

# The GRASS ROOTS

AN OFFICIAL PUBLICATION OF THE WISCONSIN GOLF COURSE SUPERINTENDENTS ASSOCIATION

VOL. XLVI  
ISSUE 6  
NOVEMBER/DECEMBER 2017





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## ABOUT THE COVER

Dustin Riley, CGCS Receives the WGCSA Distinguished Service Award at Golf Turf Symposium in Kohler.

*How many more times do I have to say that applying nutrients to turfgrass growing on soil already well supplied with the nutrients is a waste of time and money?*

**By UW-Madison Soil Professor Dr. Wayne R. Kussow, 1938-2017**

This quote by Kussow (The Turf Doc) reminds us to measure and quantify our programs and their results rather than blindly doing what we have always done.

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## 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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## 2017 That's A Wrap

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

As I get older time seems to go faster and faster. I can remember my father always saying "the two only consistent things that happen every year are death and taxes." That statement is still very true. Other than those two things nothing else seems consistent year to year. This spring was so cold and rainy that we set a record at Milwaukee County Parks for not having carts. We finished the season with an 8 week stretch without any measurable rain!

This winter you will be seeing information on the Par 4 Research. This is a fundraiser that the WGCSA started in 2010 to get a steady stream of funds for research purposes. It also allowed the direct users to help with funding. To date we have donated \$72,000 to the WTA. Please keep your eye out for this year's donation form. If you have not donated in the past please give serious consideration to donating this year! Also a big thanks to those of you who donated in the past!

The WGCSA had a very busy year! With golf meetings, the Couple's Dinner, Par 4 Research, Hospitality Room, Symposium, U.S. Open Billboard campaign,

Scholarship and research the board has been busy! If you are ever interested in joining the board or volunteering for a committee please reach out to myself or any board member. I would encourage anyone to serve on the board at some point in your career.

**As we wind down this season, please take some time to relax with family and friends. Next summer will be here before you know it, as will Saturday afternoons spent hand-watering greens.**

In 2018 the WGCSA will be offering 5 new scholarships. 4 will be for the "Great Lakes School of Turfgrass and Science." The board decided that this would be a good opportunity to offer any of our current members a chance at education. It will be open to all classifications of the WGCSA. The 5th scholarship will be a WGCSA turf scholarship. This will be open to any student member of the WGCSA who attends an accredited turfgrass management, or related field. With

the low numbers of people going into our profession we thought that this would help. Josh LePine will have more details in an upcoming article in the Grass Roots.

This year we held the 52nd annual Wisconsin Golf Turf Symposium. Over the past few years the symposium board has really worked hard to have a symposium that meets the needs of our membership. We take very seriously the comment cards that you fill out. These cards give us a great launching point for next year's symposium. This year's "Something for Everyone at the Turfgrass Management Buffet" sure did that. Please make time next year to attend the 53rd annual Symposium. For the amount of education that you receive, there is not a better deal out there. Once again I would like to thank our sponsor Milorganite. Without them this symposium would look very different!

As we wind down this season, please take some time to relax with family and friends. Next summer will be here before you know it, as will Saturday afternoons spent hand-watering greens. ✓

### 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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*\*Note: This is a one year date change due to the "Big Game" being hosted in Minneapolis in 2018.*

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## Summer 2017 Research in Review

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

This summer (like every summer) we conducted various research projects in which we investigated several issues facing the turfgrass industry. The results of these studies are publicly available on the TDL website ([tdl.wisc.edu](http://tdl.wisc.edu)). But I'd like to take the time to review a few of those research projects here in this article.

### Alternative Methods for Control of Dollar Spot

Dollar spot is the disease which receives the most attention during the growing season on highly maintained turf areas in the state of Wisconsin. Most of this "at-

tention" takes the form of spraying fungicides for curative or preventative control of this fungal disease. There is some evidence of using "alternative" methods for dollar spot control, mostly in the form of different types of fertilizers. Our goal was to evaluate some of these alternative disease control applications. Treatments and results can be seen in **table 1**. The only treatments that reduced the amount of dollar spot down to acceptable levels was the standard fungicide treatments (included as a positive check) and the urea treatments. The urea was applied at 0.6 lbs

N/1000 ft<sup>2</sup> every 2 weeks, which is quite a lot of nitrogen to be applied on a fairway. Some of our other research has shown that these higher rates of nitrogen can reduce dollar spot down to almost nothing. But none of the alternative methods seemed to have any effect on the level of dollar spot severity. So it seems that more research will be needed before any of these alternative methods can be ruled out or recommended. But in the meantime it looks like standard applications of effective dollar spot fungicides will remain the benchmark of control.

**Table 1. Mean number of dollar spot foci per treatment at the OJ Noer Turfgrass Research and Education Facility in Madison, WI during 2017.**

Treatment	Application Interval	Rate	Application Code <sup>a</sup>	Dollar Spot Severity <sup>b</sup>		
				Jun 26	Jul 27	Aug 7
1 Non-treated control				66.3a	33.5 a	25.8 a
2 Urea	14 day	0.6 lbs N/1000 ft <sup>2</sup>	DFHJLNP	29.3ab	0.0 b	1.1 b
3 Urea	20% risk	0.6 lbs N/1000 ft <sup>2</sup>	DFHJLNP	16.7ab	0.5 b	1.4 b
4 Iron Sulfate	14 day	3 oz/1000 ft <sup>2</sup>	DFHJLNP	59.6a	34.3 a	28.5 a
5 Iron Sulfate	20% risk	3 oz/1000 ft <sup>2</sup>	DFHJLNP	42.5ab	48.5 a	26.5 a
6 Potassium Carbonate	14 day	1.1 oz/1000 ft <sup>2</sup>	DFHJLNP	44.6ab	51.3 a	36.2 a
7 Potassium Carbonate	20% risk	1.1 oz/1000 ft <sup>2</sup>	DFHJLNP	9.6ab	26.5 a	16.6 a
8 Sulfur Duraphite 12	14 day	0.25 lbs S/1000 ft <sup>2</sup> 3.14 fl oz/1000 ft <sup>2</sup>	DFHJLNP	21.8ab	40.5 a	31.3 a
9 Sulfur Duraphite 12	20% risk	0.25 lbs S/1000 ft <sup>2</sup> 3.14 fl oz/1000 ft <sup>2</sup>	DFHJLNP	43.4ab	34.0 a	39.1 a
10 Manganese Sulfate	14 day	3 oz/1000 ft <sup>2</sup>	DFHJLNP	45.2ab	45.5 a	24.7 a
11 Manganese Sulfate	20% risk	3 oz/1000 ft <sup>2</sup>	DFHJLNP	47.2ab	36.5 a	11.8 a
12 Xzemplar Banner Maxx Secure Xzemplar Secure		0.26 fl oz/1000 ft <sup>2</sup>	D			
		1.5 fl oz/1000 ft <sup>2</sup>	H			
		0.5 fl oz/1000 ft <sup>2</sup>	J			
		0.26 fl oz/1000 ft <sup>2</sup>	L	0.4b	4.5 b	0.6 b
		0.5 fl oz/1000 ft <sup>2</sup>	P			
LSD P = .05				48.58	18.29	24.22

<sup>a</sup>Application code D=June 1st, F=June 15th, H=June 27th, J=July 11th, L=July 25th, N=August 8th, P= August 22nd.

<sup>b</sup>Dollar spot severity assessed as number of dollar spot infection centers per plot. Means followed by the same letter do not significantly differ (P=.05, Fisher's LSD).



# TURFGRASS DIAGNOSTIC LAB

## Biopesticides for the Control of Dollar Spot on Putting Greens

This study is very similar the previous study, except here, we evaluated biocontrol products for their efficacy against the dollar spot pathogen. Various bacteria based products were tested as well as tea

tree oil (Timorex Gold) and mineral oil (Civitas). These treatments and their results can be seen in **table 2**. Emerald, the positive fungicide control, provided the best control of dollar spot while most of the other products did not perform well. The products Double Nickel and Civitas

did significantly reduce dollar spot severity, but not to an acceptable level by themselves. Biocontrol products have been shown to not work effectively by themselves, but they could be used as a tank mix product to help increase effectiveness of existing fungicide programs.

**Table 2. Mean dollar spot infection centers per treatment on creeping bentgrass maintained at putting green height at the OJ Noer Turfgrass Research Facility in Madison, WI during 2017.**

Treatment	Application Rate	Application Interval	Application Dates <sup>b</sup>	Dollar Spot Infection Centers <sup>a</sup>		
				June 20	July 18	August 15
1 Non-treated control	N/A	N/A	N/A	107.8 b	248.0 a	96.8 ab
2 Emerald	0.18 oz/1000 ft <sup>2</sup>	28 Day	CGK	8.0 c	5.8 c	24.3 b
3 Nortica	12.9 oz/1000 ft <sup>2</sup> (initial rate) 6.4 oz/1000 ft <sup>2</sup>	28 Day	CGK	199.0 a	216.3 ab	98.0 ab
4 Timorex gold	0.314 fl oz/1000 ft <sup>2</sup>	14 Day	CEGIKM	142.8 ab	207.3 ab	56.5 ab
5 Double Nickel LC	4 fl oz/1000 ft <sup>2</sup>	14 Day	CEGIKM	77.0 bc	191.8 ab	114.5 a
6 Rhapsody	10 fl oz/1000 ft <sup>2</sup>	14 Day	CEGIKM	122.5 ab	250.5 a	113.8 a
7 Civitas Pre-Mixed	8 fl oz/1000 ft <sup>2</sup>	14 Day	CEGIKM	73.0 bc	143.0 b	65.8 ab
8 Actinovate AG Revolution	0.275 oz/1000 ft <sup>2</sup> 6 fl oz/1000 ft <sup>2</sup>	14 Day	CEGIKM CGK	136.5 ab	220.8 ab	85.0 ab
9 Zio	1.837 oz/1000 ft <sup>2</sup>	14 Day	CEGIKM	125.8 ab	250.5 a	79.5 ab
10 Serenade OPTI	0.459 oz/1000 ft <sup>2</sup>	14 Day	CEGIKM	71.0 bc	245.9 a	82.0 ab

<sup>a</sup>Means followed by the same letter do not significantly differ (P=.05, Fisher's LSD).

<sup>b</sup>Application dates: C=5/23, E=6/6, G=6/20, I=7/4, K=7/31, M=8/15



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# TURFGRASS DIAGNOSTIC LAB

## Effects of Dew Removal on Dollar Spot Control

Many discussions have been had on whether to apply fungicides to dew covered turf, or to wait until the dew is gone before making fungicide applications. The purpose of this study was to evaluate the effect of dew removal on fungicide efficacy. Treatments and results can be seen in **table 3**. On one of the rating dates dew removal significantly reduced disease severity on the non-treated control plots. And on one rating date the 26 GT treatment was much more effective when applied after dew had been removed. But on all other rating dates, dew removal had no effect

on fungicide efficacy. These results, while somewhat mixed, lean more towards dew removal not having any significant effect on fungicide efficacy. In my opinion, dew probably only has an effect on how long it takes for fungicide residues to dry on the leaves. So when applying fungicides to dew covered turf, it would take longer for residues to dry. This would increase the chances that fungicide residues could be washed off of the leaves, therefore increasing the chances of a disease breakthrough. So as long as there is ample drying time for any fungicide applications on dew covered turf, there should not be any reduction in efficacy. I believe more studies should be

done on this subject before we can definitively say, but I also believe that this small study is a good start.

As previously mentioned, all of these reports are publicly available on our website ([tdl.wisc.edu](http://tdl.wisc.edu)). There are a few more reports that will need to be finished and will be made available on our website in the coming months. As always, feel free to contact me if you have any questions or if you have any comments or concerns about current or future research. By hearing from the people who actually face these problems on a day-to-day basis we can tailor our research to help answer your questions. ✓

**Table 3. Mean number of dollar spot foci per treatment at the OJ Noer Turfgrass Research and Education Facility in Madison, WI during 2017.**

Treatment	Dew/No Dew	Rate	Application Interval	Application Code	Dollar Spot Severity <sup>a</sup>		
					Jun 26	Jul 13	Jul 27
1 Non-treated control	Dew				80.8a	12.3 a	37.5 a
2 Daconil Weatherstik	Dew	5.5 fl oz/1000 ft <sup>2</sup>	14 day	DFHJLNP	6.8c	2.0 ab	27.8 a
3 26 GT	Dew	3 fl oz/1000 ft <sup>2</sup>	14 day	DFHJLNP	20.5c	2.7 ab	21.8 a
4 Emerald	Dew	0.13 oz/1000 ft <sup>2</sup>	21 day	DFILO	9.0c	0.9 b	3.2 bc
5 Non-treated control	No Dew				46.3b	6.4 ab	39.3 a
6 Daconil Weatherstik	No Dew	5.5 fl oz/1000 ft <sup>2</sup>	14 day	DFHJLNP	3.8c	0.3 b	11.5 ab
7 26 GT	No Dew	3 fl oz/1000 ft <sup>2</sup>	14 day	DFHJLNP	1.5c	1.8 ab	0.8 c
8 Emerald	No Dew	0.13 oz/1000 ft <sup>2</sup>	21 day	DFILO	2.3c	2.4 ab	1.6 c
LSD P = 0.5					49.03	9.15	27.74

<sup>a</sup>Dollar spot severity assessed as number of dollar spot infection centers per plot. Means followed by the same letter do not significantly differ (P=0.05, Fisher's LSD).

