

The goal of North Kawartha Township is to work with it's ratepayers, associations, recreational users and various agencies to maintain and restore natural shorelines in order to protect the quality of water and health of our lakes.

The Official Plan states, "The preservation of naturally-vegetated shoreline is encouraged in order to minimize the destruction to the shoreline and wetland habitat, minimize visual impact on the water body, maintain wildlife habitats and corridors and improve water quality."

The Township Comprehensive Zoning By-law provides for a balance of property owners' rights and the protection of our lakes. Development (renovation) of a non complying main structure (i.e. main cottage) located in the 30 metre (100 foot) setback zone may be permitted if the application meets the specific requirements set out in the Comprehensive Zoning By-law: i.e. setback restrictions, lot coverage, linear expansion, etc.

When applying for a building permit it is recommended that the applicant obtain a copy of "Restoring Healthy Shorelines" which outlines best practices for the retention and restoration of vegetation in the shoreline buffer zone. Copies can be obtained from the Building Department or Peterborough Green-up at: www.greenup.on.ca

Vegetation Inventory

Planning your project is important. In addition to a plan of your proposed renovation, it is recommended that the applicant provide a vegetation inventory outlining any trees or shrubs to be removed for the project, a proposed inventory of trees and shrubs to be planted to replace the removed vegetation as well as any proposed planting of natural vegetation to enhance the buffer zone. A simple guideline is available from the building department.

Shoreline property owners are encouraged to support the long term goal of North Kawartha Township, "to protect and restore the natural vegetation in the shoreline buffer zone to ensure the water quality and health of our lakes for future generations."



WHAT ONE CAN DO TO RESTORE HEALTHY SHORELINES:

- Preservation of the natural vegetation
- Naturalization of degraded areas
- Enhancement with native species
- Restoration of cleared areas

Help your investment grow! Recent studies demonstrate that property values decrease as water quality declines. The single most important thing you can do to protect the value of your waterfront investment is to maintain the water quality in your lake. Think of the natural vegetation on your property as a free shoreline insurance policy.

*SAMPLE OF NATIVE PLANTS, SHRUBS & TREES

<u>TREES</u>	<u>SHRUBS</u>	<u>PLANTS</u>
White Pine	Alternate Leaf	Canada Anemone
Red Pine	Dogwood	Helen's Flower
White Birch	Nannyberry	Black-eyed Susan
White Cedar	Chokeberry	False Sunflower
White Spruce	Fragrant Sumac	Switchgrass
Red Oak	Creeping Juniper	
Sugar Maple	Serviceberry	

*A Shoreline Checklist of Best Practices, including a complete list of natural vegetation, can be obtained from the building department in a copy of "Restoring Healthy Shorelines".

WHERE TO PURCHASE NATIVE PLANTS:

- A list of local nurseries can be found in the North Kawartha Community Directory
- Local resources can also be found in a copy of "Restoring Healthy Shorelines"

OTHER SOURCES OF INFORMATION:

- Local Cottage Associations and Local Lake Plans
- Township of North Kawartha website at www.northkawartha.on.ca
- Healthy Waterfronts, A Shoreline Owner's Guide available through FOCA or at www.foca.on.ca
- Dock Talk at www.foca.on.ca

PROTECTING & RESTORING HEALTHY SHORELINES



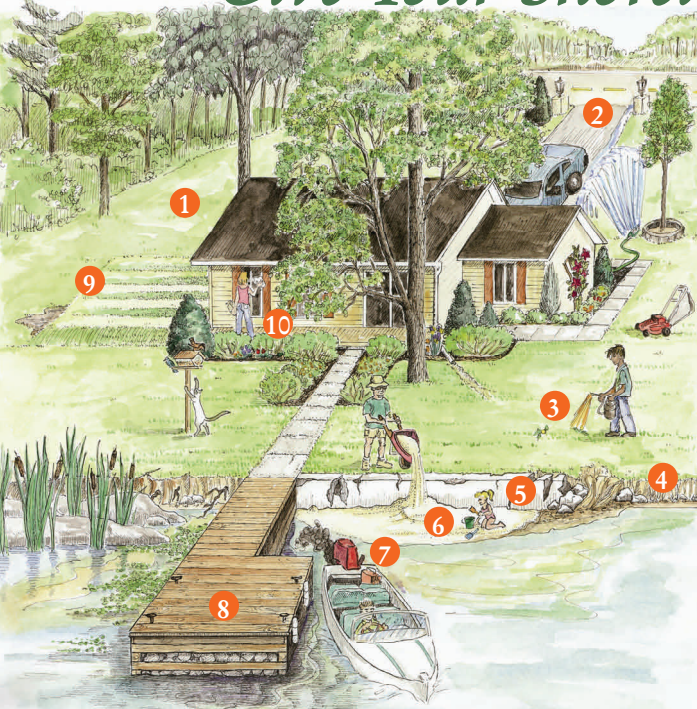
The Township of North Kawartha is blessed with numerous pristine lakes that are enjoyed by all of our residents, recreational users and wildlife. Maintaining water quality and healthy lakes is the life blood of our future.

