

HOLENOTES

The Official Publication of the MGCSA
V. 58, #6 December 2023



MGCSA Grant
Program: Piper Hills

Behind the Scenes
at GCSAA

UMN: Plant Available
Water Thresholds



On the Cover:
2023 MEGA Seminar
On this page:
Outgoing board members Matt
Cavanaugh and Geoff Jordan.

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HOLENOTES

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December 2023

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Presidential Perspective

By: Mark Michalski
Chisago Lakes Golf Course



2023 is quickly coming to an end. The older I get the faster the years seem to go by. This past year was my eighth season as a Superintendent and my twenty-first working at a course. Does not seem very long ago that Norma was teaching me how to mow greens with our Greens King IV at Silver Bay Golf Course. I mowed the ninth green first and put down about a fifteen-foot scalp on my last pass on the green. Guess I got overconfident too quickly, Norma said everyone does that when they learn, but try not to do it again.

She was right, everyone does do that when you start. I have told that story to pretty much everyone that I've ever taught to mow greens, or mow anything quite frankly. Thankfully, I had a great first boss in this business that passed on a passion for the business. There is nothing better than watching the sun rise and the good night's sleep you get after a hard day's work outside. I hope we can all pass on the passion for the job to the kids that come to work for us.

I'm excited about the money

we were able to give away this past year for turf scholarships. At the February BOD retreat we made a plan to do our best to give back as much as we could to the membership. Giving out a \$35 event credit to each member (please use yours if you have not), giving \$16,392 to six MGCSA member courses for projects at their facilities, also we pledged to give money towards turf scholarships for folks on our crews. We gave out just under \$10,000 towards this in addition to the traditional Garske and Legacy scholarships. The board desires to give back to the membership and we plan to continue those programs in 2024. Please apply for a grant at your course, please encourage your staff to apply for scholarship money.

Please make it a point to circle March 12th on your calendar for the Golf Industry Day at the Capitol. Consider making a strong effort to bring golfers from your course with you. I strongly believe that we won't get anywhere at the capitol until we start getting the golfers to come with us

and be the voice to our elected officials. If a hockey rink wanted something at the legislative level, I don't think sending the "maintenance guy" there on his own would accomplish a whole lot. No, the parents and players going and speaking would be the ones making an impact. Same thing for us, we must get those having recreation on the turf we maintain, to be the ones to speak about what the game means to them and how decisions may negatively or positively impact them.

Lastly, I hope each of you are able to enjoy the winter. We heat our home with wood and splitting and stacking wood together is one of my kids favorite activities. Everything is a competition, whether it's stacking wood, dragging brush to the burn pile, soccer, or the nightly game of UNO Flip before bed time, it's just great to spend time and invest in their lives. As I said earlier, the years seem to fly by way too fast. Take some time to take a deep breath and enjoy time with family and friends. Hope to see you all at the Northern Green!

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Turfgrass Apprenticeship Program

UNIVERSITY OF WISCONSIN-MADISON

The University of Wisconsin Turfgrass Apprenticeship Program (TAP) consists of a 12-week, in-person educational bootcamp and a field-based apprenticeship at a golf course, athletic facility, or other turfgrass facility. The program provides participants with the hands-on, real-world experience needed to succeed in the turfgrass industry. Successful completion of both the bootcamp and the apprenticeship is required to earn the Turfgrass Apprenticeship Program Certificate.

Step 1: Educational Bootcamp

The bootcamp takes place over two 6-week terms during the late fall and winter. The fall term will begin the first week of November and end in mid-December. The winter term will begin the second week of January and end in late February. Each week will have class on Tuesday, Wednesday, and Thursday from 10 AM until 3 PM CST with a 1-hour break for lunch.

Program cost is the same for in-state and out-of-state students. Check the website for current rates. Housing is not provided by UW-Madison, but we provide a number of affordable hotel options in the Madison area.

Significant scholarship funds will be available to support student tuition and housing costs from a variety of turfgrass associations. More information on scholarships and how to apply for them will be provided in the first week of class during the fall term.

Step 2: Field-based Apprenticeship

Students in the TAP are required to complete a field-based apprenticeship at a golf course, athletic complex, or other turf management facility of their choosing. A list of tasks to complete during the apprenticeship have been developed in cooperation with associations in the turfgrass industry and can be viewed on the program website.

How to Enroll

Please visit <https://turf.wisc.edu/academics/> and add your name to the enrollment form. Alternatively, contact Dr. Soldat or Dr. Koch via email (djsoldat@wisc.edu / plkoch@wisc.edu). The deadline for enrollment in the fall term is October 15th.



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GREAT LAKES SCHOOL
OF TURFGRASS SCIENCE

Great Lakes Turf School registration is now open! The 2024 session will begin on Monday, January 8th and run through Wednesday, March 27th. Register soon.

[Register Here!](#)

MGESA Stewardship Grant Program



2023 Grant Recipient Project Review

***Piper Hills Golf Course
Plainview, MN
Member: Steve Sawyer***



Piper Hills Golf Course – Waterway Enhancement Project

2023 was the start of our third year of ownership of Piper Hills Golf Course located in Plainview, MN (9-hole course). The first two years were focused on updating the greens, tees, and equipment. Year three project funding was to focus on solving a water problem the course has had for years. The south end of the course has two ponds that we installed many years ago. They fill up quickly and then water backs up on the course after only a small amount of rain. When this happens, we need to either shorten holes 1, 2, 3 and 4 with temporary greens and tees or if possible, install ramps to enable golfers to travel over a very narrow culvert back to the greens and tees.

We worked with a local contractor to determine the best way to handle the water that comes from 200 acres of surrounding farmland west of the course. It was determined that we should remove the two ponds and rebuild the waterway to

push the water off the course as quickly as possible. Work started in early November and took 6 days to complete using a D6 dozer and skid steer. The two old ponds were filled in. A new pond was added to capture runoff from a field just south of the course that was a constant problem with mud and field residue. This pond backs up against a road and does not cause issues with the course.

Dirt from the waterway work was used to double the size of a par three tee box. Two hundred and fifty pounds of grass seed was injected into the 1500-foot waterway and surrounding dirt that was spread on holes 1, 2, 3 & 4 to improve drainage. Straw blankets have been laid in the waterway to hopefully protect the work from erosion during the spring runoff. We are very grateful for the Stewardship Grant that the MGCSA provided us with. This was an expensive project that needed to be done to enable us to continue to grow the popularity of our course in SE MN.





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| •900 Best Signature 100% Crushed | White |



Golf Construction Sand Mixes

Our mixes all use USGA sand and a combination of fine grade peat and screened black dirt. Chose one of our popular mixes or we can custom blend one.

- USGA Coarse Gravel - A great bridging rock used as a drainage layer.
- Construction Sand & Peat Mixes - 50/50, 60/40, 70/30, 80/20, 85/15, 90/10
- Construction Sand & Black Dirt Mixes - 50/50, 70/30, 80/20
- Construction Sand/Peat/Black Dirt Mixes - 1-1-1, 60/20/20, 70/20/10, 80/10/10



Cart Path & Road Base

- 3/8" with fines river rock
- Class II buff limestone or red rock
- Class II, III, IV crushed granite
- Class 5 gravel
- Recycled concrete, crushed asphalt, conbit

Bagged Products

- Dry topdressing sand
- Dry tournament topdressing sand
- Dry green topdressing sand
- Dry early-green black topdressing sand
- Dry 70/30 green divot mix



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Horticulture Products

Our mixes contain highly sought after ingredients like composted pine bark, peat and screened black dirt. They are ideal for flower beds, tree and shrub growth or whatever growing application you may have.

