

Steps to Consider when Developing your Coastal Property

Developing Properties in Coastal Areas

Protecting Coastal Properties and Ecosystems

- 1 Get a professional site assessment to determine the best methods for protecting your property.
- 2 Select design techniques best suited to your property.
- 3 Contact your municipal or regional government and local First Nations for more information about coastal development considerations
- 4 Attend a workshop, access online resources, or learn more about becoming Green Shores certified at stewardshipcentrebc.ca.
- 5 If you plan on doing any works in the foreshore area, contact FrontCounterBC to obtain a permit.

For more information, please contact us!

Sustainable Development
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Coastal areas are one of the most productive ecological zones on earth, providing vital habitat for many plant, bird, fish, amphibian, and animal species.

Coastal properties are desirable places to live and recreate. Yet these properties may be vulnerable to the risk of coastal flooding and erosion due to physical forces such as wind, waves, sediment movement, and changing water levels.

Hard structures, such as rock riprap, concrete blocks, and sea walls have often been used to protect shorelines from the risks of flooding and erosion. However, we now know that hard structures can actually increase erosion risk by deflecting wave energy onto the beach or adjacent properties, making them more likely to fail over time. They often impact or eliminate coastal habitats as well.

Soft protection measures are nature-based alternatives to hard structures, and they aim to reduce erosion and flooding while restoring physical processes and enhancing habitat for fish and wildlife. They may also be less expensive and less complex to implement. A broad spectrum of soft design techniques can be applied to protect your property and manage the shoreline sustainably for you and future generations.



Design Techniques

Leaving your site to function naturally is likely the best course of action for environmental health. However, if intervention is needed, soft design techniques are best management practices that should be considered first.

Vegetation

Native vegetation is exceptional in its ability to hold soils together, stabilize slopes, and absorb and filter rainwater. Lawns are less suited for providing these benefits. Adding and maintaining vegetation is a good idea on any site.

Drainage

Redirecting rainwater through drains or pipes to the bottom of the bluff can protect your bluff or bank from rainwater-induced erosion. This technique is typically used where there is evidence of surface erosion or risk of landslide.

Building Location

When a structure is threatened by erosion or flooding, sometimes the most effective solution is to place it out of harm's way. This may mean locating a building farther from the shoreline or above a certain elevation to protect against erosion and flooding.

Log Placement

This technique places large logs and woody debris along the upper beach to mimic natural driftwood accumulation. Logs disperse wave energy, trap and build up sand, and provide habitat and food sources for plants, animals, insects, and other shoreline species.

Beach Nourishment

Nourishment involves placing sand and rounded gravel on the beach to re-establish backshore areas or create protective storm berms. Beach nourishment slows beach erosion, provides wind and storm protection, mimics beneficial natural processes, and is relatively inexpensive. Beach nourishment is a good option where buildings are at risk because beaches have eroded away.

Reslope and Revegetation

Resloping stabilizes bluffs and banks, while revegetation protects the slope from erosion and enhances aesthetics, water quality, and wildlife habitat. This approach is most often used in response to an upper slope disturbance that has created steep, unstable slopes.

Structure Installation

Hard structures are considered an option of last resort and are most often only built where required by site conditions. If a hard structure is determined to be necessary, following proper design protocols is critical for minimizing negative impacts to beach habitat and neighbouring properties.

Structure Removal

If your existing hard structure is in need of repair or replacement, it is a good time to consider structure removal. It may reduce costs, improve beach access, and benefit you and the environment.

Hard Structures

- ✗ Restored physical processes
- ✗ Enhanced habitat
- ✗ Reduced pollutants
- ✗ Reduced cumulative impacts

Hard Structures VS. Soft Design Techniques

Natural Design Techniques

- ✓ Restored physical processes
- ✓ Enhanced habitat
- ✓ Reduced pollutants
- ✓ Reduced cumulative impacts



Trained Professionals can help with design

✓ Better Beach Access

✓ Property Protection: Added sand, gravel and vegetation helps absorb wave energy, reducing flooding and erosion.

✗ Limited Beach Access

✗ Scouring and Erosion

✗ Changes to Beach as well as Fish and Wildlife Habitat

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✓ Ecological Health: Restored or enhanced habitat for fish and wildlife.

✓ Less Expensive to Install:

The Natural approach can cost 30-70% of building walled structures.

Illustration based on GREEN SHORES FOR HOMES design concept.