

FEATURE I

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Seasons of Change



As I sit down to write this we are just coming up on the end of the "100 Days," that lovely time between Memorial Day and Labor Day. We all know it's a stressful period of time, but the summer of 2012 took that to another level. Mother Nature wasn't so nurturing this year. We had the hottest July on record as well as the second driest period after the Dust Bowl. Is this becoming the norm? If so, the changes we've made here at Briarwood are going to give us a fighting chance.

October 1, 2012, is my fourth anniversary as Superintendent here at Briarwood Country Club, and it's been an experience. Three out of those four years I've had the pleasure of listening to veteran Superintendents exclaim, "I've never seen a season like this before." What do I take from this? We survived! It hasn't been easy and things haven't always been perfect, but I've learned a great deal about myself, my knowledge as a Superintendent, and a great deal about the golf course here at Briarwood. I knew stepping in to replace an icon was going to be a challenge, but I didn't expect the weather to add so much to that challenge.

Let's back track to January, 2010. What is significant about this month and year? ICE, and lots of it! I remember getting two inches of rain at BCC on Christmas Eve of 2009, but the kicker was the high of only 11 degrees the following day. The two inches of water sat on the ground surface and froze solid. As the days went by we received a little bit of snow. A few days of thaw only added to the ice that was already there. As we crept into the second week of January, I felt we had to be proactive. The Poa present in large quantities on our greens was in jeopardy if we waited any longer.

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XGD is installed in Briarwood's 90 year-old push up greens and provides an easy exit for water and gases trapped by the soil structure.



This was my first experience dealing with ice. Did I really need to be concerned? What were the best methods of handling the ice pack? Ha, saying ice pack I feel like I'm on "Deadliest Catch." Anyway, these are the times when I feel fortunate to be part of an industry where guys are so willing to help one another out. I reached out to my colleagues to pick their brains on those two questions. After consulting, we went to work using a mechanical tamper to help fracture the ice and create cracks for gas exchange and oxygen. Now, fast forward a couple months to March, when we noticed we had some issues. Four greens had significant ice damage, and all four had elements in common: poor surface drainage, low pockets, and large amounts of *Poa annua*. At this point I realized my vision for BCC wasn't so simple anymore; it wasn't just aesthetic changes that *could* be made, but structural changes that *needed* to be made . . . fast.

I started to press my Grounds Committee about the need for proper surface drainage as well as subsurface drainage. BCC's greens are, for the most part, original from 1921, when the course was constructed without subsurface drainage. Minimal amounts of rainfall would leave the soil completely saturated to where a few greens couldn't even be mowed. I began researching subsurface systems, like XGD and PC Drainage. Briarwood chose XGD's services, as they had a great track record. Our original plan was to do the four greens that had significant ice damage, but the summer of 2010 changed all that. The summer of 2010 was wet and warm. Without subsurface drainage, our greens were suffocating. I remember going out to our 13th green on July

16th with my assistant, Moe Sanchez, to check roots and soil temperatures. Again, we were battling the negative things *Poa* brings into the equation. When probes showed roots of roughly an inch tops I looked at Moe and said, "In a situation like this, we're damned if we do, damned if we don't. The green's already saturated, but the *Poa* is drying out. If we water, we're putting fuel to the fire, but if we don't, we are as well." By August, we had two greens where areas of *Poa* had faded away. After Labor Day, we closed both of those greens to reseed.

After 2010's icy start and summer beating, I presented a plan to the Grounds Committee and the Board. It was a plan to remedy both our drainage issues and our weak turf. I could only meet expectations for greens conditions when the weather was ideal for *Poa*, and I was discovering that ideal *Poa* weather is rare and fleeting. Our plan had two-phases: Phase 1 was to install XGD drainage in all 16 pushup greens. Phase 2 was to fumigate and regrass all 18 greens to a pure stand of durable bentgrass. The plan was presented to the membership in a special town hall meeting at the end of August 2010. The members approved the plan with only one nay vote. On September 7, 2010, we began our XGD installation. I had anticipated roughly 3½ weeks for installing the 16 greens. The rain stayed away, and we completed the XGD in just 19 days. Phase II wouldn't begin until the fall of 2011.

