

A BMP Plan for Your State and Facility: A License to Continue to do Business

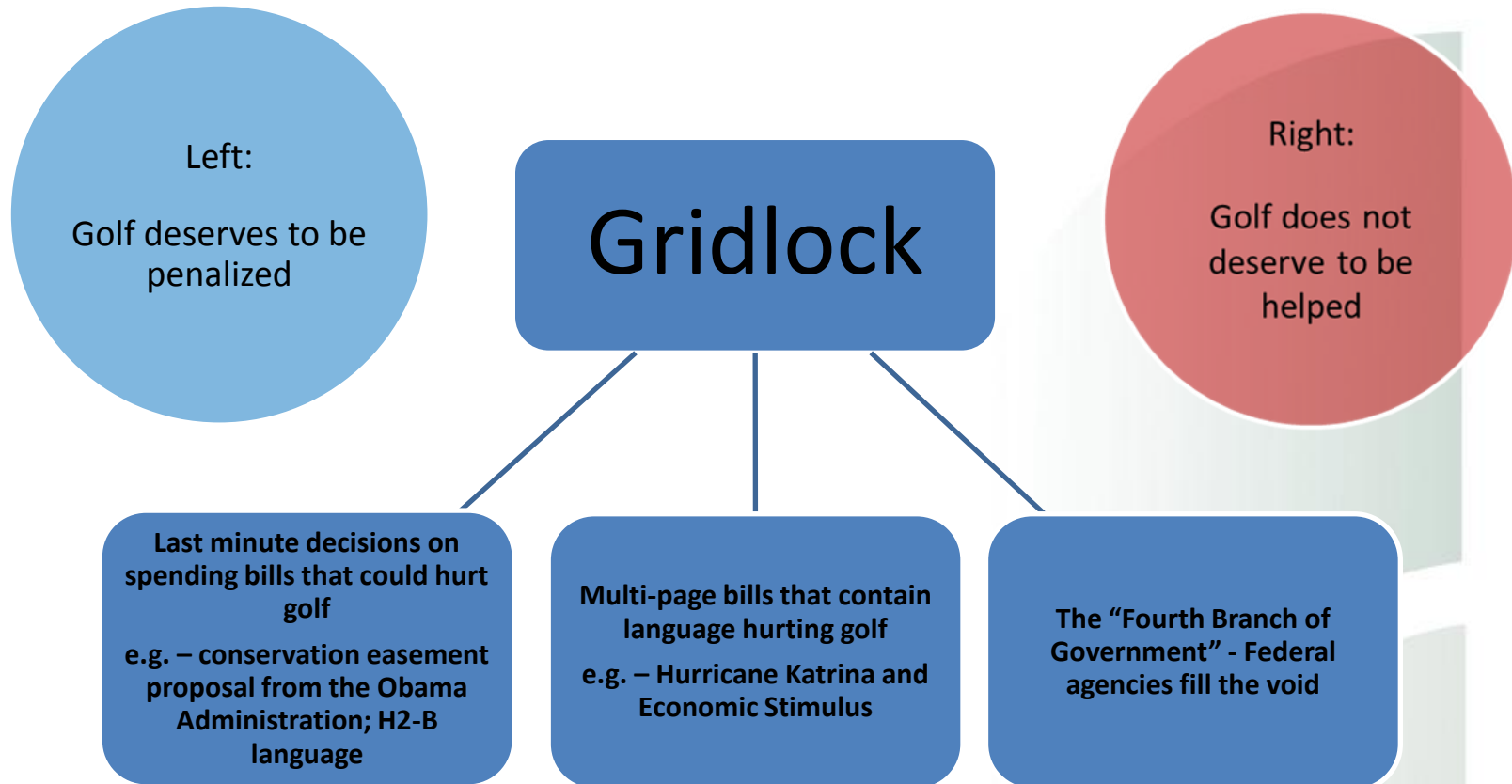
GAP Environmental Seminar

Chava McKeel,
GCSAA Director, Government Affairs





Golf Faces The Perfect Storm



How do we combat this?

GCSAA Golf Course Environmental Profile first phase

An overview of the baseline results of this landmark study

The Golf Course Environmental Profile is a groundbreaking project that began in 2006 and was designed to develop a comprehensive environmental profile of golf courses in the United States. The first phase of the project was funded by GCSAA's philanthropic organization, the Environmental Institute for Golf, and The Toro Giving Program.