Our soil amendments are mixed with existing soils, and promote healthy root growth and water retention.



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- Retaining Walls
- Firepits/Outdoor Fireplaces
- Boulders
- Monument Stones
- Water Features

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- End Dumps
- Dump Trucks
- Truck & Pup
- Clam Trucks



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Behind the Scenes

By: Randy Robinson
Central Plains Field Staff
Representative

When you hear the words “behind the scenes,” the first thing you probably think of is movies, tv shows, or maybe theater. At least that is the first thing that comes to my mind. We often forget the “behind the scenes” work that is going on all around us. The definition of this phrase is “out of sight of the public at a theater or organization.” There it is, an organization, that’s the part I want to talk about.

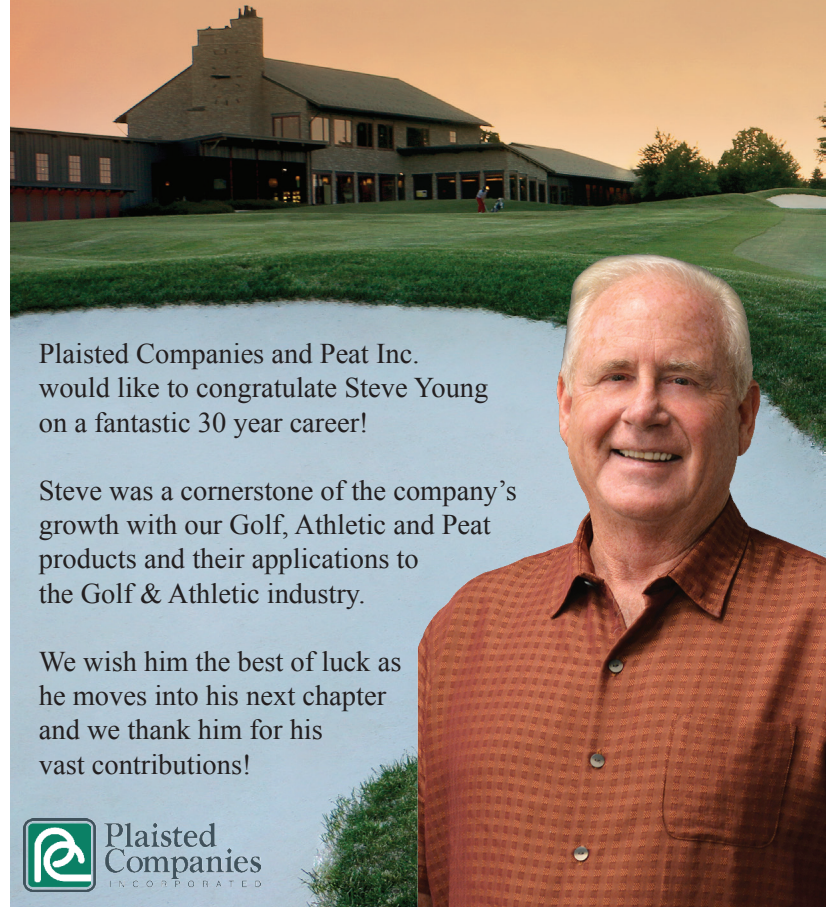
It’s everywhere in the world. Take for example my wife’s job. She is

the Director of a very successful childcare center. Most parents walk in and see her working away in her office and greeting everyone who comes in that day. Every kid knows her, and every parent knows her. She’s not a teacher (not all the time anyway) and everything she does is “behind the scenes”. From payroll to staffing, marketing, social media, early closures, curriculum, human resources, accounting and so much more that I could list. What people see is not what should define them.

Congrats Steve!

The Golf Course Superintendent Association of America (GCSAA) is an organization with as much “behind the scenes” work as you will find. As a golf course superintendent or staff member, you see emails, magazines, conferences, your field staff representative, and a significant bill for your dues every year. What you don’t see are the many employees who look out for your interest daily. We have departments for everything, and we all strive for the same goal. Our mantra is “Everyone Paddles” meaning we move in the same direction, together, as a team. Many of these employees will never meet most of our members, but they are all the same. This is most evident when we host the leadership symposium, delegates’ meeting, board meetings, and committee meetings every year. When you are at headquarters, you get to meet everyone. You will be in awe of the amount of work being done and you will leave feeling very good about your membership and its value.

How about you, the Golf Course Superintendent? How much



Plaisted Companies and Peat Inc. would like to congratulate Steve Young on a fantastic 30 year career!

Steve was a cornerstone of the company’s growth with our Golf, Athletic and Peat products and their applications to the Golf & Athletic industry.

We wish him the best of luck as he moves into his next chapter and we thank him for his vast contributions!



behind-the-scenes work are you doing? You try to get most things done ahead of the golf rush daily. Golfers think you just grow grass and mow the grass. We all know that isn’t true. If you are like me and come from a northern climate, they might think you sit on your hands all winter. Again, that’s not true either. Things are better than they used to be when it comes to the member’s knowledge of what we do, but it could be even better moving forward. That

brings me back to the GCSAA. That's what we do, we advocate, we educate, we promote, and we shed light on you behind the scenes. Sometimes you don't think it or feel it but, I SEE YOU.... WE SEE YOU and we like what we see. Thanks for all that you do for this wonderful industry!

Speaking of "seeing you," I'd love to see you all at this year's Conference and Tradeshow in sunny Phoenix, AZ. We have an action-packed agenda with something for everyone

around every corner. You can register at <https://www.gcsaaconference.com>.



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MGCSA National Hospitality Night

Wednesday, January 31, 2024
6:00 - 9:00 PM
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MONDAY Pre-Conference Sessions:

PLT Relicensure and Pesticide Recertification will be available on Monday, January 22 at the Saint Paul RiverCentre.

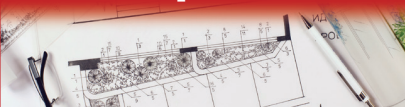
TUESDAY, JAN. 23

Community day for these Villages with a full day of focused education:

↕ Landscape/Hardscape Contractor



↕ Landscape Design/ Landscape Architecture



↕ Water/Irrigation



↕ Golf



↕ Management Path

Management level courses will be available on this path to pop into and out of throughout the day.

WEDNESDAY, JAN. 24 Dedicated trade show day!

TRADE SHOW 9:00am-5:30pm

BLOCK PARTY 5:30pm-7:30pm

THURSDAY, JAN. 25

Community day for these Villages with a full day of focused education:

↕ Turf, Grounds, & Snow Management



↕ Garden Center/Grower



↕ Professional Gardening Services



↕ Tree Care/Arborist



↕ Management Path

Management level courses will be available on this path to pop into and out of throughout the day.

Watch NorthernGreen.org to keep up with the latest details...

