

# The GRASS ROOTS

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The Par 4 7th Hole at Wild Rock Golf Club host of our June Meeting plays between 338 and 493 yards from elevated tee boxes.

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*Some people walk in the rain, others just get wet.*

**By American songwriter and musician Roger Dean Miller Sr., 1936-1992**

This quote by Miller can remind us enjoy the challenges mother nature gives us along with the beauty of rain, sunrises, sunsets, clouds and the incredible environment we work in.

## THE GRASS ROOTS

is the bi-monthly publication of the Wisconsin Golf Course Superintendents Association. No part of the *THE GRASS ROOTS* may be used without the expressed written permission of the editor.

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## PRESIDENT'S MESSAGE

### “Well We’re Waiting”

By Jon Canavan, Golf & Recreation Turf Manager, Milwaukee County Department of Parks, Recreation & Culture

It seems like every spring in Wisconsin runs late. This year spring gave us an even bigger gut punch. April in the Milwaukee area was one of the coldest on record. I can't complain too much since the central and northern part of the state saw well over 15 inches of snow in April!

With this being my 15th year in Wisconsin I have learned to be very patient with the weather. In 2012 we were all mowing grass in March. Last year it did not seem like we really got started mowing until the first of June! For some of us the weather and lost revenue can put a lot of pressure on our agronomic choices. I feel that I'm always getting pressure to not aerify, or to do the proper agronomic practices for the golf course. Last week I had our golf service manager say to me, “It is a shame that you have to punch the greens. They are perfect right now”. That is when I had to remind him that by doing this practice we are able to offer a good putting surface all year long!

With April being so cold May decided to come out with a bang. The first 11 days of May have been well over the average temp. It seemed like we went from winter to summer in about 11 days.

With this type of weather it keeps us superintendents on our toes! With the constant changing weather I feel that most superintendents unknowingly crave change. Most of us appreciate everyday being different and need new things to keep things challenging. Not sure if I could go to a job everyday where you would sit in an office and do the same thing over and over again.

Just a reminder that we have some wonderful events coming up this year. Please plan on attending one if you can. The WGCSA board works hard to offer different educational and golfing opportunity's for the membership. I personally feel that the relationships that you forge will help you in having a successful superintendent career.

- June golf meeting at Wild Rock GC, June 16th
- WTA Summer Field Day at O.Noer, July 24th
- Joint Meeting with the NGLGCSAA and Member Guest at Horseshoe Bay, August 13th
- Wee One Fundraiser at Pine Hills CC, September 17th
- WTA Fundraiser at Kenosha CC, October 1st

See you at one of these events. 



#### WGCSA MISSION STATEMENT

The Wisconsin Golf Course Superintendents Association is committed to serve each member by promoting the profession and enhancing the growth of the game of golf through education, communication and research.

#### WGCSA VISION STATEMENT

The Wisconsin Golf Course Superintendents Association is dedicated to increase the value provided to its members and to the profession by:

- Enhancing the professionalism of its members by strengthening our role as a leading golf organization in the state.
- Growing and recognizing the benefits of a diverse membership throughout Wisconsin.
- Educating and promoting our members as leaders in environmental stewardship.
- Offering affordable, high value educational programs at the forefront of technology and service.
- Being key to enjoyment and the economic success of the game of golf.



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## Turf Management Mobile: A New Tool For Professional Turfgrass Managers

By Paul Koch, Ph.D. Department of Plant Pathology, University of Wisconsin – Madison

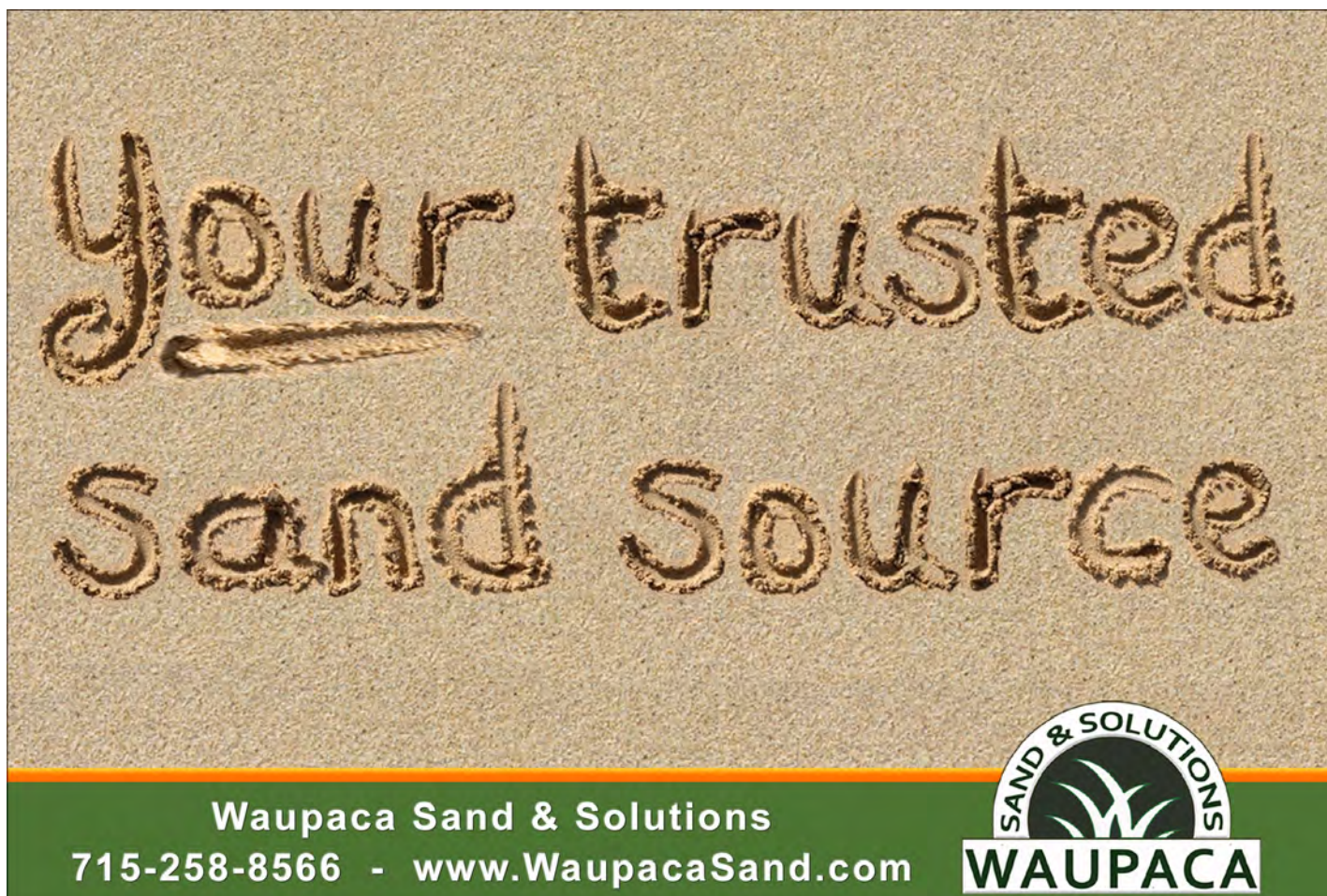
Controlling pests is one of the most important aspects of being a successful professional turfgrass manager. It doesn't really matter the type of pest or what sector of the turf industry you're in either: an anthracnose outbreak can cost a superintendent his or her job just as easily as a crabgrass outbreak can for a lawn care or sports turf manager. Proper pest control includes optimizing plant and soil health, managing abiotic stresses such as traffic and soil moisture, and knowing the biology of the pests in questions. But even when all those factors are optimized, pests can still become problematic. It's in these instances when proper pest control also includes selecting the right pesticide.

'So what should I spray?' It's probably the most common question I get, and most turfgrass extension specialists will probably say the same thing. And it's easy

to see why, selecting the right product is crucial for effective pest control. Select the wrong product and not only have you not controlled the problem, you've wasted money, product, and time associated with having to make a second (and hopefully correct this time) product selection. But selecting the right product isn't as simple as it seems. There are dozens of disease, insect, and weed pests that can occur on turfgrass in the Midwest, and for each pest there are sometimes 10 or more pesticides that are labeled for that particular pest. To make things more confusing, just because a product is labeled for a particular pest doesn't necessarily mean it's terribly effective against that particular pest.

So where do you turn for help? In my humble opinion, your local extension specialists are a great resource. My program tests hundreds of product combinations a

year for all of our major turf diseases in Wisconsin, and we post all of our results on our Fungicide Research Results page (<https://tdl.wisc.edu/results/>). Your local sales and technical representatives are also a great resource. They are often deeply knowledgeable about the products and how they perform, and the good ones are well aware that if they mischaracterize a product's efficacy to make a sale for today, they will likely lose a customer for tomorrow. Many great print and online pesticide recommendation resources also exist. In my opinion the best weed control publication is 'Turfgrass Weed Control for Professionals' from Dr. Aaron Patton at Purdue University and the best disease control publication is 'Chemical Control of Turfgrass Diseases' from Dr. Paul Vincelli at the University of Kentucky and Dr. Bruce Clarke at Rutgers University.



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# WISCONSIN PATHOLOGY REPORT

However, the University of Wisconsin turf team felt there was an opportunity to provide an additional online resource to professional turfgrass managers. One that brought all the pests groups together on one site, that focused on university product research, and that provided results in a clear, simple format that would translate easily to mobile devices. This led to the development of Turf Management Mobile (<https://turfpests.wisc.edu/>), a site developed by the UW turf

program in collaboration with 3 other universities that was launched in May of 2018 (Figure 1).