Project surveys

The project consisted of a collection of five surveys, the results of which were analyzed and published in the peer-reviewed scientific journal *Applied Turfgrass Science*, as well as in a comprehensive report and in *Golf Course Management* magazine.

The surveys were:

Volume I: Property Profile and Environmental Stewardship of Golf Courses

Covers golf course acreage, turfgrass species, water bodies, wildlife habitat, environmental improvements and non-turfgrass landscapes

Published 2007



Property Profile and Environmental Stewardship of Golf Courses

[Full report](#) [Summary](#)



Water Use and Conservation Practices on U.S. Golf Courses

[Full report](#) [Summary](#)



Nutrient Use and Management on U.S. Golf Courses

Results



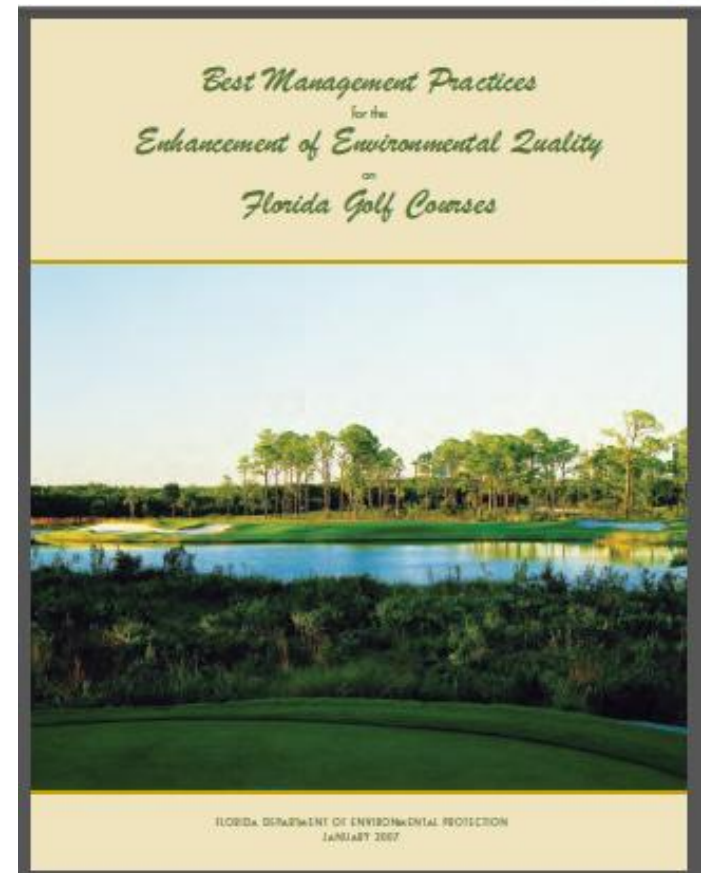
Energy Use and Conservation Practices on U.S. Golf Courses

[Full report](#)

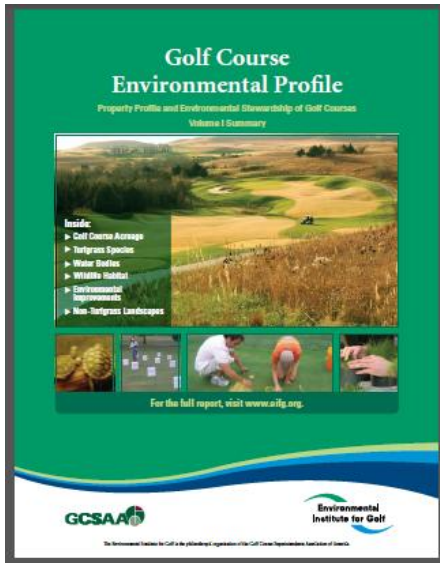


Pesticide Use on U.S. Golf Courses

[Full report](#)



Data is critical!



