More than 240,000 flowers, which guests are allowed to pick, are planted at the Arizona Biltmore each year.

**Biltmore, Holy Cross make it close**

According to judges of the 1988 Landscape Manager of the Year award, Roy Peterman at Brigham Young University had excellent competition for the title. Named honorable mention, not far behind Peterman, were a pair of aspiring writers, Thomas Harrow at the Arizona Biltmore Hotel and James Long at Holy Cross College.

Harrow, when not overseeing the planting of 240,000 flowers each year, is otherwise busy publishing a book entitled "Five Star Gardening: Back to Basics in the Southwest." And one of Long's immediate goals is to write a handbook and resource guide for landscape managers.

The Arizona Biltmore, a Westin hotel, is renovated twice a year, according to Harrow. This includes planting 28 varieties of flowers and 5,000 bulbs, and scalping, thatching and overseeding all 11 acres of turf with 14,000 pounds of grass seed. The Biltmore is one of the few hotels in the nation where guests are encouraged to pick the flowers.

What was once a landfill is now the popular Paradise Garden planted with roses, trees, bushes, flowers and a special cactus garden that features 14 cacti native to Arizona and six Australian drought-resistant plants.

Long and Holy Cross were most recently honored by the Sports Turf Manager's Association for having the "Baseball Diamond of the Year." Fitton Field, one of New England's landmark athletic facilities, has been the host to such standouts as Casey Stengel, Babe Ruth and Jimmy Foxx. During the 1920s, 1930s and 1940s, Fitton Field was the site of annual exhibition games pitting the Boston Red Sox and Boston Braves against Holy Cross.

Another highlight of the Holy Cross campus is the arboretum where the Teddy Roosevelt Tree is located. The former president planted the Scotch elm himself in 1905 following commencement. It is joined by thousands of evergreens, birches and flowering crabs on campus.

The contest was jointly sponsored by Landscape Management magazine and the Professional Grounds Management Society.
Improvements in treatment have made reclaimed wastewater a viable source of irrigation water, and a way to conserve valuable freshwater supplies.

The lyrics "Well I love that dirty water..." from the Standells' 1966 hit song "Dirty Water" were 20 years ahead of their time. More than a few landscape and turfgrass managers will be singing it soon.

The use of dirty water, commonly known as effluent or recycled water, is a growing trend in a country that is wasting water resources at an alarming rate.

The use of recycled water is not a new concept, but only in the last five or 10 years, with the advancement of waste treatment technology has its widespread use gone beyond discussion and into common practice. For now, its use is mostly on golf courses, though effluent use is spreading to parks and residential landscapes as water supplies become more scarce.

According to Toro vice president James R. Watson, Ph.D., 10 years ago about 70 to 75 golf courses in the entire country were using effluent irrigation. In California alone, notes Roger Lindholm of the California Department of Water Resources, at least that many courses were using effluent by 1985.

Water re-use in Florida is equally extensive. The 160 wastewater recycling projects in the state have a capacity to pump 380 million gallons per day (mgd). Of that total, golf courses account for 61 percent of the small systems (under 1 mgd), landscaped areas five percent. Of large systems, golf courses and landscaped areas account for 24 percent each. The balance in each case goes to fodder and direct consumption food crops.

One of the benefits of using reclaimed water, besides saving existing supplies, is its nutrient content. Most supplies have their share of ben-
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eficial nitrogen and phosphorous.

But a major problem with effluent, says Iowa State University professor Mike Agnew, Ph.D., is that a pipeline needs to be established to pump it. "If a superintendent has a problem with getting (fresh) water and he's close enough to a treatment plant, he could use effluent," Agnew says.

However, notes Lindholm, "It is expensive to put in a separate system for transport."

Effluent is not completely pure, or drinkable. But with proper treatment and filtration it's pretty close—about 99.9 percent pure, according to Watson.

"The source is the determining factor in its value," Watson says. "The biggest problem is public acceptance."

Brian R. McMahon, P.E., of Boyle Engineering Corp., which constructed Florida's huge Conserv II wastewater treatment plant, concurs.

