

STARTING FROM SCRATCH



**A look at golf course management through
ZERO-BASED BUDGETING.**

BY MICHAEL D. VOGT, CGCS, CGIA

The need to control golf course maintenance expenses in this economy is becoming more important than ever. Building a budget component-by-component, dollar-by-dollar is the goal. The best way to study costs is to develop the zero-based budget, and thereby justify each cost center. This approach is far better than the traditional approach of doing inflation-adjusted budgets with percentage increases year after year. The result is a justifiable course budget based on real costs for the actual year.

The first step for addressing the golf course budget is a written standard for quality goals and the establishment of golf course maintenance standards. These standards should be concise at describing the "hows," "whys" and "whos," so that the zero-based budget can be built.

Standards are written guidelines for golf course maintenance minimums and goals. The golf course superintendent should carefully draft these standards with major input from the green/grounds committee.

THE ZERO-BASED BUDGET

Starting with all line items being zero, the budget exercise begins. Labor, based on predicted activities, should constitute the beginning of the process. The standards and cycle times should yield an hourly total for routine maintenance. Labor dollar amounts should be relatively simple to assign to job tasks. For instance, mowing greens would not require a high wage earner to accomplish, while applying fertilizers and chemicals to green surfaces should require a more experienced, higher-wage earner.

The wild card in any golf maintenance labor budget is weather and its related impact on dollars needed to provide standards that are acceptable to membership. During the

golf season, weather and its impact on golf course maintenance should be monitored to keep labor expenditures to a minimum. The superintendent must communicate with regular frequency to the predetermined authority on additions/deletions to the allotted funds in each budget category. Hot, humid weather can increase fungicide application rates and frequencies, or drought can increase power and water use. The superintendent with training must make decisions on course requirements; he also must be a good communicator when it comes to justifying budget variances.

When building a golf maintenance budget from zero the superintendent must take into account the individual line item areas such as fertilizers and chemicals. These commodities are needed to safeguard turf from disease, insect damage, weeds and to control growth and enhance playability. They usually amount to between 8 and 15 percent of a total budget.

Price increases have steadily made an impact on the cost to deliver fine turf. An application program with specific dates, rates and cost per square foot easily can be forecasted with the use of spreadsheet programs. Basically, programs to spray herbicides, fungicides, fertilizers and other chemicals can be forecasted. Pricing these products is generally performed through competitive bidding.

Equipment maintenance and repair also are large additional expenditures included in the golf maintenance budget (usually 3 to 7 percent). An examination of repair records should take place to arrive at anticipated repair costs or whether equipment replacement is necessary.

Building-up each line item based on experience and quality goals is necessary for establishing a zero-based budget. This way, each cost item is understood and justified.

ADVANTAGES OF ZERO-BASED BUDGETING:

1. Provides efficient allocation of course maintenance resources based on needs and standards.
2. Challenges superintendent to find cost-effective ways to improve standards and operations.
3. Eliminates inflated budgets.
4. Increases maintenance staff motivation

by thorough involvement in goals and in monitoring actual time expenditures, thus providing greater initiative and responsibility for all personnel involved.

5. Improves communications and coordination with management, committees and the board.
6. Identifies and introduces new ways to do things.

HISTORICAL INCREMENTAL BUDGETING

Incremental course budgeting uses a budget or actual expenditures from the previous annual period. Incremental amounts are added to the old budget to arrive at the new maintenance budget.

This approach is not recommended, as it fails to take into account changing economic or operational circumstances. Moreover, it encourages "spending up to the present budget" to ensure reasonable allocations are available for the next budgetary period. It leads to a "spend it or lose it" mentality.

ZERO-BASED VS. INCREMENTAL BUDGETING

Across the country, many superintendents have had or will have their budgets frozen or reduced due to the economy. Many clubs also compare course operations, size and budgets with other nearby clubs.

Important issues for any club are golfers and their expectations for fine course maintenance. To satisfy those expectations, maintenance costs sometimes can get out of control. Is it time to scale back on items such as bunker maintenance (a variable expense), as it fast becomes equal to greens maintenance costs? Is out-of-play area maintenance critical to the overall golf experience? Is a vast array of annual flowers superior to perennial plantings? The key is to document and communicate quality expectations with the need to achieve a healthy financial situation during these difficult economic times. Everything done on the course costs money, and thus, priorities need to be set.

There are few reliable methods for comparing maintenance budgets from course to course. The variables associated with comparing different course operations are:

- Managed sizes of turf on greens, tees and fairways;
- Geographic location of the course;
- The number of sand bunkers and bunker design;
- Number of annual rounds of golf played;
- Water and soil quality; and
- The quality standards (goals) set for course conditioning.

