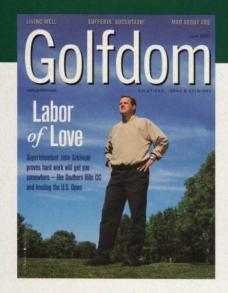
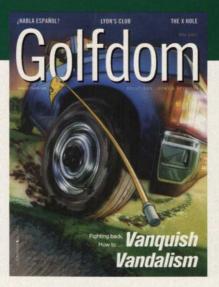
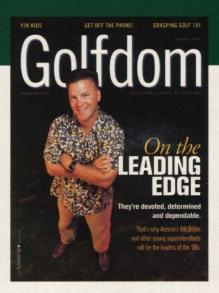
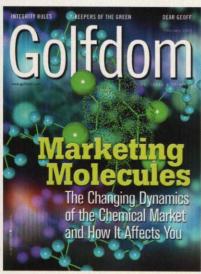
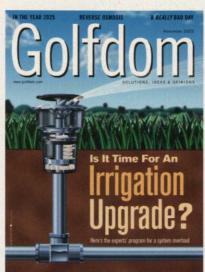
5 Great Years ... And The Best Is Yet To Come

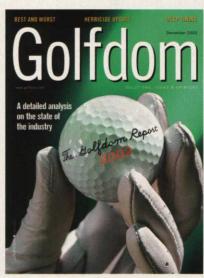


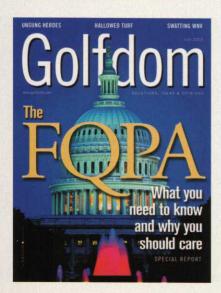












Golfdom

Read It. Live It. Love It.

Real-Life Solutions

■ IRRIGATION SYSTEM UPGRADE

Making the Most of the Money

New turfgrass cultivars forced Ridgeway CC to replace its 30-year old irrigation system, using a creative financing method to fund the job

BY FRANK H. ANDORKA JR., MANAGING EDITOR

ime finally ran out on the irrigation system at Ridgeway CC in Memphis, Tenn. After more than 30 years of valiant service, it couldn't pump enough water to meet the needs of the new zoysiagrass fairways and bentgrass greens that certified superintendent Al Davis installed.

"It was a great system when it was installed in 1971, and it served our needs well for a long time," Davis says. "But we were fixing 50 to 60 leaks per year, and it was expensive to fix them."

So Davis started looking for a new irrigation system. He replaced his hodge podge of different parts with a complete, one-brand system through careful planning in conjunction with an irrigation consultant. Then

Ridgeway got creative when it came to financing to make sure the project was completed.

The problem

It all started when Davis decided to change the turf on his course. Wanting to improve the overall turfgrass quality of his course, he switched from bermudagrass greens and fairways to zoysiagrass fairways and bentgrass greens. He chose zoysiagrass because peers told him it was drought-tolerant, which after last year's weather conditions seemed like a godsend.

Trouble was, once he planted the turf, he discovered what he'd been told about zoysia wasn't necessarily true.

"I didn't find zoysiagrass to be more drought-tolerant," Davis says. "So between the bentgrass and the zoysia, we pushed the limits of our irrigation system more than in the past."

The old system watered between 55 acres and 60 acres of bermudagrass tees, greens and fairways and handled that adequately. But after the transition to turf that needed more water, it finally broke down. Leaks sprung up at the rate of five per month because of the increase volume of water being pumped through 30-year-old piping. When Davis wanted to fix a leak, he had to shut off the entire system. And the process of repairing leaks caused other related problems.

"Whenever you fix an irrigation leak, there's the disruption of digging up the pipes, and you run the risk of breaking pipes and cutting wires," Davis says. "We were doing some of that, so it had become a nightmare."

Finally, Davis says he had no central control over the older irrigation system. To change the cycles, he had to change the electromechanical clocks by hand at every station. "It was time-consuming and not cost-efficient," he says.

The club authorized the purchase in the spring 2002 after being warned that the system was inadequate to deal with another long, hot summer.