"The public's lack of knowledge about the nature of reclaimed water can make the prospect of irrigating a community's golf course, lawns or food supply with wastewater an unattractive one," McMahon says.

"However," he continues, "knowing the process by which the waste product you flushed down the drain today becomes a valuable resource tomorrow can be the first step in making rational decisions about reuse."

Wastewater can go through several stages of pre-treatment before use, depending on where it will be applied. The first involves screening and settling of large solids from the liquid stream with minimal removal of dissolved or suspended solids. This is generally not acceptable for re-use because of the possibility pathogens remain in the water.

Stage two includes primary plus biological treatment to further remove suspended solids, break down organics and remove some dissolved solids. The finished product is then disinfected, usually with chlorine.

According to McMahon, secondary treated water is acceptable in areas restricted to access by the general public.

Tertiary treatment, for areas of full public access, includes sand filtration and chlorination to achieve higher levels of solids removal and disinfection.

"To achieve high level disinfection as defined by the Florida Department of Environmental Regulations," McMahon explains, "the treated water must contain no detectable fecal coliforms. This requirement is quite stringent and usually results in a clear, odorless reclaimed water that in many respects can meet drinking water standards."

McMahon: 'Treated water in many respects can meet drinking water standards.'

However, Watson says, when treated effluent is used, remaining impurities are filtered out by the turf. "Turf is a great filter," he says. "It permits water to percolate into the soil and back into the groundwater in a very 'pure form.'"

Agnew stresses, though, that "you have to monitor it at all times for salt content." But he adds that filtration processes usually take care of the hazardous salts. He notes that one golf course in Iowa uses effluent that actually has a lower salt content than the town's "fresh" water supply.

"We feel that this is an efficient way to use the water supply," Lindholm says. "In California, we encourage water agencies to re-use the water supply. We think that its use should be increased, and we think it will be."

"It's a great source of water," Watson agrees. "It's an economic way of dispersing wastewater. It permits grass to be grown in areas where it otherwise wouldn't be grown."

Watson: 'Turf is a great filter.'

McMahon: 'Treated water in many respects can meet drinking water standards.'

Safeguards

Despite filtration, considerations must be made for pumping and storing effluent water. "Exposure to humans must be considered," Lindholm says. "Irrigate at times when humans wouldn't be exposed."

Storage areas (usually ponds or tanks) must be kept circulated to avoid stagnation. Effluent is potentially corrosive on non-plastics and can clog valves and sprinkler heads if larger particles are present. Dissolved salts can also corrode metal parts.

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THE COST OF LAYOFFS

To layoff or not to layoff? With the winter season coming up, it could increase your cash flow to layoff some employees until spring. But, in the long run, you may lose some customers next year.

by Rudd McGary and Ed Wandtke

In today's economy, many green industry companies are experiencing the unfortunate after-effects of this summer's dry spell; poor cash flow. Because of this reduction in company profitability, many of you might be seeking ways to reduce your operating costs this winter.

What are the implications of laying off employees that you would have otherwise kept on the payroll for the entire year?

Three areas of concern need to be addressed in order to determine the appropriate course of action:

1. What did you plan on having these employees do this winter?
2. What are the potential ramifications of laying off these employees this year?
3. What will it cost to replace these employees if they do not return next year?

Plan their use
Companies often do not develop a written plan of off-season tasks for employees. They also often do not take the time to assign times for each task performance. If you take the time to detail the tasks and assign time to complete each task, you will be able to determine how many man-hours you need to plan for the winter. This planning is necessary now, if you hope to maintain or improve your financial performance for the year.

Laying off employees
Laying off non-essential employees has been a regular practice at those companies which have not been able to develop such a plan. In some cases, this may be an excellent manner by which you can continually improve the quality of your workers. Others, though, really hate to let potentially good employees leave.

Some states allow a green industry employer to be considered as seasonal with respect to his need for a specific size workforce. This allows the employee, when laid off, to qualify for unemployment benefits sooner, based on the fact that a specific return-to-work date is known at the time of the layoff. Many employees look forward to this time off; others take seasonal employment counter to the turf industry.

