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# HOLE NOTES

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Superintendents' Association

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### Hole Notes Office

Turtinen Communications  
240 Minnetonka Avenue South  
Wayzata, Minnesota 55391  
612/473-3722  
FAX: 612/473-0576

### Business Office

Minnesota Golf Association  
6550 York Avenue South • Suite 405  
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## FROM THE PRESIDENT'S DESK

### Our Next Meeting Is At Stone Brooke On June 11



I am truly amazed at the power of a group of golf course superintendents. If we can come up with rain every time we have a monthly meeting, I think we should meet at least once per week!

\* \* \* \*

**For those superintendents who know of turfgrass students**, please make them aware of our scholarship program. Applications must be in by July 1. If there are any questions, please contact Rick Fredericksen. The Harold Stodola Memorial Scholarship Fund was named after a superintendent who gave unselfishly of his time and talent to train young people in the field of turfgrass management.

\* \* \* \*

**We are not going to publish a new Association Roster** until January 1991. The Board of Directors would like to have the newly-elected Board and Officers listed each year, and we felt that we would wait until dues statements are returned for the June 1990 to May 1991 period and publish in January each year.

We are looking into making some additional copies of the 1989-90 Roster or just some copies of the printer's draft for anyone who does not have a roster and would like one. Please let Greg Hubbard or the MGA office know if you would like one. The Board realizes that this will cause some inconvenience and hopes that you will understand our position.

\* \* \* \*

**Research Fund Donation letters** recently have gone out to all members of the Association. Please see to it that the proper club official receives this information. This fund drive is the backbone of our research program. We need all of our members to participate and support this effort. It does not matter how small or large your donation might be. We all benefit from the research projects that the MGCSA supports.

\* \* \* \*

**Our Publication—"Hole Notes"**—is our best means of communication with you, our member. The continual rise in cost of production as the size of issues increase is also adding a significant cost of mailing. Should the projected increase in postal rates take effect, we will be adding to our current burden. Bulk mailing, which costs around \$150, per issue, takes upwards of three weeks for some members to receive. However, first-class mailing is costing about \$750 per issue for the larger issues.

Advertising rates were increased at the start of the new year and may have to be increased in 1991. We may also have to increase membership dues or turn back to bulk mailing to reduce costs. We need to hear from our membership to help us make a rational decision.

\* \* \* \*

**Our June 11 meeting** is planned for Stone Brooke Golf Club. Host Superintendent Tom Haugen will be looking forward to our visit as much as we are to seeing his new course.

—Kerry Glader  
MGCSA President

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# 4th Annual Turf Tourney To Be Played June 15

Nineteen metropolitan area golf clubs will make up the collective site of the MGCSA's Fourth Annual Minnesota Turf Tourney on Friday, June 15.

Participating in Turfgrass Research Benefit Day are Dellwood Hills GC, Golden Valley CC, Hazeltine National GC, Hillcrest CC, Indian Hills GC, Lafayette Club, Midland Hills CC, Minikahda Club, Minneapolis GC, Minnesota Valley CC, North Oaks GC, Oak Ridge CC, Rolling Green CC, Southview CC, Stillwater CC, Town & Country Club, Wayzata CC, Wedgewood Valley and White Bear Yacht Club.

**Proceeds from the competition** go to the MGCSA's Turfgrass Research Fund. "Last year the event raised \$3,000, with the money being directed to such

research projects as the water quality study at Baker Park and run-off studies at Penn State," said Tom Fischer, MGCSA vice-president and chairman of the benefit tournament.

"This year we hope to increase the amount raised substantially," Fischer said, while noting his appreciation "for the generosity of the 19 golf clubs for donating their courses for this event."

The \$80-per-person entry fee pays for the green fees, cart and a sit-down dinner the same evening at Oak Ridge Country Club.

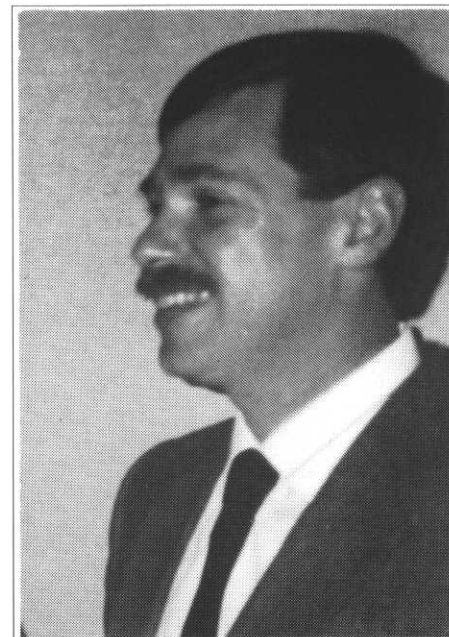
Scores based on the two best net balls per hole will determine the winning team. Ties will be broken by a hole-by-hole scorecard playoff, starting on the first hole until a winning team is determined. Team members will use 90% of their course-adjusted handicaps.