The solution

Davis' first move was to hire an irrigation consultant as he started planning for his new system.

"It was his job to sell the board members on the need for a new system and the advantages it would bring," Davis says. "If I tell them they need a new system, they may not listen. But if a consultant tells them the same thing, they're attentive and are more likely to authorize the purchase."

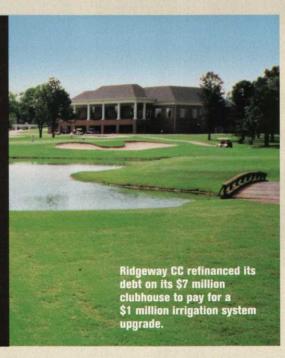
Hi second decision was to create a

Problem

A 32-year old irrigation system couldn't handle the increased capacity after Ridgeway CC changed from bermudagrass greens and fairways to bentgrass greens and zoysiagrass fairways.

Solution

A new \$1 million system allowed the superintendent to increase the amount of irrigated turf from about 60 acres to 150 acres. What allowed the project to move forward in a down economy was the refinancing of debt already spent for a clubhouse renovation.



global positioning system (GPS) map for his course. (The GPS is a web of 24 government-run satellites in 12-hour orbits and employs the triangulation method to determine position.) The goal was to use the map to determine how much pipe a new system would use. Davis says it helped him more accurately forecast the amount of pipe he would have to buy.

"I didn't have a good irrigation map, and the GPS map was the best investment I could have made," Davis says. "It was so accurate that we predicted within a few sticks of pipe how much we needed."

Davis says he was so impressed with how long his previous hybrid system performed, he initially wanted to follow the same formula this time around. When Davis went to his consultant with the idea, however, he laughed. "He told me he couldn't do that because we'd never get any warrantees with a mix of systems," Davis says.

Davis asked his peers to recommend a single system to install. He eventually chose Hunter Industries.

The most attractive piece of his new irrigation system is that the central-control computer program is being customized for his golf course, Davis says. Hunter sent its computer programmers out to discuss exactly what features he needed so they could include them in the package. (In late June, the program was still being written, and Davis was operating on a temporary system.)

"I'm not good with computers,"
Davis says. "I've never had a computer
before, let alone computerized control
for my irrigation system. But I'm learning how to do it now, and I like the
flexibility."

He was also impressed that the new system will run automatically even if his computer goes down. Each satellite is programmed to run on the last schedule it received even if there's no communication from the central computer. "Once they train me and I get

the Internet at my shop, I'll even be able to run it over the Web," he adds.

There was still the problem, however, of how to pay for the \$1 million system. The economy is still in the doldrums in many parts of the country (including Tennessee), so it took some creative thinking at the course to find the funding. Fortunately, a previous \$7 million clubhouse renovation came to the rescue.

"The club was able to go back to the bank and say it needed an extra \$1 million for the new system," Davis says. "That ended up being no problem."

RENOVATION HIGHLIGHT



A special advertising section brought to you by

A Look Back in Time

In 2001, Philadelphia Country Club underwent a major transformation of its storied course. During the renovations, which included much needed tree work and fumi-

gating the fairways, and greens, a number of old aerial photographs were found. The photographs were taken during the late 1920's and show much of the course in its original design.

The photos showed very large, dramatic bunker complexes which didn't reflect their present state. Course Superintendent, Mike McNulty was quite surprised.



"We knew the bunkers were grassed in several decades ago. But the old photos showed that our current bunkers were roughly two-thirds the size." McNulty said. He further determined that much of the grassing had occurred to minimize bunker maintenance costs.



McNulty had the opportunity to install Sandtrapper, TM an advanced polymer designed specifically for lining bunkers. "With so many of the newly redefined bunkers having dramatic shapes and flashing, we had to identify a solution." Along with new drainage systems, they installed Sandtrapper on the severe slopes to complete the bunker renovation on 9 of their 27 holes.