Layoff implications
If you choose to lay off some or all of your employees, there are many potential effects on your workforce in the future.

1. Employee morale will continue to be low. Individuals worry when it will be their turn to be laid off, especially if layoff policies are inconsistent.
2. It will be extremely difficult to attract better employees; ones needed to provide the management and consistency needed for growth.
3. There will continually be higher than average turnover of laborers who see no future for them with the company.
4. Your company will acquire a reputation in the community of inconsistency of service because of employee turnover.

Cost of layoffs
In determining the cost of layoffs, it is important to consider the total cost of keeping an employee on the payroll. These costs would include payroll, benefits, training, taxes, insurance, medical and life insurance, uniforms, customer turnover and service efficiency.

We have found that customer turnover generally increases at the rate of 30 to 40 percent when the same service personnel fail to return from one year to the next. The higher the customer's financial base, the stronger the bond between service personnel and the customer. In addition, the more interaction between the on-site technician and the homeowner, the lower the customer turnover.

Service efficiency continues to be a key factor, since the costs of equipment and training are rising. So how do you quantify this cost?

Use this formula:

1. Write down the cost to attract one new customer, in dollars.
2. Write down your current cancellation rate.
3. Write down increased cancellation rate due to change.
4. Figure the adjusted cancel rate by multiplying line 2 by line 3.
5. Figure the increased customers you need to attract by subtracting line 4 from line 2.
6. Compute customer turnover cost due to layoffs by multiplying line 1 by line 5.
7. Write the number of customers serviced at the end of the year.
8. Write down the full-time employees at the end of the year.
9. Compute average customers serviced by one employee by dividing line 8 into line 7.
10. Write down number of customers in the third month of the year.
11. Write down number of employees in the third month of the year.
12. Calculate the average customers per employee in the third month of the year by dividing line 11 into line 10.
13. Figure efficiency cost, line 9 minus line 12.
14. Multiply efficiency cost, line 13 times average revenue cost.
15. Figure total cost efficiency plus customer turnover by adding line 6 to line 14.

Conclusion
If your answers to lines 6 and 14 are so small that they are not financially significant to your company, laying off employees is obviously not that expensive. If otherwise, you must change: map a plan as to how you can avoid those costs in the future. LM
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Bobcat trenchers are easy to transport from jobsite to jobsite.
Ounce of fungicide worth a pound of cure

Jim Ellis, grounds superintendent at Lincolnshire Fields Country Club in Champaign, Ill., feels very strongly about turf disease prevention at the 20-year-old course he has worked on since 1977.

Disease prevention on fairways began only five years ago when Ellis and the previous superintendent began overseeding with ryegrass to change the stand composition.

“The main reason,” Ellis explains, “was to help combat what was known at that time as Fusarium blight. However, we also found that the ryegrass gave us excellent competition against Poa annua. Because ryegrass is generally vigorous at the same time as the poa, we’ve been able to hold our own and even decrease the annual bluegrass in some areas.”

On the other hand, Ellis has no desire to totally eliminate the original Kentucky bluegrass either. Otherwise, he believes that Pythium blight would take over as a major disease. Hence, he tries to maintain a mixed stand “that will withstand the summers a little better” by overseeding with both species on a regular basis.

“In the past, we were on a treatment program that called for addressing problems as they appeared,” Ellis recalls. “In other words, for budgetary reasons, we would do everything agronomically possible to discourage disease, and then treat those areas that became critical. That was essentially the practice for the first 15 years of this course.

“What we are trying to do now is slowly expand our budget in the area of fertilizer and fungicides to where we can get as much use as possible out of a good systemic product. Then if we still get a disease problem we hit it again.”

While Ellis admits he has used just about every fungicide on the market, he currently limits his arsenal to a half dozen contact and systemic products—the mainstay of those being Rubigan, Bayleton and Cleary’s 3336.

