Understanding Today's Environmental Issues and the Oregon Stewardship Guidelines

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My Roots

- Northwest Landscape Industries
  1986 - 1990
- The Oregon Golf Club
  1990 - 2000
- Stone Creek Golf Club
  2012 -2012
- GCSAA
  2012 Present

Key Points

- Brief history of Stone Creek Golf Club
- How Stone Creek responded to the public perception of a new golf course development
- Oregon superintendents role in leading the “Environmental Golf” movement
- Issues that may affect the way we operate in the future

Stone Creek Construction and Public Relations

Public Perception

- Over use of pesticides and fertilizers
- Pollution of the local streams
- Loss of wildlife habitat
- Wetland encroachment

Reality

Stone Creek's fertility program

- Slow release products
- No more than one pound N/1000/year on fairways
- <1 lb N/1000 on roughs
- < 2.5 lb N/1000 on putting greens

Reality

Stone Creek water quality program

- Water tested biannually
- Orthophosphates and nitrates
- Pesticides products applied in the previous six months

Reality

During construction

After planting

Today

Communication

- Clackamas County held town hall meetings with the neighbors to help them understand what we were doing
  - We addressed their concerns
  - Explained the construction timeline
  - Installed a traffic light to address a dangerous intersection
  - Constructed a trail that circles the entire golf course for non golfer recreation.

Backed up our Promise

- Stone Creek Awards
  - 2009 Golf Digest GCSAA, National Public winner, Environmental Leaders in Golf Award.
  - 2005 Clackamas County Soil and Water Conservation District's – Cooperator of the Year.
- Links Magazine – Ranked Nations Top Ten Environmentally Friendly Golf Course.

Community

- Community outreach to local schools
  - Hosted golfing field trips for local grade-schoolers
  - Sixth grade annual bird watching trip
  - High school science and photography field trips
  - Clackamas Community College habitat project
  - Worked with the CCSWCD and taught homeowner lawn class called “Golf Course Quality Lawns”

Can golf be truly sustainable?

- The U.S. golf industry recognizes sustainability as the integration of **environmental stewardship**, **social responsibility** and **economic viability**, as a critical and never ending goal.
- The golf industry embraces sustainability as “meeting the needs of the present without compromising the ability of future generations to meet their own needs.”
- People – Planet – Profit

How can golf serve all aspects of the community PEOPLE

- Recreation/Golf
- Community events (Cross country running race, Juniper GC)
- Walking Path (Stone Creek, Glendoveer)
- Charity/Fundraising

NATIONAL CHARITABLE IMPACT (2016)

12,700
GOLF FACILITIES HOSTED CHARITABLE EVENTS

84%
OF U.S. GOLF COURSE TOTAL

8%
INCREASE FROM 2011

EQUALS 1%
OF ALL U.S. CHARITABLE GIVING (TOTALED $373 BILLION IN 2015)

$3.9 BILLION ANNUAL CHARITABLE IMPACT

MLB + NFL + NBA + NHL

GREATER THAN
MLB, NFL, NBA AND NHL COMBINED

#GROWGOLF

WE ARE GOLF

Is golf good for the environment? PLANET

Water Use – From the GCSAA Profile Project

- Golf Course Irrigation accounts for only 0.5% of the 408 billion gallons of water used daily in the US
- Fewer than 15% of golf courses utilize municipal water supplies
- Golf Courses have an average of 11 acres of water bodies. Grass serves as a natural filtration system and provides a natural wildlife habitat