We followed up with Mike to see how well Sandtrapper worked on his new bunkers. "This product has worked exceptionally well. We've had several big storms recently that washed out most of bunkers without Sandtrapper." When asked how this product aided in his renovation, he replied, "We're going to install Sandtrapper on another 9 holes this year."

If you're planning some projects this year, make the bunkers a priority. Hundreds have already done it. To find out more about Sandtrapper, call IVI-GOLF toll-free at 888-970-5111 or visit www.sandtrapper.com.

©2003 Indian Valley Industries, Inc. Sandtrapper is a trademark of M-GOLF 2003, All rights reserved

73

All About Glyphosate – And Getting the Most Out of It

BY STEVE HART

y definition, nonselective herbicides are herbicides that will completely control or cause serious injury to any plant to which they are directly applied. A number of nonselective herbicides are labeled for use on golf courses and are generally described as either "contact" or "systemic."

Contact herbicides will only control the portions of the plant they are applied to and have little to no movement within the plant. These herbicides have rapid activity, but their use on golf courses is limited, because of the lack of complete perennial weed control. Diquat (Reward) and pelargonic acid (Scythe) are two contact herbicides that are labeled for use on golf courses.

Glufosinate (Finale) also has rapid herbicide activity and will translocate to a limited extent. Glufosinate has a greater potential to provide more complete control of perennial weeds than diquat or pelargonic acid, but the extent of control is heavily dependent on application rate, environmental conditions and the perennial weed species.

In contrast to contact herbicides, glyphosate is a systemic herbicide that will translocate throughout the plant and will provide control of nearly all annual and perennial weed species. Its broad weed control, combined with many favorable toxicological and environmental characteristics, is a reason of its widespread use throughout the world.

The glyphosate product parade

Until recently, Monsanto marketed glyphosate primarily in the turf and ornamental industry under the brand name Roundup. In the 1990s, Monsanto reformulated glyphosate, and marketed Roundup Pro, which contained a proprietary adjuvant system that did not require the addition of non-ionic surfactant. Currently, Monsanto markets both liquid and dry formulations of Roundup Pro as well as Roundup Original, which does not contain a built-in adjuvant system.

Starting in the late 1990s, additional companies began marketing glyphosate-containing herbicide products. While increased competition can bring economic benefits to golf courses, there was a great deal of concern that these products would be formulated differently (in terms of adjuvant



system and amount of active ingredient) than the Roundup brand of products, leading to confusion about product-use rates and additions of nonionic surfactant. Fortunately, although the brand names differ, these products are similar to the Roundup Pro and Roundup Original formulations. Cheminova offers Glyfos Pro and Glyphos; Dow AgroSciences offers Glypro Plus; Lesco offers Prosecutor Pro and Prosecutor; and

Riverdale offers Razor Pro and Razor.

In all cases, these products contain the same active ingredient (41 percent glyphosate) as the Roundup brand of products so that product-use rates are equivalent. The brand name with a Pro or Plus attached to it indicates that the product contains a built-in adjuvant system similar to Roundup Pro.

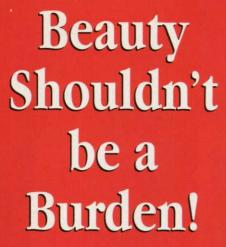
The notable exception to this similarity in products is Touchdown Pro, marketed by Syngenta. It has a different salt formulation and adjuvant system than other glyphosate formulations, and the addition of a non-ionic surfactant is recommended at spray volumes of 30 gallons per acre (GPA) or more.

Is faster activity better?

