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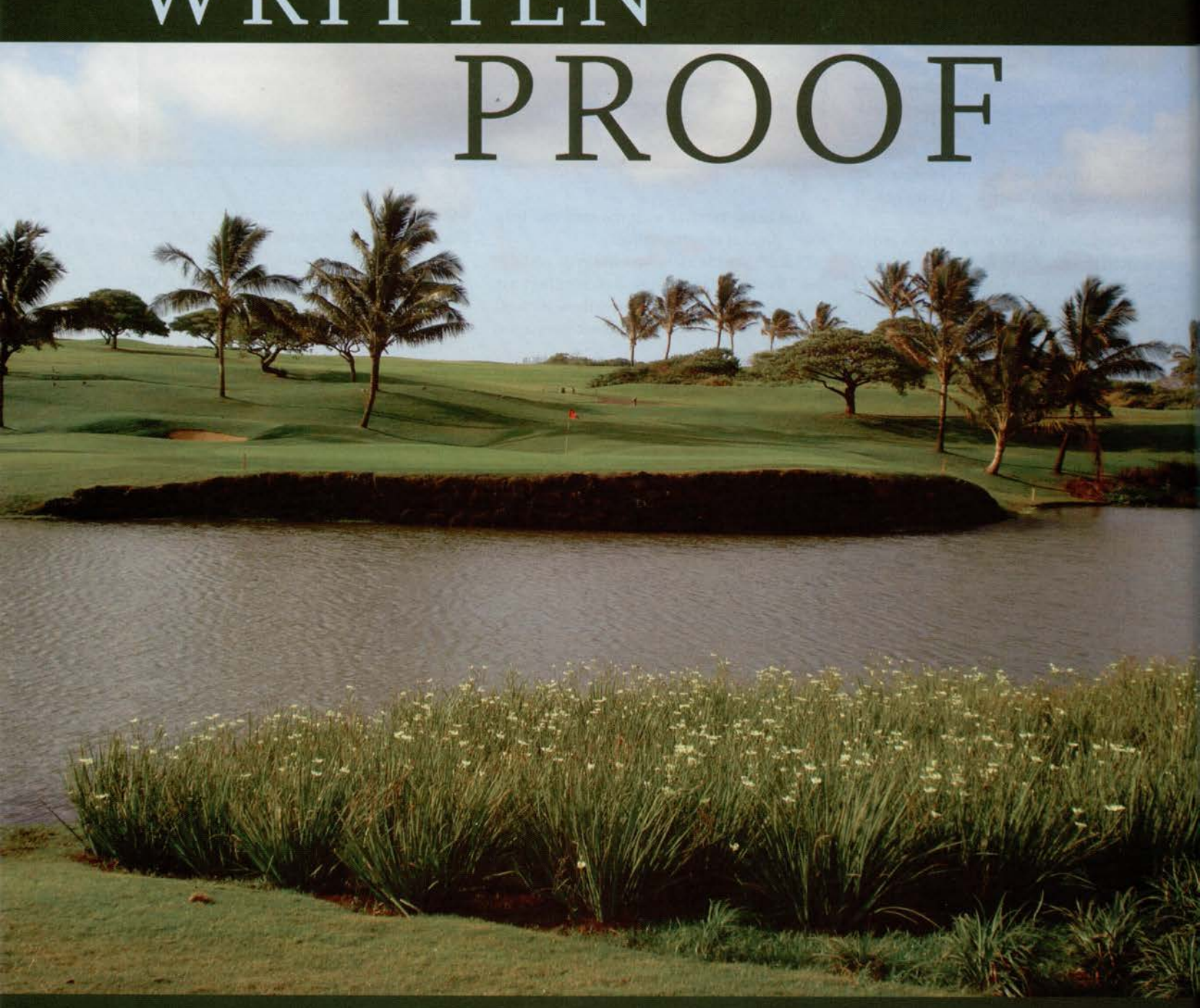


Quality maintenance is a function of a superintendent's experience, knowledge and available funds. Photo: Bill Bushman

by WILLIAM BUSHMAN

Here are five steps to manage your environmental stewardship

Mention the phrase "golf and the environment" to so-called environmentalists, and their expression immediately changes as they prepare to deliver a well-rehearsed and passionate diatribe about how golf uses phenomenal quantities of "methyl-ethyl-death" pesticides, groundwater-polluting fertilizers, and valuable drinking water to maintain exotic turfgrasses for the entertainment of the rich and famous. Mentioning the same phrase to a golf course superintendent elicits a variety of responses ranging from "we don't have any environmental issues" to "we're pursuing certification," as they smile and slowly ease away.

