cans); and litter and snow removal from facilities and parks. I also prepare budgets and oversee the Donor Tree and Bench Program.

Maintaining and improving our athletic fields has always been one of my favorite responsibilities. After completing the maintenance work, seeing the players walk onto the field brings a tremendous feeling of pride and accomplishment. I recognize the positive impact our organization has on people’s lives and constantly strive to improve experiences for the people we serve.

My least favorite task is rolling up our foul ball nets at the end of the season and getting the nets back in place in the spring. Finding the best weather conditions to complete this task can be difficult if the ground is wet.

SportsTurf: How did you get started in turf management? What was your first sports turf-related job?

Brouillard: I worked in a greenhouse during high school and became inspired after seeing how excited customers were about plants. Until then, I had planned to become an electronic engineer, but I switched gears and decided to study horticulture and business. My first sports turf-related job was with the Waukegan Park District as the Athletic Field Crew Leader/Maintenance Worker III. I enjoyed working on the athletic fields and was fortunate to have Mike Trigg as a boss. He was a terrific leader and teacher; he created a great work environment, and his passion was contagious. I try to carry forward his leadership style as I relate to my field crew.

I continued my education, earning a Master of Science degree with an emphasis in Horticulture, and increased my knowledge in other jobs, most notably maintaining all the turfgrass at the highly regarded Chicago Botanic Garden as the IPM Turfgrass Specialist. Although there was no athletic field, there was a good turf program. I am thankful to be back doing something I really enjoy and have a passion for; nothing is better than seeing others enjoy the benefits of the hard work the staff has accomplished.

SportsTurf: What changes, if any, are you considering or implementing for the winning field in 2012?

Brouillard: One of our agency’s goals is to identify and streamline critical processes to improve services. To reduce the down time of the ball field after a special event, we are considering using 48-inch rolls of sod for restoration needed on the field. We also will examine ways to reduce the likelihood of damage from special events held on the field. We are holding meetings to recognize the impact of special events and discussing options to relocate the heavy carnival rides that have been placed on the field in previous years.

SportsTurf: How do you see your job changing in the future?

Brouillard: Through ongoing education, we will continue to improve and create value, create loyalty through customer satisfaction, develop partnerships to share resources, and implement sustainable practices. Our organization’s Vision is “to be recognized as a national leader in delivering innovative park and recreation services based on responsiveness, trust and accountability to our community.” We will continue to uphold our high standards and improve as needed to meet our customer’s needs and exercise environmental, social and financial stewardship.
Jacobsen's new large area reel mower

For large area high-end sports fields that need a cost-effective, productive mower that provides superior quality of cut, nothing compares to the LF550/570 series of large area reel mowers from Jacobsen. Available in 2WD, 4WD and 4WD Turbo, the 100-inch width of cut assures professional quality results in less time.

Controls of the unit have been optimized due to the InCommand Control System console. This ergonomically designed LCD screen console system delivers the industry’s only passcode-protected, programmable max transport and mow speed settings to control cut frequency. The screen’s full text settings and diagnostics puts controls within reach and makes it easier to monitor and maintain for the operator.

On 4WD models, superior tracking is provided by the factory installed SureTrac 4WD system. This parallel-cross-series system transfers power from a slipping front wheel to the opposite rear wheel providing ultimate traction for hill climbing and side slopes.

The exclusive automatic wet parking brakes are maintenance-free and reduce cost of ownership; no linkage, cables pads, or disks to service, maintain or adjust. In addition, routine service items, including spin-on filters, area all easily accessible and under-the-hood. There’s no need for a lift, a flip up seat or to gain access under the machine.