SPECIAL THANKS TO OUR GENEROUS NORTHERN GREEN 2024 SUPPORTERS:



Northern Green Golf Village Social

Tuesday, January 23

3:15 - 5:00 PM

317 on Rice Park

Join your colleagues at this year's Northern Green social event on Tuesday, following the full day of golf education. Event will be similar to former Beer and Pretzels event, with drinks and light snacks available.

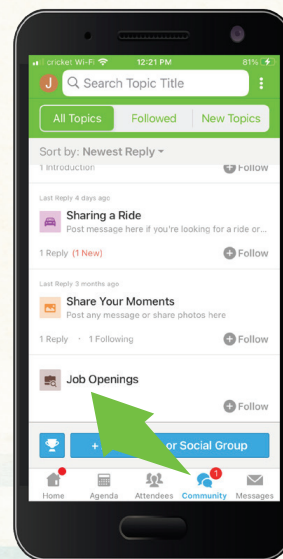
Event is free for all golf attendees!

Please RSVP online for this event, so we can better gauge the needs for food and drinks with the new format.

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Job Boards are no longer part of the physical show—they're now in the app. Your listing stays posted before and after the show! Click on **Community** at the bottom, then scroll down to **Job Openings**. Search openings already posted, or fill in the form to post opportunities at your company.

The Northern Green Job Board is on the app!

MEGA Seminar

Over 100 of your peers took in education across several areas of professional development at this years MEGA Seminar. Thank you to our host Betsy O'Donnell, the Rush Creek Staff, and all of our presenters and attendees.





Above: 2023 DSA Recipient: Fred Taylor, CGCS

MGCSA ANNUAL MEETING

Bottom Left: 2023 Watson Award Recipient: Wade Huesman
Bottom Right: 2023 Outgoing President: Matt Cavanaugh





**Above Left: 2023 Don White Champions:
Riley Soderstrom, Victory Links & Maxton Kelly, TPC**
**Above Right: 2023 Don White Runners-up:
Ryan Popp & Craig Hendrickson, SiteOne**

Below: 2024 MGCSA Board of Directors: Adam Lesmeister, Kyle Stirn, Mike Sonnek, Nikk Dickerson, Mark Michalski, Sally Jones, and JT Hauser (Not pictured: John Cameron & Jacob Dixon)



SE Minnesota Winter Outreach The Jewel Golf Club

Monday, January 8th, 2024

Host: Lucas Grieves

8:00 - 12:00

- 8:00 Welcome/MGCSA Update
- 8:30 UMN Research Update
- 8:45 Fertilizing Turf near Shorelines
- Jon Trappe, UMN
- 9:30 DNR Water Appropriation Permitting,
Drought, Permit Suspensions
- Dan Miller, DNR
- 10:30 Forum Discussion
- 11:45 Lunch

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2023 MGCSA Member Event Rebate Program



The MGCSA Board of Directors is working hard to reduce limitations to participation. In-person events are essential to the growth of our industry and the professionals within it. MGCSA has the opportunity to support those engagement efforts by implementing a member rebate program this year for all class members. We are offering an event registration rebate of up to \$35 to all class members. This will allow for free or reduced entry into one of our association events!

Use Rules:

- Must be active MGCSA Class member. Use will be monitored and recorded. One time use only, regardless of event registration costs, no redeeming cash value.
 - If using credit, the individual must register separately by choosing that ticket option when signing up for an event and entering the promo code below. Member cannot use credit within a group registration.***
 - Credit use window has been extended through November 1, 2024.
 - Applicable to most MGCSA events, except Don White Match Play, The Wee One, and The Scramble.
-

**WINTER OUTREACH, ASSTS PRO FORUM, AND
SHOP TOUR EVENTS WILL ALL HAVE REBATE
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Roll It Forward

By: Sam Bauer



Thanks to Corey Heasley for nominating me. Corey and I have a long history and it's fun to look back on. That picture on the last page of his article surely brought back some fond memories. For me, that's where it all began.

Mill Run Golf Course in Eau Claire, WI was pretty much

your run-of-the-mill property. It's where I grew up from the age of 15 to 19. The first superintendent I worked for was a gentleman named Bob Steele at Mill Run. I don't tell too many people this, but I started out on the flower crew when I was 15. The head gardener was a friend of my mom's, and she



Photos provided by Sam Bauer



would pick me up every morning and drop me off after work. I owe Betty Imler for getting me my first job on a golf course.

During that first year at the course, a second 18-hole course called Wild Ridge was being constructed. The man appointed for the grow-in was Barry

Hines, fresh off the grow-in at Kilkarney Hills in River Falls, WI. I remember my interview with him like it was yesterday. I had to get off of the flower crew, and to my surprise, he obliged rather quickly - and so, it began. Twelve-hour days, five to six days a week. You couldn't get me out of there at the end of

the day. Three of my best friends also got jobs there that summer including Nick Peinovich – now superintendent at Eau Claire Golf & Country Club - and they called the four of us the Durand boys. Nobody worked harder than the Durand boys. A reputation we fought hard to uphold for several years to come.

With some serious encouragement from several mentors at the time, including Barry, Ross Pudenz, Darren Gilgen; and some friends like Nick Peinovich and Corey

Heasley, I was bound for turf school without a doubt. After a stop for my freshman year at UW-River Falls, working at both River Falls Golf Club (mornings) and Swede's Service Station (evenings), followed by Mill Run/Wild Ridge (weekends), Barry encouraged Nick and I to take a hard look at the University of Minnesota for turf school. He lined up a tour with Dr. Jon Powell, the turf pathologist there at the time; Dr. Brian Horgan was a recent hire and was just getting settled in. Dr. Don White was lecturing and



Picture 1



Picture 2

researching some then as well. I was fortunate to be able to sit in on one lecture from Dr. White, it was very fascinating for a young aspiring turf geek.

Nick and I would be little fish in a big pond, heck we were from small town Durand, WI, but we were intrigued. We both applied, made the cut, and were on our way. We took school seriously. Yada yada. Some beers were had. Yada yada. We skipped class to go fishing a bit too much. Yada yada. We got degrees. Somewhere in the mix, at the encouragement of Barry again, I did an internship for Kevin

Ross at the Country Club of the Rockies in Edwards, CO (Picture 1). Kevin doesn't mess around, he's a no bullshit dude. I went in there as a Durand boy, but I cut my teeth at CCR. At times I felt like the six holes I was responsible for were watered exclusively with my hose. Did we have an irrigation system? Did it ever get turned on? I remember busting my butt hard to get holes 2, 5, and 8 watered, so I could spend as much time as possible on my most prized hole, number 14. The bunker faces on that hole used to dry out so much, but I had it under control. I remember Kevin driving



by one day, calling me on the radio, “Sammy, #14 looks decent, I give you an A- and I grade really hard.” I was on top of the world.

Following my junior year of college, I worked as an assistant superintendent doing a grow-in at Victory Links Golf Course in Blaine for the superintendent at the time, Jeff Reich. I learned a lot from Jeff. It was this summer, 2004, that I transitioned from a worker to a manager. There were a lot of moving parts with this grow-in, and I feel like a rose to the challenge. I worked for the U of M turf program for most of my

schooling, greenhouses in the winter and field plots in the spring and fall. I loved it. Initially I reported to Troy Carson, now with The Toro Co for quite some time. I remember mowing turf plots at night for a dollar spot and dew removal study directed by Troy. After Troy, I worked for Andrew Hollman, I learned a ton from him too. It was around this time that Dr. Eric Watkins was hired. I believe Eric knows his role in my career success.

