Peaks & Prairies Chapter
GCSAA
Golf Course Superintendents Association of America
50 Years

THE PERFECT LIE

Celebrate 50 Years with Us

We have reason to celebrate! 50 years marks the time from the inception of our association to today. We have come a long way since 1976, but our dedicated members have ensured we never lost sight of what was important—continuing education. Join us at the Peaks & Prairies GCSA Fall Meeting & Trade Show, October 13-15, 2026.

To kick off our three-day event, special this year is a gathering the evening prior at the R Club in Billings Hotel & Convention Center. (Would that technically make it a four-day event?) Enjoy complimentary hors d'oeuvres and catch up with a few stories about the year. Beverage tickets will be available to conference and trade show participants.

The fun continues. Over the next three days, industry experts will share their knowledge. Those experts can be found on the trade show floor, next to you in the meeting space, and, of course, in front of the conference room! The mid-October event also allows for continued networking at our fall golf event at Pryor Creek Golf Club, hosted by Cole Clark, GCS, with a social following golf.

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Scholarship Application Deadline September 20

Peaks & Prairies GCSA Scholarship Applications are due September 20 each year. There is also a sneaky catch to completing the online application—there are instructions listed prior that may request additional documents. The application and supporting documents must be in hand at the PPGCSA office by the 20th.

Applications are available under the "Info & Membership" tab of the website ppgcsa.org.

PPGCSA Scholarships, *September 20 deadline*
PPGCSA 50th Anniversary Fall Meeting & Trade Show, *Billings, October 13-15, 2026*
Mont. & Wyo, Scholarship/Edu. Golf Events - *September 1 & 15*
Private Webcast, PPGCSA *January 2027, TBA*
Chapters of the Northwest Hospitality Room *Red Fish Grill, New Orleans, January 20, 2027*
PPGCSA "Almost" Spring Meeting *March 1-2, 2027, Great Falls*

Grass Inducted to Montana Golf Hall of Fame

On August 5, Pete Grass, CGCS, was inducted into the Montana Golf Hall of Fame. From the time of the announcement, he has been quick to explain he was only accepting the award on behalf of all superintendents in the state. Grass, who has tirelessly given his time over the years (and years) serving his peers on both the local and national level, offered advice in the 406Golf August 1 issue. "In golf and life, I believe you get back what you give. Volunteer for things that you love, help others to succeed by mentoring them, giving them opportunities to make mistakes and learn from them. Doing the right thing is never the wrong thing, and if you live by the golden rule of treating others like you wish to be treated, you should never be disappointed in yourself."

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New High!

Course participation in the Rounds4Research has grown over the last few years, and the results are outstanding! In 2026, Peaks & Prairies GCSA proceeds from participation resulted in a new high of $11,047, thanks to the collective efforts of every participating golf course. We are grateful.

Our mission is "The Peaks & Prairies GCSA is dedicated to furthering the education of our members for the betterment of golf and its environment." Rounds4Research and our annual proceeds from the Montana and Wyoming State Golf Associations enable us to keep user fees low, ensuring all courses, regardless of budget, can participate and benefit.

Chapter Room Block in New Orleans—Act by November 6

Location, location, location! Numerous considerations were made when selecting our chapter room block for the 2027 GCSAA CTS in New Orleans — besides price.

Just as last year, there will be no bus service provided with

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August 2026
Volume 50
Number 3

"Peaks & Prairies Golf Course Superintendents Association is dedicated to furthering the education of our members for the betterment of golf and its environment."

Inside this issue

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Peaks & Prairies Golf Course Superintendents Association

THE PERFECT LIE is published quarterly by Peaks & Prairies GCSA, and is edited by Lori Russell. Our newsletter is not copy-righted, but we would appreciate credit being given when original material is reprinted. Advertising and article deadlines are the 10th of February, April, July, and October.

PEAKS & PRAIRIES GCSA OFFICE
Lori Russell, Executive Director
P.O. Box 5003, Missoula, MT 59806 ppgcsa.org
Phone: 406/273-0791 ppgcsa@ppgcsa.org

Remember - you will never be solicited by a board member, or the office, to wire money, or purchase gift cards and provide the card number to the solicitor.

President's Message

Pat Nowlen, Polson Bay Golf Course, Polson, Mont.

The 2026 season has presented an exceptionally challenging combination of spring moisture and summer heat to golf course superintendents across the Peaks & Prairies region. After a cool, saturated spring that fueled widespread disease activity, the region transitioned rapidly into a warm, often dry summer—creating both recovery challenges and increased disease and insect pressure. In locations not used to high disease pressure and insect damage, P&P members in some areas faced some previously unheard-of challenges.

Spring Climate Conditions

• Rainfall:

– Western Montana: 130–160% of normal precipitation in April–May.

– Southwest Montana: May rainfall totals close to double long-term averages.

– Central Wyoming: 150–170% of typical spring precipitation, including multiple multi-day, no-drying events.

• Temperature:

– Spring mean temperatures 3–5°F below normal. Lack of sustained cold winter temps increased insect pressure.

– Soil temperatures in many courses did not exceed 50°F until mid May.

• Snowpack Patterns:

– Western Montana above average; portions of Wyoming below average.

