



ON BOARD

Musing the Monthly Minutes

*By Rick Traver, CGCS
Monticello Country Club*

Being a lifer, and living through Minnesota weather has always been an interesting experience, but it still amazes me we can have record highs one day and extreme lows the next. We probably should get medals for doing this job. Does anyone out there want to write the president? Just joking.

Moving ahead to the business of your Board of Directors, they met on Tuesday, April 15 at the barn at Woodhill C.C. All but two members were present. Once again the Power Limited Technician training and license issue arose. For those of you who have yet to take the test, it appears that a vast majority of it is on alarms and not irrigation. Paul Eckholm also reported that it did not look like the legislature was going to extend the April 29 deadline. Since like many of you out there I have not been given a test date, I will be watching the progress of this issue online, at www.electricity.state.mn.us. If you would like to follow the actual bills, they are House File 645 and Senate File 937 and can be found on www.leg.state.mn.us/leg/legis/asp.

Scott Turtinen reported that Turtinen Communications has moved its offices to new quarters. The phone number remains the same, however they have a new fax number, 763-253-1661. He also will post address changes in *Hole Notes*.

Speaking of *Hole Notes*, you may have noticed a little extra color in this issue. It appears while conversing with a printer in St. Cloud, Scott negotiated a new price for our publication. This will allow us to add color without any substantial increase to our cost. I won't go into how this can be achieved, it had something to do with a web press. Anyway this should dramatically improve the appearance of the publication and help in putting in colored ads with only minor increases to the advertisers.

Your membership committee, headed by Mike Nelson, has been active in trying to recruit new members. They will be sending out letters and invitations to all vendors who participated in the Turf Expo but were not members of our association at the time.

The membership committee is also sending out letters to golf courses that have not been members of our association. The Board of Directors has temporarily created a new Facility membership. This would allow low budget clubs that can't meet the dual membership requirement with the GCSAA to still be active within our association. The cost is the same as a class A member with no voting benefits, and the club would be a member, not the superintendent. (This membership is only temporary and would have to be ratified at the next annual meeting of the membership.) This will also help us to contact more golf courses in an effort to fulfill our commitment to the state in trying to get everyone certified for phosphorus applications.

Dr. Horgan informed us all that the candidates have all been interviewed for the teaching position at the U of M and that opinions from the selection committee have been sent forward to the Dean for review.

Dr Horgan also reported that the TROE center has received

three NTEP trials. One trial will be for fine fescue, one on Bentgrass greens and one for Bentgrass fairways. The TROE center is in action, and you would not believe everything they have planned. I am sure we will get a complete update in future issues.

As reported last time, Jack Mackenzie and Paul Eckholm with help from Dr. Horgan have been working on a way to increase funding to the TROE center. The program they are promoting is a Hole-in-one day or week for the TROE center. You will all be getting something describing this program and how it works. We need participation by all the superintendents to generate the funds needed to move forward with this project. Please support this project and keep in mind that it will be a great way to get some one-on-one contact with your members. It will be good public relations for you and YOUR ASSOCIATION.

John Wiley was invited to this meeting to give the Board some insight into the O.J. Noer Foundation. We have been making annual contributions to this association, and the Research Committee as well as the Board was interested in how it was being used. Mr. Wiley was very informative and while his presentation was too long to elaborate on, it seems they are very good stewards when it comes to allocating funds to projects.

I hope all of you are enjoying the Minnesota weather and your profession. We are lucky people to be doing what we do even if the weather doesn't always cooperate. Take care and have a great month.



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History of Golf Course Irrigation—

(Continued from Page 15)

Moist-O-Matic in 1962, it branched out to become one of the leaders in the irrigation market.

Since the early 1960s, Toro has been manufacturing and marketing large-radius, gear-driven, valve-in-head, pop-up sprinklers. Within the past decade, Toro introduced a fully com-

puterized irrigation system for turfgrass on golf courses and athletic fields. Toro remains the only manufacturer of turf maintenance equipment that also owns an irrigation division.

Later Years

Since the 1950s, the irrigation industry has grown primarily due to the introduction of the electrically activated valve. It allowed turf managers to efficiently irrigate for specific time periods without having to depend upon the hiring of an irrigation crew. When the transistor was developed in the 1960s, this eliminated the use of tubes in radio controlled units and resulted in more flexibility in controllers. Then in the 1970s, the central computer controller was designed. These are in common use on golf courses, parks and athletic fields.

Today, computerized water management systems are available to all turf managers. These systems may be combined with weather stations, which allow the turfgrass to be irrigated in conjunction with the evapotranspiration of the site. The use of reclaimed water and fertigation technology continue to be introduced and improved upon as a less expensive method of irrigating golf courses. Irrigation has played a major role in enabling golf course architects and superintendents to elevate the sport of golf to its current state.

