

# Tough Crowd

BY ANTHONY PIOPPA, CONTRIBUTING EDITOR

**T**he golf course maintenance industry is taking on the appearance of a car (golfers' expectations) towing a trailer (superintendents). No matter how fast the trailer goes, it can't catch up to the car.

No matter what a superintendent does, it's just not enough. The greens may be perfect and rolling at 10 on the Stimp meter, but nearby is a course with a green speed of 11, so 10 is deemed too slow. It's inconsequential that the course with a green speed of 11 is 2 years old with flat putting surfaces, while the one course with a green speed of 10 is 85 years old and has wilting, undulating greens that would be impossible to play at higher speeds.

Another part of the problem is also the age-old dilemma of a course trying to keep up with the Joneses even if the Joneses have the largest maintenance budget in the area and a crew the size of a cavalry division. Of course, the color television is also to blame. If only golf tournaments could be televised in black and white.

So superintendents, like the trailer, have no choice but to keep up. This brings to light a predicament that many superintendents face when forming their maintenance budgets.

A major problem with many golf courses is that budgets aren't rising at the same level as golfers' expectations for outstanding turf. So how can superintendents better communicate with golfers and members to find out the things they want and need the most? How can superintendents make it clear to golfers and members that they sometimes can't have everything they want because of budgetary limits?

No matter how tough Fred Behnke's cur-

rent bosses are now, they will never be more demanding than the golf course's previous owners. Behnke is superintendent of Mount Prospect (Ill.) Golf Club, a municipal owned by the Mount Prospect Park District. Behnke says the mob owned Mount Prospect in the 1930s and 1940s. Now that's a boss who would be tough to say "no" to.

"I keep thinking we're going to find a body or money every time we dig an irrigation trench," Behnke says with a chuckle.

Since he has not found any cash, Behnke has to make do with the budget provided him to keep the course up to expectations, while also getting the point across to management and golfers of what's attainable and what's not.

"My boss made it clear that he's not going to tolerate what most people consider municipal conditions," Behnke says.

That's a tall order, considering that Mount Prospect's most-expensive green fees are \$46 for nonresidents on weekends. The expectations, though, are high because of so many good public layouts in the Chicago area — which Behnke says leads to an interesting phenomenon when his regulars return from one of the expensive courses. "They spent a lot more money, so they are not going to say our place is just as good," he says, even though the course just might *be* as good.

Behnke, who has been at Mount Prospect for nearly 20 years and is president of the Chicagoland Association of Golf Course Superintendents, has found that talking to golfers individually about the course's budget is the best way to communicate with them. Then they understand better why he can spend

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**Budgets aren't rising at the same level as  
golfers' great expectations for outstanding turf.  
What are superintendents to do?**







**"I want to  
communicate  
what it takes  
to achieve  
X, Y and Z."**

BOB ALONZI  
FENWAY GOLF CLUB

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money to do some things but not some others. Behnke's point is that most people — if you talk to them alone and reasonably — will be reasonable with *you*.

Behnke says another part of his job is to "act as a filtering mechanism." Because the county runs the course, a commission oversees its operation. That means the general public can voice concerns directly to the commission. Behnke says golfers won't go over his head if he answers their queries at the golf course.

Despite his challenges, Behnke says he might have an advantage over superintendents at upscale private courses.

"My golfers are mostly middle-class," he says. "They have heard the word 'no' in their lives. The guys at private clubs have it harder because they are dealing with people not used to hearing 'no.'"

Bob Alonzi will attest to that. The superintendent at Fenway Golf Club in White Plains, N.Y., has been a superintendent in the ultra-competitive Westchester County area for more than 30 years, including a stint at Winged Foot Golf Club. According to Alonzi, one of his biggest problems over the years has been dealing with a person in a position of power — whether it is green chairman or club president — who makes decisions on his own, foregoing the normal procedure.

"It becomes very political," Alonzi says. "You can't run the golf course for one person."

In these situations, people used to exercising power believe they can make changes by merely passing on the dictum without thoughts of budgets or manpower. "They want to leave their mark," Alonzi says.

Alonzi tries to combat this problem through what he calls "familiarization," or teaching his members without making them feel like they are being taught.

"It's really getting to know the people you work for," he says, noting that it's about carefully explaining why their wants and desires may not be realistic. "I want to communicate what it takes to achieve X, Y and Z."

At Barefoot Resort and Golf in North Myrtle Beach, S.C., Patrick Donelan deals with one person, the director of golf, while maintaining the Greg Norman- and Davis Love-designed courses. In his previous job, Donelan was superintendent at a private facility. Then

he used hard numbers to explain to members why certain desires could never be achieved without shattering the budget.

At one point at the private course, Donelan asked the green committee to give him a wish list of what it wanted. Then he put numbers to each item to show what each would cost.