“We basically have two systemics that would be relatively expensive on a weekly basis,” he says. “However, because they provide control for three to four weeks, the cost per day is very reasonable. So we may use Rubigan one week and the next week we may come in with a contact fungicide for another problem,” he adds, noting that fertilizer is often applied in the same application. Ellis says he was introduced to Rubigan in his quest for a chemical that would prevent and control dollar spot, which, year in and year out, had been his biggest problem.

“One of the first uses of the product was on a fairway, where we set up test strips in cooperation with Elanco, to evaluate its effectiveness against the disease,” he says. “Although there were already active dollar spots on the course, our goal was to see if we could prevent further outbreaks.”

According to Ellis, the product not only stopped the disease, but turned the appearance of the turf around. “You could see exactly where the sprayer nozzle quit and where the check strip began,” he says. “Not only did it clear up the dollar spots, but the turf that was treated actually looked greener. We’ve found since then that we also get some suppression of Poa annua.”

More recently, though, Ellis has been experimenting with Rubigan to control the summer disease previously known as Fusarium blight.

Researchers have found that infection starts below the ground rather than on the leaves of the plant. Hence, a revised approach was taken to treatment and control. “Characteristically, we don’t see patch disease symptoms show up until the end of July or the first part of August,” says Ellis. “That’s when you begin to see the textbook frogeye pattern. That is, you have healthy grass in the center of a full or partial ring of dead or dying grass, surrounded by more healthy turfgrass. As the disease becomes worse, the rings start running together until you end up with one big mottled area.”

Referring to research done on his own course in cooperation with the University of Illinois, Ellis adds, “I believe at this point that the primary pathogens are actually working on the roots of the plant. What we are seeing on top may even be other pathogens that are attacking the weak grass plant; and that’s when we are seeing the leaf damage. It also explains why you can’t get complete control of it with a contact fungicide.”

Having worked with both fungicides and patch disease for several years now, Dr. Joe Vargas, turfgrass pathologist at Michigan State University, readily concurs.

“Part of the key is applying the fungicide early enough,” he says. “By that, I mean May or early June before the disease has a chance to become established.” He insists it is equally important to select a fungicide that has proven effective against the disease you are going after. “Because of environmental conditions in our part of the country, it is pretty easy to identify them,” he says, referring to the northern states. “We typically see necrotic ring spot on Kentucky bluegrass, summer patch on annual bluegrass and take-all patch on creeping bentgrass. However, as you move south, you may also see summer patch on Kentucky bluegrass. This summer we even saw summer patch on ryegrass. So you are never sure what you’re dealing with. In most cases, the only way to tell the difference is to plate them out in the laboratory.”

Rubigan, however, has been effective in suppressing all five pathogens. Speaking from the experience on his own course, Ellis has to agree. Since the spring of 1986, he has been applying Rubigan as part of a program to prevent disease on tees, greens, approaches and those fairways that have exhibited the frogeye pattern in past years. “The way I see it, no one can expect total control when we’re not even sure of the problem,” he says. On the patch diseases, Ellis notes that Rubigan is not quite as effective.

“It’s not the night and day difference you see when you use it on dollar spot, but you can still see where it has been active,” he says. “So everyone’s line of thought is that the product does have some control of the problem. However, at this point there are still a lot of questions concerning rates, timing of applications, how deep to water it in and how much the different pathogens are affected by all of the above.”

LM
Oscar Miles, the superintendent at Butler National Golf Club, loves the LESCO 500 Fairway Mower. He should. He and Butler Equipment Manager Mark Winge had the idea of developing a lightweight, five-gang, greensmower-type fairway mower long before the LESCO machine was introduced.

Miles was one of the first superintendents to maintain fairways to putting green standards with triplex mowers. And although he never waivered in his conviction that greensmower-type machines were the way to go, he searched for ways to make the job less labor intensive and time consuming.

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Circle No. 124 on Reader Inquiry Card
Small business and the ‘lawsuit lottery’

by Edward R. Court

In fewer than three years, my product liability insurance has risen from $6,000 to $40,000 per year. And the $40,000 this year buys only one-tenth the coverage I had three years ago.