**All teams are invited to Oak Ridge** for a cash bar cocktail party, starting at 6 p.m., and a sit-down dinner. Presentation of trophies and prizes will be made at Oak Ridge.

Entries—open to golfers who have an official USGA handicap index—must arrive at the home of Barb Glader, 1004 Minnesota Blvd., St. Cloud, Minn. 56304 by 5 p.m., Wednesday, June 6. Late or incomplete entries will be returned.

Changes in teams can be made at any time before the start of the tournament as long as substitutions meet all the eligibility requirements. Entry fees will be refunded if Barb Glader is notified before the close of entries on June 6. Fees also will be refunded in event of injury or illness if requested by June 15. After that date no refunds will be made for any reason. A \$5.00 service charge will be deducted from all refunds.

Any questions should be directed to Fischer at Edinburgh USA (612/424-8756).



**Tom Fischer**  
Chairman

## Thank You For Your Generosity

Thanks to these clubs, we're looking forward to a great Turfgrass Research Benefit Day on June 15.

- **Dellwood Hills CG**
- **Golden Valley CC**
- **Hazeltine National CC**
- **Hillcrest CC**
- **Indian Hills GC**
- **Lafayette Club**
- **Midland Hills CC**
- **Minikahda Club**
- **Minneapolis CG**
- **Minnesota Valley CC**
- **North Oaks GC**
- **Oak Ridge CC**
- **Rolling Green CC**
- **Southview CC**
- **Stillwater CC**
- **Town & Country Club**
- **Wayzata CC**
- **Wedgewood Valley**
- **White Bear YC**

Minnesota Golf Course  
Superintendents' Association

## GCSAA to Host Hospitality Event During U.S. Open

GCSAA will host a hospitality event during the U.S. Open in Chicago. The reception will be Friday, June 15, from 7-10 p.m. at the Hyatt Regency Woodfield in Schaumburg.

The association also will honor Medinah superintendent Danny Quast, CGCS, and his staff for their hard work in preparing for the Open.

Attendees will include local Chicago/Illinois chapter members, representatives from the USGA, PGA and other golf associations, industry and media.

All GCSAA members are invited to attend. If you are going to be in Chicago for the Open, please drop in and say hello. If you plan on attending the reception, RSVP to the Public Relations Department at GCSAA headquarters by June 8. The number is 913-841-2240.

The U.S. Open is a USGA-sponsored event. All members with a Gold membership card (Class A, B, Retired and AA-Life) receive complimentary grounds and clubhouse admittance for themselves and their spouses. Just present your Gold card each day at the Will Call window.



# Golf Courses Show Strong Compliance With Pesticide Regulations in GCSAA Survey

About 97 percent of U.S. golf courses that employ members of the Golf Course Superintendents Association of America (GCSAA) have at least one licensed pesticide applicator on staff, according to the findings of a recent survey.

To address concerns about pesticide use, GCSAA recently conducted the survey to gauge the degree of compliance with federal and state pesticide applicator regulations among professional golf course superintendents.

"These results provide strong evidence of our members' commitment to safety and sound ecological practices," said Tom Akins, GCSAA government relations manager.

"GCSAA strongly supports the position that only properly trained and educated personnel should be allowed to purchase and apply restricted-use chemicals," Akins said. "Even though most golf courses don't apply any restricted-use materials, we are pleased that the survey shows that an overwhelming majority of our membership has taken this extra step. This supports our long-held belief that golf course superintendents are among the best educated and most thoughtful users of agricultural chemicals in the country."

Of the 1,157 superintendents who responded to the GCSAA survey, 1,061, or about 92 percent, hold valid pesticide applicator licenses for the state where they work. Another five percent who are not licensed themselves have someone on their staff who is licensed.

Certification for pesticide application is done in compliance

with the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA). Section 3 of FIFRA states that any pesticide classified by the Environmental Protection Agency (EPA) "for restricted use only" must be applied by or under the direct supervision of a certified applicator. It is up to each state to implement its own certification guidelines and programs as long as they comply with FIFRA.

"The importance of training and certification to individual communities really ties in to the concept of 'Think globally—act locally,'" said Akins. "The survey showed that individual superintendents take seriously their commitment to the environment and are working hard in communities throughout the U.S. to make sure that their operations are as safe as possible."