"They just about fell off their chairs," Donelan says of the cost for some proposed projects, such as extending irrigation into the tree lines or performing landscaping projects. "They looked at me like I was nuts."

Often times, the members who proposed the work didn't take labor issues into consideration of the potential cost, Donelan says.

One way to avoid farfetched ideas is to indoctrinate new board members. "The older guys need to help the new guys understand the superintendent's situation," Donelan says.

He points to the fact that most freshman green committee members are surprised by the fact that 54 percent of the budget is devoted to labor.

The rules are different at Barefoot Resort. Donelan works in conjunction with his counterpart, John Hughes, superintendent of the resort's Tom Fazio-designed public course. When budget time rolls around, Donelan and Hughes work together before submitting their numbers.

At times, cuts are needed even when it appears that the leanest numbers are not enough. Donelan says he and Hughes leave it up to their bosses to make the toughest cuts. Sometimes that means not hiring as many seasonal employees or reducing the frequency of nonessential maintenance practices.

Donelan says he understands the need to save money, although he doesn't always like the cuts that must be made. But since the superintendents of Barefoot have such a good relationship with upper management, he says he knows his bosses will take the utmost care when trimming.

Alonzi said communication between the superintendent and all involved parties is the simple and appropriate path to settle budget disputes.

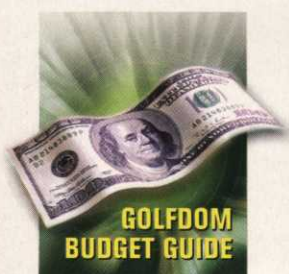
"The best way is to talk it over," he says, before offering a caution. "But you have to be extremely careful." ■



# Money 'Talks'

**It's vital for superintendents to communicate effectively when negotiating their maintenance budgets**

BY LARRY AYLWARD, EDITOR



**Jim Cross (center), certified superintendent of Rumson Country Club, keeps his green committee members—including co-chairmen Jim Morrison (left) and Jake Gehret—abreast of how much money it takes for his crew to perform certain tasks.**

**T**he green committee members at New Jersey's upscale Rumson Country Club are well-educated and well-to-do. Many are employed as stockbrokers, bond traders and bankers in nearby New

York's financial district.

Jim Cross, certified superintendent of Rumson Country Club, knows he's up against some fiscal phenoms when it comes to talking money and configuring the golf course's annual maintenance budget. "I can't pull the wool over their eyes," Cross says with a chuckle.

A seasoned superintendent, the 50-year-old Cross realizes how important it is for superintendents to communicate effectively when negotiating their maintenance budgets, whether

it's with a course's green committee, financial committee, general manager or owner. Superintendents also need to learn proper business lingo so they can hold informed conversations with the financial know-it-alls and understand the logic behind bottom lines and profit margins.

W. Davis Folsom, a professor of marketing and economics at the University of South Carolina, guesses most superintendents never took accounting in college. While they don't need to understand economics with the intensity of Alan Greenspan, superintendents do need to understand the basics of business—and then some.

"Superintendents aren't dealing with revenue, but they're dealing with cost," Folsom says. "They have to know the difference between a capital expenditure and expensing an item."

Rick Slattery, superintendent of Locust Hill Country Club in Rochester, N.Y., says it's more imperative than ever—in a stagnant economic environment—that superintendents know finance.

"It's not only for your own survival, but also for your club's survival," Slattery says. "Everyone is in this together."

## **Learning the lingo**

Communication between superintendents and their courses' financial experts must be two-way for it to be effective. However, superin-

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COURTESY OF RUMSON COUNTRY CLUB



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tendents are the catalysts for that communication on both ends.

Superintendents must understand the language spoken by the business-savvy people they deal with. On the flip side, superintendents must ensure those same people understand what they're talking about when superintendents speak to them about agronomics.

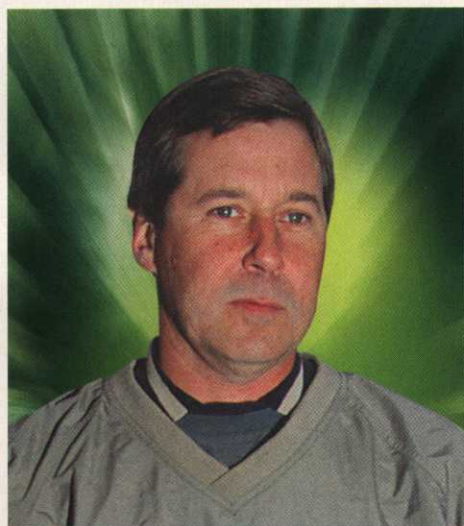
For example, a club's green committee member who's employed as a financial analyst on Wall Street expects a superintendent to understand the business language he's speaking. However, he'll also expect the superintendent to talk in novice terms when discussing the implications of insect damage if turf is not treated with an application of imidacloprid.