Jacobsen

John Deere hybrid walk greens mower

John Deere introduces its new 180 E-Cut hybrid walk greens mower. The 180 E-Cut is a new edition to the John Deere Golf walk greens mower lineup, that is built on the superior ground following system used in the industry leading John Deere 220 E-Cut. The new model takes mowing greens to the next level of contour following. The 180 E-Cut uses the 18-inch QAS cutting unit that provides a smaller, tighter stripe superior after-cut appearance and will provide superintendents with the best contour following system. Best-in-class contouring makes it ideal for superintendents who need maximum control and leading performance on undulating greens. The mower runs on hybrid technology, which John Deere first introduced to the golf industry in 2005.

John Deere

Toro Reelmaster 5210

The Toro Reelmaster 5210 features Dual Precision Adjustment cutting units to deliver an exceptional quality of cut and aftercut appearance. Powered by a 28-hp, 3-cylinder Kubota diesel engine, this unit offers a nimble and maneuverable design for mowing in a wide range of conditions. The Reelmaster 5210 is lightweight and productive with a 100-inch width of cut. It is available in standard 2 wheel drive or add on the CrossTrax all-wheel drive system.

The Toro Company

Graco has launched its FieldLazer line, a family of products that is one of the industry’s most complete lines of field marking solutions with walk-behind, ride-on and stand-on equipment systems and accessories.

The new patent-pending FieldLazer G400 striper, available April 2012, is the first all-in-one, stand-on self-propelled field marker in the sports turf industry. This durable and versatile stand-up machine features a shock-absorbing platform and Smooth Ride turf-ready tires designed to reduce fatigue and smoothly navigate even the roughest terrain. Features include self-centering steering, electronic gun trigger, Auto- Layout System, and automatic dashed line, which are all industry firsts.

“The new 2012 Graco FieldLazer line changes the game for the field marking industry,” said John Klesk, worldwide product marketing manager, Graco Contractor Equipment Division. “We now offer a complete line-up of FieldLazer line marking equipment featuring Graco’s proven airless paint spray technology recognized worldwide by sports turf professionals for delivering bright lines using less paint.

With the addition of the industry first, FieldLazer G400 striper, the FieldLazer product family provides sports turf professionals with a full line of field marking machines to meet virtually every possible application.”

Graco revolutionized the field marking industry when it introduced the first walk-behind, high-pressure, airless field paint sprayer in 2004. Today, there is a Graco FieldLazer machine for most field sizes and applications.

**STRIDE**

The Graco FieldLazer S100 and Graco FieldLazer S200 walk-behind field strippers feature durable, lightweight construction for effortless straight lines over every field condition. These flexible, hard-working machines are full of features designed for comfort and control. Easy reach handlebar controls allow the user to fine tune the stripper without stopping with controls located on the handlebar. The S100 stripper features the exclusive tall front wheel that easily maneuvers over deep ruts and cleat marks. The S200 stripper is a versatile striping solution ideal for day-to-day field marking as well as occasional parking lot maintenance.

**RIDE**

The Graco FieldLazer R300 Complete striper is an all-in-one turf ride-on field marking system that combines the Graco LineDriver HD driving system, FieldLazer R300 striper machine, and large capacity 15 gallon paint hopper. This system allows users to quickly stripe a large number of fields with sharp, long and straight lines. Smooth Ride Turf Tires reduce vibration and fatigue for a comfortable ride over any terrain. Tight turn radius and fast maneuverability is possible with the Center Line Hitch Pivot feature, which also enables quick detach for transport, storage or to Stride using the FieldLazer R300 striper on its own.

**GLIDE**

The new Graco FieldLazer G400 striper is the industry’s first all-in-one, stand-on, self-propelled field marking machine. Gliding upright enables field marking professionals better visibility and reduces fatigue while increasing productivity. Intuitive controls and a user interface dashboard are easily accessed from the standing position and enable ease of operation.

All Graco FieldLazer field marking systems feature proven Graco high-pressure, airless paint spray technology for cost-saving, brighter and longer-lasting lines. Each FieldLazer model is engineered with turf-specific tires that reduce vibration and fatigue while producing long, straight lines over any field terrain. Optional accessories are available to customize each FieldLazer stripper and meet the needs of every field marking professional.

