have further public consultation, specifically on the environmental sensitivity of this land, before making any further decisions. Residents in the area can tell you of wildlife (e.g. generations of deer) they have seen over the years, and can provide some documentation.
To improve transportation in this neighbourhood, ban parking along 232nd Street, at least during rush hour. Also, DO NOT widen Abernethy Way but keep as is, because it is very popular with cyclists and pedestrians. 124th Avenue east of 232nd Street is frequently used by families with small children learning to ride bikes. Its current status as a quiet street should be preserved. Perhaps consider a walking/cycling path (by-way) connecting 124th Ave east of 232nd Street with 240th BUT NOT a road for vehicles.
Housing density should be targeted towards downtown and stop the sprawl into Silver Valley.
make sure the schools and roads can handle the development before the building begins... too much traffic on the roads now.
If lands are not assigned with any designation, residential or industrial, such as the one on the west side 2.5 acres of lot on 12639 232 st, or you assign it as an ESA (Environmentally sensitive area)land, is the City buying that land for parkland purposes? If so, how will it be appraised for its value? If not buying, is the owner going to have that land as not useful? This will penalize the owner of this particular lot unnecessarily.
The parking and traffic are concerns. With having the 2 schools in the area it could cause safety issues for all the children .There could be potential for homeless people to occupy the area
We NEED another access road out of Rock Ridge (Balsam/Fern) ... a bridge/overpass to 240th. Proper bike/walk path on 132nd (it's dangerous right now!)
With only one way in and out of Fern crescent to all housing there, when the big storm happened in November 2005 which Fern Crescent was blocked by downed trees and power lines cutting off access for 8 hours, we were promised a secondary access road then. We here we are 20 years later and still nothing but thousands of more houses. The summer months this season because grid lock!!! a Disaster waiting to happen if ever an emergency for firetrucks or ambulance.
Most concerned with the creek setback and providing a safe stable environment for the existing wildlife ..I understand that growth in inevitable as long as wildlife is considered and accounted for

.. I've lived in this exact area for 44yrs and am very well aware of an entire ecosystem within this area
Stop trying to increase the population/housing in Maple Ridge. We do not have the services to support the people we have now.
I just feel some hesitation given what is happening in the world right now. Are people able to start businesses? Or grown existing ones. If these are minimum jobs that will be in the Commercial buildings; is this even helping out Maple Ridge's employment options?
I realize that this is progress I just think there are more suitable areas in the community. Without proper road upgrades this area with become even more congested than it already is around 232/126 and Yennadon school and people trying to get to Silver Valley
We live in a beautiful area that should be enjoyed by nature and families. There are many other areas in this community that are less desirable for that use that could be used for light industrial. The wildlife and environment should be protected.
I feel these 3 plans are going to ruin the area and fill it full of problems such as higher traffic congestion, noise pollution and scare off the wildlife. Trails in an a designated environmental area are only good for the people, not the animals who live in this area. It would be great to see a more holistic plan that understands the animals need their own wild space.
Downtown MR has so much more immediate opportunities to increase employment, business ownership and low to high density home rentals and ownership. Putting a business park in the north of the city amongst homes, schools and trails doesn't create a "work, play, live" atmosphere it creates, traffic, noise, and pollution. Large delivery trucks and semi trailers rumbling through residential areas is the opposite of what you are trying to portray. The commercial park in the Hammond/Port Hammond area is a perfect example of residential disruption. Large semi-trailers, dump trucks and delivery trucks bypass arteries such as 203rd (the most direct road to the commercial area and bridge) for 207th and ultimately side streets such as Lorne Avenue to avoid traffic delays. Putting a commercial business park in this area, this far off of major arteries will have large vehicles disrupting quiet neighbourhoods.
We don't have to occupy every square inch of undeveloped land.
we are already encroaching on animal habitat so cars and large roadways should be kept to a minimum and access tunnels around roads for animals as well
I am very concerned about the management of the ground water. We live on Balabanian Creek, and when it rains hard, the water already spills over its banks. With the proposed properties being part of a flood plain that we know becomes saturated with water , I am concerned that by paving large areas, the water levels in Coho and Balabanian Creek will increase, and negatively impact the properties that they flow through. Also, traffic. It is bad enough out here already. We moved here specifically for the tranquility and nature and adding more vehicles, especially commercial, is going to further frustrate the locals. This is the wrong location for this project, but I also don't see any need for it in Maple Ridge at all.
Please also consider the river that is right there. The water doesn't need to be contaminated as it's a main salmon run.
The area development needs to begin with infrastructure. Connecting traffic and expanding roadways not just in that specific area, but around it, specifically the Dewdney and 232nd street corridors, as well as the connections to Silver Ridge, and significant safety considerations for the Maple Ridge Park area must be in place before success of the redevelopment can be found.
As someone who lives in the area, please take into consideration the amount of wildlife that lives in the area. The people who love here choose to because of the nature and wildlife. The thought of large scale industrial buildings, and the extra volume of semi trucks, traffic etc will ruin the unique feel of this area.
Add a school and park

I want there to be ongoing environmental responsibility of the developers, at the meeting 5 years was mentioned, but I would like to see this extended. Also, truck traffic should not be directed down 128 Ave or 227 or 228. These are highly residential streets, with houses on the road and kids walking on the sidewalk. Don't ruin the neighbourhood.
Residential developments only
This survey is very very weak. It's purpose seems mainly to serve the notion of 'community involvement'. Four questions? That cannot be the requirement of community involvement.
Why can't the area be residential?
Do not assign any additional Environmentally not developable lands as there is already enough set backs for creek, such as , the small width creek of 6 ft seem to eat up 50 ft width of lands on each side of the creek for some lots while, the other lots have no creek and enjoy full use.
See above and my previous submisson.
Provide a reasonable solution for the traffic which is already heavy along 128th Ave and 232nd street because of the developments in the Silver Valley/ Rock Ridge areas. Any future developments should consider infrastructure first.
A concern is traffic along 128th ave. Why is there not a left turn lane on Abernathy going north??
We bought our home only because there were no neigbours in the back.
It would be nice if you could speed up this process as municiple elections are just around the corner and this council has been excellent to deal with in this Project.
We live in a residential neighborhood...not a business park. Abernathy is already over crowded at peak rush hour times and is backed up past 224th in the evenings. We do not have the infrastructure in place to support a business park.
This is a terrible area already for traffic congestion morning and afternoon with the school, gas station and maple ridge park nearby. So what ever is done to this area please consider the traffic problem. It is important to consider the size of this area and the fact that it is vital to the local wildlife. Retaining some green space is really important.
None
This really needs to be made more public. Just looking at the board near the land doesn't give much information. For someone new to the area and to Canada its extremely difficult trying to find anything out on the website!
See number 2
This is a bad site for the current set of proposals. Unsolvable traffic issues, office downsizing in post-covid society, habitat and nature route destruction.
The natural environments and wildlife present in our City are part of what make me very proud to live in Maple Ridge. After seeing the video created to promote tourism in the City (https://www.youtube.com/watch?v=FwbseYFUnis&ab_channel=yourmapleridge), it's clear to see that our green spaces are also a large part of what many of our citizens take pride in and are what we want to showcase to the world. This is a chance for us as a City to lead as an example of environmental stewardship for Metro Vancouver and beyond, and I believe the 20-30% of green space conserved in these concepts doesn't quite cut it.
Stop building start fixing what you have already
I feel good thought has been put into the concept. Consideration needs to be given to traffic impact and action taken to improve infrastructure prior to or at least concurrent with this development.
We moved here 20 years ago - mainly due to the tranquility and balance with nature that the land to the north of the stream provided. To this day, we enjoy the owls, deer, salmon and other wildlife that call the areas along the banks of the stream home or safe passage. To the greatest extent possible, this should be preserved. We are not in favor of any development off 228th that

encroaches the SW areas of the lands - that is the some of the most ecologically sensitive parts. Keep the development to the NE corner of the parcel.
Please reconsider the neighborhood and the people that live in the area. Make sure that the proper infrastructure is in place before you attempt the development. 128 th Ave was partially closed off for traffic this past week and it had tremendous impact on 232 and Abernathy during commuter times. Why do you not rather think of adding a strip mall with shops that is beneficial to the neighborhood- a grocery store, a deli, a pharmacy, a post office, a nice coffee shop, a daycare, another school- something that we really need and not something that only generates better taxes fir the City. Ask the people what their needs are.Thanks for trying to bring improvements, but do not involve peaceful residential areas.
No
the animals and forest are helping keep maple ridge healthy.

From:
To: Employment Lands
Cc: Maple Ridge News
Subject: Yennadon Lands Redesignation Process
Date: October 29, 2020 9:32:47 AM

EXTERNAL EMAIL: Don't click on links or open attachments you don't trust.
COURRIEL EXTERNE: Ne cliquez pas sur les liens et n'ouvrez pas les pièces jointes suspects.

My name is Corey Schmidt and I would like to be included on the email updates for Yennadon Lands. I live at [redacted] 128 and am very interested in the development. I also was part of the Zoom meeting set up for locals. I do want to know why it is that council is pushing concept #2 in all the meetings and public presentations? The city is talking about "Light Industry" and "commercial / residential mix" yet option #2 offers up to 4 acres as a "unit" for "industrial expansion" It is also the only concept with zero residential and it is being pushed as a "multi use" proposal. In the survey the definition given to concept #2 said "Neighborhood innovations village" This "sounds like a nice option Why no details and such a misleading name for Concept #2??? Why not call it INDUSTRIAL like the city obviously wants it to be? Why in the zoom meeting was Concept #2 described as (and I quote) "there are very few details at this time" ?!?! So, no details given to the people that live in direct proximity of the project and will be after completion. All the details have been given to the land owners in a closed meeting where you (as the city) claim "support and agreement" with the landowners. No where in the lower mainland would someone drop a industrial "park" in the middle of a established residential neighborhood, Especially across the street from 2 schools and on route to one of the largest provincial parks in the province. If the city wants the public to know why hide the real details? Why hide behind a misleading name in a survey supposed to be used to get consensus? If the city has nothing to hide be open. Maple Ridge is Huge there are already established industrial areas and there are lots of places to build more. The middle of a residential neighborhood is NOT the right place for industrial, period.

Thanks

Corey Schmidt
[redacted]

Sent from Mail for Windows 10

From: Zuzana Vasko
To: Mayor Council and CAO; Employment Lands; Rodney Stott
Subject: Re: Yennadon Lands: Ecological considerations
Date: November 3, 2020 3:37:11 PM

EXTERNAL EMAIL: Don't click on links or open attachments you don't trust.
COURRIEL EXTERNE: Ne cliquez pas sur les liens et n'ouvrez pas les pièces jointes suspects.

Dear Mayor Mike Morden, Councillors Kiersten Duncan, Gordy Robson, Chelsa Meadus, Judy Dueck, Ryan Svendsen and Ahmed Yousef, and Planners Amanda Grochowich and Rodney Stott,

I live on 126th Ave, bordering the 'Yennadon Lands' where the city is considering an 'Employment Lands' development.

As was acknowledged repeatedly at the October 7 Open House, this is a very environmentally sensitive area. In the last few days alone, I have seen eagles perched in the healthy cluster of high cottonwoods and also circling the land; I have watched a heron gliding above the length of the creek and over the wetlands, and a hawk soaring across the treed areas. A young bear made his way toward the open land, twice in one afternoon. While recently visiting a neighbor whose property backs onto the land a few weeks ago, we met with a deer, well-known to one neighbor for his lop-sided antlers, and to another for being of the third generation of deer they've seen cross the meadow year after year.

Owls have come out at nightfall. Neighbours commonly report bobcat sightings. In the spring, the call of frogs at night is astounding and magical. As is the rich chorus of birds in the early morning and at dusk. And in the summer, the occasional howl of coyotes in the night is beautifully haunting.

The presence of this green space – the healthy, established forests, the creek and wetland, and the open meadow – is so valuable here, a life-giving treasure to residents both human and non-human.

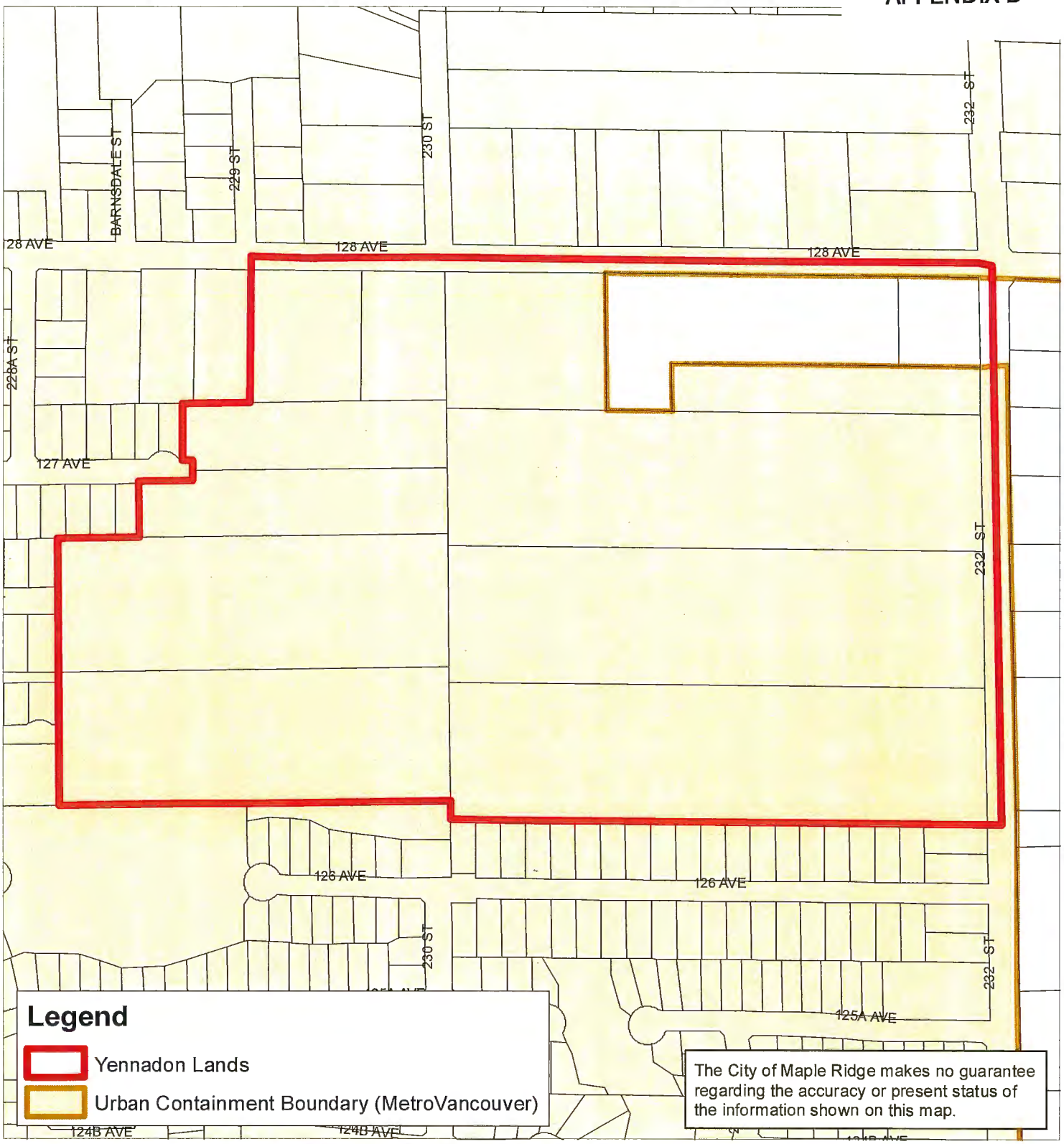
I feel very proud to be part of a community that has protected its waterways and creeks with some of the most rigorous regulations in the province. It is equally valuable that we now have a tree bylaw that seeks to protect healthy established tree growth and mature trees that bring so much to our community in terms of beauty, quality of life and fresh air, not to mention the integrity of ecosystems that help mitigate climate change. It is because Maple Ridge has put these regulations in place that salmon are thriving here compared to other areas, and that many residents can live in communities that offer healthy ecosystems, beauty and life quality.

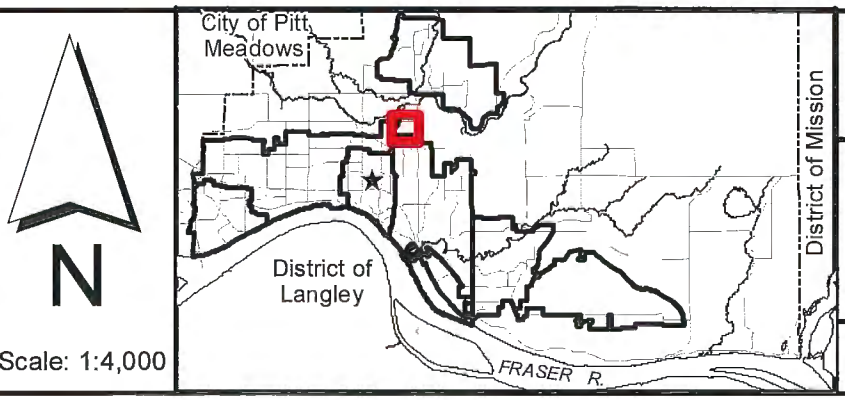
It would be excellent if Maple Ridge could be an example to other communities and take this further – to have equally rigorous protection of life and ecological systems beyond just waterways, and to protect areas that are home to raptors and other birds, to much-needed pollinators, to communities of deer, bears and a host of other mammals. Intact ecosystems are much of what makes Maple Ridge unique and special. In the Yennadon area specifically, consistent and continuous hubs where wildlife can maintain their well-used corridors – far, far beyond the mere 20-30 percent on the proposed 3 Concepts – deserve to be granted Conservation status. It would also be excellent to enhance and repair land that has been damaged or neglected.

I understand there is a need for development that offers jobs to local residents (I'm curious if being local to Maple Ridge would be a condition of employment there, or would this just bring more traffic?) and diversifies the tax base. My strong feeling is that much more mixed-use development needs to be integrated into already urbanized areas so that it doesn't damage ecologically valuable ones.

Thank you kindly for your consideration.

APPENDIX D





Scale: 1:4,000

Urban Containment Boundary (Metro Van)

PLANNING DEPARTMENT

MAPLE RIDGE
British Columbia
mapleridge.ca

FILE: YennadonLands.mxd
DATE: Mar 19, 2020
BY: DT

MAPLE RIDGE
British Columbia
mapleridge.ca

City of Maple Ridge

TO:	His Worship Mayor Michael Morden and Members of Council	**MEETING DATE:**	December 8, 2020
FROM:	Chief Administrative Officer	**MEETING:**	Workshop

SUBJECT: **Metro Vancouver Regional Industrial Land Strategy**

EXECUTIVE SUMMARY:

The Metro Vancouver Board approved the Regional Industrial Lands Strategy on July 3, 2020 in response to the shortage of industrial lands across the region. The Strategy's Vision Statement is to

> *Ensure there is sufficient industrial lands within the region to meet the needs of a growing and evolving regional economy to the year 2050.*

The shortage of industrial lands in the region is expected to worsen over the next 10 to 15 years, and in an effort to address this issue the Regional Industrial Lands Strategy provides 34 recommendations to guide a broad range of remedial actions. The Metro Vancouver Board is requesting that Councils in the region review and endorse the Regional Industrial Lands Strategy's 34 recommendations.

The 34 recommendations are action items that apply to various jurisdictions and authorities, including 13 recommendations that directly or indirectly apply to the City of Maple Ridge. There are six recommendations where Maple Ridge would lead and seven recommendations that would require collaboration. Nonetheless, Metro Vancouver has requested endorsement of all 34 recommendations.

The purpose of this report is to review and discuss the 34 recommendations, what the City of Maple Ridge's role would be for each recommendation, and the rationale for endorsement. This report also briefly summarizes the challenges, trends, and opportunities to achieve the vision of having sufficient industrial lands within the region to the year 2050.

RECOMMENDATION:

> **That the Metro Vancouver Regional Industrial Lands Strategy recommendations be endorsed and the resolution be forwarded to Metro Vancouver.**

1.0 BACKGROUND:

The Metro Vancouver region is facing a critical shortage of industrial land. This is largely due to years of steady population and economic growth in the region, which has resulted in the ongoing conversion of industrial lands into non-industrial uses. Additionally, the constrained geography of the region has exacerbated the challenges facing Metro Vancouver's industrial land supply. Metro Vancouver had, as of 2015, approximately 11,300 hectares (28,000 acres) of industrial land, about 80% of which is already developed. Land values have increased significantly over the past few years and vacancy rates are at record lows. As a result of all these factors, the limited supply of vacant industrial land across the region is anticipated to face a worsening shortage over the next 10 to 15 years.

The region's industrial lands take up 4% of the region's land base, but are home to nearly 27% (364,000) of the region's 1.3 million jobs and an additional 163,000 jobs through indirect and induced

4.2

impacts. Jobs located in industrial areas tend to be high paying, offering an average wage of $61,100 per worker, which is roughly 10% higher than the regional average wage of $55,000 per worker.

With an expectation that the pressure to convert industrial lands into non-industrial uses will continue to grow, Metro Vancouver has prepared the Regional Industrial Lands Strategy. The Strategy identifies 34 recommendations with 10 priority actions organized around 4 Big Moves: 1) Protect Remaining Industrial Lands; 2) Intensify and Optimize Industrial Lands; 3) Bring the Existing Land Supply to Market & Address Site Issues; and 4) Ensure a Coordinated Approach.

a. Official Community Plan

The Official Community Plan (OCP) outlines the long-term vision for growth and development in Maple Ridge. Principle 12 in the OCP promotes collaboration with other authorities, including Metro Vancouver, as it is essential to ensuring that municipal objectives can be met. The OCP's Industrial objectives are to:

- Create a larger and more diverse industrial sector that offers greater employment opportunities for residents, generates additional investment, enhances local businesses and creates a larger tax base to pay for municipal services and amenities.
- To create a more "complete community" by providing a range of industrial opportunities throughout the municipality.
- To encourage industrial development that meets the community's aspirations for quality of environment, character and sense of place, and compatibility with other Maple Ridge land uses.
- To ensure that the policies, zoning regulations, and supply of industrial land are favourable and adequate to attract industry to Maple Ridge.

The policies in the OCP are aimed at guiding planning decisions on land use management within Maple Ridge. Policies also direct actions related to bylaws, regulations, and strategies, regarding industrial lands, such as:

6 - 47 *Maple Ridge will review bylaws and regulations to align with market demand.*

6- 48 *Maple Ridge will implement strategies to accommodate industrial growth that is compatible with other land uses in the District*

b. Climate Change and the Region's Industrial Lands

An issue that will impact the long-term functionality of the industrial land supply is the risk posed by climate change. Detailed climate change projections have been completed for the Metro Vancouver region, and significant work is underway to understand the impacts, including increased flood risk. A significant portion of the region's industrial land supply, including most major port and airport facilities, are located within low-lying areas. Many of these areas would be vulnerable to major coastal flood events in the absence of considerable adaptation measures. Should sea level rise continue as projected, significant portions of the industrial land supply may no longer be considered viable for long-term development, further reducing opportunities for growth and economic resiliency.

c. The Challenges Identified in the Regional Industrial Lands Strategy

With several factors contributing to loss of industrial lands in the region, the region faces a number of challenges related to the protection, management and promotion of industrial and employment lands. These challenges have been categorized into four themes:

- ***Constrained Land Supply.*** Metro Vancouver is bounded both physically and politically between mountains, an ocean and an international border. This problem is further exacerbated by the fragmented nature of much of the region's remaining vacant land parcels.

- ***Pressure on Industrial Lands.*** The region's industrial lands are under threat of being further diminished due to the allowance of non-industrial uses and being out-priced due to high land values and property taxation.

- ***Site and Adjacency Issues.*** Various site-specific issues, such as non-serviced sites and access to trade and transportation routes are creating barriers to the effective development and redevelopment of the region's industrial lands.

- ***Complex Jurisdictional Environment.*** Decisions related to land use and industrial lands have the potential to affect neighbouring municipalities, the broader region, and even aspects of the economy at the provincial and national level, which result in a fractured regulatory landscape.

d. The Trends Identified in the Regional Industrial Lands Strategy

The Metro Vancouver regional industrial market stretches from the North Shore and Vancouver area to the boarder of the Fraser Valley Regional District. The Metro Vancouver region is experiencing an acute shortage of industrial land supply, which manifests as very low vacancy rates, increasing land prices, and higher lease rates. Below are three trends identified within the Regional Industrial Lands Strategy regarding the industrial market:

- ***The Nature of Industrial Activities is Changing***. Business and industrial activities are evolving, as are desired space needs and location preferences, and associated employment and transportation implications.

- **New Users of Industrial Space are Small Scale.** Artisanal businesses, such as custom manufacturing, small batch production, and food processing require smaller spaces and benefit from close proximity to the consumer population.

- **Tech Firms are Growing in Urban Light Industrial Areas**. High tech, bio-tech, software, and digital are businesses that need a high ceiling, studios, labs, storage, and power, with various activities including, research and design, packaging, and distribution on site.

e. The Opportunities Identified in the Regional Industrial Lands Strategy

Industrial businesses cover a range of activities, locational preferences and site needs. For example, a manufacturer of specialized computer components may require a far different type of space than that of a distribution and logistics warehouse operation. Much like the competition between industrial and nonindustrial space users, industrial uses with different operational needs may also be able to support different values for land and space. Below are two opportunities identified within the Regional Industrial Lands Strategy regarding industrial lands:

Protect Trade-Oriented Lands

Trade-oriented lands are large sites associated with the transportation of goods to and through the region, such as by rail and the port, which serve a national function and are crucial to the region's economy, warranting additional attention and possible protection. However, smaller specialized industrial users can also compete for these types of sites, and may be a more financially viable form of development on high value lands. This can prove a challenge given the limited number of large sites in the region that have the characteristics needed by trade-oriented businesses. A clear, consistent and collaboratively developed definition and understanding of the extent and location of these important lands will support their protection.

Increasing Industrial Capacity through Intensification / Densification

With limited options to increase the land base, many industrial projects are now considering building upwards, with modern warehouse distribution centres designed to be significantly more volumetrically intensive than traditional warehousing operations. Allowing for, and potentially incentivizing, the creation of multi-storey industrial space has the potential to modestly increase the supply of industrial space within the region, so long as the market conditions are sufficient to support it.

2.0 DISCUSSION:

The challenges facing Metro Vancouver's industrial lands are complex and interconnected, and no single action or stakeholder can resolve them. Market forces and types of industrial activity vary significantly by sub-region, such that for example, forms of densification that may be possible in certain urban locations may not be appropriate in other locations. There are a wide range of national, regional and local serving industrial activities in the region, which have different site and location needs and as a result require different policy responses. Accordingly, recommended actions need to balance regional objectives, while addressing local contexts – 'one size' does not fit all.

To respond to the challenges noted above, the Strategy identifies 34 recommendations with 10 priority actions organized around 4 Big Moves:

Table 1 Metro Vancouver Regional Industrial Lands Priority Action Items

Big Move	Priority Actions
Protect Remaining Industrial Lands	1. Define Trade-Oriented Lands 2. Undertake a Regional Land Use Assessment 3. Strengthen Regional Policy 4. Seek Greater Consistency in Local Government Zoning Definitions and Permitted Uses
Intensify and Optimize Industrial Lands	5. Facilitate the Intensification / Densification of Industrial Forms Where Possible
Bring the Existing Land Supply to Market & Address Site Issues	6. Prepare Bring-to-Market Strategies for Vacant or Under-developed Industrial Lands 7. Ensure Transportation Connectivity
Ensure a Coordinated Approach	8. Coordinate Strategies for Economic Growth and Investment 9. Improve Data and Monitoring 10. Develop a Framework for Coordination

The priority actions are formed, in part, by packaging together related actions in the longer list of recommendations into combined shorter-term actions, to be implemented over the first few years of endorsement of the Regional Industrial Lands Strategy.

In considering the 4 'Big Moves' and the recommendations that follow, the Strategy affirms that conversion or use of agricultural lands is not a solution to the shortage of industrial lands in the region. This principle was endorsed by the Industrial Lands Strategy Task Force and Metro Vancouver Board on July 3, 2020.

2.1 Recommendations in Metro Vancouver Regional Industrial Lands Strategy

The 34 recommendations are action items that apply to various jurisdictions and authorities, meaning only 13 recommendations are collaboration or direct action items for the City of Maple Ridge. There are six recommendations where the City of Maple Ridge would lead and seven recommendations where Maple Ridge would collaborate with another authority. Nonetheless, Metro Vancouver has requested endorsement of all 34 recommendations. In Appendix A, staff have organized all 34 recommendations by jurisdiction, starting with Maple Ridge, and have provided a rational for endorsement.

2.1.1 Maple Ridge Action Items

The recommendations that require direct action from the City of Maple Ridge or require collaboration and engagement with Metro Vancouver are in Tables 2, 3, 4, and 5, below. The recommendations have been divided based on the Strategy's "Big Moves". Recommendations with an asterisk (*) and shaded in grey are direct action items for the City of Maple Ridge.

Table 2 - Big Move 1: Protect Remaining Industrial Lands

Recommendation	Description	Work Already Underway or Completed
1 That Metro Vancouver, in collaboration with member jurisdictions, First Nations, regional agencies, and other relevant stakeholders, conduct a comprehensive regional land use assessment.	Engage with Metro Vancouver to identify, based on a defined set of criteria and cross-jurisdictional considerations, opportunities for more optimized locations and uses of land in order to support regional and local policy objectives and to inform policy changes.	The City of Maple Ridge is already collaborating with Metro Vancouver to update the region's industrial land inventory. The undertaking of a region-wide assessment of land use could potentially identify areas where a swap of existing land uses may be reasonable, appropriate, and beneficial for the City of Maple Ridge.
3* That Metro Vancouver, in collaboration with member jurisdictions and other regional agencies, develop a consistent definition of 'industrial' and guidelines for which primary and secondary (or ancillary) land uses should be permitted in Industrial and Mixed Employment designated areas, respectively.	The City of Maple Ridge, as part of the regional context statement updates, would commit to review and update the Zoning Bylaw using the guidelines as a resource to amend the permitted uses in their local industrial and employment lands, as appropriate.	The City of Maple Ridge's industrial zones in the Zoning Bylaw already align with the proposed definition and identified uses within the Regional Industrial Lands Strategy. Additionally, the City has a number of policies that support reviewing bylaws and regulations to align with market demand on industrial lands. Staff would collaborate with Metro Vancouver to ensure that Maple Ridge's industrial zones are consistent with other member jurisdiction and regional agencies.

4 That Metro Vancouver conduct a collaborative process to develop a clear definition of Trade-Oriented Lands, and subsequently, as part of the Metro 2040 update, develop a Trade-Oriented land use overlay.	Assist Metro Vancouver in developing a definition of Trade-Oriented Lands, and develop a Trade-Oriented land use overlay.	The City of Maple Ridge is already collaborating with Metro Vancouver on the Metro 2040 update and will provide GIS layers for the region's industrial land inventory. A clear, consistent and collaboratively developed definition and understanding of the extent and location of the lands will support the protection of industrial lands.
5* That municipalities identify appropriate areas through Trade-Oriented zoning.	The City of Maple Ridge, through the Regional Context Statement process, would identify trade-oriented lands within their jurisdiction, and to consider zoning applicable lands.	The City of Maple Ridge already updates the Regional Context Statement when there is a change. Should the definition of Trade-Oriented Lands be applicable to lands in Maple Ridge, the zoning designation may be beneficial in appropriate areas.

Table 3 - Big Move 2: Intensify and Optimize Industrial Lands

Recommendation	Description	Work Already Underway or Completed
7* That municipalities facilitate the intensification / densification of industrial forms where possible.	The City of Maple Ridge would facilitate the intensification/ densification of industrial lands through various actions, where contextually appropriate, such as removing any unnecessary restrictions to density or height limits or creating incentives in target areas.	The City of Maple Ridge, through the Area Planning process, already facilitates the intensification and densification of industrial forms where appropriate. For example, the City has been going through the Lougheed Transit Corridor, Albion Flats, and Yennadon Area Planning process and reviewing building forms, market demand, and current regulations as part of Concept Plan development.

Table 4 - Big Move 3: Bring the Existing Supply to Market & Address Site Issues

Recommendation	Description	Work Already Underway or Completed
13 That Metro Vancouver, in consultation with member jurisdictions, develop guidelines for land use policies along the edge of planned or developing Industrial areas where no natural or other physical buffer already exists.	Engage with Metro Vancouver to develop guidelines for industrial lands that do not have a natural or physical buffer to neighbouring properties.	The City of Maple Ridge, through the Area Planning process, already considers policies and design guidelines when industrial lands do not have an appropriate buffer to neighbouring properties.

15* That municipalities consider adopting the Railway Association of Canada and Federation of Canadian Municipalities Guidelines for New Development in Proximity to Railway Operations when considering development permissions and changes of use in proximity to active railway corridors and other major goods movement corridors.	The City of Maple Ridge will consider adopting the Railway Association of Canada and Federation of Canadian Municipalities Guidelines for New Development in Proximity to Railway Operations.	The City of Maple Ridge already directs applicants to the "Railway Association of Canada and Federation of Canadian Municipalities Guidelines for New Development in Proximity to Railway Operations" when an application has been made in proximity to an active railway corridor. Additionally, the City of Maple Ridge already considers the Guidelines during Area Planning process.
16* That municipalities with vacant or underdeveloped industrial lands prepare a 'bring-to market' strategy for their industrial land supply.	The City of Maple Ridge, as part of an Area Planning process, would address opportunities and challenges facing the development of vacant industrial land, including land assembly. The Area Plan process also identifies opportunities to encourage reinvestment.	The City of Maple Ridge, through the Area Planning process, already considers opportunities and challenges facing the area within the proposed Area Plan, as well as opportunities to encourage reinvestment. As part of Business Planning, the Economic Development Department has proposed undertaking an "Economic Development Strategic Plan" in 2021. The City of Maple Ridge's OCP has a number of policies that support reviewing bylaws and regulations in regards to industrial lands. As part of Business Planning 2021, the Planning Department has proposed undertaking a Thornhill Information Report, which would include reviewing the OCP policies for the Urban Reserve. However, the land use of Thornhill has yet to be determined. The city recently expanded industrial lands in the north east sector of the city and confirmed routing for the eventual extension of Abernethy Way to help improve transportation access to these industrial and employment lands, Increases to industrial land supply and improved transportation connections should help improve these undeveloped industrial areas.

17 That TransLink, Metro Vancouver, the Port of Vancouver, the Vancouver Airport Authority and municipalities continue to work together to proactively designate, manage, and regularly update the Regional Truck Route Network in line with the recommendations of the Regional Goods Movement Strategy to ensure the safety and reliability of the regional goods movement network, while also considering human health implications, such as air quality and noise.	Continue to confirm alignment for truck routing in Maple Ridge also in accordance with TransLink's Regional Goods Movement Strategy.	The City of Maple Ridge already manages and regularly updates the Regional Truck Route Network and works together with other jurisdictions and authorities to ensure Maple Ridge aligns with the Translink's Regional Goods Movement Strategy. The City of Maple Ridge is currently working with TransLink, BCTA, BCMoTI and neighbouring municipalities to identify and confirm goods movement routing in alignment with TransLink's Regional Goods Movement Strategy.
24* That regional organizations and stakeholders continue to investigate and implement options designed to reduce the environmental impacts related to the transportation of goods and people in the region, through their respective plans and policies.	Continue to investigate and implement options to reduce environmental impacts related to transportation of goods and people.	The City of Maple Ridge expanded access to charging station infrastructure for electric vehicles in 2018, when Council passed a bylaw to integrate 'rough-in' electric vehicle charging infrastructure, making it easier to retrofit a building to provide for EV charging in the future. As directed by Council at the October 20, 2020 Workshop meeting, staff will be bringing forward an OCP amending bylaw for public consultation to update the greenhouse gas emission targets to net zero by 2050 and bring back recommendations for reducing greenhouse gas emissions outlined in sections 3.2 and 3.3 of the October 20, 2020 report titled "Community Energy and Emissions Scoping Report". This will include implementing the BC Energy Step Code and strengthening electric vehicle charging infrastructure requirements in new developments. Additionally, Environmental Impact Assessments are completed when new development, including new roads, occurs in order to minimize negative impacts.

Table 5 - Big Move 4: Ensure a Coordinated Approach

Recommendation	Description	Work Already Underway or Completed
26* That municipalities provide a summary report of local development activity on lands in the Metro Vancouver Industrial Lands Inventory as part of their regional Development Cost Charge reporting, once per year.	The City of Maple Ridge would provide Metro Vancouver with a summary report on development of Industrial Lands once a year.	The City of Maple Ridge already provides a Development Cost Charge report to Metro Vancouver once a year. Including a summary of development activity on industrial lands would not significantly increase staff workloads.
27 That Metro Vancouver, in collaboration with member jurisdictions, conduct a regional employment survey on a bi-annual basis.	Engage with Metro Vancouver to conduct a regional employment survey bi-annually.	The City of Maple Ridge already engages with Metro Vancouver to share information and data. Cooperation and data tracking between governments and other organizations assists with accurate monitoring and effective land management.
29 That Metro Vancouver, in consultation with member jurisdictions, First Nations and relevant stakeholder organizations, document and promote the region's value proposition from an industrial economy perspective.	Engage with Metro Vancouver to promote the regional value from an industrial economy perspective.	The Economic Development Department already promotes the City's industrial lands and four business parks through various communication channels and by working with regional partners, such as Metro Vancouver. Economic Development staff are also working with the Metro Vancouver Regional Economic Prosperity Advisory Committee and Deloitte to develop a regional investment attraction strategy. Additionally, as part of Business Planning for 2021, the Economic Development Department has proposed implementing a GIS Site Selector Tool to enhance promotion of the City's industrial and commercial lands.

3.0 NEXT STEPS:

Should Council endorse the 13 recommendations that are related to a collaboration or direct action item for the City of Maple Ridge, staff will:

- Continue to progress work on industrial lands currently going through an Area Planning Process (i.e Albion Flats and Yennadon).
- Continue to designate new industrial lands for future employment.
- Consider adopting the Railway Association of Canada and Federation of Canadian Municipalities Guidelines for New Development in Proximity to Railway Operations.

- Conduct the regional employment survey bi-annually when circulated for response.
- Continue to collaborate with Metro Vancouver and other jurisdictions to protect, optimize, and promote the industrial designated lands in Maple Ridge in order to ensure a regional coordinated approach.
- Participate in the Regional Context Statement review when changes are required. There is no requirement to amend the Regional Context Statement until the work to implement some of the recommendations has been completed.

4.0 STRATEGIC ALIGNMENT:

Implementing strategic plans related to local infrastructure and the economy, such as the Commercial and Industrial Strategy, is a Council priority as established under its Growth pillar of the 2019-2022 City of Maple Ridge Strategic Plan.

5.0 INTERDEPARTMENTAL IMPLICATIONS:

The implementation of the action items within Metro Vancouver's Regional Industrial Land Strategy would be an interdepartmental undertaking. Planning staff would continue to collaborate on various ongoing projects with staff from other City departments, as well as staff from Metro Vancouver and other Regional and Provincial authorities. Implementation of the Regional Industrial Land Strategy through Area Planning and new development will involve ongoing collaboration with the Engineering, Building, Fire, and Parks, Recreation & Culture Departments.

6.0 ALTERNATIVE RECOMMENDATIONS:

The Metro Vancouver Board approved the Regional Industrial Lands Strategy on July 3, 2020 and has requested endorsement of the Strategy from member jurisdictions. Should Council choose not to endorse the Regional Industrial Land Strategy in its entirety, but agrees with the Strategy's Vision Statement, the following alternative recommendation is provided:

> **That the recommendations within the Metro Vancouver Regional Industrial Lands Strategy not be endorsed; and**
>
> **That the vision statement for the Metro Vancouver Regional Industrial Lands Strategy be endorsed and the resolution be forwarded to Metro Vancouver.**

Should Council choose to just receive the Metro Vancouver Regional Industrial Land Strategy for information only, the following alternative recommendation is provided:

> **For information only.**

CONCLUSION:

The 34 recommendations are action items that target various jurisdictions and authorities, meaning only 13 recommendations are directly or indirectly action items for the City of Maple Ridge. There are six recommendations where the City of Maple Ridge would lead and seven recommendations that would require collaboration with other authorities. Staff have reviewed the 13 recommendations that directly or indirectly impact Maple Ridge and concluded that the City is already implementing most of the recommendations through various plans and processes. Nonetheless, Metro Vancouver has requested endorsement of all 34 recommendations.

The purpose of this report is to review and discuss the 34 recommendations, what the City of Maple Ridge's role would be for each recommendation, and the rational for endorsement. This report also briefly summarizes the challenges, trends, and opportunities to achieve the vision of having sufficient industrial lands within the region to the year 2050.

