

By **Marisa Palmieri**

PRICING FOR AN IRRIGATION RENOVATION IS AT ITS PRIME.

course on property taxes, and the town of Vail, which owns the land.

It turns out the delays were a good thing. The new irrigation system was designed about a year ago and went out to bid in December. By the end of January, the club was down to three contractors, and eventually chose Landscapes Unlimited, which began work in April.

"I really wanted to get it done last year, and every day I wake up thinking how glad I am we didn't," Sarro says.

Timing couldn't have been better, considering copper was at a recent low in December and construction work has slowed in the North American golf market, making contractors' bids competitive.

Sarro estimates the course saved about \$500,000. The total cost for the system was \$2.6 million. If they'd started work in mid-2008, like he'd hoped for, the system could have been more than \$3 million.

Other golf facilities also have saved significantly, thanks to the rules of supply and demand, which have driven down commodities costs, reduced contractors' prices and eliminated energy surcharges and other extras.

COMMODITY MARKETS

Allied products make up 30 to 40 percent of the total cost of an irrigation renovation budget, so commodity prices greatly affect the overall cost of an irrigation overhaul, says Erik Christensen, president of irrigation consulting firm EC Design Group in West Des Moines, Iowa.

The prices for commodities used in irrigation construction – mainly copper wire and plastic pipe and fittings – are eking up from their early 2009 levels,

though they're still much lower than their post-Hurricane Katrina surges.

"Right now commodities are a lot like the price of gas," Christensen says. "It's not as low as it was a couple months ago, but it's not as high as it was last summer and we don't know how quickly it will return."

Copper reached a recent high in July 2008 (breaking the \$4 mark), but nose-

dived in December to a low of \$1.27, a price not seen since 2004.

"With 200 miles of wire on an average, 18-hole golf project, the copper market's volatility has a significant impact on the cost of a system," Christensen says.

At press time, copper prices were at \$2.33 per pound, showing signs of a slow but steady increase.

ONE-YEAR COPPER SPOT



U.S. PRODUCER PRICE INDEX/PLASTICS MATERIAL AND RESIN MANUFACTURING



P = preliminary. All indexes are subject to revision four months after original publication.

Because piping equates to about 25 miles on an average 18-hole project, according to Christensen, plastics prices also play a major role in the overall cost of an irrigation system.

The plastic price index that accounts for both PVC and HDPE pipe and fittings costs has dipped significantly since last summer, when petroleum prices fueled increases among many plastics.

Plastics prices are edging back up, too, though they're nowhere near recent highs like August 2008.

"Pipe and wire have both started to climb since they hit bottom in January of 2009, but it is still an advantageous time to purchase these goods," says Jim Boyer, senior operations manager for Leibold Irrigation, a contractor based in East Dubuque, Ill.

Energy costs can do double duty on irrigation projects – affecting plastics prices and potentially creating the need for surcharges. These surcharges can come in the form of \$1,000 tacked onto a delivery or contractors trying to renegotiate for an extra \$20,000 to cover unex-

pected fuel increases. Such surcharges have all but disappeared in this down market.

Whole goods pricing is down, too, mainly due to supply and demand. Distributors report about a 26 percent decrease on bills of goods when compared to projects quoted in early 2008.

"Materials prices are similar to what they were exactly two years ago," says Gary Kaye, vice president of Kaye Contracting Co., Anthem, Ariz.

HUNGRY CONTRACTORS

Plagued by the downturn in the golf market and the economy, builders are hungry for work. Consider it a "new definition of busy," Christensen says, comparing contractors to airlines.

"The flights are full, but they're flying half as much as before," he says. "Contractors used to be able to take on four or five projects, but now they might only take on two, but they've had layoffs, so they're full."

Construction prices are where they were

three years ago or about 15 percent less than early 2008 figures, Kaye says.

"You're never going to get a better price on construction," Kaye says. "People are doing projects for no profit at all – I know we are. It's just to keep your employees working, your business going and the machinery paid for."

Roy Wilson, president of Landscapes Unlimited's Irrigation Group, based in Lincoln, Neb., says projects are going for 7 to 12 percent less than a year or two ago. Leibold's Boyer estimates some projects may be as much as 15 to 20 percent cheaper.

"Demand is just not there as it was in the last couple of years and that brings prices down for the materials," Wilson says. "And with less projects for contractors the competition is greater and the bids for their work are less."

"Fear and hesitation with the markets and with the economy are causing owners and clubs to take a wait-and-see approach, although they're missing out on some great savings right now," he says.