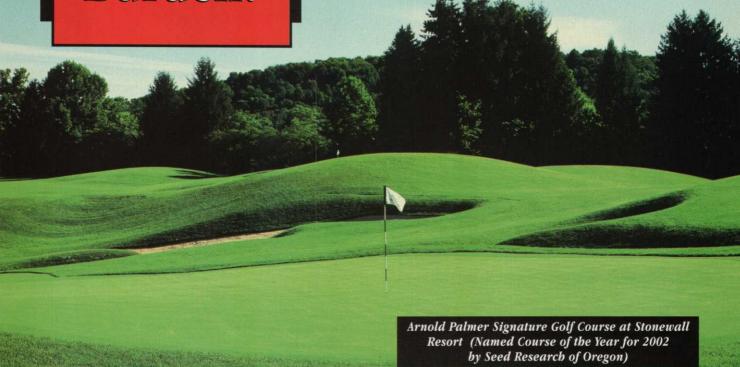
Visible injury symptoms on weeds treated with glyphosate are slower to develop in comparison with the other nonselective herbicides, and complete control of some weed species may take up to two to three weeks. To obtain more rapid herbicide activity, glyphosate is often tank-mixed with pelargonic acid (Scythe).

Recently, Monsanto introduced a combination product marketed as Quik-Pro, which contains a small amount of diquat. While superintendents may find these products beneficial for rapid weed control in and around clubhouse grounds, I would not recommend these products for situations that call for complete control of perennial weeds or turfgrass species. Use of pelargonic acid or diquat with glyphosate may desiccate treated foliage too rapidly, leading to reduced glyphosate translocation that results in incomplete control of perennial weeds or turfgrass species.

Hart is an extension specialist at Rutgers University/Cook College.



The superintendent's best friend since the mower, **SR 1119 Creeping Bentgrass** will get your course looking twice as nice with half the effort.



he top-performing creeping bentgrass available, SR 1119 Creeping Bentgrass delivers fast greens without resorting to microscopic mowing heights. This keeps your golfers happy, your greens healthy and you looking like a miracle worker. With nine years of testing, evaluation, and countless successes across North America, SR 1119's superior disease resistance makes it the ideal choice for lush fairways, manicured tees and fast greens. SR 1119's rapid establishment will get your course back in the swing of things quicker than...well, why take our word for it? Read what one of our customers says:

"Just wanted to let you know bow great your SR 1119 is. It is the best bent I have ever used – the golfers love it. The germination and establishment are great. We were mowing newly seeded areas in 8 days. Yesterday one of our owners asked me what we could do to slow down the greens, and we are currently mowing at .125!"

Mike Friedman, Superintendent of Links at Langham in Burlington, VT





Hips

Fountain Maintenance

While they are self-sufficient, they require proper attention to run effectively and not break down By Peter Blais

ountains improve golf course aesthetics, help control algae and steer golfers clear of water hazards. Superintendents realize their value and will take a number of steps to ensure they work properly through the dog days of summer before servicing them this fall to prepare for next season.

With time such a precious commodity during the hectic summer months, one of the best things about fountains is they generally require little maintenance.

Glenn Miller, superintendent at The Golf Resort at Indian Wells (Calif.), has 20 fountains ranging in age from two months to 10 years. Most are AquaMaster Fountain and Aerator models. He has only replaced three units and a handful of parts. "The fountains are pretty self-sufficient," he says.

On each fountain, Miller changes the oil every two years, relevels the supports occasionally so the float is at the proper level, assures that the spray doesn't wander too far right or left, and cleans the calcium scaling twice a year that can build up on the water-intake screens. (He cleans the screens when the water is warm since the job can require getting into the water.)

Frank Bavard, owner of Custom Fountains, a fountain manufacturer and distributor headquartered in Mason, Ohio, says the only item that needs to be maintained during the summer season on one of his firm's units is the pump intake. "As long as it is not blocked and water can run through the pump as it's supposed to,

you have a product that will last for years," he adds.

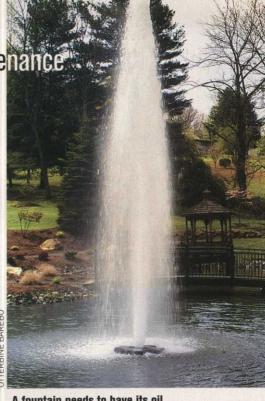
Bob Robinson, director of sales with Kasco Marine, says the can surrounding the motor and working parts of the Prescott, Wis.-based firm's fountains should be cleared of calcium, algae or other biological matter every six months. The motor sits inside the can and is cooled by the surrounding water. The insulating effect of unwanted algae and calcium on the can may cause the motor to overheat, shortening its life. Also, a sacrificial zinc anode on the shaft is more susceptible to corrosion than the stainless steel on other fountain parts. It should be checked, and replaced if needed, every six months in the North and more often in the South.

