



A Deeper Dive into Issues Addressed by the Coastal Marine Strategy

Hardened Shorelines

What's the issue?

Shoreline habitats, such as spawning beaches and salt marshes, are critical to the food web, sequester carbon, protect communities from flooding and storms, and help maintain local food security. However, these habitats have been declining at an alarming rate; upwards of 70% of salt marshes in British Columbia have been either lost or degraded.¹

A significant cause is hard (or armoured) shorelines, such as seawalls, bulkheads, riprap, and breakwaters, which are found on much of B.C.'s developed coastline. Hard shorelines, which are generally put in place to prevent erosion of the upland property, disrupt natural shoreline processes and destroy important habitats.² This is due to "coastal squeeze", whereby sea level rise moves the intertidal area upland, but a structure is there to prevent the intertidal area from shifting – basically, the habitat is squeezed out.² It is also due to changes in sediment dynamics, which can affect the shoreline that is armoured, as well as surrounding areas. Hard shorelines break up the connection between the ocean and land and disrupt the movement of some species.² They introduce contaminants into the water, and despite being put in place to prevent upland erosion, they can actually exacerbate erosion in seaward areas – as well as "flanking erosion" of adjacent properties' shorelines.²

Natural or "green" shorelines are alternatives to hard structures. Green shorelines do not suffer from the issues described above, and they provide additional benefits: they buffer the impact of storm surges (which are intensified by climate change) by absorbing wave energy, prevent erosion, reduce flooding, filter pollutants, and are less expensive to install and maintain.³

Why has it been hard to fix?

Currently, the Province mostly leaves it up to local governments to enact (or not enact) restrictions on coastal development, including hard armored structures. This had led to an inconsistent patchwork of different rules – despite shorelines and shoreline habitats being connected.

Some municipalities have created Development Permit Areas along their shorelines, with a strict framework for approving development within that area, that take into account sea level rise. Other municipalities have no framework at all.



Often, First Nations involvement in this patchwork of regulation is very limited.

To promote natural shorelines, the Stewardship Centre for British Columbia has developed Green Shores Programs that provide information and technical information to developers, landowners and local governments for implementing green shorelines.⁴ The Province has also collaborated with the Green Shores program to establish a pilot project to expedite the approval of nature-based shorelines.

How can the Coastal Marine Strategy help solve it?

In the B.C. Coastal Marine Strategy, British Columbia commits to:

- Investigate and consider incentives to homeowners and developers to maintain or restore natural shorelines (such as through grants and rebates, tax relief and permitting efficiencies).
- Improve access to Green Shores training, education and technical support to help homeowners, developers and local governments implement nature-based solutions to a high standard. Explore the establishment of a First Nations Green Shores working group to bring an Indigenous lens to the program.
- Support research to better understand the benefits of nature-based solutions for addressing climate impacts along shorelines.
- Expand the implementation of B.C.'s expedited permit process for nature-based shoreline projects.
- Replace hard armoured approaches with soft shoreline stabilization techniques in coastal marine parks and protected areas managed by the provincial government, where appropriate.

The Province also commits to develop a proposal for coastal marine legislation, in partnership with First Nations, which we think should provide greater tools and requirements to protect shorelines from harmful coastal developments.

1. Government of Canada, The Federal Policy on Wetland Conservation (1991), online: <<https://publications.gc.ca/collections/Collection/CW66-116-1991E.pdf>>.

2. Alana Colombe, "Why 'Soft' Shorelines Are More Beneficial to your Shoreline Property" (18 December 2024), online: Watersheds Canada <<https://watersheds.ca/why-soft-shorelines-are-more-beneficial-to-your-shoreline-property/>>.

3. Stewardship Centre for BC, "Nature-based vs. hard armour shoreline designs" (2021 July 16), online: <<https://stewardshipcentrebcc.ca/nature-based-vs-hard-armour-shoreline-designs/>>.

4. Stewardship Centre for BC, "Green Shores Programs" (accessed 3 June 2025), online: <<https://stewardshipcentrebcc.ca/green-shores-home/gs-programs/>>.

For more information please contact

Erin Gray, West Coast Environmental Law
Staff Lawyer
egray@wcel.org
778-679-7396