<sup>b</sup>Application Code D=May 31st, F=June 10th, G=June 14th, H=June 19th, I=June 22nd, J=July 6th, K=July 18th, L=July 25th, M=August 1st, N=August 8th, O=August 15th, P=August 22nd.



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## NEW SCHOLARSHIP OPPORTUNITIES

The WGCSA Board of Directors is pleased to announce the launch of two new scholarship opportunities. We plan to continue our existing Legacy, J.R. Love, and Monroe Miller Literary Scholarships. The new offerings are a continued effort to promote our industry, support our membership and the individuals pursuing Golf Turf Management.

Obtaining and retaining a qualified workforce is a challenge many of us face in the turf industry. Our Chapter Manager, Brett Grams, isn't getting flooded with calls from WGCSA members regarding a disease, insect or other abiotic turf issue they can't control. The majority of the calls we are receiving relate to "how do I find a good Assistant?" "How can I promote one of my staff members and get them involved in continuing education?" How can I support my employee who can't afford UW-Madison but is attending another Turf School?"

Our WGCSA Board of Directors felt we needed to help address these concerns and directed the Scholarship and Research Committee to come up with the following additional scholarship opportunities.

### WGCSA Turf Scholarship

#### General

The WGCSA Turf Scholar Program is a new scholarship offering to recognize and support active WGCSA student members attending any accredited turfgrass management, or related field, program. The (1) \$1,500 award will be funded by the WGCSA and administered annually by the Board of Directors of the WGCSA. Scholarships will be awarded based on availability of funding. Applications will be reviewed by the Scholarship Committee Chair and three WGCSA members. All decisions of the committee will be final. The applicant deadline is February 1<sup>st</sup> and applicants will be notified by mail of their status by February 15<sup>th</sup> of the year submitted. The award check will be mailed February 15<sup>th</sup> and will be made payable to the applicant.

#### Eligibility

1. Applicant must be enrolled full time at an accredited undergraduate institution of higher learning (four year, two year or certificate program) majoring in Turfgrass Management or related field.
2. Applicant must be a Class S, Student member of the Wisconsin Golf Course Superintendents Association.
3. Applicants must be planning a career in Golf Course Management.
4. Past winners are eligible to reapply.

#### Criteria for Selection

1. Applicants shall be evaluated based on academic performance, employment history and recommendations from current academic advisors and/or employers.
2. Financial need is not a factor in the selection.
3. Any Scholarship Committee member with a conflict of interest must remove him/herself from the process. (family member or current employee applying)

#### How to Apply

Students must complete the application form found on the WGCSA website and supply the following under one cover:

1. Turf Program Transcripts that include grades from the last completed semester.
2. Personal Statement Essay attachment.
3. Letter(s) of Recommendation completed by your academic advisor and/or Employer. The letter(s) should be sealed in an envelope by author and mailed with your application.
4. All applications must be postmarked by Feb. 1<sup>st</sup> of the year submitted.
5. Send application to:

**WGCSA Turf Scholarship**  
**N1922 Virginia DR**  
**WAUPACA, WI 53981**



## Great Lakes School of Turfgrass Science Online

### (4) Program Reimbursement Coupons

#### General

In order to enhance the educational opportunities of our existing membership/staff and promote the Golf Course Management Industry, the WGCSA is offering a new Reimbursement Program for the Great Lakes School of Turfgrass Science Online.

(4) Reimburse coupons will be offered annually to approved applicants who complete the Online program and submit their Certificate of Completion. Applications will be reviewed by the Scholarship Committee. All decisions of the committee will be final. Applicants will be notified by December 15<sup>th</sup> prior to the School's Registration deadline. Applicants will still need to register/pay for the Online School as if they were attending on their own. Register at <http://z.umn.edu/2018glts>

The Reimbursement check will be issued to the individual or company paying the initial Class Fee.

#### Eligibility

1. Applicants must either be a WGCSA member or sponsored by a WGCSA member to apply.
2. Completion of the program and providing Certificate of Completion is necessary for reimbursement.

#### Criteria for Selection

1. (4) Applicants shall be selected based on employment history, recommendations and personal statement essay.
2. Financial need is not a factor in the selection
3. Any Scholarship Committee member with a conflict of interest must remove him/herself from the process. (family member or current employee applying)

#### How to Apply

Applicants must complete the application form found on the WGCSA website and supply the following under one cover:

1. Personal Statement Essay (Attach a one page statement that tells who you are, explains when and how you became involved in Golf Course Management and why you are interested in the Great Lakes School of Turfgrass Science.)
2. All applications must be post marked by Dec. 15<sup>th</sup> of the year submitted.
3. Send applications to :  
WGCSA  
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Waupaca, WI 53981  
[bgrams@wgcsa.com](mailto:bgrams@wgcsa.com)

Please direct any questions to Josh LePine, WGCSA Scholarship and Research Committee.

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## A Lasting Legacy

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

As his obituary told it, on October 7, 2017, Wayne Kussow kicked the bucket. As a graduate student under his direction in the early 2000s, I remember him complaining about an obituary stating Mr. So-and-so “passed on” or some other euphemism for dying. He rolled his eyes and said “he didn’t pass on, he died!” Wayne was truly a modest man to his core, and disdained those that were full of themselves. I’d bet he’d rather go to the dentist than to be honored with an award. So by “kicking the bucket” we caught a glimpse of his humility and good sense of humor for one last time.

Wayne Kussow was a world-class advisor who got to know all of his students. He customized their schedules, so top students ended up in plant physiology or organic chemistry and students struggling to get by were put in classes where they’d be more likely to find success. Every one of his students knew that he genuinely cared about them. Like a good parent, he’d be quick to let you know if he thought you

weren’t working hard enough, but also understood the challenges that students faced and was always there to help in any way he could. Aside from academic advising, he matched his students up with summer internships where they would be

**He would often remind me that extraordinary claims require extraordinary evidence.**

sure to learn new skills they were lacking. He always encouraged his students (most in golf) to work in places with large, medium, and small budgets to see golf course management from all perspectives.

Wayne was a highly respected turfgrass researcher. He carefully monitored runoff from lawns under different fertilizer programs which plainly demonstrated to policy makers (whether they listened is a different story) that phosphorus bans would have little impact on improving water quality, and that not fertilizing a

lawn could actually worsen it. He tested turfgrass fertilizers and products annually and was quick to call a spade a spade if a product with grand marketing claims failed to perform in his tests. I enjoyed reading one of his early articles in the Grass Roots describing an earthworm based product as “foo-foo dust”. He would often remind me that extraordinary claims require extraordinary evidence.

Wayne pioneered the modern approach to soil testing in the early 2000s. After consistently failing to find a clear connection between soil test level and turf performance, he decided the best approach was to set the optimum soil test levels for a given nutrient by picking a level near the lower third of the normal distribution of soil test levels with good performing turf or adequate tissue nutrient content. This is basically the same soil test thresholding method that is employed by the popular MLSN or Minimum Levels for Sustainable Nutrition from PACE Turf.



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## WISCONSIN SOILS REPORT


Wayne also worked to compile evidence for his theory of nutrient demand, which stated that nitrogen was the primary driver for turf P and K requirements. In short, the theory states that turf fertilized with nitrogen will grow more and thus have a higher demand for P and K. He collected data supporting this theory for years but much of it was done by his final graduate student, Steve Houlihan. Of all the work Wayne did, I think he was most proud of this aspect (although pride was something he was not prone to displaying). Fittingly, nutrient demand was the subject of the last scientific article Wayne ever published in 2012.

Wayne had an enormous influence in my life and career. By offering me a chance to earn my Master's degree with him (on the Wayne Kussow Wisconsin Distinguished Fellowship, no less), he set me up for the opportunity to be in the position I am in now – something I never

**“You have not lived today until you have done something for someone who can never repay you.” John Bunyan, *“The Pilgrim's Progress”***

could have dreamed would be possible. I am eternally thankful for the good fortune I had to know Wayne Kussow as a mentor and friend. I took his death quite hard, and I realized that it was partly due to the guilt I felt because he gave so much to me and that I was unable to do much for him – particularly near the end of his life. I came to terms with this somewhat after finding this quote from John Bunyan in *The Pilgrim's Progress*:

“You have not lived today until you have done something for someone who can never repay you.”

If this is true, then Wayne Kussow lived a very full life indeed. His legacy will live on in those of us who were touched by his influence. Rest in peace, Doc. 



**Dr. Kussow at the 2003 WTA Field Day at the Noer Center. Dr. Kussow was a leader in turfgrass education and research.**

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## Biological Fungicides for Dollar Spot Control

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

Biocontrol agents typically work in one of three ways to control plant disease. The first is to produce a toxin that directly inhibits the growth of the pathogen. In some cases these antimicrobial toxins have been identified and synthesized in the lab to create regular synthetic fungicides, which is the case with azoxystrobin (derived from a compound produced by wood decay mushrooms). The second way biocontrol agents work to control disease is to colonize the surface of the plant or root and ‘crowd out’ the pathogen. It is believed that the bacteria *Pseudomonas* works as a biocontrol agent against take-all patch in this manner by colonizing the roots and crowding out the fungus. The third way that biocontrol agents can provide disease control is through the stimulation of plant defense responses. This basically works by ‘tricking’ the plant into thinking an actual pathogen is invading, so that defenses are primed when a pathogen does come knocking on the door.

The allure of using biological fungicides is obvious. In using one living organism to suppress another, there should be minimal non-target impacts on applicators, the general public, and the environment. Biological control can be marketed as natural to the consumer, and depending on the type of pathogen and type of biocontrol agent there may be less risk for resistance to develop.

Biocontrol agents for turf certainly aren’t a new phenomenon, so why haven’t they been more widely adopted? The simple answer is that they haven’t really worked in a consistent manner. Most superintendents I talk to have a negative reaction when the phrase ‘bugs in a jug’ is brought up, harkening back to the 1990’s when multiple biocontrol agents were introduced to the market...and multiple control agents were unsuccessful at providing consistent disease control. While there are many reasons for the lack of control, it’s likely that even when putting millions of cells of the biocontrol agent onto a plant or into the soil...the native community of microbes already present is even bigger and difficult to displace. In fact, in a study conducted by Dr. Geunhwa Jung at the University of Massachusetts, the organism applied as a biocontrol agent to a golf course in Massachusetts was among the LEAST detected microbes in their analysis of the course’s microbial population.

This doesn’t mean biocontrol agents are a lost cause. Millions of dollars of research is being poured into improving the field efficacy of biological fungicides because of the benefits described above. Novozymes and Monsanto have teamed up to create the ‘BioAg Alliance’, tasked with transferring the success of biocontrol in the lab to the field. Bayer Cropsience spent \$500 million to purchase the California-based biological company AgraQuest in 2012, indicating how important they feel that field will be in the future. In addition, the burgeoning field of phytobiomes may also improve future

biological control options through improved understanding of how all the various microbes on, around, and within the plant interact with each other and with potential pathogens. Our lab at Wisconsin has numerous research projects underway in the field of phytobiomes and we will be hosting a meeting on the topic of the ‘Turf Phytobiome’ in Madison in the spring of 2018.



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# WISCONSIN PATHOLOGY REPORT

Dollar spot is our most important summer disease in Wisconsin, so any biological agent that can suppress dollar spot may be an important piece of an Integrated Pest Management program. Several new biological products have entered the turf market in recent years, and we wanted to evaluate their performance (and others) for any potential efficacy against dollar spot. Emma Buczkowski is an M.S. student in my lab researching the turf phytobiome and she managed the first year of this trial during the summer of 2017. The products tested can be found in **Table 1 and Table 2** and include not only several biological products (Nortica, Double Nickel, Rhapsody, Actinovate AG, Zio, and Serendae OPTI) but also two oils (Civitas and Timorex Gold) designed to stimulate plant defense responses. Emerald is included as a positive fungicide control for reference.

This study was conducted at the O.J. Noer Turfgrass Research and Education Facility in Madison, WI on a creeping bentgrass putting green stand. Treatments were applied using a CO2 pressurized boom sprayer with two XR Teejet AI8004 nozzles at a pressure of 40 psi. All treatments were agitated by hand and applied at 1.5 gallons of water per 1000 ft<sup>2</sup>. The initial treatment application was done on May 23rd, 2017 and all following applications were either made at 14 or 28 day intervals for a total of 7 applications. Number of dollar spot infection centers and turfgrass quality (1-9 scale, 9=excellent and 6=acceptable) measurements were taken immediately prior to each application.