Some comparisons that may be useful in certain circumstances are:

- Total maintenance cost per acre;
- Total maintenance costs per hole;
- Labor hours per week;
- Labor hours per golf hole; and



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- Maintenance dollars per golf round.

In 2007 the Metropolitan Golf Association Foundation studied the maintenance expenses of more than 66 private clubs in the New York/New Jersey area. Of the clubs surveyed in three distinct regions, an 11 percent differential was observed in average maintenance budgets during the previous year. In Rubin Brown's 2007 Country Club Stats report of major clubs in St. Louis, the variation in golf course maintenance costs was more than 12 percent throughout the year of the study.

As we've continued to follow golf course maintenance expenses, the trend in maintenance costs has generally increased well in excess of the increases in the Consumer Price Index.

There could be further pressures on course maintenance expenses due to volatility in oil prices. The up and down fluctuation in oil prices will not only affect what is normally only a 3 to 5 percent inflationary impact in the typical budget, but it can also vary the cost of most fertilizers and chemicals that are derived from petrochemicals and the associated delivery costs.

CONTROLLING COSTS

Over the years, a superintendent's need for increasing budgets was necessary to keep pace with the members' ever increasing demands for a better and better golf course. How does this affect budgeting?

Consider equipment purchases, like a walking greens mower. A 22-inch mower in 1988 was \$2,500. Today it costs more than \$6,500. The inflation rate within the last 20 years was 82.44 percent, according to the Bureau of Labor Statistics, and this would put today's inflation-adjusted cost for that greens mower at only \$4,561. Yet today's mower at \$6,500 has inflated in cost by an additional 32.5 percent. Keep in mind, today's mower will not produce a significant decrease in mowing height or an increase in quality of cut.

CONCLUSION


The actual assembly of course maintenance costs can be improved with savings being generated simply by building up a zero-based annual budget. Every cost is justified, and this assures for better management of labor, equipment and material purchases.


If clubs do not take the initiative to require the zero-based budget, they'll be forced to make unrealistic, across the

board budget cuts in sharply declining economies. The zero-based budget makes sense for any economy, but even more so today when cost controls and budget cuts are the order-of-the-day. Isn't it time your club begins to protect its most important asset with a justifiable budgeting process? **GCI**


Michael D. Vogt, CGCS, CGIA, is a golf course maintenance and irrigation system specialist with the McMahon Group, a private club consulting group. He developed his zero-based budgeting techniques based on his 26 years as golf course superintendent and as general manager.

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GROUND ZERO

A zero-based approach keeps Estero Country Club's maintenance budget "lean and mean." BY MARISA PALMIERI



Estero Country Club in Fort Myers, Fla., is one facility that's benefitted from zero-based budgeting – especially in the wake of the economic recession and downturn in the private club market.

That facility, which is managed by general manager John Schoellner, who's both a certified club manager, certified club executive and a certified golf course superintendent, has expanded the program from the maintenance department to just about everywhere else in the facility.

"It's pretty simple," says Schoellner, describing the process, which entails creating an annual budget that's essentially a business plan of what normal conditions would be for every department. For example, in the maintenance department, the superintendent accounts for every single man, what he makes, how many hours a week he works and the cost for his benefits for every month of the year. After that, he plans for the fertilizer use for each part of the golf course and then for every product, line by line, all the way through the budget. Every item is backed up by a quote from a vendor, and includes a narrative description for how it's going to be used. The result is a 12-page book that justifies every dollar in the budget.

"When the people on the board and finance committee review it, they can sit down and know that these numbers aren't just pulled out of the air," Schoellner says. "That was the thought pattern when I got here. They were basically adding 5 percent onto last year's budget. Even for labor. That meant there were people who had been here for awhile getting paid too much, which meant new people weren't getting paid enough."

MEETING RESISTANCE

When Schoellner arrived at Estero a little more than two years ago, the maintenance

budget had already been approved, but he had superintendent Bruce Bach go back through and create a zero-based budget by justifying everything without looking at the numbers from the previous year. The result was nearly 10 percent saved and the reduction of two full-time and one part-time laborer based on a series of studies to determine how much time and labor every task on the golf course took.

Bach was surprised at first, Schoellner says. He had never heard of doing the budget that way and there was some resistance. "It was work," he says, explaining that Bach wasn't previously what he'd call "a numbers guy," despite his technical expertise. "So he's learning country club bookkeeping and the more he understands it, the more he accepts it. He's gotten better each year. He's really confident in his budget this year."

