



TURFGRASS MATTERS

May/June 1998

Volume 70, Number 2

Managing Personal Stress

For those of us that have listened to people who work inside all day or drive around in their vehicles making sales calls say, "You have the best job in the world. All you do is mow grass and soak up the sun in the summer and travel and goof off in the winter." We (golf course superintendents) would probably like to respond with "walk a mile in my shoes." That, however, would not accomplish anything so we smile and keep doing our jobs.

The amount of stress in all of our lives varies. Some people only think of getting their job done, taking care of family and making sure their bills are paid. Others, however, worry about many other things that cause them a lot of stress.

The word STRESS is often used for so many situations that it is hard to understand what a person means when he or she says "I have a lot of stress" or "I'm stressed out." Stress can mean feeling tired or confused. Stress can also mean there is a serious chronic anxiety. The fact that stress can come from many areas of our lives, such as work, home, community, friends and even extended families can make us feel as though we're dealing with a moving target, or worse, that we are the target and the stones are coming from every direction.

Stress is not necessarily harmful. It is a normal reaction, a biological fact of life. The amount of stress we experience within a time period and the way we handle it physically and emotionally determines whether stress becomes harmful.

One way for us to better handle stress is to be able to recognize the stress. Under

stress, our bodies usually experience a fairly standard response, consisting of a number of physiological states. Some of them are: increased blood pressure and pulse rate, a heart-pounding feeling in your chest, dilation of the pupils, dry mouth, increased perspiration, muscle tension, fast-shallow breathing, fatigue and boredom. The first eight can be minor and barely noticeable, yet they each take a small toll. If the stressful situation continues, then the last two-fatigue and a sense of boredom-may occur. Not everyone will experience these states. Some of us have a high natural resistance to stress or our stress response may be less noticeable than others.

We need to be able to recognize these reactions in our body so that we can make "an attitude adjustment." One of the best features of working with your attitude is that it is yours alone. No one and nothing else can determine your attitude. You may not always know how you have formed your attitudes, but they probably have been formed by many factors, such as your experience, your beliefs, and your values. Because your attitude is all your own, it is yours to change as you see fit.

Sometimes when we are feeling deeply worried or depressed about an impending task or situation, we may need support, or we may need some time to think about the reasons for the negative feelings, how they started, whether they are reasonable (sort of a reality check), and how to work around them. However, with many day-to-day tasks, when we are doubtful, lacking confidence, worried, or angry, it can be

very helpful to simply choose to put the negative feeling aside and decide to be optimistic.

We can not control the weather, we can only work with what we get. We can not control what other people do or say about us in our absence, we can only be ourselves and try not to let it cause so much "stress" that we change who we are. We can, however, try to manage our time so that we are better able to deal with what is handed to us. Some of the ways to accomplish this are: Tackle the toughest projects when you have the most energy, group similar tasks that can be done together, use "idle" time to get things done, delegate, take the time to refresh yourself, make lists and keep on your desk only materials needed to accomplish the day's tasks.

You can reduce your general susceptibility to stress by improving habits and

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President's Message

Mike Gilmore

Finally, the rough mowing is starting to become under control and we are seeing the light at the end of the tunnel and hopefully, it is not a train! The wet weather in early May has made life exciting for those folks who hit out of the fairway and even more exciting for those of us who suffer their wrath. Anyway, I hope your spring has been a good one and the summer is shaping up to be good as well.

The MAAGCS has been lucky to visit two of the Association's top clubs, River Bend in April and Robert Trent Jones in May. Thanks go out to both David Kardos and Glenn Smickley for hosting the Association. River Bend was an excellent event and the golf course and club were excellent. The people at River Bend really went out of their way to make us feel welcome and we appreciate the chance to visit. RTJ was in "President's Cup" mode for the Superintendent/Pro Tourney and the day was enjoyed by everyone in attendance. Once again, the Association was treated in an outstanding manner by the club and their excellent staff. I am still trying to reach the fairway from the tee, boy, I felt old out there that day! To both David and Glenn, thank you and best wishes and continued success.

We are privileged to be at the Country Club of Maryland in June, with Dave Nehila as our host. Dave promises a great day and it will be fun to visit Towson and enjoy the day. July will bring us to the beautiful town of Denton and the Caroline

C C. Jim McHenry will be sure to give us a great golf course and the people at Caroline always treat us well. It is a treat to visit Caroline. Thank you, Dave and Jim for hosting our meetings.

The topic of professionalism is a popular topic in our business today. GCSAA President George Renault, CGCS recently wrote of the efforts being made to help Golf Course Superintendents improve their image in the golf community and the community in which we live. I applaud the efforts being set forth to improve the image and stature of the Golf Course Superintendent. However, I feel strongly that the best way for a Golf Course Superintendent to be considered a professional, and treated as one, is to start at their own club and in their own community.