After my senior year, with some tutelage from Drs. Horgan and Watkins, I became interested in research and ventured

into graduate school on an assistantship. That was a great summer for me, followed by fall and winter research and classes.

In the spring of 2006, I began to miss working on a golf course. Plus, I was bitten by the muskie bug like no other. A person could only comprehend the depths of my muskie addiction by reading a book like Pete Maina's "Muskies Suck." It's not necessarily something I was proud of at the time, but it's all I could think about. I've had a love/hate relationship with muskies since I was 10 years old. Thankfully, I've relaxed a bit on the whole muskie thing, bringing some sanity and stability to my

life, thank God. Half joking here. In the spring of 2006, I moved to Hayward, WI and worked for Tod Blankenship at Big Fish Golf Club. Tod took me under his wing, and we've been good friends since. I used to go to sleep right after work until about 7 or 8pm, then I'd fish all night long on Grindstone Lake where I was staying at my grandparents' cabin. I would show up at the golf course at 2am and sleep until the mechanic, Don Adams, woke me up when he got there. That winter I worked again for the U of M turf program and the Minnesota Turf and Grounds Foundation. In the spring I did a short stint at the River Falls Golf Club as an assistant and

Lazy Bone Golf Club and David Vadnais, the real guy in charge there



mechanic, then I ventured off on an opportunity in SE Asia.

The 2008 Beijing Olympic Equestrian Events were held in Hong Kong (Picture 2). Through some prodding from Dr. Horgan and Jack Mackenzie, I jumped on a plane for an interview with Chip Lewison and Randy Witt at the Hong Kong Golf Club to be the Olympic Equestrian Course Superintendent. I'm not a good enough writer to even begin to describe what was going through my mind. The environment, the people, the language, the smells; it was a sensory overload. For a small-town Wisconsin boy who wouldn't eat at the China Buffet, this would be the boldest move of my life. With a lot more yada yada's, a successful Olympics, a year stint at Kau Sai Chau Golf Course on an island working for Christine Chan, yada yada, and being blessed by mentorship from Darry Koster of Clearwater Bay Golf and Country Club, I was off to finish my M.S. degree under Dr. Horgan.

Degree in hand, my next stop was the TPC Sawgrass in Ponte Vedra Beach, Florida working

as an assistant superintendent on Dye's Valley course for Andy Burrow. This was 100% a position secured for me by my previous boss, Jeff Reich. Upon Jeff's departure as the Stadium Course assistant superintendent, I filled the vacancy and began to puff my chest out quite a bit. I was a 1st assistant superintendent at the TPC Sawgrass responsible for the back nine holes of the Stadium Course. Are you freaking kidding me, this is awesome! The island green, #17, was under my watch (Picture 4). I was a bull in a China shop, a caged tiger, every day. I loved the pressure of THE PLAYERS Championship, tournament time, just the straight up intensity. Interns who worked for me at the time likely don't remember it as fondly. I was ruthless. I think I felt like I needed to be. It was important to me.

Accepting an Extension Educator position in turfgrass science at the University of Minnesota helped to lower my blood pressure a bit. I replaced a dear friend and mentor, Mr. Bob Mugaas, who held the



Picture 5

position for 33 years - big shoes to fill. With the help of Drs. Horgan and Watkins, I collaborated on \$7.8 million in grants, provided hundreds of presentations, produced ten peer reviewed articles, and passed on some good turf management practices along the way.

After six years with the U of M Extension, it was time to do my own thing. I made some phone calls, lined up some business, and quit my job with nothing to lose. I was single and had a hunger to work my ass off to make some money. I had several projects to make my pie whole,

as my buddy Bruce Williams calls it. Bruce of Bruce Williams Golf Consulting and Executive Golf Search has mentored me over the twelve years I've known him via our Breakfast with Bruce online chats (he calls Hour with Bauer), our golf tournaments, and our fishing trips. I admire Bruce, what he stands for, and how he got to where he is. I put our friend Roger Stewart in the same category.

Fast forward, 5.5 years since I quit my job, business is great. One of my main roles is as a professional turf specialist with Ramy Turf Products. Ramy is a

smaller, family-owned business with branches in St. Paul, Mankato, and Rochester. The owner, Mike Ramy Jr., used to donate quite a lot to the U of M Turf program and we became great friends over the years. Additionally, I operate BauerTurf, LLC a consulting, education, and research business, Great Lakes Agronomy, LLC with Dr. Horgan offering the Great Lakes Turf Schools, North Central Sod in Pelican Rapids (Picture 5), Executive Director of the North Central Turfgrass Association based in Fargo, superintendent of

Lazy Bone Golf Club in WI, and a private GC near Detroit Lakes. I teach Turfgrass Operations at Florida Gulf Coast University to approximately 40 Professional Golf Management Students in the spring and fall and am a teaching specialist at the U of M, teaching turfgrass science the past two fall semesters. If there is any way that I can help you out via one of these endeavors, please reach out. The premise of this article is why you joined the industry, what you enjoy most, and what keeps you motivated. I enjoy the

One of the biggest muskies of my career, 52 incher fishing solo



people most, and I'm motivated by my family and friends and the desire to just kick life in the teeth. Life, this is it. This is our one shot to be the best version of ourselves that we can be. I thank God and Jesus Christ for the opportunity to be the best version of myself every day.

“Go out there, grab the world by the tail, pull it down, and put it in your pocket,” as my man Matt Foley would say. I want to Roll it Forward to my buddy Matt Schmid. I've known Matt for well over 15 years

now. Matt's a family man, a businessman, and an all-around great guy. What I like about Matt is if he tells you he's going to do something, he does. I can't say that about myself all the time. Matt owns and operates Superior Turf Services. He's on the board of the association I manage (Picture 6), the NCTGA, and we are kindred spirits from the CCR clan. He also aspires to be as good of a muskie stick as me; Grant Blumreich of Reinders has similar aspirations- sorry buddy, I got the floor. Keep it real gang. I appreciate you reading my story.



