



STAFF REPORT

TO: Committee of the Whole

MEETING DATE: June 7th, 2022

FROM: Michelle Lewis
Natural Asset Technician

FILE NO:

SUBJECT: Ocean Watch - 2022 Quarter 1 Report

RECOMMENDATION

THAT the Natural Asset Technician's report titled Ocean Watch - 2022 Quarter 1 Report be received.

BACKGROUND / PURPOSE

The purpose of this report is to provide an update on the activities of the Howe Sound Ocean Watch Action Plan.

At the November 17, 2020 Council meeting the following motion was passed:

And THAT Council be provided with quarterly reports on actions and data related to the recommended Action Items in the Ocean Wise Ocean Watch 2020 Edition.

STRATEGIC PLAN IMPLICATIONS

The Ocean Watch initiative addresses the following core objectives of the 2019 – 2022 Strategic Plan:

Manage Our Assets – We will focus on fiscal sustainability and support our staff in the prudent management of our natural and engineered assets, to ensure the Town can continue to deliver critical services and infrastructure in perpetuity.

Plan for Sustainable Growth – We will plan for the future in a manner that reflects our finite resources.

Increase Resilience to the Changing Climate – We will apply a climate lens to the planning and development of actions, plans, policies and infrastructure projects.

Advocate and Collaborate on Regional Issues – We will collaborate and partner with neighbouring jurisdictions to effectively address shared opportunities and challenges.

SUMMARY

The following is a summary of the seven (7) actions of the Howe Sound Biosphere Region's Ocean Watch Initiative:

ACTION 1 – RESEARCH

INCREASE KNOWLEDGE OF THE LOCAL AREA AND SPECIES THROUGH RESEARCH.

- 1.1 Conduct baseline studies and ongoing monitoring of key indicator species and habitats to guide conservation actions.
- 1.2 Conduct ongoing monitoring of the impacts of climate change and ocean acidification to support adaptation and action.
- 1.3 Address key knowledge gaps that develop as knowledge increases.
- 1.4 Improve availability and sharing of data
- 1.5 Increase participation and engagement of First Nations knowledge holders in Western science.

ACTION 2 - PROTECT AND RESTORE

PROTECT AND RESTORE MARINE SPECIES, HABITATS AND ECOSYSTEM SERVICES.

- 2.1 Create and implement a coordinated strategy for managing growth (population, tourism, development growth) sustainably throughout the Sound, to reduce impacts on the marine environment.
- 2.2 Increase the proportion of area protected within the Sound, with a particular focus on beach spawning habitat and critical habitats
- 2.3 Work with the Federal, Provincial, First Nations and local governments to refine Bill C-64 to clarify the laws applied to abandoned, wrecked or problem vessels so location (on land or at sea), marine debris and waste management issues arising are covered.
- 2.4 Reduce entry of pollutants into the marine environment (e.g., plastics and micro plastics, harmful chemicals and wastewater).

ACTION 3 – EDUCATE AND ENGAGE**INCREASE AWARENESS AND EDUCATION AND ENSURE CONSISTENT MESSAGING ON ENVIRONMENTAL ISSUES.**

- 3.1 Work with First Nations and local governments to increase education and understanding of critical environmental issues, such as climate change, within municipal staff. Ensure key resources are shared between local governments and have uniform messaging
- 3.2 Increase education and awareness around environmental knowledge and best practices. Include Traditional Knowledge in these education opportunities, and where applicable, ensure they are taught by Skwxwú7mesh Úxwumixw/Squamish Nation members.
- 3.3 Increase opportunities for Skwxwú7mesh Úxwumixw/Squamish Nation members to connect to Traditional Knowledge in Átí'ka7tsem/Txwnéwu7ts/Howe Sound. Further meaningful reconciliation efforts are needed.
- 3.4 Continue to work collaboratively on reconciliation with First Nations.

