Courses breaking hazwaste law

BY MARK LESLIE

Most golf courses today are breaking the law.

Only 45 percent of the Club Managers Association of America members questioned in a poll say their clubs have a hazard communication program, and an industry expert feels even that is a high figure.

A poll conducted by Public Opinion Research, Inc., of Washington, D.C., and CMAA's Governmental Affairs Department found that only 56 percent of the managers polled had even heard about the law requiring a hazard communication program.

The law, which originally targeted heavy industry and manufacturing, was expanded to cover golf courses among other businesses in May 1988.

The federal Occupational Safety and Health Administration reports that lack of a

Oregon seed law vote soon

A decision is expected in mid-June on a proposed field-burning law in Oregon that may endanger the entire supply of U.S.-produced cool-season golf course grasses.

Observers close to the Oregon state Legislature say the seed industry has enough support in the House to kill any bill that would be too damaging to the 70 seed companies and 800 farmers who grow seed in the state.

But Dave Nelson, executive director of the Oregon Fine Fescue Commission, is not taking anything or anyone for granted.

"Things have to cook and take their time" in the legislative process, he said. "We're proceeding through the process but we won't know anything for sure until the final vote on the floor."

Another industry expert said the state Senate in mid-May was taking a harsh stand that would have cut the number of acres that could be burned in the state from 250,000 to 150,000 this fall, then to 100,000 acres in 1990, and 50,000 thereafter. The Senate at that time supported raising the fee farmers pay per acre burned from the current $3.50 to $20 or $25 an acre in 1992. A total of 345,000 acres produces grass seed in the state.

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Beditz leads NGF into future

BY BOB DRUM

The National Golf Foundation is "its strongest in history," says Dr. Joseph F. Beditz, its new president and chief operating officer. "I'm inheriting a healthy club and want to keep it up and keep improving."

Beditz, 38, who had been in the job in an acting status since David B. Hueber resigned in January, has high hopes since being handed the post permanently after a May 2 NGF board meeting.

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Drought woes plague courses

BY KATHY BISSELL

The drought situation continues to affect golf courses in all parts of the country.

Most severely hit are areas of Northern California, according to Don Hoos, director of agronomy for Landmark Land Co., Inc., which has 22 courses from California to Florida.

"In Carmel and Monterey the underground aquifer is not as good as in some areas. There has already been a 20-percent reduction request for industrial users, which includes golf courses, hotels and resorts," Hoos explained. "They can achieve 20 percent by being more careful with irrigation, maintaining minimum levels for grass, not watering roughs. The greens,"

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This map from the National Climatic Data Center, NOAA shows the percent of normal precipitation around the United States for the entire year of 1989.

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Drought threat is real from East to West Coast

Continued from page 1

trees and fairways will still have a pretty high level of maintenance. However, the northern areas may mandate 40 percent reduction which, Hoos said, would be severe. "It would require decreasing or eliminating watering in the fairways and roughs. Maybe they could water once or twice a week. A lot of grass would be lost."

Most of the turfgrasses in that area are the Poa annua, annual bluegrass, bentgrasses. According to Hoos, under minimal watering conditions, perennial grasses go dormant but "a lot will come back. They will also have to reseed. That makes the seed companies happy."

Some regions are not affected. Oklahoma, for example, often thought of as dry because of the dust bowl era in the 1930s, has not suffered drought conditions. At Oak Tree Golf Club, site of last year's PGA Championship, they have had more water than average the last two years. "Last year they had 90 percent of normal," Hoos said. "They are in good shape."

The Midwest

In many parts of the country fall rains helped. At Butler National Golf Club in Oakbrook, Ill., golf course manager Oscar L. Miles feels they are fortunate that many places in Illinois. Their rainfall is normally plentiful because they are close to Lake Michigan. "We had nice rainfall last fall," Miles said. "It wet the surface 12 inches. However, we are deficient this year. Last year we had 107 percent of normal. November was very wet here. But this year we've had 46 percent in January, 79 percent in February and 75 percent in March."

The moisture isn't replenished when the ground is frozen, he explained. "We had rains, but the ground was frozen, so it ran off," Miles said of conditions in early winter. "But we've had 1 1/4 inches recently and that wet ground 8 inches deep. We need substantial rainfall soon. It takes 2 to 3 inches of rainfall to wet a foot of soil. We need to have the soil wet 2 to 3 feet deep."

Miles feels conditions farther south and west in Illinois are more severe. A big concern are the trees. "We won't see it (extent of damage) until budding," he said. Damage shows with less budding and reduced vertical shoot growth.

Scientists make advances in grasses

Developing new turfgrasses and management techniques that will reduce golf course maintenance costs and water use by 50 percent by 1993 remains the goal of researchers. Relative ranking of evapotranspiration rates for the most commonly used cultivars of the major cool- and warm-season turfgrasses.*

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* = Grown in their respective climatic regions of adaptation and optimum culture regime. Cultural or environmental factors that cause a drastic change in leaf area or shoot density of a given species may result in a significant shift in its relative ranking compared to the other species.

Reports from Texas A&M, Dallas, the DSIR in New Zealand, and Penn State and Rhode Island universities detail progress in developing improved bentgrasses with greater heat tolerance, lower water and fertilizer needs, and disease resistance—all without loss of superior playing qualities. The target date of 1993 or 1992 for release of the early, promising new bentgrasses holds firm.

Southern New England

Most of southern New England is adversely affected by drought, according to Jay Reagan, superintendent at the TPC of Connecticut. "We are 5 inches below the water table right now," Reagan said in April. "We hardly had any snow last winter and only 6 inches of rain."

