

EDITOR

Kenneth D. Williams, CGCS
650-323-0937

OFFICE

Barbara Mikel - Executive Secretary
550 Main St., Suite G
P.O. Box 3360
Diamond Springs, CA
95619
Phone: (530) 626-0931
Fax: (530) 626-5132

MEDIA DIRECTOR

GREG CRAWFORD
Fax/phone (503) 796-0823
email GMCOLF@compuserve.com

PRESIDENT

GARY K. CARLS, CGCS
City of Sunnyvale Golf Courses

VICE-PRESIDENT

ROBERT COSTA, CGCS
Laguna Seca Golf Course

SECRETARY/TREASURER

Jeffrey Shafer
The Course at Wente Vineyards

PAST PRESIDENT

DAVID R. DAVIES, CGCS
Palo Alto Muni Golf Course

DIRECTORS

ROBERT A. LAPIC
Orinda Country Club

ROGER ROBARGE
California Golf Club

GARY SKOLNIK

Fountaingrove Resort & CC

AFFILIATE ADVISORS

STEVE FRANZEN
J. R. Simplot/Best

REX GENTRY

H. V. Carter Company, Inc.

PUBLISHER

Jo Harlow - Key Publications
Phone: (925) 827-9676
Fax: (925) 674-1688
email - keypub@ncal.verio.com

THRU THE GREEN

Published monthly by the
Golf Course Superintendent's
Association of
Northern California

From The President

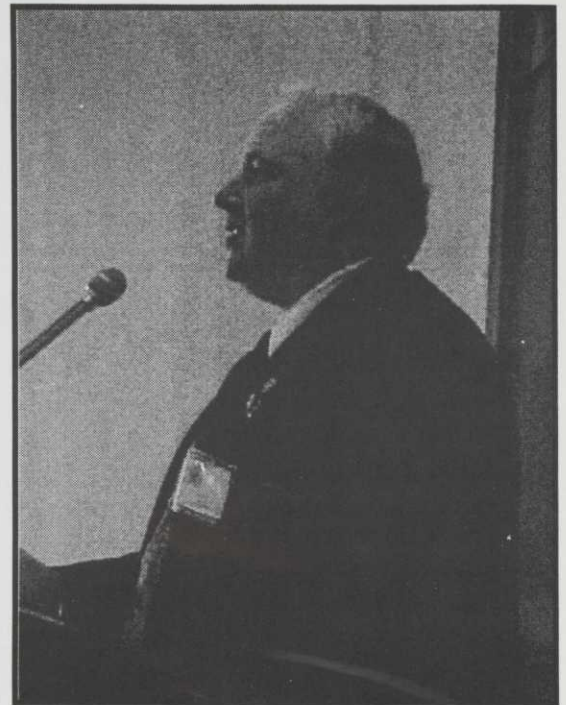
By Gary Carls, CGCS

Our April 2nd Media Day event is almost upon us. I want to thank Jeff Shafer and the people at Wente Vineyards for stepping up as a last minute replacement host for this event. Jeff has planned a full day of activities for us to go along with a media panel discussion. If you haven't had the opportunity to visit this great facility, this is one day you won't want to miss.

Over the last few months, several of you have asked about what my position is on the GCSAA's PDI. Having been involved in many phases of this initiative from focus groups to committee discussion, here is my current position. It must be understood that these are only my personal opinions.

I have felt that there needs to be alternatives to any formal education requirement. I also think that there should be some sort of continuing education requirement to maintain GCSAA Class A status. Many ways to meet these requirements have been discussed. These include local chapter meeting attendance, seminars, pesticide licenses, and even helping out in the community. This community involvement could include speaking to school groups or helping coach little league. I don't see a lot of us jumping on the HR Web to assess our competencies but most of us do competency assessment in a less structured manner every time we choose a meeting or seminar that we want to attend.

I will be serving on the GCSAA Education Committee again this year and we will be involved in two more days of cross-committee discussion on the PDI in mid-April. We will have another meeting in mid-July if there is a more finalized form of the PDI to look at. When there is something in writing to look at, I will make my final decision on how I personally will vote on PDI. At this point, I don't get too excited about what's being



President, Gary Carls, CGCS

discussed. This is only the opportunity for all of us to express opinions about what we like or don't like with the Initiative. It's also time for the Membership Standards Resource Group to format a presentation to the Chapter delegates in September. I urge any of you with any opinions to forward those to Ray Davies CGCS who is a current member of the MSRSG or to myself in the coming weeks before the April meeting.

