DISTRICT OF METCHOSIN
AGENDA

ENVIRONMENTAL ADVISORY SELECT COMMITTEE MEETING

November 28, 2023 at 7:00 p.m.
Council Chambers
Metchosin Municipal Hall

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1. Agenda, Additions, Approval

2. Presentations
a) Nitya Harris and Peter Pauwels:
Predator Strategies, Lessons Learned from other Communities

3. Public Participation

4. Adoption of Minutes
a) Environmental Advisory Select Committee, October 24, 2023 1

5. Receipt of Minutes

Council & Standing Committee Minutes
https://www.metchosin.ca/council/council-meetings/agendas-minutes
a) Council Meeting: September 11, 2023
b) Special Council Meeting: October 5 and 12, 2023

Advisory Committee Minutes
https://www.metchosin.ca/council/advisory-committees
a) Buffer Land Working Group: October 11, 2023
b) Parks & Trails Advisory Select Committee: September 19, 2023

6. Business Arising from the Minutes
a) Climate Action Plan
- Evaluation Framework for Metchosin's Climate Action Plan 5
- Action Plan Update 9
  https://reimagineus.ca/

b) BC Government 30% Protected Land by 2030 Commitment
- MEASC's Green and Blue Spaces Strategy
- Draft BC Biodiversity and Ecosystem Health Framework 19

c) Tanker traffic in the Straight of Juan de Fuca

7. Reports
a) Bullfrog Management Project Results 2023 39

8. Correspondence

9. Other Business
a) Human-Wildlife Conflict Prevention Strategies
b) Proposed Subdivision Application Referral, 4696 Beckingham Road 45
c) Fossil Fuel Non-proliferation Treaty
The Fossil Fuel Non-Proliferation Treaty Initiative (fossilfueltreaty.org)
d) Reducing Anchorages Outside the Port of Vancouver
e) Invasive Species – Parrot's Feather (Myriophyllum Aquaticum)
f) Riparian Area Regulation

10. Adjournment and next meeting

District of Metchosin

Minutes
Environmental Advisory Select Committee Meeting
Tuesday, October 24, 2023 at 7:00 p.m.
Council Chamber
Metchosin Municipal Hall

Present: Garry Fletcher (Chair), Councillor Steve Gray, Bill Cave, Merrilee Hoen, Anna Hall, Ric Perron, Erin Van de Water, Andy MacKinnon (recorder)

The meeting was called to order at 7:05 p.m.

1. Agenda, Additions and Approval

Moved and Seconded by Steve and Merrilee that the Committee approve the agenda with two changes: the addition of a Presentation (Agenda Item 2) on Dark Skies by Ted White; and combining the two bullets under 6b (Criteria for Evaluating GHG Reductions and Action Plan) into one bullet: Criteria for Evaluating Metchosin's Climate Action Plan.

Carried

2. Presentations

a) Ted White, Healthy Communities Advisory Committee. Proper lighting is generally considered under Dark Skies as useful for astronomy but has a lot of other health and environmental benefits. Metchosin has a Dark Sky policy. Ted feels that Metchosin should become a Certified International Dark Sky community (there is only one in Canada so far, in Bon Accord, Alberta).

Action Item: Please include Dark Sky as a MEASC Agenda item for November. Ted White will provide materials for the discussion at our next MEASC meeting.

3. Public Participation: None

4. Adoption of Minutes

Moved and Seconded by Steve and Ric that the Committee approve the minutes of the Environmental Advisory Select Committee meeting held on September 26, 2023.

Carried

5. Review of Minutes

a) Council and Standing Committee Minutes

Moved and Seconded by Steve and Anna that the Committee receive the Council and Standing Committee Minutes for information.

Carried

b) Advisory Committee Minutes

Moved and Seconded by Andy and Bill that the Committee receive the Advisory Committee Minutes for information.

C**arried**

6. Business Arising from the Minutes

a) Buffer Land Stormwater Management

Metchosin's Environment and Natural Areas Standing Committee recommended (following our recommendation) that Metchosin engage a qualified professional to review the Stormwater Management Plan. Council decided we are okay for engineering and hydrology, but authorized hiring a qualified professional to review adequacy of the green infrastructure design.

b) Metchosin Climate Action Plan – Draft Working Papers on Evaluation Framework

- **Criteria for evaluating Metchosin's Climate Action Plan**

In 2028 there will be a review to evaluate progress on Metchosin's Climate Action Plan. Certainly, the Capital Regional District (CRD) data will help – that is the biggest piece. Merilee and Steve provided abundant additional material for evaluation, attached to the agenda package. Their notes were produced separately; they have not been amalgamated yet. This is just an update, for MEASC information. This meeting provided time for lots of MEASC discussion about agriculture, wells, and groundwater protection.

Action Item: Staff, please leave this as a standing agenda item, with the new title. MEASC members, please review and send comments on the materials that Merrilee and Steve have developed so far.

c) New Meeting Date and Committee Terms of Reference

Erin cannot make meetings on the current day, due to a conflict with monthly preschool meetings. After some discussion, Erin volunteered to ask the preschool to change their meeting dates.

7. Reports: None.

8. New Business

a) Bilston Watershed Habitat Protection Association, Summary of Recommendations Regarding Centre Mountain Storm Water Management Plan

These recommendations, and others, have been passed along to Councillor Shukin, who is taking the lead on this.

b) BC Government 30% Protected Land by 2030 Commitment

- BC Government Commits to Doubling the Protection of Lands in BC to 30% by 2030
- Protecting 30 by 2030

Concern was expressed that the provincial government might not get the input it needs to make the best decisions about new protected areas in Metchosin.

Action Item: Garry will revisit MEASC's Green and Blue Spaces Strategy and bring a report back to our next MEASC meeting.

9. Correspondence:

a) Minister George Heyman, Ministry of Environment and Climate Change Strategy, Human Health Risk Report, Trans Mountain, Condition 38

Sooke has expressed concerns similar to Metchosin's regarding tanker traffic in the Strait of Juan de Fuca. MEASC members generally felt that Minister Heyman's recommendations were appropriate. Minister Heyman indicated that concerns transit when weather is rough is Transport Canada – perhaps include this in discussions with Sooke?

Action Item: Steve to draft a letter to PHO for consideration at our next MEASC meeting. Steve will ask Mayor Little if she will raise this issue with Sooke in the media.

10. Adjournment and Next Meeting Date

Moved and Seconded by Ric and Garry that the Committee adjourn the meeting at 8:50 p.m.

Carried

The next MEASC meeting will be held on Tuesday, November 28, 2023 at 7:00 p.m.

Priority Action Items		Investment	Staff Res.	Status (2023 - 2028)	Evaluation Criteria	Source of Measureable Data
All	CRD GHG Inventory by Sector data (all the available reports from 2020 to 2028)				New report available - Fall 2023	
1.0	**Land Use, Agriculture and Waste**					
1.1 a)	Investigate and report to Council on development of land-use conservation and enhancement targets.	$	*		Source, number and quality of targets	Supporting documentation.
1.1 b)	Engage with partners to solicit external funding for new habitat protection and restoration projects	$	**		List of projects and success of external funding requests.	Supporting documentation.
1.1 c)	Leverage land acquisition funding to buy and convert additional District lands into designated protected areas.	$$$$	***		Identification of candidate lands, number of acres purchased and protection status	
1.2 a)	Develop Agricultural Plan - climate resilience, enhanced biodiversity and low carbon agriculture		***	AASC underway	Degree to which goals stated in the original report have been fulfilled. Example: No. of trees and hedgerows planted	AASC report
	Additional opportunities:					
1.0	*Lobby senior and regional governments for improved land protection and ecological preservation.*			2023 UBCM Resolution	Outcome of resolution at UBCM, regional and senior levels.	
1.0	*Investigate opportunities to encourage wetland and riparian restoration.*			MEASC reviewing	Number of projects initiated and/or complete.	MEASC annual reports
1.0	*Support partner efforts to enhance agricultural land preservation.*				unclear how to evaluate	
1.0	*Continue support for invasive species management.*			Contractors, volunteers	Volunteer hours removing invasive plants and planting native plants.	Annual reports MISC, Devonian and PTASC
1.0	*Investigate the development of a municipal compost yard.*				Was this feasible and, if so, has it beenimplemented?	
1.0	*Investigate the development of a waste gasification facility for the District.*				Was this feasible and, if so, has it beenimplemented?	
1.0	*Investigate the development of recycling services.*				Have blue box services been increased or augmented by local recycling events?	
1.0	*Push for recognition of carbon sequestration in CRD emissions inventory assessments.*			CRD	Has carbon sequestration been included in the CRD 2028 (or earlier) report?	CRD GHG reports
2.0	**Risk Reduction from the Impacts of Climate Change**					
2.1 a)	Complete extreme heat assessment and mapping			Fire Dept	Extreme Heat and other grant-funded Programs, Counts of wildfires in Metchosin,	Fire Dept annual reports
					Wildfire smoke severity readings e.g. no. of days where it is severe	Environment Canada
2.1 b)	Develop a shoreline protection plan to address sea level rise.			MEASC	Has plan been developed and implemented? Compare erosion data if available.	Unknown
2.1 c)	Investigate and apply for funding to conduct a localized climate hazard and vulnerability assessment.			Fire Dept	Number of applications made by District for resilience funding and status of the resulting programs.	
2.2 a)	Integrate climate change into District asset management planning and policy development.			District admin	List of instances where this has occurred.	
2.3 a)	Investigate and report to Council on opportunities to enhance groundwater protection and conservation (e.g., via increase rainwater harvesting, efficient irrigation, xeriscaping).			District subdivision bylaw	Use Bilston CME pre/post construction run-off - water quality, water volume data as a case study to possibly inform bylaws and regulations for the future.	Under development
					Rainwater Management Bylaw infractions	Bylaw annual report
2.0	Additional opportunities:					
2.0	*Investigate opportunities to use natural asset management tools and approaches to manage climate impacts.*				Evidence of knowledge and use of natural asset management tools by staff.	
2.0	*Investigate building, plumbing code changes to permit outdoor greywater reuse.*				Policy in place	
2.0	*Adoption of ZCSC Level 4 for all new builds*			Council Nov 20	Policy in place	

