

# Where the Water Runs North

## Turf Maintenance in Northeastern Minnesota

By Justin R. Gustafson  
*Ely Golf Club*

Golf course maintenance here in the "Canadian Shield" area of Minnesota can be quite a challenging prospect. Soils in this area of the state are for the most part non-existent and winter can last from October to the middle of May. Combine them with periods of heat, mosquitoes, snow mold, armyworms, and your labor pool going back to school after Labor Day, it can make for a very interesting growing season.

One tasking management aspect in northeastern Minnesota is the weather. Our spring season is usually a prolonged period of cold, wet, and snowy weather when you least expect it. Low soil temperatures make it extremely difficult to get the turf to break dormancy. Desiccation and ice damage have been major issues up here over the past few years. Our lack of snow cover, bitter cold temperatures, and freeze/ thaw cycles have taken their toll on a lot of turf. This past winter was especially brutal on collars, elevated tees, and exposed greens.

Very little snow cover and many nights at -20 below raised all kinds of nasty scenarios with exposed turf. Frost went into the ground in some areas 9 feet and was lingering near Cook, MN until June 2nd. No question about it, last winter was one of the worst most of us ever remembers.

So what is it like maintaining a golf course with the Lake Superior Syndrome? Mike Davies, Superintendent at Superior National in Lutsen, Minn., says "Being so close to Lake Superior, you are a micro climate. We may have a week of fog where it is 55 degrees by the lake and over the hill on the same course it is 70 degrees and sunny. We have seen Pink Snow Mold late in the spring and early in the fall because of this. On the other hand, it is generally cooler here in the summer. It makes for great sweat-shirt sales in the pro shop!"



Blast by Clubhouse



Ledge from a distance.

Because the weather can change so rapidly in the fall, you need to be on your toes with blowing out your irrigation lines and chemical applications. Having ice cubes pop out of your quick couplers and spraying fungicides when it is below freezing is not uncommon in the middle of October. "It is just a giant guessing game in the fall," says David Soltvedt, Superintendent at Giant's Ridge Quarry. "We are at least 2-3 weeks ahead of the Twin Cities' weather. Last fall, I couldn't water my course before blow out. The temperatures were just too cold and my pilot valves were freezing up. I also had to go out and shovel areas of snow off my greens and fairways before I could put my chemicals down." There is no doubt about it; our eyes are keenly tuned to The Weather Channel in late October.

Another difficult task in northern Minnesota is finding good, quality help. The resorts and other tourist trade businesses tend to recruit younger people and hold on to them through their high school and college years. Also, younger people can find jobs that pay the same or more than golf courses and don't require getting up at 4:30 in the morning to work hard in the sun.

Mike Davies adds, "Our county (Cook) only has 5,000 people living in it. It makes it hard to find people willing to work. We started tapping into the retirement age market to find people who want to show up for work and are easy on the equipment." At the Ely Golf Club, I usually lose most of my staff after Labor Day. Last season, for example, we aerified greens with a staff of only 2. Luckily, the fall season up here is cool and the grass starts shutting down early.

Our native woodland creatures really enjoy spending time on the links also. Whitetail deer and moose love the feel of soft Bentgrass under their hooves. They also utilize the flag poles to

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They also utilize the flag poles to mark their territory and leave "scrapes" next to the cup during the fall rut. What is the ruling on a Red Fox or a Timberwolf stealing your ball? Unlikely as it may seem, it happens quite often in Ely and Lutsen. Beavers are highly creative, intelligent animals also. Bad sprinkler coverage is not always an indicator of pump problems as a smart beaver knows the wet well is where his precious water is escaping. Some well placed sticks and mud will make you wonder "Why is there a steam coming out of the pump house!?" At times our furry friends may cause a few mishaps, but spotting them every day makes it all worth while. And our members and guests absolutely love seeing them.

### How Do You Build a Golf Course On Ledge Rock You Ask?

Just talk to Vincent Dodge at the new Fortune Bay Wilderness course near Tower. Dodge says; "In a perfect world you would drill sample holes on a 30-foot grid throughout the entire site and use that data to make your design. Since doing that is not practical, when encountering ledge rock during the shaping process you first attempt to design around the ledgerock. We did this on more than half of the golf course. If that is not possible, then it is time to blast which is time consuming and very expensive. Construction in the area has to stop while blasting is being done.

After dealing with the ledge rock, all turfed areas must have at least 18 inches of the native peat/clay trashy material so that you can route irrigation lines. In some rare instances where this is not possible, trench blasting is in order. Special care must be taken to keep rocks away from the installed irrigation lines. After irrigation installation the entire site is capped of by 6-8 inches of what passes for topsoil in the area-basically a silty sand. All in all the ledge rock poses significant construction delays and cost, but when integrated into the design makes for a unique style of golf course."

Vince also adds, "Grow-in in this environment poses its own challenges as well. Low overnight temperatures well into June makes establishment a little slow. The weather in this area is also extremely fickle with thunderstorms popping up with no notice. The construction method described above is quite susceptible to washouts-particularly with the elevation changes on the site. We have been able to use Futerra blankets on troubled areas around drainage basins and steep slopes and its performance has been outstanding. Better than sod. One good thing about the climate is the absence of any sustained disease pressure. Pythium is unheard of and Brown Patch is rare. The only problems I anticipate are Dollar Spot and Take All Patch-especially with our straight sand greens and relatively sterile topsoil.

All in all, northern Minnesota is a great place to take care of a golf course. The hustle-bustle of heavy play during the summer months gives way to fantastic fall colors, cooler temperatures, and of course, hunting season. A good portion of superintendents here have some time off in the winter to sit in a fish house, ski, snowmobile, and just recuperate from the previous season. It is also nice to have the Boundary Waters Canoe Area right in your backyard where Mr. Walleye loves to hang out. Maintaining a golf course at the edge of the wilderness has been a great experience for me, and I hope to be doing it for a long, long time!

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