I have spent the past 19 years building my security gate manufacturing and installation business to its present size (I now employ 45 people). All I have worked for—and the jobs of my employees—could be lost in a single judgement in what I believe is a “lawsuit lottery” for the money-grabbing plaintiffs and attorneys.

Every gate I install raises the odds against my company. The most frustrating part of the gamble is that a judgement against me could have little or nothing to do with the quality or performance of my product.

When I first began to notice the effects of the liability crisis, I felt a lot of resentment toward the insurance industry. However, as my understanding of the problem grew, I realized that for the most part insurance companies were reflecting their cost of doing business today. Most insurance companies were not willing to quote product liability rates, and many of them were getting out of the product liability market. That is not the kind of response you see when there is money to be made.

Liability juggernaut

In 1984, insurance companies paid out $1,552,744,000. More than $1 billion of that was for non-economic damages—that is, for pain and suffering. Legislation like Proposition 51 in California will help control these high costs. Unfortunately, however, it doesn’t put any limit on the amount of damages that can be awarded for non-economic reasons.

The bottom line is this: Unless the cost of the system is reduced, there will be little or no reduction in companies’ insurance premiums and no assurance that companies will keep the assets their owners have spent a lifetime accumulating.

Today, people are more willing to sue than ever before in our history. Between 1980 and 1984, lawsuits in Los Angeles County grew at a rate four times faster than the population. In 1985, lawsuits in Los Angeles County grew at a rate 13 times faster than the population, according to county records. Wherever you look attorneys are encouraging lawsuits.

A call for reforms

If the cost of our insurance is to be reduced, we will have to take these dollars away from the special interest groups perpetuating this condition. To do that, we need reforms limiting liability. Some suggested reforms include:

- Preclude liability where the dangerous aspect of a product is inherent and recognized by the ordinary user. Preclude liability when the product provides an important benefit and the known risk is unavoidable. Should a lawn mower retailer be responsible for someone’s heart attack?
- Eliminate the Collateral Source Rule. Today juries cannot be told an injured person has already received payment for his or her injury from another source, such as a personal health plan or a government agency. Juries should be able to consider all relevant information to determine how much an injured party needs or deserves.
- Provide immunity to volunteer directors and officers of a non-profit corporation who act in good faith.
- Grant design immunity to local governments. If a local government built a road 30 years ago that today wouldn’t be considered safe (with the increased traffic and present safety standards), don’t hold it liable.
- Attorneys receive 30 to 50 percent of everything a person gets. Limit them to a sliding scale whereby they would receive 33 percent of the first $100,000, 25 percent of the next $100,000, and 10 percent of everything over $200,000. The injured person would then receive more of the money he or she needs, and the attorney would not have a financial incentive to persue long and costly lawsuits (even when his or her client might be better served by a quick settlement).

To be done...

We need reforms to control the many greedy attorneys and the many greedy so-called victims who see dollar signs every time someone has an accident. In 1975, the medical industry in California got the Medical Injury Compensation Reform Act passed, which contains many of the reforms I’ve detailed. As a result, the average malpractice case nationally costs $974,858, while in California it is only $369,662. Similarly, a neurosurgeon practicing in New York pays $103,000 per year for malpractice insurance, while in California his counterpart pays $42,000. We need the same kind of reforms to protect our businesses.

I ask myself, and you should ask yourself, “How secure am I?” Could you become the next jackpot in the lawsuit lottery? The answer is “yes” for everyone.

Our liability system is out of control. We must bring back a sense of fairness and justice to this system. Stop complaining to your insurance agent. He or she fears the same thing every day. Take 20 minutes and write a letter to your state and federal legislators. Tell them you want reforms in our liability system and tell them you want to know what they’re going to do about it.

When you see a liability reform bill on the ballot, get to the polls and vote. One thing you shouldn’t do is agree with me and then do nothing. Take time and voice your opinion. It might be your business and future you’re helping to save.

There are well-run organizations in virtually every state working to solve the liability crisis. Join them and get involved. In California, contact the Association for California Tort Reform at (916) 442-1111. Nationally, contact the American Tort Reform Association at (202) 442-1111.

Edward R. Court owns Court Security Systems in Van Nuys, California.