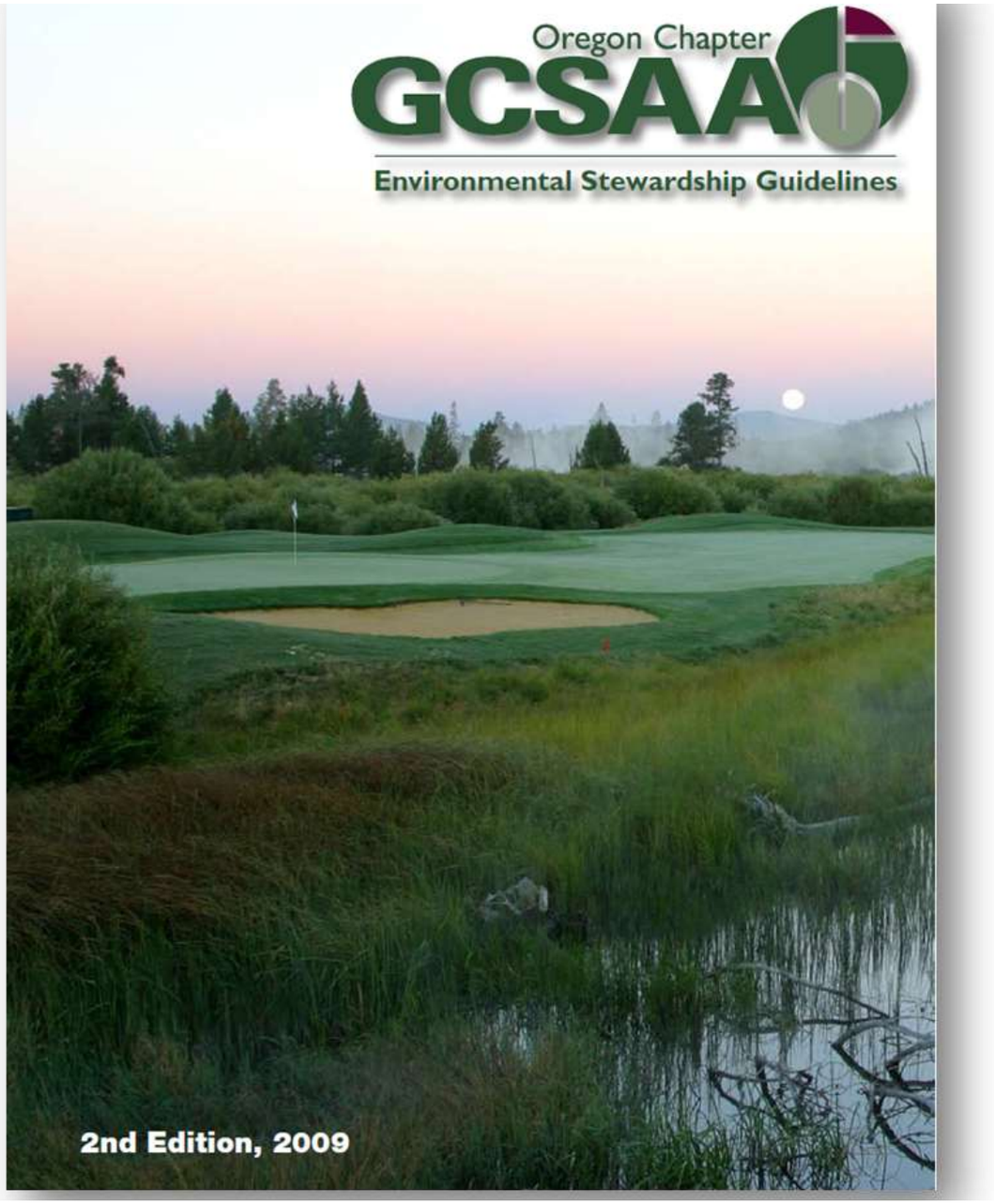
Economic Benefits of Golf in Oregon
Profit

In 2013, Oregon's golf industry generated a total economic impact of $2.0 billion, supporting over 21,000 jobs with $576.4 million of wage income.

GCSAA Presidents Award 2005

OGCSA Environmental Stewardship Guidelines

Written 2000 and revised in 2009



Eight Step Program

1. Environmental Setting
2. Best Management Practices (BMP's)
3. Integrated Pest Management (IPM)
4. Water Quality Monitoring
5. Wellhead Protection
6. Water Management and Conservation
7. Wildlife Habitat Enhancement
8. Community Outreach

Nine Step Program

1. Environmental Setting
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9. Pollinator Protection

Environmental Setting

- Local watershed and land use maps
- Aerial photographs
- Site Photographs
- FEMA map use. EPA Watershed site.
- Soil survey maps

Best Management Practices

- In Golf, BMP's are cultural practice that have been proven by research and tested through field implementation to give optimum turfgrass quality, input efficiency, and environmental protection.
- BMP's provide golf facilities a resource from which to evaluate their current operations and design a plan for continuous improvement.

Benefits of BMP's

- Reduced environmental impacts
- Improved turfgrass quality
- Enhanced golf outing experiences
- Improved worker safety
- Reduced maintenance expenditures
- Reduced regulatory requirements
- Opportunity for industry self-regulation

Oregon BMP's are divided into the following sections:

- Buffer Zones
- Turfgrass Culture
- Horticulture Management
- Fertilization
- Irrigation
- Environmental
- Pest Management
- Pesticides
- Petroleum Products
- Waste Management
- Safety and Education
- Environmental Stewardship

Integrated Pest Management Plan (IPM)