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"Original signed by Al Horsman"

Concurrence: **Al Horsman**
Chief Administrative Officer

The following appendices are attached hereto:

Appendix A – Metro Vancouver Regional Industrial Land Strategy Recommendations by Jurisdiction
Appendix B – Metro Vancouver Regional Industrial Land Strategy

#	RECOMMENDATIONS	MAPLE RIDGE WORK ALREADY UNDERWAY OR COMPLETED
MAPLE RIDGE ACTION ITEMS		
1	That Metro Vancouver, in collaboration with member jurisdictions, First Nations, regional agencies, and other relevant stakeholders, conduct a comprehensive regional land use assessment.	The City of Maple Ridge is already collaborating with Metro Vancouver to update the region's industrial land inventory. The undertaking of a region-wide assessment of land use could potentially identify areas where a swap of existing land uses may be reasonable, appropriate, and beneficial for the City of Maple Ridge.
3*	That Metro Vancouver, in collaboration with member jurisdictions and other regional agencies, develop a consistent definition of 'industrial' and guidelines for which primary and secondary (or ancillary) land uses should be permitted in Industrial and Mixed Employment designated areas, respectively.	The City of Maple Ridge's industrial zones in the Zoning Bylaw already align with the proposed definition and identified uses within the Regional Industrial Lands Strategy. Additionally, the City has a number of policies that support reviewing bylaws and regulations to align with market demand on industrial lands. Staff would collaborate with Metro Vancouver to ensure that Maple Ridge's industrial zones are consistent with other member jurisdiction and regional agencies.
4	That Metro Vancouver conduct a collaborative process to develop a clear definition of Trade-Oriented Lands, and subsequently, as part of the Metro 2040 update, develop a Trade-Oriented land use overlay.	The City of Maple Ridge is already collaborating with Metro Vancouver on the Metro 2040 update and will provide GIS layers for the region's industrial land inventory. A clear, consistent and collaboratively developed definition and understanding of the extent and location of the lands will support the protection of industrial lands.
5*	That municipalities identify appropriate areas through Trade-Oriented zoning.	The City of Maple Ridge already updates the Regional Context Statement when there is a change. Should the definition of Trade-Oriented Lands be applicable to lands in Maple Ridge, the zoning designation may be beneficial in appropriate areas.
7*	That municipalities facilitate the intensification / densification of industrial forms where possible.	The City of Maple Ridge, through the Area Planning process, already facilitates the intensification and densification of industrial forms where appropriate. For example, the City has been going through the Lougheed Transit Corridor, Albion Flats, and Yennadon Area Planning process and reviewing building forms, market demand, and current regulations as part of Concept Plan development.
13	That Metro Vancouver, in consultation with member jurisdictions, develop guidelines for land use policies along the edge of planned or developing Industrial areas where no natural or other physical buffer already exists.	The City of Maple Ridge, through the Area Planning process, already considers policies and design guidelines when industrial lands do not have an appropriate buffer to neighbouring properties.

15*	That municipalities consider adopting the Railway Association of Canada and Federation of Canadian Municipalities Guidelines for New Development in Proximity to Railway Operations when considering development permissions and changes of use in proximity to active railway corridors and other major goods movement corridors.	The City of Maple Ridge already directs applicants to the "Railway Association of Canada and Federation of Canadian Municipalities Guidelines for New Development in Proximity to Railway Operations" when an application has been made in proximity to an active railway corridor. Additionally, the City of Maple Ridge already considers the Guidelines during Area Planning process.
16*	That municipalities with vacant or underdeveloped industrial lands prepare a bring-to market strategy for their industrial land supply.	The City of Maple Ridge, through the Area Planning process, already considers opportunities and challenges facing the area within the proposed Area Plan, as well as opportunities to encourage reinvestment. As part of Business Planning, the Economic Development Department has proposed undertaking an "Economic Development Strategic Plan" in 2021. The City of Maple Ridge's OCP has a number of policies that support reviewing bylaws and regulations in regards to industrial lands. As part of Business Planning 2021, the Planning Department has proposed undertaking a Thornhill Information Report, which would include reviewing the OCP policies for the Urban Reserve. However, the land use of Thornhill has yet to be determined. The city recently expanded industrial lands in the north east sector of the city and confirmed routing for the eventual extension of Abernethy Way to help improve transportation access to these industrial and employment lands, Increases to industrial land supply and improved transportation connections should help improve these undeveloped industrial areas.
17	That TransLink, Metro Vancouver, the Port of Vancouver, the Vancouver Airport Authority and municipalities continue to work together to proactively designate, manage, and regularly update the Regional Truck Route Network in line with the recommendations of the Regional Goods Movement Strategy to ensure the safety and reliability of the regional goods movement network, while also considering human health implications, such as air quality and noise.	The City of Maple Ridge already manages and regularly updates the Regional Truck Route Network and works together with other jurisdictions and authorities to ensure Maple Ridge aligns with the Translink's Regional Goods Movement Strategy. The City of Maple Ridge is currently working with TransLink, BCTA, BCMoTI and neighbouring municipalities to identify and confirm goods movement routing in alignment with TransLink's Regional Goods Movement Strategy.
24	That regional organizations and stakeholders continue to investigate and implement options designed to reduce the environmental impacts related to the transportation of goods and people in the region, through their respective plans and policies.	The City of Maple Ridge expanded access to charging station infrastructure for electric vehicles in 2018, when Council passed a bylaw to integrate 'rough-in' electric vehicle charging infrastructure, making it easier to retrofit a building to provide for EV charging in the future.

		As directed by Council at the October 20, 2020 Workshop meeting, staff will be bringing forward an OCP amending bylaw for public consultation to update the greenhouse gas emission targets to net zero by 2050 and bring back recommendations for reducing greenhouse gas emissions outlined in sections 3.2 and 3.3 of the October 20, 2020 report titled "Community Energy and Emissions Scoping Report". This will include implementing the BC Energy Step Code and strengthening electric vehicle charging infrastructure requirements in new developments. Additionally, Environmental Impact Assessments are completed when new development, including new roads, occurs in order to minimize negative impacts.
26*	That municipalities provide a summary report of local development activity on lands in the Metro Vancouver Industrial Lands Inventory as part of their regional Development Cost Charge reporting, once per year.	The City of Maple Ridge already provides a Development Cost Charge report to Metro Vancouver once a year. Including a summary of development activity on industrial lands would not significantly increase staff workloads.
27	That Metro Vancouver, in collaboration with member jurisdictions, conduct a regional employment survey on a bi-annual basis.	The City of Maple Ridge already engages with Metro Vancouver to share information and data. Cooperation and data tracking between governments and other organizations assists with accurate monitoring and effective land management.
29	That Metro Vancouver, in consultation with member jurisdictions, First Nations and relevant stakeholder organizations, document and promote the region's value proposition from an industrial economy perspective.	The Economic Development Department already promotes the City's industrial lands and four business parks through various communication channels and by working with regional partners, such as Metro Vancouver. Economic Development staff are also working with the Metro Vancouver Regional Economic Prosperity Advisory Committee and Deloitte to develop a regional investment attraction strategy. Additionally, as part of Business Planning for 2021, the Economic Development Department has proposed implementing a GIS Site Selector Tool to enhance promotion of the City's industrial and commercial lands.

#	RECOMMENDATIONS – Other Jurisdictions	GOAL OF RECOMMENDATION
METRO VANCOUVER ACTION ITEMS		
2	That Metro Vancouver endeavour to strengthen regional policy to protect industrial lands as part of the update to the regional growth strategy, Metro 2040.	To protect remaining industrial lands.
8	That Metro Vancouver conduct a study of the financial factors and other issues that prevent the development of multi-storey industrial spaces in various regional market areas.	To intensify and optimize industrial lands.
25	That Metro Vancouver produce an annual report that summarizes changes to the Industrial Lands Inventory, while continuing to publish a comprehensive Regional Industrial Land Inventory every five years.	To ensure a coordinated approach
30	That Metro Vancouver seek to enhance collaboration across the region to encourage economic growth and diversity, including on industrial lands.	To ensure a coordinated approach
31	That Metro Vancouver assist member jurisdictions seeking to develop and update their own local bring-to-market strategies by providing data and research support in line with its mandate.	To ensure a coordinated approach
OTHER JURISDICTION'S ACTION ITEMS		
6	That the Province grant municipalities the legislative powers to define permitted forms of tenure (i.e. leasehold versus stratified freehold) on industrial land through local zoning bylaws.	To protect remaining industrial lands.
9	That the Province review the current approach to property tax assessment and tax rates based on the highest and best use of a property with regard to its impact on industrial businesses.	To intensify and optimize industrial lands.
10	That the Ministry of Agriculture, in consultation with the Agricultural Land Commission, amend legislation to define under what conditions, if any, large-scale organic waste processing facilities are permitted in the Agricultural Land Reserve.	To intensify and optimize industrial lands.
11	That the Ministry of Agriculture produce guidelines or amend legislation to: define the metrics used to measure the 50/50 rule (i.e. volume, weight, value, etc.) to facilitate consistent application; and clarify the permitted value-added infrastructure of an approved use on an agricultural parcel and define a cap on building infrastructure footprint.	To intensify and optimize industrial lands.
12	That in developing a Regional Flood Management Strategy, the Fraser Basin Council recognize industrial lands and their economic contributions to the broader region when identifying and prioritizing measures to adapt to rising sea levels and flood events.	To intensify and optimize industrial lands.
14	That the Province enable municipalities the discretion to place a warning of anticipated nuisance effects on the title of the lands with sensitive uses that are being developed within a defined proximity of an established or planned industrial use or goods movement corridor.	To bring the existing supply of industrial lands to market & address site issues.
18	That TransLink, as part of the update to the Regional Transportation Strategy and implementation through Investment Plans, continue to identify viable new opportunities to create and improve transit linkages between the region's industrial areas and local workers, where such transit can operate efficiently and effectively as part of the region's transit network.	To bring the existing supply of industrial lands to market & address site issues.

19	That the Port of Vancouver, Metro Vancouver, TransLink, the Vancouver Airport Authority, and rail line operators, work together to identify policies and actions that support the optimization and safety of goods movement to and from industrial lands via roads, highways, railways, air, and access points to navigable waterways including short sea shipping.	To bring the existing supply of industrial lands to market & address site issues.
20	That the Province work with municipalities and industry partners to understand, forecast, plan for, and mitigate the impacts of the land demands for truck traffic and truck parking related to goods movement and drayage.	To bring the existing supply of industrial lands to market & address site issues.
21	That the Port of Vancouver continue to work with Metro Vancouver and TransLink to optimize port related land uses and container drayage.	To bring the existing supply of industrial lands to market & address site issues.
22	That the Greater Vancouver Gateway Council continue its efforts to attract grants and other funding, and leverage their success towards improved infrastructure linkages and capital investments that support regional and local policy goals.	To bring the existing supply of industrial lands to market & address site issues.
23	That the Greater Vancouver Urban Freight Council continue its efforts to coordinate the implementation of the Regional Goods Movement Strategy between its member organizations	To bring the existing supply of industrial lands to market & address site issues.
24	That regional organizations and stakeholders continue to investigate and implement options designed to reduce the environmental impacts related to the transportation of goods and people in the region, through their respective plans and policies.	To bring the existing supply of industrial lands to market & address site issues.
28	That major regional industrial land users and organizations, such as the Port of Vancouver, Vancouver Airport Authority, NAIOP Commercial Real Estate Development Association and other relevant stakeholders, consider expanding data sharing partnerships for the purpose of improving economic development and infrastructure investment, guiding land use and goods movement planning, and informing the development of associated policies.	To ensure a coordinated approach.
32	That the Province develop a framework for economic and land use planning coordination between neighbouring regions in the broader southwestern BC economic region to support industrial land use and protection.	To ensure a coordinated approach.
33	That the Metro Vancouver Regional District and the Fraser Valley Regional District develop and sign a memorandum of understanding that outlines their shared priorities regarding and commitment to the effective and efficient management, protection, and development of industrial lands within the Lower Mainland.	To ensure a coordinated approach.
34	That the federal government, in implementing the Port's Modernization Review, take a broader provincial perspective for ports in British Columbia, in part to alleviate land pressure in the Lower Mainland.	To ensure a coordinated approach.

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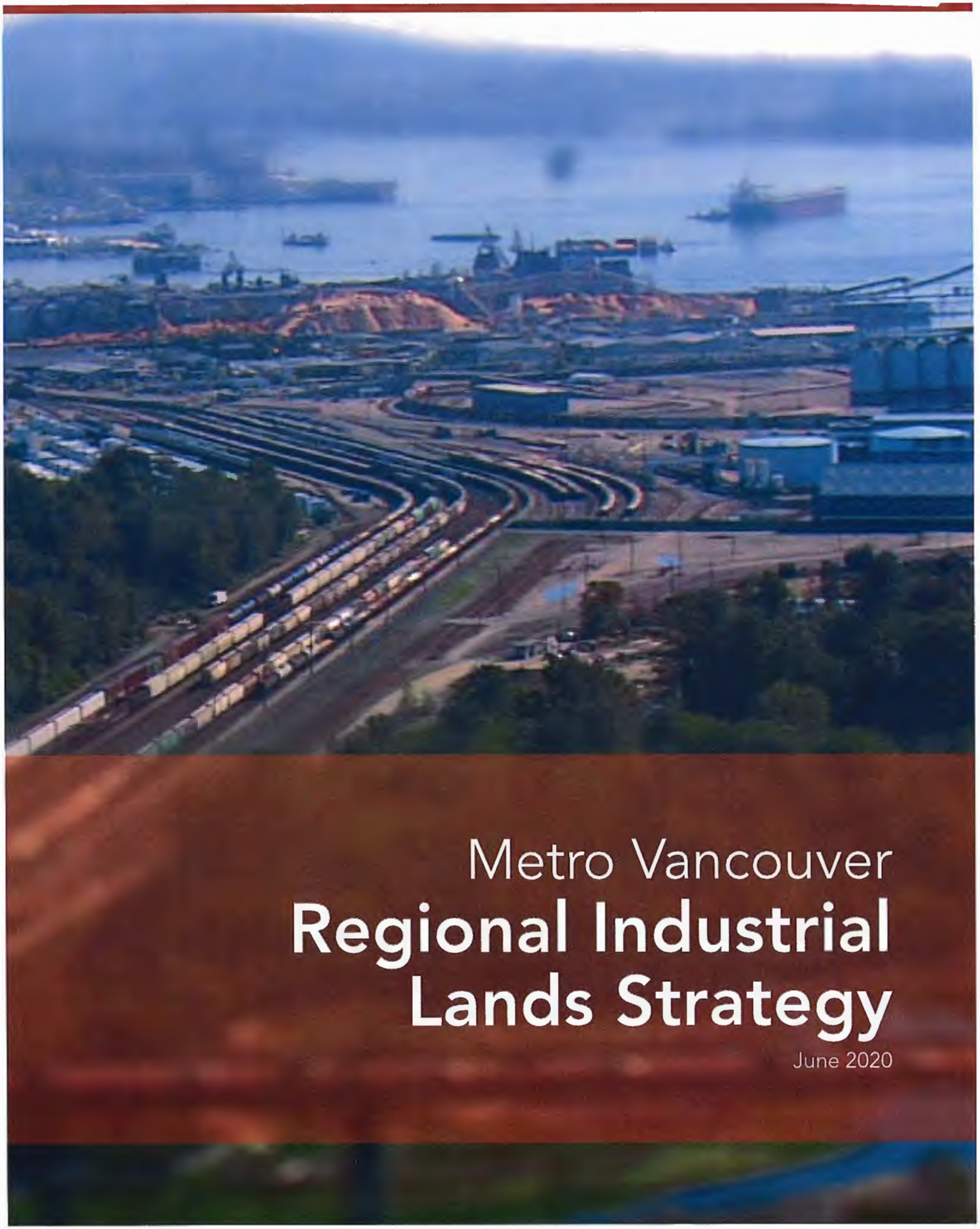
APPENDIX B



Metro Vancouver
Regional Industrial Lands Strategy

June 2020

ACKNOWLEDGEMENT OF APPRECIATION

Metro Vancouver would like to thank the following for participating in the development of the Regional Industrial Lands Strategy.

The Industrial Lands Strategy Task Force provided core input and guidance. The Task Force was chaired in turn by Mayor George Harvie, City of Delta and Mayor Richard Stewart, City of Coquitlam. Task Force representatives included:

- Elected officials from within Metro Vancouver
- BC Ministry of Jobs, Trade and Technology
- Port of Vancouver
- TransLink
- BC Chamber of Commerce
- Agricultural Land Commission
- Urban Development Institute
- Beedie Group
- Value Property Group

Hemson Consulting guided much of the engagement and prepared the draft Strategy. Metro Vancouver also acknowledges the individuals who participated in stakeholder workshops and the Subject Matter Expert Panel, as well as the Greater Vancouver Urban Freight Council, Greater Vancouver Gateway Council, and NAIOP Commercial Real Estate Development Association.

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EXECUTIVE SUMMARY

Industrial lands are crucial to supporting a prosperous and sustainable regional economy. Industrial lands accommodate over one-quarter of the region's total employment, and contribute to the region's economic well-being, along with important linkages to transportation, trade, and taxation matters. Across the region, Metro Vancouver's industrial lands serve as home to a wide range of employment activities that, in turn, play a crucial role in supporting the broader regional, provincial, and national economies. From providing services to other local businesses, offering a broad range of well paying jobs, to enabling trade between Canada and the rest of the world, industrial lands are a key component to accommodating Metro Vancouver's continued growth.

The Metro Vancouver region is facing a critical shortage of industrial land. Years of steady population and economic growth in the region, ongoing conversion and non-industrial uses of industrial lands, and the constrained geography of the region, have precipitated the challenges facing Metro Vancouver's industrial land supply. It is important to align industrial land use planning with the region's economic interests. The productivity of industrial land is inherently tied and linked to the larger system of buildings, transport infrastructure, and access to labour, which all contribute to the vitality and viability of the system.

Demand for industrial land continues to increase. Land values have increased significantly over the past few years and vacancy rates are at record lows. As a result of all these factors, the limited supply of vacant industrial land across the region is anticipated to face a worsening shortage over the coming years. With continued pressure for growth, limited options for expansion and increasing competition between other land uses, these issues now threaten not only new opportunities for growth, but also existing economic and employment activities.

The Challenge

Through canvassing industrial stakeholders and users around the region, the four main challenges facing Metro Vancouver's industrial lands are:

1. **A Constrained Land Supply**

   Bounded by the ocean, mountain ranges and an international border, the region is geographically constrained with limited options to expand the land base. As the region's population and economy continue to grow, this results in increasing demand for, and competition amongst, various land uses including residential, commercial, recreational, agricultural and industrial. With a limited supply of vacant industrial land remaining, there are fewer opportunities to accommodate both new industrial businesses and those businesses that are seeking to expand their operations, particularly for uses that require larger parcel sizes with the necessary access to services and transportation infrastructure.

2. **Pressures on Industrial Lands**

   As other land uses also compete for the limited amount of land available in the region, industrial lands are facing increased speculation and other market pressures to convert to non-industrial uses, such as commercial and residential. These other uses typically are higher value; often pricing-out industrial land uses when a range or mix of land uses are permitted in industrial areas.

   In addition, there is an increasing trend toward permitting more accessory and non-industrial uses on lands intended for industrial activities. These employment uses, although important to the regional economy, may displace and create location challenges for more traditional industrial uses.

3. **Site and Adjacency Issues**

   In some cases, the high cost of delivering servicing to undeveloped industrial areas has proven prohibitive. Similar issues related to environmental constraints, lack of transportation and public transit infrastructure and the encroachment of nearby sensitive uses have discouraged or prevented industrial development where it might otherwise be accommodated. Similarly, the encroachment of sensitive land uses often result in conflicts with industrial operations (i.e. truck traffic, noise, odours) which can prove disruptive to existing and prospective industrial uses.

4. **A Complex Jurisdictional Environment**

   The issues facing Metro Vancouver's industrial land supply involve multiple stakeholders, including the public sector, crown corporations, private sector, industry associations, chambers of commerce and boards of trade. In some cases, these challenges are compounded by overlapping jurisdictions amongst government agencies, leading to a fractured regulatory landscape and competing mandates. Similarly, varying approaches to industrial land use (including permitted activities and intensities) may be in conflict with the aspirations of the region and neighbouring jurisdictions.

The Response

In response to the challenges facing industrial lands and interests of industrial stakeholders in the region, the Metro Vancouver Regional District (Metro Vancouver) struck an Industrial Lands Strategy Task Force (the Task Force) comprising appointed MVRD Board Directors and representatives from other stakeholder agencies and organizations.

The Task Force's mandate was to guide the development of a Regional Industrial Lands Strategy to address the challenges noted. This has been a collaborative process involving a range of stakeholders with an interest in the current and future role that industrial lands should play in the region. This includes understanding how current industry sectors in Metro Vancouver use land for different types of industrial activities, challenges facing the development and operation of industrial lands within the region, and how the changing nature of work and industry could impact the future demand for land, along with associated transportation implications. Despite uncertain impacts on the future, all indications are that demand for industrial land will continue to grow.

Vision

The Regional Industrial Lands Strategy seeks to:

> Ensure sufficient industrial lands to meet the needs of a growing and evolving regional economy to the year 2050

The vision statement speaks to both the timeframe for the Strategy as well as acknowledging the challenges posed by the changing nature of work and potential impacts on the regional economy and industrial land use and demand.

The Regional Industrial Lands Strategy supports and advances the policy objective to protect and intensify industrial lands in the region as articulated through a series of plans, including *Metro Vancouver 2040: Shaping our Future (Metro 2040)*, the regional growth strategy, TransLink's Regional Goods Movement Strategy, the Port of Vancouver's Land Use Plan, and local Official Community Plans.

The 4 'Big Moves' and 10 Priority Actions

The challenges facing Metro Vancouver's industrial lands are complex and interconnected, and no single action or stakeholder will resolve them alone. Market forces and types of industrial activity vary significantly by sub-region, such that for example, forms of densification that may be possible in certain urban locations may not be appropriate in other locations. There are a wide range of national, regional and local serving industrial activities in the region, which have different site and location needs, and which, as a result require different policy responses. Accordingly, recommended actions need to balance regional objectives, while addressing local contexts – 'one size' does not fit all.

To respond to the challenges noted above, the Strategy identifies **34 recommendations** with **10 priority actions** organized around **4 Big Moves**:

- Protect Remaining Industrial Lands
- Intensify and Optimize Industrial Lands
- Bring the Existing Land Supply to Market & Address Site Issues
- Ensure a Coordinated Approach

The priority actions are formed, in part, by packaging together related actions in the longer list of recommendations into combined shorter-term actions, to be implemented over the first few years of endorsement of the Regional Industrial Lands Strategy.

In considering the 4 'Big Moves' and the recommendations that follow, the Strategy affirms that conversion or use of agricultural lands is not a solution to the shortage of industrial lands in the region. This principle was endorsed by the Industrial Lands Strategy Task Force and Metro Vancouver Board.

Big Move 1 - Protect Remaining Industrial Lands

Given the ongoing and projected demand for industrial land in the region, it is imperative to protect the region's remaining industrial lands and curb the threats that undermine their use for industrial activities. This means lands for trade-oriented purposes as well as for small, local serving businesses; businesses that are responding to the changing nature of industry as well as more traditional industrial activities. The priority actions for this Big Move are:

1. **Define Trade-Oriented Lands:** Trade-oriented lands are large sites associated with the transportation of goods to and through the region, such as by rail and the port, which serve a national function and are crucial to the region's economy, warranting additional attention and possible protection. A clear, consistent and collaboratively developed definition and understanding of the extent and location of these important lands will support their protection. Metro Vancouver will work with member jurisdictions to establish a definition for trade-oriented lands. (Subsequent actions identified in the 34 recommendations include consideration of a regional trade-oriented land use overlay in the regional growth strategy and municipal consideration of trade-oriented zoning.)

2. **Undertake a Regional Land Use Assessment:** Given Metro Vancouver's constrained land base, there is significant pressure for competing, legitimate land uses across the region. Metro Vancouver will undertake a targeted or region-wide assessment of land use, looking at and beyond the existing policy framework to proactively identify the 'best' locations for different land uses based on a collaboratively developed set of criteria.

3. **Strengthen Regional Policy:** Through the update of the regional growth strategy, Metro Vancouver will explore implementation changes, such as a consistent definition for Industrial, higher voting thresholds to amend the regional Industrial land use designation, and exploration of 'no net loss' as part of the amendment criteria.

4. **Seek Greater Consistency in Local Government Zoning Definitions and Permitted Uses:** Metro Vancouver will, in collaboration with member jurisdictions and other regional agencies, develop a consistent definition of 'industrial' and guidelines for permitted uses. Member jurisdictions, through regional context statement updates, will review and update their zoning bylaws using the established guidelines.

Big Move 2 - Intensify and Optimize Industrial Lands

Given the region's constrained land base, it is critical to encourage the most efficient use of the remaining land supply for all types of industrial users, to remove barriers to the intensification of industrial land, and investigate opportunities to optimize the location of certain land uses over time. The priority action for this Big Move is:

5. **Facilitate the Intensification / Densification of Industrial Forms Where Possible:** Municipalities will review and remove unnecessary restrictions to density or height limits where appropriate; plan space to accommodate new, smaller industrial uses when older, centrally located industrial areas densify; allow mixing of industrial with other employment uses so long as the industrial component is secured as a condition of redevelopment; and explore opportunities to encourage intensification / densification in target areas. Metro Vancouver will explore allowing mixed-use with residential on Mixed Employment lands immediately proximate to Rail Rapid Transit Stations (distance to be determined, but suggest 200 metres) as long as existing industrial space is maintained or expanded and other *Metro 2040* objectives are met (e.g. affordable, rental housing).

Big Move 3 - Bring the Existing Land Supply to Market & Address Site Issues

Certain parts of the vacant industrial land supply suffer from site-specific challenges, such as limited infrastructure support, environmental concerns, and under-sized parcels. Where vacant lands have not come to the market, local municipalities may benefit from the preparation of a bring-to-market strategy. Such a strategy would identify the issues that have prevented the development of the undeveloped or under-developed industrial land, while providing a roadmap to achieve the municipality's economic goals for its remaining industrial lands. The priority actions for this Big Move are:

6. **Prepare Bring-to-Market Strategies for Vacant or Under-developed Industrial Lands:** Municipalities with vacant or under-developed industrial lands will prepare a bring-to-market strategy for their industrial land that addresses strengths, weaknesses, opportunities and challenges, to encourage reinvestment and more intensive use, considers municipal assembly and consolidation of fragmented parcels, whether environmental remediation is required, and if local servicing and infrastructure improvements are required and can be accommodated through front-ending infrastructure investment agreements.

7. **Ensure Transportation Connectivity:** The efficient movement of goods and people is critical for many industrial businesses, both local serving and trade-oriented, in terms of where they choose to locate. The maintenance and growth of a resilient and reliable transportation network, including various modes of transit, is an integral component in planning for the effective management of the region's industrial lands. TransLink, Metro Vancouver, the Port, the Airport and municipalities will continue to work together to coordinate investment in the transportation network, implement the Regional Goods Movement Strategy, enhance the regional truck route network, support efficient container drayage, and provide transit for industrial workers.

Big Move 4 - Ensure a Coordinated Approach

Improved cooperation and data tracking among governments and other agencies and organizations is necessary to ensure effective land management and accurate monitoring into the future. Coordination also guides future alignment of policy responses to issues as they arise across Metro Vancouver and southwestern British Columbia. The priority actions for this Big Move are:

8. **Coordinate Strategies for Economic Growth and Investment:** Metro Vancouver and member jurisdictions have a shared interest in attracting new investment and supporting economic and employment activities across the region. Many municipalities have an economic development office or department that work to retain and support the expansion of local businesses. Metro Vancouver's new Regional Economic Prosperity Service provides the opportunity for a regional approach to economic development that will amplify and complement the work of member jurisdictions.

9. **Improve Data and Monitoring:** Timely access to quality data is critical for land management and the development of effective economic policy. Metro Vancouver will update the Industrial Lands Inventory to have a better understanding of the current land uses and supply, and complete a Regional Employment Survey.

10. **Develop a Framework for Coordination:** Pressures on industrial lands are not limited to Metro Vancouver. Adjacent regional districts are part of the same goods movement network and commuter-shed and they are facing similar land pressures and challenges. The Province will work collaboratively with Metro Vancouver, TransLink, and municipalities on cross-boundary economic and land use planning matters and will develop a framework for economic and land use planning coordination between neighbouring regions in the broader southwestern BC economic region to support industrial land use and protection. For example, Metro Vancouver will seek to sign a memorandum of understanding with the Fraser Valley Regional District outlining shared priorities regarding the effective and efficient management, protection, and development of industrial lands within the Lower Mainland.

Implementation

Taken together, these 10 Priority Actions will ensure Metro Vancouver's industrial lands continue to provide an attractive and viable location for industrial businesses to locate, grow and prosper, while supporting the broader regional economy and community. Further details for each action will be developed during implementation, including key stakeholder engagement. Furthermore, it is recognized that there is a logical sequencing of actions to inform subsequent work.

The Regional Industrial Lands Strategy will be periodically reviewed for effectiveness. The status of policy progress and market conditions can inform adjustments to actions as needed. Additional actions will be identified for prioritization in subsequent periods through the implementation work.

SETTING THE STAGE

Metro Vancouver is facing a shortage of industrial land. With strong demand for industrial space, many industrial businesses are finding it increasingly difficult to find suitable locations, while the prevalence of conversions to non-industrial uses in some areas further reduces the remaining supply of industrial land.

Industrial lands are crucial to supporting a prosperous, sustainable regional economy and to providing space to accommodate the industrial businesses and services needed across Metro Vancouver. These lands are home to over one-quarter of the region's jobs, and are used mainly for transportation and warehousing, wholesale trade, retail trade, manufacturing, and professional and technical services.

Some industrial activities provide critical regional services, such as infrastructure maintenance and repair, while other activities contribute to a diversified regional economy. Many activities on industrial lands provide for the day-to-day needs of Metro Vancouver's residents and businesses, providing locations for services like regional utilities, vehicle repair, hotel laundry services, catering companies, couriers, breweries, goods manufacturing, and design space. These different businesses need different types of spaces to optimize their operations.

While some industries are and will continue to be land-intensive, other forms may be accommodated in high density / intensity buildings. Modern industry needs different types of space than traditional industry, and will both impact and respond to changing business, economic, employment, and transportation conditions.

Furthermore, the type of industrial activity varies greatly across the Metro Vancouver region, from urban industrial in Vancouver to logistics facilities in locations close to port terminals, and warehouses in Surrey and Langley. Each jurisdiction has unique competitive strengths and strategies for supporting international, regional and/or local demand.

Due to a constrained land base and strong demand for all types of land use, the regional supply of industrial land is under significant pressure for conversion to permit uses that can command higher market values, such as retail, commercial and residential uses. In some parts of the region, flexible zoning has allowed non-industrial businesses to occupy industrial lands, competing for and at times displacing the industrial uses that cannot easily locate elsewhere. In other areas, the encroachment of sensitive uses, like residential, next to existing industrial operations is resulting in conflicts that threaten the continued operation of the original industrial use. These challenges, along with many others, are eroding opportunities for industrial businesses to operate and grow, which in turn threatens the economic diversity and vitality of the broader regional economy.

Metro Vancouver's Industrial Lands Strategy Task Force

In response to the challenges facing the region's industrial lands, Metro Vancouver struck an Industrial Lands Strategy Task Force in March of 2018, which continued into early 2020.

The mandate of the Task Force is to guide the development of the Regional Industrial Lands Strategy. It was intended to be a collaborative process involving a range of stakeholders with an interest in the present and future role that industrial lands play in the region. This includes developing a greater understanding of how current industry sectors use land for different types of industrial activities, the challenges facing the development and operation of industrial lands, and considering how the changing nature of work and industry could impact the demand for land in the future in the region.

The Task Force includes both voting members, comprising appointed Metro Vancouver Board Directors, and non-voting members, comprising representatives from agencies and organizations with an interest in, and specialized knowledge about industrial lands. Non-voting members included representatives of the Port of Vancouver, TransLink, the Urban Development Institute, the BC Ministry of Jobs, Trade and Technology, BC Chamber of Commerce, Agricultural Land Commission, and representatives from the industrial development community. The Task Force was responsible for guiding the development of research and stakeholder consultation to support the development of the Regional Industrial Lands Strategy, before reporting back to the Metro Vancouver Board with the recommended Strategy.

Vision

One of the first efforts of the Task Force was to confirm a vision for the Regional Industrial Lands Strategy.

> Ensure sufficient industrial lands to meet the needs of a growing and evolving regional economy to the year 2050

The vision statement speaks to both the timeframe for the Strategy as well as acknowledging the challenges posed by the changing nature of work and potential impacts on the regional economy and land demand.

Definition of 'Industrial'

If the objective of the Regional Industrial Lands Strategy is to ensure the sufficient supply of industrial lands, the first step is to develop a greater understanding of what the Strategy is seeking to protect lands for – i.e. how is 'industrial' defined.

Across the region, municipal policies and bylaws vary in terms of what uses are permitted within industrial and employment zoning. For example, some municipal bylaws limit permitted uses to more traditional industrial activities, such as manufacturing, warehousing and distribution logistics, while others provide more flexibility to accommodate a range of uses, such as commercial, places of worship, and indoor recreation. This flexibility of use can be beneficial towards realizing opportunities associated with the changing nature of industry and the emerging innovation economy, but it can also result in the displacement of more traditional industrial activities and increasing space and land supply challenges for industrial activities.

This is of particular concern in the context of the region's constrained land supply as it relates to the infiltration of industrial areas by non-industrial uses that could potentially locate elsewhere. The challenge is striking the right balance of narrowing the permitted uses to protect the needs of region-serving and trade-oriented activities, while remaining sufficiently flexible to allow for innovation in appropriate locations and ensure sufficient space for non-industrial and employment uses (e.g. in Urban Centres, which generally have better transit infrastructure and more amenities).

'Industrial' represents a wide spectrum of uses and intensities, ranging from large distribution and transportation lands, warehouses, manufacturing and processing facilities, to small local-serving production and suppliers, and new technology-driven businesses with integrated work spaces, which all need different types of accommodations to optimize their operations. Many regional jobs and businesses are also connected to national trade and the port, which require industrial lands for handling goods – e.g. for container storage, freight forwarding, warehouses, and other distribution functions. Towards this end, the Task Force, through consultation with regional stakeholders, developed a working definition for 'industrial' uses for the purpose of the Regional Industrial Lands Strategy.

Industrial is defined as:

- Light and heavy industrial production (e.g. cement manufacturing, food and beverage manufacturing, furniture manufacturing, metalwork and fabrication, sawmills)
- Distribution (e.g. warehousing, industrial storage, freight trucking, intermodal couriers)
- Repair (e.g. autobody shops, truck and trailer repair, consumer goods repair)
- Construction materials and equipment (e.g. building supplies and specialty trade contractors, heavy equipment rental and leasing)
- Infrastructure (e.g. public utilities such as wastewater treatment facilities and pumping stations, works yards, rail / port terminals)
- Outdoor storage activities (e.g. container storage)
- Wholesale (e.g. merchant and logistics wholesalers)

In addition to the more traditional industrial uses, the Strategy also recognizes other non-traditional industrial uses that may be compatible with industrial uses based on a number of criteria, best dealt with at the local and site levels (Tables 1 and 2).

TABLE 1: CRITERIA TO ASSIST IN DEFINING INDUSTRIAL USE & COMPATIBILITY

CRITERIA	DESCRIPTION
Compatibility with adjacent uses	Whether a business is an emitter of noise, vibration, odour or visual nuisances that make occupying areas proximate to other land uses (e.g. residential, commercial institutional) challenging
Access (to site and goods movement network)	Whether the business requires access to particular infrastructure or modes of transportation such as water, rail, airport, and highway
Space requirements and scale of business	Whether the business requires large / unique site or building characteristics
Product produced	Whether the business manufactures, distributes or repairs a physical product
Trip generation	Whether the business generates or handles relatively large amounts of truck or client traffic
Client type	Whether the business is geared toward other business or the public
Ancillary/hybrid use	Percentage of the business that is office if a hybrid use (e.g. bio-tech)

SOURCE: DEFINING INDUSTRIAL FOR THE REGIONAL INDUSTRIAL LANDS STRATEGY, METRO VANCOUVER, SEPTEMBER 2018

Through consultation with stakeholders, these criteria were used to categorize a spectrum of uses into four land use categories that align with *Metro 2040*'s land use designations. These include traditional industrial activities that are appropriate for lands designated or zoned Industrial; flexible uses considered appropriate for lands designated or zoned Employment; non-industrial uses that should not be permitted on Industrial lands; and context-specific uses that could be appropriate for Industrial or Employment lands depending on the criteria listed in Table 1. The spectrum of uses by applicable land use category are summarized in Table 2.

TABLE 2: APPLICABLE USES BY LAND USE CATEGORY

INDUSTRIAL	• Light and heavy industrial production • Distribution • Repair • Construction materials and equipment • Infrastructure • Outdoor storage • Wholesale
EMPLOYMENT	• Indoor Storage (e.g. self-storage) • Stand-alone office (e.g. law and financial offices) • Stand-alone recreation (e.g. karate studios, theatres, crossfit and climbing gyms, badminton/tennis facilities) • Retail / wholesale (e.g. big box, car dealerships, furniture, automotive parts) • High tech software development • Consulting services (e.g. engineering, architecture, environmental)
NON-INDUSTRIAL	• Residential and supportive housing • Artist studios and live / work space • Agriculture (soil based growing) • Places of worship • Institutional uses (e.g. schools, day cares, hospitals)
CONTEXT SPECIFIC	• Restaurants (i.e. serving adjacent industrial activities versus being a draw forthe public) • Retail (i.e. micro-breweries depends on scale and percent retail) • Services (i.e. commercial laundry, bakery, catering depends on scale) • Research and development (i.e. high-tech, bio-tech that require 'industrial' space) • Media production studios (i.e. movie, recording, television and radio)

SOURCE: DEFINING INDUSTRIAL FOR THE REGIONAL INDUSTRIAL LANDS STRATEGY, METRO VANCOUVER, SEPTEMBER 2018

The Changing Nature of Industrial Activities

The changing nature of the economy means that business and industrial activities are evolving, as are desired space needs and location preferences, and associated employment and transportation implications. This may include new types of manufacturing, advanced technology, and integrated work spaces. In some cases, these uses may be less impactful in terms of external nuisances, and different levels of employment density.

The new types of business models may not neatly fit within the traditional paradigm of 'heavy' or 'light' industrial. The types and definitions of industrial activities are evolving and becoming more diverse. Notable new forms of industrial activity include:

- Clustering together or co-locating of related operations can support eco-industrial networks and circular economy systems, where companies collaborate to utilize each other's by-products (material loops) and share resources (peer-to-peer lending) to increase overall efficiencies. These sectors can include: innovative R&D, green / clean-tech, and smart technologies.
- Local artistry 'maker movement' craftsmanship.
- High tech and other newer forms of industry such as: e-commerce, direct-to-consumer deliveries, co-facilities, advanced technology, on-demand manufacturing, and creative / media / design.
- Significant industrial land intensification as a result of market forces, specifically new industrial uses, growth in logistics, smart warehouses, and e-commerce. The reasons are that new industrial capital investments often leverage existing and emerging technologies to either scale their output or increases value-added production.
- Logistics, distribution, global supply chains, and new forms of industrial or manufacturing activity are driving demand for industrial property.
- New forms of intense industrial development such as mega-distribution facilities and e-commerce logistics facilities have become dominant features of the major industrial real estate markets in the world. The availability of a sufficient number of large-sized land parcels to support this activity, along with labour availability, influences site selection for these activities worldwide. In certain cases, the shortage of large parcels of industrially zoned land may be an obstacle to attracting such developments of a certain size.
- Evolving business models in response to e-commerce and technology are placing increasing importance on the need for integrated space where design, manufacturing, distribution, and showroom / retail activities can occur within a single building.

Findings - Role of Industrial Lands

In setting the stage for the Regional Industrial Lands Strategy, a significant body of research was undertaken. The following findings provide an overarching summary of that work, and set the stage for the Strategy's recommendations:

1. Industrial lands play a critical role in supporting both local employment and the broader regional and national economies.
2. A broad spectrum of employment activities take place on industrial lands, many of which are unlikely or unable to locate elsewhere within the region.

3. Industrial land uses have specific spatial and infrastructural needs that must be planned and protected to ensure their efficient operation and continued growth.

4. Many industrial businesses rely on dependable access to the goods movement network to ensure the timely movement of product to and from suppliers and their clients, along with transit services to link businesses with a broader range of the region's workforce.

5. While industrial areas can benefit from a mix of complementary and secondary uses, many industrial uses struggle to compete when non-industrial uses are allowed to encroach upon and develop within industrial lands:

    - there is limited alignment on what constitutes an 'industrial' use and some local zoning have permitted distinctly non-industrial uses to locate and occupy a significant amount of industrial land.

    - the encroachment of sensitive uses, such as residential, often creates conflicts with abutting industrial activities. Without sufficient buffering to separate these uses, or mitigation measures to limit conflict, encroachment may threaten the operation and growth outlook for existing industrial operations.

6. The market for industrial land and how it is used varies across the region, with differing land values, rents, and spatial characteristics in different sub-markets.

7. There are a number of ways in which industrial uses can make more efficient use of a limited land supply, including intensification of built form where local development restrictions, geotechnical / soil conditions, and market factors permit. However, not all market areas or industrial operations are well suited to multi-level industrial buildings.

8. Innovation and the changing nature of work in industrial areas requires a careful balance between protecting for certain uses and enabling flexibility to realize emerging economic opportunities:

    - the limited supply of available industrial land, coupled with speculation and competition amongst other land uses, is resulting in rising costs and fewer options for new and existing industrial businesses.

    - without careful management of the region's remaining industrial land supply, there is a real risk that industrial activities may be displaced or may choose to (re)locate elsewhere outside of the region.

    - mismanagement of the region's industrial land supply has the potential to impact not only industrial employment and economic activity, but also the broader economic outlook for Metro Vancouver.

9. Given the diverse characteristics of Metro Vancouver's industrial sub-markets and geographies, policy options that work well in one jurisdiction or area may not apply to another. As such, policy recommendations in the Regional Industrial Lands Strategy must not be implemented in a blanket manner but instead must recognize local context and applicability.

THE ROLE OF INDUSTRIAL LANDS BY SECTOR IN THE METRO VANCOUVER ECONOMY

The Metro Vancouver regional industrial market stretches from the North Shore and Vancouver area to the Fraser Valley. The Metro Vancouver region is experiencing an acute shortage of industrial land supply, which manifests as very low vacancy rates, increasing land prices, and higher lease rates. These factors impact the industrial real estate market, spurring more development of industrial projects (within the limitations of land supply) and more intense / dense forms of industrial development.

