# GREENS EXAMINER





## -MISSION STATEMENT-

The Utah GCSA is dedicated to improving the superintendents' position in the golf industry through education, networking, advocacy and to grow the game of golf.

# -VISION STATEMENT-

The Utah GCSA is a community of golf course management professionals and a go-to information source to enhance and grow the profession.



# **UPCOMING EVENTS**

- ✓ 10/01/2019: EXCEL Leadership applications due
- ✓ 12/09-12/10/2019: Annual Education Conference & Trade Show in St. George
- ✓ 1/25-1/30/2020: Golf Industry Show in Orlando, Fla.
- ✓ 01/29/2020: Hospitality Room @ Tin Roof Orlando
- ✓ 02/20/2020: Winter Education Conference @ Weber State Davis Campus

# GREENS EXAMINER



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• Alan Davis & Kara Davis

#### UTAH GCSA OFFICE

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The highest compliment you can pay our sponsors is by purchasing from them. They support our association so let's support them!



# **PRESIDENT'S MESSAGE**

# Old School, New School, Best School

We are extremely fortunate to have such a diverse Golf Course Superintendents Chapter here in Utah. There are superintendents who literally grew up in the business and have been a sup for decades, as well as a new crop of superintendents doing things no one had even heard of a decade ago. We have guys that must fix their own mowers all the way up to sups that have budgets I wouldn't even know what to do with. Yet with such a drastic range of experience, money, locations, climates, etc., I would put our courses, top to bottom, up against any other GCSA Chapter in the country.

So, that begs the question, is it better to do things the old way or the new way? A recent article in Golf Course Industry magazine talks about Red Ledges not pulling a core on their greens since they were built 12 years ago. Yet, there are plenty of courses in this state with great greens that punch like crazy whenever they can. So, what is better, Old School or New School? For my money, I say you always go with the Best School. **Do what works for you.** 

One of my main goals as president of the Utah GCSA was getting the different members to know each other. It is pretty easy in this business to just put our heads down, do our job and never look around. We know what our members, boards, cities or owners want, and we get it done. Right or wrong is not the question. The question we should be asking is whether we are getting it done in the best way given our specific set of circumstances. That may be soil profile, budget, water restrictions or a million other things. And there is one thing I absolutely know for sure; you don't know.

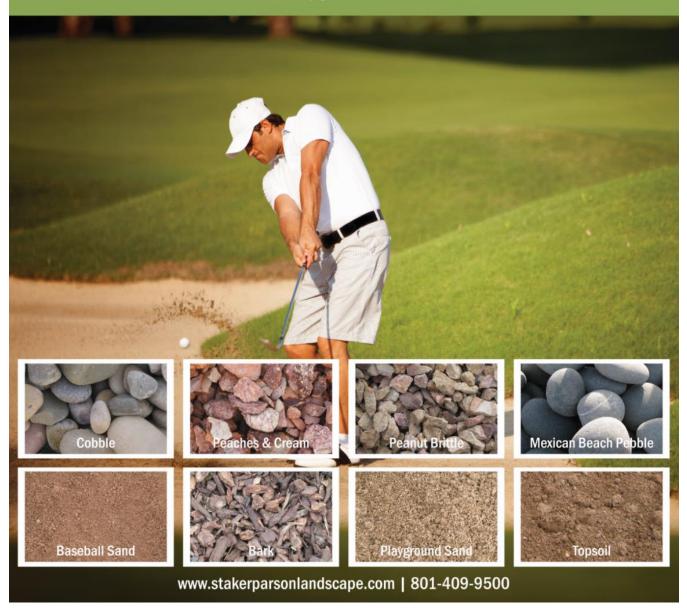
Take advantage of the collective knowledge of our membership! I haven't met a superintendent yet in this chapter that would not be willing to help another member out with a problem they are having. To the old guard, we have some young guns that essentially have a doctorate in turf management. They have solutions to problems we might not even know we have. And to the young guys...there are plenty of superintendents that have forgotten more than you will ever know. Sometimes the only answer to a problem is experience.

