Minutes

Meeting	**Regular Council**
Date	**04-May-21**
Time	**7:00 PM**
Place	**Municipal Hall - Council Chambers and by electronic means**

Present	Mayor Martin Davis	
	Councillor Bill Elder	
	Councillor Sarah Fowler	
	Councillor Cheryl Northcott	by video
	Councillor Lynda Llewellyn	by video
Staff	Mark Tatchell, Chief Administrative Officer	
	Ian Poole, Director of Finance	by video
	Janet St-Denis, Corporate Services Manager	by video
Public	5 members of the public	by phone/video

A. Call to Order

Mayor Davis called the meeting to order at 7:00 p.m.
Mayor Davis acknowledged and respected that Council is meeting upon Mowachaht/ Muchalaht territory

B. Introduction of Late Items and Agenda Changes

Council to allow item M.1 to be dealt with following F.1

C. Approval of the Agenda

Fowler/Elder: VOT 0167/2021

THAT the Agenda for the May 4, 2021 Regular meeting of Council be adopted as amended. **CARRIED**

D. Petitions and Delegations

None

E. Public Input # 1

None

F. Adoption of the Minutes

1 **Minutes of the Regular Council Meeting held on April 20, 2021**

Fowler/Elder: VOT 0168/2021

THAT the Regular Council Meeting minutes of April 20, 2021 be adopted as presented. **CARRIED**

M. New Business

1 **Report to Council Re: Temporary Use Permit Application - Tahsis Fish Processing Ltd. ("TFPL")**

Councillor Elder declared a potential conflict of interest and recused himself,

Llewellyn/Fowler: VOT 0169/2021

THAT this report to Council and Temporary Use Permit Application be received. **CARRIED**

The CAO spoke to the requirements for a temporary use permit under the Development Procedures Bylaw No. 633, 2020 and noted that these requirements had been fulfilled.

Llewellyn/Fowler: VOT 0170/2021

THAT the applicant be permitted to speak to her application. **CARRIED**

Kathy Mattice, the sole director of Tahsis Fish Processing Ltd. spoke to the application.

Llewellyn/Fowler: VOT 0171/2021

THAT Council authorize the issuance of the temporary use permit to Tahsis Fish Processing Ltd. for a three-year period beginning May 1, 2021 to permit the property to be used for the purposes listed on the application. **CARRIED**

Councillor Elder returned to the Council Chambers.

G. Rise and Report

1 At the May 4th closed meeting, in response to April 22nd correspondence from Fisheries and Oceans Canada, Council reaffirmed its position of encouraging the Canadian Coast Guard to locate its marine infrastructure on the site of the municipal wharf and also reiterated that the Village is receptive to the Canadian Coast Guard using the water lot area and is prepared to consider surrendering the part of its waterlot licence of occupation in return for the Coast Guard, at its cost, disassembling the existing wharf and disposing of the refuse.

2 Also at the May 4th closed meeting, Council approved awarding the outdoor benches and shelter construction contract to Straight Grain Inc.

H. Business Arising

1 **Circular Cities and Regions Initiative (CCRI) (Notice of Motion from Councillor Fowler)**

Fowler/Elder: VOT 0172/2021

THAT the VOT 0147/2021 Resolution made at the April 20, 2021 Regular meeting of Council be reconsidered. **CARRIED**

Fowler/Elder: VOT 0173/2021

THAT the VOT 0147/2021 Resolution made at the April 20, 2021 Regular meeting of Council be rescinded.

CARRIED

2 **Tahsis Age Friendly Action Committee - April 15th, 2021 Progress Report Re: Tahsis Seniors Volunteer Driver Vehicle Ride Service**

The CAO noted the legal requirements under section 13 of the Community Charter to provide a service outside of the municipal boundaries.

Fowler/Elder: VOT 0174/2021

THAT the Report from the Tahsis Age Friendly Action Committee be received and considered.

CARRIED

Fowler/Elder: VOT 0175/2021

THAT the Report from the Tahsis Age Friendly Action Committee be approved.

CARRIED

Fowler/Elder: VOT 0176/2021

THAT Council consider a resolution on the establishment of a volunteer ride service.

CARRIED

Fowler/Northcott: VOT 0177/2021

THAT Whereas the Tahsis Age Friendly Transportation Planning Study makes a series of recommendations for establishing a ride service between Tahsis and Campbell River; and

Whereas one of Council's Strategic Priorities for 2021 is to "develop and implement a transportation service to Campbell River" and

Whereas the Tahsis Age Friendly Action Committee (TAAC) has been meeting regularly and gathering information on other ride services, most notably the Volunteer Transportation Network based in Port McNeill; and

Whereas the Tahsis Seniors Society is committed to partnering with the Village to move this initiative ahead;

THEREFORE BE IT RESOLVED

THAT Council approve, in principle, the development of a ride service with the following features:

* TSS to operate the service, including vetting drivers, establishing schedules and dispatching;
* The Village be responsible for the financial and administrative functions, including handling payments, received and payable; and
* The Village commit $4,000 toward the start up costs and first year of the service (matching funding from the TSS); and
* The service connect with Wheels for Wellness to transport Tahsis residents to medical appointments in Gold River, Campbell River and down Island.

AND be it further resolved that:

Council direct the TAAC to return to Council with a draft plan and agreement with the TSS before implementing the Tahsis Seniors Volunteer Ride Service.

CARRIED

3 **UBCM letter to Mayor and Council Re: 2020 CEPF: Emergency Support Services - ESS Modernization Project**

Fowler/Elder: VOT 0178/2021
THAT this letter be received. **CARRIED**

4 **Old Growth Strategic Review Panel final report and the Union of BC Indian Chief's Resolution 2020-23.**
Mayor Davis spoke to this report.

Fowler/Elder: VOT 0179/2021
THAT Council receive and consider the final report of the Old Growth Strategic Review Panel final report and the Union of BC Indian Chiefs Resolution 2020-23.

Fowler/Elder: VOT 0180/2021
THAT Council:
* Endorse the recommendations contained in the Old Growth Strategic Review Panel final report
* Ask the Province for its long range plan regarding the permanent protection of the McKelvie Creek watershed, as well as the ridge above and east of the municipal boundary; and
* Continue to advocate for a community forest encompassing the Tahsis River Valley and the Village viewscapes.

J. Council Reports
Mayor Davis (written report)

First of all, I would like to congratulate Kim Rutherford who has been promoted to her new position as Sergeant for the Nootka Sound detachment of the RCMP. We look forward to continuing to work with her in future in socially proactive, community involved policing for Tahsis.

I was happy to see the new signage going up at the waterfront park regarding the salmon enhancement project that has been going on in the major salmon streams in Nootka Sound. This work has been funded by the Coastal Restoration Fund in partnership with Nootka Sound Watershed Society, Mowachaht-Muchalat First Nations and the communities of Nootka Sound. The sign was constructed with local wood using mortise and tenon construction, built and installed by our local Nootka Reforestation.

Since the last council meeting, I have attended several online meetings including Solid Waste Management, Regional District Board, Municipal Service and First Nations Relations meetings, the latter of which I chair. I raised the issue of developing a regional transportation strategy in concert with Gold River and Tsaxana to better serve our citizens here in Tahsis. There was an excellent presentation at the board meeting from the Wilderness Tourism Association of BC regarding the importance of the wild salmon economy to the region and the devastating impacts that open net fish farms have had on wild salmon.

BC Assessment has listened to our concerns regarding the steep hike in assessment values of up to 50% for some homeowners in town and will be reviewing their procedures here and will be updating their data for this community.

On another note, we have lost another leading light in our caving community - Dale Chase. While living on Hornby Island for much of his life, he loved Tahsis and its caves and was one of the principal explorers here, helping to map much of the 32 kilometres of caves at Weymer Creek. He wrote a book about his life which includes chapters on his exploits in our local caves. A couple of years ago, he gave an excellent talk hosted by our literacy society here in Tahsis. He was a close friend of mine and we shared so many adventures together. He will be greatly missed by myself and the North American caving community.

Councillor Fowler (written report)
Yesterday I attended the zoom link 2021 census kick off.

This morning at 10 am I called into the CEA (Community Energy Association) Game-changer Grant webinar and missed a webinar to which I have included the attached document called "Small and Rural Communities Climate Action Guidebook". Tomorrow I have a Green Energy, Green Mining, Green New Deal?, Transition Juste, Energie Propre, Mines Vertes?, on my calendar from 11am to 1:30pm and from 4pm to 5:30pm the Aquaculture Innovation Challenge Awards.

attachment #1 FCM- Optimizing the performance of your community buildings

attachment #2 Small and Rural Communities Guidebook

Councillor Elder
No Report

Councillor Northcott
No Report

Councillor Llewellyn (verbal report)
If you are having trouble getting a hold of me over the next two to three weeks it is because I am eye deep in resumes for the Executive Director of VIRL. We have started the process of needling down the numbers and hope to be interviewing people by the 22nd of this month.

Fowler/Elder: VOT 0181/2021
THAT this Council Reports be received. **CARRIED**

K. Bylaws

1 **2021 - 2025 Financial Plan Bylaw No. 637, 2021**
1st, 2nd, 3rd Readings

Fowler/Northcott: VOT 0182/2021
THAT the 2021-2025 Financial Plan Bylaw No. 637, 2021 be received for consideration.

CARRIED
1 "no" vote registered
Councillor Elder

Fowler/Llewellyn: VOT 0183/2021
THAT the 2021-2025 Financial Plan Bylaw No. 637, 2021 receive a first reading this 4th day of May, 2021.

CARRIED

1 "no" vote registered
Councillor Elder

Fowler/Llewellyn: VOT 0184/2021
THAT the 2021-2025 Financial Plan Bylaw No. 637, 2021 receive a second reading this 4th day of May, 2021.

CARRIED
1 "no" vote registered
Councillor Elder

Fowler/Llewellyn: VOT 0185/2021
THAT the 2021-2025 Financial Plan Bylaw No. 637, 2021 receive a third reading this 4th day of May, 2021.

CARRIED
1 "no" vote registered
Councillor Elder

2 **Report to Council Re: 2021 Tax Rate Information**

Fowler/Elder: VOT 0186/2021
THAT this Report to Council be received for information.

CARRIED

3 **2021 Tax Rate Bylaw No. 638, 2021**
1st, 2nd, 3rd Readings

Fowler/Llewellyn: VOT 0187/2021
THAT the 2021 Tax Rate Bylaw No. 638, 2021 be received for consideration.

CARRIED
1 "no" vote registered
Councillor Elder

Fowler/Llewellyn: VOT 0188/2021
THAT the 2021 Tax Rate Bylaw No. 638, 2021 receive a first reading this 4th day of May 2021.

CARRIED
1 "no" vote registered
Councillor Elder

Fowler/Llewellyn: VOT 0189/2021
THAT the 2021 Tax Rate Bylaw No. 638, 2021 receive a second reading this 4th day of May 2021.

CARRIED
1 "no" vote registered
Councillor Elder

Fowler/Llewellyn: VOT 0190/2021
THAT the 2021 Tax Rate Bylaw No. 638, 2021 receive a third reading this 4th day of May 2021.

CARRIED
1 "no" vote registered
Councillor Elder

4 **Report to Council Re: Bylaw Amendments: Fees and Charges, Water and Sewer bylaws**

Fowler/Elder: VOT 0191/2021
THAT this Report to Council be received.

CARRIED

The CAO summarized the key proposed changes to the Fees and Charges, Water and Sewer amendment bylaws.

Fowler/Llewellyn: VOT 0192/2021

THAT Council move to proceed with the 1st, 2nd and 3rd readings of the Fees and Charges Amendment Bylaw No. 639, 2021, Water Regulation and Rates Amendment Bylaw No. 640, 2021, and Sewer Regulations and rates Amendment Bylaw No. 641, 2021.

CARRIED
1 "no" vote registered
Councillor Elder

5 **Fees and Charges Amendment Bylaw No. 639, 2021**
1st, 2nd, 3rd Readings

Fowler/Llewellyn: VOT 0193/2021
THAT the Fees and Charges Amendment Bylaw No. 639, 2021 be received for consideration.

CARRIED
1 "no" vote registered
Councillor Elder

Fowler/Llewellyn: VOT 0194/2021
THAT the Fees and Charges Amendment Bylaw No. 639, 2021 receive a first reading this 4th day of May 2021.

CARRIED
1 "no" vote registered
Councillor Elder

Fowler/Llewellyn: VOT 0195/2021
THAT the Fees and Charges Amendment Bylaw No. 639, 2021 receive a second reading this 4th day of May 2021.

CARRIED
1 "no" vote registered
Councillor Elder

Fowler/Llewellyn: VOT 0196/2021
THAT the Fees and Charges Amendment Bylaw No. 639, 2021 receive a third reading this 4th day of May 2021.

CARRIED
1 "no" vote registered
Councillor Elder

6 **Water Regulation and Rates Amendment Bylaw No. 640, 2021**
1st, 2nd, 3rd Readings

Fowler/Llewellyn: VOT 0197/2021
THAT the Water Regulation and Rates Amendment Bylaw No. 640, 2021 be received for consideration.

CARRIED
1 "no" vote registered
Councillor Elder

Fowler/Llewellyn: VOT 0198/2021
THAT the Water Regulation and Rates Amendment Bylaw No. 640, 2021 receive a first reading this 4th day of May 2021.

CARRIED
1 "no" vote registered
Councillor Elder

Fowler/Llewellyn: VOT 0199/2021
THAT the Water Regulation and Rates Amendment Bylaw No. 640, 2021 receive a second reading this 4th day of May 2021.

CARRIED
1 "no" vote registered
Councillor Elder

Fowler/Llewellyn: VOT 0200/2021

THAT the Water Regulation and Rates Amendment Bylaw No. 640, 2021 receive a third reading this 4th day of May 2021.

CARRIED
1 "no" vote registered
Councillor Elder

7 **Sewer Regulations and Rates Amendment Bylaw No. 641, 2021**
1st, 2nd, 3rd Readings

Fowler/Llewellyn: VOT 0201/2021
THAT the Sewer Regulations and Rates Amendment Bylaw No. 641, 2021 be received for consideration.

CARRIED
1 "no" vote registered
Councillor Elder

Fowler/Llewellyn: VOT 0202/2021
THAT the Sewer Regulations and Rates Amendment Bylaw No. 641, 2021 receive a first reading this 4th day of May 2021.

CARRIED
1 "no" vote registered
Councillor Elder

Fowler/Llewellyn: VOT 0203/2021
THAT the Sewer Regulations and Rates Amendment Bylaw No. 641, 2021 receive a second reading this 4th day of May 2021.

CARRIED
1 "no" vote registered
Councillor Elder

Fowler/Llewellyn: VOT 0204/2021
THAT the Sewer Regulations and Rates Amendment Bylaw No. 641, 2021 receive a third reading this 4th day of May 2021.

CARRIED
1 "no" vote registered
Councillor Elder

L. Correspondence

1 **Letter from Bob Brash, Executive Director, Truck Loggers Association Re: Truck Loggers Association membership dues.**

2 **Letter from Mayor David Screech, Town of View Royal to Hon. John Horgan Re: Request for Authority and Training for Hospital Security Staff.**

3 **Letter from Merlin Blackwell, Mayor, District of Clearwater Re: Endorsement of 9-8-8 Crisis Line Initiative.**

4 **Letter from Merlin Blackwell, Mayor, District of Clearwater Re: Designation of invasive Asian clams as prohibitive aquatic invasive species.**

5 **April 27th, 2021 email from Rita Aedan to Mayor and Council Re: COVID-19 - No Recreational Travel and April 28th follow up letter to her email of April 27th, 2021.**

Lewellyn/Fowler: VOT 0205/2021

THAT these correspondence items be received. **CARRIED**

Fowler/Elder: VOT 0206/2021

THAT correspondence items 1 and 5 be pulled for discussion. **CARRIED**

1 **Letter from Bob Brash, Executive Director, Truck Loggers Association Re: Truck Loggers Association membership dues.**

The CAO spoke to this correspondence item. A brief discussion followed.

Fowler/Elder: VOT 0207/2021

THAT Staff be directed to send a letter to the Truck Loggers Association that Council declined to renew its membership.

5 **April 27th, 2021 email from Rita Aedan to Mayor and Council Re: COVID-19 - No Recreational Travel and April 28th follow up letter to her email of April 27th, 2021.**

Mayor Davis spoke to this correspondence item. A brief discussion followed.

N. Public Input #2

None.

Adjournment

Fowler/Elder: VOT 0208/2021

THAT the meeting be adjourned at 8:50 p.m. **CARRIED**

Certified Correct this
the 18th day of May, 2021

Chief Administrative Officer

attachment 1

GREEN MUNICIPAL FUND
FONDS MUNICIPAL VERT

Optimizing the performance of your community buildings

Introducing the Community Buildings Retrofit initiative

April 28, 2021

A program of FCM

attachment 1

Opportunities in community buildings

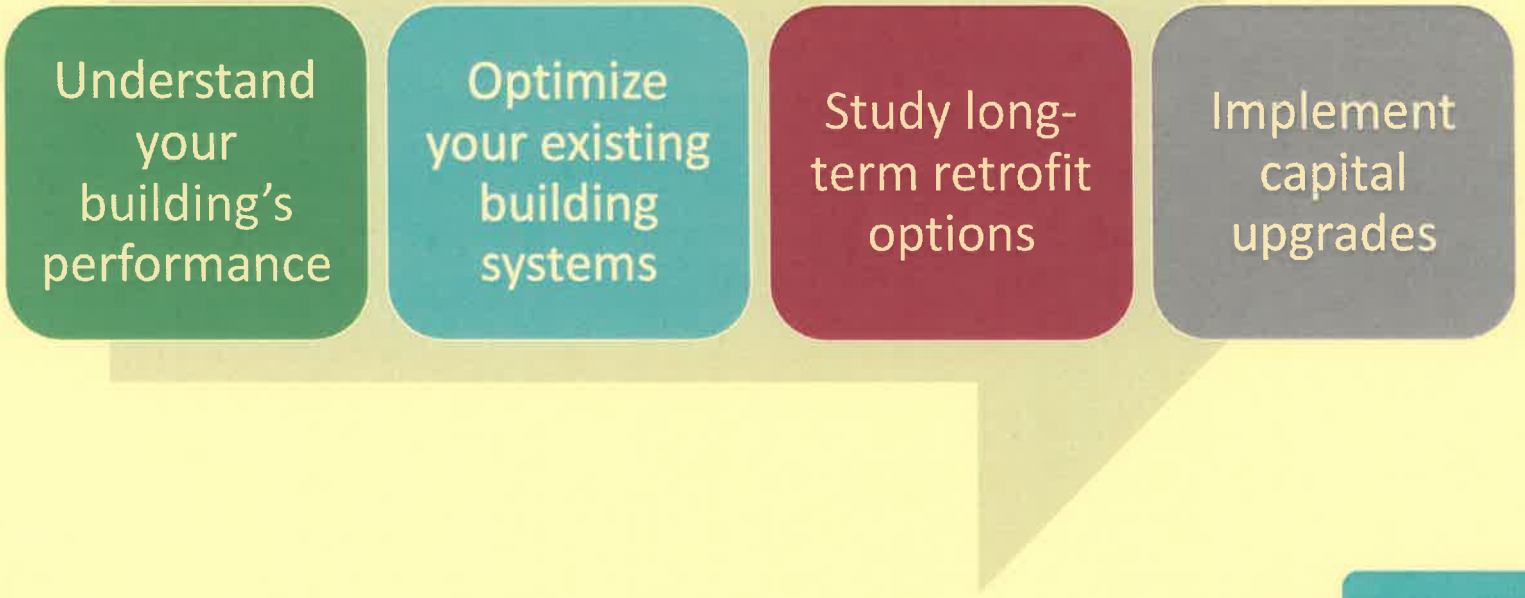
Save money in the short and long-term

Reduce GHG emissions

Improve delivery of community services

attachment 1

Supporting you along the journey



attachment 1

Funding opportunities

PROJECT STAGE		FUNDING OFFER*
IMPROVE & IDEATE	BUILDING ENERGY MONITORING & ANALYSIS	• **Grant** up to $25,000
	BUILDING COMMISSIONING	• **Grant** up to $55,000
STUDY	GHG REDUCTION PATHWAY	• **Grant** up to $65,000 for single buildings, $200,000 for portfolio of buildings
CAPITAL PROJECT	GHG IMPACT RETROFIT	• Minimum 30% reduction in GHG emissions • **Financing** (loan + grant) up to $5 million
	GHG REDUCTION PATHWAY RETROFIT	• Supports GHG reduction pathway in one or more buildings at different Stages • **Financing** (loan + grant) up to $5 million

**CBR's total funding can cover up to 80% of eligible costs, with the exception of building commissioning, for which GMF funding may cover up to 60% of eligible costs*

How to apply?

Visit the CBR webpage: fcm.ca/communitybuildingsretrofit

Review the CBR application guide (available online).

A) Monitoring & Analysis and Commissioning Grants

Application forms for each grant and the project workbook are available online.

B) Studies and Capital Projects

Complete the pre-application form and submit it to GMF

Eligible applicants will be invited to submit a **full application and project workbook**

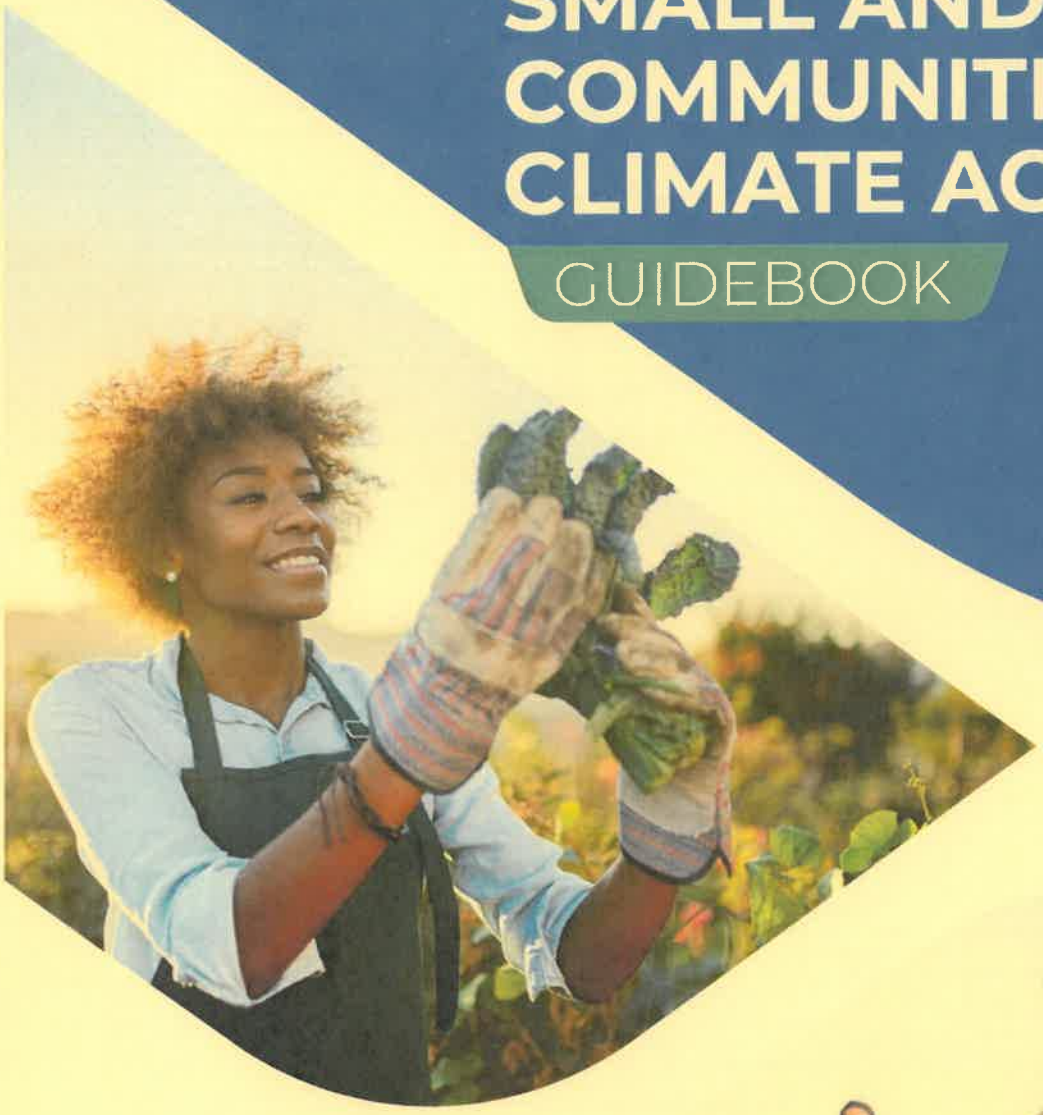
Key resources

- Natural Resources Canada tools and resources
  - Energy benchmarking
  - Energy management information systems (EMIS)
  - Recommissioning
- GMF Municipal Energy Roadmap
- GMF Technical Guidance on GHG Reduction Pathways (***upcoming***)

attachment 2

SMALL AND RURAL COMMUNITIES CLIMATE ACTION

GUIDEBOOK



ICLEI Local Governments for Sustainability CANADA

FCM FEDERATION OF CANADIAN MUNICIPALITIES | FÉDÉRATION CANADIENNE DES MUNICIPALITÉS

PARTNERS FOR CLIMATE PROTECTION

This guidebook was prepared by the Partners for Climate Protection (PCP) program, a partnership between the Federation of Canadian Municipalities and ICLEI—Local Governments for Sustainability. The program receives financial support from the Government of Canada and ICLEI Canada.

The PCP program is a network of over 450 Canadian municipalities committed to taking action on climate change. The program helps local governments reduce greenhouse gas emissions and make a difference in protecting our climate.

Researched and written by Adlar Gross with input from Megan Meaney, Cassandra Morris, Devin Causley and Sheri Young and research help from Caitlin Rodger and Hiba Kariem.

Executive summary

With the growing urgency of climate change planning in Canada, there is a significant opportunity for small communities to act and contribute to national, provincial and territorial GHG emissions reduction targets. Small municipalities, many of which are rural, make up more than 90 percent of communities in Canada and are key players in the Canadian economy, generating 27 percent of the national GDP.[1] This makes them well-positioned to lead local action on climate change mitigation. However, the challenges faced by small communities are often overlooked in policy development, guidelines and research.[2] Furthermore, the conventional approaches to municipal climate mitigation planning, such as high-rise densification and city-wide transit systems, may not be as relevant or impactful in smaller communities or may be cost-prohibitive. Small municipalities have a unique set of strengths and challenges in implementing climate change mitigation strategies. These factors must be addressed in order to take full advantage of climate action opportunities and reap the economic and quality of life co-benefits that they can generate.

This guidebook has been developed for members of the Partners for Climate Protection (PCP) program, to provide guidance for small communities on climate and community energy planning activities. These activities can be tailored to the local context and can allow small communities to play a key role in climate change mitigation.

The introduction provides context for climate action in small and rural communities and speaks to their unique opportunities and challenges. Section 1 discusses important principles and strategies that underpin climate action planning, create community buy-in, and set communities up for successful plan development and implementation. Section 2 outlines the business case for municipal climate action, providing an overview of the economic benefits, the costs of inaction, and a range of co-benefits including its contribution to community revitalization. Drawing on Canadian case studies and success stories, Section 3 discusses climate actions in the following five key municipal sectors (see Figure 1):

- Buildings
- Transportation
- Land use

1 *Federation of Canadian Municipalities,* Rural challenges, national opportunity *(2018). Retrieved from:* https://fcm.ca/sites/default/files/documents/resources/report/rural-challenges-national-opportunities.pdf

2 *Evergreen, "Making Mid-Sized the Right Size: Re-envisioning Success in Ontario's Mid-Sized Cities" (2015).*

- Waste
- Development of agriculture, resources and tourism (DART)*

* *Agriculture, resources and tourism are considered one sector here as they all relate to the development and care of Canada's natural resources and play a central role in the economies and livelihoods of many small and rural communities*

This guidebook focuses primarily on communities with populations of less than 30,000; however, because climate action often occurs as part of rural region, district or county planning, it includes a couple of examples of larger communities with populations of 40,000 to 75,000. Small and rural communities in Canada are a very diverse group. Each community has its own unique set of economic, industry and climate considerations. In recognition of this diversity, this guidebook provides a wide range of climate actions to suit different contexts.

To accompany this guidebook, 11 detailed cases studies from small and rural municipalities that are leading on climate action have been developed and are available on the PCP website. Each case study includes a description of the initiative, its challenges and success factors as well as considerations for successful implementation and adoption by other municipalities. See sidebar for the full list of featured case studies. Other examples of climate action in small and rural communities, as well as guiding resources, are included throughout this guidebook.

Featured case studies

- County of Colchester, Nova Scotia: Solar Colchester
- Town of Canmore, Alberta: Green Building Regulations
- City of Campbell River, British Columbia: Power Down Campbell River energy rebates
- City of Rimouski Quebec: Taxibus demand-responsive public transit model
- City of Plessisville, Quebec: Electric cars, vehicle sharing and the SAUVéR project
- District of Clearwater, British Columbia: Road cross-section bylaw
- Ville de Mont-Saint-Hilaire, Quebec: Transit-oriented development
- District Municipality of Ucluelet, British Columbia: Smart growth principles and density bonusing
- City of Sault Ste. Marie, Ontario: Community revitalization project, Future Sault Ste. Marie
- City of Stratford, Ontario: Pay-as-You-Throw (PAYT) program
- District Municipality of Whistler, British Columbia: Re-Use-It/ Re-Build-It centres

Figure 1: Climate action in five key sectors

Buildings

- Property assessed clean energy (PACE) program
- Energy rebate program
- Non-financial building incentives

Transportation

- Demand-responsive transit
- Electric car vehicle sharing
- Road cross-section bylaw

Land use

- Transit-oriented development
- Smart growth principles
- Community revitalization

Waste

- Pay-as-you-throw
- Curbside compost collection
- Re-use-it/re-build-it centre

DART*

- Biogas
- Sustainable forestry
- Sustainable tourism
- Partnerships

**Development of agriculture, resources and tourism*

Contents

Introduction

In 2016, Canada announced its target to reduce greenhouse gases (GHGs) by 30 percent below 2005 levels by 2030, in conformity with commitments made under the Paris Agreement. In 2020, the Government of Canada announced a new federal target of net-zero emissions by 2050. Municipalities control approximately 44 percent of national GHG emissions and are key in helping achieve Canada's reduction targets.[1] Furthermore, 19 percent of Canada's population is located in rural areas.[2] Small and rural municipalities make up more than 90 percent of communities in Canada, and generate 27 percent of national GDP.[3] With the growing urgency of climate change planning in Canada, small and rural communities are well-positioned to lead on local climate action and have a significant opportunity to contribute to national, provincial and territorial GHG emissions reduction targets. However, small municipalities have unique strengths and challenges that must be addressed—not only to enable local climate action, but also to reap the economic and quality of life co-benefits that accompany such action.

While social and economic factors, such as high real estate prices and the increasing ability to work from home, are contributing to growing rural populations in some areas, shrinking and stagnant populations are still a key challenge for many small municipalities, with the overall national trend showing rural populations declining as a proportion of total Canadian population.[4] Compared to large cities, small municipalities often have fewer financial and staff resources, making it difficult to develop, implement, deliver and monitor climate actions and strategies. Particularly in remote locations, municipalities are unable to draw upon the influence and resources present in larger urban centres—and they may lack specific expertise, making them more dependent on external consultants. Furthermore, dispersed settlement patterns create a high dependency on automobiles, making it more challenging to reduce GHG emissions in the transportation sector.

1 *Federation of Canadian Municipalities,* Act Locally: The Municipal Role in Fighting Climate Change *(2009). Retrieved from:* https://fcm.ca/sites/default/files/documents/resources/report/act-locally-municipal-role-fighting-climate-change.pdf

2 *Statistics Canada, Population Centre and Rural Area Classification 2016. Retrieved from:* https://www.statcan.gc.ca/eng/subjects/standard/pcrac/2016/introduction

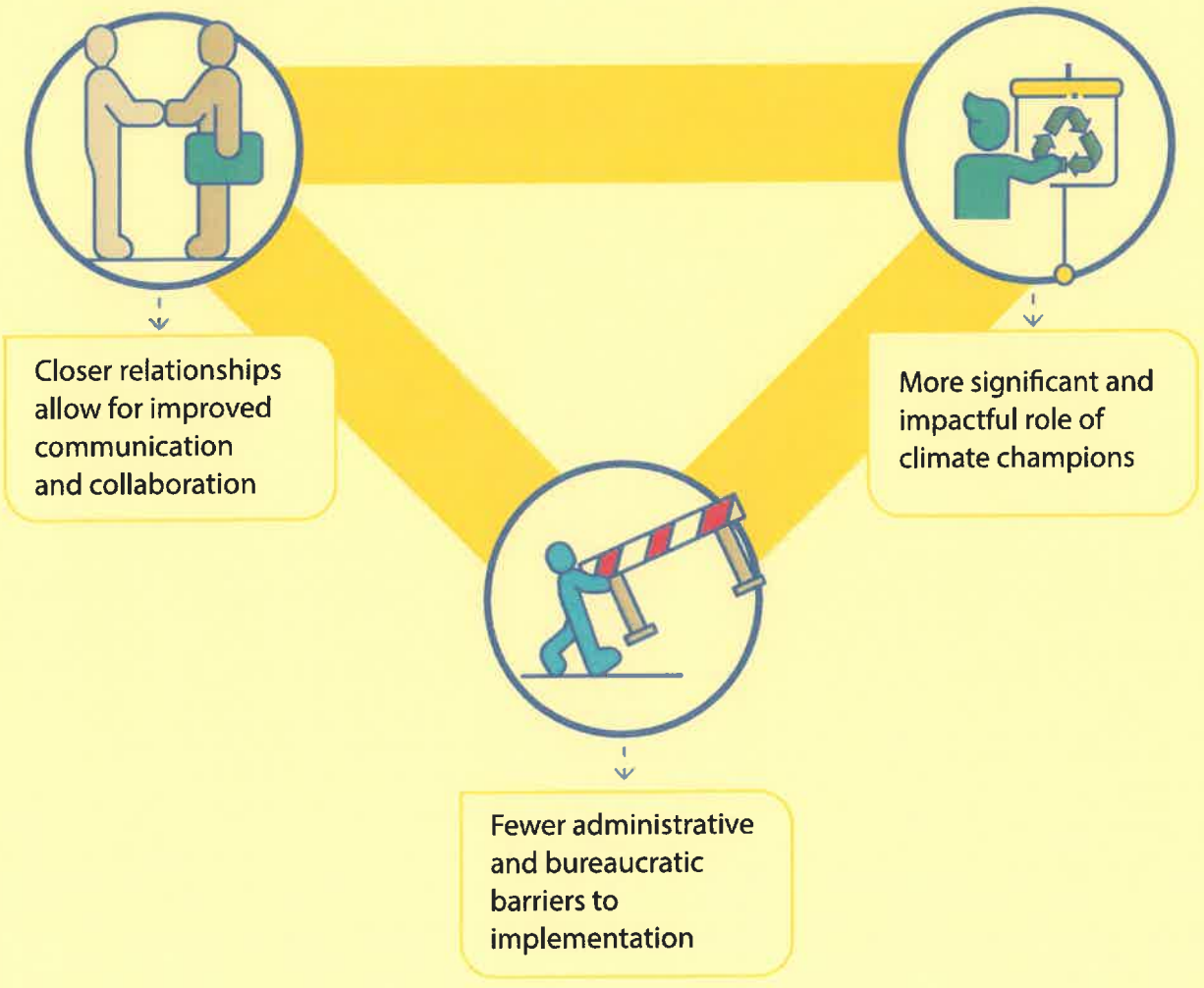
3 *Federation of Canadian Municipalities,* Rural challenges, national opportunity *(2018). Retrieved from:* https://fcm.ca/en/resources/rural-challenges-national-opportunity

4 *Statistics Canada, Population centre (2017). Retrieved from:* https://www12.statcan.gc.ca/census-recensement/2016/ref/dict/geo049a-eng.cfm

In these areas, common mitigation activities such as the development of public transit networks, modal transportation shifts and incentives, and pricing schemes to reduce road travel and congestion are often not feasible or effective.

Small and rural communities face the above challenges but also have a unique set of advantages that allow for the incubation of innovative ideas and solutions. Small communities tend to develop closer relationships among municipal departments and with community stakeholders, allowing for improved communication and collaboration. Unified and well-connected municipal teams also can have more public influence at the local level and having fewer public and municipal stakeholders may remove some of the administrative and bureaucratic barriers to implementation that larger municipalities often struggle with. Furthermore, local climate champions (such as community organizations) can play a more significant and impactful role in increasing public awareness and mobilizing community support in small communities. Strategic climate change planning and community energy planning also generate many co-benefits for the community and can aid in revitalization efforts by establishing new revenue sources, creating economic activity, and reducing operational costs while contributing to a sustainable future.

THE UNIQUE ADVANTAGES OF SMALL AND RURAL COMMUNITIES



1 Guiding principles and strategies for success

Individual mitigation actions are at the core of a climate action plan (CAP). To ensure the development and successful implementation of realistic yet impactful actions as well as build community consensus and buy-in, municipalities should consider a range of principles and strategies—before and throughout the planning process. The following principles and strategies are important building blocks in climate action planning. They can help in creating climate actions that reflect the realities of a community and can enable mitigation activities to persist over political cycles.

What is community energy planning?

A community energy plan (CEP) is a tool that helps municipalities identify, prioritize and manage local energy needs with a view to increasing energy efficiency, reducing GHG emissions and driving economic development. A community energy plan takes an integrated approach by aligning land use planning and infrastructure planning, considering energy use early on in planning processes and identifying opportunities to integrate local energy solutions at a building or neighbourhood scale.

GUIDING PRINCIPLES AND STRATEGIES FOR SUCCESS

Policy development

Municipal land use planning powers are the primary means by which local governments enact climate action. As such, integrating sustainability and climate considerations into official planning and policy documents (e.g. plans, strategies, zoning bylaws, etc.) is a key method for successfully implementing climate actions. This can include setting an overall vision and strategy for sustainability in the community and integrating green development and smart growth principles into land use planning policies. These policies can encourage and incentivize green buildings, increase active transportation, create walkable and beautiful neighbourhoods, and preserve natural areas and farmland.

Public engagement and education

To build consensus on the urgent need for climate action, it is important for local government to establish a strong, trusting relationship with the community, engaging and educating the public on climate science and the range of impacts, benefits and costs of action and inaction. This may be done through direct, municipal-led campaigns, in partnership with trusted community educators or by enabling established organizations within the community to support public education and engagement. A first step is for the municipality to conduct internal education efforts with staff and council before engaging the broader community. This builds a one-unit team approach internally that then enables broader community climate action efforts.

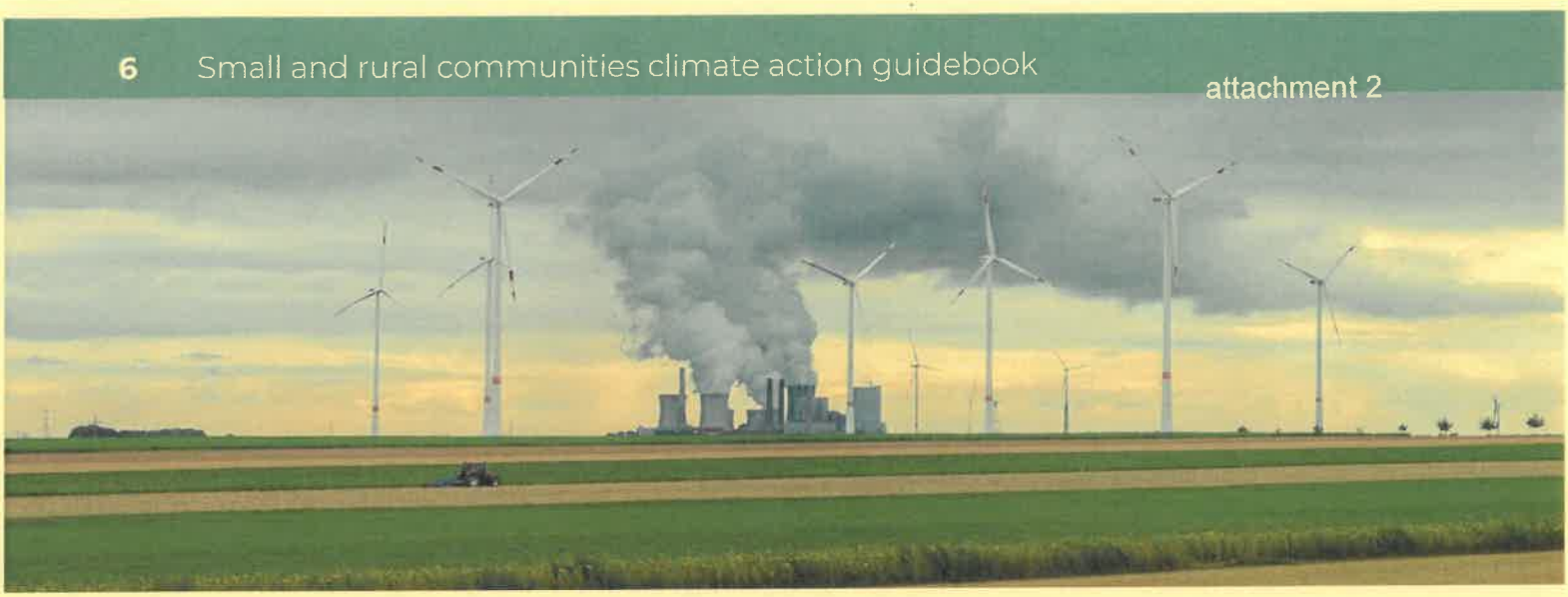
When pursuing projects or initiatives such as renewable energy installations, the installation of electric vehicle (EV) charging stations, or projects targeting energy efficiency, it is important that residents are fully aware of both the immediate and long-term benefits these projects provide. For example, as we are now within only 30 years of the 2050 GHG reduction target deadline, any new buildings constructed using conventional methods will require retrofits to ensure that those climate targets are met. In this context, reducing emissions through investments made today is ultimately cheaper than reducing emissions in the future through retrofits. Even though infrastructure like low-carbon district energy systems or other community energy systems can involve higher upfront capital costs, in the long

run there is a net benefit. Carbon footprint calculation and life cycle analysis can be useful methods to compare the overall costs, benefits and mitigation potential of different options, and this information can aid in building consensus on climate actions. However, these metrics alone can also be difficult to communicate to the public, so they are often paired with metrics that are more easily understood. For example, in describing the benefits of a community-wide energy retrofit program, the metric may be the number of trees that would need to be planted to achieve equivalent results, or the number of cars that would need to be removed from the road.

Many municipal climate actions—such as encouraging green buildings or promoting active transportation—have significant health and well-being co-benefits alongside their GHG mitigation impacts. These benefits are often more tangibly felt among communities and should therefore form a prominent part of public communication and engagement around climate action planning (bike lanes, for example, can have an immediate impact on commute patterns, while improved air quality is a less obvious benefit to the user). See the District of North Vancouver's Community Energy and Emissions Plan, "Appendix II: Improving health and wellbeing through climate action," for an in-depth discussion of these benefits.

Partnerships and collaboration

Often small and rural municipalities can develop close connections with their community members and stakeholders, including community organizations and local business, more easily than in larger metropolitan areas. Building awareness and engaging with these groups early on can help to build momentum for climate action and encourage community participation in municipally led climate mitigation projects. Engagement with local community groups prior to creating or implementing a climate action plan can help to identify existing resources within the community that can be leveraged or bolstered to better achieve municipal climate targets. The residential solar program in **Colchester, Nova Scotia**, is one example of an initiative that was made successful through



partnership and community engagement. By building on existing community supports and interest in solar energy and by partnering with a local solar organization to hold information sessions, Colchester was able to achieve full program uptake before the application closing date.

Engaging with local business and industry is also integral to identifying local options for renewable energy, such as waste biomass from forestry operations, capture of waste heat from local industries, and the use of agricultural and other organic waste for biogas production (see Section 3.5 for more on biogas systems). At a regional level, municipalities can seek to identify synergies and partnership opportunities with nearby municipalities to share costs and infrastructure. For example, on-demand transit, taxibus, or car-share programs can service multiple municipalities in a region, allowing group purchases of electric vehicles to be shared among the participating communities. Partnering with experts is also key to success—particularly when working with innovative (and perhaps expensive) technologies. In the small communities of Warwick, Quebec and Stratford, Ontario, biogas projects were made possible by involving technical partners experienced with biomethanization (See Sections 3.4 and 3.5 respectively). The technical partners assisted with the design, building and commissioning of the technology, which reduced risk and helped to build confidence in the project outcomes.

Building a baseline GHG inventory and data assessment

Creating a baseline GHG inventory is an important first step in developing a climate action plan and GHG reduction targets. An inventory tells planners where and how community emissions are produced. It also functions as a starting point to predict future emissions and as a means to measure progress over time or to benchmark against other communities in the same region. Acquiring and managing energy and emissions data is central to this process. This data forms the foundation for determining which actions to prioritize and where to allocate resources.

The data collection process is often the lengthiest phase in the development of a baseline community inventory. Data can come from a multitude of sources, including the municipality's previous plans and studies, local and regional utilities, municipal departments, other orders of government, and academia. Oftentimes, there are roadblocks to acquiring the data: the required level of detail may not be available, utilities may need to respect customer privacy, or there may simply be no organization collecting the data required. To fill in these data gaps, it is not uncommon to rely on assumptions, or use averages from national, provincial and territorial data sets that are then scaled

to a community's population. However, data gaps should be well-documented so that processes can be put in place to begin tracking data with appropriate metrics, and so that future GHG inventories are more accurate. Resources based on international best practice methodologies such as the Partners for Climate Protection (PCP) Protocol, the Global Protocol for Community-Scale Greenhouse Gas Emission Inventories, and the PCP Tool are available to assist communities in understanding the methodologies and data required to calculate emissions at varying levels of detail and accuracy.

Where data gaps exist (e.g. fuel consumption from recreational boating and off-road vehicles) some municipalities are beginning to use surveys or carbon footprint calculators, or both, to inform their inventories as well as to educate and engage residents on climate action planning.[5] Consumption-based inventories are a more comprehensive method of assessment which can also help to educate the community on the full life cycle emissions associated with consumption of goods and services. These life cycle emissions include the embodied emissions in building materials and the emissions from the production and transportation of food outside the boundaries of the municipality.[6] Energy mapping is another tool available to municipalities to aid in the identification, design and prioritization of climate actions. It is the process of mapping the energy consumption, GHG emissions and potential local sources of energy in a community.

Energy mapping allows municipalities to identify and visualize priority areas with high-energy consumption, which is likely to help in the design and deployment of energy retrofit programs. It is also an important tool for facilitating conversations with the community and stakeholders. Looking at an energy map in parallel with land use planning and transportation maps can allow municipalities to adopt integrated approaches to planning and identify gaps or opportunities that may otherwise not have been apparent. Energy maps are also an important tool in a workshop or consultation setting, since they can be used to help participants understand more about where there are opportunities for energy projects and sustainable economic development. Energy maps have also been shown to be useful in discussions with local energy utilities about energy projects and can aid them in their system planning process.

Consult these resources for more information on energy mapping:

- Community Energy Planning in Canada: The Value of Energy Mapping Symposium Report (CanmetENERGY, 2012)
- Integrated Energy Mapping for Ontario Communities: Lessons Learned Report (Canadian Urban Institute, 2011)
- Mapping opportunities for land-based renewable energy generation in Ontario: a guidebook for local planners and analysts (Community Energy Knowledge – Action Partnership, 2019)

5 *See the* Georgian Bay Biosphere Carbon Calculator *which is also used by partner municipalities to fill in common emissions inventory data gaps for activities such as off-road vehicle use and recreational boating use.*

6 *See the* ecocity Footprint Tool *and* Consumption-based GHG emissions of C40 cities *for more information.*

2 The business case for climate and energy planning

Financial constraints are one of the most common barriers to climate action, particularly in municipalities with smaller property tax bases and infrastructure needs that are spread out over large distances. Rural–urban migration, aging populations, and youth out-migration also create challenges for economic development, especially if paired with the loss of industry and employers. However, climate action is an investment in the future of a community, creating new job opportunities, generating cost savings, and improving quality of life.

In addition to helping prevent the catastrophic effects of climate change, climate action and community energy planning generate economic benefits from improved energy efficiency, as well as qualitative benefits from improved public health and better working environments. This section provides a brief overview of the co-benefits (economic and otherwise) of climate action, as well as the future costs of inaction. It will also direct readers to resources with more detailed information on the financial opportunities and co-benefits of municipal climate action.

Generating revenue through climate action

Energy is a significant cost in Canadian communities, in particular as a result of seasonal fluctuations in temperature. Average annual energy spending can be as much as $12 million in communities of less than 10,000 people, and $71 million in communities with populations between 10,000 and 50,000. Many of these dollars leave the local economy, going to regional energy utilities or oil and natural gas suppliers.[7] Implementing a climate action plan can instead help keep this money in the community and can stimulate the economy by reducing energy costs, creating jobs, and reducing operating costs for businesses—helping to attract investors.[8]

7 *Federation of Canadian Municipalities,* GMF Municipal Energy Roadmap *(2020). Retrieved from:* https://fcm.ca/en/resources/gmf/gmfs-municipal-energy-roadmap

8 *Ibid*

> Investing in sustainability measures such as energy efficiency and renewable energy generation also aids in community revitalization by creating more green job opportunities, attracting and retaining young families and sustainability-minded residents, and keeping energy dollars circulating in the local economy that would otherwise leave the community.

A report prepared in 2018 for Clean Energy Canada by Dunsky Energy Consulting, The Economic Impact of Improved Energy Efficiency in Canada, found that undertaking energy efficiency measures across Canada could potentially save $1.4 billion and could create 118,000 full-time-equivalent jobs, or 34 job-years per $1 million spent.[9] Measures explored included increasing energy efficiency in new buildings, retrofitting the existing building stock, installing energy-efficient appliances, supporting energy efficiency in the industrial sector and improving building codes for housing. Most of this economic impact would be realized as a result of energy bill savings for households and businesses, which on average would equal approximately $114 in savings per household per year. Employment gains would be seen across the economy, with half of new job creation being in the construction, trades and manufacturing sectors.

While these numbers show the national potential, a recent New Brunswick research project demonstrates a method for calculating job creation potential on a community scale. A workbook, generated as part of the project, outlines how the implementation of climate action plans can create jobs by:

- retaining energy dollars in the community
- creating direct, indirect and induced jobs from these local dollars
- attracting actors in the energy transition economy and "new dollars" to investment activities that support climate action plans[10]

Sussex, New Brunswick, is an excellent example of this model. The energy-efficiency goals of its Community GHG & Energy Action Plan are estimated to reduce energy spending by 25 percent, resulting in $2.3 million remaining in the community annually. This translates into 56 new direct jobs during the investment phase (i.e. energy auditors, home insulation companies, solar installers etc.) and 19 person-years of employment for 20 years as a result of jobs created throughout the supply chain as well as induced jobs (i.e. jobs created as more money is recirculated within the local economy).[11]

9 *Clean Energy Canada,* The Economic Impact of Improved Energy Efficiency in Canada *(2018). Retrieved from:* https://cleanenergycanada.org/wp-content/uploads/2018/04/TechnicalReport_EnergyEfficiency_20180403_FINAL.pdf

10 *QUEST,* Economic Impact of New Brunswick Community Energy Plans: Primer and Workbook *(2020). Retrieved from:* https://questcanada.org/wp-content/uploads/2020/04/Economic-Impact-of-New-Brunswick-Community-Energy-Plans-Primer-and-Workbook.pdf

11 *QUEST,* Case Study: Economic Impact of New Brunswick Community Energy Plans *(2020).* https://questcanada.org/wp-content/uploads/2020/04/Case-study-Sussex.pdf

Renewable energy is becoming more affordable, and can be an effective economic diversification strategy in rural communities, generating additional job opportunities and economic benefits. Renewables have very low operating costs, help to reduce energy costs over the long term, provide energy cost stability as well as energy security, and can drive down the wholesale price of electricity.[12] Furthermore, larger renewable energy projects generate tax revenue for municipalities, and can be revenue sources for landowners that lease land to project developers. Small scale projects that connect to the local distribution grid, such as onsite or community-scale installations, can also generate revenue by offsetting utility bills or by selling electricity directly to the grid. Depending on ownership and governance models, revenue generating projects can benefit the community through cooperative or share ownership models or be used to fund essential community needs and services as well as community revitalization projects through the establishment of community charities or development trusts.[13]

Communities are also beginning to view climate action and energy planning as an integral part of community revitalization (see case study on **City of Sault Ste. Marie, Ontario: FutureSSM**). This not only creates local economic benefits but can constitute a shift away from reliance on a single "boom and bust" industry and can help to attract new residents to a community. Implementing climate actions and broader sustainability initiatives can also enable profitable ecotourism by offering sustainable options to tourists as well as showcasing sustainability initiatives in forestry, agriculture and renewable energy (See Section 3.5 Development of Agriculture, Resources and Tourism.)

The following resources can help in developing the business case for climate and energy planning:

- *GMF Municipal Energy Roadmap* (Federation of Canadian Municipalities, 2020) https://fcm.ca/en/resources/gmf/gmfs-municipal-energy-roadmap
- *On the money: Financing tools for local climate action* (ICLEI Canada and the Federation of Canadian Municipalities, 2018) https://www.pcp-ppc.ca/resources/financing-tools-for-local-climate-action
- *Community Energy Planning: The Value Proposition. Environmental, Health and Economic Benefits* (Quality Urban Energy Systems of Tomorrow (QUEST), 2016) https://ccednet-rcdec.ca/sites/ccednet-rcdec.ca/files/valueproposition_full-report_feb92016.pdf
- *A Case for Smart Growth* (Deborah Curran, West Coast Environmental Law, 2003) https://www.wcel.org/publication/case-smart-growth

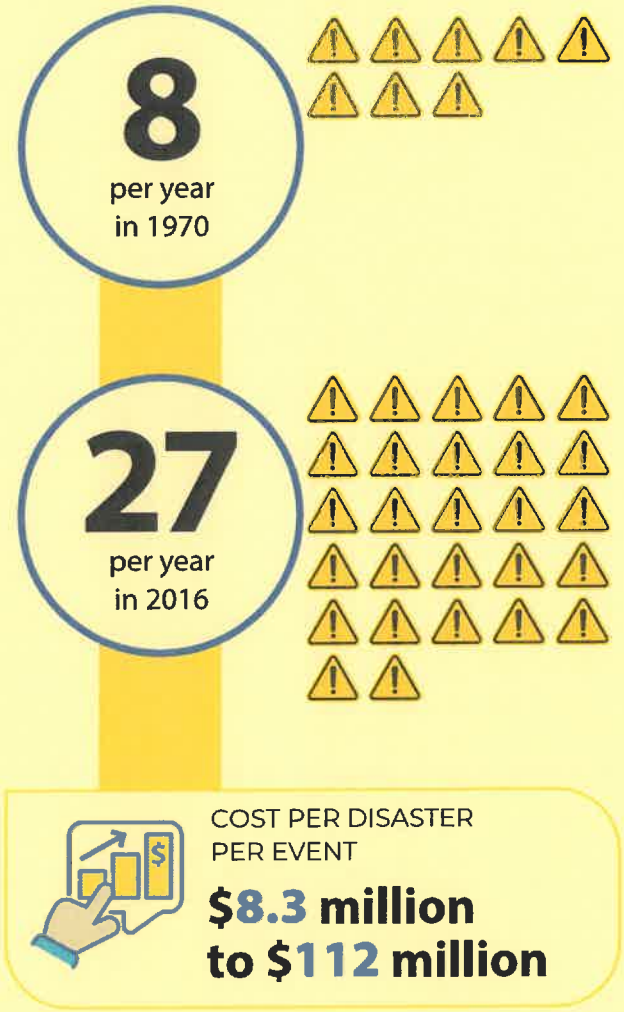
12 *Pembina Institute, "Renewable Energy Opportunities for Businesses and Municipalities in Alberta" (2020). Retrieved from:* https://www.pembina.org/pub/renewable-energy-opportunities

13 *Andrea Miller, Sonak Patel, Carter Gorzitza, and John Russell Parkins,* Community Energy in Western Canada: Insights from case studies on small-scale renewable energy development. *Edmonton, AB: Future Energy Systems, University of Alberta (2019).*

The cost of inaction

Climate change impacts are already being experienced by communities across Canada. Increasingly warm winter temperatures in BC have been linked to the rapid population growth and spread of the Mountain Pine Beetle since its initial outbreak in the 1990's. The pine beetle with its expanded range and numbers has affected 18.1 million hectares of forest, reducing the timber supply and costing the government hundreds of millions of dollars in efforts to mitigate the outbreak, as well as resulting in job loss and mill closures.[14] In 2012, an early heat wave in Ontario caused apple trees to blossom five weeks earlier than expected, leading to the subsequent destruction of approximately 80 percent of the apple blossoms during an April frost. This resulted in losses estimated at $100 million.[15]

The number of disaster events has increased from eight per year in 1970 to 27 per year in 2016, and the cost per disaster has risen from an average of $8.3 million per event to $112 million. Insurance companies are paying out record amounts to cover property damage caused by weather events such as winds, wildfires and flooding.[16] Increased healthcare costs and mortality rates are expected as a result of warmer summers, poorer air quality, extreme



14 *National Round Table on the Environment and the* Economy, Paying the Price: The Economic Impacts of Climate Change for Canada *(2011). Retrieved from:* https://data.fcm.ca/documents/reports/PCP/paying_the_price_EN.pdf

15 *Ibid*

16 *Canadian Institute for Climate Choices,* Tip of the Iceberg: Navigating the Known and Unknown Costs of Climate Change for Canada *(2020). Retrieved from:* https://climatechoices.ca/wp-content/uploads/2020/12/Tip-of-the-Iceberg-_-CoCC_-Institute_-Full.pdf

weather events and greater risk of exposure to infectious diseases transported through food and water.[17] Moreover, forest fires and pest outbreaks can negatively impact agricultural production, cause infrastructure damage, disrupt the forestry and fishing industry, and exacerbate risks related to the planning and management of natural resource industries.[18]

Mitigating the impacts of climate change today can prevent additional and higher costs down the road. The National Round Table on the Environment and the Economy estimated that the costs of climate change could grow from $21 to $43 billion a year by 2050, with a five percent chance that costs could reach $91 billion by 2050.[19] At the municipal level, the worst impacts of climate change are estimated to cost $5.3 billion per year, equivalent to 0.26 per-cent of Canada's GDP.[20] In rural and remote areas, as a result of limited transportation to infrastructure, reliance on natural resources and under-resourced social and physical infrastructure, changing climate conditions will have negative impacts on health and wellbeing[21]. For example, changing access to quality food and water systems from rising temperatures, changing precipitation patterns, and extreme weather events can disrupt the ability to fish, hunt or forage, decreasing consumption of healthy and culturally preferred foods, and increasing reliance on retail food. Where communities rely on fragile water treatment systems rising temperatures and extreme weather events can overwhelm these systems disrupting access to clean drinking water. Food and water insecurities such as these can lead to increased risk of poor nutrition, obesity, diabetes, cardiovascular disease, acute gastrointestinal illness and mental illness. More frequent extreme weather conditions such as heat waves can also lead to negative health outcomes such as heat stroke and respiratory related emergency room visits. More frequent wildfires can create health challenges such as respiratory illnesses, mental health stressors, and damage to critical infrastructure particularly in forest communities. Acting now to mitigate climate change quite literally saves lives and money.