Thanks again to Ken Williams CGCS and the staff at Stanford for hosting our March meeting. I hope all that attended gained some valuable information to use in the future. Considering all of the recent rains, Ken, Ruben and the staff provided us with some excellent playing conditions. Don't forget to check the calendar for the dates of upcoming meetings including our 2nd Annual Field Workshop at Ruby Hill in May and the annual Supt./Pro event at Green Hills C.C. in June. The CGCSA State Meeting will be May 1st and 2nd in the San Diego area. Details should be arriving very soon in the mail.

Anyone who would like to host a GCSANC event in 2001 should contact Jeff Shafer or Gary Skolnik so we can start planning potential dates for next

From The President (Cont'd)

year. The sooner we can locate meeting sites, the easier it is to plan our schedule for the coming year. If you have any thoughts or ideas on educational topics you would like to see presented at upcoming meetings, contact Gary Sayre CGCS.

Finally, we regret the fact that our date change for the Media Event has created a conflict with a meeting scheduled by Novartis for the same day. We always strive to avoid conflicts with meetings scheduled by our other groups but were unable to reschedule our event at this late date. We apologize to any of those that we have affected and always hope to avoid such conflicts whenever possible in the future.

Until next month — Gary. ♣

Office Notes

By: Barbara Mikel

As usual, your new Board of Directors is sincere, conscientious and hard working! It's always good to have a "working" Board. This year is no exception to the rule in the operations of the GCSANC.

You may not have an idea of the amount of time and talent brought to your association. Some members not on the Board continue to work for the profession by serving on GCSAA committees, California Golf Course Superintendents Association committees and various industry affiliated organizations. We need many more of you to help with GCSANC committees!

California GCSA employs lobbyist George Steffes Inc. Jim Husting, CGCS continues to serve the industry in providing a well-founded link to legislative issues that affect golf. The "Economic Impact of Golf in California" is another project with industry wide participation. Dave Davies, CGCS and Jeff Ball have worked on this endeavor since inception. Bob Costa, CGCS has branched out to write for California Fairways the state publication. Gary Carls, CGCS continues to serve on various GCSAA committees as to other members of your Board of Directors. Ted Horton, CGCS has brought his work from one coast to the other. There are few direct financial rewards for these activities. There is only the knowledge that you just might bring something to improve your profession and community. You also get to spend a lot of time with some great fellow superintendents!

So where is this going? Other than to say thanks to those serving the industry, I would encourage each and every one of you to "participate". I know it is easy to complain; we all do it. **Try getting involved. Attend a general meeting. Attend a Board of Directors meeting!** They are open to all members. You'll definitely get the scoop on what's underway. Feel free to give a board member a call. We'll always be happy to have another "face" around the table. ♣

NCGA Taking Applications For Internship Program

The NCGA is now taking applications for three openings in the golf course superintendent internship program. The internship is a two-year paid program that requires participants to complete ten blocks of instruction. The blocks of instruction include learning to operate specialized equipment, understanding the irrigation system and setting the course up for tournament play. The applicants must have at least two years of college that includes courses in agronomy, horticulture, or turf management. Prior work experience on a golf course is highly recommended. The applicants must also understand the game of golf. Applicants will be placed at courses in Stockton, Pleasanton, and the Monterey Peninsula. Interested individuals can call the NCGA at 831-625-4653. All applications must be postmarked by May 1, 2000.

Naumann's NorCal News

Jess Pifferini is the Superintendent at Coyote Creek Golf Course in Coyote. He is joining another new employee, **Murray Nonhof** who has taken the position of Construction Superintendent in charge of rebuilding the old course, formerly known as Riverside Golf Course.....**Jim Stark** has accepted the Superintendent position at Ridgemark Golf and Country Club in Hollister. Jim was the assistant under Scott Lewis at Menlo Country Club prior to his move.....**Tom Unruh** has left Lightning W Ranch Golf Course in Carson City, Nevada to become the new Superintendent at Cinnabar Golf Course in San Jose.....**Mike Scolaro** is the new Superintendent at Hiddenbrooke Golf Course in Vallejo. Mike was the assistant prior to his move. He is replacing **Gil Styles** who has moved on to another position.....

Terry's Tournament Tips

Many thanks to Jeff Shafer, and all the people at The Course at Wente Vineyards, for stepping up at the last minute and hosting our Annual Media Day Event.

This promises to be one of our best events of the year. Jeff also has a few surprises planned. (7:30 am wine tour???) So get on the phone, get your foursome together, and mark your calendar for Wednesday April 12, 2000.

My actual tip for April is to come to Wente and enjoy a great day, or take up bowling!