– Freeze–thaw cycling weakened early-season Poa annua and bentgrass health in some areas.

Summer Climate Conditions

• Temperature:

– June and July temperatures ran 2–4°F above normal across large sections of Montana and Wyoming. Humidity ran higher than normal as well.

– High daytime heat combined with low nighttime recovery periods stressed turf.

• Rainfall:

– After a wet spring, large portions of the region saw below-average summer rainfall, with significant drying in July.

– Irrigation demand increased sharply as ET rates surged.

• Storm Activity:

– Convective thunderstorms delivered scattered but intense rainfall, contributing to localized flooding, runoff, and post-storm disease risk.

Spring 2026 brought persistent rainfall, prolonged leaf wetness, and slow soil warming—conditions that supported continued Microdochium activity, elevated root-zone disorders, and early onset foliar diseases. Snow mold recovery remained slow, while saturated profiles contributed to Pythium root dysfunction and early anthracnose basal rot. Widespread red thread and an unusually early dollar spot surge reflected delayed spring fertility and consistently wet canopies.

As temperatures rose, take-all patch became increasingly visible on greens and fairways. Spring saturation weakened roots, and the rapid transition into summer heat revealed characteristic bronzed patches, poor rooting, and moisture variability typical of take-all expression. Cool-season brown patch also appeared across the region during humid June nights, especially following early-season thunderstorms and elevated nighttime humidity. Localized Pythium blight developed where warm, wet conditions kept nighttime temps high for weeks.

By mid-July, anthracnose escalated under heat and drought stress, particularly in areas affected by earlier spring decline. Numerous patch disease symptoms intensified as moisture fluctuated sharply between spring saturation and July drought.

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Courses navigated overlapping disease pressure windows through tightened fungicide intervals, adjusted fertility, aggressive scouting, and moisture management.

Insect pressures intensified across some regions as turf transitioned from saturated spring soils into warm, drying summer conditions. Black turfgrass ataenius activity became intense in some areas, with larval damage becoming more visible in June as soils dried and weakened roots struggled to support.

Bluegrass billbug damage also escalated as summer heat revealed earlier spring stem feeding. Hollow stems, scattered wilt, and patchy bluegrass decline appeared where drought stress exposed underlying larval activity. Reactive treatments were required in several settings once symptoms fully emerged.

Additional insect observations included sporadic cutworm activity during warm stretches and accelerated white grub development in areas where June soil temperatures climbed rapidly. Combined with significant disease pressure, insect-related stress contributed to uneven surface performance.

Superintendents demonstrated adaptability through:

- increased disease scouting and earlier and increased fungicide applications
- strategic fertility to support spring and midsummer recovery
- increased spot watering and hand-watering during July heat
- targeted insect control for BTA and billbug
- collaborative troubleshooting through chapter networks, allied members, and shared observations

The 2026 spring and summer seasons emphasized the need for proactive planning, flexible scheduling, and strong regional communication. As climate variability increases, coordinated knowledge-sharing across the Peaks & Prairies membership will continue to strengthen turf management success across our diverse environments.

Get the Shale out of Here!

Scott Lennemann
Marias Valley Golf Course, Shelby, Mont.

Marias Valley Golf and Country Club is nestled into a ¾ mile length of canyon along the Marias River. The walls that surround the 160-acre "Oasis of the Hi-Line" are 200-300' tall. The "badland" type topography is mostly dark gray and black shale that does not provide plant life sustainability. The region is described as high desert with an annual rainfall of twelve inches. The right sunlight can be stunningly beautiful in contrast to the turf and the giant cottonwoods that are one of the primary features of the golf course. Nine holes were built around 1970, and the next nine holes were built in the mid- 90s. I have been onsite since 2017, and there have been technological upgrades to irrigation, machinery, and overall property amenities.

We've been fortunate to host multiple events for the Montana High School Association, the Montana State Golf Association, and local fundraising-type tournaments. The summer of 2025 was no different. A full slate with one of our most prized events, the 96th Oilfield Golf Tournament, being the starting point of tournament season on Father's Day weekend. The following week is another big one, but it's a fundraiser for the local radio station, and it turns into a huge party annually. The evening of the big fundraiser, we had a rain shower of almost 0.9" that came down throughout the night. Over a three-day span, we received 1.25" of rain. These showers were not gully washers by any means, but they were setting the stage for the bigger, heavier rains that were yet to come. That 1.25" saturated the ground all around the course and made the surrounding hillsides susceptible to mudslides, unbeknownst to us.

Weeks later, the night before we were set to host an MSGA Senior Tour Event, we received 0.76", again over a lengthy period, but it did cause a small bit of soil erosion. The shale silt encroached on the playability of the course. We were able to come up with creative routing and fulfill our obligation of hosting the event for the MSGA, but it wasn't the show you ever wanted to put on. Our maintenance crew takes considerable pride in their product, and not being able to fully highlight it was a dud, so to speak.