17 *National Round Table on the Environment and the Economy,* Paying the Price: The Economic Impacts of Climate Change for Canada *(2011). Retrieved from:* https://data.fcm.ca/documents/reports/PCP/paying_the_price_EN.pdf

18 *F.J. Warren and D.S. Lemmen, editors,* Canada in a Changing Climate: Sector Perspectives on Impacts and Adaptation *(2014). Retrieved from:* https://www.nrcan.gc.ca/sites/www.nrcan.gc.ca/files/earthsciences/pdf/assess/2014/pdf/Full-Report_Eng.pdf

19 *National Round Table on the Environment and the Economy, Paying the Price: The Economic Impacts of Climate Change for Canada (2011). Retrieved from:* https://data.fcm.ca/documents/reports/PCP/paying_the_price_EN.pdf

20 *Federation of Canadian Municipalities, "Climate adaptation estimated to cost municipalities $5.3 billion annually" (2020). Retrieved from:* https://fcm.ca/en/news-media/news-release/climate-adaptation-estimated-cost-municipalities-5-billion-annually

21 *Amy Kipp, et al. "At-a-glance Climate change impacts on health and wellbeing in rural and remote regions across Canada: a synthesis of the literature,"* Health Promotion and Chronic Disease Prevention in Canada: Research, Policy and Practice, *39(4), pp. 122–126.*

3 Climate action challenges and solutions by sector

1 Buildings

2 Transportation

3 Land use

3 Waste

4 Development of agriculture, resources and tourism (DART)

Small and rural communities face unique challenges that are very different from the realities of large city centres. This section seeks to identify common challenges and barriers to climate action and highlight communities that have demonstrated leadership in these areas by developing and implementing innovative solutions in five key sectors:

- Buildings
- Transportation
- Land use
- Waste
- Development of agriculture, resources and tourism (DART)

This section demonstrates that with the proper tools, small communities can act on climate change by building sustainable, healthy, energy efficient, and economically prosperous communities.

3.1 Buildings

In 2018, buildings accounted for 13 percent of overall GHG emissions in Canada, primarily due to the use of natural gas, heating oil and biomass for space and domestic hot water (DHW) heating.[22] In this domain, energy availability and high utility distribution costs create unique challenges for rural municipalities. Where natural gas and electricity grid connections are not available, communities must rely on heating oils and biomass for heating, or diesel for electricity generation, which are often more expensive and produce more emissions per unit than natural gas and most provincial and territorial electricity grids.

Key methods of mitigating climate change in this context include retrofit programs to increase energy efficiency in buildings, energy-efficient new development, promoting energy conservation and behavioural changes, and switching to renewable sources of heat and electricity. These measures can also lower the cost of energy and create more energy independence and security.

Electrification of the heating sector

Electrification of heat refers to the replacement of fossil fuel burning furnaces or boilers with electric heat pumps or electric boilers, or both.

Heating sector electrification

Replacing natural gas and other fuels for building heating with electrification can be integral to meeting GHG reduction targets. Electric heat pumps are the primary enabling technology to achieve this and are three to five times more efficient than conventional natural gas heating. As part of energy-efficiency retrofit programs, municipalities should assess the feasibility of including heat pumps in retrofit packages or encourage increased adoption by promoting existing energy-efficiency incentives and resources.

22 *Environment and Climate Change Canada,* National inventory report: Greenhouse gas sources and sinks in Canada *(2020).*

The emissions reductions achieved through electrification will depend on the carbon intensity of the provincial or territorial electricity grid. In areas with low-carbon grids, municipalities can drastically reduce emissions through electrification initiatives, but in areas with carbon-intensive grids, increased renewable energy supply will first be needed before electrification of the heat supply can be used to reduce GHG emissions.[23] The GMF Municipal Energy Roadmap, created by FCM's Green Municipal Fund, can help municipalities identify their grid type and identify appropriate actions for reducing GHGs in the building sector.

Energy-efficiency program development and incentives

Energy-efficiency programs come in three main categories: those that deal with heating and electricity (e.g. retrofit programs); those that encourage or mandate behavioral changes (e.g. to reduce energy consumption); and those that deal with ongoing operations and maintenance in buildings.

Retrofit programs can further be categorized by the degree of energy reduction that they achieve—ranging in implementation from shallow, to moderate, to deep retrofits.[24] Shallow retrofits are "low-hanging fruit" measures that are typically less capital-intensive, are easier to install and have shorter payback periods, but achieve less energy

23 *Federation of Canadian Municipalities,* GMF Municipal Energy Roadmap *(2020).*
24 *Natural Resources Canada, Retrofitting (2019). Retrieved from:* https://www.nrcan.gc.ca/retrofitting/20707

reduction. These include things like LED lighting and weather caulking. Moderate retrofits include measures such as replacing or upgrading insulation and heating and cooling systems, as well as replacing window glazing and doors. Deep retrofits involve a significant overhaul of the building, which can include upgrading the building façade, installing new windows, replacing the roof, or installing a renewable energy heating and cooling system such as a ground-source heat pump. While it may seem attractive to first tackle low-hanging fruit measures with well-known paybacks and success stories, such as installing LED lighting and smart thermostats, this can often lead to deeper energy-efficiency retrofits being abandoned. Municipalities should consider looking at buildings in a holistic manner and bundling shallow energy-efficiency measures with deeper energy retrofits to maximize impact. This strategy can allow shorter-payback measures to help offset the longer payback periods of deeper energy retrofits.

Municipalities can leverage existing incentives and rebates for energy audits, energy-efficient equipment and building upgrades (i.e. appliances, insulation, windows, weather stripping) offered by provincial or territorial governments and local energy utilities to encourage increased adoption by community members. In addition, municipalities can play an important role in educating residents and businesses on the importance and benefits of energy efficiency, explain how to conserve energy through behavioural change, and provide resources to guide them through the retrofit process. For example, in BC, Campbell River's **Power Down Campbell River** program provides a rebate for energy audits, guides and resources to assist residents through the retrofitting process, and awareness-raising community outreach initiatives. Many municipalities across Canada are also beginning to design and finance their own energy-efficiency retrofit programs through the use of property assessed clean energy (PACE) financing models (see the financing section below for more information on PACE financing).

For new buildings, local governments can use land use planning tools to create incentives for developers to build green. They can stipulate building requirements and integrate specific climate-related policies and actions throughout the development process and in official plans—for example, requirements or guidelines for buildings to be district-energy-ready or solar-ready. The voluntary or mandatory green development standards that are being implemented in many communities across Canada can serve as examples of this approach.[25] A variety of incentives can be used to achieve voluntary standards, including expediting development applications, density bonusing or development charge reductions in return for the integration of green building elements into a development (see the use of density bonusing incentives and smart growth principles implemented in **Ucluelet, BC**). Mandatory green building standards are typically enforced, depending on provincial and territorial planning legislation, through measures such as zoning bylaws, official plan policies, and site plan control (see **Town of Canmore, Alberta: Green Building Regulations** and Section 3.3 for more information on land use planning tools).

25 *Clean Air Partnership,* Towards Low Carbon Communities: Creating Municipal Green Development Standards. *Retrieved from:* https://www.cleanairpartnership.org/wp-content/uploads/2020/10/GDS-toolkit.pdf

Financing

Deep retrofit projects and energy installations have variable payback periods depending on the degree of implementation and type of technology chosen. Where paybacks are long, financing is often a significant challenge for municipalities due to budgetary constraints. Small communities have used financing tools and incentive programs to reduce financial risk, allow return on investments and reduce energy costs.[26] To this end, property assessed clean energy (PACE) loans or local improvement charges (LIC) are growing in popularity. These municipal financing tools allow building owners to receive a loan from their municipality for energy-efficiency retrofits or renewable energy installations and pay it back through their property tax bill. This strategy removes the barriers of upfront cost and long payback periods. The building owner can acquire a loan at a favourable interest rate and, because the loan is tied to the property, can still sell the building without worrying about an outstanding loan balance. For the municipality, a PACE program is an investment, as it can earn a higher interest rate from lending than from having that same money sit in a reserve account. See the case study on the **Solar Colchester** PACE program in the County of Colchester, NS, for more information on how this type of program can be implemented successfully. Visit the Nova Scotia Pace website for examples of programs encompassing energy efficiency and clean energy upgrades.

The following are some additional resources on PACE and LIC community efficiency financing:

- Community Efficiency Financing (Federation of Canadian Municipalities) https://fcm.ca/en/programs/green-municipal-fund/community-efficiency-financing
- Collaboration on Home Energy Efficiency Retrofits in Ontario (CHEERIO) (Clean Air Partnership) https://www.cleanairpartnership.org/projects/cheerio/
- PACE Canada https://www.pacecanada.org/
- PACE BC https://www.pacebc.ca/

Energy service performance contracts (ESPCs) are also important financing tools for energy efficiency. ESPCs have primarily been used in public institutional settings such as government buildings, school boards, healthcare facilities and public housing.[27] In an ESPC, an energy service company guarantees a certain level of energy savings over a fixed term as a result of implementing energy-efficiency measures, fuel switching, or renewable energy installations in a building. The energy service company provides the project capital (usually in partnership with a third-party lender) and is repaid from the resulting energy cost savings over the period of the contract, which typically lasts 10 to 15 years depending on the specifics of the project, contract, and type of ESPC model used.

The attractiveness of the ESPC model is that it addresses key barriers faced by building owners and managers: a lack of technical expertise and limited capital budgets.[28] At the end of the contract, after the debt is repaid, the building owner receives all future cost savings as result of the

26 *See the 2018 report by ICLEI Canada and the Federation of Canadian Municipalities,* On the money: Financing tools for local climate action. https://icleicanada.org/project/auto-draft-2/

27 *Energy Services Association of Canada,* Role of guaranteed energy service performance contracts (ESPC's) in achieving Canadian carbon reduction targets *(2016). Retrieved from:* http://energyservicesassociation.ca/documents/ESPCs-and-Reduction-Targets-2016jul.pdf

28 *Natural Resources Canada,* Energy Performance Contracting; Guide for Federal Buildings *(2013). Retrieved from:* https://www.nrcan.gc.ca/sites/www.nrcan.gc.ca/files/oee/files/pdf/communities-government/buildings/federal/pdf/12-0419%20-%20EPC_e.pdf

energy-efficiency upgrades. ESPCs are well-suited to institutional contexts such as municipally owned buildings, because institutions tend to have a larger appetite for the longer payback periods typically associated with ESPCs. Furthermore, in the institutional sector, ESPCs are usually client-driven, in that energy service companies are contracted through an RFP and a competitive tendering process.

In the commercial and residential building sectors, dealing with energy service companies is not a typical core business activity, and building owners may not have the capacity or incentive to engage with these companies.[29] In addition, smaller-scale projects such as those in the private residential and commercial sectors are sometimes seen by energy service companies as higher risk and less likely to be profitable. As a result, ESPCs are less common in the private sector. However, under the right conditions, it is possible to involve the commercial and residential sectors—for example, by aggregating smaller buildings under one larger ESPC through a community partner (such as a local energy co-operative or other community organization).[30]

For more information on ESPCs, consult the following resources:

- Energy Performance Contracting: Guide for Federal Buildings (Natural Resources Canada, 2013)
- Role of Guaranteed Energy Service Performance Contracts (ESPC's) in Achieving Canadian carbon reduction targets (Energy Services Association of Canada, 2016)
- White Paper on the Use of Guaranteed Energy Service Performance Contracts (ESPC's) to Achieve Provincial Carbon Reduction Targets (Energy Services Association of Canada, 2016)

29 *TREC,* Evolving Business Models for Renewable Energy Co-operatives—Spotlight on Energy Efficiency *(2019). Retrieved from:* http://www.trec.on.ca/wp-content/uploads/2019/06/Spotlight_on_Energy_Efficiency.pdf

30 *Ibid*

- Evolving Business Models for Renewable Energy Co-operatives: Spotlight on Energy Efficiency (Toronto Renewable Energy Cooperative, 2019)

Energy efficiency co-benefits

In addition to the environmental and economic benefits of reduced energy consumption, energy-efficient buildings offer various co-benefits such as improved indoor comfort, enhanced market value, and local economic stimulus.[31] Energy-efficiency measures also help to address the issue of energy poverty. Being in energy poverty has been defined as spending more than six percent of one's household after-tax income on energy.[32] This situation can have adverse impacts on low-income families, including weather-related illness and mental strain as they may be forced to face trade-offs between essentials such as food and heat. Recent research shows that 2.8 million households in Canada have experienced energy poverty.[33] Rural households are more likely to experience energy poverty due to the higher cost of energy transmission and the higher average size of rural homes.[34] Implementing a climate action plan in a small community can reduce energy poverty significantly.

Devon, Alberta: Community Centre Solar*
Population: 6,578

In Devon, Alberta, a 100 kW solar PV system was installed on the roof of the local community centre, meeting all the building's electricity needs on an annual basis. The project cost $190,000 in total, $117,000 of which was financed through Alberta's Municipal Sustainability Initiative grant, with the remainder of the costs financed through a 15-year solar leasing program with the utility provider ENMAX. The solar lease payments are roughly equal to what the town would have paid on its utility bill, with the added benefit that the town will take full ownership of the system at the end of the lease term. Having, traditionally been an oil and gas industry community, moving forward on sustainability and energy efficiency was a huge step for the town.

* Edmonton Journal, "Solar Panels Help Devon Become New Kind of Energy Town" (2015).

31 *Tom-Pierre Frappé-Sénéclauze, Dylan Heerema, and Karen Tam Wu,* Deep emissions reduction in the existing building stock: Key elements of a retrofit strategy for B.C. *(Pembina Institute, 2017).*

32 *Canadian Urban Sustainability Practitioners,* Energy Poverty in Canada: A CUSP Backgrounder *(2019). Retrieved from:* https://energypoverty.ca/backgrounder.pdf

33 *Ibid*

34 *Ibid*

Rural energy poverty

Rural households are more likely to experience energy poverty due to the often-larger size of homes in rural settings and the higher costs of transmission on utility bills.

Renewable energy

Onsite or locally sourced renewable energy generation can help to offset emissions from energy use in buildings, particularly in provinces and territories with more carbon-intensive grids or where electric heat pumps are used to replace natural gas furnaces and boilers. While the costs of renewable energy continue to fall year over year, where capital costs are still deemed prohibitive, developing partnerships regionally with third-party organizations or utilities can enable the development of these projects in small communities. For example, utility net-metering allows buildings that supply their own electricity to "sell" their excess power to the grid. Where utility net-metering schemes are in place, renewable energy generation can lower electric utility bills by offsetting the need to draw electricity from the local distribution grid. Solar companies also offer solar leases or power purchase agreements to help overcome upfront capital cost barriers (see example above on Devon Alberta). Virtual net-metering and third-party net-metering are other emerging approaches to overcoming these obstacles. While most jurisdictions do not allow for third-party and virtual net-metering, Nelson's Community Solar Garden in BC is one of the few examples in Canada where it has been implemented. Many renewable energy organizations in Canada consider virtual and third party net-metering essential to broaden access to renewable energy, but it has yet to be implemented on a broader scale.[35] It is important to be aware of the potential of net-metering in the area and to continue the conversation with local distribution companies and provincial or territorial energy regulators.

35 *Many renewable energy organizations in Canada consider virtual and third-party net-metering essential to broaden access to renewable energy.*

Net-metering

Net-metering is a type of contract with a local distribution company (LDC) that allows a building owner to offset the cost of electricity consumption by sending electricity generated from onsite renewable energy to the grid. The owner only pays for their net-usage—the difference between the amount of electricity generated and the amount consumed.

Third-party net-metering refers to the operation of net-metered renewable energy systems by professional third-party providers, helping to remove technical barriers and enabling the use of different financing schemes such as solar leasing.*

Virtual net-metering allows a centralized net-metered installation to be set up in a suitable area, so that the installation can provide electricity to multiple buildings. In this scheme, individuals own a portion of the renewable energy installation and receive a percentage of the renewable energy produced from it.* This allows access to renewable energy for those that do not have suitable land or buildings and can also improve financial viability through bulk purchasing and the ability to locate the installation at the most optimal site. While this is more widespread in the US, in most jurisdictions of Canada, net-metering is currently restricted to installations within an individual property boundary.

* Aaron Thornell, "Ontario Net Metering Legislation Revoked," Ottawa Renewable Energy Co-operative (November 6, 2018). Retrieved from: https://www.orec.ca/ontario-net-metering-legislation-revoked/

For renewable heating, the use of wood waste or municipal solid waste as fuel for biomass district energy systems has been successfully implemented in a number of small communities. The cities of Revelstoke and Prince George, British Columbia, Oujé-Bougoumou, Quebec, Yellowknife, Northwest Territories, and Charlottetown, Prince Edward Island, have all used this strategy as a means to reduce emissions and fuel costs associated with heating buildings. Further resources include detailed case studies of best-in-class biomass district energy systems from the Biomass Energy Resource Center, as well as the Community Energy Association's Small-Scale Biomass District Heating Handbook.

Nelson, British Columbia: Solar Community Garden

Population: 10,664

Nelson is the first community in Canada to showcase virtual net-metering. In partnership with Bullfrog Power, the City of Nelson launched a 60kW solar garden project that feeds into the city-owned local distribution grid operated by Nelson Hydro. Nelson Hydro is a small municipally owned electric utility that owns its distribution grid, which is what made virtual net-metering there possible*. Community members were offered a chance to purchase solar panels at for an upfront payment of $923 per panel. Subscribers to the project then received solar credits that were deducted from their electricity bill. These credits were calculated annually in proportion to their share of the solar garden's production. Annual electricity cost reductions began at $28 and are projected to grow to $50 commensurate with electricity rates.

Nelson Hydro recognized the benefits of solar power to the community and to the utility. The project improved energy self-sufficiency and led to the development of in-house solar experience for the utility. Nelson Hydro led the project, which had the collective commitment of individual investors and community groups that supported a vision of clean energy in their community and wanted to address the fact that renewable energy generation would not otherwise be possible for many residents. It was funded through the City of Nelson and supported by a pre-feasibility grant from Bullfrog Power as well as additional financial support from Bullfrog Power during the construction phase.**

The project is now fully subscribed, with investors ranging from renters, homeowners and business owners to co-ops, churches and local schools.** The system itself produces 70,000 kWh per year—almost double the initial annual estimate of 36,000 kWh.

* David Suzuki Foundation, "Nelson, B.C. saves money with Canada's first community solar garden" (2017). Retrieved from: https://davidsuzuki.org/story/nelson-bc-canadas-first-community-solar-garden/

** City of Nelson, "Nelson's Community Solar Garden." Retrieved from: https://www.nelson.ca/223/Community-Solar-Garden

District energy

District energy refers to the distribution of heating or cooling, or both, from a centralized energy plant to buildings through a network of underground pipes using steam or water as a medium. District energy is widely regarded as integral to the transition to sustainable energy, because of its ability to take advantage of sustainable sources of heating and cooling that would otherwise not be available to individual buildings or would be wasted (such as local fuel sources and waste heat). Furthermore, as shares of renewable energy increase in electricity grids, district energy will play an important role in balancing the energy system by taking excess electricity produced by renewables and converting it into electric heat using highly efficient large-scale heat pumps.

Demonstrating leadership

Municipalities can demonstrate leadership and show the feasibility of renewable energy, energy efficiency, and district energy to the wider community by implementing these systems first in municipally owned buildings. In doing so, municipalities can also capture the operational savings offered by these technologies. For example, in Perth, Ontario, a municipal investment of $675,000 in LED lighting and mechanical and envelope upgrades in the town's buildings produced an annual savings of $43,000, with a payback period of 15 years.[36] In Raymond, Alberta, net-zero municipal operations were achieved by powering its nine municipal buildings and all of its streetlights from solar panels financed through a $2.8 million solar lease—with $630,000 provided by the Municipal Climate Change Action Centre.[37] The project has a payback period of 16 years, after which the town will see $150,000 in savings annually.[38]

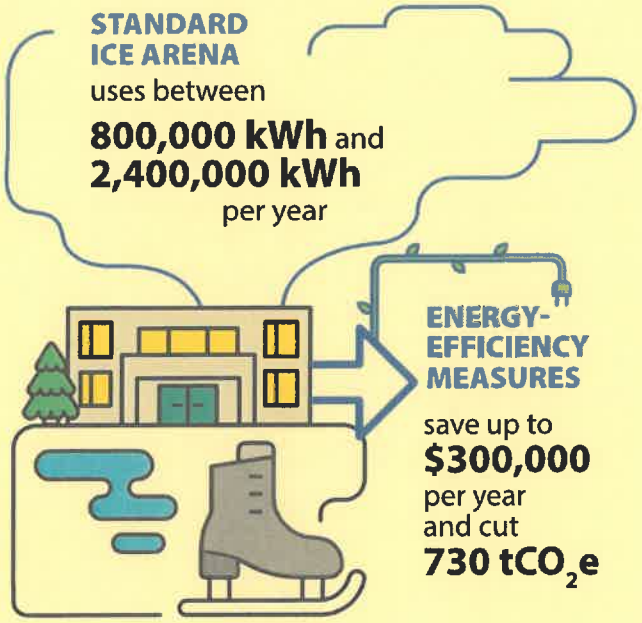
In many small and rural municipalities, community centres and ice rinks are often the largest energy consumers. A standard ice arena can use between 800,000 kWh and 2,400,000 kWh per year, depending on how energy efficient the arena already is.[39] Implementing energy-efficiency measures in poorly performing arenas has been shown to save up to $300,000 per year in reduced

36 *Town of Perth,* Perth's Climate Change Response *(2019). Retrieved from:* https://www.perth.ca/en/live-and-play/resources/Documents/FofT-Presentation-Climate-Change-Action-Plan.pdf

37 *CBC, "Alberta town aims to be first in Canada to rely on solar panels" (2019). Retrieved from:* https://www.cbc.ca/news/canada/calgary/raymond-solar-panels-net-zero-1.5190933

38 *ENMAX Corporation, "Town of Raymond completes net zero installations" (2018). Retrieved from:* https://www.enmax.com/news-events/news/town-of-raymond-completes-net-zero-solar-installations

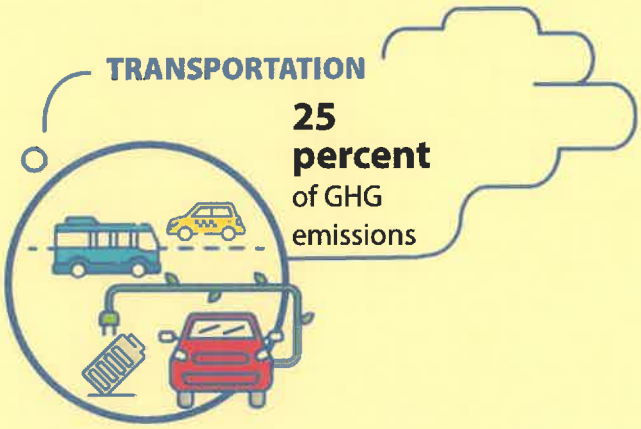
39 *Laurier Nichols, Improving Efficiency In Ice Hockey Arenas (ASHRAE Journal, June 2009). Retrieved from:* https://www.stantec.com/content/dam/stantec/files/PDFAssets/2017/Improving%20Efficiency%20in%20Ice%20Hockey%20Arenas.pdf



energy costs, cutting emissions by 730 tCO_2e. These community hubs are great opportunities for municipalities to reduce operational costs, while also building awareness around climate change, sustainability, energy efficiency and renewable energy installations.[40] In the of Town of Île-des-Chênes, Manitoba, a geothermal district energy system was installed to heat and cool the new community centre, ice arena and fire hall. With funding from the federal and provincial governments as well as FCM's Green Municipal Fund, the $1.3 million project replaced four natural gas boilers with highly efficient ground source electric heat pumps. The upgrades allow the ice season to be prolonged in the arena, reducing energy consumption by 60 percent and creating energy cost savings of 40 percent.[41]

3.2 Transportation

Transportation is the second-largest source of emissions in Canada, accounting for 25 percent of GHG emissions, just behind the 26 percent of emissions produced by the oil and gas sector.[42] The majority of emissions stem from road transportation, with light-duty gasoline trucks and heavy-duty diesel vehicles being the largest contributors. Transportation emissions are a particular issue for rural communities with low population density and undeveloped public transit systems—both between and within regions. Dominated by cul-de-sac street patterns and heavily reliant on private vehicles, small municipalities can find it challenging to develop public transit.



OIL AND GAS SECTOR
produced **26 percent**
of emissions

40 *Federation of Canadian Municipalities,* GMF Municipal Energy Roadmap *(2020). Retrieved from:* https://fcm.ca/en/resources/gmf/gmfs-municipal-energy-roadmap

41 *Eco-Ouest, "Île-des-Chênes innovates with district geothermal heating & cooling system" (2021). Retrieved from:* http://eco-ouest.com/en/project/ile-des-chenes/

42 *Environment and Climate Change Canada,* National inventory report: Greenhouse gas sources and sinks in Canada *(2020).*

Financial incentive programs that are often implemented in densely populated cities, such as road tolls, would not be practical and would be met with resistance from vehicle owners.

Strategies for transportation emissions reduction fall into several categories: vehicle efficiency improvements, low-carbon fuels, and vehicle demand reduction. While vehicle efficiency standards fall under federal jurisdiction, municipalities can take action to ensure that their own corporate fleet of vehicles is electric or as efficient as possible.

The following resources provide more information on greening municipal fleets:

- Greening Government Fleets (Natural Resources Canada, 2018) https://www.nrcan.gc.ca/sites/www.nrcan.gc.ca/files/energy/pdf/transportation/NRCan_GreeningGovFleets_e.pdf
- Model Green Fleet Policy (Clean Air Partnership) https://www.cleanairpartnership.org/resources/
- Green Fleets Business Case Series (Clean Air Partnership and Federation of Canadian Municipalities) https://www.cleanairpartnership.org/wp-content/uploads/2020/12/Green-Fleets-Business-Case-Series.pdf

Municipalities can encourage residents and businesses to switch to electric vehicles (EVs) by providing charging station infrastructure as well as reducing the price of EVs through group purchasing.[43] Forming regional partnerships for the development of EV charging stations can help smaller municipalities with low population density overcome barriers to the development of infrastructure projects such as these. Accelerate Kootenays is an example of such an initiative in BC. Multiple regional districts worked together to fund and develop a network of 13 fast charging stations that were strategically placed to benefit each community and provide access to tourist and recreation activities for EV users.

43 *See the 2018 report by ICLEI Canada and the Federation of Canadian Municipalities,* On the money: Financing tools for local climate action. https://www.pcp-ppc.ca/resources/financing-tools-for-local-climate-action

Table 1: Strategies for transportation emissions reduction

Vehicle efficiency	Low-carbon fuels	Vehicle demand reduction
• Fuel standards • Fleet management systems • Driver training to improve fuel economy • Preventative maintenance • Anti-idling policies	• Switching to electric, hydrogen and renewable natural gas vehicles • Increased access to EV infrastructure • Access to free charging stations • Preferred parking for low-carbon vehicles	• Carpooling programs • Car sharing programs • Fixed route rural buses • On-demand transportation services (i.e. taxibus, on-demand minibuses) • Increased trail development and connectivity • Improved bicycle infrastructure: bike parking, paved shoulders, bicycle route maps, dedicated bike lanes, improved trail quality to support increased bicycle usage • Complete Streets policies

While financial constraints can make it more challenging for small and medium municipalities to implement some of the above actions, vehicle demand reduction strategies may be a more feasible approach. Depending on a municipality's location, it may be able to collaborate with other nearby rural communities or metropolitan centres to build inter-regional transportation systems with daily service for commuters, purchase existing public services from regional governments, or create taxibus and car and ride share programs. A municipality might be able to provide public transit with flexible routing and schedules or demand-responsive transit that offers service during hours of high demand or in the form of dial-a-ride taxi-bus. Examples of communities with these types of services include the **City of Rimouski Quebec: Taxibus demand-responsive public transit model**, the Saint-Paul d'Abbotsford, Quebec, Friend-Bus (see the sidebar below) and the Okotokos, Alberta On-Demand Transit service.

Municipalities often collaborate with employers on carpooling and car-sharing programs, and with online ride-matching services, to help area residents find carpool options and matches. Technology will play a large role in enabling access to these services. For example, online car sharing management systems can be accessed through mobile phone apps or personal computers (see **City of Plessisville, Quebec: Electric cars, vehicle sharing and the SAUVÉR project**).

Communities can also encourage active transportation, particularly for shorter trips, in a number of ways: increase bicycle infrastructure such as paved shoulders and dedicated bike lanes; create better signage and publish route maps; provide safe bike lockers or storage areas; and develop and

implement Complete Streets policies that include better safety measures for cyclists and pedestrians (see → **District of Clearwater, British Columbia: Road cross-section bylaw**). Trails are also an important means of active transportation, particularly in rural areas with extensive natural spaces. Ensuring connectivity between trails and with other cycling or walking routes can promote their use for commuting or other types of trips. In addition, trails can help create support for the protection of natural areas, particularly if combined with educational signage on the historical and environmental significance of an area.

Municipalities can implement these measures by integrating supporting policies into official planning documents, bylaws, plans and strategies (e.g. transportation plans) and by addressing trail connectivity in parks and recreation master plans or trail master plans. Policies to promote infill, intensification and mixed-use, higher density communities, as described in Section 3.3 below, can also play an important role in reducing vehicle demand and vehicle kilometres travelled.

Saint Paul d'Abbotsford, Quebec: Ami-Bus
Population: 2,870

In partnership with Ami-Bus, Saint-Paul d,'Abbotsford has established the municipality's first public transportation option: Initially a one-year pilot project, the service offers round trip door-to-door transportation within the territory of the municipality and to the nearby larger town of Granby.* Ami-Bus, an adapted transportation service for persons with reduced mobility, delivers round-trip door-to-door service with eight 18-seat minibuses. The service is offered seven days a week, 361 days a year, from 7:00 am to 11:30 pm, and costs $6 per trip. Trips must be reserved the day before.**

The project was funded by a $10,000 grant from the Rural Pact (a provincial policy that established agreements between the government and rural municipalities to strengthen capacity) and has helped to combat rural isolation and give residents more autonomy.**

* La Vox de l'Est, "Public Transport : Ami-Bus now serves Saint-Paul" (2015). Retrieved from: https://www.lavoixdelest.ca/archives/transport-collectif-ami-bus-dessert-maintenant-saint-paul-8bd248db8eb8fa28209f0761227138a6

** Grandby Express, "Saint-Paul-d'Abbotsford s'initie au transport collectif," 2015. Retrieved from: https://www.granbyexpress.com/2015/08/20/saint-paul-dabbotsford-sinitie-au-transport-collectif/

3.3 Land use

Land use planning based on smart growth principles has become increasingly recognized as playing an integral role in reducing transportation-related emissions. Smart growth includes the development of dense, mixed-use, transit-oriented and walkable communities. In addition to encouraging active lifestyles and improving public health, denser communities increase the viability of district energy by providing higher thermal demand over shorter distances (heat density).

Land use planning also plays an important role in protecting a community's natural assets—such as forests and wetlands, which provide carbon sequestration as well as deliver a multitude of ecosystem services including food, fresh water, timber, jobs, trail systems, cooling, reduced air pollution and stormwater management.[44] Further guidance on how municipalities can support climate mitigation through the management and protection of forests and other natural assets can be found in Section 3.5.

Land use planning tools are made available to municipalities through provincial or territorial governments and are an excellent resource for municipalities looking to act on climate change. Many municipalities have begun to integrate smart growth principles into their official planning documents, implementing them in new developments and redevelopment projects (see **Ucluelet, British Columbia: Smart Growth Principles and Density Bonusing**; and **Ville de Mont-Saint-Hilaire, Quebec: Transit-oriented development**). As described in Section 3.1, municipalities are also using smart growth principles to encourage green building development.

Provincial or territorial policies and regulations determine the suite of land use planning tools available to a municipality for climate action. The table on page 30 outlines land use planning tools and strategies that are commonly used by municipalities across Canada.[45]

Ecosystem services

Ecosystem services refer to the multiple benefits people obtain from ecosystems, such as natural purification of water, erosion and flood control, nutrient cycling, and soil formation. The Millennium Ecosystem Assessment divides these services into four broad categories: provisioning services; supporting services; regulating services; and cultural services.

Since its introduction in the 1970s, this concept has evolved to include economic valuation of these services in order to better account for the benefits they provide in our economic systems. Payments for ecosystem services are financial incentives given directly to landholders for preserving or increasing the supply of ecosystem services.

44 *ICLEI, "Biodiversity in cities: How natural asset mapping helps cities protect livelihoods and address climate change impacts" (2019). Retrieved from:* https://talkofthecities.iclei.org/biodiversity-in-cities-how-natural-asset-mapping-helps-cities-protect-livelihoods-and-address-climate-change-impacts/

45 *Available land use planning tools and legislative requirements for climate change action and mitigation will vary according to provincial land use planning legislation.*

Community revitalization initiatives are another area where climate action aligns with land use planning. While these initiatives often do not explicitly link to climate change mitigation, many encourage infill, intensification and brownfield redevelopment which reflect smart growth principles and contribute to the reduction of transportation emissions. Research has also shown that new residents, talent and a cultural and creative workforce tend to be drawn to environmentally sustainable and culturally vibrant communities that prioritize health, safety and sustainability through strategies such as downtown core renewal, heritage building preservation, smart growth, and expansion of natural areas including trail and park systems.[46] Investing in sustainability measures such as energy efficiency and renewable energy generation therefore also aids in community revitalization. Sustainability measures create more green job opportunities and help to create attractive, complete communities that draw and retain younger families and sustainability-minded residents. Sustainability measures also keep energy dollars circulating in the local economy that would otherwise leave the community. In recognition of these linkages, the City of Sault Ste. Marie has begun implementing a community revitalization program with climate change action and sustainability as key pillars.

Community revitalization is often implemented through financial incentives and grants that seek to attract private sector development and enhance economic activity in downtown cores and employment areas. Depending on the provincial or territorial land use planning framework, the range of tools available to a municipality to promote community revitalization and integrate those projects with climate action will vary. For example, in Ontario, many communities are integrating energy efficiency, infill, and brownfield redevelopment into community improvement plans (CIPs). CIPs are a provincially legislated community revitalization tool that allows municipalities to create financial incentives for private sector revitalization activities.

46 *Richard Florida, Cities and the Creative Class (Oxford: Routledge, 2005).*

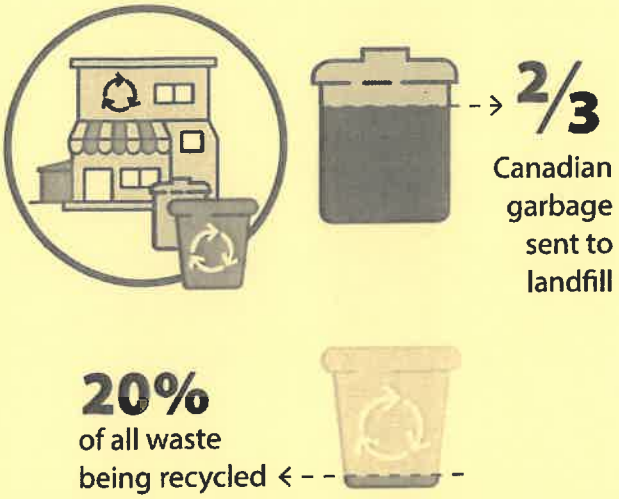
Land use planning tools

Official planning documents	Municipalities can integrate certain principles and goals into official planning documents, such as: GHG targets, climate change mitigation, naturalization, protection of natural asset polices including ecosystem services and biodiversity, complete communities and active transportation, including integration and connectivity of trail systems. Municipalities can also review existing land use planning policies that may present constraints to naturalization and reforestation/afforestation efforts and renewable energy development.
Bylaws and zoning	Bylaws and zoning can be used to create regulations for sustainable, mixed-use, higher density, compact, walkable, and transit-oriented development. Bylaws can also be created that permit naturalization on private property. Depending on the jurisdiction, municipalities may, as part of a planning application, require the developer to provide information, materials or studies. These materials can address activities related to climate action, such as assessing the feasibility of connecting to a district energy system, installing renewable energy technologies, or improving building energy efficiency. In BC and Alberta some municipalities have implemented bylaws requiring connection to a municipally owned district energy system.
Green development standards	Mandatory or voluntary measures can be integrated into the planning process to guide development and encourage environmentally, socially and economically sustainable building design.
Density bonusing, development cost charge adjustments, tax deferrals	Municipalities can offer financial incentives to developers in return for infill and brownfield redevelopment or to encourage the use of green building features or standards. Density bonusing permits developers to build more floorspace than normally allowed under the land use zoning policy for the area.
Expedited development applications	Development applications that meet established objectives for smart growth or green building designs can be prioritized for approval. This incentivizes developers by providing more certainty and reducing the length of the approval process.

Land use planning tools

Sustainability checklists and guidelines	These tools allow municipalities to assess a development's contribution to sustainability goals and serve as educational tools for developers. Completing or committing to the guidelines set out in a checklist can be encouraged through incentives such as density bonusing, development cost charges and fast tracking of development applications. Guidelines can also outline what is needed for a building to be solar-ready, district-energy-ready, or net-zero-ready, to ensure building compatibility with future installation of renewable energy technologies or connection to a district energy system.
Urban boundaries	Municipalities can establish hard urban boundaries and focus development within those boundaries to limit urban sprawl and protect natural and agricultural areas.
External sustainable design elements	Some jurisdictions allow municipalities to require external sustainable design elements such as through site plan control and subdivision planning.
Streamlined development permits	Some jurisdictions offer municipalities the ability to streamline development permits, replacing the site-by-site approach normally taken when issuing permits with more comprehensive planning at the neighbourhood scale. Examples of this streamlined approach include Development Permit Areas in BC and the Development Permit System in Ontario. These tools allow municipalities to set requirements for exterior sustainable design elements in designated areas.

3.4 Waste



Canada's National Inventory Report documents that sources of GHG emissions in the waste sector result from the treatment and disposal of waste including solid waste, composting, biological treatment of waste, incineration and open burning, and wastewater treatment and discharge. While GHG emissions from these sources account for only three percent of total GHG emissions in Canada,[47] decomposition of organic matter in landfills produces methane that is 25 times more potent in terms of its global warming potential. Moreover, this accounting only includes direct GHG emissions from waste at the time of disposal. From a life cycle perspective, food and products that eventually become waste produce GHG emissions through all stages, from production to consumption. Therefore, waste reduction measures can have significant upstream impacts by reducing the need for the extraction of resources and the manufacturing and transportation of goods. For context, in the US, 42 percent of total GHG emissions are emitted during the production, processing, transportation and disposal of products and food.[48] Food waste reduction can be an overlooked climate mitigation measure, yet approximately one-third of Canada's food is never eaten, producing unnecessary emissions throughout the entire food system as well as through the generation of methane when it is disposed in landfill.[49]

Overall, Canada has been performing poorly in waste management, ranking eighth-worst in a recent waste index study, with over two-thirds of Canadian garbage sent to landfill and 20 percent of all waste being recycled—well below the OECD average.[50] Between 2002 and 2014 household waste in landfills has increased by 18%, while over the same period materials in recycling and green

47 *Environment and Climate Change Canada,* National inventory report: Greenhouse gas sources and sinks in Canada *(2020).*

48 *U.S. Environmental Protection Agency,* Opportunities to Reduce Greenhouse Gas Emissions through Materials and Land Management Practices *(2009). Retrieved from:* https://www.epa.gov/sites/production/files/documents/ghg-land-materials-management.pdf

49 *National Zero Waste Council,* Reducing Food Waste and Cutting Canada's Carbon Emissions: Policies for Reaping the Environmental, Economic and Social Benefits *(2016). Retrieved from* http://www.nzwc.ca/Documents/NZWCSubmissionOnPan-CanadianFrameworkForCombattingClimateChange.pdf#search=Reducing%20Food%20Waste%20and%20Cutting%20Canada%E2%80%99s%20Carbon%20Emissions

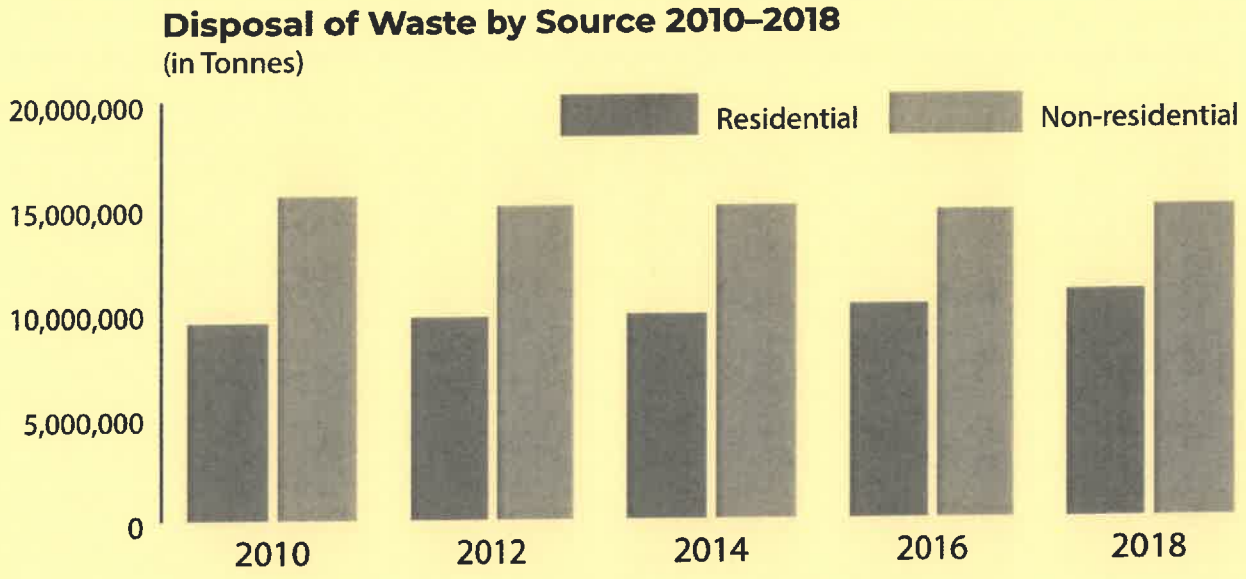
50 *Sensoneo,* Global Waste Index 2019. *Retrieved from:* https://sensoneo.com/sensoneo-global-waste-index-2019/

bins have increased by 36%[51]. This means that while Canadians are recycling and composting, total waste is still growing.

Food waste reduction is an often overlooked climate mitigation measure, yet approximately one-third of Canada's food is never eaten, producing unnecessary emissions throughout the entire food system as well as through the generation of methane when it is disposed in landfill.

As municipalities manage, collect, recycle, compost, and dispose of household waste, they have an important role to play in reversing this trend. Waste reduction measures will not only have environmental benefits but will reduce the need for new landfills and the associated costs, as well as reducing waste processing costs. While household waste is an important part of the picture, municipalities should also be aware that according to Statistics Canada data, over half of municipal solid waste is non-residential. Furthermore, total municipal waste is only a fraction of that generated by industrial sectors such as mining and agriculture.[52]

Figure 2: Disposal of waste by source, 2010–2018 (Statistics Canada, 2020)



51 *Environment and Climate Change Canada,* Canadian Environmental Sustainability Indicators: Solid waste diversion and disposal *(2017). Retrieved from:* https://www.canada.ca/en/environment-climate-change/services/environmental-indicators/solid-waste-diversion-disposal.html

52 *Statistics Canada,* Human Activity and the Environment, *"Section 3: Solid waste" (2012). Retrieved from:* https://www150.statcan.gc.ca/n1/pub/16-201-x/2012000/part-partie3-eng.htm

There are two main types of waste reduction: waste diversion (reuse and recycle) and waste prevention. Of the two, waste prevention has been shown to be more environmentally and economically beneficial.[53] Waste reduction models can range from low-cost initiatives that do not require major investments in infrastructure (like awareness-raising programs and backyard composting programs), to larger material reuse centres and curbside collection programs that deliver to large centralized facilities.

Most Canadian municipalities outside of rural areas have some form of curbside collection program, often imposing few restrictions and usually with a flat fee.[54] However, many Canadian municipalities have already begun to implement variable waste disposal fees, a more effective model which charges based on the quantity of garbage produced by each household. This can be done through Pay-as-You-Throw (PAYT) programs which charge per bag, by volume or by weight. In the US, where PAYT programs have seen more widespread implementation, the Environmental Protection Agency (EPA) reports significant reductions in waste in the over 5,000 communities that have implemented PAYT programs.[55] Studies of PAYT programs in the US report an average waste reduction of 14–27 percent, and a 32–59 percent increase in recycling rates.[56] While 19 percent of communities with PAYT programs reported increases in illegal dumping, the remainder were able to minimize this with communication, education and enforcement.[57] In the **City of Stratford, Ontario**, the PAYT program has resulted in 35 percent less garbage going to the landfill and has increased recycling by 62 percent. PAYT programs also have important co-benefits in that those who use the most pay the most, offsetting the cost for those who use less, as well as generating revenue to help cover the costs of municipal solid waste programs, including recycling and composting programs.[58]

Canada also has one of the lowest average landfill tipping fees in the OECD, as the fees do not typically include the full cost of disposal[59]. Municipalities can charge tipping fees that more accurately reflect the full environmental cost,[60] although, it should be recognized that this may also result in an increase in illegal dumping or travel outside of the municipality to where tipping fees are lower. Another approach that is becoming more common is instituting charges or bans on single-use items such as plastic bags. Canada's federal government now plans to ban single-use plastic items by the end of 2021. While this aids in removing plastic pollution from the environment, an energy-efficient alternative to plastics will be needed to ensure maximum impact. Paper bags require similar amounts of energy to make, and reusable bags take more energy to make and ship than disposable bags.

53 *Smart Prosperity Institute,* Economic tools to reduce household waste and reduce greenhouse gas emissions *(2018). Retrieved from:* https://institute.smartprosperity.ca/sites/default/files/spi-toolsforhouseholdwaste.pdf

54 *Ibid*

55 *U.S. Environmental Protection Agency, "New Studies Document Pay-As-You-Throw Results" (1997). Retrieved from:* https://archive.epa.gov/wastes/conserve/tools/payt/web/html/bullet.html

56 *Ibid*

57 *Ibid. A second study found 27 percent of surveyed communities reported increases in illegal dumping, while only four percent of these communities indicated it was an ongoing issue.*

58 *U.S. Environmental Protection Agency, "Conservation Tools—Pay-As-You-Throw" (2016). Retrieved from:* https://archive.epa.gov/wastes/conserve/tools/payt/web/html/ssintro.html

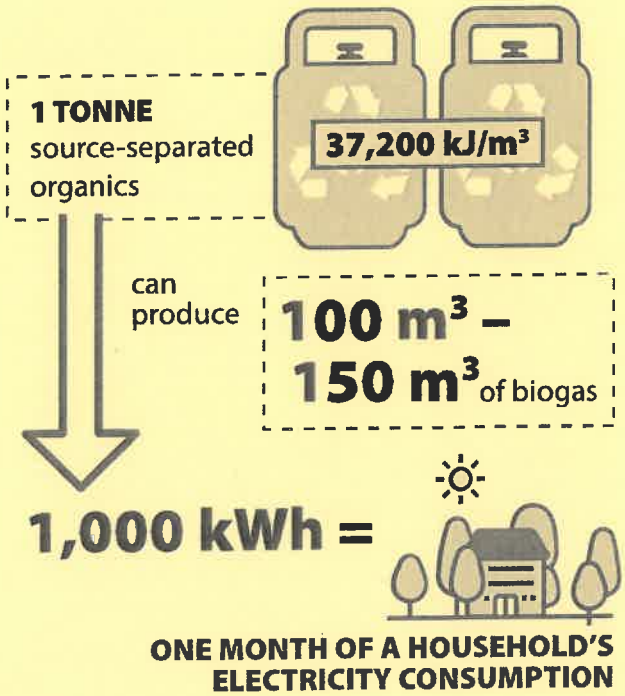
59 *Smart Prosperity Institute,* Economic tools to reduce household waste and reduce greenhouse gas emissions *(2018). Retrieved from:* https://institute.smartprosperity.ca/sites/default/files/spi-toolsforhouseholdwaste.pdf

60 *Canada's Ecofiscal Commission,* Cutting the Waste: How to save money while improving our solid waste systems *(2018). Retrieved from:* https://ecofiscal.ca/wp-content/uploads/2018/10/Ecofiscal-Commission-Solid-Waste-Report-Cutting-the-Waste-October-16-2018.pdf

The establishment of infrastructure for the drop-off or collection of unwanted household items and unused building materials, such as the **Re-Use-It and Re-Build-It centres** in Whistler, BC, has generated revenue for important community programs. It has also provided access to affordable second-hand items for purchase, thus diverting landfill waste. Establishment of depots for hazardous waste such as batteries and electronics will also be important, to avoid significant environmental damage beyond the harm caused by GHG emissions.

Waste composition analyses have found that organic waste accounts for over 50 percent of residential and commercial waste, with food waste making up the largest share (around 80 percent of organic waste).[61] Because organics generate methane, organic waste diversion and prevention programs are an important means of reducing both waste and emissions. The establishment of curbside compost pickup programs—possibly funded through PAYT program revenue—can also be considered. However, in rural areas where curbside pickup may not be viable due to wildlife concerns, organics drop-off depots can be developed that promote organic waste diversion—such as the Food Waste Collection Pilot in Canmore, Alberta. Communities can also seek to partner at a regional level to develop a waste collection system or engage in other lower-cost waste prevention and reduction programs, including:[62]

- media awareness campaigns (e.g. radio and newspaper ads, posters, websites and social media)
- behavioural change strategies (e.g. meal planners, food waste challenges and storage tips, backyard composting, education on environmentally friendly purchasing policies)
- community outreach events (e.g. waste reduction workshops, farmers' markets, local film screenings)



61 *National Zero Waste Council,* Food Waste Management + Climate Action: National GHG Reduction Potential *(2017). Retrieved from:* http://www.nzwc.ca/Documents/FoodWasteClimateChange-Report.pdf#search=Food%20Waste%20Management%20%2B%20Climate%20Action%3A%20National%20GHG%20Reduction%20Potential

62 *British Columbia Ministry of Environment,* Residential Food Waste Prevention: Toolkit for local government and non-government organizations *(2015). Retrieved from:* https://www2.gov.bc.ca/assets/gov/environment/waste-management/organic-waste/food_waste_reduction_toolkit.pdf

If organic waste is processed using anaerobic digestion, the biogas that is produced as a byproduct, consisting primarily of CO_2 and methane, can be used as fuel, providing a renewable energy source. The energy potential of the biogas is determined by the methane content. Biogas can provide approximately 37,200 kJ/m^3; and one tonne of source-separated organics can produce between 100 m^3 and 150 m^3 of biogas.[63] This translates into approximately 1,000 kWh, which is roughly the electricity consumption of a single-family home for a month. Since emissions from the use of biogas are biogenic and would have been emitted to the atmosphere anyway through natural processes it is considered to be climate-neutral and a low-carbon alternative to conventional natural gas. Biogas can also be captured from landfills and municipal wastewater treatment centres, as well as from manure produced in the agricultural sector (which will be discussed further in Section 3.5). Uses for biogas depend on the level of treatment and upgrading required, and include:

- mixing biogas with natural gas, or using it by itself as a natural gas substitute for industrial processes, building space and water heating
- producing electricity and heat in combined heat and power gas generators
- purifying biogas into high-grade fuel (also known as renewable natural gas) that can be sold to natural gas utilities for injection into natural gas distribution systems

Many examples of biogas production, in both the public and private sectors, already exist across Canada. A comprehensive list, as well as further resources regarding the establishment of municipal and agricultural biogas systems, can be found at the Canadian Biogas Association website.

The following resources provide further information on municipal food waste prevention programs and organic waste processing options:

- Residential Food Waste Prevention: Toolkit for local government and non-government organizations (BC Ministry of Environment, 2015)
- Technical Document on Municipal Solid Waste Organics Processing (Environment Canada, 2013)

63 *Environment Canada*, Technical Document on Municipal Solid Waste Organics Processing *(2013). Retrieved from:* https://www.ec.gc.ca/gdd-mw/3E8CF6C7-F214-4BA2-A1A3-163978EE9D6E/13-047-ID-458-PDF_accessible_ANG_R2-reduced%20size.pdf

Stratford, Ontario: Co-digestion project

Population: 31,465

Rather than pay the cost of building a separate new organics facility, in 2017 the City of Stratford entered into a partnership with the Ontario Clean Water Association (OCWA) and Suez Water Technologies to implement a biological hydrolysis technology. This new technology will help optimize and increase the facility's existing digester capacity, allowing for co-processing of source-separated organics. Once the project is complete, the methane from this process will then be upgraded to renewable natural gas and fed into the existing natural gas grid. As a result of waste diversion and natural gas replacement, the project is expected to reduce GHG emissions by 48,951 tC02e/year, while extending the life of the landfill and generating a high-quality fertilizer that replaces synthetic fertilizers on area farms.*

The $22.7 million project has been funded by a $5 million Ontario Centres of Excellence (OCE) grant from the Province of Ontario with initial contributions of $1.5 million each from the City of Stratford and the OCWA. The remaining $15 million will require long-term financing on the part of the city. By siting the project at the existing water pollution control plant, the city is able to utilize existing infrastructure and plant operations, reducing costs. The main sources of revenue from the project will be from tipping fees and the sale of renewable natural gas, which will be subject to a revenue-sharing agreement between the partners. The project is expected to be governed by the establishment of a Municipal Services Corporation, with the municipality and the OCWA as partners.**

Key success factors for the project include a strong technical and financial case, as well as the location of the site, which allows for use of existing infrastructure. The project generated community concerns about increased trucking, safety and smell, but there was strong political commitment and good communication of the benefits of the project as the best waste management option for the city. As well, the city took steps to mitigate community concerns, such as finding alternative trucking routes. All this allowed the project to go forward.

* Canadian Biogas Association, "Empowering Municipal RNG Market Participation: Municipal Profile—City of Stratford, Ontario" (2019). Retrieved from: https://www.biogasassociation.ca/images/uploads/documents/2019/Stratford-Profile.pdf

** City of Stratford, Renewable Natural Gas. Retrieved from: https://www.stratford.ca/en/inside-city-hall/renewable-natural-gas.aspx#Where-would-the-revenue-come-from

3.5 Development of agriculture, resources and tourism (DART)

Agriculture, natural resources and tourism play key roles in the economy and identity of many small and rural communities in Canada. These industries are also often large contributors to GHG emissions. Often, a community is reliant on a single industry for much of its employment and economic output—but these industries can constitute the largest single source of emissions in that community. The agriculture, natural resources and tourism sectors will also be some of the most impacted by climate change; therefore, many opportunities exist to synergize mitigation and adaptation efforts. Municipalities can form partnerships in these sectors to support climate mitigation activities, identify opportunities, and provide access to resources, knowledge and implementation networks. Opportunities also exist to use and promote existing natural assets for tourism and ecotourism, contributing to community and economic revitalization efforts.

Agriculture

Between 1990 and 2018, emissions from Canada's agricultural sector have increased by 27 percent, making up 8 percent of Canada's total annual emissions.[64] These emissions calculations only account for livestock and crop production, which includes

64 *Environment and Climate Change Canada*, National inventory report: Greenhouse gas sources and sinks in Canada *(2020)*.

enteric fermentation, manure management, agricultural soils, and field burning of agricultural residues. Other emissions from on-farm fuel combustion are accounted for in the energy sector and are therefore not included in this number.

The largest agricultural sectors in Canada are beef cattle, swine, cereal, and oil seed production, followed closely by the poultry and dairy industries. However, agricultural sectors are highly regionalized in Canada, with the majority of beef cattle, wheat, barley and canola being produced on the prairies, and the majority of dairy cattle, swine, poultry, corn and soybean produced in eastern Canada. Overall, emissions increases in the agricultural sector have primarily been driven by higher usage of inorganic fertilizers linked to increased crop production of canola, corn, soybeans and wheat. Larger populations of beef cattle and swine and changes in feeding (i.e. higher gross energy intake as result of feed, herd characteristics and milk productivity) and manure handling practices (i.e. shifting from solid to liquid systems) in the dairy and swine industries have also contributed to the increase in emissions.

Studies have suggested that most regions of Canada are projected to warm over the next 60 years, which could both positively and negatively impact agriculture. On one hand, this could lead to extended growing seasons, lower feeding requirements for livestock, increased youth livestock survival rates and lower energy costs. It can also result in improved soil quality that can enhance carbon sequestration and allow shifts from annual crop production to perennial crops and grazing lands, which reduces GHG emissions.[65] On the other hand, as the agricultural sector is particularly vulnerable to the impacts of climate change and is highly dependent on the weather and climate, it will be negatively impacted by more frequent extreme weather events such as drought and flooding, and increased prevalence of pests and diseases.

The agricultural sector is also unique in its climate change mitigation potential, in that there are many opportunities for synergies between mitigation and adaptation strategies. For example, several measures can improve both nitrogen use efficiencies and soil carbon storage. These include steps to reduce soil erosion, reduction of nitrogen and phosphorous leaching and conservation of soil moisture, as well as increasing species diversity in crops and implementing frequent crop rotation.[66]

Furthermore, the ongoing farm crisis, characterized by overwhelming farmer debt, shares many of the same causes and solutions as the climate crisis. Canadian farm debt now stands at $106 billion, with 95 percent of farm revenue going to large agri-business corporations that supply fertilizers, pesticides, chemicals, fuel, machinery and other agricultural supplies.[67] Most emission increases in agriculture have been driven by increased use of inorganic fertilizers. There are opportunities to reduce GHG emissions while also increasing farm income, by reducing the use of inorganic fertilizers, shifting toward more holistic management systems and implementing best management practices (as described below).