GCSAA Golf Course Environmental Profile first phase

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Property Profile and Environmental Stewardship of Golf Courses

Full report Summary



Water Use and Conservation Practices on U.S. Golf Courses

Full report Summary



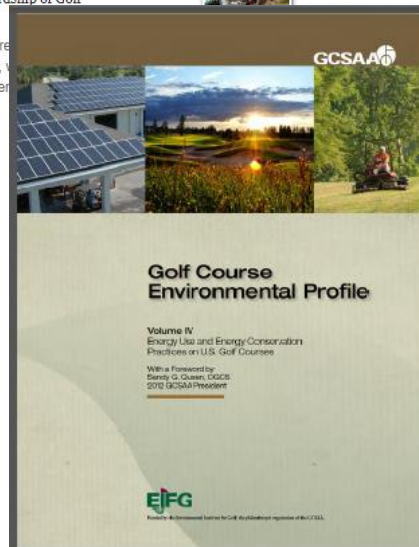
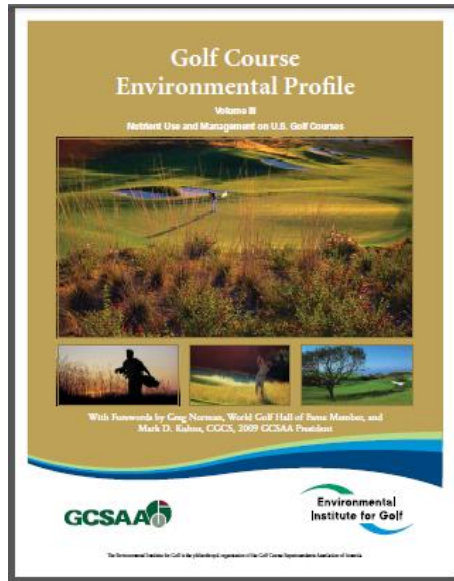
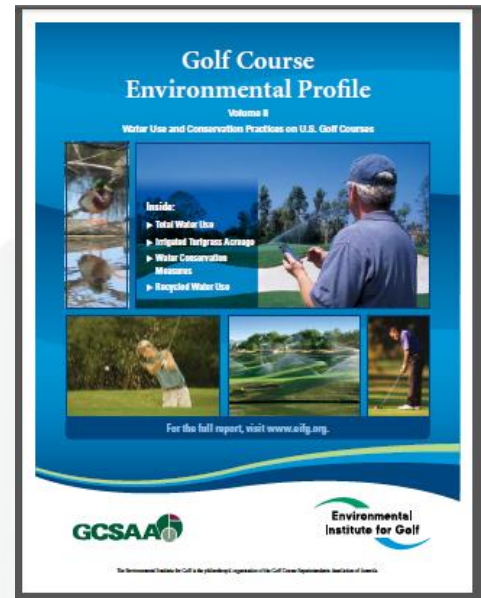
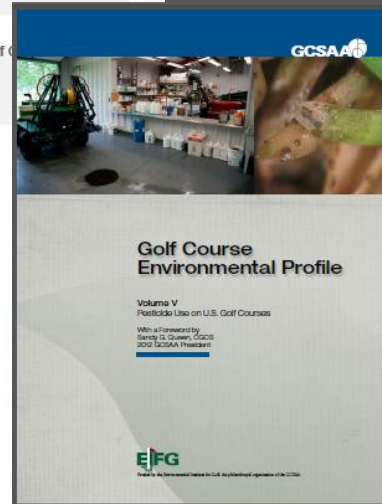
Nutrient Use and Management on U.S. Golf Courses

Results



Energy Use and Conservation Practices on U.S. Golf Courses

Full report



BMPs are critical!



Best Management Practices (BMPs)
Water-Use Efficiency/Conservation Plan
For Golf Courses

Template and Guidelines

Jan. 3, 2007

Dr. Robert N. Carow, University of Georgia, Griffin, GA
 Dr. Ronny Duncan, Vice-President, Turf Ecosystems, LLC,
 San Antonio, TX
 Dr. Chui Wahn, University of Georgia, Griffin, GA

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Best Management Practices
 for the
Enhancement of Environmental Quality
 on
Florida Golf Courses

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
 JANUARY 2007

Guidelines for Water Quality Enhancement
at Golf Courses Through the Use of
Best Management Practices

Prepared for
The Colorado Nonpoint Source Task Force

Prepared by
Wright Water Engineers, Inc.
 and
Denver Regional Council of Governments

December 1996

Environmental Best Management Practices
for Virginia's Golf Courses

Prepared by
 Virginia Golf Course Superintendents Association

GCSAA

Golf Course Water Resources Handbook
of Best Management Practices

Created through the partnership of:
 LandStudies, Inc.
 and
 The Pennsylvania Environmental Council