PS: Jerry Berrow and his juniors will be with us at Wente, so bring any golf equipment that you would like to donate to Jerry's excellent junior golf program.

Experience At Wente Vineyards (Cont'd)

of holes that stand on their own merits individually, and together engage you for the entire round.

The layout features approximately 60 acres of mowed turf with Dominant bentgrass greens, ryegrass tees and fairways, and bluegrass roughs. In addition, the maintenance staff at Wente Vineyards manages nearly 30 acres of native grassland. During the last year, we began installation of additional drainage in fairways and roughs, the conversion of native grass tee walk-ons to Kentucky bluegrass, the conversion of rough natives to Kentucky bluegrass, and additional irrigation to accommodate the changes. Future plans include the construction of new tees below existing ones on hole #14, and improving bunker drainage. In addition to managing the golf course maintenance, Jeff and I oversee the grounds maintenance crew for the Wente Vineyards Restaurant and Visitor Center located near the golf course.

One of the challenges we face at The Course includes maintaining a golf course in the middle of a working vineyard. Our relationship with the vineyard crews requires good communication between our departments and coordination of our work activities around each other. We have also partnered with the golf professional staff in a relationship of accountability and coordination of activities. We meet on a regular basis to discuss both sides of golf course operations, which helps us

stay on the same page with each other. Within our own department, we try to let people find their niche on the crew, as we realize that this leads to their personal success and ultimately to that of Wente Vineyards. With all of this in mind, as well as sound reasoning and economics, we have found that when we have a need for labor or a piece of equipment, the Wente's have an open ear. For the rest of my life. /

Wente Vineyards Hosts Media Day

(Continued from page 1)

contest and open use of the range. To climax the day, it's eighteen holes of golf at Wente's premier golf facility designed by Greg Norman. The 1:00 clock shotgun features a four-man best ball with prizes to individual players on the top three teams.

This is a real opportunity to promote our industry," says Shafer with genuine enthusiasm. "I would encourage all of our members to participate and demonstrate their support for our Media Program. I hope that members will consider inviting their managers as well."

One thing's for certain, the day won't be short on entertainment. Shafer and the Wente staff have seen to that. /

All SAND Grown!

Featuring: Bentgrass, 100% Rye, Rye Blue, Blue, Fine Fescue, Tifway II (overseeded or non).

Wade Alexander 209/993-3330

Greg Dunn 209/993-3329

WEST COAST
TURF

Life is Short. Sod It!

OFFICIAL SOD OF THE SAN FRANCISCO 49ERS



An Innovative Product Line for Efficient Irrigation Management

Hunter Industries is the established leader in water-efficient irrigation systems. Founded by industry pioneer Edwin J. Hunter, who held more than 120 patents in the field, Hunter has been associated with golf course irrigation since the 1960s. Today Hunter Golf features a complete line of products to help superintendents reach their goals of maintaining a beautiful, playable course throughout the season while also controlling water, labor and energy costs.

Hunter Golf Rotors

Hunter Golf features a complete line of gear-driven rotors for tees, greens and fairways. They are available as Check-o-Matic, Electric or Hydraulic Valve-in-Head and Block, and offer precise distribution of water and convenient through-the-top adjustments and servicing. All models offer full circle or 40° to 360° adjustable arcs.

G60 Series Low pressure sprinkler; low precipitation rates

- 51' to 67' radius

G70 Series Mid-range rotor

- 53' to 76' radius

G90 Series Widest coverage

- 69' to 97' radius

Hunter Golf Valves

ICV Glass-filled nylon construction

- Pressure rated to 200 PSI

HBV Solid brass with built-in flow control

- Pressure rated to 200 PSI

Vista Central Control System with 3D Graphics

Reality-based animated software program permits a superintendent to view the entire course on his computer monitor from a "golf cart perspective." Vista's flow management capability incorporates the characteristics of your system and re-balances irrigation flow daily.

- Optimizes pump efficiency and minimizes watering window automatically
- Monitors and senses problems in the field
- Reacts in real-time, making programming and flow balancing adjustments daily

Genesis Central Control

A powerful, yet easy to use Windows™ based system, Genesis features full programming and communications with radio or hardwire field controllers, data retrieval units and weather stations from a single location. Fully expandable.

Reliable Gear-Driven Rotors Central/Satellite Control Systems Vista Reality-Based Software Viking Decoders Data Retrieval Devices and More



- Genesis Central Control can handle a 9-hole golf course, a 36-hole resort complex and more
- True two-way command communications
- Manages up to 999 field controllers

Genesis/Vista Field Controllers

Fully-featured controllers operate as stand-alones or part of a complex network. Modular design allows quick and easy field upgrades to 60 stations and to a central-ready hardwire or radio-equipped controller.

