# Natural shorelines keep our lakes young!

Lakes age, just like we do. But the natural lifespan of a lake is hundreds, if not thousands, of years. Ecologists refer to lake aging as *eutrophication*, and measure the amounts of sediment and nutrients that have accumulated in it to determine its age.

Young lakes are described as being oligotrophic, because the water is very clear and contains few nutrients. The water near the bottom of deep oligotrophic lakes stays cold, and holds enough dissolved oxygen to support cold-water fish, such as lake trout. Most lakes in Haliburton County are oligotrophic lakes.

Middle-aged lakes are described as being mesotrophic. They contain more nutrients and more plants. There are more algae because of the increase in nutrients, and so the water is less clear, with a greenish tinge. Sediment accumulates on the bottom, which gradually makes a lake shallower, and warmer overall.

Older lakes are described as being eutrophic, and their nutrient-rich waters are murky with abundant plant and algae growth. Mucky sediment accumulates on the bottoms of these lakes. As the lake ages, and the amount of dissolved oxygen falls, all aerobic animals, including fish, begin to die off.

Left untouched by humans, it takes many years before lakes become eutrophic. But human activity around lakes has the potential speed up or to slow down the aging process.

The natural vegetation that surrounds a lake keeps it young by providing anti-aging protection in a number of ways:

- The roots of mature trees and shrubs and smaller native plants all hold the soil in place, and prevent it from being washed into the lake when it rains.
- They also provide protection from erosion that can occur from waves, be they from wind or motor boats.
- The broad leaves of trees and shrubs act like a cushion, protecting the ground from the erosive effects of heavy rain events.
- In addition, the deep roots of natural vegetation provide an underground barrier to prevent excess nutrients from reaching the lake (these excess nutrients, most often phosphorus and nitrogen, may come from poorly functioning septic systems, or from chemical fertilizers that people apply to lawns).

Lakeshore property owners owe it to one another, and to future generations, to do their part in helping keep our lakes young. You don't have to do much. In fact, just do nothing at all.

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