Funded by:
 Pennsylvania Department of Environmental Protection

June 2009

Best Management Practices for
New York State Golf Courses

Watershed Fact Sheets

Oregon Chapter
GCSAA
 Environmental Stewardship Guidelines

2nd Edition, 2009



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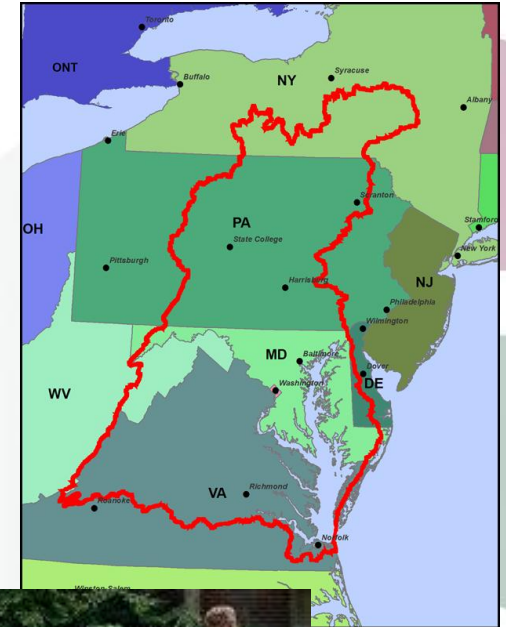
Individual BMPs

1. Structural or engineered feature such as a treatment wetland, detention pond or bio-swale
2. Practice or procedure that reduces or prevents contamination such as preventing point or nonpoint source runoff that contains elements or compounds that can deteriorate water quality
3. Cultural practice or an agronomic good practice such as aerification that is good for turfgrass health and, ultimately, helps conserve resources
4. Cultural practice(s) that have been proven by research and tested through field implementation to give optimum turfgrass quality, input efficiency, and environmental protection

The need for state level BMP programs and, ultimately, golf facility written BMP plans is greater than ever.

BMPs are a platform for advocacy!

It is critical the industry actively promote BMPs and utilize BMPs.

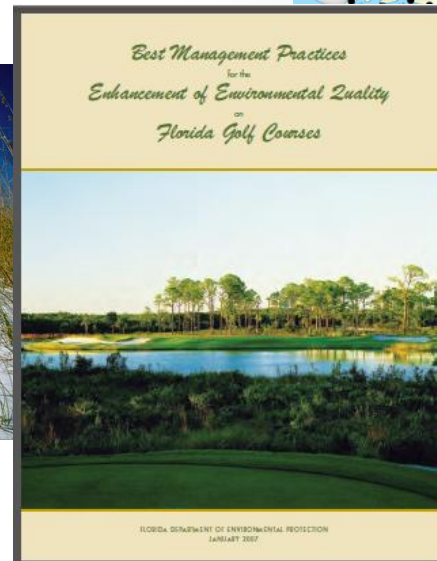


State Laws to Restrict the Use of Fertilizers

Minnesota Phosphorus Turf Fertilizer Restrictions	2004
Maine Protection and Improvement of Waters	2007
Wisconsin Turf Fertilizer Restrictions Law	2009
Michigan Public Act 299	2010
Illinois Lawn Care Products Application and Notice Act	2010
New York Dishwasher Detergent and Nutrient Runoff Law	2010
Florida Fertilizer Statutes	2010
Maryland Fertilizer Use Act of 2011	2011
Virginia Fertilizer Act	2011
New Jersey Fertilizer Law	2011
Vermont Turf Fertilizer Law	2011
Washington State Clean Fertilizers, Healthier Lakes and Rivers Law	2011

Florida – Case Study

- Local ordinances chosen approach to address water quality issues.
- Over 90 municipalities in Florida have a fertilizer ordinance in place, and 75 % of them have a strong ordinance that is more protective than the state model.
- Golf BMPs manual recognized in state model fertilizer ordinance and most local ordinances.



BMPs – The Future

1. BMP programs help superintendents manage golf facilities in an efficient manner while providing quality playing surfaces and protecting the environment.
2. Enables the golf course facility to operate and offer the industry a significant platform for advocacy, demonstration of professional land management, education, and recognition.
3. GCSAA and EIFG are partnering with the USGA to develop and provide BMP resources and tools for golf facilities, golf associations or universities to promote and encourage implementation and adoption of BMPs and to document results and future progress.

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