- Most advanced range of features
- Stainless steel or plastic enclosures
- Pedestal or new wall mount

Genesis Viking Two-Wire Decoders

A cost-effective solution for many courses, this single two-wire cable system installs over an entire course and connects decoders with both *select* and *power* valves and/or electric valve-in-head sprinklers.

- Each controller handles up to 103 stations
- Hardwire or radio communications

Genesis Data Retrieval

Connect the "real world" to your control system with up to six sensors, including flow, wind speed and direction, rain and contact closures. Offers multiple controller capabilities and input for system status, custom reports and more.

- Monitor data live or store in non-volatile memory

Authorized Hunter Distributor



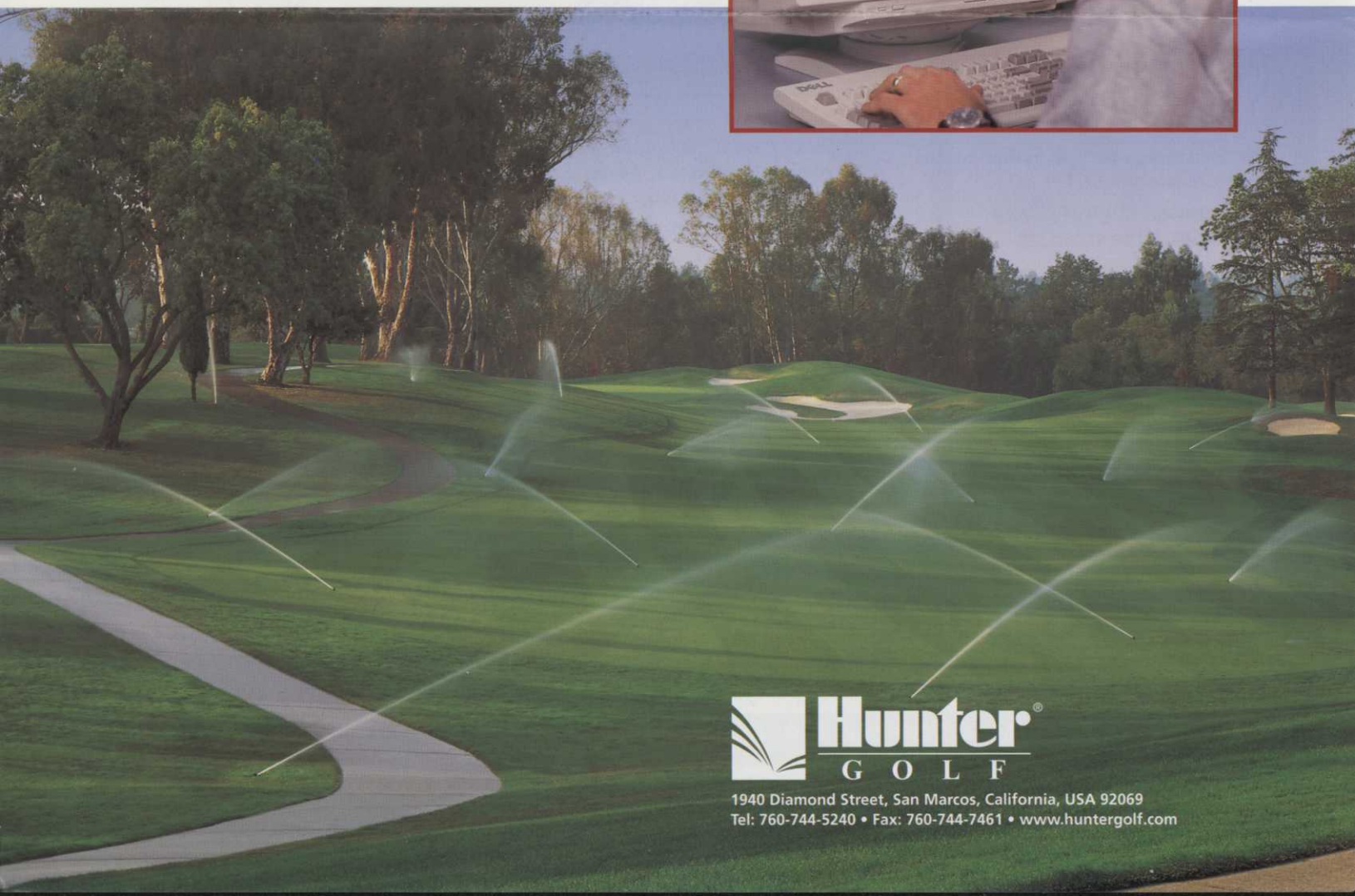
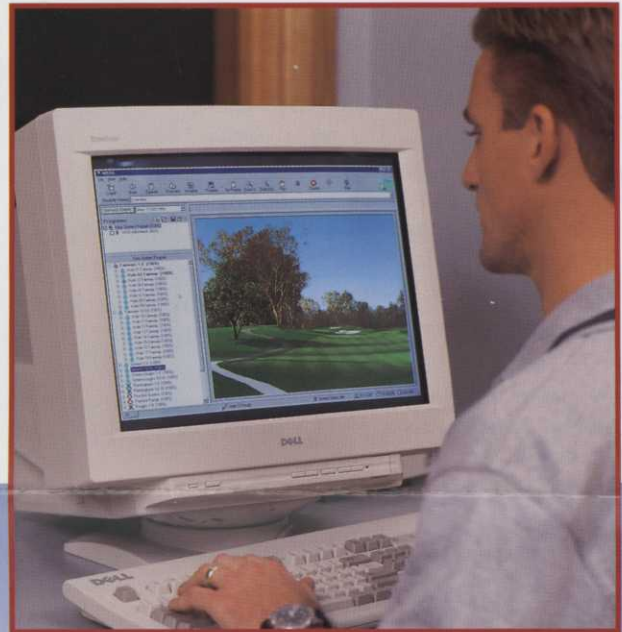
San Leandro
2462 Polvorosa Ave.
Tel: 510-357-9530