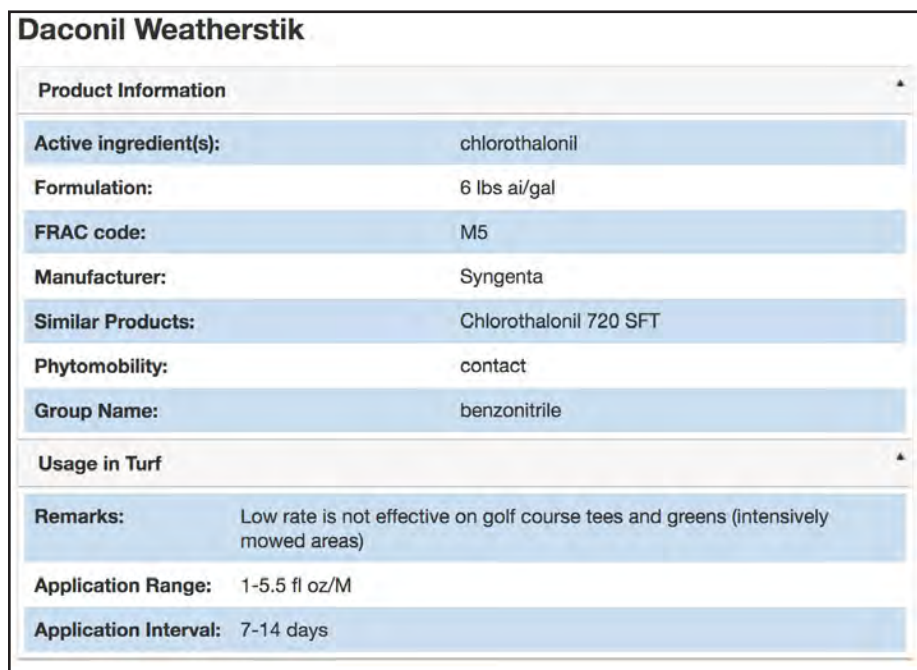
## How to use the site

As the name suggests, the site design is focused on a format that would easily translate to a mobile format but also focus on results, not pictures. The format was borrowed from the site Pest Management Mobile, which was developed by UW Agronomy professor Mark Renz

for use in various agricultural crops. Upon arriving at the homepage the user can search for a particular product by typing in the name of the product in the search bar. Upon selection of the product a whole host of new information about that particular product becomes available, including the active ingredient(s), product phytomobility, the FRAC/IRAC/HRAC code, recommended rates and intervals, any notes of interest, etc. (Figure 2).



Figure 1: The homepage of Turf Management Mobile, a turf pesticide database for professional turfgrass managers sponsored by the Wisconsin Golf Course Superintendents Association and the Wisconsin Turfgrass Association.



Product Information	
Active ingredient(s):	chlorothalonil
Formulation:	6 lbs ai/gal
FRAC code:	M5
Manufacturer:	Syngenta
Similar Products:	Chlorothalonil 720 SFT
Phytomobility:	contact
Group Name:	benzonitrile
Usage in Turf	
Remarks:	Low rate is not effective on golf course tees and greens (intensively mowed areas)
Application Range:	1-5.5 fl oz/M
Application Interval:	7-14 days

Figure 2. Information on dozens of pesticides can be obtained by using the search option near the top of the Turf Management Mobile homepage.

# WISCONSIN PATHOLOGY REPORT

From the home page the user can also search for product efficacy ratings by selecting on a pest group (diseases, insects, weeds) and then selecting on the particular pest or pests of interest. For example, to see the efficacy ratings for Gray/Speckled Snow Mold you would click on that disease and then click 'Submit' at the top of the page and the product efficacy ratings in order from highest to lowest will appear (**Figure 3**). The products are rated on a 1 to 4 scale, with 4 given to the most effective products and 1 given to the least effective products. For fungicides in particular the individual ratings can be interpreted as:

- 4 = Consistently excellent control under high disease pressure
- 3 = Consistently excellent control, though some breakdown under high disease pressure
- 2 = Fair to good control under most conditions, periodic breakdowns in disease control
- 1 = Control is inconsistent between experiments but performs well in some instances
- N = No efficacy
- L = Limited published data on effectiveness

Herbicide efficacy ratings are similar but defined in a slightly different manner:

- 4-Excellent, greater than 90% prevention or control
- 3-Good, 75-90% prevention or control
- 2-Fair, 50-75% prevention or control
- 1-Poor, less than 50% prevention or control

No insecticide ratings are provided on Turf Management Mobile because that information was not readily available after talking with numerous turf entomologists.

In addition to searching for product efficacy against one pest, users can search for the highest rated products against multiple diseases. For example, say you want to know what products have the highest combined ratings against BOTH dollar spot and anthracnose. You would simply click both dollar spot and anthracnose on the 'Disease' page, then hit 'Submit', and the product ratings provided will sum up the ratings for both diseases and rank them in order (**Figure 4**). Product ratings for up to 3 pests can be searched for at the same time.

## How was the product rating data collected?

Dr. Aaron Patton already provides annual herbicide efficacy ratings in his 'Turfgrass Weed Management for Professionals' publication and Dr. Paul Vincelli and Dr. Bruce Clarke already provide annual fungicide efficacy ratings in their 'Chemical Control of Turfgrass Diseases' publication. The herbicide and fungicide efficacy ratings on Turf Management Mobile come directly from Dr. Patton and Drs. Vincelli and Clarke, respectively. In essence, Turf Management Mobile can be thought of as a searchable database of the ratings provided in those two publications. The only exception is the Gray/Speckled Snow Mold ratings, which are based off of our research at Wisconsin.

☒ Gray/Speckled Snow Mold

Labeled Products: [Refresh Grid](#)

Name	Rating	MOA Code	Application Rate	Application Interval
<b>Concert + Banner MAXX</b>	4			
Gray/Speckled Snow Mold	4		8.3 fl oz/M + 8 fl oz/M	One or two applications prior to snow cover
<b>Concert + Turfcide</b>	4			
Gray/Speckled Snow Mold	4		8.3 fl oz/M + 8 fl oz/M	One or two applications prior to snow cover
<b>Enclave</b>	4	M5, 2, 1, 3		
Gray/Speckled Snow Mold	4		8 fl oz/M	One or two applications prior to snow cover
<b>Fame T</b>	4	11, 3		
Gray/Speckled Snow Mold	4		0.45-0.9 fl oz/M	One or two applications prior to snow cover
<b>Insignia SC + Trinity + Turfcide</b>	4			
Gray/Speckled Snow Mold	4		0.7 fl oz/M + 1 fl oz/M + 8 fl oz/M	One or two applications prior to snow cover
<b>Insignia SC + Trinity + Turfcide + Daconil Ultrex</b>	4			
Gray/Speckled Snow Mold	4		0.7 fl oz/M + 1 fl oz/M + 8 fl oz/M + 5 oz/M	One or two applications prior to snow cover
<b>Instrata</b>	4	M5, 3, 12		

**Figure 3. Product efficacy ratings were done in collaboration with Dr. Aaron Patton at Purdue University, Dr. Paul Vincelli at the University of Kentucky, and Dr. Bruce Clarke at Rutgers University.**



# WISCONSIN PATHOLOGY REPORT

## Turf Diseases

- ☒ Anthracnose
- ☒ Dollar Spot

Labeled Products: [Refresh Grid](#)

Name	Rating	MOA Code	Application Rate	Application Interval
<b>Concert</b>	7	3, M5		
Anthracnose	3		4.5-8.3 fl oz/M	14-28 days
Dollar Spot	4		1.5-3 fl oz/M	14-28 days
<b>Enclave</b>	7	M5, 2, 1, 3		
Anthracnose	3.5		3-4 fl oz/M	14-28 days
Dollar Spot	3.5		3-4 fl oz/M	14-28 days
<b>Mirage</b>	7	3		
Anthracnose	3		1-2 fl oz/M	14-28 days
Dollar Spot	4		1-2 fl oz/M	14-28 days
<b>Tekken</b>	7	7, 3		
Anthracnose	3		3 fl oz/M	14-28 days
Dollar Spot	4		3 fl oz/M	14-28 days
<b>Torque</b>	7	3		
Anthracnose	3		0.6-1.1 fl oz/M	14-28 days
Dollar Spot	4		0.6-1.1 fl oz/M	14-28 days

Figure 4. Product efficacy ratings for up to 3 diseases can be searched for at the same time. Here we searched for the product ratings for both dollar spot AND anthracnose.

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# WISCONSIN PATHOLOGY REPORT

Where did Drs Patton, Vincelli, and Clarke obtain their ratings? Each rating in their publications are based off of numerous independent university research trials. I know personally that for a product to be rated in 'Chemical Control of Turfgrass Diseases' Dr. Clarke requires approximately 6 to 8 independent university studies. This is a high bar to pass, and ensures that products are vigorously tested prior to being included in Turf Management Mobile.

## Alright Paul, what are the drawbacks?

I'll be the first to admit that Turf Management Mobile isn't perfect, and there are a few issues users need to be aware of when using the site:

- Product efficacy ratings are not designed to identify the 'best' product against a certain pest, but rather to identify the products that perform most effectively within their recommended rates and intervals. For example, Torque and Emerald fungicides both have a rating of 4 against dollar spot. Torque is a good fungicide that has many different uses, but no one is going to claim that Torque is as effective at controlling dollar spot as Emerald. However, what this rating shows is that when each product is used as recommended (Emerald at a 21 to 28-day interval, Torque at a 14-day

interval), they can both provide highly effective control of dollar spot.

- Ratings assume that there is no fungicide or herbicide resistance present in the pest population. Since resistance can vary so much from site to site it would be impossible to account for the possibility of resistance, which is why 3336F (thiophanate-methyl) is rated a 4 for dollar spot control despite widespread dollar spot resistance present in Wisconsin and elsewhere. Notes regarding potential resistance concerns are included in the 'Remarks' section for each product.