Priority Action Items		Investment	Staff Res.	Status (2023 - 2028)	Evaluation Criteria	Source of Measureable Data
3.0	**Buildings**					
3.1a)	Continue to share information and promote participation in the CRD's regional home retrofit and fuel switching program.			SIRC, Muse, District website	Poll citizens about program usage.	
3.2 a)	Encourage residents to undertake home energy audits					
3.2 b)	Encourage residents to undertake *Firesmart* Home Ignition Zone assessments.			Fire Dept	Fire Smart program indices	Fire Smart annual reports
3.2 c)	Develop a 'sustainability checklist' to for retrofits and re-developments				Copy of the checklist.	
3.2 d)	Investigate cost/benefit of solar panels onproposed new firehall.			Include in feasibility study	Outcome of the study.	
3.0	Additional opportunities:					
3.0	*Advocate at CRD for enhanced recognition of carbon sequestration in greenhouse gas inventory.*			District reps	See Action Area 1.0	
3.0	*Consider accelerated STEP code adoption at District level.*			ZCSC to Council Nov 20	Has the recommended STEP code level been adopted?	
3.0	*Promote voluntary adoption of Steps 4 and 5 of the BC Energy step code for private development.*			District documents, website, Muse	Poll citizens about adopton of STEP code and the level adopted.	
3.0	*Investigate local implementation of property assessed clean energy (PACE) program.*			SIRC, Muse, District website	Poll citizens about program usage.	
4.0	**Transportation**					
4.1 a)	Investigate and report to Council on options to develop an active transportation plan for the District.				Copy of the plan.	
4.2 a)	Establish partnerships to repair and maintain existing public EV charging stations.			CRD	Are the stations present in 2023 in service?	
4.0	Additional opportunities:					
4.0	*Continue to lobby BC transit to further improve transit scheduling and bike-to-transit connectivity and advocate for BC Transit to accelerate implementation of on-demand transit service for Metchosin.*				Changes to transit service in Metchosin since 2023.	
4.0	*Identify and apply for external funds to purchase and install additional public EV charging stations.*			CRD	List of applications and their outcomes.	
4.0	*Explore opportunities to support local businesses to install electric charging infrastructure.*				Number of EV charging stations and availability of charging for other categories of transportation (bikes, scooters, etc.)	
4.0	*Require 220v EV charge connections - new builds + retrofits.*				Changes to bylaws(?)	
5.0	**Community Engagement**					
5.1	Encourage a community-led climate change and sustainability lecture series.				Poll of citizens as to their level of engagement versus 2022 poll.	
5.0	Additional opportunities:					
5.0	*Engage with partners to identify and solicit external funding for new habitat protection and restoration projects*				Reports from local groups such as Moralea's Meadow and Bilston Creek	

Supporting Activities		
Who will promote the plan and coordinate data gathering?		
Participation will required by District staff, MEASC, community groups but there should be a group designated with primary responsibility for this task. **Proposal**: that a community group be formed (either a new group or a coalition of existing groups) to undertake supporting activities for Metchosin's Climate Action Plan. Their mandate would be to:	Promote the principle that much of what Metchosin's climate change role is to preserve the natural environment and take full advantage of the ecosystem services that it provides. Our "priceless" natural environment needs to have its value assessed so it is recognized as a prime player in climate change mitigation and community resilience.	
	Build community support for the Climate Action Plan	
	Assist in gathering base line data in preparation for the 2028 review.	
	Engage with other community groups and individuals to plan climate-related initiatives. Examples include:	
	Repair cafes	MACCA
	Recycling days for items not picked up in Blue Bins such as soft plastic	
	Promote battery recycling	District, CRD Hartland
	Facilitation of ride sharing	
	Provide assistance for seniors to apply for rebate programs	SIRC
	Organize educational events and materials	Metchosin Day, Earth Day
	Update the District website regularly on climate plan progress	MEASC

ReImagine
West Shore Community



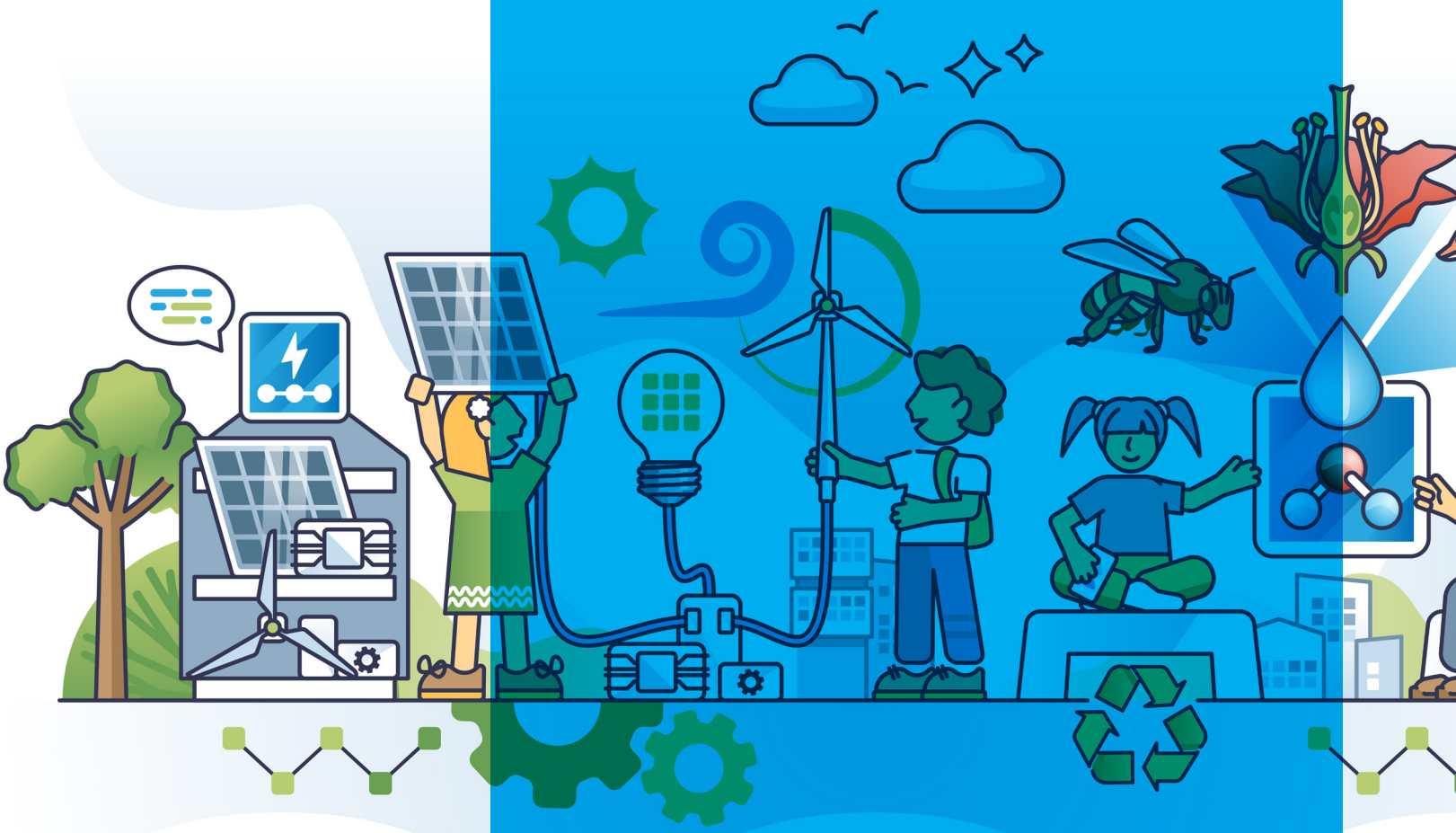
MAKING SHIFT HAPPEN

Conversations | Activities | Events

Building community while we learn how to
save money and live more sustainable lives.

2024 PROGRAM

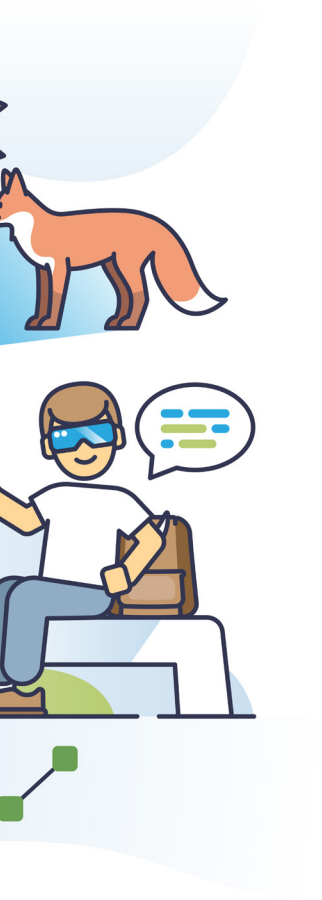
November 15, 2023



“Alone we can do so little; together we can do so much.”

HELEN KELLER

Introduction



Introducing the **2024 ReImagine West Shore Program** of conversations, activities, and events intended to connect community members and help nurture some of the changes we all need to make in response to the Climate Emergency.

Our programming takes place throughout the calendar year and features a variety of local happenings related to the following areas of interest:

- **Food Security**
- **Beyond Blue Box Recycling**
- **Energy Conservation/Zero Carbon Energy**
- **Green Transportation**
- **Nature Stewardship and Conservation**
- **Conscientious Consumption/Developing a Local Circular Economy**

Collaboration is an essential part of building a sustainable community. ReImagine West Shore is teaming up with other community organizations, individuals, and the business sector to support our grassroots efforts to inform, inspire, and celebrate sustainable and more connected living.

Let's ReImagine the West Shore together!

Program Overview



ReImagine West Shore is bringing together a year-long program of community conversations, activities, and events intended to connect people with the simple changes they can make to save money and live more sustainably. Here's an overview of how our plan for 2024 is shaping up around in-person happenings across the four seasons ...

WINTER
January – March

ReImagining Your West Shore
BIG Community Conversation and Launch of our 2024 Program Calendar

Stop Getting Wasted (Public Meet-up)
Learning how to Go Beyond the Blue Box to keep more waste out of the landfill.

Upcycling and Repair Workshop
Repurpose THIS and Fix/Mend THAT!

Let's Grow! – West Shore Seedy Saturday
Get set for the growing season with helpful tips and seeds to get you started!

Earth Hour – Dining in the Dark
A collaboration with local eateries and entertainment spaces intended to get more people talking about positive change.

SPRING
April – June

EARTH WEEK:
Planet v. Plastics
Opportunities for K-5 Students to engage with recycling through science and song.
ReImagine Fashion
Grade 6-12 Students can Put the Boots to Fast Fashion with a Sustainable Style Challenge and Showcase.