Graco, Inc.

**Tools & Equipment**

**Industry’s First All-in-One Stand-on Field Marking System**
Ready-made irrigation for synthetic fields

Underhill International introduces an industry first: new ready-to-install M-160 Total Solutions Kits for synthetic sports field irrigation. Total Solutions Kits save hours of design and installation time because they include complete AutoCad irrigation system illustrations and key irrigation components in one package. Sports field designers can "plug in" the Underhill AutoCad drawings into a field layout, while contractors have a ready-to-install mechanical system with site-specific products and schematics. Featuring robust, built-to-last components, the M-160 Total Solutions Kits are designed to perform for more than 20 years. Underhill M-160 sprinklers have become a "cleaning and cooling solution" for synthetic sports fields. Field managers typically syringe artificial turf in order to cool down and clean the playing surface before events.

Underhill International

New, faster method of installing bases

Markers Inc has developed a new, faster method of installing bases for baseball fields. The pre-assembled MarkSmart Anchor Foundation offers groundkeepers a no mess, no fuss, time-saving way to install bases. The old way of installing bases involved making wooden forms, mixing and pouring concrete, placing the female anchor and waiting for it to cure. The new MarkSmart way is faster, cleaner and easier. The pre-assembled, recycled rubber base with metal anchor is ready to install. It's a quicker solution for municipal leagues, schools and collegiate level programs. For organizations that have purchased bases with complete anchor assemblies, Markers Inc. also offers a Do-It-Yourself kit of recycled rubber bases.

Markers, Inc.

Longer-lasting pitching rubber

New patent-pending adult pitching rubber size 24" x 6" x 6" with a 3" core center from Bulldog Field Equipment. Product weighs 40 lbs. The BFE pitching rubber will last longer than current pitching rubbers on the market which will reduce overall labor and equipment costs.

Bulldog Field Equipment

Broyhill’s Ball Field Finisher

Broyhill’s Ball Field Finisher includes special rubber flail fingers with diamond pattern to prepare your infield properly. This affordable finisher is 74" wide and features a 45-degree back slope leveling bar prior to the large rubber fingers to assist in flattening any ridges. Fits a variety of vehicles with its electric lift kit.

Manual trailered lift kit available and can be towed behind hard to fit vehicles.

Broyhill

Gravely’s triplex reel mower

The PM-3084 features a 27 hp engine, 12-volt electric start, 7.5-gallon fuel capacity and hydraulic driven Locke reels. The PM-3084 includes three 30-inch, double roller, full-floating hydraulic drive head assemblies and varying cutting heights from 0.5 to 2.5 inches. The mower also comes with standard ROPS installed, meeting current guidelines. Kawasaki 27-hp four-stroke, air-cooled V-twin engine. Yoke-style, dual rear-wheel steering to eliminate turf damage.

One pedal forward, neutral and reverse for speed control and 24- x 11.5-12-inch turf tires for floatation for stability; hydraulic lift for easy transport, 2-year warranty.

Gravely Turf

New turf herbicide

United Turf Alliance announces the introduction of ArmorTech SureZone turf herbicide containing four proven active ingredients, including the proton inhibitor sulfentrazone. The other active ingredients in the new herbicide are 2,4-D, MCPP and dicamba. SureZone is an economical, water-based formulation packaged in 2 x 2.5-gallon cases and 55-gallon drums. Labeled for use on most cool- and warm-season turfgrasses, with the exception of St. Augustine, it controls a long list of broadleaf weeds including many tough species. SureZone can be applied at temperatures up to 90°F, is rainfast within 6 hours and allows reseeding in three weeks. Always read and follow label instructions.