One week after the MSGA Senior Tour event, we had the course ready to host our member/guest two-day tournament. Mother Nature had other plans, though. My Tempest weather gauge said we received 0.87" of rain in one hour. I happened to be driving into the property at 4:30 that morning as it was starting. It was a deluge! There were rivers of water flowing off everything. The farmer to the west of our property has an

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old-style rain bucket type of gauge. He told me that he received 2.2" of rain in that one hour. As the sun began to reveal the wonderful destructive powers of Mother Nature, the rain slowly diminished. Our Member/Guest was in jeopardy of total cancellation.

Fairways 1, 8, and 7 run east-west at the base of the shale hillsides on the northern part of the golf course. The main silt deposits from this latest rain fanned out over these three holes. The damage on 1 fairway was approximately 65 yards in length. The damage on 7 and 8 fairways was nearly 300 yards. We ended up playing 1 as a short 130 yd par-three, 8 as a 250 yd par-four, and 7 was closed altogether as the entire fairway

was buried with 3-10" of silt. All three holes were buried in muck that you could barely stand up in as it was extremely slick, and the silt stuck to everything!

Above the golf course, the coulees and draws are numerous and rugged. Each coulee had its own miniature flooding event. Some came onto the course like they did on 1, 7, and 8. We had similar silt deposits swing around the west end of our clubhouse that left deposits on numbers 10 and 18. 10 was played as a shorter par 4 and 18 was a par 3, similar to number 1.

As we are all aware, when challenging times fall on us, there are always folks with plenty of advice and ideas on how to attack the problem. We talked with our local insurance

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WELOME NEW MEMBERS!

Mike Cartwright
Old Baldy Golf & Rec.
7 Valley Dr.
Townsend, MT 59644
cartwrightfeeds@gmail.com
406-980-0446

Brad Proud
Canyon River Golf Course
1268 Bandman Trail
Missoula, MT. 59802
bproud22@gmail.com
253-686-1151

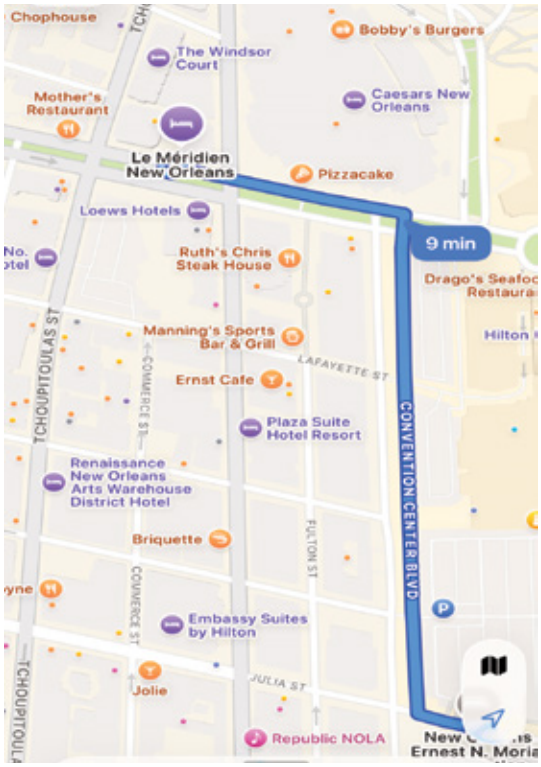
Chris Cotton
Canyon River Golf Course
1268 Bandman Trail
Missoula, MT. 59802
emshop@canyonrivergolfclub.com
406-544-9335

Charlie Stephenson
Three Crowns Golf Club
722 Saint Mary St
Casper, WY 82601
corider1309@gmail.com
(719) 287-1865

Golf Safety
Joe Dise
3662 SW 30th Ave Unit #6
Palm City, FL 34990
joedise@golfsafety.com
(239) 898-4075

Tacit Gold
Chris Underwood
215 Shady Oak
Biscoe, NC 27209
chris.underwood@tacitggolf.com
(704) 773-1264

Area around chapter room block CTS New Orleans - more restaurants than shown here.



Shale continued from page 8

company, and insurance was not an option. Marias Valley Golf Course is in the Golden Triangle of Montana, and all these farmers and ranchers have ideas!! Some good, some not so good. I listened to all comers and even tried a few things that I knew wouldn't work, just to keep the idiocy to a minimum. Our green received a small amount of silt, maybe 30 sq ft. It took hours for my irrigation guy to hose it off. Hosing off the rest of the 12+ acres of covered turf seemed to be everyone's "go-to" fix. I would point out how long it took to fix the putting green, and that stopped that discussion. I reached out to peers around the country, and the consensus was, "Good luck, let me know how she turns out."

I stared at the problem for weeks but kept coming back to the fact that I wouldn't be able to do anything with it until it was bone dry. I decided to focus on the fairways only, as the entire flooded region covered almost 12 acres of turf. I put my attention to holes 1, 7, and 8 where there were 4 acres of turf to repair. I put a 4' wide brush attachment onto our tracked skid steer and began to push the silt into piles that I could pick up and haul away. The silt had dried up to the consistency of talcum powder. As is normally the case in Shelby, the wind was a great aid in moving material away from the course. From the clubhouse it often looked like a desert dust storm that carried for miles away from the course, downriver. Every few hours I would come to the shop to blow out the air filter and get a new dust mask, even though I was inside a closed cab. I spent over 100 hours inside that machine, one 4' wide swath at a time. Was it perfect? I don't know how else we could've done it, short of a total renovation of the holes at a cost no one was ready to take on.