3 ReImagine Community Meet-ups/Pop-ups (Connecting with community at Music in the Park events, Farmers Markets, etc.)

ReImagine Your Summer Vacay
It's all about the experience, right? How to lighten your footprint and still have an Instagram-worthy good time.

How's It Growing? – Novice Gardener Check-in: Making the Most of Your H_2O
(How to conserve when things get HOT!)



SUMMER July – September	FALL October – December
ReImagine Power Plugging into clean energy solutions that fit your lifestyle.	**ReImagine Entertaining** Helpful holiday $olutions just in time for Thanksgiving!
2 Get Cooking Demos/Pop-ups Easy and in-season … humble local ingredients are transformed into delectable delights for sampling!	**GO LOCAL West Shore Food Summit** Connecting West Shore farmers and producers with our growing population of urban consumers for shared learning.
3 ReImagine Community Meet-ups/Pop-ups (Connecting with community at Music in the Park events, Farmers Markets, etc.)	**Green Friday** A Shop LOCAL Tip Sheet connecting holiday shoppers with sustainable shopping options.
Harvest Supper Potluck Global Flavours & Local Ingredients - an opportunity for community members to gather together and share stories and their tasty traditions.	**2024 ReImagine West Shore Holiday Star Party and Release of the "Nice" List** Festive Meet-up to help spread inspiration and good cheer with stories about local people taking positive action to save money and live more sustainable lives.
Get Canned! Learn how to make the most of what you grow or glean … connect with canning and other terrific ways to preserve the fresh flavours of the season.	

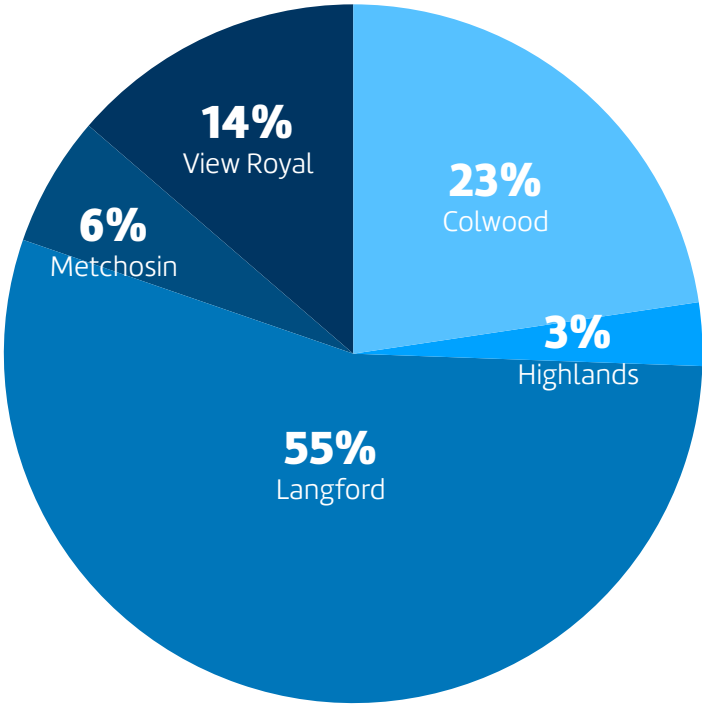
Projected Program Impact

With topics like the cost of living and climate change dominating the news and our conversations, the time is ripe to offer West Shore residents new ways to feel empowered to make a difference both in their own lives, and the planet's.

It can be challenging to accurately project what might happen with our community programming in a post-COVID public space, whether it's weekend workshops, regional awareness campaigns, or original content shared online. Based on previous experiences, ReImagine event planners are optimistic that our first year will find an enthusiastic audience eager to come together to share their concerns about the future, and to embrace change with courage and creativity.

Let's take a look at the logic we'll be applying to where events are on offer, the data points we'll be capturing to help measure our success, and make some educated guesses about the number of people we hope to engage throughout the year.





The West Shore has experienced unprecedented growth over the past 10-15 years. Langford is home to 55% of the West Shore's population of nearing 85,000 people, and dominates the region's urban landscape. We'll be going where the people are, so approximately 50% of ReImagine West Shore's In-Person programming is planned to take place in the City of Langford, with 25% of our events hosted in Colwood, 15% in View Royal, and the remaining 10% split between Metchosin and Highlands.

Questions?

Please contact us at
connect@reimagineus.ca

In-Person

ReImagine-Hosted Community Conversations, Activities & Events

WINTER (January to March)
5 Events | 450 Participants Expected

SPRING (April to June)
6 Events | 475 Participants Expected

SUMMER (July to September)
5 Events | 345 Participants Expected

FALL (October to December)
4 Events | 350 Participants Expected

Outreach

Casual Community Meet-ups

WINTER (January to March)
2 Events | 100 People Contacted/Engaged

SPRING (April to June)
3 Events | 300 People Contacted/Engaged

SUMMER (July to September)
3 Events | 450 People Contacted/Engaged

FALL (October to December)
2 Events | 100 People Contacted/Engaged

Digital Campaigns

Website Activity & Social Media

WINTER (January to March)
1,200 New Website Visitors
150 New Facebook Followers

SPRING (April to June)
1,800 New Website Visitors
300 New Facebook Followers

SUMMER (July to September)
1,200 New Website Visitors
200 New Facebook Followers

FALL (October to December)
950 New Website Visitors
350 New Facebook Followers

About Our Leadership Team

Our seasoned leadership team is comprised of positive change-makers who care deeply about the West Shore.

We are proven leaders who understand the value of community collaboration and have the know how to deliver engaging events and special initiatives in support of grassroots climate action.

Join our quest to build community as we adapt to life's changes ... **TOGETHER.**





Cindy Moyer

PRESIDENT

Cindy is a communications professional and a dynamic community leader with experience in business, government, education, and the cultural industries, including the development of outreach and engagement strategies, tactics, and tools to help people manage change.

Her local community non-profit work includes the leadership of Climate Action West Shore (CRD EcoStar Award winner) while a director with the WestShore Chamber of Commerce.



Gwen Snyder

TREASURER

Gwen ran the Royal Bay Bakery, a successful and award-winning family food enterprise in Colwood, for over 20 years, and has served as a director on multiple non-profit boards.

A significant edible landscape in Gwen's Garden provides an organic source of ingredients she transforms into healthy products she loves to share. Gwen cultivates authentic connections striving to build an inclusive community culture that leaves no one behind.



Shannon Carman

VICE-PRESIDENT & SECRETARY

Shannon has a background in communications, as well as experience in administration (Metchosin Farm, Ragnarock Studios, Coast Collective) grant writing, bookkeeping, and social media.

She has served on various executives including as PAC President of Hans Helgesen Elementary and as the Chair of the Healthy Communities Advisory Select Committee for Metchosin Council. Shannon grew up on the West Shore and is now raising her two young daughters here.

ReImagine
West Shore Community



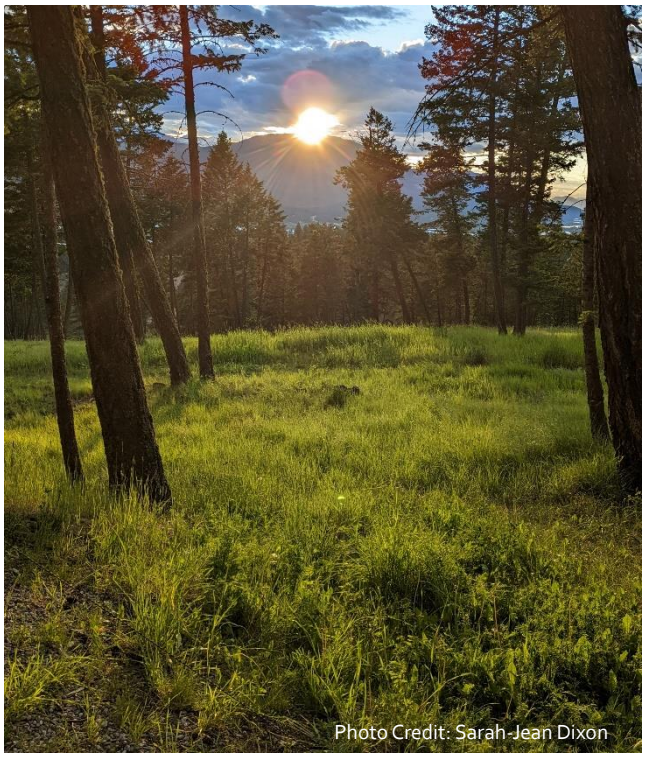
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ReImagineUs.ca

DRAFT B.C. BIODIVERSITY AND ECOSYSTEM HEALTH FRAMEWORK


Photo Credit: Sarah-Jean Dixon

November 2023

BRITISH COLUMBIA
Ministry of Water, Land and Resource Stewardship

Message from the Minister

British Columbia (B.C.) is known for the diversity of the land and water and is the most biodiverse province in Canada. However, the province's biodiversity and ecosystems are under threat. Healthy ecosystems and biodiversity are not only essential for our individual health and wellbeing, but they also ensure that ecosystems, economies, and communities throughout B.C. can flourish. Healthy ecosystems and biodiversity are vital for climate change resiliency and reducing the impacts and costs related to floods, droughts and wildfires brought on by changing climate and extreme weather events.

We are seeing the urgent need for unprecedented shifts in land and water management to ensure biodiversity and ecosystem resilience for generations to come at international, national, and local scales. Internationally, the Global Biodiversity Framework was signed in 2022. Nationally, Canada has committed to halt and reverse biodiversity loss and formally recognizes that every Canadian has a right to a healthy environment.

A collaborative stewardship approach that prioritizes the conservation and management of biodiversity and ecosystem health is needed in B.C. to address emerging environmental issues as well as support true and lasting reconciliation with Indigenous Peoples.

B.C.'s Biodiversity and Ecosystem Health Framework (the Framework) is an important step towards the provincial government's commitment to prioritize the conservation and management of ecosystem health and biodiversity, including the conservation and recovery of species at risk, which will align all existing related initiatives and set the path for co-development and implementation of new policies, legislation, and strategies.

In early 2023, we initiated engagement and the collaborative development of a draft Biodiversity and Ecosystem Health Framework with First Nations, local governments, interest groups and industry, in response to Recommendation 2 of the Old Growth Strategic Review. I want to thank everyone for their participation in the engagement and collaboration sessions, and the thoughtful input that was provided and incorporated in this draft Framework.

