



On Course *With Nature*

# Looking Back, Looking Forward

How far we've come  
and where we're going.

BY JEAN MACKAY AND PETER BRONSKI

**Outreach and Education:** After joining the Audubon Cooperative Sanctuary Program for Golf Courses, Aldeen Golf Club in Illinois adopted Christian Life Schools, offering the golf course property and greenhouse for use as a satellite learning center. Glenn Bereiter, superintendent, pioneered the partnership. During the spring of 2001 the children monitored the growth and development of annual flowers, maintained nature journals, and planted an area of native prairie species.

In 2001, Audubon International celebrated the tenth anniversary of the Audubon Cooperative Sanctuary Program (ACSP) for Golf Courses, an environmental education program designed to help golf courses play a significant role in enhancing and protecting wildlife habitats and natural resources, while reducing environmental risks. Looking back over the last ten years, there is much to be proud of since the first golf courses joined the program. Today, 2,125 courses throughout the United States are enrolled, and 307 have achieved designation as Certified Audubon Cooperative Sanctuaries by implementing and documenting a full complement of conservation activities (membership figures as of November 1, 2001).

Although many courses already have a number of environmental management practices in place, the ACSP provides a framework for organizing, expanding, and documenting these activities. And the positive publicity garnered by those who serve as case studies and demonstration sites has led to an improved public perception of golf courses as a whole.

Indeed, through the dedication, collaboration, and hard work of thousands

of golf course superintendents, USGA Green Section staff, golf associations, and local conservation organizations, we are achieving the original aims of the program:

- Enhancing wildlife habitats on existing golf courses;
- Encouraging active participation in conservation programs;
- Recognizing golf courses as important open spaces;
- Crediting the people actively participating in environmentally responsible projects;
- Educating the public and the golf community about the benefits of golf courses and the role they play relative to the environment and wildlife.

## DOCUMENTING RESULTS

In 2000 and 2001, Audubon International's research department conducted a survey to assess the environmental outcomes of participation in the Audubon Cooperative Sanctuary Program for Golf Courses in a number of key environmental priority areas. These included: wildlife habitat conservation, chemical use reduction, and water quality. In addition, the survey included a brief assessment of participant attitudes related to the impact of ACSP partici-

pation on golf playing quality, job satisfaction, and golfer satisfaction.

The survey was mailed to all golf course members; 23% responded, and data from these 470 golf courses were compiled and analyzed. Results indicate a high level of environmental quality improvement among participants in the program.

## WILDLIFE AND HABITAT MANAGEMENT

The ACSP provides significant educational information and resources to help golf courses enhance and protect habitat for native wildlife species. Results of the survey show that the majority of participants have expanded wildlife habitats significantly. Since joining the Audubon Cooperative Sanctuary Program:

- 80% of respondents decreased managed turfgrass to increase wildlife habitat.
- 89% conscientiously chose native plants when landscaping, compared with 49% before joining the program.
- 77% added gardens for birds and butterflies.
- 65% now maintain a wildlife inventory, compared with just 16% before joining.

- The average number of acres per golf course devoted to providing wildlife habitat increased from 45 acres to 67 acres, an increase of 22 acres per golf course.
- Combined, the golf courses that responded to the survey provided 40,214 acres of wildlife habitat, an increase of nearly 10,000 acres due to program participation.

## CHEMICAL USE REDUCTION AND SAFETY

Helping golf courses to reduce the use of pesticides and fertilizers, as well as

- 85% increased the percentage of slow-release fertilizers used.
- 74% increased the use of natural organic fertilizers.

## WATER CONSERVATION AND QUALITY

Limiting water consumption and preventing water pollution have long been critical environmental issues. The ACSP aims to help golf courses protect water quality for irrigation, drinking water supplies, and aquatic habitats and wildlife species. Responses to the survey



**Water Conservation and Quality:** Over the years, a small half-acre pond near the 18th hole at Colorado Springs Country Club (Colorado Springs, Colorado) had lost much of its plant and animal life. With some help from Audubon International, Terry Bolin, superintendent, decided to undertake a pond restoration project. He introduced trout, bass, and bluegill, and added aquatic plants such as cattails, sedges, reeds, and water lilies. The project successfully transformed a sterile pond into a beautiful habitat for fish, birds, and other wildlife.

safely use, store, and handle chemicals is a key environmental priority of the ACSP. Results of the research survey indicate that golf courses have been able to achieve these objectives without sacrificing golf course playing quality or member satisfaction. Since joining the ACSP:

- 75% of respondents reduced pesticide costs.
- 82% reduced pesticide use.
- 92% used pesticides with a lower toxicity level.
- 89% improved cultural control methods to decrease the need for chemical use.
- 64% improved spill containment for pesticide mixing and loading areas, compared with 33% before joining.

suggest that golf courses are taking increasing steps to decrease water use and protect water resources from potential pollutants. Since joining the Audubon Cooperative Sanctuary Program:

- 60% reduced water costs.
- 89% improved their irrigation system or the way that water is applied.
- 69% decreased water usage.
- Golf courses saved an estimated 1.9 million gallons of water per year per course since joining.
- 86% increased efforts to monitor water quality.
- 55% increased emergent vegetation in golf course ponds.
- 45% instituted a contained equipment wash-off area, compared with just 23% prior to joining.

## PARTICIPANT ATTITUDES

In order for environmentally sound management practices to be implemented and accepted, they must not jeopardize the superintendent's or club's ability to maintain high quality playing conditions or satisfy golfers. In addition, golf course superintendents must perceive environmentally sound maintenance as a positive aspect of their jobs if they are to make a long-term commitment to maintaining environmental quality. The ACSP assists golf courses in educating golfers and local community members about the benefits of maintaining an environmentally sensitive golf course. Program participants have been able to effectively integrate environmentally sound maintenance practices without sacrificing golfing priorities. Since joining the ACSP:

- 50% reported improved playing quality and 49% reported similar playing quality.
- 99% reported that golfer satisfaction has improved or remained the same.
- 66% of superintendents reported improved job satisfaction.

## CONCLUSION

Environmentally sound golf course management is essential for maintaining the quality of the environment and continuing the natural heritage of the game of golf. The Audubon Cooperative Sanctuary Program for Golf Courses provides educational resources, a structured framework, and a set of environmental standards that help golf courses respond effectively to the challenges of maintaining an environmentally sound golf course. Audubon International looks forward to continuing its work with the golf industry to further improve environmental performance, measure results, and make the program an industry standard.

*JEAN MACKAY serves as the Manager of Educational Services and PETER BRONSKI is Staff Ecologist for Audubon International. For more information, contact: [www.Audubonintl.org](http://www.Audubonintl.org).*