

## **Here's a Reference List You Can Put to Good Use**

**1. Research has shown that golf courses do not contribute significantly to groundwater contamination.** Several university and government studies (in Massachusetts, New York and Florida) indicate that, when properly applied, pesticides and fertilizers used today on golf courses do not leach into groundwater in any significant amounts.

**2. Modern turfgrass management practices** (such as the use of slow-release nitrogen formulations) can greatly reduce the potential for nitrogen leaching or run-off, into water supplies. The organic (thatch) layer in healthy turfgrass also significantly reduces the potential for nutrient "movement."

**3. An 18-hole golf course averages 140 acres. Pesticides and fertilizers are used only on portions of the golf course.** The majority of the property often consists of natural areas that are not maintained with chemicals. These unmaintained areas are usually a home for wildlife, a diverse variety of native plants and large stands of trees.

**4. Golf course superintendents are among the best-educated and most judicious users of chemical management tools.** Today, most superintendents have university degrees in agronomy, horticulture or a related field. More than 3,500 superintendents also pursued continuing professional education through GCSAA last year. Although most golf courses

do not apply "restricted-use" pesticides, virtually all courses with GCSAA members have at least one staff person who is state-certified in the safe handling and use of these chemicals.

**5. Because turf chemicals are often expensive, golf course superintendents have an economic incentive not to apply them.** What's more, many superintendents entered the profession because of a love of nature and the outdoors and are strongly committed to conservation. In a recent survey, superintendents said they give extremely high priority to selecting maintenance practices that do not have a negative impact on the environment.

**6. Golf courses do not contribute to the "yard waste" problems at America's landfills.** Grass clippings and leaves are virtually always composted in unmaintained areas of the course. In some cases, the compost is recycled for use as a natural soil amendment.

**7. The water used on golf courses is an excellent investment in both economic and environmental terms.** Irrigated golf courses generate billions of tourist and property tax dollars for state economies. (America's golf courses are also bringing an increasing number of international tourists to the

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### **Facts About Golf And The Environment**

As someone involved with the game of golf, you may already be aware that golf courses are being criticized for "damaging the environment." The use of turf chemicals, the impact on water and soil quality and the amount of irrigation water used are cited most often as public concerns about the golf industry.

Although most authorities agree that the maintenance of golf courses has comparatively little negative impact on the environment, the Golf Course Superintendents Association of America (GCSAA) believes that these issues must be addressed. And, through a comprehensive effort combining research, education and communications, GCSAA is leading the golf community's efforts to minimize the potential for ecological harm resulting from course maintenance.

However, the biggest problem we have is public perception—or, more accurately, public misperception—about the environmental impact of courses. These inaccuracies, if left uncorrected, could pose a serious threat to the vitality and integrity of the game.

You can help GCSAA change perceptions about our industry by reviewing the "Overview" on this page and sharing this information with elected officials, decision-makers and others with whom you have contact. Please do not hesitate to pass this information to others who share our belief that **golf is good for the environment.**

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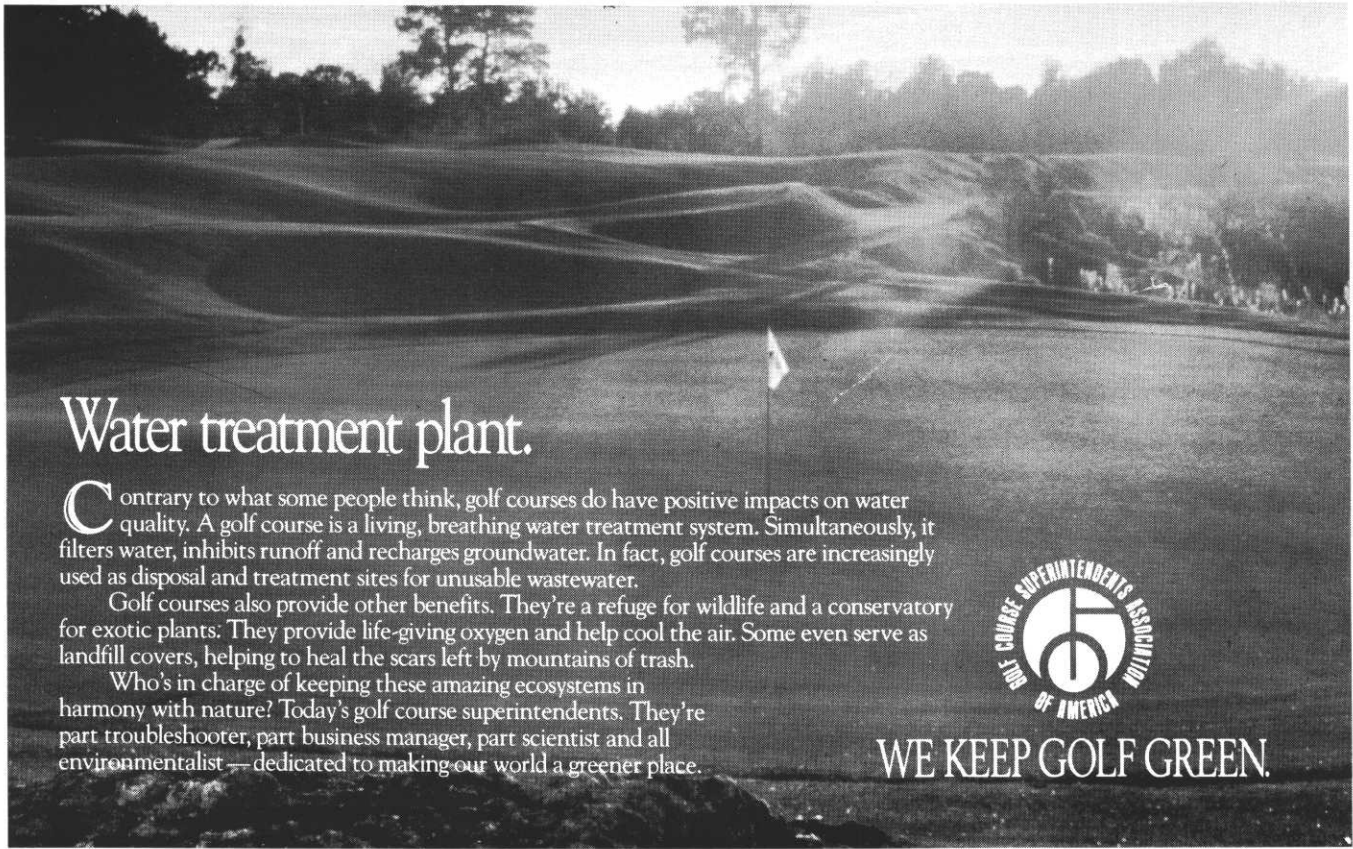
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## Water treatment plant.