Last summer and fall, they were hand-spraying and watering on their course. "We have a totally manual irrigation system, so it takes a lot of work. The roughs burned out completely," he said.

In the roughs there was the added problem of rain and gallery traffic during tournament week of the Greater Hartford Open. Many areas of the course are relatively new, also, and were trampled by crowds. The TPC of Connecticut gets water from a seven-acre, natural pond on site. "The pond level was down and it was critical. We were below the intake lines," Reagan said. They have imported water from the town water supply. Another 10,000-square-foot water area on the course is not used for irrigation.

TPC has not seen a tree problem yet. However, according to Hoos, severe tree problems will not materialize until next year. The first sign of trouble is defoliation. "If there is a second year of substantial loss, then you may lose the tree. It depends on how efficient the type of tree is and what kind of root system it has. Needle trees are more efficient. They don't transpire as much. But the root system of other broadleaf trees may be better."

At Westchester Country Club in Rye, N.Y., they are in a water-cutback situation. "If you have your own water, you can water greens and tees, but not the fairways," said Patsy Knages, superintendent at Westchester. "April 17th, Phase II of the water conservation program started, and then we could water tees and greens."

This Palmer Hydrological Drought Index map reflects long-term drought areas. It takes into account not only rainfall, but also temperatures, evaporation and soil conditions. Drought areas are colored red, extreme wetness areas green. The more extreme the numbers, the more extreme the conditions. Zero is normal soil moisture conditions. Long-term index value standard is negative for drought, positive for wetness.

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Golf courses critical care units in droughts

Nutrition

In drought situations, superintendents "have to be cautious about feeding" their golf courses, says Jim Snow of the USGA Green Section's Golf House in Far Hills, N.J.

"You wouldn't want to overstimulate the grass," Snow says. "Too much fertilization or use of well-saturated nitrogen in the spring will generate a better root system for your turf, so you will have deeper and denser root systems but they will dry out much better.

Snow also suggested sprinkling and slicing soil dried by drought. Watering frequency will depend on turfgrass species and use, soil type and evapotranspiration. But Hummel said that during drought stress periods, light, frequent waterings will produce higher quality turf than that under heavy, infrequent applications.

"Unfortunately, water use will probably be higher due to a more vigorously growing turf," he said.

In non-drought periods, Hummel said, heavier, less frequent waterings should be adequate to maintain high-quality grass. "As summer progresses, though, root systems deteriorate and plants must obtain most of their water from the surface few inches," he says. Thus the change in hotter weather to the light and frequent recommendation.

Snow says superintendents should make sure their irrigation system is working properly and covering the turf as uniformly as possible so that when they do irrigate they don't hoe poor coverage. Check the pressure regulators, head spacing, everything." Snow says.

Soil testing is crucial," he says. "You certainly should have adequate levels of phosphorus and potassium, because that will promote good root growth.

If soil tests indicate low levels of either of those nutrients, you want to provide them. Keep nitrogen fertility down to low to moderate levels during a drought." Norman W. Hummel Jr., assistant professor of turfgrass science at Cornell University, says the critical point in nitrogen management is avoiding nitrogen in the spring to promote rooting. Areas that haven't been fertilized in a year or more would benefit from a pound of nitrogen per 1,000 square feet applied early in the growing season.

On areas fertilized in fall or late fall, nitrogen should be applied until after root production has peaked, he said. "The use of slow-release nitrogen sources at that time would help insure that the growth rate will not adversely affect drought tolerance."

Water

Many factors have to be considered when deciding watering practices, Snow says. "Good cultivation practices are important because you want the water to penetrate into the soil as uniformly as possible," he says.

In the southern one-third of the United States, maintaining a high-cut turf during the summer causes larger water losses due to the greater leaf area and lower resistance in the canopy to soil evaporation. He suggests that where practical, gradually reduce the mowing height starting in late spring and keep it at that height until early fall.

In the southern one-third of the country, superintendents should cut their warm-season grasses at a lower height in the spring and Raise the cut slightly in the summer, according to B.J. Johnson, professor of agronomy at the University of Georgia Agri-

culture Department's experimental station in Griffin.

He says Bermuda and zoysia grasses especially need to be cut (to 1 1/2 to 3/4 inch) to remove thatch in the spring; but then the height should be raised as the temperature gets hotter.

Johnson says that in the South, people should cut cool-season grasses about the same year around (about 2 1/2 inches) and this will reduce stress in the summer and....

Pests

"Do anything you can to control pests, especially insects, because insects can really cause a lot of problems with roots," Snow says. "They eat the roots of the plant and you have to use water like mad to keep the turf alive.

Checking for nematodes, or roundworms, and keeping them under control is also critical, he says.

Traffic

Keeping traffic off the turf areas is important to the turf's survival, according to Snow.

He suggested the course officials look at restricting golf cars to specific areas. An example would be to keep them on the paths, or if the course doesn't have paths, have golfers drive in the tall rough areas. But still "you can't keep running over dry turf with a golf car even in the rough so if the roughs are not irrigated, consider putting the cars off the course all together or put them on the fairways for awhile," Snow says.

The issue of water for golf courses is an "enduring one. Perhaps Butler National Golf Club's Miles has the best philosophy: "It's everybody's responsibility to be responsible."

Kathy Bissell hosts a nationally syndicated golf television show and is vice president and director of public relations for Landmark Land Co., Inc.

Planning

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Landscape

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