Your standing and image will be enhanced more by how you carry yourself and the results you produce than by any publication or television show touting professionalism and the image of the Golf Course Superintendent. If your golf course is in poor condition, then no one will care about what they read or what they watch on television, they will only care about what they see on their golf course! If you are unavailable when the golfers are on the course, not seen during peek times, then the assumption will be made that either you are not capable or not on the job. Then the club will be looking for a person who resembles the "image" that we are trying to project as a

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Mid-Atlantic Association of Golf Course Superintendents

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Turfgrass Matters Committee

Bruce Zickafoose - Editor
Doug Fleming * John Haley
Keith Williams * Mitch Williams
Brian Zickafoose

Bullets from the Boardroom

MAAGCS Secretary - Nick Vance, CGCS



Tentatively our monthly meetings for next year (1999) will be at the following locations: Fountain Head Club, Turf Valley Resort (2), Chevy

Chase Country Club, Westwood Country Club, Mayo Beach and South River Golf Course for the picnic, Woodmont Country Club, Lowes Island Golf Course and Southview Golf Course. If you do not see your golf course on the list perhaps it is time you contacted the Board of Directors to schedule an event. Finding places to hold our monthly meetings has become very difficult and your help is appreciated.



By the time this newsletter gets to you the new Directory will be at the printer or maybe even in the mail.

As noted in all the dues statements that went out, if your dues are not current at the time of this printing, you will be dropped from the listing.



The Social and Benevolence Committee is in the process of putting together a CASINO NIGHT for our

September "Ladies Night" event. All the details have not been finalized yet, but it looks like a fun evening.



The dates and topics for the December seminars at Turf Valley have been approved. On December 8th we will have an "Employee Safety Training" seminar and on December 9th the topic will be "Maximizing Job Satisfaction." The Board of Directors decided to try two one day seminars to give those persons that can not get away for two days in a row a chance to take at least one day of education.



The MAAGCS Web Page is still moving forward at a pretty good pace. The Committee has put together a site that would include a calendar of events, membership information, announcements, turf links and much more. We will keep you informed of the progress and let you know when we go "on line".

Stress

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practices. Setting goals, managing your time, and organizing your tasks enable you to work more efficiently and with less frustration.

Stress management refers to the process of reviewing your life and your habits and determining what you can change to reduce long-term stress and to make your life more enjoyable. Life will always present stress, but if you have laid a ground work of healthy attitude and reduced susceptibility to stress, you will find the stress that does arise easier to handle.

Managing stress and maintaining your productivity is not a one-time endeavor or a short-term project. It is an ongoing, lifelong process.

Nick Vance, CGCS

1998 GCSAA Leadership

Mid-Atlantic Association of Golf Course Superintendents is well represented on the national level. George Renault, CGCS of the Burning Tree Club is the 1998 GCSAA President. The following is a list of the MAAGCS members that serve on GCSAA committees. Please feel free to contact the appropriate committee member to voice your questions, opinions, and concerns.

Certification Committee

John Kotoski, CGCS - The Suburban Club

Chapter Relations Committee

Harold Parr, CGCS - Traditions Golf Club

Communications Committee

Walter Montross, CGCS - Westwood Country Club

Education Committee

Joe Emanuel, CGCS - Hurstbourne Country Club

Election Committee

Ken Ingram, CGCS - Bretton Woods Rec. Center

Government Relations Committee

Steve Cohoon, CGCS - Southview Golf Course

Jim Loke, CGCS - Bent Creek Country Club

Historical Committee

Lee Dieter, CGCS

Jospeh Duich, PhD - Penn State University

Membership Committee

Timothy McMahon - Burning Tree Club

Membership Standards Committee

George Renault, CGCS - Burning Tree Club

Nominating Committee

Nick Vance, CGCS - Rattlewood Golf Course

Research Committee

George Thompson, CGCS - The C. C. of N C

Scholarship Committee

Ken Ingram, CGCS - Bretton Woods Rec. Center

Student Resource Group

Andrea Bakalyar

Tournament Committee

Nick Vance, CGCS - Rattlewood Golf Course

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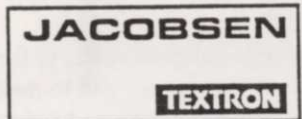
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The New "Assistant"

by Michael J. Gilmore

I was on the phone last week with a florist, on the eve of Secretary's Day, when I began to chuckle to myself about what I was doing. I wondered if anyone would be surprised that a Golf Course Superintendent was ordering flowers on Secretary's Day for their secretary, or in our case, our "Administrative Assistant." But the more I thought about it, the more I wondered why all of us were not doing the same thing.

When you got to any of the local suppliers, General Manager's office, or any other office where business is conducted, there is someone there who greets you and helps you find your way or announce your arrival. When someone comes to the Superintendent's office, what do they find? Too often they find an empty office and no sign of when anyone will return. When you call the office of a Golf Course Superintendent, how often do you get an answering machine? As a Superintendent, how often do you get to

check your messages, much less return calls? These are questions that are probably asked on a regular basis. I strongly believe that the answer to these problems are obvious. You need someone who can answer the phone, greet visitors, be a central point for communication, and do a lot of the paper work that bogs us down, when we need to be on the golf course (not to mention where we would rather be)!

