

Golf Course Superintendents Association of America's PESP Strategy

Describe your Organization's Five-Year Goals Related to Pesticide Risk Reduction

GCSAA's role with pesticide risk reduction within the golf course maintenance industry is best portrayed through its mission statement: GCSAA is dedicated to serving its members, advancing their profession and enhancing the enjoyment, growth and vitality of the game of golf.

In addition, GCSAA's philanthropic organization, The Environmental Institute for Golf is committed to strengthening the compatibility of the game of golf with our natural environment. As those two missions are advanced during the next five years, the promotion of pesticide risk reduction will be achieved within our on-going initiatives.

What do you envision doing (broadly) to try to resolve your major issues?

GCSAA will promote pesticide risk reduction within the golf industry by:

- obtaining reliable data on golf course management practices, pest management strategies and pesticide use
- sponsoring and promoting turfgrass research
- providing tools, templates, and/or other associated guides for golf course superintendents that will enhance the decision making processes regarding pesticide use
- providing direct education, outreach and communications encouraging environmental stewardship practices on golf courses

GCSAA continues to develop a working knowledge of pesticide use, maintenance operations, and turfgrass research within the golf industry. Using this knowledge GCSAA will provide programs, tools, education and research geared toward the golf course superintendent that will ultimately lead to reduced risk in the use of pesticides on golf courses.

Goal 1 and Tactics

Obtain reliable data that provide a practical understanding of golf course maintenance practices including pesticide use

Tactic:

GCSAA will utilize the Golf Course Environmental Profile as a means to achieving this goal. In an effort to obtain reliable data, GCSAA is conducting a series of surveys over the next few years to determine the physical features found on golf courses, maintenance practices used by superintendents, and inputs associated with the management of golf courses.

The Golf Course Environmental Profile project is designed to be conducted over a five-year period (2006 – 2010) to establish baseline information. Once the five-year cycle is complete, we will begin the second phase of this project to collect updated information to compare to the baseline data to determine the level of progress being made in the profession and industry.

Results from each phase will first appear in a peer-reviewed scientific journal, then in *Golf Course Management*, the association's monthly publication. It will be widely distributed for use by all interested parties.

Measures of success:

- Continued project funding by golf industry partners
- Publication of individual survey manuscripts
- Survey participation by golf course superintendents that will ensure a robust data set

EPA's Role

- Incorporate data from the Golf Course Environmental Profile within agency analysis, models, reviews, reports and similar instruments used for decision making.
 - Promote the importance of the Golf Course Environmental Profile whenever possible throughout the EPA and governmental agencies, environmental advocates and local community stakeholders.
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Goal 2 and Tactics

Sponsor turfgrass research

Tactic:

Research is an important component of The Environmental Institute for Golf's grant program. The results from decades of applied research have had a direct effect on establishing more environmentally friendly practices on golf courses.

- Fifty years of support and collaboration has produced the completion of nearly 70 applied scientific research projects funded by The Institute.
- Since 1996 alone, The Institute has provided more than \$1.7 million in support of projects in cooperation with GCSAA affiliated chapters and 10 allied organizations.
- These projects have provided information to the golf course management industry on innovative best management practices.

GCSAA will continue to publish turfgrass research in GCM and inform superintendents of any corresponding recommended operating practices.

Measures of success:

- GCSAA will fund research throughout the five-year period
- Publication of research in GCM

EPA's role:

- Incorporate research from the GCSAA and USGA within agency analysis, models, reviews, reports and similar instruments used for decision making.
- Develop a grant program to provide funding to The Environmental Institute for Golf for turfgrass research that would include efforts on reduced risk practices, improving turfgrass cultivars, pesticide products, water quality improvement, etc.

Goal 3 and Tactics

Goal: Develop and provide tools, templates, and/or other associated guides for golf course superintendents for decision making processes regarding pesticide use. Tactic: GCSAA will incorporate information from the Profile Project along with recommendations from superintendent members, committees, university scientists and other industry stakeholders to develop programs that meet the needs of the golf course superintendent and reduce the risk associated with pesticide use.

Specific tools identified include:

Pesticide Characteristics Project

- The pesticide characteristics project consists of the development of a resource to evaluate and interpret the environmental characteristics of golf course pesticides.
- Pesticide assessments will include the relative risks associated with groundwater, surface water, wildlife, and other organisms.
- Once completed, this resource will provide a new means for superintendents to incorporate environmental aspects into their pesticide use decisions.
- The project is part of the national research program funded by The Environmental Institute for Golf and the USGA. The primary investigators are:
 - Bruce Branham, PH. D., University of Illinois
 - Stuart Cohen, PH. D., Environmental & Turf Services, Wheaton, MD
 - Thomas Fermanian, PH. D., University of Illinois
 - Jennifer Grant, PH. D., Cornell University

Integrated Pest Management (IPM) Template

The development, implementation, and optimization of a comprehensive IPM plan can be a challenge. Through support from the EIFG, the GCSAA has funded a project to develop IPM templates for use nationally. The goal of this project is to produce a series of templates that guide superintendents in integrating agronomic and biological principles with site-specific information and financial resources into a proactive IPM plan that can be continuously updated.