(Editor's Note: Dr. Kent W. Kurtz has been a professor of turf grass science at California State Polytechnic University, Pomona for more than 30 years. This article was reprinted with permission from the the author.)

2003 MGCSA CALENDAR

MONDAY, MAY 19

SPRING MIXER

VALLEY HIGH GOLF CLUB

HOST: JEFF NORMANDT

MONDAY, JUNE 30

SCHOLARSHIP SCRAMBLE

NEW RICHMOND GOLF CLUB

HOST: TOM JOHNSON

MONDAY, AUGUST 18

MGCSA CHAMPIONSHIP

THE LEGACY COURSES AT CRAGUN'S

HOST: MATT MCKINNON

MONDAY, SEPTEMBER 8

STODOLA RESEARCH SCRAMBLE

OAK MARSH GOLF COURSE

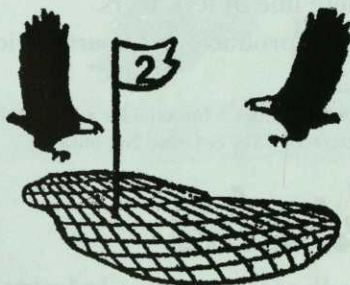
HOST: ROBERT PORTER

MONDAY, OCTOBER 13

FALL MIXER

LONG PRAIRIE COUNTRY CLUB

HOST: JOHN MONSON



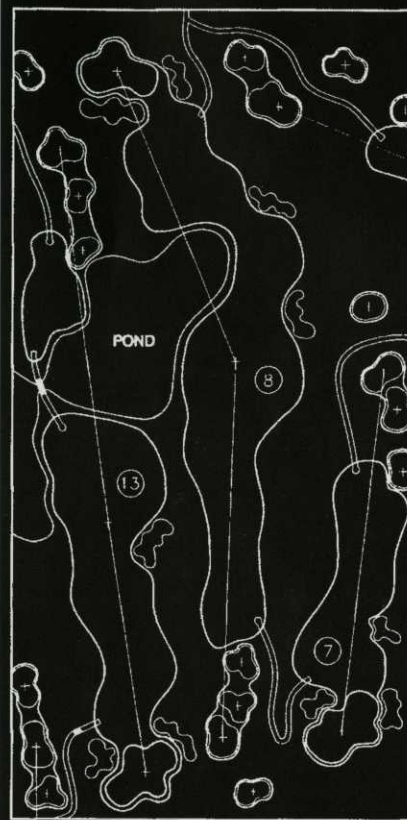
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Full Coverage Nozzle Company Delivers Impressive Pattern

First published by Peter McCormick in the August 2002 issue of TurfNet

A few years ago, Kevin Ross, CGCS, of the Country Club of the Rockies walked by our booth at the GCSAA show and handed us one of David Malcolm's business cards. "Check this out," Kevin said. "He makes a great product." That card has been in the "to do" pile ever since, but when "Minnesota Jack" MacKenzie, CGCS, of North Oaks Golf Club waxed poetic in the TurfNet.com Forum recently about his new nozzles from Full Coverage Irrigation, we thought it time to get out of the gate and check it out."... a one-piece nozzle was frequently the limiting factor in sprinkler performance."

David Malcolm is president of Full Coverage Irrigation, Inc. (Coarsegold, Calif.), specialty manufacturer of replacement irrigation nozzles. His father, Richard, was a design engineer for most of the major irrigation manufacturers over his 30-year career, and became an expert in overcoming weaknesses in sprinkler patterns caused by wind and low pressure. He concluded that a one-piece nozzle was frequently the limiting factor in sprinkler performance. David founded FCI to bring the expertise gleaned from his father to the turf sprinkler market.

When calling the FCI offices to speak to David, we were surprised to hear the greeting, "Hello, FCI, this is Mike Huck." Ta da! The light going off in our heads reminded us that Mike Huck left his USGA Green Section agronomist position a couple years ago to help David Malcolm grow FCI beyond its typically West Coast market. So, we spoke to Mike...

"David helped me with some sprinkler distribution problems when I was a superintendent prior to my USGA position," he explained, "so I knew the products worked. It seemed like a great challenge to help spread the word."

A Variety of Replacement Nozzles from FCI

FCI manufactures replacement nozzles for Toro, Rain Bird and Buckner heads. "Golf courses have much more exacting distribution requirements than agricultural or commercial applications," Huck explained. "You have to have uniformity of color and density without dry or soggy areas. Extending run times to compensate for uneven nozzle patterns is expensive and inefficient in terms of both water use and pumping costs." Recent droughts and spikes in power costs have exacerbated the problem, bringing more efficient water use to the forefront. The factors that

lead to poor coverage and operating inefficiency are not necessarily the fault of the manufacturer, the system designer, or the installation contractor. Fluctuations in water pressure (or an intentional reduction to save pumping costs), changing wind conditions, heads that are pushed below grade or knocked off perpendicular, and the replacement of heads with incompatible models create uniformity problems over time.