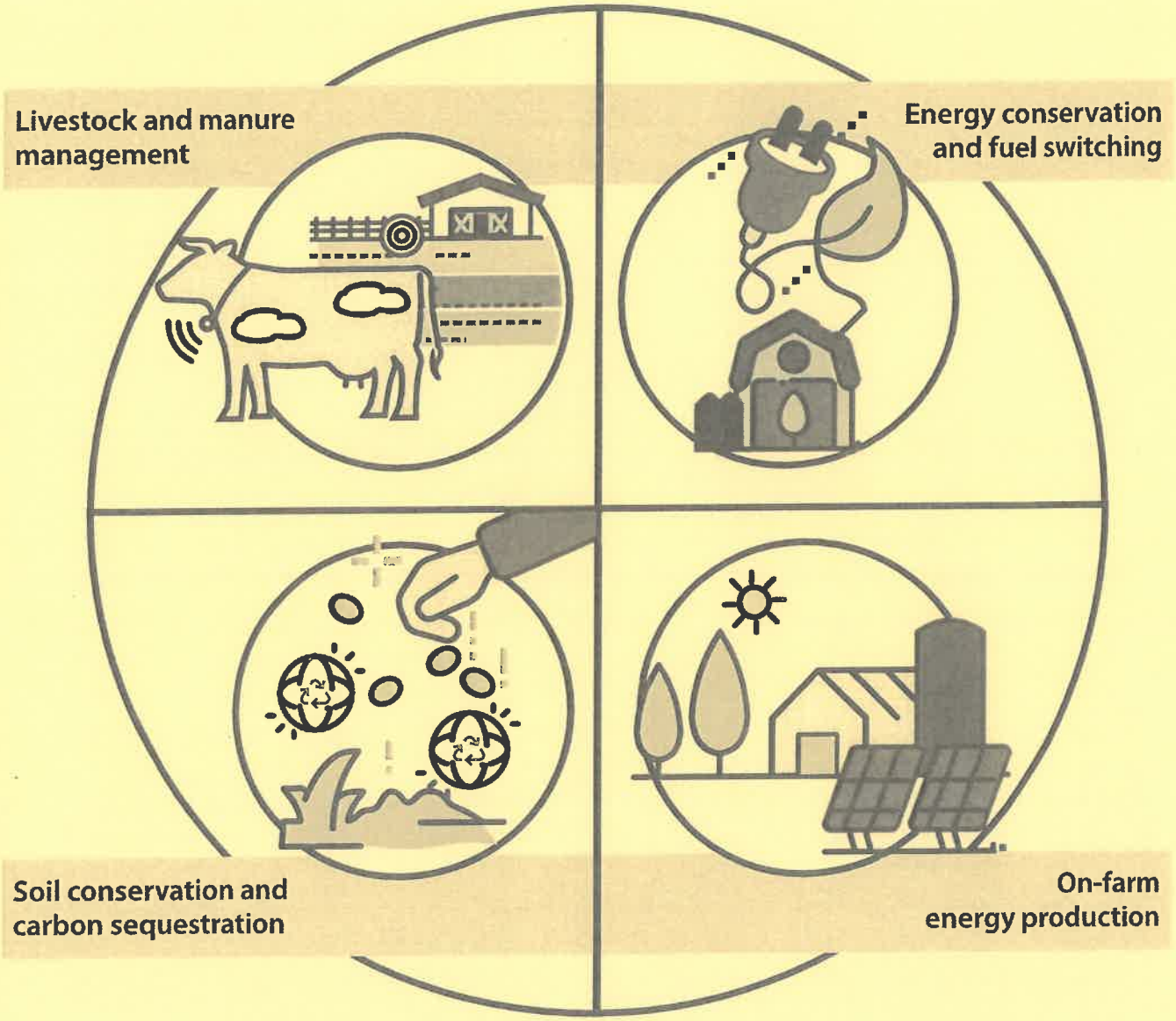
---

65 *Agriculture and Agri-Food Canada, "Climate Scenarios for Agriculture" (2020). Retrieved from:* https://www.agr.gc.ca/eng/agriculture-and-the-environment/climate-change-and-agriculture/climate-scenarios-for-agriculture/?id=1329321981630

66 *P. Smith and J. E. Olesen, "Synergies between the Mitigation of, and Adaptation to, Climate Change in Agriculture,"* The Journal of Agricultural Science, *148(5) (2010) pp. 543-552.*

67 *Darrin Qualman and the National Farmers Union,* Tackling the Farm Crisis and the Climate Crisis: A Transformative Strategy for Canadian Farmers and Food Systems *(2019). Retrieved from:* https://www.nfu.ca/nfu-announces-new-report-tackling-the-farm-crisis-and-the-climate-crisis/

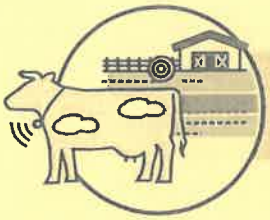
At the farm level, climate action to mitigate GHG emissions can be broken down into four broad categories:[68, 69, 70]



68 *Government of BC, "Reducing agricultural greenhouse gases" (n.d.). Retrieved from:* https://www2.gov.bc.ca/gov/content/industry/agriculture-seafood/agricultural-land-and-environment/climate-action/reducing-agricultural-ghgs

69 *Global Research Alliance on Agricultural Greenhouse Gases and the Sustainable Agriculture Initiative Platform from Livestock Research Group,* Reducing greenhouse gas emissions from livestock: Best practice and emerging options *(2015). Retrieved from:* https://ccacoalition.org/en/resources/reducing-greenhouse-gas-emissions-livestock-best-practice-and-emerging-options

70 *FarmFolk CityFolk Society,* Climate Change Mitigation Opportunities in Canadian Agriculture and Food Systems *(2019). Retrieved from:* https://www.farmfolkcityfolk.ca/wp-content/uploads/2019/12/Climate-Mitigation-Opportunities.pdf



Livestock and manure management:

- Improving grazing management practices (i.e. rotational grazing) can improve the quality of pasture.
- Manure collection and storage can be improved by reducing storage time, avoiding the addition of straw, lowering temperatures, and ensuring that housing systems are optimized for proper aeration and runoff prevention.
- Improving manure deposition and application practices can reduce N_2O emissions. Such practices include: optimizing the amount applied for more efficient and best pasture/crop growth; avoiding application on wet soils; shifting application times toward spring rather than autumn or winter; using urease and nitrification inhibitors to reduce N_2O production and nitrate leaching; and using manure in anaerobic digesters for the production of biogas and high-quality fertilizer.
- The digestibility of feed can be improved by selecting livestock for genetics that favour more efficient food conversion, as well as implementing precision feeding, enhancing quality of diet, and adding ionophores to feed to reduce methane production.

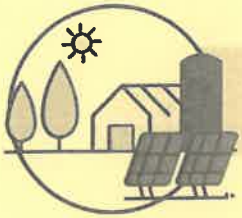
Soil conservation and carbon sequestration

- Many practices that sequester carbon also improve soil quality and health, enhancing soil organic matter. Individual practices include: no/reduced tillage, conservation tillage such as direct seeding, diversified cover cropping, multiple crop rotations, no/reduced use of synthetic fertilizers, reduction/elimination of bare fallow, and management of crop residues. While individual practices such as these can help reduce carbon loss from plants and soil, holistic approaches to farm management that integrate multiple practices are much more impactful. These include regenerative agriculture, conservation agriculture, agroforestry and silvopasture.
- Carbon can also be sequestered by restoring non-production areas of a farm with features such as riparian buffers, hedgerows, and grassland set-asides, as well as by restoring degraded lands and converting marginal farmland to perennial grass or trees, or agroforestry systems.
- Carbon farming is an approach that incorporates many carbon sequestration practices, seeking to maximize carbon sequestration in soil and plants. Quantifying on-farm carbon sequestration also allows for the potential generation of carbon credits and offsets, depending on the

mechanisms in place in the province or territory. Alberta, for example, allows for the generation of carbon offsets from approved agriculture protocols.[71] However, methodologies for quantification of on-farm carbon sequestration are still varied and uncertain. Therefore, municipalities should monitor best practices and ongoing research to identify how quantification of carbon sequestration can best be applied in their community.

Energy conservation and fuel switching

- Farms can switch to production practices that use less energy, such as no tillage, micro-irrigation, and grass-based livestock systems.
- Improvements can be made to tractor and field operation efficiency, machinery maintenance, upgrading equipment and using high-efficiency equipment (e.g. motors, fans, lighting).
- Building energy efficiency can be improved through improved insulation, optimal siting and design of farm buildings, and energy-efficient greenhouses.



On-farm energy production

- On-farm energy sources can include solar, wind, geothermal, biogas production, and combined heat and power systems.

Where a municipality can influence

Municipalities can play an important role in agricultural climate mitigation by providing support, coordination, and access to resources for the agricultural community. The **City of Kawartha Lakes Healthy Environment Plan** is a leading example of the integration of municipal support for agricultural climate change mitigation in a climate action plan. The plan includes measures to support the agricultural community by facilitating forums, training sessions and capacity-building initiatives on manure management best practices and soil carbon sequestration, integrating agritourism into the local economic development strategy, promoting participation in sustainable farm planning programs, and encouraging networking with the agricultural

71 *Government of Alberta, Agricultural carbon offsets—Overview (2020). Retrieved from:* https://www.alberta.ca/agricultural-carbon-offsets-overview.aspx

community to share tools, resources, knowledge and success stories. This approach encourages farmers to pursue profitable, innovative and sustainable agricultural practices.

In terms of on-farm energy production, in addition to wind and solar installations, biogas production from manure offers a significant opportunity for farmers to generate additional income, mitigate methane emissions and produce a high-quality organic fertilizer. Municipalities can play an important role in the establishment of agricultural biogas systems by streamlining the approval process for anaerobic digesters and energy generation installations, as well as providing resources and networks for farmers wishing to engage in these projects. At the individual farm level, biogas production opportunities in Canada are currently limited due to the lack of provincial and territorial enabling policies and regulations (such as Ontario's Feed-in Tariff program which purchased electricity generated from biogas-fueled combined heat and power units). In the absence of such policies, biogas producers are now turning to the production of renewable natural gas. However, upgrading biogas to renewable natural gas that can be injected into the local natural gas distribution grid requires upgrading facilities—which can be costly. The formation of biogas farmer cooperatives is therefore emerging as a solution to these obstacles. These cooperatives allow for higher volumes of biogas to be gathered from multiple farms through shared transportation and upgraded infrastructure.

Warwick, Quebec: Coop Agri-Énergie Warwick

Population: 4,766

Coop Agri-Énergie Warwick is the first agricultural cooperative in Canada dedicated to producing renewable natural gas. Established in Warwick and involving a dozen agricultural producers, the project will deliver manure, liquid manure and organic waste from the farms of these producers (as well as other businesses in the region) to a biomethanation facility that will inject enough renewable natural gas into the natural gas grid to heat 1,000 homes (2.3 million m^3).* The project is fully endorsed by the municipality and is supported through its environmental policies.

The project will take about 25,000 tonnes of farm slurry and manure as well as 25,000 tonnes of agri-food waste and municipal and industrial sludge, allowing the farmers to diversify their income streams while reducing GHG emissions by 6,500 tCO_2e per year. A 20-year contract with the Montreal-based natural gas company Energir has been secured for the purchase of the renewable natural gas. The project was made possible through a wide range of technical and financial partners, including the Government of Quebec, Desjardins Group, Investissement Québec, Fondaction, the Réseau d'investissement social du Québec, La Coop fédérée (now Sollio Cooperative Group), and the Conseil québécois de la coopération et de la mutualité. The project's design and construction is being led by Génitique, an experienced biomethanization developer.**

* Energir, "Coop Agri-Énergie Warwick: a sustainable new business model for the agricultural sector" (2019). Retrieved from: https://www.energir.com/en/about/media/news/premiere-cooperative-agricole-dediee-production-energie-renouvelable/

** Glacier Farm Media, "Quebec ag co-op to power up on dairy cattle manure" (2019). Retrieved from: https://www.agcanada.com/daily/quebec-ag-co-op-to-power-up-on-dairy-cattle-manure

Natural resource development

Many communities rely on Canada's extensive natural resources for their livelihood and well-being. While being responsible for a significant share of GHG emissions (heavy industry and the oil and gas sector account for 37 percent of national emissions[72]) these industries are also some of the most impacted by the effects of climate change. The devastating impacts of a warming climate have been felt throughout the forestry, fishing and mining industries, as detailed in Section 2. The following sections will discuss climate change mitigation opportunities in the mining and industrial sectors, the forestry sector and the tourism sector.

Mining

Canada's land is vast and rich in mineral resources, so it is not surprising that mining makes up a significant portion of its economy (five percent of GDP in 2018[73]) and even plays a role in our infrastructure and food production. Canada is one of the largest producers of minerals and metals in the world with almost 200 mines and 6,500 quarries—with total production valued at $47 billion in 2018.[74]

Mining for substances other than oil and gas accounted for 0.7 percent of Canada's total emissions in 2018, or 4.9 million tCO_2e. While this may not seem large in comparison to other sources of emissions in Canada such as the oil and gas sector or transportation, in a small community, a significant portion of emissions within municipal boundaries can come from mining and other industrial activities, such as manufacturing, steel mills, smelters and refineries.

As is the case with many industries, mining not only contributes to climate change but is also threatened by it. The mining industry is already beginning to feel the impacts of climate change, including:

- loss of ice roads and shorter ice road seasons, affecting supply lines to northern mining sites
- increased dust emissions from warmer and dryer conditions
- increased rainfall and snowfall that raises the cost of drying mined materials and sieving rock
- more extreme weather events that may damage mining equipment
- lack of water for processing
- shorter winters which could have a positive impact on the operating season of the mine

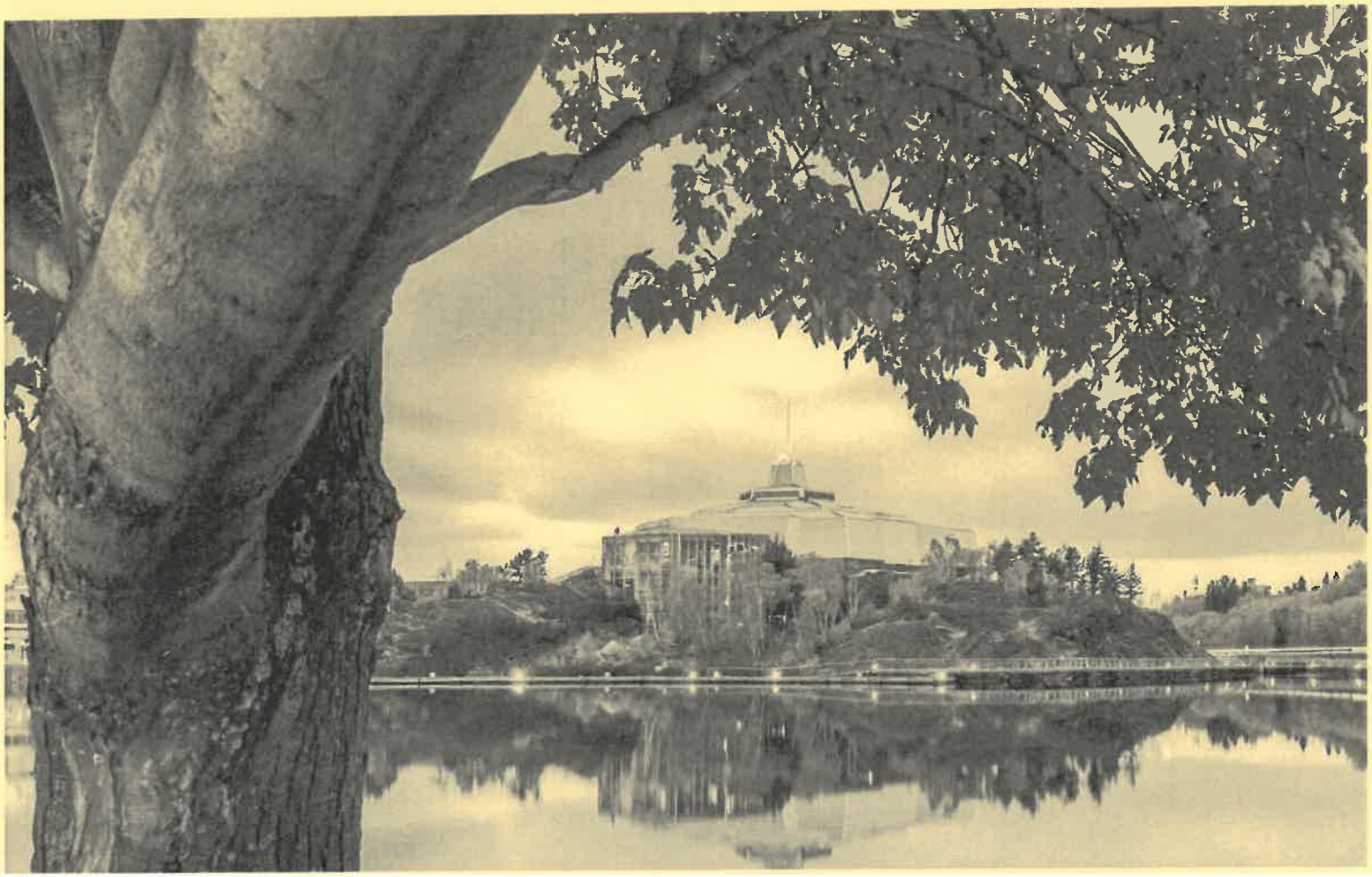
Further discussion of the impacts of climate change on the mining sector can be found in the David Suzuki Foundation's report, Climate Change and Canadian Mining: Opportunities for Adaptation.

While much climate adaptation will be required by the mining sector, mining companies also have a large incentive to reduce GHG emissions and energy consumption, as this produces significant operational efficiencies that improve their bottom line. In recognition of the impacts of climate change as well as the benefits of climate action, many mines have begun implementing GHG reduction and energy management plans. For example, Goldcorp's Borden mine is a leading innovator in the sector, with a plan to create the world's first all-electric mine. Other examples of climate change initiatives in the mining sector can be found through the Mining Association of Canada.

72 *Environment and Climate Change Canada*, National inventory report: Greenhouse gas sources and sinks in Canada *(2020)*.
73 *The Mining Association of Canada, "Mining Facts." Retrieved from:* https://mining.ca/resources/mining-facts/
74 *Natural Resources Canada, "Minerals and the economy" (2019). Retrieved from:* https://www.nrcan.gc.ca/our-natural-resources/minerals-mining/minerals-and-economy/20529

Sudbury, Ontario: Community Energy and Emissions Plan

Sudbury's Community Energy and Emissions Plan recognized that the industrial and mining sectors are increasingly tracking energy and emissions and are already shifting toward electric vehicles, more efficient motors and processes, and lower-carbon activities. There is also a natural incentive for the industry to implement energy reduction measures in order reduce operational costs. To this end the municipality has set a goal to increase industrial energy efficiency by 35 percent. Sudbury seeks to partner with mining companies to encourage the setting of timelines and targets for process and motor efficiency improvements to help them meet emissions reduction targets. The goals of the plan are to be achieved primarily through the establishment of an industry energy-efficiency working group composed of industry stakeholders that meets quarterly to disseminate knowledge and discuss actions, implementation plans, timelines and lessons learned. To meet the goal of net-zero emissions by 2050, the mining industry will have to have a 100 percent electric vehicle (EV) purchase rate for all new vehicles by 2030 and will need to increase process and motor efficiency by 50 percent. Group purchasing agreements for EVs across the mining sector are to be encouraged. Industry-specific EV campaigns, as well as education and awareness raising campaigns can also provide guidance on costs and benefits and cite industry precedents.



Where a municipality can influence

Regulation of the mining sector falls under federal, provincial and territorial jurisdictions, therefore municipal power to create regulations that require consideration of climate change is limited. However, where a mine falls within municipal boundaries, municipal zoning bylaws must be adhered to, which can allow the municipality to apply conditions to the use of land for mining and extraction. It is important to note that provincial or territorial legislation varies with regard to a municipality's ability to regulate the mining sector within municipal boundaries. In BC, for example, municipal attempts to regulate the mining sector have resulted in legal challenges.[75]

While this section of the guidebook focuses on the mining industry, municipalities can work with other local industries in much the same way—by developing partnerships; encouraging best practices, research and demonstration projects; creating support networks and working groups; and working together to establish energy and emissions reduction targets.

In addition to leveraging local policy or zoning regulations, the municipal role in reducing GHG emissions in the mining sector is largely one of facilitation. Through partnership and engagement with industry, municipalities can encourage the development and implementation of energy management plans, the establishment of goals for reducing emissions and improving energy-efficiency, and the adoption of green technologies (see call-out box above on Sudbury's Community Energy and Emissions Plan). While this section of the guidebook has focused on the mining industry, municipalities can work with other local industries in much the same way—by developing partnerships; encouraging best practices, research and demonstration projects; creating support networks and working groups; and working together to establish industrial energy and emissions reduction targets.

Forestry and natural areas

Forests make up a large part of Canada's natural areas and are important for recreation and employment as well as for the range of ecosystem services they provide. In 2018, forestry employed approximately 210,600 people across the country. It is the main source of employment and revenue for 300 Canadian municipalities.[76] Forests also provide indirect sources of income to communities, as they can attract tourists. In addition, the recreational and

75 *Global Legal Group,* Mining Law 2020 *(Seventh Edition, 2020). Retrieved from:* https://www.lawsonlundell.com/media/news/596_Canada%20Chapter%20The%20International%20Comparative%20Legal%20Guide%20to%20Mining%20Law%202020.pdf

76 *Natural Resources Canada, "How does the forest sector contribute to Canada's economy?" (2020). Retrieved from:* https://www.nrcan.gc.ca/our-natural-resources/forests-forestry/forest-industry-contribute/16517

health benefits to residents of having access to nature are well documented.[77] Forestry is clearly an economic and cultural foundation for many communities, but it is also one of the sectors most affected by climate change and most vulnerable to its impacts. Many visible effects have already been documented, including changes in the frequency and severity of disturbances (i.e. fires, drought, severe storms, pests and disease) as well as less visible changes such as the timing of spring bud burst.[78] Depending on the location, these impacts have both negative and positive implications for forest productivity, the composition, distribution and structure of forest ecosystems, and the available timber supply.

In 2018 forestry employed

210,600

people

and was the main source of employment and revenue for

300

Canadian municipalities.

As a result of natural processes (such as fire, insect infestations and tree growth) and human activities (such as harvesting, afforestation and deforestation) forests can be significant as both carbon sources and sinks.[79] The potential for climate change mitigation depends on how forests are managed. Primary mitigation activities include increasing forest area, increasing stand and landscape-level carbon density through forest management activities, and using harvested wood products that store carbon and displace other emission-intensive materials (such as concrete, steel, plastics and fossil fuels).[80] Mill byproducts and residues such as bark, shavings and sawdust can also be used as a renewable source of fuel to displace carbon-intensive fossil fuels in the production of wood products or in the heating of buildings in the wider community (such as through biomass district energy systems as discussed in Section 3.1).

Where a municipality can influence

Canada has approximately 400 million hectares of forest or other wooded land, 92 percent of which is publicly owned.[81] The federal, provincial and territorial governments are responsible for sustainable forest management laws and regulations. Municipal climate action in the forestry sector has primarily centred around urban forest management strategies, partnership with the forestry industry to encourage more sustainable management

77 *Mathew P. White, et al., "Spending at least 120 minutes a week in nature is associated with good health and wellbeing,"* Sci Rep *9, 7730 (2019).*

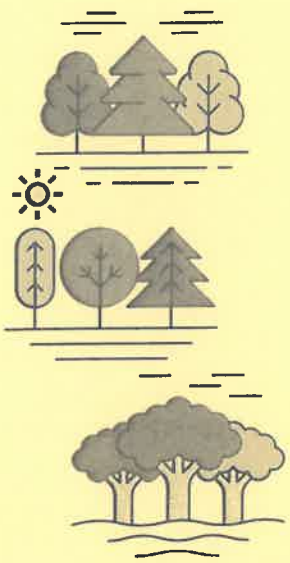
78 *Sustainable Forest Management Network,* Climate change and Canada's forests: from impacts to adaptation *(2009). Retrieved from:* https://cfs.nrcan.gc.ca/publications?id=29616#:~:text=Climate%20change%20is%20already%20affecting,bud%20burst%20are%20also%20underway.

79 *Natural Resources Canada, "Climate change impacts on forests" (2016). Retrieved from:* https://www.nrcan.gc.ca/climate-change/impacts-adaptations/climate-change-impacts-forests/mitigation/13097

80 *C. E. Smyth,* et al., *"Climate change mitigation in Canada's forest sector: a spatially explicit case study for two regions,"* Carbon Balance Manage, *13, 11 (2018).*

81 *Natural Resources ources Canada, "Canada's Forest Laws" (2020). Retrieved from:* https://www.nrcan.gc.ca/our-natural-resources/forests-forestry/sustainable-forest-management/canadas-forest-laws/legality-and-sustainability/13303

techniques, and energy and GHG reduction a ctivities throughout the harvesting and manufacturing process, as well as the establishment of community forests.



Canada has approximately

400 million hectares

of forest or other wooded land

92%

of which is publicly owned

Urban forests are made up of all trees and treed landscapes within a community, on both public and private lands. Even in rural communities, urban forests can play an important role in sequestering carbon, providing shade that reduces the need for energy consumption, and improving quality of life for residents.[82] Urban forests also produce numerous other co-benefits, including increased property values, increased community well-being and pride, and prolonged pavement life. However, there is a lack of awareness around the benefits of urban forests and a lack of funding for urban forest initiatives. Urban forests may face resistance, mainly related to issues like wildfire management, conflicts with overhead utilities, underground root systems, property damage from falling trees, and attraction of bears, raccoons, deer or other wildlife. To help local governments overcome these challenges, various tools are available to assist with inventory and mapping, so that municipalities can make calculated decisions when it comes to planting urban forests. These tools also can help municipalities assess and communicate the range of community benefits urban forests provide. For a full discussion of the challenges, benefits and available tools, please see Planting our Future: A Tree Toolkit for Communities by the Union of British Columbia Municipalities.

Different from urban forests, community forests are forestry operations run at the community level and based on community values. Emerging in Canada in the 1990s, community forests have developed in response to a desire for more local control and community involvement in the forest industry, as well as increased local ownership over the monetary and non-monetary gains generated by them.[83] Community forests have a wide variety of tenure types, property rights regimes, and organizational structures, but they tend to be based on three key fundamental elements: community control, local benefit and sustainable forest management.[84] While each arrangement is unique in its details, there are four broad types of community forest arrangement:

1) local-government-owned land (fee simple land)
2) conservation authority
3) local government on crown land
4) forest organization

82 *Union of British Columbia Municipalities.* Planting our Future: A Tree Toolkit for Communities *(2008). Retrieved from:* http://www.toolkit.bc.ca/sites/default/files/Plantingourfuture.pdf

83 *C. E. Smyth, et al.,* "Climate change mitigation in Canada's forest sector: a spatially explicit case study for two regions," Carbon Balance Manage, *13, 11 (2018).*

84 *Sara Teitelbaum, Tom Beckley and Solange Nadeau, "A national portrait of community forestry on public land,"* The Forestry Chronicle, *82, 3 (2006).*

Municipalities can also more broadly support and encourage naturalization initiatives. These initiatives can include the expansion of green spaces, tree planting programs, protection and enhancement of biodiversity, the use of native plant species, and creation of pollinator habitats on public and private lands. Municipalities can encourage such initiatives by integrating new guidelines and policies into official planning documents, processes, bylaws and building development standards or requirements (see Section 3.3). Municipal partnerships with landowners, conservation authorities, and other local conservation organizations will be essential to creating and implementing these policies and guidelines. Clarington's Trees for Rural Roads Program is a good example of a municipal tree-planting program supported by various conservation organizations. The program resulted in the planting of 588 native tree saplings and 50 native shrubs in 2020.

Mapping of natural assets and inclusion of natural assets in overall asset management strategies are also valuable exercises for a community to undertake. These activities establish a baseline that forms a foundation to measure changes in land use over time as well as informing the development of management plans, inventories and evaluations of natural assets, green spaces, wetlands, ecosystems, and ecosystem goods and services.[85]

See the following FCM resources and case studies on natural asset management for more information:

- Primer on Natural Asset Management for FCM's 2018 Sustainable Communities Conference
- Measuring the Value of Natural Assets
- Local governments incorporate ecosystem needs into infrastructure plans

Rural communities with extensive natural assets can especially benefit from payments for ecosystem services. This approach attributes value to natural or semi-natural systems that provide carbon sequestration and other ecosystem services. It also allows for local farms and pastures with wood stands, wind breaks and wetlands to be valued for the services they provide. Funding for payments for ecosystem services has traditionally been provided by governments, however newer programs aggregate funds from a variety of public and private sources. Funding sources will vary depending on the jurisdiction and can include conservation funds, private foundations, provincial or territorial tax incentives, the municipal tax base and conservation offsets. Other methods for funding conservation and increasing carbon sequestration include the sale of carbon offsets from the enhancement and restoration of natural areas. Examples include the Escarpment Biosphere Conservancy in Ontario, and the Cheakamus Community Forest in Whistler, BC, (discussed below on page 50).

For further information on ecosystem services and payment mechanisms in Canada please see the following resources:

- Ecosystem Services Toolkit (Value of Nature to Canadians Study Taskforce, 2017)
- Advancing the Economics of Ecosystems and Biodiversity in Canada (Sustainable Prosperity, 2011)
- ALUS Canada

85 *ICLEI, "Biodiversity in cities: How natural asset mapping helps cities protect livelihoods and address climate change impacts" (2019). Retrieved from:* https://talkofthecities.iclei.org/biodiversity-in-cities-how-natural-asset-mapping-helps-cities-protect-livelihoods-and-address-climate-change-impacts/

Whistler, British Columbia: Cheakamus Community Forest
Population: 11,854

In Whistler, BC, an innovative approach to community forest management is being implemented that quantifies the amount of carbon stored in the forest and compares it to emissions from forest management activities, to generate carbon offset credits. The Cheakamus Community Forest (CCF) was created in 2009 when the tenure rights for the timber harvest volume around Whistler became available. Two neighbouring First Nations and the municipality of Whistler partnered to establish a 25-year community forest tenure agreement with the Province of BC to harvest and manage the forest.* The CCF consists of 33,000 hectares and is managed using an ecosystem-based management approach. Under this approach, more parts of the forest with community and ecosystem value—such as streams, views, recreation and old growth—are protected, with 15,000 hectares completely protected from logging. An average of 40 hectares of forest is allowed to be harvested per year.

CCF partnered with the Brinkman Group and Ecotrust Canada to develop a carbon offset project, quantifying the baseline and calculating the climate benefits of the forest over a 100-year life cycle. This includes the carbon stored in the forest as well as the emissions from forestry management practices and carbon stored in forest products. As a result of this accounting, in 2015 the CCF registered its first tranche of carbon offsets, totalling 44,000 tonnes, with the majority being sold to the BC government and the rest to voluntary buyers. The carbon reductions needed to create the offsets were generated by reducing baseline harvest by 50 percent. The revenue generated by the sale of offsets has been integral to maintaining lower harvest rates and more expensive sustainable forest management methods.**

* Resort Municipality of Whistler, "Cheakamus Community Forest" (n.d.). Retrieved from: https://www.whistler.ca/services/environmental-stewardship/cheakamus-community-forest

** Brinkman Climate, "Cheakamus Community Forest Carbon Offsets" (n.d.). Retrieved from: https://www.brinkmanearthsystems.com/sites/default/files/atoms/files/CCF%20Carbon%20Offset%20Project%20Briefing.pdf

Revelstoke, British Columbia: Integrated Sustainability Plan

Population: 7,547

Revelstoke's Integrated Sustainability Plan takes a comprehensive approach to forestry with the goal of maintaining a strong forest sector by implementing safe and sustainable forest practices and exploring opportunities to add value to products. The municipality itself owns and manages a 120,000 hectare community forest through the Revelstoke Community Forest Corporation and markets the logs at a sorting facility near the town. The community forest is certified for sustainable management through an independent third-party certifier—the Sustainable Forestry Initiative (SFI).

The city also works with the Revelstoke Forest Workers Society to maintain open communication between the forest sector, the community, and the government. In 2011, Revelstoke implemented the City Wood First Policy, which promotes the use of wood in municipal construction projects and other government building, reducing carbon emissions by using local supply first and by replacing other carbon-intensive building materials.

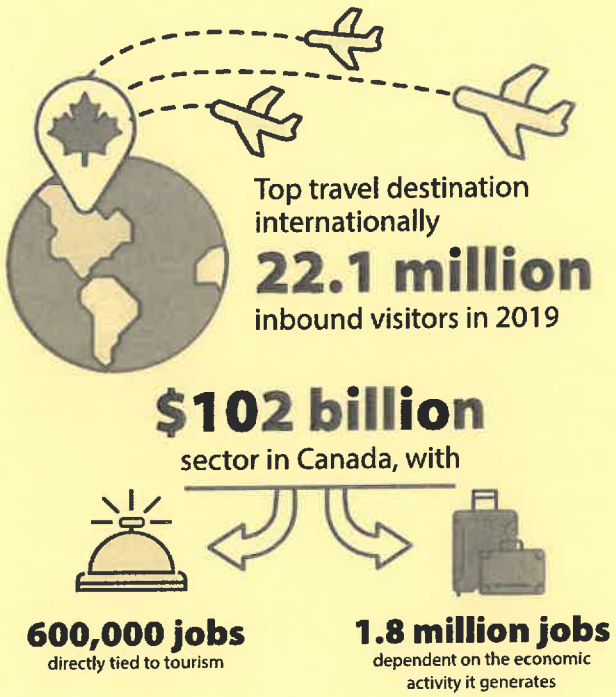
In addition, the town is home to a biomass district energy system that burns wood waste from the local Downie Timber Sawmill. This energy system creates steam for the drying kilns at the mill and hot water for space and water heating in city buildings and downtown businesses. In partnership with Downie Timber, the town is investigating other uses for wood waste, including holding innovation nights to discuss options for creating more locally produced wood products.

- Revelstokes Integrated Sustainability Plan, (2012). Retrieved from: https://revelstoke.ca/437/Key-Reports-Documents

Tourism

Canada continues to be a top travel destination internationally, with Statistics Canada reporting 22.1 million inbound visitors in 2019, the sixth consecutive year of tourism growth in Canada.[86] Tourism is a $102 billion sector in Canada, with 600,000 jobs directly tied to tourism and 1.8 million jobs dependent on the economic activity it generates. Canada's small and rural communities have natural assets that make for great tourism and recreation opportunities. Capitalizing on these has become an important economic diversification and revitalization strategy for many Canadians. However, since tourism relies on travel, sometimes by air, it also generates a significant amount of GHG emissions. While air travel falls outside the scope of municipal climate action, local governments can target other tourism-related areas to reduce GHGs, such as on- and off-road transportation, energy consumption and waste produced from tourist accommodations.

As tourism continues to grow in Canada and municipalities continue to develop and promote tourism opportunities, it is important to consider the climate impacts of these increased activities. Tourism in small and rural communities relies on the abundance and health of the local natural assets such as forests, mountains and water bodies. As a result, it also stands to be one of the sectors most impacted by climate change. In general, cold-weather activities such as those related to winter sports and ski hills are at the most risk, while there may be increased opportunities for warm-weather activities, provided that adequate adaptation measures are in place.[87] While it is clear that the tourism sector must adapt to the increasingly evident impacts of climate change, and sustainable tourism continues to be a growing subsector, there has been little recorded action in Canada to mitigate GHG emissions in this sector.[88]



86 *Tourism Industry Association of Canada, "Canadian tourism reaches new milestone with 22.1 million inbound visitors" (2020). Retrieved from:* https://tiac-aitc.ca/cgi/page.cgi/_zine.html/TopStories/Canadian_tourism_reaches_new_milestone_in_2019_with_22.1_million_inbound_visitors

87 *Micah J. Hewer and William A. Gough, "Thirty years of assessing the impacts of climate change in on outdoor recreation and tourism in Canada,"* Tourism Management Perspectives, *26 (2018) pp. 179-192.*

88 *Rachel Dodds and Sonya Graci, "Canada's Tourism Industry—Mitigating the Effects of Climate Change: A lot of Concern but Little Action," Tourism and Hospitality Planning & Development, 6:1 (2009).*

Where a municipality can influence

Sustainable tourism (and as a subset, ecotourism) represents a growing market.[89] However, to date, sustainability in the tourism sector has mostly been industry-led, whether through the adoption of renewable energy, increased energy efficiency and greater use of local resources (such as in ecolodges), or broader initiatives such as the Hotel Association of Canada's Green Key Program.

Sustainable tourism and ecotourism

While many definitions of sustainable tourism exist, it its root is can be defined as the development of a region's tourism industry in such a way as to not damage or deplete the resources that make the region attractive to tourists.

Ecotourism can be considered a subset of sustainable tourism in that it also seeks to minimize its impact on the environment, but is more specifically defined as "responsible travel to natural areas that conserves the environment, sustains the well-being of the local people, and involves interpretation and education."*

* **The International Ecotourism Society, "What is Ecotourism?"** https://ecotourism.org/what-is-ecotourism/

89 *Destination British Columbia,* Sustainable Tourism: The essential guide to operating an environmentally sustainable tourism business in BC *(2015). Retrieved from:* https://www.destinationbc.ca/content/uploads/2018/08/Susantainable-Tourrism-TBE-December-2015.pdf

As sustainable tourism relies on reducing the environmental impact of travel, implementing broad sustainability and climate initiatives in the community can support sustainable tourism operations. For example, by implementing energy-efficiency and renewable energy projects, sustainable and active transportation, local food sources, and environmental conservation efforts, the range of sustainable options available to tourists is increased. Furthermore, municipalities can integrate sustainable tourism into their overall goals and objectives for the community—by establishing strategic priorities, economic and tourism action plans and vision statements, and a sustainable tourism advisory committee.

As facilitators, municipalities can work with tourism operators to develop sustainable tourism options. For example, municipalities can publish guides on how to explore without a car and can ensure that alternative transportation options are well-promoted and easily accessible. The feasibility of installing electric vehicle (EV) charging stations in parking lots can also be investigated. This can bring more tourists with EVs into the municipality and would increase the viability of renting EVs for day trips around the region. Temaskaming Shores, Ontario, did this as part of its Municipal Energy Plan. In Banff, Alberta, the climate action plan seeks to enforce anti-idling bylaws (particularly for tour buses), develop "park and ride" facilities, and encourage energy efficiency and sustainable practices in tourist accommodations.

Municipalities can also work with local tourism operators to ensure that they have access to the resources and information they need to understand the business case for greening their operations and to encourage them to achieve sustainable tourism certification. In Canmore, Alberta, the municipal Climate Action Plan encourages and supports all tourism operators and accommodations to conduct energy audits and implement recommended upgrades. Furthermore, sustainability initiatives can themselves generate educational tourism opportunities such as through agritourism, guided tours of innovative renewable energy installations and green buildings, and visits to conservation areas or community forests.

4 Stories and experiences from Canadian municipalities

Small and rural communities from coast to coast to coast have been showing leadership and taking initiative when it comes to climate action. The case studies linked below illustrate this point and are meant to accompany this guidebook. While there are other examples used throughout this guide, each case study below highlights a climate project and includes a municipal profile, project background and description, a description of challenges faced, and success factors and positive outcomes. We encourage you to read about what these Canadian municipalities have achieved.

- **County of Colchester, Nova Scotia: Solar Colchester**
- **Town of Canmore, Alberta: Green Building Regulations**
- **City of Campbell River, British Columbia: Power Down Campbell River energy rebates**
- **City of Rimouski Quebec: Taxibus demand-responsive public transit model**
- **City of Plessisville, Quebec: Electric cars, vehicle sharing and the SAUVÉR project**
- **District of Clearwater, British Columbia: Road cross-section bylaw**
- **Ville de Mont-Saint-Hilaire, Quebec: Transit-oriented development**
- **District Municipality of Ucluelet, British Columbia: Smart growthprinciples and density bonusing**
- **City of Sault Ste. Marie, Ontario: Community revitalization project, Future Sault Ste. Marie**
- **City of Stratford, Ontario: Pay-as-You-Throw (PAYT) program**
- **District Municipality of Whistler, British Columbia: Re-Use-It/Re-Build-It centres**

Know of a case study that should be featured on our website? Please submit it to www.pcp-ppc.ca

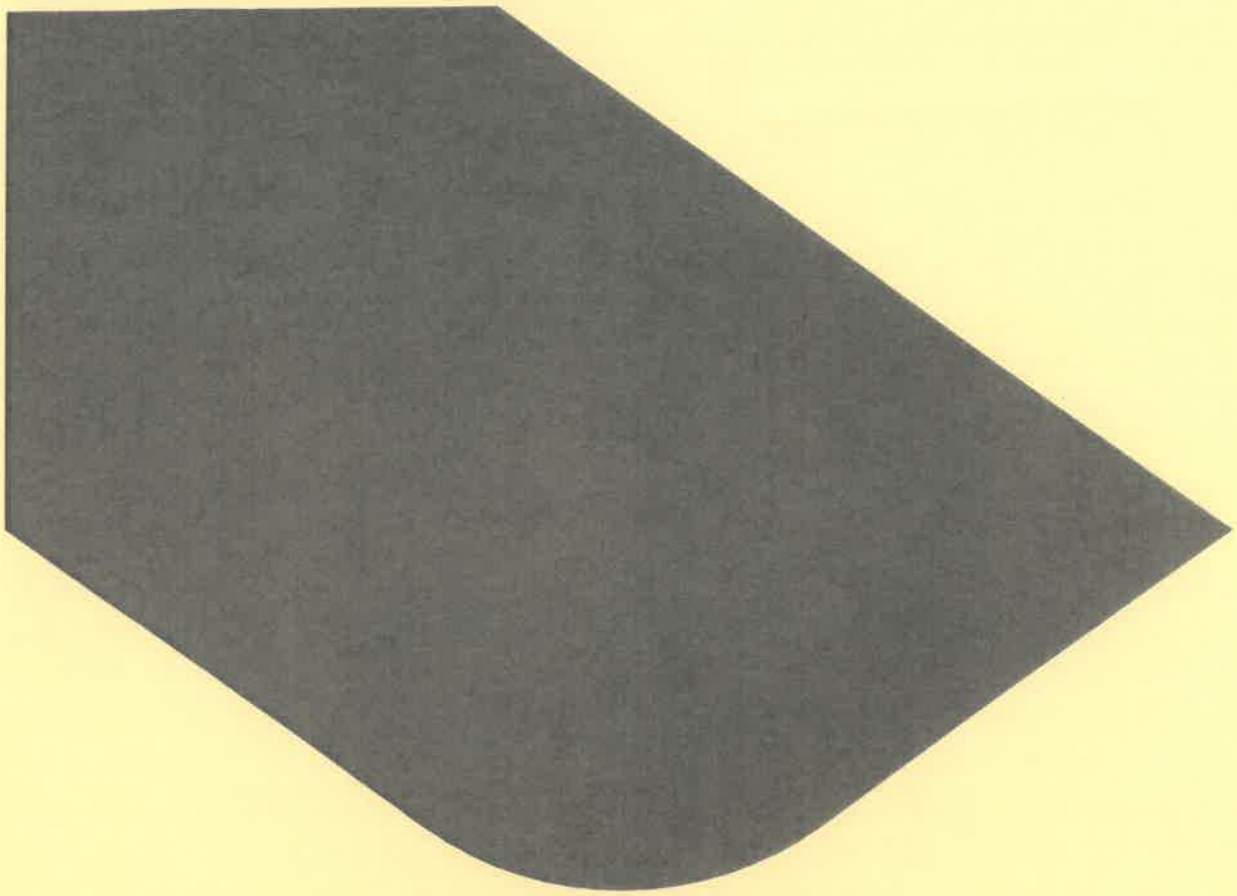
5 Conclusion

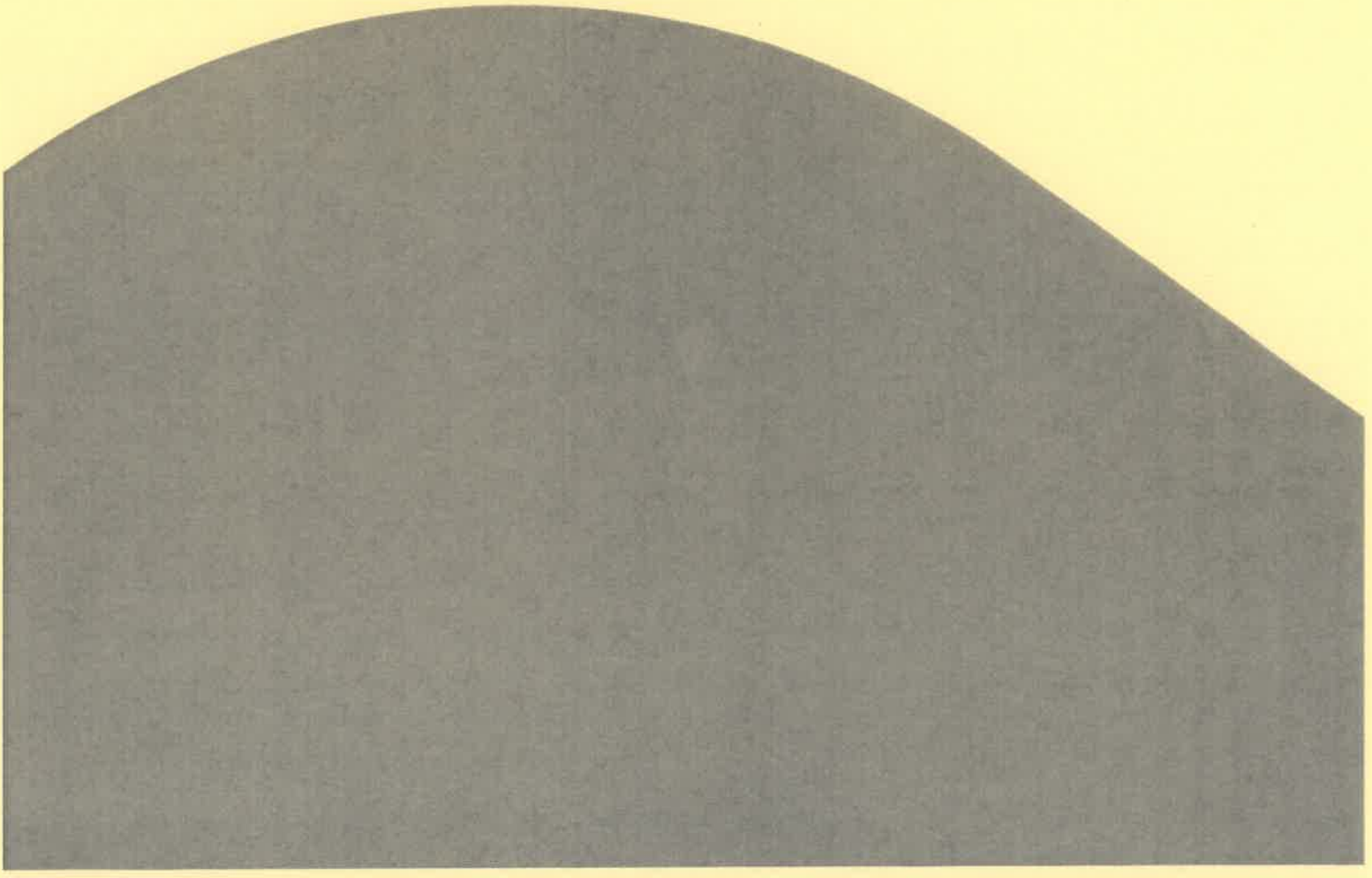
Meeting Canada's climate targets and new net-zero commitments will require national cooperation. There is a need for action by all orders of government, and municipalities will play an integral role in this major transition. No municipality is too small to have an impact. The solutions and case studies discussed in this guidebook show how much can be done with limited resources. There are a wide variety of options, resources and considerations in the small and rural community context. While investment may be needed in infrastructure, transportation and energy systems, these projects can often build on locally available resources, create additional revenue opportunities and have various co-benefits for the community.

Municipalities need not tackle climate action alone; many allies can be found in local community groups, environmental organizations, and local business and industry. Other nearby municipalities may be interested in sharing costs on initiatives that will benefit all communities involved. Establishing partnerships with local industry and creating a shared understanding of the costs and benefits of climate action are key driving factors for success in reducing emissions in small and rural communities, as well as generating operational efficiencies for industry. A common theme across the case studies referenced in this guidebook is the importance of building political commitment, community vision and consensus for sustainability and climate action. Educating the public, real estate developers, industry, politicians and other stakeholders on the importance of climate action, as well as the many co-benefits it can generate, has been a key success factor in the implementation of almost all the initiatives presented here.

Municipalities across Canada are at different stages in their climate planning processes—some are just beginning, while others are setting new targets and developing updated GHG inventories and climate plans. Regardless of where you are in the climate planning process, a wealth of resources are available to help guide you and connect you with other municipalities and experts in the field.

The Partners for Climate Protection (PCP) program offers access to the PCP Hub, a peer-to-peer online network of municipal staff and elected officials. On the Hub, members can ask and answer questions, get advice and network with peers and experts, and learn about available climate action planning resources and funding opportunities. The PCP program also offers ongoing interactive workshops and resources for working through the PCP Milestone framework—including the PCP Milestone Tool, a web-based tool that helps municipalities create GHG inventories, set targets, build action plans and track implementation. We encourage you to build on the ideas, knowledge, resources and examples in this guidebook and explore how they can be used to catalyze action in your own community.





pcp-ppc.ca

ICLEI Local Governments for Sustainability CANADA

FCM FEDERATION OF CANADIAN MUNICIPALITIES | FÉDÉRATION CANADIENNE DES MUNICIPALITÉS

PARTNERS FOR **CLIMATE** PROTECTION

Minutes

Meeting	**Regular Council**
Date	**20-Apr-21**
Time	**7:00 PM**
Place	**Municipal Hall - Council Chambers and by electronic means**

Present	Mayor Martin Davis	
	Councillor Bill Elder	
	Councillor Sarah Fowler	
	Councillor Cheryl Northcott	by video
	Councillor Lynda Llewellyn	by video
Staff	Mark Tatchell, Chief Administrative Officer	
	Ian Poole, Director of Finance	by video
	Janet St-Denis, Corporate Services Manager	by video
	Shelley Debruyne, Administrative Coordinator	by video
Guest	Cpl. K.A Rutherford, a/NCO i/c, Nootka Sound RCMP	by video
Public	5 members of the public	by phone/video

A. Call to Order

Mayor Davis called the meeting to order at 7:00 p.m.
Mayor Davis acknowledged and respected that Council is meeting upon Mowachaht/ Muchalaht territory

B. Introduction of Late Items and Agenda Changes

None

C. Approval of the Agenda

Fowler/Elder: VOT 0135/2021
THAT the Agenda for the April 20, 2021 Regular meeting of Council be adopted as presented. **CARRIED**

D. Petitions and Delegations

None

E. Public Input # 1

None

F. Adoption of the Minutes

1 Minutes of the Committee of the Whole Meeting held on April 6, 2021

Fowler/Elder: VOT 0136/2021
THAT the Committee of the Whole meeting minutes of April 6, 2021 be adopted as presented. **CARRIED**

2 Minutes of the Regular Council Meeting held on April 6, 2021

Fowler/Elder: VOT 0137/2021
THAT the Regular Council Meeting minutes of April 6, 2021 be adopted as presented. **CARRIED**

3 Minutes of the Committee of the Whole Meeting held on April 13, 2021

Fowler/Elder: VOT 0138/2021
THAT the Committee of the Whole minutes of April 13, 2021 be adopted as presented. **CARRIED**

G. Rise and Report

At the April 13, 2021 Closed Committee of the Whole, Council approved offering for sale 146 Alpine View Road (Lot 2, Plan VIP35185, DL 595, Nootka Land District)

H. Business Arising

1 Presentation by Cpl. K.A Rutherford, Royal Canadian Mounted Police, Nootka Sound Detachment "E" Division British Columbia Re: Annual Performance Plan.

Fowler/Elder: VOT 0139/2021
THAT this Annual Performance Plan be received. **CARRIED**

Corporal Rutherford spoke to the Annual Performance Plan highlighting local priorities and initiatives such as the detachment's partnership with Island Health to address mental illness health issues. A question and answer period followed. Council expressed support for the detachment's Annual Performance Plan.

2 Public Presentation of the 2021 Budget and Proposed Tax Rates

Fowler/Elder: VOT 0140/2021
THAT this presentation be received. **CARRIED**

The Director of Finance, in presenting the 2021 Operating budget, spoke to the budget cycle, time lines, considerations, costs and opportunities. The water and sewer cost structures and resulting new user fees were presented in detail.
The five-year Capital Plan was presented, highlighting the capital projects and capital funding sources.
Next, the property tax information was presented with a 7.5 % increase in property tax revenues noting an almost zero dollar change to the average single-family/strata home. **CARRIED**

Lewellyn/Fowler: VOT 0141/2021
THAT the budget discussion be opened up to the public for questions at this time. **CARRIED**

Fowler/Northcott: VOT 0142/2021
THAT Council direct Staff to prepare the Financial Plan and Property Tax Bylaws based on the details included in this presentation.

CARRIED

1 "no" vote registered
Councillor Elder

J. Council Reports

Mayor Davis (written report)

Since our last council meeting, I have attended one meeting each of the hospital board and the regional district. These were the first meetings where the Ka:'yu:'k't'h'/Che:k'tles7et'h' (Kyuquot-Chekleset) First Nations have joined us as full members, represented by Director Kevin Jules, who is Legislative Chief of the KCFN. It is an historic occasion as this is the first time that a first nation within our regional district has joined us as an equal partner. I believe that having our local first nations joining the regional district will lead to more equal and balanced governance across the region and I look forward to our other indigenous governments having representation in time. There was an exchange of gifts and at the regional district meeting, the KCFN presented a painting of sunset over the Pacific from Kyoquot, while the regional partners presented a large wood plaque created using woods donated from the various communities. Our portion was Yew wood.

We had a Unity Trail meeting last week where we are trying to find a way forward after the rejection of our previous proposal by Rec Sites and Trails. We have discussed options such as finding a different route or even going to a hiking trail instead, which should be more easily achievable. No decisions have been made and further consultation with our other partners in the project is occurring.

We have had two more budget meetings and the presentation of our financial model is on the agenda tonight.

On another note, I attended the AGM of the Canadian Cave Conservancy last weekend and have been elected President of the national association. We are involved in the conservation of cave and karst ecosystems; Horne Lake Park cave tours were originally established by the CCC as a public education tool. I hope to use my position to lobby governments to finally bring a Cave Protection Act to BC and hopefully, Canada.

Wolves have been an issue in our community for several weeks now and have led to the death of two dogs to date. This is an unfortunate situation as they seem to have moved into our community and show no fear of humans. Our conservation officers have been in town often and the wolves will be removed, hopefully before things get worse. The safety of our children is priority.

And for those so inclined, Happy 420 Day!

Councillor Fowler (verbal report)

Councillor Fowler spoke to her report on the proposed Tahsis Seniors Volunteer driver Vehicle Ride Service (TSVRS).

Councillor Elder

No Report

Councillor Northcott

No Report

Councillor Llewellyn

No Report

Fowler/Elder: VOT 0143/2021

THAT the Council Reports be received. **CARRIED**

K. Bylaws

None

L. Correspondence

1 John Vassilaki, Mayor, City of Penticton letter to Brian Frenkel, President UBCM Re: Council seeking support from UBCM to help challenge provincial paramountcy.

2 Lisa Helps, Mayor, City of Victoria Re: Support for Laid-off Hotel and Tourism Industry Workers

Lewellyn/Fowler: VOT 0144/2021

THAT these correspondence items be received. **CARRIED**

M. New Business

1 AVICC Virtual AGM and Convention May 28, 2021.

Fowler/Elder: VOT 0145/2021

THAT this information be received. **CARRIED**

Lewellyn/Elder: VOT 0146/2021

THAT Mayor Davis and Councillor Fowler attend the AVICC Virtual AGM and Convention on May 28, 2021. **CARRIED**

2 Circular Cities and Regions Initiative (CCRI) (Notice of Motion from Councillor Fowler)

Fowler/Elder: VOT 0147/2021

THAT this information be received. **CARRIED**

Fowler/Elder: VOT 0148/2021

THAT, WHEREAS participants in the CCRI can create peer to peer learning opportunities for increased sustainability and economic development;

THEREFORE BE IT RESOLVED THAT staff submit an application for the Village of Tahsis with Councillor Fowler as the representative to info@Canadiancircularcities.ca by the April 30, 2021 deadline. **CARRIED**

3 Public Notification "Alternative Means" Resolution

Fowler/Elder: VOT 0149/2021

THAT this resolution be considered. **CARRIED**

The CAO spoke to this resolution.

Fowler/Elder: VOT 0150/2021

THAT, WHEREAS from time to time the Village is obligated under the Community Charter to post or publish a public notice; and

WHEREAS it is not practicable to publish a public notice in a newspaper that is distributed at least weekly within the area affected by the subject matter of the notice, as required by the Community Charter, as the closest newspaper is published in Campbell River which is 150 km away; and

WHEREAS the Community Charter permits municipal governments to meet the public notification requirements by alternative means;

THEREFORE BE IT RESOLVED, THAT the Village of Tahsis establishes the following as the alternative means for public notification under s. 94 of the Community Charter:

The notice is written legibly on Village letterhead or with the Village logo inserted

The notice is posted on the Tahsis Now Facebook group page and one other Tahsis related Facebook group page (e.g., Tahsis, British Columbia, Tahsis Community)

The notice is posted on the Tahsis Living Blog webpage, or an equivalent blog which posts notice, news and events about the Tahsis community

The notice is posted on the Village of Tahsis website

If a matter requires publication for 2 consecutive weeks, the notices will be considered combined if the above posting requirements are met; and

BE IT FURTHER RESOLVED THAT, notices will also be posted in public posting places. **CARRIED**

N. Public Input #2

A member of the public inquired about the Community Unity Trail "snag" to which Council and staff responded.

A member of the public asked when the Museum sign board would be put up.

Adjournment

Fowler/Elder: VOT 00151/2021

THAT the meeting be adjourned at 8:45 p.m. **CARRIED**

Certified Correct this

4th Day of May, 2021

Chief Administrative Officer

Progress report

whereas local transportation options,
especially for seniors represent a barrier to health care services
therefore be it resolved to provide conditional grant and act in a trustee for local ride service offered by the seniors society.
be it further resolved to communicate with the SRD concerning expanding the TSVRS to wheels for wellness in gold river and to campbell river.