NE Minnesota Winter Outreach Two Harbors Curling Club

Tuesday, January 16th, 2024

Host: Norma O'Leary

8:00 - 12:00 (2:00 w/curling)

- 8:00 Welcome/MGCSA Update
- 8:30 UMN Research Update
- 8:45 Fertilizing Turf near Shorelines
- Jon Trappe, UMN
- 9:30 DNR Water Appropriation Permitting,
Drought, Permit Suspensions
- Dan Miller, DNR
- 10:30 Forum Discussion
- 11:45 Lunch
- 12:15 Curling



\$35

per person

Register at mgcsa.org

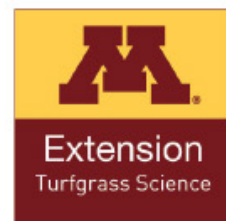
Lunch Supported By:



Event Supported By:



Supporting Partners:





**AND WE'RE
JUST GETTING
STARTED.**

For more information contact Jeff Schmidt at: jschmidt@pbigordon.com



MGCSA NEW MEMBERS - *November/December 2023*

Tyler Lewellyn	EM	Spring Hills Golf Club
Kroix Klingfus	Student	Rochester Golf & CC
Jeff Larsen	Class A	Greystone Golf Club
Beau Heiman	Class B	Hastings Golf Club
Jacob Klausung	Class C	TPC Twin Cities
Betsy O'Donnell	Class C	Rush Creek Golf Club
Tanner Knudsen	EM	North Oaks Golf Club
Parker Borreson	Class C	Bearpath Golf & CC
Logan Braun	Class C	Rochester Golf & CC
Tyler Kropuenske	Class C	Hazeltine National Golf Club
Austen Marudas	Class C	Interlachen Country Club
Scott Schunter	Class A	Cattail Crossings Golf Course
Edward Pietila	Class B	Swan Lake Country Club
Austin Wright	EM	Hazeltine National Golf Club
Noah Kraml	Class C	Hazeltine National Golf Club

Get to Know 'Em



Nathan
Beckman

*Moose Lake
Golf Club*

FACILITY INFO

Public or Private: Public

Number of Holes: 9 Holes

Full time employees: 1

Seasonal employees (not including full time): 6

Types of grass: 007 Bent, Poa, Blue, Rye

Greens acreage: 1.3

Tee acreage: 1

Fairway acreage: 18



PERSONAL TURF FACTS:

How many years have you been in your current position? First year

How many years have you been in the turf industry? 10 years as the lead, but 17 overall

Where else have you worked?
Enger Park, Proctor, Meadow Greens, Minebrook, Cloquet CC, Lakeview National

Turf School Attended (if any)? Anoka Tech

INDUSTRY THOUGHTS:

What is one “master plan” thing you would like to change at your golf course?
Utilize the space a little more, kind of compact, but there is room to expand some stuff. Greens and practice facility.

What concerns do you have the turf business and the future of golf? Finding employees, and keeping good employees.

What is needed to bring more young professionals into the industry? Maybe advertising a little bit more that its out there. A tough question for me, there’s so many things.

What piece of equipment do you want? Not a need, a want.
Toro 648 Aerator

FUN FACTS

Have you ever met a celebrity?
Who? Mostly NHL players, really close with Jamie Langenbrunner. Got to hold the Stanley Cup at his party.





Other players like Brett Hull, Wayne Gretzky, Curtis Joseph.

What is your favorite vacation spot? My duck camp in Middle River, MN. We spend a lot of time of there with the guys, pretty good year this year. Good to hang up there and get a way from it for a bit.

What is your favorite memory of starting your turf career? With the old tripex foot pedals, trying to do the cleanup, then I missed the pedal to stop the reels, and did about a 30 foot scalp in the collar. Then, the first time with the roller, I hit a flagstick, smoked it pretty good.

What is your favorite job on the golf course? I enjoy spraying,

I like getting on the sprayer and getting in the zone.

What is your least favorite job on the golf course? Probably weed whacking bunker edges and laying sod. Laying sod just gets old, then you have to keep an eye on it so it doesn't burn out.

Have you played any famous golf courses? Which ones? Baltusrol, Trump Bedminster, Panther Valley, Liberty National, Shinnecock, Winged Foot, Innisbrook.

Who is your dream foursome? Me, my dad, John Daly, and Seve Ballesteros.

What is one piece of advise that you've recieved in your career that still resonates today? It'll be there tomorrow, you dont have to be there sun up to sun down. Another thing, don't sweat the small stuff.

What are your concerns for the issues facing golf? Obviously water allocation, their going to be cracking down on it pretty hard, another thing I think is insecticides.



Don't miss the extended conversation with Nate on this month's Hole Notes Podcast!

If you would like to participate in a future Get to Know 'Em, please reach out to chris@mgcsa.org.



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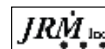
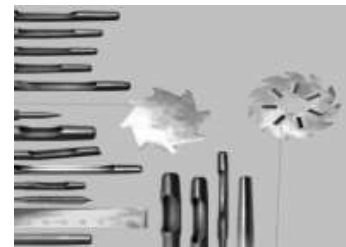
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- * Rollers for Cutting units





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Set a new benchmark in white grub and ABW control.

Introducing the unrivaled insect control of Tetrino™, the one insecticide solution that does the work of many by controlling not only white grub and annual bluegrass weevil but also a wide range of other turf-damaging pests. With flexible application timing, it even allows you to take a preventive or early curative approach to your pest management. Up your game with the new broad-spectrum control and fast-acting flexibility of Tetrino.

Learn how Tetrino can up your game against white grub and ABW at es.bayer.us/Tetrino.

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Nick White
Golf Course Superintendent



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Dollar Spot Brown Patch Anthracnose Gray Leaf Spot Snow Mold

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*Dollar spot, brown patch, anthracnose, gray leaf spot and snow mold were the five most common diseases according to a national survey among golf course superintendents.

GOLF COURSE MUSINGS

Share your strange, funny, and unique photos from your time on a golf course? Send your images to chris@mgcsa.org.



Check out the next generation of Greens "mower", brought to us by AI. Staffers Leg included!

2024 MGCSA Event Calendar

Mark these dates now to join us at an event in your area.

Northern Green Social

January 23rd - 317 on Rice Park (3:15-5:00)

The National

January 31st - AZ Wilderness Brewing Co.

Winter Outreach

January 8th - The Jewel Golf Club

January 16th - Two Harbors Curling Club

February 21st - Minnewaska Golf Club

February 27th - Bemidji Town & Country Club

Shop Tours

February 7th (see next page)

Assistants Pro Forum

February 15th - TopGolf

Golf Industry Day at the Capitol

March 12th - St. Paul

Summer Exposure Golf

June 3rd - Eau Claire Golf & CC (MN v. WI Border Battle)

June 10th - Detroit Country Club

July 24th - Minnesota National Golf Course

August 7th - Ma Cal Grove Country Club

SW MN - TBD

MGCSA Championship

September 9th - River Oaks Golf Course

The Scramble

TBD

The Wee One

October 14th - Brackett's Crossing Country Club



MGCSA SHOP TOURS



Wednesday, February 7, 2024
8:00 - 12:00
Mendakota Country Club
Highland National Golf Course
Town & Country Club

\$35
Per Person
Lunch Included



REGISTRATION COMING SOON!