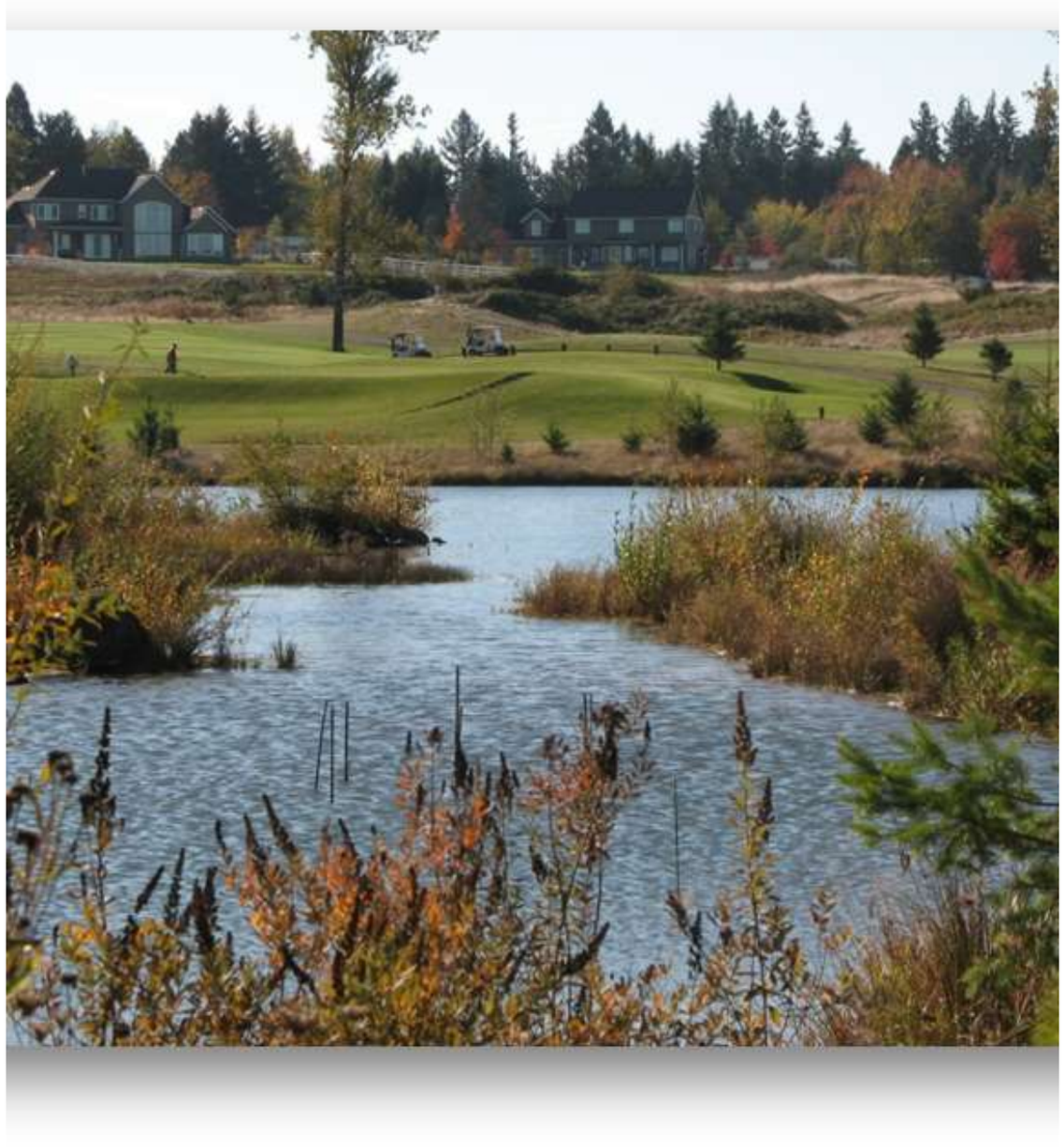
The IPM Strategy is to optimize plant health through the use of cultural methods as a means of minimizing the need to control pests with chemicals.

IPM

- Area definition
  - Cultural practices based on BMP's
- Monitoring
- Action thresholds
- Corrective action plan

Water Quality Monitoring

- Water quality monitoring locations may include:
  - Ponds
  - Wetlands
  - Lakes
  - Streams
  - Rivers
  - Storm water or drainage systems



Water Quality Monitoring

- Sampling strategies
  - Establish a baseline
  - On-going monitoring
  - Historical and statistical analyses
  - Physicochemical properties
  - Targeted monitoring

Wellhead Protection

- Objective is to protect groundwater resources for use by the golf course and the communities in which the golf course exists.

Water Management and Conservation

- Water conservation is defined as any action that reduces the amount of water withdrawn from water supply sources.

Wildlife Habitat Enhancement

- Implementation of the Guidelines is intended to promote enhancement of wildlife habitat
- Golf Courses provide significant habitat to a diverse population of birds, mammals, plants, insects, and other wildlife.

Wildlife Habitat Cont.

- Maintain most of non play areas in varied types of native vegetation
- Leave dead trees, or snags, if they are not a hazard to property or people; leave downed logs/woody debris/brush piles on the ground.

Wildlife Habitat Cont.

- Provide natural areas to allow wildlife movement corridors with shelter, concealment and food
- Maintain buffer zones surrounding all bodies of water where possible
- Provide nesting boxes for birds and bats

Community Outreach

The First Green Foundation

Working with local schools and their teachers to bring students to the golf course to learn about Science, Technology, Engineering, and Mathematics (STEM)

What does the future look like?

- Increased pesticide regulations
- Water restrictions
- Waters of the United States (WOTUS)
- Pollinators

Thank you

David Phipps

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