While the superintendent may have resisted change, it was likely easier to swallow coming from a former superintendent.

"I learned from Joe Duich at Penn State how to grow grass and watch the dollar," says Schoellner, who received his two-year turf management degree in 1969. "One thing I've done through my whole career is keep a copy of every bill that's come in and keep spreadsheets, going back to the old green ledgers and up to Excel."

Not surprisingly, there were rumblings of resistance from other superintendents who heard about what Estero was doing, Schoellner says.

"They didn't like it," he says. "They liked having the fat that they could move around. When you're lean and mean, you have to justify everything you're doing. For example, we use purchase orders for everything over \$500. If the PO isn't in the budget, there needs to be a detailed explanation for what and why the expense is."

TIME FOR CUTS

It's tough to pad the budget with a zero-based format, which critics say makes unexpected circumstances or emergencies tough to bear.

But Schoellner says the club can't budget for hurricanes or disasters.

"We budget for normal and we have a 3 percent number that's not budgeted to be used clubwide if we need it." For example, the contingency fund recently paid for an \$11,000 pump station repair.

Another thing that's not necessarily predictable is market downturns, like the one that took place this year. "We were asked to cut back about \$200,000 in expenses," Schoellner says, adding that the maintenance department came up with half of those cuts.

"It's all because they can go back, look at their budget and see where they can cut back and what the results will be," he says, noting that the superintendent cut back on fertilizer use in the roughs, stretched several chemical applications and eliminated overtime.

The zero-based budgeting also improves board relations. Having a budget where every item is justifiable helps build credibility with the board and is a tool for selling programs.

"If your board can see that you know what you're talking about and it's documented in black and white, there's not too many things they can say no to," he says.

If zero-based budgeting is so great, then why doesn't everyone do it?

"Some are afraid of it," Schoellner says. "Everybody has to work together. I see more and more people doing it once they realize the benefits. It's great because everybody knows what's happening, and we're not lazy. It's easy for people to get complacent, but things have changed, and they're never going back to where they were." **GCI**

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PINPOINTING DEFICIENCIES

Irrigation audits reveal superintendents may need to change nozzles, adjust throw and hand-water to improve uniformity. BY JOHN WALSH

Only about 8 percent of 18-hole golf facilities nationally had their irrigation systems audited by a certified irrigation auditor from 2001-2005.

Uniformity.

That's the key to effective and efficient irrigation. It's what all superintendents strive to improve, yet they don't always have the time to make that improvement.

An irrigation audit, or catch-can testing, is a common method of measuring distribution uniformity. Some superintendents perform audits on their own; some hire consultants, although consultants usually perform a larger evaluation, focusing more on an irrigation system's hydraulics and controls.

Only about 8 percent of 18-hole golf facilities nationally had their irrigation systems audited by a certified irrigation auditor from 2001-2005, the most recent years for which there's data, according to the GCSAA and Environmental Institute for Golf's "Water Use and Conservation Practices on U.S. Golf Courses" report.

Andy Slack, president of West Coast-based Spot Water Management, says some superintendents know irrigation, some think they know irrigation and some don't know irrigation at all.

"Many don't have the time or the expertise to spend analyzing their irrigation system, so they would rather hire an expert," Slack says. "The guys who are insecure try to do everything in house. Those who are more secure in their jobs want an objective opinion to confirm what they think."

If a superintendent wants to conduct audits frequently, it doesn't make sense to hire Slack. However, an evaluation is different.

"With an evaluation, I look at parts of the irrigation system, such as the hydraulics and the control system," he says. "Superintendents don't always have adequate knowledge of those areas.

"I've learned doing a catch-can test isn't worth the time or effort," he adds. "If you know irrigation, you should be able to look at the turf and estimate the distribution uniformity within 5 percent. Catch-can tests, which aren't very valuable, look at the driest 25 percent. I'd put money toward hydraulics and the control system instead."

Jason Green, superintendent at San Jose (Calif.) Country Club, hired Slack to do an audit and evaluation of the club's irrigation

system. Previously, he hadn't done any audits in house.

"We needed an audit to set a benchmark for future benchmarks and an overall check of the system," he says, adding that uniformity was good at 81 percent but Slack's evaluation exposed some pressure issues.

Brian Vinchesi, president of East Coast-

based Irrigation Consulting and past president of the Irrigation Association, conducts many audits (putting cups out and testing sprinklers) and evaluations (checking the entire irrigation system). Many times, Vinchesi is called to verify, via a report, what a superintendent is telling a club's board: It needs significant repairs to the irrigation system or

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it needs a new one.

