

Results of the 1997 Environmental Survey

The Environmental Committee, comprised of Chairman Don Ferreri and members Fred Behnke, Len Conley, Tom Fahy, Tod Hopphan, Tim Kelly, Dave Kohley, Greg Martin, and Tom Voight

The Environmental Committee of the Midwest Association of Golf Course Superintendents had a busy 1997. Formed to address environmental issues that impact the golf industry, our committee met several times during the year. There were two outcomes of our 1997 meetings. The first was the drafting of four directives used to guide our committee activities. These directives are:

- Advance the protection of environmental resources,
- Enhance the quality of the golf course environment,
- Promote recycling, and
- Educate members and the public about the positive relationships between golf and a sustainable environment.

Using these directives as a guide, the second major outcome of our committee activities was the production and distribution of a survey designed to gather environmental information from superintendent members. This article reports on the findings of this survey. It is the intention of the committee that these results be used to produce news releases and articles for the golfing industry and the general public that accurately portray the commitment to the environment made by our member superintendents.

The Environmental Committee wishes to thank each superintendent that took the time and energy to complete and return this survey.

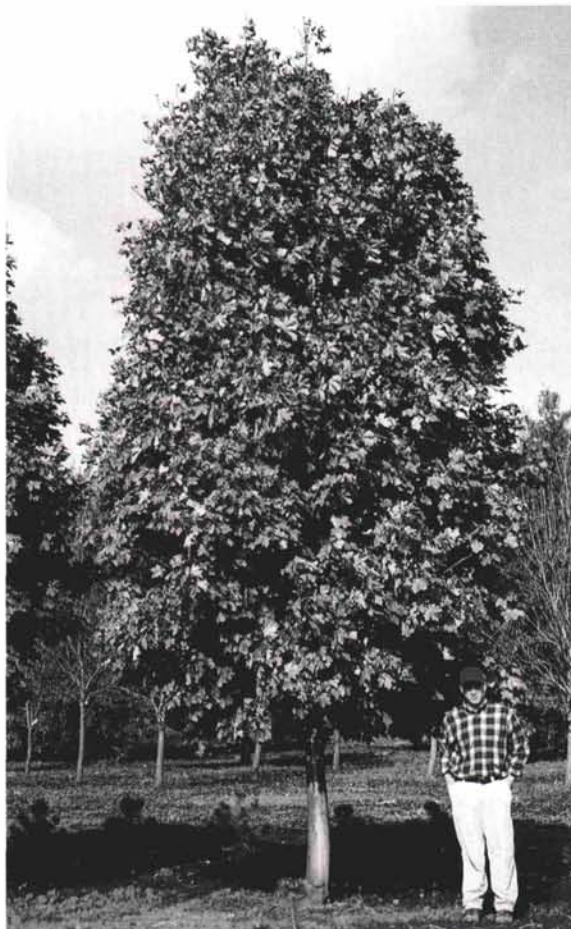
The Survey

On June 2, 1997, 286 surveys were mailed to superintendent members of MAGCS. Through September 20, 1997, 116 surveys were returned. Of the 116 returned surveys, four were not usable due to a lack of demographic data. Of the remaining 112 returned surveys, one indicated that a daily fee course and a private course were present at the same facility. This survey was counted as two surveys with the

demographic data divided by half for each. Thus, the results of 113 surveys were used to compile these data.

The survey had several parts. A portion of the survey collected demographic information about the golf courses. Another portion of the survey requested that superintendents respond to questions about their management and pest control activities. A third set of questions sought information regarding recycling activities. The final portion of the survey sought to identify several environmental perceptions of responding superintendents.

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Results of the Survey

For ease of reading, survey results are presented in eight tables. In Section I, Tables 1, 2, and 3 present demographic information about the respondents and their golf courses. Our committee has estimated that approximately one-quarter to one-third of Chicago area golf courses are represented in this survey. It is interesting to note the differences and similarities among course sizes and budgets and the break-

out of types of courses represented. What may be of greater environmental interest, however, may be the amount of non-turf areas these courses include and the wildlife that has been identified at these courses. Table 3 presents these data.