Determining Plant Available Water Irrigation Thresholds

By: Ryan Schwab, Josh Friell, Gabe Olson-Jensen, & Eric Watkins
University of Minnesota



Precision irrigation in the golf course industry is commonly adopted as new technologies, philosophies, and research make water conservation measures more accessible. One of these practices, threshold-based irrigation, can conserve water while maintaining acceptable playing surfaces. This approach involves setting a soil moisture threshold, and once the soil dries to that value, irrigation will be triggered. Informally, many on the golf course already execute this practice by monitoring soil moisture quantified by volumetric water content (VWC) with a portable soil moisture sensor and watering areas that

have dried down to a certain VWC value or below. The introduction of in-ground soil moisture sensors has allowed real-time point measurements of soil moisture to be observed remotely. These can be favorably placed in areas that need constant monitoring and be a valuable tool for threshold-based irrigation by dialing in the “when” and “where” irrigation decisions. Availability of water to the turfgrass plant is largely dependent on soil type, as one rootzone may hold onto water tighter than another. Therefore, instead of using VWC as a metric for soil moisture, it may be more beneficial to use plant available

water (PAW). This is the amount of water between a soil's wilting point and field capacity. We can strive to keep our soil at a specific percentage of PAW much like we would with VWC to keep turfgrass at an ideal level of quality and playability. Both metrics can be useful and relate to each other, but they are fundamentally different (Figure 1). As water becomes more limiting in soil, it becomes more difficult to move through soil pores and into plant roots. Once the soil dries to a certain point, the pressure needed to move the water is too high for most plants

to access, and the permanent wilting point is reached. In this case, there is no water available for the plant, even though the TDR is showing some volume of water in the soil. With soil variability on the course, water and its availability to turfgrass will differ spatially. For example, a native soil fairway will hold water tighter than a sand-based green would, especially in dry conditions. A 15% VWC on a sand-based green might be 30% PAW, whereas a 15% VWC on a native soil might be 12% PAW. In the case of using VWC for setting soil moisture thresholds,

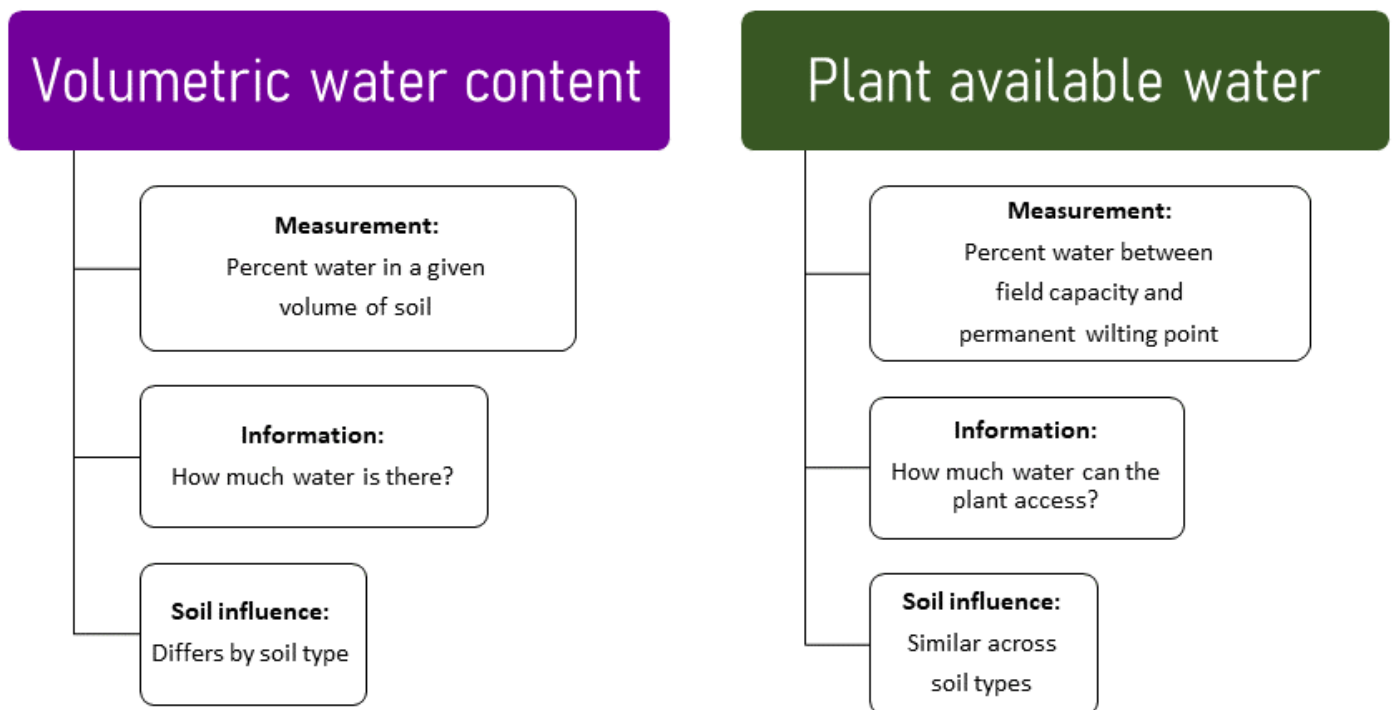


Figure 1. A description of the measurement, information gained, and potential soil influence of the soil moisture metrics volumetric water content and plant available water.

we'd likely need several different VWC values to cater to this variability. One soil moisture threshold across the course may be more efficient, and so for the last few years our research group has explored the use of PAW for threshold-based irrigation.

We recently finished collecting data on a two-phase multiyear research project evaluating responses of Kentucky bluegrass

and creeping bentgrass to varying levels of PAW at a fairway height of cut. The introduction of this project and some preliminary results were presented in the December 2022 issue of Hole Notes. Additional preliminary results from 2023 of the project's second phase will be presented here.

As a brief overview, the first phase of the project consisted of Kentucky bluegrass

and creeping bentgrass managed as a fairway. These were subjected to either drought or 100% evapotranspiration replacement. We performed three runs of this study under a rainout shelter, and two runs in a greenhouse (Figure 2). We measured a handful of turfgrass responses including green canopy cover, NDVI, light absorption, and plant stress. Soil moisture was logged by an in-ground soil moisture sensor in each plot every 15 minutes for the duration of the project. Since the soil moisture sensors reported

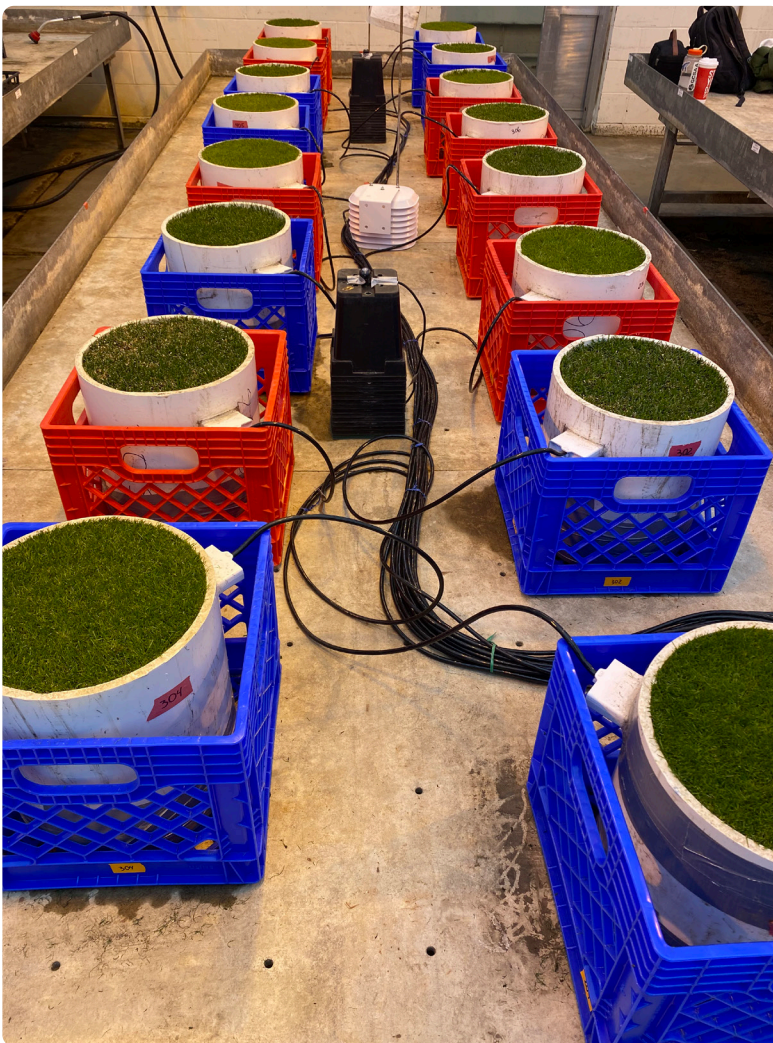


Figure 2. Creeping bentgrass and Kentucky bluegrass pots of the phase one project in a greenhouse.

