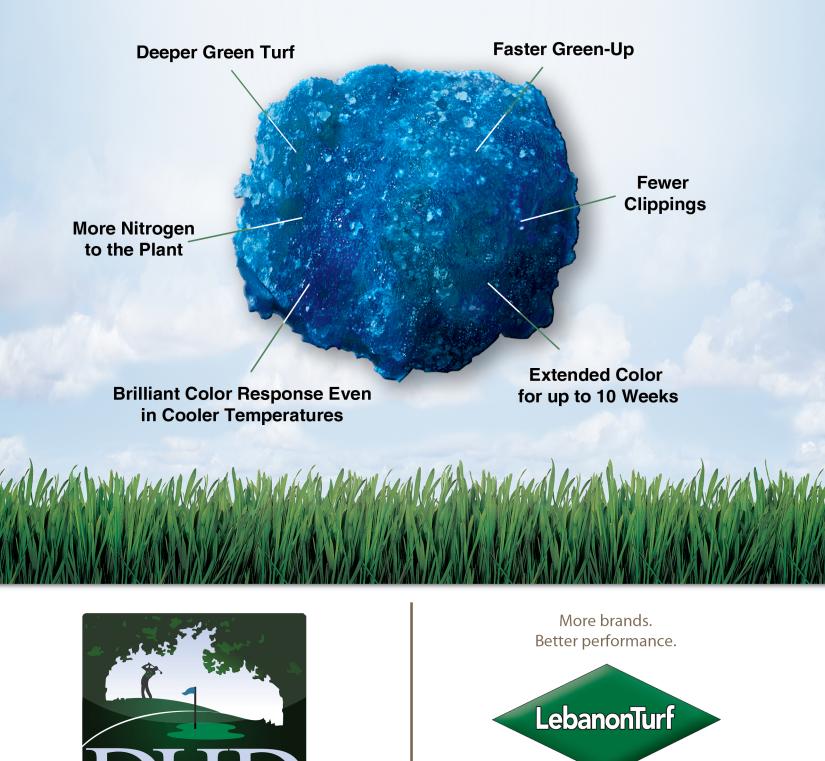


# A little bit of blue makes a whole lot of green



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After lunch 60 golfers participated in the four person scramble event for the day. The golf course was in excellent condition. Matt and his staff did a great job of preparing the golf course for the event. The cooler temperatures and being very windy made for a tough test of golf. It was not as difficult for a few teams as it was for others judging from the winning scores. The winners of the four person scramble with a score of 12 under par 60 were Mike Schmeiden, Brian Johnson, Travis Krauklis and Sparky Lockhardt. Flag event winners were Brad Legnaioli with long drive on #1. Kevin Knudtson long drive on #13. Darren Dase closest to the pin on #12. Mike Schmeiden closest to the pin on #8. Scott Bushman longest putt on #9. Thank you to all those who attended making this a successful event. Look forward to the next event on May 12 at West Bend Country Club.

TOP LEFT: First Place team of Brian Johnson, Travis Kauklis, Sparky Lockhart and Mike Schmieden.

TOP RIGHT: 5th Place team of Nick Strain, Aaron Goninen, Omar Zaldivor, Chad Grimm.

BOTTOM LEFT: 9th place team of Mark Thurow, Brian Kimbrough, Dave Kloss and Erich Lange.

BOTTOM RIGHT: 13th Place team of Cubby Obrien, Jeremy Dahl, Dave Busse and Randy Lusher.







Our hosts Matt Kregel and Jeremy Dahl



Above: The links course played firm and fast for our event but did not match the in-season beauty of the mature native grasses in the file photo of the 8th hole below.



# How Trees Impact USGA Course Rating<sup>™</sup> And Slope Rating<sup>®</sup>

By Adam Moeller, Agronomist USGA Green Section

Editors Note: "This article is reprinted from the Vol. 52 (8) April 18, 2014 of the USGA Green Section Record. Copyright United States Golf Association. All rights reserved."

