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The economic uncertainty in our nation and throughout the world continues to challenge our association as well as the industry of which we are a part. This past year emulated the previous year in that golf course operational budgets continued to tighten and the “do more with less” mantra has been replaced with “just survive as best you can.” Golf participation numbers continue to slide or, at best, remain flat. The short-term outlook remains bleak, especially when the GCSAA anticipates up to a 24-month recovery lag in our industry compared to the general economy. The good news is that we are a very special group of individuals highly capable of making lemonade out of lemons. We tend to thrive on challenges...is that not what we do every day of the golf season as we spar with Mother Nature? We, as an industry, will get through this and we will be leaner and meeker going forward.

Association memberships are down slightly over the previous year yet your Board of Directors is doing a wonderful job controlling costs and keeping the MGCSA on solid financial ground. Over the past year, we as a Board, have engaged in lengthy conversations regarding ways to keep the MGCSA moving forward as efficiently and as productive as possible, despite the economy. With that said, we have made several changes to help us in that direction. The Wee One Tournament was added as part of our annual event rotation due to the quality of its cause and growth potential. The Board decided to combine the research and scholarship scrambles, beginning in 2012, into one event for two reasons. The arrangements committee is having difficulty securing venues during the summer months of June, July, and August. Clubs are simply not willing to give up the revenue during prime time. Therefore, we have events/tournaments stacking up in September and October and our attendance declines. Secondly, the golf-maintenance job market in Minnesota has all but dried up so we made the decision to suspend offering turfgrass scholarships. MGCSA will continue to offer legacy scholarships for member’s children. Any proceeds raised by this combo event will be split 50/50 between the research and scholarship accounts.

Government regulation continues to be on the forefront in our industry. Water conservation and water quality are taking center stage and your MGCSA has stepped forward to offer a voice that represents your industry. Just recently, the MGCSA joined the Minnesota Environmental Initiative (MEI), a bipartisan organization that seeks solutions to Minnesota’s environmental problems through collaborative action taken by innovative partnerships. MEI brings together nonprofits, businesses, and government agencies to find consensus on critical issues and respond with actions that have measurable, positive environmental outcomes. We believe that through our participation in this organization we will form valuable partnerships that will enable us to promote our industry and to educate other stakeholders with the facts regarding water usage within the golf industry. Your MGCSA board is in the process of developing a water usage BMP program for Minnesota golf courses. By being proactive, we believe we will have better control of our destiny versus simply accepting government mandates. MGCSA will also address pesticide usage and fertilizer usage at a future date.

Two of our current Board members are finishing their terms and will not be returning. Tom Proshek has enthusiastically served the MGCSA for the past six years. As chair of the Arrangements Committee, his persistence and organizational skills locked up most event venues one to two years in advance. We will miss his proficiency. Shane Andrews has been a thoughtful and productive contributor to the Board and his common sense approach to issues was most appreciated. Thank you to both of these members for the time and effort they put forth.

Thank you to our affiliate members whose participation and generosity keep the wheels of MGCSA turning. Their support keeps our association viable. I also would like to thank Scott and Jeff Turtinen for their help and commitment to the MGCSA. Their dedication keeps the day-to-day operations of our association running smoothly.

I look forward to the challenges and opportunities of the upcoming year.

- Paul Diegnau CGCS
The Wilderness at Fortune Bay’s ‘Environmental Award Winning’ Crew of 2010.
The Wilderness at Fortune Bay-
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planted a blend of fine leaf fescues that are allowed to grow long with minimal maintenance inputs. This poses less of a threat for environmental contamination.

- Growing a strong stand of turf requires the use of proper maintenance practices that are continually employed and refined at The Wilderness at Fortune Bay. Mowing heights on areas requiring mowing are kept as high as possible to increase pest and wear resistance while maintaining playability. Turf is topdressed, aerified, and verticut as needed to keep thatch accumulation and soil compaction under control.

Controlling thatch and compaction allows us to irrigate more effectively—water is able to penetrate into the soil profile and thus not run off the surface and into water bodies. We employ a weather station on the site that gives us evapotranspiration (ET) data which influences our irrigation decisions. Our computerized irrigation system allows us to fine-tune the system so that we water all areas the proper amount.