In the Village of Tahsis 2021 Strategic plans under the heading of community well being the first bullet point reads “develop and implement a transportation service to Campell river.” Following that goal is something that many work on and even more benefit from “support activity that improves food security for Tahsis residents especially those financially compromised. These goals are built on the foundation of 2020’s strategic priorities of “submit a Age-friendly Communities planning grant focusing on Transportation and of 2019’s Age-friendly planning project.

Tahsis Seniors Volunteer driver vehicle Ride Service
(rideshare taxi-style volunteer service within Tahsis)

TSVRS project launched over 2021-22
We will grow an ever evolving list of volunteer drivers.

- on demand for Wheels for Wellness trips
  Schedule and dispatch (TSVRS.)
- Tahsis Seniors Volunteer Ride Service.
- Tahsis Seniors society to interview and Vet driver volunteers applicants.
- (6 day 8:00-5:00 bookings) Village volunteer vehicle ride service operated by Tahsis Seniors)
- proposed bi-weekly travel to GR/CR return)
- Seniors Society to Schedule and dispatch.
- In cooperation with Tahsis Village, Recreational and finance department for volunteer reimbursement once seniors have vetted and approved.
- All applications to be stored in secure lockup in the Rec Centre.
- Volunteer drivers to be compensated for km travel.
- Look into Tahsis Village km reimbursement schedule.
- 53 cent per km recommended local (village rides $.66 km)
- Village administrative and monetary support appreciated where possible.

Ride client payments who are under the age 55 years can contribute $5.00 trip within Village, otherwise seniors (55plus) ride client cost by donation within the Tahsis village.

- 25.00 per person travels to Campbell River.
- 8,000.00 total seed money for pilot project
- Village $4,000.00 start up funds Seniors Society to match $4,000.00.
- TSVRS budget (52 week one year budget)

26 biweekly volunteer travel reimbursement

Campbell River 360 km trip average at .53 a km = $4,960.80

- Budget reserve 3,039.20

Once the local ride service is operational.
The next step to be this linking of the seniors society ride service with the larger network Wheels for wellness.

TSVRS to Coordinate wheels for Wellness client drop off –return Gold River and Campbell River. Wheels for Wellness has service to and returns all points South Campbell River To Victoria. In cooperation with Wheels for wellness our volunteers transport to GR/CR. Wheels for Wellness transport to points South Island as far as Victoria (no cost for Wheels for wellness service donations readily accepted Tax receipt provided)

In one years time our goals expand.
Recommendations with a bit longer range… on the more distant horizon

Village of Tahsis owned a nine-passenger Van.
Scheduling – dispatch coordinated through Village Rec center.
Seniors Society to partner in this endeavor providing Volunteers to schedule and dispatch.

Potential partnerships
Locally, regional and further with public private partnerships specifically like **Rideco** for app development.
On-Demand Transit - RideCo
see appendix for links to ride co. and other websites.

TAAC Recommendations.

- Provide administrative support to groups like the Seniors, Rangers, and Community Cupboard, especially where connecting with the Regional District, food security and sharing freight charges.
- Find new ways to try to quantify the small-town care and specialized needs of citizens including collaboration with wheels for wellness.
- Continue the pursuit of a village van in next year's budget as a way to continue investment with the pilot ride service for the community Climate Action and Age Friendliness.

9-passenger (new providing warranty) van recommended
Donations…

- Approach dealership van purchase maintenance (LOGO on Van)

- Approach other business Tire shops, Muffler Springs, Oil change, Food stores, BC Hydro, Mascon ETC. promoting their logo placed on Van and Web site where available.
- Pursue available Remote Transportation Grants
- Seniors Society should be a partner in order to pursue available Seniors Grants & Age Friendly grants readily available to Seniors Society.

Tahsis Age Friendly Accessibility Committee Report

The first year of the Tahsis Age Friendly Action Standing Committee has certainly been an interesting one. We all learned to use virtual meeting tools and find ways to support our neighbours and overcome challenges. As a way to draw a picture of the priorities (FOOD, CARE & TRANSPORT) submitted to the Village of Tahsis Council, from the TAAC just after the first meeting I hope to go into a more in-depth study of what our amazing volunteers have been working on.

Transportation

The UBC report on rural health averages $777 in transport cost to access health care.

In the last meeting of the TAAC we focused on how best to move forward on an informal ride share service with the resources we currently have at our disposal. We discussed where we are at with current road conditions, icy, snowy, boxes in potholes, culverts, hitchhikers and how best to deal with parts of the population that are not taking precautions. A question that was brought up by the group was how can we make people safer and more comfortable?

Mobility concerns are both visible and invisible. In my research, I have learned that 25% of the general population of any town struggles with ableism and disability. Everyone can appreciate placemaking efforts like ramps, wheelchair friendly benches and inclusion. Many people have a hard time getting out when seeking healthcare. Even more experience a high cost of vehicle repairs because of the damage sustained to their vehicles on Head Bay Forest Service Road.

In discussions amongst committee members, we are quite aware of the costs involved in procuring supplies and accessing care. The costs are due to the distance and conditions of the main connector. Current Covid19 conditions have resulted in distinct hesitancy to give rides to strangers.

Care

The Food Program helps by being able to discreetly check up on our vulnerable citizens as well as a way to chip away at covid loneliness.

There are only two registered home care aids in Tahsis, and a great need for private care, which is difficult to measure at the best of times. I would be remiss

if I did not use this TAAC Report to Council to bring up the elephant in the room. Our local caregivers are experiencing burnout. I know that I am, but I do not think I am alone in this. The pressure of adapting to the ever changing circumstances is putting strain on neighbours and relationships. I am afraid that many complex needs are not being addressed, and unfortunately, I am unsure of how best to help.

Part of the housing survey that Councillor Llewellyn has been working on with a student from Vancouver Island University is a path to follow. Addressing some of the many structural challenges with housing stock starts by collecting information. It requires an immense personal investment not everyone is in a position to make. As with many of the Village of Tahsis owned properties many safety concerns are becoming compounded.

As part of my Federation of Canadian Municipalities Climate Leaders sessions, I was put together in a breakout zoom meeting with other elected citizens from British Columbia. We were tasked with a communications exercise whereby we were discussing how we might approach different sections of the public about a change of land to a flood prone area. The most delicate and hands on approach was for the hypothetical home owners who were in the direct path of flood risk. This educational opportunity helped me to grasp that in cases where the needs are the greatest, everyone involved is served by providing support to the most vulnerable among us.

Food.

There are many hard working groups trying to tackle food security challenges.

Good Food Box Program (FRESH) $200 (in kind monthly labour)

Administered locally by Ricki Moore, in collaboration with the Greenways Trust and the Strathcona Regional District. Originally it was distributed from the Rec Centre, on the third Thursday of each month. Since the beginning of 2021 it has been re-organized to be run out of Ricki Moore's home twice a month. The two prices are for the same size Good Food Box of fresh fruits and seasonal local island vegetables as available.

$25 is the value of each bi-weekly delivery, yet there is a subsidized offering based on (-55K annual income) and is only $10.

15 hours of volunteer labour per month, and over 1052 km logged from deliveries to local recipient households.

Community Cupboard (Local volunteers, time, muscle and vehicles) with the St. Vincent de Paul Society and St Joseph Catholic Church

(CANNED & DRY) $800 (in kind monthly)

This project team has been working on emergency food needs and support for vulnerable citizens in our community for well over four years and has seen an increase in demand since the epidemic started last year. Due to this increase in need and citizens' reliance on this program, volunteers who deliver items (such as cat and dog food) are experiencing burn out. The Community Cupboards core people have been actively recruiting new partnerships with other community groups who might be able to help them with weekly deliveries, usually taking place on Mondays. Traditionally the Community Cupboard would take two breaks during the year, Christmas and the summer months. Due to the increase in demand, this may not be possible. Also, due to the efforts of Bishop Gary and his team they have been successful in offering a broader range of food staples, including but not limited to.

Shelf Stable Milk	Diapers	Oatmeal	Sugar & Syrup
Canned Soup	Toilet Paper	Juice	Honey
Pasta	Baby Formula	Cookies	Chicken
Pancake Mix	Cereal	Coffee	

When non-perishable food items are brought into town at the expense of the volunteers, it is then unloaded in the church basement. From that point, every Sunday at 1:00 pm the volunteers gather to organize boxes into three groups for the Monday delivery.

Singles at risk (often seniors)	Couples	Families
Every week small bags	Alternating bi-weekly	Alternating bi-weekly

As far as volunteer time is concerned, I would estimate that 6 people do two hours of work each Sunday. 12 hours preparing the boxes for delivery, organizing and rotating the goods in the Church basement. On Monday a team of 2 people distribute the weekly boxes, family drop offs can take up to 3 hours. Recycling runs of cardboard and plastic are done weekly to keep the cupboard tidy. This totals in 20 hours of donated labour a week, making it approximately 80 hours a month.

Weekly Breakdown

	Hours	Volunteers	Total Hours

Prepping	2	6	12
Delivery	3	2	6
Clean Up	1	2	2
Total Weekly Hours			20
20 hours x 4 weeks = $800 (in kind monthly)			
Calculated at $10 an hour (without a kilometer accounting, we don't always do 4 weeks a month)			

Knights of Columbus Christmas Hampers & Seniors Centre Food Bank Initiative (Seasonal)

Once a year in November, we have a campaign to fundraise for Last Mile Delivery and Freight of the Knights of Columbus Christmas Hampers. It is worth noting that many recipients this year did not have phone numbers to be reached at, yet, the program was fully subscribed. Long standing partnerships with Fan-Tahsis Trucking and the Tahsis Building Supply have helped us offer a consistent place to access forms. This year we were able to secure a corporate donation from Greigg's Seafood who provided $250 dedicated to freight, as well as salmon fillets.

Due to Covid 19 we encouraged people to pick up their own hampers from the Rec Centre, but many were unable to do so. This resulted in a small but mighty team of neighbourhood leaders doing many trips until all 50 hampers were delivered this year. The Seniors Centre ran a successful pilot program last year working with the Community Cupboard Distribution Network. The Village of Tahsis has agreed to act as a trustee for a grant applied for by the Seniors Centre for a continuation of this pilot project. I hope that some of these efforts can be integrated, as often the volunteers and recipients of the Food Aid are often one and the same. Another concern for the Senior's Society Covid Relief initiative is based on my observations, with the pilot that was done for months. A sort of temporary store that was originally mentioned by Senior Centre President Jack Taylor, would allow people to have a choice, thus reducing waste and unwanted items received. There is a need for public building space as the church basement is unfinished and in need of repairs and improvements.

Appendix
Volunteer Driver application form
Sayward and Port McNeil's VTN
Legacy van project

#23 – 1705 Campbell Way
Box 185, Port McNeill, B.C, VON 2R0
Phone #250-956-3151/1-877-552-0341
mwts@pwtransit.ca

Volunteer Transportation Network Driver's Application

Date: _____ Last Name_____First Name_____

Residential Address_____

Box #_____ Date of Birth_____
Gender_____

Phone: (Home) _____ Cell#_____
Fax_____

Email Address_____
_

Preferred method of communication: Home phone □ Cell □ Email □ Fax □

Driver's Licence #_____Expiry _____ Plate number _____

Licence Restrictions (if applicable)

_____

_____
_____

How long have you been driving? years_____ months_____

Have you ever had your licence suspended, revoked or refused?

_____

If yes, please explain why

_____

_____

_____

Are you currently employed? Yes _____ No_____ Full Time_____ Part Time_____

If employed, what is your occupation?

_____

Employer's Address:

_____

What type of work have you done in the past?

_____

_____

_____

Volunteer Transportation Network Driver's Application Form
Page 2 of 5

Please answer the following questions:

Do you have any volunteer experience and if so, for which organizations?

_____
_____
_____
_____

Please provide the details of your volunteer experience.

_____
_____
_____
_____
_____

What experience personal or professional have you had with seniors, youth or children? (i.e. caring for an elderly relative)

_____

_____
_____
_____
_____

It is known that people get involved with volunteer work for four basic reasons:

Social – to be with others Emotional – to give to others

Intellectual – to learn more Spiritual – to enhance & share with others

What lead you to consider applying to be a volunteer with this program?

_____
_____
_____

Do you feel comfortable working with and helping people of different ages, ethnic or cultural backgrounds? Please explain.

_____
_____
_____
_____
_____

What are your special hobbies, skills and/or interests?

_____
_____
_____
_____

How did you hear of the Volunteer Transportation Network?

_____
_____
_____

What are your expectations of the Volunteer Transportation Network?

_____

_____

_____

What expectations do you have of the Volunteer Transportation Network Coordinator?

_____

_____

_____

Volunteer Driver Availability:

Please check off the days you are available and provide times you would be available for volunteer work.

Day	Starting From	Until When
Monday □		
Tuesday □		
Wednesday □		
Thursday □		
Friday □		
Saturday □		
Sunday □		

Are you willing and available for last minute calls? Yes □ No □

References:

Name: _____ Phone/cell

_____

Address

_____

Relationship

_____

Name: _____ Phone/cell

_____

Address

_____

Relationship

_____

Volunteer Transportation Network Driver's Application
Page 4 of 5

Name: _____ Phone/cell

_____

Address

_____

Relationship

_____

Emergency Contact Person(s):

Last Name: _____ First Name:

_____

Address _____ City

_____

Province _____ Postal Code _____ Home Phone

_____

Cell Phone _____ Work Phone

_____

Relationship

_____

Last Name: _____ First Name:

_____

Address _____ City

_____

Province _____ Postal Code _____ Home Phone

_____

Cell Phone _____ Work Phone

_____

Relationship

_____

Confidential Information:

Do you have any health related concerns of which you would like us to be aware of? Yes □ No □

In order to provide a safe and secure environment for children and vulnerable people, we believe it is necessary to include the following questions as part of our application process. The program will keep all information provided strictly confidential. (Police may access this information under warrant if requested) Answering yes to any of the questions may not preclude your involvement with this program. Thank you for your understanding.

• Are there circumstances or traits in your lifestyle or background that would call into question your ability to work with children, youth or other vulnerable people? Yes □ No □

• Have you ever been arrested or convicted for the use or sale of drugs? Yes □ No □

• Have you ever been convicted of a criminal offence? Yes □ No □

• Do you have any pending criminal charges or convictions? Yes □ No □

• Have you ever been accused, arrested or convicted for any abuse related crime? Yes □ No □

Volunteer Transportation Network Driver's Application
Page 5 of 5

Have you ever been convicted of the following?

• A felony involving a vehicle? Yes □ No □

• Reckless driving while intoxicated or under the influence of…? Yes □ No □

• Driving without insurance? Yes □ No □

• In the last 5 years, have you ever been charged with two or more moving violations or "at fault" accidents? Yes □ No □

If you have answered yes to any of the above questions, please explain on separate paper

I understand the VTN Program will complete a minimum of two reference checks. I must complete a criminal record check through the Ministry of Justice. Submit an annual driver's abstract, a copy of my driver's licence and vehicle insurance at each renewal date. If the results are not satisfactory, I understand that I may be declined a position

with this program. I hereby declare that all of the above statements are true and correct to the best of my knowledge and I agree to become a volunteer for the VTN Program.

Volunteer Applicant _____

_____

Signature Print Name

After an interview has been conducted, you will be required to sign the VTN Position description and contract that outlines duties, expectations and support.

Thank you for considering the VTN Program, we appreciate your interest. Please send this completed application form by fax, mail or email to:

Volunteer Transportation Network
Box 185, Port McNeill, B.C, VON 2R0
mwts@pwtransit.ca
Phone #250-956-3151/1-877-552-0341

Privacy: The Volunteer Transportation Network will never provide your personal information to any third party without your prior written approval.

Dear:

Sayward Age Friendly was established in 2013. Since this time, the focus has been to create a friendly, comfortable and safe place for local seniors to socialize, participate in activities and attend workshops devoted to seniors.

Sayward is a budding retirement location 78 kilometres north of Campbell River, with 55% of the population over the age of 55. Life in a small community such as Sayward presents challenges for seniors. Feedback from our program participants indicates that lack of public transportation ranks highest on the list of challenges. Seniors find it difficult to attend medical appointments, carry out everyday shopping needs or attend local activities and cultural events due to this lack of transportation.

To address this foremost challenge, the Age Friendly Program has set a goal to purchase a van.

Sayward Age Friendly has received a grant of $8000 from the Government of Canada however we must raise considerably more dollars to turn this transportation vision into reality.

We are offering citizens and the business community the opportunity to leave a legacy to the senior citizens of Sayward and to the Community as a whole. The Age Friendly Van will be highly visible and the perfect place for you to promote your business or leave a family legacy. A donation to the “Van Project” will offer the opportunity display your business name and logo or family name as Sponsors of quality of life for Seniors.

We have created the attached reward schedule. Please choose the category in your comfort level and be recognized for your legacy donation.

Your participation gives our aging population the ability to live more active, fulfilling lives; will help prevent isolation of seniors and will promote a socially inclusive community.

Thank-you in advance for your generosity and support of this important project.

Darlene Zapp

Kelsey Centre Facility Manager

652 H’Kusam Way, PO Box 182

Sayward B.C.

V0P 1R0

Sayward "Van Project" Legacy Program

Platinum - $501+

- Your Business name and logo or family name on the back of the bus
- One year of business card ads in the Sayward News
- 1 feature story in the Sayward News
- Name displayed on the "Donation Wall of Fame" located at Kelsey Centre

Gold- $251-$500

- Your family name or business name on a decal on the side of the van
- 6 months of business card ads in the Sayward News
- Name displayed on the "Donation Wall of Fame" located at Kelsey Centre
- A Plaque of Recognition

Silver- $101 - $250

- Your family name or business name on the list of sponsors on the hood or front of the van
- 1 business card size ad in the Sayward News
- Name displayed on the "Donation Wall of Fame" located at Kelsey Centre
- A Plaque of Recognition

Bronze- up to $100

- Name displayed on the "Donation Wall of Fame" located at Kelsey Centre
- A Plaque of Recognition

Please remember…..

The VTN is not a low cost taxi service for anyone to use at any time.

We support our local private taxi providers and are not an alternative.

Clients must register before accessing the VTN Program

To register for the VTN Program, contact the VTN Coordinator at the Mount Waddington Transit office at 250-956-3151.

The VTN Program provides service in Port Hardy, Port McNeill, Fort Rupert, Coal Harbour, Woss, and Sointula. VTN driver training in Alert Bay is coming soon.

VTN CONTACT INFORMATION

250-956-3151

E-mail – mwts@pwtransit.ca

Volunteer Transportation Network

#23 – 1705 Campbell Way

Port McNeill, BC, VON 2R0

Volunteer
Transportation Network

#23 – 1705 Campbell Way
PO Box 185 Port McNeill, B.C. VON 2RO
Tel: (250) 956-3151
E-mail - mwts@pwtransit.ca

Your Local Transportation Network

Serving the North Island community to community since 2007

Volunteer Transportation Network

The purpose of the VTN is to help enhance the quality of life, contribute to the whole health and greater independence for individuals and families as a part of the overall transit strategy for the North Island region.

The VTN Program a transportation option that is integrated with the HandyDART Program and the regional conventional transit system.

VTN service is offered to eligible clients residing within the Regional District of Mount Waddington where there is no other alternative transportation option available.

VTN Clients must submit a trip request a minimum of 48 hours before the scheduled appointment.

If you are living with a mobility challenge, the VTN Program now has a wheelchair accessible bus available to eligible VTN clients.

What can the VTN be used for?

The VTN service provides eligible clients access to a variety of services

Examples of these are but not limited to:

- Medical and Dental appointments
- Access to Government or social service agencies
- Important provincial court proceedings
- Attend interviews, training and employment related appointments
- Enhance educational opportunities
- Attend prenatal or parental instruction classes
- Visits to relatives or friends in care facilities
- Become involved with community social and recreational facilities
- Access to the food bank, groceries, prescription pick up and other necessities.

Who can use the VTN and what is the cost?

Once a client has registered with the VTN program either from a "referral source" or as an individual, clients can contact the office directly to request service subject to the following conditions.

- Clients must be a resident within the boundaries of the Mount Waddington Regional District on Vancouver Island
- Clients who do not have access to any alternative means of transportation including family members
- Clients who have a physical infirmity or disability, either permanent or temporary who are not able to drive or have no alternative transportation available.
- Clients who are referred to the VTN program from a "referral source."

The VTN Program operates on a fee-for-service basis (donation) where either the referral source will donate for the trip or the client or family member will be asked to provide a donation.

The VTN program continues to seek ongoing donations from businesses, service clubs, and other funding sources to keep the service operating.

Please remember…..

the VTN is not a low cost taxi service for anyone to use at any time.

We support our local private taxi providers and are not an alternative.

Clients must register before accessing the VTN Program

To register for the VTN Program, contact the Mount Waddington Transit office at 250-956-3151.
VTN registration forms and volunteer driver application forms are available at the Mount Waddington Transit office.

The VTN Program provides service in Port Hardy, Port McNeill, Fort Rupert, Coal Harbour, Woss, Sointula. VTN driver training is coming to Port Alice & Alert Bay soon!

VTN CONTACT INFORMATION

250-956-3151
Fax - 250-956-4484
E-mail – mwts@pwtransit.ca

Volunteer Transportation Network
23-1705 Campbell Way
Port McNeill, BC, VON 2R0

Volunteer Transportation Network Drivers

375 Shelley Cres.
PO Box 185Port McNeill, B.C. VON 2RO
Tel: (250) 956-3151
E-mail mwts@pwtransit.ca

Proudly serving the North Island, community to community, since 2007!

Volunteer Transportation Network (VTN)

The purpose of the VTN is to help enhance the quality of life and contribute to the whole health and greater independence for individuals and families as a part of the overall transit strategy for the North Island region.

The VTN Program is a transportation option that is integrated with the HandyDART Program and the regional conventional transit system.

VTN service is offered to eligible clients residing within the Regional District of Mount Waddington where there is no other alternative transportation option available.

VTN drivers use their personal vehicles to transport clients but if you are living with a mobility challenge, the VTN program now has a wheelchair accessible lift van available to eligible VTN clients.

Volunteer drivers

The VTN program provides service to many North Island residents who do not drive or who are no longer physically able to drive. The VTN provides a door-to-door transportation service to and from a scheduled destination.

Becoming a volunteer driver provides an opportunity to give back to your community-
become a part of the solution!

How can you become a VTN driver?

- VTN drivers must complete the VTN driver application form.
- A current driver`s abstract must be submitted with the driver`s application form.
- A criminal record check will be required.
- Once the application, the driver`s abstract and criminal record check is submitted, drivers are required to attend a VTN drivers workshop.

In 2010, the VTN program received the Community Capacity Building Award from the Canadian Cancer Society!

VTN Driver's Workshop

New VTN drivers are required to attend the driver's workshop before transporting VTN clients.

A representative from the local RCMP Detachment and the BC Ambulance Service each facilitate a portion of the workshop.

The workshop allows new VTN drivers an opportunity to discuss the issues of driver liability, insurance requirements and the Good Samaritan Act. The workshop also provides new drivers with basic first aid knowledge.

The workshop includes driver training and operation of the wheel chair accessible lift van which is dispatched for VTN clients living with mobility challenges.

The workshop includes a small amount of paperwork that you will be required to track and submit on the VTN client trip sheets.

During the workshop new drivers will receive a visibility vest, and a small survival kit which also includes a basic first aid kit.

VTN trip sheets are submitted to the VTN Coordinator at the end of every month. Volunteer drivers receive a monthly **reimbursement.**

Eligibility Guidelines for Volunteer Transportation Network

a. Live within the boundaries of the North Island.
b. Have no alternative transport available.
c. Referred to the Program by an agency, doctor, family, friend, school principal.
d. Able to provide appointment information (address, date and time).
e. Capable of giving the driver clear directions to your appointment.
f. Ready and available for pick up at accessible location.
g. Willing to share a drive where scheduling permits.

Applicant Information (Please print clearly) **STRICTLY CONFIDENTIAL**

Last Name: First: Init:

Date of Birth: Gender
(mm / dd / yyyy)

Apt. /Unit #: Address: Intercom #:

City: Prov: Postal Code:

Is this a permanent resident? **YES** **NO** (explain)

Resident Location Description (apartment, difficult location, etc.)

Mailing address if different from above (Please provide)

Phone: Fax: Cell:

Email …… Message: ..... Pager:
……

Preferred communication:

Needed and Provided by VTN Client:

Accompany *Must provide car seats.
Assistance
Crutches
Walker
Wheelchair
Oxygen
Car Entrance Required:

Driver gender request:
Funding Provided by Client:
Funding Provided by Referring Agency:
Any Medical conditions

_____
__

Signature of Client: **Date**:

I ……authorize **VT Network** to determine the eligibility for authorized transportation and, if needed, to consult the agency representative, medical specialist, or family doctor named below. I understand and agree that the decision of **Volunteer Transportation Network** shall be final.

Signature of Client: **Date**:

This section to be completed by the referring agency or person (*print clearly)*

Verification of Eligibility for Volunteer Transportation Network

Please Note: Before completing this verification, refer to the eligibility guidelines.

Has the applicant use of any alternative transportation?

YES: explain **NO:**

Family Doctor: Phone:

This client needs person-to-person transfer

Referred By: (agency or individual)

Position: Contact Person:

Address: City:

Postal Code: Telephone: Fax:

I *(Contact Person)* hereby verify that the above named applicant meets the eligibility criteria to register for the **Volunteer Transportation Network**.

Signature Date

Signature of **VT Network** Coordinator: Date:

Privacy: We will never provide your personal information to any third party without your prior written approval.

Tahsis Seniors Volunteer Ride Service

Volunteer Transportation Network Driver's Application

Date: _____ Last Name_____First Name_____

Residential Address_____

Box #_____ Date of Birth_____

Gender_____

Phone: (Home) _____ Cell#_____

Fax_____

Email Address_____

_

Preferred method of communication: Home phone □ Cell □ Email □ Fax □

Driver's Licence #_____Expiry _____ Plate number _____

Licence Restrictions (if applicable)

_____

_____

_____

How long have you been driving? years_____ months_____

Have you ever had your licence suspended, revoked or refused?

_____

If yes, please explain why

_____

_____

_____

Are you currently employed? Yes _____ No_____ Full Time_____ Part Time_____

If employed, what is your occupation?

_____

Employer's Address:

_____

What type of work have you done in the past?

_____

_____

_____

Volunteer Transportation Network Driver's Application Form
Page 2 of 5

Please answer the following questions:

Do you have any volunteer experience and if so, for which organizations?

_____
_____
_____
_____

Please provide the details of your volunteer experience.

_____
_____
_____
_____
_____

What experience personal or professional have you had with seniors, youth or children? (i.e. caring for an elderly relative)

_____

_____
_____

_____
_____

It is known that people get involved with volunteer work for four basic reasons:

Social – to be with others Emotional – to give to others

Intellectual – to learn more Spiritual – to enhance & share with others

What lead you to consider applying to be a volunteer with this program?

_____
_____
_____

Do you feel comfortable working with and helping people of different ages, ethnic or cultural backgrounds? Please explain.

_____
_____
_____
_____
_____

What are your special hobbies, skills and/or interests?

_____
_____
_____
_____

How did you hear of the Volunteer Transportation Network?

_____
_____
_____

What are your expectations of the Volunteer Transportation Network?

_____
_____
_____

What expectations do you have of the Volunteer Transportation Network Coordinator?

_____

_____

_____

Volunteer Driver Availability:

Please check off the days you are available and provide times you would be available for volunteer work.

Day	Starting From	Until When
Monday □		
Tuesday □		
Wednesday □		
Thursday □		
Friday □		
Saturday □		
Sunday □		

Are you willing and available for last minute calls? Yes □ No □

References:

Name: _____ Phone/cell

_____

Address

_____

Relationship

_____

Name: _____ Phone/cell

_____

Address

_____

Relationship

_____

Name: _____ Phone/cell

_____

Address

_____

Relationship

_____

Emergency Contact Person(s):

Last Name: _____ First Name:

_____

Address _____ City

_____

Province _____ Postal Code _____ Home Phone

_____

Cell Phone _____ Work Phone

_____

Relationship

_____

Last Name: _____ First Name:

_____

Address _____ City

_____

Province _____ Postal Code _____ Home Phone

_____

Cell Phone _____ Work Phone

_____

Relationship

_____

Confidential Information:

Do you have any health related concerns of which you would like us to be aware of? Yes □ No □

In order to provide a safe and secure environment for children and vulnerable people, we believe it is necessary to include the following questions as part of our application

process. The program will keep all information provided strictly confidential. (Police may access this information under warrant if requested) Answering yes to any of the questions may not preclude your involvement with this program. Thank you for your understanding.

• Are there circumstances or traits in your lifestyle or background that would call into question your ability to work with children, youth or other vulnerable people? Yes □ No □

• Have you ever been arrested or convicted for the use or sale of drugs? Yes □ No □

• Have you ever been convicted of a criminal offence? Yes □ No □

• Do you have any pending criminal charges or convictions? Yes □ No □

• Have you ever been accused, arrested or convicted for any abuse related crime? Yes □ No □

Volunteer Transportation Network Driver's Application
Page 5 of 5

Have you ever been convicted of the following?

• A felony involving a vehicle? Yes □ No □

• Reckless driving while intoxicated or under the influence of…? Yes □ No □

• Driving without insurance? Yes □ No □

• In the last 5 years, have you ever been charged with two or more moving violations or "at fault" accidents? Yes □ No □

If you have answered yes to any of the above questions, please explain on separate paper

I understand the VTN Program will complete a minimum of two reference checks. I must complete a criminal record check through the Ministry of Justice. Submit an annual driver's abstract, a copy of my driver's licence and vehicle insurance at each renewal date. If the results are not satisfactory, I understand that I may be declined a position with this program. I hereby declare that all of the above statements are true and correct to the best of my knowledge and I agree to become a volunteer for the VTN Program.

Volunteer Applicant _____

_____

Signature Print Name

After an interview has been conducted, you will be required to sign the VTN Position description and contract that outlines duties, expectations and support.

Thank you for considering the VTN Program, we appreciate your interest. Please send this completed application form by fax, mail or email to:

johnra@shaw.ca or return to the recreation or seniors centre

Privacy: The Volunteer Transportation Network will never provide your personal information to any third party without your prior written approval.

Links

On-Demand Transit - RideCo
community-gardens.ca - The Council (google.com)
About RIDE WELL - Business - Wellington County

Tahsis, BC | Official Home Page for Village of Tahsis

Agriculture Economic Development program | Ontario.ca
Rural and Smaller Communities_Councillor Handbook - Google Docs
https://docs.google.com/document/d/180ljdqd57UfnU6tzhwwmADDbWj2qdKCsldQkl92lldQ/edit#heading=h.3whfbd85geb5
https://www.ubcm.ca/EN/main/resources/ubcm-fcm-small-communities-travel-fund.html
HANDOUTS – Bank Of Ideas
Climate Change - Wellington County
Leadership Essentials Certificate | Courses - Continuing Studies - Simon Fraser University (sfu.ca)
Leadership Essentials - Continuing Studies - Simon Fraser University (sfu.ca)
1•10•Zero - A City Councillor's Climate Action Handbook - Google Docs
Climate Caucus
Wastewater from water treatment system used for wetlands, wildlife and community space | Federation of Canadian Municipalities (fcm.ca)
Former industrial lands cleaned up and ready to bring about district revitalization | Federation of Canadian Municipalities (fcm.ca)

Innovative municipal financing removes barriers to energy-efficiency upgrades for homeowners | Federation of Canadian Municipalities (fcm.ca)
ARI's cardboard heating pellet project awarded $95,000 federal grant - NNSL MEDIA
100% Renewable Kootenays - EcoSociety
Angela Francis: How to get everyone to care about a green economy | TED Talk
Help Cities Lead
Climate Caucus
Community Efficiency Financing | Federation of Canadian Municipalities (fcm.ca)
Canada's Net Zero Future | Canadian Institute for Climate Choices
Canadian Environmental Law Association (CELA) Primer: Small Modular Nuclear Reactors (SMRs)
Nuclear Power | Project Drawdown
Case study: Building an electric vehicle charging network in the Kootenays, BC | Federation of Canadian Municipalities (fcm.ca)
https://www.nootkasound.info/post/announcing-nootka-sound-watershed-society-intern-pskf-volunteer
other related to health & wealth
UBCM | Policy Documents and Resources
Share Your Story — PERSIST (wepersist.ca)

UBCM Union of BC Municipalities

April 28, 2021 *Sent via email/PDF*

Mayor Martin Davis and Council
Village of Tahsis
977 South Maquinna Drive
Tahsis, BC, V0P 1X0

RE: 2020 CEPF: Emergency Support Services – ESS Modernization Project

Dear Mayor Davis and Council,

Thank you for providing a final report and financial summary for the above noted project. We have reviewed your submission and all reporting requirements have been met.

The final report notes a total eligible expenditure of $19,416.39. Based on this, a payment in the amount of $15,641.00 will follow shortly by electronic funds transfer. This transfer represents full payment of the grant and is based on 100% of the total reported expenditure to a maximum of the approved grant ($15,641.00).

I would like to congratulate the Village of Tahsis for undertaking this project and responding to the opportunity to develop ESS capacity to increase the resiliency of BC communities.

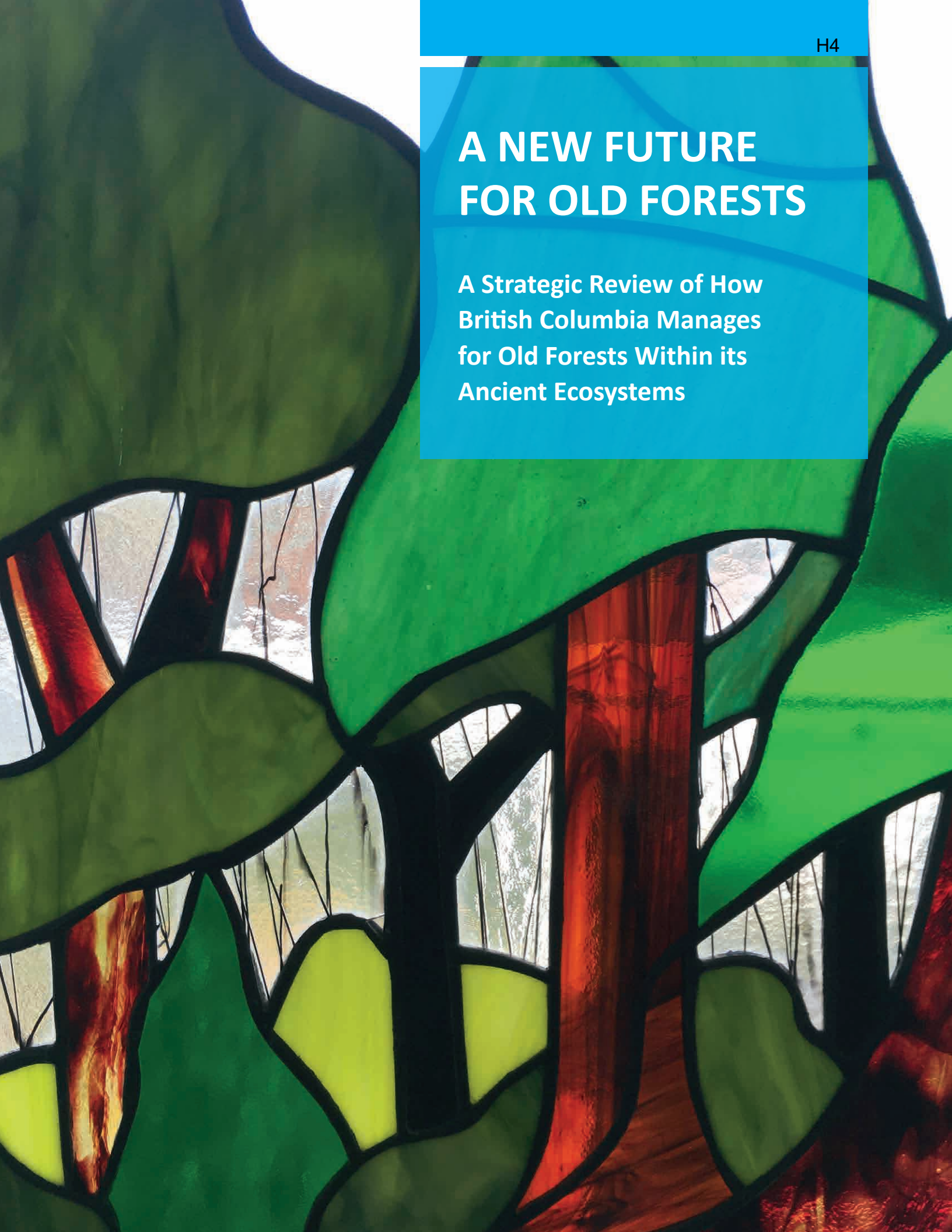
If you have any questions, please contact Local Government Program Services at (250) 387-4470 or by email at cepf@ubcm.ca.

Sincerely,

Rebecca Bishop
CEPF Program Officer

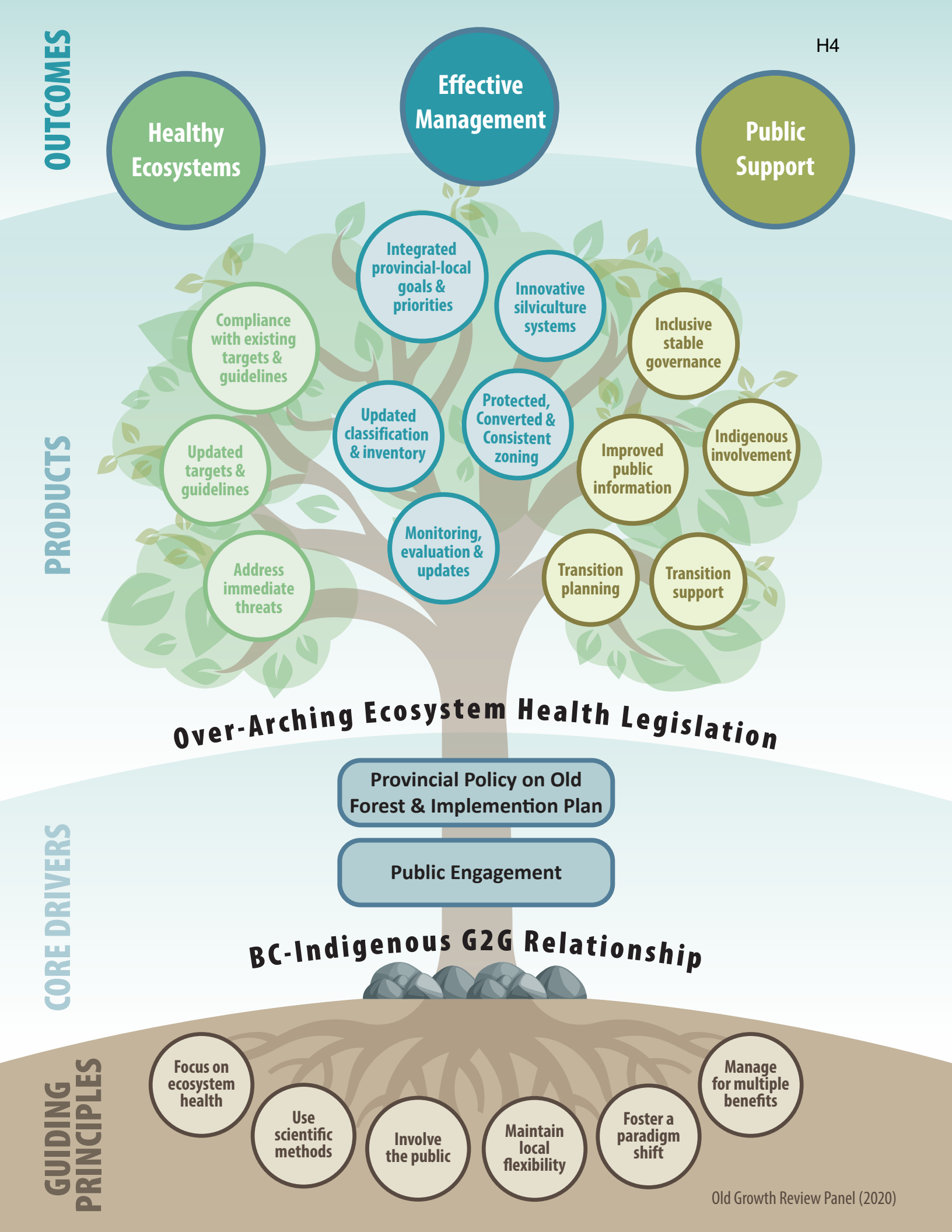
cc: Mark Tatchell, Chief Administrative Officer

The Emergency Support Services stream is funded by the Province of BC



A NEW FUTURE FOR OLD FORESTS

A Strategic Review of How British Columbia Manages for Old Forests Within its Ancient Ecosystems



Old Growth Review Panel (2020)

April 30, 2020

Honourable Doug Donaldson
Minister of Forests, Lands,
Natural Resource Operations
and Rural Development
Room 248 Parliament Buildings
Victoria, BC V8V 1X4

Dear Minister,

We are pleased to submit this report detailing the results of our independent strategic review of old growth forest management in British Columbia. We have been honoured to co-chair this work, and to have had the opportunity to engage with and hear from British Columbians directly about how they value old forests, and how they believe they should be managed.

In addition to scientific studies and data, people shared their personal observations, perspectives, and ideas about what needs to be done. In many cases, their information and ideas were about broader land use policies, or sometimes they focused on how to manage a specific plot of land. We particularly appreciated the constructive approach taken by nearly every participant in the dialogue, and the common sentiment that we need to find better ways to manage old forests for a broad spectrum of benefits and reasons.

Our recommendations are shaped by a recognition that society is undergoing a paradigm shift in its relationship with the environment, and the way we manage our old forests needs to adapt accordingly. In the government's upcoming deliberations about how to implement our recommendations, we encourage you to engage with Indigenous leaders and organizations from the outset, and to involve local communities and stakeholders throughout the process.

We also encourage you to consider our recommendations as a whole. Had previous old forest strategies and recommendations been fully implemented, we would likely not be facing the challenges around old growth to the extent we are today, i.e., high risk to loss of biodiversity in many ecosystems, risk to potential economic benefits due to uncertainty and conflict, and widespread lack of confidence in the system of managing forests.

We would finally like to thank you and your government for putting your trust in us to carry out this review. We have done our best to capture the passion and many good suggestions that were provided in the hopes that the results of our deliberations will help you as your government determines the future management of old forests in British Columbia.

Al Gorley, RPF
Co-Chair

Garry Merkel, RPF
Co-Chair

Ponderosa pine
Photo by Deb MacKillop

ACKNOWLEDGEMENTS

Many people care about appropriately conserving and managing British Columbia's old forest ecosystems. We spoke directly with nearly 800 people and heard from thousands more through our survey, written submissions and emails. We thank everyone for sharing their knowledge and opinions. Viewpoints were often expressed with passion and a sincere interest in old forests and land stewardship. In addition to scientific studies and data, people shared their personal observations, perspectives, and ideas about what needs to be done. In many cases, the information and good ideas we received were about broader land use policies, or sometimes they focused on how to manage a specific plot of land. We particularly appreciated the constructive approach taken by nearly every participant in the dialogue, and the common sentiment that we need to find better ways to manage old forests for a broad spectrum of benefits and reasons.

The written input we received has been provided to the provincial government, with the survey results, a specially commissioned technical report, and a summary of the written submissions is also provided in a What We Heard report. Please note that original versions of the written submissions we received are available on the Province's Old Growth Strategic Review website. This report does not cite every comment or idea we received, but we have attempted to bring together the essence of what we learned in our recommendations and implementation suggestions.

As many of you reminded us, it is important to recognize that old forests are more than old or big trees. They are a product of ancient and unique ecosystems, and their characteristics vary greatly across the province. They can only be effectively managed in the context of broader public priorities, including the interests of current and future generations.

We would also like to thank the people who directly supported our work on this endeavour:

- Project management: Steve Kachanoski (BC Ministry of Forests, Lands, Natural Resource Operations and Rural Development)
- Logistics and record keeping: Sacha Chin and Trevor Pancoust (Pace Group Communications)
- Report preparation and editing: Greg Descantes (Pace Group Communications)
- Report graphic design: Myron Advertising + Design
- Survey design and results Elevate Consulting

Al Gorley and Garry Merkel

Photo by Sacha Chin

FOREWORD

Almost three decades ago, over a hundred people from various walks of life, including government, worked for 18 months to find consensus on *An Old Growth Strategy for British Columbia* (B.C. Ministry of Forests, May 1992): In that report the development team said:

> *"Members of the public, public interest groups, professional resource managers and representatives of industry have expressed increasing concern about management of old growth forests in British Columbia. Not only does the forest industry depend heavily on old growth for its current wood supply, but many new demands are being placed on the remaining old growth to satisfy a broad range of forest values.* ***In parts of the province, meanwhile, opportunities to reserve representative samples of old growth are dwindling rapidly*** *(emphasis added). These pressures are leading to increased instances of conflict among supporters of competing land uses."*

Although many subsequent measures were taken under the auspices of land-use planning and the forest practices code (some of which carried forward to the current legislation), many critical aspects of the strategy laid out in that report were either discarded or only partly implemented. Had that strategy been fully implemented, we would likely not be facing the challenges around old growth to the extent we are today:

- High risk to loss of biodiversity in many ecosystems.
- Risk to potential economic benefits due to uncertainty and conflict.
- Widespread lack of confidence in the system of managing forests.

While some of the immediate old forest issues we face can be addressed within the existing policy framework, continuing to apply the approaches that brought us to this point will not provide a sustainable solution. Our underlying assumption is that the government feels it is in the public interest to conserve long-term ecosystem health by maintaining forest biodiversity, so this priority will therefore be the foundational goal of any new strategy. We also assume that a new strategy and supporting policies and programs will be developed through dialogue with Indigenous governments, communities, and stakeholders in a manner that reflects the ecological, historical, and socio-economic uniqueness of each region.

Many of the people we heard from during our engagement process expressed optimism for a positive change to managing old forests, however we also heard a considerable amount of skepticism. We frequently heard about examples where current and past governments were perceived as having not followed through on initiatives or recommendations, including: full implementation of the previous Old Growth Strategy (1992); monitoring and updating land-use plans; reviewing, monitoring and updating biodiversity guidance; and implementing the recommendations of the Forest Practices Board (2012) on old growth management, and the Auditor General's (2013) report on biodiversity, to name just a few.

Therefore, we have suggested that if the government accepts our recommendations, it develop a formal implementation plan to accompany its public response. We advise that this be developed in collaboration with Indigenous governments, and in consultation with many others. We hope this approach provides an avenue to simultaneously build good policy and practices, a stable timber industry as well as public trust.

TABLE OF CONTENTS

DEFINITIONS

Aspatial – Used to describe targets set for the amount of old forest to be retained within a management area as a whole, but not at a specifically define location.

Biodiversity Conservation – To maintain ecosystem, species and genetic diversity, and the processes that shape them, in the face of human development.

Climax condition or climax vegetation communities – A forest community of plants, animals, and fungi which, through the process of ecological succession in an area over time, have reached a state where they are subject to very little overall change.

Forest Stewardship Plan – A plan which guides forest operations for a timber tenure required under the *Forest and Range Practices Act* which is prepared by a forest licensee and approved by government.

Land Use Plans – Plans sanctioned by the provincial government, including those arising from the Commission of Resources and the Environment (CORE), Land and Resource Management Plans (LRMPs), and those developed through government-to-government processes such as for the Great Bear Rainforest and Haida Gwaii.

Legal / Non-legal OGMA – Individual Old Growth Management Areas that are either legally established or are not legally established but still identified in the planning process.

Natural range of variability – Describes the disturbance processes and ecosystem variability that these disturbances create, typically defined by the period before European settlement.

Old growth – A generic term to describe forests with old trees. In British Columbia, for management purposes, this is usually described according to the age of the trees (usually 250+ years on the coast and 140+ years in the interior).

Primary forest – Forests of native tree species, where there are no clearly visible indications of human activities and the ecological processes are not significantly disturbed.

Second growth forest – Forests regenerated on native forests that were cleared by natural or human causes.

Seral stage - An intermediate stage found in ecological succession in an ecosystem advancing towards its climax community. In many cases more than one seral stage evolves until climax conditions are attained.

Site Index – An indicator of site productivity described by the height that a stand of trees reach in a given time, e.g., SI_{50} means the height at 50 years.

Site series – A finer stratification of a biogeoclimatic sub-zone based on soil moisture and nutrients.

Spatial vs Aspatial – OGMAs that are identified spatially on maps (spatial) or are tracked in overall statistics but not specifically identified on a map (aspatial).

ACRONYMS

AAC – Allowable Annual Cut: The number of cubic meters that are allowed for harvest each year in a given area.

BEC – Biogeoclimatic Ecological Classification: A system of classification that categorizes the landscape into zones, each with its own with unique biological, geological and climatic properties.

CORE – Commission on Resources and Environment: A government-appointed commission that was in place from 1992-1996 and lead a variety of land initiatives including various regional land use plans.

ENGO – Environmental Non-Government Organization

FRPA – Forest and Range Practises Act: Legislation (2002) that regulates forest practises in British Columbia.

FSP – Forest Stewardship Plan

LRMP – Land and Resource Management Plan: A local land use plan that engages a number of local stakeholders in the preparation and ongoing monitoring and updates to that plan.

NGO – Non-Government Organization

NRV – Natural Range of Variability

OGMA – Old Growth Management Area: An area that is set aside and specially managed for old forest values.

LU – Landscape Unit: The base area for operational forest planning.

LUP – Land Use Plan

SI – Site Index

THLB – Timber Harvesting Land Base: The area that is operationally feasible to be accessed for timber harvesting.

TSA – Timber Supply Area: An administrative area that is used to set the AAC.

TSR – Timber Supply Review: The process for establishing the AAC in a TSA.

VQO – Visual Quality Objective: A mechanism for protecting the visual quality of a forested landscape.

TERMS OF REFERENCE AND PROCESS

On July 17, 2019, the Government of British Columbia announced that we, Al Gorley and Garry Merkel, would be appointed as an independent panel to undertake a province-wide Old Growth Strategic Review and provide a report to the Minister of Forests, Lands, Natural Resource Operations and Rural Development by April 30, 2020. The purpose is to inform the development of broad public policy regarding old growth forests. The government committed to releasing the report to the public within six months of us submitting it.

In British Columbia, the term "old growth" is officially defined by the age of trees in a forest using specific thresholds (often over 250 years on the coast and 140 years in the Interior). However, we did not limit ourselves to that timber-based definition because it would not have adequately captured the many values, interests and circumstances surrounding conservation and management of old forests.

We were asked to examine the subject from a variety of perspectives, including employment, economic, social, cultural, environmental and climate change, and to consider the interplay between them. To ensure we were aware of these perspectives, we undertook a four-month process of engagement which was substantially completed on January 31, 2020. We did not characterize our outreach as "consultation" because that will be the job of government after it receives our recommendations. Our aim was to learn as much as we could from a wide spectrum of people throughout the province so that we could hopefully make as fulsome a set of recommendations as possible. We also wanted to make sure every British Columbian had an opportunity to express their views.

Without limiting who we heard from, our commitment was to ensure we connected with:

- Indigenous governments and communities
- Local governments and communities
- The forest industry
- The tourism and recreation industries
- Environmental non-government organizations
- Professional associations
- Professionals, academics, and other experts
- Forest and resource stewardship organizations
- Stakeholder groups
- Members of the public

Engagement Techniques	
In-person, teleconference, and videoconference	We participated in over 200 meetings in 45 communities with close to 800 people. To ensure we received input from a wide variety of perspectives, we reached out directly to some groups and individuals, and through our Province of BC website invited everyone interested to request a meeting. Due to the time available, we were unable to accommodate all meeting requests. We kept informal notes of these meetings to help us write this report, but they will not be published. A list of in-person meeting locations can be found in our *What We Heard* report.
Written submissions	We invited individuals and organizations to make formal written submissions. We received more than 300 submissions along with more than 400 published articles, scientific papers, and reports. With a few exceptions where confidentiality was requested, we have asked that these submissions be accessible on the government's website. A synopsis of the written submissions is available in our *What We Heard* report.
Survey responses and emails	We encouraged people to complete our on-line survey, which was open for just over three months, or to send us an email. We received 18,523 survey responses, and approximately 9,000 emails to our electronic mailbox. The results of the survey are summarized and available with this report. The original submissions are also available on the government's website.
Technical and scientific briefings	We received an initial technical briefing from a group of over 30 government staff to ensure we were informed about the status of current forest management processes and initiatives relevant to our task. Several follow-up briefings were also held to address specific information requirements. We also commissioned a report from the Department of Forest Resources Management at the University of British Columbia to tell us how other jurisdictions manage old forests and what we can learn from them. That document is available in the What We Heard report.

The variety and number of contributors exceeded our expectations. We heard from and met with elementary school children, high-school and college students, leading researchers, small and large business from all areas of the timber and non-timber forest sector, practising and retired professionals, elders, parents and grandparents, forest and service sector workers, environmental advocates, self-described average citizens, government employees, and political leaders to name a few. Many people talked about the broader system for managing old forests, whereas others offered up specific local examples to explain their point of view.

Executive Summary

Grizzly Den Trail — High-elevation forest east of Prince George
Photo by Al Gorley

Old forests, especially those with very large trees, are the product of ancient ecosystems, icons of British Columbia's landscape, and a key aspect of the province's unique identity. In addition to their intrinsic value, the timber they provide is important to the provincial economy, and a primary source of income in many communities. These same forests anchor ecosystems that are critical to the wellbeing of many species of plants and animals, including people, now and in the future. The conditions that exist in many of these forests and ecosystems are also simply non-renewable in any reasonable time frame.

Facing diminishing available timber supplies, ecosystems at risk of biodiversity loss in several areas, and significant public concern, the Government of British Columbia announced that an independent panel (Al Gorley and Garry Merkel) would carry out a province-wide Old Growth Strategic Review to inform the development of new management policies and strategies.

In order to understand the range of perspectives (employment, economic, social, cultural, environmental, climate change and more) and consider the interplay between them, we undertook a four-month engagement process to hear from as wide a spectrum of people and organizations as possible throughout BC. This was achieved through a combination of meetings, written submissions, and an online survey. The review looked beyond the timber-based definition of "old growth" so we could adequately capture the many values, interests and circumstances surrounding the conservation and management of old forests. This is one of three reports, and contains a situation overview, our recommendations, and implementation advice. There are two companion documents: *A New Future for Old Forests: Summary Report and Old Growth Strategic Review: What We Heard.* All three reports and the written submissions we received are posted on the Province's Old Growth Strategic Review website.

Our strategic review of the management of old forests led us to conclude that despite the good intentions and efforts of many people, including government personnel associated with forest management development and implementation, the overall system of forest management has not supported the effective implementation or achievement of the stated and legislated public objectives for old forests. This has not come about because of any one group or decision, but through a pattern of many choices made over several decades, within an outdated paradigm.

While our report cannot possibly reflect the full breadth and depth of the information provided to us, our key observations are:

1. Ecosystems with large, old trees are important to British Columbians for many different reasons.
2. Retaining and managing forests of old trees is a key strategy for maintaining biological diversity and cannot be done in isolation.
3. The extent and condition of ecosystems with old trees, relative to natural condition, is highly variable across the province.
4. The economy is heavily dependent on trees harvested from primary forests of old trees.
5. The current system for retaining old forest and managing their attributes has issues arising from incomplete implementation of previous strategies, social trade-offs and a changing landscape.
6. There are opportunities to create greater certainty for forest-dependent communities by formally zoning timber harvesting areas; generating more sustainable and longer-term non-timber economic benefits from old forests; and developing innovative silviculture systems.
7. Climate change will become an increasingly bigger factor in choices about forest management.
8. Information around the types, condition and current status of old forests and information provided to the public about old forests is highly variable across the province.
9. There is widespread support for the provincial government and Indigenous governments to collaboratively create updated strategies and policies for the management of old forests.

There is a near-unanimous agreement that managing the health of old ecosystems, especially those with old trees provides many benefits. We believe the fundamentals to success for the Province's forest management system are ecosystem health, effective forest management and public support. Our review identified weaknesses in each of these areas. To adequately manage and protect BC's old forest biodiversity, attributes, values and benefits for future generations, these weaknesses will have to be addressed. Our recommendations are shaped by that understanding, and the recognition that society is undergoing a paradigm shift in its relationship and interaction with the environment, and the way we manage our old forests needs to adapt accordingly.

Recommendations

On conditions required for change:

1. Engage the full involvement of Indigenous leaders and organizations to review this report and any subsequent policy or strategy development and implementation.
2. Declare conservation of ecosystem health and biodiversity of British Columbia's forests as an overarching priority and enact legislation that legally establishes this priority for all sectors.
3. Adopt a three-zone forest management framework to guide forest planning and decision-making.
4. Adopt a more inclusive and stable governance model that gives local communities and stakeholders a greater role in forest management decisions that affect them.
5. Provide the public with timely and objective information about forest conditions and trends.

For immediate response:

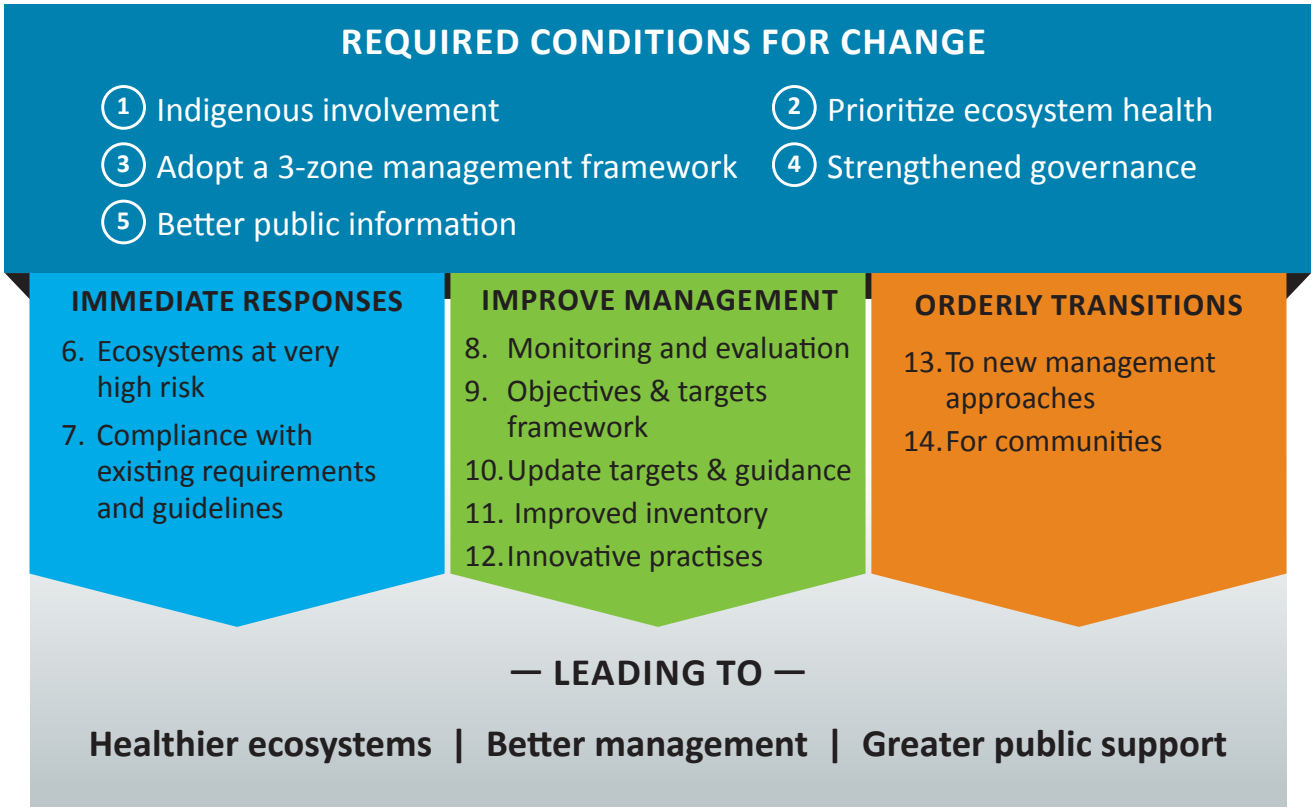
6. Until a new strategy is implemented, defer development in old forests where ecosystems are at very high and near-term risk of irreversible biodiversity loss.
7. Bring management of old forests into compliance with existing provincial targets and guidelines for maintaining biological diversity.

