

Municipality of North Cowichan

Environmental Advisory Committee

AGENDA

Tuesday, August 17, 2021, 1:30 p.m.

Electronically

Pages

1. CALL TO ORDER

This meeting, though electronic, is open to the public and all representations to the Environmental Advisory Committee form part of the public record. At this time, due to the COVID-19 Pandemic, public access to meeting rooms at North Cowichan Municipal Hall is not permitted, however, this meeting may be viewed on the District's live stream webcast at www.northcowichan.ca/meetings.

2. APPROVAL OF AGENDA

Purpose: To consider any items of business not included in the Agenda, that are of an urgent nature, must be introduced and approved at the time the agenda is adopted. Matters must be taken up in the order that they are listed unless changed at this time.

Recommendation:

That the agenda be adopted as circulated [or as amended].

3. ADOPTION OF MINUTES

3 - 4

Purpose: To consider if there were any errors or omissions prior to adopting the minutes.

Recommendation:

That the Committee adopt the minutes of the meeting held July 20, 2021.

4. BUSINESS

4.1. Cowichan Watershed Board - OCP Feedback Letter for Information

5 - 16

Purpose: To receive the feedback from the Cowichan Watershed Board regarding the Official Community Plan Update Project for information purposes only. No action is required from the Committee.

For Reference:

The motion that passed at the July 21, 2021 Regular Council meeting is as follows:

That the letter from the Cowichan Watershed Board be forwarded to MODUS, the Environmental Advisory Committee and the OCP advisory working group.

4.2. Somenos Marsh Wildlife Society - OCP Feedback Letter for Information

17 - 33

Purpose: To receive the feedback from the Somenos Marsh Wildlife Society regarding the Official Community Plan Update Project for information purposes only. No action is required from the Committee.

For Reference:

The motion that passed at the July 21, 2021 Regular Council meeting is as follows:

That the letter from the Somenos Marsh Wildlife Society be forwarded to MODUS, the Environmental Advisory Committee and the OCP advisory working group.

4.3. Biodiversity Protection Policy

34 - 48

Purpose: To consider and endorse the consolidation of information and direction collected from the EAC members at the July 21, 2021 meeting regarding the Biodiversity Protection Policy [to be used to form the raw elements of a draft scope of work].

5. NEW BUSINESS

6. ADJOURNMENT

Municipality of North Cowichan Environmental Advisory Committee MINUTES

**July 20, 2021, 1:30 p.m.
Electronically**

Members Present	Councillor Kate Marsh, Chair Neil Anderson Cam Campbell Bruce Coates Per Dahlstrom Dr. Jana Kotaska Sandra McPherson Ashley Muckle Dr. Jesse Patterson Dr. Geoffrey Strong (arrived at 1:45 p.m.) Dr. Shannon Waters
Members Absent	David Coulson
Staff Present	Dave Preikshot, Senior Environmental Specialist Shaun Chadburn, Environmental Programs Coordinator Michelle Martineau, Corporate Officer Tricia Mayea, Deputy Corporate Officer

1. CALL TO ORDER

There being a quorum present, the Chair called the meeting to order at 1:39 p.m.

2. APPROVAL OF AGENDA

IT WAS MOVED AND SECONDED:

That the agenda be adopted as circulated.

CARRIED

3. ADOPTION OF MINUTES

IT WAS MOVED AND SECONDED:

That the Committee adopt the minutes of the meeting held June 22, 2021.

CARRIED

4. BUSINESS

4.1 Biodiversity Protection Policy – Workshop

The Senior Environmental Specialist, Dave Preikshot provided a presentation, gathered input, and answered questions of the Committee. A copy of the presentation was included in the agenda.

Dr. Waters left the meeting at 1:59 p.m. and returned at 3:10 p.m.

Dr. Patterson left the meeting at 3:00 p.m. and returned at 3:45 p.m.

By unanimous consent, the Biodiversity Protection Policy discussion was tabled at 3:27 p.m. and lifted from the table at 3:45 p.m.

IT WAS MOVED AND SECONDED:

That the consolidation of information and direction collected from the EAC members regarding the Biodiversity Protection Policy be used to form the raw elements of a draft scope of work, and that the document be brought back to a meeting in August for consideration and endorsement.

CARRIED

5. UNFINISHED / POSTPONED BUSINESS

5.1 Forestry Educational Opportunities

Jana Kotaska left the meeting at 3:28 p.m. and returned at 3:30 p.m.

Dr. Strong left the meeting at 3:31 p.m. and returned at 4:15 p.m.

IT WAS MOVED AND SECONDED:

That the Environmental Advisory Committee members submit suggestions for forestry educational opportunities to the staff liaison who will compile the information and forward to Council for their consideration.

CARRIED

It was noted that the forestry educational opportunities must be submitted to the staff liaison by July 30, 2021 and include: the name of the resource; the name of the organization/individual, the relevance to Municipal Forest Reserve engagement; when/how it can be offered; and the cost.

By unanimous consent the meeting recessed at 3:35 p.m. and reconvened at 3:45 p.m.

IT WAS MOVED AND SECONDED:

That the meeting be extended to 4:45 p.m.

CARRIED

6. NEW BUSINESS

6.1 Next Meeting Date

IT WAS MOVED AND SECONDED:

That a meeting be scheduled for August 17, 2021 at 1:30 p.m.

CARRIED

7. ADJOURNMENT

That the meeting adjourned at 4:41 p.m.

Certified by Recording Secretary

Signed by Chair;



Cowichan Watershed Board

**Cowichan Watershed Board Draft Staff Report
Prepared for Municipality of North Cowichan
For discussion only – not to be circulated outside CWB at this time
Regarding:**

**Request for Advice and Recommendations: Municipality of North Cowichan Official Community
Plan Update Project**

1. Who we are

The Cowichan Watershed Board (CWB) is a local governance entity created in 2010 to promote water and watershed sustainability in the Cowichan/Koksilah watersheds, ancestral home of the Quw'utsun First Nation. Co-chaired by Cowichan Tribes and the Cowichan Valley Regional District, the CWB represents a unique partnership between First Nations and local government. Through this model, Cowichan Tribes and the CVRD work together to advance whole-of-watershed health, demonstrating a commitment to moving down the path of reconciliation.

2. Our Mandate

The CWB's mandate is to provide leadership for sustainable water management to protect and enhance environmental quality in the Cowichan/Koksilah watershed.