Demand for industrial space continues to set new records as both owner-operator and investor interest in industrial assets strengthen amid low vacancy, constrained land supply, and rising rental rates throughout Metro Vancouver.

According to market reports, demand is driven by distribution of consumer goods (warehouses), food / beverage (processing), building supplies, technology users, and film production. Logistics associated with last-mile delivery and e-commerce are also in strong demand, requiring well-located urban premises. In core locations, increasing prices force a transition to more specialized light manufacturing, tech, office and showroom-type uses.

Also identified as new users of industrial space are small scale, artisanal businesses, such as custom manufacturing, small batch production, and food processing, some relating to the sharing economy, such as facilities with common kitchens. Many of these businesses require small space, and are local serving, benefiting from close proximity to the consumer population.

In recent years the rapidly growing film industry has been turning to warehouse sites to convert the structures into large production studios. As such, modern warehouse space is now becoming more attractive to both the logistics and film industry.

The anticipated growth trajectory of the Port of Vancouver's containerized cargo volumes will remain a structural driver of demand for industrial real estate in the region. The Port and associated operations require trade-oriented lands, which are large and close to transportation infrastructure.

Growth is also occurring in tech firms in urban light industrial areas, noting the diverse types: high tech, bio-tech, software, and digital. These businesses often need high ceiling, studios, labs, storage, and power, with various activities including, R&D, packaging, and distribution on site -- industrial space that meets their needs. Furthermore, different types of tech companies have different abilities to pay, in terms of both wages and accommodations; most small and young companies cannot afford high lease rents or to purchase strata space.

Economic Contribution of Industrial Lands

Industrial lands are the foundation for a significant component of the Metro Vancouver region's economic activity, representing a large amount of employment and economic activity:

- Comprising only 4% of the region's land base, industrial lands are home to nearly 27% (364,000) of the region's 1.3 million jobs, while also supporting an additional 163,000 jobs through indirect and induced impacts.
- Jobs located in industrial areas tend to be high paying, offering an average wage of $61,100 per worker, which is roughly 10% higher than the regional average wage of $55,000 per worker.
- In 2016, business activities on industrial lands generated $27 billion in direct Gross Domestic Product (GDP), equating to 30% of the region's total GDP. These activities also accounted for an additional $30 billion in indirect and induced GDP, of which $16 billion is within the region, $5 billion is accrued elsewhere in the province, and $9 billion accrues elsewhere in Canada.

The Metro Vancouver industrial market continues to experience very strong demand for space and a limited supply of land. As described by one brokerage firm, "with record-low vacancy, escalating rental rates, an expensive and constrained industrial land supply and an insufficient volume of new development" there is a "ravenous appetite for industrial real estate among tenants, owner-occupiers, developers as well as private and institutional investors".

The demand is based on a growing regional population and economy, Metro Vancouver's geographic role as a transportation gateway for the nation, and evolving and emerging forms of industrial. Notable drivers of demand are: e-commerce, logistics and distribution, light manufacturing, food processing, advanced technologies, and creative and media production sectors, many of which desire urban locations to be close to their customers and workforce.

On the supply side, the quantity of available land is essentially fixed, and the amount of new industrial building floor area being built cannot keep up with absorption:

- Metro Vancouver had, as of 2015, approximately 11,300 hectares (28,000 acres) of industrial land, about 80% of which is already developed. Within this supply, local brokerages estimate there to be 210 million square feet of industrial building floor space.

- Because the development of new space has not kept pace with demand, the industrial vacancy rate of 1.4% is a record low for the region, and counts amongst the lowest in North America's major markets.
- Competition for space is resulting in increasing rental rates across the region, ranging from $10.50 per square foot in Surrey and Delta to $14.50 per square foot in Vancouver and North Vancouver.
- Values for vacant industrial land are also up significantly in recent years, past the $2 million per acre mark in many areas, and much higher in the City of Vancouver.
- Purchase prices for strata industrial space have followed similar trends ranging from $300 to $500 per square foot depending on the sub-market, with Vancouver representing the higher end.
- Despite the development of new supply being at an all time high, with some 6 million square feet of building space under construction, absorption levels have yet to abate, indicating demand is outpacing the market's ability to provide space.

Within this market, industrial tenants are facing limited space options to accommodate their new and expanding businesses, while also experiencing increased pressure from rising market rents, maintenance costs and property taxes. Businesses are faced with either renewing their lease at notably higher rates, or relocating further away from the region's core markets, driven – or indeed, pushed – by availability and costs rather than location preferences.

Employment and Economic Activity

Of the 364,100 jobs located on the region's industrial lands, 200,400 (55%) are associated with industrial activities, involving production, distribution, repair, public infrastructure, and trade-oriented uses (employment activity located on lands associated with the Port of Vancouver and Vancouver Airport Authority). Industrial activities are significant contributors to the local economy, contributing proportionally more GDP per job than the regional average. These jobs generated an estimated $17.3 billion in direct GDP in 2016.

Non-industrial activities, that is those jobs in sectors related to media, film and art production, research and development in professional and technical services, retail and other services, also play a significant role on the region's industrial lands. These sectors account for 163,700 direct jobs and approximately $9.5 billion in direct GDP (Table 3), though their impact is proportionally lower on a per jobs basis than the industrial sectors. This is primarily on account of the higher economic multipliers (linkages and spending with other sectors) and higher average wages associated with activity in the industrial sectors.

TABLE 3: ECONOMIC IMPACTS OF EMPLOYMENT LOCATED ON INDUSTRIAL LANDS, BY SECTOR, 2016

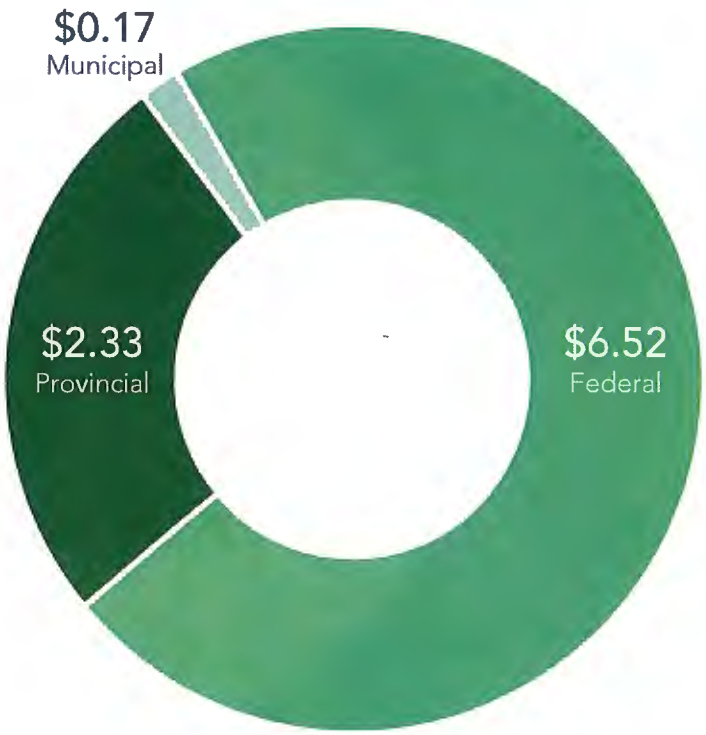
ECONOMIC IMPACT		IMPACTS	REGION	BRITISH COLUMBIA	CANADA
EMPLOYMENT (JOBS)	Industrial Sectors	Direct	200,400	200,400	200,400
		Indirect	59,200	78,100	111,400
		Induced	48,000	62,900	87,900
		Total	307,600	341,400	399,600
	Non-Industrial Sectors	Direct	163,700	163,700	163,700
		Indirect	28,900	36,000	50,400
		Induced	28,900	33,600	45,800
		Total	219,400	233,200	259,900
	All Sectors	**Total**	**527,100**	**574,600**	**659,500**
GDP ($ BILLIONS)	Industrial Sectors	Direct	$ 17.3	$ 17.3	$ 17.3
		Indirect	$ 5.5	$ 7.3	$11.2
		Induced	$ 5.2	$ 6.8	$ 9.5
		Total	$ 28.0	$ 31.4	$ 38.0
	Non-Industrial Sectors	Direct	$ 9.5	$ 9.5	$ 9.5
		Indirect	$ 2.5	$ 3.2	$ 4.6
		Induced	$ 2.9	$ 3.6	$ 4.9
		Total	$ 15.0	$ 16.3	$ 19.1
	All Sectors	**Total**	**$ 43.0**	**$ 47.7**	**$ 57.1**

SOURCE: STATISTICS CANADA CENSUS 2016, METRO VANCOUVER AND INTERVISTAS ANALYSIS AND CALCULATIONS.
NOTE: DATA ARE ROUNDED AND MAY NOT SUM. PRICES ARE 2016 DOLLARS.

Tax Impacts

Metro Vancouver's industrial lands are estimated to generate $6.5 billion in tax revenues and fees for the Federal government and $2.3 billion for the Provincial government (Figure 1). Industrial sector jobs make a greater contribution to Federal and Provincial revenues when compared to non-industrial sector jobs located in the industrial areas, primarily on account of their higher average wages for industrial related jobs.

FIGURE 1: ESTIMATED FEDERAL, PROVINCIAL AND MUNICIPAL TAX REVENUES GENERATED BY INDUSTRIAL LANDS ($BILLIONS)



SOURCE: INTERVISTAS' TAX MODEL AND CALCULATIONS, AND ANALYSIS OF BRITISH COLUMBIA GOVERNMENT TAX BURDEN SCHEDULE 707 2016 ASSESSMENTS, TAX RATES, MUNICIPAL TAXES AND CLASS PROPORTIONS OF TAXES AND ASSESSMENTS.

METRO VANCOUVER INDUSTRIAL LANDS - ISSUES AND TRENDS

Industrial lands are crucial to supporting a prosperous and sustainable regional economy and to providing space to accommodate the industrial businesses and services needed across Metro Vancouver. Industrial lands serve both an important regional role in the economy and employment, and, as a facilitator of trade-oriented activities, a critical national role to the wider economy. Industrial lands, while only comprising 4% of the land base, accommodate over one-quarter of the region's total employment, and contribute to the region's economic well-being, along with the associated linkages to transportation, trade, and taxation matters, supporting the broader regional, provincial, and national economies.

'Industrial' represents a wide spectrum of uses and intensities, ranging from large distribution and transportation lands, warehouses, manufacturing and processing facilities, to small local-serving production and suppliers, and new technology-driven businesses with integrated work spaces. These businesses all have different needs in terms of accommodations to optimize their operations, as well as location, property and building size requirements.

Industrial lands accommodate many businesses that serve the wider economy, and provide employment opportunities close to home for residents, as well as taxation benefits to the respective local municipality. Industrial lands provide for the day-to-day needs of the population, locations for services like vehicle repair, hotel laundry, catering companies, breweries and couriers, etc., that serve and provide employment opportunities for both the region and the surrounding communities. Many regional businesses and jobs are also connected to national trade through the Port of Vancouver, which requires industrial lands for the handling of goods including: container storage, rail shunting, freight forwarding, warehouses, and other distribution functions.

The Metro Vancouver market conditions are a function of a very tight supply of industrial lands in the region, and strong demand from multiple business sectors. Strong economic fundamentals are driving demand for industrial space in the region, while a shortage of developable space (especially larger size land parcels) has kept available supply constrained. The price to lease industrial space in Metro Vancouver has increased greatly. In response, some new industrial developments are built to more intense / dense levels, while some industrial tenants are rationing space or being displaced, and in other cases are leaving the region.

This section assesses the current state of industrial lands in Metro Vancouver and provides information on trends, issues, context, opportunities and challenges for the Strategy's recommendations. Research was compiled through a comprehensive review of various market and academic sources, including a series of studies and white papers prepared for the Task Force. These studies include:

- Regional Industrial Lands Strategy – Issues and Initiatives Summary (June 2018);
- Industrial Lands and the Innovation Economy (June 2018);
- Defining Industrial for the Regional Industrial Lands Strategy (September 2018);
- Stratification of Industrial Land in Metro Vancouver (September 2018);
- Industrial Edges: Compatibility and Interface Issues in Metro Vancouver (September 2018);
- Agri-Industrial Activities in Metro Vancouver (February 2019);

- Regional Industrial Lands Strategy – Survey of Industrial Users (February 2019);
- Economic Value of Industrial Lands to the Metro Vancouver Region (February 2019); and
- The Changing Nature of Industry and Industrial Land Demand in Metro Vancouver (July 2019).

Regional plans should guide market forces in ways that respond to industrial needs while considering other community objectives. The complexity lies in balancing industrial trends, development viability, business needs, responsive regulations, and other community interests. The challenge and opportunity is how to best use and intensify industrial uses without losing the industrial function of the lands.

Challenges Facing Metro Vancouver Industrial Lands

With regional population and employment growth, and a constrained land base, the region faces a number of challenges related to the protection, management and promotion of industrial and employment lands. These challenges have been categorized into four themes:

A. Constrained Land Supply

B. Pressure on Industrial Lands

C. Site and Adjacency Issues

D. Complex Jurisdictional Environment

The challenges are complex and interconnected, and addressing them will require creative responses and collaboration among all stakeholders in the region.

A. Constrained Land Supply

The challenges facing Metro Vancouver and its industrial land supply are somewhat unique, at least in the North American context. Unlike most other North American markets, where continued demand can often be accommodated via development and growth into outer areas, Metro Vancouver is bounded both physically and politically between mountains, an ocean and an international border. While there is some potential for industrial development in the neighbouring Fraser Valley Regional District to the east, it too has a limited supply of vacant industrial land available, leaving the land supply within the Lower Mainland predominantly capped.

Between the limited supply of vacant industrial lands and high demand for new space, there is a scarcity of lands in general. This is of particular concern as it relates to larger parcel sizes (20+ acres / 8+ hectares), that are typically required for major industrial and logistical uses. This problem is further exacerbated by the fragmented nature of much of the region's remaining vacant land parcels, which results in lands that are suitable for some industrial activities, but insufficient for large-scale development, in terms of size, location, or other attributes.

With limited options through traditional expansion-based methods, Metro Vancouver will need to embrace creative options for increasing both the supply and capacity of its industrial lands. These alternative approaches are not without their own challenges, as discussed in the following examples.

In the past, it was common to expand industrial and port areas into shorelines by using fill. However, the environmental and economic costs and necessary approvals and mitigation measures can be prohibitive, resulting in the practice being used much more sparingly in recent years. The Port of Vancouver is currently undertaking a comprehensive study to expand the Roberts Bank container terminal using this approach; though beyond that project there are few prospects for this approach to be applied elsewhere in the region.

B. Pressure on Industrial Lands

Not only are the region's industrial lands in short supply, they are also under threat of being further diminished due to a number of factors, including allowance of non-industrial uses and being out-priced due to high land values and property taxation. At the same time, industrial uses seeking other locations to suit their needs are putting pressure on the region's agricultural land.

Competition and encroachment from non-employment uses are putting considerable pressure on industrial lands. The encroachment of these sensitive land uses often result in conflicts with industrial operations (i.e. truck traffic, noise, odours) which can prove disruptive to existing and prospective industrial uses. Mixing non-industrial uses in industrial areas or converting the lands entirely runs the risk of encouraging speculation, which in turn may drive up land values and prevent industrial growth or displace existing industrial users.

Industrial areas can benefit from the presence of a number of complementary non-industrial uses, including restaurants and amenities to serve local workers, and ancillary retail and office components that are related to the primary industrial use. However, these and many other non-industrial uses can also compete for space in the industrial area. Many non-industrial uses are able to locate in other parts of the urban land supply, but given the comparatively lower cost of land and space, may prefer to locate in industrial areas if permitted to do so.

C. Site and Adjacency Issues

In addition to the macro-level challenges facing industrial lands, various site-specific issues are creating barriers to the effective development and redevelopment of the region's industrial lands:

- In the case of unserviced industrial lands, the high cost of delivering necessary servicing and infrastructure may be preventing the establishment of new industrial activity;
- A number of industrial areas have limited access to the Regional Truck Route Network and other infrastructure intended for the movement of goods and materials, including access to railways and navigable waterways;
- Recognizing that some industrial lands are located in areas that are challenging to serve efficiently with transit, limitations to transportation and transit infrastructure, coupled with a lack of local amenities, can make it difficult for some industrial businesses to attract and retain workers; and
- Regulations and policies related to industrial impacts on sensitive environmental features are limiting the development capacity of certain sites, requiring setbacks / buffers that can reduce building footprints to unusable sizes. Similar requirements for the remediation of previously occupied industrial sites have proven cost-prohibitive for some industrial developments.

D. Complex Jurisdictional Environment

Industrial lands and industrial activities play a crucial role in the region and its economy. While land use is primarily managed at the municipal level, decisions related to the effective management of industrial lands have the potential to affect neighbouring municipalities, the broader region, and even aspects of the economy at the provincial and national level.

At the same time, the issues facing industrial lands involve multiple stakeholders and overlapping jurisdictions of government, which may have their own organizational mandates. The result is a fractured regulatory landscape which can occasionally result in redundancies or competing policy objectives that stifle the effective utilization of the region's remaining industrial lands for various purposes. For example, the Port of Vancouver, with its federal mandate to accommodate and grow trade-related economic activity, is not subject to provincial or regional policy. As the Port has acquired lands to support this objective, critics have raised concern that the Port is overriding local, regional and provincial land use policies and objectives, including the protection of agricultural land or other local priorities.

In other regards, competition between neighbouring municipalities to attract business and grow their respective property tax bases may result in decisions that undermine the resiliency of the broader regional economy. This is best exemplified by the continued conversion of industrial areas to higher value land uses, despite the limited amount of industrial land remaining in the region.

Lack of collaboration and coordination between government agencies is also resulting in insufficient data sharing, and policy alignment between organizations. These gaps have resulted in policy misalignment (such as overly permissive zoning in industrial areas) and blind spots (such as infrequent reporting on industrial land take up) which make it difficult to track and respond to issues facing industrial lands in a timely manner.

Taking Stock: Finding Opportunities

Trade-Oriented Uses

Industrial businesses cover a range of activities, locational preferences and site needs. For example, a manufacturer of specialized computer components may require a far different type of space than that of a distribution and logistics warehouse operation. Much like the competition between industrial and non-industrial space users, industrial uses with different operational needs may also be able to support different values for land and space.

This disparity is of particular note when it comes to trade-oriented uses, such as the logistics, warehousing and distribution of goods. These uses tend to require specific locations with good access to port, rail or highway infrastructure, often in the form of large warehouses with ample space for the loading and unloading of trucks. However, smaller specialized industrial users can also compete for these types of sites, and may be a more financially viable form of development on high value lands, particularly if developing multi-storey and / or stratified sites. This can prove a challenge given the limited number of large sites in the region that have the characteristics needed by trade-oriented businesses.

In some cases, there can be a real or perceived tension between stratification (including small lot subdivision) and trade-oriented lands (requiring large, flat sites near the goods movement network). Nevertheless, creative solutions are possible, and a variety of uses and tenures are not mutually exclusive for large sites.

Stratification of Industrial

Another way in which Metro Vancouver is unique in the North American context is the popularity of owner-operated strata industrial space. Whereas most commercial and industrial users in North American markets tend to operate in leased space, the limited land supply and high land prices in the Metro Vancouver market, coupled with sustained periods of low interest rates, have resulted in significant demand for owner-occupied strata units.

The benefit of strata-ownership is that it allows smaller industrial users to have security of tenure over their space, providing stability while also enabling the owner-occupier to experience capital appreciation. The upfront nature (i.e. pre-sales) and high sales prices for strata property sales also enable developers to de-risk the development of more capital-intensive built forms, including multi-storey industrial projects, and can prove beneficial for users seeking space in denser inner-city locations.

However, stratified space is not conducive to all industrial users. The high cost may be prohibitive to smaller businesses and may limit the flexibility of firms looking to expand. The subdivision of individual units within buildings may also prove problematic for larger firms seeking large, cohesive spaces. This also poses a potential long-term issue for the redevelopment of existing space, requiring the consolidation of fragmented ownership within buildings. Speculation for strata may also price-out larger traditional and trade-oriented industrial land users from being able to acquire properties.

Increasing Industrial Capacity Through Intensification / Densification

With limited options to increase the land base, many industrial projects are now considering building upwards; modern warehouse distribution centres are developed to be significantly more volumetrically intensive than traditional warehousing operations. Multi-storey industrial buildings are rare in North American due to the high capital costs associated with constructing space that meets the needs of modern industrial businesses, which in turn requires a much higher rent in order to ensure a sufficient return on investment for developers. This also includes the need for sufficient truck access to enable the movement of goods, requiring ramps, freight elevators and loading bays, making site design more complex.

Traditionally, this meant that only smaller users were likely to occupy multi-storey industrial space, specifically those that needed to be located in proximity to the urban core, and were flexible in their space needs. However, as market pressures have increased, interest in multi-storey industrial projects is beginning to grow more broadly, with a number of new multi-storey projects in Metro Vancouver and similar North American markets in recent years. Some of these projects have involved a mix of uses and tenures, most commonly strata industrial space with office uses on upper floors.

Allowing for, and potentially incentivizing, the creation of multi-storey industrial space has the potential to modestly increase the supply of industrial space within the region, so long as the market conditions are sufficient to support it. It is important to recognize that such an option will be contextual within the region, as factors such as local rents, site size, industry activity, and geotechnical conditions will determine where such projects are feasible.

Other Forms of Industrial Intensification

In addition to increasing the amount of built space, there are a number of other ways to measure industrial intensity or density on the land base. These methods may not be as directly tied to land use policy, but can still accommodate increased employment and economic activity. Examples of utilization measures of industrial activity include:

- Labour activity (employees per land acre / hectare or per building sq. ft. / m2)
- Business revenue per unit (value generated per unit of land, or building floor area)
- Volume of goods produced / processed / stored per unit (per floor space, land area, employee)
- Vehicle or equipment movement per hour (trucks, loading, crane lifts)
- Quality and pay of jobs (education and pay levels)
- Value or level of equipment / technology investment (e.g. automation, racking warehouses)
- Transportation infrastructure utilization rates (goods / trips per unit)
- Building lease absorption period, vacancy rates, rental rates
- Longer hours of operation (shift work)

Industrial users are not the only ones constrained by the region's limited amount of available land, as the region's commercial, office, retail and other employment sectors also compete for space. While some of these uses are compatible with industrial activities, the market economics of these other uses may potentially undermine existing and potential industrial activity. These other employment uses typically tend to offer a higher return on investment

and higher rents on a per square foot basis, often pricing-out industrial land uses for floor space. Similarly, the rising popularity of industrial stratification, while providing the option of occupant-ownership, poses a potential disruptor to large scale industrial and trade-oriented activities, as the latter may not be able to compete with other industrial users for the remaining industrial land base.

Mixing Residential with Light Industrial Redevelopment in Specific Areas

With increasing competition for land and an overlap in regional and local land use policy objectives, some proponents are advocating for changes to zoning to allow for the development of mixed-residential uses in existing industrial areas, specifically for those in close proximity to rail rapid transit station areas. Advocates of this kind of zoning suggest that it will encourage the redevelopment of industrial space to modern standards while also addressing non-industrial policy objectives such as providing affordable housing and transit-oriented development. By mixing in higher-value residential uses, there is also the potential to cross-subsidize the redevelopment of new industrial space in an expensive urban context.

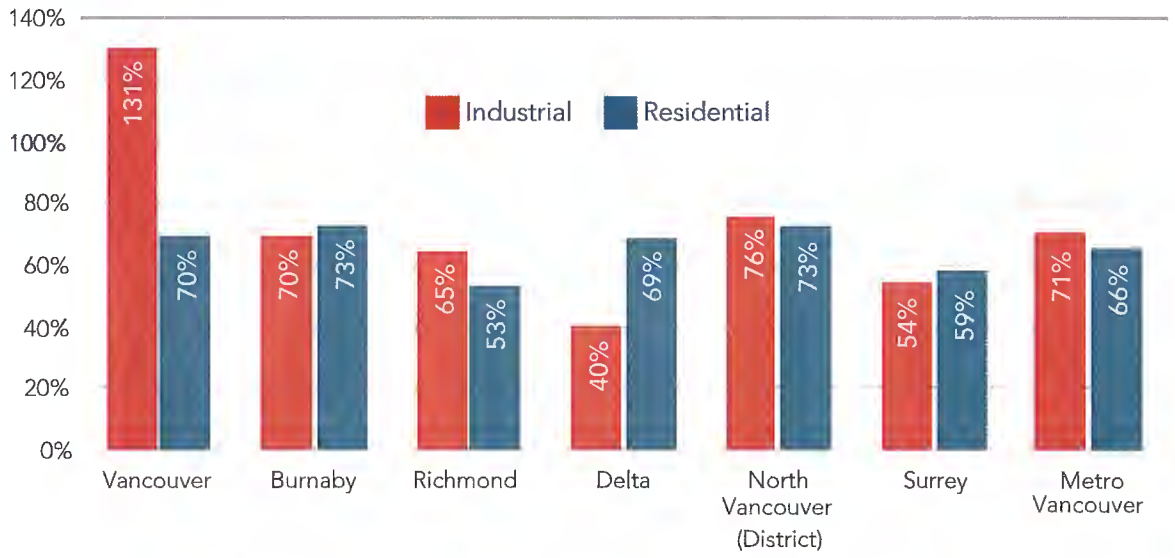
Given the conflicts that can occur between industrial and residential activities, the successful integration of these two uses is quite challenging. Generally speaking, only certain light industrial activities are compatible with sensitive residential uses in such close proximity, and even then, site design that ensures both livability and functionality for both uses can be difficult and expensive. Even with strict covenants on what uses are permitted, allowing higher value uses like residential also creates the risk of encouraging speculation on neighbouring industrial properties, and could result in the loss or displacement of the intended industrial uses over time.

Accommodating Innovation and the Changing Nature of Work

When seeking to protect industrial lands for industrial uses, it is important to recognize that industrial activity can cover a broad range of businesses and involve the production of various types of goods. Not all industrial businesses produce goods one might otherwise associate with traditional industrial activities, such as concrete, construction goods or chemicals. As new technologies have emerged in recent decades, Metro Vancouver has benefited from the growth of numerous high-skill tech and innovation clusters. While these jobs are commonly associated with office-related employment, they also spur demand for space to accommodate the production of goods related to bio-tech, green tech, and other innovative products.

Demand for these types of spaces tends to focus on certain industrial sub-markets, most commonly found in proximity to post-secondary institutions and amenities, which in turn provide linkages to emerging high-skilled labour opportunities. These businesses often seek well-located and well-equipped facilities, which means they are often able to afford more expensive and urban industrial areas.

FIGURE 2: ASSESSMENT VALUE INCREASE, BY MUNICIPALITY, 2012-2017



SOURCE: ADAPTED FROM ANDY YAN, CITY PROGRAM, SFU, USING DATA FROM BC ASSESSMENT, 2019

Rising Land Values and the Impact of Taxation

As industrial areas continue to experience rising land values (Figure 2), this not only increases rental rates, but also taxation. Property tax in British Columbia is based on assessed land value; not just on its use as it is today, but as the 'highest and best' use of the land. As industrial areas begin to permit a broader mix of densities and uses, this means that the value of the land can rise sharply, in some cases well beyond the value being generated by the existing industrial users. For example, a small automotive repair business in an area that permits multi-storey office uses would be assessed as if it were a multi-storey office. In a five-year period between 2012 and 2017, the rate of industrial assessment growth outpaced residential assessment growth in the region, with the greatest impacts being observed in more urban municipalities.

This increase has the potential to put pressure on both landowners and leaseholders, as many leases are "triple net", meaning that the leaseholder is responsible for paying rent, along with building maintenance and property tax. As land prices and the associated assessment values rise across the region, so too can the tax payment – leading to an increase in costs that many businesses, particularly smaller ones, may not be able to absorb. These rising taxes may push businesses to relocate elsewhere in the region, or shut down entirely. As a result, this also creates pressure to convert industrial land to non-industrial use.

Industrial Edges and Buffers – Tools for Mitigating Conflict

Industrial land edges and buffers are a common means to mitigate conflict between industrial and adjacent sensitive uses, such as residential. Establishing these measures helps to ensure, for example, that residents are not negatively impacted by industrial activities, while also providing industrial users with a degree of certainty that they will be able to conduct their business without disruption.

There is no single approach among Metro Vancouver member jurisdictions in how to manage the interface between industrial and sensitive uses, though there are some common elements. These include design guidelines to manage noise, odour and light, and minimum setbacks to ensure a reasonable degree of physical separation from other uses. Most commonly these are established in a municipality's Official Community Plan (OCP) or zoning bylaw, requiring on-site mitigation measures at time of site development, but may also include more broad buffers, including transitionary land uses (such as light industry of office parks) or other physical separation be located in between industrial and sensitive uses.

Depending on the approach and standard required, these measures can restrict the development of some industrial uses, or may require site plan elements that add additional cost to the design.

Addressing the Interplay between Industrial and Agricultural Land Uses

In much the same fashion of how speculation for other land uses is driving up real estate prices on industrial lands, so too is speculation impacting lands designated for agricultural uses across the region. While most of these lands are subject to provincial regulation as part of the Agricultural Land Reserve (ALR), which prevents non-agricultural uses, speculation from various land uses is raising land prices, undermining the feasibility of using these lands for their intended agricultural use and driving pressure for conversion.

While both industrial and agricultural land bases are under pressure to convert from other land uses, there is also pressure between the two. Industrial and agricultural land uses are often posited against one another, with agricultural interests advocating that agri-industrial uses be located on industrial lands, and industrial interests advocating agri-industrial uses be allowed on agricultural lands.

Currently, ALR regulations limit industrial and commercial uses from locating on industrial land, requiring that 50% of the product involved in these activities be grown / raised on site. This "50/50 rule" plays a critical role in determining what agri-industrial activities are permitted on ALR land, barring approval from the Agricultural Land Commission. Limits to infrastructure, servicing, and transportation in both *Metro 2040* and ALR regulations also direct many agri-industrial uses to industrial areas instead. Given the comparatively high cost of industrial land, agri-industrial activities that qualify as farm use (or successfully apply to the Agricultural Land Commission for an exception) will usually locate on agricultural land instead. In a general sense, agri-industrial uses are not a significant component or threat to either land base. However, given the limited land supply and similarities between site profiles (large, flat sites) there is some pressure to convert agricultural lands to industrial uses, particularly in the case of sites that are considered under-performing or poorly located for their designated use.

The Importance of Transportation and Goods Movement

Metro Vancouver's network of trucking routes, highways, railways, and ports support both local serving businesses and the region's broader role as a gateway city between Canada and the world. From local deliveries, to the movement of materials and components for production, to importing and exporting goods to marketplaces beyond the region, having access to reliable and efficient methods of goods movement is an integral consideration for many industrial businesses.

Land use and transportation planning are complementary, although there are sometimes tensions between different types of uses and transportation implications. For example, large low-density industrial sites are typically cost ineffective to service via transit, whereas uses with greater densities of employees are more appropriately located by transit service. Furthermore, non-industrial uses in industrial areas can have negative traffic implications, such as increased transit demand that is difficult to efficiently serve and truck trips interaction with pedestrians. Accordingly, the following should be determined for appropriate locations for different types of industrial uses:

- Identifying industrial uses that benefit most from transit proximity (e.g. high employment density and person trips generation) and those that benefit least (e.g. low employment density, reliance on truck route access) to facilitate better alignment of use with transit service;
- Goods movement uses with higher goods movement needs should be located with access to the Major Road Network and Truck Route Network. This may in general apply to the more traditional heavy industrial uses; and
- More job intensive uses that generate significant person-trips are best located with access to the Frequent Transit Network (FTN), and likewise those uses that do not generate significant person trips are generally not the best use of land within closer proximity to the FTN.

Much as growth in the context of a finite land base is putting pressure on the region's industrial land base, so too does it put pressure on the region's transportation infrastructure network for moving goods and people. Concerns related to congestion, aging infrastructure, road safety, pollution and other externalities like truck parking all affect the outlook for lands throughout the region. Towards this end, planning for the effective management of industrial land is intertwined with planning for the effective management of the transportation network.

A number of organizations and agencies in the region have made strides towards supporting the effective management of the transportation network, including initiatives such as:

- TransLink's Regional Goods Movement Strategy and Regional Transportation Strategy;
- The BC Ministry of Transportation and Infrastructure's innovations and improvements in commercial vehicle monitoring and emissions standards;
- The Greater Vancouver Gateway Council's work to coordinate investment on regional infrastructure projects; and
- The Greater Vancouver Urban Freight Council's work to coordinate and champion initiatives related to goods movement.

Climate Change Vulnerability

Another issue of note impacting the long-term functionality of the industrial land supply is the risk posed by climate change. Detailed climate change projections have been completed for the Metro Vancouver region, and significant work is underway to understand the impacts, including increased flood risk.

A significant portion of the region's industrial land supply, including most major port and airport facilities, are located within low-lying areas. Many of these areas would be vulnerable to major coastal flood events in the absence of considerable adaptation measures. Should sea level rise continue as projected, significant portions of the industrial land supply may no longer be considered viable for long-term development, further reducing opportunities for growth and economic resiliency. While certain measures can be engineered to adapt to this risk, including diking and improved site design, these measures may be cost prohibitive for many industrial users to implement.

In addition to responding to the impacts of a changing climate, industrial activities also have a role to play with regards reducing regional greenhouse gas (GHG) emissions. Metro Vancouver is currently developing Climate 2050, which reflect climate issues specific to the region by addressing ten key issue areas, one of which is industrial activities. Metro Vancouver's manufacturing sector (including cement production, food processing, metal fabrication, chemical manufacturing, forest products, and petroleum refining) and construction industry contribute approximately 23% of the region's total GHG emissions combined.

As part of developing Climate 2050, the region is preparing "roadmaps" for each issue area, providing a summary analysis of current conditions and challenges facing each issue area. These roadmaps will identify regional and corporate goals and actions necessary to achieve a carbon neutral, resilient region. In the case of industrial activities, this is likely to include targeted approaches to reduce emissions by encouraging or requiring switching to low carbon fuels and adopting new technologies where appropriate.

The Future of Industry and Changing Space Needs

Like many other industrial markets around the world, the region's industrial lands have undergone a long-term transition in the nature and form of their use. A steady shift away from heavy manufacturing and natural resource sectors, particularly amongst forestry-related businesses, coupled with increasing competition with other markets in an increasingly globalized economy, have changed the balance and character of the region's industrial lands. Throughout this transition, the region has evolved a diverse sectoral mix, while also retaining its role as a leading global port and economic gateway.

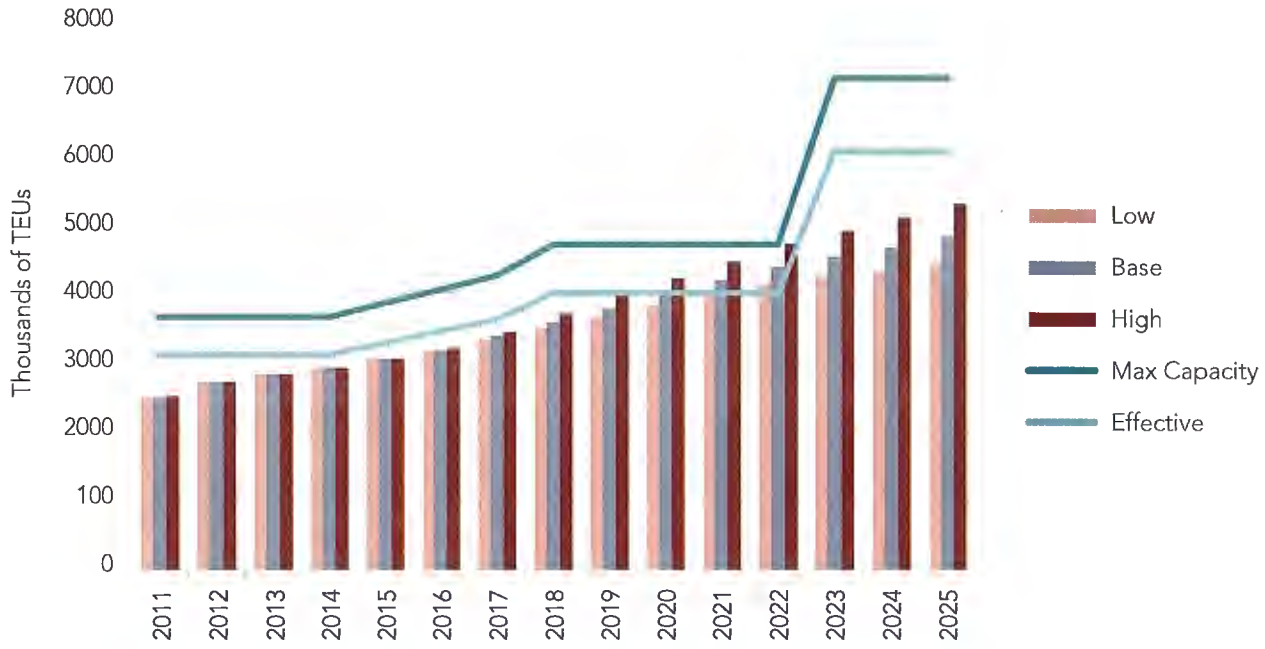
For example, locations including Granville Island, shores of False Creek, Fraser River and Burrard Inlet were once dominated by heavy industry, sawmills, large scale manufacturing, and rail operation. While a few of these uses still exist today, many industrial businesses have moved eastward or have ceased operation altogether, being replaced by predominantly commercial and residential development. In instances where employment uses have been retained, they tend to be in the form of light industrial, office and mixed commercial space.

Though some traditional waterfront-oriented industrial activities have relocated or dissipated, the core 'gateway' functions of the Port of Vancouver and Airport have continued to thrive. Continued growth in global trade have driven demand for additional space, including the need for additional container terminals, warehousing space, and logistical facilities.

In terms of growth, the Port of Vancouver has consistently outperformed other North American ports since 1990, with growth in container traffic forecasted to outpace all other ports in the Pacific Northwest for the foreseeable future. Even with the establishment of a second provincial port in Prince Rupert and improvements and expansions to local port facilities, demand is forecast to drive the need for additional port-related facilities on Metro Vancouver's industrial lands, as shown in Figure 3.

Trade-oriented uses associated with the Port and Airport represent only one part of the demand for industrial lands. Despite the changing nature of industrial activities in the region, industrial lands continue to also serve a fundamental role in facilitating city-serving activities, such as vehicle repair, food production, commercial laundry, utilities, light manufacturing and local distribution. These activities are crucial to the continued function of a range of economic activities across the region, including tourism (tour bus repair, restocking cruise ships), major office employment (printing, couriers, transit infrastructure management), and local retail businesses (food production and distribution, wholesales). At the same time, continued population growth has increased the in-region demand for goods and related services, such as e-commerce, transportation, warehousing and distribution space, particularly last mile and fulfillment centres in close proximity to major population centres.

FIGURE 3: PORT OF VANCOUVER CAPACITY AND DEMAND DEVELOPMENT TO 2025



SOURCE: CONTAINER TRAFFIC FORECAST STUDY – PORT OF VANCOUVER, 2016

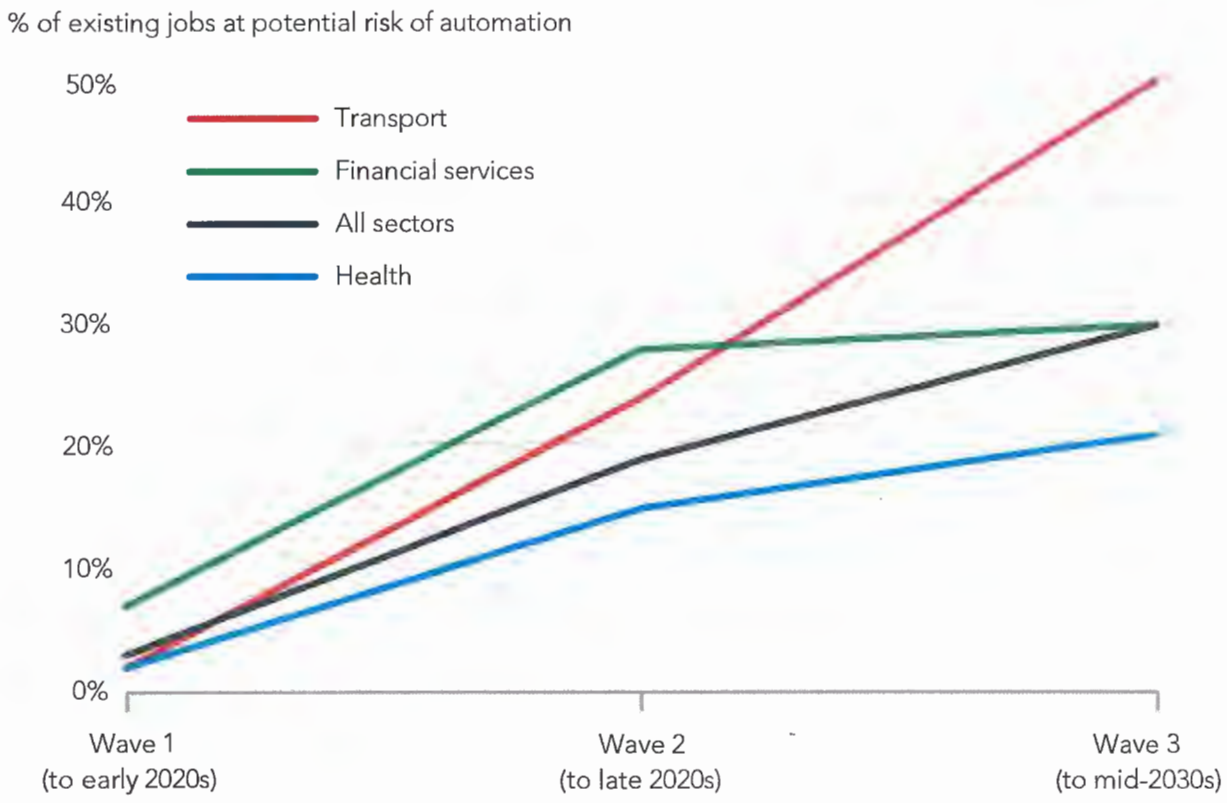
NOTE: DEMAND AND CAPACITY ARE MEASURED IN TWENTY-FOOT EQUIVALENT UNITS (TEU). DEMAND SCENARIOS PRESENT A LOW, BASE AND HIGH SCENARIO FOR EACH YEAR. THE INCREASE IN CAPACITY IN 2023 REPRESENTS THE ANTICIPATED EXPANSION OF ROBERTS BANK CONTAINER TERMINAL 2.