For improving management:

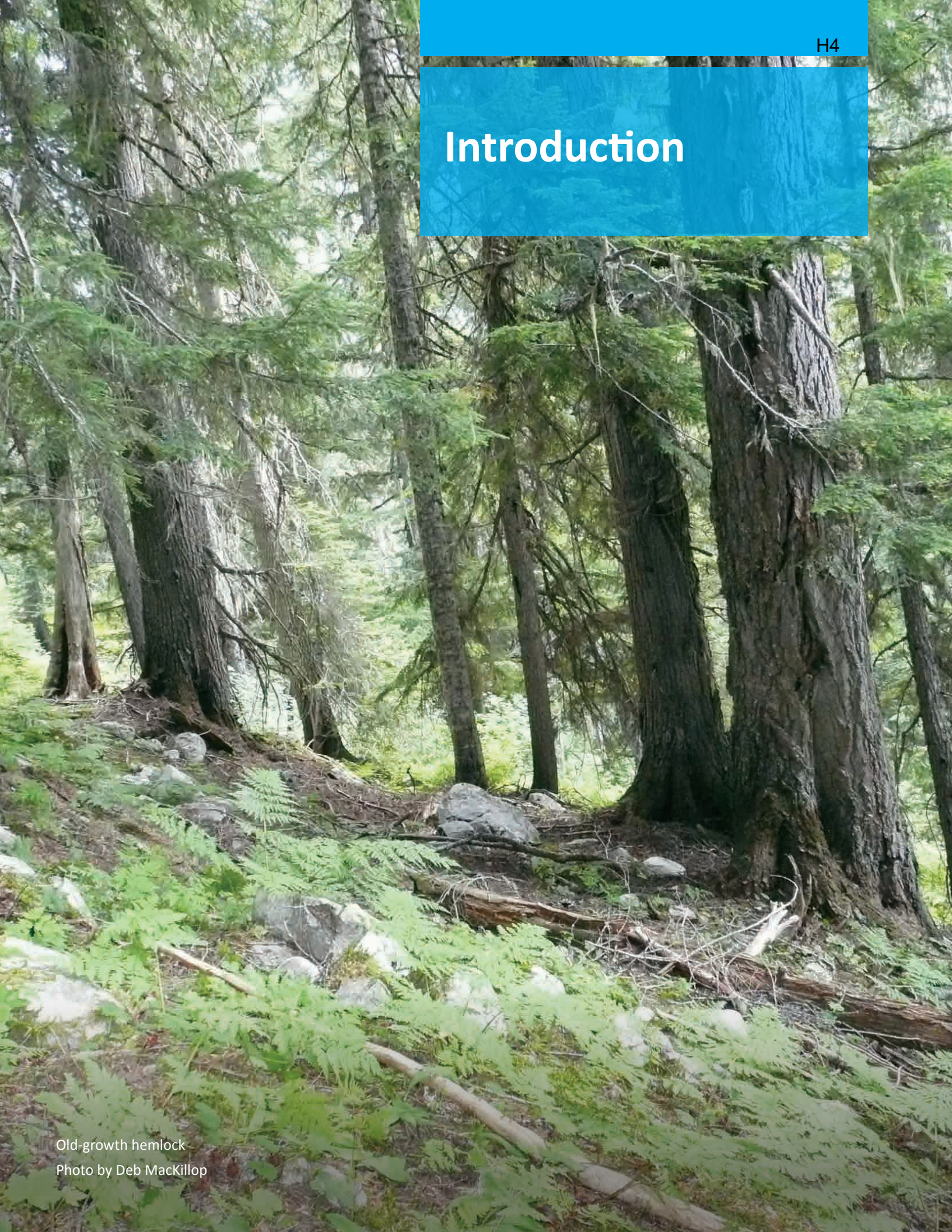
8. Establish and fund a more robust monitoring and evaluation system for updating management of old forests.
9. Establish a standardized system and guidance that integrates provincial goals and priorities to local objectives and targets.
10. Update the targets for retention and management of old and ancient forest.
11. Improve the mapping and classification of old forests to recognize multiple values.
12. Create a silviculture innovation program aimed at developing harvesting alternatives to clearcutting that maintain old forest values.

For orderly transitions:

13. Once developed, implement the new policies and strategies for for the management of old forests through mandatory provincial and local transition plans that define, schedule and monitor the process.
14. Support forest sector workers and communities as they adapt to changes resulting from a new forest management system.



Introduction



Old-growth hemlock
Photo by Deb MacKillop

INTRODUCTION

Old forests, especially those with very large trees, are the product of ancient ecosystems, an icon of British Columbia's landscape, and a key aspect of the province's unique identity. In addition to their intrinsic value, the timber they provide is an economic mainstay, and was once the province's main economic driver. The same forests anchor ecosystems that are critical to the wellbeing of many species of plants and animals, including people, now and in the future.

In recent years, the government has been under pressure to protect old forests from degradation by industrial development. At the same time, there is pressure to maintain viable resource industries at a scale that can compete in global markets. This has led to increasing tension and uncertainty about what will happen to both the forest and the industry. There have been large-scale public demonstrations demanding an end to logging "old growth" and others demanding the government protect jobs by protecting "the working forest" in the face of diminishing timber supplies. The challenge for government is further complicated by the tremendous diversity of the province. Not only are forest types different, but the history of development and economic dependence of communities on forestry varies vastly from one part of the province to another.

The purpose of this report is to inform the development of provincial policies and strategies regarding old forests. In British Columbia the term "old growth" is officially defined by the age of trees in a forest using specific thresholds (often over 250 years on the coast and 140 years in the interior). However, we have not limited ourselves to that definition because it would not have adequately captured the many values, interests and circumstances surrounding the conservation and management of old forests.

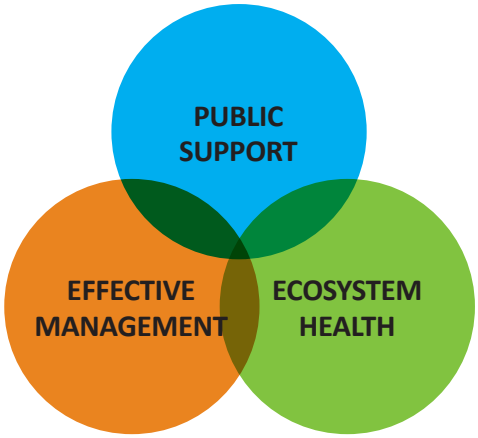
It is important to acknowledge that old forests do not exist in a vacuum. Effective management of old forests can only be properly addressed in the context of their role within the larger ecosystem, and as one component of the larger management system. While our review focussed on how we manage old forests, a significant number of people we heard from during our engagement process told us they have lost confidence in our broader forest management system. Many communities expressed strong concerns about the negative effects of current practices on their forests, ecosystems, water supplies, community safety and other forest-related businesses with little benefit in return. Others told us they are very frustrated because they think that too much harvestable timber is being set aside or made cost-prohibitive, leading to the loss of jobs and essential revenue to the community. Recognizing all these concerns, we feel that orientation of the broader forest management policy, as well as some specific interdependent components, also need to be addressed and we have identified them accordingly.

We received many submissions that identified threats to old forests and their values, and a sense of urgency was often expressed. We also received a number of submissions telling us that old forests are well managed and should be left to the professionals. While some of this is likely the result of different perspectives, interests and beliefs, it also depends a lot on location and scale. One notable observation is that very few groups or individuals fully trusted the information they see on forest management and the state of old forests, regardless of the source.

The panel believes that the fundamentals of success for the Province's forest management system are ecosystem health, effective forest management and public support. Not effectively addressing any one of these elements creates an almost certain risk of failure.

"If we take care of the land — the land will take care of us!"

A comment made to the Panel many times throughout the engagement process



Ecosystem Health: Ecosystems provide a multitude of services essential to the health of all living things, including humans. Ecosystems are very complex and have many individual components which all have some interdependence at a local or landscape level. We will never fully understand ecosystems or how much they can be put under stress before they collapse. Science gives us some direction, but we need to continually improve our understanding and translate that understanding into practise while leaving room for error in the face of uncertainty.

Effective Management: An effective management system has clear and transparent publicly driven goals and objectives; programs and methods designed to achieve them; resources, authority, and management controls necessary to implement them; and monitoring of efficiency and effectiveness to adapt and improve over time.

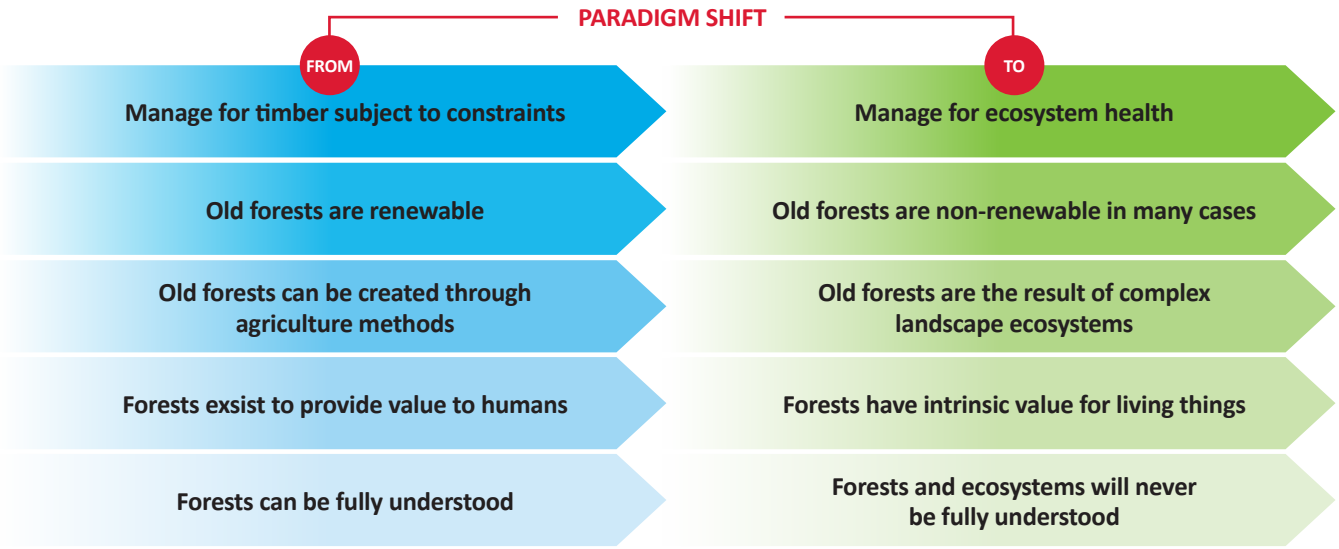
Public Support: We believe that deep and meaningful public engagement and a highly informed public are important factors in gaining public support and associated forest management stability. The confidence and trust of the general public is the biggest determinant in how much freedom government and industry have to manage our forests. If the public feels that the system is not looking after their interests, the predictable response is increased mistrust and opposition to many activities carried out by that system, demands for increased participation and control over decision-making, along with large swings in support for political parties. These reactions are intensified when communities feel that values and conditions important to their survival are threatened — a theme that we heard from a wide range of individuals and groups.

Interior spruce - Boer Mountain near Burns Lake.
Photo by Sacha Chin

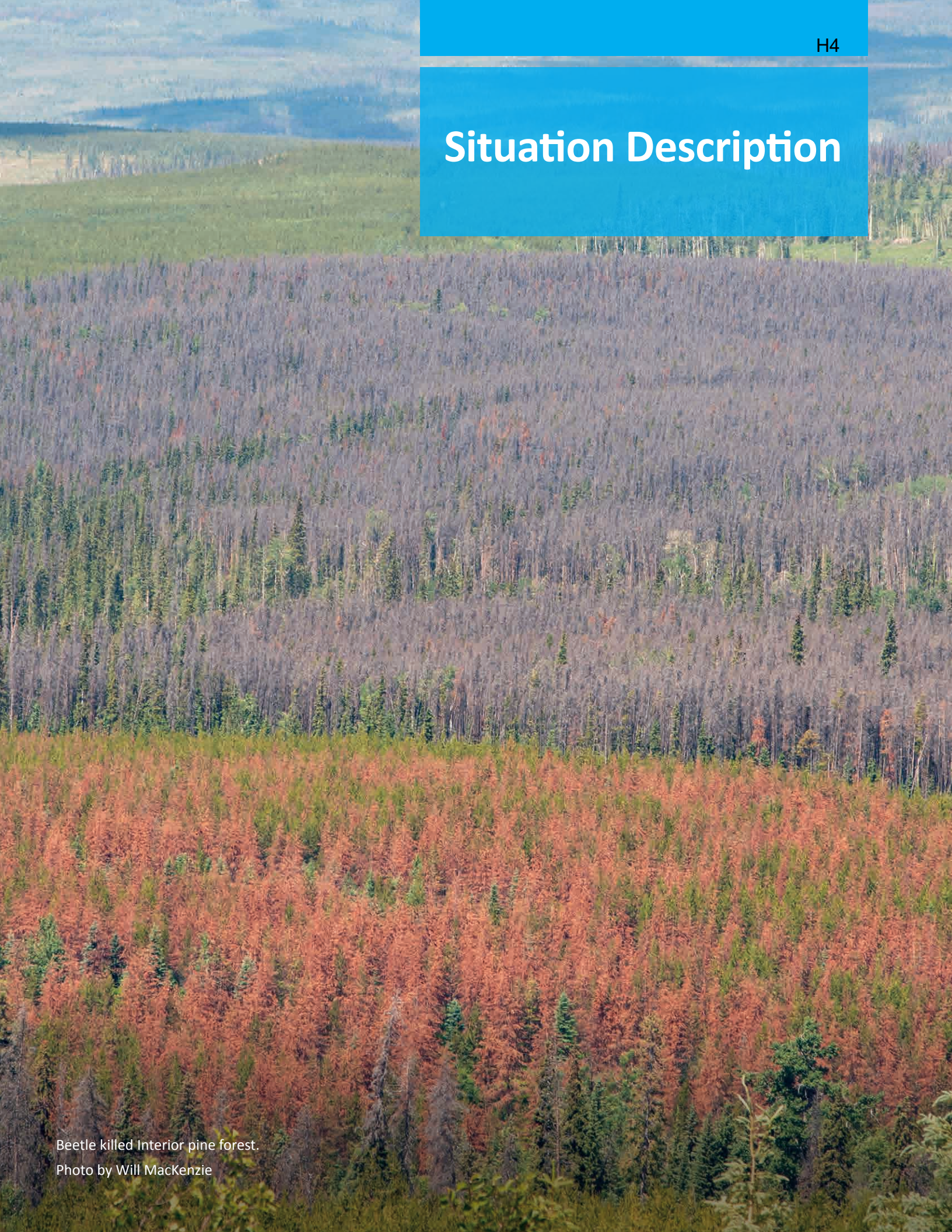
These fundamental requirements for success underly our conclusions and recommendations.

Many of the recommendations in this report are also shaped by our recognition that society is undergoing a paradigm shift, and public policy related to forest management will need to adapt accordingly:

1. BC's Indigenous communities will be key players as one of the most important participants in our future forest management system.
2. Moving to an effective management system for old forests will require a shift in its underlying assumptions. Many other countries are experiencing a similar shift, some proactively and some reactively, largely because of public pressure. Some aspects of this new paradigm are illustrated in the adjacent diagram.
3. There is no one-size-fits-all solution. A new system can establish updated standards, but the application of those standards will need to vary throughout the province depending on ecosystem type, existing and potential ecosystem impacts, local socio-economic conditions and other factors.
4. The full suite of proven scientific methods, e.g., reliable vetted information, targeted research, adaptive management, monitoring and effective technology transfer (research to practise), are essential foundational elements. Properly incorporated, these elements provide a known, reliable, and replicable foundations upon which to build.



Situation Description



Beetle killed Interior pine forest.
Photo by Will MacKenzie

SITUATION DESCRIPTION

This section describes several of the major factors affecting management of old forests in British Columbia, as we have come to understand them. What we have written here cannot possibly reflect the full breadth and depth of the information provided to us, but we have attempted to capture the highlights. Additional detail can be found in our companion *What We Heard* document, and in the many written submissions and technical papers posted on the project website. We encourage individuals desiring a more complete understanding of the situation to access that material.

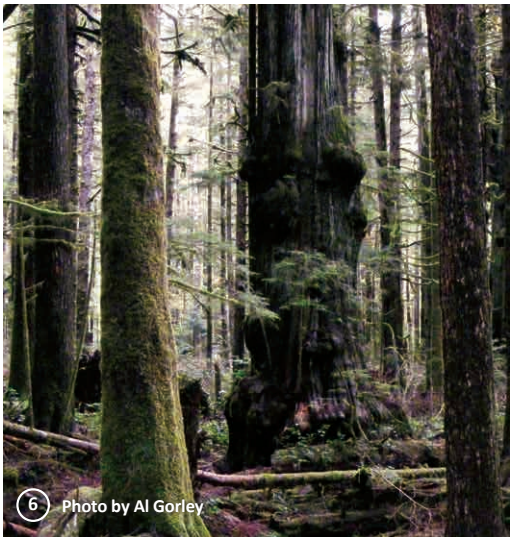
One of several interrelated government initiatives.

In undertaking this review, we quickly became aware of several other government initiatives that are in various stages of completion (See figure below). Many of these touch on some of the same general issues as our review, i.e., How do we create more effective systems to manage forest lands throughout the province, and how do we manage the social, economic and environmental transition to these new systems of land management? We attempted to gain a general familiarity with these and other related ongoing initiatives so as to avoid creating unnecessary confusion or inadvertently getting at cross purposes.

"Old growth" means many things.

The definitions used for forest inventories and planning are based on the age of the dominant trees in a forest ecosystem (often over 250 years on the coast and 140 years in the Interior). However, those definitions were of little relevance to most people outside the forestry sector, and often seen as too narrow by those within it.

In many ways, old growth is in the eye of the beholder. If we mean old forest, then we need to recognize that nearly all of British Columbia's forests (and a host of species and ecosystems services) have evolved within ecosystems that have been developing since glaciation, around 10,000 years ago, and although the trees die and regrow, most areas have continuously been occupied by forest. In other parts of the world, these would be called "ancient forests" regardless of the age of the trees. If we are talking simply about old trees, then a sub-alpine forest comprised of 200-year-old, 20-meter-tall hemlock or balsam is every bit as much old-growth as the giant spruce, cedar, and fir on coastal lowlands. The photos below illustrate a few types of old forests in British Columbia.



1. Southern Interior Ponderosa Pine
2. Interior Lodgepole Pine
3. Mountain Hemlock
4. Southern Interior Cottonwood
5. Northern White Spruce bog
6. Coastal mixed age and species
7. Interior Engelman Spruce, Sub-Alpine Fir

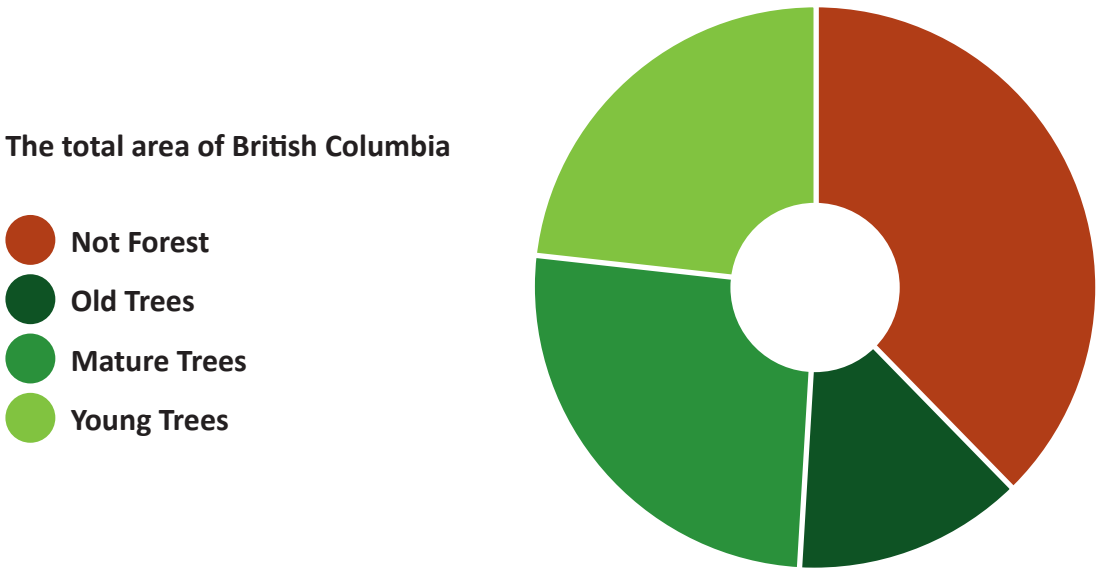
strategy for managing the risk to biological diversity from industrial development, particularly logging.

Although scientists and professionals have developed working definitions for old growth, often based on the relative age of the dominant tree species, or sometimes on physical characteristics and ecological function, no single approach has been universally applicable. For example, according to An Old Growth Strategy for British Columbia (B.C. Ministry of Forests, May 1992): "*Old growth forests are natural stands of old and young trees and their associated plants, animals, and ecological relationships which have remained essentially undisturbed by human activities".* The authors of that strategy recognized their definition required considerable refinement to reflect the diversity of the province's forests, a notion repeated by others in subsequent years. The issue may be best described by an article in the Journal of Forestry (2004), which said: *"An ecological understanding of old growth requires a multi-scale perspective, ranging from individual trees to regions. A consensus on a single general ecological definition of old growth will never be reached, but that should not preclude the development of specific definitions need by managers."*

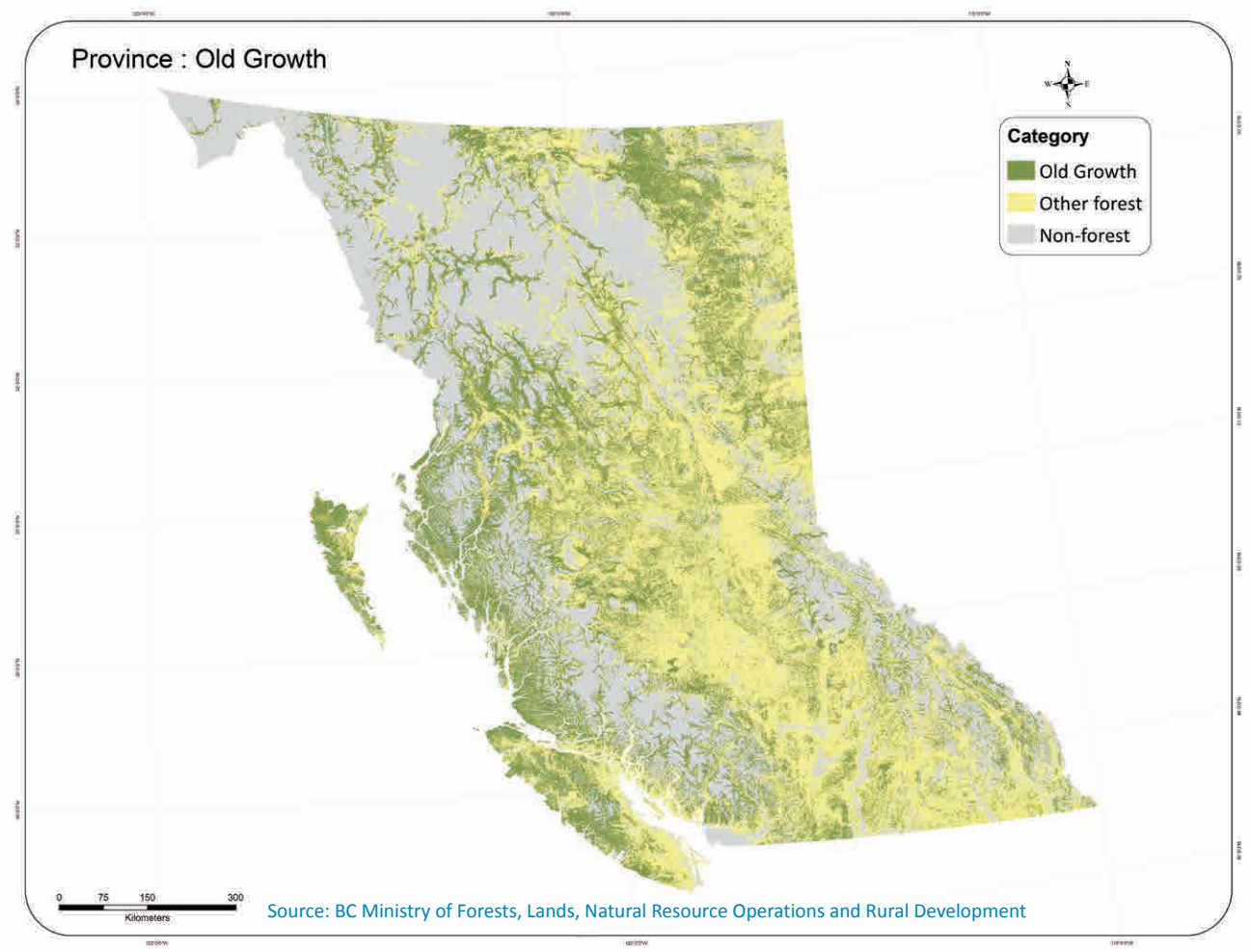
We heard from significant numbers of people who think of old growth as: exceptionally large trees worthy of travelling some distance to see; old or large trees near their home or school; accessible areas where they can enjoy a forest that doesn't have obvious evidence of human disturbance; forests that feel old; areas of mostly older dead and dying trees; and forests with big trees that can be made into high-value products. Others didn't differentiate by age or other characteristics specifically but were more interested in the ecosystem services mature forests provide, especially in relation to climate change, hydrology, and wildlife habitat. Many also made some reference to the value of old growth to conserving biological diversity. A common description was that it is original forest in its natural state, not altered by human activity. In our view, none of them are wrong. Through our recommendations we encourage more clarity in classifying and communicating about old forests, by being more specific about the management objectives and desirable attributes for a particular area of forest.

The amount of forest with old trees.

The total area of British Columbia is nearly 95 million hectares, of which 60% is forest. Based on the government's forest inventory definitions, about 23%, or 13.2 million hectares is "old growth".



Forests with “mature” trees, but not classified as old growth constitute another 46% or 26 million hectares.Except at a very broad scale, the overall provincial statistics are of only limited value because there are vast differences in the amount and character of forest ecosystems with old trees across regions and on individual landscapes (naturally and because of human disturbance). And since the province is so biologically, ecologically and climatically diverse, with many different ecological zones, this means the distribution and representation of various types of forest is very uneven. The map below provides an overview of where old trees exist in the province.



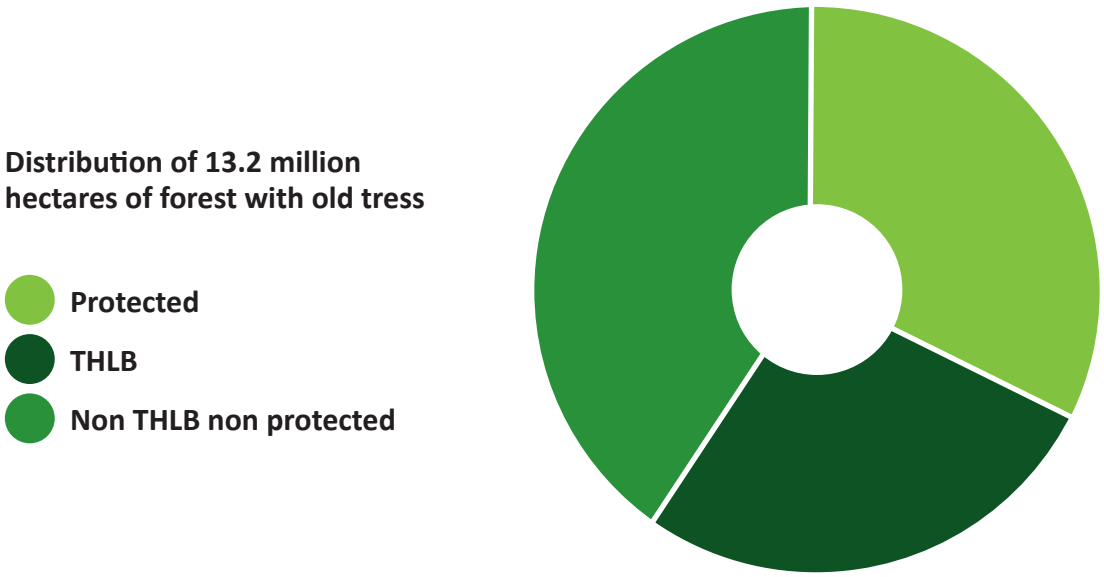
We have not attempted to include specific information about the amount, distribution, and quality of old forest at the regional or local level in this report, but our recommendations will encourage the government to proactively make more information publicly available at relevant scales.

About 4.5 million hectares, or 5% of the province is private land. Of that, approximately 818,000 hectares are in the Managed Forest Land Program. Although only a small portion of the total land area, this is important regionally, and is concentrated in the Kootenay area and southeastern Vancouver Island. Our review focused on public lands; but we heard various concerns that practices on private lands do influence adjacent public forest conservation and management objectives and are not integrated with the overall forest management system.

An important consideration, especially for managing risk to biological diversity, is how much of an area has old trees now relative to what would occur naturally — a proportion that varies by ecosystem and historical natural disturbance. Not all old forest is the same, and old does not necessarily mean big trees.

As much as 80% of the area of old forests consists of relatively small trees growing on lower productivity sites, such as Black Spruce bogs in the North, high elevation sub-alpine forests, or Cedar-Hemlock forests on the outer coast. Those forests remain in relatively great abundance, and are important ecologically, but they are not what many people typically envision as "old growth", and although they may be disturbed by some industrial activities such as mining or oil and gas development, many are not likely to be extensively logged in the foreseeable future. Less abundant are ecosystems that are more productive from a timber perspective and have not already been heavily logged.

Of the 13.2 million hectares of old forest, 33% (4.4 million ha) is protected and 67% (8.8million ha) is not. Protected means the old forest is in parks, ecological reserves, ungulate winter range no-harvest areas, private conservation lands, regional water supply, wildlife management areas, OGMAs (legal and non-legal) and retention VQOs. Of the old forest that is not protected, 38% is within the THLB, while 62% is not as it is assumed to be currently inoperable.



One of the challenges we found early in the engagement process was how information about these statistics is communicated. We consistently heard concerns about the information available to the public. The issues were not so much about data, which has become much more widely available in recent years, but about how it is interpreted and communicated, and by whom. We have seen numerous examples of information put into the public realm that is fact-based but lacking in context or explanation of assumptions or scale.

Many people said they felt the government is largely absent in the discussion about old forest management. This perception is a problem, because the void leads some to believe that the government is bending to corporate interests, while others fear the government will acquiesce to the demands of environmental advocacy groups. If there was unanimity in the comments we received, it was around the need for the provincial government to take a stronger leadership role in facilitating an informed discussion about what is in the best long-term interest of the public, with a strong emphasis on Indigenous communities. In the past, the Province published State of the Forest reports through the Chief Forester's office. The last such report was in 2010. On its website, the government does provide reports on environmental indicators, but not on forest conditions or on old forests specifically. The Forest Practices Board investigates and reports publicly on specific forest practices, but not on forest conditions.

British Columbians expressed a strong desire to participate in informed decisions about how old forests are managed. This was especially the case for those who will be most directly affected by changes to forest management strategies. We believe the public is not only looking for factual information, but also for objective analysis and context that explains what the collective statistics, indicators and trends are telling us.

Forests with old trees have many values

Forests with old and ancient trees contain unique combinations of attributes that grow from ecosystems that have formed over centuries or millennia. These attributes can rarely, if ever, be replicated in younger or compromised ecosystems, even if they contain old trees. It is also important to understand that the age and characteristics of old forests vary greatly between ecosystem types and therefore their descriptions and values are relative. In other words, a forest on the coast may have several species and many ages of trees, whereas drier Interior forests may have only one or two species and be relatively evenly aged. Of course, forest values go far beyond just the trees, as forests also contain other plants, insects and animals, many of which require old forest to survive.

Some of the many values found in forests with old and ancient trees are:

- Unique conditions and processes that are important to conservation of biodiversity;
- Unique species, many of which are still undiscovered;
- Banks of genetic material for future use or adaptation strategies;
- High value timber with qualities not found in younger forests;
- Resistance to fire;
- Interception and storage of water;
- High carbon storage and sequestration capacity;
- Botanical forest products, including medicinal, edible, decorative, and ceremonial plants;
- Fish and wildlife habitats, including essential attributes for nesting or denning, thermal protection and hiding from predators;
- Spiritual and cultural uses, including carvings, canoes, and ceremonial poles;
- Aesthetics such as resident viewing and tourism;
- Commercial and non-commercial recreation; and
- Knowing they are there for their own sake — intrinsic value.

Many of these values can be realized concurrently on the same landscape, or even in the same forest stand, but accessing them can also put them in conflict. The degree of risk depends on how much of the old forest is disturbed and what attributes remain and in what state.

Many people identified specific highly diverse and complex ecosystems that support very large, old trees, and have persisted in a relatively stable climax condition for centuries. These “ancient forests” are globally unique, rare, and contain species as yet undiscovered, and many of these ecosystems and old forests are simply non-renewable within any reasonable time frame . They promote protecting these areas from human disturbance to conserve a wide range of benefits, and particularly for their intrinsic value.

Economic Benefits.

Note that while we have provided examples of statistical information for the forestry and tourism sectors, we caution against direct comparisons as the information sources and their assumptions may vary. We also acknowledge that not all economic benefits are captured here, such as trapping, mushroom collecting, decorative plants, and others that are important sources of income for some individuals.

1. Timber harvesting

For over 100 years, the timber industry has been a central part of the provincial economy, exporting large quantities of lumber, pulp and other wood products to world markets, providing jobs in communities throughout British Columbia, and generating government revenue through stumpage fees and taxes. The industry depends heavily on cutting trees in old primary forests, and although its relative contribution to the overall provincial economy has declined in recent years, many communities, including an increasing number of Indigenous communities rely heavily on the jobs and revenue it generates.

According to statistics compiled in 2016 report for the Council of Forest Industries, harvesting of timber in British Columbia generates over 100,000 direct and indirect jobs, contributes $12.9 billion to provincial GDP, and generates over $2.5 billion to provincial tax revenues. Many of the jobs are spread across 140 forestry-dependent communities and urban centres, including Vancouver and the lower mainland.

According to Statistics Canada, forest product exports have made up 30% to 36% of B.C.'s commodity export value since the recession in 2009, and in 2018 was 32%. While service exports have been growing, commodities still make up the bulk of exports, making the forest sector an important source of foreign currency.

In BC, most of the industry is configured to harvest and manufacture existing primary old forest. There is a substantial interdependency between sub-sectors of the industry: harvesting; primary, secondary and tiertiary manufacturing; transportation; and services. There are also regional interdependencies, with fibre moving between geographic locations at different stages of processing. For example, logs may be harvested in one area, sawn into lumber in another, with the byproduct chips being shipped to a pulp mill somewhere else. Some of the lumber may be shipped to a different region altogether for further manufacture.

According to provincial government data, the non-lumber sector made up 46% of wood product manufacturing sales and more than 47% of wood manufacturing employment in 2018. The non-lumber industries include shingles and shakes, wood preservation, veneer, plywood and engineered wood products, millwork, container and pallet manufacturing, and other activities. The majority of non-lumber goods are consumed domestically, whereas the majority of lumber is exported (82% in 2018).

Concerns around log export and fibre utilization were raised in a number of outreach sessions. Several groups expressed frustration about logs being exported rather than used locally, valuable waste being left in the woods and the amount of old forest residue that is being burned because it is cheaper to burn it than use it. Some licensees and contractors told us that being forced to take poor quality timber, especially in isolated locations, would make their business uneconomical and cause them to shut down. We also heard from a few businesspeople that they could support a viable business if they could get access to these materials but are restricted by either the license holder or government regulations. We did not address this directly in this report however do note that it is an important matter with respect to continued social license.

2. Tourism and recreation

According to a report in 2017 by Destination British Columbia, tourism employs 137,00 people and contributes $9 billion to provincial GDP. Export revenue is reported to be $5.4 billion and provincial tax revenue $1.2 billion. The BC tourism industry is largely anchored in the "Super, Natural British Columbia" brand which invites visitors to enjoy activities in our wild and remote landscapes. While we have not seen province-wide data that states what portion of the economic impact of tourism and recreation is attributable to old forests, and perhaps it isn't possible to know, we know old forests play a key role in tourism. Some individual tourism businesses have done studies on the economic value of old forests for tourism compared to timber in their specific area of operation. We are also aware of a recent (unpublished) study done in the area near Port Renfrew that found the net economic benefit is projected to be higher when the trees are left standing for tourism, than if they are logged.

Information provided by the Adventure Tourism Coalition states that adventure tourism directly or indirectly supports 32,000 families and generated $3.2 billion in visitor spending in 2018. A 2014 analysis of coastal tourism opportunities provides some insight to the dependence of the sector on forests; 78% of surveyed marine tourism operators indicated that their business is "somewhat or very dependent on the natural environment," and 37% cited viewscapes as the primary motivator for nearly all their clients.

There are many other examples of economic interdependence between tourism activities and old or mature forests, including:

- Hunting, fishing, and guiding
- Wildlife viewing
- Mountain biking
- Backcountry hiking, skiing, and snowmobiling
- Canoeing, camping, and horseback tours
- Touring

Perhaps the most obvious examples of tourism dependence on old forests are those activities centred around unusually large trees reasonably close to public access. The best known of these on the coast is probably Cathedral Grove in McMillan Provincial Park near Port Alberni, or in the Interior, the Ancient Forest Recreation Trail east of Prince George. Public and visitor interest in seeing and experiencing these and other big-tree forests is increasing and is being promoted.

3. Natural infrastructure.

Not an entirely new concept to many communities, this is an emerging area of economics and we feel it bears mention, particularly because of climate change. According to the World Resources Institute: *"Natural ecosystems like forests and wetlands provide essential services to water utilities, businesses, and communities — from water flow regulation and flood control to water purification and water temperature regulation. To ensure these ecosystem functions and associated benefits continue, communities can strategically secure networks of natural lands, working landscapes, and other open spaces as 'natural infrastructure.' While concrete-and-steel built infrastructure will continue to play a critical role in water storage and treatment, investing in natural infrastructure can reduce or avoid costs and enhance water services and security as part of an integrated system to cost-effectively deliver safe drinking water."* Some communities are already starting to incorporate the concept of natural infrastructure in community plans.

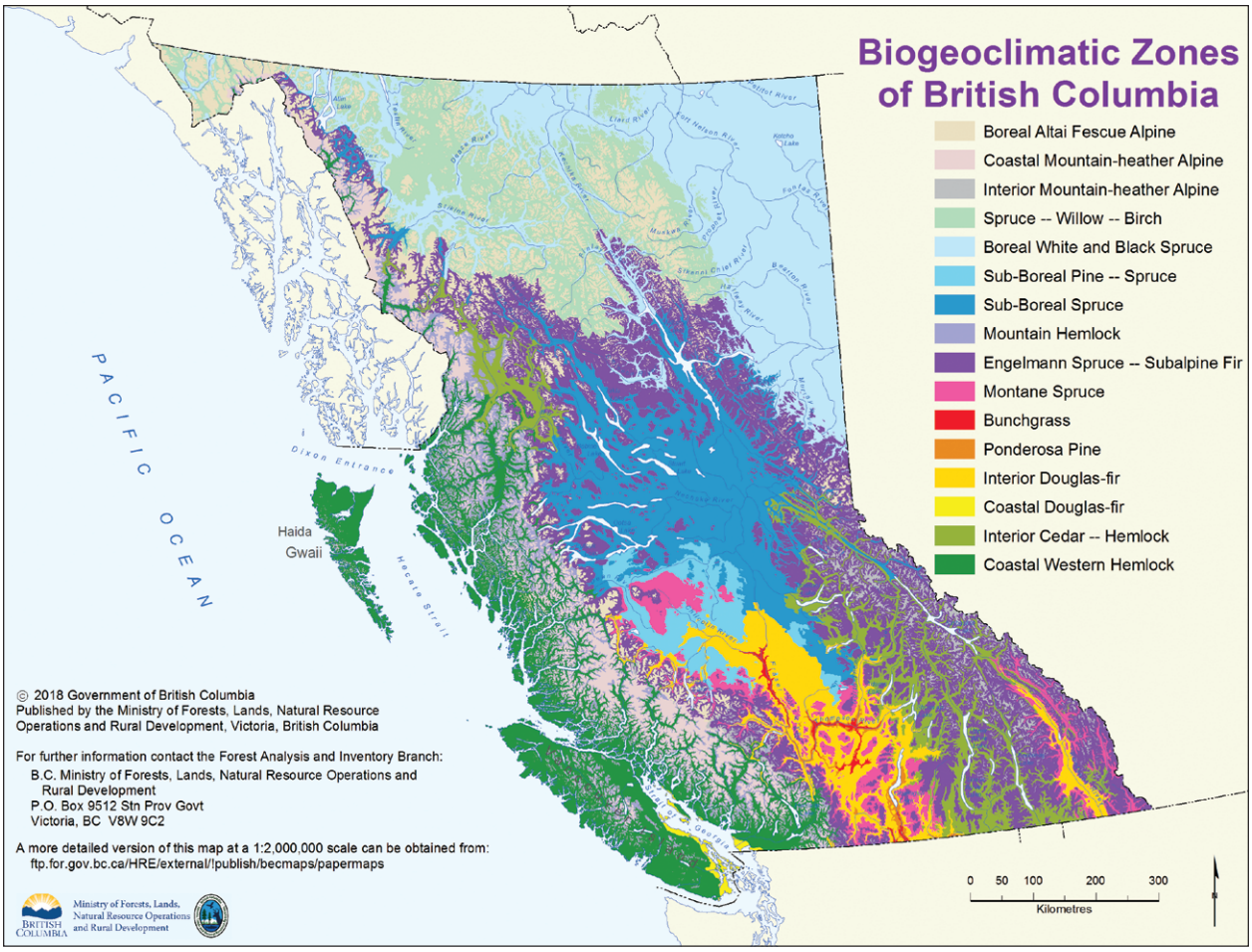
Biological Diversity

Old forest conservation in BC has focused mainly on maintaining biological diversity. A key assumption guiding our current forest management system is that, if biological diversity is maintained, other values will often be accommodated concurrently. This assumption is imperfect, however, since the preferred wildlife habitat, tourism site, or other old forest value being considered is often not physically located where the biodiversity representation is needed.

To describe our diverse ecosystems, British Columbia uses the Biogeoclimatic Ecosystem Classification (BEC) system to stratify the province into zones based on climax vegetation communities that reflect the combined ecological effects of climate and soil.

This is a hierarchical system, with each of the province's 16 major zones divided into climatically distinct sub-zones, some of which are further divided according to climatic variations within the sub-zone. The variety of growing sites that occur in each sub-zone or variant are described using site classification, based on soil moisture and nutrients (site series).

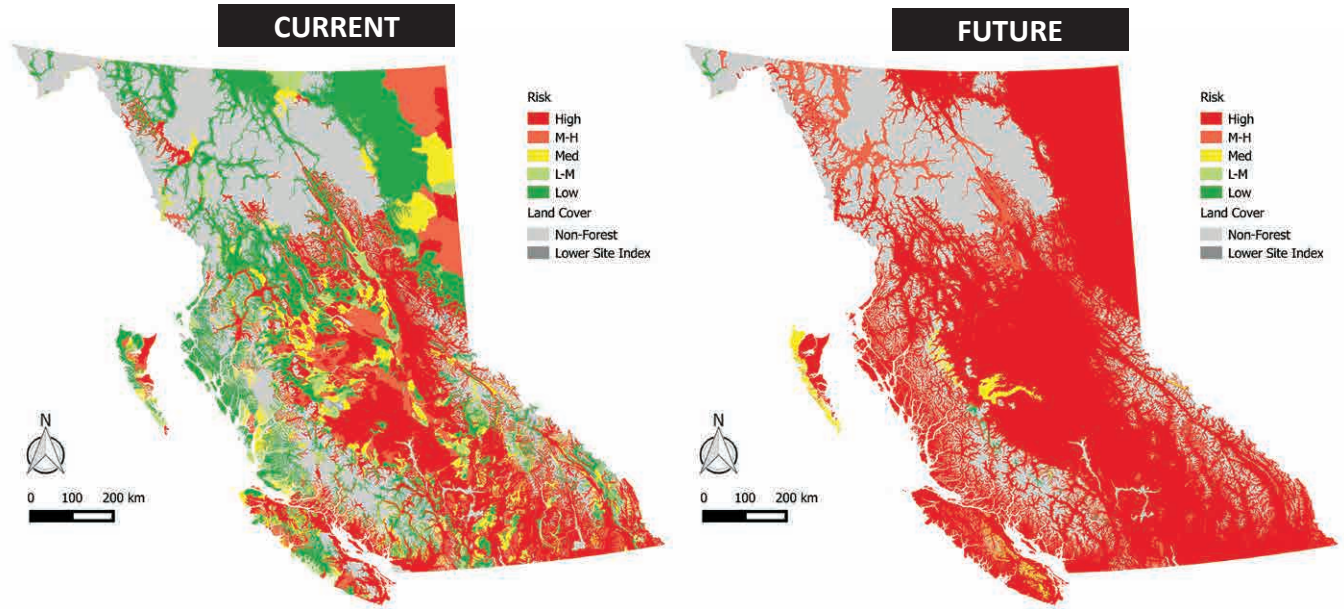
In addition to the variety of ecosystems (as defined by BEC), forests exist in various stages of succession (seral stages) as the trees advance from young to middle age, mature and eventually climax community stages. In some cases, a climax community has persisted without any widespread disturbance for many centuries, resulting in unique, ancient forests. Each site classification may host a different mix of plants, animals, and insects, at each seral stage. Science tells us that if we want to have the greatest chance of conserving our natural biological diversity, we need to keep enough old forest to have a viable, representative sample of every BEC zone at the site-series level.



Source: BC Ministry of Forests, Lands, Natural Resource Operations and Rural Development

Knowing how much to maintain as forest with old trees is guided by the notion that mimicking nature is the approach that presents the least risk to biodiversity. The concept used to measure this is called “natural range of variability” (NRV). This is typically based on a description of ecosystems as they existed before major changes brought about by extensive industrial or agricultural activity. Conservation science provides us with a general risk rating, telling us that if we retain 70% or more of the natural abundance of forest with old trees the risk of species loss, compromised ecosystem services, and losing ecosystem resilience is low. If we retain below 30%, the risk is high. At between 30% and 70%, the risk varies by ecosystem.

Consistent with what we heard from several provincial government staff, a recent report submitted to the panel by a group of independent scientists illustrates that we are in situations of high risk to biodiversity in many areas in the province, particularly in high-productivity, low elevation ecosystems. More troubling is the future projection where almost all of the province will be in high biodiversity risk once our current management approach harvests most of the available old forest. The time to complete this transition depends on the available old forest and various industry and economic factors in each region.



Source: Price, K., R.F. Holt and D. Daust. 2020. BC’s Old Growth Forest: A Last Stand for Biodiversity

Their research also provided the following list of BEC zones that contain less than 10% of their original old forests - CDFmm (all CDF), CWHxm1,2, dm,CHxw, mk3,4, mw1,2,3,4,IDFxc, xh1,2,4, xk, xm, xs, xx2, dc, dk1,2,3,4,5, dm1,2, mw1,2, PPxh1,2,3 (all PP), SBPSmk, SBSwk1,2,3a, and possibly: ESSFxv2, dc1, mh, mv1,2,3,4, wc3,4, wh3, wk1 and wm1,2,3,4. They note that there is some uncertainty because of potential misclassification of age in some of these units, and also recommend that these areas be deferred from further development until we have brought them back enough to meet current legislated targets.

Several practitioners also raised the issue of our current management system combining old forests and using their aggregated data when making assessments for managing biodiversity risk and planning for old forest retention. One example was parks and protected areas, where an initial net down estimate is removed at the landscape level and then netted out again at the detailed operations level, resulting in double counting. A related concern is that many parks and protected areas contain low-productivity old forests, which are deducted from total old growth aggregate targets without identifying which ecosystem they represent. These types of aggregation calculations overlook distribution and spatial considerations that are crucial in managing for effective ecosystem health.

Managing for forests with old trees

On public lands, which comprise about 95% of the province, Land Use Plans (LUPs) provide the basic framework for management of forest lands, of which old forest is only one component. While LUPs vary by area and when they were completed, most use some sort of system of land-use priorities to guide management. This includes parks and protected areas which, while often not specifically designed for the purpose of managing forests, do include significant areas of forest with old trees.

Three distinct areas (Clayoquot Sound, Haida Gwaii and the Great Bear Rainforest) are managed under ecosystem-based management regimes, and although we heard about implementation challenges in those areas, the required level of conservation in ecosystems with forests of old trees is much higher than in other areas of the province. Therefore, we have focused our discussion on management outside of those areas.

Most public forested areas outside parks and protected areas are available for logging through various types of licences issued by the Province. Most licences make the holder responsible for planning where to log within the license area, subject to constraints set out under the *Forest and Range Practices Act* (FRPA). Other activities such as oil and gas development, mining, or tourism development are subject to different legislation and requirements.

Under current regulations governing forest licensees, the objective set by government for wildlife and biodiversity at the landscape level is, to the extent practicable, design areas on which timber harvesting is to be carried out that resemble, both spatially and temporally, the patterns of natural disturbance that occur within the landscape "without unduly reducing the supply of timber from British Columbia's forests". The objective set by government for wildlife and biodiversity at the stand level is to retain wildlife trees, "without unduly reducing the supply of timber from British Columbia's forests". We note potential changes to FRPA are being considered by the Province, which should remove this overall constraint.

Forest licensees are required to submit a Forest Stewardship Plan (FSP) describing how they will meet these and other objectives. Once an FSP is approved by government, timber harvesting can be authorized provided it is consistent with the plan. We heard consistent concerns about a lack of monitoring to see whether these guidelines are being met, and if they are effective. We also heard that where monitoring has occurred, the commitments approved in the FSPs are too vague to enforce.

The Biodiversity Guidebook was completed in 1995 as part of implementing the *Forest Practices Code Act*. The guidebook was developed using the best available science at the time, with an expectation that it would be refined as new knowledge was obtained. The original team of senior ecologists drafted the Guidebook using what they felt were the minimum requirements considered to have a good probability of maintaining biodiversity within a landscape unit. Many of the scientists we talked with during our engagement process told us that the original guidance provided by the Guidebook is still sound. However, the Landscape Unit Planning Guide (1999), introduced the concept of biodiversity emphasis options (different levels of risk). This resulted in a deduction from old forest retention targets to account for old forest presumed to already be protected in parks and it limited targets for representation to the BEC variant, rather than the finer site series level. We heard that, from the outset, implementation has fallen so far short of the original guidance that it could not be expected to meet the goals established at that time.

Since 1995, the policy direction has been to limit the impact of biodiversity conservation on timber supply to approximately 4% across the province, and to locate old forest retention areas preferentially in areas with a low priority for harvest. While this seems logical from a timber supply perspective, it weakens the original intent, by biasing representation to lower productivity ecosystems, often at higher elevations.

This trade-off between risk to biological diversity and protecting timber supply is an example of government policy attempting to balancing competing interests. Although old growth targets are a compromise, there was a clear expectation and commitment by government that the risks would be reviewed and future adjustments would occur, if required. We are not aware of a review and adjustment happening, but we believe the circumstances are sufficiently changed, that it needs to be done now.

Old forest retention in BC is administered in one of three ways:

1. Legal, spatially-defined Old Growth Management Areas (OGMAs).
2. Non-legal, spatially-defined OGMAs.
3. Aspatial old forest management.

During our engagement process, we heard a great deal of concern about how these approaches are being implemented. In some ways, the details about the size and condition of OGMAs, how they are located, and rules for incursions and amendments have diverted attention from their original purpose, as a tool in the broader biological diversity conservation strategy. Several forest managers expressed the opinion that the term OGMA is misleading because they are actually used to retain intact areas rather than for proactive management.

Although these retention mechanisms may be working in some areas, examples of the complaints we heard are illustrated in the figure below.

OGMA Concerns

- Poor or unjustifiable location (e.g., doesn't contain old trees, fire hazard)
- Too small
- Not flexible enough to accommodate forest dynamics
- Flexibility abused for roads or development
- Should all be spatial and legally delineated
- Should all be aspatial
- Should all be spatial but not legally delineated
- Unclear objectives
- Inconsistent or unclear rules regarding implementation, or retaining/replacing OGMAs destroyed by wildfire or bark beetles
- poor mapping or inadequate detail in the forest inventory to identify key areas.
- inadequate change reporting

One notable concern was from recent research on edge effect in OGMAs that were established to maintain intact old forests. It showed that old forest dependent species had disappeared, and many old forest functions were often compromised, on average, up to 100 meters from the edge of the adjacent opening (logging, roads, etc.) depending on the OGMA shape, topography and the nature of adjacent openings or other features. When this edge effect was applied to sample local areas, soon to be published research submitted to the panel found that there were almost no intact old forests that retained their original function in those areas.

We also found that, despite having been already reduced to protect timber supply, old growth targets are not being met in some areas. It's difficult know how widespread the problem is because only a few areas have been monitored to determine if targets are being met. In some of these areas, forest licensees said they are challenged to find enough unconstrained timber to harvest their allowable cut. Something clearly isn't working when neither objective is being met.

What was committed/planned/assumed/ recommended…	What we have now…
Adaptive management through continuous monitoring and regular updates	No substantial monitoring or updates since implementation in 1995
Periodic reviews of the entire old growth and biodiversity management system	None to date
Maintain old forest (both the mature and overmature age classes) at acceptable targets	OGMAs focus primarily on overmature in most of the province (mature is not included)
Tracking implementation and achievement of mature and overmature targets	No consistent system to track compliance with targets except in areas of the province where government staff have led special projects
Biodiversity targets for retention of old forests was set at various levels above the minimum threshold of 30%	Some areas were lowered by subsequent political decisions — some lower than the minimum threshold
Old growth would contain old forests, and preferably some of the best.	Many OGMAs do not contain old forests and some contain forests less than 40 years old

Despite commitments made to formally evaluate their effectiveness as a policy tool on an ongoing basis, no review of the OGMA system has taken place since it was implemented more than 20 years ago. Furthermore, there has been no formal, consistent monitoring program to determine whether there is compliance with the current targets, or if they are achieving the intended results. That makes it impossible for the public to know if it is getting good value. The government has small pockets of work underway that may help to alleviate some of these problems. For example, over the last decade, effort has been put into developing methods to assess cumulative effects, including for old growth and biodiversity values. Also, following a special investigation by the Forest Practices Board in 2012 the government formed a working group to address the Board's recommendations. Our impression is that, while these initiatives could lead to some improvements, they have not been a high priority for government and are not presently well enough resourced to have any meaningful impact on management of old forests, at least in the near future.

While the foremost goal of science and practices to conserve and manage forests with old trees is maintaining biodiversity, there are many other objectives that can also be achieved. Managing for most values is quite site-specific. The amount of forest with old trees and the conditions we require depend on the objective. For example, if we're protecting the character of a spiritual or historical site, it may only be necessary to delineate a small area, but it has to be at a very particular location. If the objective is protecting mule deer winter range, we may be able to distribute areas in several suitable places on the landscape. If our objective is preserving visual quality, our actions will be based on attributes as they appear from certain viewpoints or travel corridors.

It is often possible to manage the same area for a multitude of old forest values, provided the objectives are clear and compromises are not so great that critical values (e.g., biological diversity or water quality) are put at high risk in order to accommodate values where we have more discretion (e.g., timber or tourism). This suggests the need for the Province to have clear priorities and objectives for managing old forest values at all scales.

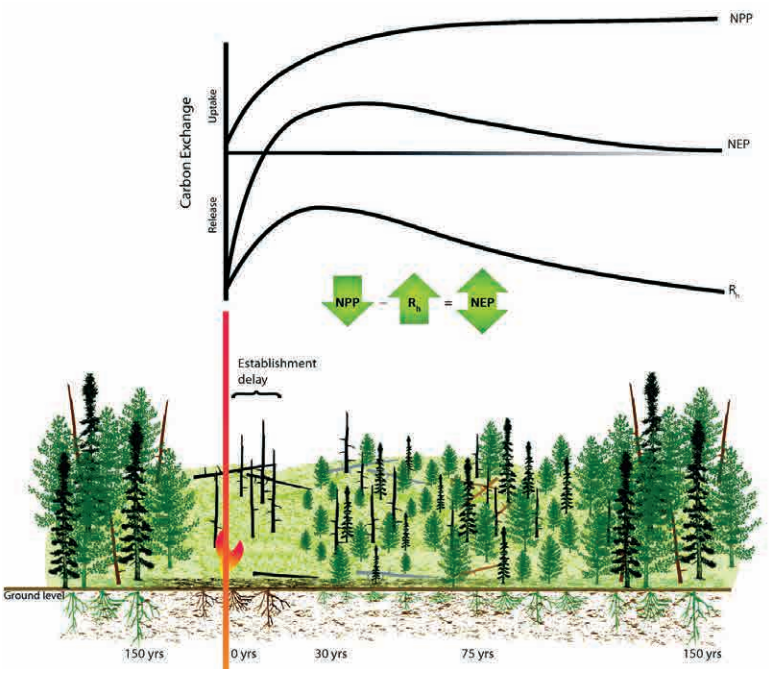
Carbon balance and climate

Many people we heard from linked forests with old trees to climate change, often with conflicting perceptions about its value for absorbing and storing carbon.