Mother Nature can unexpectedly wreak havoc with fountains during the summer months.

"The only maintenance problem we've had was with a turtle eating an electric line," remembers Tony Rutherford, superintendent at Shadowood GC, in Seymour, Ind., who uses Aqua Control fountains. "One other time we had to replace one of the cables we use to secure the pump to the shore."

Buck Workman, superintendent at Cateechee GC in Hartwell, Ga., says lightning has occasionally damaged the units and required an electrician to repair. Otherwise, he does little to them.

Workman says his Otterbine Barebo fountains are part of an overall algae-control plan. Like most superintendents, he uses a variety of programs and products, along with fountains,



A fountain needs to have its oil changed and its support releveled so the float is at the proper level.

to control the unwanted plant.

Gregg Grenert, superintendent at Samoset Golf Resort in Samoset, Maine, uses six fountains scattered around his property in conjunction with either barley bails sunk below the water's surface or the easier-to-use barley pills to help control algae. He also uses pond dyes that help minimize the amount of sunlight reaching the algae. And he maintains fertilizer-free buffers around his ponds. "The worse thing to do is fertilize anywhere near the ponds because you introduce a food source for the algae," he advises.

Off-season maintenance

The major decision facing Northern superintendents is whether to remove their fountains in late fall or leave them in the water through the winter months.

Mike Jones, superintendent at the Lochmoor Club in Grosse Pointe Woods, Mich., has two Aqua Control fountains he sinks and runs through the winter as aerators to help keep the fish healthy.

"We do little to them in terms of maintenance," Jones says. "We've had the three-horsepower for three seasons and the two-horsepower for two seasons. Come winter we take the nozzles off so they basically becomes bubblers."

Aqua Control General Manager Reanna Pelszynski says: "We recommend they [superintendents] take the unit out or sink it. It can be used as a de-icer to keep a portion of a pond open for wildlife or to protect a dock if you sink the unit and remove the nozzle."

Grenert removes his fountains from his Maine ponds in November.

"I've built cradles for them where we can keep them in the winter," he says. "We steam clean them, and then go through the fountain to make sure the working parts are clean and lubricated. We store them in a dry container. I have a fountain on the 13th hole, and the only thing I've had to rebuild since 1986 is the float itself. If you maintain them properly, you can get a lot of mileage out of them."

Otterbine Barebo Marketing Coordinator Robin Bio offers this advice: "If the unit was in storage over the winter, before re-installation in the spring, we suggest performing a routine maintenance check. Glance over the float and spin the propeller to make sure the bearings are free. To ensure that the unit is in prime condition when it is re-installed, and if the unit incorporates oil into its motor components, this is the ideal time for an oil change. We only recommend an oil change after the second but before the third running season.

"The basic rule: if the water generally does not drop and remain below 30 degrees F, the unit can remain in

the water year-round. It should be run 24/7 to deter any ice formation, which could do serious damage to the motor. If the unit gets frozen into the pond, do not run it until all the ice has melted. Those with oil-cooled motors can keep them in the water year-round. However, diffused air systems should only be kept in so long as there are no moving parts in the water."

AquaMaster Vice President of Sales and Marketing Jerry Goldberg says: "Astute superintendents will have already done a lot of work before putting the fountain in [in the spring]. Look for loose or frayed wires or for any maintenance that can be done internally."

Bio stresses that superintendents be pro-active when water-quality management issues arise and take care of problems immediately, since not acting can result in major turf expenses, particularly on greens. The most common irrigation pond problem, algae and nutrient build-up, can lead to clogged irrigation valves, black root zone and sludge/sediment build-up.