It's Time to Take a Closer Look at Hunter Golf

Introducing *Vista* - With the Power of Real-World Visual Control

Reality-Based Software with Animated Graphics

Hunter Golf introduces Vista, the most advanced and powerful irrigation control system available today. Vista utilizes the precision of your irrigation consultant's AutoCAD™ design to create realistic 3D graphics that allow you to "drive" every fairway on your course, fine-tuning the system from a real-world golf cart perspective. Advanced yet easy to use, Vista features truly automated programming, real-time dynamic flow balancing and a familiar internet-style interface. See your local distributor and take a closer look at the full range of innovative products from Hunter Golf.



1940 Diamond Street, San Marcos, California, USA 92069
Tel: 760-744-5240 • Fax: 760-744-7461 • www.huntergolf.com



MAPMAKING SYSTEMS

WWW.MAPMAKINGSYSTEMS.COM
707.833.6720

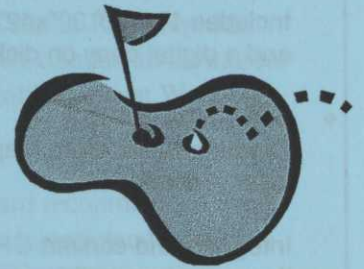
GOLF COURSE GPS SURVEYED AS-BUILTS & DIGITAL GIS SOLUTIONS

Mapmaking Systems brings state of the art digital mapping technology to the golf course. Your golf course and its critical components are digitally mapped and graphically illustrated in full color, on scaled, computer generated maps. Available on full size plans and on your computer, you'll know precise locations of each sprinkler head, quick coupler, isolation valve, satellite controller and catch basin, and all the pipe sizes in between. Exact square footage of your greens, fairways, and tees are at your fingertips.

Your golf course map is a management tool that saves you time and money in daily operations, water management, and pesticide, seed, and fertilizer applications. You can locate specific sprinkler heads, valves and pipe routing from your desk top, and measure precise distances between any points. Your map saves money by allowing you to allocate staff and resources more effectively.

ABOUT MAPMAKING SYSTEMS....

Mapmaking Systems specializes in mapping golf courses. While we can expertly provide detailed GPS and GIS mapping services, we also bring 25 years of golf experience to your project. We know first hand the challenges of the busy superintendent, and bring years of experience in the "underground" world of golf course construction. More information, price quotes, references and samples of our work are happily provided.



MAKING A DIGITAL MAP USING GPS AND GIS TECHNOLOGY

Mapmaking Systems uses Global Positioning System (GPS) and Geographic Information System (GIS) technology to produce detailed As-Built digital maps. Field data is collected utilizing survey grade GPS equipment. Precise maps are drawn to scale illustrating all critical course features and components. Maps are available in full color on bond and digitally on your computer for instant access.

GIS is a geographic data-processing system which provides descriptive information linked to geographical features. GIS files can be integrated with irrigation central controllers such as Rainbird Cirrus and others.

GOLF COURSE MAPPING SERVICES

- ◆ **GPS SURVEYED AS-BUILTS**
Primary Course Features & Cart Paths
Irrigation Mechanical Components
Irrigation Electrical Components
Station Number Programming
Drainage Systems Components

Includes 1"=100' 30"x42" color maps,
and a digital copy on disk.

