Some superintendents also have expressed concern about the potential loss of some of the older products from the marketplace such as MSMA, a postemergent grassy weed control. They'd like to see an affordable alternative introduced. A preemergent control for nutgrass and a 100-percent effective, affordable control for *Poa annua* are other items on their wish list.

COST COMPARISONS

There might be as many ways to track chemical expenditures as there are superintendents. Some break down budgets by area; some combine turf and landscape products in one category; some include labor costs with product costs. The breakdown of the budget is developed primarily to give superintendents a means of tracking, and controlling, expenditures.

Hellenga early orders most chemicals for price breaks and to ensure he has a product on hand when needed. Typically, his annual fertilizer costs are about \$40,000, and fungicide costs are about the same. Herbicide expenditures average about \$7,000 annually.

In contrast, Doolittle prefers to bring in product as needed in season.

"My budget is bottom-line oriented, with enough flexibility to make adjustments as long as the course is in top condition and I don't exceed the budget," he says. "I feel I can better control my expenditures that way."

All pesticides are grouped under chemicals in Doolittle's budget. Herbicides, including the fertilizer/preemergent combination product, account for about 25 percent of the chemical budget. Insect outbreaks are minimal, accounting for as much as 5 percent on average. Fungicides, wetting agents and specialty products make up the balance.

Jamestown Golf Course groups all pesticides under chemicals, too. Fungicides account for 50 percent of their chemical budget, and insecticides account for 40 percent. The herbicides make up about 10 percent, costing between \$300 and \$500 a year.

Herbicide expenditures at the Quarry at La Quinta are higher than those for insecticides or fungicides because weed control applications are made on the larger area of the fairways and roughs. The fungicides and insecticides are used only on the greens and tees. The course also has extensive landscaping that's treated with herbicides. Without the Prograss application this year, landscape area herbicide expenditures will exceed those for turf.

La Quinta's turf herbicide costs will be reduced a few thousand dollars this year, compared to the last three years, Smith says.

"We eliminated the Prograss, which averaged around \$12,000 per season, but added the PGRs for *Poa* seed-head suppression," he says. "I include that expenditure within the herbicide budget." **GCI**



www.golfcourseindustry.com/readerservice - #33



RESURRECTING / illie

Architects bring A.W. Tillinghast's hell-raising hazards back to life

Rees Jones Golf Course Design restored A. W. Tillinghastdesigned bunkers at Bethpage State Park's Black Course for the 102nd U.S. Open in 2002. Photo: Larry Lambrecht



BY MARK LESLIE

When George Crump and Harry Colt designed Pine Valley golf course in the sandy hills of New Jersey, they asked for the input of golf course architect A.W. Tillinghast. Tillinghast's contribution was a masterpiece within a masterpiece: the now-famous 7th hole, where Hell's Half Acre is a 1.2-acre bunker that bisects the fairway and provides a challenging second shot, eye-catching aesthetics and a dash of fear.

From Hell's Half Acre, Tillinghast began to implement his trademark – massive hazards at courses throughout the country. Bob Trebus, Tillinghast Association president and Baltusrol Golf Club member, says Tillinghast designed Great Hazards in about half of his approximately 60 original layouts, mostly created during the 1920s.

Tillinghast's hazards earned him the nickname Tillie the Terror. He once described the logic behind his design: "In my humble opinion, the green to the three-shot hole must be beyond the range of any player who misses either his drive or second stroke. The most effectual method, and I believe the only satisfactory one, is the location of a truly formidable hazard across the fairway. This must be carried with the second shot if the green is to be gained with the third."

Architect Stephen Kay has worked on 11 of Tillinghast's layouts.

"With Tillie, everything was about the second shot and getting over the hazard," Kay says. "More often than not, the clubs eliminated a Great Hazard because it was too difficult for women or the maintenance budget was cut."

Now, clubs throughout the country who've lost theirs are resurrecting them.

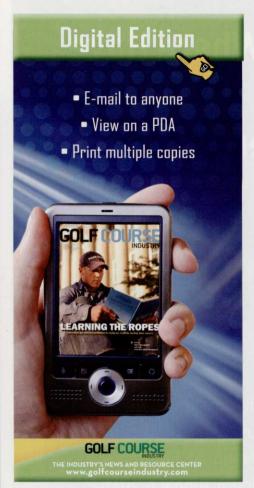
BRINGING BACK THE HAZARD HAS-BEEN

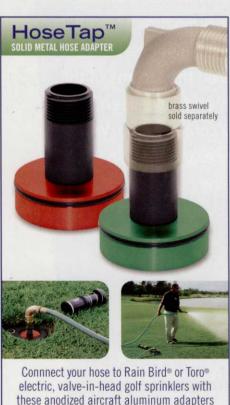
Perhaps the most famous Great Hazard resurrection was at Bethpage State Park's Black Course, which Rees Jones Golf Course Design restored for the 102nd U.S. Open in 2002. Jones' lead architect, Greg Muirhead, says the giant cross-hazard, once in use at the 4th hole, was so deteriorated there was little in terms of noses and fingers.