Our goal is to water deeply with less frequency while avoiding over-watering. Surface drainage on the site is very good but still we are always adding more to correct wet areas that inevitably appear. One drawback of this site is that its soil texture and surrounding topography make it stay wet during wet weather periods. An independent laboratory performs tests bi-annually that give us information on soil pH and fertility levels and this information is used to determine our fertilization and soil amendment requirements.

- We use a spoon-feeding regimen on greens that allows us to feed the plant on an as needed basis that avoids fertilizer leaching through the soil profile. Wear and tear on the golf course is easily controlled on this site due to a continuous cart path and a golf course design that distributes wear effectively. Shade from trees is a non-factor on the golf course since most of the shady areas of the golf course are seeded to fescue, which is a shade tolerant plant. All of these factors contribute to us being able to grow a thriving and pest resistant turf that requires minimal chemical input.

In addition to the factors listed above, Integrated Pest Management (IPM) is a practice that involves the following four factors, all of which are employed by The Wilderness at Fortune Bay:

1) Scouting, Monitoring, and Identification. We employ at our facility two university-trained and experienced professionals proficient at pest identification and control. These individuals are inspecting the golf course on a daily basis and in the event that a pest problem is detected, the next step is identification. In most cases this is easily done with experience or referring to publications but in some instances some assistance is required. An example of this is our diagnosis of Take-All Patch on some tees and fairways. In this instance we had a diseased sample sent to the University of Minnesota for positive identification. Being a relatively new golf course, we are in the process of establishing a history of pest development in different areas of the golf course that will assist us in detecting problems in the future.

2) Establishing Threshold Levels. Not every pest detected is life threatening and just because a pest is detected does not mean that one immediately resort to chemical control. A little Dollar Spot discovered in the rough does not warrant an application nor does a few white grubs in an out of play area. A Pythium Blight epidemic on a putting green, however, is a different story. Control measures must be taken or severe turf and economic loss will result. The judgment in regards to control or not rests with the superintendent who determines whether an application is necessary for playability and/or economic reasons.

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Wherever golf is played.
The Wilderness-  
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3) Taking Appropriate Control Measures. If after pest detection it is determined that a control measure is needed, then the next step is to select an appropriate control measure. This may require the use of a fungicide or it may require the use of a biological control. As an example, in past years we have had an algae problem on a high profile golf course pond. We have been reluctant to use a chemical control on the pond for environmental reasons. We have been using a biological control in this area in the form of barley straw. In other instances, such as with Take-All Patch, we have been using a fugal control which, when used according to label directions, has minimal if any impact on the environment. Another control measure may be to correct the underlying cause of the problem, such as poor drainage or insufficient aeration. In all instances, all options are carefully considered with a premium being put on environmental protection.

4) Establishing a Baseline History. Effective golf course management and state law requires that all applications be recorded. Information including date, time, weather conditions, pest treated, areas treated, control product used, and equipment utilized are all carefully documented. This information is compiled throughout the year and studied so that we can establish trends and better anticipate and prevent the same problems from occurring year after year.

CHEMICAL APPLICATION PRACTICES

The Wilderness Golf Course at Fortune Bay Resort is committed to the safe and responsible use of control products. To this end, we adhere to the following procedures:

- The proper pesticides are applied only at the proper place and time. Experience and study determine what pesticides will have the least impact upon the environment. Spot treatments will be made whenever possible and only when treatment is absolutely necessary.
- Pesticides are only applied when conditions are favorable. This means that applications will only be made when winds, temperatures, soil moisture levels, and rainfall either real or anticipated allow it. An application made in poor conditions not only is a hazard to the environment but also a danger to the applicator and those around him/her.
- All equipment is calibrated for proper application pattern and rate. The Wilderness at Fortune Bay has two computerized sprayers that make precise applications possible. Even with the computer, however, the sprayer is calibrated manually to confirm its accuracy.
- Label directions must be followed at all times. A label must be displayed on all pesticide containers.
- Care must be taken to avoid applying materials to all sensitive environmental sites, such as lakes and wetlands. Buffer zones of no mow grasses, which are prevalent at the Wilderness at Fortune Bay, help immensely with this.
- All applications must be recorded and periodically evaluated for effectiveness.