ArmorTech/United Turf Alliance

New variable flow hose-end nozzles

Underhill International introduces Magnum UltraMax, new heavy-duty, variable flow hose-end nozzles. Featuring robust "firefighter quality" construction, UltraMax nozzles are designed for infield conditioning and as a hand-watering tool for irrigating dry, patchy turf. The nozzles are also practical for stadium and playground wash-downs and equipment clean-ups. Offered in four models with optional pistol or firefighter grips. The Full Throttle nozzle features a variable flow in either high volume (15 to 40 GPM) or low volume (12 to 19 GPM). It delivers a steady fog, jet stream or fan pattern. The Turbo Shift model has a dual variable flow that can be shifted from light coverage to a higher volume fog, jet stream or fan pattern. The high volume model offers 12 to 17 GPM and can be “turbo shifted” to 20 to 43 GPM. The low volume model performs at 7 to 12 GPM and also turbo shifts to 14 to 17 GPM.

Underhill
Strategic Plan guides STMA’s future

**THE STMA BOARD OF DIRECTORS** met for an extra day and a half during its summer 2011 board meeting to formulate their vision for the future. That vision is captured in the association’s 2012-2014 Strategic Plan, which is outlined below. The 2007-2011 plan is complete, and its accomplishments were outstanding (see “President’s Message” on page 7). Some elements of the new plan build on concepts that were introduced in the previous 5-year plan; other elements are new for STMA. The goal of this plan, as it has been for its previous plans, is to take STMA to the next level in advancing the association, its members, and the industry.

Consultant Joe O’Brien, CAE, facilitated the development of this plan, as he did the creation of the just completed 5-year plan, and a shorter 2-year plan that helped guide STMA for 2005 and 2006. O’Brien says he is amazed at the progress of STMA. “When I helped to facilitate the plan for 2005 and 2006, the items that were identified in that plan are very different from those in this plan. STMA attacked those issues, accomplished those goals, and set higher and higher expectations,” says O’Brien. “I am impressed how far the STMA has come in such a relatively short amount of time.”

The STMA Board is vigilant in reviewing its strategic plan’s progress during each board meeting. During these reviews, the Board also discusses how the industry and other factors may be impacting the plan, and makes adjustments accordingly.

The plan guides Board’s discussions on partnerships and collaboration efforts. Any organization that STMA is considering an alliance with is examined relative to a fit with the Strategic Plan. Any new program or service idea that is brought to Board is vetted against how it fits into the plan and whether its adoption will help STMA achieve its goals. The plan also serves as the basis for performance evaluation for CEO Kim Heck and her staff. Because the plan sets very specific milestones, the achievement of the plan can be quantitatively measured.

As the Board discussed the association’s future, it determined that a 3-year plan is more nimble and realistic in this economy and for the rapid pace-of-change the industry is experiencing. The new plan is organized into four platforms that set the overall direction and focus for the association. Within each platform are goals and objectives. Within each objective there is an action plan with timing (short, mid, or long-term) and committee/committees assigned to help achieve the plan. Noted below are the platforms, goals, and objectives.

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**STMA Strategic Plan 2012-2014**

**STRATEGIC PLATFORM I: Attract and Retain a Vibrant and Engaged Membership**

**Goal:** Grow and sustain a membership at 3,800 by the conclusion of 2014

- **Objective 1:** Recruit non-members who fit into STMA’s current membership categories.
- **Objective 2:** Use our membership growth initiative to help chapters grow.
- **Objective 3:** Tap into markets that are involved on the periphery of sports field management.
- **Objective 4:** Increase the membership retention rate from 71 percent to 80 percent.

---

**PLATFORM II: Be Recognized as the Leader in Industry Education**

**Goal:** Provide educational resources that are vital to the success of members and advance the profession

- **Objective 1:** Develop education that is relevant, affordable and accessible.
- **Objective 2:** Develop significant learning opportunities at the national and regional conferences.
- **Objective 3:** Develop an educational platform around safety.

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**PLATFORM III: Gain Recognition and Respect for Members and the Profession from External Audiences**

**Goal:** To increase awareness of the profession and visibility of members with employer groups, the media, sports organizations, athletes, and international organizations.

