

Design & Construction Along the Shoreline



Lake Health Program



Why maintain the forest landscape?

What is done today should not have a negative impact on the land and lakes 5, 25, or 50 years in the future!

Wildlife and humans depend on the continuation of healthy forest and aquatic ecosystems. By practicing good stewardship and being aware of construction design, we are better able to sustain the forests and waterways within our environment.

Forest trees...

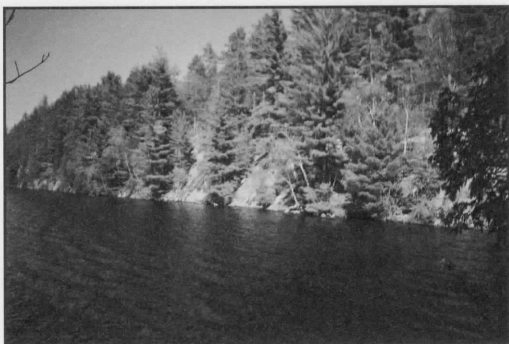
- 🌲 supply oxygen and reduce carbon dioxide in the atmosphere.
- 🌲 assist in climate control by cooling the air as water evaporates from the leaves of the trees.
- 🌲 provide food and habitat for numerous species.
- 🌲 reduce dust and noise, and provide privacy.

Dead and dying trees...

- 🌲 provide habitat and shelter for insects, birds and wildlife.
- 🌲 decompose, and replenish the soil with nutrients that contribute to new plant growth.

Tree roots, and overhanging branches along the shorelines...

- 🌲 provide a source of food, shelter and nutrients for fish and other aquatic life.
 - 🌲 host moist fertile soil, providing habitat for a wide variety of plant species.
 - 🌲 assist with stabilizing soil and reducing erosion by wind and water; allowing water to slowly filter through, resulting in cleaner surface and groundwater.
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Maintain privacy, wildlife habitat, and water quality by keeping your property well forested and having a buffer strip along your shoreline.

Other brochures in the Water Quality series:

- ◆ Protecting Muskoka's Water
- ◆ Guide to Healthy Shorelines
- ◆ Eutrophication & Algae
- ◆ Stormwater Management for a Single Lot
- ◆ Benthic Macroinvertebrate Monitoring

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Tips for Design & Construction

1. Clearly outline driveways and areas where heavy equipment is permitted, to protect the surrounding environment. Mulch areas for traffic on your property (4-6 inches of organic material) to reduce stress and compaction on underlying roots.
2. Try to maintain the natural drainage patterns of your property. Sudden reductions to the amount of moisture can affect the health of plants and trees. Keep the area surrounding the construction site moist, by installing a sprinkler system if necessary.
3. Minimize root damage when excavating land by hand digging trenches and tunneling under large roots. Co-ordinate the installation of various utility services through the same underground corridor. Root injury weakens the tree, making it more susceptible to insect, disease, and fungi attacks.
4. Trees in the forest support and protect each other. Forest trees have less extensive root systems and the branches occur high up the tapered trunks. If many trees are removed, wind and sun may affect those surrounding.
5. Try to maintain a variety of natural plant communities that provide food and shelter for wildlife and preserve the natural landscape.
6. Incorporate the natural environment and topography into the design and location of the new structures on site.
7. When planting, choose native trees and plant species that are appropriate to the site conditions. Native species are more resistant to drought, disease and insect problems common to this area.
8. Prune trees and shrubs that are obstructing views, rather than removing the entire tree or plant.
9. Design routes for driveways, stairs and pathways that follow the natural contours of the land to avoid disturbing areas of fragile vegetation.
10. Use porous materials for driveways and walkways. Minimizing the amount of pavement maintains natural infiltration and prevents increased runoff and erosion.
11. Leave some dead or dying trees lying on the ground along streams and lakeshores to provide habitat and food sources for numerous species of wildlife.
12. Maintain natural shoreline vegetation and incorporate existing features into the design of access to docks and beach areas.

Dock construction

The shallow water along the shoreline is known as the ribbon of life – the most productive and most essential of all ecosystems in the entire water environment. When planning to construct a dock along your shoreline property, consider the implications it may have on the neighbouring flora and fauna.

Do not alter the waterway, shoreline, or currents when constructing your dock.

Keep these tips in mind:

- docks should intrude as little as possible into the ribbon of life
- docks should not cover the bed of the lake
- docks should occupy less than 10% of the lot frontage
- dock plans should be checked early with agency staff for easy approval

Consider the benefits a floating dock offers to the surrounding environment:

- it doesn't touch the bed of the lake
- it doesn't obstruct currents, fish, or plant communities
- with proper design, it is solid and stable
- it requires little maintenance and has a long life

