IN DA WOODS

by Melanie B. Fullman, US Forest Service

LIVIN' BY THE LAKE

Shoreline development often results in "cleaning up" native vegetation, where forest undergrowth is removed and replaced with lawn and herbicides are used to eliminate shoreline plants. As a result, many lakes today have little or none of the original native shoreline remaining.

Natural, wild lake shores are basically a giant sponge and filter. Nearly all the water that falls as rain is intercepted by the leaves and branches of the vegetation or soaks into the soil. Very little is left to run across the land as surface runoff. A wild lake shore is also a highly diverse environment for both plants and animals – a transition zone from aquatic species, such as cattails, frogs, turtles, and fish, to land species, such as dogwood, raccoons, and herons.

Life in the Slow Lane

Along the edges of lakes, fallen twigs and leaves decompose or are digested by insects and microorganisms. These, in turn, are eaten by fish and other predators. This near shore area is particularly important for fish and other aquatic life, providing food, cover, and habitat.

If you live on a lake because you like to fish, a natural shoreline is definitely in your best interest. Most lake fish need to spend at least part of their life cycle in a near shore environment to spawn and carry out other essential life activities. A vibrant tree canopy helps stabilize water temperature, provides cover, and enhances habitat diversity. Native shore plants maintain stability and prevent bank and soil erosion by trapping pollution and preventing silt from choking spawning beds.

Shrubs and forested areas along shorelines are also important nesting sites for a wide variety of songbirds. Near shores grasses and reeds provide nesting cover for waterfowl; the popular loon greatly prefers to nest on lakes with undisturbed shoreline.

In contrast to such natural shores, the well manicured lawns of many lakefront properties provide some of the least diversity. With lawns, tree cover is often minimal and the leaf covered forest floor eliminated. Despite what many people assume, most rain does not seep into lawn grass but rather, flows overland, picking up pollutants such as fertilizers, pesticides, oil, grease, and pet waste. These usually end up in the lake.

In addition to accelerating the movement of pollutants, lawn introduces new sources of chemicals, in the form of fertilizers and pesticides. Runoff fertilizer often stimulates growth of nuisance aquatic plants, including filamentous and blue- green algae. The algal blooms that result deprive the lake of oxygen, which leads to oxygen starvation and death

for fish. Since most shoreline wildlife and birds cannot live or reproduce on lawns, they too, move out.

Another pollution problem associated with lawn is soil erosion. When a lawn is planted to the water's edge, the shallow roots of the grass are not able to withstand the forces of waves and ice. Over time, the lawn and land are eroded away and washed into the lake. Perhaps you know a homeowner who has had to resort to rocks and/or a seawall to stop the erosion and loss of land? While the 'armoring' of the shoreline reduces the threat of erosion, it further diminishes the native habitat.

Working WITH Nature

A University of Wisconsin-Extension study showed that lakefront property owners find peace and quiet, and natural beauty to be the most important reasons to settle on lake shores. In response, shoreline standards and guidelines have been developed for lakefront lots. These blend lawn and buildings into the natural setting. Through proper landscape design, a unique lakefront home can be created, instead of just another subdivision-looking house and yard. In addition to having a distinctive lot, a natural shoreline minimizes pollution, provides greater protection from erosion, and supports a greater number and diversity of wildlife. Some tips to consider:

Remove only those trees necessary to build and protect the house and open a view to the lake.

Keep lawn away from the lake, using native plants that need little watering or fertilization instead. Look for native species with square, triangular, or round stems (mint, sedge and reed families) which remain erect during rainstorms and persist throughout the winter to slow runoff and trap sediments and nutrients. Shorelines and near-shore zones which consist of a mix of vegetation types are more likely to host a wide variety of fish and wildlife throughout the year.

Maintain brush on steep slopes and a buffer zone of native vegetation along the lake shore.

Keep boating and swimming areas as small as possible to maintain the native shoreline.

Avoid retaining walls. Instead, use long-rooted native plants and shrubs or rock rip-rap to control erosion, lining the rock with geotextile fabric.

If a lakefront home already has lawn to the edge of the water, a native shoreline can be re-established by planting a lake shore buffer zone. This might consist of low-growing shrubs and flowers, with taller trees along the sides. Such a combination of plantings will maintain the view yet screen other developments from sight. In addition,

Extend the buffer zone 25 – 50' into the water and along 60 – 80% of the lot's lake frontage.

Divide the buffer zone into three planting areas: 1) aquatic plants which grow below the water surface; 2) moist-soil plants, such as cattail and bulrush, which will grow in the wave-washed area; and 3) dry-soil plants, such as native grasses, wildflowers, shrubs and trees, along the water's edge.

Plants in the buffer zone should be natives that historically grew along lake shores in the local area. Native plants are generally easier to establish, grow more luxuriously, and require less maintenance. They also provide the structure, habitat, and seeds that local animals need for feeding, nesting, and resting.

Keep the lawn back from the lake's edge but allow it to meander among the plantings as a pathway from the yard to any swimming and boating areas.

More Information

For more information about native lake shore management, contact me for free brochures and other publications. You might also want to obtain a copy of the book *Lakescaping for Wildlife and Water Quality,* by C. Henderson, C. Dindorf, and F. Rozumalski. Published by the Nongame Wildlife Program, Minnesota Department of Natural Resources, it is available through the Michigan State University Extension Office, Agriculture Hall, Michigan State University, East Lansing, MI 48824; 517-353-6740; online at http://web2.msue.msu.edulbulletins/mainsearch.cfrn (publication #WQ 57).

I hope you're enjoying these wonderful summer days. An evening campfire with friends along the shore of a lakefront home is certainly one of the most desired memories of life in the North Woods. By maintaining or creating critical native lake shore habitats, you can help ensure such summers will come again and again.

See YOU in the woods?

Trees, bushes, and other native plants are often cut down to make room for houses and lawns. When multiplied around a shoreline,
this destruction threatens the natural quality of our lakes and rivers.

Good fishing is the result of clean water and abundant spawning habitat found in lakes and rivers that still have plenty of natural shoreline.

MELANIE B. FULLMAN

District Ranger

Bessemer Ranger District, Ottawa NF
E6248 US Highway 2, Ironwood, MI 49938
906-932-1330 x539; fax: 906-932-0122

"Being in charge is a lot like being a lady. If you have to tell people, you probably aren't." – British Prime Minister Margaret Thatcher