- Not all turf pesticides are on this site, and some products are on the site but don't have ratings for every pest. This is not because we're choosing favorite products or companies, but rather because multiple years of university testing is required before a product can be included. This means that new products oftentimes won't be on the site until the required testing can occur. It also means that products, including many generic products, that aren't tested by their manufacturers in university testing trials aren't included in the site.

- Insecticide efficacy ratings aren't included on Turf Management Mobile. As mentioned before, we couldn't find any information on insecticide ratings present in the literature and no turf

entomologist was willing to try and develop that kind of information...which admittedly doing from scratch would take a very long time. What Turf Management Mobile includes instead is a list of all products labeled for a particular insect pest in alphabetical order.

- No information on pest biology or cultural pest control strategies is included in Turf Management Mobile. This is obviously a critical aspect of integrated pest management, but is not a focus of this particular site. Other publications and websites contain a host of information on these topics and should be used in concert with Turf Management Mobile.

## Acknowledgements

The development of this site was a true team effort across multiple universities and encompassed multiple industry partners. UW Agronomy professor Mark Renz provided us the initial formatting for the site, based off of his Pest Management Mobile site, and allowed us to use his 'infrastructure' in creating our site.

Turfgrass Diagnostic Lab manager Kurt Hockemeyer put in countless hours this winter developing the spreadsheets and doing the data analysis to create all the data you see on the site. UW turf professors Doug Soldat and Chris Williamson provided insight on the overall site design and the herbicide and insecticide sections in particular. We have already mentioned our collaboration with Drs. Patton, Vincelli, and Clarke on this project but their input on other features of the site were important in improving the final version.

UW web developer Bret Huisenga did the web development for the site and was crucial in accomplishing this project in a timely manner.

Lastly, this site was not free to develop, and we greatly appreciate the financial support provided by the Wisconsin Turfgrass Association and the Wisconsin Golf Course Superintendents Association. This particular project serves as another great example of how the UW and the Wisconsin turfgrass industry can work together to provide tools to aid professional turfgrass managers, and I look forward to working with both the WTA and the WGCSA on future projects. ✓


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## New Fish in the Pond

By Bruce Schweiger, Manager, O.J. Noer Turfgrass Research and Education Facility

The last 16 months has been a learning experience. Prior to becoming the Superintendent of the O.J. Noer Turfgrass Research Facility, I was the Manager of the Turfgrass Diagnosis Lab. I also am a UW Classmate of Tom Schwab so we seemed to work together quite well. During that four-year period, I do not recall Tom having or us discussing many UW inspectors.

Then came January 2017, when the ARS (Agricultural Research Stations) announced the hiring of a NEW Superintendent at the O.J. Noer. I can only imagine some of the discussion on campus:

What's the O.J. Noer Turfgrass Research Facility?

Where is the O.J. Noer Turfgrass Research Facility?

Have we done an inspection there?

When was their last fire inspection?

Do they have an alarm system for smoke and fire, when was it inspected?

I bet they spray pesticides, are they keeping records?

What records are they keeping?

Do they have a "Right to know" campaign?

Who handles their trash pick-up?

The list could go on and on. I bet you are way ahead of me. You are correct every UW inspector, Waste Management, Safety, inspector and others decided to make their presence know at the Noer. One inspector

was sent to inspect the roof at UW Ridge Golf Course and saw the sign at the road (interesting since those looking for the sign usually miss it), turn around to see what the O.J. Noer Turfgrass Research Facility. His nice inquiry resulted in two hours plus I will never get back in my life.

September 2016 there was a large hail event that made its way through the area causing various amounts on damage. With the recent realization the Noer exists they realized that had not inspected the roof of my buildings for damage. Then one day in July while I was mowing, I looked up and there were people walking on the roof of the Pesticide Building and the main office. When I investigated they explained what they were doing here and promptly told me they did not know who to contact since Tom had retired, my office telephone number did not change. Yes, there was damage and they hope to be back by the end of the year to repair it, the year ended December 31st.

Most of these inquiries were harmless but very time-consuming. Risk Safety made a visit with the ARS Safety Officer and ask to do a more in-depth review of our policies. My contact was Jessica and she was awesome. We looked at pesticide records, inventory, and policy for spraying pesticides, Workers Right to Know and our hearing conservation program. It was soon

apparent that what we had done was OK but they wanted to update the policies and procedures. One July day Jessica and her assistant came to the O.J. Noer to record audiograms of all of the equipment. With that data, she developed a hearing conservation policy. We also looked at the use and handling of pesticides. When this was discussed with ARS someone noticed we were slightly behind ARS Policy. Over the fall and winter we re-wrote a few policies and in January sent out the new policies to the professors.

As in all our lives things changed. Some of the changes appear new but they are actually the same policies Dr. Koch trained me on years ago. The changes we had to implement this year were not earth-shattering. I know how busy the professors are each year so we rolled out these changes over the winter months. None of us like change but they have all been very good and I appreciate their cooperation. I agree because these changes affect my staff and me as well.

Hopefully, the feeding frenzy is over and the O.J. Noer can move on from policy change to continue the great traditions of research conducted by our Professors.

As I submit this article I have received 5.4 inches of ram since May 1 and the temperature here at 2:00 p.m. is 41 degrees F. The weather has to improve, PLEASE! 🌱



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# Wisconsin Turfgrass Association

2018 Summer Field Day, Tuesday, July 24th

O.J. Noer Turfgrass Research and Education Facility in Verona



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# NOTES FROM THE NOER

## Field Day Schedule

8:00am – 9:00 Attendee Registration/Trade Show open  
 9:00 – 9:30 Welcome Session and Building dedication  
 9:30 – 11:00 Lawn Care & General Turf Tours  
 11:00 – 1:30 Trade Show Only time  
 12:00 – 1:15 Lunch  
 1:30 – 3:00 Golf Turf Tours

## Lawn Care & General Turf 9:30 – 11:00

- Diseases of over watered lawns
- Z-Spray calibration
- Pre & post crabgrass control
- Rodents in the lawn
- Adjuvants for Control of White Grubs
- Fertilizer and Grass Selection update
- Living with Wildlife

## Golf Turf 1:30 – 3:00

- Dollar Spot model implimentaion
- Wetting Agent Strategies
- Fe apps for dollar spot control
- Clipping collection
- Traffic and bentgrass growth
- Effects of Guttation Water Systemic Pesticides on Pollinators

## Registration Includes

- \*Donuts & coffee in the morning
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cut here and return registration form with payment

## Registration Form

Mail registration form and check payable to WTA by July 17<sup>th</sup> to O.J. Noer Turfgrass Facility / 2502 Highway M / Verona / WI / 53593, or register online at [www.wisconsin-turfgrass-association.org](http://www.wisconsin-turfgrass-association.org). Prices valid if postmarked by July 17<sup>th</sup>. Add \$5 after July 17<sup>th</sup> and for on-site registration.

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Company \_\_\_\_\_ email \_\_\_\_\_

Mailing address \_\_\_\_\_

City/State/Zip Code \_\_\_\_\_ phone \_\_\_\_\_

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 Continue 2.5 miles to O.J. Noer Facility



## What Is Your Sand Made Of?

By Dr. Doug Soldat, Department of Soil Science, University of Wisconsin – Madison

Have you ever wondered why beaches are usually white? This is one of the questions we ask the students in Soil Science 301 (formerly 101 when Dr. Love taught it). The explanation has to do with the weathering of rocks. Rocks are made up of minerals, and different minerals break down at different rates. For example, the state rock of Wisconsin is red granite, which is composed of potassium feldspar (pink), quartz (white), and biotite (black). If given enough time, granite will break down into smaller pieces of itself through the actions of freezing and thawing, and root penetration, and maybe as a result of tumbling down a hill. We call that type of breakdown physical weathering. The granite will also break down chemically from exposure to rain, and the acids excreted by plant roots and lichen until the minerals are completely dissolved.

But physical and chemical weather doesn't affect all minerals in the same way. The minerals in rocks possess different abilities to resist physical and chemical weathering and quartz turns out to be one of the most resistant minerals of all. Quartz also tends to be clear or white in color. So the reason beaches are often white is because the action of the waves has weathered away everything else (feldspar, biotite, etc.). Eventually, the quartz will weather away too, or become buried and cemented into sandstone. The reason beaches are sand instead of silt or clay (which can also be made of very resistant minerals) is that the waves carry away the smaller particles leaving only the heavier sand sized particles.

Non-white beaches exist but are quite rare. The Big Island of Hawaii has many black sand beaches and one famous beach composed of green sand. There are very few green minerals on Earth, but one is olivine. Olivine happens to be one of the easiest minerals to weathered, and therefore green beaches are rare because the olivine doesn't last very long under nature's forces. We tend to find these green and black sand beaches in volcanic areas where the earth is new (like Hawaii). But after a few million years, these weird colored beaches will turn mostly white because the non-white minerals will be lost to the persistent actions of the waves and other weathering processes. Colors can tell you a lot about potential mineral weathering rates. Light colored minerals (white, pink, gray) tend to weather slowly, while dark colored minerals (black, dark gray, green) weather relatively quickly.

With the exception of nitrogen and maybe sulfur, plants in natural ecosystems get all of their mineral nutrients from the breakdown of rocks and sand and silt and clay through physical and chemical weathering processes. Soils derived from easily weathered minerals (like olivine and biotite) will make for a nutrient rich soil, because the nutrients become plant available as the minerals weathers away. Soils derived from quartz sandstone tend to be very nutrient poor.