The Utah GCSA is a fantastic chapter. Take advantage of it. We have fantastic courses in one of the most difficult climates in the country. **Together, we are always better than** when we do things alone.





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#### FALL 2019

## GREENS EXAMINER

# **VETS ON COURSE OUTREACH**



In June 2019, GCSAA awarded 15 Chapter Outreach Grants totaling \$27,000 help to affiliated chapters engage in outreach activities on a local level. The Chapter Outreach Grant Program gives chapters assistance in spreading the message of the important work of superintendents and the many benefits golf brings to our communities.

On September 5th, Chapter Executive, Natalie Barker attended the Utah Golf Foundation's Veterans on Course event at Soldier Hollow for an outreach opportunity to speak to vets about the labor shortages in the golf maintenance industry. Grant money was used to purchase custom UGCSA ball mark repair tools and provided the meal for the event.



"The free Veterans on Course program is open to male and female military personnel of active or veteran status. Participants are not limited to any one event. Each event consists of an hour of lessons from PGA Professionals, a nine-hole scramble tournament, and dinner with a guest speaker. The mission of the program is to provide veterans with access to the game of golf as well as donated clubs, balls, and bags."

# **VETS ON COURSE OUTREACH (continued)**

Employers have been complaining about a shortage of skilled workers – particularly those with advanced degrees in STEM fields. Nearly every industry now has a labor shortage and golf is no exception. In fact, employers are having a harder time filling blue-collar positions rather than white-collar positions that require a college education. Many courses across the state have felt the affects of these labor shortages and have turned to temporary services, college students, retirees and the H-2B Visa Program.



The Utah GCSA wanted to reach out to veterans to talk about the benefits of working on a golf course – a beautiful environment, ability to play the course for free or reduced rate, food budgets, job variety, early morning hours, and much more. Further, for those suffering with PTSD, working on a golf course can be very therapeutic and a great stress reliever. Names and contact information was gathered from those vets looking for jobs and will be shared with members and courses in their respective areas.



Overall it was a great opportunity to communicate our mission, vision and the importance of the Utah Golf Course Superintendents Association and to join forces with the Veterans on Course Program to help those who have sacrificed so much.



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# **EXCEL LEADERSHIP PROGRAM**



#### FUNDED BY NUFARM

The EXCEL Leadership Program offers leadership training for personal, career, and community/industry stewardship for **assistant superintendents**; the future leaders in the golf course management industry.

# Applications for the 2020 program are open through Oct. 1.

#### EXCEL

- E Educating golf industry leaders of tomorrow.
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- **C** Creating community leaders who serve more than take.
- **E** Encouraging future leaders through advisory boards and councils.
- L Developing leaders who will mentor others.

#### THE PROGRAM

The EXCEL Leadership Program features two, two-day education and training sessions and a trip to the annual Golf Industry Show for assistant golf course superintendents. The education and travel for 2020 includes:

Golf Industry Show, Jan. 25-30, in Orlando Spring Meeting, TBD, at GCSAA headquarters, Lawrence, Kan. Fall Meeting, TBD

#### ELIGIBILITY

To be considered, a GCSAA Class C member must complete the application and respond to two pre-selected essay questions. Up to eight assistant superintendents will be selected for this opportunity to develop their leadership skills over a three-year period.

Applicants must be:

- Currently employed as an assistant golf course superintendent within the United States (including Alaska and Hawaii) or Canada.
- A Class C member of GCSAA
- Able to participate for three full years
- Not be working for current members of the GCSAA Board of Directors or EIFG Board of Trustees, children of GCSAA or Nufarm staff, or current employees of those organizations.