- ◆ **GIS DATA BASES**
Create and separate map features by
layer and attribute.

Integrate and convert GPS data to
the central controller irrigation
management software package.

- ◆ **LAMINATED FIELD BOOKS**
Durable laminated books containing
detailed sprinkler head locations and
station numbering.

- ◆ **AUTOCAD LITE & ARCVIEW
SOFTWARE TRAINING**
Update As-BUILTS on your computer as
changes are made in the field. View,
search, measure and print from your
computer. We install software and
provide training.

- ◆ **AND MORE!**
We customize our many mapping
services to meet your needs. We
provide contour mapping, aerial
orthophotos, yardage marker plans
and more.

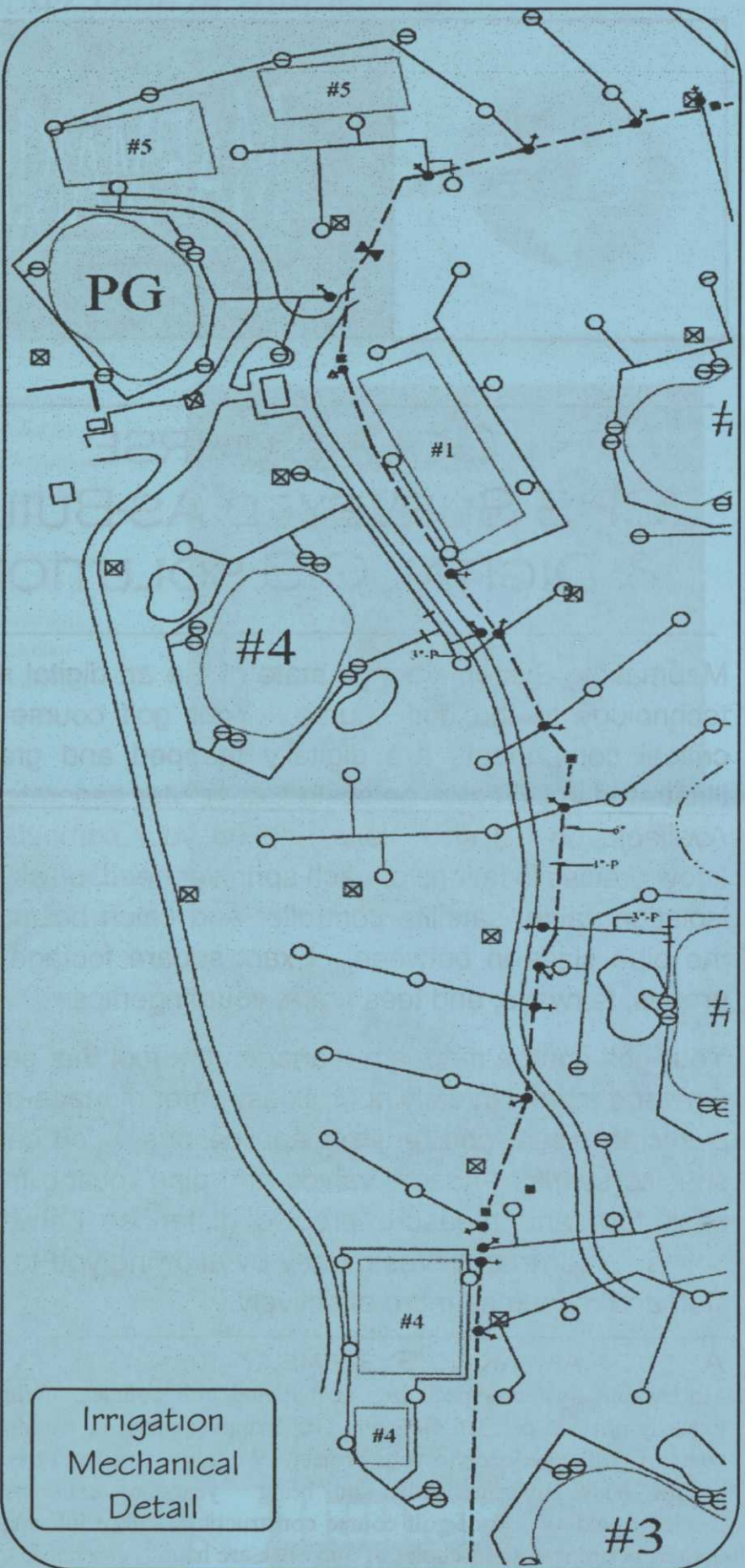
Contact
Mapmaking Systems



707-833-6720

or visit our web site
www.MapmakingSystems.com

or e-mail
info@MapmakingSystems.com



Boardroom Briefs

- ◆ Newly elected President **Gary Carls**, CGCS presented the Board the year 2000 budget which was developed in early December. Budget objectives included increasing revenues from the Institute and maintaining a break-even policy with monthly meetings.
- ◆ The sponsorship program was discussed in detail and a decision was made to solicit advertising revenue from corporate sponsors. **Jeff Shafer** offered to develop a list of potential sponsors for presentation at the March 27th Board meeting.
- ◆ Past President **Dave Davies**, CGCS reported that the State Annual meeting is scheduled for May 1st and 2nd in San Diego. Dave also noted that several Southern California Chapters have made a donation to a trust established in the name of the children of Affiliate member Tracy Barcelona. Tracy tragically passed away in December. In his lengthy report, Dave concluded that the State board was interested in comments regarding the hospitality event in "N'awlins."
- ◆ Scholarship chairman **Roger Robarge**, reports that he will be reviewing the current Scholarship program and suggests some changes may be in the offing. One possible suggestion is the establishment of an endowment fund at a particular college, an idea that was fathered by past Scholarship Chairman **Ken Williams**, CGCS.
- ◆ The Board approved a \$500 donation to Jerry Berrow, founder and operator of the Alameda Junior Pro Shop. Mr. Berrow and two junior golfers will be extended an invitation to the April 12th Media Day at The Golf Course at Wente Vineyards.
- ◆ In a unanimous decision, the Board recommended **Dave Sexton**, CGCS be considered for the Superintendent profile in the May/June issue of California Fairways.
- ◆ At the conclusion of the Board meeting, a Media Program planning session was conducted. The session resulted in the finalization of the Media Plan for 2000. (See the related story in this issue of "Thru the Green" for more details.)