In Section II, Tables 4, 5, and 6 present results of questions about the superintendents' management and pest control activities. The responses in this section prove to be interesting. While insecticides are often con-

sidered to be the more toxic of our commonly used pesticides, note that a relatively small percentage of acreage is insecticide treated. On the other hand, is there ever a need to apply insecticides five to nine times per year anywhere on a course?

While not reported in a table, survey respondents were asked to report on what percent of pesticide applications were made on a preventative or curative basis or on the basis of a set sched-

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SECTION I — Golf Course Demographics

Table 1. Golf facilities, acreages, and number of rounds per year of responding golf courses.

Golf Facilities	Number of Facilities	Percent of Total Responses	Total Number of Acres	Number of Acres Per Facility	Total Number of Rounds	Number of Rounds Per Facility
municipal courses	36	31.9	5,185 ^a	148	1,645,500 ^a	47,014
daily fee course	25	22.1	4,200	168	893,500	37,229
private course	48	42.5	8,363	174	1,035,000 ^a	22,021
other	4	3.5	860	215	116,000	29,000
Totals	113	100	18,448	164.7	3,640,000	33,394.5

Table 2. The sizes and annual budget ranges of responding golf courses.

Number of Holes and Annual Budget	Percent of Total Responses	Municipal Courses ^b	Daily Fee Courses	Private Courses	Other
9 holes	9.7	7	2	2	0
18 holes	77	23	19	42	3
27 holes	7.1	4	1	2	1
36 holes	3.5	2	1	1	0
other	2.7	0	2	1	0
less than \$249,999.00 per year.	20.4	10	9	4	0
\$250,000.00 to \$499,999.00 per year.	35.4	18	9	11	2
\$500,000.00 to \$749,999.00 per year.	36.3	6	6	27	2
7 - \$750,000.00 to \$999,999.00 per year.	6.2	1	1	5	0
1 - more than \$1,000,000.00 per year.	0.9	0	0	1	0

^b One no response in budget category.

Table 3. Composition of non-turf areas and wildlife at responding golf courses.

Non-Turf Areas On Courses	% of Total Acres Represented in Survey	Approximate Number of Acres	Wildlife	Approximate Number of Species Identified ^c
creeks, streams, or rivers	1.5	269.4	birds	0 - 100+
ponds or lakes	5.4	987	mammals	0 - 30+
unmowed grasslands, meadows, or prairies	8.7	1601.3	amphibians	0 - 10+
woodlands, forests, or savannas	5.0	920.5	reptiles	0 - 10+

^c Values are ranges for the number of species identified by respondents. For example, the number of bird species identified at responding courses ranged from 0 to more than 100. What's more, 24.5% of 106 respondents indicated that they have identified locally endangered wildlife species at their facilities.

SECTION II — Golf Course Management and Pest Control

Table 4. Approximate number and percent of acres (of 18,448 acres represented in survey) treated with fungicides, insecticides, and herbicides.

Treatment Frequency	Acres Treated by Fungicides	% Golf Course Acres Treated	Acres Treated by Insecticides	% Golf Course Acres Treated	Acres Treated by Herbicides	% Golf Course Acres Treated
5 to 9 times per year	1,426.4	7.7	223.5	1.2	254 acres	1.4
1 to 4 times per year	2,047	11.0	2,260.5	12.1	4,875.5 acres	26.2
by spot treatment	1,306.6	7.0	768.5	4.1	4,605 acres	24.7

Table 5. Sprayer calibration frequency.

Frequency of Sprayer Calibration	% of Responses	Number of Responses
never	0	0
once per year	37.7	40
monthly	25.5	27
with each application	32.1	34
other	4.7	5

Table 6. Responses to questions concerning golf course management activities.