Sand Source	Total K content (%)
New Jersey 1	0.10
New Jersey 2	0.11
Waupaca Roscoe Fines Free	0.54
Waupaca Dousman Fines Free	0.55
Pennsylvania 1	0.60
Waupaca Fines Free – OJ Noer	0.71
Waupaca Chillicothe Fines Free	0.72
Minnesota 1	0.74
Waupaca Fines Free 1	0.76
Waupaca Fines Free 2	0.78
Indiana 1	0.80
Minnesota 2	0.82
Indiana 2	0.83
Indiana 3	0.83
Indiana 4	0.84
Indiana 5	0.88
North Dakota 1	0.91
Indiana 6	0.93
Waupaca Morris Fines Free	1.01
Michigan 1	1.05
Washington 1	1.10
Ohio 1	1.23
Minnesota 3	1.24
Colorado 1	2.20
Arizona 1	2.30

**Table 1. Total K content of sands submitted by turfgrass managers to our lab from around the US. Total K was determined by x-ray fluorescence. Quarries were listed when known; otherwise, the state from which the sample was submitted was reported.**



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# WISCONSIN SOILS REPORT

Plants play a role in this too, plants native to nutrient rich soils haven't evolved too many intricate strategies for acquiring nutrients, but plants native to nutrient poor soils have evolved the ability to speed the breakdown of soil minerals to meet their nutritional needs. Your bentgrass turf isn't much different. Sure, you apply nitrogen, potassium, and phosphorus often, but you probably don't think about molybdenum or nickel or magnesium very often. That's because your bentgrass is able to find those three, and the near dozen other mineral elements in the soil through the slow but steady weathering of minerals.

Plants require so much nitrogen, potassium, and phosphorus that you may add those nutrients to meet your production goals. Scientists work to identify the minimum level in the soil above which you won't need to apply fertilizer. As you probably are aware, we've identified a minimum number for phosphorus (Mehlich-3, 7 ppm) been have failed to find the minimum level for potassium after almost a decade of trying on a sand-based green at the O.J. Noer Facility. This failure has us convinced that the plant is mining the potassium in the sand as a nutrient source. The Mehlich-3 levels of potassium are simply too low for the plant to be able to survive on it alone.

So this winter, we decided to characterize the potassium content of the minerals in our sand. If we assume that the effective root zone depth is three inches, and the bulk density is 1.6 g/cm<sup>3</sup>, the root zone weighs about 15,000 pounds for every 1,000 square feet of surface area. The total K content of our root zone sand was 0.7%, meaning there were about 105 pounds of potassium per 1,000 square feet in the sand minerals in those top three inches. We noticed that our plants take up about 1 pound of K per 1000 square feet every year, so only about 1 percent of the total K in the soil would need to be "released" from the mineral structures for the plant to meet its nutrient requirement. This seems feasible. Now add in the fact that we are topdressing with about 0.2 inches per year with the same sand, adding about 7 pounds of K per 1,000 square feet annually. We hypothesized that the plant will never run out of potassium because our K requirement is being met by the weathering of our topdressing sand, which is being added at a rate that exceeds removal.

Soil Science undergraduate and employee in my lab, Malachi Persche further characterized our sand this winter. Malachi worked with some high tech instrumentation in the Geosciences Department and found that our sand (Waupaca Fines Free, Waupaca Sand and Solutions) was composed of 78% quartz (white and pink in color), 12% Orthoclase (a pink potassium feldspar), 5.2% hornblende (a dark amphibole that contains a small amount of potassium), and 4.4% albite (a white potassium feldspar). The total amount of potassium in this sand was about 0.7% as mentioned above, and as you can see, the main source of potassium in the sand was from potassium feldspar.

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# WISCONSIN SOILS REPORT

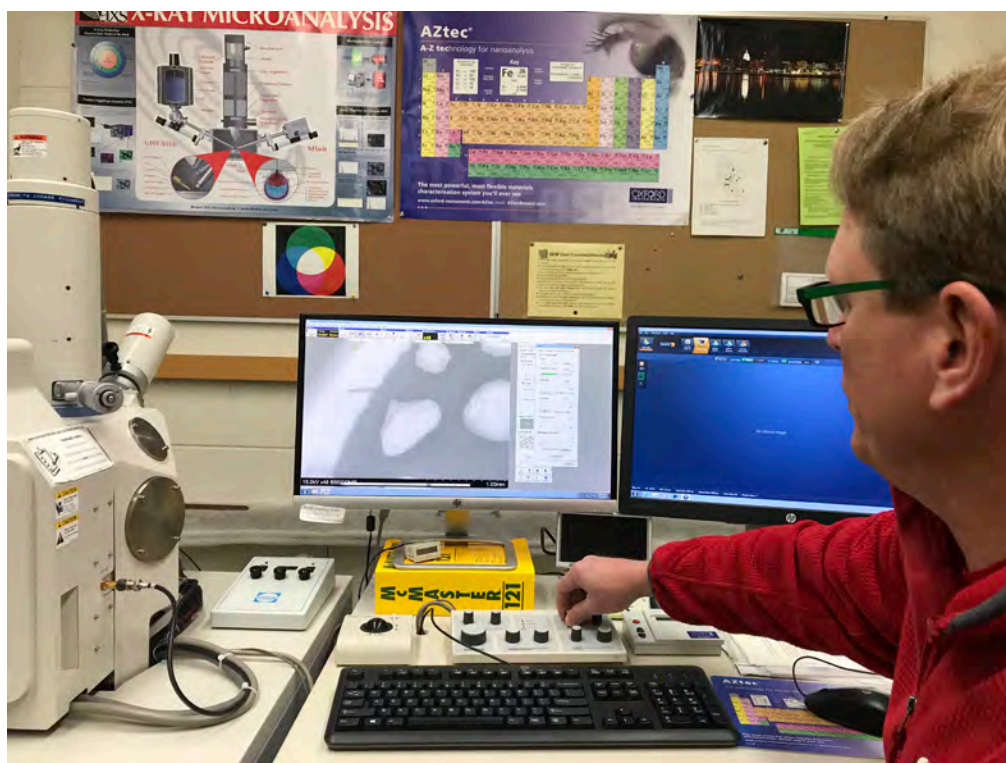
We think this work is helpful to the superintendents in Wisconsin growing bentgrass and using Waupaca Fines Free, but we also wondered about how we can extrapolate our results to other areas. We asked superintendents to send us their sand for total K analysis to compare with ours. We received 25 samples from all over the US but most coming from the upper Midwest. A big thanks to Waupaca Sand and Solutions for sending us samples of their Fines Free from all their quarries in Wisconsin and Illinois. We also tested Fines Free delivered to the O.J. Noer

and a golf course in Racine from unknown quarries. You can see from **Table 1** that the Waupaca sands are on the lower end of the spectrum in terms of K content. This suggests that it may be that the majority of sands used for topdressing in the US would be able to supply K to bentgrass. However, we have a lot more work to do before we can say that for certain and are already working on some new studies so we can eventually make more solid recommendations regarding the ability of bentgrass (and maybe annual bluegrass) to extract K from topdressing sands. Stay tuned! ✓



**Figure 1.** The sands we tested varied in color.

**Figure 2.** We used a few different x-ray techniques to identify the minerals in the sands.





# MEMBER SPOTLIGHT

## Joe Stadler

By Josh Lepine, Certified Golf Course Superintendent, Maple Bluff Country Club &  
Ben Labarre, Golf Course Superintendent, The Legend at Bristlecone

*Author Note: Thank you to everyone who participated in the Membership survey. The information and feedback obtained was invaluable. The requests for more member spotlight stories inspired me to start this column. I hope to randomly highlight a few members each edition from all geographic areas, facility types and membership classifications. It may take me 20 years to get to everyone in the directory but please be ready for that phone to ring and be prepared to share stories, photos and information about YOU!*

Name: **Joe Stadler**

Company Position: **Executive Director, Wisconsin PGA**

Years as WGCSA Member: **Not sure but as many as 23**

Membership Classification: **Honorary**

Joe Stadler became a PGA Member in 1994 after spending 4 years at Oakwood Park Golf Course in Franklin, Wisconsin. Stadler was named the Executive Director of the Wisconsin PGA in early 1995 after serving as the WPGA's Tournament Director for one year. In 2000, Stadler also became the Executive Director of the Wisconsin PGA Junior Foundation.

During his tenure as Executive Director the WPGA has seen remarkable growth. The creation of the not-for-profit, Wisconsin PGA Junior Foundation in 2000 highlights the growth. The junior activities of the WPGA have gone from a 12 event tournament schedule to a full schedule of over 100 events. The Foundation has awarded almost \$200,000 in college scholarship since inception. Stadler also was instrumental in the creation of The First Tee of Southeast Wisconsin and currently serves as Vice President.

Stadler is a 1989 graduate of UW-Stevens Point with a BS in Business Management. Stadler resides in Wauwatosa with his wife, Lindsay and sons, Jackson (9) and Michael (5).

### 18 Holes With Joe Stadler

**1. How did you get started in the turfgrass industry?** Everything I have learned about turfgrass has been through a Wisconsin GC-SAA member and my time discussing issues with them as we host events throughout the state. Just a great group of professionals that are willing to share.

**2. What is the most rewarding part of your career?** Helping our members in either their career or in their person life.

**3. What would you consider to be your greatest career challenge?** The challenges facing the industry and individual facilities can make the lives of our members difficult. It is always deflating to receive the call or email that someone has lost their position at

a facility because it can be very challenging to find that next career step.

**4. Which three adjectives describes you the best?** Compassionate - even though I try not to act like it, persistent, rational (usually)

**5. Tell us about your family.** - Lindsay and I have been married for ten years and have two boys, Jackson and Michael. My sister lives in Fort Collins, Colorado.

**6. Any pets?** We have a tortoise named Todd.

**7. What drives/motivates you every day?** Trying to make things better and making sure things are done correctly.

**8. Who Would You Admire?** I can't say I really admire any one person. I like a lot of different traits of different people.