Contrary to what some people think, golf courses do have positive impacts on water quality. A golf course is a living, breathing water treatment system. Simultaneously, it filters water, inhibits runoff and recharges groundwater. In fact, golf courses are increasingly used as disposal and treatment sites for unusable wastewater.

Golf courses also provide other benefits. They're a refuge for wildlife and a conservatory for exotic plants: They provide life-giving oxygen and help cool the air. Some even serve as landfill covers, helping to heal the scars left by mountains of trash.

Who's in charge of keeping these amazing ecosystems in harmony with nature? Today's golf course superintendents. They're part troubleshooter, part business manager, part scientist and all environmentalist — dedicated to making our world a greener place.



WE KEEP GOLF GREEN.

## Golf and the Environment—

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United States, thus helping to counter the foreign trade imbalance.)

**When effectively irrigated, healthy turf provides numerous environmental benefits.** Properly maintained turfgrass:

- produces oxygen (carbon dioxide exchange)
- removes pollutants from the air.
- cools the atmosphere (acts as a heat-sink)
- absorbs sound and glare
- prevents erosion
- filters natural and synthetic contaminants from rainfall and irrigation

Beyond these benefits, computerized irrigation systems and improved turfgrass varieties now allow courses to use less water more efficiently to achieve the same level of conditioning. Continuing research will provide even more "low-water" turfgrass varieties in the future.

**8. In addition to turf-related benefits, courses provide other important ecologic and community assets.**

Golf courses are:

- key sanctuaries for birds and other wildlife
- disposal and treatment sites for wastewater (effluent)
- attractive and environmentally sound "covers" for closed landfills and other ecologically damaged locations
- sites for non-golf recreational activities, such as jogging, walking, bird-watching, cross-country skiing and fishing
- businesses that provide hundreds of thousands of skilled and semi-skilled jobs
- places for social interaction and community events

- civic benefactors that fund major contributions to charities
- the keystone of a multi-billion dollar industry nationwide
- community improvements that add value to land, thus increasing local tax bases.

**9. On golf's behalf, GCSAA has developed a strong and cooperative relationship with the U.S. Environmental Protection Agency and other major regulatory groups.** Through governmental affairs, professional education and public information, the association strives to make environmental responsibility a basic precept for its members.

**10. GCSAA and the entire golf community are firmly committed to seeking answers through research.** The United States Golf Association, in partnership with GCSAA, is funding a three-year, \$3 million research program that will provide a number of those answers.

Unlike most industries, golf has the motivation, the resources and the willingness to address the issues now, before environmental questions seriously impede the growth of the game. By pursuing this enlightened path, it is hoped that golf will be increasingly perceived as a model environmental industry of the 1990s.

For more information or copies of additional fact sheets on specific subjects including UST Management, Hazard Communication, Endangered Species Protection Program and Groundwater Protection, please contact the Office of Government Relations, Golf Course Superintendents Association of America, 1421 Research Park Drive, Lawrence, KS 68049-3859, Telephone 800/472-7876 or 913/841-2240.