Survey Questions	Number of Responses	% Yes	% No
Do you use naturally occurring organic or biological products at your facility?	110	90.0	10.0
Do you maintain a compost pile and use the compost at your facility?	110	40.9	59.1
Are you participating in the Audubon Cooperative Sanctuary Program?	110	57.3	42.7
If you are not currently participating in the Audubon Cooperative Sanctuary Program, do you plan to become involved in the future?	47	76.6	23.4
Does your golfing facility have any areas specifically designated as wildlife habitat?	110	54.5	45.5
Have you reduced the number of maintained acres at your facility during the last five years?	107	75.7	24.3
Do you perform:			
soil tests?	111	96.4	03.6
water quality tests?	110	85.5	14.5
tissue tests?	106	36.8	63.2
Do you practice Integrated Pest Management?	109	98.2	01.8
Do you use weather models to assist in pest control?	107	43.0	57.0
Has your facility banned the use of metal spikes?	107	37.4	62.6
Has your facility limited the use of metal spikes?	80	40.0	60.0
Does your facility operate with a state-approved rinsate pad?	103	32.0	68.0

ule. Of 101 respondents, 44% of pesticide applications were made on a preventative basis, 48.4% were made on a curative basis, and 7.6% were made on the basis of a set schedule.

Also of interest in Table 6 are the responses dealing with integrated pest management (IPM), the Audubon Cooperative Sanctuary Program, and the use of naturally-occurring organic or biological products. More than 98% of respondents indicated practicing IPM, 90% currently

participate or plan to participate in the Audubon Cooperative Sanctuary Program, and 90% use naturally-occurring organic or biological products at their facilities. These responses cast local golf course superintendents in an environmentally-friendly light.

In Section III, Table 7 presents results of recycling questions. Survey respondents, in general, reported a high percentage of recycling. It can be speculated that there might be increased recycling activity should

individual communities or regions in our area accept a wider variety of recyclable materials.

Finally, in Section IV, Table 8 presents responses to statements with respect to superintendents' environmental perceptions. It is interesting to note the overall positive reactions to the statements concerning wildlife and wildlife habitat at Chicago-area golf courses. Overall, there was strong agreement with the statements, "Providing

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SECTION III — Golf Course Recycling

Table 7. Responses to questions regarding recycling.

Does Your Facility Recycle:	Number of Responses	% Yes	% No
aluminum?	108	85.2	14.8
food waste?	107	4.7	95.3
glass?	108	34.3	65.7
tires?	108	73.1	26.9
batteries?	108	94.4	5.6
paper or cardboard?	108	49.1	50.9
oil or other shop waste?	108	97.2	02.8
plastic?	108	27.8	72.2
other?	107	9.3	90.7

SECTION IV — Environmental Perceptions of Responding Superintendents

Table 8. Golf course superintendent responses to survey questions regarding environmental perceptions.

Statement	Average of All Responses	1 - Strongly Disagree	2 - Disagree	3 - Neutral	4 - Agree	5 - Strongly Agree
Public concerns about the environment are just temporary.	1.6	59	40	3	5	1
High quality golf course conditions should take precedence over environmental concerns.	2.0	31	55	15	5	1
High quality golf can take place in an environmentally friendly setting.	4.4	0	0	7	50	50
Reducing golf course maintenance by not mowing out-of-play areas is a good idea.	4.3	0	2	9	48	49
I have confidence in the performance of naturally occurring biological pest controls and fertilizers.	3.4	1	9	49	41	8
Providing wildlife habitat within a golf course is a good idea.	4.6	0	0	2	39	67
The presence of wildlife enhances the golfing experience.	4.6	0	0	4	38	66
Golfers at my facility support changes leading to a more environmentally friendly facility.	3.7	1	8	29	48	21

wildlife habitat within a golf course is a good idea,” and “The presence of wildlife enhances the golfing experience.” Conversely, there was less agreement with the statement, “Golfers at my facility support changes leading to a more environmentally-friendly facility.” Perhaps we need to improve our environmental salesmanship with our golfing public.

Future Activities of the Environmental Committee

The Environmental Committee has three broadly based, survey-related goals for 1998. First, individual members of the committee will address specific results of this survey in articles in *On Course*. Second, in late 1998, our goal is to distribute a more in-depth environmental survey as a

follow-up to this survey (61 of the 93 respondents of this survey expressed a willingness to complete the more in-depth survey). Finally, we plan to distribute three news releases concerning results of this survey to golfing audiences and to the general public. ■