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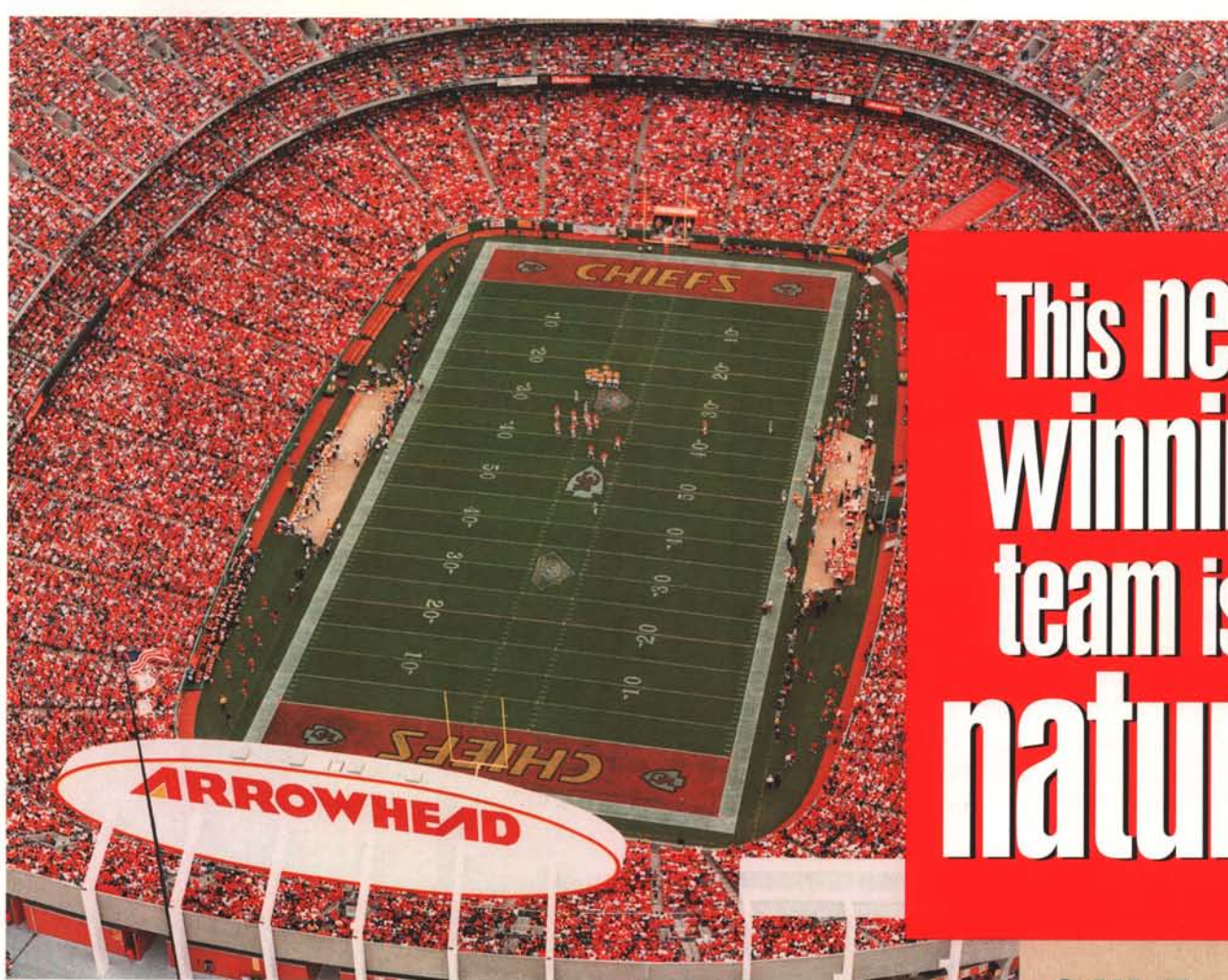
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PROGRAM

VOLUME 14, NUMBER 3

MARCH 1998

MAIN EVENTS

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Television media covered the 1997 Holiday Bowl at Qualcomm Stadium, but the cameras missed the major action that followed. They didn't stick around to see George Toma's 30-second orchestration, "Count Down to the Super Bowl." The game ended around 8:30 p.m., and within 30 minutes crews converged on Jack Murphy field...

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20 Slit Drainage: A Cutting Edge Tool in Sports Field Construction and Renovation

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30 From Seed to Soccer: Bermudagrass You Can Sink Your Cleats Into

In less than 10 years, seeded turf-type bermudagrass has experienced tremendous advances. Turf professionals now have a range of options when choosing certified seeded bermudagrasses and certified seeded bermudagrass blends. One thing is certain: bermudagrass from seed isn't just common anymore.