"Nozzle development is sort of a dark science..." So how do they do it? How can a little guy do it better than the big boys? "Nozzle development is sort of a dark science," explained Huck. "Either you have it or you don't. With his specialty focus, David has developed a methodical way of designing high performance nozzles that solve a variety of problems, taking into account the design of the sprinkler, flow characteristics and internal turbulence. They work, and superintendents immediately notice the improved coverage."

"Our design is completely unique," said Huck. "David found that by inserting a stainless steel orifice plate with small notches punched out of it, we can precisely strip the stream of water apart without disrupting the distance it

(Continued on Page 24)

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2003 MGCSA RESEARCH COMMITTEE

From left to right: Dr. Brian Horgan, Tom Proshek, Bob Simondet, Keith Scott, CGCS, Paul Eckholm, CGCS, Joe Churchill, Rob Panuska, Rick Traver, CGCS, Jack MacKenzie, CGCS



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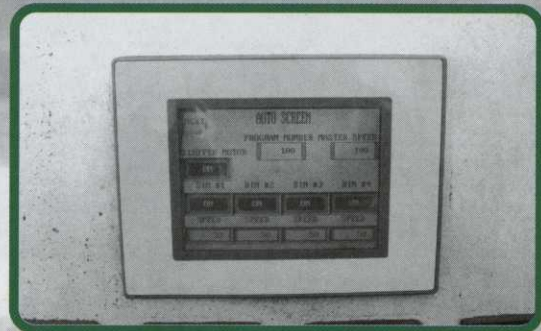
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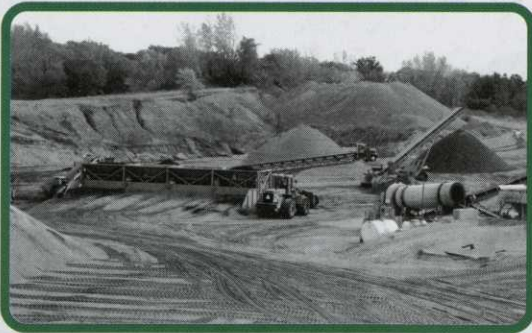
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Nozzles –

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throws. The amount of water stripped away is determined by the width and length of the notches. This provides a more uniform application across the throw of the sprinkler, particularly at lower pressures where straight bore nozzles tend to produce a steady stream with no break-up or atomization, resulting in the donut effect."

FCI nozzle bodies are machined from brass to close tolerances, while the orifice plates are manufactured from high-grade stainless steel. Stream straightening veins and flow control devices (when required) are injection molded and the only plastic found in FCI nozzles, which are individually assembled by hand to assure proper alignment of all components.

What are the red flags that might indicate a need for a nozzle change-out? "Any time you have repetitive patterns of inconsistency - wet spots, dry spots, or donuts - across the property, you would benefit from testing our nozzles," Huck said. He recommends changing out at least a full block, if not an entire hole, rather than intermingling with existing nozzles. "Interfacing with factory nozzles on a random basis might create new problems that you didn't have before," Huck advised. And how does one go about it? "We

just need to know what sprinkler model, the spacing, square or triangular pattern, and whether there are any pressure problems," Huck said.

What does it cost? "About \$10 per set, purchased in

The amount of water stripped away is determined by the width and length of the notches. This provides a more uniform application across the throw of the sprinkler, particularly at lower pressures

quantity," said Huck. "With a typical 18-hole course having somewhere between 1,000 and 1,100 full circle heads, that's an investment of \$10,000 - \$12,000 to retrofit the entire golf course. And it should take a trained technician only two or three minutes to complete the change-out for each nozzle."

The only special installation requirement is to orient the nozzles properly, due to the unique design of the orifice plates. "Proper orientation is critical, so we train people how to do it and explain why," concluded Huck.

(Editor's Note: For more information about Full Coverage Irrigation, Inc. call 877-658-3072 or 949-388-5097 or go on-line at www.fcinozzles.com. Full Coverage Irrigation, Inc. is located in Coarsegold, Calif.)

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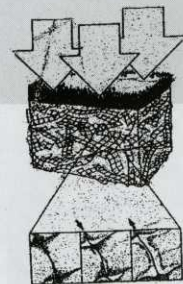
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It's in the Hole...

The MGCSA extends its best wishes to **Mike Redmond** and his family as Mike recovers from heart surgery. At the time of this writing Mike was in critical condition but slowly improving with each day ...



LILY VINKEMEIER, daughter of Jeff and Sheila Vinkemeier of Glencoe Country Club, celebrated her second birthday on May 8.