I have been fortunate to have had an Administrative Assistant for the past two years and there is not a day that goes by that I don't think how much harder my job would be without her. The biggest worry I had going to the GM's office two years ago to discuss hiring this person was not how much was I going to pay this position, but convincing him that this was a vital need for our operation. It was amazing to him that I, a Groundskeeper, needed a secretary. After a brief period of silence and a stunned look on his face,

we had a conversation on the value of this position. I pointed out some things that I felt were the obvious reasons and he had to agree. I said that I am always reminded that my budget was the biggest in the operation, that my salary was the highest and how important the golf courses were to our business. If all of these are true, what would you rather have me spend my time on? Should I be riding the courses, supervising the staff and agronomic programs, meeting with members, and managing my department, or should I spend my time filling out vacation request forms, chasing down a price or a delivery ticket for a \$15.00 shovel, answering phones, doing schedules, filing, placing generic orders, waiting for a call back on something that is not really that important and in general, be a prisoner of my office? With a budget that is steaming towards a couple of million dollars and 1,000 acres to

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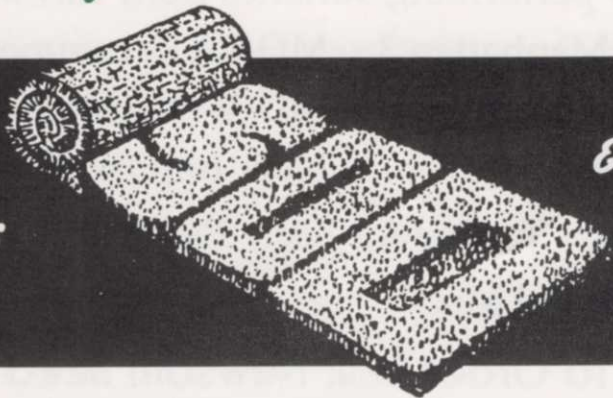


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MAAGCS Golf Notes

Our first tournament of the year was a points tournament at River Bend Country Club. In response to feedback from our focus group sessions last December, pairings for the tournament were determined by blind draw. This format seemed to have been very well received.

Kudos to Dave Kardos and his staff for the excellent condition of the golf course. Thanks, also to Head Golf Professional Roger Mack and his staff for all of their help. In an unprecedented move, Roger donated \$150.00 toward prizes for the event. Sponsors for the golf tournament were: G. L. Cornell, Zeneca, The Scotts Co., Summit Hall, Newsom Seed, and Finch Turf Equipment. Thank you for your continued support of the MAAGCS.

The day's winners were:

Net:

1st - Michael King (+2)
2nd - Steve Cohoon (-1)
3rd - Jeff Michel (-1)
4th - Mike Evans (-2)
5th - Tim Haines (-2)
6th - Nick Vance (-3)

Gross:

1st - Bob Katula (32)
2nd - Paul Tideman (28)
3rd - Phil Davidson (27)
4th - Glenn Smickley (27)
5th - Dave Horton (26)
6th - Bill Shirk (24)

Closest to the Hole:

3 - Joel Simmons
7 - Tim Norris
#10 - Steve Cohoon
#13 - Steve Cohoon
#17 - Paul Tideman

Long Drive:

9 - Kevin Atkinson

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Assistant

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cover, not to mention the housing and hotel additions, etc., he was convinced that I had a point.

Not every Golf Course Superintendent has 54 holes, 65-70 employees, a diverse golfing clientele and 1,000 acres, but in relation to the size of your operation, all of these things are true for you as well. The expectations placed on the Golf Course Superintendent today have grown by leaps and bounds. The tools to meet the growth on the agronomic side of the game have been growing as well to help us meet the challenges. However, on the administrative side, we are way behind. From having a secretary to working in a maintenance building that dates this century, the owners and members of the clubs seem to have forgotten the "back of the house." I firmly believe that if the people who sign your checks were to spend a couple of days with you, they would appreciate this need. Watching the juggling act that is required to handle all

of the demands that you are faced with, they would find a way to take some of the burden from you and free you up to do what they hired you to do and that is to be the Golf Course Superintendent.

How do you fit this in your budget? I would ask you to think what would be a bigger value to you, a nine month seasonal employee who uses a weed whacker and seems to be getting lost in the woods on a regular basis, or someone who takes the paperwork out of your hands, can screen calls, make calls, arrange appointments, and always be there as the center of information? In my mind there is no choice. I am more effective on the golf course. I am absolutely horrible when it comes to paperwork. Amazingly enough, there are people who call that I really do not want to speak to, for whatever reason. I have reduced by required time in the office by at least 50% and that helps me do my job 100% better. I am not afraid to hire someone who is strong in areas that I am not. If

they help the operation and help me in retaining gameful employment, they are more than welcome. My Administrative Assistant does that and has been possibly the best hire I have made! I have excellent Assistant Golf Course Superintendents and they are effective because they too are on the golf course, not stuck in the office. They come and they go that's the nature of the business but, an Administrative Assistant will probably last longer.

While the cost in hiring a good person for this job might be a bit higher than the nine month employee, the return will far exceed the investment if you have a quality person in the office. Whether you are at a public course or the top private clubs, this position can only help you be a better Golf Course Superintendent. I hope that more people will get the opportunity to order flowers, or buy lunch, (or if you are smart, both) for our Administrative Assistant next year on SECRETARY'S DAY!

