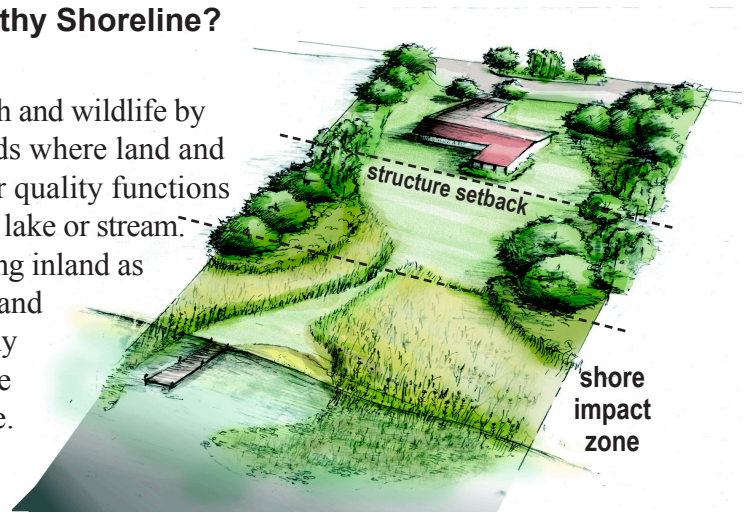




Healthy Shorelines

What is a Healthy Shoreline?

A healthy shoreline supports a diverse community of fish and wildlife by providing native vegetation that fulfills their habitat needs where land and water meet. Native vegetation provides important water quality functions by slowing and filtering water runoff as it moves to the lake or stream. Shorelines with a diverse mixture of native plants extending inland as well as offshore of the bank are more resilient to wave and ice erosion. Our lakes, streams and wetlands need healthy shorelines to reduce runoff, filter pollutants, and provide important habitat functions that benefit fish and wildlife.



Vegetation Management in Shoreland Areas

The protection of natural vegetation in shoreland areas, especially along lakes and streambanks, is critical to maintaining water quality and wildlife habitat. Good shoreland management requires the protection of natural vegetation in shore impact zones, steep slopes and bluff areas.

Shoreland vegetation (native trees, shrubs, forbs, grasses) provides numerous ecological benefits including:

- Minimizes the erosive impact of raindrops
- Holds soils and limits soil erosion from surface runoff, which is important since high velocity or concentrated runoff volumes can readily erode soils
- Removes nutrients in runoff which would degrade water quality
- Binds and strengthens the soil column with deep, dense roots which prevent and reduce the likelihood of bank or slope failure
- Provides diverse fish and wildlife habitat
- Provides privacy and helps screen shoreland development
- Provides natural and aesthetic views
- Reduces erosion by protecting the banks against wave energy

What is a Shore Impact Zone?

The shore impact zone is land located between the waterbody and one-half of the structure setback.

This concept was created in the 1989 shoreland standards to maintain existing buffers, limit the number of buildings placed in close proximity to the water, reduce soil erosion caused by construction or vegetation removal, and preserve aesthetic values. It serves to buffer the water from more intensive land uses.

A proliferation of accessory structures (boathouses, fish houses, sheds, etc.) clutters shores and displaces natural vegetation. Moreover, construction near the shoreline brings grading and filling activities and increases erosion. In order to protect shoreland soils, vegetation and aesthetics, the Shore Impact Zone was designated to protect important amenities of the lake while still allowing for access to the waterbody.

Healthy Shorelines

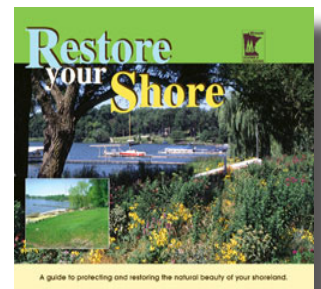
So What's the Problem?

There are many shorelines where the banks were long ago stripped of the native plant community, including trees and shrubs, and converted to turf grass-type lawns. The loss of this vegetation encourages soil erosion and nutrients to flow directly to the lake. As these practices spread around a lake, there are fewer areas left to treat runoff water and provide habitat. Studies of Minnesota lakes have shown that the removal of natural vegetation near the shoreline reduces the amount of habitat available to songbirds and amphibians and reduces fish-nesting. Many of these problems could be prevented or minimized if an area of native plants is maintained or restored.

Shoreland ordinances allow a limited number of trees and shrubs to be cleared to accommodate stairways and access paths. However, the applicable standard for such removal is that the screening of structures, vehicles or other facilities as viewed from the water may not be substantially reduced. Dead or diseased vegetation can be removed although they may be important for songbirds and other wildlife. Invasive species can be an overwhelming problem both on the shore and in the water. The local zoning office or DNR area hydrologist should be contacted for guidance before proceeding with any lakeshore alterations or removal of live vegetation.

What Can You Do?

- Protect the health of the vegetation growing on your property.
- Invasive species tend to spread rapidly. Learn to identify the most common invasive species. Invasives should be removed, but replanting native species may be needed to protect shorelines from erosion.
- Use herbicides that are labeled for an aquatic site or use a more precise method of application, like a wick applicator or a cotton glove over the top of a chemical resistant glove to apply the product only to those plants you want to control.
- Leave vegetation in place to screen structures, vehicles or other facilities as viewed from the water.
- Consider leaving dead or diseased vegetation in place as they may be important for songbirds and other wildlife.
- Most importantly, leave an area of native plants between the house and the shoreline area. Limit the removal of trees and shrubs.
- If you have been mowing near the shoreline, simply discontinue that practice to allow growth of native plants or restore and replant with native flowers, shrubs or trees.



Contact the local Soil and Water Conservation District, DNR area hydrologist or your county zoning office to get assistance. There are also a number of books and "on-line tools" (*Restore Your Shore* <http://www.dnr.state.mn.us/restoreyourshore/index.html> and *Score Your Shore* <http://www.dnr.state.mn.us/scoreyourshore/index.html>) and other literature available to help you support shorelines that promote healthy lakes and streams and the biotic communities that depend on them.

Glossary of Terms

Shore Impact Zone: land located between the waterbody and one-half of the structure setback

Bluff Impact Zone: bluff and land located within 20 feet from the top of a bluff

Steep Slopes: land having an average slope greater than 12 percent

Runoff: precipitation or snow melt, which is not intercepted by vegetation, absorbed in soil, or evaporated, that moves over the land surface to streams, lakes, ditches, and depressions in the ground

DNR Contact Information



DNR Ecological and Water Resources
website and a listing of Area Hydrologists:
<http://mndnr.gov/waters>

DNR Ecological and Water Resources
500 Lafayette Road, Box 32
St. Paul, MN 55155
(651) 259-5100

*This information is available in an
alternative format on request.*

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DNR Information Center

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TDD toll free: 1-800-657-3929

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