STAFF TRAINING

Currently at The Wilderness at Fortune Bay we have three State of Minnesota licensed applicators. These applicators are both experienced and highly trained and are the only individuals allowed to make chemical applications. The individuals performing chemical applications are required to attend annual seminars and workshops to stay up to date with current legislation and technology. The latest workshop for applicators that we attended was in fact held at the Wilderness Golf Course clubhouse—we try to work with the Minnesota Department of Agriculture to make training more accessible for northern Minnesota. This was a tradition began by Justin Gustafson at the Ely Golf Course and hopefully will continue for many years to come.

Seasonal staff are educated with a hazard communications program which includes knowing where the MSDS are located, where chemicals are stored, and the hazards to both the environment and staff that chemicals may pose. In weekly staff meetings all staff are encouraged to contribute ideas as they relate to safety and pest problems on the golf course. We have our own Incident Response Plan posted next to the MSDS station and all staff are aware of its presence.

CHEMICAL STORAGE AND HANDLING

The Wilderness Golf Course at Fortune Bay Resort has made efforts to make chemical storage as safe as possible. A separate Pro-Tec pesticide storage building is located adjacent to the main facility and has plenty of room for both liquid and solid chemicals. The storage building has built in spill containment and is well ventilated. The building is made of coated steel, as are the shelves within the unit. The building is locked and accessible only by applicators. Though not always possible, we try to go into winter with as little chemical inventory as possible so that we can avoid storing too much material over the winter.

Mixing and loading is performed on a containment pad. A spill kit is located nearby to catch any spills that may occur. All plastic, glass, and metal containers are triple-rinsed before disposal. The sprayer tank has an anti-siphon apparatus for filling. All rinsate left in the tank after cleaning is sprayed in the field. All necessary PPE is located in the maintenance building.

WATER USAGE MANAGEMENT

Water usage is becoming more and more of a pressing issue with not only golf courses but also any industry that uses large quantities of water. An ever-growing population has increased the demand for water everywhere. The Water Quality Branch of the Bois Forte Band of Chippewa carefully estimated water usage before and during construction of the golf course. The determination was that the golf course, if managed properly, would have a negligible impact on the numerous natural bodies of water present and the wells used for potable water in the area.

In order to better describe our efforts to conserve water, I will be dividing this explanation into three parts: property description, irrigation equipment, and watering programs.

PROPERTY DESCRIPTION

The water source for The Wilderness Golf Course at Fortune Bay Resort is surface water pumped from Lake Vermilion into a storage pond for golf course use. The water source for the resort and surrounding areas is from a well located on the property.

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IRRIGATION EQUIPMENT

The irrigation system at The Wilderness golf course was state-of-the-art in 2002 but likely will require some future control upgrades to stay that way. Toro 800 series heads are utilized. On the 13th hole by Lake Vermilion half-circle heads are used extensively to keep from watering the lake. On the tee on 13 we use only smaller landscape sprinklers to keep water on the turf only and away from Lake Vermilion. In addition, we have switched out full-circle sprinklers to half-circle sprinklers to minimize irrigation on out of play no mow fescue areas. The Toro OSMAC Site Pro 2.2 Central Computer is also an integral part of allowing us to save water on the golf course. With this program we are able to adjust the system head by head to maximize irrigation efficiency while minimizing waste. Incorporated with this control system is a weather station capable of monitoring ET that allows us to adjust times accordingly. We have an irrigation technician on staff who repairs leaks the day they are detected and monitors the system for proper nozzles, O-rings, and other parts to keep efficiency maximized. The pump station is a variable-speed drive unit that keeps electricity usage to a minimum and reduces stress on irrigation components. The Flowtronix pump station also has an on-board computer that we use to track water usage and establish trends in water usage. All of these features help us to keep both our water and electricity usage as efficient as possible.

CULTURAL/WATERING PROGRAMS FOR STRESS REDUCTION

A strong stand of turfgrass is the best way to keep water use to a minimum and at The Wilderness Golf Course at Fortune Bay we do everything possible to grow strong turf. Water quality is taken very seriously not just by the Bois Forte Band of Chippewa but also by the Department of Natural Resources here in Northeastern Minnesota. From the very beginning Best Management Practices were utilized and continue to be utilized today. Since the watershed of the property ultimately ends up in Hudson Bay, what we do here impacts more than just the golf course and surrounding area.