## ABOUT THE COVER

The weather outside wasn't frightful, but it couldn't claim to be delightful. However, MGCSA did have a top-notch get-together at Owatonna Country Club on April 16. One big question was where Greg Hubbard's tee shot went in the top cover photo. The congenial hosts at this session were, from left on the cover, Randy Nelson, CGCS, Assistant Gene Griffith and mechanic Scott Bjorge. (See additional photos on Page 13.)

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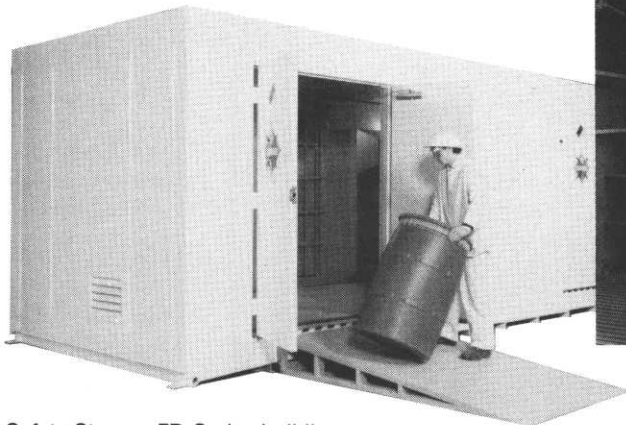
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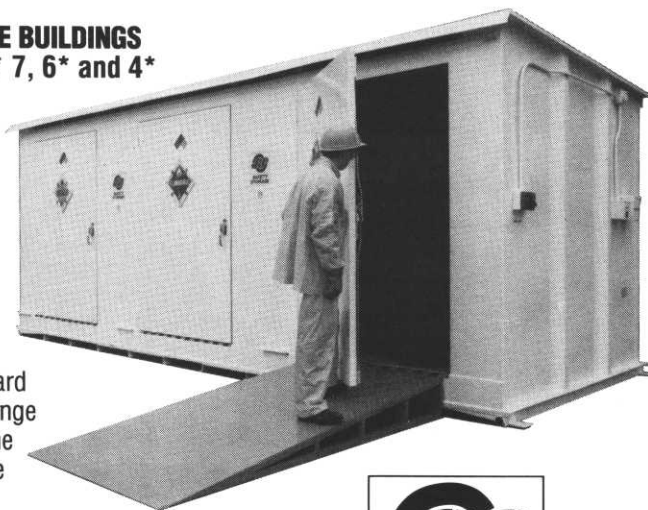


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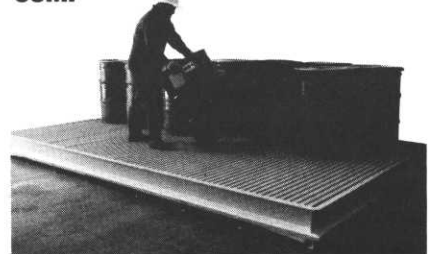
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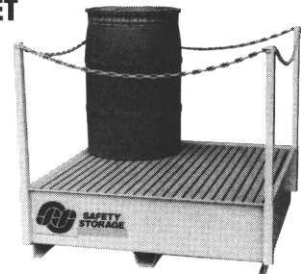
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# Want to Learn More About Estimating Turfgrass Water Use with an Evaporation Plan? Here's a Petrovic Suggestion

Interested in learning more about estimating turfgrass water use by using an evaporation pan?

That was the subject discussed by A. Martin Petrovic, associate professor of turfgrass science, at the MGCSA Mini-Seminar held March 21 at The Lafayette Club in Minnetonka Beach.

Following up in a letter to MGCSA Treasurer Jim Nicol, a member of the association's Conference and Education Committee, Petrovic enclosed a copy of a production version of a pan evaporation station from a WeatherMeasure/WEATHERTRONICS catalog.

"These are expensive," he wrote, "but superintendents can build and calibrate their own."

As noted in the catalog sheet, "The 6820 Series evaporation stations are complete systems used to measure the amount of water lost each day through evaporation."

"There are two commonly used procedures for making these measurements. In both, a pan 10 inches deep and 47.5 inches in diameter is used to hold the water. This U.S. Class A pan is normally installed on a wooden platform set on the ground in a grassy location.