Trees are common features on golf courses that add aesthetic beauty and challenge for players. Unfortunately, trees can make it very difficult to maintain a healthy, uniform stand of turf. Trees create shade, restrict air movement and compete with turf for water and nutrients in the soil. All of this can result in poor turf performance and undesirable course conditions when trees are located too close to playing areas. When investigating the underlying problems associated with poor turf performance, start by examining trees and their impact on growing environments. When turf suffers and playing conditions are compromised because of trees, golf facilities are wise to routinely remove problematic trees, especially those near the most important playing areas.

Tree removal is often met with resistance from golfers despite the negative impact trees have on turf. Golfers are often concerned with how removing trees might impact the difficulty of a particular hole or the course in general. The phrase "we cannot remove that tree because the hole will become too easy" has been muttered often. This sentiment is highly subjective from a golfer standpoint, but understanding the USGA Course Rating System<sup>™</sup> can provide some valuable insight for this concern.

#### USGA COURSE RATING AND SLOPE RATING

The USGA Course Rating System is used to predict the difficulty of a golf course for a scratch golfer under normal course and weather conditions. A Slope Rating<sup>®</sup> is the USGA mark that indicates the measurement of the relative playing difficulty of a course for players who are not scratch golfers compared to the Course Rating.



### USGA GREEN SECTION RECORD

The USGA Course Rating System is the standard by which the USGA Handicap System<sup>™</sup> is established, and it determines adjustments in a player's handicap for a particular course. For instance, the USGA Course Handicap<sup>™</sup> Calculator determines that a golfer with a Handicap Index of 9.6 playing a course with a Slope Rating of 140 will have a Course Handicap of 12, which is the number of strokes received in relation to other players on that set of tees.

Course yardage is the primary determinant of a Course Rating, with adjustments for effective playing length factors such as roll, prevailing wind, and altitude above sea level. There are also 10 obstacle factors taken into consideration, such as water hazards, trees, out of bounds, rough difficulty, putting difficulty, etc. Each obstacle is assigned a value of 0 to 10, depending on the difficulty it presents to a scratch or bogey golfer on a given hole. When the evaluation is complete, the obstacles are totaled and multiplied by a relative weighting factor. The weighted obstacle values are applied to scratch and bogey formulas and then converted to strokes. Those strokes are added to or subtracted from the Yardage Rating to produce a Bogey Rating<sup>™</sup> and a Course Rating. The difference between those two values multiplied by a constant factor is the Slope Rating.

From a Course Rating perspective, tree obstacle ratings are twofold. First, the distance trees are located from the middle of the landing zone or putting green is evaluated. Second, the recovery potential from those trees is determined to be minor, moderate,

significant, or extreme. Other adjustments for unusual situations such as chutes or obstructing trees are determined as necessary. Trees that obstruct the landing zone or putting green and those that define doglegs receive a higher obstacle value than trees located on the periphery of the hole, which come into play less often and usually offer good recoverability. However, trees with limbs extending to the ground (e.g., unpruned spruce trees) do not offer much recovery and receive a higher obstacle value.

Trees located 30 yards or more from the centerline of the hole often have very little impact on the obstacle value. This is especially true around and behind putting greens. It is important to note that the most detrimental trees on golf courses are frequently located around and/or behind putting greens.



Trees creating shade, limiting air movement, and/or causing tree-root competition on putting greens are a serious agronomic concern. These trees have very little impact on Course Rating and Slope Rating because they are 30 yards or more from the centerline of the hole.



When calculating USGA Course Rating, trees adjacent to landing zones and putting greens have the most impact on obstacle value compared with trees inperipheral areas. The same is true for trees that define the dogleg of a hole.

### USGA GREEN SECTION RECORD



Also, keep in mind that two to three significant trees adjacent to the landing zone could produce the same obstaclevalue as a fairway lined with many trees. Obstacles in the landing zone are focused on more heavily than obstacles in peripheral parts of the hole, because they are more likely to come into play. The obstacle value for trees is also increased as the length of the shot to reach the landing zone or putting green is increased due to wider shot dispersion on longer shots.