- **Objective 1:** Create an association-wide marketing and public relations plan.
- **Objective 2:** Use the environmental stewardship of members to raise awareness of the profession and enhance the image of STMA members.
- **Objective 3:** Protect and advance the work of members through government relations outreach.
- **Objective 4:** Develop relationships internationally that will raise the awareness of STMA.
- **Objective 5:** Leverage the CSFM program to enhance recognition and status of certified members.

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**PLATFORM IV: Create Excellent Value for Commercial Partners**

**Goal:** To validate the importance of commercial members to STMA

- **Objective 1:** Provide a conference and exhibition that meets exhibitor expectations relative to timing, floor traffic, and the cost/value proposition.
- **Objective 2:** Provide sponsorship opportunities that achieve commercial partners’ goals.
- **Objective 3:** Provide information to commercial partners about STMA members that helps them grow their businesses.

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**Ten Common Reasons Strategic Plans Fail**

*By Leo J. Bottary*

**WHILE THE DATA** on strategic plan failure rates is all over the map, suffice it to say it’s HIGH! Below you’ll find ten common reasons strategic plans fail. It’s likely that the last strategic initiative to fall short in your organization could be attributed to one (or some combination) of these 10 causes.

1. **History** - You have to be mindful of your history when it comes to launching strategic initiatives. If you’re the kind of organization which, just a year ago, launched a new initiative with great fanfare only for it to have died an unceremonious death, then your employees are not likely to be fooled again. They’re smarter than Charlie Brown, who as you recall was repeatedly fooled by Lucy every time he was asked to kick the football. If your announcement is met with rolling eyes and a collective groan, then you stand little chance of real success no matter how brilliant the plan.

2. **People/Culture** - Knowing what to do in the abstract is usually the easy part. Knowing what YOU can do based on the unique skills and mindset of your team is an entirely different matter. Understanding your people, the culture and sub-cultures within your organization, and shared vision/values is essential to developing a plan that stands a chance of success. Failure to do so is a recipe for disaster. Dave Logan’s research on “tribes” in his book *Tribal Leadership* offers a practical framework for understanding and working with your culture to achieve what Peter Senge describes as the difference between apathy/compliance and commitment/enrollment.

3. **Leadership** - How committed is your lead-
Membership Application

SportsTurf
MANAGERS ASSOCIATION

Experts on the Field, Partners in the Game.

Name ________________________

Title ________________________

Employer/ Facility

☐ Business  ☐ Home

Address ________________________

City ___________________ State ______ Zip ______

Home phone ______________ Work phone ___________ Cell phone ___________

Fax __________________________ Email ________________________

Signature ________________________

Direct Supervisor Name ____________

Membership Category:

☐ Sports Turf Manager $110

☐ Sports Turf Manager Associate* (Additional member(s) from the same facility) $75

Please select the primary facility type where you are employed:

☐ Professional Sports  ☐ Higher Education  ☐ Schools K-12  ☐ Parks and Recreation

☐ Academic $95

☐ Student (verification of enrollment) $25

☐ Commercial $295

☐ Commercial Associate* (Additional member(s) from the same commercial company) $75

☐ Affiliate (Person who is indirectly or on a part-time basis, involved in the maintenance/management of sports fields) $50

☐ Chapter Dues (contact headquarters for amount) Chapter name ____________________ $ ____________________________

☐ Contribution To SAFE Foundation (research, education and scholarship) $ __________________

Total Amount Enclosed: $ ______________

Payment Method:

☐ Check  ☐ Money Order  ☐ Purchase Order # ______________

Credit Card: ☐ Mastercard  ☐ Visa  ☐ American Express  ☐ Discover

Name on Card ________________________

Card # ___________________ Exp. Date ________________________

Signature: ________________________

*There must already be a national sports turf manager from your facility or commercial member from your company before you may sign up in the Associate category.