More often, I run into an educated and sincerely interested member of the golf course industry who realizes golf and the environment are one and the same – and they want to make a difference.

In reality, I believe a large majority of superintendents are compliant environmentally day in and day out. Also, I believe many of them are conscientious environmental stewards who, unfortunately, spend little to no time documenting their management practices. In short, they're good stewards who fail to provide written proof of their stewardship. It's understandable, to a degree. I mean, who relishes the idea of voluntarily adding another major task to their regular daily responsibilities and duties?

So far, in most places, an environmental management plan isn't required of most golf courses. But there appears to be an increasing consensus among members of the golf course industry who believe the topic of golf and the environment – and dealing with environmental management planning regularly – is here to stay. Accordingly, managers of the game of golf must respond aggressively to critics who don't believe golf and the environment are compatible or golf courses aren't a positive contribution to their communities.

Well-informed golf course superintendents and managers are the key to this aggressive approach. Documented environmental stewardship is the only way to convince the opponents of the game to understand good golf course management is inherently compliant and environmentally sound. The key is in the proof, or in this case, the written, implemented and regularly updated golf course environmental management plan.

Because the average day of a golf course superintendent already involves time and effort spent dealing with labor, management, weather, tournaments, membership, vendors, budget, equipment, licensing, irrigation, training, language barriers and community concerns, how do the environmentally-conscious document their compliance while managing the significant issues at their course? One way to accomplish this is following the GEM planning process.

GEM PLANNING PROCESS

The five-step comprehensive golf course environmental management or GEM planning process is based on ISO (International Organization for Standardization) 14001, an international standard for environmental management systems based on sound planning, demonstrated stewardship, and continual improvement. Properly employed, the GEM process will yield measurable, continual improvement that focuses on the significant issues faced by the superintendent or manager at their golf course.

STEP 1: ANALYSIS

Experienced golf course architects know data collection, site analysis and keen observation are the keys to a good design. The same is true for environmental managers. Collecting and analyzing pertinent data; determining inherent opportunities and constraints of the land, its setting, its environmental challenges, and its management; as well as examining the course firsthand are all key tasks that need to be performed. All aspects of the golf course facility should be part of the analysis step. Those areas include the:

- Maintenance complex;
- Golf car storage building;
- Pesticide mixing and storage area;
- Equipment fueling and wash area;
- Clubhouse;
- Restaurant or snack bar; and
- Pro shop.

Another important component of the analysis step of the GEM process is the five-category, 100-question environmental compatibility index checklist. The ECI checklist categories include planning and compliance, operations and maintenance, water resource

management, conservation, and pesticides and pollution prevention. The ECI checklists are used to determine the current compatibility of a course's management practices with general environmental stewardship goals and objectives and will provide the manager with two measures. The first is the actual ECI – the tally of the "yes" answers provided in the checklist. This score represents where the course's stewardship level is today. The second measure, or the potential ECI, tallies the "yes" and the "partial" answers and shows where the course's stewardship level could be with a little more effort.

Additionally, any available environmental studies, maps, future development plans, and state/local regulations and requirements are collected to determine the potential environmental challenges, if any.

STEP 2: DOCUMENTATION

Having completed the detailed analysis, collected all the important data and established the baseline, the next step is to complete the assessment by identifying a course's environmental challenges and to finish the GEM plan document. Environmental challenges can be defined as concerns or issues of local, state, regional or national significance that might be impacted by a golf course's management practices. A simpler definition for a challenge is any environmental issue that is bigger than the golf course. This is where the rubber meets the road. Determining a course's potential environmental challenges might or might not be a complex task. It depends on how well you know your community, state and federal regulations. A consultant might be valuable at this stage to ensure your list of challenges.

