Human Nature Sensitivity to the Environment Abounds in Golf

By Neal Kotlarek

A sk golfers why they relish the game, and at least a part of the responses will include the magical intersection of nature and the environment. Who among us hasn't stopped mid-round to exalt in the flora and fauna that envelop holes built away from the clubhouse parking lot and through dense forests or across wetlands?

There's no denying that a great deal of science goes into the integration of golf and nature. While some of this work - specifically on environmentally sensitive areas of a project – involves oversight by regulatory agencies, other aspects are left up to golf course developers seeking to optimize the golfing experience by reducing their work's impact on indigenous plants and wildlife. While critics rightly bring up concerns about herbicides, synthetic fertilizers and pesticides, golf course owners, managers, and superintendents bring up successes in stormwater management and providing desirable habitats for various land and aquatic animals.

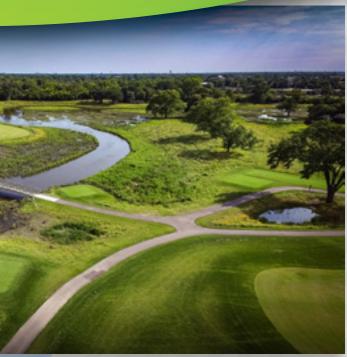
The folks who manage Coyote Run Golf Course in Flossmoor are so driven to environmental awareness that they regularly run "Prairie at Night" events on course premises. Golf superintendent Dave Ward provides walking tours to introduce golfers and nature lovers to the landscaping techniques used to plant native grasses and flowers across the property.

"I got interested in (sustainable landscaping) in the late 1980s," said Ward, widely considered one of the nation's preeminent golf superintendents, and the grounds boss at Olympia Fields Country Club during the 2003 U.S. Open. "Coyote Run was built on the grounds of an old



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In 1999, the Homewood-Flossmoor Park District was provided \$14 million in taxpayer funds on a "Keep it Green" referendum. This fund was partially used for land acquisition that included Cherry Hills Country Club, purchased in March 2003. Thirteen months later, Ward left Olympia Fields and a staff of over 50 to oversee the development of a municipal project with a team of 12. Coyote Run, designed by Greg Martin, was constructed on the Cherry Hills site in 2004 and opened for play in 2005 with the express goal of maintaining the golf course in an environmentally sensitive way.

Among the initiatives in the course's environmental mission are: conservation of scarce natural resources; use of organic fertilizers, flood mitigation through retention of rainwater from the golf course and surrounding neighborhoods; minimal pesticide use; preservation of natural ecosystems; a bio-solid organic fertility program; and equipment wash water recycling. Even the course's clubhouse grill has green initiatives, specifically: paper straw use only, biodegradeable cutlery, and kitchen scrap compost.

Perhaps the most delightful initiative undertaken by Ward and his staff is participation in the Audubon International "Monarchs in the Rough" program. By undertaking habitat restoration projects in outof-play areas, golf courses can provide much needed habitat for the iconic monarch butterfly population. Coyote Run plants five different species of milkweed - the plant of choice for egg-laying monarchs.