News & Notes

New Members

Class A

Ron Diefenthaler, CGCS	Hunt Valley Golf Club
Tom Lipscomb	P. B. Dye Golf Club
David F. Schingel	South Riding Golfers Club

Class B

Raymond T. Nash	Crofton Country Club
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Class C

Bradley Files	Fawn Lake Country Club
Edward Galeno	Argyle Country Club
Tom Gravl	Hillendale Country Club
Bill Overman	Army Navy C C - Fairfax
Barry C. Pearre	River Downs Golfer's Club
Brett R. Post	Washington Golf & C C

Class D

Thomas H. Wunch	Chevy Chase Club
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Class E

David Mattes	TSG Services
David E. Shanley	Telemark, Inc.
Mary Thurn	Egypt Farms
Jeff Waters	Shemin Nurseries, Inc.
Joel Weiman	McDonald & Sons

Get Well Wishes

To Debbie List wife of Tom List, CGCS recovering from back surgery.

To Cheryl Gaultney recovering from foot surgery.

To Sarah Potter wife of Steve Potter recovering from recent surgery.

Condolences

To the family of Karen and Nick Vance, CGCS please forgive the misspelling of their son, Jeff Quigg's name.

Reroutings

Mike Mueller is now at Herndon Golf Course

Steve Nash, CGCS, is now at Hidden Creek Country Club

Kevin Smith is now at Lakewood Country Club

Tom Tokarski is now at Norbeck Country Club

Jefre Tschudi is now at White Plains Golf Course

Jim Wachter is now at Watchman Group

Lentz Wheeler is now at Springfield Country Club

Certifications

Congratulations to Harlyn Goldman, CGCS, of Great Hope Golf Course upon his certification.

Congratulations to Turf Graduates

Mike Perry

Charlie Poole

Brett Post

Kevin L. Smith

Calendar of Upcoming Events

July 14th

Caroline Country Club

July 15th

Maryland Turfgrass Research Field Day

August 11th

Family Picnic - Mayo Beach

September 18th

Ladies Night

President

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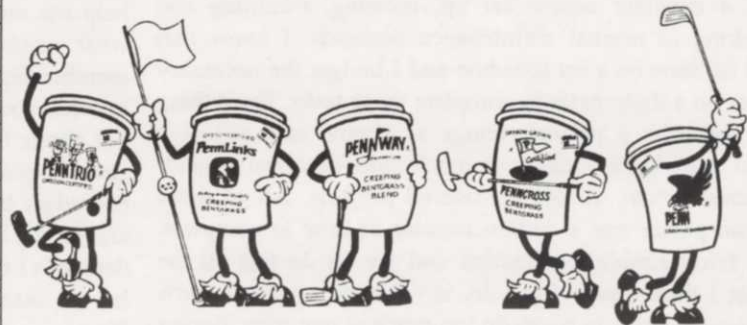
profession. Use the materials that are out there to help enhance your image and standing in the club, but it is more important that you use yourself as the main tool to improve.

The opportunity to exhibit professionalism and keep a good "image" is to act professionally when attending meetings with your peers and your vendors. When you make a reservation, honor it. When a vendor hosts a meeting and is providing a meal, they have to pay for the people that guarantee. Is it professional to make a reservation for these meetings and then not bother to show up or call? The answer to all of these should be obvious. How we conduct ourselves when we are representing our club and our profession will determine how we are perceived and treated in the business and in the community. It all starts with you!

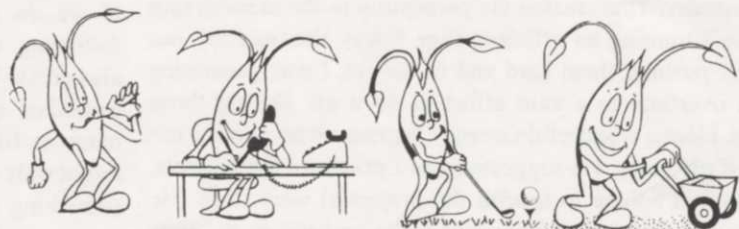
Keep an eye out for an update on the new legislation that will impact your nutrient management program, if you are in Maryland. We will be attending a meeting in Annapolis on June 4 to be briefed on what will be required to comply with this new law. There will be space in the next newsletter dedicated to trying to explain what you need to know. Once again, I want to acknowledge the efforts of Mark Schlossberg, Lou Rudinski, and Steve Potter in keeping us informed and working, under the MAGI banner, to keep us out of the line of fire as best as possible. If you all had any clue how much time was spent by this group, especially Mark, you would be grateful to them and be willing to help out when called upon.

I hope that your season will continue to be a good one. If you have any questions or comments please feel free to call.

