To alleviate the amount of overlap between the GCSAA Golf Championships and the education conference, the tournament schedule has been shifted back one day. The new schedule will run as follows:

<table>
<thead>
<tr>
<th>Event</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Four Ball</td>
<td>Saturday, Feb. 1</td>
</tr>
<tr>
<td>Welcoming Reception</td>
<td>Saturday, Feb. 1</td>
</tr>
<tr>
<td>Shamble</td>
<td>Sunday, Feb. 2</td>
</tr>
<tr>
<td>Golf Classic</td>
<td>Sunday and Monday, Feb. 2-3</td>
</tr>
<tr>
<td>National Championship</td>
<td>Sunday and Monday, Feb. 2-3</td>
</tr>
<tr>
<td>19th Hole Reception</td>
<td>Sunday and Monday, Feb. 2-3</td>
</tr>
</tbody>
</table>

**JOIN US IN ORLANDO TO:**

- DISCOVER solutions to your biggest challenges while networking on and off the course
- FIND out first-hand how the game of golf impacts what you do every day
- DEVELOP long-term, valuable relationships with other industry professionals
- VIEW maintenance practices while playing several top-notch golf courses
- PLAY against your peers in a friendly competition
- WIN money for your chapter

**SIX PROMINENT GOLF COURSES**
- Disney’s Grand Floridian Resort & Spa
- Palm
- Magnolia
- Lake Buena Vista
- Hawk’s Landing Golf Club
- Marriott’s Grande Pines Golf Club
- Celebration Golf Club

400+ of your peers in a casual setting
25+ hours of networking on and off the course

**BACK BY POPULAR DEMAND!**
Prize money awarded to the chapter team competition winners in net and gross division AND an onsite mobile pro shop!
Evaluation of Products for Turfgrass Water Conservation Using a Linear Gradient Irrigation System (LGIS)

MARCO SCHIAVON, JIM BAIRD, TOAN KHUONG, JACOB GRAY, and KATARZYNA ZAK
Department of Botany & Plant Sciences • University of California, Riverside

Objectives:
1. Determine effective irrigation and chemical management practices to reduce turfgrass water use.
2. Evaluate the ability of products to maintain acceptable turf quality under reduced water use.

Methods:
The LGIS area was sodded with ‘Tifway II’ bermudagrass on 7 August 2012 and is mowed three times weekly at 5/8 inches. The area receives ½ lb N/M/month during the growing season. Areas of each plot that receive 10, 25, 55, 60, 65, 70, 75, 80, and 85% reference evapotranspiration (ETo) were determined using catch cans to capture irrigation water. This procedure was repeated and validated every two weeks during the experiment. Both irrigation and chemical treatments were applied from September to December 2012 and resumed again on 5 April 2013. Every two weeks, plots were evaluated for turf quality, NDVI (measure of greenness), volumetric soil water content, and surface temperature in the irrigation zones representing 10 to 85% ETo.

Table 1. List of chemicals used in the LGIS study. Riverside, CA.