The impact of the forest on net atmospheric carbon is complicated. We heard evidence for and against old forests as carbon sinks (taking up more carbon than they release). The answer can vary considerably depending on the circumstances and the timeframe. Forests accumulate carbon in new plant material when they are green and growing. The carbon is returned to the atmosphere when plant material decomposes and combusts (whether it burns in the forest or as wood products).

Carbon can be stored in trees, soil, and long-lived wood products for decades, or even centuries. This storage is considered an important factor in the effort to curb climate change. Of course, we need to keep in mind that not all old forest is the same: in coastal Douglas Fir or cedar-hemlock forests, trees are very long lived and have a relatively low risk of natural disturbances, while many interior forests have shorter lived tree species, and more frequent large natural disturbances (e.g., fire). In other areas, such as the Interior NDT4 Douglas Fir forests can be maintained in a relatively stable old-forest condition through frequent low-intensity fires that burn the understory and keep the forest spaced.

The ability of a forest to absorb and store carbon is age dependent.



NPP net amount of carbon that enters the ecosystem.
Rh respiration from decay
NEP net ecosystem production – total amount of organic carbon

Source: Kurz et al, Carbon in Canada's boreal forest — A synthesis, Environmental Reviews Vol. 21, 2013 (Courtesy NRC Research Press)

- Immediately after disturbance it is a carbon source because post-disturbance organic materials are decaying more quickly, and very young trees are not accumulating high biomass volumes.
- Young forests that begin to accumulate high biomass volumes are strong carbon sinks because they are quickly accumulating biomass.
- The amount of carbon sequestered declines with old age but the amount of carbon stored is very high.
- The timing of maximum amount that is stored and the maximum sink differs.

Timber harvesting causes short-term emissions from the activity itself (e.g., from equipment to harvest, transport and manufacture), and when forest debris (e.g., slash) is burned. We can expect harvested stands to be net carbon sources for several years, until the capacity of new trees to capture carbon overtakes the emissions from the forest floor, soil, and decay of woody debris. The relative carbon impact of harvesting the primary forest depends upon a number of factors, including:

1. Condition of the primary forest at the time of harvest (storing, sequestering, or emitting carbon);
2. The method of harvesting, level of wood utilization, and method of slash disposal;
3. Longevity of the products the wood is used for (e.g., pellets or paper compared to lumber or timbers);
4. How quickly and completely new trees occupy the site and grow;
5. How long the new trees are allowed to grow before being harvested again (rotation age); and
6. The substitution value of using wood over an alternative (e.g., concrete, steel, or plastic).

A report prepared in 2019 entitled Forestry and Carbon in BC suggests that a managed secondary forest could-in principle-recapture the lost forest carbon if allowed to regrow long enough to fully recover its carbon stock, which could be achieved more quickly and easily in most interior forests than in coastal or interior wetbelt forests. It also emphasized that underlying carbon budget calculations are complex and depend on assumptions about a future with much uncertainty.

Another team of BC researchers recently wrote, *"Every old-growth forest is made up of a unique history of management choices and disturbances. Furthermore, their carbon storage value is dependent on future climatic changes specific to the region in question. There seems to be sufficient evidence indicating that many old-growth forests already protected in BC are likely carbon sinks."* And *"more research is needed into which old growth forests are carbon sinks and which are sources, and under what conditions."*

Mountain Pine Beetle-killed timber.
Photo by Traci Van Spengen

Photo by Al Gorley

Many of the old trees in the forest on the left are dead or dying and it would likely be better from a carbon management perspective to recover the salvageable wood and establish a crop of young trees. The old trees in the forest on the right, on the other hand, are relatively healthy, and are still absorbing and storing significant quantities of carbon.

In addition to the function of forests with old trees in the carbon cycle, old trees also play a role in mitigating the impacts of climate change on ecosystems, human communities and infrastructure. For example:

- Regulation of air temperatures (cooler in summer, warmer in winter) and local climate that can be critical to the health of other plant communities, wildlife, and humans.
- Regulation of water temperature, evaporation, cleanliness, flow volume and timing.
- Resistance to fire due to cooler, moister internal forest conditions.

These mitigation functions require having enough mature and old trees in a forest to carry out the hydrological functions and provide canopy. How much primary forest needs to be retained in an older-tree state to influence micro-climates will depend on the local circumstances and objectives.

History of forest conversion

Until the early 1900s, BC's old forests were so extensive that few people would likely have anticipated the circumstances we are in today. The early years of industrial timber harvesting were limited by access — there were few roads, so cutting took place in areas where timber could be manufactured close-by or economically moved by water. Most of the forest was left alone. The scope and scale of harvesting increased considerably though the middle of the 20th century, reaching nearly every region of the province. This led to public concern that the timber supply was exhaustible, and the encouragement of "tree farming".

The result was a policy of "sustained yield", the idea being, that over a period of about 80-120 years, subject to economics, the natural (primary) forest would be logged and converted to managed (farmed) forest, mostly by clearcutting. The subsequent crops of timber would be harvested at their economic culmination age (depending on species, usually 60 – 100 years), thus creating an even, perpetual supply of timber. It is important to note that this is not a typical agrarian model. The intent has always been to conduct forestry with indigenous species on the sites where they would naturally occur.

Under this model of conversion to managed forest, we would expect to transition over a period of time from harvestable primary forest to areas that have another crop ready after harvesting. However, many regions will have a decline in harvest for several decades because of a disproportional amount of young forest. In some regions of the province, mainly on the South Coast, conversion has been underway long enough, and trees grow fast enough that some of the timber being harvested now is from previously converted areas, or "second growth". In some of these, the transition from harvesting old primary forest to second growth will likely be complete within 20 to 30 years. However, in other areas it will be several decades before previously harvested areas are ready to cut again. This means that the situation is highly variable across the province. (We note that some of the areas where harvesting only began at a large scale in the late 1960s or early 1970s have accelerated conversion due to salvaging Mountain Pine Beetle-killed timber and some of these areas have neither an abundance of remaining old forest nor second growth approaching harvestable age).

Areas with the best timber and typically closest to access were often the first to be converted, and few remain in their natural state. These are not only the best timber growing sites, they are also high in biological diversity, often critical to water and fish, and many other values. A recent study tells us: *"Sites with the potential to grow very large trees (Site Index >25) cover less than 3% of the province. Old forests on these sites have dwindled considerably due to intense harvest so that only 2.7% of this 3% is currently old."* We found near unanimous agreement for conserving more of these areas.

Many things have changed since the inception of sustained yield, but it remains the underlying premise for most of our forest management system, except perhaps in the areas under ecosystem-based management regimes. Beginning sometime in the 1980s and following global trends, the public became more aware of the importance of forests for a wide range of ecological values. This led to the creation of more parks and other conservation areas through the Protected Areas Strategy and various forms of land use plans, thus reducing the areas available for conversion to managed forest. It also gave rise to new constraints on forest practices to protect a variety of "non-timber" values, such as water, wildlife, visual quality, and biological diversity — including old forest, within the areas still open to harvesting.

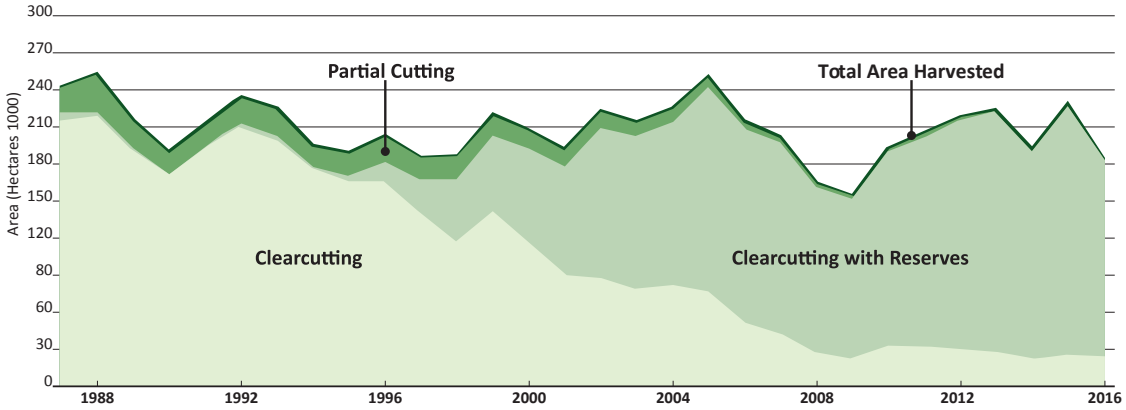
Harvesting methods

Traditionally, most forest harvesting in BC was done by clearcutting, which is the most efficient and least expensive method. Generally speaking, clearcutting removes all trees from an area of one hectare or more, and greater than two tree heights in width, in a single harvesting operation. A new even-aged stand is obtained by planting, natural or advanced regeneration, or by direct seeding. It is most appropriate in forest ecosystems where tree species require an abundance of sunlight or naturally grow in large, even-age stands. Social concerns about large clearcuts have led to a decrease in their average size from 45 hectares on public lands in 1989 to 30 hectares in 2006. We were told that, in some areas, the average size is now 2-3 hectares, but we are also aware of extensive clearcuts carried out in salvage areas during the last several years, and of cutting adjacent to recently harvested areas before they reach the full green-up (continuous clearcut).

Clearcutting with reserves began in the early 1990s and is a variation of the conventional clearcutting silvicultural system in which trees are retained, either uniformly or in small groups. The trees retained may be combinations of small and large trees. They may be chosen to provide wildlife habitat, nesting and den trees, future sources of snags or coarse woody debris, or some level of visual quality.

In 1995, a system of variable retention was adopted for some coastal harvesting as an alternative to conventional clearcutting. This system has two approaches: distributed, where retained individual trees are distributed relatively evenly across the area; or aggregate, where groups of trees are retained to maintain structural diversity over the cutblock. The generally accepted parameters for variable retention are that the retained trees distributed throughout the cutblock, must remain for at least one rotation and be configured to leave more than half the total cutblock area within one tree height from the base of a tree or group of trees including the edge of the cutblock. Note that many scientists and industry advocates of variable retention argue that clearcut with reserves generally does not meet the parameters for variable retention.

Partial cutting is a general term for silvicultural systems (which includes variable retention) in which some trees are left standing after logging. Compared to other systems, the distribution of remaining trees will typically be fairly even across the cut area. Depending on the management objectives, the selection of trees to be retained may be based on their value to a future timber crop, mimicking natural processes to maintain biodiversity, wildlife habitat, aesthetics, or some other purpose.



Source: Trends in Silviculture in B.C. (1987-2016). Ministry of Forests, Lands, Natural Resource Operations and Rural Development, 2018

Until the mid-1990s, most harvesting on public lands in British Columbia involved conventional clearcutting. Government reports show that from 1970 to 1998, clearcutting systems were applied on 87% of the area harvested on public lands. By 2015-2016, harvesting on public lands was by clearcutting with reserves (85%), clearcutting (11%), retention cutting (3%) and other cutting methods (1%). One of the challenges for the public is often to differentiate between conventional clearcutting and clearcutting with reserves, especially in some of the salvage areas in the Interior, where very large contiguous areas have been logged and reserves constitute only small forest remnants.

More use of systems that emulate natural ecological processes may allow us to continue harvesting timber from forests with old trees without converting them to unnaturally uniform managed stands. However, that approach is influenced by a complex combination of numerous factors, such as: government leadership and support, timber value, operating costs, stumpage rates, desired profitability, terrain, technology, blowdown risk, stand condition, forest health, worker safety, expertise, and other land use objectives for the area.

Scientists and professionals use a broad system of natural disturbance types (NDT) to differentiate these processes:

NDT1: Ecosystems with rare stand-initiating events
NDT2: Ecosystems with infrequent stand-initiating events
NDT3: Ecosystems with frequent stand-initiating events
NDT4: Ecosystems with frequent stand-maintaining fires
NDT5: Alpine tundra and subalpine parkland

We heard from several forest managers who said they would like to change their harvest systems to better reflect natural processes but are constrained by these factors, or by the Province's forest practices and timber pricing policies. We also heard about various partial cutting silviculture systems having been applied in the past, but many have been discontinued, except in the case of a few select companies. The results of these experiments need to be better understood.

Generally speaking, under the present system, an area is either reserved from harvesting or available to be converted to managed forest. We heard from many people who are frustrated that the managed forest lacks many of the previously existing natural attributes and they oppose further conversion. We also heard from many forest managers about the costs of uncertainty due to incremental reductions in area available for harvesting. Concerns about this have led many forest-dependent communities to repeatedly call for the designation of a "working forest" to provide greater certainty for on-going access to timber.

The 1992 Old Growth Strategy proposed a conservation framework with:

- A system of reserves to conserve old growth values;
- Commodity emphasis areas supporting sustainable economic activity;
- Special management areas where forest practices maintain old growth attributes.

The current management system has gone part way to this three-zone conservation framework by assigning biodiversity emphasis areas for the setting of old growth targets, but there is no definitive, legally established zoning as was originally envisioned. We believe there is an opportunity to bring greater certainty to the management system, achieve a more optimal mix of public benefits, and encourage innovation, by formalizing this three-zone concept.

The role of the provincial government

We heard a lot of dissatisfaction with government from people on all sides of the issues. While some of that is inevitable in an exercise like ours, this was largely non-partisan, focused on policy and priorities, and had a lot of commonality. We observed widespread concern that the government lacks an "on the ground" presence and needs to have a more active role in ensuring the public's interests are met. The views were not always specific to management of old forests but were offered in that context.

We frequently heard:

1. We need a clear and legally supported long-term vision and set of priorities for our forests.
2. The vision and priorities need to be supported by a principles-based management framework that will meet the needs of the province and provide the flexibility to accommodate the diversity of ecosystems and communities. The principle of proximity, (those who are most directly affected by a decision should have a proportional say) should be embedded in the framework.
3. Government policies for forestry tenures, stumpage, and forest practices discourage the innovation necessary to meet the optimum mix of public values.
4. The management framework needs to be supported by efficient and adequate policies and resources (capacity) to enable implementation.
5. The province has to take a much more active role at all levels to ensure the public's interests are being met. This includes oversight, monitoring, enforcement, and objectively and regularly informing the public about forest conditions and trends.
6. Where the government has direct control (e.g., BC Timber Sales) it should show leadership in developing and demonstrating best practices for sustainably managing forest values.
7. The government's rules for regulating the industry should not oscillate between "command and control" and "hands off" based on the ideology of the government of the day.
8. The government should facilitate a planned and orderly transition from harvesting primary forests to second growth, on timelines suited to specific areas.

Indigenous involvement

Support for Indigenous involvement was heard from every sector and the majority of people who submitted input to the panel. This is obviously top of mind for a variety of legal, social, and environmental reasons: legal with the Crown's duty of consultation and accommodation plus the recent passing of the province's Declaration of the Rights of Indigenous Peoples Act; social with the Province's commitment to a New Relationship; and environmental where many are looking to Indigenous communities for guidance on how to establish land management that achieves a higher standard of land care.

The panel heard a mix of Indigenous perspectives, ranging from calls for increased involvement of Indigenous communities in the timber industry and continued access to old forests for harvesting, through to increased protection for the range of other values from the forest. One common theme was the necessity for increased involvement of local Indigenous communities in the planning and oversight of forest use in their local areas.

Many of the Indigenous groups that were interviewed are actively involved in planning in their own forest management areas and many have developed very innovative, practical, and effective approaches to the management of old forests. These approaches were developed and are continually monitored with close involvement of the local Indigenous community, particularly the Elders in those communities. However, at a provincial level, the capacity of Indigenous communities to do this is very uneven and in some areas underdeveloped. We believe supporting the development of capacity and extending learning amongst Indigenous communities presents an opportunity to support effective forest management and advance reconciliation.

Public and community involvement

Just as we heard almost universal support for government collaboration with Indigenous communities, we also heard from local governments and stakeholders who said that they want more meaningful roles in forest planning and decision-making. We believe their current level of involvement contributes to a significant amount of uncertainty and discontent.

In previous sections, we touched on concerns about a lack of trusted information and process for the public to engage in a meaningful dialogue about forest management, including for forests with old trees. We did encounter a small number of areas in the province where community and stakeholder groups are engaged with government and industry on an ongoing basis, however this was the exception. Yet almost every local government, community organization, and often individuals, expressed a need for a place to learn, exchange ideas and perspectives, and develop useful input to forest management.

In several areas, we heard about the positive experiences with land use planning committees, and the benefits of bringing together experts and civil society with a variety of interests in a collaborative forum where provincial and local priorities could be addressed. Despite an expressed intent, when plans were completed (most during the 1990s), to maintain monitoring committees and have a periodic plan updates, government support declined, and most were disbanded. In some cases, government-facilitated groups were replaced by public advisory groups struck under the auspices of various market certification programs. Convened by forest licensees, these groups helped fill the gap, but many of them ceased operating when companies changed certification systems.

Lessons from other jurisdictions

The panel explored experience from other areas in the world to see if there were any lessons that could be learned around the management of old forests from those areas. Some of the main points were:

- Every jurisdiction's reasons for moving towards the management of old forests were different but most of the areas that adopted a system of significant old forest protection did so as a response to overwhelming public pressure that included either civil disobedience or legal actions;
- Many of the jurisdictions that responded to public pressure went through public policy swings that alternated between favoring the timber industry and favoring protection groups before landing on protection;

- Well-organized ENGOs were deeply involved in almost every jurisdiction's shifts to greater protection;
- The term "old growth" is relatively recent term used primarily in North America: Other jurisdictions use a variety of terms such as old forest, primeval forest, primary forest, virgin forest, ancient forest, wildwood, etc.;
- The trend towards greater protection for old forests had less to do with the age of the timber industry and the associated forest management system in each country and more to do with increased public understanding of issues related to biodiversity, ecosystems and climate change, the use of civil disobedience and legal tactics, and increased public involvement in forest management (generally within with the last few decades);
- Some jurisdictions went to protection measures applied only to old forests while others went to a more comprehensive zoning system to identify measures for lands are protected, managed for ecosystem health or intensively managed for timber production;
- Some countries that have gone through multiple rotations under intensive management are dealing with significant biodiversity loss and associated forest health issues; and
- Many jurisdictions have committed to detailed forest monitoring although in practise many defaulted on those requirements.

Compared to much of the world, our situation in BC is somewhat unique in that:

1. Large-scale commercial cutting of primary forests in BC began less than 100 years ago in southern and coastal regions, and 50 years ago or less in much of the central and northern interior;
2. The vast majority of cutting has been done with the expectation of managing the area for a perpetual crop of timber, rather than forest removal;
3. We have maintained a policy of reforesting with native species that are ecologically suited to the area logged.

This means that although much of the forest is altered from its natural condition, most of the original components still exist somewhere on the landscape. We can't go back and replace the primary forest, but we do have the opportunity to maintain viable examples of the remaining ecological attributes, and possibly restore others.

Summary of key points

1. Ecosystems with large, old trees are important to British Columbians for many different reasons.

- The term "old growth" has become a generic label for forests or trees that hold a variety of different values beyond the definitions used in timber management. OG means different things to many people and has a diverse array of sometimes conflicting values, all of which warrant consideration.
- Old forest values and objectives need to be clearly articulated, with less emphasis on the generic "Old Growth" label.

2. Retaining and managing forests of old trees is a key strategy for maintaining biological diversity and cannot be done in isolation.

- The ability of ecosystems to support species, including humans, and adapt to change is dependent upon their resilience, which comes largely from the natural diversity they harbour.
- Old forests are part of complex multi-scaled, interdependent ecosystems, and are also impacted by complex interdependent forest management policies.

- The total amount of old forest in the province is not as important as the distribution and ecosystem representativeness.
- There are many impacts to old forest arising from various activities in almost every resource sector.

3. The extent and condition of ecosystems with old trees, relative to natural condition, is highly variable across the province.

- The risk to biodiversity is extremely high in some ecosystems and there is a wide-spread call to protect them.
- The forests' ecological conditions, history of natural and human disturbances, and social, cultural, and economic importance are too variable to suggest a single sweeping approach, although there is strong support for a common management framework.
- In many areas, we are not meeting the intent of the biodiversity conservation strategy adopted 25 years ago.
- The approaches to managing old forest have to be adaptable to the ecosystem and natural disturbance regimes.

4. The economy is heavily dependent on trees harvested from primary forests of old trees.

- The degree of economic reliance differs amongst regions and individual communities. For example, some have undergone a transition to greater reliance on tourism, or other sectors, while many others have not.
- In some areas, a transition to second-growth forests is well underway, while in most of the province that transition will require decades of forest growth.
- There is widespread support for assisting workers and communities negatively affected by reduced access to timber supplies, for whatever reason.

5. The current system for retaining old forest and managing their attributes has issues.

- The original intent of the science-based guidance has not been fully implemented.
- The approaches to managing, tracking, and reporting on old forest retention and management requirements are inconsistent and, in some cases, absent.
- Old Growth Management Areas (OGMAs) are applied inconsistently and sometimes ineffectively.
- The use of clearcutting silviculture systems limits the ability to manage for old forest attributes and conserve biological diversity, especially in ecosystems that don't naturally experience large stand-replacing disturbances.

6. Opportunities have been identified to provide greater economic certainty about the blend of benefits from old forests:

- Formalizing designation of forest areas outside reserves to be either managed primarily for commercial production (conversion) or managed for key ecosystem attributes with compatible forestry practices.
- Analysis and pursuit of an optimal blend of public benefits from a wide range of uses (timber, tourism, natural infrastructure, botanical forest products, recreation, etc.).
- Transition to silviculture systems that more closely emulate natural process on remaining unconverted forest.

7. Climate change will become an increasingly bigger factor in choices about forest management.

- The role of old forests in climate change is complex.
- Mitigating climate change through carbon sequestration and storage needs to be fully analyzed and integrated into forest management decision-making.

8. Information around the types, condition and current status of old forests is highly variable across the province.

- There is no regular, objective public reporting about forest condition and trends.
- Classification based on timber inventory criteria, which does not necessarily reflect other old forest values.
- The existing inventory is not well suited to stand-level identification of many old forest attributes.

9. There is widespread support for the provincial government and Indigenous governments to collaboratively create updated strategies and policies for the management of old forests that include:

- Transparent expressions of the public's long-term interests, priorities, and policies;
- Ongoing public involvement in planning and strategic decisions, supported by objective and comprehensive information regarding related issues, risks and opportunities;
- Economic analysis tools to inform public discussion and choices;
- Clear and measurable objectives at meaningful scales, supported by well-resourced enforcement and evaluation of long-term effectiveness;
- Oversight that ensures public interests are considered and incorporated in forest planning and practices, monitoring, compliance and enforcement;
- Ongoing research, innovation and information sharing to foster continual learning and expand the province's collective forest management expertise;
- Adequate monitoring and objective reporting of forest conditions and trends, including the cumulative effects on all values and transparent communication of risks and benefits; and
- The means and authority to address risks to critical values.

Old coastal forest.
Photo courtesy BC Ministry of Forests, Lands, Natural Resource Operations and Rural Development

KEY FINDINGS

Based on the situation overview and key points above we find that, while there may be debate about how much old forest we have and where, there is a near-unanimous agreement that managing and protecting ecosystems for forests with old trees provides many benefits. However, there are serious concerns about the ability of our current management policies and implementation of old forest strategies to achieve that in the long-term. We observed what we believe to be fundamental weaknesses in the system relating to the core foundations for forest management success identified earlier in this report: ecosystem health; public support; and effective management.

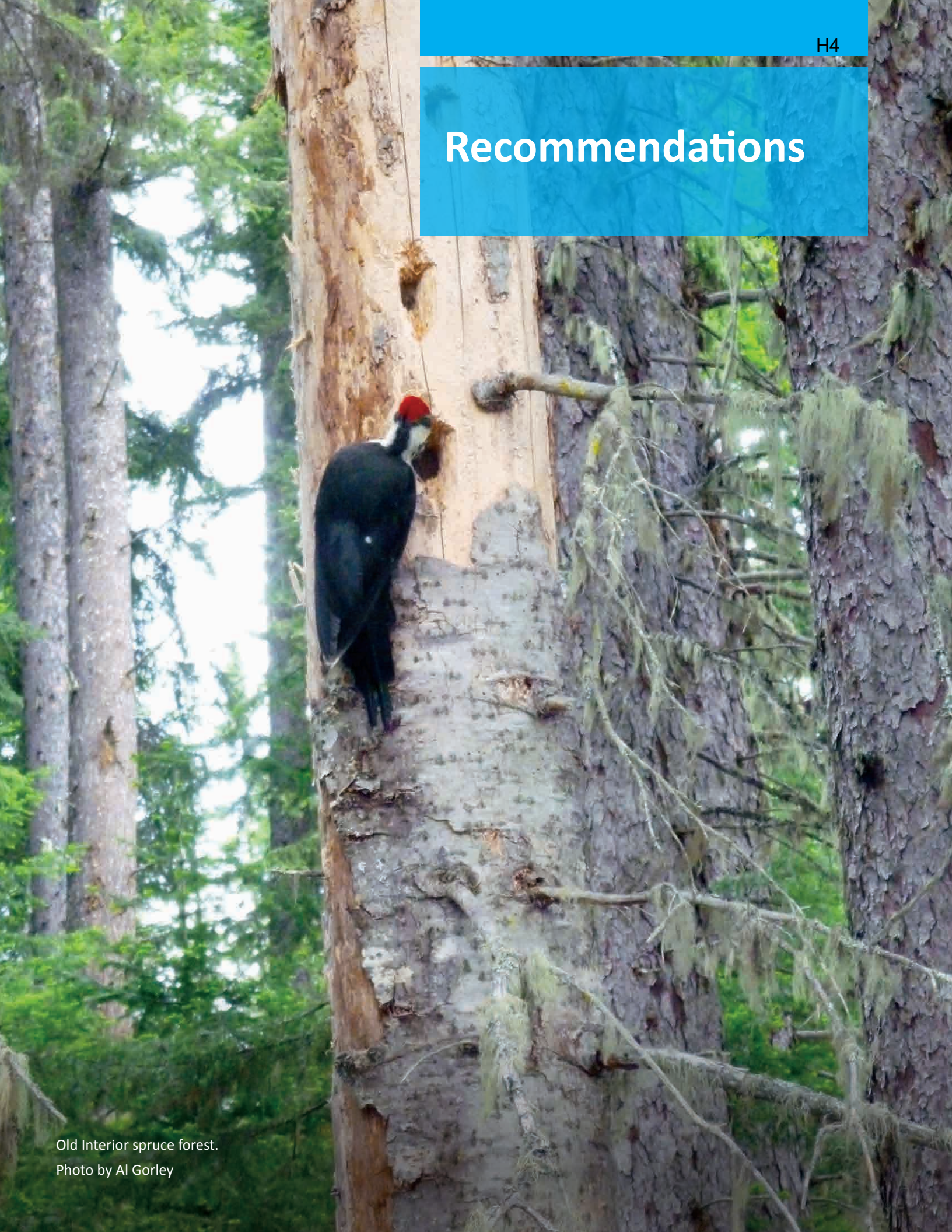
1. **Ecosystem Health:** The priorities that currently drive our forest management system are backwards. Rather than determine what must be done to maintain ecosystem health and resilience, and then what social and economic benefits we can derive within that guidance, we often do the opposite. We consistently refer to measures required to protect ecosystem values as "constraints" on timber. An example is the policy for implementation of biodiversity conservation, which has a fixed ceiling on timber supply impact, reinforced by the objectives in the *Forest and Range Practices Act*. Many members of the public and government staff expressed concerns about this bias in the current system.

2. **Effective Management:** Many aspects of the system are seriously lacking and are not anchored in sound management theory. In particular, our system does not measure the performance of policy implementation relative to clear and measurable objectives and then adapt accordingly. The panel is also not convinced that government has demonstrated a serious, and sustained commitment to applying science-based methods to implementing management policies for conserving and managing old forest.

   Significant recent examples of this are: in 2012, the Forest Practices Board conducted a special investigation resulting in six recommendations about tracking, monitoring, enforcing, and evaluating implementation of old growth management areas, and in 2013, the Auditor General conducted an audit to assess the effectiveness of key tools for managing biodiversity in BC. Although these investigations concluded there was a lack of adequate measuring and reporting within our current forest management system, little has changed as a result of those reports.

3. **Public Support:** Much of the public is not well informed or engaged regarding old forests and forest management. This appears to be contributing to a pervasive lack of supportive for the current system. We frequently heard from individuals, organizations and communities that they have no reliable source of information about the condition and trends in local forests, and little influence over decisions that directly affect them. Over the past several years, direct ongoing involvement of communities in forest management has declined. A lack of confidence in the system was also reflected in concerns about a lack of clear long-term priorities, inconsistent policies for land users, and a lack of government oversight.

Recommendations



Old Interior spruce forest.
Photo by Al Gorley

RECOMMENDATIONS

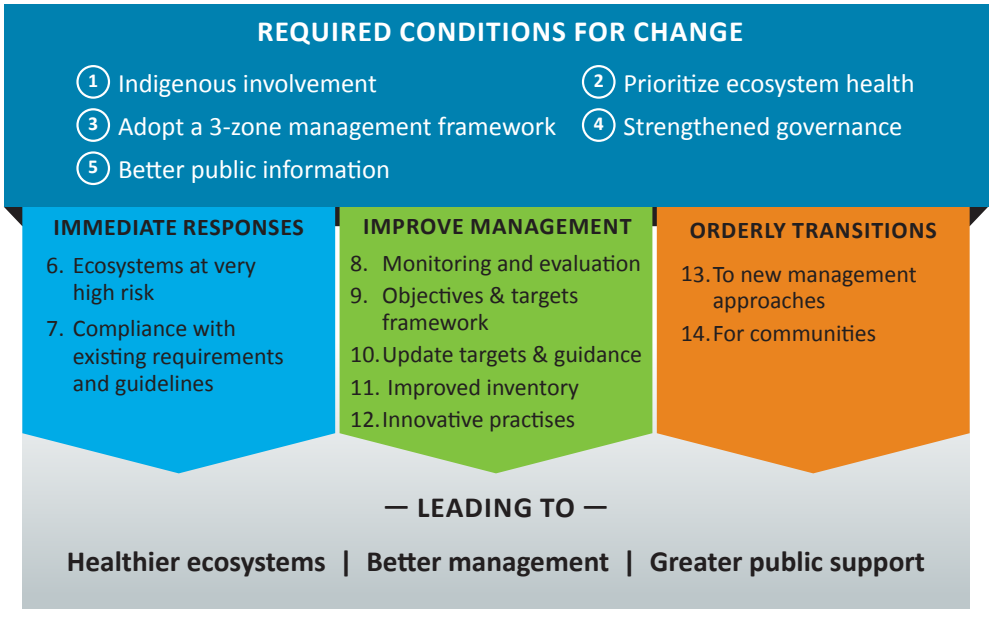
Our recommendations address the conditions we believe are needed for successful long-term management of old forests, the actions needed now to prevent irreversible loss of biodiversity, improvements to the management processes, and transition requirements to ensure change happens. The implementation advice supporting each recommendation is offered as a starting point for the government to consider, with the understanding that other approaches will likely emerge through dialogue with Indigenous leaders, input from stakeholders, and analysis by government staff.

Old forests do not exist in isolation. They are part of a complex ecosystem that has evolved over thousands of years. Similarly, our forest management system has also evolved over the long term, often in response to changing economic conditions and community needs. While we recognize that it is sometimes necessary to deal with a specific management component such as old forests, this must be done with the whole system in mind. To do otherwise would be a fundamental error. Therefore, our recommendations, although developed with a focus on old forests, by necessity extend to the broader forest management system in order to support healthy ecosystems, and by extension, healthy people, as well as old forests.

In our introduction, we identified a paradigm shift in the way we approach managing forests. We found widespread support for a new way of thinking during the engagement phase of our review. We believe that if our recommendations are implemented with this new paradigm in mind, they will be more likely to succeed, and will contribute to facilitating the desired paradigm shift over time.

As illustrated in the figure below, we have structured these recommendations to start with those that we believe are necessary to create the proper conditions for management of old forests in the future and important to ensuring the subsequent recommendations achieve their intended results for the long-term. The remaining recommendations focus on responding immediately to curbing biodiversity loss, improving the management system, and transition requirements. We believe that implementing these recommendations will lead to healthier ecosystems, better long-term land management and greater public support for forest management.

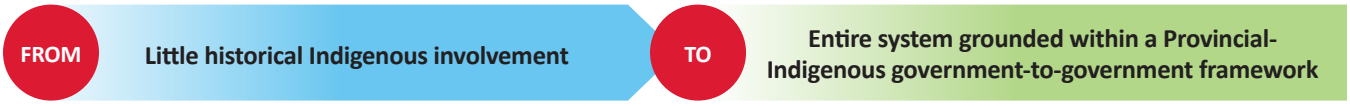
We recognize that these recommendations will be refined and adjusted through engagement with Indigenous communities and stakeholders, and with additional technical and scientific input.



Required conditions for change

1. Indigenous Involvement

Engage the full involvement of Indigenous leaders and organizations to review this report and any subsequent policy or strategy development and implementation.



Rationale:

The panel understands that Indigenous involvement is built into almost every provincial land-based activity, especially a policy review of this scale, however we feel it is worth reinforcing because it is essential to creating conditions for successful and sustainable implementation of both the shorter- and longer-term actions proposed.

1. **Widespread support and expectation:** The panel heard support or acknowledgement of this priority from every sector and the majority of those who provided input to the panel.

2. **Legal imperative:** BC has legal consultation and accommodation obligations with respect to possible infringements on Indigenous rights, which is now even more strongly affirmed with the BC government's recent passing of the *Declaration on the Rights of Indigenous Peoples Act*.

3. **Social Imperative:** The Province has committed to a New Relationship where the Indigenous population has the opportunity to achieve the same economic, environmental and social societal goals as the rest of the population in the province.

4. **Environmental Imperative:** Recognizing Indigenous commitment to environmental stewardship, which has extended for millennia, many are looking to Indigenous communities for guidance on how to establish a land management regime that achieves a higher standard of land care.

5. **Address the Gap:** Indigenous peoples were not involved creating most of the higher-level plans and orders that dominate the management of old forests. This is a significant source of frustration among Indigenous communities and could also mean that most of these historic plans and orders do not conform to the Province's current legal consultation and accommodation requirements or DRIPA legislation.

6. **Sustenance Dependence:** Many Indigenous communities still depend on the natural resources of their traditional territories for a significant portion of their sustenance and livelihood.

7. **Practical Working Models:** Indigenous communities are becoming more active in most economic and management aspects of the forest sector and are leading many interesting and potentially valuable on-the-ground approaches to land stewardship and management of old forests.

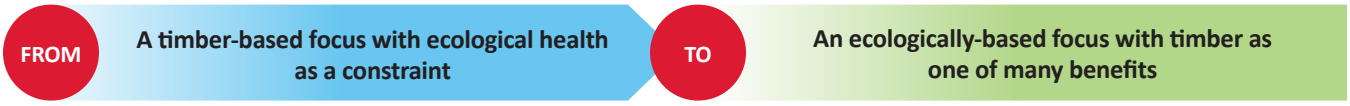
8. **Develop Readiness:** Many Indigenous communities need support to develop their internal readiness to accept a leadership position in forest management and the Province also needs to build its internal readiness so that it can effectively participate in these new government-to-government relationships.

Implementation Advice:

1. As soon as practicable, engage provincial Indigenous governments in developing a policy response to these recommendations.
2. In collaboration with Indigenous leadership, develop provincial guidelines for implementation:
    a. Develop criteria for establishing government-to-government planning relationships between the Province and Indigenous groups, including appropriate involvement and associated criteria for third-party participation in these planning relationships;
    b. Establish planning units that conform to local Indigenous group's territories while still adhering to ecologically and administratively practical planning units; and
    c. Establish mechanisms for local Indigenous groups to meet provincial targets and standards for biodiversity protection, and ecosystem representation, etc.
3. Establish support programs for Indigenous groups to build their land/forest management expertise and capacity including:
    a. Direct support to establish G2G land management relationships in accordance with point 2.a above;
    b. Programs to support the development of internal management capacity; and
    c. Opportunities to share experiences among Indigenous groups.
4. Develop focused training for government staff to support the establishment of appropriate G2G relationships and develop provincial government capacity to meet its responsibilities under these relationships.

2. Prioritizing Ecosystem Health and Resilience

Declare the conservation and management of ecosystem health and biodiversity of British Columbia's forests as an overarching priority and enact legislation that legally establishes this priority for all sectors.



Rationale:

Conserving and managing old forests is a cornerstone of the Province's biodiversity conservation strategy. We believe that strategy has underperformed in several areas due to competing pressures.

1. Outdated Thinking: An overriding theme heard throughout our engagement phase was that we need to change the way that we think about our forests and that we need to preserve the integrity of our natural systems as much as possible, particularly the old forests component. Individuals with international experience and our own research on other jurisdictions indicate that this sentiment is consistent with global trends.

2. Focus on the right priorities: Managing forests in a way that does not unduly compromise timber supply puts our focus on the wrong thing. This treats ecosystem resilience and reducing biodiversity risk as constraints, which, over time, are constantly being eroded by compromises. Making choices about risk to biodiversity in return for another defined benefit might be a necessity but those choices need to be made with the overarching goal of maintaining ecosystem health in mind.

3. **Ecosystem Risk:** Several scientists project that under our current management strategy, much of the province, especially the areas covered with productive forest, will be in a high biodiversity risk situation in the near future. It is time to reorient and integrate the system towards an overarching priority that applies to all incursions in the forest, i.e., to maintain ecosystem health by managing biodiversity risk. Without this reorientation, we are losing old forests and possibly ecosystems that are non-renewable.

4. **Complete Implementation:** The original old forest management strategy contemplated a number of components that were never fully implemented or were addressed ad hoc, e.g., seral stage distribution, site series representation, landscape connectivity, and adaptive management, which has compromised the effectiveness of that strategy.

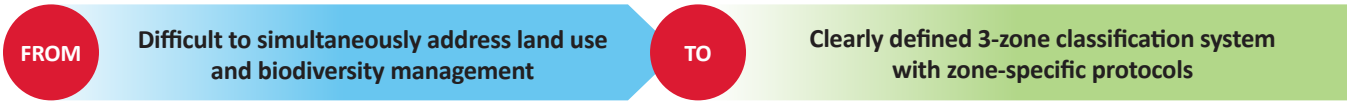
5. **Multiple Sectors:** There is only one land and every land-based sector has some potential to compromise that land, some to the point of undermining provincial ecosystem health goals, if they do not adhere to a common standard. Aligning all sectors towards an overarching goal improves our chances of achieving our ecosystem health goals, reduces conflict between sectors and fosters a common target for everyone involved.

Implementation Advice:

1. The province should declare that managing for ecosystem health and minimizing biodiversity risk are key priorities of its provincial land management framework.
2. This priority should be reinforced through overarching legislation that:
    a. Formalizes this priority and sets a broad framework to work towards that commitment (similar to the DRIPA construct);
    b. Includes principles that will guide the overall shift to this new framework, e.g.:
        i. Province-Indigenous government-to-government foundation;
        ii. Science-based;
        iii. Monitoring, evaluation and regular updates;
        iv. Planning and oversight involving a range of interests; and
        v. Accountability, particularly to the public; and
    c. Establishes a commitment to align all other land-related provincial legislation, management systems and processes to this overarching goal.

3. A Formalized Three-Zone Forest Management Framework

Adopt a three-zone forest management framework to guide forest planning and decision-making.



Rationale:

We believe that the Province can better focus its management efforts if it partitions the forest into three overarching and distinct management zones. The concept is already partially used to apply biodiversity emphasis zones for setting old forest targets but needs to be formalized and communicated. Other jurisdictions have moved in this direction to try and create greater certainty for both conservation and economic activities.

We suggest the following categories (the names can change but we feel their substance should remain relatively the same.)

1. **Protected:** These are forests that will be largely left alone, although there may be some management activities within them to maintain ecosystem health and manage risk from fire, disease or insects (depending on their designation and associated jurisdiction). One example of a Protected area that might allow some management activities are fire-maintained forests, where fire regularly removes the understory while maintaining the overstory. If fire is excluded from these areas and no other intervention is allowed, then they tend to become dense pockets of unhealthy forests that support the development of pest or pathogens or have increased susceptibility to catastrophic wildfire.

2. **Converted:** Converted forests are those that we have already or intend to change from their natural state to intensive management areas as industrial timberlands. Although these lands do not provide all the same services as old and ancient primary forests, they can still provide a number of important ecosystem services in addition to timber, such as water, recreation, carbon sequestration, wildlife, tourism, etc.), especially since many are close to communities. Conversion areas may have multiple objectives compatible with industrial timber production.

3. **Consistent:** These are forests and forest landscapes that are managed for ecosystem health and biodiversity risk by using planning and practises that result in forest landscapes that are reasonably consistent with the attributes of the original forests and forest landscapes. We recognize that we can never fully replicate what nature creates over time, but with careful management we can plan and use practises at a forest or forest landscape level that are reasonably consistent to what the original forest or forest ecosystem would have created.

The following are reasons that we feel that we need to move in this direction.

1. **Reduced confusion:** Despite the existence of land use plans, there is significant confusion or misperception about which forests should be managed for which goals, particularly outside parks and protected areas. Partitioning the forest, focussing on goals for each partition and having clear rules about if and when partitions can contribute to another partition's goals (e.g., protected areas contributing to ecosystem health) or when an area can move from one partition to another can significantly reduce this confusion.

2. **Reduced conflict:** Our current system also entrenches the idea that we need to either completely protect or allow use of an area. This all-or-nothing mentality oversimplifies management, does not allow us to focus on the right thing for the right area, fosters an "us versus them" behavior and ultimately narrows our focus as land stewards. To paraphrase an Indigenous Elder's perspective, "The reason that we create parks is because we don't trust ourselves to look after land." Many people expressed frustration about second growth forests that are managed like plantations because they think these forests should be more like their iconic undisturbed counterparts. Having them zoned as "Converted" provides clear direction on the goals for these areas and transparency for the public.

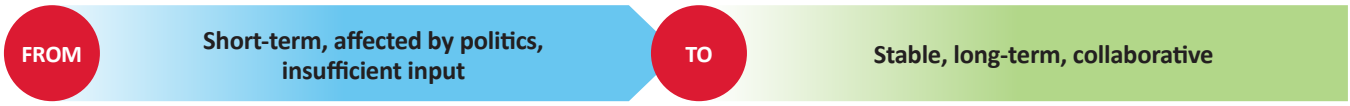
3. **More focused management:** We have forests that are already in the Converted category but we still try to manage them as part of an ecosystem to reduce biodiversity risk, we have forests that are protected for ecosystem biodiversity reasons but are promoting landscape ecosystem health problems because of our no-touch policy, and we have mixed biodiversity targets across the province which in many cases may not be able to achieve their intended ecosystem resilience goals because of their location and ongoing levels of disturbance.

Implementation Advice:

1. Use a collaborative process under the umbrella of a Provincial-Indigenous government-to-government framework to support ongoing designation of these areas.
2. Develop criteria for:
    a. Slotting parcels of land into each of the three management zones (e.g., Areas that are already under intensive management and in close proximity to population centers are high candidates for Converted Forests);
    b. How Protected Forests or Converted Forests might contribute to Consistent Forest objectives; and
    c. Moving areas from one zone to another.
3. Prioritize the designation process in management units (e.g., TSAs and TFLs) that have already logged a high percentage of their operable land and are facing the greatest risk to ecological and economic values. Areas with existing plans and legal orders like Clayoquot Sound, Haida Gwaii, and the Great Bear Rain Forest may be deferred from this process for now.
4. Where possible, coordinate the designation of forest areas with active land use planning, but do not wait for the renewal of land use planning to designate zones in high priority management units.
5. Where applicable, consider the implications to public safety and infrastructure (e.g., wildfire, floods).
6. In addition to the any other information required, support the collaborative decision-making process and stakeholder input by:
    a. Conducting objective, government-led multi-value assessments in remaining areas of primary old and ancient forest;
    b. Identifying special features (e.g., large, and unique trees or stands, unique ecosystems) that are close to communities and presently or foreseeably provide important recreational, cultural, spiritual, or educational opportunities; and
    c. Developing and analyzing various risk-benefit scenarios and options, including the probabilities.
7. Establish the zones formally through legislation.
8. Establish mandatory transition plans to implement changes on a scheduled basis, specific to the management unit(s) involved.

4. A More Inclusive and Stabilizing Approach to Governance

Adopt a more inclusive and stable governance model that gives local communities and stakeholders a greater role in forest management decisions that affect them.



Rationale:

British Columbia needs a forest management governance system that is more inclusive and grounded in the long-term vision of local communities in order to create strategies that are more consistent with long-term ecosystem timeframes. This is needed for the following reasons:

1. **Stability:** We are managing ecosystems that often take thousands of years to form with policies that can change based on election cycles. We have seen how frequent changes in priorities due to the ideologies of different governing parties can cause uncertainty and loss of continuity. Frequent changes in management direction and emphasis do not align well with most forest management activities. While changes will be inevitable, they should be based more on science-based adaptive management than short-term pressures. We believe the combination of collaborative management with Indigenous communities and formal ongoing participation of local communities, within a provincial science-based framework, can provide a stabilizing effect on policy by ensuring the local and provincial impacts of change are thoroughly considered and understood before decisions are made.

2. **Accumulation of Wisdom:** There is often high turn-over amongst forest managers, especially in government, and frequently the professionals working in a forest do not reside in local communities. This results in varying levels of knowledge about local forests and community interests and can put communities and forest managers at cross purposes.

   Managing forests to achieve a spectrum of community and provincial interests requires an understanding that benefits from local knowledge, continuity, and accumulated wisdom. Involving more people in the process of informing and making decisions increases the opportunity to retain and pass on knowledge.

3. **Proper Link to Public Policy:** Forest management has less to do with forests and more to do with translating pubic expectations around forests into policy that drives how we manage those forests. A governance system that more effectively integrates public knowledge and priorities also integrates a much closer link to support developing effective and timely policy.

4. **Public Trust:** The panel heard consistently from across the province that local communities do not have confidence that the government or large corporations will manage their forests properly, and that they want to better understand what's happening in their forests and be more involved in managing them. This was particularly true among Indigenous communities, many of whom are already assuming that role in their respective territories.

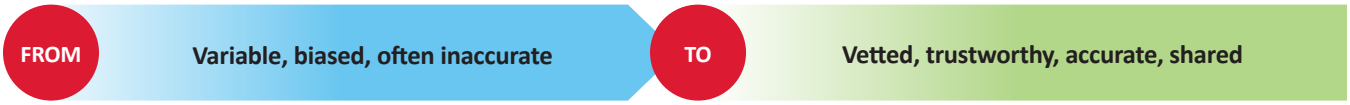
Implementation Advice:

1. The governance system should exist under the umbrella of Provincial–Indigenous government-to-government relationships.
2. Redefine planning areas considering:
   a. Existing administrative boundaries, e.g., TSAs, LUs;
   b. Indigenous territories (likely multiple Indigenous groups in one planning area);
   c. Biogeoclimatic Ecosystem Classification (BEC) / ecosystem boundaries;
   d. Administrative practicality; and
   e. Other factors.
3. Establish local forest boards/planning tables that may be formalized through the overarching legislation described earlier (Recommendation 2).
4. Local forest boards for each planning area could include a range of groups, potentially including:
   a. Scientific experts;
   b. Land planners;
   c. General public;
   d. Resource professionals (foresters, biologists, ecologists, hydrologists); and
   e. All land-based sectors (e.g., mining, oil & gas, tourism, highways, etc.).
5. Responsibilities of local forest boards may include:
   a. Tailoring provincial goals and priorities to their planning area;

   b. Monitoring adherence to and reporting on their region's status and progress towards provincial goals and priorities;
   c. Overseeing transition to an updated management system;
   d. Participating in and possibly overseeing implementation of regional land use planning processes;
   e. Establishing and monitoring (possibly involved with approving changes) in regional partitions, e.g., Protected, Converted, Consistent; and
   f. Supporting public reporting.
6. Provide local forest board with appropriate support to meet their responsibilities including:
   a. Mapping;
   b. Scenario development;
   c. Training & education of participants;
   d. Scientific methods; and
   e. Others?
7. Adopt formal Terms of Reference for each local forest board that conform the overarching legislation and provincial guidelines.
8. Although this recommendation has much broader application, it could be used as a mechanism to help implement other aspects of this report.

5. Public Information

Provide the public with timely and objective information about forest conditions and trends.



Rationale:

As we indicated earlier in this report, we frequently found local governments, organizations, and individuals that wanted to be better informed about the condition of old forests but were not sure where to go for accurate and objective information.

1. **Build Trust & Reduce Bias:** As stated before, very few people we heard from said they trust information regarding the condition of BC's forests. Many feel the information provided to the public around BC's forests is biased, regardless of its source.

2. **Reduce Polarization:** There are very strongly held views regarding how best to manage BC's forests and those views are largely based on where people are getting their information. Although opposing viewpoints may never be fully reconciled, we can reduce the level of conflict and improve the quality of dialogue with greater access to unbiased science-based information.

3. **Foster Engagement & Wisdom:** Having an informed public can foster increased public engagement and hopefully bring more wisdom and stability to the forest management process.

Implementation Advice:

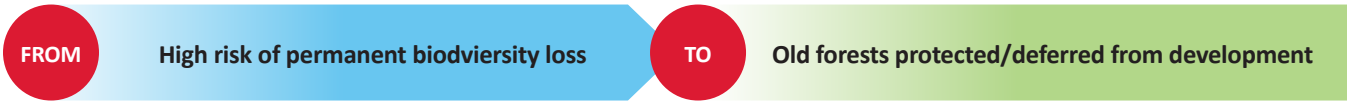
1. Provide the public with proactive reporting on forest condition through an objective, professional voice, free from political influence. Options for this may include:

   a. Formally expanding the role of the Forest Practices Board;
   b. Creating a statutory provision for independent reporting by a senior public servant with an ombudsperson-type role;
   c. Reporting through an independent scientific panel; or
   d. Establishing a new office.
2. Significantly enhance public reporting on forest conditions by producing regularly scheduled updates, including:
   a. Local scale reports, perhaps building on the Multiple Resource Values Assessment (MRVA) approach;
   b. Regional scale or value-themed reports (e.g., biodiversity), possibly by expanding the work already underway through the Cumulative Effects Assessment initiative; and
   c. Periodic Provincial Forest Condition reports (e.g., every five years).
3. Where available, utilize existing internal data gathering and analysis processes to inform reporting that is specifically aimed at the public.
4. Ensure reports provide context and relevant commentary to make them meaningful to the public. (Answer the contextual "so what?" question).
5. Have this new public reporting function provide an annual report on its activities and how it achieved its goals during that year.

Immediate Responses

6. Immediate Response to Ecosystems at Very High Risk

Until a new strategy is implemented, defer development in old forests where ecosystems are at very high and near-term risk of irreversible biodiversity loss.



Rationale:

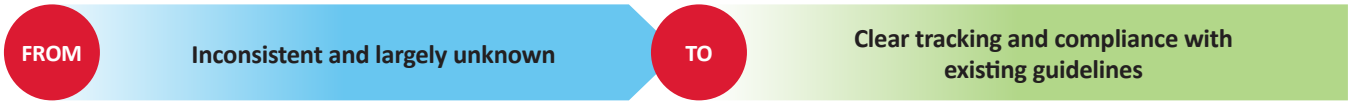
There are some areas of the province where failure to act now could lead to the permanent loss of rare or unique ecosystem components contained in old and ancient forests. Many of these areas are the primary subject of a public call for protection of old forests. They tend to be iconic stands in relatively close proximity to public access or population centers and have a number of other economic, ecosystem services and intrinsic values that are important to a wide range of the general public. A system of new, more sustainable, and effective approaches to managing biodiversity and other old-forest values will take some time to fully develop and implement. In the meantime, any of these stands that are intended for harvesting or other significant disturbance should be deferred from development.

Implementation Advice:

1. Act on this recommendation as quickly as possible.
2. Use the information already compiled by FLNRORD staff, supplemented by other information available in the scientific community, to identify the ecosystems at highest risk to permanent biodiversity loss.
3. Consider the following old forest areas (and possibly others) for short-term deferrals:
    a. Any BEC variant with less than 10% old forest remaining today;
    b. Old forest in any BEC – Landscape Unit combination that has less than 10% old forest today;
    c. Ancient forests (e.g., forests >500 years on the coast and wet ICH) and forests > 300 years in ecosystems with higher disturbance intervals);
    d. Areas with a high potential to contribute towards larger ecosystem resilience; and
    e. Areas with a Site Index of >20m.
4. Determine which of those areas are subject to harvesting or other significant disturbances within the next two years. We would expect the FLNRORD staff to have this information or be able to collect it from licensees.
5. Establish a prioritized and spatialized list of potential deferral areas and verify them on the ground and with recognized experts.
6. Use various mechanisms as needed for deferrals, for example:
    a. Instruct BCTS to cease development and defer selling timber in the areas;
    b. Request authorized tenure holders to voluntarily defer development;
    c. Decline to authorize new permits or licences in deferral areas; and
    d. If necessary, establish regulatory provisions and incentives to enable deferrals.
7. Carry out an economic impact analysis of deferrals.
8. Establish a fair and equitable process to mitigate economic impacts to holders of small area-based timber tenures (e.g., replacement area or compensation).
9. Provide a public progress report on how these priority areas have been addressed at the end of the first year after this report.
10. After two years, confirm which temporary deferral areas will be subject to protection or further management measures.
    a. For each identified area, determine whether biodiversity conservation requires full exclusion from development or special management.
    b. Establish legal protection for areas confirmed to be critical for biodiversity conservation.

7. Compliance with Existing Requirements

Bring management of old forests into compliance with existing provincial targets and guidelines for maintaining biological diversity.



Rationale:

The existing targets for retention of old forest reflect policy decisions that balanced risk to biodiversity with economic considerations more than two decades ago. While we feel these should be revisited

and updated to reflect current circumstances (see recommendation 10), we have been shown by government staff and scientists that some regions are below the approved targets, and at higher biodiversity risk than current policy allows. We also learned that some of the existing provisions are not enforceable because legal commitments are vague and an approved FSP takes precedence over discretionary decision-making.

1. **Reputation:** The province's reputation as a forest land steward is at risk if it has failed to comply with or enforce its own legal orders and targets, even if this is largely because it didn't implement an adequate system to track those targets. This is not about effectiveness or changing management approaches – it is simply about knowing what is happening and taking corrective actions.

2. **Unknown Compliance:** Although there are existing guidelines and legal orders and targets for protection of old forest, we don't have an adequate system of tracking compliance with, and enforcing those requirements.

3. **Urgency:** Many of the existing targets already reflect a negotiated compromise, where a high risk to biodiversity was accepted in favour of economic benefits. These targets are already below scientifically accepted minimums and failure to achieve them increases the risk of moving into critical biodiversity risk situations and possible irreversible losses.

4. **Setting a Base:** An accurate assessment of where we are at with respect to our targets and how we are managing OGMAs now is essential to future decision-making.

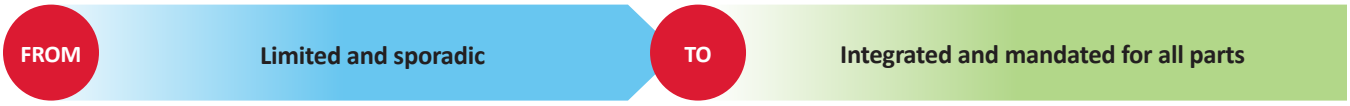
Implementation Advice:

1. Determine a schedule for completing this work starting with priority areas, e.g., Kootenay, Vancouver Island and Central Interior regions, moving towards less urgent areas over time, e.g., Muskwa-Kechika, Haida Gwaii, Clayoquot and the Great Bear Rain Forest.
2. Using the current work occurring under the auspices of the Cumulative Effects Assessment initiative (e.g., October 2018 Biodiversity Analysis for Arrow and Kootenay) as an example or template, complete an evaluation for all priority regions of the province by the end of 2020 and the entire province by the end of 2021 to answer the questions:
    a. Are legal targets being met with the OGMA layer?
    b. Is there enough old forest to meet aspatial old seral targets?
3. Where the analysis shows non-compliance, take the necessary steps to bring the area into compliance as soon as practicable, including:
    a. Deferring development in any BEC variant/Landscape Unit/Site series old forests that are below targets (including existing development permits);
    b. Amending OGMAs where necessary to ensure that they contain old forest, have enough area to meet both mature and old targets, and are adequate (functional shape, size and level of incursions);
    c. Clarifying, strengthening, and standardizing the OGMA amendment requirements and procedures;
    d. Ensuring the provincial government has the necessary tools (tracking and regulatory) and capacity to enforce the requirements.

Improve Management

8. Monitoring and Evaluation

Establish and fund a more robust monitoring and evaluation system for updating management of old forests.



Rationale:

There is little value in setting objectives and targets if they are not monitored. Without monitoring we cannot know if they are being complied with or if they are effective. We heard from nearly every region of the province that there has been no formal monitoring plan for old growth management, even though the guidelines have been in place for more than two decades.

Sound, science-based management requires monitoring and evaluation of results. It also establishes the basis for adapting to what is learned, and to changing circumstances, which is especially important in view of the current pace of environmental change. Public confidence requires reporting and acting on those results.

This is a significant and relatively straightforward opportunity to improve management and demonstrate excellence.

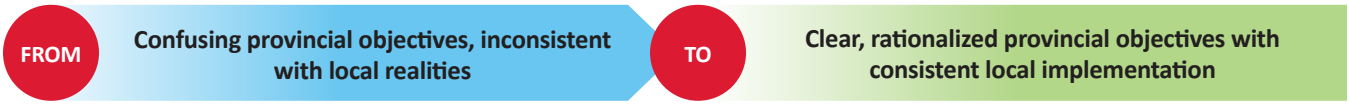
Implementation Advice:

1. Adopt a formal management discipline, such as adaptive management or continuous improvement, as the underpinning to monitoring, evaluation and update, but do not stall implementation of this objective choosing and adopting a discipline (note that scientists are generally more familiar with the adaptive management methodology).
2. Ensure that this system includes the core elements required for success, i.e.:
    a. dedicated research function;
    b. dedicated monitoring function;
    c. link to operations;
    d. regular updates; and
    e. objectivity.
3. Publicly report on activities undertaken in response to previous recommendation to update the monitoring and evaluation of old forests such as the FPB (2012) report and the assessments underway through the Cumulative Effects Framework, as soon as practicable.
4. Establish a dedicated organization, possibly building on the existing FREP program by expanding its mandate and resources to:
    a. Monitor implementation of and adherence to old forest orders, targets, and guidelines on an ongoing (scheduled periodic) basis across the province;
    b. Evaluate the effectiveness of old forest (and seral stage) management at all scales; and
    c. Update the management system for old forests based on the latest research and effectiveness audits on a periodic basis, e.g., minor updates every two years, major updates every six years.