Phone: 800-323-3875     www.STMA.org
STMA Adopts Environmental Policy Statement

**AT THE FALL BOARD MEETING**, the STMA Board of Directors adopted an Environmental Policy Statement that includes an environmental mission, vision, principles and goals. This policy lays the groundwork for STMA’s efforts in developing environmental programs for members and in creating partnerships with other organizations.

The statement was developed by the Environmental Committee during the previous eight months under the leadership of Chairman Kevin Trotta. Members of the committee include Pam Driver, Beth Guertal, Ph.D., Mark Lucas, Scott MacVicar, David Minner, Ph.D., Kevin Mercer, Paul Patterson, Jim Sluiter, John Sorochan, Ph.D., Gwen Stahnke, Ph.D., Mike Tarantino, CSFM, Waldo Terrell, Vickie Wallace, Clint Waltz, Ph.D., and Rich Watson. The committee’s next steps are to develop action plans that will provide a roadmap to achieving the set goals.

**ENVIRONMENTAL VISION STATEMENT:** An environmentally sustainable sports field industry for present and future generations.

**ENVIRONMENTAL MISSION STATEMENT:** To practice and promote environmental stewardship and education in the management of sports fields and facilities.

**PRINCIPLES**

- **Education** is a key to continued improvements in environmental performance
- **Leadership** means performance beyond compliance
- **Sustainability** is not an established set of practices. It’s a goal.
- **Natural resource stewardship** benefits current and future generations
- **We** can reduce, reuse and recycle
- **Prosperity** and pollution can be disconnected
- **Sports turf** provides communities with social and economic benefits
- ** Appropriately managed turfgrass enhances air and water quality**
- **Best Management Practices** are tools for reduced environmental impact
- **IPM** affords a sensible approach to managing turfgrass pests
- **Trends** in equipment and vehicle development promise continued reduction in environmental impact

**GOALS**

- **Sustainability.** Ecologically compatible, socially desirable and economically viable sports turf
- **To advance environmental awareness and provide educational opportunities for sports field managers**
- **Pursue alliances and collaborations that foster the STMA’s Environmental Mission**
- **Encourage participation in stewardship and certification programs**
- **Openly communicate our actions and intentions**
- **Encourage research that integrates environmental stewardship and sports field management**
- **Continual improvement in STMA’s environmental performance and leadership**
- STMA members are invited to use these principles as appropriate and promote their stewardship within their facilities and their communities.
Growing a Foundation from the Roots Up

THE FOUNDATION FOR SAFER ATHLETIC FIELDS FOR EVERYONE (SAFE) is growing, in part to a new initiative rolled out by its Board of Trustees in November. The Grass Roots Initiative is designed to engage STMA members in providing ground level support for the Foundation. SAFE is STMA’s 501 (c) (3) charity.

This initiative is important to build recognition of SAFE within the STMA membership, thus enabling the Foundation to raise funds from those external to STMA. External donors want to know that the association’s members support it own charity. Grass Roots is the first step in an industry-wide initiative: Sports and Recreation Fields - Safety First. Its core purpose is to fund education, outreach, research and scholarships to advance the safety and sustainability of playing surfaces and reduce sports field injuries.

Through the Grassroots campaign, STMA members are asked to contribute at a minimum an amount that corresponds to the year that they joined the association, and donate that amount each year for 5 years. For example, if a member joined STMA in 2001, he/she would contribute $20.01 each year for a total donation of $100.05.

The grass roots initiative has increased it number of donors by more than 1000 percent from its ground level support in previous years. SAFE’s fundraising programs also expand beyond Grass Roots. SAFE raised more than $277,000 during this year’s STMA conference events, which included a golf tournament, a casino night, raffles, and silent and live auctions.