"You have to understand that they don't know your lingo and probably won't make an attempt to learn it," Slattery says.

But it often takes time and patience for superintendents to learn their lingo.

Joe Boe, superintendent of Coral Oaks Golf Course, a municipal course in Cape Coral, Fla., meets a few times a year with the city's finance department to discuss his course's budget and financial state. Boe admits "number crunchers" intimidated him when he began working at Coral Oaks about nine years ago.

Boe says the city's financial wizards are detailed in their approach — they seek precise figures on how much it costs to operate the course per hour and per acre. But after a few rounds of dealings with the finance department, Boe says he had a clearer picture of his



**"You have to understand that they don't know your lingo and probably won't make an attempt to learn it."**

RICK SLATTERY  
LOCUST HILL COUNTRY CLUB

## A Good 'Business' Man

Jim Cross is all business when it comes time to present his budget to the green committee. Cross, certified superintendent of Rumson Country Club, offers these tips:

- **Give a complete presentation.** "Use spreadsheets and include supporting statements for both maintenance and capital requests," Cross says. "This should be in the form of text, graphs and literature."
- **Look professional.** "Wear a coat and tie, and speak clearly and concisely," Cross says. "Package the budget neatly in a binder with cover page, index and dividers so the information is easy to read and find."
- **Provide copies of the budget to everyone and personalize them if possible.** "The more involved everyone is in the process, the more likely they are to take ownership of and support the cause," Cross says.

course's economics. "You have to get it down to an exact science to know exactly where the money is," he adds.

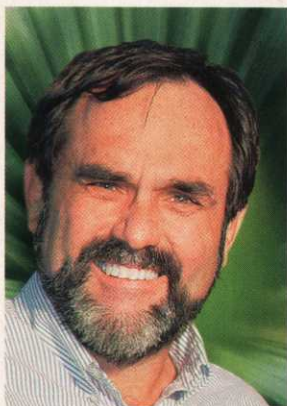
Boe says it's important for superintendents to understand specific statistics such as cost per acre. Then they will understand why — or why not — they're granted certain funds at budget time.

Cross, who has been at Rumson for 15 years, says he doesn't get jumpy when he discusses financial matters with his club's green committee. That's because Cross is no dummy when it comes to numbers. He originally attended college to study business and accounting, and what he learned has helped him in his business dealings with the green committee.

If superintendents don't have a handle on

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**"They have to know the difference between a capital expenditure and expensing an item."**

W. DAVIS FOLSOM,  
ECONOMICS  
PROFESSOR

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business basics, Slattery advises them to attend seminars or classes to learn them. They could also learn from reading books or Web sites on the Internet.

"You don't need to know everything in-depth, but you need to know enough to talk intelligently with the people who handle the money," Slattery says.

If you don't know the business ropes, Boe recommends you talk to the people at your courses who do, such as general managers and food-and-beverage managers.

"Talk to them to see how they break things down," Boe says. "Then look at your own operation."

Folsom says superintendents can learn business basics by reading the *Wall Street Journal*

if they have time. "[The paper's] writers never use business jargon without defining it."

Folsom also recommends securing a copy of *Barron's Dictionary of Finance and Investment* for a quick study of financial terms. Folsom also offers his own publication, *American Business Language*, a pocket dictionary of business terms.

Superintendents fresh out of college may have studied business and finance as part of their turf curriculums. More colleges, such as Rutgers University/Cook College and Penn State University, offer business courses to better prepare future superintendents. For instance, undergraduate students in turfgrass science at Penn State must take classes in soil science and business management.

Rutgers offers similar courses in its four-year and two-year programs. In fact, the classes are more defined in the two-year program to accelerate the learning process.

"The two-year certificate program is applied and focused on what superintendents will need," says Bruce Clarke, director of the Center for Turf Science at Rutgers. "In fact, some of the students in our four-year program takes certain courses in the two-year program."

While more up-and-coming superintendents are learning about business in college, Slattery believes their best financial education will occur on the job.

"It's experience under fire,"

Slattery says. "It's hard to learn a lot of it until you get right in the middle of it."