"The edging was lost, and there was no real form or definition," Muirhead says.

Using aerial photographs from the 1930s, the team recreated Tilling-







866-863-3744 • www.underhill.us

that won't break or wear out.

www.golfcourseindustry.com/readerservice - #35

Where Have All The Lenders Gone?

No other institution knows the business of golf as well as First National. For decades, the First National team has been working directly with golf course owners. We've weathered the storms of the industry and have seen other lenders come and go. We've been here, and we plan to stay: continuing our support of course owners.

Contact us to discuss your financing needs:
Call: 908-604-4700
Email: golf@firstna.com
Visit: www.firstna.com



www.golfcourseindustry.com/readerservice - #36

COURSE RENOVATION

hast's design so well that it's now one of the most-photographed holes in golf. The fairway has two elevations, with the tee shot landing at a lower elevation so a menacing wall of elevation looks you in the face, Muirhead says.

More recently, in 2006, architect Keith Foster rebuilt the East Course at Five Farms' version of Hell's Half Acre on the 14th hole before the club hosted the Senior Players Championship in 2007.

"It went from a wild and wooly look to something formal and very maintained," Foster says. "Using old aerial photos, we reshaped it to what Tillie had designed originally, then regrassed it in a more rugged, old-school look."

Preserving and protecting Tillinghast's design is part of the club's mission, says superintendent Tim Kennelly, whose Five Farm's course is part of Baltimore Country Club. "Our members insisted that whatever we did, it shouldn't look like we did anything to it," Kennelly says.

LEGACY IN LAKEWOOD

In the mid-1990s, members of Lakewood Country Club in Westlake, Ohio, became aware of the origins of the gem on which they played when now-deceased member Ken Stofer, a founding member of the Tillinghast Society, first stirred the pot, says Brian Pizzimenti, general manager of Lakewood. Since then, Lakewood has created a lounge and a library in Tillinghast's name.

"This golf course is a piece of history," says Jim Noel, superintendent at Lakewood. "I look at maintaining this course as maintaining a piece of artwork. If Tillinghast came back and saw this course, he'd say, "This is what I wanted." It's that good."

On its Web site, Lakewood states, "Our out-

Architect Keith Foster rebuilt the East Course at Five Farms' version of Hell's Half Acre on the 14th hole before the club hosted the Senior Players Championship in 2007. Photo: Five Farms



PLEASE REPAIR YOUR DIVOT



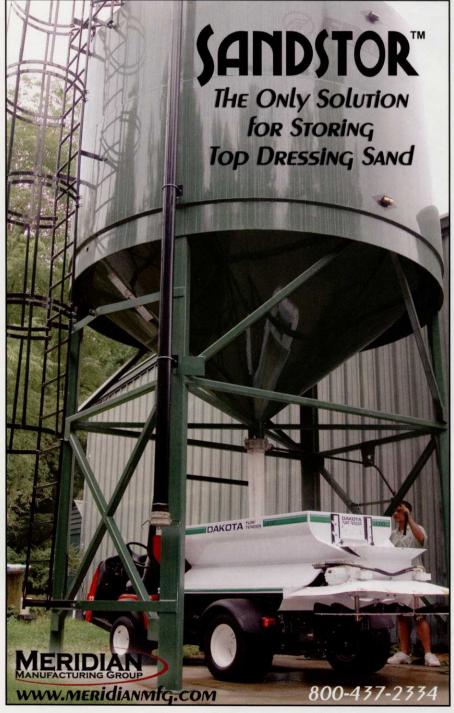
Soon, a fungus free course won't have to hurt the planet

Coming this Fall – a truly new fungicide choice that's virtually non-toxic[†] and just as effective as the leading competitors. Good for you. Good for the environment.

www.agreenercourse.com



www.golfcourseindustry.com/readerservice - #39



www.golfcourseindustry.com/readerservice - #38

COURSE RENOVATION

standing, 18-hole, A.W. Tillinghast-designed golf course is the cornerstone of our existence. The golf course is our legacy."

That legacy includes Winged Foot Golf Club in Mamaroneck, N.Y.; Quaker Ridge in Scarsdale, N.Y.; San Francisco Golf Club; Chicago Golf Club; Ridgewood Country Club in Moultonborough, N.H.; Southward Ho! Country Club in Bayshore, N.Y.; and Sunnehanna Country Club in Johnstown, Pa., according to Trebus.