In addition to these city-serving functions, industrial lands are also playing a prominent role in accommodating the region's emerging innovation economy. These businesses do not fit easily into any one classic or conventional employment sector, as the nature of their work encompasses a wide range of activities including light manufacturing, media and digital entertainment production, clean-tech and bio-tech, software and hardware design, and various other uses. The space needs of these businesses can vary, but typically require a diversity of spaces at different scales, including offices, production space, and logistical facilities, many of which are most commonly associated with industrial and employment lands.

Changing industry profiles are not the only factor resulting in different land and space needs. Technological innovations are also dramatically changing the relationship between employment, productivity, and how industrial lands are occupied and used.

Automation, which has already significantly affected the manufacturing industry, is expected to continue to change how goods are produced and tasks accomplished. With the potential advent of artificial intelligence and advanced robotics, there is a real possibility that more jobs in many more sectors could be affected by automation than ever, with 42% of the

FIGURE 4: ESTIMATED POTENTIAL JOB AUTOMATION RATES BY INDUSTRY ACROSS WAVES

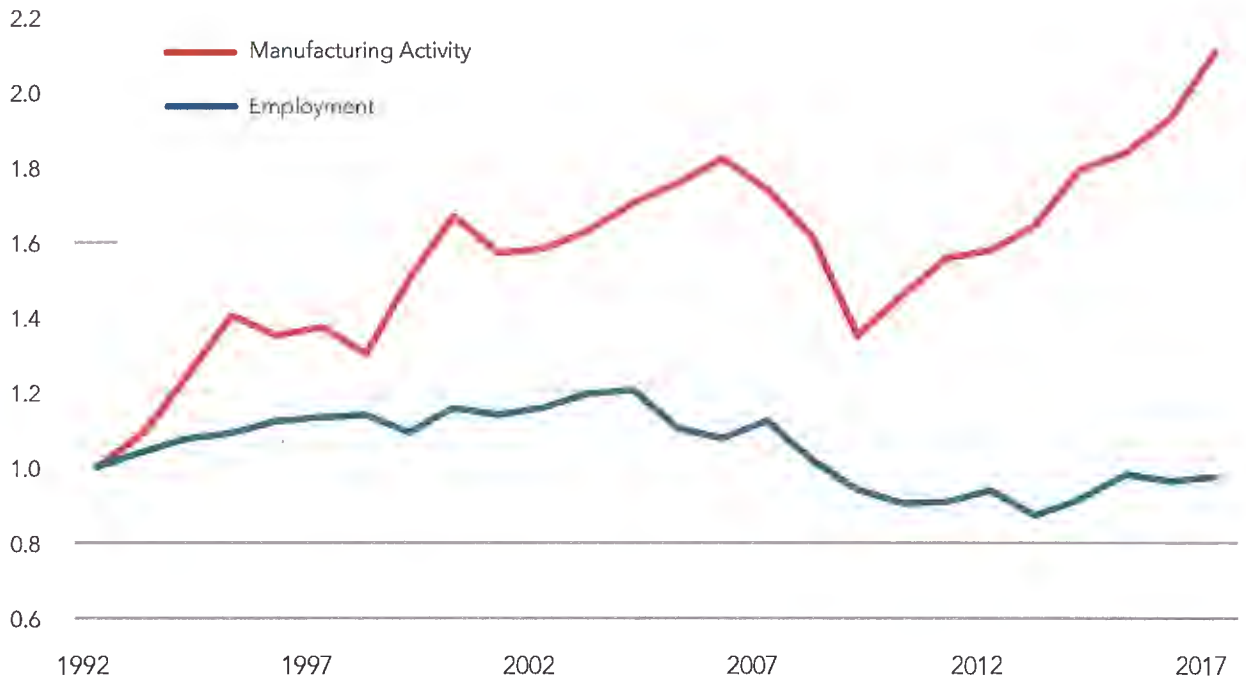


SOURCE: 'WILL ROBOTS REALLY STEAL OUR JOBS?', PWC, BASED ON OECD PIAAC DATA, 2018

Canadian labour force at high risk of being affected by automation in the next decade or two. As shown in Figure 4, artificial intelligence, advanced robotics, and automation will have a different impact on different sectors over time, with some sectors being susceptible to a significantly reduced need for labour as different waves of technological advancement occur over the next few decades.

This change has the potential to affect the demand for labour in different sectors, but it does not necessarily mean that there will be any less demand for industrial land. While automation can lead to a number of operational efficiencies, it typically still requires space to conduct the business activity (e.g. production and warehousing of goods). As shown in Figure 5, manufacturing productivity in British Columbia has continued to grow, despite declines in total manufacturing employment.

FIGURE 5: COMPARISON OF ANNUAL MANUFACTURING ACTIVITY (DOLLARS) AND EMPLOYMENT, PROVINCE OF BRITISH COLUMBIA, 1992-2017



SOURCE: HEMSON CONSULTING LTD. USING DATA FROM STATISTICS CANADA TABLES 304-0015 & 14-10-0023-01

NOTE: FIGURES HAVE BEEN INDEXED (1992 = 1)

The separation between manufacturing activity and employment has been occurring for quite some time in North America; however, this trend began to accelerate most notably following the 2008-2009 Global Recession. While manufacturing employment has yet to recover to its pre-recession levels, manufacturing activity has continued to grow.

Over this same period (2008-2018), Metro Vancouver increased its industrial floor space by over 30 million square feet. This translates into an average growth rate of nearly 1.7% per year, significantly higher than the average annual industrial employment growth rate of 0.5% per year. While the amount of land take-up associated with this growth has declined over time (due to limited supply), suggesting denser industrial buildings are being built, the demand for space is still resulting in a net demand for land.

Industrial Land Demand Forecast to 2030 and 2050

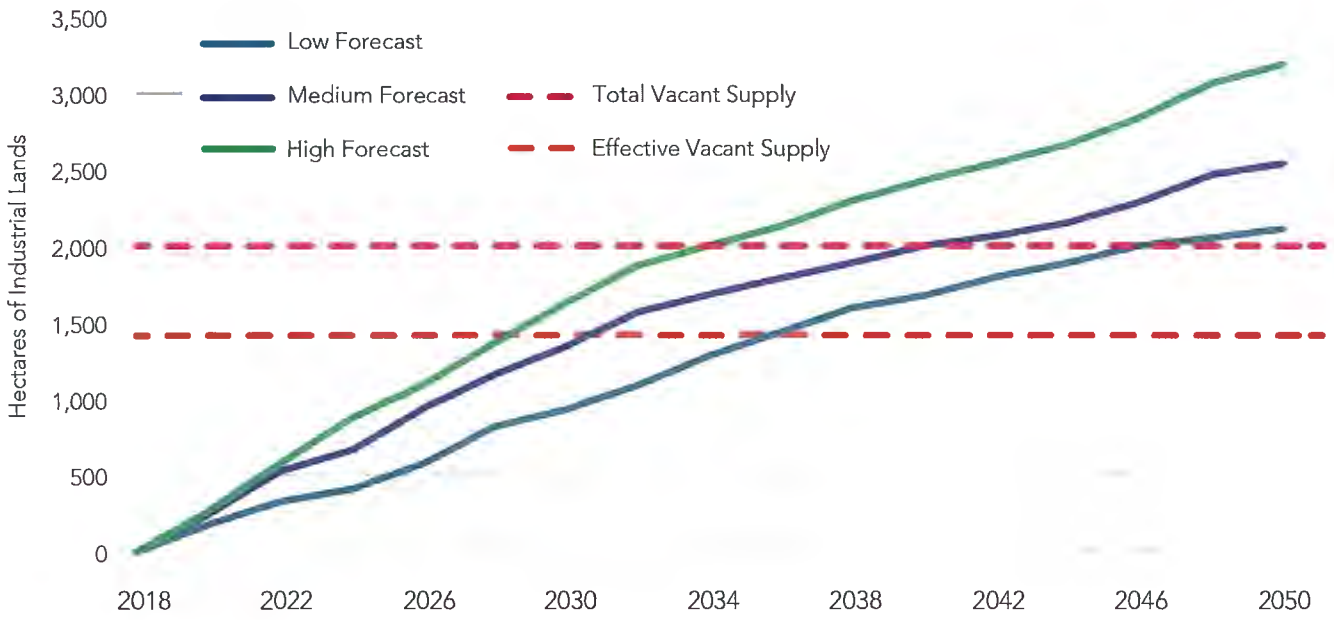
Forecasting the longevity of the industrial land supply is a particularly challenging task in Metro Vancouver because of its unique situation as a region with a fixed land supply. While not quantifiable for the overall market, there is ample evidence that industrial development and land absorption is being limited by the availability of land for development. Some larger distribution and manufacturing facilities are already locating outside of Metro Vancouver simply because there are few large industrial sites available today or likely to be available in the future.

The most recently prepared forecast of regional industrial land demand used an absorption method with a range of 80 to 110 ha per year (200 to 275 acres per year). Applied to the effective supply of 1,820 ha (4,500 acres) identified in its analysis, full development would be reached between 2035 and 2045. Of course, land development does not proceed in a linear fashion until the last parcel is consumed, rather it nearly always tails off because the remaining land is of limited viability. This means that there is demand that cannot be met by the available supply well before a point of build out is reached.

These unconstrained land demand forecasts are shown in Figure 6. Depending on the scenario, the region is anticipated to absorb the last of its effective supply sometime between 2028 and 2035, with the total inventory being absorbed sometime between 2035 and 2047. However, as previously noted, absorption is likely to tail off as supply dwindles. Figure 7 demonstrates what the demand and land absorption is likely to look like when factoring in the effects of a constrained land supply.

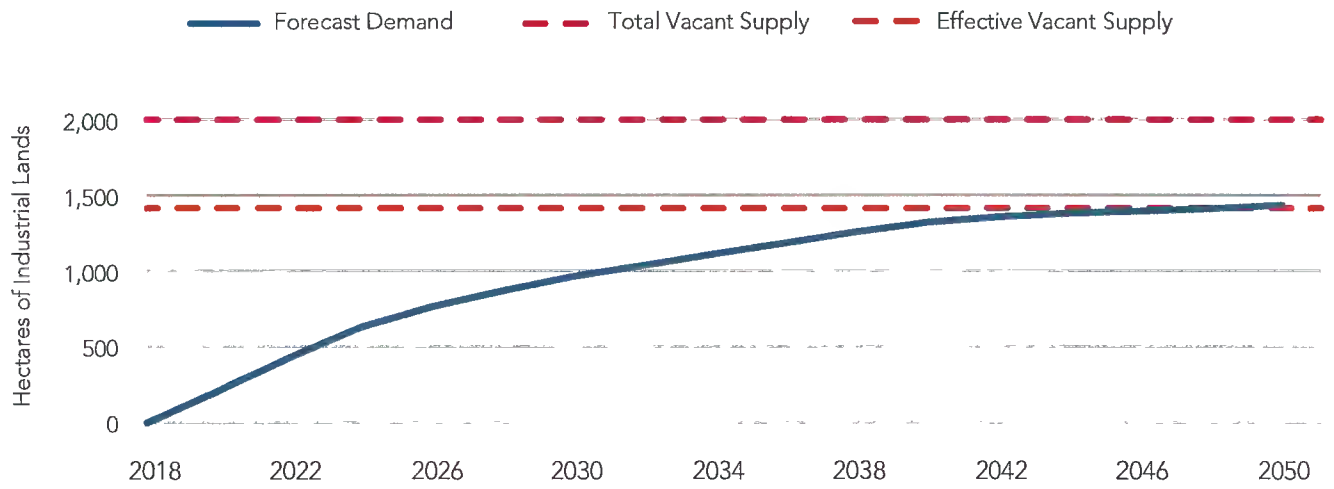
In the absence of additional land to meet the needs of continued demand, the rate of land absorption will tail off until near full development is reached. This decline in absorption will not be due to a lack of interest, but instead will be the result of businesses and jobs having relocated to markets that are more readily able to meet their needs. The combination of a constrained land supply and steady demand will keep the price of industrial land high, likely even higher than experienced today. This will be a limiting factor for some industrial activities, but will likely also force more intensive use of land where possible.

FIGURE 6: EMPLOYMENT GROWTH BASED INDUSTRIAL LAND DEMAND FORECAST, 2019 TO 2050



SOURCE: HEMSON CONSULTING LTD.

FIGURE 7: CONSTRAINT BASED FORECAST OF INDUSTRIAL LAND DEMAND, 2019 TO 2050



SOURCE: HEMSON CONSULTING LTD.

Implications for the Regional Economy

Industrial lands serve a crucial role in accommodating a diverse and resilient economy. Regions that are more economically diverse tend to experience less instability and lower unemployment rates when compared to regions with more homogeneous economies. Complex economies, that is those that feature a web of interconnected industries and business sectors, also tend to be far more resilient, experiencing less economic decline during periods of recession, and faster recoveries.

In the same regard, failing to ensure a suitable amount of industrial land could limit growth and investment, and even weaken existing sectors that rely on these lands. Even with the changing nature of work and technological innovations resulting in evolving land and space needs, industrial lands will still be necessary to ensure regional economic diversity and resiliency for the future.

The consequences of a constrained land supply are already being witnessed, with a number of large industrial businesses and activities being unable to find suitable space to locate or expand their business. For example, the Port of Vancouver has noted that, despite significant improvements to site intensification and optimization in recent years, it may be unable to accommodate future trade demand given its current land supply. As the Port approaches its capacity, it risks losing business to other ports along the western coast.

Similarly, a shortage of space for logistics terminals is seeing demand grow for inland distribution ports as far away as Calgary. These inland ports serve as staging areas for containers that are unloaded in Vancouver, transported by rail to the distribution hub to be unpacked and sorted, and then (for some of the cargo) transported back to Vancouver to be delivered to end users and points of sale. Ashcroft offers an inland terminal focused on processing exports, such as lumber in containers. In other cases, larger manufacturers are choosing to locate, or relocate, to areas with more available and affordable land south of the border, in communities such as Blaine, Washington.

The relocation of these business and trade activity could have a negative impact on the region, province and even country. For example:

- Should a business relocate to another port in the province, such as Prince Rupert, the impact might be neutral for British Columbia and Canada, but negative for the Metro Vancouver region;
- Should a business relocate to Alberta, the net impact might be neutral for Canada, but negative to the Metro Vancouver region and British Columbia; and
- Should a business relocate south of the border (such as Washington, Oregon or California), the net impact would be negative to the Metro Vancouver region, British Columbia, and Canada.

The potential impacts of losing industrial activity due to lack of available land are threefold:

- The loss of local businesses could negatively affect the economy due to the loss of potential or existing jobs and tax revenues for governments.
- The further abound these businesses locate, the greater the distance goods must be transported, resulting in increased fuel consumption, GHG emissions, traffic congestion and cost to consumers.
- The loss of industrial activity could weaken the region's economic diversity and resiliency, potentially exposing the economy to greater fluctuations in market cycles and broader economic shifts.

It is worth noting that adding new industrial uses in Metro Vancouver could result in its own set of costs and challenges, including increased competition for land and the potential to increase traffic, business related emissions, and possible conflicts with other uses. However, on the whole, these costs and challenges are unlikely to be greater than the net loss and environmental impact that is likely to occur if these businesses relocate elsewhere.

RECOMMENDATIONS

To achieve the Strategy's Vision, and to address the Challenges facing industrial lands in the region, 4 'Big Moves' have been identified:

1. Protect Remaining Industrial Lands
2. Intensify and Optimize Industrial Lands
3. Bring the Existing Land Supply to Market & Address Site Issues
4. Ensure a Coordinated Approach

The 4 'Big Moves' are used to frame and organize the Strategy's 34 recommendations and 10 priority actions.

In considering the 4 'Big Moves' and the recommendations that follow, the Strategy affirms that conversion or use of agricultural lands is not a solution to the shortage of industrial lands in the region. This principle was endorsed by the Industrial Lands Strategy Task Force and Metro Vancouver Board.

Protect Remaining Industrial Lands

Given the ongoing and projected demand for industrial land in the region, it is imperative to protect the region's remaining industrial lands and curb the threats that undermine their use for industrial activities. This means lands for trade-oriented purposes as well as for small, local serving businesses; businesses that are responding to the changing nature of industry as well as more traditional industrial activities.

RECOMMENDATION 1:

That Metro Vancouver, in collaboration with member jurisdictions, First Nations, regional agencies, and other relevant stakeholders, conduct a comprehensive regional land use assessment.

In the context of Metro Vancouver's finite and constrained land base, there is significant pressure for competing, legitimate land uses across the region. There is an opportunity to undertake either a targeted or region-wide assessment of land use, seeking not to reflect what is already in existing policy frameworks, but rather to proactively identify the 'best' locations for different land uses depending on a developed set of criteria (e.g. location, adjacent land uses, lot size, proximity to the goods movement network). Such an assessment could potentially identify areas where a swap of existing land uses may be reasonable, including opportunities to optimize the remaining supply of industrial land.

This assessment will identify, based on a defined set of criteria and cross-jurisdictional considerations, opportunities for more optimized locations and uses of land in order to support regional and local policy objectives and to inform policy changes.

The regional land use assessment will include:

- Metro Vancouver and member jurisdictions work with the Provincial and Federal governments, the Port of Vancouver, and Vancouver Airport Authority, to identify if industrial functions can be integrated or co-located on public industrial lands. This includes examining the potential for joint use for large non-intensive land uses such as extractive activities, public rights-of-way, and others;
- where existing designated land uses are determined to be under-utilized, Metro Vancouver, in consultation with the owners of the subject lands, the member jurisdiction in which they are located, and other relevant stakeholders, may consider the potential for swaps with other land uses. The proposed swap should be considered between lands that are identified as being under-utilized through the land use assessment, located within the same jurisdiction or elsewhere within the region, and improve the potential for the intended uses per the land use assessment criteria; and
- Metro Vancouver assess whether or not there are sufficient supplies of suitable land to reasonably accommodate retail, service or recreational uses that may be restricted from otherwise locating within Industrial areas.

RECOMMENDATION 2:

That Metro Vancouver endeavour to strengthen regional policy to protect industrial lands as part of the update to the regional growth strategy, *Metro 2040.*

Examples of ways to strengthen the regional growth strategy to be considered are:

- increase the voting threshold required for a minor amendment of the Industrial and / or Mixed Employment regional land use designation to General Urban;
- explore 'no net loss of land' as part of the amendment criteria for Industrial lands, recognizing the regional benefit of conversions that are offset by land-swaps in suitable locations within the municipality or elsewhere in the region;
- clarify the definitions and permitted uses on the Industrial and Mixed Employment regional land use designations, including appropriate principal and accessory uses by type and scale; and
- explore permission of mixed-use including residential on Mixed Employment lands immediately proximate to Rail Rapid Transit Stations (distance to be determined, suggest 200 metres) as long as existing industrial space is maintained or expanded and other *Metro 2040* objectives are met (e.g. affordable, rental housing).

RECOMMENDATION 3:

That Metro Vancouver, in collaboration with member jurisdictions and other regional agencies, develop a consistent definition of 'industrial' and guidelines for which primary and secondary (or ancillary) land uses should be permitted in Industrial and Mixed Employment designated areas, respectively.

Member municipalities, as part of their regional context statement updates, would commit to review and update their zoning bylaws using the guidelines as a resource to amend the permitted uses in their local industrial and employment lands.

The definition of 'industrial' in zoning bylaws and associated permitted uses (and scale of accessory uses) varies significantly across the region. Different zoning bylaws permit accessory and non-industrial uses, such as recreation, big-box retail, and places of worship, on industrially zoned lands, creating additional competition for industrial land from uses that should be located elsewhere. The bylaw review and update should remove non-industrial uses from the industrial zoning while adding new types of industrial uses, and limit the scale or size of accessory uses. Definition consistency would limit non-industrial, commercial and institutional uses in certain industrial locations across the region, and would create a clearer understanding and more consistent permissible uses while aligning with the regional growth strategy.

Protecting Trade-Oriented Lands

The following three recommendations have to do with protecting trade-oriented lands in the region. It is important to recognize that trade-oriented industrial uses (e.g. logistics, warehouses, distribution centres, transportation terminals) are a crucial part of the region's role as an economic gateway between the Asia-Pacific and the rest of the country. These uses typically have a very specific set of location and site needs, such as large, flat sites that allow for movement and storage of goods, with proximate access to highway, port, or rail infrastructure. Amongst the region's industrial land supply, sites that offer these characteristics are limited.

Because these sites also tend to offer attractive characteristics for other types of industrial (and other) uses, trade-oriented uses often compete with other industrial uses when looking to purchase and develop these lands. The low-density nature of many trade-oriented industrial uses means that they often struggle to compete, particularly when increased development densities are permitted under more broad industrial zoning. This is of particular concern when stratification of industrial is permitted, which tends to both significantly increase the price competing users can offer for the land, while also fragmenting ownership of the property, which can be an issue for operators that require large sites. To ensure these strategically located sites are protected, a coordinated approach is required between the region and member jurisdictions.

That is not to say that smaller lots and stratification do not play a critical role in the region. On the contrary, the importance of stratification is recognized in enabling small businesses to own their space, have security of tenure, and opportunity for capital appreciation. Other recommendations are focused on different types of industrial businesses.

Based on feedback from stakeholders, there is a desire when looking for solutions to address conversion of industrial lands to other uses, to first consider local government and regional policy options, rather than a provincial industrial land reserve.

RECOMMENDATION 4:

That Metro Vancouver conduct a collaborative process to develop a clear definition of Trade-Oriented Lands, and subsequently, as part of the *Metro 2040* update, develop a Trade-Oriented land use overlay.

A clear, consistent and collaboratively developed definition and understanding of the extent and location of these lands will support their protection as well as the protection of other types of important industrial lands. A regional overlay identified in the regional growth strategy would distinguish trade-oriented lands within the Industrial land use designation based on confirmed criteria (i.e. site size, proximity to transportation infrastructure linkages) and provide additional guidance to member jurisdictions regarding permitted land uses to protect trade-oriented industrial activities.

RECOMMENDATION 5:

That municipalities identify appropriate areas through Trade-Oriented zoning.

Subsequent to participating in the development of a consistent and collaboratively developed definition for trade-oriented lands, municipalities, through the regional context statement process, would be asked to identify trade-oriented lands within their jurisdiction, and to consider zoning that would limit or restrict non-industrial uses and the fragmentation of parcels with an aim to protecting these strategically located lands for trade-oriented activity. This would be a judiciously applied approach, recognizing the potential limits to flexibility and future use that this zoning would place on these lands.

RECOMMENDATION 6:

That the Province grant municipalities the legislative powers to define permitted forms of tenure (i.e. leasehold versus stratified freehold) on industrial land through local zoning bylaws.

Given the limited control municipalities have over tenure of non-residential land uses through zoning, the province would be requested to grant additional powers under the Local Government Act to ensure these sites are reserved for their intended use. Member jurisdictions may seek to limit stratification of ownership to a minimum size to prevent the fragmentation of large trade-oriented parcels.

Intensify and Optimize Industrial Lands

Given the region's constrained land base, it is critical to encourage the most efficient use of the remaining industrial land supply for all types of industrial users, to remove barriers to the intensification of industrial land, and to investigate opportunities to optimize the location of certain land uses over time. Currently multi-storey industrial buildings are rare in most North American markets because, for most uses, multi-storey space is much more expensive than single storey buildings. However, as the remaining industrial land supply is diminished, it may become feasible for more of this type of development to occur in the future. To encourage more efficient use, it would be beneficial to industrial users to be able to locate in more intensive / dense built forms not restricted by policy or regulation. In addition to removing height and density restrictions in areas that have the opportune market and physical characteristics necessary to support intensive development, municipalities may also seek to offer incentives to attract and realize this form of development in strategic locations.

RECOMMENDATION 7:

That municipalities facilitate the intensification / densification of industrial forms where possible.

Actions to support industrial intensification include:

- removing any unnecessary restrictions to density or height limits, where contextually appropriate;
- planning the space to accommodate new, smaller industrial uses when older, centrally located industrial areas densify;
- allowing mixing of industrial with other employment uses so long as the industrial component is secured as a condition of redevelopment; and
- exploring opportunities to encourage intensification in target areas (i.e. proper geotechnical conditions, access to infrastructure and transit) via incentives. These could include pre-zoning, density bonuses, financial incentives, and/or others.

RECOMMENDATION 8:

That Metro Vancouver conduct a study of the financial factors and other issues that prevent the development of multi-storey industrial spaces in various regional market areas.

The study should identify the gap between development costs and market rents or sales prices in different municipalities to assess if there are ways that Metro Vancouver and member jurisdictions could improve the feasibility of delivering higher-density industrial spaces.

RECOMMENDATION 9:

That the Province review the current approach to property tax assessment and tax rates based on the highest and best use of a property with regard to its impact on industrial businesses.

Growth in assessment values on the region's industrial lands have risen rapidly in recent years. The associated rise in property taxes is putting increasing pressure on industrial businesses, particularly in high growth and high value urban areas where assessing property is based on the highest and best use. These costs can displace industrial users and undermine the intended use for the land. This review should identify if there are reasonable approaches to mitigate the destabilizing effect of rapidly rising assessments and taxes on industrial businesses.

Provide Greater Clarity on Agri-Industrial Uses in the Agricultural Land Reserve

While both industrial and agricultural lands are under pressure to convert to other land uses, these two types of land uses are often posited against one another, particularly as it relates to agri-industrial businesses. While there are some permissable agri-industrial uses within the Agricultural Land Reserve, there is some uncertainty over the scope and scale of activity that can be permitted before these uses would have to relocate to industrial areas.

RECOMMENDATION 10:

That the Ministry of Agriculture, in consultation with the Agricultural Land Commission, amend legislation to define under what conditions, if any, large-scale organic waste processing facilities are permitted in the Agricultural Land Reserve.

RECOMMENDATION 11:

That the Ministry of Agriculture produce guidelines or amend legislation to: define the metrics used to measure the 50/50 rule (i.e. volume, weight, value, etc.) to facilitate consistent application; and clarify the permitted value-added infrastructure of an approved use on an agricultural parcel and define a cap on building infrastructure footprint.

Ensure Consideration of Industrial Lands in a Regional Flood Management Strategy

Climate change and the impacts of rising sea levels are likely to be one of the greatest challenges of our time, and their potential impact on the industrial land supply cannot be ignored. A significant portion of the region's industrial land supply, including most major port and airport facilities, are located within low-lying areas that are anticipated to be at risk in the face of rising sea levels and more frequent flooding events. As the Fraser Basin Council develops a flood management strategy for the region, it is critical that that industrial lands be given proper consideration to ensure the continued economic resiliency of the region, while also recognizing the cost that adaptation measures may have on industrial development in the future.

RECOMMENDATION 12:

That in developing a Regional Flood Management Strategy, the Fraser Basin Council recognize industrial lands and their economic contributions to the broader region when identifying and prioritizing measures to adapt to rising sea levels and flood events.

Bring the Existing Supply to Market & Address Site Issues

To ensure the region's remaining vacant industrial land supply gets to market, identify the local issues facing these lands and the linkages between them, and map out the necessary policy updates and strategic investments in response.

Manage Land Use Conflicts through Buffering Policies

Managing the interface between industrial uses and other sensitive land uses, particularly residential, is a significant issue when it comes to preserving the functionality of existing industrial uses, while also protecting for future economic activity. A broad range of planning tools exist that may contribute to the mitigation of potential, existing or perceived nuisances, offering varying degrees of flexibility or conversely, prescriptiveness. Member jurisdictions across Metro Vancouver incorporate a range of approaches to managing this interface. However, while there are common elements amongst these approaches, there is no single approach that meets the context and needs of each community. While there is little appetite for a "one-size-fits-all" approach to interface management, there are certain leading practices that could be formally recognized through regional guidance to encourage more effective management of industrial edges and conflict prevention.

RECOMMENDATION 13:

That Metro Vancouver, in consultation with member jurisdictions, develop guidelines for land use policies along the edge of planned or developing Industrial areas where no natural or other physical buffer already exists.

These guidelines will serve as reference for member jurisdictions on how to mitigate the potential for conflict with other sensitive uses depending on the context:

- Where the industrial area is already established, direct employment uses, including light industrial, commercial, and office, or other non-sensitive uses to the area abutting the Industrial lands to serve as a transitionary land use.
- Where the industrial use is encroaching upon an established sensitive use, direct light industrial and ancillary components of the primary industrial use to the edge of the industrial area where the sensitive use is located to serve as a transitionary / buffer land use.
- In cases where the abuttal of industrial and sensitive uses cannot be separated by other land uses, the guidelines should also provide direction towards:
    - Site design best practices including recommended minimum setbacks for different industrial uses, on-site migration measures such as visual screening of mechanical equipment, requirements for enclosing industrial activities, lighting fixtures, and recommended performance standards, where appropriate.
    - Mitigation requirements for residential and other sensitive uses that are encroaching upon areas of existing or planned industrial activity and associated vehicle traffic, including consideration for the potential for future intensification of industrial uses.

RECOMMENDATION 14:

That the Province enable municipalities the discretion to place a warning of anticipated nuisance effects on the title of the lands with sensitive uses that are being developed within a defined proximity of an established or planned industrial use or goods movement corridor.

The notification warning could be included in any offers of purchase and sale, notifying current and prospective owners and tenants that they are within the potential area of influence of the industrial use, and may experience adverse effects as a result.

RECOMMENDATION 15:

That municipalities consider adopting the Railway Association of Canada and Federation of Canadian Municipalities Guidelines for New Development in Proximity to Railway Operations when considering development permissions and changes of use in proximity to active railway corridors and other major goods movement corridors.

Develop Local Bring-To-Market Strategies

Certain parts of the vacant industrial land supply suffer from site-specific challenges, such as limited infrastructure support, environmental concerns, and under-sized parcels. Where vacant lands have not come to the market, municipalities may benefit from the preparation of a bring-to-market strategy. Such a strategy would identify the issues that prevent the development of undeveloped or under-developed industrial land, while providing a roadmap to achieve the municipality's economic goals for its remaining industrial lands.

RECOMMENDATION 16:

That municipalities with vacant or under-developed industrial lands prepare a bring-to-market strategy for their industrial land supply.

The strategy should address:

- assessing the strengths, weaknesses, opportunities and challenges facing the development of vacant industrial land;
- identifying opportunities to encourage reinvestment and more intensive use of existing industrial lands;
- whether municipal assembly and consolidation of fragmented parcels may be required, or is feasible, in order to bring the lands to market;
- if environmental remediation is required and if current programs are sufficient to facilitate the required degree of site remediation; and
- if local servicing and infrastructure improvements are required and can be accommodated through front-ending infrastructure investments or cost-sharing agreements.

Ensure Transportation Connectivity

The efficient movement of goods and people is critical for many industrial businesses, both local serving and trade-oriented, in terms of where they choose to locate. The maintenance and growth of a resilient and reliable transportation network, including various modes of transit, is an integral component in planning for the effective management of the region's industrial lands. Through the development of the Strategy, transportation issues and linkages were consistently rated one of the highest priorities. As a result, seven recommendations focus on this critical issue.

RECOMMENDATION 17:
That TransLink, Metro Vancouver, the Port of Vancouver, the Vancouver Airport Authority and municipalities continue to work together to proactively designate, manage, and regularly update the Regional Truck Route Network in line with the recommendations of the Regional Goods Movement Strategy to ensure the safety and reliability of the regional goods movement network, while also considering human health implications, such as air quality and noise.

RECOMMENDATION 18:
That TransLink, as part of the update to the Regional Transportation Strategy and implementation through Investment Plans, continue to identify viable new opportunities to create and improve transit linkages between the region's industrial areas and local workers, where such transit can operate efficiently and effectively as part of the region's transit network.

RECOMMENDATION 19:
That the Port of Vancouver, Metro Vancouver, TransLink, the Vancouver Airport Authority, and rail line operators, work together to identify policies and actions that support the optimization and safety of goods movement to and from industrial lands via roads, highways, railways, air, and access points to navigable waterways including short sea shipping.

RECOMMENDATION 20:
That the Province work with municipalities and industry partners to understand, forecast, plan for, and mitigate the impacts of the land demands for truck traffic and truck parking related to goods movement and drayage.

RECOMMENDATION 21:
That the Port of Vancouver continue to work with Metro Vancouver and TransLink to optimize port-related land uses and container drayage.

RECOMMENDATION 22:
That the Greater Vancouver Gateway Council continue its efforts to attract grants and other funding, and leverage their success towards improved infrastructure linkages and capital investments that support regional and local policy goals.

RECOMMENDATION 23:
That the Greater Vancouver Urban Freight Council continue its efforts to coordinate the implementation of the Regional Goods Movement Strategy between its member organizations.

RECOMMENDATION 24:
That regional organizations and stakeholders continue to investigate and implement options designed to reduce the environmental impacts related to the transportation of goods and people in the region, through their respective plans and policies.

This includes:

- the Province's efforts to improve standards such as the Renewable & Low Carbon Fuel Requirements Regulation and improved permitting and tracking to help reduce GHG emissions from the commercial trucking industry;
- Metro Vancouver's efforts towards protecting and improving air quality while ensuring infrastructure, ecosystems and communities are resilient to the impacts of climate change through Climate 2050;
- the Port of Vancouver's efforts to optimize and reduce the carbon impact of its operations;
- TransLink's efforts to optimize goods movement and public transit options through the Regional Goods Movement Strategy and Transport 2050; and
- local municipal efforts to expand access to charging station infrastructure for electric vehicles.

Ensure a Coordinated Approach

Improved cooperation and data tracking between governments and other organizations will be necessary to ensure accurate monitoring and effective land management into the future, while also guiding future coordination and alignment in terms of policy responses to issues as they arise in Metro Vancouver and across southwestern British Columbia.

Improve Data and Monitoring

A challenge for the effective planning and management of industrial lands is timely access to quality data. This is true for both land management and the development of effective economic policy. However, many of the data sources available to the region are prepared infrequently, such as the Census and Industrial Lands Inventory Update, or are not fine-grained enough to provide useful guidance at the local level, such as the Labour Force Survey. Through the development of more effective data collection frameworks and sharing agreements, the region and its partners would be able to greatly improve the quality of data used to inform policy decisions. The following four recommendations are focused on data provision.

RECOMMENDATION 25:
That Metro Vancouver produce an annual report that summarizes changes to the Industrial Lands Inventory, while continuing to publish a comprehensive Regional Industrial Land Inventory every five years.

RECOMMENDATION 26:
That municipalities provide a summary report of local development activity on lands in the Metro Vancouver Industrial Lands Inventory as part of their regional Development Cost Charge reporting, once per year.

RECOMMENDATION 27:
That Metro Vancouver, in collaboration with member jurisdictions, conduct a regional employment survey on a bi-annual basis.

RECOMMENDATION 28:
That major regional industrial land users and organizations, such as the Port of Vancouver, Vancouver Airport Authority, NAIOP Commercial Real Estate Development Association and other relevant stakeholders, consider expanding data sharing partnerships for the purpose of improving economic development and infrastructure investment, guiding land use and goods movement planning, and informing the development of associated policies.

Encourage Growth and Investment through Regional Economic Coordination

Both Metro Vancouver and member jurisdictions have a shared interest in attracting new investment and supporting the retention and expansion of economic activity across the region. In the past, cooperation and collaboration between the economic development initiatives of member jurisdictions has occurred on an ad hoc basis.

Metro Vancouver's new Regional Economic Prosperity Service represents the adoption of a collaborative regional approach to attracting investment to the region. With a focus on regional collaboration to advance shared economic, livability, and sustainability goals, the new service will work closely with member jurisdictions, provincial and federal governments, and other stakeholders to attract new investment in the region - investment that will both increase the number of well-paying, high quality jobs and generate new tax revenues.

RECOMMENDATION 29:
That Metro Vancouver, in consultation with member jurisdictions, First Nations and relevant stakeholder organizations, document and promote the region's value proposition from an industrial economy perspective.

RECOMMENDATION 30:
That Metro Vancouver seek to enhance collaboration across the region to encourage economic growth and diversity, including on industrial lands.

RECOMMENDATION 31:
That Metro Vancouver assist member jurisdictions seeking to develop and update their own local bring-to-market strategies by providing data and research support in line with its mandate.

Coordinate with Neighbouring Regions

Pressures on industrial lands are not limited to Metro Vancouver. Adjacent regional districts are part of the same goods movement network and commuter-shed and they are facing similar land pressures and challenges. However, with these challenges also comes the possibility of shared opportunity. The broader economic region of southwestern British Columbia presents opportunities for collaborative planning that reaches beyond Metro Vancouver's borders, building on shared infrastructure linkages to expand upon the role as an economic gateway, while also creating new opportunities for growth.

RECOMMENDATION 32:
That the Province develop a framework for economic and land use planning coordination between neighbouring regions in the broader southwestern BC economic region to support industrial land use and protection.

The components and benefits of the framework could include the following:

- providing a Lower Mainland-wide view for industrial land management, infrastructure investment and other economic development opportunities between Metro Vancouver and the Fraser Valley Regional District;
- identifying options to expand the Lower Mainland's economic linkages with trade-oriented and industrial uses along major highway and rail corridors in the Squamish-Lillooet Regional District, Thompson-Nicola Regional District, and Regional District of Okanagan-Similkameen; and
- identifying opportunities for short sea shipping and maritime linkages with other port facilities located on Vancouver Island and along the Georgia Straight.

RECOMMENDATION 33:
That the Metro Vancouver Regional District and the Fraser Valley Regional District develop and sign a memorandum of understanding that outlines their shared priorities regarding and commitment to the effective and efficient management, protection, and development of industrial lands within the Lower Mainland.

RECOMMENDATION 34:
That the federal government, in implementing the Port's Modernization Review, take a broader provincial perspective for ports in British Columbia, in part to alleviate land pressure in the Lower Mainland.

THE 4 'BIG MOVES' AND 10 PRIORITY ACTIONS

The challenges facing Metro Vancouver's industrial lands are complex and interconnected, and no single action or stakeholder will resolve them alone. Market forces and types of industrial activity vary significantly by sub-region, such that for example, forms of densification that may be possible in certain urban locations may not be appropriate in other locations. There are a wide range of national, regional and local serving industrial activities in the region, which have different site and location needs, and which, as a result require different policy responses. As a result, recommended actions need to balance regional objectives, while addressing local contexts – 'one size' does not fit all.

Successfully achieving the vision of the Regional Industrial Lands Strategy will require a collaborative approach and sustained effort on the part of various governing bodies and stakeholders with overlapping, yet distinct areas of business and jurisdictions in the region. Each of the identified actions will take time and resources to realize their full potential, and while some recommendations can be implemented in the near term, others may take additional time to build capacity before implementation. The key to success will be to act in partnership, setting early priorities with clearly defined roles.

Success is defined as a prosperous regional economy, full workforce employment, and an efficient transportation system, achieved through an adequate supply and location, as well as use and utilization, of industrial lands that can house a wide variety of industrial functions that support both the regional as well as national economies.

From the list of 34 recommendations, a short-list of 10 priority actions is identified organized within the 4 Big Moves. These priority actions are formed, in part, by packaging together related actions in the longer list into combined shorter-term actions, to be implemented over the first few years of endorsement of the Regional Industrial Lands Strategy.

This priority list reflects the immediacy of specific pressures facing the region's industrial land supply, along with stakeholder feedback gathered through the development of the Strategy. The actions have been identified as having an optimum balance of: short term readiness, a wide level of support, a logical sequence to feed into the subsequent steps of the implementation program, and a direct relevance to inform the update of the regional growth strategy.

Due to the complexity of the issues and areas of overlapping jurisdiction among partner organizations, lead roles are identified for implementation with respect to the core mandates of each partner (see Appendix 1).

Together, these priority actions will work to ensure the region's industrial lands continue to provide an attractive and viable location for industrial businesses to locate, grow and prosper, while supporting the broader regional economy and community. Implementation is expected to be an iterative and ongoing process that will need to be monitored and adapted over time. As recommendations are implemented, new issues will emerge and new priorities may need to be adjusted and the roles of partner organizations may need to be reshuffled. As new challenges arise and new information becomes available, new actions will inevitably need to be identified and prioritized, which may augment or replace other short-listed recommendations.

The 4 Big Moves:

- Protect Remaining Industrial Lands
- Intensify and Optimize Industrial Lands
- Bring the Existing Land Supply to Market & Address Site Issues
- Ensure a Coordinated Approach

Big Move 1 - Protect Remaining Industrial Lands

Given the ongoing and projected demand for industrial land in the region, it is imperative to protect the region's remaining industrial lands and curb the threats that undermine their use for industrial activities. This means lands for trade-oriented purposes as well as for small, local serving businesses; businesses that are responding to the changing nature of industry as well as more traditional industrial activities. The priority actions for this Big Move are:

1. **Define Trade-Oriented Lands:** Trade-oriented lands are large sites associated with the transportation of goods to and through the region, such as by rail and the port, which serve a national function and are crucial to the region's economy, warranting additional attention and possible protection. A clear, consistent and collaboratively developed definition and understanding of the extent and location of these important lands will support their protection. Metro Vancouver will work with member jurisdictions to establish a definition for trade-oriented lands. (Subsequent actions identified in the 34 recommendations include consideration of a regional trade-oriented land use overlay in the regional growth strategy and municipal consideration of trade-oriented zoning.)