Through this draft Framework, we are committing to a collaborative stepwise approach to prioritizing healthy ecosystems and biodiversity, and to take a holistic approach to stewarding B.C.'s land and water resources, ensuring that they are healthy and resilient for the long term.

Sincerely,

Nathan Cullen
Minister of Water, Land and Resource Stewardship

Foreword

B.C. is the most biodiverse province in Canada. However, the province's biodiversity and ecosystems are under threat from habitat loss and fragmentation, climate change, pollution, unsustainable use, and invasive species. B.C. has experienced impacts from climate change such as wildfires, flooding, landslides, water shortages and heatwaves which have resulted in negative impacts (such as loss of life, infrastructure, property, revenue, and habitat for species). These negative impacts are expected to become more frequent with more significant impact unless action is taken.

The climate change and biodiversity crises are inextricably linked – climate change is threatening biodiversity in B.C. Conserving and restoring ecosystems is fundamental to mitigating and adapting to climate change. Our long-term economic prosperity depends on resilient biodiversity and ecological integrity.

B.C. has many examples of collaborative stewardship initiatives, in addition to provincial strategies which have been, and are being, developed to concurrently manage for ecological integrity and human well-being through ecosystem-based and adaptive management approaches. These approaches are helping to shift the ways land and water are managed across the province.

While all these initiatives are underway, the province would greatly benefit from a common vision related to biodiversity and ecosystem health that we can all work towards. The B.C. Biodiversity and Ecosystem Health Framework (the Framework) is proposing a vision and a cohesive, collaborative, and transparent provincial approach that will build off, align, and integrate ongoing work, and that is adaptable to diverse ecosystems, cultures, and ways of approaching stewardship across the province.

The Framework promotes an inclusive, partnership-based approach - founded on upholding Title and Rights of First Nations and advancing reconciliation. Through networks, governance structures partnerships, planning tables, forums, agreements and co-operation and various means of collaboration we can continue work together in concert, strengthening the relationships we have with one another and with the land, water, and all living things.

While much work is underway, the aim is to achieve the transformative change needed through the clarity of prioritizing ecosystem health and resilience. There is an incredible opportunity to seize this moment to show the world how working together with First Nations, local communities, industry, civil society, and others can help maintain biodiversity and ecosystem health and ensure healthy communities and prosperous resource-based economies for current and future generations, inspiring hope, and optimism for us all.

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Statement of Intent

THE BRITISH COLUMBIA GOVERNMENT COMMITS TO THE CONSERVATION AND MANAGEMENT OF ECOSYSTEM HEALTH AND BIODIVERSITY AS AN OVERARCHING PRIORITY AND WILL FORMALIZE THIS PRIORITY THROUGH LEGISLATION AND OTHER ENABLING TOOLS THAT APPLY TO, AND CAN BE ACCESSED BY, ALL SECTORS[1].

The Framework is built on the foundation of upholding and enabling the articles set out in the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) and the requirements of the *Declaration on the Rights of Indigenous Peoples Act* (Declaration Act). This foundation supports three pillars:

1. **Taking a whole-of-government approach that demonstrates vision, leadership, and integration: including setting ecosystem health and biodiversity objectives and standards that apply across sectors, and integrating and aligning provincial government decision-making, policies, processes, and legislation that affect ecosystems.**

2. **Fostering and supporting a broader whole-of-society approach that facilitates actions and initiatives by individuals, organizations, private sector, governments, and communities to conserve and manage ecosystem health and biodiversity and to advance sustainable communities and economies.**

3. **Adopting an open and transparent process through evaluation, reporting, continuous collective learning, and adaptive management.**

The core drivers of success are working together to maintain and enhance biodiversity, ecological integrity, and their overall resilience to ensure the coexistence of healthy ecosystems and human communities and economies in B.C. for current and future generations.

[1] The intention is that this priority applies to sectors (within provincial jurisdiction) that impact ecosystems, including forestry, agriculture, fisheries and aquaculture, energy and mines, oil and gas, tourism, recreation, transportation, and housing. The Framework is also inclusive of other sectors that benefit from biodiversity or play a role in supporting outcomes of this Framework, including health, finance, education, research, training, and innovation.

1. Ecosystem Health and Biodiversity in B.C.

B.C. is home to the greatest biodiversity of any province or territory in Canada, bordered by the arctic-alpine tundra on the north, the fringes of the prairies on the northeast, the Rocky Mountains along the length of the eastern boundary the arid valleys on the south and the rich waters of the Pacific Ocean on the west. The diverse climate and topography in B.C. contribute to complex and varied ecosystems, including mountains, plateaus, valleys and coastal plains and their associated forests, grasslands, wetlands, alpine, oceanic, and aquatic ecosystems[iv].

The health of an ecosystem can be evaluated by the degree to which it maintains biodiversity and other ecosystem benefits. Healthy ecosystems have the structures, functions, composition, and processes that maintain and support native biodiversity. This includes energy and nutrient cycling, natural disturbance processes, hydrologic cycles, and complex interactions among systems, both terrestrial and aquatic, above and below ground, forested and non-forested, biotic, and abiotic, at community and individual scales, and with humans and our surroundings.

Healthy ecosystems are dynamic and resilient. They are adapted to natural disturbances at scales that vary based on ecosystem attributes such as climate, species, topography, and soils. Healthy ecosystems also have a high degree of ecological integrity; they contain native species and communities, natural landscapes, and ecological functions that are characteristic of the region and ecosystem they occur within[v].

Healthy ecosystems and biodiversity provide a range of environmental, social, cultural and health benefits to British Columbians that are the foundation of our well-being. These benefits include providing clean air and water, supporting spaces for social activities and spiritual practices, provision of medicine (including social and psychological wellness), water security, flood and disease prevention, and food and nutritional security (particularly for Indigenous traditional ways of life). Healthy ecosystems and biodiversity underpin B.C.'s economy and are critical for key economic sectors, including tourism and recreation, forestry, agriculture and fisheries, and innovation for medical and pharmaceutical industries. They provide nature-based solutions for climate mitigation and adaptation and are a source of innovation via many types of social and environmental research.

Biodiversity and cultural diversity are inextricably linked. Evidence shows that human cultural diversity is associated with the remaining high concentrations of biodiversity, demonstrating the critical role Indigenous Peoples play in conserving biodiversity and ecosystems[vi]. These unique relationships are embodied in the values, beliefs, worldviews, livelihoods, and knowledge of Indigenous Peoples. In B.C., there are more than 200 distinct First Nations, each with their own unique traditions and history, and each of which are closely tied to and shaped by their relationship to their lands and their inherent stewardship responsibility to those lands.

The need for unprecedented shifts in land and water management to ensure ecosystem health and biodiversity for future generations is being addressed on international, national, and local scales. Internationally, the Global Biodiversity Framework (GBF) was signed in 2022. Canada will revise the National Biodiversity strategy to align with GBF goals and targets and formally recognizes that every Canadian has a right to a healthy environment. Different levels of co-operation and alignment can lead to combined support and actions in B.C. for example, the

Marine Protected Area Network Action Plan for the Northern Shelf Bioregion was jointly endorsed with 15 First Nations, the B.C. Government, and the Government of Canada[vii].

Key terms are defined below to help guide the interpretation of the Framework.

Ecosystem Health – a concept or metaphor that describes environmental conditions in relation to natural/historical benchmarks for biodiversity and ecosystem structures, functions, and processes. Unhealthy ecosystems are degraded by human/industrial use.

Biodiversity (short for biological diversity) - the diversity of plants, animals, and other living organisms in all their forms and levels of organization, and includes the diversity of genes, species and ecosystems, as well as the evolutionary and functional processes that link them.

Ecological Integrity - ecosystems that contain native species and communities, natural landscapes, and ecological functions that are characteristic of the region and ecosystem they occur within.

Ecological Resilience - the ability of ecosystems to absorb the effects of combined human and natural disturbance events by resisting and recovering from the disturbance, while still maintaining ecosystem composition, structures, functions, and processes.

Human Well-Being – the overall quality of life and satisfaction that individuals and communities experience. It encompasses various physical, psychological, social, and economic factors that contribute to a sense of contentment, fulfillment, and happiness.

Conservation – the protection, care, management and maintenance of ecosystems, habitats, wildlife species and populations, within or outside of their natural environments, to safeguard the natural conditions for their long-term permanence.

Ecosystem-Based Management - an adaptive approach to managing human activities that seeks to ensure the coexistence of healthy, fully functioning ecosystems and human communities. The intent is to maintain those spatial and temporal characteristics of ecosystems such that component species and ecological processes can be sustained, and human well-being supported and improved.

Adaptive Management – is a rigorous approach for designing and implementing management actions to maximize learning about critical uncertainties that affect recurrent decisions while simultaneously striving to meet multiple management objectives.

2. Purpose

The purpose of the Framework is to provide strategic direction that sets the course for changes in legislation and current practices that aligns the Province's commitment to UNDRIP with specific goals that are intended to maintain and enhance biodiversity and ecological integrity, protect and conserve priority areas, restore degraded ecosystems, and ensure healthy communities and economies for generations to come. It sets out desired outcomes, principles, and broad directions on which we can build the next steps required to deliver legislation, detailed policies, and actions necessary - jointly with First Nations and with involvement from all British Columbians. It will facilitate short-term shifts towards transformational changes.

Recognizing the many initiatives and programs that are already underway in B.C. that support healthy ecosystems and biodiversity, the Framework aims to create a coordinated and cohesive approach as well as fill gaps. It aims to strengthen and accelerate these existing initiatives, building on successes and wise practices that can be scaled and applied more broadly, while supporting a collective culture of learning and growth.

The Framework is living and flexible recognizing that many actions and ideas contained in this document are based on the current state and will continue to change as we progress reconciliation and adapt to a changing environment.

What does Prioritizing the Conservation and Management of Ecosystem Health and Biodiversity mean?

The Framework sets the stage for the desired transformational shift from a land management system that prioritizes resource extraction (subject to constraints) to a future that is proactive, prioritizes the conservation and management of ecosystem health and biodiversity, and is implemented jointly with title and rights holders (a paradigm shift). This shift recognizes that strong, stable, and prosperous communities and economies rely on healthy ecosystems.

This means that policies, decisions, and actions would first consider what ecosystems need to sustain themselves and the benefits they provide[2] across spatial scales (e.g., local, watershed, regional) through time, and then consider how they may be sustainably used to support communities and economies.

