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## Purple Gold

### A contemporary view of recycled water irrigation

by [Dr. M. Ali Harivandi](#), Extension Specialist, University of California Cooperative Extension



Most of us are familiar with the term **Black Gold** as another name for oil, and we may have heard of **Blue Gold** used in some quarters in reference to water. World news increasingly delivers stories of water being "privatized" or of political fights between those who would commoditize it and those who believe access to clean water is a basic human right. Without question, humanity is polluting and wasting water even as its need for water grows with increasing population. Thus, just as it appears that wars today are fought over oil, future wars may be fought over water (for an excellent treatment of this topic, see *Blue Gold: World Water Wars*, a documentary film, as well as a book, by Barlow and Clarke).

Agronomists generally do not play the roles of economist, diplomat, or soldier. We can, however, try to educate, and sometimes the topics we broach have large consequences. The use of recycled or reclaimed water is, I believe, such a topic. And considering the critical water needs of today's world, I would like to assign to recycled water the term **Purple Gold**, after the color officially used to designate all equipment contacting it. Having worked with this resource for over 30 years, evaluating its potential for turfgrass and landscape irrigation, I have witnessed its quality increase significantly. As quality has increased, both the value and the use of recycled water have also risen dramatically. I believe recycled water, already deserving of the name **Purple Gold**, will be recognized as such society wide in the near future. Already, in the face of increasingly common drought, habitat erosion, and the escalating cost of potable water, recycled water is the **Purple Gold** of urban landscape irrigation. In light of recycled water's importance, a review of its qualities and of the management practices needed to use it successfully is in order.

*Editor's note: In addition to discussing how water is recycled, this article includes excellent reference information for evaluating water quality as well as how well various turfgrasses tolerate salinity.*

[Read the rest of this article](#)

## 2012 USGA Green Section Award

### Dr. Wayne Hanna, Turfgrass Scientist and Breeder

by USGA



Dr. Wayne Hanna

The United States Golf Association has selected turfgrass scientist Dr. Wayne Hanna, of Chula, Ga., as the recipient of the 2012 USGA Green Section Award for his achievements in developing environmentally friendly grasses that have made a tremendous impact on golf courses around the world.

Presented annually since 1961, the Green Section Award recognizes individuals who have made an outstanding contribution to the game through their work with turfgrass. The USGA Green Section was created in 1920 to conduct research and to collect and distribute information about the proper maintenance and upkeep of golf courses to Member Clubs and courses.

During his 40-year career, Hanna has produced bermudagrasses such as TifSport, TifEagle and TifGrand, all of which are hardier and less costly to maintain, while providing excellent fairway and putting surfaces for the enjoyment of millions of players, including those competing in USGA championships.

"I've gotten a lot of feedback over the years," said Hanna, "but when an honor like this comes from the USGA Green Section, it's the icing on the cake. The USGA is the leader in making sure these grasses we develop perform to expectations and beyond."

A native of Texas, Hanna earned multiple degrees, including a Ph.D. in genetics, from Texas A&M University. He settled in Tifton, Ga., in 1971, beginning a long career as a research scientist for the U.S. Department of Agriculture and the University of Georgia.

Hanna collaborated with Dr. Glenn Burton, recipient of the 1965 USGA Green Section Award, and their breakthroughs over the years are a big reason Tifton is known as the bermudagrass capital of the world. Hanna's innovations have provided ideal surfaces for home lawns, public spaces and sports fields, including many college football and NFL stadiums.

[Read more about Dr. Hanna](#)

## Regional Updates



### Northwest Region

by [Larry Gilhuly](#) and [Derf Soller](#)

### Football Penalties As They Relate To Golf Course Maintenance

It's that time of year when attention diverts away from playing golf outdoors (except in warmer climates) and spending more quality time watching large human beings hit each other with force and purpose on the football field. During this time of year it is also a good time to reflect on the game of golf and look at the profession of golf course maintenance from various angles.

In football, there are numerous penalties called when rules are broken. Some can completely change the direction of a game or season. The same applies for golf course maintenance. Let's look at the names of these penalties and how they relate to golf and golf course maintenance:

**Personal foul** - Talking to a golf course maintenance employee in a derogatory manner. Major penalty that can easily be avoided. Forget your last bad shot and treat all staff members as you would like to be treated.