**9. Who is the person in history you'd most like to meet?** Janis Joplin



Lindsay, Jackson and Michael ready to cheer on the Packers.



## MEMBER SPOTLIGHT



LEFT: Jackson, Michael and Lindsay ready to enjoy a huge sunday treat!

BELOW: Jackson and Joe ready to cheer on Marquette.



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## MEMBER SPOTLIGHT

**10. What's a fun fact that people don't know about you?**

I won my first college golf tournament at Stevens Point and my last and in between I finished anywhere from 2nd to last to not even making the starting lineup.

**11. What do you do in your spare time, favorite hobbies? ?**

Kids mostly. Hang with the neighbors. Play golf. Marquette basketball.

**12. If you could go anywhere in the world on vacation, where would you go?** Ireland

**13. What is the one thing you would like to learn/accomplish someday?** Keep working to make the WPGA better for our members and all golfer and to raise two sons that have success in life and their careers and are good people.

**14. What is your favorite turf management related tool or technique?** Verticutting

**15. Favorites:**

**TV Show:** Homeland

**Movie:** Godfather

**Food:** Chips and Salsa

**Sports Teams:** Marquette/Brewers/Packers/Bucks/Rangers

**16. Do you golf? Handicap? Best shot or golf story?** Yes. PGA Professional. Keep a handicap. It's about a 2. No specific story but it would have to be all the funny things that happen on a course or the funny stories.

**17. Top Bucket List Item?** Want to go to Madison Square Garden to a Rangers playoff game.

**18. If you could provide one piece of professional advice, what would it be?** Stay flexible and current as you advance throughout your career. ✓



**TOP:** Jon Tollette, COO Minnesota PGA, Michael Miller, Executive Director Southwest PGA, Joe, Mike David, Executive Director Indiana PGA at Grayhawk Golf Club

**ABOVE:** Joe with Omar Uresti 2017 PGA Professional Champion, Jeff Ellingson, PGA GM at Edelweiss Chalet, Joel Weitz, PGA owner of Vitense Golfland at 2017 PGA of America Annual Meeting.

**LEFT:** Jackson And Michael with Marquette's Andrew Rowsey





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## First Green Field Trips Continue Around The Region

By Shane Conroy, GCSAA Field Staff - Great Lakes Regional Representative

As the spring finally decided to show itself in the Great Lakes region, and much of the country, superintendents are off and running with the 2018 golfing season. Superintendents continued to take advantage of whatever it was Mother Nature threw at them, with many of you using the frost mornings completing fall projects, training staff, and working on the maintenance facilities to be even more productive this season. 2018 GCSAA programs and initiatives are also off and running

GCSAA and the First Green Foundation have officially come to an agreement which will see the First Green come under the umbrella of the Environmental Institute for Golf (EIFG). If you're unfamiliar with the First Green, it is a tax-exempt nonprofit, which utilizes innovative STEM (science, technology, engineering and math) education using golf courses as hands-on environmental learning labs, which is the only program of its kind. The First Green originated in the Pacific Northwest in 1997, and offers extensive resources for golf course superintendents, including on-line lesson plans, tips on connecting with schools, and information about hosting a field trip at your course.

Golf course superintendents and industry representatives host students on field trips to teach on a variety of topics. I have been fortunate to be involved in a handful of field trips across the region, which offer the superintendent and golf course to connect with students, teachers and the community. Field trips can last anywhere from a couple hours, to a half-day. Typically, there are a handful of learning stations set-up on the golf course where students rotate through during their time on the course. Sample stations may include:

- Soil Science
- Area and Volume Measurement
- Golf Course Maintenance Technology
- Environmental Stewardship
- Chipping, putting and golf course etiquette

These are just a few suggestions, as you can put your own spin on the field trip and incorporate areas of the course which are unique to your property. Recent field trips have included rain gardens, pollinator

environments, geocaching activities, and even a bald eagle nest.

The agreement with the First Green will offer superintendents the ability to reach students of all ages and communicate the benefits of our profession and great game. It allows the opportunity to connect with the local community to highlight the environmental stewardship superintendents demonstrate on a daily basis, and the positive attributes golf courses bring to the area. Many of the students involved in these field trips have never stepped foot on

a golf course or swung a club. Hosting First Green field trips is a great way to introduce students to the field of golf course management, and the game of golf.

First Green field trips are just another tool in the toolbox superintendents can use to be community leaders. It allows superintendents and industry representatives to educate the public on the benefits golf courses bring using first hand examples, and be part of the active community; all while inspiring the next generation of superintendents and golfers. ✓

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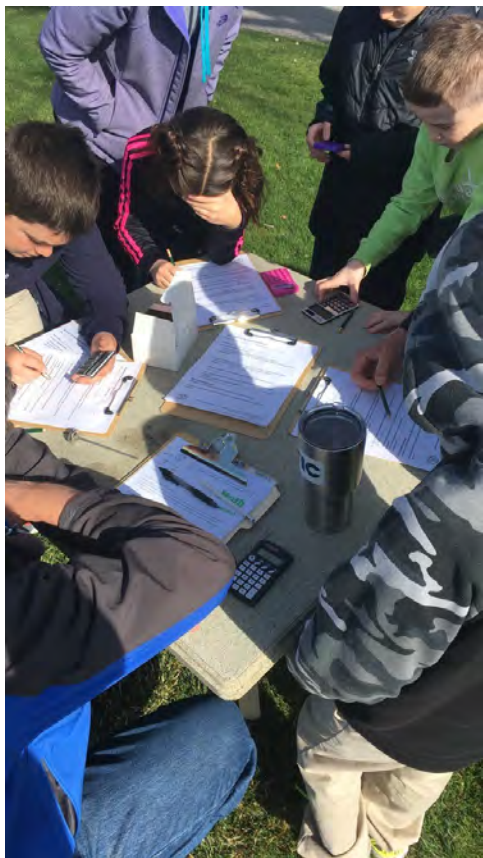
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Pictures from a recent "First Green" field trip in Ohio

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## Managing Weather Impacts During USGA Championships

By **Darin Bevard**, USGA Green Section, Director of Championship Agronomy and  
**Jim Skorulski**, USGA Green Section, Northeast Region Agronomist

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**Managing the various weather issues that impact USGA championships requires planning, prioritization, and communication. The same is true for managing weather-related challenges that affect golf events at your course.**

Preparing golf courses to host USGA championships is challenging. For a major championship, such as the U.S. Open, logistics both inside and outside the ropes can seem overwhelming. Spectator experience and television broadcast windows impact the agronomic preparation of a golf course. Most golf facilities will never host an event that has the scale and complexity of a major championship. However, lessons can be learned from championship preparation that apply to daily golf course maintenance and the preparation for important events at any golf facility.

Current weather and the weather forecasts greatly impact planning and daily preparations during a championship. Rain events are generally viewed as the biggest concern, but extreme heat, winter injury, and even frost also impact championship preparations just as they do normal play. Understanding and planning for the potential impact of weather on turf health, course preparation, and playability will help produce a successful event even if the weather does not cooperate, albeit with some adjustment to expectations.

### AN OUNCE OF PREVENTION

Fundamental agronomic programs and golf course infrastructure must be discussed before addressing weather impacts. Routinely implementing basic agronomic practices such as aeration and topdressing can modify poor soils and prevent excess organic matter accumulation below playing surfaces. These practices improve drainage, promote healthier turf, and make it possible to provide firm, fast playing conditions with reduced risk of turf damage. Effective surface and internal drainage is critical for removing excess water. Rapid drainage allows maintenance and play to resume as quickly as possible after a rain event. Good infrastructure and agronomic programs that satisfy the basic needs of turf provide a better opportunity to have good playing conditions despite unfavorable weather.

Bunkers provide another example of how proper infrastructure can make a big difference when bad weather happens. Drainage should be improved in bunkers that chronically hold water. Installing bunker liners, while costly, reduces bunker erosion and allows for easier restoration of playable conditions after rain.

### Weather Planning Checklist

- Priority of in-play areas has been discussed with course officials.
- Course setup takes into account areas known to develop casual water on teeing grounds, in landing areas, and around hole locations.
- The sequence of maintenance tasks is clearly defined.
- Maintenance routes through the course are identified to prevent damage to wet areas.
- Workers are on call if needed.
- Rakes, squeegees, bunker pumps, etc. are ready to go.
- Poorly draining bunkers and other problem areas are identified.
- Known areas where debris from flooding or wind accumulates are identified.

**Use a basic checklist to ensure preparations are in place should rain disrupt maintenance or play. Checklists can be tailored to a specific golf course or event and can help guide communication so that all parties are on the same page during what is often a stressful time**



**During high temperatures, syringing may need to be performed during play. This practice can reduce wilt and prevent turf decline until more water can be applied after play**



## USGA GREEN SECTION

Some weather events, such as a severe winter that leads to cold temperature injury, are harder to predict and plan for than common weather events like heavy rain or extreme heat. However, covering greens in injuryprone areas may reduce the risk of winter injury.

Regardless of the situation, thinking through the potential impacts of weather events well in advance enables the development of a proactive action plan. Having a plan is better than simply reacting when challenges arise.

### WINTER INJURY

Winter damage, especially on putting greens, has a prolonged effect on playing conditions. If winter conditions raise concerns about damage, periodically remove plugs from putting greens and bring them inside to assess damage during the winter. If winter injury has occurred, plans for recovery should be developed and communicated weeks in advance.