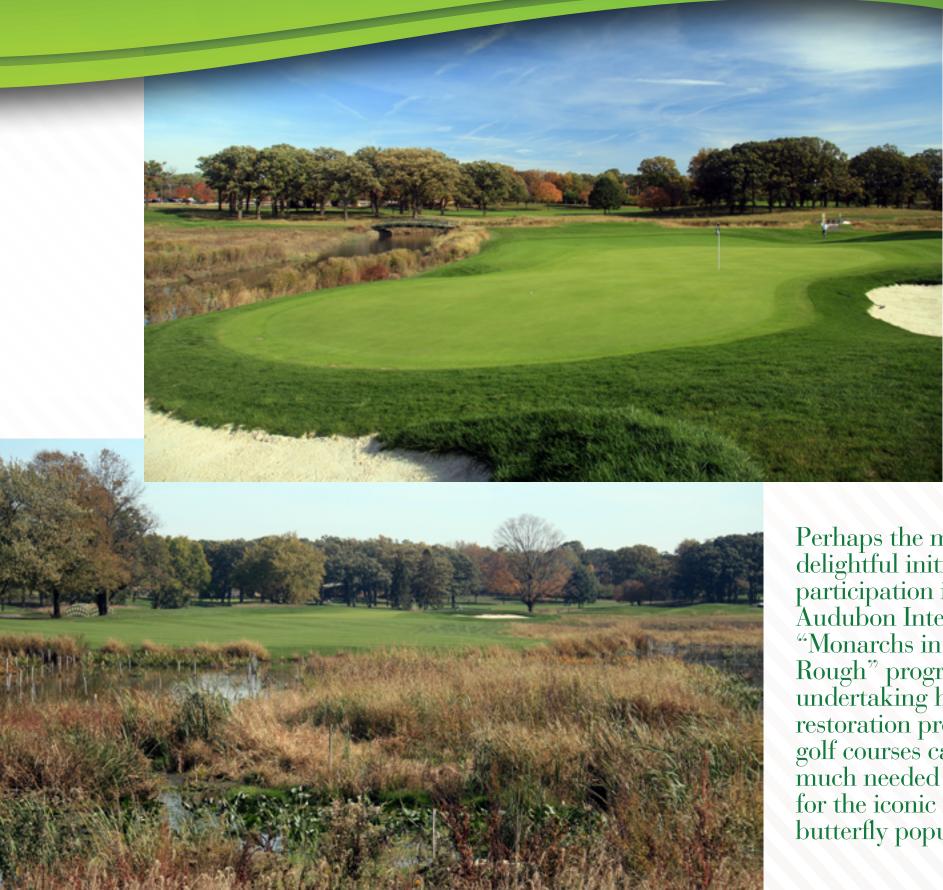
"We had a really good summer for monarchs," Ward said. "Golfers and our staff saw more monarchs flying about the area this summer over many smmers past."

A few miles north in Chicago, Harborside International is undisputedly an environmental success, as its 428 acres - once literally a city blight – was turned into property that thrives with wildlife and humanity. Formerly a dump used for disposal of municipal solid waste, incinerator ash, and wastewater sludge, the land was transformed into a 36-hole championship golf complex and practice facility through the engineering wizardry of the late golf designer Dick Nugent.

The work, completed in 1995, included the moving of three million yards of dirt and the introduction of three million cubic vards of fill, seal, and topsoil. The clay material was dredged from adjoining Lake Calumet, which also resulted in the creation of a boat marina. Concrete from the concrete rubble inside the landfill was recycled for application in roadways, cart paths, embankment erosion control, and building foundations.

The end result of this land rejuvenation was two magnificent courses - the Port and the Starboard - built on top of the dump and its impervious clay seal. As tree roots would obviously break through this seal, the courses maintain a decidedly Scottish seaside look to them. That look is enhanced by large stretches of decorative fescue grasses which separate many holes and serve to tighten many tee shot landing areas. Winds also play a role in adding challenge to the course, a reason Nugent designed fairways 50 percent wider than standard. The complex is also among the highest points in the city due to the mountain of waste contained in the landfill.

In 1996, the American Academy of Environmental Engineering cited Harborside International with its top award for Superior Achievement for



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Excellence in Environmental Engineering. Besides hosting two courses perennially ranked among the top 10 in the metro area, the complex is also home to a 58-acre practice facility, touted as the largest driving range and practice facility in Northern Illinois. The course's golf center also hosts youth golfers 7–17 who participate in the acclaimed The First Tee of Greater Chicago life skills experience classes.

Another prominent environmental benefit of Harborside International is stormwater retention. In fact, one of the important roles all urban-area golf courses play is to accept, retain, and absorb rainwater. It is generally accepted that 20 percent of the country's 17,000 golf courses are used for stormwater and water quality treatment. The roofs, paved streets and parking lots in urban areas which hold and redirect storm runoff necessarily stress sewer systems.

According to some studies, stormwater contributes as much as 30 percent of the pollution issues in lakes, streams ,and estuaries. To offset at least a portion of that burden, communities including Highland Park (Sunset Valley), Addison (The Preserve at Oak Meadows), Arlington Heights (The Bridges of Poplar Creek), and Glenview (Glenview Park) rely on municipal golf courses to serve to both detain and retain runoff

When it was reintroduced to the public three years ago, Glenview Park in Glenview was hailed by golf writers for its improved playability, its attractive bunkering, and its contoured greens. Overlooked in many of those reviews was the meticulous engineering work performed by Libertyville-based Jacobsen Golf Course Design on rainwater diversion. The master plan for the golf course renovation project developed by the firm made the golf course the key flood mitigation resource. The end result is a course that is beautiful, fun and an ecological asset to the city.