**Figure 1: There was heavy dollar spot pressure on the experimental area in 2017. Picture taken on July 24th, 2017.**

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# WISCONSIN PATHOLOGY REPORT

Table 1. Dollar spot infection centers on a putting green plot at the OJ Noer Turfgrass Research Facility in Madison, WI during 2017.

Treatment	Application Rate	Application Interval	Application Dates <sup>b</sup>	Dollar Spot Infection Centers <sup>a</sup>		
				June 20	July 18	August 15
1 Non-treated control	N/A	N/A	N/A	107.8 b	248.0 a	96.8 ab
2 Emerald	0.18 oz/1000 ft <sup>2</sup>	28 Day	CGK	8.0 c	5.8 c	24.3 b
3 Nortica	12.9 oz/1000 ft <sup>2</sup>	28 Day	CGK	199.0 a	216.3 ab	98.0 ab
	(initial rate) 6.4 oz/1000 ft <sup>2</sup>					
4 Timorex gold	0.314 fl oz/1000 ft <sup>2</sup>	14 Day	CEGIKM	142.8 ab	207.3 ab	56.5 ab
5 Double Nickel LC	4 fl oz/1000 ft <sup>2</sup>	14 Day	CEGIKM	77.0 bc	191.8 ab	114.5 a
6 Rhapsody	10 fl oz/1000 ft <sup>2</sup>	14 Day	CEGIKM	122.5 ab	250.5 a	113.8 a
7 Civitas Pre-Mixed	8 fl oz/1000 ft <sup>2</sup>	14 Day	CEGIKM	73.0 bc	143.0 b	65.8 ab
8 Actinovate AG Revolution	0.275 oz/1000 ft <sup>2</sup>	14 Day	CEGIKM CGK	136.5 ab	220.8 ab	85.0 ab
	6 fl oz/1000 ft <sup>2</sup>					
9 Zio	1.837 oz/1000 ft <sup>2</sup>	14 Day	CEGIKM	125.8 ab	250.5 a	79.5 ab
10 Serenade OPTI	0.459 oz/1000 ft <sup>2</sup>	14 Day	CEGIKM	71.0 bc	245.9 a	82.0 ab

<sup>a</sup>Means followed by the same letter do not significantly differ (P=.05, Fisher's LSD).

<sup>b</sup>Application dates: C=5/23, E=6/6, G=6/20, I=7/4, K=7/31, M=8/15

Table 2. Turfgrass quality on a putting green plot at the OJ Noer Turfgrass Research Facility in Madison, WI during 2017.

Treatment	Application Rate	Application Interval	Application Dates <sup>b</sup>	Turfgrass Quality <sup>a</sup>		
				June 20	July 18	August 15
1 Non-treated control	N/A	N/A	N/A	4.75 bc	3 bc	3.5 b
2 Emerald	0.18 oz/1000 ft <sup>2</sup>	28 Day	CGK	6.5 a	7.5 a	5.25 a
3 Nortica	12.9 oz/1000 ft <sup>2</sup>	28 Day	CGK	3.75 bc	2.5 c	3.25 b
	(initial rate) 6.4 oz/1000 ft <sup>2</sup>					
4 Timorex gold	0.314 fl oz/1000 ft <sup>2</sup>	14 Day	CEGIKM	3.5 c	2.5 c	3.75 b
5 Double Nickel LC	4 fl oz/1000 ft <sup>2</sup>	14 Day	CEGIKM	5 b	4 b	2.75 b
6 Rhapsody	10 fl oz/1000 ft <sup>2</sup>	14 Day	CEGIKM	4.25 bc	2.5 c	3 b
7 Civitas Pre-Mixed	8 fl oz/1000 ft <sup>2</sup>	14 Day	CEGIKM	4.25 bc	3.75 bc	4 ab
8 Actinovate AG Revolution	0.275 oz/1000 ft <sup>2</sup>	14 Day	CEGIKM CGK	4 bc	2.75 bc	3.5 b
	6 fl oz/1000 ft <sup>2</sup>					
9 Zio	1.837 oz/1000 ft <sup>2</sup>	14 Day	CEGIKM	4.75 bc	3 bc	3.5 b
10 Serenade OPTI	0.459 oz/1000 ft <sup>2</sup>	14 Day	CEGIKM	6.5 a	7.5 a	5.25 a

<sup>a</sup>Means followed by the same letter do not significantly differ (P=.05, Fisher's LSD).

<sup>b</sup>Application dates: C=5/23, E=6/6, G=6/20, I=7/4, K=7/31, M=8/15



# WISCONSIN PATHOLOGY REPORT

Dollar spot pressure in 2017 was quite high through much of June and July before tapering off with the cooler and drier conditions in August (Table 1). Emerald is a very effective dollar spot fungicide, and as expected it was the most effective treatment in our trial. Early in the season it was clear that certain treatments were providing some dollar spot suppression relative to the non-treated control. Double Nickel, Civitas, and Serenade OPTI all lowered dollar spot severity, but still didn't provide control on the same level as Emerald. No other treatment provided a reduction compared to the non-treated control, and once dollar spot pressure increased in July the suppression that was being observed with the above products was no longer apparent.

Double Nickel is a strain of *Bacillus amyloliquefaciens* bacteria registered for use on turf and Serenade OPTI is a strain of *Bacillus subtilis* bacteria not currently registered for use on turf. Civitas is a mineral oil that is also registered

for use on turf. While these products did not provide acceptable dollar spot control on their own throughout the season, it's possible that these products or products like them could be used within an Integrated Pest Management Program. This might include using these products in combination with lower rates of synthetic fungicides or applying them during the spring and fall when disease pressure is lower. Or these products might become more viable for those that have installed newer bentgrass varieties with higher resistance to dollar spot.

Producing more effective biological fungicides and finding successful niches for the biological fungicides currently on the market will be important for future integrated disease strategies. We are planning to repeat this biological control experiment during the summer of 2018 and will continue to keep an eye out for new, improved biological fungicides hitting the turf market in the years to come. ✓



**Figure 2:** Despite the high disease pressure, Emerald fungicide provided excellent dollar spot control throughout the study. Picture taken on July 24th, 2017.



**Figure 3:** Double Nickel, Civitas, and Serenade OPTI (not pictured) provided some level of dollar spot control relative to the non-treated control, though not enough to be commercially acceptable under heavy pressure. Picture taken on July 24th, 2017.





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- 8:30 Welcome and Scholarships
- 8:45 – 9:30 **Dr. Chris Williamson, Ph.D. - University of Wisconsin Madison - Entomology**  
Best Management Practices for Honeybees
- 9:30 – 10:15 **Carmen Magro, CGCS - POGO**  
Optimizing Turf Performance and Health Through Technology
- 10:15 – 10:30 Break
- 10:30 – 11:15 **Dr. Paul Koch, Ph.D. - University of Wisconsin Madison - Plant Pathology**  
Dollar Spot Prediction Model: What It Is And How You Can Use It
- 11:15 – 12:00 **Dr. Frank Rossi, Ph.D. - Cornell University**  
Current Research and Best Management Practices for Turfgrass Management
- 12:00 – 12:45 Lunch
- 1:00 – 1:30 **Kurt Hockemeyer – TDL Manager**  
2017 Turf Diagnostic Lab Update
- 1:30 – 2:15 **Leslie Ptak – OSHA**  
OSHA for the Green Industry
- 2:15 – 3:00 **Dr. Doug Soldat, Ph.D. - University of Wisconsin Madison - Soils**  
Soils Update / Golf Cart Traffic Study



Chris Williamson is a professor of Entomology at the University of Wisconsin-Madison where he is an extension/research entomologist in urban landscape entomology including turfgrass. He received his B.S. and M.S. degrees from the Ohio State University. He received his Ph.D. from the University of Kentucky.



Carmen Magro serves the Turfgrass, Golf Course and Ag Management Industry for twenty-five years focusing on applying the most practical solutions to solving turfgrass problems and presenting optimal turfgrass performance conditions. He maintains CGCS status with the GCSAA.



Paul Koch is an assistant professor in the Department of Plant Pathology as well as the Molecular and Environmental Toxicology Center at the University of Wisconsin-Madison. He joined the faculty in January of 2014. His research has focused primarily on fungicide breakdown in the environment and snow mold diseases on golf course turfgrass.



Frank S. Rossi, Ph.D., is an associate professor of turfgrass science at Cornell University. He received a B.S. and M.S. degrees from the University of Rhode Island and his Ph.D. from Cornell University. Rossi's research interests include resource efficient turfgrass management, turfgrass ecology and cultural and environmental stress management.



Leslie Ptak is a compliance assistance specialist in the Madison OSHA office. Her responsibilities include outreach and training for Madison OSHA's 19-county territory and oversight of the office's cooperative programs, such as alliances and partnerships. As a compliance assistance specialist, she has no enforcement authority.



Doug Soldat is an associate professor and turfgrass extension specialist in the Department of Soil Science at the University of Wisconsin-Madison. He advises turfgrass management students at the UW and teaches courses in the fields of turfgrass management and general soil science.



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# Developing a Preventive Maintenance Checklist for Golf Course Irrigation Systems

By Brian Vinchesi, President, Irrigation Consulting, Inc.

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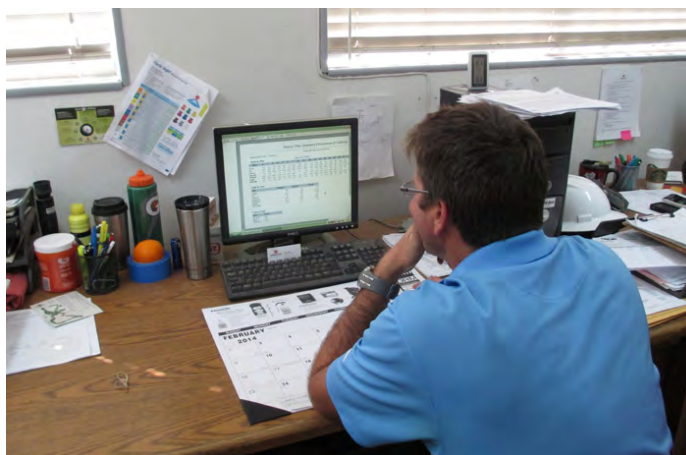
**Proper maintenance can reduce labor and materials costs and may also help save water and energy while improving playing conditions.**

Irrigation systems are an integral part of golf course maintenance, just like maintenance staff, mowing equipment, and maintenance facilities. Without a functional irrigation system, it is virtually impossible to maintain golf course turf in playable condition. However, while mowers and other equipment are regularly seen working on a golf course, irrigation systems are a mystery to many golfers because they are buried underground and most frequently operate at night. Therefore, it can be difficult for golfers to understand that irrigation systems wear out and are very expensive to replace. A new irrigation system can cost \$1.5 million or more, depending on location and complexity. Not surprisingly, most golf courses try to avoid this expense for as long as possible, especially since the true value of an irrigation system often is not fully understood.

Golf course irrigation systems can quickly deteriorate from lack of maintenance. Irrigation system maintenance is primarily reactive at most golf courses — i.e., when a component of the irrigation system breaks or is not properly working, an irrigation technician or assistant superintendent is dispatched to make repairs. Pre-ventive maintenance can reduce the amount of reactive maintenance and improve playing conditions. Developing a preventive maintenance program is the best way to extend the life of an irrigation system, maintain performance, and minimize the severity and frequency of problems.

Preventive maintenance programs must be customized to meet the unique needs of an irrigation system, and they should be based on a thorough check of the system and its components. As with any preventive maintenance regime, some tasks will need to be accomplished on a daily, weekly, or monthly basis, while others may require attention quarterly, semiannually, or annually. Of course, while preventive maintenance reduces irrigation system problems, it does not eliminate some tasks that must be completed on an as-needed basis.

So, what does a preventive maintenance program look like for the irrigation system at your golf course? It depends on the type of irrigation equipment and its age, but a typical program includes the observation, adjustment, and maintenance at regular intervals of sprinklers, valves, controllers, pump systems, and other components. The following sections of this article can be used to create a customized preventive maintenance checklist for any irrigation system.



A daily check of the central controller shows if the previous night's program operated on schedule. Adjustments to irrigation run times also can be made before the next irrigation cycle.

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# USGA GREEN SECTION

## DAILY MAINTENANCE

On a daily basis, the maintenance staff should perform the tasks that are a normal part of routine irrigation system operation and management. Examples include the following tasks:

- Observe golf course turf conditions for wet and dry spots.
- Review the irrigation program from the previous night to confirm that the irrigation system operated on the programmed schedule.
- Check the pump system monitor for any inconsistencies or abnormalities. This may be done remotely depending on your pump system equipment.
- Review and record water use from the previous night's irrigation cycle.
- Document evapotranspiration with a weather station or online source. Measure any precipitation using a simple rain gauge.
- Log any pipe breaks and component failures.
- For two-wire systems, check the operating log in the central control software diagnostics to verify normal communication between the central control software and each sprinkler or valve. Investigate stations that report possible issues.
- Prepare and prioritize irrigation repair orders and discuss them with the appropriate personnel. Assign additional staff to assist with repairs if necessary.
- Determine the water requirements for the next irrigation cycle

and adjust the program accordingly.