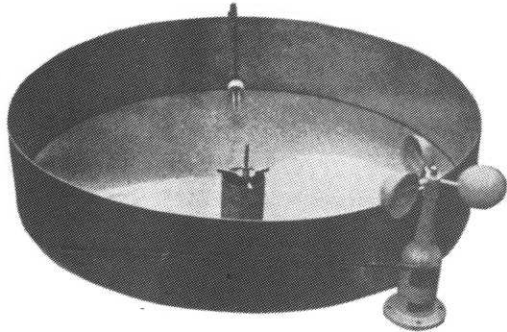
"One alternative for measuring the daily evaporation loss is to use a graduated hook gauge set on a stillwell to determine the water level in the pan. The hook gauge is adjusted until the point just breaks the water surface, and a reading is taken from the attached scale. The second alternative uses a stillwell with a fixed point. Each time a measurement is taken, the pan is refilled to the level of the point using a calibrated graduate. The graduate has a surface areas of 1/100 that of the pan, so

that the amount of water added is the equivalent evaporation. The choice between these alternatives is generally made on a practical basis, such as the availability of daily replacement water.

"The amount of evaporation is a function of temperature, humidity, wind and other ambient conditions. In order to relate the evaporation to current or expected conditions, the maximum and minimum temperatures of the water and the amount of air passage are normally recorded along with the evaporation. The 6820 Series evaporation stations include a submersible minimum/maximum thermometer and a totalizing anemometer to provide these measurements. A floating minimum/maximum thermometer is available as an alternative; however, use of the submersible thermometer is recommended.

"Accessory instruments for measuring precipitation, humidity, air temperature and other required parameters are described in other sections of this catalog."

*(Ed. Note: If you're interested in obtaining the catalog referred to in this article, write to WeatherMeasure WEATHERtronics for the company's 1987-88 catalog, P.O. Box 47039, Sacramento, Calif. 95841 or call 916/923-0055.)*



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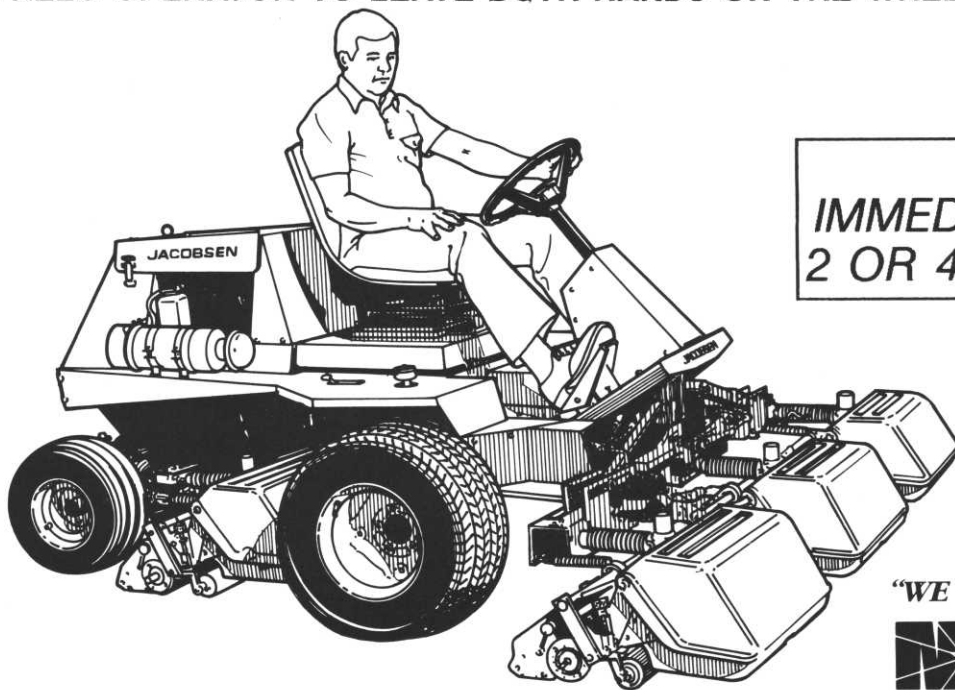
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# GCSAA Water Utilization Fact Sheet

**FINDING:** Water is essential for the maintenance of all life. Thus, experts are increasingly worried about the continued supply of this resource in the future. Already periodic droughts and regional shortages cause planners to worry about supply issues. Many forecasters foresee more serious shortfalls in the future.

For the most part, golf courses are efficient users of water. The professionals who care for the nation's golf courses recognize the potential dangers of water shortages and have already started conservation efforts. Techniques have been adopted to decrease demand for freshwater, and the future promises to bring even more advances to save this resource.

**NET WATER USE:** Golf courses are important sources of recharge of rainfall and snowmelt to groundwater supplies. For example, open, grassy areas are approximately 90% pervious to rainwater whereas residential areas are only 20% pervious.<sup>1</sup>

Even assuming a 50% rate of evaporation, a typical golf course in Westchester County, New York provides seven times as much groundwater recharge as it consumes for irrigation purposes.<sup>2</sup> By providing an open "green belt," a golf course is actually a net water supplier to the community.