#### A CASE STUDY

To illustrate how trees may impact the Course Rating and Slope Rating, a simulation from a golf course with minimal trees is provided. The actual Course Rating and Slope Rating are 73.8 and 128, respectively. When a moderate obstacle value for trees is added to all 18 holes, the Course Rating and Slope Rating rise to 74.4 and 139, respectively. When a high obstacle value for trees is added for all 18 holes, the Course Rating and Slope Rating rise to 75.0 and 147, respectively.

The Course Rating and Slope Rating increase as the obstacle value for trees increases, but this simulation accounts for more trees across all 18 holes on the course. In the event that a few trees are removed or added to a single hole, it is highly unlikely that the Course Rating or Slope Rating will change at all. This is particularly true when trees are 30 or more yards from the centerline of the hole.

#### CONCLUSION

Several championship venues have undergone major tree removal programs— some removing more than 75 percent of their trees to restore the original architectural intent of the golf course. The Course Rating and Slope Rating were largely unaffected

at these facilities, and the same would likely be true at your course. On golf courses with tree-lined fairways, it is very likely that 50 percent of the trees on the periphery of a given hole, or even the entire golf course, could be removed without significant change to the Course Rating or Slope Rating.

Remember, Course Rating and Slope Rating are derived from the expected score from the scratch and bogey golfer. Scratch golfers will rarely hit the ball far enough offline to have serious challenges with trees, and these players often recover well after wayward shots. Bogey golfers may find themselves with tree troubles two to three times over 18 holes on some rounds, which could impact one to two strokes of their score, while on other rounds they may have no tree trouble at all.

When averaging the impact of trees over 10 rounds, it becomes clear that trees have a very small impact on Course Rating. Slope Rating and a player's Handicap Index are unlikely to be affected, in most cases, if trees are added or removed from a few holes.

When trees need to be removed to improve sunlight penetration, air movement, and/or eliminate tree-root competition, golfers should not fear that the Course Rating and Slope Rating will



The tree fronting the left side of this putting green will impact the obstacle value on this hole, but it is unlikely that the Course Rating and Slope Rating will change dramatically if it is removed.



### The obstacle value for trees increases with the length of shot required to reach the landing zone.

dramatically change. However, the challenge of a particular hole may change if a key tree is removed for agronomic purposes. In this instance, work with your USGA agronomist and golf course architect to develop the most reasonable solution to provide healthy turf and desirable golfer challenge. Also, keep in mind that when shade, limited air movement, and treeroot competition are reduced, other variables impacting Course Rating and Slope Rating are likely to be affected.

For instance, with fewer trees around a landing zone or putting green, sparse rough can transform into a healthy, dense stand that becomes more difficult. Likewise, healthier putting greens due to increased sun and/or air movement may be maintained to create more difficult playing conditions, such as drier, firmer putting surfaces, which would impact Course Rating and Slope Rating.

The argument that tree removal will negatively impact Course Rating and Slope Rating should not be used when evaluating long-term agronomic decisions. Good golf conditions require healthy turf, and that sometimes requires removing trees.

### COMING EVENTS

# **Coming Events!**

Monday June 23rd, WGCSA Tournament Meeting, Brown Deer GC, Milwaukee

Tuesday July 29th, UW - Summer Field Day, OJ Noer Facility, Verona

Tuesday August 11th, Joint meeting w/Northern Great Lakes Chapter, Brown County GC, Green Bay

Monday September 15th, Wee One Fundraiser, Pine Hills CC, Sheboygan

Tuesday October 7th, WTA Fundraiser, University Ridge GC, Verona

Saturday October 4th, Couples Outing/Party, Wild Rock GC, WI Dells

Wed and Thur Dec 3rd-4th, Turfgrass Symposium, American Club, Kohler (CHANGED DATE)

### WELCOME NEW MEMBERS

**Corey Betz** Rick Biddle (S) Adam Dempsey (C) Brian Fenney (C) Adam Freeman (A) Jeff Gibson (E) Aaron Hansen (S) Matt Kinnard (E) **Barry Larson** (E) Gabriel Lopez (E) Luke McGhee (S)