Blais is a free-lance writer from North Yarmouth, Maine.



Dramatically reduce your bunker maintenance costs when you install TrapMaster™

TrapMaster[™] erosion control fabric solves your toughest problems. It's 2-layers – a thick, non-woven polyester "blanket" that absorbs and holds sand in place AND an innovative polyester spunbond fabric that adds durability and prevents contamination. Together, the patent-pending **TrapMaster**[™] 2-layer design:

- Greatly minimizes bunker maintenance costs
- Holds sand on steep bunker faces up to 60°
- Prevents erosion and washout
- · Keeps water draining and sand from clogging drains
- Functions as a weed block

Upper blanket layer allows water to penetrate and drain evenly – drastically reducing the incidence of erosion.

 Sand fills the blanket layer, keeping it in place – even on slopes with up to 60° angles!

 Spunbond underlayer is porous enough to let water pass through but dense enough to keep troublesome weeds and debris out.

"This innovative product was engineered and developed with input from golf course superintendents. TrapMaster" will help solve your sand trap problems for years to come."

> Terry Grosch PGA Master Professional

Call TOLL-FREE 1-866-273-9280

and we'll send you an information packet along with the full

TrapMaster™ story!



Glit/Microtron 809 Broad St, Wrens, GA 30833

Organic Nematode Control Kit



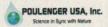
No REI - 100% Natural Effective - Sprayable EPA Exempted

RUTOPIA

Liquid Biostimulant

With Trichoderma and specific bacteria that prohibit the growth of nematodes

Each Kit Covers ½ Acre
Includes .5 Gallons 7509 Emulsifier for DRAGONFIRE-CPP



1-866-709-8102 or 863-709-8102 www.poulengerusa.com

Down and Dirty

DOING MORE WITH LESS

hen most industry outsiders think of golf, they think of wealthy men and women playing on manicured courses at luxurious country clubs. That's not the image you'll see

in Silver Bay, Minn., however.

Reserve Mining Co. carved the town out of the Iron Range of northern Minnesota, where winters are harsh and the golf season is short, to entice people to work in its taconite (a flint-like rock that's a source of iron ore, which in turn becomes steel) mine. The workers attracted to Silver Bay, located on the western shore of Lake Superior, reflected the rock they mined and the area where they

lived - tough, hardened and enduring.

The company built Silver Bay GC to provide its blue-collar workers with recreation after long hours extracting taconite pellets from the ground. But in 1983, Reserve declared bankruptcy. The new owners sold the course to the town. As younger workers fled to other cities in search of jobs and tax revenues diminishing, there wasn't enough money in Silver Bay's coffers to keep the course in playable shape.

Enter certified superintendent and general



Volunteers Stand at the Ready

BY FRANK H. ANDORKA JR.



NORMA O'LEARY
REALIZES SHE
COULDN'T HAVE
DONE MUCH
AT SILVER BAY
WITHOUT HER 125
ADULT MEMBERS
AND THEIR
VOLUNTEER
EFFORTS

Certified Superintendent:
Norma O'Leary
Course: Silver Bay GC
Location:
Silver Bay, Minn.
Maintenance budget:

manager Norma O'Leary in 1990, who harnessed the passion of the remaining residents for the course and their penchant for hard work to save the course money and return it to its former glory.

"People were out of work," O'Leary says.
"It was a hard time for the town. They had lost a lot, and they didn't want to lose the golf course, too."

O'Leary realizes she couldn't have done much at Silver Bay without her 125 adult members and their volunteer efforts. It's an older crowd, most of whom are long past retirement age.

"Most of my members are retired mine workers, so hard work comes naturally to them," O'Leary says. "There's also a pride of ownership that fuels their desire to help."