## WEEKLY MAINTENANCE

Daily observation and maintenance should occur as part of normal irrigation system operation. On a weekly basis, time should be allocated to inspect the irrigation equipment itself and to make sure it is functioning correctly. Because the irrigation system most frequently operates at night, issues are not always obvious without inspection. Therefore, preventive maintenance on a weekly basis should include:

Check sprinkler operation to answer the following questions:

- Do any sprinklers appear to be turning faster or slower than usual? If so, time them to be sure.
- Does each sprinkler pop up, turn, and retract?
- Are part-circle sprinklers turning in the correct arc?
- Is there any leakage?
- Are any nozzles clogged?
- Update the central controller database with any changes.
- Check the condition of valve boxes and covers.
- Review the status of irrigation repair orders. Order necessary parts to complete repairs if they are not in stock.
- For two-wire systems, use software diagnostics to check the performance of each wire path for abnormalities such as excessive or unusual current draw and low-voltage reports.
- Visually inspect the condition of the pump station.



**Sprinklers should be checked every week to ensure that they properly pop up, turn, and retract. Check that they rotate at the correct speed and that they are not leaking.**



**Sprinkler nozzles should be checked frequently for clogs and wear. Also, ensure that the proper nozzles are installed in each sprinkler.**



**Turf can grow over sprinklers and disrupt irrigation coverage, especially in rough and naturalized areas. Check and trim turf around sprinklers every month.**



# USGA GREEN SECTION

## MONTHLY MAINTENANCE

Approximately once a month, the staff should:

- Check that sprinklers are not blocked by surrounding turf and trim around sprinklers as necessary.
- Inspect valve assemblies for leaks or damage.
- Examine and clean filtration devices.
- Check for wear on filter screens.
- Review and consider adjusting temporary changes made to irrigation station run times during the previous month.
- For two-wire systems, use software diagnostics to run a voltage check of every sprinkler or valve in the field.
- Compare voltage readings to results from the previous month to verify that there is no unexpected drop in voltage.
- Inventory and restock irrigation repair parts.

## QUARTERLY MAINTENANCE

Dust, dirt, and debris can damage irrigation controllers and pump systems. Quarterly cleaning can significantly extend the life of system components, especially electrical items such as central computer controls and field satellites. Quarterly maintenance should include:

- Clean satellite controllers and replace insect repellent.
- Clean the pump system, pump house, and irrigation parts room.
- Remove dust from the central computer using a compressed-air duster.
- Check if software updates are available for the central control system and install them as necessary.
- Clean out rain gauges.
- Listen to the pump system as it starts up and shuts down during an irrigation cycle to ensure that it is operating correctly. Check to ensure that pumps turn on and off smoothly, watch for excessive cycling, and listen to how the drive ramps up and down.



Checking the satellite controllers and central computer for backup programs and accurate run times should be done at least once every month.



Clean field satellite controllers quarterly by dusting, removing cobwebs, and replacing insect repellent. This can greatly extend the life span of electrical components.

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# USGA GREEN SECTION

## SEMIANNUAL MAINTENANCE

- Exercise all quick couplers on the course, especially those that are rarely used.
- At minimum, record pressure readings at high and low points of the irrigation system using quick couplers and a pressure gauge. Compare readings to previous results and note any changes in pressure to identify potential problems.
- Pump system service should occur semiannually at minimum in climates with a 12-month irrigation season.

## ANNUAL MAINTENANCE

- Exercise all isolation valves and drain valves to prevent them from sticking open or closed.
- Pump system service should occur annually in climates with a six- to eight-month irrigation season.
- Pressure-wash pump system filter or “Y” strainer screens. Check intake screens for clogging and debris.
- Test and certify the function of any backflow prevention devices. Hire a certified technician who works in accordance with state and local testing requirements.
- Test and service pressure-regulating devices.
- Test, clean, and service air-release valves by flushing “Y” strainers and exercising ball valves.
- Drain and winterize piping systems in cold climates.
- Level and set sprinklers and valve boxes to grade.
- Check antennas and their connections.
- Back up map and program databases on the central control system to an external device.
- Renew central computer service plan and update the computer according to service schedules.
- Check field controllers to ensure that backup programs are still installed and relevant.
- Calibrate flow meters on the pump system and water sources.
- Run a test of the battery backup that protects the central computer and replace it if necessary.
- Verify that a sample of grounding readings continues to meet manufacturer specifications. Compare readings across years to identify changes that could indicate reduced lightning protection.
- Check the calibration of weather station sensors and check all connections.
- Inspect quick-coupler hoses and hose-end fittings.

## AS NEEDED

If necessary, hire a contractor to inspect the pump intake and clear any accumulated debris.

- Repair or replace pump intake screens.
- Rewind pump motors and rebuild turbine pumps, replacing seals, bowls, and bearings.
- Perform an irrigation field audit every three to five years to monitor water distribution uniformity and sprinkler performance.

## DIAGNOSTICS AND REPAIRS

With new technology, some of these tasks can be automated or are incorporated into the features of irrigation equipment. Today's central control systems have the ability to diagnose or troubleshoot many aspects of a golf course irrigation system. They are often able to pinpoint where problems are occurring and can provide diagnostic data such as voltages and amp draws at every sprinkler. These troubleshooting features, currently available with newer irrigation systems, will only expand and improve in the future.

In order to efficiently service an irrigation system, it is important to maintain a small, on-site inventory of irrigation parts. It is difficult to perform maintenance when parts must be ordered every time something goes wrong. Parts inventories should be diverse. However, every golf course should have at minimum a selection of fittings, a small amount of pipe, and repair couplings for every size of pipe used in the irrigation system.



Isolation valves and drain valves should be exercised annually to prevent them from sticking open or closed.



Pumps are the heart of an irrigation system. Semiannual maintenance of electrical and mechanical components by a trained technician ensures efficient operation.



## USGA GREEN SECTION

Additionally, sprinkler bodies and internals, sprinkler control wire, wire connectors, gate valves, and a variety of nozzles should be readily available. Other items that are good to have on hand include a spare faceplate and several spare circuit boards for field controllers; an electrical multimeter for testing voltage, amperage, and resistance; a metal detector; and a wire locator. Two-wire systems will require more specialized diagnostic equipment such as a clamp meter and wire radar device.

Depending on the age and amount of time required to maintain an existing irrigation system, employing an irrigation technician may be advantageous. Irrigation technicians focus on performing both reactive and preventive maintenance, checking pump system operation, and keeping the irrigation computer database accurate. If you have a large irrigation system — e.g., an irrigation system with 2,500 sprinklers or more — you may need two or more irrigation technicians. A properly trained irrigation technician will keep an irrigation system functioning as intended while reducing additional costs. A side benefit of proper irrigation system maintenance is the potential for reduced water use. When an irrigation system is in good condition, it is more efficient and saves both water and energy.

### CONCLUSION

Although a preventive maintenance program will not make an irrigation system last forever, it will reduce the labor and materials costs associated with keeping the system operational. It may also help save water and energy while improving playing conditions. A well maintained irrigation system can even help reduce the stress level of maintenance staff by providing a dependable system they can rely on during hot, dry days when it is most needed.

*BRIAN VINCHESI is president of Irrigation Consulting, Inc., a golf course irrigation and consulting firm headquartered in Pepperell, Massachusetts, that designs irrigation systems throughout the world. He can be reached at [bvinchesi@irrigationconsulting.co](mailto:bvinchesi@irrigationconsulting.co)*



**A selection of pipe fittings and repair couplings of different sizes should be on hand so that repairs can be made in a timely manner.**

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## 2018 WTA Turfgrass Research Day

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

The final curtain has been closed on the 2017 growing season. What a crazy one it was. Early June we were hot and very dry. July felt like the Noer Facility flooded every other day. The end of summer brought a long drought to Madison. After a complaining tweet in September of no rain at the Noer, a few people informed me they had received several inches of rain and flooded again. A crazy year or just what we have come to expect.

We all need something to count on and that will happen January 9th, 2018 at the Pyle Center on the campus of the University of Wisconsin-Madison, the 2018 Turfgrass Research Day. This year's Research Day is a different from past years. This year the WTA Board formed a committee over the winter of 2017. This group planned the entire day. In the past, the professors developed ideas and arranged speakers. This new group has done all the leg work to arrange speakers and topics.

The mission of Research Day is to give the UW – Madison professors and their staff the ability to share their recent research and interact with turf managers to discuss ideas for future research projects. This is another opportunity to show off the beneficial work conducted at the O.J. Noer Turfgrass Research and Education Facility and sponsored by the WTA.

Besides the Turf Group from the UW - Madison we have the following:

**Dr. Frank Rossi, Ph.D. Cornell University** “Current Research and Best Management Practices for Turfgrass Management”

Frank S. Rossi, Ph.D. is an associate professor of turfgrass science at Cornell University. He received a B.S. and M.S. from the Uni-

versity of Rhode Island and his Ph.D. from Cornell University. Dr. Rossi's research interests include resource efficient turfgrass management, turfgrass ecology and cultural and environmental stress management.

**Carmen Magro, CGCS from POGO** “Optimizing Turf Performance and Health Through Technology”

Carmen Magro has served as the Turfgrass, Golf Course and Ag Management Industry for twenty-five years focusing on applying the most practical solutions to solving turfgrass problems and presenting optimal turfgrass performance conditions. He maintains CGCS status with the GCSAA.

**Leslie Ptak – OSHA** “OSHA for the Green Industry”

Leslie Ptak is a compliance assistance specialist in the Madison OSHA office. Her responsibilities include outreach and training for Madison OSHA's 19-county territory and oversight of the office's cooperative programs, such as alliances and partnerships. As a compliance assistance specialist, she has no enforcement authority.

This is a great time to visit the UW-Madison campus because classes are not in session and parking is easy, just two blocks from the Pyle Center. I can't think of a better way to start 2018 than seeing your industry colleagues, visiting with our distinguished guest speakers and the UW – Madison professors.

More information is available at [www.wisconsinturfgrassassociation.org](http://www.wisconsinturfgrassassociation.org). Registration is due by December 28th, 2017. Registration for Non-WTA members is \$50.00 and for WTA members \$40.00.

**The complete Registration Form can be found on Page 20 & 21 of this issue.** ✓



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## Goodbye 2017

By David A. Brandenburg, Editor, The Grass Roots

As I ponder how to start my 54th Editor's Notebook I am again amazed at how fast the years go by. It seems as though former editor Monroe Miller was writing about Bogey Calhoun and his exploits just a few months ago.

My thanks to the professors and UW Staff members who write the all important education and research portions of *The Grass Roots*. Without them our pages would be reduced to meeting results, my opinions and some ads.

Thank you to Josh Lepine for offering to start the Member Spotlight and to Ben Labarre for assisting Josh and of course to the many members who have allowed us to look into their lives by submitting material.

Jacob Schneider was our longest tenured free-lance writer and although he is taking a short hiatus, he and the other occasional writers add a flavor to these pages that cannot be overlooked.

Thank you to the 6 presidents who at first nervously, then talentedly wrote messages for these 54 issues as they guided our association.

Thank you to our advertisers (listed below) who support our publication. As customers please thank the advertisers who

bring you *The Grass Roots* and twist the arms of those vendors who are not current advertisers. If you do not feel comfortable twisting arms you can pass along the vendor information to Brett Grams and he will send them our Industry Partners information.

Speaking of Brett, thank you to our Chapter Executive who serves as business manager to obtain sponsorships, ad copy and the all important payments.

We have come a long way in 9 years. We have worked with three different printers with each one increasing our quality while reducing our costs.

*The Grass Roots*...The writers make it worth reading, the advertisers make it possible.

\*\*\*\*\*

Golf Digests 2017 / 2018 rankings of top courses for each state came out in June. We are lucky to have a number of great places for golfers to enjoy.

1. Whistling Straits, Straits Course remains at number 1.
2. Erin Hills Golf Course
3. Milwaukee Country Club

4. Blackwolf Run, River Course
5. Sentryworld Golf Course
6. Whistling Straits, Irish Course
7. Blue Mound Golf and Country Club.
8. Lawsonia Links moved up from 12 last year.
9. Blackwolf Run, Meadow Valleys
10. Troy Burne Golf Club

I am sure there will be some shuffling in the rankings as the new Sand Valley courses come on line and enter the mix.

The first 4 in Wisconsin are in the America's top 100 and all but the private Milwaukee CC and Blue Mound are in the America's Top 100 public courses.

