On your behalf, over the last two and one half years I have had the opportunity to pursue and develop positive relationships with influential individuals who work at our state agencies in the Departments of Natural Resources, Agriculture, Pollution Control and the Bureau of Water and Soil Resources. Prior to these partnerships our industry was synonymous with mineral mining in northern Minnesota and viewed as a spoiler of finite natural resources, simply for a recreational pastime. Heads lifted when told the “good economic story of golf”; the 2.4 billion dollars of economic impact and the 35,000 jobs maintained annually by our industry, the 75,000 acres of green space, wildlife and pollinator habitat, the responsible attitude adopted when utilizing water, applying nutrients and plant protectants and the willingness to partner with public entities for the betterment of our community at large. Not only do heads lift, but also they spin real quickly once the positives of golf are touted.

It has been hard work, but the Environmental Stewardship Committee, led under the direction of Scottie Hines CGCS and Superintendent at Windsong Farm, has continued to creep forward with baby steps as they have learned that nothing moves fast when working with state agencies. It has been an education, with each department having their own special requests for consideration. The catalyst of everyone’s concern is water; its distribution, allocation and availability. It has been said often that the land of 10,000 lakes couldn’t possibly have issues with water, yet we do, because much of the water that drops from the sky eventually runs off our state to the Hudson Bay in the north, the Atlantic Ocean to the east or the Golf of Mexico via the Mississippi River. We have clean water, the best in the country. Yet without the ability to create a reservoir system, the state agencies have taken the attitude that everyone must take care of and not waste what we have stored in aquifers or whatever flows from our land.

Both the Departments of Pollution Control and Agriculture are very concerned that golf courses are in compliance with state regulations. In an effort to maintain standards and educate golf turf managers, the MDA has gone so far as create a new industry specific “Golf Course Regulatory Compliance Bulletin” which has been in the last three issues of Hole Notes Magazine. They have also requested an assessment be completed to, “take the pulse of the golf industry in Minnesota.” They want to be educated on water, nutrient and pesticide use, soil types, plant communities and physical logistics of a large turf management operation.

They want a study that has never been done in our state before…until now.

Sam Bauer, UMN Extension Turf Educator and member of the ESC, has been hard at work creating a web-based module to be completed by a pilot group of courses to develop a baseline of the industry. It is thought that in time the survey would be available to all state courses for their input. This material, combined with existing and current scientific studies, will help satisfy and assure the MDA and the public that golf course superintendents are true professionals, environmental stewards, and that golf courses are not toxic waste sites. The Department of Natural Resources is primarily concerned with water availability whether underground or surface. With the reduction of water levels in many lakes across our state and frequent light flow in streams, the DNR was mandated by the legislature two years ago to develop a strategic plan to better manage our water. The MGCSA’s presence at the table during these discussions has made us important partners in the decisions which will be made in the future, however there are a few you must consider today to protect your projected water source. This is especially important if you are a surface water user.

“Forewarned, forearmed; to be prepared is half the victory.”

by Jack MacKenzie, CGCS
Surface users, or approximately 20 percent of all courses in the state, must evaluate their water supplies because the current law states that once a specific low level is attained or limited stream flow achieved, the water use permits will be pulled for everyone (except consumption and energy) as there soon won’t be water to pull. However, there are measures that can be taken to soften this suspension.

In this issue of Hole Notes are four case studies of courses that have reduced or eliminated their use of fresh water. Superstar environmental stewards, they simply opened their minds to the possibilities and chose, with the help of agencies and communities, a different method of capturing and containing water for irrigation. Read about their successes and consider any change you can make at your club to be proactive.

Consider local businesses that use water to cool their plants or wash their products. Could you capture and reuse this resource? What about a low capacity well, under 10,000 gallons per day or 1 million gallons a year so you don’t need a permit, to be used to irrigate your greens and tees when, not if, surface water permits are suspended. Combined with a large pond to contain stormwater, your course may never enter a crisis period.

Recently I was contacted by the Minnesota Department of Health, because they are curious as to why so few golf courses are using effluent water. They too have been prodded to do more with less water available and create alternate resources for existing industries. In the near future, you will be asked to complete a survey on effluent water use upon your course. Better think carefully about your answers, as in time there may be very few options.