North Shore CC Lakeshore Technical College **Bishops Bay GC Geneva National GC** Lake Arrowhead GC Waterwell Solution Group **UW-Madison Proturf Solutions** Textron **Irrigation Protection Services UW-Madison** 

Jordan Mock (C) Travis Nordstrom (A) Robert Parduhn (A) **Dustin Peterson (E)** Josh Peterson (C) Matt Smith (C) Tom Speltz (A) Benjamin Steeger (A) Vitense Golfland Michael O. Stein (A) Michael Walczak (E) Tyler Wessyldyk (C)

**Golf Courses of Lawsonia Spooner GC** Mayville GC **Rain Bird International Blue Mound CC** Sentryworld GC Lake Arrowhead GC Dretzka GC **On Course** Nassau Country Club



# May Meeting At West Bend Country Club

### By David Brandenburg, Golf Course Manager, Rolling Meadows Golf Course

Jeff Gibson of Water Well Solutions was on hand to present "Maximizing Efficiency Of Wells, Pumps and Controls. Jeff provided a informative talk on regular maintenance to allow pumps and motors to run efficiently to allow for a longer life. Just like cars pumps and motors need regular service to avoid catastrophic untimely failure.

When a minor loss of flow is detected a bowl and impeller can easily be restored to "like" new specifications. However if the parts are allowed to deteriorate beyond repair, replacement can be costly.

Well maintenance can be hard to get grasp of as we operators never see the actual well. A well should be rehabilitated before it has a 20% loss in specific capacity.

Gibson also discussed the causes and cures of decreasing water flow including new technology in Air Bursting.

As Jeff was finishing up and our thoughts were turning to lunch and golf the skies turned black and opened up a 3/4° deluge of rain in a short time. As we looked out the clubhouse windows we saw a course white with rain water. Rivers flowed down the 9th and 18th holes during the storm.

As attendees were making plans for early returns home after lunch host superintendent Bruce Worzella announced we would wait an hour re-group and play 9 holes. I for one did not believe him, but I was proven wrong.

As the rain stopped we loaded our clubs and headed out to a amazingly dry golf course. In our 9 holes I saw one puddle in the grass and one in a bunker.

With 30 plus years of service at West Bend Country Club Worzella showed he knew the property and how well it drains.

Set on Kettle Moraine glacial till soils West Bend Country Club was designed by Langford and Moreau in 1930 with a second 9 designed by David Gill in 1960. Given the limited ability to move soil in the 1930's West Bend is a incredible layout with steep banks and deep bunkering.

According to the West Bend Country Club website William Langford would build greens with a steam shovel to make a big pile of dirt on the green pad. Then he simply scraped off the top. He let the dirt fall at its natural angle of repose, creating those steep sides.

Then workers would rake out the banks and hazards by hand giving his courses a very natural flowing look.

Bruce Worzella started at West Bend CC in 1979 after time spent at The Ridges and Bulls Eye both near his hometown of Wisconsin Rapids. Not only has Bruce worked at the club for going on 35 years he has lived on the course with his wife Mary raising their three children Beth, Marci and Michaeyln.

Bruce served on the WGCSA board starting in 1984 and as Chapter President in 1992 and 1993. After his presidency he did not disappear but stayed active in the industry serving on the Golf Turf Symposium Committee and Wee One Foundation.

Bruce is looking forward to retirement at the end of the season and moving north a bit to relax and enjoy life with Mary.



Host Superintendent Bruce Worzella with GCSAA Director John Fulling. Fulling was on hand to congratulate Bruce on his years of service to the industry and West Bend Country Club.



The Par 3 eigth hole shows some of the slopes and banks Langford's design features.

Thank you to our hosts Rick Weiterman, Burce Worzella and Brian Bonlander



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Above: The Par 5 Third Hole Has A Challenging Green Middle: Mark Robel Hits His Approach Shot Below: Jeremy Dahl Drives On Hole 9







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