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On the Cover:

Qualcomm Stadium's "new" Super Bowl sod had been growing for over a year at West Coast Turf prior to installation. Courtesy: West Coast Turf



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There Are No Limits

By: Steven Guise
STMA President

First, I express my gratitude to the STMA membership for the opportunity to serve as your president. As an STMA member for the past seven years and as a member of the board of directors, it's been a pleasure to see this organization grow both in membership and financial stability. As president, I will see that we continue to move forward.

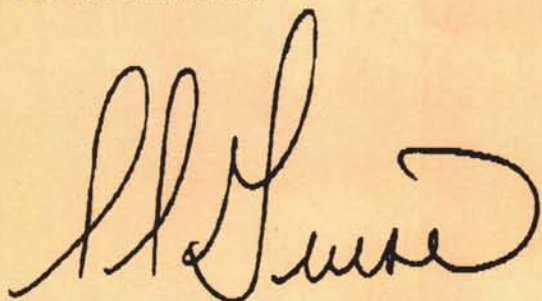
The future of this organization promises to be tremendous when you consider the number of potential future members. As we grow, the sharing of their thoughts and ideas will improve our industry and expand it in new directions.

I begin my term with the initial goal of continuing the progress of our past president and board. The Certification Program is at the top of my list of priorities. This is followed closely by my desire to build a bridge to the NFL, MLB and FIFA groundskeepers and sister organizations such as the National Intramural Recreational Sports Association, the National Recreation & Park Association, the National Federation of High School Athletic Directors, and the Stadium Managers Association (SMA).

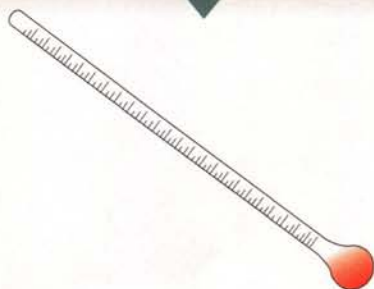
Executive Director Steve Trusty and I just returned from the SMA Conference, where we were received with open arms. We found that managers of professional and collegiate level stadiums are seeking information on such topics as field design, construction and maintenance practices to solve their multi-use problems of wear, drainage and compaction. Most of our Category I (professional sports turf facility managers) and Category II (four-year college and university facility sports turf managers) members work along side or directly for the SMA. We need to open communication lines between our two organizations for the benefit of all.

I would like to publicly thank all who served on the board in the past, past committee members and our Executive Directors who have pulled this organization together over the past seven years. There are far too many to mention, but a few individuals do rise to the top of my list: Gil Landry for his solid direction; Greg Petry for his financial negotiation; Mike Schiller for his dedication; Dr. Henry Indyk for his persistence in education; Eugene Mayer for his "reality checks" and support; Ken Kurtz for reminding us of our history; and George Toma for always being there for us. To all of you who have been so instrumental to the STMA, I will never forget your efforts. I invite you all to continue to be part of our evolution.

To all of our old and new members, I would like to say thanks for your support and to encourage you to get involved with your local chapters, sports fields, and our national organization. I work for you, so call me if you have any questions, comments, ideas, or if you just want to talk. I can be reached at (818) 834-1000 (office) or (714) 680-4026 (home).



TIP O' THE MONTH



Degree Days are units of measurement that reflect just how hot or cold the weather has been. They can help you predict when a critical pest event is likely to occur.

There are various methods for calculating degree days. One simple method involves using the "lower developmental threshold" or "base temperature" for a specific insect pest or disease organism.

The base temperature represents the temperature below which an organism will not develop. This information can be obtained from your local Cooperative Extension Service.

The following formula is a good method for calculating degree days:

Degree Days =

$$\frac{(\text{Max. Temp.} + \text{Min. Temp.}) - \text{Base Temp.}}{2}$$

For example, the following calculates the number of degree days accumulated on one day for an insect that has a base temperature of 55 degrees F. A Min/Max Thermometer shows you that the maximum (high) temperature on that day was 86 degrees F and the minimum (low) temperature was 62 degrees F. To calculate degree days for that day:

add: 86 + 62 = 148

divide: 148 / 2 = 74

subtract: 74 - 55 = 19

You would therefore have 19 degree days for that particular day. □

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THE FRONT OFFICE

OPINION PAGE



The Common Message of an Extraordinary Tale

When I first saw Captain-Retired Al Haynes' name on the agenda at STMA's 9th Annual Conference and Exhibition, I didn't quite understand his relevance as a featured speaker. You'll remember that Captain Haynes piloted United Airlines flight 232 that crashed in Iowa City. Most of you probably watched television in awe that day as dramatic footage of the fiery crash flashed across the screen. Haynes' story promised to be a fascinating and dramatic tale, but I couldn't understand how it would relate to the duties of a sports turf manager.