USGA championships in northern climates have been impacted by winter injury on putting greens. Recovery from severe winter damage is usually accomplished through an extensive overseeding program or with nursery sod, if available. Using sod, although sometimes necessary for a timely recovery on putting greens, is usually a last resort because of the impacts it can have on surface integrity. When winterkill occurs before a USGA championship, the goal is to have full turf cover on all surfaces before the championship is played. Affected surfaces should be closed to golf until healing is complete. Though a difficult decision, closing damaged putting greens offers the greatest likelihood of successful recovery. Championships are an opportunity for host sites to showcase their golf course, so strategies to maximize turf health are critical.

The strategies that promote the quickest recovery from winter injury leading up to a championship should provide the same results at any course.

They include eliminating traffic from damaged areas until full turf cover is restored. Once the repaired putting greens are reopened, expectations for speed and firmness should be tempered to prevent the decline of immature turf. Communicating to golfers why playing conditions may not meet their expectations can foster understanding and help reduce complaints about golf course conditions during the recovery process.

### EXTREME HEAT

High temperatures are not unusual during the summer championship season. However, when the heat becomes extreme, strategies must be employed to protect turf health. These strategies may include forgoing afternoon or evening mowing of putting greens and fairways and altering watering plans in the interest of turf health, even at the expense of putting green speed and firmness.

Syringing — i.e., applying light amounts of water to wet and cool the turf canopy — is another strategy that is often employed to maintain turf health through periods of heat stress. During extreme heat, syringing may even be performed during play at a championship. This results in a shortterm change in playing conditions that can upset golfers who feel that the maintenance staff should syringe only after play is complete. Unfortunately, a few hours can be the difference between survival and significant turf decline under heat and moisture stress. At times, syringing is necessary even when it is not convenient.



**Fundamental agronomic programs play a critical role in preparing turf and soils for environmental stresses. Healthy turf and well-draining soils offer the opportunity to provide better playing conditions despite the weather.**



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## RAIN AND THUNDERSTORMS

The impact of winter injury is typically known well in advance of a championship. Even heat waves are fairly predictable several days before they arrive. While the impacts of some events can be easily anticipated and planned for, the impacts of rain events — especially thunderstorms — are difficult to predict. Storms provide the greatest challenges when preparing for and continuing play during a championship.

When rain is in the forecast, course setup decisions can have a significant impact on maintenance and the resumption of play. Hole locations should be placed in high, rapidly draining areas of putting greens. Poorly draining tees should be avoided. Sometimes a specific tee can be selected for play that provides an opportunity for most players to avoid hitting their tee shots into a poorly draining area of a fairway.

Light rain in the absence of lightning should not impact normal maintenance or play until water accumulates to the point that casual water creates unplayable conditions. Conversely, maintenance should be postponed and play suspended or delayed to keep workers and players safe in the event of lightning regardless of rain.

Planning and communication are critical before, during, and after weather events that could cause delays and dictate changes in maintenance programs. Bunker maintenance, fairway mowing, rough mowing, and sometimes putting green mowing may need to be scaled back or skipped altogether to keep play on schedule. In other instances, it may be too wet to perform maintenance practices without causing damage to the course. At a U.S. Open Championship, enough volunteers and equipment are available to overcome storm delays, but the same is not true for some smaller championships or the average golf course. Decisions must be made to prioritize maintenance, and those decisions must be communicated to course officials and golfers.

## COMMUNICATION AND PLANNING

Communication and planning are critically important to successful management, especially when it comes to weather challenges. While the ultimate impacts of a weather event remain unknown until



**Prioritizing maintenance when time and resources are limited is critical. The severe sand erosion on this bunker face should be repaired before play resumes, but the bunker floor could be left unraked in the interest of time.**

it occurs, plans to mitigate weather challenges at USGA championships are developed well in advance. The planning process starts by developing an understanding of the people and equipment that are available to deal with potential post-storm problems once the condition of the course has been evaluated. Alerting key decision-makers to what can be realistically accomplished before resuming play is critical. Striking a balance between resuming play as quickly as possible and restoring playing conditions after heavy rain is paramount. If there is not enough time to fully restore playing conditions, it is important to provide an honest assessment and adjust accordingly.

Putting greens are the top priority. In the instance of an overnight rain event during a USGA championship, the goal is to mow putting greens before play if they are dry enough. If rain during a round causes a suspension of play, efforts shift to focus on removing casual water and debris so play can resume as quickly as possible. Repairing severe bunker wash-

outs is also important. However, raking bunkers in their entirety or even pumping water from the bunkers is not a priority if an opportunity exists for players to take relief from casual water in a bunker. When bunker sand is excessively wet, raking can diminish rather than improve playability.

The same principles used to manage weather-related problems and delays at USGA championships can be applied at any golf facility. Providing the best possible playing conditions should be the goal, but it is important to consider other parts of the operation, including food and beverage services and player schedules. Finishing an event on schedule may be very important, in which case compromises on playing conditions may be necessary.

## KEY TAKEAWAYS

Whether you are planning a large golf event or trying to manage routine play, here are some recommendations that will help you plan maintenance around weather events at your course:



# USGA GREEN SECTION



Plans for restoring playability should be in place before a storm. The plan should identify priority areas and be communicated to course officials.

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## USGA GREEN SECTION

- Develop your response to potential weather events before they occur. Consider who will evaluate areas of the golf course after rainfall or severe weather. Develop a good understanding of the time, manpower, and equipment that are available to recover from various weather events. It is also important to account for potential impacts on long-term turf health. Make sure that expectations are realistic and capable of being met.
- Discuss maintenance priorities with course officials and the head golf professional so that all parties have a clear understanding of the maintenance and playability goals following various weather issues. Allocate time and resources based upon these priorities to restore playing conditions in

critical areas so play can resume.

- A clear communication plan should be developed to inform golfers how a weather delay will be handled and why it may not be possible or even necessary to perform full maintenance in some areas. Provide periodic updates as preparations progress and reminders that the goal is to resume play if the golf course is playable.

Golf is an outdoor sport and weather is the overwhelming factor that dictates the conditions on a golf course, whether you are preparing for the U.S. Open, a charity tournament, or daily play. The sheer number of volunteers at a championship golf event allows the impacts of weather to be mitigated more rapidly than is possible at most golf facilities. Even during a championship, howev-

er, some maintenance practices might need to be skipped if severe weather strikes. Carefully manage golfer expectations to ensure that they are aligned with what's possible in the best interest of turf health and time. In some unfortunate instances, Mother Nature wins regardless of planning and preparation. Sometimes losing a day of play or having to cancel an event is simply unavoidable.

The same principles of preparation, prioritization, and communication that are used to manage weather impacts during championships apply at any golf course for any event. Developing a clear plan to address the challenges that weather conditions may create presents the best chance of conducting a high-quality, enjoyable event for everyone involved. ✓



**In some instances, weather prevents play from resuming. Knowing when to cancel play to prevent long-term damage and avoid unsafe conditions is as important as having a plan to mitigate problems.**

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10:30 - 12:15 Registration  
11:00 - 12:15 Range  
11:00 - 12:15 Lunch  
12:30 4-person Scramble, Shotgun Start  
After golf Hors d'Oeuvres, door prizes & golf awards  
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Your **\$150 registration fee** will include golf, cart, practice range, lunch, door prizes, golf awards and hors d'oeuvres after golf. If you have questions, contact Audra at 608-845-6536 or [audra.anderson@wisc.edu](mailto:audra.anderson@wisc.edu). Come out and play the newly renovated Kenosha Country Club. Let us show long-time supporter of the WTA, Paul Bastron, that we are grateful to him and his board of directors for allowing us to play this impressive course.

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- Refer questions about the outing to Audra at 608-845-6536, or [audra.anderson@wisc.edu](mailto:audra.anderson@wisc.edu)
- Registration deadline is Tuesday, September 27<sup>th</sup>, 2018.
- You may register by yourself or as a foursome.

## 2018 Super Pro at University Ridge Golf Club

By David A. Brandenburg, Editor, The Grass Roots

The 2018 Super Pro sponsored by Premier Golf and Utility offers a fun competition for both WGCSA and WPGA members. 1st Division is for a WGCSA member and a WPGA member while the second Division is for anyone else including teams with a member without a handicap.

Luckily the heavy snows we had a few days before the April 25th event melted and Phil Davidson and his staff could prepare the links for the event.

In Division 1 and taking \$500 for first place were Bryan Brothie and Brian Johnson from Geneva National GC shooting a Net 62.65 in the modified chapman alternate shot format.

2nd place was Luke Scharf and Jim VanHerwynen from South Hills G&CC with Michael Crowley and Travis Krauklis from Morningstar GC in 3rd.

In Division 2 Craig Czerniejewski and Mike Kac-tro from Washington County GC took the \$440 first place with 65.70. In second was the team from Prestwick Golf Group with Ben Fahrenholz and Dustin Schwab while Aaron Goninen and Bruce Schweiger from Reinders and the O.J. Noer Turfgrass Facility came in third.

Thank you to the Wisconsin PGA for organizing the event and to Mike Gaspard, PGA General Manager, Ryan Wieme, Head PGA Professional, Phil Davidson, Superintendent and Talia Taylor, Food and Beverage Manager and all the staff at University Ridge for hosting us.