<table>
<thead>
<tr>
<th>Number</th>
<th>Treatment</th>
<th>Type</th>
<th>Rate (oz/M)</th>
<th>Interval (d)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>UCR006P</td>
<td></td>
<td>5.88</td>
<td>14</td>
</tr>
<tr>
<td>2</td>
<td>UCR006P</td>
<td></td>
<td>7.35</td>
<td>14</td>
</tr>
<tr>
<td>3</td>
<td>UCR006P</td>
<td></td>
<td>8.82</td>
<td>14</td>
</tr>
<tr>
<td>4</td>
<td>UCR006P</td>
<td></td>
<td>11.75</td>
<td>14</td>
</tr>
<tr>
<td>5</td>
<td>Recovery Rx</td>
<td>Phosphite + Nutrients</td>
<td>5.00</td>
<td>14</td>
</tr>
<tr>
<td>6</td>
<td>PK Plus</td>
<td>Phosphite + Nutrients</td>
<td>6.00</td>
<td>14</td>
</tr>
<tr>
<td>7</td>
<td>Kelpex</td>
<td>Nutrients +</td>
<td>2.00</td>
<td>7</td>
</tr>
<tr>
<td>8</td>
<td>Ultraplex</td>
<td>Surfactant</td>
<td>4.00</td>
<td>7</td>
</tr>
<tr>
<td>9</td>
<td>Revolution</td>
<td>Surfactant</td>
<td>6.00</td>
<td>28</td>
</tr>
<tr>
<td>10</td>
<td>Neptune</td>
<td>Surfactant</td>
<td>6.00</td>
<td>28</td>
</tr>
<tr>
<td>11</td>
<td>Aquaplex</td>
<td>Polyacrylamide</td>
<td>3.00</td>
<td>28</td>
</tr>
<tr>
<td>12</td>
<td>Primo Maxx</td>
<td>Plant Growth Regulator</td>
<td>0.30</td>
<td>14</td>
</tr>
</tbody>
</table>

*All treatments applied in a carrier volume of 2 gal/M.

Results:
No treatment differences have been found with respect to drought response in 2012 or to date in 2013. Although chemical treatment differences are not yet detected in any of the ratings collected, ETo has a significant effect on turf quality and NDVI or “greenness.” Ratings differ when ETo drops below 55%, with the 25% and 10% ETo treatment showing the lowest NDVI and turf quality. Both NDVI and turf quality decreased until 16 August. However, after a rainfall event that amounted for 1.5 inches of rain on 29 August, higher NDVI and quality were collected on the plots on 30 August (Figures 1 and 2). Overall these data support the use of warm-season (C4) turfgrass species for water conservation in southern California such as bermudagrass, which requires significantly less water (55% ETo) to maintain color and quality compared to cool-season turfgrass species. This study will continue through 2014.

Figure 1. NDVI collected on bermudagrass plots irrigated at 10%, 25%, 55%, 65%, 70%, 75%, 80% and 85% reference evapotranspiration (ETo). Riverside, CA.

12 Thru the Green—November/December 2013
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Acknowledgments:
We thank the Metropolitan Water District of Southern California, California Turfgrass & Landscape Foundation (CTLF), Toro, and participating chemical companies for their continued support of this research.

Figure 2. Turf quality (1 to 9 scale, 9 = best) of bermudagrass plots irrigated at 10%, 25%, 55%, 65%, 70%, 75%, 80% and 85% reference evapotranspiration (ETo). Riverside, CA.
Let us try out for the part. We can provide all the supplies you need to keep your course looking its best. And with our knowledgeable staff, we can help you make an ace.
**The First Tee Committee**  By GARY INGRAM, CGCS

Many do not know that one of GCSANC’s standing committees is the First Tee Committee. Our primary focus is to help superintendents set up relationships with local golf programs and schools and to spread the word that golf courses are good for the community and the environment. We are also trying to develop a database of other outreach organizations within the GCSANC membership to create a collaborative effort.

Metropolitan Golf Links has developed an outreach program called Oakland Turfgrass Educational Initiative (OTEI) for which GCSANC has donated funding. Their current programs are study tours to golf courses and other agronomic venues, internships, and career days. In the last couple years they have created a relationship with the local First Tee program that uses their facility as a learning center. Short 10-20 minute discussions can be as simple as ball mark repair, divot repair or cup changing. It is very important, fun, and rewarding to discuss golf course maintenance principles and the need for golfers to respect the venue for which play golf. If you are interested in getting more involved or if you already have an outreach program for which you facilitate please contact committee members Gary Ingram CGCS or Jay Neunsinger.