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Project Scheduling and Time Management

by Walter Montross, CGCS

As with most of you I sometimes feel that there are never enough hours in the day or week to accomplish the demands placed upon us. Besides the normal golf course maintenance practices, there is always a long list of projects that we need to get done. I consider course set up, mowing, trimming and bunker raking as normal maintenance demands. I know that these will be done on a set schedule and I budget the necessary man power on a daily basis to complete these tasks. Everything else then becomes a project, things as simple as weeding a flower bed and edging bunkers, to much more involved projects such as construction, all are considered projects. All of these require man power and a certain amount of time to complete. This is a fairly simple explanation and we all do this all the time. What I think many don't do, is to create a plan. I know that I have a tendency to try to do too much at one time. Earlier in my career I would start a project, notice something else that needed to be done and start working on that also. Inevitably, I had too many projects going and nothing was getting finished in a timely manner. This created the perception to the membership that I wasn't running an efficient ship. I was also wearing out the staff by pushing them hard and of course, I was generating too much overtime in a vain effort to do it all. During those early years I had a wonderful Greens Chairman who pointed out the error of my ways. He suggested that I prioritize the projects, make a list and adhere to it until the project(s) were done. He also suggested that it was important to be realistic in the time demands of a particular project and to not set the schedule much

more than a week in advance. I must clarify that I am not talking about work that is contracted out, unless there will be crew involvement at some point.

The following is a procedure that I have used for many years to help me set a schedule. The first thing you must do is identify what needs to be done. This sounds pretty reasonable but membership demands may take priority over what you want to do or what you think needs to be done. Secondly, I try to only look out about 1-2 weeks in advance, anything longer than that will get changed, I guarantee it. I then write everything down and try to budget how much time and man power something will take and lastly, I prioritize the list. Based on the time and man power demands I then look at my weekly schedule and fit in only what I have a reasonable expectation to get finished during the week. Now you might say to yourself many projects will take longer than a week to finish. I still set a goal of how much of that project we should finish and I write it down. For example, we may be involved with a drainage project that will take a couple of weeks. If we do not finish the project it becomes the priority the following week and everything else is adjusted accordingly. I also create an "open ended" schedule of projects that will be done sometime in the future. There are some weeks that we have as many as 10-15 small projects scheduled and some weeks that we might only work on one thing. If we are successful in completing something ahead of schedule we simply move on to "open

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Reservations & Golf Policies

by Mike Legere, CGCS

Over the winter a copy of the reservation and golf policies, that have gone into effect, were sent to all members of the Mid-Atlantic Association of Golf Course Superintendents. Starting with the June meeting at Country Club of Maryland these policies will be strictly enforced. If you have not made a reservation by the deadline set, you will not be permitted to attend. Members who appear without a reservation will be asked politely to leave.

The Association is responsible to the hosting club for accurate counts given for meals. When members walk in without a reservation, especially during a sit down meal, clubhouse staff may be unprepared to service these extras. It creates last minute havoc that is unnecessary at that function. The same holds true when a member calls the morning of a meeting, expecting to play golf, without making a reservation before the deadline. It throws a last minute wrench into the planning for that day's event that is not necessary.

We are all busy professionals that expect to have appointments made, kept or canceled by visitors to our golf courses. It is time to show the same professional courtesy to your Association and make or cancel reservations on time. The permanent RSVP list is an alternative to assure you have a reservation for a meeting (golf reservations must still be

made), but it is your responsibility to cancel if not attending or you will be billed.

Lets all make a conscientious effort to make reservations by the deadlines, and have a great season!!!

Project Scheduling

continued from page 10

ended" projects. One other trick that works for me is to create the schedule at a calm point in the day. I find it difficult to schedule things rationally when the shop is busy or I am trying to deal with all the catastrophes that seem to be happening. I find the time on Monday morning after the crew is out of the shop as the best time to write down and try to arrange a schedule.

The most important part of any plan is to stick to it. Of course, with any plan the unexpected does occur and you may find yourself juggling things. However, you simply move back to your schedule when you can. Lastly, I try to utilize bulletin boards in the clubhouse to apprise the membership of our plans. This also forces us to stay on task.

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Water Test Results As A Second Language

by Dave Burkhart

I am sure most golf courses on the Eastern Shore have plenty of fresh clean irrigation water to use this summer. No salts. No sodium. No pfisteria. I suspect, however, there are a few golf courses that may have some water quality problems and Hog Neck happens to be one of them. I found out that trying to understand what was important on a water analysis report wasn't always clear. At least not until I took the GCSAA Irrigation Water Quality seminar taught by Dr. Clark Throssell from Purdue University and Dr. David Kopocec from the University of Arizona. The following is an attempt to summarize that seminar and hopefully make your water testing a little less testy.

The main components of water quality are salt concentration, sodium hazard, bicarbonate content, toxic ion concentration, and pH. The last two, toxic ions and pH, rarely cause problems. Chlorine and boron are usually cited as

the problem ions but turfgrasses are quite tolerant to them. A pH range of 6.5 to 8.4 is recommended for turf but not much is known on its effects on turf growth. However, a higher pH can signal other problems such as elevated sodium and bicarbonate levels.

Salt concentration and sodium levels seem to cause the most problems in our area. The potential of water to move from an area of low salt concentration to high salt concentration can starve a plant of water. This occurs when the salt content in the soil solution is higher than in the root of the plant and the water will not move into the root system. Sodium affects the soil structure by taking over sites occupied by calcium and magnesium on individual particles. The soil will deflocculate, losing large pore space and begin to tighten up. This can also occur when bicarbonate levels are extremely high in irrigation water. The bicarbs combine with calcium and magnesium to

form carbonates. When they leave their sites on the soil particle, the sodium takes their place and comprises the soil structure.