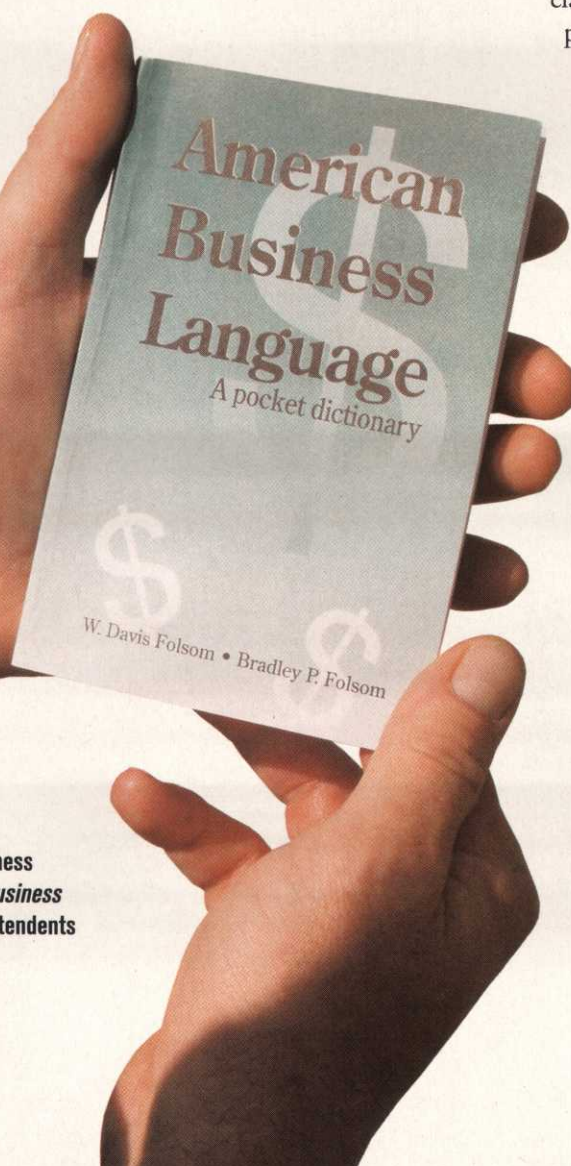
### Teach your members well

The green committee members at Rumson Country Club know what they want for their course. "My job is to explain to them how to get it," Cross says.

To help green committee members understand better what he and his crew do — and how much it costs — Cross provides each committee member with a copy of his operational manual, which discusses the course's maintenance

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A pocket dictionary of business terms, such as *American Business Language*, can help superintendents keep up on the lingo.





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objectives in not-too-technical terms.

Cross is careful not to turn his talk into an Agronomy 101 seminar when he speaks to green committee members about maintenance projects and their costs. His goal is to educate them enough so they understand why he allocates certain dollars to the budget for particular items.

Throughout the year, Cross keeps members abreast of money spent on labor, the largest segment of the budget.

"I provide them with weekly spreadsheets of all the jobs we do — mowing, irrigation repairs and spraying — and how much time it takes to do those jobs each day," Cross says. "They need to realize how many man-hours some jobs take."

Cross also clues members in on chemical, fertilizer and equipment costs.

Slattery, a superintendent for more than 30 years, points out that golf course maintenance is a tough sell to a course's financial decision makers because maintenance is so intangible. For instance, it's difficult for a superintendent to sell the financial decision makers on a 10 percent increase in pesticide spending because they can't *see* the effect pesticides have on a course.

"It's easy for them to spend money on new chairs in the dining room or for an extension in the grill room," Slattery says. "But when you try to sell them on something like an irrigation system — where you're asking them to essentially take a million dollars and bury it in the ground — it's a very difficult sell."

That's why it's important for a superintendent to communicate effectively — and in this case, illustratively — that a new irrigation system will help improve a course's playability and consistency. Slattery says it's also vital for the superintendent to convince others that the investment will pay for itself in X amount of years.

How you look is also important when communicating with a course's financial authorities, says Cross, who wears a coat and tie when addressing Rumson's green committee about budget manners.

"The audience is made up of business professionals and, in my experience, they are more accepting of my requests when addressed in a businesslike manner," he says.



**"You have to get it down to an exact science to know exactly where the money is."**

JOE BOE  
CORAL OAKS GOLF COURSE

### **On the up and up**

Even if your course's green committee members don't work as bankers, Slattery stresses that superintendents should never try to pad or manipulate their budgets. Superintendents should view their golf courses' monies as their own and spend it accordingly.

"Every time you purchase a chemical, fertilizer or a part for a mower, think about taking money out of your own wallet to do it," Slattery says. "And then stop and ask yourself, 'Should I do this?' If the answer is, 'No,' then don't do it."

Sooner or later, an owner or green committee will realize you're spending money wisely, Slattery says. Then they will respect you for your financial capability, and you'll develop credibility with them.

Then it will be much easier to talk business with them come budget time. ■



# Gaining Grounds

**Three simple precepts can keep superintendents on track when creating maintenance budgets for areas outside the golf course**

BY FRANK H. ANDORKA JR., MANAGING EDITOR



**W**hen Dave Smith became the superintendent at Fawn Lake Country Club in Spotsylvania, Va., the clubhouse didn't exist. Once the owners built it, however, it didn't take the general manager long to ask Smith to take care of its surrounding flower beds.