# **READ MORE**

https://www.eifg.org/education/excel-leadership-program#ixzz5zACBBXjp





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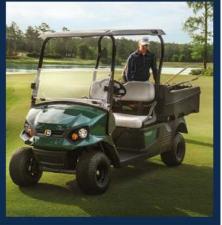
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#### FALL 2019

## GREENS EXAMINER



Call for nominations for the SUPERINTENDENT OF THE YEAR, ASSISTANT SUPERINTENDENT OF THE YEAR, and SALESPERSON OF THE YEAR awards!! Winners will receive a plaque, full event package to the Annual Conference and a \$100 Visa gift card!!!

We ask that you take a few minutes and submit a deserving member of the Utah GCSA for these awards. This is a great opportunity to nominate or vote for a colleague, your assistant or salesperson that you think is doing a stellar job. Nominees should not only be exceptional turf managers but also active in developing their staff and team members, active in the association and active in growing the game of golf. Winners will be chosen by the current Board of Directors based on the number of nominations and justification provided as well as votes on the UGA website. They will be announced at the 2019 Annual Education Conference and Trade Show in St. George.

To nominate, submit the name, course and justification to the UGCSA office or check your bi-monthly UGA handicap email for a personal link. Nominations on the UGA webpage are for the superintendent only. Nominations may be emailed or mailed and anyone is welcome to nominate. \*\* NOTE: Award winners must be a current 2019 member of the Utah GCSA \*\* Nominations must be submitted by Thursday, October 10, 2019.





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#### FALL 2019

# **Utah Golf Course Superintendents Association**



# VOTE NOW GOLF COURSE SUPERINTENDENT OF THE YEAR! HOW TO VOTE:

# **VISIT WWW.UGA.ORG**

The Golf Course Superintendent is the professional who manages the largest asset of the facility – the golf course. They are a vital piece in maintaining all aspects of the course including course condition, labor, equipment, financial resources and environmental sustainability.

The Utah GCSA is a community of golf course management professionals and a go-to information source to enhance and grow the profession.



Voting open until September 30, 2019





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## **GREENS EXAMINER**



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Mike Richardson, Professor of Horticulture, University of Arkansas Brian Whitlark, Agronomist, USGA Paige Boyle, Presidential Doctoral Research Fellow, Utah State University, Dept. of Plants, Soils and Climate

FLYERS & REGISTRATION FORMS WILL BE MAILED OUT BEGINNING OF OCTOBER

# GREENS EXAMINER



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PAGE 16

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# **SCHOLARHIP RECIPIENTS**

# Meet our scholarship recipients! Each received \$2,000.



Kate recently graduated from Evanston High School where she enjoyed participating in Vocal Jazz Choir, Color Guard, Speech and Debate, the AVID program and school musicals. Other hobbies include drawing and painting, listening to music, playing the piano, bullet journaling and spending time with friends and family. Currently she is working a summer job at McDonald's before attending Utah Valley University in the Fall. At UVU she will be studying American Sign Language in preparation for a career as an interpreter.





Tyler has worked in the golf community for 14 years and is currently an Assistant Superintendent at Bonneville Golf Course. Before taking on the position at Bonneville, he worked as an Irrigation Specialist at Forest Dale Golf Course. He has a passion for golf and maintaining a well kept course. Tyler is attending Penn State University to obtain a degree is turfgrass science and is anticipated to graduate in May 2020. He's served on the Salt Lake Safety Committee and the Salt Lake Water Conservation Committee.

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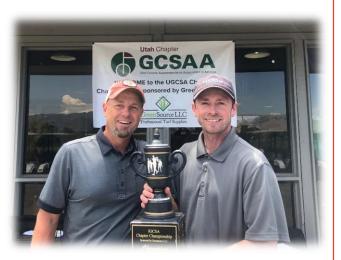


#### FALL 2019

# **CHAPTER CHAMPIONSHIP RECAP**

July 15, 2019 – The Utah Chapter of the Golf Course Superintendents Association of America (UGCSA) held their eighth annual Chapter Championship at Salt Lake City's Glendale Golf Course.