During construction the number one concern was erosion. For construction a great deal of silt fence was utilized—virtually the entire perimeter of the property was protected. In addition, we used mass quantities of both futhera erosion control blanket and sod to stabilize areas particularly slopes as soon as possible. Now that the golf course turf is established, the threat of erosion is virtually non-existent. Grasses are some of the best erosion control there is.

Chemicals are used on an as needed basis only but when they are we try to deliver them in a manner as safe as possible to the environment. All wood lines and water bodies have buffer zones that help to stop run-off. These fescue no mow buffer zones vary from 6 feet wide to hundreds of feet wide. Chemical applications on these areas are very rare. In addition, at The Wilderness at Fortune Bay we have both a spoon feeding program and a fertilization system. Both of these systems help to apply only what is needed by the plant and help to eliminate nutrients from both running off the surface and leaching through the soil profile. Also utilized are the newest slow-release fertilizer technologies, namely stabilized urea and nitro-form, both of which help to eliminate nitrogen wastage.

As was alluded to in our previous description of IPM, our ESD equipment wash system is a state of the art machine description of IPM, our ESD equipment wash system is a state of the art machine which utilizes microbes to break down pollutants and allow the same water to be used over and over again to wash equipment-polluted water is not discharged to storm drains, retention areas, etc. We have a chemical spill containment plan and

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both a mobile spill kit and a chemical storage facility complete with a containment sump. The maintenance facility has been designed from the beginning to be as clean as possible. Algae had been a problem in a few ponds. This problem improved as we switched over to fertilizers with less phosphorus (during grow-in some phosphorus is necessary for juvenile grass plants). In addition, we have been using a biological control program on the historically problematic ponds. This combined with some manual removal should suffice for us to control the problem with little if any use of chemicals. Other than algae and a little duckweed on a few of the more shallow ponds, there have been no problems with all lakes.

WILDLIFE AND HABITAT PRESERVATION

The site at The Wilderness at Fortune Bay—being adjacent to Lake Vermilion—has some of the most unspoiled habitat for wildlife in the country. Every hole is separated by large tracts of woodland and wetlands and basically the entire site is a core habitat. The key to keeping it this way is by being as unobtrusive as possible to what is already there.

To protect this environment, we have been diligent in protecting it from any inputs that could be damaging. We have created fescue no spray buffer zones not only around lakes but adjacent to woodland areas as well. Fertilizer applications adjacent to lakes are done by hand. Perhaps one of the best ways to preserve habitat is to leave the woodland areas alone as much as possible. Leaving dead trees and thick brush is probably the best thing that we can do for habitat preservation. In addition, we have added some indigenous plants that provide food and habitat for birds and butterflies.

We have nest boxes for bluebirds, owls, and wood ducks throughout the property. What we are finding is that wildlife, if given the choice between a natural woodland environment (which is readily available everywhere) and a man-made birdhouse, will almost always go with the natural environment. This is what makes this site so easy to manage as a wildlife sanctuary—all the site requires is to be undisturbed.

Coming from an urban area originally, at first sightings of wildlife were somewhat rare and different. Living up here the past few years, we begin to take these sightings for granted. During the past seven years, it is not uncommon for the crew to see black bear, deer, golden and bald eagles, coyote, wolf, osprey, moose or other animals common to this area.

EDUCATION AND OUTREACH

Making the public aware of our actions to preserve the environment is a vital part of our efforts and at The Wilderness at Fortune Bay we have done much to make the public aware of our efforts. We have a brochure available to all of our patrons about our participation in the Audubon Cooperative Sanctuary Program for Golf Courses. We have involved local colleges (Vermillion Community College) in the water testing of our golf course lakes for impurities such as phosphorus. We have worked closely with the Environmental Services for the Bois Forte Band of Chippewa in the monitoring of water quality. On more than one occasion we have funded the building of bluebird and owl houses by a local scout troop. These houses were then installed on the golf course. We are an Audubon Cooperative Sanctuary and so have benefitted from the associated press releases. In addition, we have signage on the golf course that illustrates the most environmentally

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