Ecosystem-based management (EBM) will be an important management approach to achieve this which looks to concurrently manage for ecological integrity and human well-being. Implementation of EBM will look different across B.C. (spatially and temporally) given the diversity and continuum of change in ecosystems, local communities, and Indigenous cultures and stewardship practices. It is expected that there will continue to be areas of more intensive development to accommodate population growth and increasing demands for food, fiber, and energy as well as areas of the landscape where there will be greater emphasis on ecosystem health, including protection of priority areas and restoration of degraded ones. It will require a

[2] Ecosystem benefits include, but are not limited to, clean air, water quality, species diversity, soil productivity, predatory-prey interactions, pollination, carbon sequestration and storage, flood and disease prevention, and provision of medicine, food, and fiber.

complementary transition toward a long-term view of economic health and community prosperity.

Prioritizing the conservation and management of ecosystem health and biodiversity includes[viii]:

Shift from	Shift to
Individual species	Continue to advance holistic multi-species / ecosystems and threats-based approach*
Small spatial scale	Multiple scales
Short-term perspective	Long-term perspective
Humans independent of ecosystems	Humans as integral parts of ecosystems
Management separate from research	Adaptive management
Managing commodities	Enhanced production potential for ecosystem goods and services

* While managing for vulnerable individual species may always be needed, shifting to a multi-species / ecosystems focused approach can result in greater benefits across multiple species and reduce overall costs and effort on single species management.

Creating Conditions for Change

Managing for ecosystem health and biodiversity is a considerable shift, and it will be challenging to do. Success will require that:

- the right sets of laws, policies, and practices are in place;
- people have the necessary tools and support to work effectively;
- all voices are heard, valued, and considered in decision-making;
- all of society understands the change and why;
- full expression to the standards in UNDRIP is provided for;
- the transition is a just one that does not unfairly impact certain sectors or communities;
- there is a well-aligned vision of land use, stewardship and governance between First Nations and the Province.

The Framework is designed to help get this in place, and as part of its strategic direction fill policy gaps while working towards longer term legislation.

Desired Outcomes

The desired outcomes from implementing the Framework include:

- **Healthy ecosystems**: achieve a level of stewardship that maintains and enhances biodiversity, ecological integrity, and ecological resilience across the province.
- **Advances reconciliation**: implementation of the standards of UNDRIP; First Nations have the space and capacity to play an integral role in conserving ecosystems and biodiversity in their territories; and there are increased opportunities to exercise Indigenous rights and responsibilities, including right to harvest, and the responsibility to care for and respect lands and waters.

- **Effective stewardship**: approach is broadly understood, supported by, and meaningfully involves the broader public; there are respectful relationships; and holistic learning and knowledge sharing.
- **Resilient communities and economies**: achieves social and economic benefits for all; supports diverse and ecologically sustainable local, regional, and provincial economies; and fosters and attracts necessary skills, innovation and training with communities benefiting from secure, innovative jobs for generations to come.

The vision is that healthy and biodiverse ecosystems will be thriving, productive and resilient – and sustain community, social, economic, and environmental well-being in all ways for generations to come.

3. Principles to Guide Our Shared Path Forward

The following principles are intended to guide actions, decisions, and policy development to support implementation of the Framework, such as informing the co-development of legislation and guiding considerations for statutory decision-makers. These principles are in addition to, and designed to complement, existing principles that are related to the Framework. For example, the Draft Principles that Guide the Province of British Columbia's Relationship with Indigenous Peoples will guide the Province-Indigenous relationship that is based on respect and recognition of inherent rights when implementing the Framework.

Shared Responsibility and Accountability	We are all responsible for managing and caring for the land and water together. We all have actions that we can commit to that will make a difference. Aligning levels of government and individual goals will amplify our success.
Respectful relationships	Success relies on respectful relationships with each other and the land and water. Partnerships and collaboration among governments and all British Columbians that embraces a diverse range of values and perspectives, and a spirit of learning and adapting will be key.
Sustainable and Inclusive Economies	Recognize that long-term stable jobs, and resilient and competitive economies, are only possible with a healthy environment.
Interconnectedness	Recognize that the connection between land, water and people are inseparable when it comes to stewardship and conservation.
Community/ Place-Based Decisions and Actions	Accounts for regional differences by emphasizing community empowerment and informed decision-making and supporting flexible local approaches (rather than top-down, one-size-fits all approaches).
Multi-generational	Ensure that decisions made today are sustainable for future generations and provide for intergenerational equity.

4. Foundation

The Framework is built on the foundation of upholding and implementing the articles set out the United Nations Declaration on the Rights of Indigenous Peoples and the requirements of the Declaration Act

First Nations in B.C. have stewarded their territories for millennia and have specific rights, interests, and connections. The uniqueness of each First Nation in B.C. is expressed, in part, through knowledge systems, cultural identities, and laws which are inextricably linked to the lands and waters in their respective territories. The Province recognizes and supports the fact that ecosystem health and biodiversity are core to inherent title and rights of First Nations in B.C.

Indigenous world views, cultural and economic practices have demonstrated success in maintaining ecosystem health and biodiversity. Sharing knowledge (Indigenous, scientific, expert, local) and learning together will strengthen the adaptive approach necessary to address the complex challenges we are collectively facing.

Implementation of the Framework will involve a distinctions-based approach to ensure that the unique rights, interests, and circumstances of Indigenous Peoples in B.C. are acknowledged, affirmed, and respected; that respects First Nations, Métis and Inuit peoples as distinct, with unique cultures, histories, rights, laws, and governments; and, which requires Canada and B.C's relationship and engagement with First Nations, Métis and Inuit peoples to include different approaches or actions with different outcomes; therefore this Framework involves First Nations as the Indigenous Peoples who hold title and rights to territory in B.C. through agreed upon governance structures and the exercise of First Nations rights to self-determination and self-government.

Commitments related to new biodiversity and ecosystem health legislation as well as amendments to existing land and water related provincial legislation to give effect to the Framework would be co-developed with First Nations. The Province is also committed to working in partnership with First Nations to advance territorial planning, which includes land use planning, to inform land use decisions that can support healthy ecosystems and biodiversity.

The Province recognizes that consistent capacity funding for Indigenous communities, governments and organizations will be needed to support readiness in the implementation of the Framework. Implementation of the Framework will entail working with Indigenous knowledge holders to uphold and support Indigenous knowledge meaningfully and respectfully.

5. Actions

Pillar 1: Taking a whole-of-government approach that demonstrates vision, leadership, and integration: including setting ecosystem health and biodiversity objectives and standards that apply across sectors, and integrating and aligning provincial government decision-making, policies, processes, and legislation that affect ecosystems.

A whole-of-government approach is essential to shift to mainstreaming concepts of ecosystem health and biodiversity across all relevant sectors including health, agriculture, forestry, mining, infrastructure, and finance. Changing our ways to maintain and enhance ecosystem health and biodiversity is complex and challenging and requires all government bodies at all levels to be actively involved to ensure government actions are complementary and not working at cross-purposes. It requires shared goals, backbone capacity and governance, and structural enablement through law and policy – all of which enables collective action and impact across sectors. B.C. will:

1. Establish an Office of Biodiversity and Ecosystem Health within the B.C. Public Service with the necessary powers and authorities to lead a coordinated and collaborative approach across government and in partnership with First Nations to implement the framework including:
    a) Improving the collection, coordination and sharing of information on the status of ecosystem health, including biodiversity, and supporting informed decisions and continuous improvement.
    b) Leading the development of ecosystem health and biodiversity objectives and standards for key ecosystems (e.g., forests, wetlands, grasslands) supported by guidance for all sectors, based in science and local and Indigenous knowledge, to account for multiple values, that can then be recognized in legislation.
    c) Championing policies and approaches; and ensuring accountability to meet ecosystem health and biodiversity objectives and standards across government.
2. Co-develop with First Nations new legislation and amendments to existing land and water related provincial legislation to give effect to the Framework, including affirming First Nation jurisdiction, governance, and stewardship practices.
3. Integrate and align decision-making processes, policies, programs, with the priority of conserving and managing ecosystem health and biodiversity.
4. Incorporate ecosystem health and biodiversity objectives and standards (see 1 b) in all planning activities (e.g., Land Use Planning, Forest Landscape Planning, Watershed Planning), in a manner that enables First Nations and the Province to work together in an inclusive and transparent way to adjust the objectives and standards to meet the goals for specific areas. Planning activities will be based on ecosystem-based management principles to ensure:
    a) Ecosystems are managed in a way that minimizes biodiversity risk and ensures ecological integrity is maintained.

b) That cumulative effects of natural and human-caused disturbances are managed for the desired future conditions, informed by the range of natural/historic variability and the need to manage for resiliency to future climate conditions.
c) Protected areas and other effective area-based conservation measures are established to protect, connect, recover, and maintain important habitat, riparian areas, and wildlife features.
d) Restoration is included as part of planning activities and is used strategically to improve landscape condition.
e) Ecosystems are managed to promote and enable sustainable economies and resilient communities.

Pillar 2: Fostering and supporting a broader whole-of-society approach that facilitates individuals, organizations, private sector, governments, and communities to conserve and manage ecosystem health and biodiversity and to advance sustainable communities and economies.

While many British Columbians are working hard to conserve ecosystem health and biodiversity, the value of this Framework is in connecting and unifying efforts and people to maximize long-term impact. Supporting connections between people and nature, with enabling mechanisms in place for all to actively contribute to protection, restoration, and sustainable use (e.g., governance, information sharing, and investment in skills, knowledge, capability, and capacity), are proven to have measured benefits on physical, spiritual, and mental health and well-being[ix]. B.C. will:

1. Support and connect societal initiatives and actions that are working towards achieving healthy ecosystems and biodiversity in B.C., address barriers and gaps, and evaluate these three supports.
2. Provide education and publicly available, accessible, and credible data and information on ecosystem health and biodiversity, while supporting Indigenous data sovereignty, to help enable informed local participation in decision-making.
3. Create or use financing mechanisms (e.g., conservation finance, tools and sustained long-term funds) to enhance stewardship capacity.
4. Create pathways (including fostering innovation, skills, and training) to achieve environmental, social, and economic benefits for all, this includes supporting sustainable and stable natural resource sectors that continue to be a source of good jobs and economic security for communities and creating new opportunities and benefits which accelerates diverse streams of revenues.

Pillar 3: Adopting an open and transparent process through evaluation, reporting, continuous collective learning, and adaptive management.