MILLIKEN CHEMICAL

The Milliken Chemical Turf Products Umbrella

Invigorate™
SOIL CONDITIONER

SeaQuential™
Liquid Chelated Iron Supplement for Turf

OptiMil™
LIQUID CHELATED IRON SUPPLEMENT

SeaQuential™
LIQUID CHELATED IRON WITH MICRONUTRIENTS

MIRAGE™
LAKE AND POND COLOR

GroWin™
Granular Pregermination Bio-stimulant

Blazon™
SPRAY PATTERN INDICATOR

Pana-Sea™
plus

THATCH X

SAND-AID™
Granular Sea Plant Meal

BAman™
Bacterial Management To Reduce Excess Moisture

CPR™
Color, Performance, Roots

Milliken Chemical M-402
Division of Milliken & Co.
P. O. Box 1927
Spartanburg, SC 29304
Phone: 1-800-845-8502
www.millikenturf.com

Tips from the USGA:

BCSR — Base Cation Saturation Ratios

by Mike Huck, USGA Green Section - Southwest Region

Bob Vavrek of the North Central Region of the USGA Green Section recently wrote the following article based upon a presentation at the Wisconsin Turf Conference. It was posted as a *Regional News Update* on the USGA web page. I felt this would be good information to share, especially with the current popularity of balancing base cation saturation ratios based upon soil tests.

Calcium/Magnesium Ratios: Helpful, Hype, or Hogwash?

By Bob Vavrek

Dr. Wayne Kussow's (University of Wisconsin-Madison) talk regarding the potential benefits of balancing the ratio of exchangeable calcium to magnesium in the soil by fine-tuning fertilizer applications was one of the more interesting and informative presentations I have seen in quite a while.

After performing a literature search on the subject of Ca/Mg ratios, he found that the idea of balancing the ratio of cations in the soil goes back a hundred years or so. Early research indicates that the effect of a specific Ca/Mg ratio on crop yield varied a great deal depending on the crop.

The bottom line was that the information gleaned from a simple soil test can help superintendents maintain adequate levels of nutrients in the soil - but don't worry about adjusting the level of one cation to balance another. Just keep the levels of Ca, Mg, and other nutrients from falling below a value that would have a negative impact healthy plant growth—there is plenty of research in turf and other crops to support this theory. There is

little evidence to support the theory that the proper *ratio* of cations will provide ideal turf. In fact, the old research was done on crops like clover, and it should come as no surprise that there were no research studies to be found regarding turf. He posed an interesting question or two at the end of the talk. Why is it that you never find a fertilizer recommendation based on a cation ratio on an *independent* University soil test? Why are they often found on a soil test from a consultant affiliated with a fertilizer or chemical company?

