

BULK TRUCK LOAD OF MILORGANITE

\$4,995

For Better Results.
Naturally.

Milorganite

★ FERTILIZE 62 ACRES OF YOUR GOLF COURSE.

AVERAGE LOAD 22 TONS.

CALL FOR DETAILS.



651-454-3106 / 800-551-4857

Want to Play an Historic Round of Golf? ...Head for Fort Ridgely!

By Jeff McDowell
Bonestroo

Golf course designers regularly meet the challenge of designing courses to highlight the best of a site's natural terrain, but at Fort Ridgely State Park in Fairfax, Minnesota, course designer Jeff McDowell is also working to preserve the site's heritage. His partners in this effort are Park Manager Mark Tjosaas, state archaeologists, the state's historic preservation office and the Bureau of Indian Affairs.

One of two courses operated by the Minnesota DNR (The other DNR-operated course is at Fort Snelling.), Fort Ridgely is a nine-hole, walk-only course that currently features artificial turf greens. Originally built in the 1930s during the Great Depression by members of the Civilian Conservation Corps (CCC), the course was designed by an attorney who had never played golf, but had watched some friends play the game. That design, which included a putting green within feet of a building's front door, reflected the crude beginnings of American golf. A 1970s remodel updated the routing to improve safety and added the artificial turf greens.

To meet the demands of today's golfers, the course needed a complete re-design including multiple tee boxes for each hole, 6,000 square foot greens, a two-acre irrigation pond and a double-row irrigation system. The catch is that the work cannot dis-



turb the historical artifacts.

In addition to unique CCC elements, the state wants to preserve historic landmarks from the mid-1800s, and Native American artifacts dating back as far as 10,000 years. "Incorporating the site's history is an essential element of the course re-design," said McDowell.

A Short History Lesson

Shards of pottery and other evidence of civilization dating back 10,000 years have been found at the Fort Ridgely site, said Tjosaas. Bison and elk roamed the area years ago, making the land attractive to Native Americans. In the summer months the Native Americans lived in the hills overlooking the Minnesota River Valley.

In 1855 the U.S. Army constructed Fort Ridgely. Other buildings followed, creating a village setting. The fort was near the southern border of a new Sioux reservation and also near to a new German settlement. The fort was never intended to be a defensive stronghold, but rather a training ground for Civil War volunteers and a station to maintain peace as settlers arrived to the area.

In 1862, however, Sioux leaders, increasingly frustrated with broken treaties and dishonest agents and traders, decided to take action. This was the start

of the Sioux Uprising, also known as the U.S. - Dakota War.

On August 20, 1862, the Sioux attacked Fort Ridgely. With ravines on both sides of the fort, Sioux warriors could get to within 100 feet of the walls without being seen. Refugees from the surrounding area gathered at the fort. The U.S. soldiers were able to withstand this attack, as well as a second attack on August 22. The fort was never taken. The Sioux Uprising lasted 40 days and when it was over, 38 Sioux were executed, the largest mass execution in the country's history.

Following the Sioux Uprising the fort was still used, but gradually the many buildings that once stood on the site were torn down, Tjosaas explained. More than 12 foundations have been discovered near Fort Ridgely. The only major structure still standing is the fort.

Making a Golf Course

Planning for the new course began in 2003, when, with a project budget of \$1.5 million, Bonestroo's team set about designing a new course that takes full advantage of the Minnesota River Valley bluffs, while positioning holes to avoid disturbing known historical areas.

(Continued on Page 23)



Third green river valley view after clearing.

Fort Ridgely GC-

(Continued from Page 22)

"On this project, the design process got turned upside down," said McDowell. "Usually, we pick the best tee and green sites, and then route fairways to those sites. The most dramatic tee and green sites had soldier or Native American artifacts that needed preservation. As the archeologist discovered artifacts, we moved golf features."

The three-year design process resulted in about a dozen routings, with only two putting greens and one set of tees staying in their original location. The irrigation pond has been re-sited three times to preserve shrapnel from the Sioux uprising and a pre-settlement fire pit found on the site.

Preservation of artifacts was additionally difficult since many artifacts were within a few inches of the surface. "Four of the five holes had artifacts so close to the surface that we were not allowed to disturb the topsoil," said McDowell. "In order to level the fairways for modern mowers, we had to import a thin layer of



Rough grading of first and second hole at Fort Ridgely.

topsoil."

Another unusual design restriction was preserving the level landscape near the fort. "From an interpretive point of view, it's important that visitors to the fort have the same views today that existed during the Sioux Uprising," said McDowell. The deep ravines of the river valley allowed the Sioux to get close enough to attack, but the level land between the ravines and the fort allowed the soldiers to defend themselves. Four of the holes lie within this viewshed protection area. The greens

for these holes have only three feet of mounding, and the back side of the mounds will be planted in prairie grasses. The idea is to create greens that when viewed from the fort look like small rolling hills in a prairie.