Salt concentration, sodium levels, and bicarbonate levels are the blood and guts of your water analysis. The units these three are measured in may differ depending on your lab. Salt concentration is measured by electrical conductivity (EC) and/or total dissolved solids (TDS). The units for conductivity are decisiemens per meter (dSm-1) or millimhos (mmhos cm-1). These units are equal meaning 1 dSm-1 is equal to 1 mmhos cm-1. The same is true for TDS in which the units, part per million (ppm) or milligrams per liter (mg l-1), are equal. If you wish to convert from TDS to EC or back the conversion factors for salt concentration is as follows: $TDS \times .0016 = EC$ or $EC \times 640 = TDS$.

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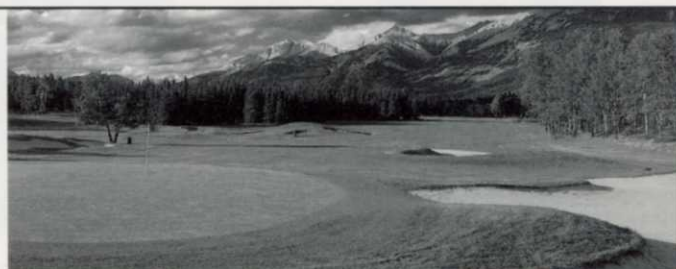
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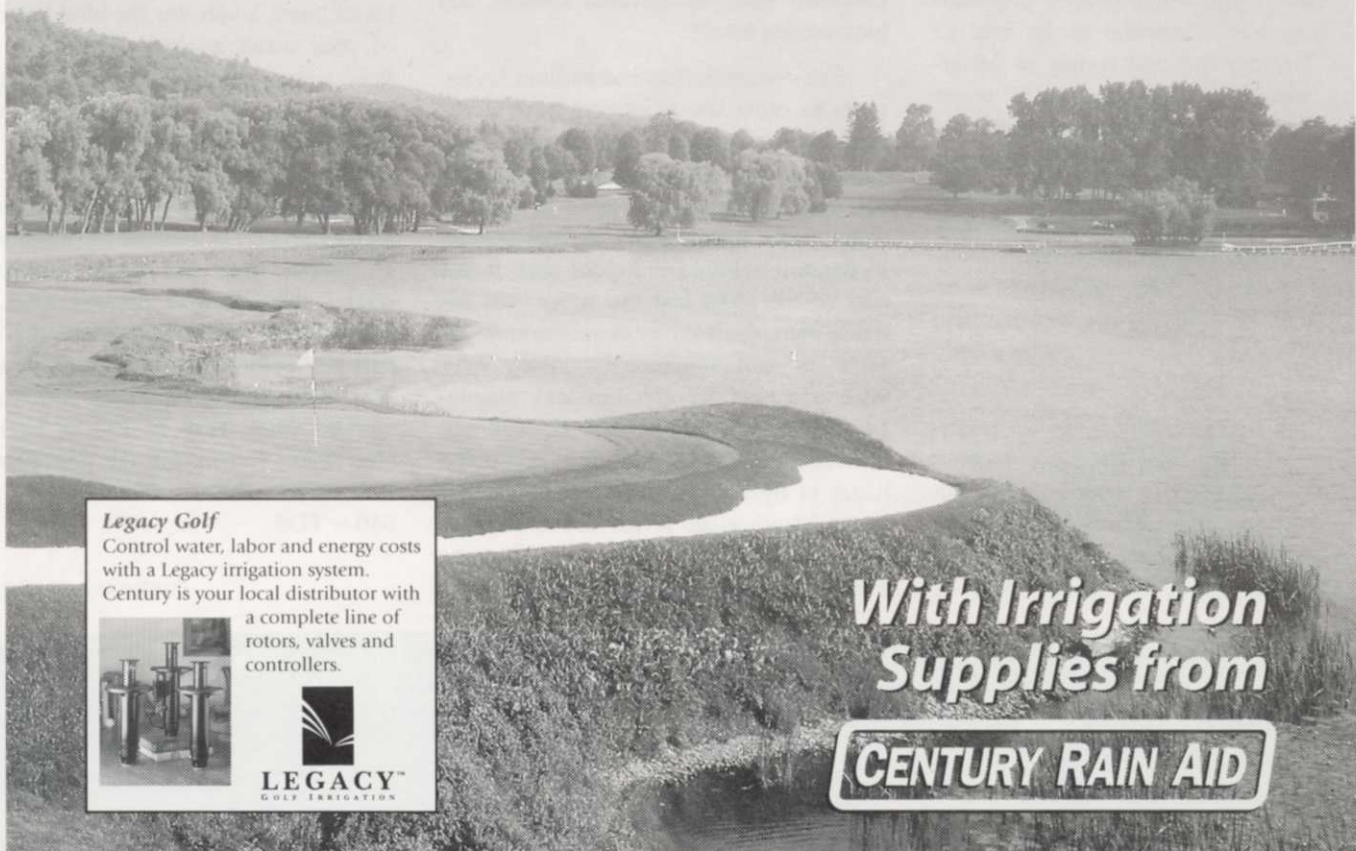
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Audubon Cooperative Sanctuary Program

by Dean Graves

Bethesda Country Club has recently become the 134th in the world, the first private club, and the third Maryland golf course recognized by Audubon International as a Certified Audubon Cooperative Sanctuary. Four years have passed since BCC entered the Cooperative Sanctuary program, and finally achieving full certification has given those of us who have been involved from the beginning a strong sense of accomplishment. I have been pleased to find that increasing our environmental consciousness has not meant sacrificing quality playing conditions. Indeed, the course has become more beautiful and more interesting with the addition of naturalized areas containing unmowed native grasses and wildflowers. These areas have earned us many compliments from our members, and our ever expanding nest box program has generated many questions about the new bird species inhabiting the golf course.

