Living Shorelines

NATURAL SHORES RESIST EROSION

- Trees and shrubs absorb moisture, reducing runoff and erosion.
- Vegetation stabilizes slopes and creates shoreline habitats.
- Shorelines erode naturally, building beaches & maintaining ecological values.
- Natural beach slopes and soft sediments absorb wave energy.

DEVELOPMENT INCREASES EROSION

- Paved surfaces and vegetation removal can saturate soils causing lawns and slopes to slump or fail.
- Seawalls block sediment needed to maintain beaches and spits.
- Wave scouring against hard surfaces removes pebble and sands.
- Over time, wave scouring causes beach slopes to steepen and degrades soft-sediment beaches and fish habitat.
- Energy reflected off armouring generates more waves and can damage properties.
- Failed seawalls put properties at risk.

Shoreline Stabilization

Nature is the ultimate shoreline engineer!

Shoreline stabilization options vary along a gradient from "soft" to "hard.

"Soft" options (bioengineering) use natural vegetation, logs and low slopes to stabilize soils, provide upland drainage and habitat. Raised foreshores, or beach nourishment, add fine beach sediments to dissipate wave energy. Soft shore designs work with nature to resist erosion and protect shorelines.

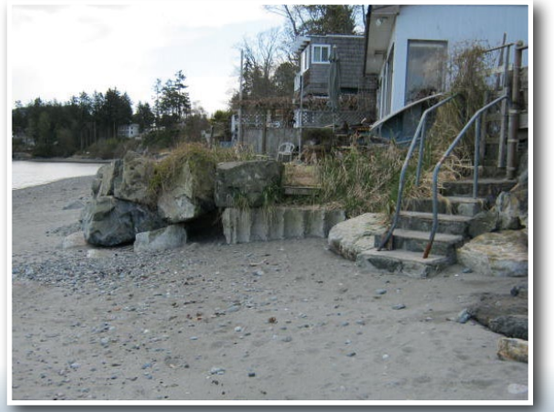
"Hard" shoreline options are immovable barriers to wave energy. "Hard armouring" includes seawalls, riprap, retaining walls or any shore hardening structure. Rather than resisting erosion, hard armouring can increase erosion and damage shorelines.

SOFT›››››››››››››HARD

- Set structures back from the high-water mark
- Maintain and enhance vegetation and upland drainage controls
- Add logs, driftwood & stumps
- Slope and beach sediment enhancement (raised foreshore using sand/gravel mix)
- Breakwaters
- Retaining walls
- Concrete groynes
- Seawalls and stacked stone walls (riprap)

soft shore design

hard shore design



Sharing Our Shorelines

Shoreline Matters

Shorelines are living systems, constantly changing, as is their nature.

Changes we make along shorelines can affect wildlife and property values.

Shorelines are habitat for hundreds of species connecting food webs from the land to the ocean abyss.

Actions we take now can safeguard marine life for generations.

Explore your options for balancing shoreline stabilization and habitat conservation.

We have resources to help guide your decisions and find the right option for your shoreline.

Evolving Shorelines

Over time, the tides, winds, and currents have sculpted Thetis coastlines providing us with spectacular views and a wealth of biodiversity.

Erosion is necessary to maintain coastal beaches. Eroded sediment transported from watersheds and feeder bluffs build beaches and salt marshes.

Different "shoreline types" are the result of balances between these coastal processes and sediment transport.

"Shoreline types" are sediment classes that describe the intertidal habitat wedged between the land and the sea.

Thetis Island Shoreline Types

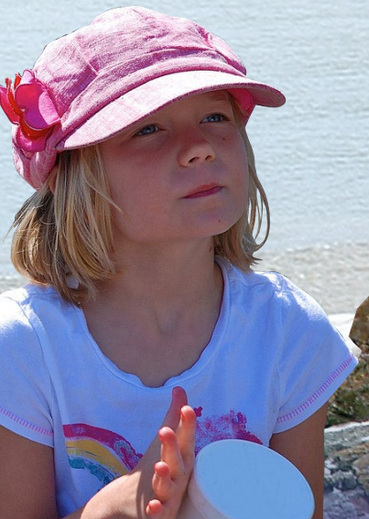
Different shoreline types function and react differently to disturbance. Some shoreline types are resistant to changes from development and weather, while others are fragile and easily damaged. Know your waterfront's shoreline type when developing your land.

SOFT SEDIMENT SHORELINE TYPES are unstable and vulnerable to shoreline development.

If considering shoreline protection, these shoreline types require a "soft option" or Green Shores approach to shoreline stabilization and habitat conservation.

ROCKY SHORELINE TYPES meet winds and waves "head on" and are more resistant to weather and changes due to development.

These shoreline types rarely need shoreline stabilization measures.



Pebble-sand/
Shell Beaches

Marsh/Fine
Sediment.

Sea Cliff

Boulder/Cobble

Low Rock/
Boulder

Caring for My Shoreline

The Thetis Island Local Trust Committee and the Islands Trust have been actively working to increase our understanding of shorelines

- Shoreline types
- Shoreline Mapping
- MapIT Shoreline Mapping
- Greenshores for Homes

PLEASE VISIT:

Caring for My Shoreline
www.islandstrust.bc.ca/how-do-i/care-for-my-shoreline

NAPTEP COVENANT PROGRAM
www.islandstrustfund.bc.ca/initiatives/privateconservation/naptep
Or call us at: 250-405-5151

For more information:
www.greenshores.ca
www.env.gov.bc.ca/wld/BMP
www.ecy.wa.gov/puget_sound/index.html

Islands Trust

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