**WGCSA Past President Jim Van Herwynen presents Golf Course Superintendent Phil Davidson with a framed flag in appreciation for hosting the event. (photo from WIPGA)**



**A Bagpiper welcomed the group! (photo by Jim Vanherwynen)**



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**ABOVE:** In the cart are Div 1 winners Bryan Brotchie and Brian Johnson from Geneva National with Steve Fischer (Premier Golf & Utility Vehicles) on the right and Dustin Schwab and Ben Fahrenholz (Prestwick Golf Group) on the left. (photo from WIPGA)

**BELOW:** Players enjoying Hors'Dourves while waiting for the results to be tabulated. (photo by Jim Vanherwynen)



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## PAST DIVISION 1 CHAMPIONS

2018 - Brian Johnson and Bryan Brotchie (Geneva National)  
 2017 - Craig Czerniejewski / Mike Kactro (Washington County)  
 2016 - Skip Simonds / Patrick Sisk (Milwaukee)  
 2015 - John Freeman / Jeff Millies (Edgewood)  
 2014 - John Freeman / Jeff Millies (Edgewood)  
 2013 - Charlie Brown / John Feiner (Johnson Park)  
 2012 - Seth Jamison / Craig Filley (Nakoma)  
 2011 - Eddie Terasa / Randy DuPont (North Hills)  
 2010 - Charlie Brown / John Feiner (Johnson Park)  
 2009 - Tom Dolby / Jay Pritzl (Timber Ridge)  
 2008 - Tom Dolby / Jay Pritzl (Timber Ridge)  
 2007 - Charlie Brown / John Feiner (Johnson Park)  
 2006 - Don DuChateau / Jim Van Herwynen (South Hills)  
 2005 - Charlie Brown / John Feiner (Johnson Park)  
 2004 - Eddie Terasa / Randy DuPont (North Hills)  
 2003 - Fred Hancock / Jeff Barlow (Waupaca)  
 2002 - Charlie Brown / John Feiner (Johnson Park)  
 2001 - John Freeman / Jeff Millies (Edgewood)



Above: Jim VanHerwynen and Luke Scharf representing South Hills G&CC.

Below Left: Jason Haack and Scott Bushman from Fox Valley Golf Club

Below Right: Hole 6 at University Ridge

Bottom Right: Hole 9 looking up at the clubhouse.  
(photos by Jim Vanherwynen)







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**Left: Scott Bushman hits his putt while partner Jason Haack looks on while Luke Scharf studies his next putt.**

**Below: Hole 7 called Drumlin plays 429 yards from the back tees.**

**Bottom: Hole 10 is impressive even in the spring. The hole plays 483 yards from a elevated tee. (photos by Jim Vanherwynen)**



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## SentryWorld Hosts Equipment Managers Meeting

By David A. Brandenburg, Editor, The Grass Roots

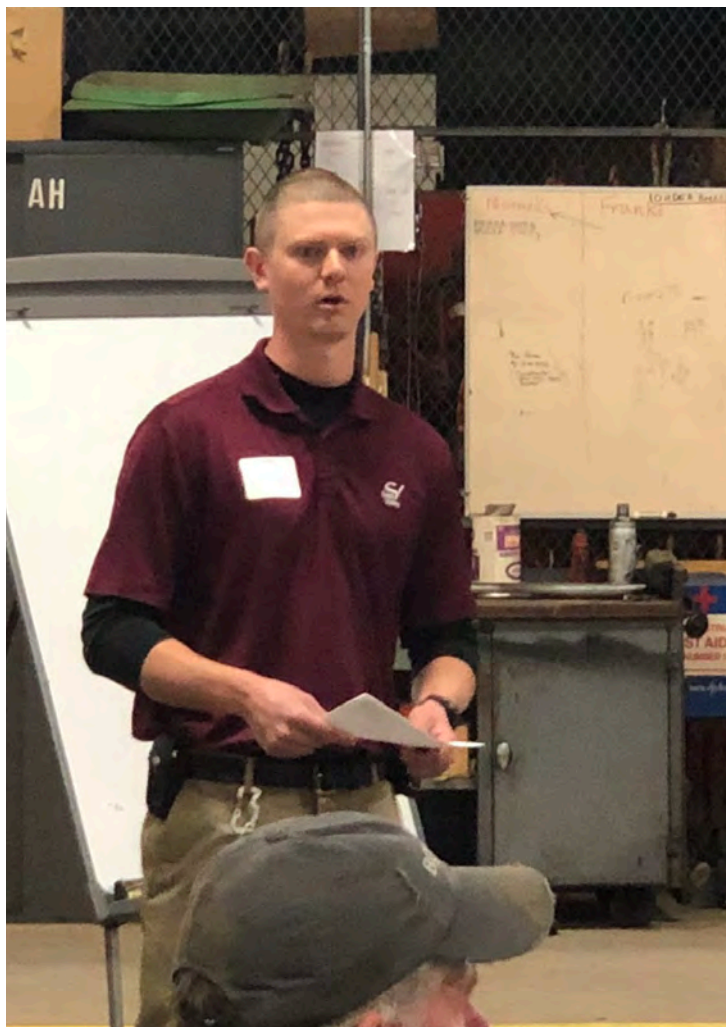
The WGCSA and SentryWorld Golf Course hosted a Equipment Managers Meeting and Training on March 20th at their maintenance facility in Stevens Point. Thank you to Tim Johnson for laying the groundwork for the meeting and for Paul Zellner, Horst Distributing, Aaron Trylick, SentryWorld and Austin Wright, Sand Valley for participating.

The 44 participants learned about Volt and Ohm meter usage and electrical troubleshooting, more about GCSAA's Equipment Manager Program and toured the Sentry World facility.

We look forward to continued educational opportunities for equipment managers as the equipment we use becomes more technologically advanced. ✓

**Right: Austin Wright, Equipment Manager at Sand Valley Golf Resort speaks to the 44 attendees.**

**Below: The attendees from the first WGCSA Equipment Managers Meeting. (photo by Shane Conroy)**







The group was listening intently to Austin Wright, Equipment Manager at Sand Valley Golf Resort.

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## TDL Happenings

By Kurt Hockemeyer, Turfgrass Diagnostic Lab Manager, O.J. Noer Turfgrass Research and Education Facility

**M**y last article for this magazine I was writing about what kinds of winter research was going on here around the TDL. We were waiting for a very long time for snow to melt off of the winter research plots at our northern locations. Since then it seems like Mother Nature snaps her fingers and we go straight into early summer. It's not ideal but it's what we've been dealt this year. Here is what's going on in the TDL right now in mid-May.

**In short we saw that fungicide apps targeting snow mold more than 30 days before snow cover had very little effect on disease severity. This is just one year of a multiyear study so we will see what the data says once this study is concluded.**

We just finished up snow mold season by having the UW Snow Mold Field Day held for the first time in May. Luckily we were able to rate our final two snow mold research locations just the day before field day (Minocqua, WI and Marquette, MI). Both of those locations had very high snow mold pressure due to the prolonged and deep snow cover each of those locations endured over the winter. I know heavy disease pressure is something that many of you may wince at, and that's understandable. But it is something that we pathologists love to see.

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By conducting these efficacy trials under heavy disease conditions we can pass on the most relevant information to you, the end user. That way you can choose the products that actually work best in case there is heavy disease pressure at your location. The Minocqua research location had a fungicide timing study on a fairway (**Figure 1**). In short we saw that fungicide apps targeting snow mold more than 30 days before snow cover had very little effect on disease severity. This is just one year of a multiyear study so we will see what the data says once this study is concluded.



**Figure 1.** Snow mold pressure at the Minocqua site was very high. Treatments in the painted row on the left were very early. The last two treatments in the painted row were much closer to snow cover and resulted in much better control.



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The Marquette trial was nothing short of epic (**Figure 2**). Dr. Koch has been conducting snow mold trials for much longer than I have and he said he has never seen this level of disease severity before. This trial saw almost 180 days of snow cover (almost 6 months!). Snow cover started in early November and lasted until the end of April. We definitely were able to identify which snow mold treatments are truly the best. Any treatments below 10% disease are excellent treatments. The primary fungal pathogen in Marquette was *Typhula ishikariensis* (Figure 3). Reports for snow mold trials can be found on the TDL website (<https://tdl.wisc.edu/2017-2018-snow-mold-fungicide-research-reports-2/>).

Enough about snow mold, let's talk about summer research. We have a lot of the same research trials as we have done in the past. Many different studies looking at dollar spot control on both greens and fairways. One interesting study will be looking at alternative methods for dollar spot control. Keep an eye out for this study at Summer Field Day on July 24th. We will also be doing summer patch, brown patch, *Pythium*, and anthracnose trials.

I wanted to give a quick update on where we are on accumulating GDDs at this point in the year. We did not accumulate any GDDs base 50 in Madison until April 24th (according to my recordkeeping). This is the second longest we've gotten into the year before accumulating any GDDs since 2011. But once we finally turned that corner, those GDDs started accumulating very quickly. Between April 30th and May 9th (10 days), we pretty much accumulated all the GDDs needed to time our early season dollar spot fungicide applications. So May 9th is when we reached 140 GDDs, which is a little bit early compared to average, but not by much. So any early season dollar spot apps should be going out soon (mid-May) in the Madison area. Obviously if you are not in the Madison area your GDDs will be different.

That's all I've got for this update. It's been good to finally get some warm weather, and I wish everyone the best of luck for the upcoming growing season. 🌱



**Figure 2. Snow mold pressure at the Marquette site was highest Dr. Koch has ever seen. Nontreated controls were essentially 100% affected. Many treatments did provide excellent control. Results can be found on the TDL website.**



**Figure 3. The main pathogen at the Marquette site was *Typhula ishikariensis*, typically found in areas with much longer periods of snow cover. Notice the small, black, almost pepper-like sclerotia in the fungal mycelia.**



# EVENT SCHEDULE

## Event Schedule!

June 18th (Monday) June Golf Meeting - Wild Rock Golf Club

July 24th (Tuesday) WTA Summer Field Day - O.J. Noer Research Center

August 13th (Monday) Joint NGLGCSA/WGCSA Meeting - Horseshoe Bay Golf Club

September 17th (Monday) Wee One Fundraiser - Pine Hills Country Club

October 1st (Monday) WTA Golf Fundraiser - Kenosha Country Club (REVISED DATE!)

November 3 (Saturday) Couples Evening - Green Bay

Nov 28th - 29th - 53rd Golf Turf Symposium - American Club

Visit our website at [www.WGCSA.com](http://www.WGCSA.com) for the most up to date calendar and registration forms.