3. Limitations of this response

This response is not intended to be a detailed recommendation on land use policies and procedures that could or should be included in, and supported by, a revised Official Community Plan (OCP) for North Cowichan. Rather, as requested in Community Planning Coordinator Chris Hutton's letter of March 10, our intent is to provide some suggestions, both generic and specific, on elements of a revised OCP that should be considered in terms of achieving North Cowichan Councils stated goal of achieving *"restoration and regeneration of the municipality's lakes, streams, estuaries and rivers, and of protecting biodiversity"*. Although we have, for the most part, limited our comments and suggestions to the maintenance and restoration of ecological and environmental values, we have also provided some insights as to the importance of doing so to address the communities' long term needs associated with public health and economic sustainability.

No field work, data collection or literature review has been carried out to support this document. It should be noted that the intent of this submission is to flag specific areas of interest to decision makers when considering watershed impacts and opportunities associated with crafting a long-term, forward-thinking plan that sets out the future of your community for the next 20 years and for generations to come.

Although the level of detail in this document has been limited by staff availability, the information that is included is, to the best of our knowledge, factual and accurate. We hope that it will help to inform the important OCP planning process being undertaken by North Cowichan at this time and we appreciate the opportunity to do share our perspective.

4. Comments and Recommendations

4.1 Overview

The Municipality of North Cowichan (MNC) includes several water bodies of significance including 2 major rivers, the Cowichan and Chemainus, as well as several of their tributaries, a number of lakes including Quamichan, Somenos, Fuller and Crofton and smaller watercourses draining directly into Stuart Channel and Maple Bay. MNC also includes a municipal forest reserve, several municipal and regional parks, as well as 2 provincial parks within the municipal boundaries.

The watercourses within MNC currently support populations of anadromous salmonids including Chinook, Coho, Steelhead and Chum as well as resident Cutthroat and Rainbow and a number of other native and introduced species.

North Cowichan lies within the unceded traditional territory of the Hul'qumi'num people and members of the Cowichan, Halalt, Penelakut and Lyackson Nations lived and prospered in the area for millennia before European contact.

4.2 Approach

The Cowichan Watershed Board's (CWB) workplan and priorities are driven by a set of Principles contained in our Governance Manual <https://cowichanwatershedboard.ca/wp-content/uploads/2019/08/CWB-Gov-Manual-Version3-Sept-24-2018.pdf> and a series of Targets <https://cowichanwatershedboard.ca/cowichan-watershed-board-targets/> that capture in broad and accessible terms the aspirations of the Board in terms of implementing positive change in the Cowichan/Koksilah watersheds. We have formatted our reply around this framework – working from overarching principles which we feel are key to ensuring a useful and forward thinking OCP to more specific examples associated with our Watershed Targets.

4.3 Principles

The Cowichan Watershed Board is committed to the following principles:

- Partnership
- Representation
- Watershed Emphasis – “Whole of Watershed” thinking
- Transparency
- *Nutsamat kws yaay' us tth qa'*

We feel that three of these principles are particularly relevant and should be considered when crafting the MNC's OCP.

4.3.1 “Whole of Watershed” thinking – “Mukw'stem 'o' slhilhukw'tul” (Everything is interconnected)

4.3.1.1 Background

Cowichan Watershed Board, 4335 Riverside Road, Duncan BC V9L 6M8
www.cowichanwatershedboard.ca | info@cowichanwatershedboard.ca | Facebook: Cowichan Watershed Board

- In recent western dominated approaches, the components that contribute to a healthy functioning ecosystem – and healthy functioning communities - are managed in isolation of each other. Management decisions affecting water, agriculture, fish, wildlife, forestry, residential development, linear development, waste management and the myriad of other components that influence and contribute to watershed health are often made in “silos” - which is not the way natural systems work.
- Although the mandates for these decisions are divided between jurisdictions, local governments, through their OCP planning process can demonstrate leadership in considering how to take a more integrated approach, acknowledging that decisions around residential development, for example, can and do affect many watershed functions. A new and more integrated way of thinking around how local governments make their decisions is required.

4.3.1.2 Comments – Points for Consideration

- This approach can be fostered by ensuring clear lines of communications between disciplines (engineering, environmental services, planning etc.), establishing close ties with other levels of government to ensure an integrated decision making process within MNC boundaries and establishing/maintaining strong and effective community advisory mechanisms which can provide a wide range of input at a modest cost.
- At an operational level, ongoing monitoring of key environmental indicators in the implementation of the OCP as well as providing cumulative impact assessment information regarding land use decisions with triggers for when an OCP/zoning regulation or goal is at risk is advised. Long term ground and surface water sustainability in the face of climate change should be taken into account when assessing all development options.
- On a landscape level – taking a “whole of watershed approach” speaks to the importance of natural habitat connectivity. The importance of “habitat corridors” is well documented in the literature and something that should be incorporated into all development and park/protected area systems planning – and the OCP vision in general.
- *Water Objectives* and *Water Sustainability plans* as defined under B.C.’s *Water Sustainability Act* will require consideration and accommodation by local governments in all decision making. Building tools to provide the means to do so should be considered in developing a forward thinking OCP.

4.3.2 Partnerships - “Nutsamat kws yaay’ us tth qa” (We come together as a whole to work together to be stronger as partners for the watershed)

4.3.2.1 Background

- **In British Columbia in 2021 it is imperative that local governments reach out and engage with First Nations partners in a meaningful and robust manner. This intention should be captured as a foundational piece of any planning document – particularly one that sets out a vision for the next 20 years. As we move down the challenging road of reconciliation in BC, soliciting First Nations input and guidance in the decision making processes that will define our communities moving forward will prove an excellent investment in ensuring a positive future for all.**
- More broadly, local government staff and elected officials can benefit from the expertise that resides within the community they serve. Forging new partnerships and strengthening existing ones with other levels of government, NGO’s and industry can result in significant value added benefits for all. MNC should be applauded for their efforts to date in this regard and the importance of establishing and formalizing mechanisms to ensure effective external partner engagement in both planning and implementation of policies and programs – including the development and implementation of the OCP, - cannot be overstated.

4.3.2.2 Comments – Points for Consideration

- As mentioned previously, MNC should be applauded for its efforts to engage with, and benefit from, expertise within the community. The Environmental Advisory, Forestry Advisory and Public Engagement committees are all good examples of this, as is the First Nations Relations Committee and the various External Liaison roles played by elected officials.
- Consideration should be given to creating an advisory body to the OCP update project that is co-chaired by MNC and local First Nations elected official(s). This approach, which has worked well for the Cowichan Watershed Board for over a decade, would provide an opportunity for building valuable and essential relationships and providing a perspective that reflects the true nature of our community and the spirit of reconciliation.
- Incorporating robust and empowered advisory processes in both the development and implementation of the OCP will be imperative in terms of assuring positive outcomes for MNC citizens. In terms of aquatic habitat management MNC elected officials and staff can greatly benefit from engaging with existing stewardship organizations which have developed a high level of expertise and capacity that can greatly benefit MNC staff and result in significantly increased capacity on the ground – and in decision making processes. These organizations include, but are not limited to, the Somenos Marsh Wildlife Society, Cowichan Valley Naturalists, Quamichan Watershed stewardship Society, Cowichan Community Land Trust and the Cowichan Watershed Board.
- A formal relationship with the Cowichan Tribes and other local Nations should be developed to provide a venue for open and ongoing discussions around water and watershed management issues.