\*\*\*\*\*

How was your weather year? Ours in Fond du Lac was mixed with a February opening full of promise followed by cold and wet conditions that persisted well into May. The summer was mild with ample rain but overall good weekends for golf. Our rain outs came at league time with storms between 2 and 4 PM right as the bulk of our players were arriving and then going right back home.

We hit labor day hoping for a good fall and were instead slapped in the face by a cold wet early September while Mid-Sept brought record warmth. That was followed by a warm October but unfortunately every weekend gave us rain or cold or both. But still golfers were happy and courses busy. Most of the state had a dry spell from the end of September into October but in Fond du Lac we had rain and the grass kept growing right into November.

Then the last week of October the cold came in and has pretty much lasted the first 3/4 of November. As I type this on November 26th we are in a stretch of some of the best weather of the month with no end in site. We had 100 players on Black Friday and Cyber Monday.

The turf did well all year due to the mild summer temperatures and dollar spot was the only troublesome disease. Our programs worked great on fairways and greens despite the first cut being loaded with dollar spot.

\*\*\*\*\*

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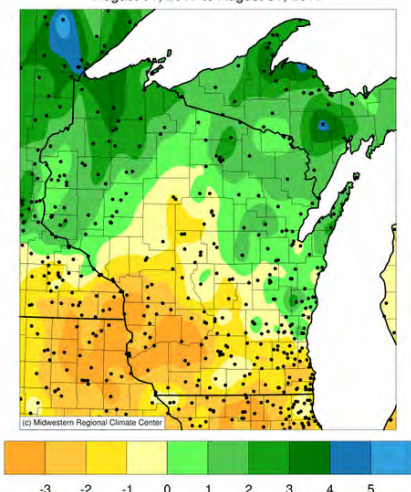
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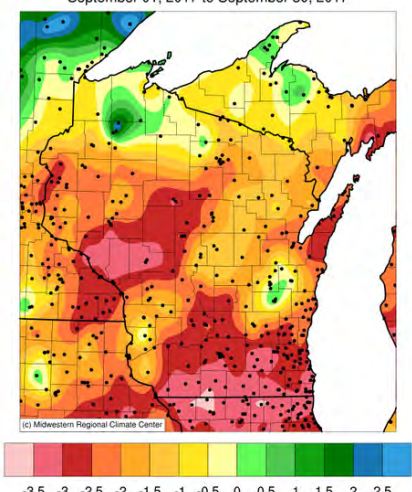
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# EDITOR'S NOTEBOOK

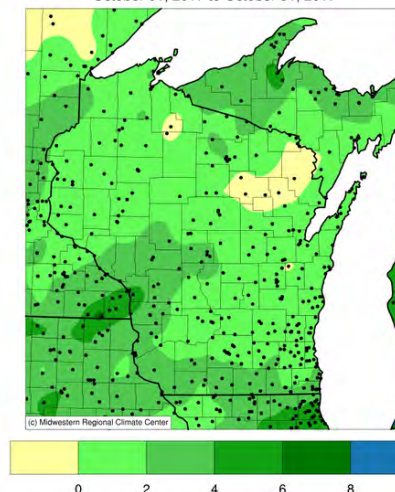
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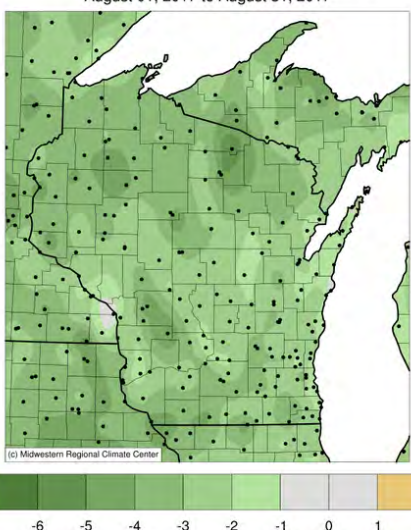


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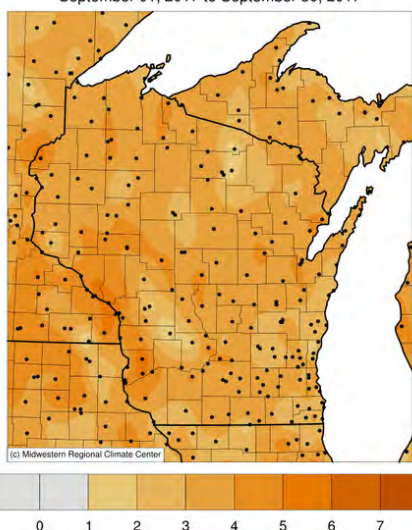


The precipitation maps from the last 3 growing months of 2017 show dryer than normal in the south and south west in August and nearly statewide in September with a increase in October. Note that both my home lawn in Theresa and our course in Fond du Lac received above average rain throughout the period. *Maps courtesy of Wisconsin State Climatology Office, University of Wisconsin-Madison.*

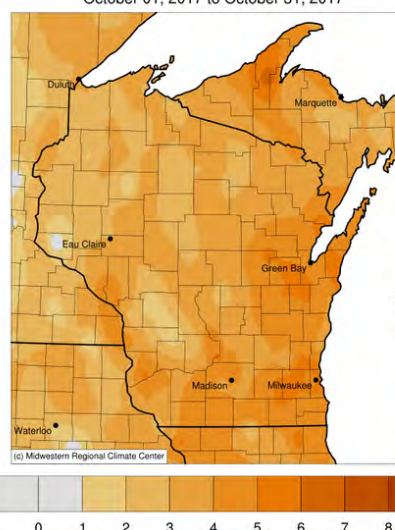
Average Temperature (°F): Departure from 1981-2010 Normals  
August 01, 2017 to August 31, 2017



Average Temperature (°F): Departure from 1981-2010 Normals  
September 01, 2017 to September 30, 2017



Average Temperature (°F): Departure from 1981-2010 Normals  
October 01, 2017 to October 31, 2017



The temperature maps from the last 3 growing months of 2017 show a cool August followed by a warmer than normal September and August. September for Fond du Lac had a cold beginning and ending with a hot middle with Sept 20 to 24 in the upper 80's and even 90 degrees. *Maps courtesy of Wisconsin State Climatology Office, University of Wisconsin-Madison.*

The business of golf does not seem to be getting any easier with rising costs and a growing number of customers who always want a deal.

I am not a marketing expert nor did I stay at a Holiday Inn last night but in the daily fee market the keys to success seems to be treat your current customers good and use social media to keep your name in the mind of customers.

Although golf is a challenging game it should also be enjoyable for players from check in to the first tee to the last putt drops in the hole to a beverage in the clubhouse

afterwards. Are your customers having fun? Are they greeted by friendly staff every step of their visit?

A large number of Wisconsin courses have been enticed to join a new 3rd party marketer Group Golfer. They do have a convincing sales pitch to attract course operators to allow them to sell certificates for your course that can be used in the next 6 months or year.

From receiving their emails for the past 9 months most courses are selling 18 and a cart for 60 to 75% off normal rate. For that the course gets 75% of the discount rate from Group Golfer.

The golfer gets a whopper of a deal and the course gets 75% of 25% of their normal fee. Group Golfer claims the course gets more than that per redeemed round due to rounds that are sold but never redeemed.

Although this may help a course that needs some cashflow and does not have a way to reach new customers it does lower the market for golf fees in a area. I have two thoughts on this.

First, once the golfers plays a course at 75% off rack rate will never pay full rate or even close to full rate again. They will be trained to wait for the next deal.



## EDITOR'S NOTEBOOK

Secondly a course would be better off to buy a email list or buy Google or Facebook advertising than provide a living for the operators of Group Golfer. Even if they offer a 50% off deal directly to customers the course will have 100% of the 50% rather than 75% of 25%. Golfers will be trained to go the golf course website for the best deal, not a 3rd party.

Group Golfer along with Golf Now, type sites are good for the golfer, good for the company selling the rounds without any investment or worry about a golf courses future but in my humble opinion are bad for the golf industry and the golf courses that get into bed with these operators.

\*\*\*\*\*

In good news from Club and Resort Business the members at Tuckaway Country Club have approved a 3.2 million dollar renovation to replace the irrigation system, move tee boxes and install bunkering.

It should be an exciting year for Jim Poitz and his staff.

\*\*\*\*\*

Are you able to find and keep entry level and seasonal workers in these days of low unemployment?

According to the United States Department of Agriculture and the National Agricultural Statistics Service on ag labor wages are rising to meet demand.

In the Lake Region of Michigan, Minnesota and Wisconsin field workers averaged \$12.47 per hour and livestock work-

ers \$13.28.

With car washes, retail outlets and fast food restaurants hiring at between \$10 to \$14 an hour golf courses will need to make their positions attractive to entice employees to work outside in the early morning.



\*\*\*\*\*

Have you seen this man on your course? The photo from Rick Wood (used with permission) and a article by Jim Stingl in the Milwaukee Journal Sentinel highlight John Krueger's 30 year quest to play every golf course in Wisconsin.

John who was active in the golf industry through his business Wisconsin Classic Golf

Tour has played 546 Wisconsin Courses and has the scorecards to prove it.

His wife Ann backs up the claim and explains that golf filled every vacation and they even played 54 holes on the last day of their 1987 honeymoon.

The 546 includes every regulation golf course in Wisconsin. His first time on a golf course property was picking stones on what is now Naga-Waukee Golf Course for a high school job. Krueger's first actual golf round was in 1968 at St. John's Northwestern Military Academy in Delafield for \$2.50 for all day golf on the 9 hole layout.

\*\*\*\*\*

*Golf Inc.* came out with it's annual most powerful people in golf list with President Trump at the top. The President moved up from 17 last time. As a golf course owner the industry was hopeful for a administration that would be business friendly with less regulations and lower taxes.

As we near the end of the first year of the administration the jury is still out but the stock market seems happy. Unemployment is low but there still seems to be a good number of Americans working jobs with less than livable wages.

Also it is hard rate an administration when half the things you hear or read are half truths in support or against them. Social media has a important place in the world but half the headlines on Facebook are just fake and trying to get you to click a link to something else. Of course many citizens would prefer the administration stay off social media in many cases.

Michael Keiser moved up to 4 on the list as the golf course developer is making waves with his Sand Valley project along with a new one on the Northern Coast of Scotland. Sand Valley was recently announced as best new course for 2017 by Golf Digest.

The CEO's from Troon Golf, Kemper Sports and other management companies are on the list along with PGA and USGA and other association officials.

Former GCSAA Executive Director Steven Mona make the list as CEO of the World Golf Foundation. Mona oversees Golf 20/20, The First Tee and the World Golf Hall of Fame spends his time focused on growing the game.

\*\*\*\*\*

54 issues down, and hopefully a few more to go. Thank you for sticking with it and reading to the end.

Merry Christmas to you, your staffs and families. I hope you have a wonderful off-season.



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## EDITOR'S NOTEBOOK

In the last issue my article on the WI PGA State Open at North Shore Country Club was cut a little short after I did not give host superintendent Joel Larsen time to respond to my request for information. So to quote the late Paul Harvey... "Here is the rest of the story".

Joel entered the business working for his brother at age 13 for the Lake Michigan Hills Golf Course in Benton Harbor MI.

Larsen attended Lake Michigan Community College for his general studies and then Michigan State to obtain his degree in Turfgrass Management in 2007.

He turf career has taken him to Point O'

Woods Country Club, Milwaukee Country Club, Sand Creek Country Club in Chesterton, Indiana and now North Shore Country Club in Mequon where he has been since 2014.

Besides the State Open Joel has also been involved with a number of top Amateur events including volunteering for the US Amateur at Erin Hills in 2011.

The 27 hole North Shore Country Club is a full service club with tennis and pool complexes to supplement the golf course and club operations.

One of the challenges for Joel and his staff is maintaining a 50/50 mix of bent/

poa on poorly drained clay soils. I must say the course was in excellent condition for the open and was well received by the players and the WI PGA.

Larsen was sure to recognize Jim King his Equipment Manager and Assistant Superintendents Emilo Ladron and Kevin Hartenberger. Managing 27 holes can be a challenge especially with part of one 9 across a very busy street in Mequon.