True to the architect's design, Lakewood recently brought Tillinghast's 6th hole Great Hazard back to life with the help of Stephen Kay.

"On several Tillinghast courses, you go out to where the Great Hazard was in the drawings and all you see across the fairway are mounds and undulations," Kay says. "Sometimes courses intended to install the sand when finances improved, but it never happened."

Lakewood had mounds shaped where the Great Hazard was supposed to be and seeded it to save money.

"The grass was mowed as rough, and then women complained the grass was too thick, so it was mowed at an intermediate height," Kay

Members thought they would put sand in a few years later, but the Great Hazard lacked the sand Tillinghast wanted until Kay's arrival 80 years later. Kay and partner Doug Smith drafted

Lakewood Country Club in Westlake, Ohio, recently brought Tillinghast's 6th hole Great Hazard back to life with the help of Stephen Kay. Photo: Lakewood Country Club



a master plan and convinced members to install sand. They also shifted the hazard 20 yards closer to the green to make it more challenging for today's game.

"We changed it drastically," Noel says. "Beforehand, we just had mounds, and we would mow the middle of it down to step-cut heights. It wasn't difficult at all. Long hitters could get over it with a 7-iron and be 110 yards away from the green. Now, you barely make it over, and you're 80 yards away from the green."

At first, the membership was overwhelmed by the sheer size of the Great Hazard.

"Now, when anybody who brings guests out, the first thing they talk about is what a great hole that is," Pizzimenti says. "It has really turned around for us."

The Great Hazard moves diagonally from left to right. The par-5 6th hole measures 527 yards; the bunker is 302 yards from the back tee, 285 yards from the second tee, 267 from the third tee and 187 from the forward tee.

"It puts a premium on your drive," Noel says. "If you hit a drive 250 yards from the back tee, you can get home because you only have 260 to go."

Kay plans to add a new back tee another 45 yards behind the existing one.

"Some people love it, and some hate it," says Tom Watrovich, head golf professional. "The positives are fabulous. It's a very talked-about hole by golfers in the area. It's our No.1 handicap hole, and as such, it should be difficult."

Reconstruction of Lakewood's Great Hazard cost about \$50,000, and the ongoing cost of maintenance is negligible, Kay says.

People who have Great Hazards yet aren't us-

ing them are making a mistake, Noel says.

"It's a great visual," he says. "You see all this sand and the mounds and you can see the green, so it almost looks like the green is right over it. From a nothing hole, it's now our No. 1 handicap hole. Stephen Kay really got into Tillinghast's mind and did a fabulous job."

Watrovich agrees: "Tillie's smirking up there every time he sees someone hack around in that hazard. It's a great thing." GCI



Maybe It's Time to Look into an Aeration System

No one should have to live with poor water quality. For over 50



vears Otterbine continues to lead the industry with a complete line of surface spray and sub-surface aeration systems that effectively circulate water and transfer oxygen. 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!



1-800-AER8TER 610-965-6018 www.otterbine.com

Product leasing available.

www.golfcourseindustry.com/readerservice - #40





ow do you know if the big check you just wrote will change from outlay to income for your club?

"It's sort of like the old adage, 'You've got to spend money to make money,'" says Mike Leemhuis, c.e.o. and general manager of Congressional Country Club in Bethesda, Md.

Congressional has completed \$20 million of capital improvements during the past decade. With recent investments in exercise facilities, a new wine list and top-notch maintenance equipment, Congressional has everything covered, Leemhuis says, noting the club has a waiting list for membership despite one of the highest initiation fees in the country.

"I know that to meet my budgets, I have to provide a level of service and product above people's expectations," Leemhuis says. "To do that, I have to spend money. I have to have the best cuts of beef. I've got to have the very best conditioned golf course. I've got to have the very best service in our restaurant facilities."

Leemhuis recognizes his willingness to invest isn't universal.

"I've been lucky enough to work at great facilities where people bought into that philosophy," he says.

Jay Miller, president of Hidden Valley Golf Club in Norco, Calif., also isn't shy about investing. Miller has been pouring time and money in his latest venture for two years. He arrived at the high-end public course when it was on the verge of closing – the perfect opportunity to develop a golf business through savvy investments.

As the founder of an organization for troubled youth, Get a Grip, Miller knows mentoring can go a long way toward growth. One of his mentors is industry veteran Ted Horton, who consulted on the operations at no cost.

"If Ted says, 'Jay, you need to invest in this,' I don't even second guess it," Miller says.