Superintendents, assistants and vendors from around the state competed for the coveted Green Source, L.L.C. traveling trophy and the esteemed title of UGCSA Chapter Champion.



# With a score of four under par (68), David Booth, Assistant Superintendent at Lakeside Golf Course in West Bountiful wins the 2019 championship.

On behalf of the UGCSA, we would like to thank our title sponsor – Green Source, L.L.C., host Superintendent Bryan Witzel and the entire staff at Glendale Golf Course for their hospitality.



## **GREENS EXAMINER**









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# **BIG 3 TOURNAMENT RECAP**

The inaugural Big 3 Charity Tournament was held at Jeremy Ranch Golf & Country Club on September 9<sup>th</sup>, 2019. The event had participants from the Big 3, which includes the UGA, PGA Utah Section, and the UGCSA.

What a success! For the 124 lucky participants, there was an immaculately set up golf course (thanks to Ben Timmons and his staff), a delicious lunch, and clear blue Park City skies. To be honest, no one except the UGCSA's fearless leader, Justin Woodland, knew quite what to expect in this. His belief in this cause, and this event was unwavering through all the planning phases. A huge thanks to him and the many behind the scenes that got this tournament off the ground and running.



The Big 3 Fundraising proceeds went to the UGCSA benevolent fund, Folds of Honor, Youth on Course & many more!

Many questions – How many participants would show? Would we be able to get sponsorship of an unproven event? Would the "Big 3" regional golf associations be able to work together and make this event a success? All questions were answered in the most positive of ways! The big winner for the afternoon was the UGCSA benevolent fund and the many other local charities that this tournament benefitted. The "Big 3" really pulled together and showed where their hearts truly are, helping those in need. Looking forward to many great years of the Big 3 tournament to come.

# **CHECK OUT MORE PHOTOS OF THE EVENT ON PAGE 32!**









# STILL CALLING FOR UGCSA NOMINATIONS!

If you would like to run or nominate someone you think would do a great job on the Utah GCSA Board of Directors, send us your/their name and course.

# The following positions still need to be nominated:

- ✓ (2) Directors
- ✓ (1) Assistant superintendent liaison

"Only members of the Association actively employed as Golf Course Superintendents or Assistant Superintendents shall be eligible for election as Board of Directors. Three quarters must be members of GCSAA. Associates, affiliates, or other commercial liaisons may be appointed to the Board of Directors but may not hold any office in the Association and may not vote on matters involving the operation of the Chapter." (Article VII, Section 2). Officers must also be a class A or B member of the GCSAA."

The time requirement is very minimal; however, we are looking for members who are dedicated and enthusiastic about improving our chapter. The board meets on an as needed basis in a central location.

We've come a long way and need your help to keep our chapter successful! Voting for these positions will take place at the Annual Education Conference & Trade Show in December.

The deadline for nominations for the 2020 UCSAA Board of Directors is **September 30, 2019**.



# An irrigation evaluation

To tackle irrigation system deficiencies at the root — rather than just reacting to them — a Colorado superintendent put his turf to the stress test. The results debunked some long-held beliefs.

June 2016 Steve Southard, CGCS GCM

Filed to: Irrigation, Water, Colorado



Mariana Butte Golf Course, an 18-hole facility that opened in 1992, is within an hour's drive of Denver and is one of three golf courses under the management of the city of Loveland, Colo. **Photos courtesy** of Steve Southard





Far too often, irrigation problems are simply masked with wetting agents and additional hand watering. In late summer, though, superintendents have the opportunity to assess and troubleshoot their irrigation systems by performing a turf stress test, which will uncover areas of turf that aren't receiving proper irrigation — some of which may not be noticeable otherwise. A stress test will expose all the weaknesses in your irrigation system, and although this will present temporary discomfort, identifying, understanding and correcting your irrigation issues will allow you to be in greater control and face fewer difficulties in the long run.