Our collective success depends on making sure we are on the right path to maintaining and enhancing ecosystem health and biodiversity. This requires a foundation of science and local knowledge, improved understanding of biodiversity, ecosystem health and related cumulative impacts, and enhancement of monitoring, evaluation, and adaptive learning. Tracking, reporting

on and celebrating progress will be important for maintaining momentum towards this transformational shift. B.C. will:

1. Develop an implementation plan to operationalize the Framework that identifies the necessary resources which will accelerate and integrate related initiatives and fill gaps.
2. As part of the implementation plan implement interim measures to ensure action is taken quickly and options are retained for long-term decisions.
3. Enhance oversight through compliance and enforcement such as by involving others (e.g., First Nations Guardian programs) and provide improved ability to tailor to region-specific needs.
4. Regularly and transparently report publicly on the state of ecosystem health and biodiversity and progress in implementing the Framework (including how we are tracking against ecosystem health and biodiversity objectives and standards), and adjust response where needed based on the results of monitoring and evaluation.

6. Conclusion and Next Steps

The Biodiversity and Ecosystem Health Framework sets out an important provincial commitment: "the conservation and management of ecosystem health and biodiversity as an overarching priority and formalizing this priority through legislation and other enabling tools that apply to, and can be accessed by, all sectors." While the Framework provides the strategic direction and creates the structure for understanding and action, each of the commitments will have to be further designed, with analysis and policy choices made.

Along with that commitment, the Framework facilitates the short-term shifts towards transformational changes that are needed. It provides strategic direction, setting the course for changes in legislation and current practices that are grounded in the Provincial commitment to UNDRIP. With guiding principles, desired outcomes, and specific actions, it lays out a pathway to maintain and enhance biodiversity and ecological integrity, protect and conserve priority areas, restore degraded ecosystems, and ensure healthy communities and economies for generations to come.

The Framework is living and flexible, recognizing that many actions and ideas contained within it are based on the current state and will continue to change as we progress reconciliation and adapt to a changing environment. Our collective efforts, through co-operation and integration, will ensure we are learning, building, and implementing the transformational changes needed to build our shared future. This includes reviewing and renewing the Framework with opportunities for involvement in its evolution.

In the intervening time, once engagement on the draft Framework has drawn to a close, all feedback will be considered and used to inform the final Framework.

In addition, recognizing that the Framework sets out a pathways approach, the next steps will be to develop an implementation plan that identifies interim measures and the expected timelines for all measures, whether short, medium, or long term.

Appendix A: Background Information

The following information provides additional context on the various concepts introduced in this document.

Nature's value

- B.C. has the greatest diversity of species, ecosystems, and habitats of any province or territory in Canada.
- Healthy ecosystems support healthy environments that provide stable cultural, social, and economic benefits to people and communities throughout B.C.
- Ecosystem benefits include, but are not limited to, clean air, water quality, species diversity, soil productivity, predatory-prey interactions, pollination, carbon sequestration and storage, flood and disease prevention, and provision of medicine, food, and fiber.
- There is increasing recognition for the need and value of natural asset management, i.e., to ensure clean drinking water, healthy fisheries and waterways, and mitigation of floods, landslides, wildfires, and other risks.
- The economy is not separate and apart from nature but embedded within it: our prosperity is dependent on the dynamics in nature.
- There is a wealth of knowledge and case studies on the economic benefits of biodiversity from local economic studies, from other jurisdictions and internationally. Taking the full value of nature into account can lead to different types of opportunities, benefits and a more pragmatic assessment of decisions, unintended consequences, and their costs.

Our shared future: managing for different risks and uncertainty

- The climate change and biodiversity crises are inextricably linked – climate change is threatening biodiversity in B.C. Conserving and restoring ecosystems are fundamental to mitigating and adapting to climate change.
- Building healthy ecosystems is part of disaster risk reduction. For example, the Sendai Framework for Disaster Risk Reduction[x] includes recommendations to: "strengthen the sustainable use and management of ecosystems" and "… preserve ecosystem functions that help to reduce risks."
- Managing for uncertainty will require us to coordinate our collective efforts and action, build from the collective wisdom that incorporates different views and knowledge systems information, and to strengthen decision making and collaborative processes, through better communications.

Meaning of prioritization of ecosystem health and resilience

- Prioritization of the conservation and management of biodiversity and ecosystem health means to consider the restoration and maintenance of the natural range of variability of ecosystem characteristics across scales (local to regional) to promote ecosystem resilience and sustainable delivery of economic and social services.

- Conservation and management of biodiversity and ecosystem health is proposed to be based on an ecosystem approach, which includes ecosystem-based management. In some cases, where an ecosystem is severely degraded or at risk: that ecosystem may need protection, restoration, or enhancement efforts.

- As part of the UN Convention on Biological Diversity and decisions made under it, sustainable use has been recognized as a management objective as it is a way to promote conservation of biodiversity, providing incentives for conservation and restoration because of the social, cultural, and economic benefits that people derive from that use. It also means that sustainable use is connected to effective conservation measures[xi].

- Ecosystem-based management looks at long-term viability, ecosystem services benefits, functions, and use, and makes decisions in the context of people's relationships to those ecosystems. For example, for an ecosystem in a watershed, the erosion of soil and the water filtration function will be critical benefits that need to be considered along with other factors in deciding the use of that ecosystem. Management decisions will also entail consideration of the cumulative impact of activities on species or ecosystems in management decisions related to the species or ecosystem.

- Adaptive management works to deal with uncertainty, given that ecosystems are dynamic, complex and that decisions in relation to an ecosystem are not static. Adaptive management allows for learning from previous results. The Framework will facilitate learning from wise practices, cross-sector learnings, different knowledge systems including Indigenous knowledge and increased monitoring to strengthen adaptive management.

- There is a need to create a broader understanding on what conservation and management entails: a common assumption is that it is only preservation, but the actions are broader and can be tailored for a given situation and different ecosystem types in terms of protection, care, maintenance, or restoration.

- Many of the actions that span the scope of conservation and sustainable use are already underway in B.C., for example, consideration of the ecosystem and adaptive management. Having a cohesive and consistent approach may enable enhanced practices and procedures and provide broader certainty and clarity.

- The goal is to ensure that existing initiatives can be amplified and promoted, creating knowledge networks and exchanges, with learnings shared between sectors, reducing duplication of efforts.

Designing for Economic Resilience

The Framework is expected to:

- add to existing efforts in the StrongerBC Economic Plan to strengthen community resilience in the context of climate change nurturing talent, promoting investment, strengthening infrastructure, and fostering innovation in both traditional and new industries.

- strengthen and or create pathways towards inclusive and sustainable economic opportunities that can diversify revenue streams for local communities and explore opportunities to avoid additional costs and impacts on vulnerable and/or marginalized populations.

- enable the exploration and adoption of financial mechanisms to support outcomes and create initiatives that support early adopters and industry leaders in addressing biodiversity loss.

- support existing efforts to sustain sectors and jobs into the long-term based on the recovery and productivity of ecosystems.

- create the support and awareness for nature-based assets that could help communities to avoid costly local infrastructure spending, building more resilient local economies.

- bolster existing efforts designed to increase productivity by enhancing biodiversity, for example, strengthening food security through changes to soil health and advancing forest climate change strategies.

- build and prepare for the full range of future skills and training that will be needed to support the actions needed to maintain, restore, and enhance biodiversity.

Implementation

- The Framework will be implemented in various ways: from communications, to updates to existing policies, to increasing partnerships, agreements, and participation in existing processes in the short term. Many of the short-term activities entail increasing awareness, strengthening knowledge networks, and building relationships as preparation for dialogue and design of broader structural changes that are needed.

- Through a consultation and co-operation plan, further work will be outlined to co-develop the longer-term policy and legislative changes needed.

- The Framework will be implemented and supported through various initiatives already underway or in place that would further the outcomes in place, such as land use planning, protected area targets, other effective conservation measures, protected areas, watershed security strategy, the coastal marine strategy, to name just a few examples.

- The Framework would create a common frame of reference for all the related initiatives, enabling identification of shared goals and purpose, understanding where alignments are needed, improving communications, and identifying support needed.

- The Framework can catalyze the broader conditions (structural, relational, and transformational) that are needed to support a shared understanding and greater awareness, that will result in proactive measures, thus reducing the risk of costly reactive responses.

- Having a structured approach with clear outcomes and direction prepares and equips everyone better to deal with complex, dynamic environments that will require a broad range of appropriate responses.

[i] Convention on Biological Diversity, 2022, Kunming-Montreal Global Biodiversity Framework: https://www.cbd.int/gbf/
[ii] Canada's 2030 National Biodiversity Strategy, 2023: https://www.canada.ca/en/environment-climate-change/services/biodiversity/national-biodiversity-strategy.html
[iii] Parliament of Canada, 2023: https://www.parl.ca/legisinfo/en/bill/44-1/s-5
[iv] UBC, Biodiversity of BC: https://linnet.geog.ubc.ca/biodiversity/
[v] Government of Canada, 2023, Ecological integrity of national parks: https://www.canada.ca/en/environment-climate-change/services/environmental-indicators/ecological-integrity-national-parks.html
[vi] UNESCO, 2008, Links between biological and cultural diversity: https://unesdoc.unesco.org/ark:/48223/pf0000159255
[vii] MPANetwork, BC Northern Shelf: http://www.mpanetwork.ca/nap/
[viii] Adapted from: UNEP, 2017, Ecosystems Based Management: Markers for assessing progress: https://www.unep.org/resources/report/ecosystems-based-management-markers-assessing-progress
[ix] Parks Prescriptions: https://www.parkprescriptions.ca/
[x] Sendai Framework for Disaster Risk Reduction 2015-2030: https://www.undrr.org/publication/sendai-framework-disaster-risk-reduction-2015-2030
[xi] UNEP, CBD, April 2004: cop-07-dec-12-en (cbd.int)

Bullfrog Management Project Results for 2023 –
District of Metchosin, B.C.

Prepared by Stan A. Orchard, Herpetologist, October 2023

The 2023 field season was seriously hampered [redacted] This reduced my work force from three 2-person crews to only two. The ramifications [redacted] were many and scheduling fieldwork in a timely fashion was a big one and given the uncertainties of the weather. The Bullfrog Control Program will be back on track next year with at least three crews to respond relatively quickly to reports from the public and to time our site visits more in accordance with bullfrog seasonal behaviour patterns and management aims and priorities.