Facilities perform audits for different reasons, such as to document a problem, justify a new system or help with scheduling. The benefit of an audit is it provides actual data, not theoreticals. An audit provides the exact precipitation rate and targets distribution uniformity.

An audit performed on all 18 holes is rare because it's time consuming, expensive and unnecessary, Vinchesi says.

"Once you've done it, the results won't change a lot," Vinchesi says. "However, if you're watering all your greens with the same equipment, water still is put down differently. If you do an audit yourself, do part of the golf course, such as the greens."

Many superintendents see the process done by a consultant and then start doing it on their own, Vinchesi says.

A distribution uniformity of 70 percent and higher is a standard goal. Michael Dukes, associate professor and irrigation specialist at the University of Florida, says superintendents want to be in the 70- to -80-percent range. Above 85 percent is exceptional, he says.

AUDITING BY THE NUMBERS

Percent of golf facilities that have conducted an irrigation system audit

By facility type

Public	6%
Private	11%

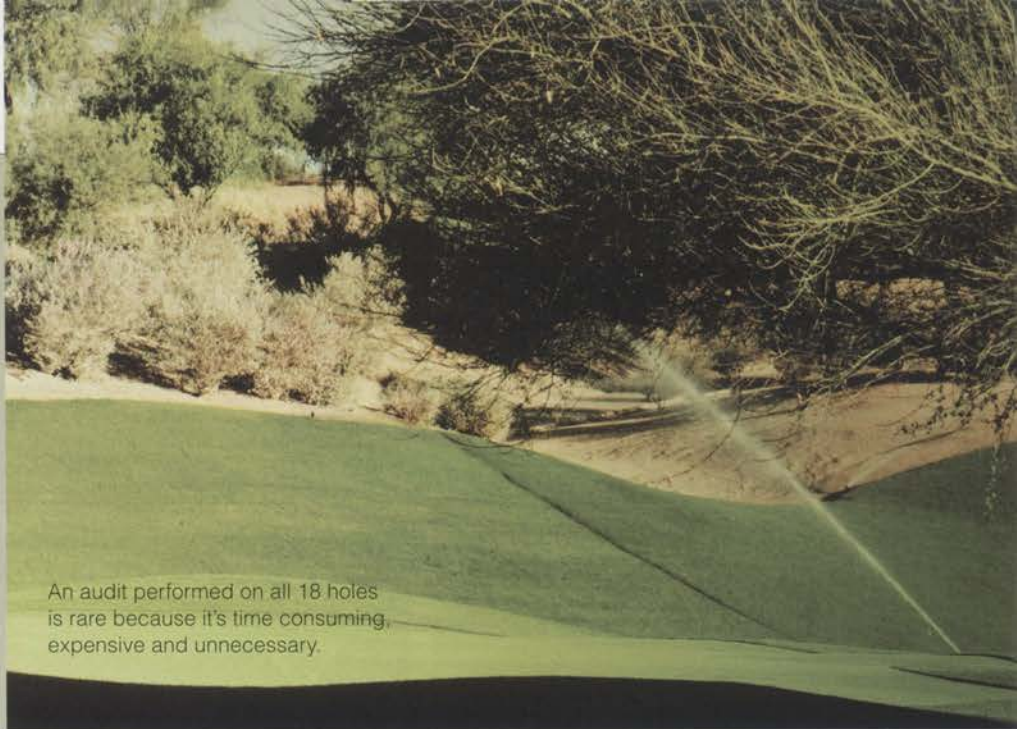
By maintenance budget

<\$500,000	5%
\$500,000-\$999,999	8%
\$1 million+	16%

By agronomic region

Southwest	15%
Southeast	11%
Northeast	7%
Pacific	7%
Transition	7%
North Central	5%
Upper West/Mountain	5%

Source: The GCSAA and Environmental Institute for Golf's "Water Use and Conservation Practices on U.S. Golf Courses" report



An audit performed on all 18 holes is rare because it's time consuming, expensive and unnecessary.

For a consultant to audit just greens costs just less than \$10,000 and takes about three days, Vinchesi says. To do the whole course, which is rare and Vinchesi has never done, costs about \$25,000.

Vinchesi recommends superintendents focus on the trouble spots. The most common problem he sees on golf courses is that sprinklers aren't level or are too low.

"Everyone worries about spacing," he says. "If slope is a problem, it's an install issue. If they're too low, it's a maintenance issue. Some superintendents are good about keeping sprinklers at grade; others aren't."