Investments at Hidden Valley throughout the last two years have been multifaceted: \$90,000 to restore the irrigation system, \$23,000 to restore the clubhouse, \$35,000 to renovate the wedding facilities and \$7,000 for audio-visual capabilities. The big-ticket item was the driving range at \$100,000.

Miller has invested capital in areas that will give his customers a better experience, as well as provide his course with a better reputation and possibly a boost in revenue.

"You get out what you put in as long as it's an intelligent investment," he says. "As for your personal time investment, you get 10 times more back in blessings if you take the time to think things out and talk to your customers."

Miller uses a suggestion box at the club to find out players' ideas. He often meets new players and buys them a beverage after the round and asks about their first impression of the course. Play has increased 4,700 rounds during the past five years at Hidden Valley, he says.

WEATHERING THE STORM

Scott Hoyt, a former golf pro turned general manager, handles the 27-hole course at Cinnabar Hills Golf Club in San Jose, Calif. Hoyt thinks his strong business plan from day one has a lot to do with the 10-year old, high-end public course's success today. He credits the ownership group with making good decisions early on.

"They know that to have a successful business, you need to do it right to start with," Hoyt says. "So the building and the golf course were built right to start with."

Once a nice course and facility is completed, the biggest challenge is keeping it in prime shape, especially amid the chaos that has hit the industry and Southern

FACILITY OPERATIONS



"I have to provide a level of service and product above people's expectations. To do that, I have to spend money." – Mike Leemhuis

California, Hoyt says. He credits his course's local owners who, while other owners bailed out, didn't flinch after the 2002 stock market crash.

"They continued to invest in the golf course and the building," he says. "The economic situation in the area was seen as an opportunity to become more efficient. The club reduced expenses by \$500,000 within a year, after getting each manager's input about every expense line item."

Congressional has completed \$20 million in capital improvements during the past decade. But that kind of willingness to invest isn't universal. Photos: Congressional Country Club



The team focuses on maintaining a high-caliber course while being smart with money. Their strategy seems to be working – Cinnabar Hills was voted Golf Course of the Year in 2005 and 2006 by the California Golf Course Owners Association.

"When people come out here, they say, 'Wow, this is really a nice place," Hoyt says.

SATISFACTION GUARANTEED

Stu Stram, president of The National Golf Club of Kansas City, says his 36-hole club constantly evaluates ways to serve members better. The private facility is one of the top 100 golf clubs in the nation, according to several magazine rankings. Considering the club's location, far from scenic mountains and ocean views, the recognition speaks volume for The National's attention to detail, Stram says.

"There's always a happy medium when it comes to spending capital dollars on improvements to your facility," he says. "We have an ambitious ownership group who is the driving force behind the success of The National and The Deuce courses."

When an idea for capital improvement is researched, financial returns and member satisfaction are worked into the equation by the owners.

"First and foremost, they analyze the potential of member satisfaction and how it affects increased membership, so all those things are tied together," says Stram, who believes all areas of the members' experience factor into the club's success. "We feel that if we have the best facility, services and amenities package, we'll increase our market share here in the Midwest."

PROFITABLE PERSONNEL

Hoyt challenges anybody in the country to beat the quality of the greens maintained by his golf course superintendent, Brian Boyer, CGCS.

"There are so many people out there, no matter what industry you're in, that it's as if you're afraid to admit somebody else can do it better," Hoyt says. "You're afraid to ask questions."

Boyer is good at analyzing what's successful elsewhere and avoiding mistakes, Hoyt says. In addition to following excellent maintenance practices, Boyer addresses the financial side,

"He understands the business side of it," Hoyt says. "He knows how to balance the needs of the course with keeping the customer happy."

Miller also is boosting revenue by investing in employees with expertise he doesn't have himself.

"I'm a golf course guy," he says. "I'm not a restaurant guy, so I'm taking the best of both worlds. Now I have a real restaurateur running my whole golf food-and-beverage operation – weddings, banquets, everything."

Income at Hidden Valley has been increasing since the first year Miller took over the operation. The club sold \$100,000 in memberships in 2006, and he expects to be in the black with a six-figure profit by next year.

Leemhuis agrees course improvements aren't the only way to invest in better outcomes. Congressional invests in the employees' morale and training throughout the year by holding off-site events for the employees.

"We want to make sure we're paying the best possible wage we can in the marketplace in our area," Leemhuis says. "We prefer to gear ourselves toward good employees who understand our culture and service."

Hoyt believes it's critical for employees to feel empowered.

"If an employee feels that he or she has responsibility and can make a difference, that's so huge," he says. "It's almost more important than money." GCI