Congratulations to Joel and his staff on a great WI Open and my apologies for splitting up the article. (The original article can be found on page 36 of the September / October issue of *The Grass Roots*.) ✓

### Member 9 With Joel Larsen

1. **What was your first vehicle?** 1989 Ford F150.
2. **Favorite piece of golf course equipment?** *Dakota 440 Turf Tender.*
3. **18 hole Handicap?** *Maybe 18.*
4. **What is your current vehicle?** *Dodge Ram 1500.*
5. **Favorite TV shows?** *Andrew Zimmern Bizarre Foods.*
6. **Favorite professional sports team?** *Detroit Lions.*
7. **Favorite main course meal?** *Anything Mexican.*
8. **Pets?** *2 Dogs.*
9. **Favorite thing about working in the golf industry?** *Everyday has a different challenge to overcome.*

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## 2017 Chapter Delegates Meeting

By Jeff Barlow, Certified Golf Course Superintendent, Waupaca Country Club

The GCSAA Board of Directors, 2018 board candidates, and 88 delegates representing 94 of GCSAA's 99 affiliated chapters, convened at the Hilton Kansas City Airport Hotel and GCSAA Headquarters on November 7-8, 2017, for the 25th annual Chapter Delegates Meeting. Twenty-five of the delegates were first-time attendees. The Chapter Delegates Meeting is an event that brings together representatives from GCSAA-affiliated chapters. Delegates carry the opinions of their chapter's members regarding initia-

tives and issues affecting the profession, the association and its members. I want to thank the WGCSA board and members for the opportunity to attend. As a Delegate, I am responsible for communicating information I receive at the meeting to our chapter. Finally, this meeting is also the beginning of a new election year, as delegates we get the opportunity to meet GCSAA board candidates and discuss their campaign platforms. The following is a compilation of the key meeting outcomes provided by GCSAA.

### President's Association Briefing

President Bill H. Maynard, CGCS called on the attendees to be a force for good in the world, in their profession, and in the association. There are four principles Mr. Maynard hoped the delegates would take to heart:

- Everyone makes a difference
- Success is built on relationships
- Create value for others
- Reinvent yourself regularly

Mr. Maynard challenged the delegates to take these principles to heart and make a difference in the world around them.

### CEO Briefing

GCSAA Chief Executive Officer, J. Rhett Evans, began his presentation with a quote from GCSAA founder, Col. John Morley. The quote speaks to the association being founded on justice, faithful brotherhood and generous benevolence. Those foundational truths still hold firm today. Mr. Evans thanked the chapters and membership for their generous contributions to the GCSAA Disaster Relief Fund. As of the meeting, \$150,000 had been raised. The delegates heard from Field Staff in Florida, Texas and California that were affected by natural disasters.

### Benevolence

Mr. Evans shared that GCSAA has entered into an agreement with the Wee One Foundation.

### Report of GCSAA

Mr. Evans provided an overview of GCSAA financials. The association remains on solid financial footing with revenues outpacing expenses. GCSAA is expected to have \$18,066,000 in revenue and \$17,963,000 in expenses in 2017. The association continues to focus on increasing value in GCSAA membership by spending its resources in key member services and initiatives. Those areas include – research and environmental programs, chapter outreach and government affairs.

Mr. Evans reminded us that last year GCSAA set a goal to achieve 20,000 members by 2020.



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Currently, GCSAA has 17,380 members. International opportunities are an area for growth for GCSAA. Mr. Evans shared information surrounding three countries:

- Ireland – GCSAA has granted a license to the Golf Course Superintendents Association of Ireland to allow them to consume GCSAA educational content for a fee.
- Canada – The recent CanAm Tournament is an example of partnering with Canada to support networking and education opportunities that benefit both associations.
- Mexico – In Mexico, the interest to collaborate with GCSAA was so great they agreed to change their association name and to officially become an affiliated chapter of GCSAA. The Mexico GCSA is now the 99th GCSAA chapter.

## Rounds 4 Research Auction

2017 Rounds 4 Research Auction had its most successful year yet. The number of rounds donated increased 26% from 2016 and the number of rounds sold increased by 33%. Marketing in the social media sphere was a focus for the auction, with significant gains on Twitter, Instagram and Facebook. The top five fundraisers were:

- Carolinas GCSA - \$50,000
- Georgia GCSA - \$19,826
- Florida GCSA - \$15,614
- Tennessee GCSA - \$13,235
- GCSA of New Jersey - \$10,358

Individual Wisconsin courses participate in the Rounds for Research program but the WGCSA operates our own successful Par 4 Research program. 100% of all funds generated are directed to UW Turfgrass Research.

## State BMP implementation and Next Steps

GCSAA's goal is to have all 50 states with a BMP in place by 2020. Ten states have a BMP Manual in place, with 3 more set to come online this winter. In all, there are 31 states in progress. The State BMP initiative is gaining steam and is expected to hit the goal by 2020!

### Next Steps:

Once states have created and adopted state-level BMP plans the next step will be for facility level plans. More information about all of these programs and progress being made in this area will be available at the 2018 Golf Industry Show and on [gcsaa.org](http://gcsaa.org).

## Government Affairs Briefing

GCSAAPAC - GCSAA now has a Political Action Committee (GCSAAPAC) to support advocacy efforts on behalf of the membership. Having a PAC allows GCSAA to build Congressional champions to advance GCSAA's agenda. The PAC will grant greater access and visibility with Members of Congress and increase the association's profile with allied golf groups. It will help GCSAA remain a leader in golf advocacy.

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National Golf Day - 2018 National Golf Day which will be held on April 24-25, 2018. This event continues to bring together allied golf associations through the We Are Golf coalition. The lobby day brings together hundreds of attendees spreading the coalition's message regarding golf's charitable, economic, environmental and fitness benefits to Congressional leaders. 2017 was the first time a community service project was included and it was successful.

Grassroots Ambassador Program - The Grassroots Ambassador Program is entering the 4th year of matching a member of Congress with a GCSAA professional member. GCSAA has 305 Grassroots Ambassadors. There are still districts open and in need of volunteers. This program has been successful because of dedicated volunteers meeting with their member and establishing relationships.

## Task Groups Update

GCSAA is focused on growing its value proposition with current and potential members. This will help the association achieve its overall membership goal of reaching 20,000 by 2020. GCSAA asked three task groups to help increase the value in membership to students, assistants and equipment managers.

Equipment Manager Task Group: This task group helped launch two new certificates in 2017 – Metalworking and Fabrication-Fundamentals of Turfgrass Operations. This brings the total of certificates available to 8. The task group will continue to work towards creating a new Certified Golf Course Equipment Manager designation.

Student Task Group: The student task group provided feedback on a new online mentoring program; suggested free student web membership and helped with a new marketing piece aimed at high school students and their parents. The task group also helped identify potential topics at GIS and gave their thoughts on a new Student Pavilion area that will be on the Trade Show Floor.

Assistant Superintendent Task Group: The Assistant Superintendent Task Group got to work on the brand-new Assistant Superintendent Certificate Series. These certificates are aimed at helping assistant superintendents market their expertise and knowledge, although they will be available to everyone. The Agronomic and

Business exams will debut by the end of 2017. The 2018 task group will further define the remaining certificate criteria for content relative to communication/leadership, and environmental management.

First Green: Information was presented on First Green, a program that provides STEM Education opportunities for children using the golf course as a learning lab. The First Green has been around for 20 years and is based in the Northwest. GCSAA and the EIFG are supportive of First Green because field trips introduce kids to the golf course and potential careers. It has the opportunity to impact these young minds and tackle some challenges that the industry has been faced with – lack of qualified assistants, declining enrollment in turf programs and a labor shortage. The EIFG Board of Trustees will discuss taking over the management of The First Green program at its winter meeting.

## Governance Updates

### *Proposed Bylaws Revisions*

- Proposed revision to Article 1, Section 1: Currently, only A and B members living in the United States (excluding Alaska) are required to belong to an affiliated chapter. Now that GCSAA has two international chapters, Ontario GSA and Mexico GCSA, the proposed change to the bylaws will extend the dual membership requirement internationally if there is an affiliated chapter nearby.
- Proposed revision to International Member: The changes to the definition would only allow international superintendent membership in countries without a GCSAA Affiliated Chapter. It goes hand in hand with the change in Article 1, Section 1.
- Proposed revision to Article V, Section 4: This change would allow vacancies, or unexpired terms due to the election process (Secretary/Treasurer election) to be filled by ballot immediately following the election for the open positions for director.
- Proposed revision to Article VI, Section 2: The revision states the appointments to fill a vacancy on the Board of Directors will only remain in effect until the next scheduled election. At which point, the delegates would vote to fill the remaining term.
- Proposed revision to Article VI, Section 3: This revision cleans up and consol-

idates language surrounding the process of removing a GCSAA Board member.

- Proposed revision to Article VIII, Section 1 (B): Brings the technology used while holding "Special Meetings" up-to-date.
- Proposed revision to Article VIII, Section 1 (D): Speaks to allowing board members to waive notice of meetings by emailing or messaging the Secretary of the Board. Adding 21st technology options.
- Proposed addition to Article VIII Meetings: Adds the Chapter Delegates Meeting to the Bylaws and outlines the consequences of nonattendance. This is consistent with the Affiliation Agreement.
- Proposed revision to Article XIV Dissolution: Cleans up language surrounding how the assets of GCSAA would be distributed if it dissolved.

### *Town Hall Session*

The GCSAA Board of Directors established the practice of conducting "town hall" meetings to further enhance the communication and information sharing between GCSAA's elected leaders and affiliated chapters and members.

The feedback received generally ran along these themes:

- Overall, the groups supported the changes in the election process.
- Several groups suggested looking into voting technology that could speed up the process.
- We didn't care for the removal of job poaching language from the Code of Ethics, they realized that the law is the law and didn't want the association to get into trouble over it.
- There were great conversations around the new certificate programs for Equipment Managers and Assistant Superintendents. Several of us encouraged the Board to consider not charging members for these certificates.
- There was a robust discussion structure of the board. Should there be representatives from each region, or facility type? We wanted the best candidates to run, not necessarily an individual from a certain region.

### *Election Process*

- No proposed changes to President, Vice President or Secretary/Treasurer election process.



- Each open director position would be voted on one at a time vs. the current process of voting for all open director positions at the same time.

## *Unexpired Terms/Vacancies on the Board*

- There is a proposed bylaw change that would require an immediate vote by ballot for any vacancy that might occur due to the unexpired director's term in the Secretary/Treasurer election. This unexpired term would be voted on after the open position(s) for director(s). Currently, if there is an unexpired term due to the Secretary/Treasurer election, it is filled by presidential appointment.

- A proposed change to the bylaws would also address how to fill a term due to a resignation on the Board. Currently, the President appoints a replacement. The change would be to have the President appoint a replacement only until the next election. Then the delegates would vote on the replacement.

## **Candidate Presentations**

We had an opportunity to listen to presentations from candidates running for elected office. After the presentations, we participated in the "Meet the Candidates" session where they asked questions of the candidates in breakout groups. The 2018 GCSAA Board candidates are:

- Office of President: Darren J. Davis, CGCS
- Office of Vice President: Rafael Barajas, CGCS
- Office of Secretary/Treasurer:  
John R. Fulling, Jr., CGCS  
Mark F. Jordan, CGCS
- Director (electing 2):  
T.A. Barker, CGCS  
Kevin P. Breen, CGCS  
Nelson Caron  
Kevin P. Sunderman  
Rory Van Poucke  
Jeff L. White, CGCS.

There are two open director positions, with Kevin P. Breen, CGCS completing a two year term and Kevin P. Sunderman completing a one year appointment. If

the proposed bylaws change passes, which will be voted on prior to the election we will elect one director at a time. If the proposed bylaws change doesn't pass, then the two director candidates receiving the most votes will be elected to two-year terms.

For the Secretary/Treasurer candidates, if Mark F. Jordan, CGCS, or John R. Fulling Jr., CGCS is elected Secretary/Treasurer, the other candidate will automatically remain on the board to complete their term but then the Board would need to appoint someone to fill the remainder of the one year director term of the elected Secretary/Treasurer unless the proposed bylaws change is adopted, in which case that position would be elected after the directors have been elected. Bill H. Maynard, CGCS will serve on the board for one year as immediate past president. Peter J. Grass, CGCS retires from the board after serving the last year as immediate past president.

Please contact Jeff if you have any questions or concerns. 

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## MEMBER SPOTLIGHT

### Rob Wasser and Steve Wasser

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: **Rob Wasser**

Company Position: **Sales representative for Arthur Clesen**

Years as WGCSA Member: **20**

Membership Classification: **D**

#### 18 Holes With Rob Wasser

**1. How did you get started in the turfgrass industry?** I started out working for my uncle, who owned a landscape / lawn care maintenance company in Lake Zurich, Illinois. I did that for three years. In my sophomore year of college, Dave Smith, superintendent at Abbey Springs Golf Course hired me to be his special projects guy. It was there where I fell in love with working on a golf course. I worked for Dave for 4 years and was hired by Jim Knulty, superintendent at Big Foot CC as his assistant. It was under him where I learned how to manage the maintenance side of a golf course. I really enjoyed being and working out on a golf course.

**2. What is the most rewarding part of your career?** It is extremely rewarding being able to work at a job and for a Company that I really love. It is great when you don't mind getting up in the morning and going work. One of the things that makes the job so rewarding is being part of the Wisconsin brotherhood of the green industry.

