

Governor's Clean Water Initiative: Shoreland Rules Update Project Article Number 10

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Your Lake, Our Lakes: Identifying sensitive shorelines allows for greater protection

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Not all shorelines are created equal. This is true both in the eyes of men and fish.

For many of us, the perfect lakeshore has a gentle slope, clean and clear water, a sand beach with no aquatic vegetation, and a reasonable distance to deep water for boat access. Lakeshore lots with these characteristics demand more in our free economic market.

Fish, who have no regard for our economics, do not generally share our preferences in shorelines. Clean water, of course, is as important, if not more important to fish, but they need more than water, just like birds need more than air.

All fish are dependent on the shore at one time in their life. And for many fish species, a sand beach is not desirable habitat. Walleyes, for example, select clean, wave-washed gravel and cobble shorelines for spawning.

Northern pike move into the shallows to spawn after the ice breaks up. Eggs are deposited on last year's emergent vegetation in 6 to 10 inches of water. Fertilized eggs hatch in 12-14 days. A newly hatched fry, which does not have a developed mouth, hides in the vegetation using a sucker-type membrane on the top of the head to adhere to vegetation. As it grows it feeds on plankton, insects, and then small fish (darters, minnows, and perch). This young northern pike will stay in the vegetation all summer to avoid being eaten by predators.

Many fish and amphibians choose bulrushes for spawning. Fish and wildlife depend on aquatic plants for food and shelter. So, areas rich in aquatic and wetland plants are often viewed as sensitive or critical shoreline areas.

Areas that provide habitat to unique and valuable wildlife species are also sensitive shoreline areas. Loons will not likely nest on a groomed and manicured beach – they prefer to nest near shore on vegetated hummocks, small islands, or masses of emergent vegetation.

And, shoreline areas with clean gravel used by walleye as spawning sites may also be considered a sensitive or critical shoreline area.

Shorelines along lakes may vary greatly with a variety of ecological characteristics that provide varying habitats for wildlife and fish species, and performing different water quality functions. Yet, state shoreline rules treat all shoreline within a lake class the same.

Determining where significant fish and wildlife habitat occurs is helpful in regulating shoreland and public waters development, including structures, bridges, culverts, water alterations, excavation, and destruction of aquatic plants.

Other states identify and map significant fish and wildlife shoreline habitat. Wisconsin has a sensitive area designation program which identifies and protects key fish and wildlife habitat and provides specific management recommendations to lake organizations, shoreline property owners, county zoning officials, DNR personnel, and others.

Here in Minnesota, Cass County recently began a pilot project on six lakes. The county has developed criteria for determining resource protection (or critical area) districts, and has applied the criteria to the pilot lakes. The county is currently holding public hearings on this approach of protecting significant fish and wildlife habitat.

The state of Minnesota could also establish a program to identify and map fish and wildlife shoreline habitat so that shoreline rules and standards could protect sensitive or critical shoreline areas. For example, lot sizes, structure setbacks, shoreline and lake vegetation alteration rules could be more protective in sensitive areas.

Governor Pawlenty's Clean Water Initiative pilot project in the north central lakes area is bringing people together to create an alternative set of shoreland development standards in the lakes area. Citizens working on the project have been discussing the merits and shortcomings of higher standards for sensitive or critical shorelines. The updated standards adopted through this project will give local governments an alternative for local ordinances.

Details of the Shoreland Rules Update project are online at www.dnr.state.mn.us/waters (Click on the Governor's Clean Water Initiative link). Email comments to shorelandupdate@dnr.state.mn.us.

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