If you have considered joining the Audubon Cooperative Sanctuary System, you may know that full certification entails satisfying requirements in five categories: Water Quality Management, Wildlife and Habitat Management, Integrated Pest Management, Water Conservation and Outreach and Education. Considering the time and effort required simply to keep a golf course green and playable, the above list looks imposing. Some of the categories represent additional learning and different management techniques that can cut into our time, take away more of our already overextended budgets. But, taken in pieces and spread out over several years, satisfying Audubon's expectations becomes an attainable goal. The reward is not just a more beautiful and environmentally sensitive place for golf and work, but our efforts within this program add to the growing body of evidence that golf courses can be maintained without polluting the environment. Data collected from required water testing will help superintendents argue that water quality can benefit from the filtering effects of turfgrass, and, particu-

larly in urban areas, we can claim that we are restoring wildlife habitat previously lost to development. These arguments will become more persuasive as more clubs collect the water quality data that is a fundamental part of the Sanctuary Program.

Obviously, dealing with such wide ranging environmental categories requires the participation of many people. I was encouraged to become a part of the Cooperative Sanctuary System by part-time crew member Brian Cusik. Brian collected the initial information from Audubon International, helped formulate our overall environmental plan and developed and wrote up the Outreach and Education category. Another crew member, John Gleason, has been instrumental in establishing and maintaining our nest box program, and has handled most of the paperwork necessary for certifica-

tion. Mike Augustin, a past assistant and current superintendent at Belle Haven Country Club, played an important role in establishing our naturalized areas, programming our irrigation system for maximum efficiency and fine tuning our IPM program. Mike's enthusiasm for Audubon's goals has been gratifyingly continued by my current assistants, Mark Kingora and Brian Pardoe. And certainly, the regular support and interested involvement of Greens Committee Chairman, Mr. Jim Jennings and Club President, Mr. Richard Nolan has made the whole process easier.

We tackled the Water Conservation category first, and the task was simplified by our recently installed Maxi-V irrigation system. Audubon's concerns center on minimal water usage, and on reducing water loss. Since many clubs already conserve water as a hedge

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against summertime drought, and since a drier course can play better than an over watered one, most courses are probably in good shape here. We couple judicious water use with aeration, spiking and wetting agents for better penetration, and we use individually controlled sprinkler heads, part circle heads and lots of hand watering for precise water placement.

Integrated Pest Management came next, and this is another area where many clubs are already active. For several years, those of us working at BCC have been trying to reduce total pesticide output along with reducing overall levels of pesticide toxicity. Pyrethrin based insecticides such as Merit, Tempo, and Tolstar offer a safer approach to insect control, and we have had some success applying bacteria with the Bioject system to help control brown patch, pythium and dollar spot. Using organic and slow release fertilizers, and applying soluble nutrient sources at low rates has helped us closely regulate turf growth and control fertilizer runoff. Reliance on drought, disease and insect resistant grasses helps, as does pruning and thinning of tree stands for better air movement across greens and fairways. The turf on our fifteenth green was thin because of the surrounding trees, but there was noticeable improvement several weeks after installing two fans to improve air circulation. None of these practices are new or radical, and I believe many clubs would find that they would already be well positioned for certification in this category.

Although public concern over pesticide use is what attracts legislative attention, golfers will be most aware of any efforts regarding Wildlife and Habitat Management. Members may not know the fine points of our irrigation or pesticide programs, but they certainly notice naturalized areas of native grasses and wildflowers and the various birds populating the nest boxes. Establishing Bethesda's naturalized areas took some experimenting, but the additional colors and textures beautifully set off the rest of

the course and regularly draw compliments from our members. Our nest boxes have increased the Bluebird population, and have attracted Purple Martins and Tree Swallows, two species that we didn't see before erecting the boxes. The high grasses and Blue Flag Irises near our pond have brought in Red-winged Blackbirds, and the seeds available in our scattered stands of wildflowers are popular with American Goldfinches. Recently installed thistle seed feeders were serving a steady stream of Goldfinches and House Finches within a day of going up. The last two years we have been fortunate to have Great Horned Owls nesting in Eastern White Pines alongside our third and eleventh holes, and this year we were pleasantly surprised when a snapping turtle chose to lay her eggs within ten feet of our seventeenth green. The turtle's nest cavity is under a thick protective layer of

turf that has been posted as ground under repair, and we are hoping to witness the emergence of the young turtles by the end of June. Wildlife and Habitat Management will take some planning, but most courses have out of play areas suitable for experimentation with native grasses and wildflowers, and the changes can be implemented over several years. For information on nest boxes, I would recommend Mike Donovan's article that appeared in the Spring '98 Turfgrass Matters.