In the west suburban city of Addison, Martin, he of Coyote Run's success, was presented a daunting challenge by the Forest Preserve District of DuPage County: thoughtfully integrate environmental benefit with a championship golf course that could withstand significant flooding events. After an arduous approval process by various agencies, the Preserve at Oak Meadows underwent a two-year environmental restoration project that improved

stormwater management and water quality for Salt Creek and enhanced the habitat for the property's fish and wildlife, while at the same time improving the quality of the golf experience. The former home to 27 golf holes, the property was reconfigured to support the detention of 20 million gallons of stormwater from the creek. Twenty-five acres of the 288-acre property was converted to new wetlands. Forty-three acres of riparian habitat were also built and 13 acres of the Salt Creek corridor were restored to improve water quality and plant and animal diversity.

The results of the work are, in a word, spectacular. The course received wide acclaim from both local and national media. Ron Whitten of *Golf Digest* pronounced the Preserve at Oak Meadows "might be the most important new golf course of 2017" due to the role in community improvement. The magazine presented the course its Green Star award given to golf facilities that "demonstrate the best in sustainable, efficient, and innovative environmental practices that every golf facility could emulate."

Environmental sensitivity by golf course owners isn't restricted to the Chicago area, of course. In Wisconsin, Sand Valley, the Mike Keiser-owned getaway near Nekoosa in the center of the state – and the middle of nowhere - has turned back the clock, decades of timber growth removed to reveal the original glacier-created sand dunes on which multiple courses have been laid. And a large portion of those 1,700 acres of former pulp tree stands will now sit fallow, allowing nature to retake them.

A little over an hour south of Sand Valley, Wild Rock Golf Club at Wilderness Resort in the Wisconsin Dells was carefully crafted by renowned design team Michael Hurdzan and Dana Fry, who wove holes between trees, around wetlands, over ponds, and even across an abandoned guarry.

"The famous sandstone of the Dells is not part of our landscape here on Wild Rock property," superintendent Michael J. Blazich said. "It is nearby and all around but specifically the golf course land is a glacial till and the beautiful topography of the golf course is known as 'end moraines' where the glaciers in this area stopped. As far as flora and fauna they are comprised mostly of what is typical in Wisconsin. The difference is on the golf course the wildlife is protected in a virtual sanctuary where no hunting is allowed and only invasive weed species are managed."

Wild Rock's spectacular 15th hole crosses a guarry. Or, what had been a guarry.

"Like with any area where man eliminates influence, nature returns quickly," Blazich said. "The guarry hole is no different. During construction of hole 15, we took great care to limit our impact. Our goal was to fit the hole to the land provided so nature and the area wildlife would remain as a part of that area.

"Once completed, wildlife returned and now flourishes in that area. Today our challenge, because we limit golfer access to the quarry, is maintaining sight lines to the green as trees tend to grow which reduces visual appeal and shot value of the hole."

Both wildlife and the native plants are taken into consideration when caring for the golf course, Blazich explained. "It started with Hurdzan and Fry creating numerous routing ideas to help minimize the disturbance to the natural topography but still create awe inspiring views on almost every tee box," Blazich said. "We focused on selecting disease resistant grass for tee boxes, fairways, and greens that require less fertilizer and maintenance; using fescue grass to large areas of meadow that do not affect play and create the perfect habitat for animals and birds; and creating several water features throughout the property. The plants and animals which reside here are the beneficiaries of all these important early decisions. Since the completion of construction in the fall of 2007, we have maintained environmentally sound maintenance practices and always make calculated decisions to reduce our impact."

All this has been highlighted by the recent opening of a trail to show off the beauty of the property. It's obvious to the golfers as well.

"During a round of golf don't be surprised when you see whitetail deer, red fox, turkeys and the occasional eagle," Blazich said. "In addition, Monarch butterflies are prevalent thanks to the healthy population of milkweed throughout the property's fescue areas, and several species of migratory birds which utilize our water features. The most interesting was a black swan which took up residence for a few days in the four-acre pond along our fourth hole. We were hoping he/she would stay to help control the resident goose population, but no such luck."