2. **Undertake a Regional Land Use Assessment:** Given Metro Vancouver's constrained land base, there is significant pressure for competing, legitimate land uses across the region. Metro Vancouver will undertake a targeted or region-wide assessment of land use, looking at and beyond the existing policy framework to proactively identify the 'best' locations for different land uses based on a collaboratively developed set of criteria.

3. **Strengthen Regional Policy:** Through the update of the regional growth strategy, Metro Vancouver will explore implementation changes, such as a consistent definition for Industrial, higher voting thresholds to amend the regional Industrial land use designation, and exploration of 'no net loss' as part of the amendment criteria.

4. **Seek Greater Consistency in Local Government Zoning Definitions and Permitted Uses:** Metro Vancouver will, in collaboration with member jurisdictions and other regional agencies, develop a consistent definition of 'industrial' and guidelines for permitted uses. Member jurisdictions, through regional context statement updates, will review and update their zoning bylaws using the established guidelines.

Big Move 2 - Intensify and Optimize Industrial Lands

Given the region's constrained land base, it is critical to encourage the most efficient use of the remaining land supply for all types of industrial users, to remove barriers to the intensification of industrial land, and investigate opportunities to optimize the location of certain land uses over time. The priority action for this Big Move is:

5. **Facilitate the Intensification / Densification of Industrial Forms Where Possible:** Municipalities will review and remove unnecessary restrictions to density or height limits where appropriate; plan space to accommodate new, smaller industrial uses when older, centrally located industrial areas densify; allow mixing of industrial with other employment uses so long as the industrial component is secured as a condition of redevelopment; and explore opportunities to encourage intensification / densification in target areas. Metro Vancouver will explore allowing mixed-use with residential on Mixed Employment lands immediately proximate to Rail Rapid Transit Stations (distance to be determined, but suggest 200 metres) as long as existing industrial space is maintained or expanded and other *Metro 2040* objectives are met (e.g. affordable, rental housing).

Big Move 3 - Bring the Existing Land Supply to Market & Address Site Issues

Certain parts of the vacant industrial land supply suffer from site-specific challenges, such as limited infrastructure support, environmental concerns, and under-sized parcels. Where vacant lands have not come to the market, local municipalities may benefit from the preparation of a bring-to-market strategy. Such a strategy would identify the issues that have prevented the development of the undeveloped or under-developed industrial land, while providing a roadmap to achieve the municipality's economic goals for its remaining industrial lands. The priority actions for this Big Move are:

6. **Prepare Bring-to-Market Strategies for Vacant or Under-developed Industrial Lands:** Municipalities with vacant or under-developed industrial lands will prepare a bring-to-market strategy for their industrial land that addresses strengths, weaknesses, opportunities and challenges, to encourage reinvestment and more intensive use, considers municipal assembly and consolidation of fragmented parcels, whether environmental remediation is required, and if local servicing and infrastructure improvements are required and can be accommodated through front-ending infrastructure investment agreements.

7. **Ensure Transportation Connectivity:** The efficient movement of goods and people is critical for many industrial businesses, both local serving and trade-oriented, in terms of where they choose to locate. The maintenance and growth of a resilient and reliable transportation network, including various modes of transit, is an integral component in planning for the effective management of the region's industrial lands. TransLink, Metro Vancouver, the Port, the Airport and municipalities will continue to work together to coordinate investments in the transportation network, implement the Regional Goods Movement Strategy, enhance the regional truck route network, support efficient container drayage and provide transit for industrial workers.

Big Move 4 - Ensure a Coordinated Approach

Improved cooperation and data tracking among governments and other agencies and organizations is necessary to ensure effective land management and accurate monitoring into the future. Coordination also guides future alignment of policy responses to issues as they arise across Metro Vancouver and southwestern British Columbia. The priority actions for this Big Move are:

8. **Coordinate Strategies for Economic Growth and Investment:** Metro Vancouver and member jurisdictions have a shared interest in attracting new investment and supporting economic and employment activities across the region. Many municipalities have an economic development office or department that work to retain and support the expansion of local businesses. Metro Vancouver's new Regional Economic Prosperity Service provides the opportunity for a regional approach to economic development that will amplify and complement the work of member jurisdictions.

9. **Improve Data and Monitoring:** Timely access to quality data is critical for land management and the development of effective economic policy. Metro Vancouver will update the Industrial Lands Inventory to have a better understanding of the current land uses and supply, and complete a Regional Employment Survey.

10. **Develop a Framework for Coordination:** Pressures on industrial lands are not limited to Metro Vancouver. Adjacent regional districts are part of the same goods movement network and commuter-shed and they are facing similar land pressures and challenges. The Province will work collaboratively with Metro Vancouver, TransLink, and municipalities on cross-boundary economic and land use planning matters and will develop a framework for economic and land use planning coordination between neighbouring regions in the broader southwestern BC economic region to support industrial land use and protection. For example, Metro Vancouver will seek to sign a memorandum of understanding with the Fraser Valley Regional District outlining shared priorities regarding the effective and efficient management, protection, and development of industrial lands within the Lower Mainland.

APPENDIX 1 – REGIONAL INDUSTRIAL LANDS STAKEHOLDERS

Many different agencies and organizations play a key role in the management, development, and use of industrial lands in the Metro Vancouver region. Each stakeholder has a different role, different responsibilities, and different authority over the rules, guidelines and decision making as it relates to industrial land and its use.

	ORGANIZATION	PURPOSE/MANDATE	ROLES AND RESPONSIBILITIES RELATED TO INDUSTRIAL LANDS
LOCAL	Member Jurisdictions (21 municipalities, 1 Treaty First Nation, 1 Electoral Area)	Represent the interests and respond to the different needs and changing circumstances of their communities, residents and businesses	• Designates permitted land uses and regulates the density and form of development through local zoning by-laws, neighbourhood plans, and Official Community Plans • Builds and maintains streets, sidewalks, and local infrastructure • Regulates traffic, use of streets (including on-street parking) and the size and weight of vehicles that are permitted to travel on municipal streets • Sets municipal property tax rates for industrial and commercial uses
REGIONAL	Metro Vancouver	Delivers regional services, policy and political leadership on behalf of 23 member jurisdictions	• Supports coordinated land use planning around common framework for regional growth management • Communicates value of industrial land uses and improved regional transportation network, including efficient goods movement, as components of broader economic ecosystem
REGIONAL	TransLink: South Coast British Columbia Transportation Authority (SCBCTA)	Transportation authority for Metro Vancouver region Mandate to provide a regional transportation system that moves people and goods and supports the regional growth strategy and regional and provincial environmental and economic objectives	• Operates integrated regional transit system • Owns and operates 5 bridges • Together with municipalities, co-funds and co-manages the Major Road Network (MRN) • Leads and facilitates regional goods movement research and planning

	ORGANIZATION	PURPOSE/MANDATE	ROLES AND RESPONSIBILITIES RELATED TO INDUSTRIAL LANDS
PROVINCIAL	Government of British Columbia	Authority to create local governments and their governing legislation Authority over Provincial Highways, roads and other infrastructure Coordinates high level economic development issues of provincial interest Authority to identify and legislate use for specific lands	• Provincial legislation, such as the Local Government Act • Provincial transportation planning and policy • Administers a number of acts related to transportation and goods movement, including the Motor Vehicle Act and the Commercial Transport Act • Highway construction and maintenance • Commercial vehicle safety and enforcement • Port and airport development • Infrastructure grants • Major capital project management • Provincial emergency management
PROVINCIAL	Agricultural Land Commission	Preservation of agricultural land Encourage local governments, First Nations, and others to enable and accommodate farm use of agricultural land and uses compatible with agriculture in their plans, by-laws and policies	• Sets regulations for determining which business activities are permitted within the Agricultural Land Reserve • Determines the scope and scale at which agri-industrial businesses are allowed to locate within the ALR before having relocate to industrial lands in the urban containment boundary
FEDERAL	Government of Canada	Promotes safe, secure, efficient and environmentally-responsible transportation and trade-oriented land uses in Canada	• Administers a number of Acts related to transportation, including vehicle requirements on new equipment pursuant to the Canada Motor Vehicle Safety Standards (CMVSS), engine emission standards, and rail safety standards • Provides funding to help improve major infrastructure systems, including Asia Pacific Gateway initiatives • Works with its portfolio partners, other government departments and jurisdictions and industry to ensure that trade-related networks and transportation systems work well • 18 Port authorities fall under the federal portfolio across Canada

	ORGANIZATION	PURPOSE/MANDATE	ROLES AND RESPONSIBILITIES RELATED TO INDUSTRIAL LANDS
FEDERAL	Port of Vancouver	Responsible for the stewardship of federal port lands in and around the region	• Oversees transportation operation in collaboration with terminal operators, railroads an shippers to ensure efficient goods movement on port lands and waters • Acquires and develops lands to support current and anticipated port-related operations
	Vancouver Airport Authority	Oversees Vancouver International Airport's operations	• Develops and maintains airport infrastructure and oversees day-to-day operations at Vancouver International Airport • Plays active role in the development and growth of air cargo and the Asia Pacific Gateway
NON-PROFIT INDUSTRY AND BUSINESS ASSOCIATIONS	Greater Vancouver Gateway Council	Collaborate to establish a globally competitive Pacific Gateway in trade and travel between North America and the Asia Pacific economies	• Advocates for members' interests • Conducts and publish research studies • Provides economic impact data • Supports and coordinate application for infrastructure grants
	Greater Vancouver Urban Freight Council	Champion the implementation of the priority actions identified in the Regional Goods Movement Strategy (RGMS)	• Advocates for members' interests • Coordinates the implementation of policy recommendations related to goods movement in the region • Monitors and assesses the progress of RGMS implementation • Periodically reviews current priorities against the region's evolving goods movement needs
	BC Trucking Association (BCTA)	Province-wide, non-partisan, non-profit motor carrier association formed to advance the interests of British Columbia motor carriers and associated industrial land owners	• Promotes prosperous, safe, efficient and responsible commercial road transportation industry • Conducts research • Advocates for member interests

	ORGANIZATION	PURPOSE/MANDATE	ROLES AND RESPONSIBILITIES RELATED TO INDUSTRIAL LANDS
NON-PROFIT INDUSTRY AND BUSINESS ASSOCIATIONS	NAIOP Commercial Real Estate Development Association	Non-partisan, non-profit business association formed to advance the interest of commercial land users, developers and real estate industry	• Conducts research • Provides education on commercial and industrial development and real estate related issues • Advocates for member interests
	Boards of Trade and Chambers of Commerce	Non-partisan, non-profit business associations formed to advance the interest of their members	• Conducts research • Advocates for member interests
	Fraser Basin Council	A charitable non-profit society committed to advancing sustainability in the Fraser Basin and across British Columbia	• Conducts and publishes research related to environmental and economic sustainability • Preparation of BC Regional Adaptation Collaborative to strengthen regional capacity and increase action to advance adaption planning and implementation related to climate change impacts, including coastal flooding
PRIVATE SECTOR	Railways	Delivers returns on investments by providing fast and reliable transportation for rail and intermodal customers	• Provides rail and intermodal services to customers consistent with federal Rail Transportation Acts • Coordinates with local governments on adjacent land use and road networks
	Goods Movers	Deliver returns on investments by providing fast and reliable transportation for their customers	• Provides road delivery services to customers consistent with federal, provincial and municipal regulations
	Business	Deliver a return on investment for shareholders or owners	• Consumes and produces goods an services to support customers and other businesses • Makes locational, transportation, investment, real estate, and scheduling decisions to advance business operations

APPENDIX 2 – INDUSTRIAL MARKET CONDITIONS

Industrial land values and lease rates across Metro Vancouver have increased significantly between 2014 and 2019. These changes reflect the scarcity of large, vacant, developable industrial land parcels, speculation that densities will increase on industrial lands, increased competition from other uses, or outright conversion to non-industrial uses.

METRO VANCOUVER INDUSTRIAL LAND VALUES AND LEASE RATES, 2014, 2017, 2019

	LATE 2014	LATE 2017	EARLY 2019
Average Vacant Industrial Land Value ($million/acre)	$1.1 million to $1.6 million	$1.9 million to $3.0 million	$2.0 million to $4.0 million
Average Rental Rate for Industrial Space ($/net square foot per year)	$8	$10	$12

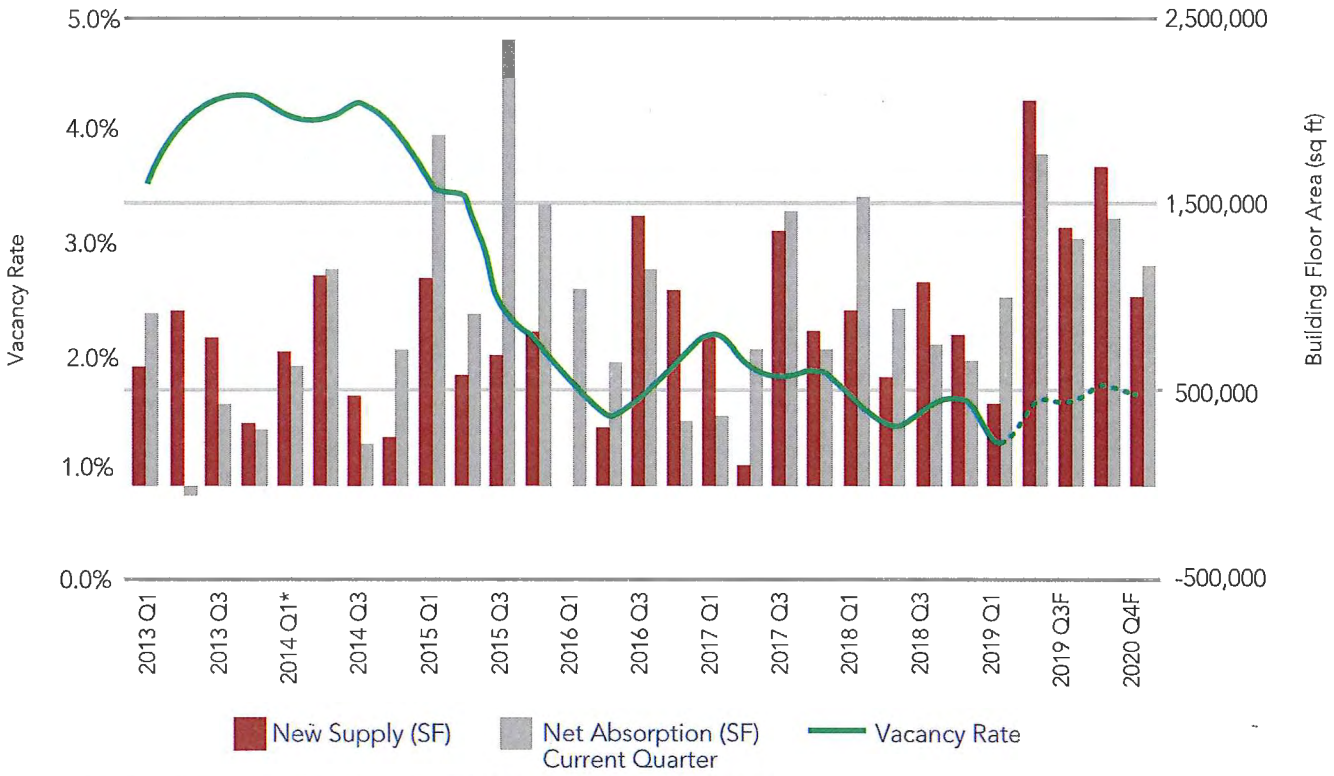
SOURCE: ADAPTED FROM THE CHANGING NATURE OF INDUSTRY AND INDUSTRIAL DEMAND IN METRO VANCOUVER: DISCUSSION PAPER, SECTION 4.7, 2019

NOTE: FIGURES REPRESENT AVERAGE VALUES FOR THE REGION AS COMPILED BY MAJOR BROKERAGES. INDUSTRIAL TRANSACTIONS IN SPECIFIC SUB-MARKETS MAY BE GREATER OR LESS THAN RANGE SHOWN.

These land price and lease rate increases are the result of changing dynamics between the supply and demand of industrial land and space availability. In the case of Metro Vancouver, demand and competition for these lands has been steadily increasing, while the supply of available industrial land has declined. Demand for industrial space has far outpaced how quickly developers have been able to bring new buildings to the market, resulting in a regional vacancy rate that has averaged below 2% for the past 4 years.

The industrial market has remained extremely tight over this period, with the lack of supply and strong demand putting upward pressure on lease rates and land values.

METRO VANCOUVER INDUSTRIAL MARKET ABSORPTION TRENDS AND FORECAST, 2013-2020



SOURCE: COLLIERS INTERNATIONAL, METRO VANCOUVER INDUSTRIAL MARKET: Q1 2019

APPENDIX 3 – INDUSTRIAL LANDS INVENTORY AND ABSORPTION

The preliminary update to Metro Vancouver's 2015 Industrial Lands Inventory indicates significant absorption of lands since 2015, including many of the last remaining larger well-configured sites. While the remaining supply of about 1,050 hectares (2,600 acres) of truly vacant land and another 750 ha (1,860 acres) of non-industrial land uses that may eventually be developed for industrial, may seem significant, much of it is lands that are difficult to develop, fragmented and require assembly to bring to market, otherwise encumbered or whose owners are disinterested in development. As more of the unencumbered available sites are developed, an increasing proportion of that supply will be the more "difficult" or unavailable sites.

Typically, full development of an industrial land supply is about a remaining 5% long-term land vacancy or 95% development; in Metro Vancouver's case the long-term vacancy would be about 570 ha of an 11,330 ha developed and vacant supply. Assuming there is no future conversion of industrial land to non-industrial uses, the effective available supply for future development would be about 1,430 ha.

The constrained land supply in Metro Vancouver means that there are two perspectives that can be taken to the demand forecast:

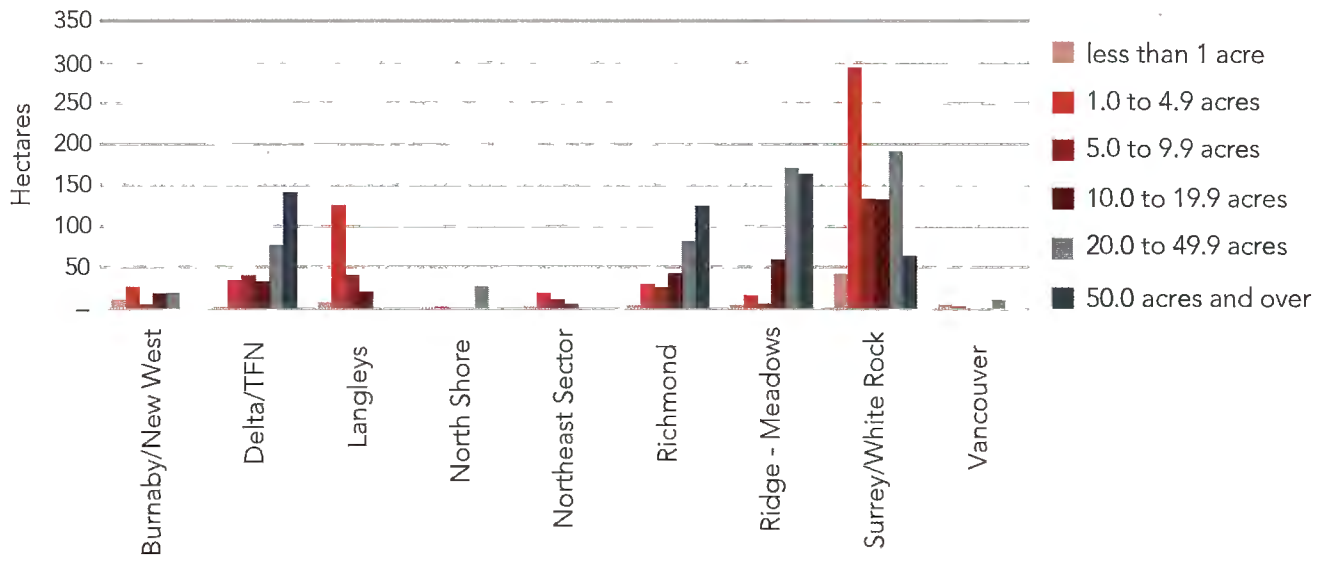
- What would the land demand be if there were no significant supply constraints in the region?
- Given the supply constraints, what is the demand for land that can be satisfied in the market and when will the available long-term supply near 95% full development?

There are two primary ways of forecasting land demand, both of which are appropriate ways to forecast and each can be used as a check on the other approach:

- The absorption method looks at the recent history of land absorption and projects the absorption forward for the forecast period. Adjustments to the forecast rate of absorption, up or down, are made to reflect expectations for a changing proportion of economic activity occurring on industrial land and higher or lower levels of overall growth expected, compared to the past.
- The employment-based method starts with a forecast of total employment and the relative growth by economic sector. The proportion of growth within sectors that may be accommodated on industrial lands provides an employment forecast for industrial areas. Applying an anticipated floor space per worker (in m2 per employee) or an employment density (in employees per net ha) provides building space and land areas.

For larger sites (20+ acres / 8+ hectares) that point has already been reached in Metro Vancouver. To meet the demand forecast to 2050, an additional 800 to 1,600 ha (2,000 to 4,000 acres) would need to be added to current vacant land inventory.

VACANT LANDS BY SITE SIZE AND SUB-REGION, METRO VANCOUVER, 2015



SOURCE: METRO VANCOUVER 2015 INDUSTRIAL LANDS INVENTORY: TECHNICAL REPORT

As part of the Regional Industrial Lands Strategy work, Hemson Consulting looked at industrial land demand from an employment growth perspective. The forecast is based on a low, medium and high range of Metro Vancouver employment growth from the current base. Following a long-standing pattern of economic change, a continued shift in the employment base of Metro Vancouver away from those sectors occupying industrial land towards service sector uses is assumed to continue. Under this assumption, 20% of the region's job growth would be accommodated on industrial lands through forecast period to 2050 (from 27% of total regional employment in the 2016 base year), with approximately 5% occurring within already developed industrial lands via intensification. Assuming an employment density of 35 jobs per net ha, the resulting industrial land demand to accommodate this growth would be 70 to 100 ha per year (175 to 250 acres per year). Similarly, an additional 650 to 1,550 ha (1,600 to 3,800 acres) of land on top of existing supply would be a reasonable estimate of the lands needed to satisfy this demand.

MAPLE RIDGE
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City of Maple Ridge

TO:	His Worship Mayor Michael Morden and Members of Council	**MEETING DATE:**	December 8, 2020
		FILE NO:	11-5600-03
FROM:	Chief Administrative Officer	**MEETING:**	Workshop

SUBJECT: Review of Residential Water Metering - Background and Considerations

EXECUTIVE SUMMARY:

The City of Maple Ridge currently meters industrial and commercial sectors; however, similar to the Region and the province, single family residential metering is well behind the national average. Metro Vancouver (Metro) has recently released a guide and a triple-bottom-line analysis tool to facilitate member municipalities' consideration of residential metering. The analysis tool and metering are voluntary.

A work plan with milestones has been developed to review the Metro tool and use it to analyze options specifically for Maple Ridge to gain understanding of the implications of metering. With the background data and information gathered, it is a logical time for Council input on options and strategic alignment.

Metro used the analysis tool for the entire Region and found that universal implementation of metering across the Region would be economically beneficial. In addition, it predicts that other, less aggressive approaches to metering will be economically beneficial to the City if the costs to install residential meters are borne by developers and/or homeowners. A major component in the economic analysis is the deferral of future, Regional, growth-related capital resulting from water conservation as a result of metering. The cost to implement metering is borne by the municipalities and/or developers/homeowners. On the environmental and social factor Metro selected, the analysis tool indicates positives on all options. The goal of the project is to develop the business case and apply the Metro analysis tool to Maple Ridge's specific situation.

The question of implementing residential meters is a complex and multi-faceted issue. There are often inter-related and seemingly contradictory elements. The long-term nature of the infrastructure and the multiple factors and variables affecting the potential future costs and benefits to the City means that there is no guarantee that the potential future costs and benefits will remain as identified as part of this analysis.

The options for analysis using the Metro triple-bottom-line tool for Maple Ridge are as follows:

1) Maintain status quo
2) Install a meter at newly constructed homes and when service connections are replaced
3) Install a meter at existing empty meter boxes
4) Universal metering

Council consideration, input and endorsement of the options is desirable.

4.3

RECOMMENDATION:

That the following options for residential water metering be endorsed for analysis using the Metro Vancouver triple-bottom-line analysis tool:

- maintaining status quo
- installing a meter at newly constructed homes and when services connections are replaced
- installing a meter at existing empty meter boxes
- using universal metering

DISCUSSION:

a) Background Context:

The intent of this report is to:

1) Provide project plan and update to Council
2) Provide background and information for Council to consider as the business case and analysis moves forward
3) Verify the options that will be analyzed

The review of residential water metering was included in the Engineering Department's Business Plan under the priority of Growth in response to work that Metro recently completed on the issue. The project can be divided into phases and milestones as follows:

PHASE 1 – Background Information and Options Analysis

1. Preliminary Review of Requirements and Model
2. Engage Consultant
3. Gather Background Data and Considerations
4. Review Strategic Alignment
5. Develop and Confirm Options ← Currently Here
6. Review Tool Parameters and Maple Ridge situation
7. Business Case and Metro Vancouver's Analysis Tool on Options
8. *Council Decision and Direction*

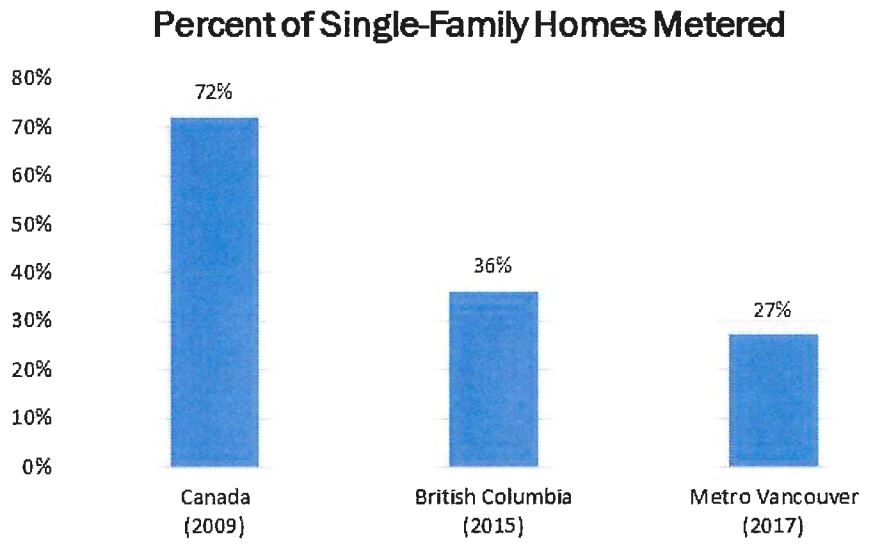
PHASE 2 – Program Development and Implementation
(IF REQUIRED based on Analysis and Council Direction)

1. Program Development & Resourcing
2. *Council Approval of Program*
3. *2022 Budget Approval*
4. Implementation – 2022 & beyond (including bylaws/polices)

Background and Considerations

British Columbia and Metro have and continue to have less residential metering than the rest of the country. (See Figure 1) This is an ongoing issue and has been periodically revisited. In 2013, there was a report to Council considering the triple-bottom-line for water metering. Metro released a guide in 2019 and a triple-bottom-line analysis tool in 2020. The associated Business Plan item is in response to this latest review of residential metering practice. While catching up and implementing a program to meter all residences may seem simple, it is a challenging task and business case.

Figure 1: Percentage of Homes Metered Nationally

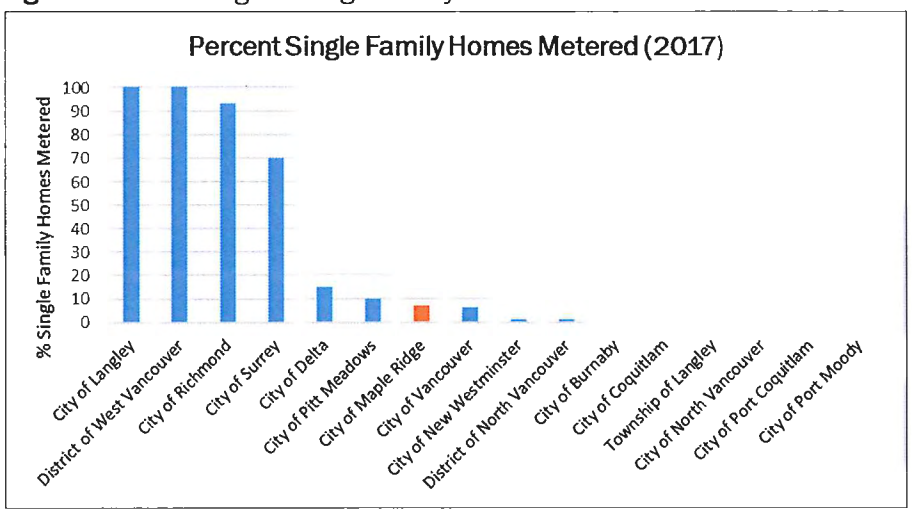


Across the Region, institutional, commercial and industrial (ICI) customers are metered. In Maple Ridge, metered consumption customers account for about 40% of all usage, including ICI and agricultural.

Metro's recent work and this project focuses on residential/single-family metering. ICI and agricultural water use is not included in the scope of this work.

Regional residential water metering practices vary within the Region, as shown in Figure 2.

Figure 2: Percentage of Single-family Homes Metered in Metro Vancouver[1]



Universal residential metering has not been widely adopted by municipalities in the Region. Metro is the producer of potable water, owning and operating treatment facilities and supply mains. Municipalities 'resell' and distribute the water to customers. This is important because much of the estimated financial benefit from metering is gained through the deferral of Regional capital, such as major upgrades at water sources or treatment facilities.

Several municipalities have adopted policies and practices for partial implementation or being "meter ready," a summary is included in Table 1.

[1] Regional Engineers Advisory Committee – Water Subcommittee (2020) – informal member survey

Table 1: Metro Vancouver Jurisdictions Metering Requirements for New Single-family Construction

Jurisdiction	Currently Universally Metered	Requirements for New Single-family Construction
City of Langley	Yes	Meters Installed
City of Richmond		
District of West Vancouver		
City of Delta	No	
City of North Vancouver		
City of Surrey		
Tsawwassen First Nation		
University Endowment Lands		
City of Vancouver		
City of Burnaby	No	Meter Box with no Meter
Township of Langley		
City of Maple Ridge		
City of New Westminster		
City of Port Moody		

Maple Ridge's water metering bylaw currently requires the metering of:

- all non-residential uses (industrial, commercial, agricultural, institutional, etc.)
- all properties with in-ground pools or in-ground sprinkler systems
- all parcels with a large-diameter service connection pipe
- all properties greater than 0.4 hectares in area

Maple Ridge has maintained a policy of installing empty meter boxes when constructing new service lines since 1995. Table 2 summarizes the status of water meter infrastructure in Maple Ridge.

Table 2: Statistics for Single-family Homes in Maple Ridge

Billing Type	Metering Status	Number of Single-Family Homes	% of Single-Family Homes
Flat Rate	None	10,000	60%
	Has Empty Meter Box and Setter	6,000	30%
Metered Billing	Has Meter	1,500	10%
	Total	**17,500**	100%

This is a portion of the data, with associated costing, that is required to utilize the Metro analysis tool and reflect the specifics of Maple Ridge's situation.

The Metro analysis tool was developed broadly for the Region and costing is at a macro or economic level. Metro itself is not responsible in the model for any of the direct costs — the municipalities and/or the developers, homeowners or purchasers would incur the costs of installing all meters and appurtenances. This allocation of costs, or who pays, will be a central consideration. The options proposed in this report will be those reviewed and analyzed in the tool, as well as any other options identified by Council.

The Metro analysis tool considers the following:

Economic factors:

- Deferral of capital costs for growth-driven water infrastructure upgrades
- Total operations and maintenance cost to treat and distribute water
- Capital costs of water meter installation
- Operations and maintenance costs associated with water metering
- Municipal exposure to risk

Environmental factors:

- Environmental impacts associated with supply, installation and renewal of meters
- Environmental impacts associated with capital construction of water/wastewater infrastructure upgrades
- Environmental impacts associated with water use/systems operations
- Ability to support and enforce water conservation

Social Factors:

- Ability to charge customers for what they use
- Impacts on residents from water meter installation
- Public perception/support
- Developer and real estate industry perception/support

An important part of a utility is cost recovery; this means that the total cost to operate the utility (capital, operations and maintenance) is recovered based on volume consumed. A portion of the utilities costs are generally fixed (i.e., labour, infrastructure) and a portion are variable based on demand (i.e., treatment chemicals, electricity for pumping). A reduction in consumption does not necessarily reduce the rate ($/m^3) as the overall costs are distributed over a smaller volume.

The installation and maintenance of water meters is a capital and ongoing (operational) cost to the utility. The Metro tool considers population growth and conservation as a result of implementing metering.

Regarding operational issues, Metro estimates between a 17–20% reduction in water consumption as a result of universal residential metering, if realized this savings may cover the annual operating costs.

With respect to capital costs, an important factor for the economic analysis is the deferral of capital (i.e., delayed future Regional expenditures for plant or source water improvements such as lowering Coquitlam Lake intake or raising a dam/reservoir) and the associated environmental impacts. Effectively the Metro tool assumes this future deferred capital offsets the capital cost of the installation of universal residential metering. The current estimated capital cost for universal residential metering in Maple Ridge is in the order $20M to 30M. There is not a lot of detail in the long-term capital plan used in the Metro tool. The current understanding is that there are no details on how or if the savings will be passed on through Metro water rates.

With roughly 3% of the Region's population, the impact of metering in Maple Ridge would have little impact on deferral of Regional capital. Construction escalation tends to out-pace general inflation; however, there are larger swings in construction pricing over time.

The timing on the adoption of metering relative to the rest of the Region could result in an apparent transfer of cost (or benefit) between metered and unmetered municipalities (the same would be true on individual properties as a result of partial implementation in Maple Ridge).

The analysis tool takes into account greenhouse gas (GHG) emission offset costs as a result of operations of the meters and associated water conservation. This was done through Metro's pricing of carbon. It does not take into account the GHG costs for the capital component of installation of meters or the deferred capital component, due to a lack of data. These aspects were instead assessed through the non-financial weighting of environmental factors.

A further consideration is Metro's scheduled review of Development Cost Charges. Ensuring an understanding of the allocation of the costs associated with growth and the impacts on the metering analysis and Maple Ridge is an important consideration.

Metro also developed and completed a survey on residential water metering. The survey findings showed a high degree of support for the concept of paying for water based on usage. In the northeast area (including Maple Ridge) the support was slightly lower. A survey for residents of Maple Ridge could be part of the analysis moving forward.

Strategic Alignment

The initiative is currently under the strategic priority of Growth. This is logical given the growth in Maple Ridge and the aim of the initiative is to defer growth-related Regional infrastructure.

The business case is not clear at this time and it may be that the importance of environmental and social factors drive the decision. Council could choose to consider re-aligning this with the strategic priority of Natural Environment.

Options for Analysis within Maple Ridge

The Metro guide and use of the tool are voluntary. The tool looks at several programs and scenarios typical of the Region. When Metro ran the analysis for the entire region, when all costs were considered, only the full-implementation metering scenario is a positive business case. When municipal costs were considered (developers, home builders and homeowners pay for aspects of the programs), three of the scenarios become positive business cases from the municipal perspective. The tool found all scenarios are positive from the environmental and social perspective. All of these consider the benefit of Regional deferred capital.

The scenarios are effectively policy options and suggestions from Metro to municipalities. Using the specifics and criteria that represent Maple Ridges situation and reviewing the business case inputs will help in informing a solution for Maple Ridge.

Given the City's current bylaw and policies, the scenarios outlined in Table 4 are being considered to analyze the situation in Maple Ridge. The consulting engineering company Urban Systems Ltd. has been retained to utilize the tool and analyze these scenarios. Background data and information have been compiled to inform the analysis.

Table 4: Proposed City of Maple Ridge Metering Options Analysis Scenarios

Metering Program	Metering (Increasing Implementation Effort)			
	Base Case	Scenario 1	Scenario 2	Scenario 3
Current Approach (as per Bylaw[2])	X	X	X	X
Install Meter at Newly Constructed Homes and when Service Lines are Replaced		X	X	X
Install Meter at Existing Empty Meter Boxes			X	X
Universal Metering				X

These scenarios provide a representation of the spectrum of options in pursuing residential metering, and will provide an indicator of the triple-bottom-line for the options. Council could indicate that they would like to see another option analyzed. The results of the option analysis will be brought back for Council's consideration.

b) **Strategic Alignment:**
The consideration of residential water metering is currently aligned with Growth in the Strategic Plan.

c) **Citizen/Customer Implications:**
Residents would be affected by changes to policies on water metering and billing.

d) **Interdepartmental Implications:**
Engineering, Engineering Operations, Finance and Information Services Departments are all involved in water metering and billing and would be affected by changes in metering policy.

e) **Alternatives:**
At this time, Council may wish to:

- Not proceed with the study and analysis
- Identify other options for analysis

[2] Properties with in-ground irrigation systems, in-ground pools or greater than 0.4 ha in area

CONCLUSION:

The City of Maple Ridge generally meters ICI users and multi-family and similar to the Region and the province, Maple Ridge is well under the national average on residential water metering. Metro recently released a guide and triple-bottom-line analysis that indicated universal metering or partial increases in metering would be beneficial for the Region. The Metro tool and assumptions should be reviewed to effectively utilize and reflect the specifics of Maple Ridge's situation. While the assessment will be completed for Maple Ridge, cost savings will be projected at the Regional level through assumed deferment of growth-related infrastructure projects. Once the Maple Ridge analysis is complete, the City can consider the next steps in its ongoing metering review.