At the end of all this dust blowing, it was too late in the season to seed anything, but we were able to aerify it three times with 5/8" hollow tines and top-dress it with a very coarse sand from a local pit. Over the winter when we were free of snow, I went out and ran our tractor over it with the aerovator attachment to poke more holes. More top dressing.

In the spring of this year, we waited until soil temperatures would allow us to try and germinate the ryegrass. I opted to save money and not seed with a Kentucky bluegrass/ rye blend until late in the season when temperatures are more conducive to germination. Our forecast looked good, our window between

events looked good, and the board of directors told me to get after it. We put out a pound of nitrogen pre-fertilizer, double verticut the affected areas, we seeded heavily, we top-dressed with a compost material, wheel-packed the seeded areas, and set the water to run for five minutes every two hours. We shortened up the holes for play as we had done in 2025 and we crossed our fingers.

None of us are weathermen, but I'm sure we all wished we could be wrong as often as they are. Not in the forecast were two consecutive mornings of 20-degree frosts! I thought I was sunk. We kept the watering process up for eight days until I had to dry things up enough for play and more events. I was not thrilled with the highly inconsistent results. As time has carried us through the summer, we have been able to keep the silt-affected areas as close to the rest of the property as possible—being mindful that we can't get it as wet as the rest of the course because it will become a sloppy wet muck. In mid to late August 2026, we will repeat the spring process of pre-fert, punch holes, verticut, seed with our Kentucky Blue/Ryegrass blend, and water, water, water.

As of today, we are in far better condition than I expected, and my board of directors is thrilled with our results. There are areas in the rough that still need loving attention, and they will get it as time allows. There are areas of the course that we haven't touched and have healed up better than expected and areas that we have probably overworked and look horrible. I've learned that patience and thought will carry the day more often than bull rushing into a problem. I've learned from pretty much every mistake I've made in the turf business since 1989. I am sure I'll screw more things up, and I hope Mother Nature and I have an amicable next few years, as this past year has been a huge challenge.

Shop Culture = Course Culture

Why the Turf Industry Starts in the Shop

NaTalia Eggebrecht, Polson Bay Golf Course, Polson, Mont.

In the turf industry, people often judge success by what they can see — smooth greens, striped fairways, clean bunker edges, and maintained rough. Golfers and guests notice course conditions long before they notice the people who do the work to create those conditions. Behind every successful golf course is a culture that begins somewhere far less noticeable to golfers: the maintenance shop.

In the Northwest, where growing seasons are shorter, weather can be unpredictable, and demanding conditions challenge turf professionals daily, the connection between the maintenance shop and the golf course is more important than ever. The phrase "shop culture = course culture" is what affects morale, efficiency, equipment longevity, and most importantly, the quality of the golf course itself.

A strong course culture does not magically appear at the beginning of every season. It is built through consistent habits, standards, communication, and accountability that often begin inside the equipment shop before sunrise.

The maintenance shop is the heartbeat of a golf course. It is where equipment is prepared, repaired, inspected, stored, and trusted. More importantly, it is where relationships are built between mechanics, seasonal crew members, assistants, and superintendents.

When a shop is consistently organized in a specific way, the rest of the operation usually follows. Equipment is prepared for each day's work. Crews show up on time and show pride in their work. Mowing quality improves, and employees communicate better because they know what is expected of them.

On the flip side, a disorganized, negative shop environment often spreads throughout the property. Poor maintenance habits lead to more breakdowns. Operators lose confidence in equipment and its ability to complete its task, and eventually, course conditions begin to reflect that dysfunction.

In the Northwest, golf courses are often short-staffed and have tighter budgets than larger resort markets. That means every employee and every machine matters. A single mower down during peak season or the fast-growing seasons can significantly impact conditions. A crew member who has a sour attitude can affect the entire crew as a whole just as much as an energetic, optimistic crew member can.

The culture that is established in the shop becomes the culture seen on the course.

One of the easiest ways to spot a strong turf operation is professionalism. Professionalism is not just about the crew

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wearing uniforms. It is about consistency, accountability, and pride in work.

Professional shops operate with structure. Equipment is thoroughly cleaned after each use. Maintenance schedules are followed unless otherwise told by the superintendent. Parts are labeled, organized, and put away. Work orders are documented. Employees understand expectations and communicate clearly when problems arise.

When a shop prioritizes professionalism, employees begin to value details. That attention to detail carries onto the course itself. Crews mow cleaner lines. Setups become more precise and irrigation issues are addressed sooner.

Employees mirror what leadership tolerates and promotes. If corners are cut in the shop, corners will eventually be cut on the golf course.

One of the most overlooked aspects of turf management is communication between departments. Mechanics are sometimes viewed separately from the golf course crew, but the best operations eliminate that divide.

A good way to look at that would be a mechanic who understands why tournament conditions matter will most likely be more invested in equipment performance. Likewise, an operator who understands the complexity of maintaining cutting units is more likely to treat equipment with more care and respect.