VWC, our soil at the study location had to be characterized by a soils lab to determine the relationship between PAW and VWC. Declines in all the turfgrass responses were observed as PAW decreased in the drought plots. We evaluated the rates at which they declined to help us determine a range of acceptable PAW thresholds for each turfgrass species.

The second phase of the project explored which PAW level would be an appropriate irrigation threshold for each Kentucky bluegrass (cultivar Shamrock) and creeping bentgrass (cultivar Penncross) at fairway height. This phase was in an open field (no rainout shelter) to be more applicable to a real golf fairway situation (Figure 3). Instead of drought and well-watered treatments, we irrigated individual plots based on five PAW levels: 15, 30,

45, 60, and 75% PAW (these were the levels we determined based on results from the first phase of the project). Once a plot dried down to its assigned PAW threshold or below, it received a quarter-inch of water. The same in-ground soil moisture sensors as the first phase were used in each plot, and the soil was once again characterized for VWC and PAW relationships. For at least three months of the 2022 and 2023 growing seasons, moisture levels were checked daily, and the same data was



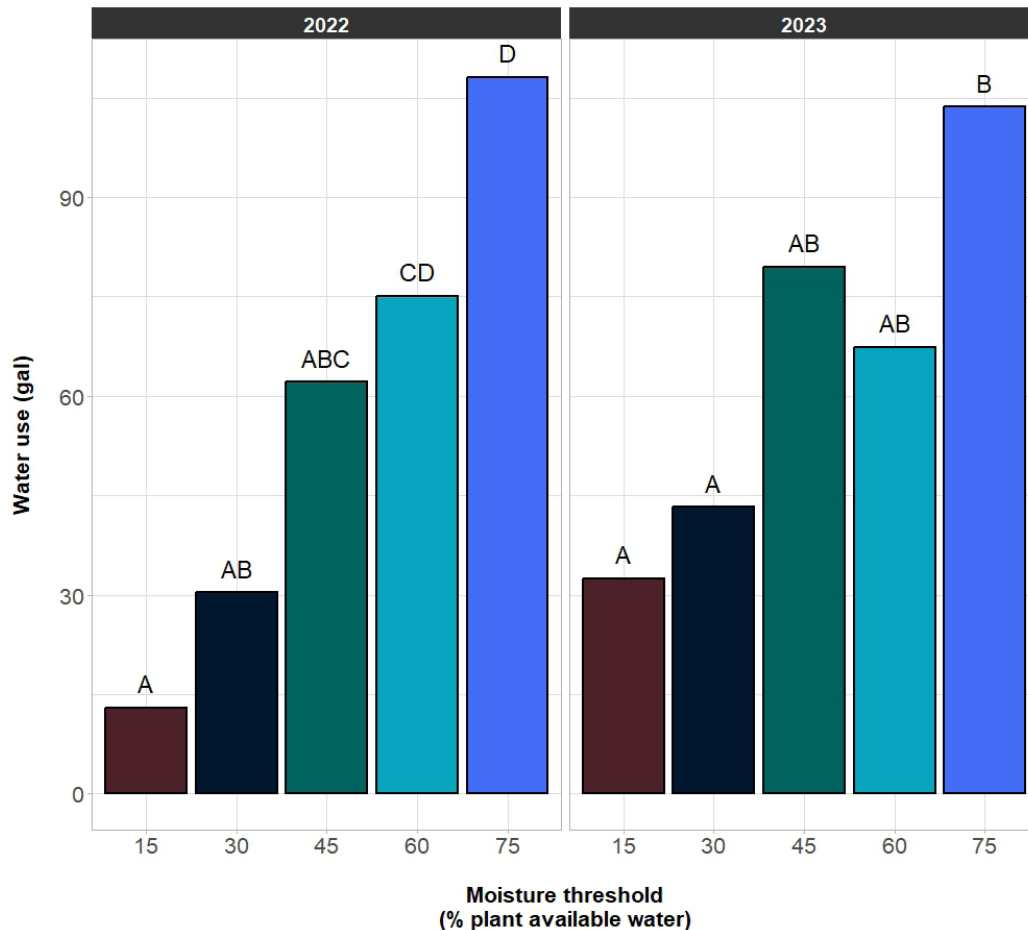
Figure 3. Creeping bentgrass and Kentucky bluegrass plots of the phase two project.

collected regularly as in the first phase with the addition of water use totals for each PAW level and surface firmness.

In general, plots irrigated at higher moisture thresholds used more water and remained softer and greener. The 15% and 30% PAW threshold treatments used less water than the 60% and 75% treatments in 2022 and used less water than the 75% treatment in 2023 (Figure 4);

however, this lower water use came at the expense of turfgrass quality. After the three months of our runs, we assessed the condition of the plots. Creeping bentgrass and Kentucky bluegrass had similar surface firmness and green canopy cover in 2023 but differed in their green canopy cover in 2022 (Figure 5). This may suggest that appropriate threshold-based irrigation using PAW may need to be adjusted by species.






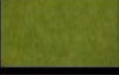
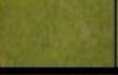
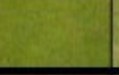


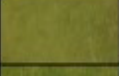
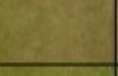
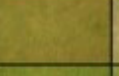
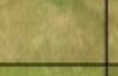



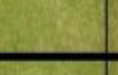






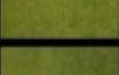

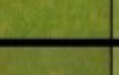

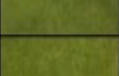

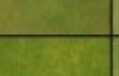
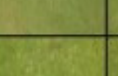
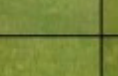

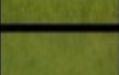

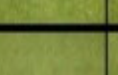
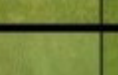











Figure 4. The total water use for each moisture threshold treatment by year, averaged across turfgrass species. Bars that share the same letter grouping are statistically similar.



Creeping bentgrass, for example, had a large variation in green canopy cover in 2022 ranging from 12-94% cover depending on the treatment. By contrast, Kentucky bluegrass green cover ranged 50-78%. This difference in green canopy cover ranges between species indicates the drought symptoms in creeping bentgrass may be more sensitive than Kentucky bluegrass; this also may be due to the cultivars chosen for this project.