5. Integrate government and external scientists, operations specialists, management experts and other specialists into this system to support information gathering and analysis, evaluation and providing options for updating the system.
6. Continue to develop and utilize standardize protocols for monitoring and evaluation of both compliance and effectiveness at achieving objectives (which may be multiple, including socio-economic).
7. Establish and maintain strong linkages between monitoring and evaluation results, research and inventory priorities, innovative practices trials (discussed elsewhere), periodic updates to practise guidelines and public reporting. This can be achieved through:
    a. Information protocols;
    b. Clear decision processes, authorities, and timelines; and
    c. Others means.
8. Use the information collected from this system to enhance public reporting of results and management responses (also see recommendation on forest condition reporting).
9. Ensure that regional planning tables drive regional reporting.

9. Setting and Managing Objectives and Targets

Establish a standardized system and guidance that integrates provincial goals and priorities to local objectives and targets.



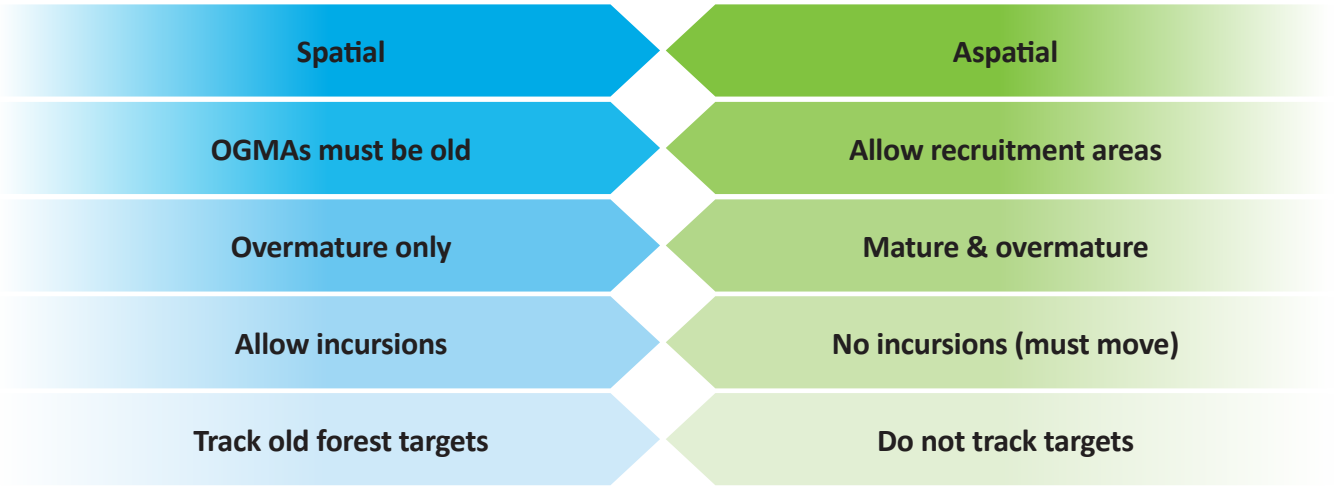
Rationale:

1. Local flexibility within a clearly defined framework: The current management system for old forests is applied inconsistently and often ineffectively across the province and is not achieving its original intent. Many areas have different methodologies, often arising from a higher-level plan, e.g., CORE, LRMP, or when they were applied. The figure below illustrates some aspects of the variation across the province. Local areas want flexibility and feel that the current system often sets inflexible rules that do not work in their local situation. However, almost all local areas did recognize (and support) that their local management strategies had to conform to some larger objectives and in a manner that allows the Province to track how each area was conforming and contributing to these larger objectives.

2. Changed circumstances: The original guidance for the management of old forests set out in the Biodiversity Guidebook and the Landscape Planning Unit Guide two decades ago were not fully and consistently implemented. Since that time, some ecosystems have been heavily disturbed, circumstances have changed due to climate change, and risk to biodiversity has increased. The introduction of FRPA in 2002 reduced the ability of government managers to directly control and coordinate activities on the landscape, and many current managers and professionals were not involved in the creation of the current guidance and likely don't fully understand its intent.

3. **Incorporate what has been learned:** Many managers expressed frustration because they feel the OGMA approach is not working and that many OGMAs are ineffective and sometimes managed inconsistently with natural forest processes (e.g., Interior Douglas Fir NDT 4, where lack of management is resulting in a considerable increase in the risk for insects, disease and catastrophic wildfire). These managers need support to have an informed voice in the system, which will in turn make the overall system more effective. We have also seen modified approaches taken in some regions, such as the Great Bear Rain Forest and Haida Gwaii, which can inform update provincial approaches.

4. **Consistent Implementation:** A new government policy that prioritizes conservation and management of forest biodiversity will require the existing guidelines to be adjusted, and implementation of some of the original intent to be reinforced. Having an operational framework that regularly provides the latest guidance to front-line workers and effectively engages those workers in developing this new guidance, helps to ensure that the management of old forests is implemented consistently across the province on an ongoing basis. The following illustrates a sampling of the range of OGMA approaches.



Implementation Advice:

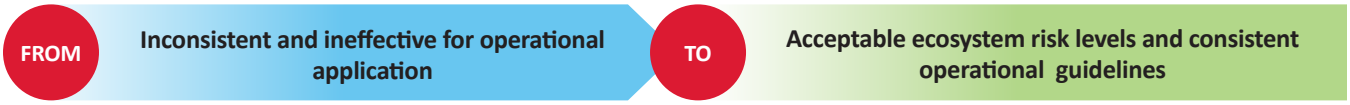
1. Clearly define and communicate the government's overarching objective(s) and priorities for the management of old forests in guidance or standards that provide:
    a. clear direction on the intent; and
    b. provide flexibility for local adaptation.
2. Establish a scientific and technical panel to provide oversight and advice to developing updated guidance, including government and external experts, and incorporating operational knowledge and experience.
3. Establish a scheduled review and update process for guidance.
4. Review the Biodiversity Guidebook (1995) and the Landscape Unit Planning Guide (1999) and determine whether it would be better to update or replace them. In doing so, decide where and how to place:
    a. Biological diversity: Should be addressed for the whole landscape, including seral stage distribution and grasslands; and
    b. Old forest: Focus on categories of old, ancient, and rare forests and the various values and objectives assigned to them.
5. Provide for consistent processes and administrative requirements across the province, while accommodating the diversity of ecosystems, disturbance history (natural and anthropogenic), and community values, e.g.:

a. Reporting requirements, i.e., content, geographic unit, timing;
b. How to buffer for unplanned events, e.g., wildfire, disease pests, slides, etc.;
c. Assign clear objectives to every OGMA);
d. Consistent, rigorous, objective and transparent processes for assessing options, including risk to ecological values and economic costs and benefits; and
e. Adopt a standardized, responsive process for amending (moving) spatial designations.

6. Incorporate an extension and education component tailored to practitioners, managers, and decision-makers.

10. Update Biodiversity Targets and Guidance

Update the targets for retention and management of old and ancient forest.



Rationale:

Implementation of the aforementioned recommendations will ensure we are meeting current targets, establishing a more inclusive and informed governance process and providing updated guidance to managers. Establishing the recommended overarching commitment to ecosystem health will also require us to update our retention targets and improve our guidance for retention and management of old forests.

1. **Ecosystem Health:** Scientific research provided to the panel projects that almost all of the province's most productive forest ecosystems are, or very shortly will be, in a high biodiversity risk scenario and the rest of the ecosystems will move into a similar situation under the current old forest policies and practices. This will result in lower ecosystem resilience, loss of species and compromised ecosystem services in many areas.

2. **Use Best Science:** Developing new guidance is of little value if it is not incorporated into both our targets and practices. Current targets have been in place for up to 25 years and no longer reflect today's reality. It is time to reset them to incorporate the latest research and practises and recognize the impacts to old forests that have occurred in the intervening time.

3. **Shifting Paradigm:** The survey conducted as part of our review and the panel's outreach process suggests there is widespread support for conserving and maintaining biodiversity and other old forest values. Many argue that increased retention of old forest is necessary to achieve this, and to provide a buffer against uncertainty. We heard concurrently the sentiment that families and communities that depend on harvesting and manufacturing timber from old forests need to be considered in any change.

4. **Conserve Future Options/Choices:** Very old and ancient primary forests have evolved over a long time, including some that have not experienced significant stand-replacing events. As a result, these forests are repositories of biota and process we may not even know or understand. This makes them an extremely important buffer against species extinction, climate change, and lost future opportunities. Many of these irreplaceable forests are in the THLB and are subject to harvesting. Harvesting them would mean their inherent value and future options will also be lost.

Implementation Advice:

1. Re-evaluate the assignment of biodiversity risk in light of overarching commitments to ecosystem health and managing biodiversity risk.
    a. Develop a schedule that prioritizes areas where we have the greatest risk to biological diversity under the current targets and management regime.
    b. Utilize information and advice from evaluation work and updated guidance to inform implementation.
    c. Formally incorporate the importance of very old or ancient forests and ecosystems by adding new classifications and specific management targets and guidelines.
    d. Be specific about whether the objectives of each area identified are required to be left undisturbed or managed to maintain attributes.
    e. Address connectivity and multiple-scale objectives.
2. Where there is a deficit of old forest necessary to meet the updated targets, incorporate a formal recruitment strategy.
    a. Conduct analysis of the expected socio-economic benefits and costs, both short and long term.
    b. Involve local communities in making decisions and choosing options.
3. Verify that OGMAs have the intended attributes through LIDAR, ground-truthing, or other means.
4. Adopt a standard set of provincial guidelines for OGMAs in each OGMA category as illustrated in the figure below.

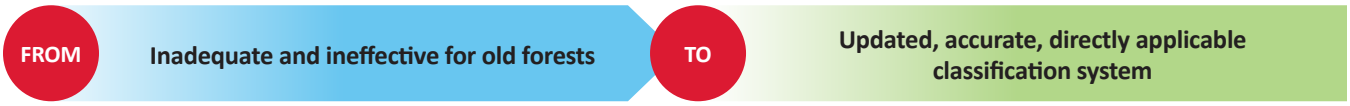
OGMA GUIDELINE CONSIDERATIONS

1. What is an old forest (OGMA), i.e., must be old, must be big, etc.
2. Guidelines for the size and shape for old forest areas to achieve the objectives of that area.
3. Types of management activities that are allowed in those areas, e.g., stand treatments to maintain NDT properties.
4. Incursions — when allowed, what type of incursion.
5. Requirements for unavoidable incursions (e.g., need replacement areas).
6. How to move an OGMA.

5. Eliminate generalizing, including ensuring that Protected and Conversion zones (see recommendation 3) are allocated to the proper BEC/LU/SI category.

11. Inventory and Old Forest Classification

Improve the mapping and classification of old forests to recognize multiple values.



Rationale:

1. Refine Guidance: The current system uses age class as a proxy for old forest — over 140 years in the interior and over 250 years on the coast. Only using age class does not recognize the inherent complexity in old forests and the range of values that they contain. We cannot separate whether an area was categorized as an OGMA because of its biodiversity, spiritual, recreation or other values and

it is very difficult if not impossible to set parameters on how to manage the area to protect its values. Even full protection can fail if the value being protected requires some level of intervention, e.g., maintaining structure in old fire-maintained ecosystems.

2. **Recognize Variation:** The mature and over-mature age classes were created from a timber perspective and are valuable from that perspective, however, these age classes need to be further refined when managing for genetic or biological diversity. A 250-year-old Douglas Fir stand that has regrown after a disturbance is completely different than a 250-year-old Douglas Fir stand in a 3,000-year-old undisturbed ecosystem in terms of genetic, scientific, ecological, ecosystem function and intrinsic values.

3. **Protect Values:** Our current classification does not allow us to identify important values that we may all want to protect. It is impossible to differentiate between an area that has old big trees that has value for recreation and some minor habitat from another area that contains ancient genetic material that may help save landscapes or contain cures for diseases that help save mankind, or have critical habitat necessary for the survival of an important species.

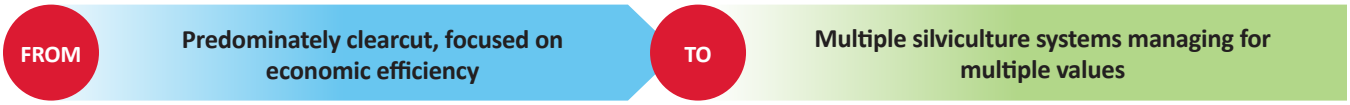
4. **Improve Management:** The quality and even existence of forest and BEC mapping in the province is highly variable ranging from very good (not excellent) to poor or non-existent. While this mapping has improved over time, most OGMAs and strategies for the management of old forests were implemented 25 years ago when much of this information was of a much poorer standard. Numerous errors have been found where old forests that were incorrectly labeled or mapped or in some cases don't even have old trees. Some regions have undergone adjustments, but many areas still have poor information or haven't updated their old forest strategies to the new information.

Implementation Advice:

1. Refine the Province's Natural Disturbance Types (NDTs) to a finer classification system. For example, one submission said that there could be as many as 8 refinements to fire regime NDTs.
2. Work with a team of inventory and habitat mapping specialists and scientific experts in the management of old forests and classification to develop a new classification system for old forests.
    a. It might be something like habitat mapping, i.e., considers a number of factors to assign a classification.
    b. Refine the OGMA name to reflect the objective, e.g., biodiversity, iconic, ancient, recreation, spiritual, etc.
3. Add new age classes to the current inventory system.
    a. Recommend 250-500 years, 500-1,000 years and 1,000 years plus (confirm these new age class definitions with old forest experts).
4. Refine mapping of all old forest in the province:
    a. 100+ years for the interior, 140+ years for the coast;
    b. Do at a relatively detailed level;
    c. Ideally this would adopt the use of LIDAR for these areas; and
    d. Continually verifying that OGMAs have the intended attributes through LIDAR, ground-truthing, or other means.
5. Establish a program with industry to acquire their inventory information for public use.

12. Innovative Silviculture Systems

Create a silviculture innovation program aimed at developing harvesting alternatives to clearcutting that maintain old forest values.



Rationale:

1. **Improve Acceptance:** The clearcut (including clearcut with reserves) silviculture system is the mainstay of the BC forest industry because, as numerous industry representatives told the panel, it is the most cost-effective. However, this system is also the most contentious because it often significantly compromises many other values on the land (e.g., biodiversity, tourism, Indigenous sustenance use) and many ecosystem services. Most of the communities, local governments, local organizations and citizens we interviewed from across the province told us they were frustrated that their landscapes were being cleared, their local values were being compromised (particularly water supply) and they were getting little or no local return or compensation for these impacts. Areas that used gentler silviculture systems to mimic NDT patterns or enhance ecosystem services (e.g., water retention, visual, and habitat), were generally deemed more acceptable.

2. **Ecosystem Heath:** Managing for ecosystem health and low biodiversity risk requires maintaining a percentage of the ecosystem in as close to its original state as possible, but very few of BC's NDTs yield stands look or function like clearcut systems. Even the fire-dominated northern NDT 3 areas (frequent stand replacing events) yield landscapes that are a mixture of species, standing dead and live trees and varying structure. Managing for attributes that mimic the NDT type can support ecosystem health at a stand and a landscape level plus preserve the integrity of many ecosystem services.

3. **Increase Access:** Using silviculture systems that are more gentle and manage for multiple values are generally more acceptable to the wider public because they tend to be gentler on the land, have a higher chance of protecting important community ecosystem services and result in forests that are more appealing because they look more like the pre-harvest forests. As the public gains trust with these systems, they should generally become more amendable to timber harvesting thus increasing access to the forest land base.

4. **Reduce Conflict:** In much of British Columbia, the forest industry has played out as clearcut or no-cut, often with little attempt to manage for multiple values. This tends to foster an all or nothing approach, i.e., allow or don't allow industrial activity, which leads to tensions and compromises that may not be necessary if more balanced options were available. The variable retention system used on parts of the Coast starts to move away from this hard distinction, as do selective systems in the Interior Douglas Fir zone. While conventional clearcut harvesting (with appropriate measures to protect water, soil, and critical habitat) may still be appropriate in a few areas (e.g., second growth plantations), other approaches are needed to achieve additional public objectives across the land base.

5. **Operational Efficiency:** There are pockets that use, and there have been sporadic attempts at creating, silviculture systems that manage for multiple values and are more acceptable to the public, but they generally didn't get the appropriate support, have a longer-term program framework and/or become adopted a wider scale. Having a dedicated program that designs, operationally tests,

measures, and reports on silviculture systems aimed at optimizing a suite of ecological and socio-economic objectives at an operational level increases options available to forest managers.

6. **Increase Overall Returns:** The current clearcut systems preserve relatively few valuable ecosystem services. There are examples of alternate systems such as Interior Douglas Fir on dry sites, where continuous shelterwood systems are needed because clearcut sites are generally too hot for seedling survival. Due to climate change, this same condition may also be true of Cedar-Hemlock sites in the near future. Alternate silviculture systems tend to preserve more of the inherent ecosystem services (e.g., Shelter for seedlings, filtered water, cooler streams for fish, carbon storage, habitat), make the area more conducive for other forest sector businesses, and reduce mitigation costs for other sectors, all of which in turn tend to increase overall net returns from those areas.

Implementation Advice:

1. Implement a program that supports a collaboration of industry, operations practitioners and scientists to develop and implement a set of silviculture systems that are cost-effective and maintain or enhance other values, e.g., maintain each NDTs old forests as close as possible to their inherent states, water retention, habitat, etc.
2. Develop partnerships with:
    a. Other governments (e.g., Forestry Canada and Indigenous);
    b. Existing research organizations (e.g., FP Innovations, universities, non-profits);
    c. Forest licensees (especially community forests and other area-based licensees);
    d. BC Timber Sales program;
    e. Local governments and water purveyors;
    f. Wildlife management programs;
    g. BC Climate Action Secretariat; and
    h. Other potential public and private sector collaborators.
3. Test a series of silviculture systems and variations to achieve the previous goals, i.e., manage old forests to effectively achieve a defined suite of values and objectives, recruit and encourage old forest attributes where required to meet long-term objectives; and demonstrate and encourage new practises.
4. Once tested, make these proven silviculture systems the default requirement for each NDT and/or ecosystem type and provide clear guidance on when these systems might be varied because of local operational constraints.
5. Ensure that there is support for operations to effectively utilize these systems, such as:
    a. Facilitate communication and collaboration across jurisdictions and disciplines;
    b. Facilitate knowledge transfer to practitioners;
    c. Involve local residents and stakeholders; and
    d. Ensure that the stumpage system provides appropriate offsets to cover extra costs.

Orderly Transition

13. Transition Planning at the Provincial and Local Levels

Once developed, implement the new policies and strategies for the management of old forests through mandatory provincial and local transition plans that define, schedule and monitor the process.

Rationale:

1. **Credibility**: Past attempts at changing the management system for old forests have not been as effective as they could have been because they lacked formal implementation plans, comprehensive implementation, appropriate resourcing and effective public accountability mechanisms. In light of this history, there is significant skepticism about this current Old Growth Management review process. This can be mitigated to some degree by planning for results with mandatory, publicly accountable transition plans.

2. **Avoid Unnecessary Harm**: In the absence of mandatory, publicly accountable transition plans, history has shown us that we tend to fall back to old habits, further compromise ecosystem health, continue to impact other forest values and create more negative socio-economic impacts.

3. **Proactive:** The primary forest is finite and diminishing, and each area's transition requirements vary depending on how much primary forest currently exists, economic conditions (expansion or contraction of the THLB) and land-use decisions. Areas that proactively plan for this transition generally have more options than areas that only react to the situation when they run out of available timber.

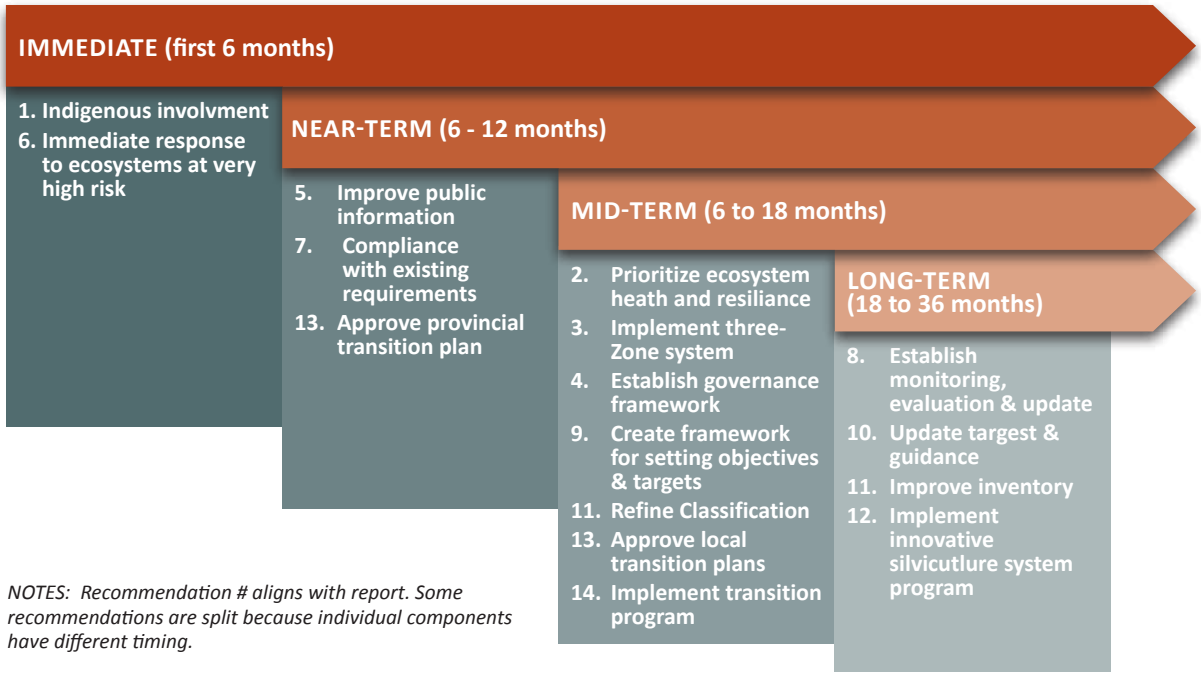
4. **Stability:** At a larger scale, these transitions are attempting to address destabilizing events, but it is possible to provide some level of stability by proactively planning ahead, being accountable for achieving targets in mutually supported mandatory plans and having the ability to adjust those plans as circumstances evolve. These parameters improve an area's ability to adjust their trajectory and work their way through inevitable economic cycles.

Implementation Advice:

1. Recognize that transitions will occur at:
    a. The provincial level from the resultant old forest policy and strategy that will arise from these recommendations; and at
    b. The local level from:
        i. Deferrals and long-term strategies to address immediate threats to ecosystems;
        ii. Moving to compliance with current biodiversity targets; and
        iii. adopting updated biodiversity targets, OGMA guidelines and practices.
2. Immediately engage Indigenous leadership at the appropriate level (provincial and/or local) in each of these transitions (this includes developing a quick response plan to recommendation #6).
3. Review the government's internal organization to ensure that the strategies and priorities for management of old forests will be successfully implemented:
    a. Inter-ministry accountabilities, authorities, and coordination;
    b. Clear cross-government priorities and direction to staff;

c. Adequate staffing and resources;
d. Support for the new planning systems; and
e. Effective multi-disciplinary processes.

4. Develop and formally approve an overall implementation plan that will accompany the provincial old forest policy and strategy that will result from this report's recommendations. Implementation recommendations include:
   a. Done under a Province-Indigenous government-to-government umbrella;
   b. Needs to engage various government, scientific, operational and planning experts; and
   c. Should include a clear schedule (the following provides an overview of the panel's view on prioritization and broad scheduling of the recommendations in this report).



NOTES: Recommendation # aligns with report. Some recommendations are split because individual components have different timing.

5. Provide for local transition plans in legislation (perhaps initially in FRPA and the Old & Gas Activities Act, but eventually in the new proposed overarching legislation).
   a. Make transition plans a mandatory consideration in AAC determinations by including a new clause in the *Forest Act* Section 8(8)(a).
   b. Provide direction and authority to statutory decision makers to consider the impact of authorizations on the objectives of a transition plan.
6. Develop government-led local transition plans on a scheduled, prioritized basis.
   a. Begin immediately in management units with the:
      i. Highest risk to biodiversity;
      ii. Most constrained timber supply (hard to find the AAC); or
      iii. High public values in the primary forest that are not compatible with conventional timber harvesting.
   b. Complete remaining plans in conjunction with scheduled TSRs.
7. Recognize the unique ecological, social, economic, and timber supply circumstances of each management unit and its dependent communities and develop a plan specific to its needs.
   a. Develop implementation plans collaboratively with the most directly affected communities.
   b. Recognize and address the potentially disproportional impact on small area-based tenures.
   c. Conduct a realistic assessment of economic diversification opportunities and options, including the time required to realize them, and the probability of success (could be value-added manufacture of wood products, botanical forest products, tourism, and commercial recreation, etc.). Ensure they are viable options — not just ideas.

   d. Assess the opportunities/suitability of the forest to alternative silviculture systems outside the Converted zone.
   e. Assess timber operations' dependence on old forests for economic viability and possible transition to second growth.
8. Review the stumpage system to evaluate: the true direct and indirect costs and effects of silviculture systems that are carried out; its effect on the Province's ability to meet biodiversity targets and other established old forest objectives; and its effect on potential silviculture innovation.
9. Explore the potential of a land acquisition fund to enable the purchase of land or covenants to retain or recruit old forest in ecosystems at high biodiversity risk, or otherwise of high public interest.
10. Report publicly on implementation of transition plans.

14. Transition Support for Communities

Support forest sector workers and communities as they adapt to changes resulting from a new forest management system.

Rationale:

1. **Proactive versus Reactive:** There are already a number of areas in the province that are facing significant economic restructuring because they are at or near the point of diminished timber supply. It is much better to be proactive and manage this transition when we still have options versus reacting to a crisis when it is upon us, e.g., a mill shutdown.

2. **Local Dependence:** The importance of the forest sector to the economy and social well-being of the province as a whole is diminishing but still important. This broader picture belies the fact that there are still a significant number of local areas that are highly dependent on this sector and any transition away from a timber-based economy will drive deep into the core and possibly even the economic survival of those areas. Those communities will need support to reform themselves now and develop other options while they still have choices.

3. **Fairness:** We live in a society where the generally accepted convention is to support communities that bear a disproportional share of the negative consequences from broader societal decisions. The support we provide them should be sufficiently substantive to meaningfully mitigate the effects of those consequencess.

4. **Foster Confidence:** There is a tremendous amount of local uncertainty and lack of confidence within the timber sector, and it is too late to pretend that things are fine or to try to avoid the inevitable shortages of timber. Areas that are facing economic changes are generally aware that negative changes are coming, and they need support in planning a scheduled change. This will help foster confidence and support for the larger system in those areas.

5. **Improve Local Economies:** There are still forest-based economic options that can be realized in many areas. On their own, these options may not offer the same level of local employment or economic spin-offs as the timber sector in the short-term, however they may be much more sustainable in the long-term. There are still probably significant opportunities for continued local timber sector benefits if new innovative systems can be used.

Implementation Advice:

1. Require a socio-economic transition plan for every area where the forest transition plan may result in a higher negative impact than a defined threshold to local, regional or provincial social and economic values.
2. Provide adequate funding for plan implementation, including:
    a. Capacity to investigate and facilitate local and regional economic opportunities;
    b. Bridge financing assistance for businesses;
    c. Workforce adjustment; and
    d. Conservation funding (e.g., carbon, biodiversity).
3. Develop and implement policies and programs aimed directly at promoting local manufacture, especially for value-added specialty and high-value products.
4. Develop and implement policies and programs aimed directly at generating sustainable economic benefits from forest-focused tourism, e.g., Improved access, facilities and interpretation for visiting big trees and unique ecosystems (e.g., Similar to Cathedral Grove, Ancient Forest Recreation site etc.) and other non-timber forest businesses.
5. Review existing administrative practices, including the stumpage system, to ensure they do not inhibit local economies.

Spruce –Lady fern-Oak fern ecosystem.
Photo courtesy Deb MacKillop.

In Closing...

High-elevation old forest in Babine Mountains near Smithers.
Photo by Al Gorley

IN CLOSING…

Our strategic review of the management of old forests led us to conclude that despite the good intentions and efforts of many people, including government personnel associated with forest management development and implementation, the overall system of forest management has not supported effective implementation or achievement of the stated public objectives for old forests. This has not come about because of any one group or decision, but by a pattern of many choices made over several decades, within an outdated paradigm.

Our current system of forest management emerged in the middle of the of the 20th century, when the provincial policy was focused on generating economic wealth and "building the province" by monetizing the vast natural supplies of timber and converting them to tree farms. Only later, especially through the 1990s, did conservation and management for ecological values across the landscape receive serious attention. Since that time, a great deal of effort has gone into creating protected areas, planning for multiple uses of forest lands, and designing systems to manage forest practices that respect a range of values including biological diversity. The underlying timber policy remained oriented toward a sustained yield of timber but was now somewhat constrained by these new policies and practices.

Our ever-expanding understanding of forest behavior and management, as well as the effects of climate change, have made it clear that we can no longer continue to harvest timber and manage forests using the approaches we have in the past while also conserving the forest values we cherish. We therefore have to be honest with ourselves and collectively and transparently make the difficult choices necessary to ensure future generations of British Columbians can enjoy and benefit from our magnificent forests, as we have done.

Recently planted woodlot near Port Hardy.
Photo by Trevor Pancoust

Old dry pine forest in the Interior.
Photo by Al Gorley

OUR LAND IS OUR FUTURE

UNION OF BRITISH COLUMBIA INDIAN CHIEFS

FOUNDING HEAD OFFICE
209 - 345 Chief Alex Thomas Way
Kamloops, B.C. V2H 1H1
Tel: 250-828-9746
Fax: 250-828-0319

VANCOUVER OFFICE
401 - 312 Main Street
Vancouver, B.C. V6A 2T2
Tel: 604-684-0231
Fax: 604-684-5726
1-800-793-9701
Email: ubcic@ubcic.bc.ca
Web: www.ubcic.bc.ca

UNION OF B.C. INDIAN CHIEFS
52ND ANNUAL GENERAL ASSEMBLY
SEPTEMBER 29TH TO 30TH, 2020
VIRTUAL MEETING

Resolution no. 2020-23

RE: Implementation of an Old Growth Strategy that Protects First Nations' Welfare and Endangered Old Growth Forests

WHEREAS Indigenous peoples sustain vital cultural and spiritual relationships with the environment and have derived their livelihoods, way of life, health, and well-being from the care and stewardship of their lands and waters since time immemorial;

WHEREAS old-growth forests are considered "heritage habitats" with ancient trees, some up to 2,000 years old, that not only play an integral ecological role in the biodiversity and health of BC ecosystems, but possess incalculable cultural value and significance for First Nations who use old-growth yellow and red cedar for traditional purposes, such as clothing and regalia, canoes, totem poles, and long houses;

WHEREAS logging has reduced the grandest stands within the ancient temperate rainforest in BC to less than 3% of its original size and despite Vancouver Island's old-growth forests approaching extinction, the government agency BC Timber Sales (BCTS) and private corporations are responsible for the logging of irreplaceable swathes of ancient trees, including those in Nuu-chah-nulth territories and the Nahmint Valley in Hupacasath and Tseshaht First Nations territories;

WHEREAS the *United Nations Declaration on the Rights of Indigenous Peoples*, which the government of Canada has adopted without qualification, and has, alongside the government of BC, committed to implement, affirms:

Certified copy of a resolution adopted on the 29th day of September of 2020, through virtual engagement

Grand Chief Stewart Phillip, President

Article 19: States shall consult and cooperate in good faith with the indigenous peoples concerned through their own representative institutions in order to obtain their free, prior and informed consent before adopting and implementing legislative or administrative measures that may affect them.
Article 26(1): Indigenous peoples have the right to the lands, territories and resources which they have traditionally owned, occupied or otherwise used or acquired.
(2) Indigenous peoples have the right to own, use, develop and control the lands, territories and resources that they possess by reason of traditional ownership or other traditional occupation or use, as well as those which they have otherwise acquired.
(3) States shall give legal recognition and protection to these lands, territories and resources. Such recognition shall be conducted with due respect to the customs, traditions and land tenure systems of the indigenous peoples concerned.
Article 29(1): Indigenous peoples have the right to the conservation and protection of the environment and the productive capacity of their lands or territories and resource; and

WHEREAS around 4/5ths of old-growth logging done on Crown land is attributed to private companies who are encroaching into increasingly controversial and endangered areas of ancient forests that hold irreplaceable cultural value for Indigenous Nations and, rather than being destroyed in the short-term, could be left standing to accrue long-term value as part of a diverse economy;

WHEREAS although the provincial government claims 55% of old-growth forests on Crown land in B.C.'s coastal region are protected from logging, the majority of the protection extends over the Great Bear Rainforest and fails to protect much of the old-growth on Vancouver Island where there are several private companies which — combined with BCTS logging — are clearcutting about 10,000 hectares of old-growth a year, or more than 30 soccer fields per day;

WHEREAS logging in the Nahmint Valley has led to the felling of some of the largest and oldest trees in the province, and after the Ancient Forest Alliance submitted a complaint in 2018 to the compliance and enforcement branch at B.C.'s Ministry of Forests, Lands and Natural Resource Operations and Rural Development (FLNRORD), two subsequent investigations revealed that the BCTS was violating old-growth management plans and protection rules, as well as Vancouver Island's official Land Use Plan which designates the Nahmint Valley as a Special Management Zone with a critical mass of old-growth that needs to be retained;

WHEREAS it is deeply concerning that despite making recommendations that the BCTS should put a hold on future harvesting tenures and be prevented from legalizing new old-growth management areas until they address ongoing overcutting, the senior compliance and enforcement specialist conducting the internal investigation of BCTS was told to close his investigation and that the government would not charge the agency;

WHEREAS the current landscape of old-growth logging has been exacerbated by years of the BC government fostering an economic dependence on old-growth for First Nations communities by arranging

agreements for revenue-sharing, employment, joint ventures, and tenures in old growth timber in contentious areas for First Nation bands who face limited economic opportunities as a result of years of colonialism and racism;

WHEREAS the provincial government has allowed BCTS and logging companies to over-harvest old growth and to operate with no accountability and repercussions for their infractions and compliance issues, allowing low enforcement standards to jeopardize salmon-bearing streams and other wildlife habitat already under duress from the climate crisis, forest fires, and carbon emissions linked to intensive development and logging;

WHEREAS a conservation financing model similar to the one administered by Coast Funds in the Great Bear Rainforest can be applied to Vancouver Island in order to permanently finance First Nations stewardship, sustainable economic development, and the conservation of old growth;

WHEREAS the First Nation Forestry Council (FNFC) has a mandate that includes advocating on forestry matters on behalf of BC First Nations, and by UBCIC Resolution 2012-14 "Support for First Nations Leadership Council Renewing its "Declaration & Protocol of Recognition, Support, Cooperation and Coordination with the First Nations Forestry Council" and UBCIC Resolution 2016-15 "Support for First Nations Forestry Council and Improved Forest Range Revenue Sharing and Tenure Solution," UBCIC has consistently supported the work of the FNFC;

WHEREAS the FNFC has worked to develop and implement a BC First Nations Forest Strategy that will allow for increased revenue sharing, shared decision-making, and the meaningful involvement of BC First Nations as full partners in the forest sector, and by UBCIC Resolution 2019-24 the UBCIC Chiefs Council fully supported the draft BC First Nations Forest Strategy and Implementation Plan, which provides a supportive framework for increasing the role of First Nations in the management and protection of old-growth forests;

WHEREAS the BC government must consult with and learn from First Nations land and forestry plans and practices, and work in partnership with First Nations to develop sustainable timber harvesting policies that support the UN Declaration, the BC First Nations Forestry Strategy, and First Nations' need to retain sufficient old-growth for spiritual and cultural purposes;

WHEREAS logging now threatens the Fairy Creek watershed near Port Renfrew, the last unlogged old-growth valley on south Vancouver Island, and activists and land defenders have set up road blockades in August 2020 to prevent clear-cutting from destroying the local environment;

WHEREAS an Old Growth Review Panel appointed by the B.C. government in 2019 was to provide a report and draft recommendations for a new approach to old-growth management in the spring of 2020 following a public engagement process, but the province did not meaningfully consult with First Nations, including the First Nations Forestry Council who had requested to be a part of the review panel;

WHEREAS on April 30, 2020, the Old Growth Review Panel presented its report to the Province which concluded that years of mismanagement and the inconsistent application of previous old-growth and conservation plans have led to the current old forest challenges, and included 14 recommendations to guide a four-phased process to develop and implement an old growth strategy that consists of immediate, near-term, mid-term, and long-term actions;

WHEREAS after significant delay, the Province finally released the old growth report and recommendations to the public on September 11, 2020, alongside the announcement of the deferral of old-growth logging within more than 350,000 hectares and the protection of up to 1,500 giant trees;

WHEREAS although the report and the Province's renewed commitment to old growth are promising steps, there are still many concerns, including how BC is continuing with plans to log old growth and critical caribou habitat in the Argonaut Valley north of Revelstoke, and how the logging deferral still leaves almost half of the province's old growth unprotected, does not include vulnerable areas such as the Fairy Creek area, and leaves the most at-risk and contentious areas for First Nations to log while privileging industrial forest corporations; and

WHEREAS although decisions regarding old-growth are a Title and Rights subject, the government has enabled a dangerous and irresponsible system that deprives Indigenous Nations of their consent and leaves them most contentious and at-risk areas for logging: their consent is only honored and recognized when it is given to protect old-growth, but it is never sought and respected by the government when it comes to the destruction of old-growth.

THEREFORE BE IT RESOLVED the UBCIC Chiefs-in-Assembly fully support the First Nations and allies who are protesting the negligent logging and clear-cutting practices enabled by the BC government that have undermined First Nations Title and Rights and pushed Vancouver Island's old-growth forests to the brink of collapse;

THEREFORE BE IT FURTHER RESOLVED the UBCIC Chiefs-in-Assembly fully support the Old Growth Strategic Review Panel's report and recommendations that are vital to creating a new, sustainable old growth strategy, and call upon the provincial government to take immediate and sustained action to ensure that the report's recommendations are carried out, with First Nations included and consulted every step of the way;

THEREFORE BE IT FURTHER RESOLVED the UBCIC Chiefs-in-Assembly call upon the BC government to provide more details on its plan to shift logging deferrals to permanent protection, and working in partnership with impacted First Nations, to engage in discussions on expanding these deferrals to include all threatened old-growth forests, including areas like the Walbran Valley, Nahmint, Fairy Creek, Tsitika Valley, Mt. Elphinstone, Argonaut Creek.

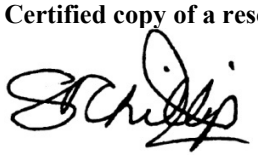
THEREFORE BE IT FURTHER RESOLVED the UBCIC Chiefs-in-Assembly direct the UBCIC Executive and staff to work with other like-minded organizations to urge the provincial and federal

governments to provide dedicated funding for First Nations Indigenous Protected and Conserved Areas (IPCAs) and First Nations land use plans, as well as financial support for First Nations communities to manage and steward ICPAs, purchase and protect private lands with old-growth, and pursue conservation-based businesses and economies, including cultural and eco-tourism businesses, clean energy, and second-growth forestry;

THEREFORE BE IT FINALLY RESOLVED the UBCIC Chiefs-in-Assembly urge the Ministry of FLNRORD to consult and engage with First Nation communities and organizations, including the First Nations Forestry Council and the First Nations Leadership Council, to develop and implement a renewed old-growth strategy that entrenches Indigenous consent into its processes; is aligned with the principles of the UN Declaration, the Old Growth Strategic Review recommendations, and the BC First Nations Forestry Strategy; is supported by strong enforcement and compliance standards; and is intended to support sustainable old-growth cultural harvesting as an important First Nations livelihood and source of culture.

Moved: **Spokesperson Chris Syeta'xtn Lewis, Squamish Nation**
Seconded: **Terry Dorward, Tla-o-qui-aht First Nation (Proxy)**
Disposition: **Carried**
Date: **September 29, 2020**

Certified copy of a resolution adopted on the 29th day of September of 2020, through virtual engagement



Grand Chief Stewart Phillip, President

VILLAGE OF TAHSIS

BYLAW NO. 637, 2021

A BYLAW FOR THE VILLAGE OF TAHSIS RESPECTING THE FINANCIAL PLAN FOR THE FIVE-YEAR PERIOD 2021 –2025

WHEREAS under the *Community Charter*, a Council must adopt, by bylaw, a Five-Year Financial Plan;

NOW THEREFORE, the Council of the Village of Tahsis, in open meeting assembled, enacts as follows:

1. Schedule "A" and Schedule "B" attached hereto and made part of this Bylaw is hereby declared to be the Financial Plan of the Village of Tahsis for the years 2021-2025 inclusive.

2. This Bylaw may be cited for all purposes as the "2021-2025 Financial Plan Bylaw No. 637, 2021".

READ a first time this	4th	day of May, 2021
READ a second time this	4th	day of May, 2021
READ a third time this	4th	day of May, 2021
Adopted this	11th	day of May, 2021

_____ _____

MAYOR CORPORATE OFFICER

I hereby certify that the foregoing is a true and correct copy of the original Bylaw No. 637, 2021 duly passed by the Council of the Village of Tahsis on this 11th day of May, 2021.

_____

CORPORATE OFFICER

Village of Tahsis
Bylaw No 637, 2021
2021-2025 Financial Plan

SCHEDULE "A"

Operational Revenues	**2021**	**2022**	**2023**	**2024**	**2025**
Taxation					
Property taxes	$ 792,815	$ 832,456	$ 874,079	$ 917,783	$ 963,672
Grants in lieu of taxes	11,650	12,233	12,844	13,487	14,161
Fees					
User fees and charges	130,700	133,314	135,980	138,700	141,474
Water	168,350	171,717	175,151	178,654	182,227
Sewer	187,000	190,740	194,555	198,446	202,415
Environmental health	154,240	157,325	160,471	163,681	166,954
Other sources					
Grants/other governments	678,003	425,380	425,380	425,380	425,380
Investment income	73,500	74,970	76,469	77,999	79,559
	$ 2,196,258	$ 1,998,135	$ 2,054,930	$ 2,114,129	$ 2,175,842
Operational Expenditures					
General government	$ 958,874	$ 978,052	$ 997,613	$ 1,017,565	$ 1,037,916
Protective services	190,552	194,363	198,250	202,215	206,259
Environmental health	106,414	108,543	110,713	112,928	115,186
Public works services	321,279	327,704	334,258	340,943	347,762
Recreation, cultural & dev. services	311,522	317,753	324,108	330,590	337,202
Water services	168,381	171,748	175,183	178,687	182,261
Sewer services	186,888	190,626	194,438	198,327	202,293
Amortization	409,566	417,757	426,112	434,635	443,327
	$ 2,653,475	$ 2,706,545	$ 2,760,676	$ 2,815,889	$ 2,872,207
Net operating surplus / (deficit)	$ (457,217)	$ (708,410)	$ (705,745)	$ (701,760)	$ (696,365)
Reserves, capital and debt					
Capital expenditures	$ (2,569,080)	$ (5,794,128)	$ (1,431,189)	$ (575,000)	-
Proceeds from debt	-	1,496,457	309,922	366,519	
Community donations	-	40,000	-	-	-
Capital grants	2,422,974	3,712,184	982,530	-	-
Reserves for Capital projects	146,106	545,487	138,737	208,481	
Transfer equity in capital assets	409,566	417,757	426,112	434,635	443,327
Net transfer from reserves	47,651	290,653	279,633	267,125	253,037
Financial Plan Surplus / (Deficit)	$ 0	$ 0	$ 0	$ (0)	$ (0)

Village of Tahsis
2021-2025 Financial Plan – Bylaw No. 637, 2021
Financial Plan Statement
Schedule "B"

In accordance with Section 165 (3.1) of the *Community Charter* the Village of Tahsis is required to include in its 5-year Financial Plan (2021-2035):

A) The objectives and policies of the municipality for the 5-year planning period in relation to each of the funding sources and the proportion of total revenue from each funding source; and

B) The distribution of property value taxes among the property classes that may be subject to taxes; and

C) The Use of permissive tax exemptions.

A. Proportion of Total Revenues by Source

Objective

The Village will continue to review the proportion of revenue that is received from each source and seeks to balance the sources by seeking out new user fees, available grants and maximizing investment returns.

Policies

The Village continues to review user-fees and charges to ensure that they adequately reflect the full cost of recovery within each utility. Where possible, the Village endeavours to supplement revenues from user fees and charges, rather than taxation, to lessen the burden on a limited tax base. Additionally, alternate revenue sources are continually examined to reduce the reliance on property taxes as the major source of funding.

Table 1: Funding Sources, 2021

Revenue Source	Dollar Value	% of Total Revenue
Property Taxes	$ 804,466	36.2%
User fees and charges	640,290	29.3%
Grants, including capital grants	678,003	31.1%
Investment Income	73,500	3.4%
Total Revenue	$ 2,196,258	100.0%

B. Distribution of Property Taxes Across Property Classes

Objective

To ensure an equitable distribution of tax burden across all property classes.

Policies

Over the term of the plan, municipal property taxes are distributed across six property tax classes as per Table 2 below. The Village regularly reviews the class distribution and makes adjustments when necessary with the goal to attracting and sustaining economic development.

Table 2: Distribution of Village of Tahsis Property Taxes, 2021

Class 1 - Residential	$ 447,909	58.09%
Class 2 - Utilities	33,462	4.34%
Class 5 - Light Industry	147,694	19.15%
Class 6 – Business/Other	94,616	12.27%
Class 7 - Managed Forest	37,635	4.88%
Class 8 - Recreational	9,773	1.27%
Total	$ 771,089	100.0%

C. Permissive Tax Exemptions

Objective

Council may utilize its authority under the *Community Charter* to provide permissive exemptions to property owners who contribute to the community's social and environmental well-being, for example, greenhouse gas reduction, affordable housing, and Village revitalization.

Policies

Permissive exemptions are granted to not-for-profit organizations that form a valuable part of and provide services to the community. In 2018 the Village, through Bylaw No. 609, granted a tax exemption, through to 2028, to the property located at 744 Nootka Road, the Bishop of Victoria, for 50% of the land value with estimated tax to be $605 in 2021

VILLAGE OF TAHSIS

Report to Council

To: Mayor and Council

From: Ian Poole, CFO

Date: April 27, 2021

Re: 2021 Tax Rate Information

PURPOSE OF REPORT:

To provide Council with additional information regarding the composition of 2021 property taxation from all agencies.

OPTIONS/ALTERNATIVES

1. For receipt of information.

BACKGROUND:

Staff and Council have been involved with budget discussions, via public electronic meetings, for the past 4 months. At the most recent Council meeting held on April 20th, the CFO gave a formal public budget presentation. This presentation covered the current year (2021) operating budget and a 5-year capital budget (2021-2025) and identifies the spending categories and their proposed funding sources. From feedback obtained at that meeting it appears that the presentation was well received.

Further, at that meeting, Council adopted a motion to direct staff (the CFO) to proceed with creating the requisite financial plan and tax rate bylaws incorporating the financial information contained in the presentation.

POLICY/LEGISLATIVE REQUIREMENTS:

1. The Community Charter S 165 requires Council to adopt a 5 Year Financial Plan prior to May 15th of the year and a current year Tax Rate Bylaw by the same date. These bylaws are on the agenda for the Regular Meeting of May 4th, 2021.

FINANCIAL IMPLICATIONS:

Throughout the process Council was always concerned about the impact on taxpayers for the "other agency" taxes even though Council has no power to influence those taxes with the exception of the Strathcona Regional District levy in that the Mayor is a sitting member of that Board and also the VIRL levy which Councillor Llewellyn is a liaison to that Board.

Table 1 below shows the dollar value of those agency fees and their respective change from 2020. While some of the percentage increases appear high the dollar values are relatively insignificant (except School levies) especially when viewed as being collected by all taxpayers across all tax classes.

Table 1 - Other Agency Taxation

	2021	2020	$ diff	% diff
VI Regional Library	12,497	11,207	1,290	11.51%
Strathcona RD	12,848	10,983	1,865	16.98%
CS Waste Mgmt	8,445	9,234	(789)	-8.55%
CS Regional Hospital	21,411	26,345	(4,934)	-18.73%
School	218,421	196,822	21,599	10.97%
Police	14,937	14,179	758	5.35%
BC Assessment Authority	2,675	2,418	257	10.63%
	291,234	271,188	20,046	7.39%

Incorporating the above "other agency" fees with our municipal property taxation results in the total taxation that a taxpayer will experience on their 2021 tax notice.

Table 2 below depicts a taxation notice for the average single-family residential home with an assessed value of $125,396.

Table 2 -Average residential taxation notice - 2021

Average residential assessment -	$125,396
Jurisdiction	$
Municipal	1,274
VI Regional Library	21
Strathcona RD	29
CS Waste Mgmt	19
CS Regional Hospital	48
School	503
Police	33
BC Assessment Authority	5
Sub-total	1,932
Garbage User Fee	93
Water User Fee	346
Sewer User Fee	392
Total	2,763

Of course from this total a homeowner can deduct their Home Owner Grant of either $770 or $1,045 if they qualify for the additional grant (generally seniors).

Note – new for 2021 is that the application process for claiming a Home Owner Grant is done on-line through the Province of BC's web portal and not through the Village office or webpage as in past years.

Also new for 2021 is that for commercial water and sewer users we are incorporating these annual charges onto their property taxation notice rather than sending them a separate utility invoice. This will have added impact of seeing a larger taxation notice but they need to keep in mind no further invoice will be sent.

Finally, Figure 1 below is a pie chart that depicts " Where your Taxes Go - 2021" – this is an update from the pie chart that was presented at the April 20th Council meeting which was data for the 2020 taxation year.

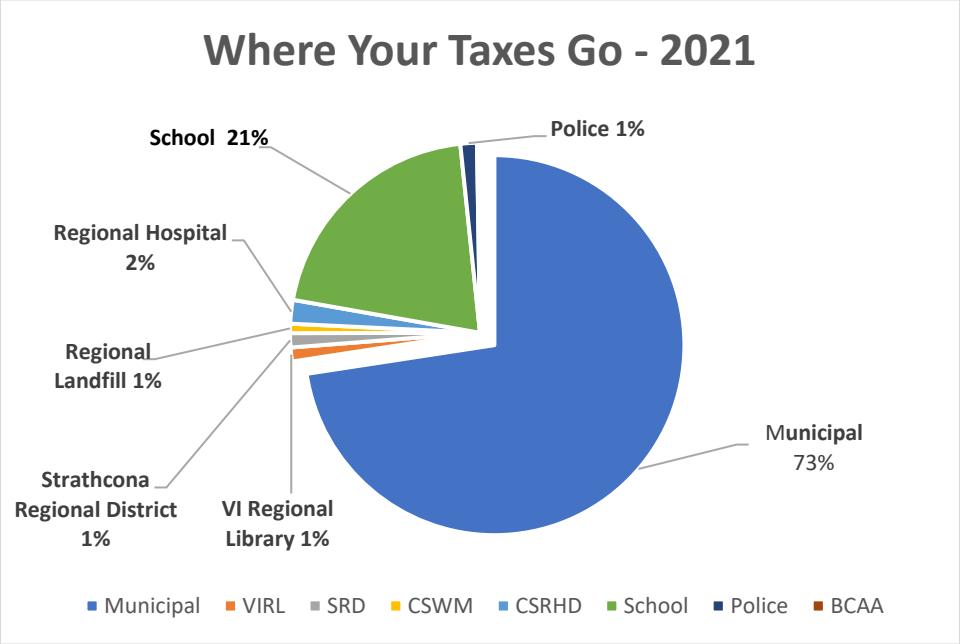


FIGURE 1 – WHERE YOUR TAXES GO - 2021

STRATEGIC PRIORITY:

Council's strategic priorities have been considered and whereby applicable have been incorporated into the Financial Plan.

RECOMMENDATION:

Option 1.

Respectfully submitted:

Ian C. Poole, CFO

Mark Tatchell, CAO

VILLAGE OF TAHSIS

BYLAW NO. 638, 2021

A BYLAW FOR THE LEVYING OF RATES FOR GENERAL MUNICIPAL, REGIONAL LIBRARY, REGIONAL DISTRICT, WASTE MANAGEMENT, REGIONAL HOSPITAL DISTRICT PURPOSES FOR THE YEAR 2021.

WHEREAS pursuant to section 197 of the Community Charter, Council must, by bylaw, impose property value taxes for the year by establishing the tax rates for the municipal revenue proposed to be raised from property value taxes and the amounts to be collected by means of rates established by the Village's taxing obligations in relation to another local government or other public body;

NOW THEREFORE the Council of the Village of Tahsis in open meeting assembled enacts as follows:

1. Definitions

1.1. Collector means the municipal officer assigned responsibility as Collector of taxes for the municipality and includes all persons appointed or designated by the Collector to act on their behalf.

2. Tax Rates for General Municipal Purposes

The rates and taxes named under this Bylaw are hereby imposed, levied, raised and collected for the year 2021 for the purposes stated and shall be payable in Canadian funds to the Collector at the Village of Tahsis, BC.

2.1 For all lawful General Municipal purposes of the Village of Tahsis on the assessed value of land and improvements taxable for General purposes, rates appearing in column 'A' of Schedule "A" attached hereto and forming a part of this Bylaw;

2.2 For Regional Library purposes of the Village of Tahsis on the assessed value of land and improvements taxable for General purposes, rates appearing in column 'B' of Schedule "A" attached hereto and forming a part of this Bylaw.

2.3 For Strathcona Regional District purposes of the Village of Tahsis on the assessed value of land and improvements taxable for Hospital purposes, rates appearing in column 'C' of Schedule "A" attached hereto and forming a part of this Bylaw;

2.4 For Comox Valley Regional District Services: Solid Waste Management purposes of the Village of Tahsis on the assessed value of land and improvements taxable for Hospital

purposes, rates appearing in column 'D' of Schedule "A" attached hereto and forming a part of this Bylaw;

2.5 For Comox-Strathcona Regional Hospital District purposes of the Village of Tahsis on the assessed value of land and improvements taxable for Hospital purposes, rates appearing in column 'E' of Schedule "A" attached hereto and forming a part of this Bylaw;

3. Penalties

3.1 The Collector of the Village of Tahsis shall add to the unpaid taxes of the current year, for each parcel of land and its improvements of the property tax roll, 10% of the amount of the current year taxes which remain unpaid after July 2, 2021 and the said unpaid taxes together with the amount added as aforesaid shall be taxes of the current year due on such land and its improvements.

3.2 Tax rates and percentage additions caused as a result of a supplementary roll prepared under the Assessment Act shall be executed in accordance with section 241 of the *Community Charter*.

3.3 The tax rates and taxes imposed under this Bylaw shall be payable at the offices of the said Collector at the Village of Tahsis Municipal Hall, 977 South Maquinna Drive, P.O. Box 219, Tahsis, BC, V0P 1X0, no later than 4:00 pm on July 2, 2021.

3.4 Any and all amounts payable under this Bylaw shall be payable at the offices of the said Collector at the Village of Tahsis Municipal Hall, 977 South Maquinna Drive, P.O. Box 219, Tahsis, BC, V0P 1X0.

4 Citation:

This Bylaw may be cited for all purposes as the "Tax Rates Bylaw No. 638, 2021".

READ a first time this	4th day of May, 2021
READ a second time this	4th day of May, 2021
READ a third time this	4th day of May, 2021
Adopted this	11th day of May, 2021

_____ _____

MAYOR CORPORATE OFFICER

I hereby certify that the foregoing is a true and correct copy of the original Bylaw No. 638, 2021 duly passed by the Council of the Village of Tahsis on this 11th day of May, 2021.

_____

CORPORATE OFFICER

Village of Tahsis
Tax Rates Bylaw No. 638, 2021

Schedule "A"

The following rates shall apply on each thousand dollars of the assessed taxable value of land and its improvements:

	Property Class	A General Municipal	B Regional Library	C Strathcona Regional District	D Comox Valley Regional District - Solid Waste Mgmt	E Comox Strathcona Regional Hospital District
1	Residential	10.1634	0.1647	0.2291	0.1506	0.3819
2	Utilities	39.6371	0.6424	0.8020	0.5272	1.3365
3	Supportive Housing	10.1634	0.1647	0.2291	0.1506	0.3819
4	Major Industrial	34.5554	0.5600	0.7791	0.5121	1.2984
5	Light Industrial	304.9009	4.9415	0.7791	0.5121	1.2984
6	Business/Other	37.6044	0.6095	0.5614	0.3690	0.9356
7	Managed Forest Land	355.7177	5.7651	0.6874	0.4519	1.1456
8	Recreation/Non Profit	37.6044	0.6095	0.2291	0.1506	0.3819
9	Farm	10.1634	0.1647	0.2291	0.1506	0.3819

VILLAGE OF TAHSIS

Report to Council

To: Mayor and Council

From: Mark Tatchell, CAO

Date: April 26, 2021

Re: Bylaw Amendments: Fees and Charges, Water and Sewer bylaws

PURPOSE OF REPORT:

To summarize the key proposed changes to the Fees and Charges, Water and Sewer amendment bylaws that have been drafted to incorporate Council's decision to impose new water and sewer user fee rates. The report also notes "housekeeping" amendments which have been incorporated in these bylaws as well.

OPTIONS/ALTERNATIVES

1. Move to proceed with 1st, 2nd and 3rd readings of Fees and Charges Amendment Bylaw No. 639, 2021, Water Regulation and Rates Amendment Bylaw No. 640, 2021, and Sewer Regulations and Rates Amendment Bylaw No. 641, 2021.
2. Refer any and/or all of the bylaws to a committee of the whole for further consideration
3. Any other option that Council deems appropriate.