Vinchesi helped the Governor's Club in Durham, N.C., improve its irrigation efficiency 13 percent by auditing all its greens. The club ended up replacing sprinkler heads to achieve that efficiency.

NO MATTER THE AGE

Even though Gozzer Ranch, a private, 18-hole club in Cor d' Alene, Idaho, opened in 2007, superintendent Jim McPhilomy, who worked with consultant Erik Christiansen to design the irrigation system, looks at the young system closely all the time. In fact, he has three crew members who spend all their time on the irrigation system.

McPhilomy and his staff focus on the microclimates throughout the course. Some areas are surrounded by pine trees; others are wide open.

"It's harder to determine all the microclimates during construction," he says.

Gozzer Ranch was sand capped – 9 inches in most places, 12 inches in others – and the areas that have 12 inches of sand dry out faster. So McPhilomy adjusts run times or changes nozzles to improve uniformity and

avoid creating wet spots.

McPhilomy has deep roots in irrigation. His father, who had a keen interest in irrigation, was a golf course superintendent for 25 years. After that, he became an irrigation consultant in the early 1980s. McPhilomy worked with his father performing catch-can tests at a time before the newer control systems came to market.

"It was a great learning experience for me," he says.

Even though Gozzer is a new golf course, there's still a need for McPhilomy to do catch-can testing.

"We're using catch cans to see where we should change nozzles or increase or decrease the distance of throw," he says, adding that the sprinklers are spaced 65 feet apart.

When performing a catch-can test, McPhilomy recommends using a minimum of 20 cans and as many as 35 for a 2,000-square-foot area.

"Most guys are aware of the need to improve irrigation uniformity," he says. "We all talk about it. But it's hard to find time to do. I want to do it based on my experience with my dad. It's good education to check the theories we learned about in school."

The main reason McPhilomy performs audits is uniformity.

"Everything we do is based on irrigation uniformity," he says. "It affects fertilization, compaction, disease pressure, surface wear, etc. The more uniform and the fewer wet and dry areas we have, the better."

With a new course and irrigation system, superintendents have a somewhat false sense of reliability.

"When a system is installed, there's a sense of, 'Hey, we paid X amount of money

to have this system designed and installed, so it should work right," McPhilomy says. "But that's not always the case."

The intentions are always right, but what if the architect moves a bunker after the irrigation system has been installed? That, in turn, affects uniformity because the sprinklers need to be moved. The superintendent needs to fix problems areas around bunkers or large greens. Steep slopes factor in, too.

"There are some things that aren't thought of during the design phase," he says. "That's when the superintendent comes in to manage those areas."

HAND-WATERING

Even with the help of an audit and moisture meter, sometimes hand-watering is inevitable, says Larry Stowell of San Diego-based PACE Turf. A moisture meter and a virtual irrigation audit help diagnose irrigation distribution problems, but unfortunately, they don't correct the problem.

"Only hand-watering will overcome the deficits of circular head-to-head design limitations," he says.

A soil-moisture meter and virtual irrigation map help superintendents communicate some of the problems they encounter trying to maintain uniform and dry turfgrass conditions.

"Without periodic rainfall to even out the soil-moisture profile, it's impossible to deliver the ultimate in dry, fast turf conditions without supplemental hand-watering," Stowell says.

For Green, hand-watering the 100-year-old push up greens at San Jose is a must because of the high clay content in the soil.

For information on the Irrigation Association's recommendations for irrigation audits, visit the July Online Extras section at golfcourseindustry.com.



LEARNING MORE

If superintendents want to learn more about audits, they can attend seminars put on by the Irrigation Association or GCSAA.

"Many times it's difficult to get enough superintendents to

attend the irrigation audit seminar at local meetings, but it's a hit at the Golf Industry Show," Vinchesi says.

"I like superintendents to do it on their own because they learn a lot more," he adds. "It's just time consuming. It's more visual than reviewing numbers. There's really no drawback for superintendents to do an audit on their own. Credibility can be an issue with boards because they seem to want to pay someone to do it."

Green's assistant has been trained as an irrigation auditor, so Green will rely on him to audit the irrigation system regularly and hire Stack every other year for evaluations.

Despite all the irrigation system improvements during the past 25 years, irrigation still comes down to uniformity.

"We're still at a disadvantage because of physics," McPhilomy says. "I'd like to see a sprinkler head that puts down water more uniformly, but I don't have the answer." GCI

John Walsh is a freelance writer based in Bay Village, Ohio.



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