4.4 Targets

To effectively implement a broadly scoped workplan to fulfill the CWB's mandate of providing leadership for sustainable water management, the CWB has developed a series of targets. These are intended to be aspirational initiatives distilled into powerful statements that have become rallying cries for CWB activities. These targets have recently been reviewed and we feel that they provide an effective framework for structuring more detailed input and suggestions regarding the development of MNC's OCP.

4.4.1 Water Quantity Target:

Seasonal flows throughout the Cowichan-Koksilah watershed support the needs of communities and aquatic ecosystems.

4.4.1.1 Background

- With the advent of climate change, winter freshet events and summer droughts will be experienced on SE Vancouver Island with increased frequency and heightened extremes - the science on this is strong and growing. There is no need for more science – the challenge facing local governments at this time is how to adapt and mitigate these impacts.
- Local governments control and influence a variety of factors that can have real impacts on mitigating the impacts of winter floods and summer droughts. "Status Quo" is no longer a viable options and careful thought must be dedicated to crafting OCP's and other planning documents to be effective within this new reality.

4.4.1.2 Comments – Points for consideration

- The following adaptive mechanisms should be incorporated into municipal planning and development moving forward:
 - Protecting, maintaining and enhancing natural flood mitigation watershed features.

- Wetlands, marshes, swales, natural flood channels and flood plains should be identified, mapped, protected and enhanced. These are nature's "flood control mechanisms" and are our best protection against winter flooding moving forward.
- Park and protected area acquisitions and community forest management should be prioritized with respect to protecting and restoring natural functioning condition of our watercourses.
- Opportunities to store winter/spring water for summer release should be identified and prioritized. Realizing these opportunities will provide resiliency not only in terms of aquatic ecosystem health but also in terms of economic sustainability, public health and recreation.
- Opportunities to store winter/spring water for summer release should be identified and prioritized. Realizing these opportunities will provide resiliency not only in terms of aquatic ecosystem health but also in terms of economic sustainability, public health and recreation.
- "Net Zero" hydrological impact should be a pre-requisite for any new development. The era of taking ground and surface water availability for granted, if it ever truly existed, is long gone.
- Monitoring both surface water discharge in natural watercourses and ground/surface water connectivity should be actively supported, either unilaterally or through partnerships with the CVRD, industry, sr. government agencies and ENGO's.
- Managing flood and drought impacts will be a major challenge facing MNC in the future. It is imperative that addressing these factors is incorporated into all development decisions and that MNC provide leadership in actively encouraging industrial and senior. Government partners to step up and do their part to ensure a sustainable water and thus a future for citizens of MNC.

4.4.2 Water Quality Target:

We want swimmable, fishable, drinkable water in our watershed.

4.4.2.1 Background

- Water quality issues are increasingly a concern in our lakes, rivers and streams. Unlike some of the other challenges we face, these are almost without exception a function of controllable activities in our watersheds and should be considered in all planning and operational activities conducted or supported by local governments.

4.4.2.2 Comments – Points for Consideration

- "If you don't look, you don't know" – Ongoing water quality monitoring programs should be supported in all major watercourses in MNC. This work can be done in a cost effective manner, often in partnership with other entities, and will provide information necessary to protect community health and natural ecosystems.
- Guidelines – Federal, provincial and regional water quality guidelines should be supported in the OCP and commitment made to monitoring (see above), including tracing and addressing any exceedances.
- High value "summer refuge" aquatic habitats (ground water influenced areas) should be mapped and protected. These cooler summer habitats serve as refugia for cold intolerant species (e.g. Salmonids) and will be critical in terms of maintaining viable populations in the face of climate change
- Stormwater management
 - Ongoing stormwater management review mechanisms should be incorporated into the OCP to assess the impacts of stormwater management practices on public health and aquatic ecosystems.
 - Detailed stormwater management plans demonstrating no net hydrological or water quality impacts of any new development should be mandatory.

4.4.3 Water Conservation Target:

We want Cowichan watershed residents to use water wisely.

4.4.3.1 Background

- Seasonal shortages of both surface and groundwater are expected to be the norm in the coming decades.
- Changing our behaviour around water use will be an integral part of ensuring adequate water supply for all of us moving forward and we feel that local governments can play a major role in terms of implementing the positive change required.

4.4.3.2 Comments – Points for Consideration:

- MNC's OCP should include a variety of recommended tools for water conservation practices and protocols:
 - Outreach-Education initiatives increasing awareness as to the importance of water conservation as well as incentives/promotions supporting the wise use of water
 - Incorporate water efficiency and conservation requirements in new builds and renovations including for example, water efficient plumbing fixtures, pipe and tank insulation.
 - Implementation, compliance monitoring and enforcement of water use restrictions (e.g. Lawn watering) when appropriate
 - Promotion of drought tolerant landscaping strategies and water capture, storage and recycling systems.
 - Partnerships with agriculture and agricultural support agencies/organizations to promote increased irrigation efficiencies within MNC

4.4.4 Watershed Awareness Target:

Cowichan residents of all ages increasingly know, value, and understand their connection to their watershed.

4.4.4.1 Background

- Having “healthy” functioning watersheds will be key to ensuring economic and ecological sustainability in the decades to come and is critical to supporting public health and the wellbeing of our community
- “You can’t value what you don’t understand”. Having an informed and engaged community will be essential in terms of crafting a future that ensures the opportunity for subsequent generations to live healthy and productive lives in the MNC. Local government can and should play a key role in this process.

4.4.4.2 Comments – Points for Consideration:

- The new OCP should enshrine an overarching commitment to supporting a robust public outreach and engagement process through both the creation and support of advisory bodies (as referred to earlier in the document) and through a commitment to providing citizens with factual information, supported by traditional ecological knowledge and the best science of the day, regarding the ecological values of Watersheds within MNC and the impacts, or lack thereof, of development and infrastructure decisions on those values.

- Whenever possible, MNC should support their staff's engagement in partnership initiatives aimed at increasing citizen awareness of the issues we are facing in terms of watershed and community sustainability.

4.4.5 Fish Health Target

Healthy, wild and diverse fish populations in the Cowichan-Koksilah watershed.

