

MGCSA GOLF COURSE ECONOMIC & WATER USE COMMITTEE UPDATE

by **Scott Hoffmann, Chairman**

The MGCSA GOLF COURSE ECONOMIC & WATER USE COMMITTEE has recently met with the Minnesota Department of Natural Resources, Division of Waters. The purpose of the meeting was to share MGCSA concerns over water appropriation standards and priority rating as they relate to golf courses, and to determine what we can and should be doing as an Association and concerned user to help ensure a fair and adequate allocation of water to Minnesota golf courses.

As a result of a sharing of ideas and information with the DNR and because of information gained through the MGCSA Economic & Water Use Survey, the committee will be directing its energies toward the following goals:

1. Through the use of case studies of individual golf courses, work with the DNR to re-define water appropriation standards. We are looking for golf courses of all types that have water metering devices and that can accurately determine percentage of water allocated to greens, tees, fairways, and roughs.
2. Through the legislative process, attempt to raise the priority rating for golf course greens and tees from Minnesota's lowest priority of "five" to a rating of "three" which places us on a par with agriculture and sod-growers.
3. Encourage the use of water meters on all Minnesota golf courses.
4. Encourage the installation of water efficient, state of the art irrigation systems.
5. Encourage the use of drought resistant grass varieties.
6. Encourage ground water sources for golf course irrigation over surface water sources, or at the very least have a contingency plan for greens and tees.
7. Provide the DNR with observation wells to monitor ground water levels throughout the state. These could be existing golf course wells and would be of great help in aiding the development of a statewide hydrologic map.

Among the information learned were some startling facts about Minnesota's water resources. In the last 30 years our water use has quadrupled and is expected to do the same in the next 30 years. Some experts say that in 50

years, Minnesota's water resources will be more valuable than Texas oil ever was. What this should be telling us is that we must act now to define how our water is being used currently to help ensure a fair and adequate future allocation.

The committee would like to thank all of you that participated in our survey. Although this is just a beginning, we now have a basis for future work and have gained some very pertinent information about water usage and the golf industry in Minnesota.

If you are willing to participate in a case study of water usage on your golf course, and/or monitoring of your ground water levels, please contact Keith Scott, (612-938-6900), or Scott Hoffmann, (218-829-2811).

WATER CONSERVATION . . .

OUR SHARED CONCERN

by **Larry Vetter & Water Use Committee**

The drought of 1988 heightened public awareness of an issue about which the turfgrass industry has been concerned for years. Water is a precious commodity. It is not unlimited and without it life, as we know, cannot exist.

Given this indisputable fact, the Minnesota Golf Course Superintendent's Association (MGCSA) has assumed a proactive stance in identifying water use by its member courses and charting a course of action that will further encourage wise use of this limited resource.

The logical starting point was to identify the industry status quo. A survey of member clubs was conducted and data gathered from this and other sources are presented as the base from which to develop a responsible plan of action. Data from and action by the golf industry in Minnesota pertinent to this process are:

- * Directly generates \$255-300 million revenues annually.
- * Generates in excess of \$18 million in state sales tax revenue annually.
- * Provides over 16,000 jobs.
- * Over 20% of golf rounds impact tourism.
- * 75% of survey respondents host charitable events with 54 specific charities identified. Golf has been documented in one area as second only to United Way in raising funds for charity.

- * Hosts numerous recreation and/or competition events for juniors, junior and senior high school boys and girls, senior citizens, college, university and corporate participation.
- * Hosts statewide tournaments along with a variety of fund-raising events.
- * Outspends all other segments of the turfgrass industry in spending on research and updating of equipment aimed at conservation, including computer-controlled irrigation, drought tolerant grasses, tensiometers, surfactants, cultural practices and others.
- * 80% responded they use some form of water conservation.