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Manager of Utility Engineering

Reviewed by: **Josh Mickleborough, PEng.**
Director of Engineering

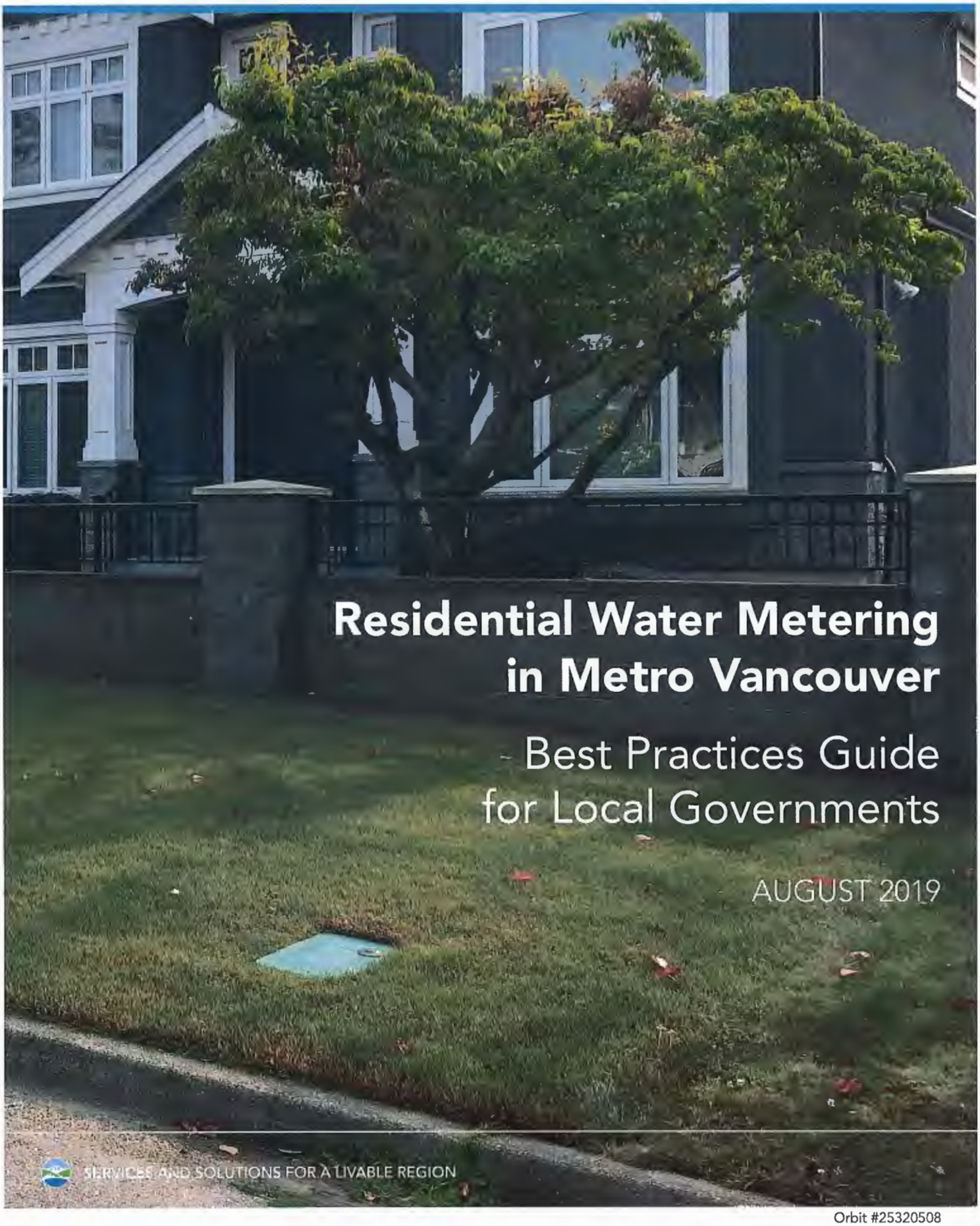
Approved by: **David Pollock, PEng.**
General Manager Engineering Services

Concurrence: **Al Horsman**
Chief Administrative Officer

Attachments:

(A) Residential Water Metering in Metro Vancouver Best Practices Guide for Local Governments (2019)

metrovancouver | WATER



Residential Water Metering in Metro Vancouver

Best Practices Guide for Local Governments

AUGUST 2019

SERVICES AND SOLUTIONS FOR A LIVABLE REGION

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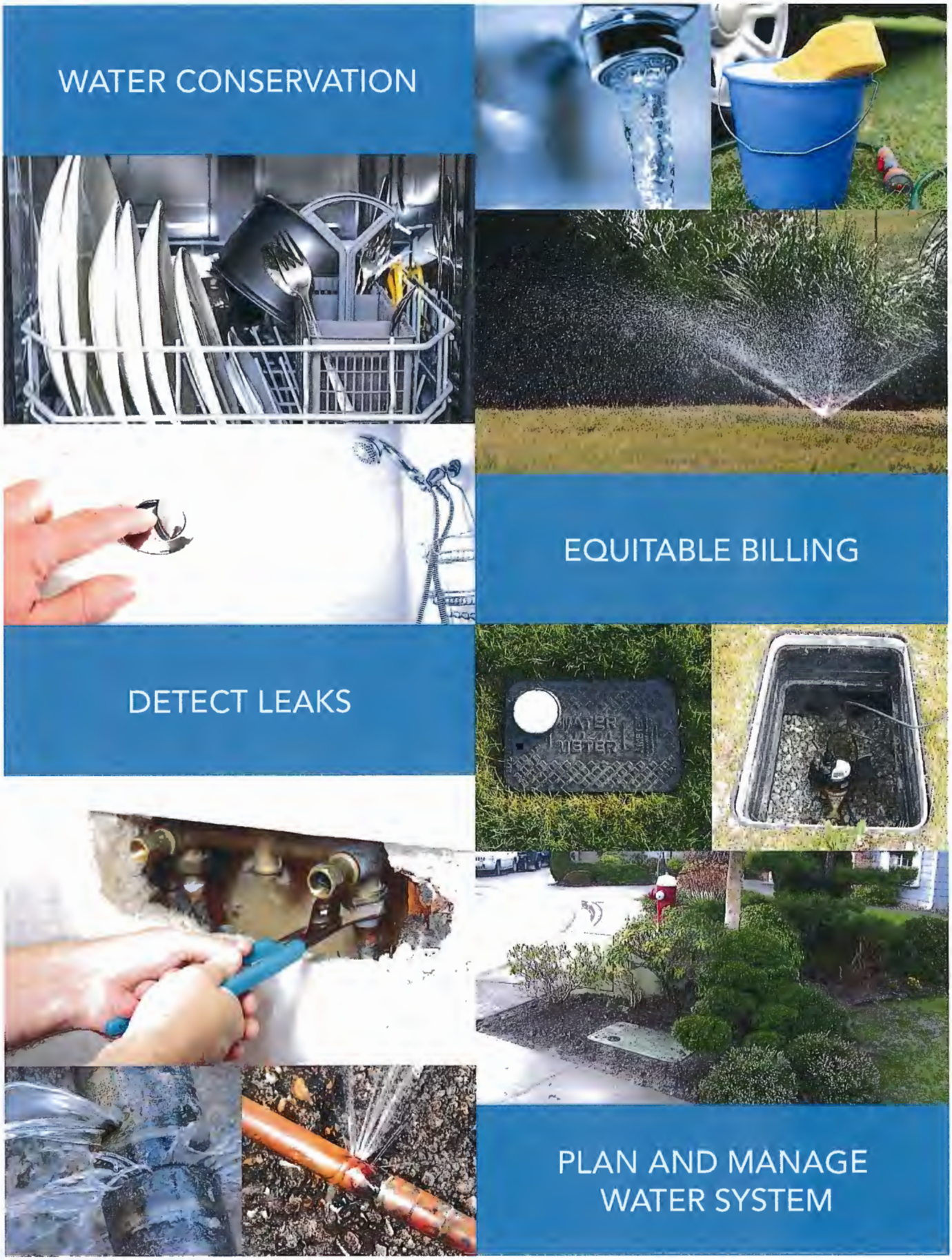

WATER CONSERVATION
EQUITABLE BILLING
DETECT LEAKS
WATER METER
PLAN AND MANAGE WATER SYSTEM

1. Water Metering as a Best Management Practice

Water Metering in Metro Vancouver

Metro Vancouver meters all water delivered to local governments and bills each local government for the amount of water consumed. Local governments are responsible for decision making on water metering of residences and businesses.

Generally, all industrial, commercial, and institutional water users are fully metered in Metro Vancouver. The approach to metering multi-family buildings and single-family homes varies greatly across the region. Some local governments have implemented metering for all homes, while homes in other local governments are unmetered.

Metro Vancouver supports water metering as a best management practice and encourages local governments in the region to move towards universal metering.

Implementation of residential water metering programs over an accelerated timeline by all local governments will yield the highest benefits to the region. However, Metro Vancouver recognizes the need of local governments to determine an approach to water metering that best meets their own objectives and requirements.

Associations Supporting Water Metering

Water metering is recognized as a best practice by the BC Water and Waste Association, the Federation of Canadian Municipalities, the American Water Works Association, and the Canadian Water and Wastewater Association. Residential water metering contributes to achieving water conservation goals, improves billing equity, helps with leak detection and reduction, and helps with planning and managing of water systems.

> "A water meter is a device used to measure the precise volume of water consumed at a particular location, such as a single-family home, a multi-family building or a business facility. Water meters provide vital information to utility managers about water consumption, water loss and system efficiency."– BC Water and Waste Association (2012)

> "Metering how much water we draw, treat, distribute, and consume is now widely recognized in North America and around the world as a best management practice." – Federation of Canadian Municipalities (2003)

> "The American Water Works Association (AWWA) recommends that every water utility accurately meter all water taken into its system and all water distributed from its system at its customers' points of service. Meters should be read at sufficiently frequent intervals appropriate to support the utility's understanding of volume of production, rate structures and to provide accurate bills and feedback to its customers." – American Water Works Association (2014)

2. Introduction

Purpose of the Guide

This guide presents key considerations for local governments in Metro Vancouver interested in residential water metering. The decision to meter is ultimately determined by local governments and hence this guide has been developed by Metro Vancouver as a resource for local government staff to use to determine optimal water metering programs for single-family homes in their jurisdictions.

The guide has been informed by the results of a triple-bottom-line regional assessment of residential water metering conducted by Metro Vancouver, local and international case studies and other resources that outline best practices for water metering program implementation.

This guide is intended to provide local governments with the best water metering information available to support decision makers, including:

- The importance of residential water metering to local water conservation efforts
- The benefits of residential water metering to local governments and the public
- Approaches to implementing a residential water metering program
- Practical, financial, resource, and public outreach considerations for implementing a residential water metering program

NOTE: *While this guide is intended to be relevant region-wide, local variances in current water metering practices, utility operations, water use characteristics, and housing type may necessitate individual local governments to implement appropriate alternatives.*

Residential Water Metering in Action

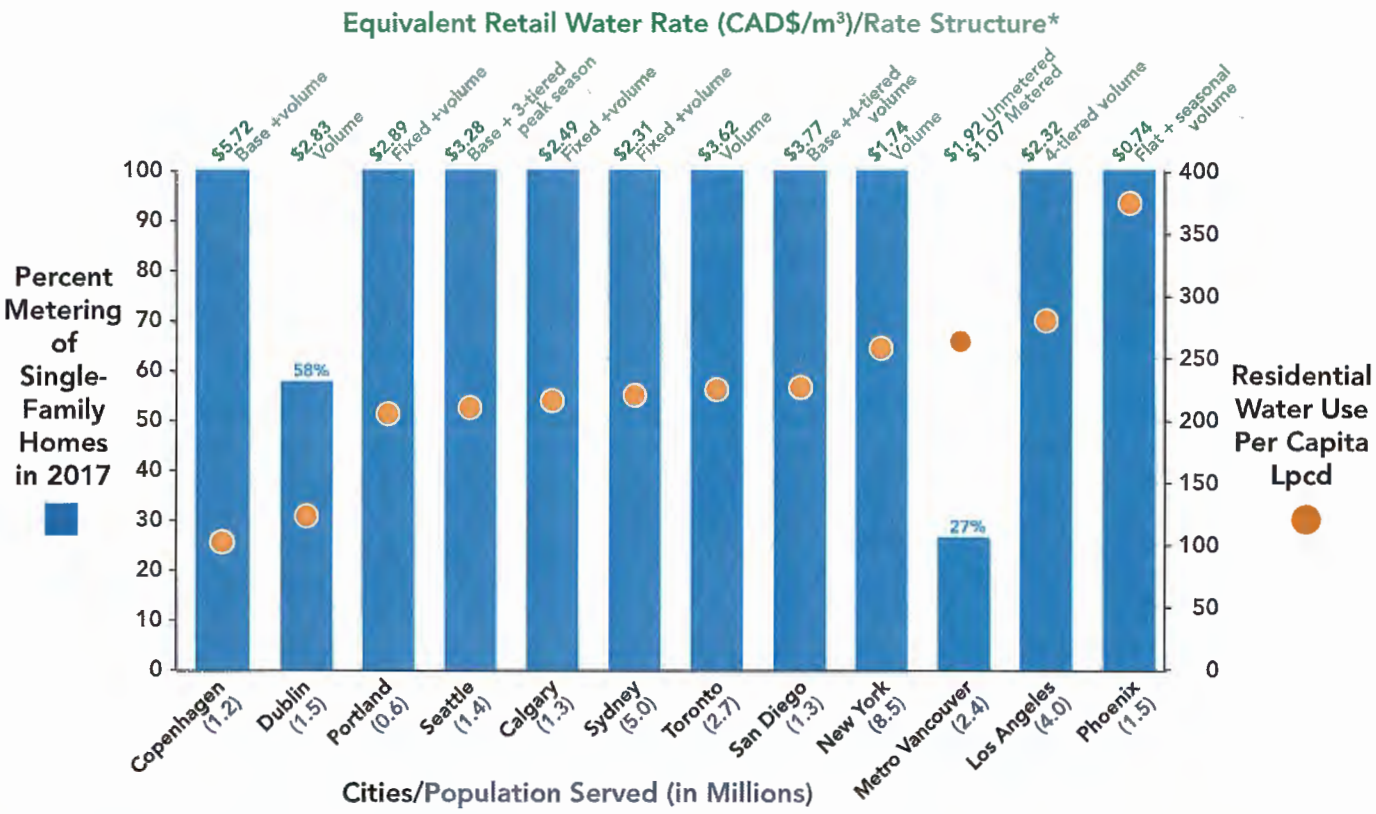
In North America and around the world, including in Metro Vancouver, many local governments have implemented residential water metering to measure the volume of drinking water used by their residents.

Cities such as Calgary, Toronto, and New York have had varying levels of residential water metering for many decades, and in recent years have successfully transitioned to universal metering. The City of Seattle and the City of Portland have been universally metered since the 1920s.

Many local governments in Metro Vancouver have residential water metering programs currently in place. This Guide profiles the City of Richmond, the City of Surrey, the City of Vancouver, the District of West Vancouver, the City of Abbotsford, the District of Mission, and other cities around the world. These programs vary in scope and concentration, and each consists of a different combination of metering program approaches.

Figure 1 shows a comparison of the level of residential single-family metering, water use per capita, and average water rates for select cities from around the world. Most of the cities compared are fully metered, although water use and average water rates vary.

FIGURE 1: RESIDENTIAL WATER METERING AROUND THE WORLD



* For information about the different rate structures, see Section 6.

Benefits of Residential Water Metering at a Glance:

- Residential water metering helps local governments to move toward their water conservation goals.
- Residential water metering offers residents equitable billing: the more water residents use, the more they pay.
- Residential water metering provides an effective detection system for leaks and water loss, thus reducing costs for residents and local governments when these leaks are promptly repaired.
- Residential water metering enables local governments to better plan and manage their utility systems by providing data on water usage.

3. Regional Assessment of Residential Water Metering Overview

Context

Metro Vancouver and its local governments work together to supply clean, safe drinking water to more than 2.5 million residents and businesses in the Metro Vancouver region. The region is expected to grow by 35,000 people per year over the next several decades (MV, 2017) and as such, Metro Vancouver is taking steps to conserve drinking water in alignment with global water conservation efforts.

One of the goals of Metro Vancouver's Drinking Water Management Plan is to ensure the sustainable use of water resources for the growing population (MV, 2011). Metro Vancouver's 2019–2022 Board Strategic Plan includes a strategic direction to "provide guidance on implementing residential water metering in the region as a best management practice."

Purpose and Approach of the Assessment

Metro Vancouver conducted a regional assessment of residential water metering (the Regional Assessment) to evaluate the overall costs and benefits of water metering for single-family and duplex homes.

The purpose of this study was to evaluate the economic, social, and environmental aspects of water metering from a regional perspective to provide local governments with an adaptable methodology and tools to conduct their own assessment.

A triple-bottom-line evaluation assessed the impacts of water metering over a 50-year timeframe to capture multiple water meter lifecycles.

As part of this study, a water metering evaluation tool was developed for local governments to conduct localized triple-bottom-line evaluations using the same approach as the regional evaluation. Local governments can add or modify information to capture conditions specific to their local areas that may impact decision making.

The Regional Assessment investigated a variety of approaches for implementing residential water metering. These approaches are described in the next section (Study Findings).

Financial impacts were evaluated through life cycle costs of the metering programs. These impacts included meter installation, operations and maintenance costs including greenhouse gas emissions, as well as the potential to defer infrastructure upgrades through water savings.

Other considerations, that could not be translated into financial impacts, were evaluated qualitatively on a per meter basis. These considerations included several environmental impacts, billing equity, and construction impacts on residents.

Study Findings

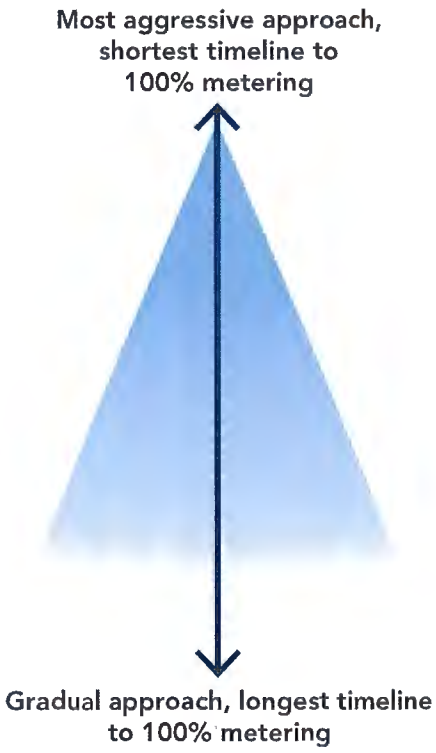
For local governments considering implementing residential water metering programs, there are a range of approaches with differing timelines and varying costs and benefits.

Results of the Regional Assessment showed that the greatest overall financial and non-financial benefits are achieved by implementing universal metering on all residential dwellings over an accelerated timeline.

While the Regional Assessment found that a 10-year approach to universal metering provides optimal benefits, it is a large investment that may require substantial up-front funding, staffing, maintenance, and commitment.

Recognizing that some local governments may prefer to take a smaller-scale or more gradual approach to residential water metering, the triple-bottom-line evaluation found that financial and non-financial benefits may also be achieved by implementing one or more of the approaches listed in Figure 2 below.

FIGURE 2: APPROACHES TO WATER METERING



Various approaches can be taken to implement water metering, ranging from the most aggressive approach of universal metering for all homes to gradually installing water meters on unmetered dwellings that:

- Have existing meter-ready connections
- Are being transferred in ownership
- Are heavy users of water
- Have secondary or laneway suites
- Are participating in a voluntary metering program
- Have repeatedly infracted water restrictions
- Are being renovated
- Are having their utilities services replaced
- Are being newly constructed

Metering Scenarios Explored

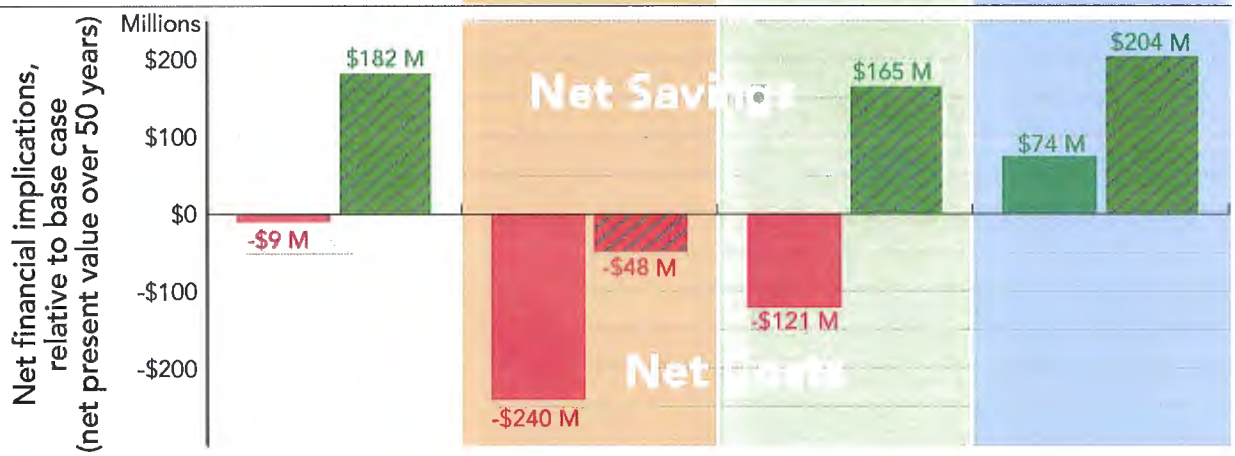
To evaluate the regional impacts of water metering, the Regional Assessment designed various metering scenarios to represent differing approaches, illustrated in Figure 3.

The Regional Assessment explores a range of scenarios: Low Hanging Fruit (the most gradual and low effort approach), Targeted Approach (adds metering programs targeting heavy water users and a voluntary option), Concentrated Effort (adds additional programs), and finally Full Commitment (the highest level of effort and commits to achieving universal metering in 10 years). Financial savings from water metering include the deferral of growth-based infrastructure upgrades and system operations savings, which are largely influenced by overall water use reductions. Financial costs include water meter installation costs as well as meter reading/maintenance costs, both of which vary based on each metering program and meter installation efficiencies (such as bulk meter purchases or neighbourhood-wide installations). The net financial impacts of each metering scenario are expressed as net present values over 50 years. Variations in net financial impacts between the scenarios are due to how fast meters are installed over the 50-year timeline. The metering programs within the Targeted Approach have higher reading/maintenance costs, leading to a higher net financial cost. Full Commitment achieves the greatest net financial savings due to the efficiencies and benefits from achieving universal metering at an accelerated pace.

The outcomes of the metering scenarios apply to Metro Vancouver as a whole under the evaluation assumption that the region as a whole implements residential water metering as defined in each metering scenario. These regional findings are intended to be viewed as high-level guidance on the expected costs and benefits of water metering, to be used in conjunction with localized triple-bottom-line evaluations to determine projected outcomes for their individual local governments.

FIGURE 3: SCENARIOS EXPLORED IN THE REGIONAL ASSESSMENT OF RESIDENTIAL WATER METERING

Scenarios	Low Hanging Fruit	Targeted Approach	Concentrated Effort	Full Commitment
	By 2068: • 53% of single-family homes metered • 8–11 BL in estimated annual water savings	By 2068: • 93% of single-family homes metered • 19–24 BL in estimated annual water savings	By 2068: • 100% of single-family homes metered • 19–24 BL in estimated annual water savings	By 2068: • 100% of single-family homes metered • 24–29 BL in estimated annual water savings
Metering Programs within each scenario to install meters on dwellings that:				
Have been newly constructed or renovated*	✔	✔	✔	✔
Are having their utilities services replaced	✔	✔	✔	✔
Are participating in a voluntary metering program		✔	✔	✔
Have repeatedly infracted water restrictions*		✔	✔	✔
Are heavy users of water		✔		✔
Are being transferred in ownership*			✔	✔
Have secondary or laneway suites			✔	✔
Have existing meter-ready connections			✔	✔
Are currently unmetered				✔



LEGEND

Financial implications for Metro Vancouver, local governments, and developers/home builders/homeowners

Financial implications for Metro Vancouver and local governments only

* Many cities across North America reduce local government costs by shifting the initial meter installation costs for these metering programs to developers/home builders/homeowners.

4. Metering Benefits to Local Governments

Water Conservation

Water metering initiatives in Metro Vancouver and in other areas have made significant positive impacts on water conservation efforts. Conservation success is due in part to the financial incentives that come along with water metering, as a reduction in water consumption generally results in a decrease in household water bills. Local governments have found that water meters and water conservation programs benefit one another when adopted in conjunction with one another.

The following real-world examples show the relationship between water metering and water conservation:

- The installation of water meters was coordinated with water conservation efforts to encourage and support water wise behaviour adaptations in the **City of Richmond.** Free educational materials and water conservation kits containing high efficiency fixtures were offered to residents that volunteered for water meters.
- In the **City of Surrey,** where 70% of single-family homes are metered, the purchase of water from Metro Vancouver over the last 15 years has remained constant while the population has grown by around 45%.
- While the **City of Abbotsford** is fully metered and the **District of Mission** remains largely unmetered, the two local governments participate together for their water conservation campaigns through a shared website. Abbotsford is able to better engage with residents through a free irrigation audit that shows water use differences before and after using metered data.
- In the **City of Calgary,** which implemented mandatory water metering in 2002, the water withdrawn from the Bow and Elbow Rivers measured 18% less in 2016 than it did in 2003, despite a population growth of 30%.
- **New York City,** which established drastic metering incentives in 1999, has seen a steady downward trend in water consumption since the 1990s, beginning with a 15 to 17% reduction in residential water use in the first two years after the initial round of water meter installations.

Detecting and Reducing Leaks

Efficient operations and management of drinking water systems rely on the accurate measurement of water use and water loss. Water meters provide essential information needed to evaluate the performance of these systems.

Many local governments use data from water metering to monitor prolonged spikes in consumption, indicating possible leaks. In the **City of Richmond,** staff report that leaks within homes can make up a significant portion of household water use, and water meters have allowed for the detection and reduction of these leaks.

Advising People About Leaks in Their Residential Water System

If a leak is detected by reviewing water metering data, local governments can efficiently convey this information to residents to prompt repairs, prevent water waste, and reduce costs to the water system.

Some local governments, such as the **District of West Vancouver** and the **City of Richmond,** provide leak detection rebates to encourage residents to fix leaks in a timely manner.

Moving Toward Better Systems Management

Without water meters, it is difficult to accurately measure water in a distribution system. Water meters provide data that can be used to make decisions related to upgrading, refining, and optimizing distribution system operations, such as for water audits, pressure management, and reservoir filling optimization. The data can also be used to identify water use patterns and spatial variations in consumption for systems planning.

In the **City of Surrey,** staff report that the implementation of water metering has helped to reveal consumption patterns in specific areas of the city to better inform the planning of capital programs.

Improving Relationships with Residents

Providing water metering data to customers allows them to see exactly how much water they are using. This empowers customers to make their own decisions on how they pay based on their water use habits, which builds trust with the customer base and reduces customer complaints to local governments.

The water metering program in the **City of Richmond** was initiated by public interest. The City received many requests for water meters from residents who asked to be billed for their water consumption in an equitable manner.

5. Metering Benefits to Residents

Equitable Billing

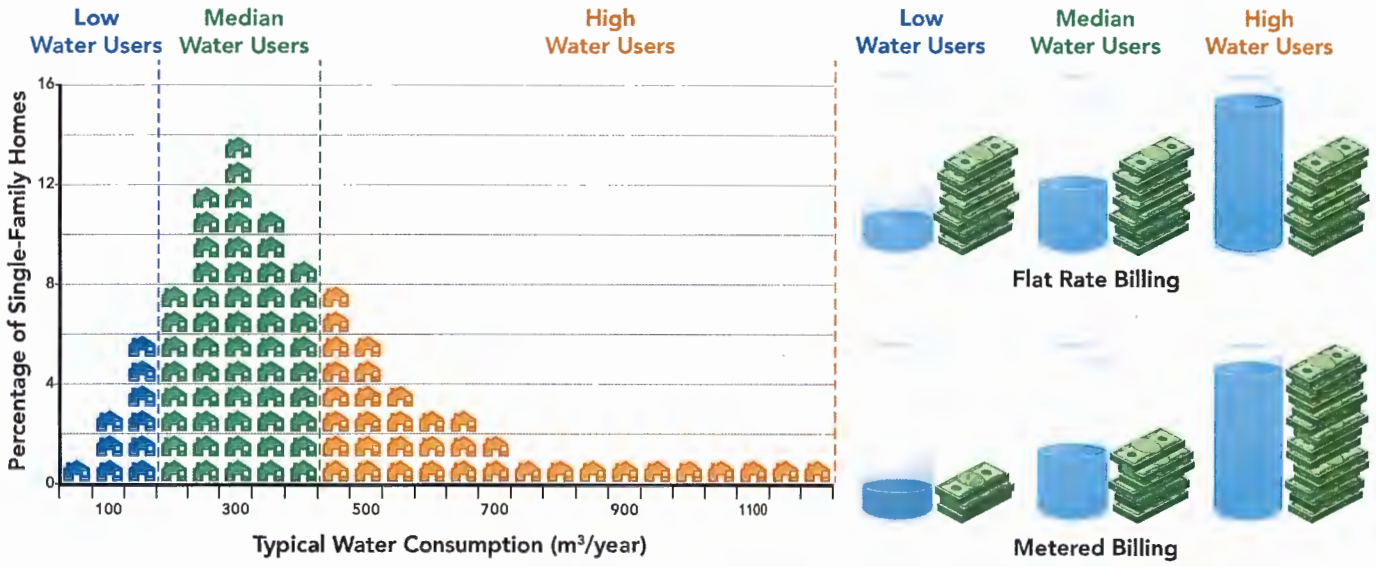
Residents with water meters are billed according to the volume of water they use, rather than a flat rate. This ensures an equitable distribution of costs that precisely reflects the amount of water consumed by each individual household.

Metro Vancouver conducted a public attitudes survey in September 2017 to gauge the perceptions and attitudes towards water metering in the region. The survey findings showed that **86% of respondents support the concept of paying for water based on usage versus a flat rate** (Mustel Group, 2017).

The results of a metering pilot study in the **District of Mission** found that 80% of homes with a meter installed, use less water than the average consumption volume that determines the District's flat rate of water billing.

Figure 4 shows the typical distribution of single-family water consumption. The water flat rate for unmetered households is typically influenced by a few high water users. This results in the majority of water users (median or low) paying more for their share of water use, since without water meters, flat rates are determined based on the average unmetered water use. All users pay the same rate regardless of use. With water meters, volumetric billing allows for users to be charged based on the volume used.

FIGURE 4: TYPICAL DISTRIBUTION OF RESIDENTIAL WATER USE



Empowering Residents to Make Their Own Decisions

When local governments provide their residents with household water use data, residents are empowered to make their own decisions about how much water to use. It has been demonstrated that this approach works in favour of regional water conservation goals and improved customer relations.

The **City of Toronto** has had success in setting up an online portal where residents with water meters can log in and view their water usage in real time. Because of the transparency that it provides to the public about water consumption, the portal has led to a decrease in disputes for high water bills (from 200 to 300 per year to 80 per year), has provided residents with a tool for informed decision making about water usage, and has helped the city to build trust with its customer base.

The **City of Abbotsford** is launching a similar web portal in 2018 for residents to access water use information online. This portal will allow customers to set alarms for leaks and monitor hourly water use.

When residents have metered water connections, they are more likely to make decisions in favour of water conservation. Environment Canada produces statistics on localized water use and pricing in Canada through the Municipal Water and Wastewater Survey of local governments across the country. Survey results since 1991 have consistently indicated that local governments with universal metering and volume-based water rates tend to have significantly lower household water use compared to local governments with no metering and flat rates or taxes (EC, 2011).

6. Considerations for Local Governments Developing a Water Metering Program

There are many factors to consider related to residential water metering programs including planning and implementation, the type of water meter and meter reading system, meter locations, the approach to measuring and monitoring, rate structures, staffing and resources, and public communications.

Planning and Implementing a Water Metering Program

DETERMINING AN APPROACH TO WATER METERING

Metro Vancouver local governments are diverse and may have different drivers and constraints for water metering. There are a number of approaches that local governments can take to implement residential water metering programs.

Some local governments decide at the outset to install meters on all residential properties within a specified time frame, thus implementing a universal metering program.

Other local governments take a more gradual approach, designing voluntary metering programs for residents and/or requiring meters to be installed during the construction of new homes and during major renovations. Local governments that choose these approaches may opt to shift to universal residential water metering after evaluating their initial metering efforts and public response.

Local conditions will inform the best approach to residential water metering for your community. Staff may choose to:

- **Investigate public support and explore approaches with residents:** The Metro Vancouver public attitudes survey offers a high level overview of public support for water meters. Additional local outreach and public involvement may provide valuable information on what approach is best for residents in your community.
- **Investigate water conservation and loss management goals:** Water meters are essential for accurate water measurement. Local government goals for conservation and water loss management are often drivers for water metering and may inform the best implementation approach.
- **Account for growth and development:** Several residential water metering programs, such as meters for newly constructed homes and meters when utilities services are replaced, have lower installation costs. Growing communities or communities with redevelopment plans should consider such opportunities to install water meters at lower costs.
- **Consider existing metering programs currently in place:** The staffing and resource requirements, water metering benefits, and public perception of existing programs may impact future decision making on water metering.

APPROACHES TO WATER METERING IN PRACTICE

Various approaches can be taken to implement water metering, ranging from the most aggressive approach of universal metering for all homes to gradually installing water meters on unmetered dwellings that:

- Have existing meter-ready connections
- Are being transferred in ownership between residents
- Are heavy users of water
- Have secondary or laneway suites
- Are participating in a voluntary metering program
- Have repeatedly infracted water restrictions
- Are being renovated
- Are having their utilities services replaced
- Are being newly constructed

In Metro Vancouver and around the world, local governments have used unique combinations of metering programs as strategies to implement residential water metering programs.

As each local government may have unique circumstances, local governments are encouraged to select an approach or combination of approaches to water metering that best aligns with their localized triple-bottom-line assessment outcomes. To read case study examples of residential water metering approaches implemented by several local governments in Metro Vancouver and other cities in North America, the United Kingdom and Australia, please see the Appendix (Case Studies).

LOCAL APPROACHES TO WATER METERING

An example of a local government that decided in the initial planning phases to implement universal water metering is the **District of West Vancouver,** where mandatory meters were installed on all unmetered homes (around 80% of all homes at the time) between 2005 and 2007. The District's reasons for choosing this approach were to ensure that all of its residents had access to equitable billing based on the volume of water they consumed.

In addition, West Vancouver determined that the bulk purchase of water meters offered competitive pricing when compared with the cost of purchasing fewer meters for a voluntary metering program.

The **City of Richmond** is an example of a local government that has taken a gradual, 15-year approach to universal residential water metering. The City started off with a voluntary water metering program in 2003 spearheaded by public interest in equitable billing. In 2005, new bylaws required water meters for all newly constructed single-family and multi-family homes and for certain renovation activities. The City achieved 70% metering of single-family homes in 2014 due to the popularity of the voluntary metering program and has now completed the path toward universal residential metering by mandating that all remaining unmetered residences become metered.

INTERNATIONAL APPROACHES TO WATER METERING

Water metering is widespread in many developed parts of the world, such as the United States, Australia, and Europe (Boyle et al., 2013, OECD, 1999). In general, single-family homes are metered in most major metropolitan areas. However, there are several countries such as the UK and Ireland, where the extent of water metering varies from one region to the next.

COMPLETING A TRIPLE-BOTTOM-LINE ASSESSMENT

To determine a metering approach that is right for their community, Metro Vancouver recommends using the water metering evaluation tool, developed as part of the *Regional Assessment of Residential Water Metering* (Urban Systems, 2019).

Local governments can use the water metering evaluation tool to understand the full costs and benefits of residential water metering programs, compare metering programs to select the most appropriate approach(es) for their jurisdictions, and generate cost estimates and water savings forecasts to support decision making.

Benefits of Universal Water Metering

- Increased savings happen more quickly
- Installing meters all at once is more efficient than a gradual approach and saves money
- Achieves comprehensive leak detection and full systems management
- In line with the utility industry best management practices

Practical Considerations

CHOOSING WATER METERS AND METER READING SYSTEMS

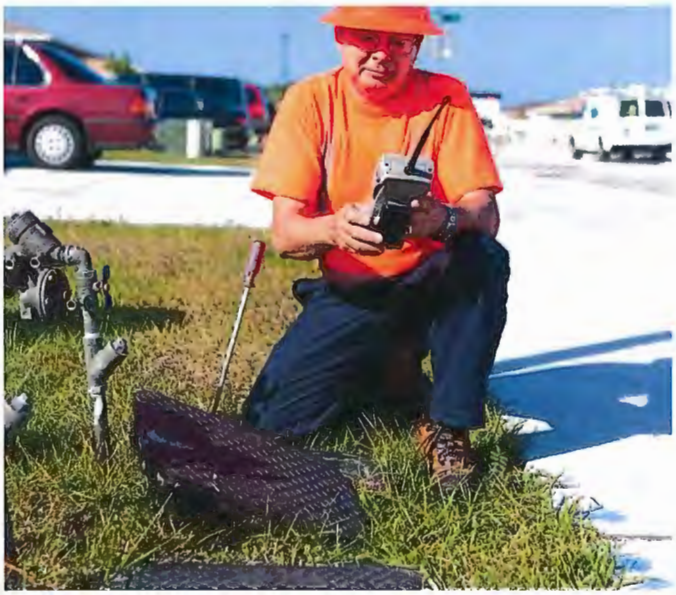
Selecting appropriate water meters, meter reading systems, and data management software is an important consideration that may impact the overall costs and benefits of water metering for a local government.

Water meters and reading systems have advanced over recent years. Many cities are considering an upgrade from traditional manual and touch-read systems, which require staff to collect data through handheld devices and vehicle units, to radio read and advanced metering infrastructure (AMI) systems, which electronically collect and transmit data to the utility office.

More information about the various metering technologies currently available can be found in the *Regional Assessment of Residential Water Metering* report produced by Urban Systems (2019).

INSTALLING WATER METERS

Meter installation is another important aspect to consider when designing metering programs. Within the Metro Vancouver region, the general preference has been to place water meters in outdoor pits located at property lines. This practice allows utilities staff to easily access and maintain the meters. Other options include installing the meters in local government boulevards, inside the property lines near the home, or indoors where the service lines enter the home.



The *American Water Works Association M6* (2012) manual provides detailed guidance on water meter installation, testing, and maintenance.

MEASURING AND MONITORING WATER USAGE

When deciding on the type of water meter reading system to implement, key considerations include the speed, efficiency, and cost at which the system can measure and monitor water.

In 2011 the **City of Abbotsford** transitioned to an advanced metering infrastructure (AMI) system which allows for automatic collection and transmission of meter data through remote fixed-base systems. The shift to AMI was motivated by water supply constraints and a desire to reduce overall water consumption. The AMI system has increased the efficiency of leak detection, resulting in prompt repairs that contribute to water conservation goals.

The **City of Toronto** found that implementing an AMI system significantly reduced costs. The AMI system eliminated the need for meter-reading staff (a savings of $5 million per year). The City of Toronto has also used AMI data to provide customers with near real-time water use monitoring through a web-based portal.

Financial Considerations

FINANCING OPTIONS FOR WATER METERING PROGRAMS

In Metro Vancouver, water meters are typically installed in outdoor pits located at property lines with installation costs ranging from $1,000 to $1,500 per connection. Although outdoor installations are sometimes preferred in temperate climates, many cities in North America install meters indoors due to colder climates and reduced costs of installation.

While water metering for new construction is almost always financed by homebuilders and developers, financing methods for other metering programs can vary across local governments. There are a variety of funding strategies that local governments can access to acquire the initial capital for water metering programs.

The most common of these include:

- Creating a universal metering reserve fund using annual revenues
- Charging users for upfront installation costs
- Acquiring third-party financing through private suppliers
- Accessing provincial and federal funding programs

In Metro Vancouver, gradual metering programs, such as voluntary programs, have typically been funded through annual local government water utility programs (operating funds). For example, the **City of Surrey** allocates approximately $3 million per year to fund meter and installation costs for single-family homes.

Larger-scale universal metering programs have been funded by a combination of third-party financing, government funding programs and user-pay options. The capital cost of the **District of West Vancouver's** universal metering program was borrowed from the Municipal Finance Authority of BC. The District estimates that by saving 15-20% of their water expenditures through metering, they will recover the full cost of the program in approximately 12 years.

Balancing the Books: Financial Sustainability for Canadian Water Systems (2018) is a resource published by the Canadian Water Network that can guide local governments on financial planning for water metering investments and cost recovery. This publication includes case studies from several local governments.

ESTABLISHING RATE STRUCTURES

By creating appropriate rate structures, local governments can ensure that they obtain adequate revenues and full cost recovery from water metering programs.

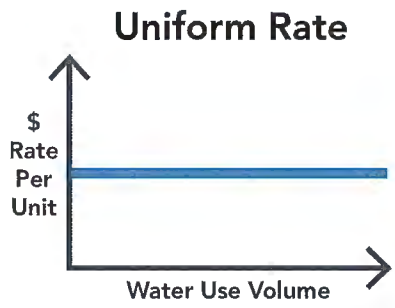
Volume-based water bills typically consist of two components: a fixed charge and a variable charge. The fixed charge is constant and helps to cover costs for services such as meter maintenance and replacement. The variable charge reflects the total volume of water the customer has consumed during the billing period, as measured by the water meter.

Local governments in Metro Vancouver use diverse approaches to determine the variable rate component of a metered customer's water bill. These approaches include:

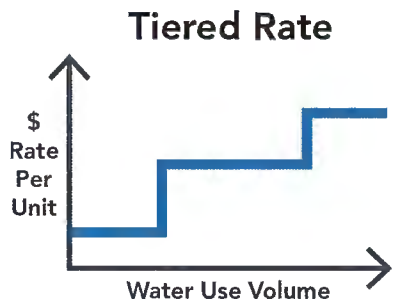
- Charging uniform rates for each unit of water consumed, as implemented by the **City of Surrey** and the **City of Richmond**
- Charging tiered rates, in which the unit rate increases depending on the level of consumption (light users are charged the lowest unit rates, moderate users are charged a somewhat higher unit rate, etc.), as implemented by the **District of West Vancouver**
- Charging seasonal rates that vary between summer and winter, as implemented by the **City of Vancouver** and the **City of North Vancouver** (Urban Systems, 2019)

Figure 5 demonstrates the differences between uniform, tiered and seasonal rates.

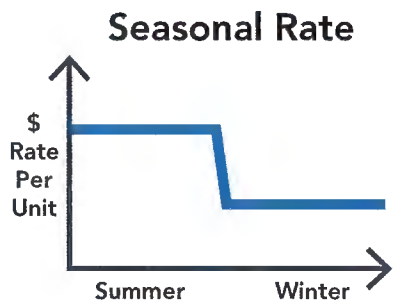
FIGURE 5: OVERVIEW OF THE APPROACHES USED TO DETERMINE THE RATE CHARGED ON A METERED SYSTEM



A uniform rate is a single cost per unit of water which remains constant on a year-round basis. The efficiency of this rate structure depends on whether it recovers the costs of water purchased by local governments.



A tiered rate structure charges a lower rate for light water use and increases the rates for water consumption over and above this initial amount. This rate structure can contain any number of tiers (two, three, four or more) and promotes water efficiency motivated by cost savings.



A seasonal rate structure varies depending on the time of year. Usually water rates increase during peak water demand season (summer) and decrease in the winter. Additional seasonal variations may also be used.

As overall water use may decrease when water metering programs are introduced, local governments will need carefully designed water rate structures to ensure full cost recovery (Urban Systems, 2019).

At the same time, in order to build customer morale and trust, local governments will often break in newly-metered households with a period of "mock billing." This allows for a financially low-risk period where customers can adjust their water use habits to suit the new rate structure (Urban Systems, 2019). In the **City of Richmond,** for example, a first-year price guarantee program allows residents to apply for credit if the first year of billing with a water meter exceeds the flat rate.

Some helpful resources for determining rate structures include:

- *Regional Assessment of Residential Water Metering,* prepared for Metro Vancouver by Urban Systems (2019)
- *Only the Pipes Should be Hidden: Best Practices for Pricing and Improving Municipal Water and Wastewater Services* by Ecofiscal Commission (2017)
- *Manual of Water Supply Practices: M1 Principles of Water Rates, Fees and Charges, 7th Edition* by American Water Works Association (2017)
- *Building Better Rates for an Uncertain World: Balancing Revenue Management, Resource Efficiency and Fiscal Sustainability* by Alliance for Water Efficiency (2014)

Resource Considerations

STAFFING

To implement a water metering program, local government staff need to plan for coordination between departments involved in planning, implementing, and maintaining water meters, including engineering, IT, billing, finance, corporate services, and development services.

Staff should establish clear dialogue between departments and solicit inter-departmental support to help build the program. It is a best practice for local governments to create detailed multi-year project plans that include staffing and resourcing needs for water metering programs.

Many local governments outsource water metering programs to third-party companies that often offer a full package of support including public outreach, advertising, water meters and installation, as well as billing and data management.

Many local governments within Metro Vancouver have transitioned from using third-party contracts to local government resources for ongoing water meter operations and maintenance, after the initial installation phase. The transfer of knowledge between third-party and local government staff is another important aspect to consider when outsourcing water metering programs.

Public Outreach Considerations

IDENTIFYING PUBLIC ATTITUDES FOR WATER METERING PROGRAMS

When developing a water metering program, it is important to assess public attitudes toward metered water. This assessment will allow local governments to anticipate potential public concerns and create effective communication campaigns to accompany meter installation efforts.