The Water Quality Management category goes hand-in-hand with the careful application of fertilizers and pesticides. Audubon's concerns center on regular water testing, vegetative buffers for streams and ponds, and on controlling rinse water from equipment wash pads.

continued on page 17



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Water Test Results

continued from page 12

The sodium hazard is determined by the sodium absorption ratio (SAR). This represents the proportion of sodium to calcium and magnesium. When the SAR increases so does the sodium hazard and the soil begins to tighten. The third factor in evaluating your water analysis is residual sodium carbonate (RSC). This figure you will have to determine on your own using values provided in your test results. The RSC compares the amount of carbonates and bicarbonates in your water to the amount of calcium and magnesium in the water. When the carbs and bicarbs are higher, they will pull Ca++ and Mg++ from the soil creating space for Na+ to attach itself. The formula for RSC is (carbonates + bicarbonates) - (Ca++ + Mg++) = RSC. All values are measured in milliequivalents per liter (meq l-1). For example, one of my test results read calcium 0.81, magnesium 0.73, carbonates 0, bicarbonates 2.64. The result is 2.64 - (0.81 + 0.73) = 1.1 meq l-1.

So what does all this mean? By taking the three values for salt concentration, SAR and RSC we can determine the suitability of a water source for irrigation. The charts below can be used as guidelines to interpret your water analysis.

Electrical Conductivity as mmhos cm-1

0 - 0.25	low hazard
0.25 - 0.75	medium hazard
0.75 - 2.25	high hazard
> 2.25	very high hazard

Sodium Hazard as SAR

0 - 10	low
10 - 18	medium
18-26	high
> 26	very high

Residual Sodium Carbonate as meq l-1

0 - 1.25	low
1.25 - 2.5	medium
> 2.5	high

Other factors that may affect your water quality include suspended solids (silt and clay) which can impede infiltration and pesticide contamination which is rare and quite expensive to test for. Salt, sodium, and carbs/bicarbs are the backbones of your water testing. With these factors understood, it is easier to understand what you are dealing with and how to address any problems with your water supply.

Management practices for salt affected water include using salt tolerant grasses, improving drainage, leaching excess salts, and blending a poor quality water with a better quality water. Dealing with sodium also includes water blending as well as the use of soil amendments like sulfur and calcium compounds to remove sodium for the soil particle and allow Ca++ and Mg++ to take its place. Strategies for water with a high RSC value are the same as high sodium water but also includes acid injection to the irrigation system.

Hopefully, this will shed a little light on the complexities of a water analysis report. I would strongly recommend taking the Water Quality Seminar. In retrospect, I think it would be extremely beneficial to take one of your own lab reports to the seminar. Numbers seem to mean more when they are your own.

Sanctuary

Continued from page 16

The water testing can be done in house, or through an outside company. The testing offers the golf industry an opportunity to amass data from many clubs that can be used to demonstrate the public and local legislative bodies that golf courses don't contaminate ground or surface waters.

The last category, Outreach and Education, focuses on disseminating information to members and the general public on the golf industry's responsible reaction to environmental concerns. At Bethesda we have put together bulletin board displays, issued an informational brochure and sponsored Travilah Elementary School in Audubon International's Cooperative Sanctuary Program for schools. We would like to eventually have guided tours or nature walks for members and school children, and we are hoping for some positive publicity in the local press. Publicizing this type of program would reflect well on golf in general.

Helping Bethesda Country Club receive certification as an Audubon Cooperative Sanctuary has been very satisfying, but the real reward comes when I ride around the course. I feel good knowing we are working hard to avoid contaminating our water supplies, and I am happy we are supplying a good home for wildlife, but I am also pleased with how much better the course looks. The wildflowers are beautiful, and to watch a dozen Goldfinches suddenly fly up from feeding and quickly scatter always makes me smile. They weren't even here several years ago.

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The Greenskeeper's Blues

by Bill Steedman, contributed by Merrill J. Frank, CGCS

The feats of golf's anointed in this enlightened age
 Are spread with care meticulous upon the printed page.
 We read of Pro and Champion - and of some less-gifted chaps
 Who break into the 60s (with aid of handicaps),
 But it's really quite unlikely that you'd recognize the name
 Of one who does as much as they to help along the game.
 I mean the guy who grows the grass, the man behind the scenes,
 That unobtrusive character - the Keeper of the Greens.
 He needs a milder temper than the meekest of the saints,
 The only times he hears from us are when he hears complaints:
 The pins are here instead of there; the rough's too rough, and oft
 The greens at once are far too fast, too slow, too hard, too soft.
 His name is mentioned only when we put him on the pan-
 When cheers are being handed out, he's Golf's Forgotten Man.
 Before the sun's first level rays strike o'er the dewy lea
 He's sweeping greens, or raking traps, or marking off each tee,
 But you seldom run across him, for he keeps out of your way
 For fear he might commit the crime of interrupting play.
 A part from human contacts he spends his toilsome days,
 A man whom there are few to know, and fewer still to praise.
 Still, as you proudly view, or stride across those verdant scenes,
 Just think, where you would be without the Keeper of the Greens!



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