The SAFE Foundation spent 2011 redefining itself. It implemented a new mission, a new vision and officially changed its name. Previously it was known as the Foundation for Safer Athletic Field Environments. Its new mission focuses on outreach to communities highlighting the importance of safe fields for users at all levels.

SAFE continues to contribute to the overall growth of knowledge and talent within the industry. Since 2003, with its limited funding it has awarded $112,250 in pure scholarship and grant dollars representing 101 recipients.

SAFE has provided more than $50,000 in travel assistance to these recipients, and awards $8,000 annually to the two top winning Student Challenge teams at the annual conference. SAFE also supports the development of STMA educational materials. With additional funding SAFE will do so much more.

SAFE’s goal is to raise $1,000,000 over 5 years.

The Next Steps

Fundraising is key for SAFE to successfully accomplish its mission of making sports fields safer for play.

Goal $1 million over 5 years

- Auctions & Raffles
- Golf Tournament
- Casino Night
- Grass Roots

Donations

STMA Affiliated Chapters Contact Information

Sports Turf Managers Association of Arizona: Chris Walsh cwalsh@scottsdaleaz.gov
Florida #1 Chapter (South): 305-235-5101 (Bruce Bates) or Tom Curran CTomSell@aol.com
Florida #2 Chapter (North): 850-580-4026, John Mascaro, john@turf-tec.com
Florida #3 Chapter (Central): 407-518-2347, Scott Grace, scott@sundome.org
Minnesota Park and Sports Turf Managers Association: www.mpstma.org
Nebraska Sports Turf Managers Association: 402-441-4425.
Oklahoma Chapter STMA: 405-744-5729; Contact: Dr. Justin Moss
Oregon STMA Chapter: www.oregonsportsturfmanagers.org
OregonSTMA@gmail.com
South Carolina Chapter of STMA: www.scstma.org.

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March 2012 - Expires August 2012 - RS1203

1 What is your company’s primary business? (check ONLY ONE)
   A ☐ Sports Complex  B ☐ Athletic Field and/or Park Architect/Designer
   G ☐ School, College or University  P ☐ Park
   H ☐ Other (please specify)        

2 Which of the following best describes your title? (check ONLY ONE)
   A ☐ EXECUTIVE/ADMINISTRATOR — President, Owner, Partner, Director, General Manager, Chairman of the Board, Purchasing Agent, Athletic Director
   B ☐ MANAGER/SUPERINTENDENT — Superintendent, Landscape/Ground Maintenance Manager, Foreman, Supervisor
   C ☐ GOVERNMENT OFFICIAL — Government Commissioner, Agent, Other Government Official
   D ☐ SPECIALIST — Architect, Designer, Consultant, Agronomist, Horticulturist, Certified Specialist
   F ☐ COACH  E ☐ Other (please specify)

3 Do you have the authority to buy, specify or recommend products and/or services for your business or organization?  Y ☐ Yes  N ☐ No

4 Yearly operating expenditures (excluding salaries)
   F ☐ Over $1 million  G ☐ $50,000 - $100,000
   E ☐ $50,001 - $1 million  B ☐ $25,001 - $50,000
   D ☐ $100,001 - $500,000  A ☐ $25,000 and under

5 Please also send a free subscription to the following people at the same location
   Name ______________________  Title ______________________
   Name ______________________  Title ______________________

Continued from page 37

There are also potential disadvantages to direct injection:
• Material more expensive
• Equipment and maintenance expensive
• Danger of handling acids
• Irrigation efficiency and uniformity must be optimal
• Segregation of areas is not possible (e.g., greens versus fairways in golf courses)

As human population grows and fresh water becomes increasingly scarce, recycled water is a viable alternative to costly, limited potable water for irrigating turfgrass sites. Recycled water is often better tolerated by turfgrasses than by other landscape plants; simultaneously, turfgrass venues, with their large expanses and trained maintenance staffs, are particularly well-suited to incorporate recycled water in their irrigation programs.