The list of potential environmental challenges parallels the gamut of environmental laws and regulations and includes:

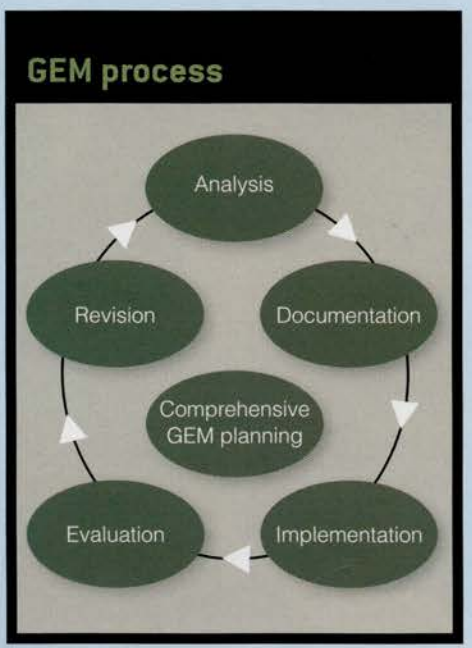
- Wetlands;
- Landfills;
- Water conservation requirements;
- Threatened or endangered species habitat;
- Groundwater, wellhead, and injection well protection;
- Pesticide usage restrictions;
- Permitting;
- Storm water quality;
- Environmental restoration sites;
- Water supply;
- Archaeological and cultural resources;
- Floodplains;
- Air quality; and
- Coastal zone management.

Armed with the final list of environmental challenges, the golf course superintendent can begin the important task of determining the management practices for each to ensure short- and long-term compliance with appropriate regulations or concerns. Accordingly, when this information is overlaid with the course's maintenance activities, sensitive environmental challenges can be protected by the management staff more readily. This is accomplished by examining all of the course's management practices that possibly could impact an identified environmental challenge negatively. By identifying practices that can have a profound or significant effect on management's perceived ability to be stewards of the environment, more emphasis can be placed on employees to take special care during these tasks.

Additionally, for each environmental challenge, a superintendent must determine an appropriate management practice that complies with all regulatory requirements while ensuring the golf course is still attractive and playable for customers.

Courses implementing a GEM plan must have a written environmental policy that includes statements such as minimizing the potential for negative impacts, always staying compliant

Pond maintenance can be a complex task when you're unsure of applicable environmental regulations. Photo: Bill Bushman



and committing to regular reevaluation to satisfy the policy requirements. Because all employees should be aware of the policy, a mention in a newcomer's brief and a regular mention of the policy and its implications during weekly staff meetings or safety briefings are good ways to get the word out to employees. And because you've come this far, why not post it for employees and customers? Take credit when you can. A professional-looking policy statement can be created and posted easily in highly visible locations throughout the facility.

STEP 3: IMPLEMENTATION

Positive, decisive action is the only true measure of a GEM plan's success. By implementing new practices, whether to knowingly improve the course's environmental compatibility or to just try new ideas to determine their value, you and your customers should benefit. Consider providing summaries of the GEM plan and posting a map of the property depicting its particular environmental challenges for customers and employees and immediately begin finding ways to minimize or eliminate any and all potentially negative environmental impacts.

STEP 4: EVALUATION

Continual improvement requires regular evaluation. Ongoing measurement of the reduction or elimination of environmental impacts the newly implemented practices have on the course is one way to evaluate a course's management practices. For example, documenting the reduced use of inputs such as fertilizers, pesticides and irrigation can be used to demonstrate the increased environmental stewardship of the golf course management practices, as well as the overall value of the GEM plan. It's important all golf courses show improvement in their environmental compatibility throughout time. One way this can be accomplished easily is to evaluate golf course

management practices regularly and change, refine or adjust them where appropriate.

STEP 5: REVISION

A high-quality GEM plan must reflect the most current situation to be valid. Acting on lessons learned is right behind initial implementation as the most important aspect of a successful golf course operation. Accordingly, a GEM plan should be kept as current as possible at all times, with major revisions regularly scheduled at appropriate intervals. And once completed, a GEM plan is easy to update because most of the work has been done already.

A GEM planning process can guide the comprehensive management of all aspects of the golf course facility while establishing a measurable baseline to track improvement. The GEM planning process also ensures management efforts are focused on the significant concerns by environmental challenges. Additionally, a GEM plan assists with attaining and maintaining daily compliance with all appropriate rules and regulations while ensuring constant examination of all aspects of golf course management to achieve the highest standards of environmental excellence. Done correctly, it will be worth the effort and will provide you with proof of your stewardship to all those environmental activists who know so much about your business.

So, the next time an environmental activist – or a customer – asks you about golf and the environment, you can be ready with a well-researched, field-tested, regularly updated written answer that stops them in their well-worn tracks ... with the truth. **GCI**

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Sedimentation of ponds connected to a running stream is a common golf course environmental challenge. Photo: Bill Bushman