The city of Loveland, Colo., operates a trio of golf courses — Mariana Butte, Cattail Creek and The Olde Course — and as the city's golf operations manager, I split my time among the three. The ages of the courses differ, as do the ages and capabilities of their irrigation systems. Mariana Butte is a resort-style golf course in the foothills of the Rocky Mountains, and it has a 25-year-old Toro irrigation system. Cattail Creek is a par-3 course with a 26-year-old Rain Bird control system and Toro irrigation heads. The Olde Course is a 54-year-old course with a 10year-old Rain Bird irrigation system. Our Mountain West, high desert region is known for high evapotranspiration (ET) in summertime, minimal rainfall, and water quality challenges.

During summers, three or four crew members at each of the courses were assigned to daily handwatering duties to respond to hot spots and stressed turf, and they would return to work on Saturday and Sunday afternoons to ensure the courses were surviving the midsummer heat.

I developed the idea of a stress test as a way to pinpoint areas with poor distribution uniformity (DU) — an alternative to continuing to purchase gallons of wetting agent and having employees spend more hours with hoses in hand. In summer 2015, I instructed the maintenance staffs at all three courses to put away the products, park the hand-watering carts and reduce their deficit irrigation programming, and to turn their focus instead to improving DU as a means of permanently eliminating localized dry spot, decreasing daily hand watering and relieving midsummer stress.





**First things first** *Do your research*. Know the design of your irrigation system, and measure DU at the outset, before you attempt to implement any improvements. By closely observing the irrigation patterns at our three courses pre-stress test, the staffs shifted from a mentality of "It has always been that way" to "Why is it that way?"

*Test wisely*. Not only is DU testing necessary, but who performs the testing is also important. Crew members often don't have the formal training or continuing education opportunities that superintendents do. A sensible strategy is to have the irrigation staff perform the DU testing under the superintendent's supervision and direction.

Shape of sprinkler head spacing greatly affects DU. One hundred percent distribution uniformity is not possible — all irrigation systems will have weakly and heavily watered areas. Uniformity can exceed 90 percent with triangular spacing of irrigation heads, however, which is more efficient than square spacing. In a wet and humid area, square spacing may be adequate, but here in the arid high desert, triangular placement always produces more even water distribution. On large putting greens, the irrigation design may have an unusual spacing of heads, which may significantly hurt DU. Be especially leery of pentagon-shaped head spacing for large round greens. Such an arrangement typically leads to a green that's too wet in the middle and dry along the outside.



Elevation matters. Along with head spacing, pressure and nozzle selection, the elevation of your golf course will determine sprinkler heads' effective throw distance. Air density at higher elevations results in a noticeably different rain curtain than what's published in manufacturers' brochures. Superintendents and irrigation designers shouldn't blindly trust performance data that was collected on an indoor test site located near sea level (unless your course is located indoors and at sea level). The nozzle performance tables can get you close to an accurate estimation of appropriate head spacing, but nozzle selection and superintendents should always trial nozzle performance at their site using accepted DU test methods. Loveland sits at 5,000 feet above sea level, and the throw from our irrigation heads is 7 to 9 percent farther than that of the same irrigation heads operating at the same pressure but located at sea level.

CONTINUED...

If sprinkler head spacing is consistent course-wide, the water distribution pattern will be consistent. If a course has an irrigation uniformity problem and head spacing is relatively consistent, the irrigation pattern will be repeated throughout the course. This can often be seen more easily via satellite imagery taken in the heat of summer or during a drought period. If the pattern is consistent, diagnosing what's wrong will be easier.

**Time to test.** To perform the stress tests at our three courses last summer, each course's irrigation system was programmed to deficit-irrigate at 50 percent of the previous day's evapotranspiration (ET), instead of the typical 60 to 65 percent of the previous day's ET. Staff applied supplemental water by hand only two days per week (Tuesday and Friday). Within a few days of starting the tests, the turf became stressed, and a mosaic of irrigation patterns appeared. Now our detective work could begin.