### GOLF TO WATCH

June 22-24: Champions PGA Tour - American Family Insurance Championship, University Ridge Golf Course, Verona

July 3-8: LPGA - Thornberry Creek LPGA Classic, Thornberry Creek Golf Club, Oneida

July 12-15: USGA - Inagural Senior Women's Open Championship, Chicago Golf Club, Wheaton, IL

July 23-26: WSGA - 117th Wisconsin State Amateur Championship, Minocqua Country Club, Minocqua

Aug 10-12 Symetra Tour - PHC Classic, Brown Deer Park Golf Course, Milwaukee, WI

August 20-22: WI PGA - 98th Wisconsin State Open, North Shore Golf Club, Menasha



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### It's Just Weird

By David A. Brandenburg, Editor, The Grass Roots

What can you say about Spring 2018? I think weird describes it best. It had a early hints of warm weather followed by rain, cold snow, rain, more snow and rain. Northern counties were begging for rain for awhile and in the past few weeks they have had record rains with major highways washed out, parts of the south west including Madison have had multiple 3" storms while here in Fond du Lac we were getting dry before a nice 1/2" rain Friday the 15th.

There has been no rhyme or reason or pattern with the rain storms the past month. We have seen storms just sit and spin in once place, move east to west and pretty much every other direction. Days the weather forecasters said there was not a chance of rain places were deluged and days the rain forecast was in the 80% range we saw sunshine.

I guess no matter how much we want to control the weather we can only do our best to cope with what mother nature

gives us.

\*\*\*\*\*




The turf world mourned the loss of Dr. James Beard who passed away May 14th at the age of 82. In the age before the internet and books were our main source of information Dr. Beard wrote the "Bible"

for turfgrass managers with his *Turf Management for Golf Courses*.

Dr. Beard started at Michigan State and then later Texas A&M University and received numerous awards and honors including the USGA Green Section Award in 1989 and the GCSAA Distinguished Service Award in 1993.

\*\*\*\*\*

This issue is a bit late due your editor just not finding time to edit or do anything else in this mixed up spring. One would think offices and shops would be cleaned and organized with every corner and feature polished and put away around a maintenance facility after the slow spring and ample inside time. At least here in Fond du lac that is not the case and we seem further behind than ever.

But summer is here, the staff is becoming trained on a variety of tasks and it is downhill to fall! Well maybe. Best of luck to you and your staff this summer! 

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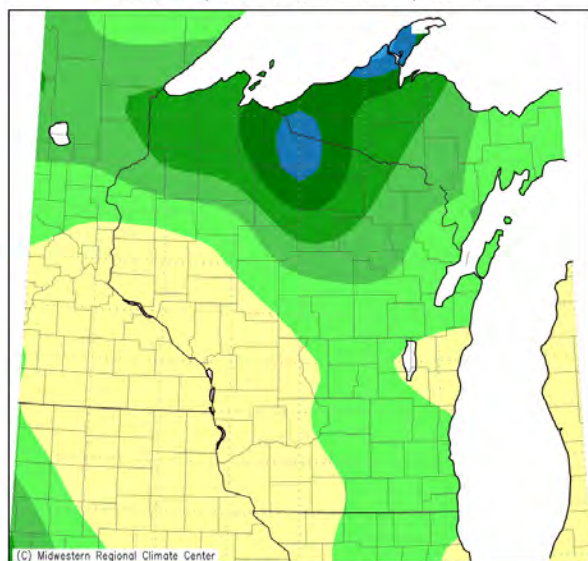
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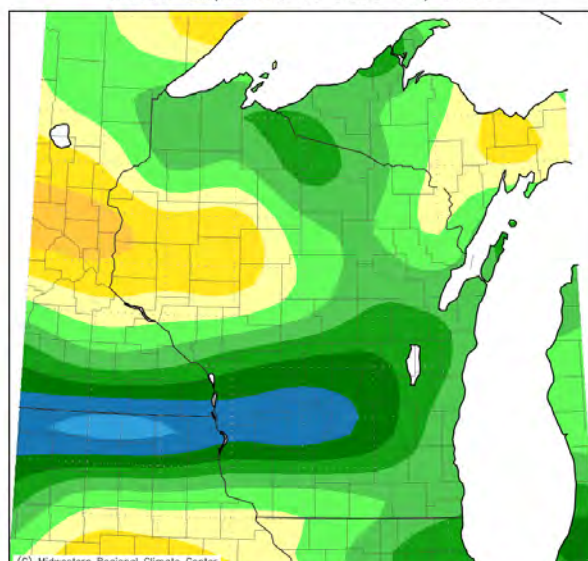
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# EDITOR'S NOTEBOOK

Accumulated Precipitation (in): Departure from Mean  
June 11, 2018 to June 17, 2018



Accumulated Precipitation (in): Departure from Mean  
March 20, 2018 to June 17, 2018



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The weather maps above show the 7 day (left) and 90 day (right) precipitation means compared to average. Some areas have received ample moisture while others are behind for the spring.

The temperature maps are not included and although we have had some recent warm weather we have averaged out after the cold spring.

Some of our phenological events such as tree blooming, cottonwood seeding and even poa annua seeding were behind for much of the state this year.



Congratulations to Matt and Rosa Kregel and their daughter Isabel for being awarded a Garske Scholarship. Isabel is in the middle of the picture at her recent graduation from Grayslake North High School and will be attending the University of Iowa, majoring in journalism and mass communications. Good luck Isabel.



## Wild Rock Hosts June Meeting

By David A. Brandenburg, Editor, The Grass Roots

Mike Blazich, Golf Course Superintendent at Wild Rock Golf Club was our host for the June meeting. Wild Rock was designed by Michael Hurdzan and Dana Fry using part of the property that used to be the Wilderness Golf Club. The new club provides a great mix of woods, quarry, water features and dramatic elevation changes.

Andy Staples of Staples Golf Design was our morning speaker and although his main offices are in Arizona and California Andy is from Wisconsin and got his casual start in the business designing a beach front green with multiple tee angles at his families northern Wisconsin vacation cottage.

Andy studied Landscape Architecture at the University of Arkansas and spent time with Wadsworth Golf Construction and a couple design firms before starting Staples Golf in 2003.

Staples is currently working on a new short game practice facility at the University Club (Formerly Tripoli CC) to be used by members and the Marquette

Golf Team.

Staples discussed his work with clubs developing tee “equity” and has found the traditional women’s tees or red tees are often too long for the swing speed and driving distance of the average woman. He has also worked with clubs to get away from the traditional Red White Blue tees for names or numbers that are more inviting for players to try forward tees without the embarrassment of a man on the red tees.

He discussed a concept favored by Dr. Trey Rodgers out of Michigan State using variable greens mix depths to reduce dry and wet areas on new putting greens. For instance the high areas may only have 8” of mix while the low areas have 14 to 16 rather than the traditional 12 throughout the green.

Staples finished up with a discussion on bunker drainage where he has had success getting away from the traditional herring bone system in favor of a circular 3” drain line with a center main backfilled with sand. Both the bunker

drain design and variable depth greens construction method depend on the “water release curves” of the sand mix used. Andy provided a informative talk and we thank him for taking some time to visit with us.

After a sandwich buffet it was time to hit the links. The day offered a mix of sun and humidity followed by rain, more sun and humidity and more rain. Most groups were able to finish the day, although a bit wet. I did find I need new grips on my clubs or at least rain grip gloves and wearing glasses in the rain and humidity is a challenge. I am not sure if my club hit the ground 6 inches before my ball because I couldn’t see or because it slipped out of my hand but either way I am blaming the rain.

After the two man scramble we returned to the clubhouse to tabulate the results and enjoy some Hors D’ Oeuvres.

Thank you again to Wild Rock for having us and to Mike Blazich, John Gallus and the entire staff for their hospitality. 🌱



Host Superintendent Mike Blazich has been at Wild Rock since construction started.



Above: Andy Staples provided our education on golf course design, layout, practice facilities and new construction methods.

Right: Matt Lindgren studies the line while Robert Rivera makes the putt on hole 13.

Below: Joe Jehnsen, Mike Upthegrove and Seth Brogen enjoy after golf refreshments and Hors D Oeuvres.

## 2 Man Scramble at Wild Rock

1st Gross - Nic Johnson & Dennis Dary  
2nd Gross - Darren Armstrong & Tom Speltz

1st Net - Cubby Obrien & Dave Bussey  
2nd Net - Brian Baker & Mark Petitgoue

Blind Draw - Phil Spitz & Jordan Moch  
Blind Draw - Matt Kinnard & Brandon Nebl

## Hole Event Winners

Closest to the Pin - Rod Johnson, Shawn Reimer, Brandon Nebl, Dennis Dary  
Long Drive - Tom Speltz, Matt Lindgren  
Long Putt - Jordan Mock, Spenser Grams







Above: Hole 15 features 6 different tee boxes with 6 varied looks over the quarry to the green.

Below Left: Hole 12 is a challenging Par 4 well guarded off the tee by bunkers left and right along with a rock wall right.

Bottom Right: Hole 8 provides for a shorter Par 4 although it seemed longer in the rain. The hole is protected left and right off the tee by bunkers.

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## FLAG EVENT SPONSORS

Clesen Pro Turf  
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National Golf Graphics (3 events)  
Reinders  
Syngenta







The Par 3 9th hole shown from the tee and looking back from behind the green plays to 211 yards from the back tees with bunkers left and right.



Above: Hole 18 Greensite is well protected by bunkers right and behind.

Below: One of the Woods Executive Golf Holes from 3 Tee. The course has 3 sets of tees playing 1887 to 1379 yards for the 9 holes. The adult tees are Par 30, while the Juniors are rated at Par 37



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