4.4.5.1 Background

- Salmon are a cornerstone of Hul'qumi'num culture, a keystone species in the Pacific Northwest and an iconic symbol to all British Columbians. They also serve as a very high profile indicator of water and watershed health. Living in a watershed that supports salmon is a privilege enjoyed by a small minority of Canadians and something that is important to celebrate – and protect.
- Residents of MNC are lucky to live in several watersheds and sub-watersheds that support salmon and trout and special care must be taken to maintain this privilege for future generations by protecting this valuable resource – and local governments can play an active role in doing so.
- Examples of these watersheds include, but are not limited to: Cowichan River mainstem; Bings, Averill, Richards creeks and Somenos Lake; Lower Quamichan creek; Chemainus River; Bonsall creek, etc.

4.4.5.2 Comments – Points for Consideration

- MNC should consider a series of actions to protect and enhance salmon bearing waters in the municipality. These measures should include, but not necessarily be limited to:
 - Accurate inventory and mapping of salmon bearing water bodies
 - Support and encouragement to First Nations, community partners and senior resource management agencies to carry out ongoing salmon population abundance estimates in salmon bearing watercourses in MNC
 - Ensuring a comprehensive and robust suite of local governance tools (zoning, DPA's, related by-laws) to protect salmon bearing streams including pro-active planning tools to address:
 - Water quantity (4.4.1)
 - Water Quality (4.4.2)
 - Riparian health (4.4.7)
 - Hydrological impacts (4.4.1)
 - Habitat impacts
 - Create and implement an innovative and pro-active – “salmon-first” development strategy for MNC.

4.4.6 Estuarine Health Target:

We want to be able to eat shellfish from Cowichan Bay.

4.4.6.1 Background

- Estuarine habitats in the Pacific Northwest are known to be one of the most productive, important and threatened aquatic habitats.
- These habitats are key to salmon sustainability and support a wide variety of flora and fauna that make up an incredibly complex and diverse convergence of salt and freshwater aquatic habitats
- They are also very important areas for First Nations traditional food harvest – and have been severely impacted over the last several decades by industrial and recreational development and infrastructure.

- MNC has a major stake in both the Chemainus and Cowichan River estuaries.

4.4.6.2 Comments – Points for consideration:

- Similar to the recommendation made in section 4.4.5.2 for freshwater aquatic habitats, MNC should consider a comprehensive and robust suite of local governance tools (zoning, DPA's, related by-laws) to protect estuarine habitats.
- With partners as available, MNC should implement an estuarine specific ecological monitoring program including water & sediment quality, sedimentation, species composition and distribution
- MNC should continue to participate in the Cowichan Estuary Environmental Management Committee and should encourage a renewed and enhanced implementation strategy for the Cowichan Estuary Management Plan.
- OCP's, policies and mapping/management tools for the Cowichan estuary should be synchronized with the CVRD.
- MNCTechnical staff should engage with and support, wherever and whenever possible, current Salish Sea and other estuarine research initiatives being led by First Nations and community partners in both estuaries.
- Estuarine impacts and estuarine health should always be considered when evaluating upstream development or works within MNC's boundaries ("whole of watershed thinking")

4.4.7 Riparian Health Target:

We want to protect, restore and experience healthy streamside, lakefront, wetland, and estuary habitats

4.4.7.1 Background

- Riparian (streamside) habitats are incredibly important in terms of maintaining healthy rivers, streams, lakes and wetlands. Riparian areas provide/support several valuable ecosystem functions including:
 - Providing shade environments to cool water temperatures
 - Stabilizing banks
 - Providing Large woody debris inputs to create complex aquatic habitats
 - Preventing erosion
 - Providing leaf litter to support benthic invertebrates and the entire aquatic food chain
 - Providing insect drop for fish and other aquatic organisms
 - Acting as natural filters to remove surface water impurities prior to entering the watercourse.
- Healthy riparian zones also provide habitat connectivity for terrestrial and avian species as well.

4.4.7.2 Comments – Points for Consideration:

- Rather than supporting minimum riparian protected areas as specified under the current Riparian Area Protection Regulation, the OCP should recommend providing maximum levels of protection on all salmon bearing watercourses and make note of the importance of terrestrial habitat connectivity and wildlife corridors.
- Protected areas, covenants or other tools (in addition to zoning) that could be utilized to afford riparian protection should be included in all conversations involving development and/or land acquisition in MNC.
- Monitoring and compliance in support of Riparian Areas Protection Regulations should be included in annual workplans of relevant MNC Staff.

- Importance of riparian habitats should be highlighted in any MNC communications regarding development and ecological values (4.4.4.2)

5. Other Considerations

In addition to the suggestions and recommendations above, as framed by the Cowichan Watershed Board's Principles and Targets, there are three other considerations that should be taken into account when crafting a new Official Community Plan for MNC.

5.1 Reconciliation with First Nations

- This point has been mentioned previously but we feel it is of sufficient importance to repeat our firm belief that all elements of MNC's OCP should be developed utilizing a lens of reconciliation with First Nations. As noted, this approach will ensure a more positive outcome for all as we work towards ensuring a positive future for generations to come.

5.2 Agriculture and food sustainability

- We are convinced that a thriving agricultural community and sustainable aquatic ecosystems are not mutually exclusive – and in fact, both will be necessary to ensure healthy communities moving forward. Having said that, it is very possible that “status quo” is not the answer with respect to agriculture (or anything else!) moving forward.
- It is also important to note that fishing and foraging opportunities are important components of food sustainability and both of these opportunities would be enhanced by adopting the suggestions included in this document.
- MNC's OCP must be clear with respect to protecting agricultural land and promoting sustainable agriculture wherever and however possible. Support must be provided to local farmers in terms of encouraging the infrastructure investments, and operational costs associated with moving to more sustainable practices and productive agricultural land should be protected from development without exception.

5.3 Public Health

- The health of our citizens and the health of our ecosystems are inseparable. If we encourage the identification, monitoring, restoration and protection of our sensitive freshwater aquatic, estuarine and riparian habitats we will be safeguarding the health of those who are privileged to live here – now and into the future.
- The time of COVID response, and now recovery, the many ways our local environment, particularly our blue spaces have supported our mental, emotional, spiritual and physical health has been drawn on heavily. This will likely become even more important in the future. We are in a reciprocal relationship with the environment we live in – if we take care of our environment, our environment can take care of us.
- An MNC OCP should include careful thought, consideration and guidance towards implementing programs and policies that provide support to our less fortunate residents – those who are struggling

to obtain food, shelter, healthcare and the other necessities of life. Investments into the well being of those in need will pay dividends to all of us moving forward.