As we entered the winter of 2010-2011, I was a little more relaxed, knowing that there was a light at the end of the tunnel. I was confident that XGD was going to help us. Right out of the gate, XGD showed me things I wasn't sure

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The greens and approaches were prepped for Methyl Bromide, the most labor intensive and difficult part of the process.

were possible. For instance, before XGD our #1 green would be too soft to mow after .25" of rain. XGD gave us the ability to mow that green following a nice 1.1" early morning rain. It was great to watch the water flow out of the pipe and know the soils were being relieved of saturation while the roots were getting oxygen. As the summer progressed, we received the same heavy rains and high temps as 2010, but the greens continued to perform. Our normal maintenance adjustments, such as smooth rollers, raising heights, easing up on topdressing produced better results. I'm confident that the XGD played a large part in the greens' survival throughout 2011.

August 8, 2011, was the day! In the initial planning procedures we learned a great deal from talking with other Superintendents. Most of them were seeing the majority of *Poa* encroachment coming in at the front of the greens. The assumption was that this *Poa* was being brought in from the fairways and that the buffer wasn't big enough to catch those seeds and prevent them from reaching the surface of the green. When I calculated the cost to do all our approaches as well, it only made sense. I decided that regrassing our approaches would give us large buffers in front of each green. We could utilize some of the new *Poa* controls and create better playability.

Our procedures began the week before the fumigation. We scalped surfaces by aggressive verticutting and by lowering mowing heights to .08" on the greens and .100" on the collars and approaches. Prepping for gassing was probably the most strenuous and time-consuming aspect of the project. We carried out a quad verticut, Drill n Fill (7/8" x 8" bit), Deeptine (1/2" x 6" solid), and normal aerification (5/8" hollow at 2" spacing). Following the deep tining, we topdressed to fill the holes, before carrying out the normal aerification, after which we topdressed as well. Once all the sand was brushed in and smoothed the greens were ready for Methyl Bromide. The Methyl Bromide process was simple. The laborious part was the sod work around the edges to tie down the tarps in order to keep the Methyl Bromide trapped. Tarps were left on most greens for three days. A few had them on for five days, because of a weekend.

Tarps were pulled, the greens were left to air out for a little over 48 hours, and then we began to seed.

The seeding process began on August 17, using a 50/50 blend of A1/A4 on the greens and a 50/50 blend of PennEagleII/PennLinksII on approaches and collars. All areas were seeded at a 2lb/1000 rate. Once the seed was dropped, we went in three directions with our TruSurface Spikers, topdressed, rolled, fertilized, then popped on the water. Weather caused us to put the brakes on for a few days, but seeding was completely wrapped up on August 23. I'll admit that the time waiting for the seed to pop was nerve wracking. The rain on the 21st had us wondering how much seed washed away, if any. Each day I drove to each green looking for the faintest bit of new grass. Germination was obvious five days after we seeded the first four greens and approaches, and the others followed suit. As time went on we started to notice that things seemed stunted after germination. Mornings you could see a nice hue of dew across the greens, so we knew turf was there but it just didn't seem to be filling in. We hadn't considered the effects of dry conditions and the constant use of our irrigation water with high salts and bicarbonates. After that rain on the 21st, there was no rain for just over three weeks. Routine irrigation cycles to keep the seed moist kept adding more salts to the soil. Once again I reached out to colleagues. The information they provided made me decide to drop the acid injection to 5.8 pH and give the greens a good watering. This seemed to be very helpful, but the real help was 0.8" of rain on Sunday, September 18. Two days later, there was a night and day difference in new grass coverage. September began to close and temperatures began to cool. Covers were used on some of the slower growing greens to keep temperatures ideal. Thankfully, in early October we got a nice, much-needed, warm-up. That last warm-up filled things in to about 95% coverage.

There were still some sparse areas, so we decided to cover all of the greens for winter. Mild conditions throughout the winter kept my mind racing, trying to figure out how this would help or hurt the turf underneath. Never did I imagine that we'd have days throughout the winter when temperatures

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The tarps were removed after 3 days of cover and seeding began at the rate of 2lbs per 1000 square feet.

under the covers were peaking at over 70 degrees. With that warmth, we were actually seeing growth—very aggressive lateral growth. We pulled off the covers on February 1, 2012, and gave the greens a cut to get that lateral growth under control. I really believe that if we hadn't mowed them, there would have been a hard battle, come spring, to get things to where we wanted. The quick warm up to spring was a blessing. It helped us get on the greens and start working to increase density and durability. For a time we had to alternate—covers off and covers on—especially if we saw a cool stretch of weather coming. For the most part, we would mow, topdress, put covers on for a few days . . . then repeat. Doing this required a lot of added labor, but it helped us move things along.

