Mille Lacs Lake
Watershed Management Group

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# TOPIC OF THE MONTH - May 2018

## Along with Spring Comes Ice Heaves

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Spring has (finally) arrived throughout Minnesota! The trillium are blooming, the grosbeak have returned, and the ice has released our beloved lakes from its cold, hard grasp. But as we all know, not all signs of spring are welcome. In northern Minnesota, we can likely agree that the worst of these are the wood ticks, mosquitos and ice heaves! These are all prices we pay for living here.

**What is an Ice Heave?** Ice heaves are a very common occurrence caused by the collision of ice sheets and the shoreline. As the ice along a lakeshore thaws more rapidly than in the center of a lake, the shoreline is exposed to the potential impact of larger, thawing ice masses. As the ice throughout the lake becomes thin and breaks up, it is pushed around freely by the spring winds. Under the right conditions the ice crashes against the shoreline, creating earthen berms out of our lawns, riprap or even well vegetated buffers.

**Can they be prevented?** Ice heaves are not necessarily preventable. With enough force, ice can move virtually any material. Houses too close to the shoreline have even been moved from their foundations! However, well established, deep rooted vegetation can significantly reduce these impacts, especially during low or moderate ice impacts. Riprap may occasionally reduce the damage as well, but it has the potential to make matters worse too. The rock provides the ice with a convenient "ram-rod" that can be pushed deep into a shoreline and cause an even larger heave. Unfortunately, no solution is guaranteed to stop this natural process.

Photo courtesy of Minnesota Native Landscapes

**What can I do now that my shoreline has heaved?** "Fixing" an ice heave should really only be done if absolutely necessary. Heaves can help improve water quality by slowing the flow of surface water into lakes, along with the pollutants they may carry. This protective barrier allows for infiltration in a manner similar to a rain garden. But if a fix is desired, or needed, it is best to address the issue promptly and thoroughly. There are currently rules in place that allow ice heaves to be fixed without a permit from the DNR, though consulting them before undertaking any work is always recommended (visit their website below for the rules and regulations). Fixes should include protective materials that hold the soil in place while vegetation becomes

established (biodegradable blankets, coir logs, etc.). Deep rooted, native sedges, grasses and wildflowers provide the best protection in the long run. As establishment of these plants can take years, it is essential to maintain the protective materials that whole time. Make sure they are secure and continue to function properly. This is most important during times of high wave activity in the summer and right before the ice forms in the winter. Check and recheck the shoreline frequently to give it the best protection and a fighting chance against heaving.

Photo courtesy of Minnesota Native Landscapes

For more information on Ice Heaves; how to minimize them and what you can and cannot do to repair them; visit the DNR's website at: https://www.dnr.state.mn.us/waters/watermgmt_section/pwpermits/ice_ridges.html