SUMMARY OF AMENDMENTS:

FEES AND CHARGES AMENDMENT BYLAW NO. 639, 2021

- Revises hourly rates for Village public works crews and equipment to reflect true costs
- Revises Daycare Rates to address anomaly in monthly versus daily rates
- Adds water and sewer annual fee schedules to incorporate the 2021 fees as per Council's decision and to simplify future annual fee changes
- Establishes penalties for late payments of water and sewer fees.
- Clarifies that applicable water and sewer fees are payable on properties that are unoccupied and/or unused.
- Updates and clarifies other water and sewer fees to reflect true cost, e.g., connection fees.
- Establishes fee for permanent discontinuance or abandonment of water service.

WATER REGULATION AND RATES AMENDMENT BYLAW NO. 640, 2021

- Clarifies distinction between temporary shut off of water service and permanent discontinuance or abandonment. Property owners who have relied on temporary water shut off to avoid paying water and sewer annual fees will now be required to pay the annual fee or make an application for permanent disconnection.

- Updates regulation regarding wastage of water by removing reference to the installation of a water meter.
- Deletes references to water meters.
- Deletes references to the fee schedules in the bylaw (these have been moved to the Fees and Charges Bylaw).

SEWER REGULATIONS AND RATES AMENDMENT BYLAW NO. 641, 2021

- Updates and clarifies the regulations regarding service connections, e.g., fees, applicable provincial requirements, and the general service connection requirements.
- Deletes references to fee schedules which have been moved to the Fees and Charges Bylaw.
- Updates the prohibitions primarily regarding wastes which cannot be deposited into the sanitary sewer system or the storm drain system.
- Updates the Offence and Penalties provisions.

POLICY/LEGISLATIVE REQUIREMENTS:

1. None

FINANCIAL IMPLICATIONS:

The financial implications of the increased water and sewer annual fees have been communicated to Council and the public.

STRATEGIC PRIORITY:

N/A

RECOMMENDATION:
Option1

Respectfully submitted:

_____
Mark Tatchell, CAO

VILLAGE OF TAHSIS

BYLAW NO. 639, 2021

BEING A BYLAW TO AMEND THE VILLAGE OF TAHSIS FEES AND CHARGES BYLAW NO. 594, 2017

WHEREAS the Council of the Village of Tahsis wishes to amend the *Fees and Charges Bylaw No. 594, 2017* to establish fees under the *Water Regulations and Rates Bylaw, No. 581, 2016* and the *Sewer Regulations and Rates Bylaw No. 582, 2016* and to delete Schedules "F" and "N" and replace with Schedule "F" and "N" to this Bylaw.

NOW THEREFORE, the Council of the Village of Tahsis, in open meeting assembled, enacts the following amendments to Fees and Charges Bylaw No. 594, 2017 as follows:

1. The *Fees and Charges Bylaw No 594* is hereby amended:

a) by deleting Schedule "F" and replacing with the Schedule "F" to this Bylaw; and

b) by deleting Schedule "N" and replacing with the Schedule "N" to this Bylaw; and

c) by adding "P" Water Fees and Charges on the next line and immediately following "O" Development Procedures Fees in section 2; and

d) by adding Schedule "P" as annexed immediately following Schedule "O"; and

e) by adding "Q" Sewer Fees and Charges on the next line immediately following "P" Water Fees and Charges in section 2; and

f) by adding Schedule "Q" as annexed immediately following Schedule "P"

Citation

This bylaw may be cited for all purposes as the "Fees and Charges Amendment Bylaw No. 639, 2021."

READ a first time this 4th day of May, 2021

READ a second time this 4th day of May, 2021

READ a third time this 4th day of May, 2021

Reconsidered, Finally Passed and adopted this 11th day of May, 2021

_____ _____

MAYOR CORPORATE OFFICER

I hereby certify that the foregoing is a true and correct copy of the original Bylaw No. 639, 2021 duly passed by the Council of the Village of Tahsis on this 11th day of May 2021.

_____

CORPORATE OFFICER

SCHEDULE “F”

Labour rates (per person hour) includes use of hand tools and light equipment	$50.00 regular time (2 hour minimum)
	$75.00 after 8 hours
	$100.00 after 12 hours
Heavy equipment	$135.00/hour
All other services	At cost

SCHEDULE "N"

PUDDLE DUCKS DAYCARE FEES

	Monthly (under 36 months) Full Day	Monthly (3 years to Kindergarten) Full Day	Daily (under 36 months) 4 hours or less	Daily (under 36 months) 4 hours or more	Daily (3 years to Kindergarten) 4 hours or less	Daily (3 years to Kindergarten) 4 hours or more
Per Child	$500.00	$500.00	$14.00	$28.00	$12.00	$20.00

Other Child Care Services

Per Child	Daily	Hourly
Before School Care	$8.00	
After School Care	$10.00	
Half Day	$10.00	
Before and After School	$15.00	
Pro-D Day	$20.00	
Full Day	$20.00	
Lunchtime		$6.00
Emergency Care		$10.00

Schedule "P"
Water Utility Rates and Charges

Classification of Users		Annual Fee
Each single family dwelling, duplex unit, apartment, suite, Guesthouse, condominium, and any short term rental accommodation unit	$	346.00
Mobile Home Park per pad with mobile home	$	346.00
Bed and Breakfasts, Boarding, Lodging and Rooming Houses	$	346.00
Hotels and Motels	$	346.00
plus each room to rent located on the property[1]	$	173.00
Restaurants, cafes, dining rooms, pubs		
up to 60 seats	$	1,182.18
over 60 seats	$	1,412.85
Churches	$	346.00
Industrial premises	$	1,412.85
Schools	$	346.00
plus each classroom	$	173.00
Clubs, non-profits	$	346.00
Home based businesses	$	346.00
Retail premises	$	403.67
plus for each square foot gross area	$	0.13
Other commercial premises	$	1,412.85
Campground/RV park (per site)	$	62.47

[1] Whether a room is available to rent or not the annual fee applies.

A charge under this bylaw shall be paid by the owner of a serviced property for:

1. TURNING ON AND OFF SERVICES

The fee for turning off and turning on water supply at the curb stop is:

To turn on or turn off	During Business Hours	All Other Times
	$25 ($50 On and Off)	$150.00

2. ABANDONMENT[2] FEE

The fee for the permanent disconnection of an abandoned or discontinued connection is:

Connection size	Abandonment or Discontinued Fee
ALL	$500.00

3. NON-EMERGENCY SERVICE CALL OUT AFTER HOURS[3] $200.00

4. CONNECTION FEES

Water connection application fee for all water service connections[4]	$500.00
Inspection fee	$100.00
Fees shall be charged on the basis of the cost of work required including but not limited to all pavement, sidewalk, cut/replacement and boulevards work	AT COST
The fee estimate must be paid prior to the work commencing. Excess fees will be refunded. Excess charges will be billed.	

5. SUPPLY OF WATER FROM FIRE HYDRANT

	During Business Hours	All Other Times
Opening and closing hydrant	$50	$150

[2] When a building on a lot serviced by the Village's water system is abandoned or demolished, the Director may require the turn off and/or disconnection of the service and the cost will be recovered from the Owner as set out in the Bylaw.

[3] A non-emergency service call-out means Village crews dispatched to respond to an incident at a property where the likelihood of property damage is low and/or the risk of serious property damage is low.

[4] May be combined with sewer connection application fee

1. The users of water supplied by the water system are classified in accordance with the classification of users set out in this bylaw, and the rates specified in the schedules must be paid by the owner of any real property to which water is supplied.

2. A charge under this bylaw shall be imposed on and from the first day of the month immediately following the date the water service connection to that property is turned on.

    (i) shall be due and payable in advance in the first calendar year of service; and

    (ii) shall be due and payable annually in advance thereafter on the 1st day of January in each year.

3. A charge under Section 2(ii) of this bylaw shall be billed on or before the 31st day of May in each year. A penalty in the amount of ten percent (10%) of the unpaid sum shall be added to any charge remaining unpaid after July 2nd in the year of billing unless Council has adopted an alternative scheme under the *Community Charter*, s. 233.

4. A charge imposed under this Bylaw which remains unpaid on the 31st day of December in any year shall be deemed to be taxes in arrears on the land or real property on which the charge was imposed and may be recovered as authorized in section 258 of the *Community Charter*.

5. No deduction in the charges under this bylaw shall be allowed on account of any waste of water.

6. Failure to receive an invoice or notice is not justification for the non-payment of an applicable fee.

7. When a building lot serviced by the water system is abandoned or demolished, the Director of Infrastructure and Operations may require the turn off and/or disconnection of the private system from the Village's water system.

8. All applicable fees and charges are payable on properties that are unoccupied and/or are unused.

SCHEDULE "Q"

Sewer Utility Rates and Charges

CLASSIFICATION OF USERS	ANNUAL FEE
Dwelling	
Dwelling unit per unit single family, duplex unit,, apartment, suites, Guesthouses, condos, short term rental accommodation	$392.00
Mobile Home Park per pad with mobile home	$392.00
Bed and Breakfasts, Boarding, Lodging and Rooming Houses	$392.00
Hotels and Motels	$392.00
plus each room to rent located on the property[5]	$196.00
Restaurants, cafes, dining rooms, pubs	$1,330.00
Churches	$392.00
Industrial premises	$450.00
plus per square foot	$0.18
Schools	$392.00
plus per classroom	$137.00
Clubs, non-profits	$392.00
Home based businesses	$392.00
Retail premises	$450.00
plus per square foot gross area	$0.18
Campgrounds per site	$58.70
Sani-stations	$547.68
Other commercial	$509.00

[5] Whether a room is available to rent or not, the annual fee applies

A charge under this bylaw shall be paid by the owner of a serviced property for:

1. **NON-EMERGENCY SEWER SERVICE CALL OUT AFTER HOURS**[6] **$200.00**

2. **SEWER CONNECTION FEES**

Sewer connection application fee for all sewer service connections[7]	$500.00
Inspection fee	$100.00
Fees shall be charged on the basis of the cost of work required including but not limited to, all pavement, sidewalk, cut/replacement and boulevards work	AT COST
The fee estimate must be paid prior to the work commencing. Excess fees will be refunded. Excess charges will be billed.	

[6] A non-emergency service call-out means Village crews dispatched to respond to an incident at a property where the likelihood of property damage is low and/or the risk of serious property damage is low.
[7] May be combined with water connection application fee

1. The users of the sanitary sewer system are classified in accordance with the classification of users set out in this bylaw, and the rates specified in the schedules must be paid by the owner of any real property which are connected to the sanitary sewer system.

2. A charge under this bylaw shall be imposed on and from the first day of the month immediately following the date the water service connection to that property is turned on.

    (i) shall be due and payable in advance in the first calendar year of service; and

    (ii) shall be due and payable annually in advance thereafter on the 1st day of January in each year.

3. A charge under Section 2(ii) of this bylaw shall be billed on or before the 31st day of May in each year. A penalty in the amount of ten percent (10%) of the unpaid sum shall be added to any charge remaining unpaid after July 2nd in the year of billing unless Council has adopted an alternative scheme under the *Community Charter*, s. 233.

4. A charge imposed under this Bylaw which remains unpaid on the 31st day of December in any year shall be deemed to be taxes in arrears on the land or real property on which the charge was imposed and may be recovered as authorized in section 258 of the *Community Charter*.

5. Failure to receive an invoice or notice is not justification for the non-payment of an applicable fee.

6. All applicable fees and charges are payable on properties that are unoccupied and/or are unused.

VILLAGE OF TAHSIS

WATER REGULATION AND RATES AMENDMENT BYLAW No. 640, 2021

A Bylaw to amend the regulation of the water distribution system.

TITLE:

This bylaw may be cited for all purposes as the "Water Regulation and Rates Amendment Bylaw No. 640, 2021"

Council of the Village of Tahsis, in open meeting assembled, hereby enacts the following amendments to the Water Regulation and Rates Bylaw No. 581, 2016 as follows:

Part 1- Citation and Definitions

2. Deleted and replaced with the following

2. *In this bylaw the definitions set out in the British Columbia Building Code 2018 and the following definitions shall apply:*

2. f) Deleted

2. t) Deleted and replaced with the following:

"Normal Use" means water used for essential purposes including household sanitation, human consumption, food preparation and water needed for commercial and industrial purposes by the types of consumers listed in the applicable schedule in the Fees and Charges Bylaw. It does not include use for fire fighting purposes.

Part 2 – General Provisions

3. Deleted

Part 4 – Discontinuance of Water Service

15. Deleted and replaced with the following:

15. To temporarily shut off or permanently discontinue water service, a consumer shall complete and submit a work order to the Village office and pay the applicable fee under the Fees and Charges Bylaw.

16. Deleted and replaced with the following:

16. The Village will provide a rebate to a consumer who has paid their water utility fee for the year and has had their water service permanently disconnected after paying the applicable fee under the Fees and Charges Bylaw. The rebate will be proportionate to the remaining time in the current billing period after being applied against any outstanding charges owed under this Bylaw.

17. Deleted and replaced with the following:

17. *Prior to any demolition work, the demolition permit holder shall pay the applicable fees under the Fees and Charges Bylaw to either temporarily or permanently discontinue the water service. When a building lot serviced by the water system is abandoned or demolished, the Director of Infrastructure and Operations may require the turn off and/or disconnection of the private system. When this occurs, the property owner will be billed for the applicable fees under the Fees and Charges Bylaw.*

Reconnection of Service Connection

18. Deleted and replaced with the following:

18. To reconnect a water service which has been permanently disconnected, all applicable fees and charges owed under the Fees and Charges Bylaw must first be paid. The annual water utility fee may be prorated for the remaining time in the current billing period.

19. Deleted and replaced with the following:

19. Upon adoption of this bylaw, consumers who have had their water service temporarily turned off are required to pay the annual water utility fee or make an application for a permanent disconnection and pay the fee set out in the Fees and Charges Bylaw.

Wastage of Water

28. Deleted and replaced with the following:

28. A person who allows water to be wasted whether willfully or by permitting pipes, taps, toilets or other fixtures and means of distributing or storing water to remain in disrepair or by any device or for any change in the use of the premises, increases the amount of water consumed or increases the water usage, is guilty of a breach of this Bylaw. In addition to the penalty provided for in this Bylaw, the Village may temporarily or permanently disconnect the water service until the person has made repairs and paid all fees and charges owed under this Bylaw.

Part 7 – Water Meters

Installation of Water Meters

36. Deleted

Testing of Water Meters

45. Deleted

Part 9 – Rates, Fees and Charges

Establishing Water Rates, Fees and Charges

52. Deleted

53. Deleted

54. Deleted

55. Deleted

56. Deleted

57. Deleted

Water Rates, Fees and Charges

58. Deleted

59. Deleted

60. Deleted and replaced with the following:

60. When a building lot serviced by the water system is abandoned or demolished, the Director of Infrastructure and Operations may require the turn off and/or disconnection of the private system.

61. Deleted

62. Deleted

63. Deleted

Schedules A, B, C and D are deleted.

READ a first time this 4th day of May, 2021

READ a second time this 4th day of May, 2021

READ a third time this 4th day of May, 2021

Reconsidered, Finally Passed and Adopted this 11th day of May, 2021

_____ _____

MAYOR CORPORATE OFFICER

I hereby certify that the foregoing is a true and correct copy of the original Bylaw No. 640, 2021 duly passed by the Council of the Village of Tahsis on this 11th day of May, 2021.

_____

CORPORATE OFFICER

VILLAGE OF TAHSIS

SEWER REGULATIONS AND RATES AMENDMENT BYLAW No. 641, 2021

A Bylaw to amend the regulation of the sanitary sewer system.

TITLE:

This bylaw may be cited for all purposes as the "Sewer Regulations and Rates Amendment Bylaw No. 641, 2021"

Council of the Village of Tahsis, in open meeting assembled, hereby enacts the following amendments to the Sewer Regulations and Rates Bylaw No. 582, 2016 as follows:

Part 1- Citation and Definitions

2. g) Deleted and replaced with the following

2. g) "Connection Fee" means the amount due and owing to the Village of the installation and construction of a service connection as set out in the applicable schedule in the Fees and Charges Bylaw.

2. w) Deleted and replaced with the following.

2. w) "Service Connection" means the pipes and equipment that connect a property to the sanitary sewer system.

Part 2 – General Provisions

4. Deleted.

6. Deleted and replaced with the following:

6. *The Director of Infrastructure and Operations ("the Director") is the person appointed by the Village's CAO to manage the Village's sanitary sewer system.*

8. Deleted

Part 3 – Service Connections

10. Deleted and replaced with the following:

10. A person must apply for a service connection by submitting the form prescribed by the Director of Operations and Infrastructure and by paying the Village the connection fee that is set out in the applicable schedule in the Fees and Charges bylaw.

11. Deleted and replaced with the following:

11. The connection fee is set out in the applicable schedule in the Fees and Charges Bylaw.

12. Deleted and replaced with the following.

12. The Director may limit the number, size and capacity of connections to the Village sanitary sewer system for purposes of protecting the system and preventing adverse effects on other users.

13. Deleted and replaced with the following.

13. *Subject to s. 12, every owner of a parcel:*

a) on which a building or structure with plumbing is built or is being built and
b) that borders a highway or right-of-way containing a Village sewer system main must connect the building or structure to the Village sewer system using a service connection.

14. Deleted and replaced with the following:

14. All service connections shall be in accordance with the requirements of the BC Building Code, other applicable provincial codes and Village bylaws.

15. Deleted and replaced with the following:

15. The Village will not turn on any new service connection until:

a) a completed application form has been submitted to the Village;
b) the service connection fee has been paid;
c) the connection has been inspected by the Village; and
d) a site plan showing the location of the service on the property has been submitted to the Village

16, 17, 18. 19, 20 and 21. Deleted and replaced with the following:

Prohibitions

16. No person shall obstruct or prevent the Village from accessing the system and/or carrying out an inspection under this Bylaw.

17. No person other than a Village employee shall turn on or shut off any valve, pump or other fixture of the Village Sewer System or the Storm Drain System or shall tamper with such objects in any way whatsoever.

18. No person shall obstruct access to any valve, pump or other fixture of the Village Sewer System or Storm Drain System.

19. No person shall connect or suffer the connection of a Storm Drain to the Village Sewer System.

20. No person shall connect, or suffer the connection to, the Village Sewer System except for a Service Connection approved through an application made under Section 10 of this Bylaw.

21. No person shall deposit, or suffer the deposit of, any of the following wastes into a Service Connection, the Village Sewer System or the Storm Drain System:

- *a) hazardous waste as defined by the Environmental Management Act and its Regulations;*
- *b) any waste which, by itself or in combination with another substance, is capable of creating, causing or introducing an air contaminant outside any sewer or sewage facility or is capable of creating, causing or introducing an air contaminant within any sewer or sewage facility which would prevent safe entry by authorized personnel;*
- *c) any waste, which, by itself or in combination with another substance, is capable of causing or contributing to an explosion or supporting combustion in any sewer or sewage facility including, but not limited to gasoline, naphtha, propane, diesel, fuel oil, kerosene or alcohol;*

d) any waste, which, is by itself or in combination with another substance, is capable of obstructing the flow of, or interfering with, the operation or performance of any sewer or sewage facility including, but not limited to, earth, sand, sweepings, gardening or agricultural waste, ash, chemicals, paint, metal, glass, sharps, rags, cloth, tar, asphalt, cement-based products, plastic, wood, waste portions of animals, fish or fowl and solidified fat;

e) any waste with corrosive properties which, by itself or in combination with any other substance, may cause damage to any sewer or sewage facility or which may prevent safe entry by authorized personnel;

f) any waste which will raise the temperature of waste entering any sewage facility to 40 degrees Celsius or more; and

g) any waste, other than sanitary waste, which by itself or in combination with another substance constitutes or may constitute a significant health or safety hazard to any person, that may interfere with any sewer or sewage treatment process or that may cause a discharge from a sewage facility to contravene any requirement by or under any discharge permit or any approved Liquid Waste Management Plan or any other law or regulation governing the quality of the discharge or may cause the discharge to result in a hazard to people, animals, property or vegetation.

22. Deleted

23. Deleted

24. Deleted

Part 5- Offences and Penalties

Offences

25. Deleted and replaced with the following:

25. Every person who violates any provision of this Bylaw or who permits or allows any act or thing to be done in violation of any provision of this Bylaw, or who neglects to or refrains from doing anything required to be done by any provision of this Bylaw, is guilty

of an offence against this Bylaw and each day that a violation continues to exist is deemed to be a separate offence against the Bylaw.

Penalties

26. Deleted and replaced with the following

26. Every person who commits an offence contrary to the provisions of this Bylaw is liable upon summary conviction to a penalty of not more than $10,000.00 and to any payment of the costs of the prosecution that the court may order.

27. Deleted

28. Deleted

29. Deleted

30. Deleted

READ a first time this 4th day of May, 2021

READ a second time this 4th day of May, 2021

READ a third time this 4th day of May, 2021

Reconsidered, Finally Passed and Adopted this 11th day of May, 2021

_____ _____

MAYOR CORPORATE OFFICER

I hereby certify that the foregoing is a true and correct copy of the original Bylaw No. 641, 2021 duly passed by the Council of the Village of Tahsis on this 11th day of May, 2021.

_____

CORPORATE OFFICER

THE TRUCK LOGGERS ASSOCIATION
Our strength is in our roots.

725 - 815 West Hastings St.
Vancouver, BC V6C 1B4
Canada
tel: 604.684.4291
fax: 604.684.7134

April 15, 2021

Dear valued TLA Member,

Thank you for being a committed Truck Loggers Association member. Your ongoing support enables us to continue advocating on your behalf and ensure that you have a voice in the forest industry.

Please find an enclosed invoice to renew your annual membership, which is due May 31, 2021. This year, you will notice a marginal increase in the annual dues. For more than ten years, there has not been an increase for our members; however, factoring in inflation, this has meant about an effective 40 per cent reduction in our ability to provide the services and advocacy our members expect. While the board never welcomes such discussions, especially considering your challenges these days, such impacts had to be addressed and the financial health of the TLA must be maintained. To be fully transparent, each year moving forward, annual dues will increase based on the current average of the Canadian and British Columbian inflation rate.

As a reminder, the Industrial membership dues structure is based on the number of employees that routinely work within a parent (and child, where applicable) company over the course of the year. We have used the information available to us, and when it differed from what we have on file, we contacted members to confirm accurate employee numbers to ensure our records are up to date.

Your Voice with Government and Industry
Over the past year, while the COVID-19 pandemic has prevented us from many of our regular in-person advocacy efforts, we have continued working with government and industry on many vital issues including:

- Our ongoing work to ensure regulation changes resulting from the Contractor Sustainability Review are implemented correctly, accurate cost data is collected to support the process, and members are educated to ensure its intent is met.
- Diligently sending letters to government and media to ensure the TLA's voice is heard, and the public receives correct information about old-growth logging.
- Requesting to meet with the government to find a permanent and sustainable solution for the urgent need for helicopter emergency medical transportation.

TLA Membership Benefits
The TLA provides members with two exclusive benefits options: an extended health and dental benefits program through Johnstone's Benefits, and an equipment and liability insurance program with Wilson M. Beck. Both companies work with the forest industry and understand your needs better than most to exclusively tailor plans to TLA members' needs. Other membership benefits include discounts on convention pricing, free attendance at TLA networking events, access to OFA3 training funding and TLA trades scholarships, as well as discounts through other Affinity programs.

Membership Information
Has your address or contact information changed? Please send updates to contact@tla.ca. Are you and your key employees receiving our Grapple Yarder e-newsletter? To subscribe, please contact contact@tla.ca.

Thank you for your valued membership with the TLA, it truly makes a difference and is greatly appreciated. If you have any concerns or comments regarding your invoice, please feel free to contact Diane Basarich at 604-684-4291 or by email at diane@tla.ca .

Sincerely,

Bob Brash
Executive Director

L1

Invoice

The Truck Loggers Association
725 - 815 West Hastings Street
Vancouver BC V6C 1B4

Phone: (604) 684-4291
Website: http://www.tla.ca
Email: diane@tla.ca

VILLAGE OF TAHSIS
Battista Bertoia
977 South Maquinna Drive
PO Box 219
Tahsis BC V0P 1X0

Date: 14/04/2021
Invoice #: 65364
Due: 31/05/2021

Description	Quantity	Rate	Amount
Community Member Dues (01/05/2021 - 30/04/2022)	1	$385.00	$385.00
GST #122882475RT0001	1	$19.25	$19.25
		Invoice:	**$404.25**
		Balance:	**$404.25**

VILLAGE OF TAHSIS
Battista Bertoia
977 South Maquinna Drive
PO Box 219
Tahsis BC V0P 1X0

Date: 14/04/2021
Invoice #: 65364
Due: 31/05/2021

The Truck Loggers Association
725 - 815 West Hastings Street
Vancouver BC V6C 1B4

Amount Due: **$404.25**

TOWN OF VIEW ROYAL

45 View Royal Avenue, Victoria, BC, Canada V9B 1A6
Ph. 250-479-6800 · Fx. 250-727-9551 · E. info@viewroyal.ca · www.viewroyal.ca

April 1, 2021

Honourable John Horgan
Premier of British Columbia
PO Box 9041 Stn Prov Govt
Victoria, BC V8W 9E1

VIA EMAIL: premier@gov.bc.ca

Dear Premier Horgan:

RE: Request for Authority and Training for Hospital Security Staff

It has come to the attention of View Royal Council that there is an excessive use of police resources in hospital emergency waiting rooms as officers must remain with persons apprehended under section 28 of the *Mental Health Act Act* until the individual is transferred to the care of a physician. This requirement sees costly police resources tied up in emergency waiting rooms often for lengthy periods of time.

As such, we are requesting that hospital security staff be given the authority and necessary training to take custody of patients apprehended under the *Mental Health Act* on arrival at the hospital.

Allowing hospital security staff to assume this role from police officers would not only provide a less costly approach for taxpayers, but would also ease the burden on police resources, enabling them to provide timely services where they are needed in the community.

Thank you for consideration of this request.

Sincerely,

David Screech
Mayor

cc. Hon. David Eby, Attorney General and Minister responsible for Housing
Hon. Adrian Dix, Minister of Health
Hon. Sheila Malcolmson, Minister of Mental Health and Addictions
All UBCM Municipalities

April 12, 2021

Dear BC Municipalities

RE: Endorsement of 9-8-8 Crisis Line Initiative

Please be advised that at a District of Clearwater Regular Council meeting held on April 6, 2021, myself and Council expressed appreciation for the initiative to create a 9-8-8 crisis line and passed the following resolution:

> ***"THAT Council direct Administration to provide a letter of support for the 9-8-8 Crisis Line Initiative to be addressed and distributed to BC Municipalities."***

Council understands the critical significance of reducing the barriers that a person in crisis will face when seeking resources. Through unanimous consent, the District of Clearwater supports the creation of a national 3-digit suicide prevention hotline in Canada. This initiative is particularly timely given the considerable pressures on the mental health of Canadians that have manifested during the COVID-19 pandemic.

Yours truly,

Merlin Blackwell
Mayor

DISTRICT OF CLEARWATER
P 250.674.2257
F 250.674.2173
E admin@docbc.ca
PO Box No. 157
209 Dutch Lake Road
Clearwater BC V0E 1N0

districtofclearwater.com

L4
File: 0400-60

April 12, 2021

Dear BC Municipalities

RE: Designation of invasive Asian clams as Prohibitive Aquatic Invasive Species

Please be advised that at a District of Clearwater Regular Council meeting held on April 6, 2021, Mayor and Council expressed their support for correspondence received from the District of Sicamous regarding a species of clams, Corbicula fluminea, which threaten the natural biodiversity of lakes in the B.C. Interior. To echo the District of Sicamous Council passed the following resolution:

> ***"THAT Council direct Administration to provide a letter of support for the District of Sicamous campaign against invasive Asian clams and forward to municipalities in B.C.."***

Council understands the delicate nature of our inland aquatic ecosystems and the threat posed by introducing new species into such an environment. We would therefore call upon the B.C. Government to use its authority to designate Asian clams as an Aquatic Invasive Species under the Controlled Alien Species Regulation.

Yours truly,

Merlin Blackwell
Mayor

DISTRICT OF CLEARWATER
P 250.674.2257
F 250.674.2173
E admin@docbc.ca
PO Box No. 157
209 Dutch Lake Road
Clearwater BC V0E 1N0

districtofclearwater.com

From: Rita Aedan <ritaaedan@gmail.com>
Sent: Tuesday, April 27, 2021 2:31 PM
To: Mayor Davis <Mayor@villageoftahsis.com>; Bill Elder <BElder@villageoftahsis.com>; Sarah Fowler <SFowler@villageoftahsis.com>; Lynda Llewellyn <Lynda@villageoftahsis.com>; Cheryl Northcott <CNorthcott@villageoftahsis.com>
Cc: Mark Tatchell <MTatchell@villageoftahsis.com>
Subject: COVID 19 - NO RECREATIONAL TRAVEL

Greetings Mayor & Council, Village of Tahsis,

Thank you for the April 26th, 2021 Village of Tahsis COVID -19 NOTICE TO VISITORS that was on Facebook and Tahsis Living. Due diligence during this unprecedented pandemic is highly appreciated. Thank you again.

I would like to make a suggestion as follow-up on the "Notice to Visitors" and your local government authority by taking additional action. Why? Well, for one obvious reason, many ignore the rules concerning travel restrictions. Only yesterday afternoon a road-dirty white truck came slowly rolling up Resolution, turned down Princess Victoria View and stopping at the huge anchor viewpoint exited their truck and walked up to the viewpoint. Quasi-tourists? They weren't locals. This cruising the drag by outsiders happens regularly minus both respect for our village, the health authority and the provincial government. The old adage appears applicable to people like these, "Rules are meant to be broken".

My suggestion: How about following through in support of the COVID -19 NOTICE TO VISITORS by having provincial signage, as noted below, firmly posted after crossing the bridge over Gold River where the pavement ends and, turning left, the dirt road begins? Surely this would not be difficult as the provincial government will be posting signage as noted below by the following excerpt and copied from the Province of British Columbia website under the heading Travel and Covid-19.

"Additional measures are in place to support the restriction on non-essential travel, including:

- Increased signage on highways and at border crossings reminding travellers of current restrictions
- Hotels and resorts eliminating or cancelling bookings from out-of-area guests"

I feel this is a good idea and trust Council does too. Looking forward to your response.

Best Regards,

Rita Aedan
907 Princess Victoria View
Tahsis, B.C. V0P 1X0

April 28th, 2021.

Mayor & Council, Village of Tahsis

Re: Initial letter to Mayor & Council dated April 27th, 2021

I expected my original letter on the subject of No Recreational Travel signage to be addressed as all other letters to Council are through it being added to a meeting agenda wherein the entire Body gives consideration to said letters. Therefore, I was surprised to receive the following email from Councillor Bill Elder:

Sorry Rita.....I cannot support your idea just as I did not and do not support this illegal action taken by the provincial government. This action is in violation of the Canadian Charter of Rights and Freedoms, I ponder on just how this government can tell us to not violate this bill when they themselves are doing the same thing- violating the law

Bill

Concerning Bill Elder's email where he states he does "*not support this illegal action taken by the provincial government",* and to refresh my memory, I conducted some research on the Canadian Charter of Rights and Freedoms. First off, "'*Receiving approval from Britain for the last time, Queen Elizabeth II signed the Canada Act on* ***April 17, 1982*** *in Ottawa. This action gave Canada control over its Constitution and guaranteed the rights and freedoms in the Charter as the supreme law of the nation."*

Flash forward to 2021 and life during this existing COVID-19 pandemic (now including highly dangerous to human health variants) which also has affected the laws of nations, is the furthest from normal. * Humanity is not living within normal conditions and to assume that rights and freedoms, including mobility rights, as upheld within the 1982 Charter of Rights & Freedoms, would not be adjusted during a pandemic...would not be impacted in order to protect human health and life...would be to ignore facts as well as human health concerns. In short, during a pandemic it's rational to restrict travel to protect public health.

The Constitution is very clear that Canadians have the right to enter and leave Canada & have the right to travel within Canada. However, like all other rights, it can be limited -- if the limitation is justified, reasonable and proportionate.

Therefore, and referring to Mr. Elder's email concerning mobility rights, the suspension of rights must be exceptional and a global pandemic that affects all life on this planet, including Canada as a whole, plus our small village of Tahsis, meets that criteria of "exceptional". Will the suspension of mobility rights last indefinitely? No, only as long as the pandemic emergency lasts. When this state of emergency no longer exists and there is a return to stability, then and only then, the return to full human rights protection becomes normalized again. Until that time, all government states, including municipal, have both a legal and moral obligation to protect their citizens. Thusly, with regard to my initial letter and the suggestion therein of posting a COVID-1 ESSENTIAL TRAVEL ONLY - NO RECREATIONAL TRAVEL at the start of the dirt road leading into Tahsis is well within the bounds of current government awareness. Perhaps it may be viewed as a balancing act as it were between rights and freedoms and the protection of human health during this pandemic and, balance it we must.

Concerning another subject, please be aware it is not my intention to criticize unfairly. However, I am left to wonder if Mr. Elder's personal email to myself overstepped the boundaries of Council and the governance under which all municipal authorities function. Again, my letter was addressed to Council as a whole with full intention of it being discussed at a forthcoming Council meeting and not through a personal email from Mr. Elder.

In closing, please add this letter to the May 4th meeting agenda. With thanks.

Respectfully yours,

Rita Aedan

Rita Aedan,
907 Princess Victoria View,
Tahsis, BC V0P 1X0

* Resources

Brenda McPhail, "Public Health, Pandemic and Privacy", Canadian Civil Liberties Association, 19 March 2020.

Eric S. Block and Adam Goldenberg, "COVID-19: Can they do that? Part II: The Emergencies Act," McCarthy Tetrault, 18 March 2020.

Sean Fine, "How measures to contain COVID-19 may clash with Canadians' Charter rights," *The Globe and Mail*, 17 March 2020.

Sonya Norris and Isabelle Brideau, *Federal Authorities During Public Health Emergencies*, HillNotes, Library of Parliament, 23 March 2020.

VILLAGE OF TAHSIS

Report to Council

To: Mayor and Council

From: Mark Tatchell, CAO

Date: April 20, 2021

Re: Temporary Use Permit Application – Tahsis Fish Processing Ltd. ("TFPL")

PURPOSE OF REPORT:

To provide Council with contextual information regarding the attached temporary use permit application, as required by s. 4.3 (6) of the Development Procedures Bylaw No. 633, 2020.

OPTIONS/ALTERNATIVES

1. Authorize the issuance of the temporary use permit for a three-year period beginning May 1, 2021.
2. Refuse to authorize the issuance of the temporary use permit.
3. Authorize the issuance of the temporary use permit as amended by Council.
4. Any other option that Council deems appropriate.

BACKGROUND:

TFPL began operating in 2016 under a licence of occupation with the Village to utilize the heliport building and adjacent fenced area. The area is part of a 2.5-acre parcel fronting the Tahsis inlet which is zoned I-2 and has an assessed value of $205,000. TFPL's business is processing saltwater fish caught by sport fishers. The business is licensed/permitted by Island Health and Department of Fisheries and Oceans. The zoning permits the property to be used for fish and shellfish processing.

TPFL has engaged in off and on discussions with Village staff regarding options for expanding the business. Most recently, TPFL proposed selling coffee and doughnuts during early morning hours. As this use is not permitted under the current zoning, the options are either to re-zone the property to permit this use or apply for a temporary use permit.

Staff recommended that the applicant apply for a temporary use permit based on the following:

- provides the applicant with business flexibility without a long-term commitment;
- allows the Village to assess TFPL's expanded business without making a more permanent decision;
- re-zoning requires a bylaw amendment which would take longer and more effort to change once enacted;
- allows neighbouring businesses and residents a period of time to assess the impact of the temporary use permit and provide feedback to Council prior to renewal or any other decisions; and
- allows the Village more time to consider its long-term vision for this property while supporting a local business

POLICY / LEGISLATIVE REQUIREMENTS:

1. Section 4.3 of the Development Procedures Bylaw (attached) sets out the requirements and procedures for temporary use permit applications. This application is atypical as the Village is the property owner.

   As per the bylaw:
   - The applicant installed a public notice sign advising of the application within 10 days of the application being made. (Copy of sign enclosed)
   - The Village provide notice to owners and occupiers of all properties within a 75-metre radius of the lot lines of the subject property at least 14 days before this Council meeting (Sample of notice enclosed)

The bylaw requires that temporary use permit applications shall be submitted to Council accompanied by a staff report which may include the following:

- A copy of the proposed temporary use permit (attached)
- Advice from internal committees or external government agencies (not applicable)
- Any public submissions received (no submissions received)
- A review and analysis of the proposed variance (included)
- A recommended course of action for Council to consider (included)
- Any additional information Village staff consider relevant

2. *Local Government Act*, Part 8, ss. 492-497

FINANCIAL IMPLICATIONS:

There are no direct financial implications to the Village. The applicant has paid the permit application and notice fees.

STRATEGIC PRIORITY:

Yes.

Promote Tahsis as a tourist destination.

RECOMMENDATION:
Option 1.

Respectfully submitted:

Mark Tatchell, CAO

a) Register a Notice of Permit against the title of the property at the Office of the Land Title and Survey Authority of British Columbia;
b) Update databases and file all information pertaining to the application;
c) Administer any further conditions of the development variance permit as specified within each individual permit as required.

4.3 Temporary Use Permits

1) Temporary use permits shall not exceed three (3) years and may be renewed for an additional three (3) years upon a new application to Council.
2) A temporary use permit application shall be completed upon a form provided by the Village which then shall be delivered to the Village together with such additional plans and particulars as may be required. The application is considered as being accepted when all required information (including fees) has been received.
3) All completed applications shall include the following:
    a) A completed application form including the application fee in the amount set out in the *Village of Tahsis Fees and Charges Bylaw No. 594, 2017*;
    b) A written authorization from the owner of the subject property or from an agent authorized to act on the owner's behalf;
    c) A copy of the certificate of title;
    d) A legal description and municipal address(es) of properties included in the application;
    e) A written outline of the proposed use and the duration of the proposed activity including plans for mitigating potentially harmful impacts on the environment, adjacent lands, and the local community as well as plans for the rehabilitation of the site following the discontinuance of the proposed temporary use;
    f) A site plan and other supporting plans which contain the following minimum information about the subject property:
        i. Location map including neighbouring land uses;
        ii. Existing and proposed buildings in relation to legal property boundaries;

iii. Significant physical features and topographic information including all existing watercourses and wetlands;

iv. North arrow and drawing scales;

v. Dimensions for all elevations and site plans;

vi. Geodetic elevation;

vii. Residential unit or building layout and/or comprehensive plan illustrating unit distribution;

viii. Existing and proposed roads;

ix. Open space.

g) A Surveyors Certificate by a BCLS Surveyor;

h) A completed "Site Profile" as per the *Environment Management Act* for the subject property or release from the Ministry to proceed.

4) All applications shall be subject to the following conditions:

a) Where an application contains multiple parcels, each legal parcel shall be considered as a separate application, unless otherwise determined by the Chief Administrative Officer;

b) An application that has been refused by Council shall not be reconsidered for a period of twelve (12) months immediately following the date of refusal, except when permitted pursuant to Section 460 of the *Local Government Act*. A re-application is considered a new application which shall eb subject to the same prescribed application fee;

c) An application which has been inactive for six (6) months is deemed to be abandoned. A re-opened application is considered a new application which shall be subject to the same prescribed application fee.

5) Residents shall be notified of the consideration of a temporary use permit application through the following:

a) Within ten (10) days of the application being made, the applicant shall install the public notice sign advising of the application in a local visible from the road adjoining the subject property. If the property has two road frontages, two signs

may be required. The sign shall adhere to the regulations set out in the Zoning Bylaw. The sign must remain in place until the date the application is either approved or refused by Council, or becomes inactive, and shall be removed within ten (10) days of that date;

b) The Village shall provide a notice to be mailed or otherwise delivered to the owners and occupiers of all properties within a 75-metre radius of the lot lines of the subject property at least fourteen (14) days before the meeting where Council will make a decision on the application.

6) Temporary use permit applications shall be submitted to Council accompanied by a staff report which may include:

a) A copy of the proposed temporary use permit;

b) Advice from internal committees or external government agencies;

c) Any public submissions received;

d) A review and analysis of the proposed variance;

e) A recommended course of action for Council to consider;

f) Any additional information Village staff consider relevant.

7) The applicant shall be notified within ten (10) days of Council's decision to:

a) Authorize the issuance of the temporary use permit;

b) Authorize the issuance of the temporary use permit as amended by Council; or

c) Refuse to authorize the issuance of the temporary use permit.

8) Pursuant to Section 502 of the *Local Government Act*, security may be required as a condition of permit subject to the following regulations:

a) Security shall only be required in relation to:

i. A condition of the temporary use permit respecting landscaping,

ii. An unsafe condition or damage to the natural environment that may result as a consequence of a contravention of a condition in a permit;

b) Security shall be in the form of cash or an irrevocable letter of credit, effective for the term of the permit;

c) The amount of security required shall be 125% of the costs to undertake or supervise the works for which the securities are required, as determined by the Village of Tahsis using an estimate or quote provided by the applicant as prepared by a qualified registered professional;

d) Security shall be returned, without interest, to the applicant once all conditions of the permit have been met.

9) After Council has approved a temporary use permit, Village staff shall:

a) Register a Notice of Permit against the title of the property at the Office of the Land Title and Survey Authority of British Columbia;

b) Update databases and file all information pertaining to the application;

c) Administer any further conditions of the development variance permit as specified within each individual permit as required.

READ a first time this 4th day of August, 2020

READ a second time this 4th day of August, 2020

READ a third time this 4th day of August, 2020

Reconsidered, Finally Passed and Adopted this 3rd day of November, 2020

MAYOR

CORPORATE OFFICER

I hereby certify that the foregoing is a true and correct copy of the original Bylaw No. 633, 2020 duly passed by the Council of the Village of Tahsis on this 3rd day of Nov, 2020.

CORPORATE OFFICER

Village of Tahsis

April 12, 2021

NOTICE OF TEMPORARY USE PERMIT APPLICATION

Tahsis Fish Processing Ltd. located at 154 Head Bay Road has submitted a Temporary Use Permit Application to permit the sale of:

- Coffee and mini-donuts
- Commercially obtained salmon and halibut
- T-shirts

The zoning for this property does not permit the above uses, so the applicant is seeking a three-year temporary use permit under the Development Procedures Bylaw.

Under the bylaw, all owners and occupiers of property within a 75-metre radius of the subject property must be notified of the application at least 14 days before the meeting where Council will make a decision on the application.

Council will consider the application at its May 4th regular meeting at 7 pm.

You may comment on the temporary use application by writing to the Village at the address below or by email at reception@villageoftahsis.com. All comments must be received by April 28th.

Village of Tahsis
977 South Maquinna Drive
P.O. Box 219 Tahsis BC V0P 1X0
TEL: (250) 934-6344 FAX: (250) 934-6622
www.villageoftahsis.com

TEMPORARY USE PERMIT APPLICATION FORM

H2
Village of Tahsis
977 S. Maquinna Dr.
PO Box 219
Tahsis, BC
V0P 1X0
Ph (250 934-6344
Fax (250) 934-6622
reception@villageoftahsis.com

Legal Description: District Lot 32, Nootka Land District
Civic Address: 154 Head Bay Road
Folio Number: _____ PID #: 009-803-173
Applicant: Tahsis Fish Processing
Mailing Address: Box 24 Tahsis BC Postal Code: V0P 1X0
Phone: 425-535-5536 Fax: _____
Current Zoning: I-2
Official Community Plan Designation: _____

Existing Use (if applicable)
Describe the age, condition and use of any buildings on the subject property and plot their location on a scaled site plan noting various setback dimensions.

Proposed Temporary Use(s)
Describe the proposed temporary use for the subject property. Also include duration of proposed activity and include plans for mitigating potential harmful impacts on the environment, adjacent lands and the local community as well as plans for rehabilitating the site following the discontinuance of the temporary use.

See attached letter

Council Meetings
Do you wish to appear before Council to explain your proposal?

(Yes) No

Please ensure the following items are included with the completed application:

- Fees

TEMPORARY USE PERMIT APPLICATION	**$800.00**
NOTICE FEES (additional fee which applies to the above, refundable if notice is not distributed)	**$200.00**

- Current Title Search for all parcels and copies of all covenants, building schemes, easements and right of ways charged on title Please Waive
- 8½ x 11 legible site plan (if applicable)

Please note, a refundable Security Deposit will be required in a form acceptable to the Village of Tahsis before the permit can be issued. The amount of the deposit will be determined at the time of Council approval.

TO BE COMPLETED BY THE DISTRICT OF ~~FOFINO~~: TAHSIS

Date Complete Application Received _____
Application Fee $_____
+ Notification Fee $_____
= Total Fee Paid $_____ Receipt # _____

H2

TEMPORARY USE PERMIT CONSENT FORM

Complete one of the following statements:

IF OWNER IS PERSONALLY APPLYING FOR THE PERMIT

I, _____

solemnly declare that I am the owner of the real property legally described as:

_____

_____

and that I am registered as such with the Land Title and Survey Authority of British Columbia

Signature: _____

Date: _____

Mailing Address: _____

_____

_____ Postal Code: _____

Telephone: _____

Facsimile: _____

Email: _____

IF AN AGENT IS APPLYING ON BEHALF OF THE OWNER

I, KATHY MATTICÉ

solemnly declare that I am the authorized agent of Village of Tahsis

who is the registered owner of the real property legally described as:

154 Head Bay Road

_____

It is understood that until the Village of Tahsis is advised in writing that I am no longer acting on behalf of the undersigned registered owner, the Village shall deal exclusively with me with respect to all matters pertaining to the proposed Temporary Use Permit application.

I hereby declare that the foregoing information is true and proper.

Signature of Agent: KMattice

Signature of Owner: _____

Name of Owner: _____

Mailing Address of Owner: _____

_____

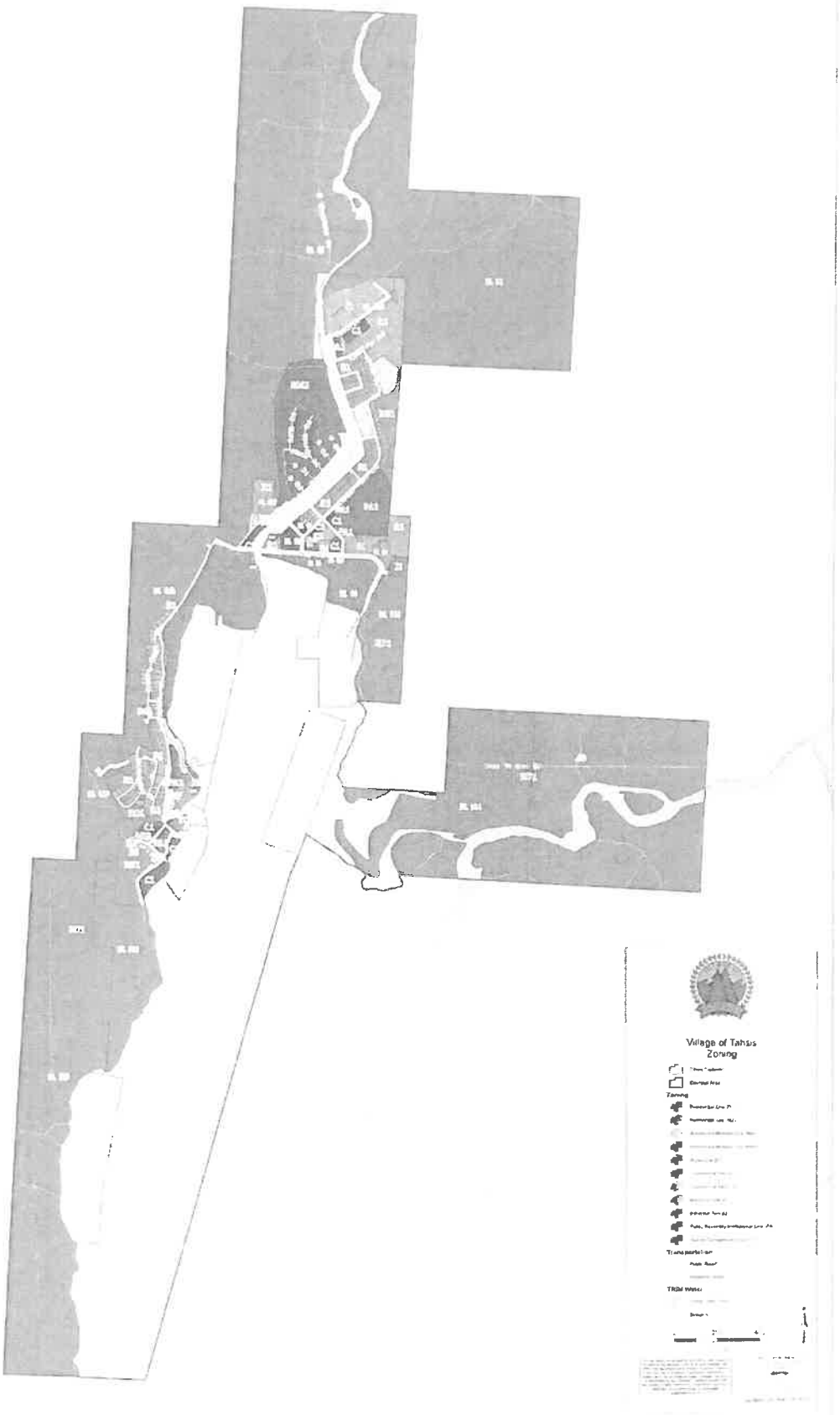
_____ Postal Code: _____

Telephone: _____

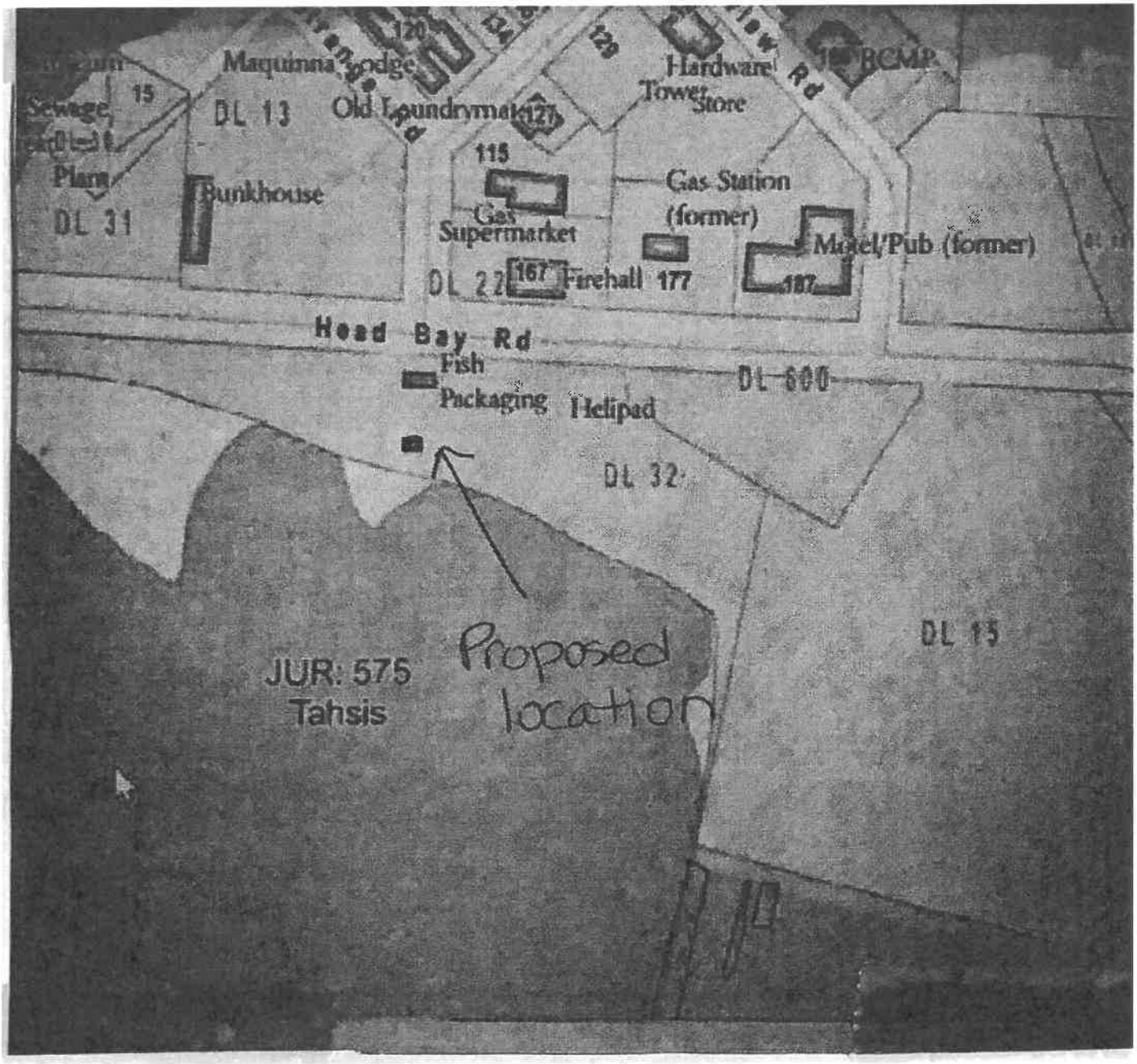
Facsimile: _____

Email: _____

Any personal information required by this application form is being collected for the purpose of administering the Village of Tahsis Development Procedures Bylaw No. 633 (2020) and is collected under the authority of the Local Government Act and the bylaw. Questions about the collection of this information should be directed to the Corporate Officer at 977 S. Maquinna Drive, PO Box 219, Tahsis, BC, V0P 1X0, or (250)934-6344.



F(i)


Maquinna Lodge
Hardware
Tower Store
BCMP
Sewage
Plant
DL 13
Old Laundromat
115
Gas Station
(former)
Bunkhouse
DL 31
Gas
Supermarket
Motel/Pub (former)
DL 22
Firehall
177
Head Bay Rd
Fish
Packaging
Helipad
DL 600
DL 32
DL 15
JUR: 575
Tahsis
Proposed
location

TAHSIS FISH PROCESSING LTD.
PO BOX 24
TAHSIS, BC V0P 1X0

000017

DATE 2021-04-10
Y Y Y Y M M D D

PAY to the order of Village of Tahsis

$ 800.00

eight hundred dollars XY 100 DOLLARS

TD Canada Trust
WASHINGTON PARK SHOPPING CENTRE
789 RYAN ROAD, UNIT A
COURTENAY, B.C V9N 3R6

TAHSIS FISH PROCESSING LTD.

RE TUP Application

PER Mallice

⑈000017⑈ ⑆90750-004⑆ 9075-5229282⑈

TAHSIS FISH PROCESSING LTD.
PO BOX 24
TAHSIS, BC V0P 1X0

000018

DATE 2021-04-10
Y Y Y Y M M D D

PAY to the order of Village of Tahsis

$ 200.00

two hundred dollars XY 100 DOLLARS

TD Canada Trust
WASHINGTON PARK SHOPPING CENTRE
789 RYAN ROAD, UNIT A
COURTENAY, B.C. V9N 3R6

TAHSIS FISH PROCESSING LTD.

RE Notice fees

PER Mallice

⑈000018⑈ ⑆90750-004⑆ 9075-5229282⑈

April 9, 2021

Dear Village of Tahsis Council members,

I am writing this letter in hopes that you will help and support me in obtaining a temporary use permit for a three-year period.

The village is the owner of the property that I currently lease at 154 Head Bay Road. Last year, it became apparent that the fish plant requires supplemental income to remain viable.

PROPOSED TEMPORAY USE:

I would like to add a small Mocha/Coffee and mini donut stand. I would also like to pursue selling commercially obtained salmon and halibut. I was also considering having some funny fishing t-shirts for sale as well. There would be no impact to services the fish plant already provides.

Last year, I placed a 8x10 wooden shed on the property. This is what I would use to house the additional services/products. The shed would have temporary power, and independent water and waste. There would be no impact to the existing buildings or the environment.

Please see attached the Temporary Use Permit Application Form. As a tenant, I do not have access to many of the requirements on the check sheet and thereby ask the village (owner) to assist me by waiving or providing me with the information needed to complete the application form.

Thank you for your consideration,

Kathy Mattice
Tahsis Fish Processing

4.3 Temporary Use Permits

1) Temporary use permits shall not exceed three (3) years and may be renewed for an additional three (3) years upon a new application to Council. 3 YEARS

2) A temporary use permit application shall be completed upon a form provided by the Village which then shall be delivered to the Village together with such additional plans and particulars as may be required. The application is considered as being accepted when all required information (including fees) has been received. ATTACHED AND PARTIALLY COMPLETED

3) All completed applications shall include the following:

a) A completed application form including the application fee in the amount set out in the Village of Tahsis Fees and Charges Bylaw No. 594, 2017; COMPLETED ON APPLICATION, PAYMENT ATTACHED

b) A written authorization from the owner of the subject property or from an agent authorized to act on the owner's behalf; Waive or Village to provide

c) A copy of the certificate of title; Waive or Village to provide

d) A legal description and municipal address(es) of properties included in the application; COMPLETED ON APPLICATION

e) A written outline of the proposed use and the duration of the proposed activity including plans for mitigating potentially harmful impacts on the environment, adjacent lands, and the local community as well as plans for the rehabilitation of the site following the discontinuance of the proposed temporary use; ATTACHED SEE LETTER

f) A site plan and other supporting plans which contain the following minimum information about the subject property:

i. Location map including neighbouring land uses; ATTACHED

ii. Existing and proposed buildings in relation to legal property boundaries; Waive or Village to provide

iii. Significant physical features and topographic information including all existing watercourses and wetlands; Waive or Village to provide

iv. North arrow and drawing scales; Waive or Village to provide

v. Dimensions for all elevations and site plans; Waive or Village to provide

vi. Geodetic elevation; Waive or Village to provide

vii. Residential unit or building layout and/or comprehensive plan illustrating unit distribution; Waive or Village to provide

viii. Existing and proposed roads; Waive or Village to provide

ix. Open space. Waive or Village to provide

g) A Surveyors Certificate by a BCLS Surveyor; Waive or Village to provide

h) A completed "Site Profile" as per the Environment Management Act for the subject property or release from the Ministry to proceed. Waive or Village to provide

5) Residents shall be notified of the consideration of a temporary use permit application through the following:

a) Within ten (10) days of the application being made, the applicant shall install the public notice sign advising of the application in a local visible from the road adjoining the subject property. COMPLETED AND POSTED

PUBLIC NOTICE OF
TEMPORARY USE PERMIT APPLICATION

Tahsis Fish Processing has applied for a TEMPORARY USE PERMIT in order to add services and products to its existing business.

This includes

1) MOCHA/COFFE AND MINI DONUT STAND
2) COMMERICAL SALMON AND HALIBUT SALES
3) TSHIRT SALES


FILLETING
PACKAGIN