On the fairways at two of the courses (Mariana Butte and The Olde Course), we discovered that the area around each sprinkler head stayed wet while the space between the heads began to go dormant. The findings on the third course (Cattail Creek) were the opposite — the areas around each head became bone-dry, but those between the heads remained healthy. Staff noticed the same patterns on the greens, which was something that had gone almost entirely undetected back when routine application of wetting agents and daily hand



watering were the norm. About a week after initiating the tests, each course had a turf palette that resembled a checkerboard, and we were ready to dive into DU testing.

**Measuring DU.** Standard 40-catch-can DU tests can take a long time to complete, and we realized that with our triangular head spacing, the amount of water in the middle of the triangle should be nearly equal to the amount of water near each head. So, we used only the center seven catch cans and the nine external catch cans of the typical 40-catch-can DU protocol. I would rather have staff address 20 areas at 95 percent accuracy than 10 areas at 98 percent accuracy. Using this modified method, a DU test result of 95 percent or higher will provide uniform and excellent playing conditions.



CONTINUED on page 28...

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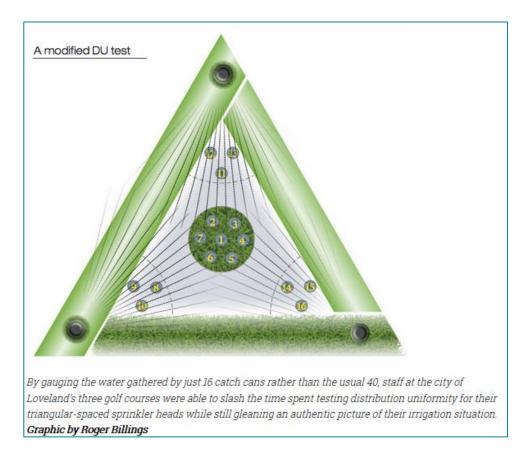


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#### FALL 2019

# An irrigation evaluation (cont'd)



The first DU test percentages ranged from the high 60s to the low 70s at Mariana Butte and Cattail Creek. The newer irrigation system at The Olde Course was slightly with DU better, percentages in the 70s. Although these tests sound equally terrible, the observations field established a dramatic difference: The soil moisture at Mariana Butte and The Olde Course was higher around the heads, whereas the soil at Cattail Creek was wet in the space between heads.

CONTINUED...

One related note: Although the catch-can method is the best method to calculate DU, soil moisture meters are also a good tool for measuring water accumulation in soil. We use the FieldScout TDR 300 to identify areas that might be getting too much water, as well as to determine when the turf will begin to wilt. Any 20-handicapper can tell when turf is wilting, but recognizing a slow accumulation of water caused by uneven irrigation distribution is often impossible. Superintendents can use soil moisture meters to identify heavy irrigation areas, and then have the irrigation staff verify the overwatering via the catch-can method.

The fastest and easiest remedy for our flawed irrigation patterns was to make sure we were using the correct nozzles at each course. The original nozzles at Mariana Butte had a throw distance between 85 and 90 feet despite head spacing of 72 feet — a definite overthrow. The Olde Course had a similar overshoot of about 10 feet on all fairway heads, while at Cattail Creek, particularly small nozzles had a throw of 55 feet but were spaced at 65 feet. After testing many nozzle types (both original manufacturer and aftermarket), we replaced all the nozzles on all three courses. The cost of the nozzle upgrade was small, and the improvement was dramatic.



**Lessons learned.** *Long-held assumptions may not be accurate.* For years, Cattail Creek staff thought the course's unhealthy turf was the result of "salty" irrigation water. In the 1990s, the course had a sulfur injector installed in the pump station, and in 2004, an inline magnetic water-conditioning device was added to the mainline just downstream of the clay valve. Former crew members spent countless hours aerating the dead sections in the fairways and roughs, which appeared in the same places every summer. After our stress test and swapping out the nozzles on all the irrigation heads throughout the 34 acres of turf, we began to see a significant improvement in turf health. The sulfur injector and inline water conditioner were removed, aerification in the fairways and rough ceased, and midday watering was suspended.