6. Summary

The Cowichan Watershed Board greatly appreciates the opportunity to provide input to MNC's OCP process. We acknowledge that crafting an OCP is very important work and applaud MNC for reaching out to the CWB and other community organisations at this time.

We will be happy to engage further in this process and/or answer any questions you may have regarding this note or the Cowichan Watershed Board. Please refer any questions or comments to our Executive Director, Tom Rutherford at tom@cowichanwatershedboard.ca or by phone at 250-815-5790.

Appendix 1 – Summary of Recommendations

“Principles” – Overarching Considerations:

4.3 Partnerships / Whole of Watershed Thinking

- In crafting North Cowichan's OCP – and in all municipal business – make every effort to reach out and engage with Cowichan First Nations in the spirit of partnership and reconciliation. This should include the development of a formal relationship to provide a venue for open and ongoing discussions around water and watershed management issues
- Continue to create, support and engage with empowered advisory bodies and partners to create and implement the OCP
- Create an OCP, associated delivery mechanism and corporate culture that encourages cross-sectoral communication & external partnerships and discourages organizational silos.
- Ongoing monitoring of key environmental indicators in the implementation of the OCP as well as providing cumulative impact assessment information regarding land use decisions, with triggers for when an

OCP/zoning regulation or goal is at risk is advised. Long term ground and surface water sustainability in the face of climate change should be taken into account when assessing all development options.

- Building tools to provide the means to accommodate future *Water Objectives* and *Water Sustainability plans* as defined under B.C.'s *Water Sustainability Act* should be considered in developing a forward thinking OCP.
- Consider and promote "habitat corridors" in all land use decision making to ensure sustainability of fish and wildlife – and improve public health and quality of life.

"Targets" – Specific Recommendations to be considered in OCP development process:

(Please see details in the text of the document)

4.4.1 Water Quantity

- "Net Zero" hydrological impact development policy
- Protection, maintenance and restoration of natural flood mitigation features
- Mapping and protection of natural cold water refugia in water bodies
- Identification, prioritization and development of water storage opportunities

4.4.2 Water Quality

- Develop monitoring program for surface water discharge of major watercourses
- Explore groundwater – surface water connectivity
- Support ongoing monitoring of ground and surface water quality and development/adoption of guidelines
- Development/improvement of stormwater monitoring and management systems
- Requirement for detailed stormwater management plan for any new development or re-development

4.4.3 Water Conservation

- North Cowichan's OCP should include a variety of recommended tools for water conservation practices and protocols (e.g. Outreach/education, incentives, compliance and monitoring, "droughtscaping", etc.)

4.4.4 Watershed Awareness

- The new OCP should enshrine an overarching commitment to supporting an ongoing robust public outreach and engagement process supported by traditional ecological knowledge and the best science of the day

4.4.5 Fish Health

- The Municipality of North Cowichan should consider a series of actions to protect and enhance salmon bearing waters in the municipality including adopting a "salmon first" development policy ensuring a comprehensive and robust suite of local governance tools (zoning, DPA's, related by-laws) to protect salmon bearing streams and estuarine habitats.

4.4.6 Estuarine Health

- Continued participation in the Cowichan Estuary Environment Management Committee including promotion of a renewed CEMP implementation plan and increased monitoring.

4.4.7 Riparian Health

- The OCP should recommend providing maximum levels of protection on all salmon bearing watercourses, make note of the importance of terrestrial habitat connectivity and wildlife corridors and call for increased monitoring and compliance of RAPR.

5 Other Considerations

- Agricultural land should be protected and sustainable agriculture promoted.
- The OCP should include careful thought, consideration and guidance towards implementing programs and policies that provide support to our less fortunate residents

From: Paul Fletcher <president@somenosmarsh.com>
Sent: Sunday, July 18, 2021 10:33 PM
To: Chris Hutton <chris.hutton@northcowichan.ca>
Subject: Re: Somenos Marsh Wildlife Society Enviro response

Hi Chris

Please find attached the SMWS OCP recommendations.
Also attached is a copy of Heather Pritchard's presentation that she made to council earlier this year on behalf of the SMWS. It provides some background information as well as recommendations re riparian setbacks that we would like to see implemented in the OCP.

Thanks

Paul

Paul Fletcher
President, Somenos Marsh Wildlife Society
somenosmarsh.com
250 732-0462

Stewards of the S'amunu/Somenos Conservation Area



July 16, 2021

Attn: Municipality of North Cowichan
From: Somenos Marsh Wildlife Society

RE: OFFICIAL COMMUNITY PLAN REVIEW

Introduction

The Somenos Marsh Wildlife Society ("SMWS") wishes to thank the Municipality of North Cowichan ("MNC") for the invitation and opportunity to engage in the Official Community Plan ("OCP") review process. We feel that this is a very important and timely process that must be carefully nurtured for the long-term benefit of our community. The efforts of the MNC to involve local stewardship and community groups in preparing a new OCP are very much appreciated.

Background of the Somenos Marsh Wildlife Society

The SMWS has been operating as a registered charitable society in the Province of British Columbia with an office in Duncan since 1989. The SMWS mandate is stated as follows, "to operate, maintain, manage, restore and preserve areas for research, nature study, observance of flora and fauna, protection of wildlife habitat, instruction in natural history and other purposes of a like nature for the advancement of public education and to use such means of communication as are deemed appropriate to create a deepened and broadened understanding of the wildlife habitat to ensure public support for its proper use and care."

The fundamental undertaking for the SMWS is for the restoration and long-term protection of the S'amunu/Somenos Watershed, a once thriving habitat for salmon and many other species that is now suffering through failure to protect this ecosystem.

The SMWS - GreenStreams Community Stewardship Project encompasses the S'amunu/Somenos Watershed with four specific segments:

- Forested headwaters
- Industrial, farm and residential properties
- Three creeks feeding Somenos Lake
- Somenos Creek outflow connecting to the Cowichan River

The goal of GreenStreams is to improve the water quality of the S'amunu/Somenos Watershed.