1) Ball mark repair. 2 & 3) Divot Repair. 4) Soil percolation. 5) Soil ph/salt testing and irrigation discussion.
This year the Chapter Delegate Meeting was held GCSAA Headquarters in Lawrence, Kansas on October 3 and 4. It was a very informative and interesting two days. Even though the primary goal was to meet and learn about the candidates for the upcoming GCSAA Board and provide unique networking opportunity, we were given the opportunity to learn more current state of affairs of our organization, tour our newly renovated headquarters, and to participate in a roundtable discussion.

What we learned and observed was that our current board, with the leadership of CEO Rhett Evans, not only evaded the economic storm, but were able to make some major improvements to our organization. Through investments, and modifying our GCSAA team, we have become a stronger and more effective organization. Even though we needed to reduce our overall staffing they have been able to add regional field staffing that can visit golf courses and provide additional support to the local organizations. Jeff Jensen is our field representative and many of you have met at our events and have read articles he has written our newsletter. We also visited the beautiful and highly efficient, newly renovated headquarters. These needed improvements were accomplished by obtaining low-interest loans that were just recently available. These improvements have become a definite win-win situation. With the major reduction in staffing they needed to provide an efficient and enjoyable working environment to keep our member services intact. Some of the offices are even rented out to private businesses to help defer costs. One of the improvements we visited was library which all of us may enjoy. You can also now even get onto The Michigan Turfgrass Foundation through the GCSAA website as a golf course superintendent member.

The roundtable discussions primarily focused on our current classifications. The questions that were asked were:

1. Do you feel it would help GCSAA’s marketing efforts to employers to simplify membership classifications?
2. As you think about your chapter members who are not Class A, what needs to happen to make him/her want to achieve Class A?
3. What is a realistic timeframe for having any changes in place?

The overall consensus was that something needs to be done to clarify our classifications for our membership, employers, and the general public.

If you have any opinions, concerns, or ideas please do not hesitate to email us at gcsanc@att.net.

As first indicated, the primary goal of this trip was to obtain information about the upcoming election for the GCSAA board.

Following is a list of this year’s candidates:
For President: Keith Ihms, CGCS
For Vice President: John O’ Keefe, CGCS
For Secretary/Treasurer: Pete Grass, CGCS
Bill Maynard, CGCS
Director Positions: Rafael Barajas, CGCS
Mark Jordan, CGCS
John Walker

There are two open positions for director. The two director candidates receiving the most votes will be elected to two-year terms. If Peter Grass, CGCS is successful in his bid for secretary/treasurer, Bill Maynard, CGCS will need to accept a nomination from the floor at the annual meeting to continue as a director of GCSAA in 2014. Mr. Grass’s remaining year as director will be filled by an appointment by the president with approval by the board of directors. If Mr. Maynard is successful in his bid for secretary/treasurer, Grass will automatically remain on the board for another year as director. Darren Davis and John R. Fulling Jr., CGCS, remain on the board with one year remaining in their two-year director terms. Patrick R. Finlen, CGCS, will serve on the board for one year as immediate past president. Sandy G. Queen, CGCS, retires from the board after serving the last year as immediate past president. If we you would like more information concerning elections they can be found on the GCSAA web at: http://www.gcsaa.org/Community/Annual-Meeting/2014/2014-Annual-Meeting-Preview.aspx.
From the GCSAA Headquarters museum:
1) Ball bruise repair tool.
2) Portable sprinkler.
3) Myrtle Wagoner collected a "charm" for each year attending the GCSAA Conference and Show since 1974. All the charms distribution series is part of the GCSAA Museum collection. Special congratulations to Myrtle and Clifford Wagoner on their 72nd wedding anniversary.
**TEE OFF** - The Koro Topmaker® is ideal for removing and leveling damaged or worn turf areas on your fairways, verticutting and dethatching your tee-tops and greens.

**THE APPROACH** - Install our Tifway 419 Hybrid Bermuda, 50-50 Blue Rye Blend, Bentgrass or our exclusive bermuda turf blends; Baby Bermuda, Celebration, and Princess 77. All varieties are offered on peat soil or sand with or without netting, ideal for all your golf course needs.

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