The North Kawartha vision is of a place where water quality, wildlife habitat, natural beauty, recreational opportunities and peace and tranquility are improved and conserved in perpetuity for all human and wildlife generations to come.*

This pamphlet is designed to provide shoreline property owners with important information when working on shoreline properties. Please read carefully before applying for a building permit.

*Special thanks to Clear, Ston(e)y and White Lakes for sharing their Lake Plan Vision.

Give Your Shoreline a Make-over!



Needs Improvement

1. *Cleared manicured lot* - lacks shade and privacy; loss of native plants leads to more erosion, runoff and work for you!

2. *Runoff* - flows over solid surfaces accelerating erosion; pollutants and excess silt degrade habitat for aquatic life.

3. *Chemical fertilizers and pesticides* - degrade water quality, are hazardous to your health, can be deadly for fish and other wildlife.

4. *Lawn to the water's edge* - lacks deep roots required to stabilize bank.

5. *Hardened shoreline* - can deflect erosion downstream, eliminates "natural filtering" of pollutants and sediment, degrades habitat.

6. *Artificial Beach* - requires ongoing sand replacement, reduces water quality, degrades aquatic habitat.

7. *Old 2-stroke engine* - dumps 25-40% of fuel, un-combusted, into water and air.

8. *Solid crib dock* - destroys aquatic habitat, alters currents, can deflect erosion downstream.

9. *Malfunctioning septic system* - allows phosphorus and bacteria to leach into adjacent waterways.

10. *Harmful household chemicals and cleaners* - damage septic system and degrade water quality.



Healthy

1. *Prune trees* rather than removing them; plant low maintenance native trees and shrubs to reduce erosion and absorb runoff.

2. *Replace solid surfaces* with porous materials where possible; redirect runoff into settling areas, away from the water's edge.

3. *"Mow it high and let it lie"* - leave grass 8 cm (3 in) high to retain moisture; mulch clippings for fertilizer.

4. *Start a buffer* - leave some grass uncut along the water's edge; restore with deep rooting native plants.

5. *"Soften" your shoreline* - improve erosion protection with native trees, shrubs, grasses and aquatic plants.

6. *Create a "dry land" beach* above the high water mark; let imported sand erode away naturally and native plants grow back.

7. *Use a well maintained electric motor*, or a 4 or 2-stroke engine that meets or exceeds EPA 2006 guidelines.

8. *Remove solid dock* - try a pipe, cantilever or floating dock; avoid treated wood; use public access where possible.

9. *Replace and properly maintain your septic system* - consult an expert.

10. *Use environment-friendly products*, or alternatives like baking soda and vinegar.

THE RIBBON OF LIFE

Ninety percent of all lake life is born, raised and fed in the area where land and water meet. **The shallow water and the first 10 to 15 metres of shoreland forms a ribbon of life around lakes and rivers that is essential to the survival of many species.** This rich and complex habitat supports plants, micro-organisms, insects, amphibians, birds, mammals and fish.

Unaware of the importance of shoreline vegetation, many landowners clear their shorelines and transform them into urban landscapes. They destroy the cattails, bulrushes and other native species, and replace them with lawns and non-native species. They also build retaining walls, docks and boathouses. These changes destroy the balance of the aquatic and shoreline ecosystems. They also alter the wildlife habitat, natural beauty and character of our lakes and rivers.

Natural shoreline vegetation plays an important role in preventing soil erosion. Plant roots anchor the soil, preventing shoreland from being washed away by currents, waves and rain. The roots of mature trees reach down to the upper levels of the water table. Dogwood and meadowsweet roots form a web that extends a half-metre downward, these native species are far more effective in protecting properties from erosion than the roots of grasses, which only reach eight centimetres below the surface.

By preventing erosion and runoff, natural shoreline vegetation also improves water quality. When soil and excess nutrients are washed into the water, fish spawning beds can be destroyed, dissolved oxygen is depleted and the growth of algae and aquatic plants is encouraged. Shoreline vegetation also improves water quality by shading and cooling shallow water.

All of these changes in water quality can lead to rapid eutrophication - the aging of a lake. Eutrophication of a lake ultimately changes the kinds and numbers of species that can live there.

Best Practice

A healthy buffer zone, or the ribbon of life as it is called, is potentially the most important factor in protecting the quality of water of our lakes for future generations to enjoy. As a best practice, every waterfront property owner should strive to maintain 75% of the buffer zone in its natural state focusing all cottage activities, structures and viewing corridors on the remaining 25%.