**3. What would you consider to be your greatest career challenge?** The greatest challenge for me is having to deal with the significant financial challenges the golf industry has gone through in the first decade of the 2000's. In the 1990's, the industry was booming. You couldn't do anything wrong. But after 9-11 and the Great Recession of 2008, there were many financial setbacks experienced in the industry which affected everyone. It forever changed our industry.

**4. Which three adjectives describes you the best?** Organized, diligent, friendly

**5. Tell us about your family.** I have been married to my best friend Lisa for 29 wonderful years. Lisa is an English teacher and coach at Shoreland Lutheran High School. We were blessed with 4 great kids. The first is Amy, who is married, a mom (my granddaughter Mya) and a First grade teacher in Franklin, Wisconsin. The second is Jessica, who is a Fifth grade teacher in Brookfield Wisconsin. Our third is Nate, who is a staff account in Brookfield. He is currently working to get his CPA license. Our last one is Rachel. She

is a junior at Carroll University in Waukesha where she is majoring in nursing.

**6. Any pets? Not anymore.** I am a dog lover and have had two dogs (a black lab mix and a beagle dachshund mix).

**7. What drives/motivates you every day?** I don't want to let anyone down. I want to get the job done for Arthur Clesen and to help customers with any problem they may have. It is an awesome feeling to be able to solve a problem for someone, whether it is internal or external.

**8. Who Would You Admire?** The person I most admired was my dad. Unfortunately, he died a few years ago. I never knew anyone who could get kicked, knocked down in life and get back up smiling. He had a lot of guts and the biggest heart. He and my mom adopted 22 kids. This was after they had me, and my two brothers Steve and Craig. He never cared what anyone thought of him. He always fought for and did what he thought was the right thing to do.

**9. Who is the person in history you'd most like to meet?** That would be Major Dick Winters. He was the Commander of Easy Company (Band of Brothers) who fought in Europe in World War II. He was an extremely humble man who accomplished one of the toughest jobs imaginable.



**The Wasser Siblings: Nate, Jessica, Amy, and Rachel**



## MEMBER SPOTLIGHT

**10. What's a fun fact that people don't know about you?** I am the oldest sibling out of 25. As mentioned earlier, my parents had me and my two brothers Craig and Steve. After that they started adopting children. It started as foster care which my parents did not like. They wanted to give them all a permanent home. That is exactly what they did. Our Holiday get together's can be very interesting.

**11. What do you do in your spare time, favorite hobbies?** I like to kayak and cross country ski. If I can find time, my wife and I love to camp. We hopefully can do it near a river or lake.

**12. If you could go anywhere in the world on vacation, where would you go?** I would love to go to Alaska on a kayaking trip. Of course, it would be in the summer.

**13. What is the one thing you would like to learn/accomplish someday?** I would love to learn how to fly a plane.

**14. What is your favorite turf management related tool or technique?** It would have to be the sprayer or fertilizer spreader. It is because of these two pieces of equipment, I have been able to make a living for me and my family.

**15. Favorites:**

**TV Show:** Designated Survivor

**Movie:** Band of Brothers, I own this and never get tired of watching it.

**Food:** BBQ Baby Back Spare Ribs, My wife has the perfect recipe.

**Sports Teams:** The Packers, can't remember the last time I

missed a game. Actually, I love watching all our Wisconsin Sports teams.

**16. Do you golf? Handicap? Best shot or golf story?** I love to golf. I wish I could do it more. However, I have to admit that I am a terrible golfer. My handicap is 25 and the only reason it isn't higher is because you can't have a handicap higher than that. At least that is what I have been told. My best golf story is back in 2010, my team won the Monday Pro Am at the Deere Run Golf Classic. Randy DuPont was my partner and we were golfing with Ted Purdy. It was a best ball tournament. Our team shot 57. I actually contributed that day. On hole 7 a par 3, I put it 6 inches from the cup on my drive. That was simply a miracle. No one even got out of their cart, they told me to putt it in the hole. I was shaking as I didn't want to blow the putt with everyone watching. I did make it and it netted out for a "1" because of my handicap. That was the only contribution I made to the team that day. They made me pickup my ball on every other hole in order to keep the pace of play moving.

**17. Top Bucket List Item?** I would love to take a summer off and travel around the northern Midwest to camp, kayak and hike.

**18. If you could provide one piece of professional advice, what would it be?** Make your "vocation a vacation." If you like and enjoy what you do for a living it makes it easy getting up in the morning to go to work. Keep looking until you find the right job.



Left: Rob, Lisa, Amy, Josh, Rachel, Jessica and Nate Wasser

Below: Rob and Lisa's Kayaks



## MEMBER SPOTLIGHT

*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: **Steve Wasser**

Company Position: **Sales Reresentative, Clesen Proturf Solutions**

Years as WGCSA Member: **34**

Membership Classification: **D**

### 18 holes with Steve Wasser

1. **How did you get started in the turfgrass industry?** I got started in the turf grass industry when I was 10 years old. I needed money to buy things that kids want. My parents didn't believe in allowances, so my brother Rob helped me get a job mowing the neighbor's yard. This turned into maintaining 6 yards by the time I was 15. By this time Rob was working at Abbey Springs Golf Course. David Smith, Superintendent, needed someone to wash the carts, all 72, 7 days a week. So at age 16

I became the cart washer- making minimum wage. I was in heaven! From here Dave and Rob molded me into loving the game of golf- at least the agronomic side! I am still a terrible player

2. **What is the most rewarding part of your career?** Helping people have the best manicured property

3. **What would you consider to be your greatest career challenge?** Sales, I thought after being groomed by Dave, becoming a superintendent, building a golf course sales would be easy. It is extremely challenging and different every day.

4. **Which three adjectives describes you the best?** Fun, Energetic, Workaholic

5. **Tell us about your family.** Married to my wife Tami for 25 years and counting. I have 3 children; Rebecca, she is a school teacher in MN, Matt, he is an insurance agent, and Brooke, she is in her first year of college.

6. **Any pets?** No pets at this time, my dog Sarge passed away last Christmas- 16 years old!

7. **What drives/motivates you every day?** Seeing 5-7 friends every day, working with them, and learning from them

8. **Who Would You Admire?** Honestly all of my customers. It's amazing to see how each one runs their golf course.

9. **Who is the person in history you'd most like to meet?** Dwight D. Eisenhower, he is the father of our freeway system! Even though his timeline and costs were way off, his vision was incredible!



Matt, Brooke and Rebecca Wasser at Little Star Lake in Manitowish, WI

### LAUGHTER ON THE LINKS

Three unmarried men were waiting to tee off when the starter walked up to them and said, "You see that beautiful blonde practicing her putting?"

"Her? Wow, she is beautiful," they all said.

"She's a good golfer," he continued, "and would like to hook up with a group. None of the other groups will play with a wom- an. Can she play with you? She won't hold you up, I promise." They looked at each other and said, "Sure! She can join us." Just as the starter said, the woman played well and kept up. Plus, they kept noticing, she was very attractive.

When they reached the 18th hole, she said that if she sank her 18-footer, she'd break 80 for the first time. "Guys, I'm so excited about breaking 80 that I have to tell you something. I had a great time playing with you. I can tell you all really love golf. I want you to know that I'm single and want to marry a man who loves golf as much as I do. If one of you guys can read this putt correctly and I make it, I'll marry whichever of you was right!"

All three jumped at the opportunity. The first one looked over the putt and said, "I see it breaking 10 inches left to right." The second looked it over from all sides and said, "No, I see it breaking eight inches right to left."

The third man looked at the woman, looked at the ball, and said, "Pick it up. It's good!"



## MEMBER SPOTLIGHT

**10. What's a fun fact that people don't know about you?** That I own 3 commercial Toro mowers, 2- 325D (with all the attachments) and a 345. (Yes with the attachments) I enjoy mowing a church cemetery every Saturday- takes 6 hours to mow and 1 ½ hours to trim! (Half that time if my son shows up!)

**11. What do you do in your spare time, favorite hobbies?** I enjoy walking (2 miles a day) with my wife and spending time with my family. I am continuously remodeling my house, and of course truly love the Packers.

**12. If you could go anywhere in the world on vacation, where would you go?** My favorite vacation spot is Key West, but in general any place next to the water will do.

**13. What is the one thing you would like to learn/accomplish someday?** I would like to build my own house, from the ground up.

**15. Favorites:**

**TV Show:** M.A.S.H.

**Movie:** Back To The Future.

**Food:** Pizza.

**Sports Teams:** Packers

**16. Do you golf? Handicap? Best shot or golf story?** I am a terrible golfer, but I do have a best shot story. This took place on the 8th hole at Abbey Springs Golf Course, before the back tee was built. The tee used to be long and narrow, approximately 50 ft. long and 8 ft. wide. To accommodate the ladies (it was not called

a forward marker at that time) the ball washer was placed in front and to the left of the tee. My brothers and I were playing for the longest drive on this hole. Both brothers hit approximately 200 straight down the fairway. (Notice I was hitting last) It was my turn. One time I wanted to beat them at something, this was going to be the time! I gave it all I had- aiming left because of my wicked slice, the ball flew off the tee- line drive, it hit the metal ball washer pole, corrected the direction of the ball and flew (bounced and rolled) past both of their drives! I was really proud of myself! I turned around to gloat and found both of them on the ground laughing hysterically at my best shot ever!

**17. Top Bucket List Item?** To go see and explore Alaska during the summer.

**18. If you could provide one piece of professional advice, what would it be?** Be who you are. 🌱



Steve and Tami Wasser at Mirror Lake in 2017

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## Dustin Riley Receives Distinguished Service Award

By David A. Brandenburg, Editor, The Grass Roots

“For What?” was Dustin Riley’s first response when WGCSA Board Member Garrett Luck called to tell him he would be honored with the Distinguished Service Award. It is this humble attitude and his willingness to go the extra mile to help the WGCSA is exactly why the award is given.

Riley grew up in Lomira, WI and entered the golf industry as a grounds crew member at Camelot Country Club.

He began college at UW-Stevens Point working towards a Wildlife Biology degree when he saw limited opportunities in that field.

His summer job at the golf course became appealing to him so he transferred to UW-Madison and graduated with a degree in Soil Science. It was at Madison that Dr’s Wayne Kussow and Frank Rossi had a influence on Dustin’s career.

To expand his horizons Dustin joined Scott Schaller’s staff at South Hills Country Club in Fond du Lac and learned the difference in expectations and turf management at a private club in comparison to the daily fee club.

With a quest for additional knowledge in golf turf management Riley headed to Penn State’s Golf Course Turfgrass Management Program.

After graduation from Penn State Dustin became the Assistant Superintendent at North Shore Golf Club in Menasha again working under the direction of Scott Schaller. After honing his skills and education Riley was ready to head out and was successful in landing the Superintendents position at Oconomowoc Golf Club.

Dustin has been at the Donald Ross designed Oconomowoc for 18 years and has been a great asset for the membership. His largest project was regrassing the fairways to reduce poa populations and provide more consistent conditions for the members.

Riley joined the WGCSA board in 2004 and served as President in 2008 and 2009.

As President Riley was instrumental in creating the full time Chapter Manager position to meet the growing needs of the association.

Dustin saw the need to increase the associations contributions to turfgrass research

at the UW-Madison O.J. Noer Research Center. In result he was the founding chairman of the Par 4 Research Auction and continues helping with the auction. Since it’s inception in 2010 the Par 4 Research has netted more than \$73,000 to benefit research.

Riley was humble in his acceptance speech and was quick to point out he was not alone and anything he did was done as part of a

board or group.

Dustin and his wife Jamileen have 3 children, Dayle, Maguire and Riann. The family lives in Oconomowoc.

I am proud to say I knew Dustin when he was a youngster on the golf team looking for a summer job and I am proud to know him as the professional and leader he has become today. Congratulations Dustin on this well deserved award! ✓



**WGCSA President Jon Canavan presents Dustin Riley with a Distinguished Service Award for his continued above board support of the WGCSA.**

### WGCSA Distinguished Service Awards

Les Verhaalen

Bill Sell

Dr. Jim Love

Bob Welch

Jim Belfield, CGCS

Dr. Gayle Worf

Monroe Miller

James Latham

Rodney Johnson, CGCS

Dr. Wayne Kussow

Eugene Haas

Wayne Otto, CGCS

David Brandenburg, CGCS

Charles Wilson

Thomas R. Harrison

Danny H. Quast, CGCS

Robert Vavrek

Mark Kienert, CGCS

Dustin Riley, CGCS



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## 2017 Fall Business Meeting

By Brett Grams, Chapter Manager, WGCSA

Only a handful of WGCSA members besides the board of directors joined us for the fall business meeting.

This meeting used to be on a separate day and location and then moved to after the first day of the symposium which improved attendance but also caused a rush when the Kohler staff had to clear the room for the next group. The other problem was the meeting was the only thing standing between the membership and the coveted beer and cheese.

Please consider attending in 2018 to learn more about and participate in the future of the WGCSA. The meeting last about a hour giving attendees time to enjoy a lunch at the Horse and Plow before returning for the first session of the Golf Turf Symposium.