In healthy shops, problems are addressed early instead of ignored. Operators report unusual noises or issues promptly before a major disaster can occur. Mechanics, in turn, need to communicate realistic timelines for repairs. Superintendents should include their mechanics in planning discussions because equipment availability directly affects scheduling.

On courses where staffing shortages often occur, or that they just naturally keep a smaller crew, trust becomes even more important. Crews may need to be able to perform many different tasks, such as a mechanic may help with mowing, irrigation repairs, or snow removal. Assistant superintendents may troubleshoot mechanical problems when needed. Everyone depends on each other.

Leadership Sets the Tone

Shop culture does not happen by accident. Leadership determines whether the environment they create is productive or chaotic.

Superintendents, equipment managers, and assistants all contribute to culture through their behavior. Employees notice how their leadership handles pressure, how they communicate, and how they support their teams when things get tough.

The best leaders in the turf industry lead by example. They hold everyone accountable equally. Good leaders also recognize that culture extends beyond the course. Safety, work-life balance, and employee development all matter.

Some very useful basic implementations a course can do to improve the culture are these:

Organization

Stay organized in the shop and with how the crew is managed with schedules and work times.

Respect

Create a respectful work environment where everyone is held to the same standards, and no down-talking is allowed.

Training

Train everyone thoroughly, confidently, and with patience, as everyone learns at a different pace, and making them feel incompetent because they do not catch on quickly goes back to the respect point. Also, it is important to encourage all employees to keep developing skills and learning new ones that will benefit the entire crew.

Recognition

Recognize when an employee does something good. When you acknowledge any hard work or extra effort an employee has done, it helps them want to stay engaged and motivated in

their work.

These principles may sound basic, but when applied consistently, they create lasting cultural change.

The turf industry is evolving. Equipment technology continues to advance. Labor shortages remain a challenge. Expectations for course conditions continue to rise.

Despite these changes, one thing always remains constant: culture drives performance.

Golfers may never see the maintenance shop. They may never understand the hours spent grinding reels, diagnosing electrical problems, or preparing equipment before sunrise. But they experience the results every time they step onto the first tee.

Smooth greens, healthy turf, and consistent playing conditions are reflections of preparation, teamwork, and pride behind the scenes.

The relationship between shop culture and course culture is especially important. The operations that thrive are usually not the loudest or the most expensive. They are the ones built on trust, professionalism, communication, and accountability.

New Orleans Room Block continued from page 1

the conference. Our selected property, Le Meridien New Orleans (Marriott), is about a 15-minute walk from the convention center and a five-minute walk from our hospitality room at the Red Fish Grill in the French Quarter. So, whether you want to visit the iconic Old Absinthe House (15 min walk), enjoy a beignet from Café Du Monde (15-min walk), shop at the Riverwalk Outlets (six-min walk), or even visit Ruth's Steak House (10-min walk), we are centrally located to enjoy the sights. Plus, there are even more restaurants in the area than depicted on the map on page 9.

Important! With the CTS in mid-January, our room block deadline is November 6. To reserve a room in our hotel block, click on the link provided in our email blasts, or ask Lori for the link.

Also important! If you want to add additional nights to a Monday arrival and Friday departure, please make your reservation in the block and contact GCSAA travel immediately to ask for assistance to include shoulder nights.

PETE GRASS, CGCS, MONTANA GOLF HALL OF FAME AUGUST 5, 2026

Thanks to David Phipps for all the great pictures!

The Slough Reimagined: Restoring Nature's Place at Yellowstone Country Club

James Anderson,
Yellowstone Country Club, Billings, Mont.

*I*n the winter of 2025, and in addition to the course renovation of Yellowstone Country Club, we decided to improve and restore our largest on-course native area. At approximately ten acres in size, 'The Slough' borders holes 11, 12, 14, 16, and 17. This low-maintenance area contained over two hundred invasive Russian olive trees, as well as dead or decaying cottonwood, poplar, and ash trees. The slough was also notorious for producing large pockets of various thistles and other noxious weeds, which we weren't able to control due to the thick brush and overgrown trees. Over the years, however, this area had been neglected and had become very difficult to manage. With the winter that we had (or lack thereof), we took the opportunity to remove this eyesore and improve this portion of the property.

Starting in mid-December, we began cutting the trees down and transporting the plant material to a nearby stockpile using a front-end loader and a pull rope. Once the piles were large enough and the conditions were favorable, we would burn them with our legal burn permit obtained from the state of Montana. With the ditch in the slough being about 600 yards long, there were multiple burn locations to make it more efficient by reducing travel distances.

As the project progressed, there was an interesting discovery beneath the bark of many declining trees: a significant population of red flat bark beetles. Although these insects inhabit weak or dying trees, their presence may have been one of many factors contributing to the health decline of the trees in this area.

In total, this project took our staff about three months to complete, and the results were incredible! With the unwanted trees and thick brush gone, we are now able to get a sprayer back in this area to control the noxious weeds. With the improvements in the slough, we have already seen the ecological benefits as well. More wildlife such as deer and pheasants are roaming through the grasslands, and ducks are swimming through the ditch again, reinforcing the slough's role as a valuable habitat on the golf course.