(continued on page 63)



A summer stress breakthrough.

Echo® ETQ™ Turf Fungicide combines Echo chlorothalonil with an exceptional pigment additive. While the ETQ additive minimizes the factors contributing to turfgrass stress, Echo prevents dollar spot, brown patch, leaf spot, gray leaf spot, anthracnose and other diseases. What results is remarkable disease control accompanied by improved turf color, strength, density and consistency. All at a fairway-friendly price and without resistance issues. Relieve summer stress. Make **Echo ETQ Turf Fungicide** your go-to product for disease control and enhanced turf quality.

www.AdvanLLC.com
866-429-0887



SipcamAdvan
The Natural Choice™

EEGC10509

©2009 Advan LLC. Echo and Advan are registered trademarks of Sipcam Agro USA, Inc. The Natural Choice and ETQ are trademarks of Advan LLC. Always read and follow label instructions.

www.golfcourseindustry.com/readerservice - #21

JULY 2009

SMART IRRIGATION



A SUPPLEMENT TO
GOLF COURSE
INDUSTRY.

S3

5 WAYS TO BETTER MANAGE YOUR WATER

Ideas big and small to help you save water and, potentially, money.

S12

CASE STUDIES

A look at three facilities saving water: Indian Hills Golf Club, Murfreesboro, Tenn.; Silver Stone Golf Club, Las Vegas; and Chariot Run Golf Club, Laconia, Ind.

S18

A DESIGNER'S VIEW

Golf course designer Joe Jemsek's perspective on turf conversions.

ADD UP THE SAVINGS WITH AQUATROLS!



-50%

Save 20% - 50% on water —
find out how!

Pre-Emergent Herbicides + Dispatch® = Better Weed Control

Insecticides + Dispatch® = Better Results with Lower Rates

Fungicides + Revolution® = Best Defense Against Disease

Fertilizer + Dispatch® = Increased Nitrogen Efficiency


Save Money • Reduce Waste • Keep Turf Healthy

University research and superintendent use show that Aquatrols products save water, reduce waste and keep turf healthy.

Ask your Aquatrols distributor representative about our "Dollars & Sense" series or follow the link below to find out how Aquatrols can help you conserve water and stretch your budget further.

800-257-7797 • www.aquatrols.com/whatsnew.htm

**AQUATROLS®**



5 ways

to better manage
your water

Ideas big and small to help you save water and, potentially, money.

BY MARISA PALMIERI

SMART IRRIGATION

1. GET LOW

Low-volume emitters, or microsprinklers, are a tool that International Golf Maintenance's desert-climate courses are using to improve conditions and save water.

"We battle bad wind in the desert," says Steve Gano, vice president of operations for the ChampionsGate, Fla.-based contract maintenance firm. "Even at night, the winds can be so bad that we battle dry spots in the summers."

Rather than overwatering or hand-watering the localized dry spots, IGM facilities use sets of low-volume emitters, which are typically made up of strings of 10 heads with about 10 feet of hose between them.

"They sit low to the ground – they're only 18 inches tall – so wind doesn't affect them," Gano says.

In addition to preventing drift and evaporation, the emitters prevent runoff, which is inevitable when turf managers attempt to treat small dry spots (like a 10- by 10-foot area), with a typical irrigation head that may have a 75-foot radius.

Though Darin Pakkala, director of golf course maintenance for IGM at ViewPoint Golf Resort in Mesa, Ariz., hasn't calculated the short-term water savings, he says he's certain he's saving water.

"Going off the basis that we're running the emitters that put out about 12 gallons an hour vs. a head that puts out more than 24 gallons a minute, we're saving water," he says.

Use of the emitters combined with other

management practices have helped ViewPoint reduce its annual water use from about 450 acre feet to about 330 acre feet per year (more than 39 million gallons) since Pakkala joined the staff three years ago.

Pakkala keeps one set of emitters for every few holes. The maintenance staff moves them to various dry spots twice in a typical day.

"They're very easy to move, you can grab them and drive them to the next location, or sometimes you don't even have to drive," he says. "I'm able to move about six of them in 20 minutes tops, including getting them set-up."

Pakkala and other IGM superintendents fabricate the emitters in-house, purchasing the parts from irrigation distributors for between \$50 to \$250 per set (depending on the set's size).

Gano points out that the emitter sets are also good tools for leaching salts and establishing seed or sod.

Plus, they can be used during golf play because they're so low to the ground.