"We never had a sit-down meeting about it," Smith says. "They assumed I would take

over the responsibility, and I assumed I would take over the responsibility. But budgeting for it has been a challenge because of the way my responsibilities evolved."

Smith has learned how to create a budget for these extra responsibilities on the fly, but he doesn't recommend his colleagues do it that way.

"We're learning as we go along, and we'll get the process down for good soon," Smith says. "It's been a little bit of a learning curve as the responsibilities multiplied."

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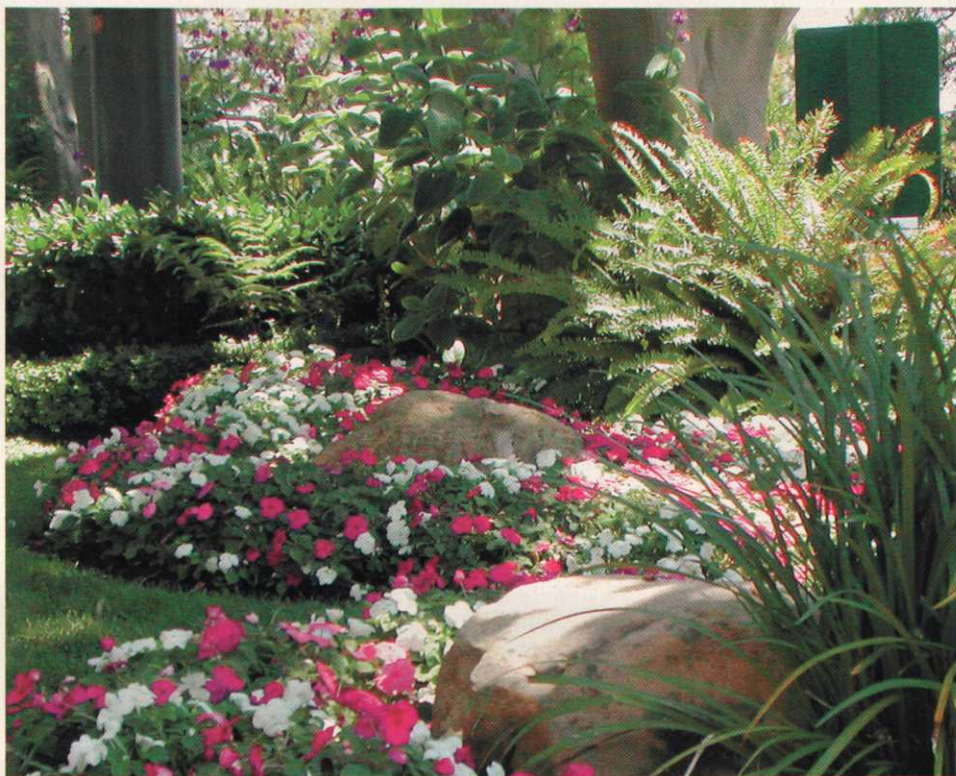
When members start adding intricate landscaping at the club's entrance (as they have at the Big Canyon Country Club), the superintendent should ask them to hire a staff horticulturalist.



BIG CANYON COUNTRY CLUB



The skill set necessary to take care of flowers isn't the same set necessary to take care of turf.



BIG CANYON COUNTRY CLUB

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Smith's story isn't uncommon. Superintendents start out being responsible solely for the golf course, but shift into more of a grounds maintenance role as new landscap-

**"You don't need to be a horticulture expert, but you'd better listen to the one you hire."**

JEFF BEARDSLEY  
BIG CANYON COUNTRY CLUB

ing and other maintained grounds are added. Experts say superintendents should live by three precepts when they budget to meet these new responsibilities.

First, realize that most golf courses will keep adding to the responsibilities without adding money to superintendents' budgets unless they speak up. Golfers and members often don't realize the amount of work it takes

to maintain landscaping, so superintendents need to tell them when it becomes a burden.

Second, experts say superintendents must fight for a separate grounds budget so they can document costs more clearly. Superintendents should also fight for separate staffs because the skill set for turf care isn't the same as the one required to care for flowers and other grounds.

Finally, as with all other maintenance functions, superintendents must manage the expectations of the budget committees so they can properly budget for the job, say people who've gone through the process for years. If superintendents can stick to these three principles, budgeting for grounds maintenance doesn't have to be difficult.

### **Containing 'landscape creep'**

Dan Dinelli, certified superintendent at North Shore Country Club in Glenview, Ill., felt its presence as the years progressed. Something outside his consciousness weighed him down, stretched his resources thin and added more pressure to an already pressure-packed job. Then one year it hit him — "landscape creep" increasingly ate up his time and that of his crew.