**EFFLUENT WASTEWATER:** An estimated 10 percent of the golf courses in the United States have already started using effluent wastewater for irrigation needs.<sup>3</sup> Because recreational users are generally low-priority recipients of potable water, reclaimed water is a real panacea for golf courses. Use is especially high in hot and arid regions like Arizona, Florida and California.<sup>4</sup> It is anticipated that nearly all desert courses will be irrigated with effluent by the year 2007.<sup>5</sup>

Effluent water is high in nutrients like nitrogen and phosphorus, which means that professionals can use less chemical fertilizers.<sup>6</sup> Moreover, reclaimed water cannot currently be returned to municipal water supplies, and federal regulations make it difficult to release it into streams, lakes or oceans.<sup>7</sup> Thus, turfgrass use helps dispose of this water. Obviously, turfgrass use of wastewater is safer than use of effluent to irrigate food crops.<sup>8</sup>

**TECHNOLOGICAL PROGRESS:** Many technological advances promise to reduce golf course demand for water. Indeed, some have already been adopted by superintendents. For instance, a new low pressure irrigation system, combined with computer controls, is being used on some golf courses, including one in the Southern California desert. That course achieved a 25 percent reduction in water use.<sup>9</sup> Additionally, the new technology substantially reduced the need for fertilizers and other chemicals.<sup>10</sup>

Still other courses are beginning to apply improved climatological information to irrigation problems. Using data about evaporation and transpiration—known as "evapotranspiration" or ET—turf specialists can achieve 20 to 40 percent reductions

in water demand, depending on the season.<sup>11</sup> More savings are achievable during warm seasons than in cool. The National Weather Service provides ET data.

Turfgrass research and development can also lead to reduced water needs. In particular, drought resistant strains can be developed that will require less water. A jointly operated research program by the GCSAA and U.S. Golf Association provides funds for scientists to develop new turfgrass strains. The ultimate goal of the program "is a 50 percent reduction in water use."<sup>12</sup> Scientists also seek ways to decrease compaction of the soil, a condition that increases the need for irrigation.

**EROSION CONTROL AND WATER SUPPLY:** Soil erosion causes sedimentation of the nation's lakes, rivers and streams, thus effectively limiting supply of clean water. Since turfgrass prevents soil erosion, golf courses indirectly assure a continued supply of fresh water.

According to the scientific evidence, land planted in grass erodes at a rate far less than soil planted in agricultural crops. Indeed, corn erodes 668 times more topsoil, and wheat 84 times as much.<sup>13</sup> Construction is even more devastating to soil, often causing the equivalent of a decade's erosion in a single year.<sup>14</sup> Thus, alternative projects such as shopping malls or housing developments cause much more erosion than does a golf course.

Golf course ponds also combat the harms of erosion by serving "as a reservoir for storm water drainage."<sup>15</sup> Pond water additionally creates a "supply of irrigation water that the superintendent can use at his discretion."<sup>16</sup> Thus, ponds on golf courses can reduce the need to compete against other users of a community's water supply.

**CONCLUSIONS:** Golf course superintendents recognize the potential importance of water supply issues in the future. Many have already started to adopt means to conserve water today. Various techniques have been developed that can reduce demand for water by 25 percent or more. Other projects are in the research stage and could achieve even greater water savings.

\* \* \* \*

1. Larry A. Roesner, "Quality of Urban Runoff," in *Urban Stormwater Hydrology*, ed. David F. Kibler (Washington, DC: America Geophysical Union, 1982), p. 168.

2. Ted Horton, "Presenting a Case for Golf Courses," *Golf Course Management*, May 1988, p. 76.

3. Richard M. Phelps, "Effluents for Irrigation: The Wave of the Future?" *Golf Course Management*, April 1985, p. 106.

4. Phelps, p. 106

5. Jolee Edmundson, "Hazards of the Game" *Audubon*, November 1987, p. 37.

6. William H. Sloan, "Irrigation of public use areas by land application of combined industrial and domestic waste effluent," *Journal of the Water Pollution Control Federation*, May 1984, pp. 478, 480.

7. Dr. Ali Harivandi, "Questions from the Floor," *Golf Course Management*, April 1983, p. 73.

8. Bob Jarecki, "Seven years of Effluent Irrigation," *Golf Course Management*, April 1986, p. 78

9. "The Look of the Future Today?" *Golf Course Management*, May 1987, p. 34. Adapted from material provided by Mona, Meyer & McGrath.

(Continued on Page 13)