"Golfers aren't bothered by them at all," Pakkala says. "If there's wind, you're not getting any drift because the water's going right to the turf."

.....
The top three water conservation methods superintendents use are wetting agents (92%), hand-watering (78%) and keeping turfgrass drier (69%).*



2. WET IT RIGHT

Sometimes saving water is just about saving water.

But sometimes it's about a lot more – like improving course conditions and conserving labor.

At the private, 18-hole South Hills Golf & Country Club in Fond du Lac, Wis., Jim Van Herwynen, CGCS, has found a way to do all three with the help of his wetting agent program.

Since implementing the program about four years ago, the facility has not had to tap into the city water supply, which it had been spending about \$8,000 a year to use.

Though Van Herwynen estimates he spends \$8,000 to \$9,000 on wetting agents each year, he says the program saves him additional dollars in labor and has improved course conditions.

"Turf conditions are far better than they used to be," he says. "Everything's more consistent and uniform."

This region of Wisconsin is so wet from the snow melt-off in the spring; plus, the area's heavy clay soil retains that moisture, which means Van Herwynen risks not being able to get



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

the heavy machines out on the golf course without damaging the turf.

After years of trial and error, he's devised a plan where he injects Dispatch into the irrigation pipes as he's starting up the system. The first application goes out with the initial irrigation test.

"Doing this helps us move the water through the soil profile in the spring so we can actually get our machines out there," he says, noting he injects Dispatch throughout the spring until about Memorial Day weekend.

In the fall, Van Herwynen does a double application of Dispatch via injection on back to back nights just before he blows out the irrigation system. Again, the goal is to help water move through the soil profile so the crews can get the equipment out faster in the spring.

In the summer Van Herwynen makes an application of Lesco-Flo at 12 ounces per 1,000 square feet to fairways, intermediate rough, green surrounds and tees. He prefers

to apply the product in the rain. The goal of this step in the program is to keep the heavy clay soil from going dry.

"The problem in our region is extremes – it's either too wet or too dry," he says. "So we've combated that with penetrants in the beginning and end of the season and a true wetting agent in the summer."

On the native push-up greens that have five decades worth of sand topdressing, Van Herwynen applies 5 to 6 ounces of Revolutions once a month starting the third week in April and running through September. He tries to time those applications when it's going to rain, or he'll water them in with 3/10 inch of water that night.

The biggest benefit of the greens wetting agent program is preventing the need for hand-watering – which hasn't taken place at South Hills in more than four years.

Before that, in the summer it wasn't uncommon for three crew members to hand-water tees, collars and surrounds every other

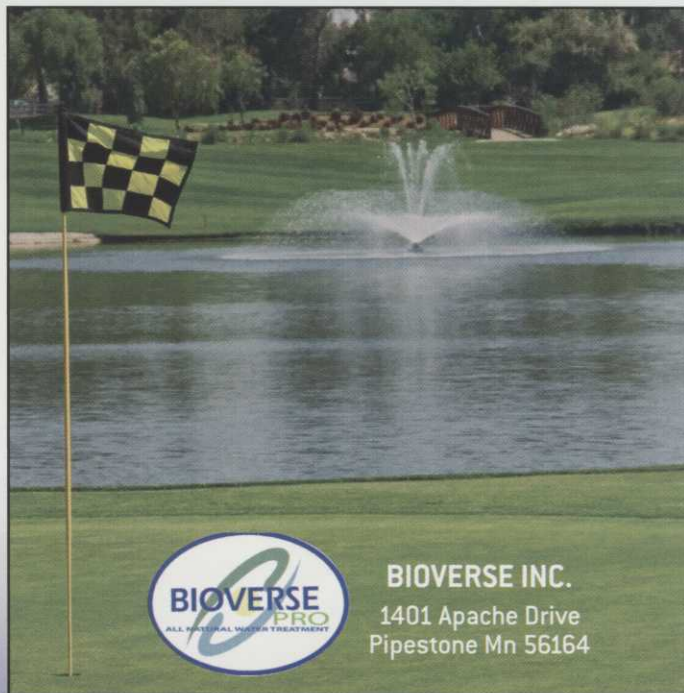
day for six hours a day.

Now that Van Herwynen is down to a crew of 12 after peaking at 18 in 2002, saved labor hours are a boon as budgets get tighter. Those hours can go towards other tasks that were neglected in the past.

"Our landscaping and detail work is much better," he says. "We have time to do those things now. We're slowing decreasing our staff size to become more efficient and we're using wetting agents to help us out."