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## Gaining Grounds

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Suddenly, Dinelli found himself responsible for taking care of the tennis courts, pool and clubhouse — 5 acres of high-end landscaping in all — in addition to maintaining a top-notch golf course.

"The members kept adding to the landscape, and this isn't just any landscaping. This is high-end, high-maintenance stuff," Dinelli says. "Most superintendents work hard, and they just keep moving forward from one job to the next even as more gets added to their plates. The problem is that I eventually reached a point with the landscaping that my department couldn't absorb it anymore."

Dinelli asked his budget committee to fund an additional seasonal worker to maintain the landscaping. His board, however, reacted skeptically.

"We'd been doing it on our own for so long that they had a hard time understanding why we needed another body," Dinelli says. "I

realized it was my job to get my facts together to persuade them."

At North Shore, the budgets are mixed together under the rubric of "greens and grounds," so Dinelli says he couldn't provide the budget committee with historical information on how much it cost to take care of the landscaping. To combat the shortcoming, he asked three local landscaping firms (including, ingeniously, the company that did landscaping for one of the committee members) to price out how much the job would cost. The number, \$30,000, staggered the committee.

"They quickly saw that the \$18,000 I requested to add a seasonal staffer wasn't bad," Dinelli says. "It crystallized the issue for them."

### Separate staff

Jeff Beardsley, superintendent at Big Canyon Country Club in Newport Beach, Calif., says

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**Dan Dinelli, certified superintendent at North Shore Country Club in Glenview, Ill., says his members kept adding high-end landscape until he couldn't handle the extra maintenance duties with his existing staff.**



NORTH SHORE COUNTRY CLUB



## Gaining Grounds



NORTH SHORE COUNTRY CLUB

**Hiring a seasonal worker to dedicate his or her time strictly to the landscaping is more cost-effective than hiring an outside firm to do the work.**

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it's important for superintendents to maintain separate staffs for grounds maintenance functions.

"The quickest way to have the project done properly is to have a dedicated staff do it," Beardsley says. "With some of the landscaping demands, it's the only way to keep the club members satisfied."

Once members realize that the grounds around the clubhouse make the first impression on visitors (in the hotel business, they call it curb appeal), they start to understand the importance of hiring experts to handle it instead of adding the duties on the golf course maintenance staff.

"We can't be experts in everything and having dedicated experts on staff mean the grounds will get the same level of attention as the course," Beardsley says.

Beardsley oversees a staff horticulturalist and four employees to look after the areas around the clubhouse and other peripheral

grounds. Though they report to him (and he handles their budget requests), the horticulturalist sets the agenda and makes sure the flowers are taken care of properly. Before Beardsley makes the case for how much money the grounds budget needs, he walks into the horticulturalist's office, sits down and listens.

"You don't need to be a horticulture expert, but you'd better listen to the one you hire," Beardsley says.

(Beardsley declined to put a number on how much he spends on the grounds, saying his low-key, high-end club isn't typical — and he might find himself in trouble if he made the number public.)

### **The expectations game**

Beardsley says he views his job as figuring out what the members expect the grounds to look like and then giving them the actual budget figures on what it will take to do it. If the

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## Gaining Grounds



Water features around the clubhouse often require extra labor and time for their care.

NORTH SHORE COUNTRY CLUB

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members decide they want to rotate the flowers on a quarterly basis (to keep the color palette fresh as the seasons change), Beardsley and his staff are happy to do it. But it costs money, and members often decide they have other priorities for where the money should be spent on the course when presented with the hard numbers.

"During tough financial times, the landscaping budget is the first item they cut," Beardsley says. "If you're meticulous in showing them exactly what it costs to care for the landscaping, you put the decision in their hands about what to do."

"That doesn't mean you're trying to evade responsibility," he adds. "But it is *their* golf course, and they should make the decisions about what to cut out of the budget."

Smith, whose evolving role as the grounds maintenance supervisor left him playing catch-up from the beginning, says educating golfers about the grounds maintenance costs