Looking ahead, in the slough we now plan to introduce additional native grasses to further diversify the landscape and

Looking ahead, in the slough we now plan to introduce additional native grasses to further diversify the landscape and implement yearly controlled burns to promote vigorous spring growth, suppress invasive weeds, and maintain the health of this area. We have also started to implement more native, low-maintenance areas elsewhere on the golf course. Before this renovation, Yellowstone Country Club only had about 12 acres of native areas. But we have now increased that to roughly 33 acres in total. Implementing these new native areas has not only cut back on man-hours and hours on equipment, but it has also reduced irrigation and fertility requirements in these areas as well. The newly introduced native areas still need some time to fully establish, however, as we have to transition them from a mixture of bluegrass, bentgrass, and ryegrass rough to more native low-maintenance cultivars. All in all, we are excited to see what these areas look like in the years to come!

Drought Outlook 2026 - Practical Strategies for Golf Courses, Sports Fields, and Managed Turf

Brian McGiff, Allied Liaison, Simplot Turf & Horticulture,
Idaho Falls, Idaho

*T*he summer of 2026 is shaping up to be a severe drought year, with much of the United States currently experiencing moderate to exceptional drought conditions. Snowpack levels across key Western states are well below historical averages, contributing to reduced water availability and increased pressure on irrigation systems.

Across golf courses, athletic fields, and managed lawncare properties, these conditions create real challenges—balancing turf quality, playability, and visual expectations while managing limited water resources. Proactive planning now can help maintain performance and reduce stress during peak summer months.

Cultural Practices to Manage Drought Stress

Effective drought management starts with strong cultural practices. While many strategies apply broadly, how they are implemented can vary by turf system and use.

Golf Courses

Golf course superintendents can prioritize irrigation on high-value playing surfaces, such as greens and tees, while reducing water inputs on roughs and out-of-play areas. Adjusting mowing heights to increase leaf surface area and maintaining sharp blades can also help reduce plant stress and moisture loss.

Sports Turf

For sports fields, maintaining safe and consistent playing conditions is critical. Focus on managing moisture in high-traffic areas such as goal mouths, sidelines, and center fields, where wear stress is greatest. Increasing aerification early in the season can improve infiltration and reduce runoff during limited irrigation cycles.

Lawncare and Managed Landscapes

In lawncare and landscape settings, prioritizing visible or high-traffic areas can help maintain overall property appearance while reducing water usage elsewhere. Communicating expectations with clients during drought conditions is also important, as turf may experience natural dormancy under prolonged stress. Across all segments, practices such as aerification, raising height of cut, and improving infiltration can help maximize the efficiency of available water.

Maximizing Water Efficiency with Wetting Agents

While cultural practices form the foundation of drought management, many turf managers incorporate wetting agents to improve water efficiency and maintain more consistent soil moisture.

Wetting agents help ensure that available water moves more effectively into the soil profile, reducing localized dry spots and improving uniformity. This can be especially valuable when irrigation is limited or inconsistent.

Depending on turf type, soil conditions, and usage demands, different wetting strategies can help address specific challenges—whether improving infiltration, correcting water repellency, or extending moisture availability between irrigation events.

Key Takeaways for Turf Managers

- Prioritize irrigation where performance, safety, and visibility matter most
- Use cultural practices to improve water infiltration and reduce stress
- Incorporate wetting agents to maximize available moisture
- Plan early to better manage peak summer drought conditions
- Adjust strategies based on turf use and environmental conditions

On the Road with Peaks & Prairies

David Phipps, GCSAA, NW Representative

*T*he first week of August took me to Billings, Mont., for the induction of Pete Grass, CGCS, into the Montana Golf Association Hall of Fame. With several days in the region, I took advantage of the opportunity to hit the road, visit members and facilities throughout northeastern Wyoming and southeastern Montana, and make a few new connections along the way.

My first stop was in Sheridan, Wyoming, where I had a great visit with Jason Busch and Mike Nelson at The Powder Horn. I've always been impressed with the way Jason and his team develop their staff, so I was pleased to offer GCSAA memberships to three team members: Andrew Walker as a Class C member, and Walker Mitchell and Rachell Edwards as Student members. I'm confident they'll take full advantage of the educational and professional development opportunities available through their new memberships.

Next up was Kendrick Golf Course, where it was great to catch up with Chris Cremer and Justin Bishop. Like so many others, they've been battling the elements this season, and on the day I visited, the wind was probably blowing 50 mph! I always enjoy Justin's passion for education and his commitment to introducing students to the golf course. He's already planning his next First Green event for this fall.

Buffalo Golf Club was next on the agenda. This was my first opportunity to meet Jeff Lipics (left), who is fairly new to his position and originally hails from Pennsylvania. Jeff is happy to report that he has found a new home in Buffalo, and the golf course is looking great!

It had been a few years since I had connected with Dwayne Dillinger, CGCS, so when he said he had time to visit, I couldn't pass up the opportunity. I was greeted at Bell Nob Golf Course by superintendent Sean Gregson (shown above with Phipps). Like Jeff in Buffalo, Sean is originally from Pennsylvania and couldn't be happier with his move west to Gillette.