SMWS OCP recommendations

In respect to North Cowichan's forthcoming Official Community Plan the SMWS recommends that:

- the MNC collaborates with the SMWS and other stewardship groups to adopt a watershed-wide management approach focusing on riparian health, drainage issues, Salmon spawning and rearing habitat restoration, nutrient control and contaminant monitoring.
- Collaboration with the SMWS and other environmental groups to secure funding and grants for programs with common goals.
- the important Somenos Watershed headwaters be afforded long-term protection by establishing protection zones around these areas.
- the MNC take steps to preserve its unique forested land position as important biodiversity and carbon capture elements for our ecosystem (this may serve as a long-term source of revenue for the MNC through monetization of carbon credits). Some of these forested areas may well serve to expand parkland within the MNC thereby increasing opportunities for eco-tourism.
- the OCP establishes 'Cultural Protection Zones' in collaboration with Cowichan Tribes.
- the OCP encourages riparian area restorative improvements through tax incentives
- the MNC further identify and expand natural methods to mitigate stormwater impacts on the Somenos ecosystem.
- the municipal QEP be the approving officer for all riparian area development requests and that the overall health of the watershed be considered, not just the immediate affected area, in all riparian area decision making.
- the MNC establish a tree protection bylaw for the MNC. These are standard practise in many other jurisdictions.
- the MNC explore tax exemption opportunities with landowners to implement conservation covenants for riparian areas

Sincerely,

Paul Fletcher, President

Riparian Protection:

Meeting community and ecological needs



Heather Pritchard, RPF
November 18, 2020



Impacts in the Somenos watershed:

- Excessive nutrient loading
- Invasion of Parrot's Feather
- Reduced summer flows
- Decreased oxygen levels
- Increased water temperatures



➔ Loss of fish populations in the lakes and creeks

What does science say about riparian buffer widths?

Function	Full Range	Common Range
Bank stabilization	10 – 30 m	10 – 30 m
Sediment control	5 – 100 m	10 – 30 m
Reduce flood risk	20 – 150 m	20 – 150 m
Filter N, P	5 – 90 m	10 – 20 m
Stream temperature	10 – 70 m	10 – 30 m

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Litter inputs	3 – 100 m	10 m
Large fallen trees	50 m	50 m

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Stream temperature	10 – 70 m	10 – 30 m
Litter inputs	3 – 100 m	10 m
Large fallen trees	50 m	50 m
Terrestrial species	10 – 500+ m	50+ m
Birds	45 – 200 m	100+ m
Amphibians, reptiles	120 – 300 m	120 – 300 m

How have other LGs improved riparian protection?

1. Predetermined riparian protection setbacks

(Squamish, West Vancouver, Saanich, Courtenay)

- 30 m buffers on main streams
- 30 m for new developments
- 15 m in already developed areas
- 15 m on ephemeral watercourses

How have other LGs improved riparian protection?

2. **Riparian restoration** (Saanich)
3. **Connectivity** (Saanich, Cumberland)
4. **Wildlife habitat** (Cumberland, Whistler, Sechelt, West Vancouver, Saanich)
 - Wildlife and habitat inventories
 - Covenants

How have other LGs improved riparian protection?

- 5. **Blanket DPAs** (Cumberland, Whistler)
- 6. **Environmental impact studies** (Whistler, Courtenay)
- 7. **Habitat compensation**
- 8. **Education and incentives**

Wetlands as natural assets

- \$35,000 per year per hectare
 - Flood control
 - Water supply
 - Water treatment



Somenos Marsh Wildlife Society:

- Planted 383 trees and shrubs
- Removed over 600 kg of garbage
- Landowner education for over 200 households
- Initiated a Citizen Science program
- 77% of survey respondents support MNC redirecting \$100K per year for restoration work in Somenos

Recommendations

1. Science-based predetermined setbacks

- 30 m buffer along main streams and in headwaters
- 20 m voluntary Stewardship Zone
- 15 m buffers on small ephemeral streams
- Graduated restoration program on converted lands

Recommendations

2. Emphasis on restoration
3. “Whole of watershed”
4. Riparian restoration in ALR
5. Performance-based targets



Recommendations

6. Incentives for riparian restoration

- Riparian Tax Exemption
- Carbon offsets

Moving forward...

1. Community engagement
2. Riparian working group



DRAFT SCOPE OF WORK FOR BIODIVERSITY PROTECTION PLAN

1.0 Purpose

Development of a Biodiversity Protection Policy (BPP) is one of the actions identified to support Council's Strategic Plan Goal that "We lead in environmental policies and practices to support the future health of our community."

A BPP is also consistent with the recommendation from the environmental policy review conducted by Diamond Head Consultants in 2021 that North Cowichan develop a biodiversity protection policy to address gaps in existing by-laws and policies.

2.0 Background

North Cowichan lies in an area of relatively great biodiversity with respect to the rest of Canada and North Cowichan Council has requested that staff develop a Biodiversity Protection Policy as part of its strategic goal of leading in environmental policies.

On June 21, 2021, Dr. D. Preikshot, Senior Environmental Specialist, conducted a workshop, see Appendix 1, with the Committee of the Whole (COW) to discuss;

- Biodiversity as a concept globally, nationally and in the municipality,
- The federal and provincial regulatory environment for biodiversity,
- Resources available understanding biodiversity in North Cowichan,
- Resources for monitoring biodiversity in North Cowichan, and
- Identification of ideas and concepts to help scope the work that will be conducted by a consultant to prepare a BPP for North Cowichan.

COW provided Environment staff with guidance on both the purpose and scope of a BPP. COW also passed a motion directing staff to:

"...negotiate a contract with a consultant who has expertise with biodiversity policies and work with the consultant to add and consider the comments from the committee of the whole and staff to seek input from the Environmental Advisory Committee prior to bringing an updated scope of work to the Committee of the Whole; and that upon endorsement, staff will seek direction to obtain input from other groups as listed in Dr. Preikshot's report or as directed by the committee.

COW provided environment with several recommendations to consider for defining the purpose and scope of a BPP report, see appendix 2. In order to fulfil COW directions to staff, Dr. Preikshot presented the same material to the Environmental Advisory Committee (EAC) on July 20, 2021 to listen to their input prior to returning to COW with an updated scope of work. Appendix 3 contains staffs record of feedback received from the EAC

relating to the policies, actions, and considerations that should be addressed in a scope of work to develop a BPP for North Cowichan.

The objectives, scope and deliverables listed below reflect the feedback received from Council, via the COW meeting of 21 June, 2021 and feedback from the EAC on July 20, 2021

3.0 Objectives

This project will deliver a prominent action item in Council's Strategic Plan, the development of a Biodiversity Protection Policy that supports Council's strategic goal of leading in environmental policies and practices

Objective 1: Identify species and ecosystems at risk.

Objective 2: Identify significant ecological assets

Objective 3: Identify municipal and staff resources conducting biodiversity protection work in North Cowichan

Objective 3: Develop policies, actions, and a monitoring framework to assess, protect, and restore species and ecosystems at risk in North Cowichan.