Extrapolating yield data from other crops to turf is always risky business—even if the data supported the hypothesis in the first place. After all, the goal of turf management is not to see who can produce the most clippings. In any event, this concept is a great example of how a theory can mystically and magically transform into a hard fact when enough of the sales force gets together and chant the mantra over and over.

Have a safe, restful, and educational off-season—spring will soon be here! -Bob Vavrek

Okay, so that is just one man's opinion correct? Well, Jim Skorulski from our Northeastern Region reported similar comments from a presentation made by Dr. Jim Murphy (Cook College - Rutgers) at the New York State Turfgrass Conference. Dr. Murphy feels that "These ratios are being taken too literally and results of the initial work conducted in the 1940's have never been verified on turfgrass". He also commented that base cation saturation ratios can generate expensive fertilizer and amendment recommendations not justified by research.

So you still don't believe two Ph.D.'s's from reputable universities? Then refer to *Soil Testing and Plant Analysis*, 3rd Edition, from the Soil Science Society of America, Pages 192 & 193. This reference reports no results in the literature confirming the existence of ideal cation saturation ratios, and wide variations in BCSR are of little consequence as long as

gross imbalances are not created. Calcium and Magnesium recommendations based on cation saturation percentages and the resulting Ca/Mg and Ca/K ratios are not warranted, instead it recommends striving to maintain soil pH between 5.5 and 6.0 for maximum nutrient availability. (SSSA Book Series No.3. available from SSSA, \$38.00, www.soils.org and then to online store, SSSA book series.)

This isn't suggesting that you cannot have healthy turf following BCSR recommendations, what it does suggest is that healthy turf can be grown with less nutrients than recommended by BCSR. Additionally, you would need to think it through and ask yourself: If more nutrients than needed are applied using this method, where do they ultimately end up? The drainage water? Ground water? Surface runoff? Also, who or what benefits from this management practice? Probably

Supporter Listing

Spot Water Management

Andy Slack, Irrigation Central Computer Consulting
 aslack@spotwater.com
 voice 408-288-8153 fax 408-288-8156

Bay Irrigation & Turf Supply Inc.

Providing one stop shopping for sprinklers, valves,
 pipe, fittings, sod, seed, stakes, drainage and lighting.
 Our 25th year of service to Northern California.
 Jeffrey Jones, VP/Sales 800-622-TURF (8873)

"Support your Supporters"

Hunter Industries
 Milliken Chemical
 West Star Dist.
 West Coast Turf
 Delta Bluegrass Co.
 Soltis Golf, Inc.

DELTA BLUEGRASS COMPANY



**Quality Golf Course
 Sod Blends & Services**

BLEND: Penncross, Dominant, Hybrid
 Bermuda, Baby & 419, Blue Rye 50%/50%
 & 90/10, 100% Rye and 100% Bluegrass
 SERVICES: Hybrid Bermuda Row
 Planting, Deep Tine Aeration, Slit Seed,
 Green and Fairway Top Dressing

800-637-8873

Alan Heath @ 916-768-0132



WEST STAR DISTRIBUTING, INC.

2438 Radley Court • Hayward, CA 94545-1159

HAYWARD
 (510) 887-1222

RANCHO CORDOVA
 (916) 635-3232

**For Sale
 Used Equipment**

Castlewood Country Club

**Contact Blake Swint
 925-484-1313**

- 1988 Jacobsen 16HP Gas Greensking IV \$1,800
 with roller units and spiking units
- 1988 Toro 16HP Gas GM 3000 \$1,500
- 2 Cushman-Mount Vicon Spreaders \$ 500 ea
- 4 1995 EZGO Golf Carts with Utility boxes \$ 800 ea
- 1991 Toro Fairway Aerator \$5,000
- 1992 Ransoms 180 3WD 72" Tri-plex \$1,500

Cypress Point Club

**Contact Jeff Markow
 1-831-624-7575**

- Jacobsen Blitzer gang unit w/parts
- Jacobsen Greensking w/Reels and Verticut Units
- 1993 Multi Pro 1100 Sprayer w/Pro Control
- 1992 Jacobsen TriKing 84 inch
- Ryan Tow Aerator
- 200 Gal. SDI Sprayer
- Olathe PTO Chipper

Sand Channel Greens

**Contact Jerry Stratton
 1-800-8873**

- 1995 Kubota 8030 tractor,, 4wd, creeper gear, full
 hydraulics, 1300 hours, turf tires! **\$16,000**
- 2-inch perforated corrugated pipe in 500 ft. rolls. I had too
 much made! Custom production run. **\$165 per roll**