Our target date for opening was the Friday of Memorial Day weekend, May 25. I hadn't realized when I pitched the project that Memorial Day was almost a week earlier than the previous year, but we were able to open. Again, things lined up for us. That weekend included a spike in temperatures, which really helped push the A1/A4 to fill in any areas that were thin. Members commented they could feel the difference from Friday to Monday when fixing ballmarks and even when walking on the greens. As much as we'd like to forget what happened as the summer progressed, I was happy to see how the turf performed. Those hot, dry conditions were exactly why we chose to do the regrassing, although I would have preferred not to have seen the turf put to the test in its very first year. The weather made me a bit nervous as well as timid with practices; the last thing we needed to do was push too hard too fast. As the 2012 heat and drought continued, I was amazed at the resilience of the new turf. I had told my assistants that throughout the season we'd do what the greens allowed us to do. We'd implement practices and see how the turf responded. If the response was positive, we'd progress; if we saw any negative effects, we'd back down. I'm very happy to say the greens made it through with flying colors. I'm very happy, as is the membership here at Briarwood. It wasn't the easiest sell. It required limiting an already short golf season, but the membership saw what this turf is capable of, and now we can move into the future with less worry.

Greens are always the major focus at any course, and that's true of the project at BCC, but I can't slight the approach work we did. The area in front of each green varies, but each creates a welcoming approach to the complex along with different playability options. These areas are mowed very tight (.275"), and the members are enjoying it greatly. Lots of people have mentioned that they like to be able to putt

or use a utility wood to bump the ball up onto the green. Others like the clean picking of the ball using a wedge to get better control and increase spin on the ball. We've tried our best to maintain these areas with the greens, but the summer of 2012 shifted our focus. In years to come, the approaches and greens will all be maintained in basically the same way with cultural practices and spraying.

While the course was closed, members started to talk about other things that needed to be done. The heavy rains of 2010 and 2011 showed that our bunkers' weren't performing well. Many times half the staff was out on the course pumping water from bunkers and pushing sand back onto the faces. I estimated that we had spent roughly \$60,000 in labor to get our sand traps back in shape after rains. Not only was this a great deal of money to spend and still have substandard bunkers, but it took labor away from other necessary tasks. After research and analysis, the bunker project was presented to the board. They took the issue to the membership for a last-minute vote. It passed on Sunday, August 28. We were digging out our first bunker on the 29th at 6:00 a.m. Members had lots of ideas on what they'd like to see done, but we had to be practical. People wanted the flashy white sand, but I had to educate and inform them of costs. White sand meant liners would be needed, as well as more hand raking, and more frequent replacement of sand. I love the look of white sand, but the size of our bunkers (and the fact that we weren't doing full bunker renovations) didn't warrant that extra cost per ton, as well as the cost of additional maintenance. Our decision was to go with Steep Face from Waupaca. We couldn't be happier. Our goal was to increase drainage and reduce our maintenance after rains, and this sand has enabled us to do so. The minimal rains we've had this season have shown us the capabilities of Steep Face. After a 2" rain a few weeks ago there were minimal washouts. These were minor enough that the operator of the SandPro could fix them on his own, rather than needing three or four guys with shovels.

We discovered some surprises when we started removing sand from the bunkers. The bunkers were dug to where the sides were straight down, forming a 90 degree angle with the base. At spots they were almost 18" deep. When we saw this, I felt we needed to address this and create a better edge around all the bunkers. In-house, we used clay, stockpiled on the property, to go through each bunker and pack the edges. We painted a 6" lip around all the bunkers. The crew would then pack clay up to the lip, creating a slope down to the base of the trap. My explanation was a "bathtub" bottom, a

curved slope helping water get pushed to the center of the bunker rather than being trapped along the edge. It was a great deal of hard work, but we had the time to correct some things, so we thought we should do it right. By doing this we've helped reduce washouts and increased drainage.

I'm excited about the future here at Briarwood.

The membership has shown great enthusiasm for protecting their #1 asset, the golf course. It hasn't always been easy or perfect, but the club has listened to what needs to be done to move BCC in a positive direction. I can't thank the Grounds Committee and Board enough for their support throughout the process. Thanks to Moe and Nate, my assistants, for helping the contractors and crew to complete in a timely matter. Lastly, thanks to all my colleagues, who either stopped by or took calls from me while I researched and completed this project. **-OC**



The bunker project began: Members had lots of ideas on what they'd like to see done, but we had to be practical.

As the turf matured and we were able to drop the mowing heights on our newly grassed approaches. The members really like the quality of turf on the approaches now because it allows many different options if the ball is left short of the green; - players can putt, bump and run or use a wedge to spin the ball.