Urban population growth ensures an expansion of turfgrass sites for a variety of recreational and functional uses, and this means that irrigation with Purple Gold will be a permanent part of our urban landscape schemes.

M. Ali Harivandi, PhD, is an extension specialist at the University of California Cooperative Extension. This excerpt was reprinted with his permission and that of Dr. Kimberly Erusha of the USGA Green Section.
Is today your day?

What date should I apply my pre-emergence herbicide? What month should I begin to fertilize my fields? What is the best date to treat for beetles?

I often get questions asking for a calendar date to initiate annually reoccurring management activities. These activities are often season annual activities that may relate to environmental conditions. While I have generally resisted the temptation to associate every management practice to a calendar date, I have found myself doing just that more and more over the past several years. I’ll discuss that more in a moment, but first let’s look at the examples in the questions above.

Pre-emergence herbicides obviously need to be applied before the weeds emerge. Some people have suggested that crabgrass germination can be linked to initiation of flowering by dogwood trees. While this technique may work for some, these trees bloom in relation to day length, not temperature. The data indicates that crabgrass can begin to emerge when the soil temperature reaches about 54 degrees near the soil surface for 3-5 days with most emergence kicking in at soil temperatures of 60 degrees. Goosegrass will also begin emerging at 60 degrees. What date is that in your area? It may be well before the dogwoods bloom.

Timing of initial spring fertilization of bermudagrass fields depends on green-up, assuming your fields went dormant. Green-up is also largely dependent on soil temperatures. In central North Carolina green-up begins as early as mid-February to as late as mid-April. Assuming we want at least 80 percent green-up before fertilizer application (plus wanting to be after the last frost date), we often do not start fertilizing bermudagrass fields until at late March. But there was one year in the past five that early March was an appropriate fertilization date. What date do you typically have 80 percent green-up?

Beetle mania? If you have ever had a bad case of grubs, then you know what I’m talking about. Grubs are the larvae stage of an adult beetle. The beetles emerge sometime in the early summer (most places), eat plant material, mate, and then (females) lay eggs toward end of summer. The eggs hatch relatively soon after being deposited in the soil and the larvae burrow deeper in the soil in the fall while feeding on roots and organic matter. The grubs return to the soil surface in the spring with warmer soil and emerge as adults to complete a year life cycle. I am no entomologist, but it seems to me that this year-long process is at least partially related to temperature. The grubs hang out in the soil and feed and then emerge when it is fairly warm. Grubs are best controlled when they are small and feeding near the soil surface. When is that in your area? Apply at the wrong time and control is almost zero.

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So, all three scenarios have a relationship with temperature. We associate days and months of the year with “normal temperatures,” at least that is the relationship our meteorologist tells us every day when giving the day’s forecast. But warmer or cooler-than-average temperatures that may shift germination, green-up, or beetle emerge in one direction or the other. Of course one great attribute of today’s products is the residual aspects. Pre-emergence herbicides often last 6 to 10 weeks, slow release fertilizers can last a few weeks to months, and many insecticides may last 2 to 3 weeks.

This residual activity allows a turf manager to get their products out a little ahead of the peak need without negative consequences—lack of control of the target pest (weed or grub) or too rapid a flush of new growth from the fertilizer. This is particularly important with weed control because once the weed is present, it is largely a waste of money and product to apply the pre-emergence herbicide.

So consider other factors than just a calendar date. You can track your on-site soil temperatures, or you may be able to use a state weather tracking service for regional information. For example in North Carolina we can track 24 hour mean soil temperatures at http://www.nc-climate.ncsu.edu/products/wx. These types of weather sites can often be found by searching climate along with your state’s name in a search engine.

So, yes we often put management practices on calendar schedules because we are asked to do so and we realize it is easy for some people to use these references. But realize that the need for management inputs may often be more related to temperature or other biological events much more so than a date on a calendar. Knowing this will allow you to better time your applications so that you get better control of pests and healthier turfgrass on your fields.