ACTION 4 – LEGISLATION**DRIVE HIGH-LEVEL CHANGE USING OFFICIAL CHANNELS (E.G., GUIDELINE, POLICY, BYLAW) APPROPRIATE TO THE CIRCUMSTANCES.**

- 4.1 Implement appropriate regulations to curtail actions that are detrimental to the environment (e.g., pesticides, pollutants, boating, development).
- 4.2 Strengthen protections for vulnerable ecosystem components including legal protection, e.g., Important Bird Areas.
- 4.3 Explore the option of citizens or First Nations working with government agencies (e.g., a ranger program or something akin to the Coastal Guardian Watchmen Program).

ACTION 5 – FUNDING**FINANCIALLY SUPPORT CONSERVATION ACTIONS AND ENSURE STRICTER ENFORCEMENT.**

- 5.1 Strategically fund priority projects for protection of vulnerable species and restoration of critical habitats.
- 5.2 Support ongoing, and new, long-term data collection initiatives.

- 5.3 Allocate resources to clean-up activities (e.g., wrecked, problem and abandoned vessels; plastics and contaminants; shoreline cleanups and appropriate disposal or recycling, especially after storm events).
- 5.4 Incentivize transitions towards environmentally friendly practices and products, e.g., a zero-carbon economy.
- 5.5 Commit more resources to enforcement.

ACTION 6 – MONITOR

COLLECT LONG-TERM DATA TO IDENTIFY TRENDS, SUPPORT DECISION MAKING, AND EVALUATE THE OUTCOME OF ACTIONS TAKEN.

- 6.1 Conduct long-term observations of key species and habitats, and potential hazards (e.g., pollutants).
- 6.2 Make information easily available to support decision making, e.g., through the Marine Reference Guide.
- 6.3 Create a centralized hub to make group information and data easily accessible and searchable, to increase group participation and data use

ACTION 7 – GREENHOUSE GAS REDUCTIONS

DECREASE GREENHOUSE GAS EMISSIONS AND MOVE TOWARDS ZERO CARBON MUNICIPALITIES TO ALIGN WITH RECOMMENDED REDUCTIONS IN GLOBAL GREENHOUSE GAS EMISSIONS, E.G., IPCC, PARIS AGREEMENT, COPENHAGEN ACCORD.

- 7.1 Invest in efficient, regular public transit options in the Sea to Sky corridor.
- 7.2 Invest in renewable energy and green infrastructure.
- 7.3 Where not already done, local governments should declare a climate emergency to enable council and staff to dedicate the resources required to immediately reduce communitywide GHG emissions.
- 7.4 Conduct a baseline GHG emission inventory for each community to identify the largest emitters, with ongoing monitoring and reporting of community-wide emissions beginning in 2020 to track success.
- 7.5 Work with large businesses to advise on how to decrease their carbon footprint.

- 7.6 Create a climate action plan to prioritize policies and actions that will be most effective at reducing community wide GHG emissions. Identify challenges and opportunities and establish key evaluation criteria to evaluate success.

DISCUSSION

Based on the seven (7) actions of the Ocean Watch Action Plan the following initiatives are being explored/implemented by the Town:

- 1.1 *Conduct baseline studies and ongoing monitoring of key indicator species and habitats to guide conservation actions.*

The Town of Gibsons has implemented the following modelling and monitoring initiatives to assess potential impacts to natural assets in the region from climate change:

