

## NATURAL SHORELINES

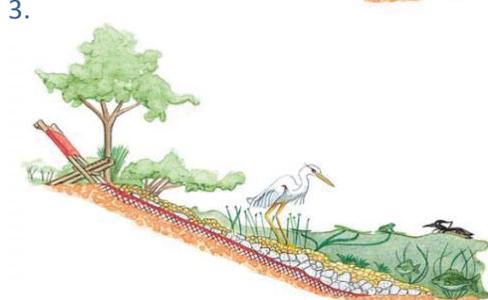
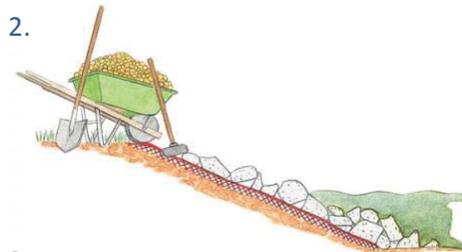
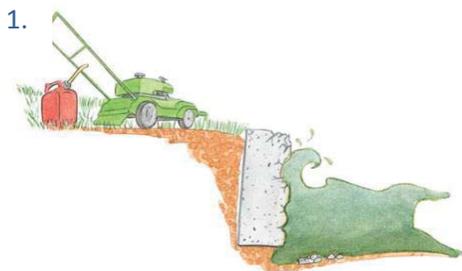
*Instead of concrete and steel sheet-pile, shoreline best management practices use a combination of vegetation plantings, gravel, stone, logs, and slope modification to protect against shoreline erosion. It's important to set structures back far enough to preserve the natural shoreline and vegetation.*

Natural shorelines offer the following benefits:

- ✓ They maintain shoreline stability while substantially improve habitat for fish and other wildlife;
- ✓ They allow for improved water access for homeowners and guests, making swimming and shoreline enjoyment easier;
- ✓ They offer a softer, more natural shore that can enhance views by adding variety and seasonal interest; and
- ✓ They retain or improve land value offering a better return on sale due to their aesthetic beauty and compatibility with nature.



(OMNRF)



(Images: Fisheries & Oceans Canada)

1. Existing retaining wall
2. Creating a natural shoreline slope
3. Allowing a shoreline to naturalize benefits fish and wildlife species.

### Natural Shore Protection (e.g. soft engineering)

Options for more natural shore protection include soil bioengineering, re-grading slopes to mimic the natural shoreline, rock and boulder revetments. These techniques utilize vegetation to help bind the soil and augmented with other materials, will provide a more natural shoreline that can create fish habitat and improve water quality given their filtering properties. All methods should be fully investigated with qualified professionals before you consider using them in your specific situation. Answering the question “What are you protecting?” will direct the scale and type of protection.

### Retaining Wall Removal

The Bay and your property will benefit from the removal of an existing retaining wall (made of concrete, wood, steel, etc.) and the creation of a more gradual and natural connection between the Bay and your property. These hardened shorelines are the least environmentally considerate shore protection techniques. Many of these structures were hastily constructed during the high water level period (1986 was the record high level). Many did not take into account interruption of shoreline processes nor the impact on natural habitats. Given current low water levels and improved designs, there are plenty of opportunities to improve the shoreline health and improve the water’s edge. Keep in mind that the opinion of a qualified coastal professional should be sought to ensure such a change in shoreline conditions is done properly and does not create undue risks.

## HEALTHY PROPERTIES

### Surface Water Runoff

Every property in southern Georgian Bay drains water to the Bay. Therefore, the water runoff from your property, the stormwater management facilities of your municipality, and the non-point source pollution from inland farms will all play a part in water quality. Slow it down, soak it up, and keep it clean are the three messages for wise water management on your property. Conserve water when possible, use a rain barrel for watering outdoor spaces and replace pavement with permeable surfaces. Stormwater should not be directed to a naturally dry beach. Doing so may create gullies and allow the area to be invaded by the invasive plant *Phragmites*.



Storm water discharging onto Beach (A. Crowe)

### Low Impact Development (LID)

Green infrastructure, natural landscaping, and a few other topics which come under the heading of LID, all assist to improve ecosystem health. These approaches are considered to have a “low impact” on the environment and include such considerations as permeable pavements allowing water to soak in on your driveway and surfaces around the home. *Rain gardens* containing native plants will absorb and use the excess moisture that would otherwise flow to storm sewers that may already be at capacity.

### Maintaining Sand Dunes

Dunes are your insurance policy for the next high water period. They store sand for when it is needed to feed storm waves that would otherwise start eroding or damaging properties. Dunes also maintain an equilibrium regarding beach elevation. If beaches are lowered (called deflation) by sand removal, bulldozing or other mechanical means, they risk becoming wet beaches where dry sand is uncommon. Wet beaches in residential areas serviced by septic systems have been shown to have high concentrations of E.coli and pathogens that get into the groundwater and eventually into the Bay at the shoreline.

#### **Beach Note:**

Sand dunes work in unison with beaches to remove sand during storm waves, store sand in offshore sand bars and then return sand to the dunes after the storm passes. Dunes are natural shore protection.



(A. Crowe)

#### BE THE CHANGE

Community groups, environmental non-government organizations and government agencies are collaborating on projects designed to naturalize shorelines and improve habitat. Seek out opportunities in your community!