Establishment of a full-time Water Resources Committee. The golf course industry in Minnesota has an enormous impact on the quality of life that we are so proud of in our state. In addition to offering the recreational and competitive opportunities previously mentioned, each individual golf course property has an environmental impact as follows:

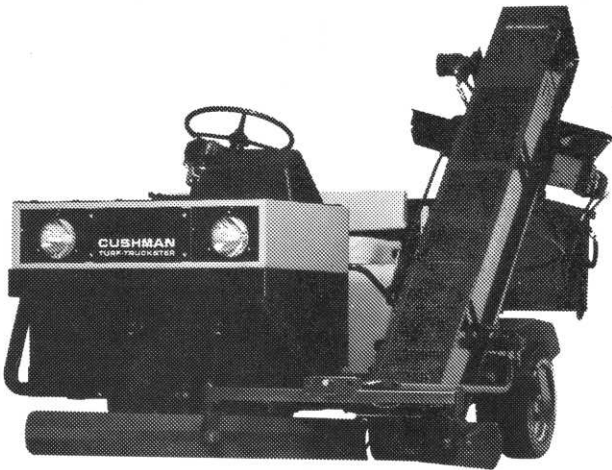
- * 100 acres of actively growing turf produces enough oxygen to support approximately 7,000 adults.
(This process is the greenhouse effect in reverse

as carbon dioxide is used to produce the oxygen.)

- * Grasses modify temperature. This same 100 acres has the cooling capacity of more than 7,000 tons of air conditioning.
- * Grasses reduce undesirable noise 20-30%.
- * Grasses absorb and reduce glare.
- * Grasses absorb pollutants and trap particulate matter from the atmosphere.
- * Grasses are the most effective form of plant life for the prevention of soil erosion.
- * Wildlife is attracted to grassy and treed areas.
- * A typical golf course will recharge the water table with approximately 10 times the amount it uses.
- * Dense turf has over 3 times the water infiltration rate of thinly covered areas.

Numerous other environmental, economic, mental and physical health statements can be made. However, the above is meant to be indicative of the contributions the

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game of golf makes to the State of Minnesota and the respective communities located within the state.

The MGCSA study found that an average of nearly 300,000 gallons of water per acre were used in 1988 on the courses whose superintendents responded to the questionnaire. One disturbing thing that became obvious was that some do not know how much water they use on their property.

As a result of the study and the MGCSA's ongoing concern for its industry and the environment, the MGCSA is committed to:

- * Encourage the installation of effective metering devices on all golf course irrigation systems in the state of Minnesota.
- * Permanently install a functioning committee for the increased conservation of water and other resources.
- * Intensify the educational opportunities available to our membership specifically addressing water conservation.
- * Continue contributions, and expand as resources permit research dedicated to water conservation in areas such as irrigation equipment, plant breeding and selection for better drought tolerance as well as lower water usage, and cultural practices that will reduce the use of water and runoff, improve water retention and facilitate the expanded use of effluent water.



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GOLF COURSE IMPACT ON WATER QUALITY

(Credit— THE MOUNTAIN STATE GREENLETTER—JULY 1989)

FINDING: Golf courses do not pose a significant pollution threat to the nation's water supplies. This conclusion is based on a review of the scientific evidence that is currently available. Neither groundwater nor surface water is threatened by golf course runoff. Further, studies show that stormwater runoff is near zero from golf courses.

GROUNDWATER: About half of all people in the United States depend on groundwater for their drinking water, and the figure is 90% in rural areas. Results from ongoing scientific studies show that the use of pesticides on golf courses does not threaten public drinking water. Because of the low mobility and quick biodegradation of most golf course pesticides, they simply do not reach groundwater in significant quantities.

One Environmental Protection Agency-funded study being undertaken on Cape Cod in Massachusetts provides for a "worst-case" estimate of groundwater contamination. To date, test results have been encouraging, demonstrating that golf courses and clean groundwater do co-exist.

Some experts argue that golf turf offers uniquely favorable control mechanisms to prevent groundwater contamination. Dr. Stuart Z. Cohen, a former Ground Water Team Leader for the EPA in Washington, notes that "the use of pesticides on golf courses poses less of a threat to the nation's groundwater than does the agricultural use of pesticides.

Additionally, turfgrass provides a "thatch layer" not found in row crop situations. Thatch binds up pesticide residues and increases degradation of some chemicals. Dr. Harry D. Niemczyk of Ohio State University has found that as much as 99% of recovered pesticides are found in turfgrass thatch.

In some areas, golf courses are also helping to mitigate the groundwater pollution effects of hazardous waste sites. Many of the nation's golf courses fertilize soil using sludge compost mixes prepared by urban waste recycling programs. These sludges might otherwise be disposed of in municipal landfills. Thus, potential groundwater leaching from dump sites is averted by careful community planning and recycling.

STORMWATER RUNOFF: Stormwater runoff from golf courses is not a significant environmental hazard. Research conducted by Dr. Thomas Watschke, a turfgrass specialist at the Pennsylvania State University,