.....
Approximately 46 percent of 18-hole golf facilities treat their irrigation water or distribute products via their irrigation system. The most common products distributed through the irrigation system are wetting agents (34 percent) and fertilizer (23 percent). More than 70 percent of 18-hole golf facilities with maintenance budgets less than \$500,000 do not treat irrigation water or deliver products through their irrigation system.*

Because lush and green should describe your fairways, not your ponds.



BIOVERSE INC.
 1401 Apache Drive
 Pipestone Mn 56164

Natural , Safe, Effective

AquaSpherePRO

The AquaSpherePRO is a patented dispensing system for larger ponds and lakes. This recyclable plastic sphere ships complete with PROFormula, will treat large fresh water ponds and lakes for up to 30 days, and is available in three convenient treatment sizes.



AquaSpherePRO –Biodegradable

This newly released addition to our Aquasphere force is 100% natural. It's the same great product just with less hassle — you just dispense and forget about it.



Blast

Blast advances the decomposition of organic matter in a pond or lake through a proprietary blend of multiple strains and species of beneficial bacteria. Blast is best used in combination with the AquaSpherePRO as a means to compensate for seasonal spikes in nutrients and temperature.



website : www.bioverse.com

the best results on the golf course without damaging the turf. After years of trial and error, it's obvious a stain when an irrigator changes into the right equipment to be working on the green. The first application goes out with the initial irrigation.

Paying 35% more for a wetting agent is enough to make anybody hydrophobic.

(Sorry, that's a little industry humor.)





Tournament Ready® Soil Surfactant performs as well or better than our competitor's top selling brands, including Revolution® for up to 35% less. Now you can get the most from water, without being dragged under by the cost.



KALO

The Science of Common Sense.

800.255.5196

kalo.com

SMART IRRIGATION

3. LOOK FOR LITTLE THINGS

A water conservation strategy with many little components can do a lot of good. That's the philosophy at American Golf Corp., the Santa Monica, Calif.-based company that manages 110 golf facilities in the U.S. With many of its facilities located in the Southwest, mandatory water reductions are a reality.

"Not being proactive and just becoming a victim of the circumstances is not an option for us," says Scott Bourgeois, director of maintenance for Southern California.

American Golf's comprehensive strategy to minimize water consumption includes many components, all of which are tailored to each specific operation.

Some of the tactics include: aggressive cultural practices, including verticutting and aeration to improve water penetration; being choosy about turf types (favoring drought-tolerant, warm-season varieties); minimizing or eliminating overseeding on

some properties; and looking for spots to further cutback on irrigation, including slopes, landscape beds and deep rough areas. Also, employees are careful when it comes to cleanup – they clean golf cars with air hoses and by wiping them down vs. using water. They use backpack blowers instead of hoses to tidy up hardscape areas.

Irrigation system components, of course, play a role. American Golf is retrofitting irrigation heads on about 20 of its courses to FCI Profile nozzles, which are eligible for a Metropolitan Water District of Southern California rebate program. FCI nozzles are metal nozzles with stainless steel orifices, designed to improve distribution uniformity.

Bourgeois estimates a 5 percent water reduction per course because of the nozzle upgrades. The company has used these nozzles over the years, but recently committed to converting more facilities to them



as increasing drought conditions and water restrictions have put pressure on the golf business and large-volume water users.

"When a course is applying 300,000 gallons to over 650,000 gallons a night to irrigate the entire course during the warmer months of the year, saving 5 percent to 20 percent with a comprehensive water reduction strategy can really help the cause and help protect this precious and limited supply," Bourgeois says.

UNDERHILL

AERATION AND BEAUTY AT ITS BEST. Demanded by You. Mastered by Us.

Aqua Master®

FOUNTAINS AND AERATORS

MASTER THE POWER AND BEAUTY OF WATER

The Industry Leader for quality and dependable Fountains, Aerators and MasterClear Natural Microbial Products.

Aeration is a natural, environmentally safe and highly effective water quality management tool. It addresses a wide range of water quality problems, including algae build-up, aquatic weeds, bottom sludge, foul odors, insect infestation, and stagnation in lakes and ponds.

AquaMaster® products are available in 60 and 50 Hz, from 1/3 to 25 HP with AquaMaster's quality warranties.



AquaMaster Advantage

All MasterClear Natural Microbial Products are environmentally safe and supportive of a healthy balanced Ecosystem.

www.aquamasterfountains.com

1.800.693.3144

www.golfcourseindustry.com/readerservice - #25