

Governor's Clean Water Initiative: Shoreland Rules Update Project Article Number 2

DNR NEWS

Summer 2005

Your Lake, Our Lakes: Lawn-to-lake shorelines no longer are ecologically smart

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Many people like to look out across a beautiful lake or enjoy nature by fishing or boating. You can see the evidence of this on the highways heading north out of the cities on Friday afternoon. Visitor surveys note that the top reason people visit the area is to escape to natural areas.

Perhaps we should not put our best asset at risk. In a recent survey of Minnesotans, 85% cite development as a cause of decline in scenic quality. But, development does not have to harm scenic quality.

All of us, personally and as a community, can protect our lakes and shorelines, through individual acts and through shoreland development standards and ordinances that regulate development around our lakes.

Recent research has shown that current shoreland rules are not providing enough protection. There are approximately 225,000 residential lake lots in Minnesota. And, while most lakeshore owners leave or restore native vegetation along the shore, more than 25% have a mowed lawn down to the lake. The cumulative impact of those lawns is substantial.

Biologists have found that the trees, shrubs, and the forest understory near the shore declined over time on developed shoreline. This change in lakeshore habitat leads to different bird communities. Common suburban-style birds like chickadees, blue jays, and grackles replace the uncommon 'species of special concern' birds like warblers and vireos along developed shores.

The loss of trees along shore means less trees that fall into the water. Fallen trees provide habitat for fish. Biologists have determined that this loss of trees due to development will negatively affect fish for centuries.

Green frogs, which are often common along shore, disappeared where development exceeded 30 homes per mile (or where the average lot width is 180 feet). Male green frogs establish breeding territories within two feet of the lake's edge, and disturbance to the shoreline vegetation eliminates their habitat.

Jeff Reed, a biologist studying crappie nesting in three Alexandria area lakes, found only 24 of the 897 crappie nests near developed shoreline. Crappies were selecting undeveloped shorelines for their spawning and nesting activity at significantly higher rates. Why? Nearly 90% of the crappie nests were near bulrush, and this emergent plant is sensitive to recreational activity and often declines near developed shore.

Hydrologists and chemists have also found interesting differences with the 'lawn to lake' style of shoreline compared to a native vegetated shoreline. Rainwater runoff from 'lawn to lake' shoreline was measured to be 5 to 10 times higher than forested shorelines. The 'lawn to lake' shoreline allows 7 to 9 times more phosphorus to enter the lake than a more natural native vegetated shoreline. Phosphorus is plant nutrient, and more of it entering the lake means more algae resulting in lower water clarity.

A lawn down to the lake is bad. It diminishes fish and wildlife, reduces water quality, and degrades the scenic quality of the lake. Because of this, many people are seeking higher shoreline vegetation standards that local communities can add to their ordinances.

For example, new standards could require lakehome owners to preserve or establish a native forest buffer along the lake. The timber harvest industry and farmers, must leave a vegetative buffer along lakes to.

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