- **Managing Natural Assets to Coastal Resilience** project, to understand the value of our natural coastal assets (eelgrass beds, beaches and rocky shorelines, etc.) and how these assets could mitigate effects from floods, storm surge, and coastal erosion.. Project results will inform the Town’s restoration work over the coming years, and the project team hopes to have created a replicable model for other local governments to follow. The full report can be found on the Town’s website here [Coastal Resilience Project – Town of Gibsons](#).
- **Creek Monitoring Stations** in three creeks within the Gibsons watershed, monitoring flow data and water levels, to better understand aquifer recharge through these systems. The monitoring will track changes over time from impacts due to activities occurring in the upper reaches of the streams, as well as changes in severity and frequency of precipitation events. The hydrometric stations will also determine the seasonal discharge values. This information would be useful for delineating potential areas of surface water – groundwater interaction (characterizing the groundwater recharge potential) and the ability of each creek to support aquatic life. The data is an important piece for the Source to Sea project, and the monitoring will continue monthly by Town staff and SC Streamkeepers.
- **Source to Sea** project, to consider natural assets within the extent of the Gibsons Aquifer watershed. Goals of the project include:
 - establishing a baseline inventory of the natural assets that support water services.
 - providing a condition assessment of the identified areas.
 - understanding of the level of service of the identified natural assets; and
 - recommending best management practices of the natural assets identified.

- 1.3 *Address key knowledge gaps that develop as knowledge increases.*

Through a pilot project with MNAI, staff were engaged to develop a new guidance document, “How to Develop Levels of Service for Natural Assets and Ecosystem Services”. The document aims to support local governments to better integrate natural asset management into asset management policies, plans and programs.

MNAI recognized the importance for local governments (LGs) to develop an understanding of the services natural assets are providing or can provide to the community. This understanding enables LGs to define a level of service they will commit to sustaining over time, whether that is

through conservation, adaptive management or other programs that might require collaboration and partnerships with private landowners or other government jurisdictions.

2.2 Increase the proportion of area protected within the Sound, with a particular focus on beach spawning habitat and critical habitats.

The Town of Gibsons is looking at the designation of no-anchor eelgrass protection zones in the critical nearshore marine environment in front of their shoreline in early 2022. This initiative is in collaboration with the Nicholas Sonntag Marine Education Centre and SeaChange. Gibsons will be one of the first communities to implement these no-anchor zones in the Canadian side of the Salish Sea.

3.4 Continue to work collaboratively on reconciliation with First Nations.

In August 2020, staff presented a proposal for establishing a Healing Forest within Town boundaries to a representative for the Skwxwu7mesh Uxwumixw (Squamish Nation).

The [National Healing Forest](#) initiative envisions creating a network of forests and green spaces across Canada, where Indigenous and non-Indigenous peoples can come together in the spirit of reconciliation to heal, reflect, meditate, talk, share and build respect and understanding as a result of the Residential School legacy and the findings of the National Truth and Reconciliation report. The proposal for the Healing Forest as part of the Whitetower Pond expansion project in Gibsons will be taken to the Nation's Council Committee for further discussion.

Though the pond expansion project has been put on hold while an archeological assessment is completed after the discovery of significant archaeological material onsite, the delay is providing Staff with the opportunity to further explore options for the Healing Forest in collaboration with the Nation.

5.2 Support ongoing, and new, long-term data collection initiatives.

In July of 2021, surface watering monitoring stations were installed in Gibsons, Charman and Chaster Creeks within the Gibsons Aquifer watershed.

6.1 Conduct long-term observations of key species and habitats, and potential hazards (e.g., pollutants).

In conjunction with the Coastal Resilience project, staff are developing the "Source to Sea Project" (S2S) with MNAI to consider natural assets within the extent of the Gibsons Aquifer watershed. Goals of the project include are to ensure that the natural assets within the Town's entire watershed are understood, measured, valued and, ultimately, managed to ensure their health.

A Natural Asset Registry Dashboard has been produced, with condition assessments of the Natural Assets complete. Staff are looking at the inclusion of an additional tab for the Urban Forest, separate from the Forest tab (delineation of tree stands inside and outside of Town boundaries). An economic valuation of watershed natural assets is in progress (initial valuation with uncalibrated model results). Next steps will be to identify options to protect the NA, to develop management strategies and to identify any inputs or guidance to policy and financial planning.