RESULTS

In 2023 fieldwork in Metchosin was carried out on four calendar nights at four different sites. All of these sites had been visited in past years. Overall, 43 bullfrogs were collected from four sites including 17 adult males, 15 adult females, and 11 juveniles.

The same numerical code for identifying sites is used in Table 2 (below) as was used in 2020. No new sites were added in 2023.

Table 1. Metchosin Capture Results Sorted by Size-class and Gender

Size-class by Body Length	Totals 2021	Totals 2022	Totals 2023
Young males (80-120 mm)	34	9	13
Mature males (>120 mm)	4	8	4
Young females (80-120 mm)	96	10	10
Mature females (>120 mm)	11	9	5
Juveniles (<80 mm)	171	72	11
Total	**316**	**108**	**43**

Table 2. Chronological Capture Results by Site including surface water temperature

Site	Date	Young ♂♂	Mature ♂♂	Young ♀♀	Mature ♀♀	Juveniles	Totals	Surface Water Temp
Pond #1	June 5	0	0	0	0	0	**0**	20.5° C
Pond #12	Sept 5	3	1	1	0	0	**5**	18.3° C
Pond #3	Sept 6	6	0	2	0	2	**10**	18.2° C
Pond #4	Sept 7	4	3	7	5	9	**28**	18.8° C
Totals		**13**	**4**	**10**	**5**	**11**	**43**	

INTERPRETATION OF RESULTS

Site #1 – No adult or juvenile bullfrogs were found at this site in 2023. Tadpoles were present but not abundant and three voucher specimens were collected. The remaining cohort should transform into juveniles late-summer 2024.

An incident occurred while the crew was unloading and setting up their equipment whereby some self-appointed vigilante approached them at dusk with a baseball bat and an uncouth and threateningly agitated manner. He saw our spotlights and must have thought it was the bat signal. Calmer heads prevailed.

Site #12 – Our visit to this site was late enough in the year that the native waterlily leaves had begun to curl and were therefore less obstructive in terms of our locating bullfrogs as well as less resistant to our pushing the boat through them. The lone adult female (body length 91 mm) caught was small and with undeveloped eggs. This late in the season she would not have spawned for the first time until 2024. No juveniles were found or tadpoles seen which indicates that no spawning has occurred here in prior years.

Site #3 – This site has become more difficult to work year by year as native willows crowd the margins and grow out into deeper water of the pond. These tangled thickets are shrouded behind an outer veil of leaves and provide adult and juvenile bullfrogs with cover and ready sanctuary. Luckily, bullfrogs tend to position themselves along the outer fringes of these dense entanglements but can quickly retreat back into them. While these fortresses of live and dead entangled foliage are a hinderance, the bullfrogs will inevitably move around and so persistence almost always pays off. Adult bullfrog numbers remain very low and all were in the young adult category (< 120 mm body length). The ovaries of both females were not yet egg bearing. Only two juveniles were captured which suggests that they transformed elsewhere and then migrated into this pond. If they had hatched and transformed within this pond then one would expect there to have been hundreds of them.

Site #4 – The water level of this pond was exceptionally low even for late summer which means that as the water receded it left extensive sections of now exposed wet mud that was dangerous to step into and impossible to push the boat through. This was where many juvenile bullfrogs were aggregated and thereby almost inaccessible. Consequently, we concentrated primarily on locating and capturing adult bullfrogs that were either out among the floating weeds offshore in the pond or arrayed in littoral and riparian vegetation where the margin meets standing water of sufficient depth that they can quickly leap into if threatened. A total of nineteen adults including 7 males and 12 females were captured. The eggs of the adult females were either undeveloped or not yet mature. It is not possible to be certain from this whether any of the larger females spawned earlier in the summer but thankfully no tadpoles were observed.

SITE OMISSIONS

Matheson Lake Regional Park – At the end of May 2023 I was informed of a potential sighting of a bullfrog jumping into Matheson Lake. Shortly thereafter I was contacted by CRD Parks to chat about it and then told that they would write-up a three-night contract for my crews to do a comprehensive survey of the entire lake. They asked for my insurance information which I provided. Nothing happened for some time so I sent e-mail requests for an up-date on the status of this contract. I received no reply to multiple enquiries. So, I cannot confirm that bullfrogs have arrived at Matheson Lake but it is a possibility worth investigating. I intend to try once again next year to breach the cone of silence at CRD Parks and perhaps the funding for a survey will finally materialize in 2024.

Two reports of bullfrogs were brought to my attention in 2023 by Miranda Yeats at the Metchosin Office. First on August 15th came a report from Leefield Road of calling male bullfrogs being heard and juveniles seen. This location will hereafter be referred to as **Site #13**. Then on August 16th came a report from Kangaroo Road that will henceforth be known as **Site #14**. Regrettably I was unable to respond to either of these reports this year but I will make contact with these residents and visit both sites at the first opportunity if the bullfrog control program is approved to proceed in 2024.

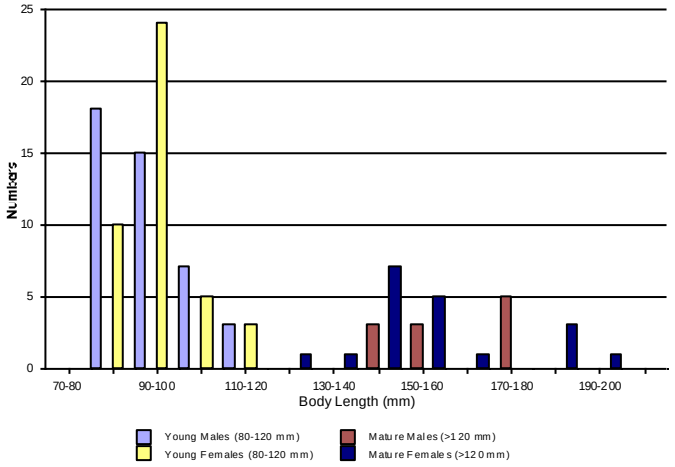
CONCLUSION

1. Bullfrog numbers in Metchosin are not on the rise at any of the four historical sites visited in 2023 as illustrated in TABLE 1 & GRAPH 1d. However, bullfrogs have been on the move regionally and the current extent of their distribution in Metchosin remains uncertain. The number of young and mature adults of both genders remains low (GRAPH 1d) and could potentially be made to peter out entirely in 2024 if proper attention is paid to re-visiting these sites prior to the mid-summer spawning with timely follow-up where required.

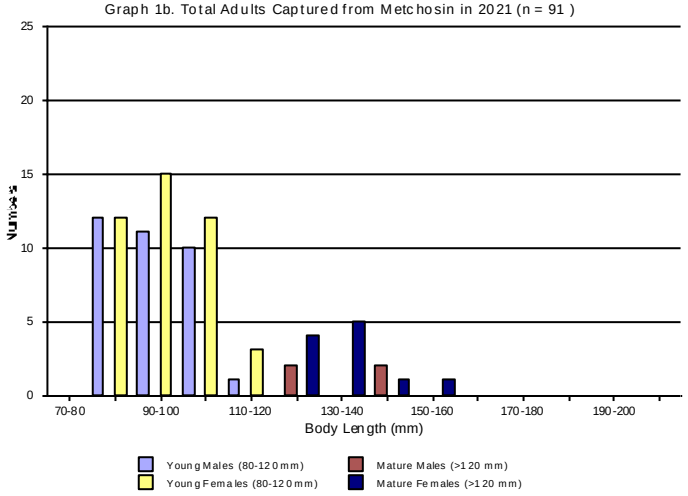
RECOMMENDATION

1. The bullfrog program in Metchosin should continue and intensify in 2024. That is to say that permission for us to proceed should be made early enough in the year – by late April or early May – so that scheduling of fieldwork can be tailored to the whims of the weather and thus take advantage of every opportunity for optimal results. My intention is to get back to deploying three 2-person crews now [redacted] With multiple crews we will also return to being able to visit multiple Metchosin sites in a single evening which is a huge advantage given that only a smattering of nights may be workable for us in the late spring and early summer.

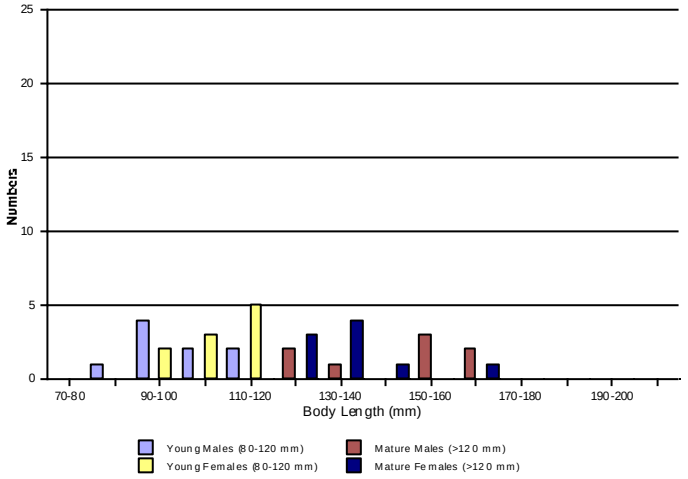
Graph 1a. Total Adults Captured from Metchosin in 2020 (n = 115)



