



**DRYDEN**

## **APPENDIX C**

# **NATURAL SHORELINE BUFFER**

## Six Key Benefits of a Natural Shoreline

### 1. Maintaining Water Quality

Shoreline vegetation filters polluted and contaminated runoff before it flows into the lake, preventing an altering of the water chemistry and excessive algae blooms.

### 2. Moderating Temperatures

The shade cast by plants provides fish and other wildlife, as well as people, with relief from the summer sun. Shade also reduces water evaporation from the soil. This is helpful for plants that require moist or wet conditions for survival.

### 3. Creating Wildlife Habitat

Over 70% of land-based wildlife and 90% of aquatic life depend on shorelines during some point in their lives. Reptiles, amphibians, fish, birds, insects and mammals use the shoreline for mating, rearing young, food, shelter and protection from predators. It's why shorelines are known as the "ribbon of life."

### 4. Mitigating Flood Frequency and Impacts

Buffers can reduce flooding by slowing the velocity of surface runoff so it absorbs into the ground and becomes groundwater. This reduces the amount of direct drainage into the lake, limiting flood potential and helping the lake regulate its water levels more easily.

### 5. Reducing Erosion

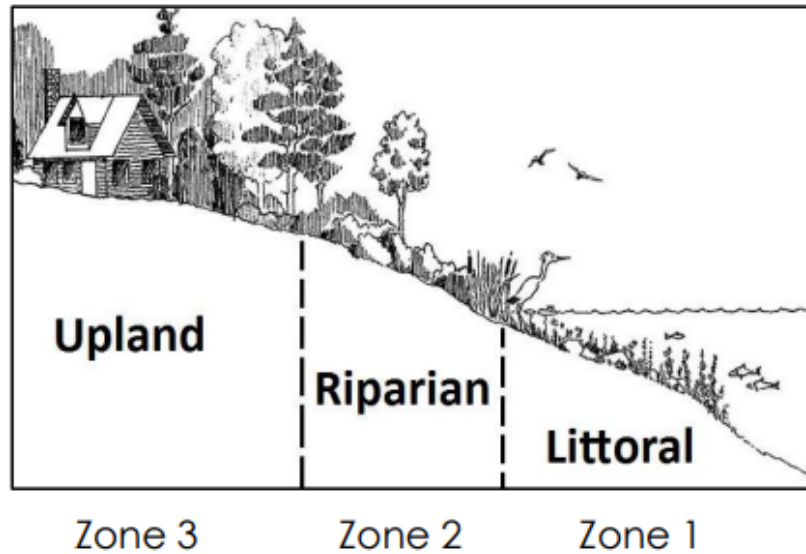
The vast network of roots under a natural shoreline holds soil in place and prevents shorelines against slumping and washing away. The leaves above ground reduce the impact of rain and surface water on the soil surface, and also the severity of wave action from water currents and boat wakes.

### 6. Maintaining or Increasing Property Values

Natural shorelines protect property values from decreasing due to loss of land, wind or water damage, and poor water quality. At the same time, as waterfront views improve, so too does the price of the property.

Source: <http://loveyourlake.ca/natural-shoreline>

A three-zone shoreline buffer provides a framework through which water quality, habitat and other objectives can be accomplished. Illustration of a healthy riparian buffer.



Zone 1 (Littoral) – provides habitat, reduces flood effects, stabilizes the bank, and removes some sediments and nutrients.

Zone 2 (Riparian) – removes sediment, nutrients and other pollutants from surface and groundwater. In combination with Zone 1, it also provides most of the enhanced habitat benefits, and allows for recreation and aesthetic benefits.

Zone 3 (Upland) – provides the greatest water quality benefits by slowing runoff, infiltrating water, and filtering sediment and its associated chemicals.

Source: <https://www.muskokawatershed.org>