- The adoption of a written IPM plan will help superintendents enhance turf performance, aid in communication their staff, golfers and owners and use resources effectively while improving the compatibility of the golf course with the environment.
- A team of private industry and university scientists with a wide range of expertise in turfgrass science and IPM are developing the IPM template.

Measures of success:

- Development and distribution of the described tools

EPA's Role:

- Recognize and utilize GCSAA's research, publications, and information resources regarding pesticide use and pesticide risk reduction on golf facilities.
- Promote GCSAA's research and tools regarding pesticide risk reduction through EPA's website, news releases, and other communications.
- Consider developing a system of recognizing innovative practices on golf facilities. This could be targeted toward IPM or reduced risk accomplishments. It

could also include recognizing the implementation of formal Environmental Management Systems through Performance Track program at EPA.

Goal 4 and Tactics

Provide direct education, outreach and communications encouraging environmental stewardship practices on golf courses.

Tactic:

GCSAA will develop education seminars, webcasts, and other online education for golf course superintendents that promote sound environmental stewardship practices including pesticide risk reduction. GCSAA will utilize GCM to publish research, features, and other articles promoting pesticide risk reduction. The Environmental Institute for Golf's website will host information and tools for pesticide risk reduction. In addition, GCSAA will utilize the chapter network to promote the education, tools, and publications as well as promoting the Environmental Leader in Golf Awards program.

Education

The GCSAA Education and Environmental Programs Departments worked with GCSAA's Environmental Programs Committee, Education Committee, and associated advisory groups to identify and develop new educational opportunities that will help to enhance environmental stewardship on golf course properties.

- Prior to 2003, approximately 33 seminars related to environmental stewardship/conservation were available through GCSAA.
- The committees and advisory groups worked to prioritize topics for new seminars to expand the knowledge and address today's most pressing environmental issues.
- Since 2003, a total over 43 new environmentally related seminars have been developed for superintendents including three new ones that will debut at the 2008 Golf Industry Show.
- In addition to the formal seminars, more than 39 environmentally oriented webcasts have been conducted since 2004.

Institute website features:

EDGE – A Web-Based Environmental Resource

GCSAA's Environmental Programs Committee and its associated task groups identified the need for a centralized and online reference tool for best management practices, case studies, written plans, and technical documents about golf course maintenance operations and the environment.

The EDGE was developed as an on-line environmental resource and was implemented to meet this need.

- The EDGE is designed for superintendents to share case studies, best management practices, and written plans with their peers to help with environmentally related issues surrounding golf course maintenance and design practices.
- Superintendents can tell what works, what doesn't work, or how they best resolved environmental issues.
- Additionally, technical information and education opportunities are provided to assist the superintendent with those issues.
- The EDGE also provides this information for educators, students, the media and the public to learn about golf courses and the environment. It helps to portray the environmental stewardship efforts of the golf maintenance industry.
- A direct link for the EDGE can be found at www.eifg.org.
- Currently EDGE contains more than 150 reference items including 60 case studies that feature the environmental stewardship practices of golf industry professionals.

Green Links – Highlights from EDGE

- Green Links, a new online monthly feature highlights case studies from EDGE with a monthly column from a superintendent host along with comments from a guest columnist - a superintendent, golf industry professional, environmental professional or similar industry related professional.

Resources

- Links to the Golf Course Environmental Profile, tools, templates, and related items will be incorporated within the website.
- Links to other Web resources will be provided. Environmental Leaders in Golf Award
- The Environmental Leaders in Golf Awards recognize golf course superintendents and golf courses around the world for the commitment to environmental stewardship.
- The awards are presented by GCSAA and Golf Digest in partnership with Syngenta Professional Products and Rain Bird Corp., Golf Division.
- These awards have recognized the environmental leadership and creativity of golf course superintendents and have also provided funding to The Environmental Institute for Golf through the support of corporate sponsors. Since 1993, participating sponsors have contributed more than \$275,000 to The Environmental Institute for Golf and more than 325 golf course superintendents have been recognized with awards.

Measures of success:

- GCSAA's readership survey results

- Quantify the number of superintendents enrolled within seminars, webcasts, etc
- Monitor website use
- Award recipients

EPA's role:

- Develop grants targeted for the golf industry providing funding for education, publications, etc.
- Recognize GCSAA Class A members and CGCS as professionals within the golf industry who have obtained licensure for pesticide applications or who have successfully satisfied GCSAA's IPM requirements for certification and membership.
- Attend the Golf Industry Show.
- Sponsor regional seminars through GCSAA chapters.