Objective 4: Identify significant invasive species in North Cowichan

Objective 5: Develop policies, actions, and monitoring work to assess and control significant invasive species in North Cowichan

4.0 Scope

In Scope:

The scope of the project includes:

- Emphasis of MNC's status as a biodiversity hotspot and a determination of baseline status,
- An emphasis on preventing the loss of local biodiversity and the intrinsic value of all species not just their economic value, e.g., the role of native pollinators, small habitats like hedgerows, and aquifers
- Identification of natural assets, e.g., urban forest, wetlands, reservoirs, lakes and streams
- Identification of green corridors
- Identification of climate mitigation opportunities in local biodiversity protection

- Differentiating between restoration and conservation goals and a unified approach for targets and monitoring
- A mapped understanding of what we have
- Habitat preservation targets and indicators
- Alignment of MNC forest habitat preservation with provincial old growth protection policy
- Identify risks to local biodiversity amid global losses of species and climate change
- A recognition of the importance of living harmoniously with nature
- Assess influence of development on native species
- Identification of policies and actions to restore local life forms and habitats
- Establish partnerships with local First Nations for biodiversity protection
- Developing actions not just guidelines
- Strengthen partnerships with community groups
- Identify municipal roles within framework created by federal and provincial agencies
- Species and ecosystems approaches to identify:
 - baseline status,
 - goals and objectives,
 - indicators of change,
- Defining policies, objectives, and indicators at different scales, e.g., species, ecosystem, landscape
- Identify opportunities to work with Ministry of Agriculture and Local Agricultural producers
- Consideration of climate change effects on changes in species distributions and IPCC – Global scale Biodiversity protection policy
- Accounting for edge effects of human development on protected areas
- A review of similar biodiversity work in other municipalities and by other environment committees
- Focus on Garry Oak ecosystems and associated species
- Identifying gaps in our existing green corridors
- Developing a process for state of the environment reporting

Out of Scope:

The following items are out of scope and provided to help clarify the scope boundaries of the project:

- Agricultural management
- Forestry management
- Mining
- Marine fish and shellfish
- Sewage outfall relocation
- Park and trail management
- Management of GHG emissions

- Transportation planning

5.0 Deliverables

Document the tangible final products of the project in terms of the major deliverables.

The major deliverables for this project are:

- An assessment of the species and ecosystems at risk in North Cowichan
- Mapping of ecosystems, habitats, green corridors, locations of significant species, and natural assets.
- Identifying the resources, policies and actions necessary to augment monitoring and management work by municipal staff and local stewardship groups
- A list of Ecosystem and Species indicators and goals and the monitoring programs required to track these indicators and goals.
- An assessment of natural assets in North Cowichan.
- An assessment of significant invasive species in North Cowichan
- A description of policies, actions, and monitoring work to assess and control significant invasive species in North Cowichan

Appendix 1: Presentation by Dave Preikshot, Senior Environmental Specialist, to the Committee of the Whole meeting on 21 June 2021 and the Environmental Advisory Committee on 20 July, 2021.

Biodiversity Protection Policy for North Cowichan



Dave Preikshot, PhD, RPBio
Senior Environmental Specialist

2



- Strategic context and assumptions
- Overview of biodiversity
- Existing biodiversity programs and resources in North Cowichan
- Scoping a biodiversity protection policy for North Cowichan
- Next steps



2019-2022 Council Strategic Plan

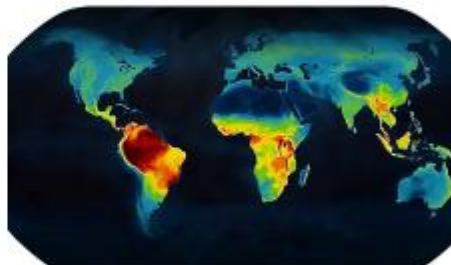
- Environment Strategic Pillar
 - *"We lead in environmental policies and practices to support the future health of our community."*
- Strategic Priority Project (2021 Business Plan)
 - *Create a Biodiversity Protection Policy*

Staff Assumptions

- Staff have been tasked with developing a [Council Policy](#) (vs creating an additional program, strategy, or plan)
- Once developed, the policy will provide practical guidance:
 - to staff and Council on biodiversity decision-making,
 - the operational achievement of the policy's purpose statement. i.e. definitions, roles and responsibilities, budgeting, etc.
- Input and comments from COW tonight will inform policy development

What is Biodiversity?

- The variety of genes, species and ecosystems in a place



Global Animal Biodiversity,
Red = More Blue = Less

Why is Biodiversity Important?

Biodiversity usually, *but not always*, has a positive effect on ecosystem services. For example:

- **Provisioning services**, yields of fodder, plants, wood
- **Regulating services**, fish production stability, insect pests, plant disease, invasive species, CO₂ sequestration, improved soil organic matter, remediation from climate change effects
- **Cultural Services**, landscape aesthetics, cultural values, recreation opportunities

Canada's goals and targets

- Better land use planning management
- Environmentally sustainable management across sectors
- Improving information about biodiversity ecosystem services
- Raising awareness of biodiversity and encouraging participation in conservation

Source: [biodivcanada](https://biodivcanada.chm-cbd.net/2020-biodiversity-goals-and-targets-canada), Canada's national biodiversity clearing-house,
<https://biodivcanada.chm-cbd.net/2020-biodiversity-goals-and-targets-canada>

BiodiversityBC: 1 vision, 3 goals

- *British Columbia is a spectacular place with healthy, natural and diverse ecosystems that sustain and enrich the lives of all.*
1. Conserve the Elements of Biodiversity
 2. Increase Awareness of the Importance of Biodiversity and Respect for the Natural Environment
 3. Providing Tools and Incentives to Enable Biodiversity Conservation

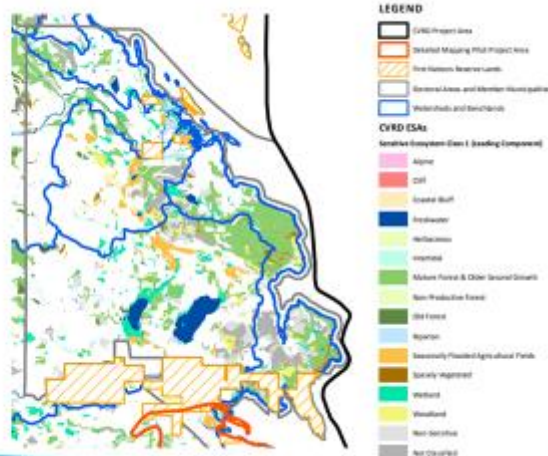
source - <http://www.biodiversitybc.org/>

CVRD

Environmentally Sensitive Areas

- Mapping
- Inventory
- Strategy

Figure shows MNC portion of ESA map prepared by Madrone Environmental for CVRD



Species/Ecosystems in North Cowichan (BC CDC)

- BC Conservation Data Centre identifies over 350 species and ecosystems of interest in North Cowichan
- Management, e.g., Somenos Conservation Area, stream flow augmentation
- Protection, e.g., Riparian Area Protection Regulations
- Enhancement, e.g., Wetland construction, Quamichan Lake Bluegreen Algae control