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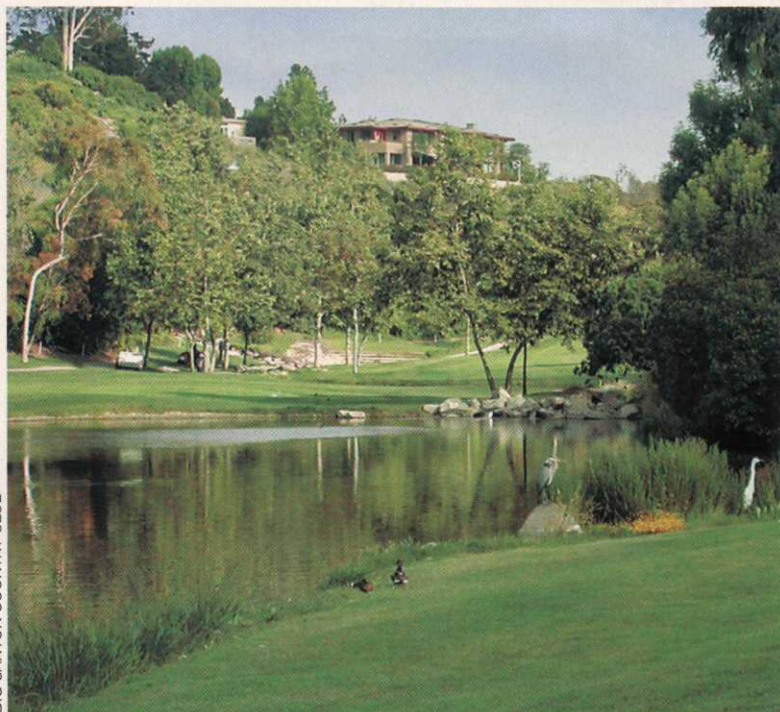
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## Gaining Grounds

BIG CANYON COUNTRY CLUB



**Big Canyon Country Club superintendent Jeff Beardsley also maintains a separate budget to care for the slopes that surround his course.**

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is the most important aspect of creating a budget for it.

The original general manager at Fawn Lake designed the landscaping around the clubhouse with a certain look in mind. When a new person replaced him two years ago, the vision changed radically. Smith and his crew ripped out the old landscaping and planted new flowers, trees and shrubs. Unfortunately, the new general manager expected it to look as finished after the renovation as it had before — especially after he'd spent all that money on it.

"I had to explain to him that it wasn't going to look like a finished product right away, and that he was expecting too much," Smith says. "Problems arise when expectations move beyond what can reasonably be expected. We learned from each other how to match the expectations with the ability to provide for them, and the whole process is moving more smoothly."

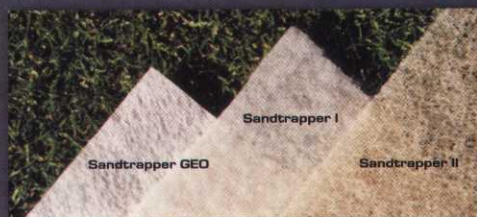
He chuckles. "We're getting there." ■

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# 'Bread' and Water

## An irrigation upgrade could save your course money in the long run

BY CURT HARLER

**W**hether your course is blessed with 44 inches of annual rainfall or scrapes by on 4 inches a year, your use of irrigation water will be regulated. Irrigation is a big economic factor in many course budgets.

Superintendents at courses in Nevada and New York found that keeping close rein on water use not only is economically rewarding, but environmentally satisfying, too.

Las Vegas-based Shadow Creek Golf Course saved 76 million gallons of water, or 223 acre feet, in 2003 by implementing a series of improvements. "Every day I look at the grass. Every night I turn down or turn off the system, depending on what I observe," says Shadow Creek superintendent David Diver.

In Rochester, N.Y., Rick Holfoth took a more gradual approach to upgrading the irrigation system at Irondequoit Country Club. It paid off, both in water use and professionally. Holfoth took a system that was limping along with irrigation efficiency factors like 41 percent on the No. 3 fairway and

49 percent on the No. 11 tee to a uniform 89 percent on the No. 12 fairway.

"That proved the money spent on No. 12 was a good investment," Holfoth says.

Two good things came out of the improvement on No. 12:

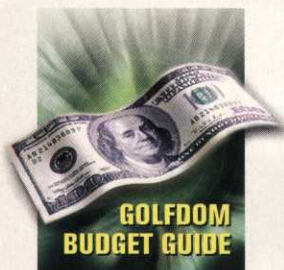
- First, Irondequoit decided to go ahead and upgrade the other 17 holes.

- Second, partly based on his work at Irondequoit, the Country Club of Rochester hired him away last year and made one of his first tasks upgrading its irrigation system.

The bottom line: Better management and a better system will smooth out irrigation water usage, even in tough moisture times.

"The ratio of average-to-peak irrigation cycles is directly related to the operator of the irrigation system: the superintendent," states Mike Brownell, water resource scientist with the federal Susquehanna River Basin Commission (SRBC) in Harrisburg, Pa. Even in an area that normally sees 42 inches to 44 inches of rain a year, golf course water use ranges from 50,000 gallons to 830,000 gallons of water per day — or 147 million gallons per year.

MIKE KLEMM





## How they did it

Shadow Creek, built in the late 1980s, is a 300-acre island of green surrounded by 30,000 trees in the middle of the desert. It is lush. At no point on the course can a player see another hole from the one he is playing. It's easy to forget you're in the Nevada desert.

Last summer, Shadow Creek was closed for six weeks to tear out the old heads and upgrade the fairway irrigation system. The roughs and tees are being addressed this year, and tall-grass areas will be addressed in 2005.