Statistically, the odds that Captain Haynes' DC-10 would experience total hydraulic failure in mid-flight were negligible. Theoretically, if one of the plane's hydraulic units failed, one of its two backups would be sufficient to handle the job. United Airlines was so confident in the safety of the double-backed system, they didn't even have a standard operating procedure for the unlikely possibility of total malfunction.

During the course of flight 232, all three units did fail, and more than 100 people died in the crash that followed. However, as a result of the team work of everyone involved in the disaster, 184 people survived. Ultimately, this proves to be the most statistically unexplainable fact of the entire event. United replicated flight 232's situation in simulations numerous times after the disaster. Each simulation resulted in a 100% fatality rate.

It's easy to consider Captain Haynes a hero for his part in these incredible events, but he refuses to present himself as such. Instead, he credits five main factors in averting total disaster: *luck, communication, preparation, execution and cooperation.*

The role *luck* played in flight 232's situation is undeniable. Weather, location, and time of day created conditions that were "favorable" enough to allow the event to unfold as it did. The fact that the plane remained flyable at all without its hydraulic systems "can be attributed to pure luck."

From start to finish, thorough *preparation* and effective *communication* further contributed to the unexpectedly high survival rate of flight 232. Before the flight ever left the ground, the United Airlines cabin and cockpit crews prepared to cope with emergency situations with regular and comprehensive safety training. The ground crews matched this preparation with disaster drills of their own. When the unthinkable occurred, Air Traffic Control coordinated communications with the cockpit and groundcrew, and the cabin crew kept passengers calm and rational.

Smooth *execution* rose out of excellent preparation. Everyone *cooperated* in an intense rescue effort that stretched into the night. Samaritans placed the well-being of others above their own interests, and many, many heroes were born.

The average sports turf manager may never have to deal with a crisis as devastating as the crash of flight 232, but the importance of Captain Haynes' message extends to anyone who works closely with the community. The five main factors Haynes listed to explain the high survival rate are universal. We can use them in our daily lives as well as our emergencies.

With effective communication, preparation, execution, cooperation, and a little bit of luck, we should all be able to handle anything that comes our way.

Steve Berens, Editor

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Working Up To

Super Bowl



by Steve Wightman

Television media covered the 1997 Holiday Bowl at Qualcomm Stadium, but the cameras missed the major action that followed. They didn't stick around to see George Toma's 30-second orchestration, "Count Down to the Super Bowl."

The game ended around 8:30 p.m., and within 30 minutes crews converged on Jack Murphy field. Eight of the NFL groundcrew had flown into San Diego on December 27th. All but one came from George Toma's "home" team in Kansas City. They joined our Qualcomm stadium crew for the first stage of Project Super Bowl XXXII.

As the goal posts came down, we ripped 1-1/2 inches into the existing sod with seven 14- to 20-inch sod cutters. By 1:30 a.m., cutting was complete. At 6:00 a.m. the next morning, a large loader and five dump trucks hit the field, and by 2:00 p.m., the sod had been completely stripped and trucked away.

Our crews spent the remainder of December 30 and 31 applying fertilizer, filling low areas and setting the rough grade. On New Years Day, we wrapped the finished grade and made the final pre-sodding fertilization.

The "new" sod had been growing for

ryegrasses. This produced a very mature hybrid bermudagrass to provide a bio-mass with excellent footing. The overseeded perennial ryegrass added color and growth.

We cut the sod to a height of 1-7/8 inches, and started laying it at 7:00 a.m. January 2. The process continued through 9:30 p.m. Sunday, January 4. By now our crews were working 12- to 14-hour days.

On January 5, more groundcrew members arrived. George Toma stepped into the role of hands-on coordinator and organizer. Trevor Vance, Head Groundskeeper with the Kansas City Royals, became co-captain for hands-on field operations with Atlanta Braves Head Groundskeeper Ed Mangan. After preparing playoff sites around the league, NFL

Supervisor of Fields Chip Toma joined the San Diego team on Monday, January 12. The four men pooled their resources to manage as many as 27 groundcrew members from around the



The NFL left nothing to chance when preparing for Super Bowl XXXII. Its complete renovation of the field at Qualcomm Stadium started with brand new sod. Courtesy: West Coast Turf.

over a year at West Coast Turf. In early October, the base of Tifway 419 Bermudagrass was overseeded at the rate of 15 lbs. per 1000 sq.ft. with Ph.D., a three-way blend of perennial

country (and the world), including our full Qualcomm crew.