The list of projects that O'Leary and her band of volunteers has completed is impressive (and too long to list completely here). With their help, she has:

- installed drainage tile under two existing reens;
- installed an automatic irrigation system;
- replaced three dilapidated bridges with new 80-foot-long structures;
- built a heated shop in a new maintenance building;
- sodded entire surrounds of a newly constructed irrigation pond;
- removed and replaced several thousand square feet of sod in preparation of cart path construction;
- shouldered and sodded along edges of all new cart paths; and
 - removed trees.

O'Leary says her initial foray into using volunteer labor hit a snag. She scheduled too many people for a job, and many stood around with nothing to do.

Continued on page 80





1-800-AER8TER
610-965-6018 • www.otterbine.com
Product leasing available.

Maybe It's Time to Look into an Aeration System

No one should have to live with poor water quality. Being the industry leader for over 50 years, Otterbine offers a variety of surface spray and



sub-surface aeration systems that effectively circulate water and transfer oxygen. And with independent testing conducted by the University of Minnesota, you can rest assured that Otterbine systems will surpass all industry standards and your expectations. The result? Beautiful, healthy waterways—on the surface, as well as below where it counts!

Down and Dirty

Continued from page 78

"Volunteers are most enthusiastic when they're actually doing something," O'Leary says. "You have to make sure you don't have idle hands because they'll be less likely to come back next time you need them."

The other vital factor in mobilizing volunteers is to make the job fun, O'Leary says. In return for a little effort on her part, she has saved the course thousands of dollars in labor costs with her small, dedicated army of volunteers.

Since 1990, O'Leary's volunteers have averaged 300 hours per year, with a peak of 500 hours in 1991 during the irrigation system installation. This saves the course between \$3,000 and \$5,000 per year in labor costs.

"We make sure we thank them and let them know their work is appreciated," she adds. "If you combine that with a sense of pride after a project is completed, it's a powerful motivator."

Think about how powerful it would be to have your
members take new interest
and ownership of your
course in a way they may
not now. Think of the opportunities to educate them
about what you do during
volunteer days like those
O'Leary sponsors. Think
about the new respect you
might garner from those members —
and then think of the money you'll

Silver Bay GC is proof that the methods work. O'Leary says the next project, once the city finishes purchasing an extra 24 acres, is to build nine more holes to make the course a complete 18-hole facility — and she expects to do most of the work with her volunteer corps.



Two Silver Bay volunteers lay irrigation pipe during a new system installation.

"We know we can do a fair job building those extra nine holes," O'Leary says. "And we know we'll save the club a lot of money so we can stay within the budget."

Here's betting that O'Leary and her volunteers in an old mining town with its blue-collar work ethic will make it happen.

For Color, Texture, Transition, TMI Varieties are Hard to Beat!



Paragon is in a class all of its own. Better color, finer texture, improved disease resistance. Paragon- the professionals choice.



Its dark green color and dense turf make PIZZAZZ an attractive choice for parks, home lawns and golf courses. Contained high levels of endophytes and is lower growing.



This new selection has unusually dark-green color and a high endophyte count. It produces lush green turf under various soil types and climatological conditions.



A combination of quality and performance...and at an amazingly affordable price. Contains #1 ranked varieties. Available in specific overseeding formulations. Varieties chosen for outstanding ease of transitioning, and genetic dark green color. Contains endophytes.

Perfecting Turfgrass Performance™



33390 Tangent Loop Tangent, Oregon 97389- 9703 Phone (541) 926-8649 Fax (541) 926-4435 800-421-1735 www.turfmerchants.com Two aliens, hovering in a spaceship high above a golf course, observed in amazement as a novice practiced his game.

The golfer duffed his tee shot, shanked his second into the rough, took three to get out of the rough onto the fairway, sliced the next shot into the bushes, then used a putter to get it out on the fairway again.

Above him in the ship, one alien told the other that the man must be playing a sport of some kind. They continued to observe him closely, fascinated.

The golfer hit a great shot into a bunker by the green. He took several shots to get out of the bunker and finally onto the green. He putted several times, and finally got the ball into the hole.

At which point the other alien turned to his partner and said, "Wow. He's in *serious* trouble, now."