Diver's irrigation strategy is built on accuracy of spraying, efficiency of water application and constant monitoring to see what the system is doing.

One of his first steps was to move to gear-drive heads from impact heads. "I now know that each head makes a rotation in two minutes," he says. There is no variation caused by pressure differences or worn parts.

He knows that a 180-degree head will apply one-eighth of an inch of water in six minutes and that a 90-degree head will take three minutes.

Diver is picky about his irrigation audits, using catch cans to see how efficiently and uniformly water is applied. He goes through the exercise on tees, fairways and greens.

The course uses a mix of Rain Bird, Toro and Hunter equipment. All irrigation data is entered into a global positioning system (GPS) and plotted by computer. The maps it develops show exactly how water is applied and allow Diver to correct problems before much water is wasted or turf is damaged because it didn't receive enough irrigation.

At the same time the course replaced the irrigation system, it replaced 30 acres of fairway turf, going with a 419 bermudagrass purchased from an Arizona turf farm.

In December 2002, Shadow Creek used 440 million gallons of water. In

December 2003, that figure was down to 364 million gallons — a savings of 76 million gallons.

## 'Driving' irrigation

Holfoth likes to compare irrigation systems to cars. Back in the 1970s, cars were powerful but not too efficient. Today, there is less power but more efficiency. Good irrigation systems are like that, too, he says.

Years ago, Irondequoit installed a single-row irrigation system fed by a 700 GPM pump. "It was the best system in Rochester in the '70s," Holfoth says.

The system featured single-row valve-in-head sprinklers. Irondequoit draws from a creek and the Erie Canal. By 1988, course officials realized it had problems with the system, though. Like most courses, cash was tight, so officials wanted to make the system more efficient and extend its life.

*Continued on page 60*

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## 'Bread' and Water

*Continued from page 59*

In 1990, they updated the control system to solid-state timing and central control. In the early '90s, they converted the greens to a valve-in-head system. In 1993, officials retrofitted the pump facility, and between 1994 and 2000 they replaced fairway sprinklers.

The cost to extend the life of Irondequoit's irrigation system for 10 years was not cheap. The course put \$150,000 into pumps and a pump building. Upgrades to the controllers cost \$75,000. Installing additional couplers cost \$30,000, and the course spent another \$30,000 removing sprinkler heads from the greens.

"The upgrades bought us 10 additional years of life on the system," Holfoth notes. "But the course did not address issues of coverage, uniformity, leaks, sprinkler failures and high labor costs. It was one big Band-Aid."

In 1997, the course built a new prac-

tice facility with triple-row irrigation on precise spacing. Gear-driven sprinklers with good pressure control boosted efficiency.

The new facility's irrigation system convinced everyone that the time had come for a total upgrade for the system on the course and modifications to its ponds for irrigation water storage. One pond in particular was made 30 percent larger and its depth doubled.

The upgrade was a major success. "The new system gave us 15 percent to 20 percent water savings," Holfoth says. "From 2001 to 2002, we covered 20 percent more irrigated turf and realized 15 percent net-water savings."

Water use dropped from 19 million gallons to 15 million. If that sounds good, keep in mind that 2002 was a severe drought year.

Holfoth credits the USGA turf advisory service and the USGA Green Section's David Oatis for providing the fig-

ures that helped convince club members to make the sizable investment required.

### Pressure from above

Superintendents like Diver and Holfoth made changes because they knew it was the right thing to do, both for their clubs and for the environment.

There are regulations on surface water and ground-water withdrawal and consumptive use throughout the United States. In Nevada, a golf course that exceeds its water budget by 1 percent to 20 percent will pay a surcharge amounting to three times as much for its water. Use more water over the budgeted amount by 21 percent to 40 percent and the price is five times more. Using more than 40 percent over the budgeted amount means the cost is nine times more.

"The price of water is going up, and it will escalate rapidly," says Doug Bennett, conservation manager for the Southern Nevada Water Authority (SNWA).

There are carrots, however. SNWA will provide up to \$300,000 per course to make landscaping changes that save water.

Some water districts set percentage-reduction targets for water conservation. Both Bennett and Brownell agree they are unfair, penalizing the club that already does a good job and not really cracking down on the club that is wasting water.

Brownell recalls a course in Pennsylvania that SRBC slapped with a \$35,000 penalty because it had not made a \$5,000 change to measure permissible water levels for its irrigation draw-down.

"Storage is the most important thing when you operate a self-supplied irrigation system," Brownell says, adding that superintendents should plan for peak withdrawal times, not for averages.

Both Diver and Holfoth agree. Each would be quick to tell other superintendents that a sound irrigation plan will pay off — both in dollars and in common sense. ■



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*Harler is managing editor for Golfdom's TurfGrass Trends.*