**Illegal motion** - Changing how a course is maintained due to individual preferences. Maintenance standards are the simple answer to halting illegal motion. If this penalty is allowed, it can destroy an entire season.

**Chop block** - Refusal to consider the negatives associated with trees. Turfgrass and trees together on a golf course always result in the larger plant winning. Tree shade removes needed sunlight, and turf and roots compete for water or nutrients. Often, trees require removal.

There are plenty more - [Read the rest of this update](#)



## Florida Region

by [John H. Foy](#), director

### *Why Can't We Have Firm And Dry Conditions Throughout The Winter In Florida?*

Golf in Florida is a year-round proposition; but for clubs and courses in the central to southern part of the state, the majority of rounds are played between October and May. Providing consistent and top-quality conditioning throughout the winter play season does present some very unique challenges. With the majority of play occurring when warm season turfgrasses, such as bermudagrass and seashore paspalum, are not actively growing, aggressive and disruptive cultural management programs are needed through the summer months to ensure that the turf cover is properly prepared to survive the winter season. Over the past three or four years, many private clubs throughout the region have implemented programs to try to increase play during the summer, and in turn, revenues. When summertime programs are deferred or eliminated in order to minimize disruptions and inconveniences, there are ultimately agronomic consequences.

[Read the rest of this update](#)



Until the transition out of the rainy season has occurred, being able to maintain firm and dry course conditions during the time when peak seasonal play is being hosted can be a real challenge.



## North Central Region

by [Bob Vavrek](#), senior agronomist

### December Dilemma

A few more courses try to protect greens with covers every time a region is affected by a severe bout of winterkill. Unfortunately, conditions for winter injury from ice suffocation and crown hydration have been quite favorable these past several seasons, so the number of courses trying covers for the first time has increased dramatically.

The top '*frequently asked questions*' with respect to green covers for the first time user is the issue of timing. Superintendents that have little or no experience with covers want to know the optimal time to install and remove the protection. Experienced superintendents know this is a crapshoot.



Why worry? First, installing a cover too early may delay or reverse the turf hardening process. Temperatures will increase quickly under a cover during a few consecutive days of mild, sunny December weather, and this may encourage the turf to break dormancy. Similarly, mild weather during late winter can encourage early green-up and turf growth beneath a cover. This could make the turf susceptible to low temperature injury once the covers are removed.

The temperature at ground level beneath a standard woven cover can reach the low 80's on a sunny day when air temperatures barely climb into the mid 40's. No doubt this can disrupt the natural hardening process of turfgrass during fall and the de-hardening process during late winter and early spring.

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## Mid-Atlantic Region

by [Keith Happ](#), senior agronomist

### Preparation For Winter Is Well Underway



(L) During the winter and early spring, the sun is much lower in the southern sky. Take the time during the winter months to evaluate sun angles in essential areas of the course. (R) Topdressing to protect the turf prior to winter weather can provide a level of insulation and a degree of additional free drainage for the crowns (the growing points) of the turf.

How long is your winter work check list? Most golf course superintendents have almost completed their preparation for the upcoming winter months. Preparing the turf for dormancy and freeze/thaw cycles takes time and should not be taken lightly. There are several strategies that can be employed to maximize turf health and minimize the potential for problems next spring. The following are some key examples.

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## Northeast Region

by [Adam Moeller](#), agronomist

### Frost, Temporary Greens, Budgets, and Balance

Golf in the northeast has slowed significantly over the past week as frost delays are getting longer and darkness hits earlier each day. It's tough on anyone hoping to get in a few more rounds before the New Year. Traffic on frost-covered turf can be very damaging; although the delays may be frustrating, they are necessary to preserve the long-term health of the grass. Turf has gone dormant (i.e. stopped growing) at most courses in the region, so it's a great time to close the greens and direct play onto temporary surfaces. Traffic and subsequent thinning on dormant greens will not recover until growth resumes in the spring, which can ultimately impact spring and summer conditions. Playing conditions on the greens at this point are sure to be bumpy and inconsistent and often don't play much better than quality temporary greens anyway. Although the decision may be unpopular, directing play to temporary surfaces will lead to better putting green turf next year.

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*by the USGA Green Section Staff*

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