**President Canavan** reported on the success of the U.S. Open billboard campaign and thanked the membership for his first year in office.

The **Chapter Managers Report** included updates on the Par 4 research which saw more bidders but less rounds.

A matching \$3,000 grant from GCSAA, \$3,000 from WGCSA and \$2,000 each from the WI PGA and WTA funded the US Open Campaign.

Meeting participation was up in 2017 and a good slate of events is scheduled for 2018.

A ad hoc committee has been formed to help with the creation of a Equipment Manager Classification similar to the GCSAA offering.

Much of the managers time is spent obtaining vendor support for the Industry Partner Program which funds The Grass Roots, monthly meeting awards and other functions of the association.

The board is refining their set of Standard Operating Procedures to help guide board operations in the future and provide continuation from year to year.

### Event Schedule!

**January 9 (Tuesday)** Turfgrass Research Day and Webinar Pyle Center, UW-Madison

**February 3-8** Golf Industry Show, San Antonio, Texas

**February 7 (Wednesday)** Wisconsin Room at GIS - Smoke The Restaurant

**February 20 (Tuesday)** Assistants Seminar - Whispering Springs

**February 27 (Tuesday)** Spring Business & Education Meeting - South Hills CC

**March 7 (Wednesday)** NGLGCSA Educational Conference - The Waters of Minocqua

**April 25th (Wednesday)** Super Pro Outing - University Ridge Golf Course

**May 21st (Monday)** May Golf Meeting - Racine Country Club

**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 4th (Thursday)** WTA Golf Fundraiser - Kenosha Country Club

**TBA (Saturday)** Couples Evening - Green Bay

**Nov 28th - 29th** 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.

### Scholarship and Research

S and R Budget for 2018	2017 Bud.	2017 Act.	2018 Prop.
JR Love Scholarship	\$ 1,500.00	\$ 1,500.00	\$ <b>1,500.00</b>
Legacy Scholarships	\$ 2,000.00	\$ 2,000.00	\$ <b>2,000.00</b>
MS Miller Literary Schol.	\$ 1,000.00	\$ 1,030.00	\$ <b>1,000.00</b>
TDL DONATIONS	\$ 3,100.00	\$ 3,100.00	\$ <b>3,100.00</b>
UW Madison/WTA *	\$ -	\$ 25,100.00	\$ <b>6,200.00</b>
PAR 4 Research Donation	\$ 8,500.00	\$ 6,132.00	\$ <b>6,300.00</b>
EIFG	\$ 500.00	\$ 500.00	\$ <b>500.00</b>
Other/OJ Noer	\$ 11,500.00	\$ 2,000.00	\$ <b>2,000.00</b>
NEW Turf Scholarship	\$ -	\$ -	\$ <b>1,500.00</b>
Great Lakes Certificates	\$ -	\$ -	\$ <b>1,500.00</b>
Best Management Plan	\$ -	\$ -	\$ <b>10,000.00</b>
<b>Total Scholarship and Research</b>	<b>\$ 28,100.00</b>	<b>\$ 41,362.00</b>	<b>\$ 35,600.00</b>



The members in attendance approved the Scholarship and Research funding for 2018.



The **Membership Report** showed our membership numbers are the same but the membership is aging slightly. As a reminder all membership information is cloud based and members can update their own information when they move. Of course if you need help just contact Brett and he will help.

Jeff Barlow gave a **Delegates Meeting** update that can be found on page 34 of this issue.

Mike Bremmer presented the **Governmental Regulations and Environmental Committee Report** with updates on the H2B program and Wotus from GCSAA.

The **Treasurers Report** and **Budget** for 2018 were presented and gone over before the members voted on the Scholarship and Research funds to be spent in 2018.

Josh LePine gave an update on the **Best Management (BMP)** program his committee is working on. 10 states have completed BMP's that are available on the GCSAA website. Josh envisions our program will mainly be online with printable sections. The committee is working with the University Professors for their expertise. Dr. Williamson has completed a Pollinator BMP so that chapter is done.

Bruce Schweiger gave an update with pictures of the new storage facility at the Noer Center funded in part with WGCSA donations. He has promised a full article in the January / February, 2018 issue.

Dr. Soldat gave a thank you from the U.W. Team and gave an update on the compaction study. He also updated the group on the turf program, a possible short course and the online course.

The final business was the election of officers and directors for 2018. A unanimous ballot was cast for the following candidates nominated by the 3 previous Past Presidents Jim VanHerwynen, Chad Harrington and Jeff Millies.

President - Jon Canavan

Vice President - Josh LePine, CGCS


Treasurer - Jeff Barlow, CGCS

Secretary - Scott Anthes

Director - Michael Bremmer

Director - Brian Bonlender

Garrett Luck and Ben LaBarre each have a year left on their two year director terms and Jim VanHerwynen will continue as Past President.

If you are interested in serving on a committee or being a future board member please contact President Canavan. We have a number of committees that need your expertise. 

## UW Funding Proposed as of 11.1.17

Name of Project	Requested by:	2018 Funding	2019 Funding	2020 Funding	Project Total
Dollar Spot Control Using urea and iron sulfate (EIFG, UW, UM)	Koch, Soldat, Horgan, Bauer	\$10,000	\$10,000	-	\$20,000
Turf Pest Management Website Update/Creation	Koch, Soldat, Williamson	\$ 2,500			\$2,500
	Annual Totals	\$12,500	\$10,000	\$0	\$22,500

*For 2018 Budget the \$12,500 will be funded by PAR 4 Donation of \$6,300 and an additional amount of \$6,200 donation out of our general budget funds.*



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# Something For Everyone at the Turfgrass Management Buffet

By David A. Brandenburg, Editor, The Grass Roots



WGCSA President **Jon Canavan** opened up the 2017 symposium with welcoming remarks before turning the microphone over to Dr. Doug Soldat who gave a memorial statement on Dr. Kussow who passed away this year. The Turf Doc served the

UW Soils Department from 1984 to 2005 and was a recipient of the Distinguished Service Award in 2005. This years symposium was in remembrance of Wayne's Legacy. Dr. Soldat had put together a short slide show of Dr. Kussow's life and career in pictures. For more on Dr. Kussow see page 12 of this issue.

Jon then turned to WGCSA newest recipient of the Distinguished Service Award as he introduced Dustin Riley. More on Dustin and his award can be found on page 42 of this issue.

**Gary D'Amato** served as Keynote Speaker as he covered his career in covering golf both nationwide and locally. Gary recently entered the Wisconsin State Golf Association Hall of Fame for his work covering golf since 1992.

His recent series titled the "Making of Erin Hills" was a huge hit as patrons looked for information on the U.S. Open



Host Course.

Gary recalled his interaction with local players both professional and amateur he got to know them as he covered their careers.

Gary loves the game of the golf and the

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properties Wisconsin has to offer. He considers Lawsonia and Grant Park as his sentimental favorites but named many courses he enjoys.

D'Amato said "Superintendents are like offensive lineman and are only noticed when something goes wrong."

Gary provided a treasure trove of information on the Wisconsin amateur golf scene and we were fortunate to get have him open the 52nd Golf Turf Symposium.



Mark Johnson discussed "Best Management Practices Program and Resources" and showed the benefit of being proac-

tive rather than reactive when considering regulations and policy.

He explained how water and water use or pollution is a key topic for all environmental discussions. He reminded us how the Mississippi drains water from 6 major rivers and 33 states into the Gulf.

Overall Mark was able to show why WGCSA should invest time and resources into adopting Best Management Practices in cooperation with the University and government regulators.



Todd Quitno, Lohmann Golf Designs took the podium to discuss "The Great Bunker Debate" Bunkers constitute 3% of the average golf course acreage but likely



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constitute 80% of golf complaints. 10-25% of a maintenance staff's time is spent maintaining bunkers and the average unit cost of bunker construction is often greater than that of USGA greens.

Depending on style and building practices bunkers average \$7-13 per sq. ft..

So if they are expensive and bunkers "piss people off" to quote Todd why do we have them? As Quitno explained bunkers are one of the most versatile features on the golf course. They provide visual interest, color contrast, shadowing and frame golf holes.

While trees provide a vertical hazard sand bunkers provide a horizontal hazard and allows variety in play and design.



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Bunker design has seemed to vary from flat-sand to flashed-sand and for some clubs back and forth.

Bunker construction has improved with the new capillary concrete and Better Billy Bunker products and methods golf courses have been able to go back to flashed sand bunkers without risk of contamination from sand wash-outs. The liners are important and can double the life of a bunker and the expensive sand.

Todd ended his talk with "Bunkers are both the joy and pain of golf, and they always will be!"



Roger Stewart spoke on "Recruiting and Retaining Your Staff." With unemployment at historic lows and wages for workers rising, golf courses have found it challenging to fill their staffing needs.

The seasonality of the upper Midwest golf season adds to our challenges to bring back staff members year after year.

Golf's other challenges are we are cheap and a industry, we are slow to keep up with economic changes and we took laborer positions for granted.

It doesn't help that golf course work is done early in the morning, on weekend and holidays and in bad weather.

Roger suggested we have a long road ahead but we can make it better by showing respect, trust and equal treatment in the workplace.

Camaraderie can be built with uniforms, hats, staff events, recognition for good work and appreciation for their commitment.

Stewart suggested we get out of our silo's and work with the other departments at our clubs and some employees can be shared.

There isn't any new news in recruitment but use all the normal avenues, even signs and banners will work to get people in the door. We just have to stick it out and do what we can to raise the wages we offer.



Tom Emmerich is the states leading expert in irrigation design, technology and installation. He entered the irrigation business doing residential work for Acme Lawn Sprinklers in 1971. His first golf course job was at Westmoor in 1977 working for Milwaukee Lawn. He started with Reinders in 1985 performing sales and design before heading out on his own in 1992.

"Golf Irrigation Technology Then and Now" gave a great recap of where we have been and where we are currently. Tom said it was difficult to predict the future because manufactures are very secretive about what they are developing.

Pumpstations, pipe, pipe fittings, sprinklers and control systems have become smaller and more efficient and easier to maintain. Filtration at the pump station has reduced problems in the field. Everything can be monitored from anywhere via smart phone.

Emmerich provided a wealth of knowledge on installation methods, new fitting technology and pump station technology.





Dr. Mike Richardson, University of Arkansas presented “How Much Shade Is Too Much Shade?” In stadiums supplemental lighting can be used but in golf that is not practical from a cost or environmental matter.

Dr. Richardson is working to find a quantitative number of how much light is needed to grow quality turf. At the same time they looked at is morning or afternoon light more important for growth when moisture is taken out of the equation.

In the bentgrass trials Primo Maxx and Turf Screen both increased turf quality. The trials also showed a Daily Light Integral of 30 mol m<sup>-2</sup> d<sup>-1</sup> were needed for acceptable quality.

Of course many factors come in to play such as turf variety, root intrusion, timing of shade and general weather factors.

The next step is to develop tools golf course superintendents can use to find the minimal number needed on their course.



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of O.J. Noer**



Dr. Soldat began his talk on “Optimized Fertilization Practices” by explaining the difference between the current hot topic work “minimalism” and the more practical “optimization”.

Soldat gave tribute to Dr. Wayne Kussow as the architect of the modern turfgrass fertility movement.

Kussow started MLSN before it existed and knew BCSR testing lead to extra fertilization. Wayne also collected clippings before it was cool to tie growth and nutrient needs together.

Work by both Soldat and Kussow showed light urea applications provided healthy turf at a controlled growth rate. It also is one of the most cost effective N applications available.

A program of urea and iron sulfate heptahydrate can provide quality playing conditions with P and K added only as needed based on work Doug has done at the Noer Center.

Doug continues to be a leader in golf turf fertilization and as he says, “optimized is not sacrificial, it is better and costs less.”



Stephen Tucker, Equipment Manager, Four Seasons Orlando finished the morning session with “Equipment Management, What Are We Missing?”

Steve says equipment technicians are getting harder to find and with no school teaching the trade and aging demographics it is going to get harder.

His first tip was to be sure to communicate with our technicians so they know what is coming up to allow them to be organized and prepared. Tucker said leadership was mainly communication.

He covered hydraulic hoses and the common misses causing leaks. Greasing and how he has operators grease non reel fitting to give them ownership of the machine.

Leveling and squaring cutting units along with roller runout is imperative to providing a quality cut. I wonder how many attendees were goggling leveling plates at lunch?

Help your technician keep records by investing in technology to make it easy.

A set of shop standards will provide a guide for maintenance and keep everyone on the same page. Overall Tucker had the crowd enthralled in that right before lunch time frame.



The symposium ended with a great talk by the “panel of 1” Zach Reineking discussing the history and challenges of Erin Hills and a recap of the U.S. Open. The day ended with Bob Vavrek’s roundup of each talk and attendees were on their way, full of knowledge. 🌱

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