Methods for gauging public support for water metering include consultation initiatives, such as surveys, and attentiveness to unsolicited requests from residents for equitable billing, as was the case in the **City of Richmond.**

PREPARING TO COMMUNICATE EARLY AND TAILORING MESSAGES TO MEET THE NEEDS AND INTERESTS OF PUBLIC AUDIENCES

Successful water metering programs rely on well-planned public education and awareness communications that begin well in advance of water meter installations.

Local governments should ensure open communication with the public on the details of a given water metering program, with emphasis on education and awareness of water consumption and water use habits.

The successful water metering communication strategy from the **City of Richmond,** for example, publicized that residents can use available data from meters to manage the cost of their water bills. The City also paired meter installation with the distribution of educational materials on water conservation and the offer of efficient fixtures to residents.

METRO VANCOUVER PUBLIC EDUCATION AND OUTREACH SUPPORT FOR WATER METERING PROGRAMS

Metro Vancouver will support water metering programs by developing and distributing public education and outreach materials, messaging and other resources that can be used or adapted by local governments. All materials will incorporate international and localized best practices and research, and Metro Vancouver will collaborate with local governments to determine the most effective messaging and methods for promoting water metering programs.

CREATING EDUCATIONAL MATERIALS AND PROGRAMS AROUND WATER CONSERVATION

Many local governments report the mutual benefits of water metering and water conservation programs by linking educational messaging around water consumption habits, financial impacts, and water conservation efforts.

The ability to provide customers with their individual consumption data encourages more accountability and recognition of household water use behaviours and also presents an opportunity to connect customers to water conservation education and outreach programs.

To better support water use habit changes, it is recommended that educational material on water conservation and efficiency accompany water bills.

Metro Vancouver creates educational resources, water conservation messaging, and promotional artwork that can be used or adapted by local governments.

7. Key Findings from Case Studies

INTRODUCTION

The intent of the case studies is to:

- Explore real-world applications of the approaches to residential water metering studied in the Regional Assessment.
- Explore the factors that motivate local governments to implement residential water metering programs.
- Hear from local governments about the planning, practical, financial, resource, and public outreach strategies and lessons learned involved in implementing residential water metering programs in order to inform best practices and key considerations.

The case studies that follow were developed through a series of phone interviews with local government staff conducted between December 2017 and March 2019. These case studies feature examples of residential water metering programs that have been implemented throughout Metro Vancouver and the world.

THE CASE STUDIES

The first five case studies explore residential water metering in four Metro Vancouver local governments and two neighbouring local governments:

- **City of Richmond**
- **City of Surrey**
- **City of Vancouver**
- **District of West Vancouver**
- **City of Abbotsford/District of Mission**

Further case studies describe residential water metering programs in:

- **City of Calgary**
- **City of Toronto**
- **City of Seattle**
- **New York City**
- **London, England**
- **South East Queensland, Australia**

Key Findings from Case Studies

The case studies revealed several common themes:

1. **Drivers for Water Metering**

- Billing equity was the main driver for many local governments. Water meters allow local governments to bill based on water use in a fair manner and gives residents the ability to make their own decisions on how much to pay for water.
- Water meters are often viewed as an essential component of water conservation goals. Water meters provide data to monitor water use, support conservation campaigns, and provide pricing incentives to reduce consumption.

2. **Benefits of Meters**

- The ability to improve leak detection and reduction was a major benefit for local governments that have recently adopted water metering.
- Water meters empower residents by providing information on individual water use behaviour to allow household decision-making on water use impacts to bills, with the added benefit of improving communications between city and residents.

3. **Approaches to Metering**

- Some local governments choose to implement several of these approaches at once when planning and designing water metering programs, or they may decide to stagger a number of approaches over an extended time period.

4. **Public Perception**

- Local governments report overall positive public reaction to water metering programs, even though there may be a small contingent of residents resistant to meters. Well-planned communication and outreach campaigns, along with fair water rate structures, help to illustrate the benefits of meters to residents.

5. **Staffing and Resources**

- It is important to coordinate between local government departments on water metering initiatives. Local governments report that various departments such as engineering, IT, finance, and billing may be involved in water metering efforts.
- Most local governments use third-party contractors to begin larger scale metering efforts, but eventually transition to internal crews and staff for ongoing maintenance and support once programs are established or completed.

6. **Installation**

- In Metro Vancouver, local governments install meters in outdoor pits at property lines. This provides ease of access to the meters without the need to enter private properties.
- Elsewhere in North America, meters are typically installed indoors due to colder climates that require deeper pipe burial depths and lower costs of installation.

City of Richmond

WATER METERING IN RICHMOND AT A GLANCE
Estimated level of single-family metering (as of 2018): 100%
Single-family residential metering programs in place: • Voluntary (2003) • New construction (2005) • Major renovations (2005) • Watermain replacement (2005) • Mandatory metering (2014)
Main drivers for water metering: • Equitable billing and fairness • Leak reduction • Water conservation • Improved systems management

OVERVIEW OF WATER METERING

All institutional, commercial, and industrial (ICI) water users have been fully metered within the City of Richmond since the 1970s.

In 2003, a voluntary program to install water meters for single-family homes was created. Multi-family buildings were included in this program in 2010.

In 2005, new bylaws were enacted to require water meters for all newly constructed single-family and multi-family homes, as well as for single-family homes when fronting water mains are being upgraded or replaced.

These single-family metering programs enabled the City of Richmond to achieve 70% metering of all single-family homes by 2014. This prompted the decision to require mandatory meters for the remaining unmetered homes.

The City of Richmond's mandatory water metering program is expected achieved universal metering of single-family homes in 2017. Currently, around 40% of multi-family buildings are metered.

PLANNING AND DECISION MAKING FOR WATER METERS

The main driver for water meters in Richmond has been the desire for **equitable billing and fairness,** which has largely been led by public interest.

The City of Richmond received many requests from residents interested in having water meters installed in their homes. In 2003, city staff implemented a voluntary metering program to satisfy requests from residents and test the potential for future programs.

This voluntary program was very popular with residents. Public support for water meters led the adoption of other water metering programs including meters for newly constructed single-family and multi-family homes, and meters installed during water main repairs.

Around 70% of single-family homes were metered through these programs and **a decision was made in 2014 to require mandatory water meters** for the remaining 30% of single-family homes. This decision was made due to the declining participation rates in the voluntary program and the City's focus on equitable billing for all residents.

A similar voluntary program for multi-family buildings was initiated in 2010. However, multi-family meter installations are often complex and much costlier compared to single-family meter installations. The City of Richmond is currently

investigating options for increasing the level of multi-family metering in the future.

PROGRAM FUNDING

Richmond's metering initiatives have been funded through the water utility program, estimated at about 2% to 4% of the total annual program budget. Staff note that the gradual implementation of water meters has helped to spread costs and ease budget concerns.

Meter installations for single-family homes under the voluntary and retrofit programs are paid for by the city, meters for newly constructed homes (single-family and multi-family) are homeowner/developer paid, and meters for multi-family buildings under the voluntary programs are partially funded by the city.

Costs for meter maintenance and replacements are covered by fixed fees on metered water rates, for all metered connections.

RATE STRUCTURES AND BILLING

Based on billing equity as the main driver, water rate structures at the City of Richmond are set up so that the average water consumption results in equivalent fees on a metered rate or a flat, unmetered rate.

The City has found that the vast majority (around 80% of single-family and 96% of multi-family) of residents saved money with metered services compared to the flat rate, due to flat rate billing based on water consumption averages being skewed by a few excessive users.

The gradual shift to water metering has led to steady changes in consumption behaviour, allowing rates to adjust smoothly without much variability in annual budgets.

Focus on Billing Incentives: Overcoming Barriers

The City of Richmond identified two potential barriers to residents signing up for voluntary metering: residents fearing the unknown because of lack of information on water use as well as the financial burden of being billed for leakage.

With this information in hand, staff developed two incentives to help overcome these potential barriers:

- A **leak rebate program** that offers a credit for the excess volume billed after an identified leak has been fixed.
- A **first-year price guarantee program** that allows residents to apply for credit that covers the difference if the first year of billing with a water meter exceeds the flat rate. This program was put in place to encourage residents develop better water use habits without fear of penalization during the adjustment process.

These initiatives encouraged residents to sign up for the voluntary program while minimizing the financial risks involved. City staff attribute a large component of the success of the voluntary program to careful planning and consideration of residents' concerns.

THE POTENTIAL FOR METER READING SYSTEMS UPGRADES

With the universal metering of single-family homes, the City of Richmond has set its sights on moving towards a full advanced metering infrastructure (AMI) system. Rather than relying on staff to collect meter readings, AMI electronically collects and transmits data from water meters to the utility office.

The motivation to switch to AMI is to **identify leaks faster** and to **speed up billing communication and response times.** Since 2014, the City has been monitoring a Fixed Base Network pilot program, in which meters are

continually read through radio towers called gateways. This pilot program has revealed that around 8% of homes monitored have detectable, continuous leaks.

Faster meter read frequencies will allow the City to provide better customer service and leak detection assistance. Richmond is aiming for city-wide meter reads every 15 minutes, which will help save money for the City as well as residents.

Richmond completed an economic evaluation which concluded that water savings through leak reduction will generate enough funds to pay for a universal AMI system. Furthermore, AMI is anticipated to significantly speed up the meter reading process to improve overall systems management and allow for more accurate water balance calculations.

Fixed-base receivers will be installed in 2018 to 2019 and the remaining stock of touchpad read meters will be switched out within two to three years.

INSTALLATION OF WATER METERS

In 2003, the City of Richmond contracted Neptune Technology Group to operate the water metering programs, including advertising, public outreach, communications, voluntary program signup, meter installation, and residential meter reading.

Meter installations that were potentially difficult, such as those with landscaping complications, were performed by City staff. The original contract with Neptune expired in 2016, after the transition from the voluntary to the mandatory metering program. A decision was made to transition all meter installations to City staff due to the added potential of difficult installations for the remaining unmetered connections.

FEEDBACK FROM RESIDENTS

Throughout the metering process, a key message to residents was that residents now have control over how much money they want to save on their water bills with water consumption information now available through metering.

Public outreach for water meters was also combined with water conservation messaging. New meter installations were followed up with the distribution of free education material and efficient fixtures. The success of this water conservation campaign led to the extension of water conservation material to the remaining flat rate customers, with the idea that water conservation initiatives should target all residents.

City staff note that there was overall positive public response to water meters, as the majority of residents signed up for water meters voluntarily. Once this critical mass was achieved, potential political concerns over public disapproval of water meters were avoided and City Council decided to proceed with universal metering on the basis of equitable billing for all water users.

KEY REFLECTIONS ON RESIDENTIAL WATER METERING IN THE CITY OF RICHMOND

- City staff note that public interest for water meters was vastly underestimated in the beginning stages of the voluntary program. Approximately 2,000 to 3,000 residents attended the first open house to advertise the voluntary metering program.
- A major revelation for city staff through the metering programs was the ability for meters to detect leakage issues, especially private side leaks. The City found that indoor leakage played a significant role in residential water use, potentially due to the historic lack of price signal to fix leaks with flat rate billing systems.
- Staff estimate that leak detection and reduction in the City of Richmond has led to savings equivalent to the costs of the metering programs. Staff also note that the leak rebate program and first year price guarantee program played an important role in ushering in long-term behaviour changes.

City of Surrey

WATER METERING IN SURREY AT A GLANCE
Estimated level of single-family metering (as of 2017): 73%
Single-family residential metering programs in place: • New construction (1999) • New service connections (1999) • Major renovations (1999) • Residents with repeat water restriction infractions (1999) • Voluntary (2002)
Main drivers for water metering: • Equitable billing and fairness • Water conservation • Improved systems management

OVERVIEW OF WATER METERING

Since the 1980s, the City of Surrey has metered most institutional, commercial, and industrial (ICI) water users and 100% ICI metering was achieved by 2000.

Surrey City Council approved a metering strategy to **improve customer billing equity** and in 1999 new bylaws were enacted to require water meters for all newly constructed homes, major renovations over $400,000, new service connections, and when property owners do not fix private side leaks.

In 2002, a voluntary metering program was introduced for all single-family and multi-family homes. Currently, all ICI connections, approximately 73% of single-family homes, and approximately 40% of multi-family buildings within the City of Surrey are metered through the existing metering programs.

PLANNING AND DECISION MAKING FOR WATER METERS

In 1999, the City of Surrey's metering strategy established a goal for eventual universal metering of all water users. The main drivers for water metering are: **equitable billing and fairness, water conservation,** and **systems management and data collection.**

The City of Surrey introduced voluntary water metering to showcase the benefits of metering while giving residents the ability to make their own decisions. The new construction and major renovation programs ensure that the number of unmetered properties decreases over time.

The City of Surrey continues to evaluate the overall impacts of water metering and determine how to reach its metering strategy goals.

PROGRAM FUNDING

The current metering programs are under a 10 year funding plan, at approximately $1.8 million per year. funded through annual budget allocations. Under the single-family voluntary metering program, meter and installation costs of approximately $1,000 per meter are fully funded by the City. For new construction homes and those undergoing major renovations, meter and installation costs are paid for by homeowners and developers through the building and permitting process, then installed by the City. Meters for multi-family buildings are installed on a cost-share basis between the city and the property owner.

Costs for meter maintenance, billing, testing, and replacements are covered by meter base charge fixed fees that are meter size dependent on metered water rates for all metered connections.

City of Surrey

INSTALLATION OF WATER METERS

Currently, meters for single-family homes are installed in outdoor pits located at property lines. This allows for staff to easily access and maintain the meters. Meters for multi-family buildings are mostly located indoors.

Water meter installation, maintenance, and testing is completed by third-party contractors. City staff are responsible for billing, customer support, and water meter maintenance.

Water meter installations through the City's voluntary metering program averaged between 6,000 to 7,000 installations per year from 2003 to 2005. Since then, participation has steadily declined to around 1,000 installations per year in 2015.

THE POTENTIAL FOR METER READING SYSTEMS UPGRADES

The City of Surrey is planning a two-year advanced metering infrastructure (AMI) pilot project to begin in 2018. Rather than relying on staff to collect meter readings, AMI electronically collects and transmits data from water meters to the utility office.

An AMI reading system will be installed to monitor approximately 100 homes in order to gain insights on how this technology may benefit both residents and the City. In particular, staff will investigate the potential for AMI systems to assist with leak detection, improvements to customer service, water conservation, and water use education.

FEEDBACK FROM RESIDENTS

Residents are generally supportive of current water metering programs, although City staff are aware of some residents who are opposed to metering.

KEY REFLECTIONS ON RESIDENTIAL WATER METERING IN THE CITY OF SURREY

- Over the past 5 years, the City of Surrey's water purchase from Metro Vancouver has been constant despite population growth in the City. This indicates that the per capita consumption has been decreasing year after year.
- Water metering has helped the City better manage its water systems, understand consumption patterns in particular areas, and better plan its capital programs.
- After metering, households better understand the cost of their water use.

City of Vancouver

WATER METERING IN VANCOUVER AT A GLANCE
Estimated level of single-family metering (as of 2016): 6%
Single-family residential metering programs in place: • Large lots over 0.5 acres (1970s) • New construction, including laneway homes (2012) • Major renovations (2012) • Residents with repeat water restriction infractions (2016)
Main drivers for water metering: • Equitable billing and fairness • Water conservation • Leak reduction • Improved systems management

OVERVIEW OF WATER METERING

Since the 1970s, the City of Vancouver has metered all institutional, commercial, and industrial (ICI) water users, all multi-family buildings, and single-family homes with lot sizes larger than 0.5 acres.

In 2012, a new bylaw was enacted to require water meters for all newly constructed homes and homes undergoing major renovations, including new laneway homes.

As part of the City's leak reduction program, water meters may be installed when residents fail to repair detected leaks.

Currently, all ICI connections, multi-family buildings, and approximately 6% of single-family/duplex homes within the City of Vancouver are metered through the existing metering programs.

PLANNING AND DECISION MAKING FOR WATER METERS

The Greenest City Action Plan was approved by Vancouver City Council in 2011 and included a goal to **reduce water consumption per capita by 33%** in 2020 when compared with 2006 levels.

This **water conservation** goal was the main driver for investigating additional water metering as a bold step towards water use reduction. Other drivers include **leak reduction** and **systems management.** In recent years, **customer equity and fairness** has emerged as another strong driver for water metering of residential properties.

High level business cases for various approaches to water metering were put forward to Council, along with other initiatives to reduce water consumption. In 2012 Council decided to take a gradual approach to water metering, with the **eventual goal of establishing universal metering** in the City.

Since 2012, water meters have been installed on all newly constructed homes and those undergoing major renovations, including new laneway homes. A parallel initiative was created around the same time to meter all city accounts, including community centres, fire halls, and parks facilities.

A current water meter pilot program is helping the City determine the impacts of water meters on water consumption and provide leakage estimates. This pilot program will inform decision making on how to proceed with the City's goal of universal metering.

PROGRAM FUNDING

Under current metering programs, meter and installation costs are paid for by homeowners and developers through the building and permitting process. Costs for meter maintenance and replacements are covered by fixed fees on metered water rates, for all metered connections.

City of Vancouver

RATE STRUCTURES AND BILLING

When determining water rate increases, the City of Vancouver applies the same changes to both flat and volumetric rates. In 2012, the City began charging metered customers **seasonal rates** to reflect the seasonal changes to Greater Vancouver Water District (GVWD) bulk water rates. Unmetered, flat rate customers are currently not affected by seasonal rate changes.

INSTALLATION OF WATER METERS

Through new construction and major renovations, the City currently installs around 1,000 new meters per year on single-family/duplex homes. Currently, meters are installed outdoors at property lines. Water meter installation work is currently completed by city staff, who are also responsible for billing and customer support.

The City has established meter installation standards to balance impacts to service, safety, and costs.

THE POTENTIAL FOR METER READING SYSTEMS UPGRADES

The City of Vancouver's ultimate goal is to achieve universal metering and as such, a decision was made in 2012 to make the existing metered system "smart-ready" for a future fixed-base reading system. Currently, all water meters (ICI and residential) are radio-read with drive-by collection with a range of two to three kilometres.

FEEDBACK FROM RESIDENTS

Public feedback received to date has been generally supportive of water metering programs.

In recent years, there has been an increase in public interest for retrofit water meters on existing homes from residents with a desire for billing equity and cost savings.

KEY REFLECTIONS ON RESIDENTIAL WATER METERING IN THE CITY OF VANCOUVER

- The current pilot program has encountered some difficult retrofit meter installations due to mature trees and lot limitations, which has affected installation costs in some instances. If the City were to consider retrofit programs in the future, indoor meters may be investigated as an alternative option in instances when outdoor installations are too costly.
- Although many brands of water meters are marketed as compatible with various reading systems, the City has encountered some growing pains when changing meter suppliers.
    - Hardware and installation modifications are typically required for each brand of water meter, and the resources required should be taken into account when establishing meter standards.

District of West Vancouver

WATER METERING IN WEST VANCOUVER AT A GLANCE
Level of single-family metering: 100%
Single-family residential metering programs in place: • Universal mandatory metering since 2007 • New construction (1999)
Main drivers for water metering: • Water conservation • Long-term financial and environmental investment in the local water supply • Equitable billing and fairness

OVERVIEW OF WATER METERING

Since the 1980s, the District of West Vancouver has metered all institutional, commercial, and industrial (ICI) water uses and all multi-family buildings.

In 1999, a new bylaw was enacted to require water meters for all newly constructed single-family homes.

In 2005, the District implemented **mandatory residential water metering** of all remaining unmetered homes and achieved universal metering in 2007.

PLANNING AND DECISION MAKING FOR WATER METERS

One of the main drivers of water metering in West Vancouver was to improve the **public perception of West Vancouver's residential water use.** This decision arose from media attention given to the high per capita consumption rates of West Vancouver residents.

An additional driver of water metering was to make a **long-term investment** in the local water supply. The District has made a decision to invest in improving, maintaining and conserving their own Eagle Lake water source while decreasing their reliance on water supplied by Metro Vancouver. By initiating this shift, the District's intent was to control cost increases and improve system resiliency.

Metering was a key component of West Vancouver's water **conservation strategy.** The strategy took a holistic approach to conservation by introducing a metering rate structure that encourages customers to save water. The District has also complemented its metering program with water conservation education, outreach, and incentives.

The District decided to implement a universal metering program from the start. The universal program ensured **billing equity and fairness** for customers and allowed the city to access a competitive bulk rate when purchasing meters.

PROGRAM FUNDING

The capital cost of the universal metering program was borrowed through the Municipal Finance Authority of BC (MFABC). A key financial aim of the program is to save **15 to 20% in water expenditures** to recoup the cost of universal metering.

The District determined that full remuneration for the program could be achieved in 12 years. Since the meters have a lifecycle of 15 years, West Vancouver has projected that the program will pay itself back three years ahead of schedule.

The cost of meter installation was funded by customers. These costs were not absorbed into the water utility charge, but appear as a separate charge on the utility bill. As meters had already been installed in some newer homes and on a trial basis since the 1990s, the District ensured that these already-metered residents were not billed for new meter installations through the general water utility.

The charge is billed as a "meter fee" and has been amortized over 15 years at the same rate as the District's MFABC loan. Most residents opted to pay the lump sum charge upfront. Separating the meter fee from the ongoing water utility charge was very beneficial in getting buy-in from customers.

RATE STRUCTURES AND BILLING

West Vancouver's water rate structure was designed to help achieve its 15 to 20% water use reduction target.

The District initially used a **three-block inclining structure** for single-family homes. This is a tiered rate structure in which the unit rate increases depending on the level of consumption. The sewer utility rate is tied to winter water use (reflective of indoor water use) to further encourage conservation.

The rates were reviewed in 2017 and a new **four-block rate structure** was introduced in 2018. The first block was split into two separate rate structures to motivate customers to use less water. With this new rate structure, households who use minimal water are rewarded by staying at the same rate, and second-block customers have a financial incentive to get back to the first block.

To address the issue of leaks, the bylaw included a section that stipulates that if a leak is found that the owner was aware of and they had a timely response to fix it, the District would provide "leak adjustments," or a relief on the water bill.

INSTALLATION OF WATER METERS

The District developed the following protocol for water meter installation:

- The first preference was to install the meter in an outdoor pit, at property line.
- The second preference was to install it in the municipal boulevard.
- The third preference was install it inside the property but still outside.
- The fourth preference was an indoor installation, paired with close monitoring of the meter to see if a movement to the outdoors was possible.

This protocol enabled the District to achieve its goal of universal metering, despite site constraints.

FEEDBACK FROM RESIDENTS

The District has found that delivering public messaging on equitable billing and fairness is more effective than highlighting cost savings as a benefit of water metering.

Some residents have provided the feedback that they thought they were going to save money with the implementation of universal metering, but their bills have increased. The District has responded by noting that while water bills are indeed on the rise, they are rising at a slower rate than they would if the meters had not been installed.

KEY REFLECTIONS ON RESIDENTIAL WATER METERING IN THE DISTRICT OF WEST VANCOUVER

- The metering program identified significant water wastage and leaking on the private side service connections. Most of the leaks were due to older service connection and old or faulty irrigation systems. Leak detection was a major benefit of universal metering.
- Considerable resources and efforts are needed to implement a universal water metering program, including meter reading, billing, and operational systems.
- The program required an adjustment to internal staff resources, including a balance between finance capabilities and engineering data collection needs.
- There were construction impacts and issues because of the high visibility and intrusive nature of the installation. The District was well prepared with good public relations and messaging to respond to and manage concerns.

City of Abbotsford and District of Mission

WATER METERING IN ABBOTSFORD AND MISSION AT A GLANCE	
Abbotsford	**Mission**
Estimated level of single-family metering (as of 2016): 100%	Estimated level of single-family metering (as of 2016): 13%
Single-family residential metering programs in place: • Universal metering since 1995	Single-family residential metering programs in place: • New construction • Pilot program for single-family metering
Main drivers for water metering: • Systems management • Equitable billing • Leak reduction • Water conservation	Main drivers for water metering: • Systems management • Equitable billing • Leak reduction • Water conservation

OVERVIEW OF WATER METERING

The City of Abbotsford has been **universally metered since 1995**, when the District of Matsqui and the District of Abbotsford amalgamated to form the City of Abbotsford. After amalgamation, a decision was made to install water meters on all unmetered dwellings to consolidate water services operations within the newly formed city.

In contrast, the District of Mission is **partially metered.** In 2009, the District required water meter installation on all newly-constructed single-family homes, resulting in a current estimate of 13% metering in single-family dwellings. Additionally, there was a period in the 1970's when development included the installation of meters. However, these meters were never used for billing purposes. In 2015, these meters were replaced and used in the development of a **pilot study** to investigate the potential water savings that could be achieved with universal metering for single-family homes. The results of the study will inform Council on how to proceed with water metering within the District.

PLANNING AND DECISION MAKING FOR WATER METERS

The City of Abbotsford and the District of Mission share a **regional system for water and sewer services,** with a combined service population of approximately 160,000 residents. Abbotsford, as the larger local government body, is responsible for regional water supply operations, with financial contributions from Mission.

Abbotsford and Mission are collectively responsible for regional water and sewer decision making through the Abbotsford/Mission Water and Sewer Commission. Localized water issues, such as water metering, are decided upon individually by each local government.

In 2006 and 2007, peak water demands in the Abbotsford/Mission area approached supply capacity and several options were considered by the Commission to improve water security more intensive water conservation efforts were initiated in 2008, such as two days a week, morning only lawn watering regulations. Mission decided not to proceed with funding new water supplies and Abbotsford declared a referendum to decide the feasibility of a public-private partnership (P3) project.

The Abbotsford referendum in 2011 for supply infrastructure spending was overturned, dissolving plans to build a new supply and treatment facility at Stave Lake. In the meantime, major water conservation efforts were also underway.

Automatic Metering Infrastructure (AMI) was installed on all meters in Abbotsford in an effort to reduce peak water use, improve customer service, and increase billing frequency. **The focus on water conservation led to noticeable decreases in water use,** which has improved water supply in the region.

As the region continues to grow and plan for the future, the sustained focus on water conservation has successfully maintained a decrease in water use, allowing for flexibility in the exploration of further water supply options.

City of Abbotsford – A Case Study in Advanced Metering Infrastructure (AMI)

IMPLEMENTING METER READING SYSTEMS UPGRADES IN THE CITY OF ABBOTSFORD

In 2011 the City of Abbotsford **transitioned their metered accounts to an AMI system** for reading and billing. Rather than relying on staff to collect meter readings, AMI electronically collects and transmits data from water meters to the utility office. This shift to AMI was motivated by water supply constraints and a desire to reduce overall water consumption.

Prior to the implementation of the AMI system, water metering data was read manually and water bills issued annually as a component of the homeowner's annual tax bill. AMI allowed for a unified meter reading system, eliminated time consuming and labour intensive manual reads, and enabled automatic monthly reads and bi-monthly bills to encourage water conservation.

AMI has also improved customer service and leak detection. City staff estimate that 3,000 to 6,000 leak notification postcards per year are sent to residences when leaks are detected.

FINANCING AND IMPLEMENTING AN AMI SYSTEM

The AMI system upgrades and software were funded through a combination of grant funding and City operating funds. Itron, a third-party contractor, was hired to install all related AMI hardware, set up software, and ensure integration with City operations.

Various departments within the City were heavily involved in the transition to AMI, including engineering, operations, IT, billing, and finance teams.

DEMONSTRATED BENEFITS OF AMI

Abbotsford staff noted that two of the greatest benefits of transitioning to an AMI system are **leak detection** and the **enhancement of customer service.**

Through the leak detection program, there has been a significant amount of water saved. Although the City was universally metered prior to AMI, reading and billing occurred annually, which made it difficult to detect leaks and report to customers in a timely manner.

With monthly AMI meter reads and bi-monthly billing cycles, the City is now able to detect increases in water use, indicating leaks, and notify customers accordingly. In addition to reducing water loss, this process encourages **public trust in a fair billing system** and improves customer service.

DEVELOPING A WEB PORTAL FOR RESIDENTS

The City of Abbotsford is continuously working to educate residents on water conservation and efficiency. To complement existing water conservation and leak detection efforts, the WaterWise web portal was launched in March 2018 so that residents can access water use information online.

This web portal allows users to set alarms for leaks and monitor hourly water use. The objective of the portal is to enhance the overall customer experience and further educate users.

FEEDBACK FROM RESIDENTS ON AMI AND RATE STRUCTURES

City staff note that the timing of the AMI upgrades collided with peak summer water use and water supply upgrades, in addition to the failure of the water supply infrastructure spending referendum and the local government elections in 2011. This timing, coupled with a general lack of public awareness of water metering, led to some initial public outcry over the new AMI system.

A new inclining tiered billing rate structure was initially implemented as AMI was launched. However, City Council reversed the decision after the first summer of using this rate structure due to customer complaints.

KEY REFLECTIONS ON AMI IN THE CITY OF ABBOTSFORD

- There are practical, public outreach, and billing considerations involved when transitioning to an AMI system:
  - Although suppliers and third-party contractors may advertise AMI installations as "plug and play," the transition requires considerable efforts and resources from City staff departments. **Effective communication between teams** and detailed knowledge transfer between contractors and City staff are integral to the success of AMI.
  - Although public education campaigns about the new AMI system were launched in advance of billing changes, City staff reflect that a more **gradual transition to AMI** may have lessened public concerns.
  - City staff recommend **gradual changes to billing structure,** to ease the transition to separate bi-monthly water bills from annual tax bills.

District of Mission: A Case Study in Developing a Water Metering Pilot Study

BACKGROUND

As the District continues to investigate future supply planning, **water conservation** has been identified as an effective means of reducing demand. Water conservation is an attractive strategy because it costs less than developing additional water supply infrastructure.

Under Mission's, new construction metering program, all single-family homes built since 2009 are metered and pay a volumetric rate for water usage, currently making up around 13% of single-family homes in the District. Water metering options for the remaining unmetered homes are being explored as a means of conserving water and **improving billing equity** amongst customers.

Staff have been conducting a pilot study to gather information on the costs and benefits of water metering and available metering options. The pilot study is based on monthly 'drive-by' readings that provide monthly water usage information by customer. If further investigation is required for a specific customer, Mission staff are able obtain hourly meter data for a one month period, but directly connecting to a meter. The results of the pilot study will inform District Council on **how best to proceed with water metering** in Mission.

SCOPE AND RATE STRUCTURES

The main purpose of the pilot study is to determine the potential water savings that can be achieved through universal water metering.

The pilot study, consisting of approximately 500 meters, began in 2015 with 500 single-family homes that had water meters installed. The selected homes continued to be billed a flat rate regardless of their water use. During the initial years of the study, water use information was not provided to residents, thus establishing a blind assessment of unmetered water consumption behaviour.

City of Abbotsford and District of Mission

In late 2017, Council made the decision to transition pilot study participants to a metered water rate structure with water use and corresponding billing information provided to residents.

RESULTS OF THE PILOT STUDY SO FAR

The pilot study has now gathered three years of data that represent unmetered water use behaviour in single-family homes.

This current data set reveals that **over 80% of the selected homes are using less water than the average consumption that determines the District's flat rate for water billing.** These results indicate that the majority of these pilot study homes would see financial savings once they transition to volumetric water billing. Furthermore, this demonstrates that the majority of flat rate customers are subsidizing the small percentage of high water users.

The ongoing pilot will now inform residents on their water use through an educational campaign. Pilot meter customers currently pay an annual flat rate, but will be transitioned to a volumetric rate in 2019 (with customers given the option to switch sooner if desired). After the transition to volumetric billing, staff will continue to monitor the pilot study data to establish a comparative data set of metered water use behaviours. Additional staff resources have been allocated to the monthly review of water usage trends in order to identify and rectify leakage issues.

Another notable finding from the pilot meter study was the scale of water leakage that was identified. In one case, an in-ground, service line leak increase to a rate of 77 m^3 per day. This highlighted two important aspects:

- Large leaks on the service line can go undetected if situated in porous ground conditions; and
- Metering at the property line is necessary to identify service line leaks (some municipalities install meters in-house to reduce cost).

The before and after comparison of the impacts of water metering on water use will inform a business case and action plan on water metering in Mission.

FUTURE DECISION MAKING ON WATER METERING IN THE DISTRICT OF MISSION

Mission staff are planning to review the pilot results with Council through a workshop to discuss the costs and benefits of water metering and the various implementation options available.

City of Calgary

WATER METERING IN CALGARY AT A GLANCE
Level of single-family metering: 98-99%
Single-family residential metering programs in place: • Universal mandatory metering since 2008
Main drivers for water metering: • Water conservation • Equitable billing

OVERVIEW OF WATER METERING

All industrial and commercial buildings are metered in the City of Calgary and 98-99% of residential households have water meters installed.

The City of Calgary held a plebiscite in 1989 to assess public interest in residential water metering to **conserve water** and **introduce equitable billing.** Based on the outcome of this plebiscite, the City implemented a voluntary residential water metering program in 1991.

In 2002, a new bylaw required all newly constructed buildings to install water meters. The City of Calgary made the decision to implement a mandatory residential water metering program in 2008, with 2015 as a target for meters to be installed on all households.

PROGRAM FUNDING

All initial costs for water meters and installation are funded by the City through water utility rates. These costs are then integrated into water utility bills.

RATE STRUCTURES AND BILLING

Residents with water meters installed, which constitute the majority of the City's water utility customer base, receive bills containing both a flat-rate water service charge and a variable charge that reflects their water usage.

Rates for unmetered customers (1 to 2% of residents) are determined based on the square footage of their dwellings. Unmetered customers are subject to a minimum charge and typically have higher bills than metered customers.

The City completes a cost-of-service study every four years to determine the billing rate for both metered and unmetered water users.

INSTALLATION OF WATER METERS

In Calgary, water meters are installed in basements where service lines enter the home.

THE POTENTIAL FOR METER READING SYSTEMS UPGRADES

The City of Calgary currently uses an automatic meter reading (AMR) system. Meters are read with handheld AMR device reads. The City is currently exploring an advanced metering infrastructure (AMI) program, with the possibility of initiating the transition to AMI within the next year.

KEY REFLECTIONS ON RESIDENTIAL WATER METERING IN THE CITY OF CALGARY

- Residential water metering has contributed to the conservation of the local water supply. In 2016, **annual water withdrawn from the Bow and Elbow Rivers was 18% less than the 2003 benchmark**, despite a population growth of 30% since 2003.

City of Toronto

WATER METERING IN TORONTO AT A GLANCE
Level of single-family metering: Nearly 100%
Single-family residential metering programs in place: • Universal advanced metering infrastructure (AMI) water metering program
Main drivers for water metering: • Consistency across amalgamated areas • Equitable billing • Systems efficiency

OVERVIEW OF WATER METERING

In 1998, six boroughs amalgamated to form the City of Toronto. Metering policies and technologies used to differ between the boroughs and after amalgamation there was a desire to centralize and simplify the mix of billing and metering systems to **ensure customer equity** and **system efficiency.** In response, Toronto Water was created to manage the water supply of the newly joined region.

Water meters were installed in the 1920s to 1940s in the five outer boroughs. However, about 15% of single-family homes in the old City of Toronto did not have water meters at the time of amalgamation.

After amalgamation, a business case for universal water metering in Toronto was completed from 2002 to 2003. The Water Meter Program, a capital project to install advanced metering infrastructure (AMI) water meters on all homes and businesses in the City of Toronto, was approved by City Council in 2008. The implementation of this program took place between 2010 and 2016.

In 2016, the City of Toronto launched the MyWaterToronto online portal for residential customers. The portal allows customers to log in and view their daily water usage.

PLANNING AND DECISION MAKING FOR WATER METERS

Amalgamation in 1998 resulted in an inconsistent mixture of billing systems and water meter reading technologies in the City of Toronto. As a result, water billing varied depending on where each resident lived in the city.

After amalgamation, some residents paid a flat rate for water, whereas others were metered. Many older meters were under registering. Some residents were allowed to phone in their water meter reading, while other meters were manually read.

As water meters are located indoors in the City of Toronto, staff visited each individual dwelling to read the meters. If residents were not home, bills were subject to estimates that were often proven to be inaccurate once the actual readings were taken.

The City of Toronto decided to pursue a universal metering program with advanced metering infrastructure (AMI) to unify metering practices in the region, address billing issues and improve customer service, eliminate meters that gave inaccurate reads, and increase system efficiency.

PROGRAM FUNDING

Water meter replacement costs and installation, as well as the installation of meters for unmetered homes, were paid for by the City as part of the universal AMI water metering capital program. The budget for this program was 200 million dollars.

The savings from eliminating manual reading systems was five million dollars per year. Improving the efficiency and accuracy of meters resulted in a revenue recovery of 28 million dollars per year. **In total, universal AMI metering resulted in a savings of 33 million dollars per year, recovered across five to six years.**

City of Toronto

RATE STRUCTURES AND BILLING

The City's water rates factor in operating and capital costs, as well as water meter acquisition and installation. Toronto Water requested from City Council a 9% increase in water rates for a duration of nine years in order to financially support the implementation the AMI water metering program.

Rather than split water billing into a fixed charge and a variable charge, the City integrates all of its water operations and maintenance costs into one variable rate.

INSTALLATION OF WATER METERS

In the City of Toronto, meters are installed indoors because of the cold climate. From 2010 to 2016, water meter upgrades and installations were completed in each of Toronto's 44 wards.

At the onset of program implementation, the City installed AMI water meters one ward at a time. Once staff became comfortable with the meter installation process, they began to work within seven wards simultaneously.

FEEDBACK FROM RESIDENTS

The City of Toronto launched a comprehensive public education and communication program prior to the water meter installations. City staff note that proactively offering information to residents about the installation expectations and offering a rationale for the project was helpful in increasing public support.

Some residents resisted the new program because of concerns about the health impacts of AMI transmitters. In response to these concerns, the City worked with health officials to promote the safety of the meters. In-field testing was conducted on AMI meters, and results were shared with the public.

The public reaction to the MyWaterToronto online portal was very positive, as this system initiated a customer service interaction that wasn't in place previously.

KEY REFLECTIONS ON RESIDENTIAL WATER METERING IN THE CITY OF TORONTO

- Prior to the implementation of universal water metering, the City was charging a flat rate for unmetered customers based on an estimate of 300 cubic metres of water per year. Once meters were installed in these dwellings, **the average bill dropped by approximately 15%.**
- Many residents who contacted the City to complain about water metering came around to the idea after staff explained the rationale for the change. The City's proactive approach to informing residents about the meter installation process and expectations was also helpful in building public trust.

The MvWaterToronto Online Portal

In February 2016, the City launched the MyWaterToronto online portal. The purpose of the portal is to make all water use data available online to residents and businesses. Customers can log in to the portal, view their daily water use, and make choices about their water consumption based on the information that they view.

MyWaterToronto has helped to improve and diversify customer service. During the first five or six months after the portal launch, the City responded to 1,000 to 1,500 emails from customers, opening up dialogue with residents beyond the water bill.

City staff have observed that increasing transparency with customers through the portal has helped to build public trust in the water utility system. Since the creation of MyWaterToronto, the number of water service complaints has gone down. The City used to manage 200 to 300 bill disputes per year. With the implementation of the portal, the number of customer disputes has decreased to approximately 80 per year.

City of Seattle

City of Seattle

WATER METERING IN SEATTLE AT A GLANCE
Level of single-family metering: 100%
Single-family residential metering programs in place: • Universal mandatory metering since 1920
Main drivers for water metering: • Equitable billing • Systems efficiency

OVERVIEW OF WATER METERING

The city of Seattle began a gradual program of metering in the early 1890s before adopting a policy to universally meter all connections in 1908. Seattle has had universal metering in place since July 1, 1920. Under the 2003 Municipal Water Law, the State of Washington requires all municipalities in the state to meter their customers.

The main drivers for water metering were **billing equity,** and to provide customers with an incentive to conserve water and not waste it.

PLANNING AND DECISION MAKING FOR WATER METERING

Seattle Public Utilities (SPU) is focused on balancing equity, efficiency, and financial stability as it continues to supply metered water to the City of Seattle.

Over the next six years, water rate increases will be driven primarily by inflation and the cost of several new capital projects. Current water demand forecasts indicate that during this period, water use will remain fairly constant followed by slightly increasing demand in the years to follow.

PROGRAM FUNDING

The primary source of funding for The City of Seattle's water utility is revenue derived from wholesale and retail sales of treated drinking water. To finance capital water treatment facilities, the City relies primarily on borrowing. Seattle also receives contributions from developers, though this funding source accounts for only a small portion of capital financing.

Originally, the City of Seattle paid for meters and installation costs. This policy has changed, and now the customer pays for the meter and the meter installation. Once the meter is in place, the City pays for testing, maintenance, repair, and replacement.

RATE STRUCTURES AND BILLING

The rate structure for residential customers includes two components: a fixed monthly charge and a seasonally differentiated variable charge.

To encourage conservation in the summer months, the residential variable charge has a three-tier structure. The first tier, up to five hundred cubic feet (CCF), is designed to meet basic residential water needs. The second tier, from 5 to 18 CCF, is billed at a higher rate than the first. The third tier, above 18 CCF, is set at an even higher rate to discourage the use of very large volumes of water for activities such as irrigation.

Seattle has high fixed costs and very low variable costs because of its gravity-fed system.

INSTALLATION OF WATER METERS

Most water meters are installed outdoors. For single-family homes they are placed at the property line in the right-of-way.

KEY REFLECTIONS ON WATER CONSERVATION EFFORTS IN THE CITY OF SEATTLE

- One of the key misconceptions about water conservation is that conservation causes rates to increase. This misconception misses two key facts: unit rates may increase but bills do not necessarily increase proportionally because residents have reduced their water use and can control how much they pay. Secondly, conservation saves money in the long-term because it helps postpone or avoid the high costs of expanding supply which leads to much more substantial water rate increases.
- Now that conservation has created a comfortable cushion between demand and supply for Seattle, there is less reason to invest as heavily in conservation programs. Water use efficiency is projected to continue improving as customers replace appliances and fixtures with ever more efficient models provided by the market and/or required by code. Seattle's conservation program now concentrates mostly on reinforcing current practices and maintaining the conservation ethic so that conservation savings already achieved are maintained.