Sean introduced me to employee Owen Gorsuch, who plans to pursue a career in turfgrass management. Owen will enroll in Penn State's online program this fall, so we made sure he was set up with a GCSAA Student membership. Sean then gave me the full tour of Bell Nob, and the course couldn't have been in better shape.

Dwayne stopped by later, giving us a chance to catch up—and solve a mystery from my drive into town. Earlier, I had spotted an election sign reading "Dillinger Senate District 23,"

so naturally, I had to ask if the candidate was a member of his family. Dwayne fessed up: It was him! As he retires this year from the City of Gillette Parks, Dwayne may soon be trading one form of public service for another.

I was disappointed to miss last year's Peaks & Prairies Scholarship Tournament at The Golf Club at Devil's Tower, so I made sure to include a visit on this trip. I arrived in the evening to find Shawn Stutzman and his assistant, Boz Backen (right), on the course verticutting and topdressing greens. With a welcome break from the hot weather, the team was taking full advantage and getting the work done.

Shawn graciously set me up in one of the club's bunkhouses for the night. During our visit, Shawn and Boz told me about an employee they thought would benefit from GCSAA education. I met Jodi Roger, who was thrilled to receive an Associate membership and plans to take advantage of the Greenkeeper Certificate Program. To top off the visit, Shawn and Boz made sure my wish to play Devil's Tower came true and took me out for a

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Let's all get together to celebrate!

We're excited to share a fantastic opportunity for you and your facility.

Peaks & Prairies GCSA

Fall Meeting & Trade Show

celebrating 50 years!

October 13-15, 2026

(Social October 12)

Billings Hotel & Convention Center, Billings, Mont.

Golf: Pryor Creek Golf Club, Huntley, Mont.
Cole Clark, GCS

Our Presenters:

Pat Jones, Flagstick LLC

Thom Nikolai, Ph.D.
Michigan State University

Kee Dunning, LCPC, Stacy Stellflug, Ph.D., and Peter Grass CGCS

Pat Finlen, CGCS
Denehy Club Thinking Partners

Matt Gourlay, CGCS, MG, AGS
Hillcrest Country Club, Boise, Idaho

Trent Manning, CTEM
Director of Equipment Solutions

Peaks & Prairies Chapter GCSAA 50 Years

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memorable round of golf.

That afternoon, I made my way back to Billings to prepare for Pete's Hall of Fame induction the following evening. Pete was honored during the Montana State Senior Men's Tournament banquet at the Northern Hotel, and I was elated to see so many of his peers there for the occasion. It was another reminder of the strong bonds among members of the Peaks & Prairies GCSA. KTVQ Sports Director Scott Breen did a great job interviewing Pete, and, in true Pete fashion, he was at no loss for words! *(See pictures page 15.)*

Thursday was my final day in Billings before heading home to Oregon, so I arranged a few more site visits and invited Todd Nevin, a teacher at Billings West High School, to join me. Todd first reached out to GCSAA in March to learn more about career pathways in our industry and explore establishing a CTE program in golf course maintenance. I couldn't think of a better way to introduce him to the profession than by bringing him along to see local facilities and meet the people doing the work every day.

Todd (pictured right with Grass and Schulke) gained valuable insight into the industry while making connections with Cody Schulke, Stephen Grass and Sean Sullivan, CGCS. I'm excited to see where those conversations may lead and what opportunities they could create for students interested in golf course management careers.

It was a busy five days traveling through northeastern Wyoming and southeastern Montana, but it was worth every mile. I can't thank everyone enough for taking time out of their schedules and going out of their way to meet with me. Trips like this are a great reminder that the strength of our association comes from the people, relationships, and shared commitment to growing the profession.

I'm already looking forward to being back in October for the 50th anniversary and the Peaks & Prairies Fall Meeting!

Powering Autonomous Mowers from the Irrigation System

Pat Nowlen, Polson Bay Golf Course, Polson, Mont.

I get asked the question quite often: How am I safely getting power from our irrigation controllers to power the autonomous robot charging stations? This is the answer to that question.

Utilizing the existing power infrastructure already installed in the ground is a great way to get started in autonomous mowing on the golf course. The key is to not put that infrastructure at risk of damage, protect the autonomous mowing system, and avoid any damage to the irrigation system. Autonomous mowing is great, but if you damage or cause the irrigation system to not operate at key times, you could have dead turf and be out of a job. I can't give a definitive solution for every course and condition as irrigation systems vary on design and capabilities, but I can help with some ideas that might help you get started.

One of the biggest issues with using irrigation satellite power is timing. At first, I would send the robots home at the time the irrigation system came on, and I thought it would be fine. Turns out, the autonomous robots use the highest amount of wattage when they start charging, so I had to send them to the charging stations over an hour before the irrigation started. While this strategy worked fine for our robot range picker, this turned out to be too limiting to our mowing time and we had to find a different option. I started to explore the solar option, and I determined quickly that only mowing when the sun was shining was not the answer. I had to find a way to combine all power sources. The answer came in the form of "solar generators" or "solar power stations."

The concept is to store and use the irrigation satellite power during the day, when it is not being utilized, and then use that stored power to charge the autonomous mowers at night. There are some challenges to this method.