Going into this project, we hypothesized that there would be at least one PAW threshold that could be too high, providing more irrigation than needed. Ideally, we would like to maintain high quality fairways without overusing water. Indeed, the 45% PAW threshold treatment performed similarly to the 60 and 75% PAW threshold treatments and used less water. The 45% threshold treatment used 43% and 23% less water than the

Figure 5. Raw image examples from 2023 phase two plots overtime by moisture threshold and species treatment (CBG = creeping bentgrass; KBG = Kentucky bluegrass).

Plant available water threshold	Species	7/3	7/31	8/14	8/28	9/11	9/22
15%	CBG						
	KBG						
30%	CBG						
	KBG						
45%	CBG						
	KBG						
60%	CBG						
	KBG						
75%	CBG						
	KBG						

75% threshold treatment in 2022 and 2023, respectively. In 2023, NDVI increased overtime in the 45, 60, and 75% threshold treatments, whereas the other lower thresholds stayed the same or saw a reduction. These results may have been impacted by the depth at which we irrigated once thresholds were reached. In our field, both 15 and 30% PAW were considered unacceptable for a threshold-based irrigation plan; however, a threshold around 45% PAW appeared to be more appropriate.

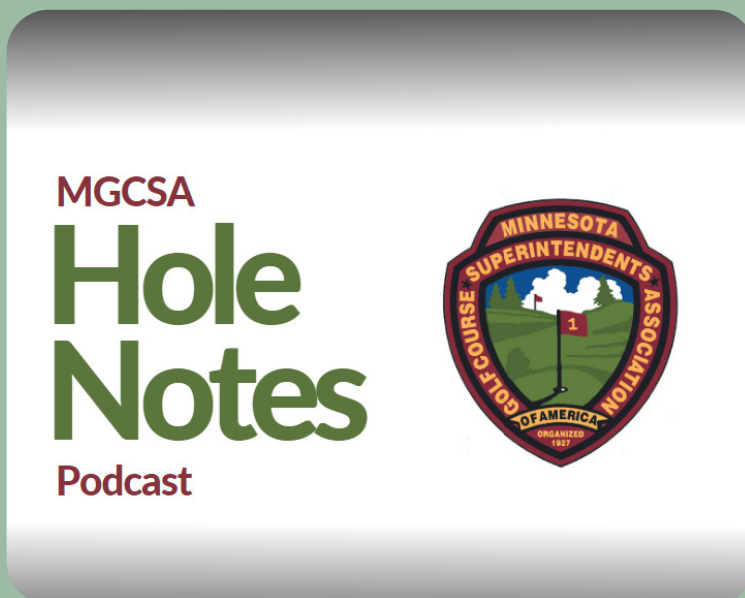
After completing this project, we still have a number of questions about this approach. Can we dial in a more appropriate threshold or range of thresholds than the 45% PAW? Do PAW thresholds hold true across soil types, turfgrass species or cultivar, compaction levels, or with the addition of inputs such as fertilizer, plant growth regulators

or surfactants? How much would irrigation depth sway threshold recommendations? Some general changes may need to happen to make the adoption of PAW threshold-based irrigation more accessible to the golf industry. Soil characterization would need to become more available since many of the portable or remote soil moisture sensors use VWC to quantify soil moisture. The sensors themselves may also need to change to measure PAW instead of VWC. More in-depth analyses of this project will be available in the future, so stay tuned!

We would like to thank the United States Golf Association, the Minnesota Golf Course Superintendents Association, and The Toro Company for supporting this research.

Follow the UMN Turf Blog
for project updates!

This issue is also available in audio format!! Suscribe to the MGCSA Hole Notes Podcast on Spotify, Apple Podcasts, Amazon Music, or find it online at Buzzsprout.



The advertisement for Hartman Golf Course Construction & Renovation is set against a background of a lush green golf course with trees and a clubhouse. The company name "HARTMAN" is written in a large, serif font, with a stylized green tree to its left. A red flag on a black pole is positioned behind the letters "A" and "N". Below the name, the text "Golf Course Construction & Renovation" is written in a smaller, white font. In the top right corner, the slogan "Quality since 1971..." is written in a red, cursive font. At the bottom left, the text "Specializing in..." is written in a purple font, followed by a list of services: "Bunkers Tees Laser Leveling Green Drainage Irrigation Design Pump Station Upgrades" in a yellow font. The bottom left corner contains the address "8099 Bavaria Rd. Victoria, MN 55386 952.443.2990" and the bottom right corner contains the email "info@hartmancompanies.com" and the website "www.hartmancompanies.com".

From the High Grass

By: Chris Aumock



What does the future of golf look like?

You may notice that I am leaning hard on some AI photos for various things lately. First off, I find it fascinating, and they provide an interesting perspective when I throw golf related things into the image generators. Secondly, it keeps me thinking about what the future will actually look like for the golf industry. In a more real sense, we are already fighting for that future, with our efforts for water assurances, pesticide use, and commercial gas equipment exemptions.

For many years I have viewed the future of golf as not a story of the game, or the equipment, or even the players, but likely it will be a result of the maintenance efforts we implement. Or more so, the maintenance efforts we lose access to in the future. We all know that golf is constantly in the crosshairs for our use of water and chemicals, and we are viewed rather unfairly as irresponsible

users of those resources. It seems so easy for others to discredit an entire industry of professionals, yet that is one of the many challenges we currently face. I don't know many of us who would generalize an entire profession like that. For example, let's think of an lawyer, someone who is educated and trained in that field. Would we consider them incompetent at their job, just because some of them have made mistakes or acted improperly? Reasonable and logical people would say no, not everyone there is incompetent. But that is one of the challenges we face in the environmental management arena, partly due to the lack of awareness of what Golf Course Superintendents do.

As we continue to work for responsible, sustainable solutions to the issues facing our industry, we must continue to expand our efforts to educate, inform, and

engage broader communities. When we get deeper into these issues and their challenges, us Superintendents alone will not be the only ones needed to combat them. As Mark mentioned earlier in this issue, these efforts will soon rely on the engagement and involvement of the golfing community. Our future will be dictated by raising their voices to speak for the golf industry, and especially those of us on the maintenance side.

So what is our role?

Being engaged and involved in the discussions, and being aware of the truly pressing issues that are bearing down on the industry. It is easier to let others handle these difficult issues, but as an industry, we do owe each other something. Now, if one of us missteps, we are all then associated with that error. As responsible professionals with integrity, it is our duty to maintain open, and honest communication with relevant parties regarding our efforts to improve our operations with more efficient resource utilization.

Golfs history and past issues are not something we can ignore.

The outdated perception of the old, white man's game for the too wealthy, and the too few, will linger on. It's in our best interest to move forward by acknowledging our industry's past, but not accepting that as our future. This industry needs everyone to step up and show that we will not be defined by the games past but will create a new future that addresses the current social and environmental concerns.

I often talk to my wife about awareness, and how important is to me that people are aware of their surroundings, situations, and other perspectives. We as professionals must be aware of these issues, and actively engage with the solutions, and can no longer work to avoid the hard topics. It will take more than just one, or some of us, but everyone will need to do their part. Talk to your representatives, build those relationships. Educate your neighbors, family, and friends when the opportunity arises. Changing the outdated perception of golf and golf course maintenance will be massively important to any long-term legislative successes.