New York City

WATER METERING IN NEW YORK CITY AT A GLANCE
Level of single-family metering: Nearly 100%
Single-family residential metering programs in place: • Mandatory metering in place since 2000, with a 100% surcharge on flat rates for residents who do not comply
Main drivers for water metering: • Water conservation • Equitable billing

OVERVIEW OF WATER METERING

The New York City has required the installation of water meters on all businesses since 1937. Faced with **the need to conserve water due to a shortage of supply**, New York City Council passed a local law in 1985 requiring that water meters be installed on all new construction and substantially renovated dwellings.

In the mid-1980s, the New York City Water Board designed regulations that provided the legal basis for metering existing residential properties.

From 1992 to 1998, the City installed approximately 500,000 new residential water meters. Along with implementing the metering program, the City spearheaded a toilet replacement program involving more than 1.3 million fixtures and 120,000 properties.

Starting in 2000, unmetered residential customers were required to install water meters. Residents who did not comply were assessed a 100% surcharge on their annual flat rate bills. At the beginning of this initiative, 36,000 residential accounts were surcharged, but this number has decreased to about 4,800 today.

PLANNING AND DECISION MAKING FOR WATER METERS

The decision to implement water metering was driven by the need to conserve water. New York's water supply was limited and wastewater treatment projects needed to be developed and expanded.

Prior to implementing mandatory water metering, it was only during drought emergencies that the City was able to motivate residents to decrease their water use. However, once the emergency was over, residents went back to their old habits and consumption rates increased again.

By implementing water metering and increasing water rates by more than double, the City generated the urgency required for people to pay attention to their water use. Residents were encouraged to minimize their water consumption, fix leaks, and make the shift to "waterwise" fixtures.

PROGRAM FUNDING

The New York City issued capitally funded contracts with water and sewer funds to implement mandatory water metering. Had water metering not been selected as a water management strategy, the City would have spent significantly more than the capital investment cost on expanding water supply and infrastructure.

RATE STRUCTURES AND BILLING

The New York City has increased their water rates steadily over the last 20 years, which has helped to keep consumption low. There is an argument that metering is more effective now than when it was first introduced because of these rising rates.

New York City

INSTALLATION OF WATER METERS

As of the mid-1980s, the City's intention was to work toward universal water metering, with the understanding that this goal would take many years to accomplish. In order to manage the magnitude of the plan, water meters were installed in stages.

The first round of residential water meter installations occurred between 1988 and the mid-1990s. A second round took place from the mid-1990s to the early 2000s, and by 2002 about 90% of residential buildings had meters installed.

KEY REFLECTIONS ON RESIDENTIAL WATER METERING IN THE NEW YORK CITY

- There was a **15 to 17% reduction in water use** in the first two years after meter installation. The City has seen a steady downward trend in water consumption since the 1990s, which has been driven by improvements in appliance efficiency and the introduction of water metering.

London, England

WATER METERING IN LONDON AT A GLANCE
Level of single-family metering: • The majority of households in London have water meters • 53% of England is metered (as of 2016)
Single-family residential metering programs in place: • Private water suppliers can mandate water metering in London and other areas of serious water stress, and on change of occupier
Main drivers for water metering: • Water scarcity and conservation

OVERVIEW OF WATER METERING IN LONDON AND ENGLAND AS A WHOLE

The water and sewerage industry in England and Wales was privatized in 1989. There are currently 25 private water suppliers covering England, Scotland and Wales, with Thames Water being the main water company or supplier in London.

Water metering efforts began in London in the later part of the 2000s, with the main driver being **water scarcity.** As of 2016, 53% of households were metered in England.[1] Most of London is currently metered.

The southeast part of England has higher metering rates because this area has been classified by the Environment Agency as an area of serious water stress. The regulatory framework in the United Kingdom allows private water suppliers to mandate metering to all of their customers in areas that have been given this designation.

The extent and timeline of metering program implementation depends on each water supplier. Water companies pay for upfront meter costs, which are then recovered through customer water bills.

WATER METERING REGULATORY FRAMEWORK IN THE UNITED KINGDOM

Water companies in the United Kingdom can charge metered customers by volume if they live in a new home, use large amounts of water, or live in water stressed areas.

For homes that do not meet the prescribed conditions above, water companies can install meters on residential properties, but only insist that new occupiers pay for their water by volume. Residential customers can voluntarily opt for a meter.

KEY REFLECTIONS ON RESIDENTIAL WATER METERING IN ENGLAND

- From 2015 to 2016 in England, metered households consumed an average of 125 litres of water per day, whereas unmetered households consumed an average of 155 litres of water per day.
- From 2015 to 2016, the average Londoner consumed 164 litres of water per day, about 20 litres per day above the national average.[2]

1 Retrieved from Delving into Water 2016: Performance of the water companies in England and Wales 2011-12 to 2015-16: https://www.ccwater.org.uk/wp-content/uploads/2016/11/Delving-into-water-2016.pdf

2 Retrieved from Delving into Water 2016: Performance of the water companies in England and Wales 2011-12 to 2015-16: https://www.ccwater.org.uk/wp-content/uploads/2016/11/Delving-into-water-2016.pdf)

South East Queensland, Australia

Queensland Government

WATER METERING IN SOUTH EAST QUEENSLAND AT A GLANCE
• Level of single-family metering: 100%
Single-family residential metering programs in place: • Universal metering since the early 2000s
Main drivers for water metering: • Water conservation • System efficiency • Equitable billing • Responsible water utility management

OVERVIEW OF WATER METERING IN SOUTH EAST QUEENSLAND

Queensland Urban Utilities (QUU) was established in 2010 as a statutory body to provide retail water services to more than 1.4 million people within the Brisbane, Ipswich, Lockyer Valley, Scenic Rim, and Somerset council areas in South East Queensland.

Water meters are mandatory for all users. The QUU service area is universally metered and most of the region has been so for several decades. South East Queensland became more serious about this issue in the early 1990s and Brisbane Water (making up most of what would become the QUU service area) became universally metered by about 1998. The rest of the service area was fully metered by the early 2000s. Two decades later, QUU is working on replacement of its fleet of water meters for the second and third time under a continuous change out program.

PLANNING AND DECISION MAKING FOR WATE METERS

In Australia, water metering is viewed as a baseline as part of responsible water systems management. Average residential consumption in the QUU service area is around 160 litres per capita per day (Lcpd) and has remained stable for many years, since the record-breaking "Millennium Drought" of the mid-2000s.

The vast majority of meters in the current fleet are a conventional (manual read) design. Conventional meters are currently read quarterly at a cost of about AU$0.10 per read, which remains the most cost-effective approach in the short term. As a benchmark, QUU can purchase conventional residential meters at a cost of about AU$51 per unit compared to AU$175 to AU$300 for an AMI unit (note that the price for the conventional units excludes installation and is based on volume purchasing for a very large utility).

Meanwhile, QUU has implemented a pilot project in Rocklea, a large suburb south of Brisbane, using drive-by data collection technology. More advanced AMI technology with radio transmitters is also required for new large non-residential and multi-residential development in anticipation of it becoming universal in the future.

PROGRAM FUNDING

QUU currently replaces about 5,000 or 6,000 meters per year under a normal capital renewal program. This work is funded through ordinary capital budgets with costs ultimately recovered through customer water rates.

RATE STRUCTURES AND BILLING

The QUU bill includes both fixed and variable charges. Fixed charges include a water access charge (currently AU$54.12 per quarter) and a sewer access charge (currently AU$134.46 per quarter). The variable component includes a bulk charge (reflecting cost of bulk supply from the State Government) and an inclining block two-tiered

consumption charge. Consumption charges vary across council services areas. As an example, in the Brisbane area (with the largest population), consumption under 74 m^3 per quarter is charged at AU$0.768/m3, while consumption over this threshold is charged at AU$1.489/$m^3$. The variable bulk charge is an additional AU$2.915/$m^3$. Altogether, a household consuming an average of 80 m^3 in a 90-day period would have a bill of AU$487.44 including both water and sewer charges.

INSTALLATION OF WATER METERS

Developers are responsible for installation of meters on new properties according to a standard specification. This specification follows one set out by the Water Services Association of Australia (WSAA) for approved meter types. Meters are installed outdoors at property boundaries following conventional configurations.

Maintenance and replacement work are completed by QUU, usually employing outside contractors.

Universal metering in Queensland is supported by various state level regulatory requirements. For example, the service provider has the power to install meters and enter properties to read them under the *Water Supply (Safety and Reliability) Act 2008* (s. 35, s. 37). Sub-metering has also been required in certain types of development such as gated strata properties since 2008.

FEEDBACK FROM RESIDENTS

Residential water metering is a standard practice and QUU staff report that there is no push back whatsoever against the ongoing replacement program.

QUU provides information on its website about related topics including how to locate and read meters, replacement, advice on how to find usage information on bills, and how to get a test if a resident believes their readings are not accurate.

QUU conducts regular customer surveys as part of normal operations. This research finds that residents continue to view environmental management as an important issue. Residents are supportive of QUU's environmental leadership, are interested in water conservation, and want to avoid future spending on water infrastructure projects such as construction of new dams. Lessons learned from the drought remain top of mind for residents, including water restrictions and symbols of conservation that became commonplace (e.g., shower timers). Sustainable water management is highly valued by the community.

Where there is push back from residents, it is typically about charges and bills. Water services remain expensive as QUU continues to pay for the substantial costs of major drought-related infrastructure constructed in the past 15 years (desalination plants, new dams, large pipelines, etc.).

KEY REFLECTIONS ON RESIDENTIAL WATER METERING IN QUU

Metering is a broadly accepted best management practice both within the water industry and by the general public across Australia. After decades of living with water meters, residents do not imagine it any other way.

Water services are highly valued in South East Queensland and per capita consumption is exceptionally low by Canadian standards. Historically, metering contributed to this situation. Unfortunately, it also took a major crisis in the form of a record breaking drought that reached near emergency proportions.

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MAPLE RIDGE
British Columbia
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City of Maple Ridge

TO:	His Worship Mayor Michael Morden and Members of Council	**MEETING DATE:**	December 8, 2020
		FILE NO:	01-0340-50
FROM:	Chief Administrative Officer	**MEETING:**	Workshop
SUBJECT:	Public Hearing Policy No. 3.17		

EXECUTIVE SUMMARY:

Public Hearings allow affected citizens to provide their comments and opinions to Council on proposed amendments to Official Community Plan bylaws, zoning bylaws, phased development agreement bylaws and bylaws for the termination of land use contracts.

At the Public Hearing, all persons who believe that their interest in property is affected by the proposed bylaw must be afforded a reasonable opportunity to be heard. This involves an opportunity to address Council verbally and/or submit correspondence.

The attached Public Hearing Policy has been drafted to provide guidance and clarity on the process and correspondence submission to anyone wishing to participate in a Public Hearing. The legislative procedures will be embedded in a revised Council Procedure Bylaw.

RECOMMENDATION:

That Public Hearing Policy No. 3.17 be adopted.

DISCUSSION:

a) **Background Context:**

Currently there are no written guidelines or policies for residents and applicants to refer to when wanting to know more about the Public Hearing process. While staff do adhere to the notice requirements in the *Local Government Act*, there is confusion as to which staff or department Public Hearing correspondence should be sent to. Public Hearing notices advise residents and applicants to email clerks@mapleridge.ca but some correspond directly with Mayor and Council and some directly with the file manager in Planning. To allow the process to function as required, Legal and Legislative Services staff need to ensure that all incoming correspondence related to an official Public Hearing Package is captured and appropriately distributed.

The current deadline for receipt of correspondence is 4:00 p.m. the day before the Public Hearing for written material and 4:00 p.m. on the day of the Public Hearing for email correspondence. There is an assumption from residents that their correspondence has been received but as staff leave at 4:00 p.m. there is a potential risk that correspondence may be missed after hours.

4.4

In preparing the policy staff surveyed other municipalities for their deadlines for the submission of correspondence:

Municipality	Correspondence Deadline
City of Surrey	**12:00 Noon day of Public Hearing**
City of West Kelowna	10:00 a.m. day of Public Hearing
Port Coquitlam	**12:00 Noon day of Public Hearing**
City of Burnaby	2:45 p.m. day of Public Hearing
District of Ucluelet	**12:00 Noon day of Public Hearing**

Staff are recommending the implementation of a deadline of 12:00 Noon the day of the Public Hearing for receipt of all correspondence in order to be consistent with other municipalities.

b) **Policy Implications**
Once adopted, the policy will be posted to the City's website and will be in place for the 2021 and subsequent Public Hearing schedules.

c) **Alternatives**
Should Council decide not to proceed with the attached policy, staff will continue with current practices.

CONCLUSION:

Staff believe that the attached policy will provide clarity and transparency on the City's Public Hearing process.

Prepared by: **Stephanie Nichols**
Corporate Officer

Approved by: **Christine Carter, M.PL, MCIP, RPP**
General Manager: Planning & Development Services

Concurrence: **Al Horsman**
Chief Administrative Officer

Attachments:
(A) Public Hearing Policy No. 3.17

MAPLE RIDGE
British Columbia

mapleridge.ca

POLICY MANUAL

Title: Public Hearing Process			Policy No.: 3.17 Supersedes: NEW
Authority:	☒ Legislative	☐ Operational	Effective Date: December 8, 2020
Approval:	☒ Council	☐ General Manager ☐ CMT	Review Date: December, 2021

Policy Statement:
Pursuant to Section 465(2) of the *Local Government Act*, the City of Maple Ridge must hold a Public Hearing to ensure all persons who believe that their interest in property or is affected by the proposed bylaw(s) are afforded a reasonable opportunity to be heard or to present written submissions respecting matters contained in the bylaw(s) that is/are the subject of the hearing.

Pursuant to Section 465(3) of the *Local Government Act*, the Chair of the Public Hearing may establish procedural rules for the conduct of the hearing.

Purpose:
The purpose of this policy is to set timelines and procedures for public participation at Public Hearings

2.0 Correspondence Submission Process
Staff will manage written correspondence received (by letter or email) for public hearings as follows:

Timing:	Process:	Public Hearing Package / Public Record:
Prior to the Council direction to proceed to Public Hearing.	• Correspondence received by Planning staff will be retained in the application file • Correspondence sent directly to Mayor and Council will be handled in accordance with "Mayor and Council Correspondence Policy No. 3.08"	Correspondence received prior to Council direction to proceed to Public Hearing will not form part of the Public Hearing Package or the public record.
In response to the Public Hearing Notice	• Correspondence must be addressed to the attention of the Corporate Officer. • Email correspondence must be emailed to clerks@mapleridge.ca.	Correspondence received by Noon on the day of the Public Hearing will be included in the Public Hearing Package and will form part of the public record.

Timing:	Process:	Public Hearing Package / Public Record:
Correspondence received at the Public Hearing.	• Correspondence handed to the Corporate Officer is considered received.	• Correspondence received during the meeting will form part of the public record.
Correspondence received **after** the close of the item at Public Hearing	• Correspondence received after the close of the Public Hearing will be forwarded to Planning staff the next business day.	• Late items will not be included in the Public Hearing Package or form part of the public record.

3.0 Public Hearing Format

- The Chair will call the meeting to order.
- The Corporate Officer or designate will provide the purpose for the Public Hearing and outline the procedural rules for the conduct of the hearing.
- The Director of Planning, Planning staff, or designate will provide a presentation to introduce the proposed amendment.
- The Chair will invite anyone who believes their interest will be affected by the proposed bylaw, an opportunity to address Council.
- A timing/lighting or other stated device may be used to monitor individual(s) allotted time.
- A speakers list may be used for larger Public Hearings.
- The Chair will only receive submissions that pertain to the bylaw under consideration.

4.0 Speaking at a Public Hearing

- Persons wishing to speak at the Public Hearing are asked to provide their name, address and indication as to whether they support or are against the proposed amendment.
- PowerPoint or other digital or video presentations will not be accepted nor displayed during a Public Hearing.
- There will be three calls for speakers by the Chair for each item. Speakers will be limited to five (5) minutes per call, to a maximum of three (3) calls to speak or fifteen (15) minutes.
    - After all speakers have had an opportunity to speak, a person may speak a second time to provide new information only.
    - After all speakers have had an opportunity to speak a second time, a person may speak for a third time to provide new information only.
- A speaker will not debate a point of view with another speaker but can ask for clarification through the Chair.
- The owner/applicant may provide clarification or respond to questions and concerns when speaking at first, second or third call.
- Those in attendance at the Public Hearing will follow the rules of conduct as set out in the most recent version of the Council Conduct Bylaw and the Council Procedure Bylaw.

5.0 After the Public Hearing has Closed

- Once all speakers have been heard, the Public Hearing is then closed.
- Council may not receive new information or correspondence from the public or applicant once the Public Hearing is deemed closed.

6.0 Miscellaneous

- In future, if there is a discrepancy between this Policy and the *Local Government Act*, the *Local Government Act* will prevail.

5.0 Correspondence

From: peter.julian@parl.gc.ca <peter.julian@parl.gc.ca>
Sent: November 26, 2020 2:19 PM
To: Mike Morden <mmorden@mapleridge.ca>
Subject: ERRATA w our sincere apologies - Request regarding Bill C-213 The Canada Pharmacare Act

Mayor MORDEN
MAPLE RIDGE

Dear Mayor MORDEN,

We are writing to you today seeking the City Council of MAPLE RIDGE's formal endorsement of Bill C-213, the *Canada Pharmacare Act.*

Introduced in February 2020, the *Canada Pharmacare Act* is ground-breaking new federal legislation based on the recommendations of the Hoskins Advisory Council on the Implementation of National Pharmacare and modelled on the *Canada Health Act*.

The *Canada Pharmacare Act* specifies the conditions and criteria that provincial and territorial prescription drug insurance programs must meet to receive federal funding. This includes the core principles of public administration, comprehensiveness, universality, portability, and accessibility.

Universal public drug coverage has been recommended by commissions, committees, and advisory councils dating as far back as the 1940s. Immediately following the last election, the New Democratic Party of Canada began working to draft a legislative framework to enable the implementation of a universal, comprehensive and public pharmacare program. The *Canada Pharmacare Act* is the first piece of legislation introduced by the New Democrat Caucus in the current Parliament.

As you know, across Canada, people are making impossible choices every day because they cannot afford their prescription medications. Over the past year alone, one-in-four Canadians were forced to avoid filling or renewing a prescription due to cost or take measures to extend a prescription because they could not afford to keep the recommended dosage schedule.

Even those with private coverage are seeing their employer-sponsored benefits shrink – a trend that has accelerated due to the economic impacts of COVID-19. In fact, Canadians are twice as likely to have lost prescription drug coverage as to have gained it over the past year.

Simply put, universal public pharmacare will extend prescription drug coverage to every single Canadian, while saving billions every year. The final report of the Hoskins Advisory Council found that, once fully implemented, universal public pharmacare will reduce annual system wide spending on prescription drugs by $5 billion. Businesses and employees will see their prescription drug costs reduced by $16.6 billion annually and families will see their out of pocket drug costs reduced by $6.4 billion a year.

Although a recent study from Angus Reid Institute found near universal support for pharmacare among the Canadian public, powerful vested interests in the drug and insurance industries are lobbying to block this critical program in order to protect their profits.

Indeed, the *Canada Pharmacare Act* is reaching a crucial period in the legislative process. The first hour of debate on this bill took place in Parliament on November 18, 2020. The second hour of debate and the first vote will be held in February 2021. This legislation could be enacted by next spring, allowing millions of Canadians who are struggling to pay for medication to receive the support they desperately need.

That's why we need your help to secure the adoption of the *Canada Pharmacare Act* in Parliament. We are asking your City Council to join other municipalities across Canada to formally endorse Bill C-213. We will be publicizing this support nationally.

For more information on C-213 and to sign the e-petition, please visit our website: www.pharmacarec213.ca

Thank you very much for your consideration. Please feel free to contact us if you require further detail.

We look forward to hearing from you.

Sincerely,
Peter Julian, MP
New Westminster-Burnaby

Jenny Kwan, MP
Vancouver East

Don Davies, MP
Vancouver Kingsway

First Session, Forty-third Parliament,
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HOUSE OF COMMONS OF CANADA

BILL C-213

An Act to enact the Canada Pharmacare Act

FIRST READING, FEBRUARY 24, 2020

MR. JULIAN

Première session, quarante-troisième législature,
68-69 Elizabeth II, 2019-2020

CHAMBRE DES COMMUNES DU CANADA

PROJET DE LOI C-213

Loi édictant la Loi canadienne sur l'assurance médicaments

PREMIÈRE LECTURE LE 24 FÉVRIER 2020

M. JULIAN

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SUMMARY

This enactment enacts the *Canada Pharmacare Act*, which establishes criteria and conditions in respect of drug insurance plans established under the law of a province that must be met before a cash contribution may be made.

SOMMAIRE

Le texte édicte la *Loi canadienne sur l'assurance médicaments*, qui établit les critères et conditions qui sont applicables aux régimes d'assurance médicaments institués en application d'une loi provinciale et qui doivent être respectés aux fins du versement d'une contribution pécuniaire.

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1st Session, 43rd Parliament,
68-69 Elizabeth II, 2019-2020

HOUSE OF COMMONS OF CANADA

BILL C-213

An Act to enact the Canada Pharmacare Act

Her Majesty, by and with the advice and consent of the Senate and House of Commons of Canada, enacts as follows:

Short Title

Short title

1 This Act may be cited as the *Canada Pharmacare Act*.

Interpretation

Definitions

2 The following definitions apply in this Act.

cash contribution means a cash contribution that may be provided to a province under any other Act of Parliament. (*contribution pécuniaire*)

drug insurance plan means, in relation to a province, a plan or plans established by the law of the province to provide for coverage of the cost of insured drugs and any related dispensing fees. (*régime d'assurance médicament*)

health care practitioner means a person who is entitled under the law of a province to prescribe drugs. (*professionnel de la santé*)

insured drug means a prescription drug or any supplies prescribed by regulations made under paragraph 18(a). (*médicament assuré*)

insured person means, in relation to a province, a resident of the province other than

(a) a member of the Canadian Forces;

1re session, 43e législature,
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CHAMBRE DES COMMUNES DU CANADA

PROJET DE LOI C-213

Loi édictant la Loi canadienne sur l'assurance médicaments

Sa Majesté, sur l'avis et avec le consentement du Sénat et de la Chambre des communes du Canada, édicte :

Titre abrégé

Titre abrégé

1 *Loi canadienne sur l'assurance médicaments*.

Définitions

Définitions

2 Les définitions qui suivent s'appliquent à la présente loi.

assuré Résident d'une province, à l'exception des personnes suivantes :

a) les membres des Forces canadiennes;

b) les personnes purgeant une peine d'emprisonnement dans un *pénitencier*, au sens de la partie I de la *Loi sur le système correctionnel et la mise en liberté sous condition*;

c) les personnes qui ne respectent pas le délai minimal de résidence ou de carence imposé par la province pour être admissibles au régime d'assurance médicaments de celle-ci. (*insured person*)

contribution pécuniaire S'entend de la contribution pécuniaire qui peut être versée à une province au titre de toute autre loi fédérale. (*cash contribution*)

médicament assuré Médicament sur ordonnance ou fournitures médicales prévus par règlement pris en vertu de l'alinéa 18a). (*insured drug*)

ministre Le ministre de la Santé. (*Minister*)

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(b) a person serving a term of imprisonment in a *penitentiary* as defined in Part I of the *Corrections and Conditional Release Act*; or

(c) a person who has not completed the minimum period of residence or waiting period that may be required by the province for eligibility to its drug insurance plan. (*assuré*)

Minister means the Minister of Health. (*ministre*)

resident means, in relation to a province, a person who is ordinarily resident in the province. (*résident*)

professionnel de la santé Personne autorisée en vertu de la législation provinciale à prescrire des médicaments. (*health care practitioner*)

régime d'assurance médicaments Le régime ou les régimes institués en application d'une loi provinciale en vue de couvrir le coût des médicaments assurés et les frais d'ordonnance connexes. (*drug insurance plan*)

résident Personne résidant habituellement dans une province. (*resident*)

Canadian Pharmaceutical Policy

Policy

3 It is declared to be the policy of the Government of Canada to facilitate access to prescription drugs without financial or other barriers in order to protect and promote the physical and mental well-being of Canadians.

Politique canadienne en matière de produits pharmaceutiques

Politique

3 Le gouvernement fédéral a pour politique en matière de produits pharmaceutiques de faciliter l'accès exempt d'obstacles — notamment d'ordre financier — aux médicaments sur ordonnance de manière à protéger et à favoriser le bien-être physique et mental des Canadiens.

Purpose

Purpose of this Act

4 The purpose of this Act is to establish criteria and conditions that must be met before a cash contribution may be made in respect of public drug insurance plans.

Objet

Objet de la présente loi

4 La présente loi a pour objet d'établir les critères et les conditions à respecter aux fins du versement d'une contribution pécuniaire relativement aux régimes publics d'assurance médicaments.

Cash Contribution

Cash contribution

5 Subject to the other provisions of this Act, a cash contribution may be made to each province for each fiscal year.

Contribution pécuniaire

Contribution pécuniaire

5 Sous réserve des autres dispositions de la présente loi, il peut être versé à chaque province une contribution pécuniaire pour chaque exercice.

Criteria for Payment

Criteria for payment

6 In order that a province qualify for a cash contribution for a fiscal year, its drug insurance plan must, throughout the fiscal year, satisfy the criteria described in sections 7 to 11 respecting the following matters:

(a) public administration;

(b) comprehensiveness;

Critères de versement

Critères de versement

6 La province dont le régime d'assurance médicaments satisfait tout au long d'un exercice aux critères ci-après, qui sont prévus aux articles 7 à 11, est admissible au versement d'une contribution pécuniaire pour cet exercice :

a) la gestion publique;

b) l'intégralité;

(c) universality;

(d) portability; and

(e) accessibility.

Public administration

7 (1) In order to satisfy the criterion respecting public administration,

(a) the drug insurance plan of a province must be administered and operated on a non-profit basis by a public authority appointed or designated by the government of the province;

(b) the public authority must be responsible to the government of the province for that administration and operation; and

(c) the public authority must be subject to audit of its accounts and financial transactions by the authority that is charged by law with the audit of the province's accounts.

Designation of agency permitted

(2) The criterion respecting public administration is met even if the public authority referred to in subsection (1) has the power to designate any agency

(a) to receive on its behalf any amounts payable under the drug insurance plan of the province; or

(b) to carry out on its behalf any responsibility in connection with the receipt or payment of accounts rendered for insured drugs, provided that it is a condition of the designation that all those accounts are subject to assessment and approval by the public authority and that the public authority must determine the amounts to be paid in respect of those accounts.

Comprehensiveness

8 In order to satisfy the criterion respecting comprehensiveness, a drug insurance plan must provide for full coverage of the cost of all insured drugs prescribed by a health care practitioner and of any related dispensing fees.

Universality

9 In order to satisfy the criterion respecting universality, a drug insurance plan must entitle every insured person of the province to be covered by the plan on uniform conditions.

c) l'universalité;

d) la transférabilité;

e) l'accessibilité.

Gestion publique

7 (1) Le critère de gestion publique est satisfait si, à la fois :

a) le régime d'assurance médicaments de la province est géré et exploité sans but lucratif par une autorité publique nommée ou désignée par le gouvernement de la province;

b) l'autorité publique rend compte de la gestion et de l'exploitation du régime au gouvernement de la province;

c) les comptes et les transactions financières de l'autorité publique sont vérifiés par l'autorité légalement responsable de la vérification des comptes de la province.

Désignation d'un mandataire

(2) Le critère de gestion publique est satisfait même si l'autorité publique visée au paragraphe (1) a le pouvoir de désigner un mandataire chargé :

a) soit de recevoir en son nom les sommes dues au titre du régime d'assurance médicaments de la province;

b) soit d'exercer en son nom les responsabilités liées à la réception ou au paiement des comptes remis pour la fourniture de médicaments assurés, pourvu que la désignation soit assortie d'une condition selon laquelle l'autorité publique vérifie et approuve les comptes et détermine les sommes à payer à l'égard de ces comptes.

Intégralité

8 Le critère d'intégralité est satisfait si, au titre du régime d'assurance médicaments, le coût de tous les médicaments assurés qui sont prescrits par un professionnel de la santé et les frais d'ordonnance connexes sont entièrement couverts.

Universalité

9 Le critère d'universalité est satisfait si, au titre du régime d'assurance médicaments, tous les assurés de la province sont couverts selon des modalités uniformes.

Portability

10 In order to satisfy the criterion respecting portability, a drug insurance plan

(a) must not impose any minimum period of residence or waiting period of more than three months before residents of the province are covered by the plan;

(b) must provide for and be administered and operated so as to provide for the payment of amounts for the cost of insured drugs provided to insured persons of the province while they are temporarily absent from the province on the basis that

(i) if the insured drugs are provided in Canada, payment for the drugs is at the rate that is approved by the drug insurance plan of the province in which the insured drugs are provided unless the provinces concerned agree to apportion the cost between them in a different manner, or

(ii) if the insured drugs are provided outside Canada, payment is made based on the amount that would have been covered under the drug insurance plan of the insured person's province of residence for similar drugs prescribed in that province; and

(c) must provide for and be administered and operated so as to provide for the payment, during any minimum period of residence or waiting period imposed by the drug insurance plan of another province, of the cost of insured drugs prescribed to persons who have ceased to be insured persons by reason of having become residents of that other province as though they had not ceased to be residents of the province.

Accessibility

11 In order to satisfy the criterion respecting accessibility, a drug insurance plan

(a) must provide for insured drugs on uniform conditions and on a basis that does not directly or indirectly impede or prevent, by charges made to insured persons or otherwise, reasonable access to those drugs by insured persons; and

(b) must provide for payment for insured drugs in accordance with a tariff or system of payment authorized by the law of the province.

Transférabilité

10 Le critère de transférabilité est satisfait si le régime d'assurance médicaments, à la fois :

a) n'impose pas de délai minimal de résidence ou de carence supérieur à trois mois aux résidents de la province avant qu'ils soient couverts par le régime;

b) prévoit le paiement des sommes représentant le coût des médicaments assurés fournis aux assurés de la province qui en sont temporairement absents, et est géré et exploité de manière à permettre le paiement de ces sommes :

(i) si les médicaments assurés sont fournis au Canada, selon le taux approuvé par le régime d'assurance médicaments de la province où ils sont fournis, sauf si les provinces concernées conviennent de répartir le coût différemment entre elles,

(ii) si les médicaments assurés sont fournis à l'étranger, selon le montant qui aurait été couvert au titre du régime d'assurance médicaments de la province de résidence de l'assuré pour des médicaments similaires prescrits dans cette province;

c) prévoit le paiement, durant le délai minimal de résidence ou de carence imposé par le régime d'assurance médicaments d'une autre province, du coût des médicaments assurés qui sont prescrits aux personnes qui ne sont plus des assurés du fait qu'elles résident maintenant dans cette province, comme si elles résidaient encore dans leur province d'origine, et est géré et exploité de manière à permettre le paiement de ce coût.

Accessibilité

11 Le critère d'accessibilité est satisfait si le régime d'assurance médicaments, à la fois :

a) prévoit la fourniture des médicaments assurés selon des modalités uniformes et d'une manière qui n'entrave pas directement ou indirectement — notamment au moyen de frais à leur charge — l'accès raisonnable des assurés à ces médicaments;

b) prévoit le paiement des médicaments assurés selon un tarif ou un mode de paiement autorisé par la loi de la province.

Condition for Cash Contribution

Condition

12 In order that a province may qualify for a cash contribution, the government of the province must, at the times and in the manner prescribed by the regulations, provide the Minister with the prescribed information that the Minister may reasonably require for the purposes of this Act.

Defaults

Referral to Governor in Council

13 (1) If the Minister is of the opinion that a drug insurance plan does not satisfy all the criteria described in sections 7 to 11, or that a province has failed to comply with section 12, the Minister must, subject to subsection (4), refer the matter to the Governor in Council.

Conditions

(2) The Minister may refer the matter to the Governor in Council only if

(a) the Minister has consulted with the minister responsible for health care in the province in accordance with subsection (3); and

(b) the province has not given an undertaking satisfactory to the Minister to remedy the default within a period that the Minister considers reasonable.

Consultation process

(3) Before referring the matter to the Governor in Council, the Minister must

(a) send a notice of concern with respect to any problem foreseen, by registered mail, to the minister responsible for health care in the province;

(b) seek any additional information available from the province with respect to the problem through bilateral discussions and make a report to the province within 90 days after sending the notice of concern; and

(c) if requested by the province, meet within a reasonable period of time to discuss the report.

When no consultation can be achieved

(4) The Minister may act without the consultation referred to in paragraph (2)(a) if the Minister is of the opinion that sufficient time has passed since reasonable

Condition – contribution pécuniaire

Condition

12 Pour que la province soit admissible à une contribution pécuniaire, le gouvernement de la province doit communiquer au ministre, selon les modalités prévues par règlement, les renseignements réglementaires dont celui-ci peut normalement avoir besoin pour l'application de la présente loi.

Manquements

Renvoi au gouverneur en conseil

13 (1) Sous réserve du paragraphe (4), s'il estime que le régime d'assurance médicaments ne satisfait pas aux critères prévus aux articles 7 à 11, ou que la province ne s'est pas conformée à l'article 12, le ministre renvoie l'affaire au gouverneur en conseil.

Conditions

(2) Le ministre ne peut renvoyer l'affaire au gouverneur en conseil que si, à la fois :

a) il a consulté le ministre chargé de la santé dans la province conformément au paragraphe (3);

b) la province ne s'est pas engagée de façon satisfaisante à remédier à la situation dans un délai que le ministre estime raisonnable.

Processus de consultation

(3) Avant de renvoyer l'affaire au gouverneur en conseil, le ministre :

a) envoie par courrier recommandé au ministre chargé de la santé dans la province un avis sur tout problème éventuel;

b) tente d'obtenir de la province, dans le cadre de discussions bilatérales, tout renseignement additionnel disponible sur le problème et fait rapport à la province dans les quatre-vingt-dix jours suivant l'envoi de l'avis;

c) si la province le lui demande, tient une réunion dans un délai raisonnable afin de discuter du rapport.

Impossibilité de consulter

(4) Le ministre peut procéder au renvoi sans la consultation mentionnée à l'alinéa (2)a) si, après un délai

efforts were made to achieve consultation and that consultation will not be achieved.

convenable, il estime que malgré les efforts raisonnables déployés, il sera impossible d'effectuer cette consultation.

Order reducing or withholding contribution

14 (1) If, on the referral of a matter under section 13, the Governor in Council is of the opinion that a drug insurance plan does not satisfy all the criteria described in sections 7 to 11, or that a province has failed to comply with section 12, the Governor in Council may, by order,

(a) direct that any cash contribution to that province for a fiscal year be reduced in respect of each default by an amount that the Governor in Council considers appropriate, given the gravity of the default; or

(b) direct that the whole of any cash contribution to that province for a fiscal year be withheld.

Décret de réduction ou de retenue

14 (1) Si l'affaire lui est renvoyée en application de l'article 13 et qu'il estime que le régime d'assurance médicaments ne satisfait pas à tous les critères prévus aux articles 7 à 11, ou que la province ne s'est pas conformée à l'article 12, le gouverneur en conseil peut, par décret :

a) soit ordonner, pour chaque manquement, la réduction – qu'il estime indiquée – de la contribution pécuniaire versée à la province pour un exercice, compte tenu de la gravité du manquement;

b) soit ordonner la retenue de la totalité de la contribution pécuniaire à la province pour un exercice.

Amending order

(2) The Governor in Council may, by order, repeal or amend any order made under subsection (1) if the Governor in Council is of the opinion that the repeal or amendment is warranted in the circumstances.

Modification du décret

(2) Le gouverneur en conseil peut, par décret, annuler ou modifier un décret pris en vertu du paragraphe (1) s'il l'estime justifié dans les circonstances.

Notice of order

(3) A copy of each order made under this section, together with a statement of any findings on which the order was based, must be sent without delay by registered mail to the government of the province concerned, and the Minister must cause the order and statement to be laid before each House of Parliament on any of the first 15 days on which that House is sitting after the order is made.

Avis

(3) Tout décret pris en vertu du présent article, accompagné d'un exposé des motifs sur lesquels il est fondé, est envoyé sans délai par courrier recommandé au gouvernement de la province concernée; le ministre fait déposer le décret et l'exposé devant chaque chambre du Parlement dans les quinze premiers jours de séance de celle-ci suivant la prise du décret.

Commencement of order

(4) An order made under subsection (1) must not come into force earlier than 30 days after the day on which a copy of the order has been sent to the government of the province concerned.

Entrée en vigueur du décret

(4) Le décret pris en vertu du paragraphe (1) ne peut entrer en vigueur que trente jours après la date de son envoi au gouvernement de la province concernée.

Reimposition of reductions or withholdings

15 If a drug insurance plan continues to fail to satisfy all of the criteria described in sections 7 to 11, or if a province continues to fail to comply with section 12, the Minister must reimpose, for each succeeding fiscal year, any reduction or withholding of a cash contribution to the province under section 14 for as long as the Minister is of the opinion, after consultation with the minister responsible for health care in the province, that the default is continuing.

Nouvelle application des réductions ou retenues

15 Si le régime d'assurance médicaments continue de ne pas satisfaire pas à tous les critères prévus aux articles 7 à 11, ou que la province continue de ne pas se conformer à l'article 12, le ministre applique de nouveau les réductions ou retenues de la contribution pécuniaire à la province prévues à l'article 14 et ce, tant qu'il estime, après consultation du ministre chargé de la santé dans la province, que le manquement se continue.

When reduction or withholding imposed

16 Any reduction or withholding of a cash contribution under section 14 or 15 may be imposed in the fiscal year

Application aux exercices ultérieurs

16 Toute réduction ou retenue d'une contribution pécuniaire visée aux articles 14 ou 15 peut être appliquée pour

in which the default that gave rise to the reduction or withholding occurred or in the following fiscal year.

l'exercice au cours duquel le manquement à son origine a eu lieu ou pour l'exercice suivant.

Federal-Provincial Arrangement

Drug agency

17 The Minister may, with the approval of the Governor in Council, enter into an arrangement with one or more provincial governments to establish an independent drug agency, whose mandate is, among other things, to

(a) assess the clinical effectiveness and the cost effectiveness of prescription drugs compared to other treatment options;

(b) advise on which prescription drugs and supplies should be insured by a drug insurance plan;

(c) negotiate prices and supply arrangements of prescription drugs with manufacturers;

(d) provide advice to health care practitioners and patients on how best to use prescription drugs; and

(e) using fact-based evidence, monitor the safety and clinical effectiveness of prescription drugs.

Arrangement fédéral-provincial

Agence des médicaments

17 Le ministre peut, avec l'approbation du gouverneur en conseil, conclure avec un ou plusieurs gouvernements provinciaux un accord afin d'établir une agence indépendante responsable des médicaments dont le mandat consiste notamment à :

a) évaluer l'efficacité clinique et la rentabilité des médicaments sur ordonnance comparativement aux autres options de traitement;

b) recommander les médicaments d'ordonnance et les fournitures médicales que le régime d'assurance médicaments devrait couvrir;

c) négocier avec les fabricants les prix et les ententes d'approvisionnement des médicaments sur ordonnance;

d) fournir aux professionnels de la santé et aux patients des conseils sur la meilleure utilisation possible des médicaments sur ordonnance;

e) examiner l'innocuité et l'efficacité clinique des médicaments sur ordonnance en se fondant sur des faits.

Regulations

Regulations – Governor in Council

18 The Governor in Council may make regulations for the administration of this Act and for carrying its purposes and provisions into effect, including regulations

(a) prescribing the prescription drugs that are to be insured by a drug insurance plan and the supplies that are essential for the proper administration of those drugs; and

(b) prescribing the information that the Minister may require under section 12 and the times at which and the manner in which that information must be provided.

Règlements

Règlements – gouverneur en conseil

18 Le gouverneur en conseil peut, par règlement, prendre toute mesure d'application de la présente loi, notamment :

a) déterminer les médicaments sur ordonnance devant être couverts par le régime d'assurance médicaments et les fournitures médicales essentielles pour l'administration adéquate de ces médicaments;

b) déterminer les renseignements dont peut avoir besoin le ministre au titre de l'article 12 et les modalités selon lesquelles ces renseignements doivent être fournis.

Report to Parliament

Annual report by Minister

19 (1) As soon as feasible after the end of each fiscal year but no later than December 31 following the end of

Rapport au Parlement

Rapport annuel du ministre

19 (1) Dès que possible après la date de la fin de chaque exercice mais au plus tard le 31 décembre suivant cette

that fiscal year, the Minister must make a report respecting the administration and operation of this Act for that fiscal year, including all relevant information on the extent to which the drug insurance plans of the provinces have satisfied the criteria, and the provinces have satisfied the conditions, for payment of cash contributions under this Act.

Tabling in Parliament

(2) The Minister must cause the report to be laid before each House of Parliament on any of the first 15 days on which that House is sitting after the report is completed.

date, le ministre établit un rapport sur l'application de la présente loi au cours de cet exercice; il y précise notamment tout renseignement pertinent sur la mesure dans laquelle les régimes provinciaux d'assurance médicaments ont satisfait aux critères, et les provinces se sont conformées aux conditions, aux fins du versement d'une contribution pécuniaire au titre de la présente loi.

Dépôt au Parlement

(2) Le ministre fait déposer le rapport devant chaque chambre du Parlement dans les quinze premiers jours de séance de celle-ci suivant son achèvement.