... **Matt Rostal**, superintendent at Interlachen Country Club, has joined the Editorial Advisory Board of *Golf Course News* ... Our president, **Rick Fredericksen**, CGCS, Woodhill Country Club, recently passed the infamous Low Voltage test administered by the Electrical Board. Way to go, Rick! ... **Dave Simeon**, Rick's former assistant at Woodhill, is the new Superintendent at Pebble Creek Golf Club in Becker, Minn.

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In Play

By Jack MacKenzie, Jr., CGCS
North Oaks Golf Club

Recently I received a request from Andy Lindquist, student in a Careers Class at the Elk River High School. Andy is considering becoming a golf course superintendent and wanted some insight into our profession. Well, here goes an attempt at answering his ten question survey:

How many hours do you work per day? Sure I could be a smarty and say "as many as it takes", but in reality, there is always something more to be done during the golf season. When I was younger I would invest all of the time I felt I possibly could to accomplish the goal of providing my members with an exceptional playing opportunity. Today, an older and hopefully wiser man, I say prioritize your life. Family first, vocation second. Achieve a productive lifestyle to allow more time with your family. My average workday in the summer is 10 hours and in the winter 6.

What are the tasks and duties to be completed during the day? In an effort to provide an exceptional track for my players, I must wear many different hats and accomplish many different tasks. There are regimented daily chores to be managed, in both English and Spanish. Political balls to juggle with the golf pro, general manager, the women's 18 hole and 9 hole groups, the "high rollers" and sweet old boys (SOBs). Each of which has agendas of its own. I must shield my members from my staff and my staff from my members. And I must battle Mother Nature in an attempt to grow grass that sometimes wants to die in spite of what I do. In the spur of a moment I am a pathologist, agronomist, politician, golf rules specialist, interpreter, manager, gardener, cup cutter, mower and rarely a mechanic.

How many people do you have helping you complete tasks on an average day? In the winter I have three additional staff members. The shoulder months of April, May, September and October witness the addition of seven bodies more. And in the peak months my crew may exceed 22 total. Employed on the green staff are several Hispanic personal, one lad from the Czech Republic, a few semi-retired experienced workers and a sprinkling of high school and college employees. Each of whom requires a different motivational strategy.

Do you report your work to anyone? Members? One of the beauties of this job is the independence that it affords me. Sure there are changing Board members who think they are in charge, and I have a real decent general manager who is theoretically in command of the whole club, but I like to believe that I work for myself. I set my expectations high and I do everything within my power to achieve and overcome the challenges presented to me on a daily basis. Of course I inform my GM and the membership of the

course conditions. But to achieve them, I make my own choices.

How much time do you spend outside of the work place doing golf work? See the answer to question one. You do your club a disservice if you cannot step away and have a life without your course, IMHO of course.

Do you spend time year round working at the course? Yes. Although my members think that when the snow flies I pack up my swim thongs and spend the winter in Cabo San Lucas, in reality I put on my Carharts and work outside. Construction projects keep me busy until the ground freezes followed by tree trimming until my finger tips tell me to get back inside and help the boys paint benches, ball washers, water coolers, tee blocks and Armor All the bunker rakes and waste baskets.

What type of personality would be best for this job? Independent, conservative, personable, retentive, ambitious, friendly, imaginative, creative, perfectionist, punctual and dynamic. I like to think that as a whole, Superintendents are great folk. We can be counted upon to do the right thing, typically without being asked. We are the glue that holds a club together during hard times and the oil that keeps the organization running smoothly the rest of the season.

What type of mental stress is found on the job? As long as I remember that there is nothing I can do about the weather, the choices other people make and the "rub of life's green," there are few stresses. When times get rough I remind myself of the serenity prayer: "God grant me the serenity to accept the things I cannot change, the courage to change the things I can and the wisdom to know the difference." Good managers manage their stress by appreciating their own capabilities.

What are some of the fringe benefits you have? None of us got into the business to become rich. But if I were paid for the number of beautiful sunrises I see each year I would be a millionaire ten times over. I am witness to more rainbows in one season than many people see in a lifetime. The sound of the snow melt, the smell of growing grass, the feeling before a thunder storm and the appreciation of a course as perfect as it can be for an important event are elixirs you cannot buy at the store. The development of a "team" over the course of a season sends shivers down my spine. Watching kids grow to adults, foreign employees learn to communicate and the bliss of a retired office worker just mowing grass are all "benefits."

What are some of the advantages and disadvantages to the job? Simply this, if you don't love what you do, quit. Find what you love and excel at it. From the trenches to the club house politics, my job is a game and I like to think I'm winning!

With all of its trials and tribulations, I love what I do. Not a day goes by when I do not take a moment and appreciate all of the opportunities that surround me. My life is good and I am very happy to be a golf course superintendent.

-- Jack MacKenzie, Jr., CGCS