“Forewarned, forearmed; to be prepared is half the victory”, a quote by Miguel de Cervantes is appropriate when contemplating our growing partnership with our state agencies. A modern day axiom would be, “Proper planning prevents poor performance.” Either way you say it, your association leaders are taking steps to protect your viability as a golf and employment destination. However, to assure your club’s success, you have to become involved and begin thinking outside the box for solutions to very difficult challenges.
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Think about how we handle non-personnel problems – a sick animal, a wilted crop, an unacceptable green speed, a dissatisfied customer. Even though we are all well trained to address these issues, we still often treat symptoms rather than taking the time to analyze the problem to determine the real or root cause.

What happens when we treat symptoms? Usually the solution we implement works only temporarily at best. The problem soon returns. It is like taking a cough drop for a serious sore throat instead of going to the doctor. If we really want to fix the problem, we must determine the real or root cause.

I believe that the incidence of treating symptoms rather than determining and treating the real or root cause is higher for employee problems than for non-personnel issues like those referred to above.

Let’s explore my observations from a recent vacation to understand the importance of seeking root causes.

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My wife and I just returned from a twelve day group excursion (through Road Scholar educational adventures) visiting six national parks in the US and Canada from Grand Tetons to Yellowstone to Glacier to Banff. We stayed in six hotels/lodges and ate at numerous restaurants and cafeterias.

Although I did a great job of not working on this vacation, the occupational hazard of observing employee performance remained. Two points jumped out from those observations. First, there was great variation in performance among employees within each business. That is to be expected.

More importantly, though, there was a large variation in the level of employee performance between businesses. Employees in one cafeteria we frequented were uniform in their poor performance. By contrast every employee at the hotel we stayed at the last night was proactive in serving us and seemed to do everything perfectly and effortlessly.

Was this dramatic difference due to the quality of the employees at the two businesses? I think not! Instead, my observation is that the quality of the leadership and supervision was dramatically different!

The second observation concerns how those in our group responded to poor employee performance. Many were upset and blamed the employees. This is where my occupational hazard kicked in. I started...
thinking about WHY the employee performance was so poor. I was thinking about what leadership had failed to do that prevented employees from performing effectively.

Those who blamed the employees were reacting to symptoms. By asking WHY, I was looking for real or root causes.

Let’s return to our poor employee performance cafeteria and look specifically at the cashiers. They were mostly unenthused, slow, and often incapable of pricing meals that were not entirely routine. Clearly, the easy conclusion from observing their behavior – the symptom – is that the cashiers were lazy, unwilling to focus, and unmotivated.

Let’s further analyze what I observed and suggest some possible real or root causes:

- **Motivation:** The employees are in fact lazy and do not have sufficient self-motivation to perform. (Although this is possible for individual employees, it is not likely the root cause for all of the employees.)
- **Staffing:** The recruitment and selection processes were inadequate resulting in employees who do not possess the attributes – skills, knowledge, experience, attitudes – to succeed in this position. (Unlikely here as these are definitely entry level positions.)
- **Training:** The employees were not sufficiently trained in menu items, pricing policies, and customer service. (I believe this was a big part of the real or root cause.)
- **Supervision:** The employees were not being provided clarity – “chalking the field” – and feedback – positive, redirection, negative. (I am pretty certain this was a key root cause. The root cause of the poor supervision was likely lack of supervisory training.)
- **Authority:** The employees had insufficient decision-making authority to effectively make needed decisions. (I saw this as cashiers often had to wait for a supervisor to authorize a charge.)

We conclude our discussion of employee problem root causes with three amplifications to assist you in determining employee problem root causes.

1. The Fundamental Theorem of Attribution – a key tenant of organizational behavior – holds that when we as human beings are analyzing a problem we caused, we tend to blame the problem on the situation – not on what we did. On the other hand, when we are analyzing a problem someone else created, we tend to blame the person. For employee problems, the Theorem of Attribution is a powerful force keeping supervisors and leaders from seeking real or root causes. It is easier to treat the symptom – blame the employee – that seek root causes that likely will lead back to the supervisors and leaders.