Additionally, the project team will work towards the development of a framework to connect Coastal Assets (Coastal Resilience Project) and Watershed (Source to Sea) methodologies.

7.2 *Invest in renewable energy and green infrastructure.*

In July 2020, the Town of Gibsons announced that it had been awarded a total of \$955,000 by the Province of BC and the Government of Canada to construct an additional storm water detention pond at Whitetower Park. The new pond will reclaim wetland that was historically infilled, protect approximately 2 km of Charman Creek's natural watercourse and habitats, and aid in managing flood risk to downstream infrastructure and properties. Additionally, it will mitigate the effects of past development, serve future development, and provide greater resiliency to climate change. On completion, this project will improve water quality and stormwater management capacity, expand Whitetower Park, and better connect residents to our natural assets.

7.4 *GHG emissions inventory*

The Town of Gibsons plans to reduce and track GHG emissions for municipal infrastructure. Reducing and tracking GHG for the municipality itself is more difficult.

7.5 *Work with large businesses to advise on how to decrease their carbon footprint.*

The Town of Gibsons is planning to discuss how to decrease the carbon footprint of large businesses.

7.6 *Create a climate action plan*

October 2021, the Town of Gibsons signed a pledge agreement with the "Cities Race to Zero" campaign. Race to Zero is a global campaign to rally leadership and support from businesses, cities, regions, and investors for a healthy, resilient, zero carbon recovery that prevents future threats, creates decent jobs, and unlocks inclusive, sustainable growth.

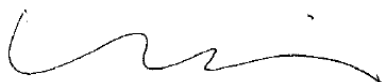
Moving forward, actions the Town has pledged to take to help reach our net-zero target include:

- Create green and healthy streets
 - Expand and improve walking, cycling and integrated transit access and identify potential areas for future zero emission zones by 2025.
- Reduce air pollution and ensure clean air
 - Develop plan by 2025 to achieve pollution reductions from major sources of pollution within city/under city control and implementing at least one new substantive policy and program to reduce pollution from top source.
 - The Town of Gibsons has added electric vehicles to its fleet as part of its commitment to reducing the production of greenhouse gases.
- Develop zero-carbon buildings
 - Develop a roadmap to achieve net zero carbon new buildings from 2030
 - Enact regulations and/or planning policy to ensure new buildings operate at net zero carbon by 2030
 - Benchmark building energy use in existing buildings and implementing citywide efficiency programs with an approved roadmap to achieve all net zero carbon buildings by 2050.
- Move toward resilient and sustainable energy systems

- Lead by example with municipal renewable energy projects maximizing the potential of municipal assets for onsite generation with the aim to cover municipal electricity demand by 100% renewables by 2025
- Make sure our policies follow the rule of “energy-efficiency” first so take all actions to increase the efficiency of end-use sectors
- Promote the use of clean energy sources for heating and cooling buildings.
- Advance toward zero waste
 - Progressively phase out organics disposal to landfill and incinerators
 - Ensure all waste generated in the city is being collected and residual waste is disposed of adequately in at least an engineered sanitary landfill
 - Reduce the municipal solid waste generation per capita achieving at least 8% reduction in 2025, with actions like restricting single-use materials, and volume-based collection fees/incentives like “pay as you throw”, enroute to 15% reduction by 2030
 - Reduce the amount of municipal solid waste disposed to the landfill and incineration by at least 50% compared to 2015 by 2030; and increase the diversion rate away from landfill and incineration to at least 70% by 2030, with actions like scaling up citywide collection with 3-stream segregate waste collection including food/recyclables/residue by 2025.
- Create sustainable food systems
 - Regulate or activate programs for food businesses to minimize food-related carbon emissions.

The Town of Gibsons is already taking action to lower our CO2 emissions, through initiatives such as our organic waste program, active transportation upgrades, the Healing Forest, and our adoption of the BC Energy Step Code and Tree Preservation Bylaw.

Respectfully Submitted,



Michelle Lewis
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