Natural Assets in North Cowichan

- Municipal Forest, Urban Forest
- Lakes and Reservoirs
- Streams and Wetlands
- Parks, Covenant Areas, Conservation Areas

Work Under Way at North Cowichan to Protect Biodiversity

- Invasive and Noxious Weeds, Parrot's Feather
- Collaboration With Stewardship Groups
- Riparian Area Protection Regulations
- Environmental review of development applications
- Municipal Forest Management
- Wetland Enhancement
- Wetland Development
- Lake Monitoring
- Invasive Plant Control
- Conservation Areas and Covenants
- Recommendations of Diamond Head Consulting report



Invasive and Noxious Weeds Managed

- Blueweed (*Echium vulgare*)
- Garlic Mustard (*Alliaria petiolata*)
- Giant Hogweed (*Heracleum mantegazzianum*)
- Gorse (*Ulex Europaeus*)
- Knotweeds (*Fallopia spp.* and *Polygonum spp.*)
- Poison Hemlock (*Conium maculatum*)
- Wild Chervil (*Anthriscus sylvestris*)

Parrot's Feather



Lake Monitoring and Remediation



Input from COW

Scoping the Biodiversity Protection Policy

Existing Biodiversity Action

- Reactions to existing programs/services?
 - Satisfied?
 - Gaps?
- What elements of biodiversity protection should North Cowichan leave for senior governments?
- What will a Council biodiversity protection policy add in Council's view?

Purpose Statement Development

- What does Council want a biodiversity policy to address?
- What does the policy add to existing actions?
- What might be added to existing areas of focus for biodiversity?

Scoping a biodiversity protection policy

- Accounting of species, in general, and at risk
- Accounting of Ecosystems
- Tracking of significant invasive species
- Identification of significant ecological assets
- Monitoring environmental health indicators
- Biodiversity lens on development
- Watercourse protection
- Tree protection



What else might be considered within scope of the policy?

Policy Development Process

Local First Nations

EAC Involvement

Stakeholders

Stewardship groups

Developers

Others



Anticipated Next Steps

1. Staff to retain consultant
2. Engagement
3. Report to Council with Draft Policy for feedback
4. Council adopts policy
5. Staff return with resourcing requests for implementation during budget and business planning 2022 (if required)



Other Suggestions? Ideas?



**Thank-You !
Huy ch q'u !**



Appendix 2: Recommendations from the Committee of the Whole related to the Purpose and Scope of work for a Biodiversity Protection Policy report, based on notes from the meeting held on 21 June, 2021.

Purpose of a Biodiversity Protection Policy

- Emphasize MNC's status as a biodiversity hotspot
- Responsibility to prevent loss of local biodiversity
- Identify risks to local biodiversity amid global losses of species and climate change
- Intrinsic value of all species regardless of value to people
- Importance of living harmoniously with nature
- Restoration of local life forms and habitats
- Establish partnerships with local First Nations as part of reconciliation
- Purpose of a Biodiversity Protection Policy
- Need actions not guidelines
- Highlight work of community groups
- Develop policy first then develop a Biodiversity Strategy
- Identify municipal roles within framework created by federal and provincial agencies
- Species and ecosystems approaches to identify:
 - baseline status,
 - goals and objectives
 - indicators of change

Scope of a Biodiversity Protection Policy

- Develop a unified approach for targets and monitoring
- A mapped understanding of what we have
- Habitat preservation targets and indicators
- Alignment of MNC forest habitat preservation with provincial old growth protection policy
- Policy development to restore lost habitats and extirpated species, e.g., Western Bluebird work
- Develop ways to work with local stewardship groups that are already doing important preservation and restoration work
- Focus on Garry Oak ecosystems and species therein
- Identify gaps in our existing green corridors
- Assess influence of development on native species
- State of the environment reporting

Appendix 3: Recommendations from the Environmental Advisory Committee related to the Policies, Actions, and Considerations for a Biodiversity Protection Policy report, based on notes from the meeting held on 20 July, 2021.

Based on feedback from Dave Preikshot's presentation on scoping a biodiversity protection policy for North Cowichan, Environment Staff have compiled the lists below of policies, actions and considerations. These items will be discussed at the August, 2021 EAC meeting for EAC endorsement for Staff retuning to COW with a Scope of work for approval.

Policies

1. Connection of Greenspaces
2. Identify opportunities for Restoration and Re-establishment of Riparian Areas
3. Policy to leverage the power of the community, *e.g.*, community organizations, the public
4. Establishing a baseline – part of RFP should be to compile a baseline inventory, targets, and how we are going to evaluate the effectiveness of the policy
5. Framing decisions in the context of Climate Change lens "How is climate change going to affect biodiversity"
6. Human disturbance – if you are going to set aside a piece of protected land – ensure its appropriate (not beside a highway or near recreation areas)
7. Protecting what we have, and regeneration of disturbed areas
8. More Comprehensive Environmental Assessments (Archeological Assessments, Cultural Assessments, Navigable waters etc.)
9. Should the Municipality acknowledge a Biodiversity Crisis
10. Management and stewardship of estuaries
11. Better defining the role of urban trees/plants
12. Assessment of protection needed in riparian corridors

Actions

1. Defining indicators and goals
2. Encourage planting of native species through all municipal mechanisms, *e.g.*, Develop a preferred list of native species for developers
3. Stormwater Management Ponds (slowing the flow of water)
4. Restoration of urban forest
5. Enforcement of Violations of biodiversity policy
6. Detailed list of Gaps – Staff time and devotion
7. Examine the interface between roads and the natural environment
8. Review of pesticide and herbicide use in MNC
9. Develop a Native Plant Salvage Program
10. Identification and mapping of green spaces and connectivity
11. Foster partnerships with local stewardship groups

12. List of actions
13. Assessment of staff, consultant, volunteer time and resources necessary to achieve actions, /conduct monitoring

Considerations

1. How will we work with Local First Nations
2. Review similar biodiversity work in other municipalities and by other environment committees
3. Defining policies, objectives, and indicators at different scales, e.g., species, ecosystem, landscape
4. Opportunities to work with Ministry of Agriculture and Local Agricultural producers
5. Thinking of the scale of biodiversity - not forgetting the smaller creatures – can't focus on megafauna only
6. Need to consider which species are worth saving and which invasive species may be inevitable
7. IPCC – Global scale Biodiversity protection policy – 160 countries participating
8. Accounting for edge effects of human development on protected areas
9. Climate lens on likely changes to the environment, ecosystem and species
10. Differentiating between restoration and conservation goals
11. Importance of native pollinators, hedgerows, aquifers