The solar generators can be set to limit charging rate from 120v, but they "pass through" the charge station draw. Example, if you set the charge rate to be 200w, then the battery will only charge at 200w, but when the autonomous mower docks, 750w will be passed through the system drawing too many watts from the limited power source causing a brown out. While the solar generator might be able to handle over 2000w, the irrigation system power becomes the limiting factor again. This "pass-through," however, doesn't occur with solar or DC power. This fact is important in my final solution.

The second challenge is sizing the system to handle the wattage needed by the autonomous system. I used a watt meter to analyze the power requirements of the mower I was going to be hooking up to a controller. I used it to track the max draw and total power used in a 24 hour period and a week. For my Echo TM2000, a 2400wh total power requirement was needed for the nighttime mowing, so this set the holding capacity needed. The charging station requires 7.5 amps at 120v or 900w. The irrigation satellite located at the charging site was only utilizing 300w of power. Therefore, I was only comfortable with utilizing 300w of power. The math for this location was calculated as 300w for 18 hours or 5400wh of available power per 24 hours of mowing. That is plenty of total power for mowing a continuous 24/7 schedule.

My first try was a small Oupos 1000w solar generator costing about $560. It worked well for short periods of time, but it's app was too limited and it didn't charge well from solar. The minimum charge rate as 500 watts which was more than what I had available. Turns out it works well for powering a reference station. I then moved on to an Ecoflow Delta 2 Max. The app for the Ecoflow allows me to limit the charge rate down to 200 watts and charge from 120v, solar, and DC at the same time. The Delta 2 Max has a storage capacity of 2048wh and 2400w output. With the ability to add additional 2048wh storage batteries, I was able to upgrade to 6000wh. Plenty of storage, and power. I was able to run three small autonomous mowers on the same system. This solved part of the problem, but I still had to solve the "pass-through" issue.

My next solution was to haul the solar generators back to the maintenance shop and charge them. They charge quickly from a 15A circuit, so changing out the power station two times a day actually turned out to be a good temporary solution. If you time it to when the mower is out working and have an extra battery, you can have a good solution for small, remote areas. Also, seeing every mower multiple times a day is a good thing to practice when you first install them. However, I have 21 robots now and hauling batteries is no longer an option.

The answer came when I started adding solar panels and unlocked the other options in the solar generator app. I found that when I plugged the solar generator into a 12V automotive power source or a solar panel, the charge rate stayed consistent (no pass-through). Also, the apps allow for programing of charging schedules, so I can only allow 12v charging from 7am to 10pm. For 12v, the solar generator is automatically limited to less than 8 amps, or about 96w. It was fairly easy for me to find a way to create 8 amps of 12v from the irrigation power. So now I had 96w for up to 24 hours a day or 2300wh per day to charge the power station and up to 400w of solar during the day. This works great for the smaller autonomous mowers, so problem was solved. Cost for the small power storage solutions is about $1200 to $2400 depending on the size of the robot, the area being mowed, and the charging station power requirements.

One thing to note, different brands of autonomous mowers have very different power requirements. Some charge slower than others and therefore have a lower watt charging requirement. Others charge faster and therefore can cover a greater area in the same number of hours, but also take more power during the charge cycle. This means bigger wire, or a bigger solar generator system. However, less mowers and charging stations would be required to cover the same size golf course, so fewer solar generators would be needed.

The next problem I ran into was that some locations had no 120v power available. I turned to EcoFlow again for the solution. My first solution was with a solar generator system charged by a gas generator instead of hauling batteries back to the maintenance shop. I would fill the generator with just enough gas to charge the solar generator and start it before I left for the day. This worked fairly well, so I shopped for a better solution. This is what I found, EcoFlow Delta Pro 3 power station with a EcoFLow 3200w Duel Fuel Smart Generator. This combination unit costing $3600 stores 4000wh and will automatically start the generator to charge back up when reserve power falls below a set point like 20%. It will then charge itself to about 80% and turn the generator off. I am currently using this system to run two Husqvarna Automowers; one 580L and one Ceora. These two mowers are mowing 2 fairways, 2 green surrounds, and 2 tee surrounds, and 8 acres of rough. Total fuel usage per day is 1.5 gallons of gas. Because it is duel fuel, I will be connecting it to a propane tank. The app allows for the same time restrictions for the operation of the gas generator to avoid running in the middle of the night or when golfers might be present.

I now follow a few guidelines after some initial trial and error:

1. Only take power from the irrigation system during the times of day it is not operational. The system was most likely designed to provide only the power to the controllers during the irrigation cycle.
2. Only use the amount of current used by the irrigation satellite at that location.
3. Utilize all other sources of power first. (bathrooms, pumpstations, etc.)
4. Consult with an irrigation designer or electrician to determine availability of power.
5. Do the research and the math, don't guess.

I am not selling or promoting the use of EcoFlow over another brand of solar generator, this is the product that I chose after research, and in most cases, it has worked well for the cost.

Eventually, proper power may be installed underground to power this section of the course, but these solutions allowed me to get the holes in our autonomous mower coverage filled relatively inexpensively until permanent grid or solar power can be installed.