Our crews mowed the new sod on January 7, and rolled it out the next day. With help from the San Diego City Engineering Department's surveys, we placed all the necessary benchmarks.

At this point, crews began painting the field's perimeter and yard lines. On January 13 and 14 we positioned visqueen stencil templates to apply the first coat of paint to the team and NFL logos. The design of the field's artwork attempted to preserve equality, precision and balance, and we held the variance standard to 1/4-inch or less.

Then the rains came. Our rainy season generally runs January through March, so we expected and were prepared for rain, and we certainly got it. 2-1/2 to 3 inches started coming down every day.

The turf had been thriving on a once- or twice-a-week fertilization schedule. We used small, tailored applications of all the major elements and all needed micro-nutrients. However, the wet weather combined with stretches of tarping to cause pythium in the turf. We started fungicide applications on January 9 and continued them until a few days prior to the game.

At this point, crew activity began to spread beyond Jack Murphy field. Starting January 11, we split 20 members of the NFL Super Bowl crew and seven members of the Qualcomm crew into sub-crews to fertilize, mow, manicure and paint the Broncos' and Packers' practice fields at other Chargers facilities.

The teams arrived in San Diego on January 18. On the 20th we focused our attention on Qualcomm Stadium for media day, and members of each team turned out to meet approximately 5,000 media personnel. Our crew prepared for the event by laying tarp



George Toma (right) has prepared every Super Bowl field since the inception of the championship game. Courtesy: Steve Wightman.

over the sideline area on both sides of the field. We placed 10 different podiums around the field perimeter, and erected scaffolding for the media day team pictures.

The NBC announcers' booth consisted of a platform raised 10-ft. off the ground and enclosed in Plexiglas. We placed it next to the normally open corner of Qualcomm Stadium. The NFL brought in scaffolding and temporary seating from the Rose Bowl to fill the rest of the space and made room for another 600 spectators.

Obviously, with all this construction, layout and in-and-out activity, traffic control was a major responsibility for our crews. Fork-lift movement and overall traffic at the eastern end of

the field and sideline area was intensive and destructive. The extra vehicle traffic had been restricted to turf in the out-of-bounds area, which had been protected with Enkamat, geotextile and plywood. Still, the crew ended up re-sodding about 5,000 square feet of this area three weeks into the month of January.

We mowed the game field at a one-inch height every day with 21-inch walk-behind rotary mowers to keep the grass standing upright. The one-inch height also allowed us to maximize our root structure and turf color. We used four of these mowers, none of which were self-propelled.

Crew members formed teams for each mower. One person mowed

across the field; another person mowed back. Whoever pushed the mower across emptied the grass catcher bag. Using this tag team method we could finish all of the turf in 1-1/2 hours.

A heavy mowing schedule and Mother Nature's ample irrigation put a lot of wear on the field painting. Application of the second coat occupied major blocks of time between January 13 and 18, and during the

week of the 19th.

We started dealing with on-field tarps on the 12th. As rain dominated the weather system, we covered the field every night until the 22nd. Fortunately, the weather finally broke, and it remained good during the big weekend. The crew initiated dry down efforts to prepare for the game.

We fanned across the field: brushing, brooming and cocoa matting away



In the middle of game week, the crew switched from push mowers to triplex reel mowers and set the game day height of 13/16 of an inch. Courtesy: Steve Wightman.

Q: What do all of these teams have in common?

Oakland A's
Arizona Diamondbacks
University of Texas Longhorns
San Diego Chargers
University of Southern California Trojans
California Angels
Arizona State University Sun Devils
San Francisco 49'ers
San Diego State University Aztecs
San Francisco Giants
San Diego Padres
Los Angeles Dodgers
Oakland Raiders
Arizona Cardinals

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surface moisture. A helicopter joined the battle from the 21st to the 24th. This extra drying power came twice a day in one-hour sessions. It helped minimize disease potential and dried the turf for painting.

To tackle the painting, our crews used airless sprayers, each of which required a team of four people to operate. We filled in the fine detail work on the logos with three or four hand-held compression sprayers. Once the initial layouts were completed, the crew was able to paint the entire field, including all logos, lines, hashes and numbers, in about five hours.

By now everyone on the crew was putting in 10- to 14-hour days. There had been no breaks, nor would there be any before the Super Bowl.

Our routine became: mow the grass, dry the grass, paint another coat. And then, two days later, paint again so we didn't lose the outlines and have the time-intensive job of resetting each feature. In the middle of game week, we dropped the mowing



The crew used hand-held compression sprayers for fine detail work on the field's logos. Courtesy: Steve Wightman.