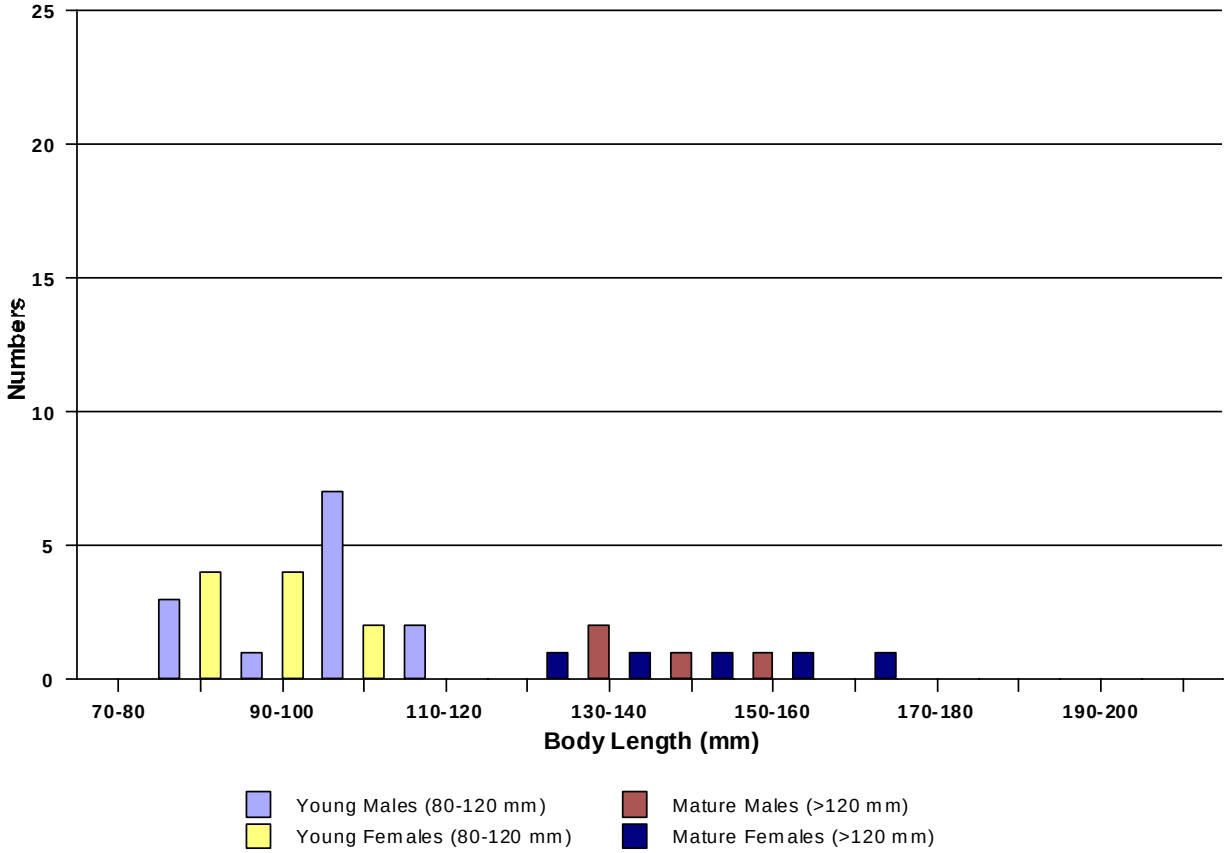
Graph 1b. Total Adults Captured from Metchosin in 2021 (n = 91)



Graph 1c. Total Adults Captured from Metchosin in 2022 (n = 36)



Graph 1d. Total Adults Captured from Metchosin in 2023 (n = 43)



DISTRICT OF METCHOSIN

MEMORANDUM

TO: Mark Atherton, Chair PTASC
Gary Fletcher, Chair MEASC

FROM: Susan Dyble, Development Services Coordinator

DATE: November 9, 2023

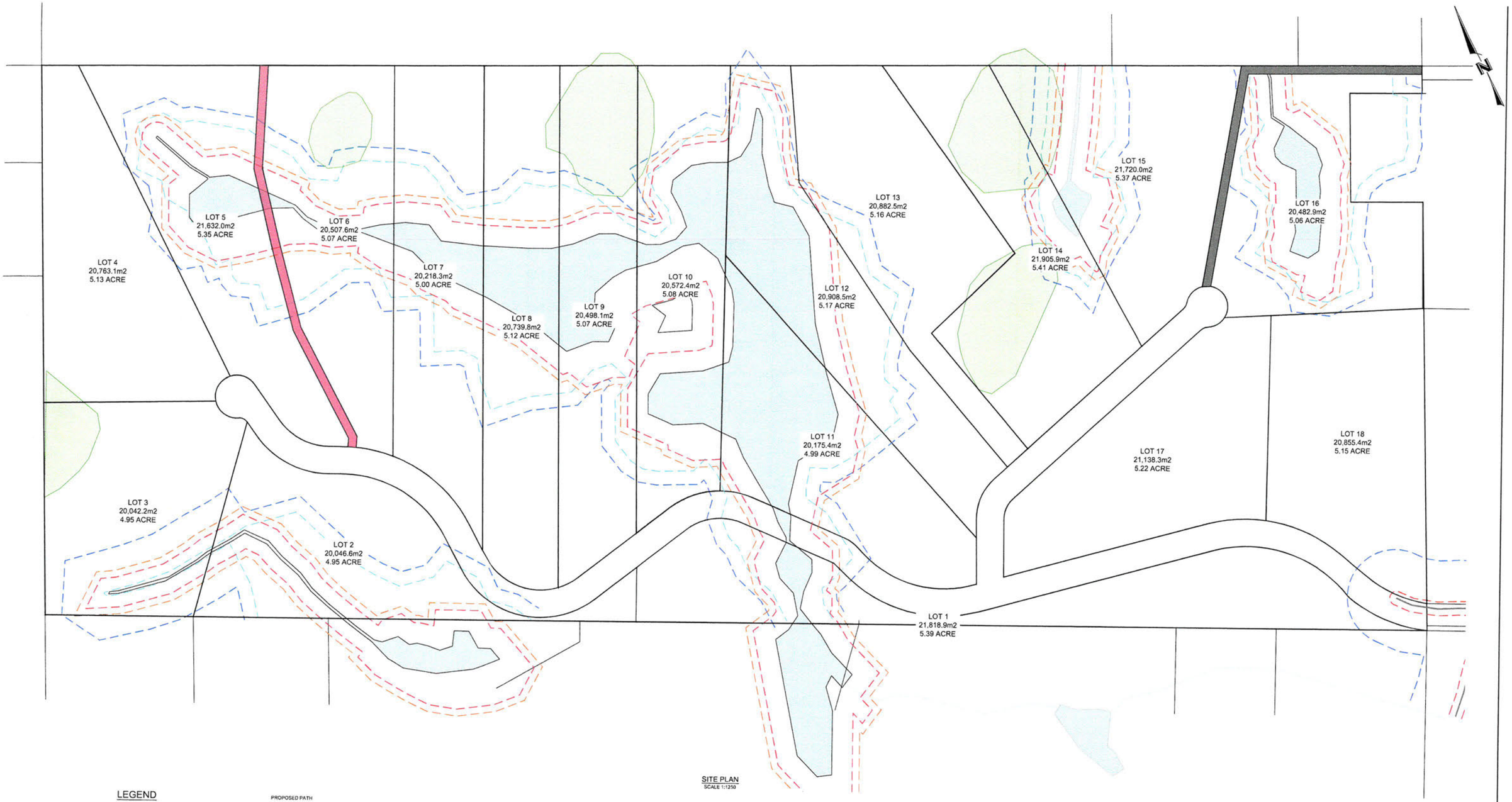
Our File: 3320-23-02

Re: **Proposed 18 Lot Subdivision (17 new lots)**
Section 16, Metchosin District, Except Part in Plan VIP62759
File No. 3320-23-02

Please find attached proposed subdivision plan for the above noted property. The applicant(s) are:

LIDA Developments c/o Dave Stephens
6105 Patrician Bay Highway
Victoria, BC V8Y 1T5
[redacted]

Please advise me as soon as possible of any concerns, comments and recommendations regarding the proposal. If you should require further information or documentation, please contact me.



SITE PLAN
SCALE 1:1250

LEGEND

- HWM
- ROCK OUTCROP SENSITIVE ECOSYSTEM
- PROPOSED EMERGENCY ACCESS ROUTE
- PROPOSED PATH SRW
- PROPOSED PATH
- TOB OR TORB
- RAA
- SPEA
- ADDITIONAL PROTECTION AREA
- ZOS - SHADE
- ZOS - LWD, BANK & CHANNEL STABILITY - LITTER FALL & INSECT DROP FOR STREAMS (10m OFFSET, SAME AS SPEA)
- ZOS - LWD, BANK & CHANNEL STABILITY - LITTER FALL & INSECT DROP FOR WETLANDS (15m OFFSET)

1:1250 0 25 75m

BC 1 CALL
1-800-474-6886
THE CONTRACTOR IS TO CALL B.C. ONE CALL, AND HAVE EXISTING U/G SERVICES STAKED PRIOR TO ANY CONSTRUCTION

AUGUST 17, 2023
DRAFT

ISLANDER ENGINEERING
873 DISCOVERY STREET
VICTORIA, B.C. V8T5G4
PHONE 250.590.1200
www.islanderengineering.com

CONFIRM UNDERGROUND LOCATIONS WITH UTILITY COMPANIES

THE LOCATION AND ELEVATION OF THE EXISTING UNDERGROUND INFRASTRUCTURE SHOWN ON THIS DRAWING MAY NOT BE ACCURATE OR COMPLETE. THE ACTUAL HORIZONTAL AND VERTICAL LOCATIONS MUST BE CONFIRMED PRIOR TO THE START OF ANY EXCAVATION.

LEGEND

Existing Municipal Infrastructure	Drain	Curb	Concrete Box	Valve
Proposed Municipal Infrastructure	Ditch	Sidewalk	Wood Box	Flush Valve
Existing External U/G Utilities	Sewer	Manhole	Catch Basin	Hydrant
Proposed External U/G Utilities	Water	Cleanout	Culvert	Reducer
Street Lighting Pole Mount / Standard Mount	Traffic Sign	Silt Trap	Cap / Plug	Air Valve
Post Top / Pedestrian Signal / Traffic Signal	Ctrl Monument	Traverse Hub	Gas Valve	Water Meter

REVISIONS

6	
5	
4	
3	
2	
1	

REVISIONS APPROVED

	REVISION # 1			REVISION # 2			REVISION # 3		
	Approved	Date	Signed	Approved	Date	Signed	Approved	Date	Signed
Design Engineer									
Manager of Development									
Development Coordinator									

DESIGN APPROVED

	Approved By	Date	Signed
Design Engineer			
Manager of Development			
Development Coordinator			

DISTRICT OF METCHOSIN	
4694 BECKINGHAM ROAD	ISLANDER FILE # 2732
SITE LAYOUT	MUNICIPAL DESIGN # –
B.M. : – Elev: –	REV. # –
Design: JTA Drawn: JTA Checked: JBB	DRAWING # C01
Scale: Hor: 1:1250 Vertical: – Date: 2023-08-17	SHEET # 1 OF 3

ISLANDER ENGINEERING: August 17, 2023 / C:\shortcut-targets-by-id\0B9TdRYWSunTNkbazdzdCtLemc\Civil\Civil Projects\2732 - 4694 Beckingham\3 Drawings\2023-08-17 - 2732 - 4694 Beckingham - 5 acre lots.dwg