2. The conclusion that an employee problem is caused by the employee should result in some form of employee reprimand – negative feedback. After determining root causes, where the cause was not under the control of the employee, a redirection feedback would be in order. With redirection feedback we provide the employee the training, feedback, authority, clarity, etc. needed to successfully perform. As we have often discussed, one of the easiest ways to decrease employee trust in their supervisor is to provide a negative feedback when the employee believes he or she should have received redirection feedback. Treating symptoms rather than root causes often creates this disastrous situation.

3. One word – WHY – was prevalent in our discussion of root causes. That is because the key to finding root causes is to ask WHY. Why did this problem happen? In fact a simple and effective tool for determining root cause is called “Five WHYs.” Ask WHY until one or more root causes are found. It is called “Five WHYs” because a root cause is normally found by asking WHY five or fewer times.

A concluding comment: The next time you observe an employee problem, use the Five WHYs and the process we used in the cafeteria cashier example to determine the root cause or causes of the problem. Do not act hastily and respond to symptoms.
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In this example I trust you have seen the power of identifying the real or root cause of employee problems. You have also seen several of the most common root causes for employee problems.

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Advanced turf management theories for the Golf Course Manager.

The MGCSA welcomes Dr. Dave Kopec, University of Arizona, and Dr. Bill Kreuser, University of Nebraska, to discuss the pros and cons of current cultural practices including aeration and topdressing for managing thatch. In the afternoon each will touch upon current projects they are pursuing.

This should be a great day of discussions. Register today.

7:00am - 8:00am  Registration/Networking with assorted pastries and coffee
8:00am - 10:00am  Dr. Dave Kopec: Standard and Specialized Aeration Techniques for Thatch Management
10:00am - 10:15am  Break
10:15am - 12:00pm  Dr. Bill Kreuser: Long Term Topdressing Programs for Thatch Management with Relation to Ball Speed
12:00pm - 1:00pm  Lunch
1:00pm - 2:00pm  Dr. Dave Kopec: ET Driven Irrigation Management with Field Test Catch Techniques
2:00pm - 3:30pm  Dr. Bill Kreuser: Iron Oxide Layers in Sand Based Greens, Winter and Summer Desiccation Prevention and Recovery
3:30  Cash Bar Available

Cost of the Day: $75 ceu’s pending
Education, networking, lunch!

The MGCSA encourages all members to attend this fun event.
It won’t be the same without you

Please use Universal Registration form at mgcsa.org
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Effective Spay Patterns, Are You Really Covered?

By Ken Rost, Frost Services

Having the answer may not be as difficult as you think. Universities, chemical companies and spray nozzle manufacturers use laser or doppler equipment to analyze droplet size from different nozzles in a controlled laboratory environment. The information gathered from this equipment is detailed, accurate and critical to the development of new technologies. However, outside the laboratory where we live, there is a big world with lots of variables and a more practical method of spray coverage measurement is necessary. This is where water sensitive paper (WSP) comes in handy.

WSP is a special paper with a yellow film on one side that turns to blue color when it gets wet. It was developed by Syngenta over 30 years ago and it is widely available through spray parts suppliers. When droplets hit WSP they form a blue dot relative to the size of each droplet. This gives us an indication of the droplet sizes that are coming out of the nozzles. The number of drops and the total blue area on the paper gives us an indication of the volume of liquid applied over a specified area. We can compare this applied volume to the rate of application from the sprayer and see how efficient the application was. We can also use WSP just to indicate the presence of droplets. An example is to check if drift is occurring in a no-spray area. Here are a few ways that WSP can be used:

Checking Droplet Size – Labels on spray products include a recommendation of droplet size. To maximize the efficacy of the product, we need to be within the range of their recommendations. We can check this by positioning the WSP flat on the ground and simply spraying over the paper with the spray boom. After the droplets dry on the paper we can look at the size of the blue dots to determine the relative droplet sizes. There is a ‘spread factor’ for the size of the blue dots that corresponds to what liquid is used. Water has a known spread factor but a full tank mix of spray product may have...