The takeaway: Although the Cattail Creek water supply is slightly "salty," the even application of water gave us a healthy stand of turf. The quality of the water wasn't perfect, but neither was it horrible, and evenly applying the water trumped minor salinity problems.

*Technology can help you communicate*. Soil moisture meters, computer-generated DU simulation, and satellite photography can aid in the process of improving irrigation efficiency. We used the SPACE Pro software from Fresno State University's Center for Irrigation Technology to visually explain our irrigation problems to a citizen golf advisory board whose members had limited knowledge of or experience with irrigation design. The software translates DU data from lab tests into images to show the areas that will receive heavy or light irrigation depending on head spacing and nozzle selection.

*Run times on some control systems are truncated.* Two of the irrigation systems were controlled using ET, and the third irrigation system was controlled based on run times. After much observation, staff identified that the cycle and soak option on the third system truncated irrigation run times by a multiple of the number of cycle times. For example, an area with three cycles only had the option of running for three, six, nine, 12 or 15 minutes. In the high desert, this limitation can be troublesome. If an irrigation station is programmed for, say, 10 minutes, and the global adjust is 80 percent, you might expect the run time to be eight minutes. When three cycles are used, the run time is truncated to six minutes, the closest interval divisible by three that's less than the run time calculation. The outcome is 25 percent less water applied than the intended eight-minute run time.

Program water applications to ET, even when irrigation programming is based on run time. With newer irrigation systems, this is simple, as most superintendents know the percentage of deficit irrigation required to maintain healthy turf. With our system, consistently watering at 60 percent of ET will eventually deplete the available water in the turf and lead to stress, while consistently watering at 70 percent of ET will produce succulent turf with wet, soft playing conditions. The irrigation programmer thus toggles between 60 percent and 70 percent of ET, based on the playing conditions in the field.





If you can't program to ET and are using run time-based programming, convert daily ET rates into a percentage of that original program run time. This step is absolutely necessary, as different employees may have different assumptions about how much water is applied when the program is set to 100 percent. For instance, a breezy summer day in early July with a temperature of 95 degrees Fahrenheit and 15 percent humidity might produce an ET of 0.28 to 0.30 (which would need a global run time of 110 percent). A 95-degree day with 15 percent humidity in late August, however, may only result in an ET of 0.23 (which would need a global run time of 100 percent is not logical for both days. Convert the daily ET rate to the correct global run time to allow for an irrigation event that matches the daily ET rate.

**Stressed to impress.** Stress tests have allowed us to eliminate nearly 100 percent of recurring localized dry spot on the three courses, which is a big claim here in the high desert. Hand watering is now done only on Tuesdays and Fridays, and it's implemented only in areas that receive slightly less moisture than the surrounding turf. Remember: One hundred percent distribution uniformity is not achievable, so there will always be a need for supplemental hand watering during extended dry periods.

A great irrigation goal for maintenance staffs is to eliminate all watering after 9 a.m. Midday watering is inefficient, as much of the water that's applied can be lost to evaporation. The practice can also change playing conditions from one group to the next, and it increases electricity usage and shortens the life of the pump station. Do your best to irrigate right at

night, and you'll save money and have less work during the day. While wetting agents and hand watering are normal, acceptable medicines for irrigation inefficiencies, consider documenting the obvious problems and troubleshooting the root causes of those problems with the help of a stress test. You'll likely find that most of the improvements are relatively easy to implement, such as changing nozzles or refining sprinkler head spacing. The benefits of such self-evaluation are long-lasting and numerous: less need for hand watering, less dependency on wetting agents, fewer wet areas, more uniform playing conditions, less energy use, fewer employee visits to the golf course during high-stress periods, and, of course, an overall reduction in expenses.



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