Restoring the Landscape

"When the course was originally conceived in the 1930s, few trees grew in the area. The landscape featured prairie grasses and scattered oak trees", McDowell said, a look he wants to restore. Fire suppression in the intervening years has allowed more trees to grow. To

help bring back the native oak savannah, the DNR has removed more than 20 acres of trees, and in the process has restored the dramatic views of the Minnesota River Valley. Over 25 acres of native prairie seeding will begin the process of restoring the course to its early 1900s appearance.

The end result for Fort Ridgely is a golf course that will feature challenging holes, a spectacular natural setting that could serve as its own visitor destination and an historical experience like no other.

LEITNER COMPANY

Specializing in Soils for Golf Course Maintenance & Construction

Soil mixing and processing specialists.

Supplying the Golf Course Industry with soil and sand products for over 60 years.

Material to specification for topdressing and construction.

Quality - Reliability - Experience

MIKE LEITNER

LEITNER COMPANY

945 Randolph Avenue ~ St. Paul, Minnesota 55102

(651) 291-2655

PROUD SUPPORTER OF RESEARCH AND EDUCATION THROUGH THE MGCSA

Low-Input Species for Golf Course Fairways

By Eric Watkins, Andrew Hollman and Brian Horgan
University of Minnesota

Currently, turfgrass species options for golf course fairways in Minnesota are limited. As restrictions on water use, fertilization and pesticide applications on golf courses continue to increase, superintendents will need to use species that require reduced inputs on fairways. As researchers, we need to be forward-looking; we can envision a day in the not-to-distant future when water use and pesticides are severely restricted on golf courses in Minnesota and currently used cultivars and species will not be adequate.

In order to address the potential problem, we initiated a low-input fairway trial. The objective of the study is to evaluate alternative grass species under low-input fairway conditions. In September 2005, 17 species were established on native soil at the TROE Center in St. Paul. Each species was evaluated at 3 levels of traffic (0, 3 and 6 passes per week using a drum-type wear machine) and plots were mowed at either 0.75 or 1.00 in. Species evaluated included creeping bentgrass (*Agrostis palustris*), colonial bentgrass (*Agrostis tenuis*), velvet bentgrass (*Agrostis canina*), redtop (*Agrostis alba*), Kentucky bluegrass (*Poa pratensis*), creeping bluegrass (*Poa annua* var. *reptans*), rough bluegrass (*Poa trivialis*), supina bluegrass (*Poa supina*), Canada bluegrass (*Poa compressa*), tall fescue (*Festuca arundinacea*), hard fescue (*Festuca trachyphylla*), Chewings fescue (*Festuca rubra* var. *commutata*), sheep fescue (*Festuca ovina*), perennial ryegrass (*Lolium perenne*), tufted



hairgrass (*Deschampsia cespitosa*), alkaligrass (*Puccinellia distans*), and timothy (*Phleum nodosum*).

During the first year, the top performing species when mowed at 0.75 in. under high traffic were velvet bentgrass, supina bluegrass, creeping bentgrass, Kentucky bluegrass, tall fescue and colonial bentgrass. Overall, the most consistently top performing species regardless of management level was velvet bentgrass. A major drawback to velvet bentgrass use is excessive thatch production. When wear was applied to the velvet bentgrass plots, thatch levels were reduced and velvet bentgrass flourished. In recent years, we have noticed discoloration and poor performance of velvet bentgrass in the bentgrass greens trial. We have not, to this point, noticed similar problems under low-input fairway conditions.

Turf performance during 2006 was determined through visual ratings. For 2007, we will continue to rate each plot visually for overall turfgrass quality, color, density, disease, etc. Additionally, we will begin taking measurements on surface hardness and soil compaction so that the effect of the traffic treatments can be quantified. As we continue to traffic the plots, overall turf performance of most species will most likely decline. An additional summer of stress should continue to yield interesting data. The results from this research will be used to design further studies that look for new options for lower-input golf course fairways.

Be sure to come to the University of Minnesota Turf and Grounds Field Day on September 13 on the St. Paul campus. We will discuss data from 2007 and should have a better idea of which species have the potential to be used on a wide-scale in Minnesota.

HEDBERG
LANDSCAPE & MASONRY SUPPLIES
"Built on Service"

Everything for
your Golf Course
but the Grass

The Midwest's largest selection of natural stone and concrete products for your grounds and facilities. Five metro locations for easy pick up and fast delivery.

Supplier of: **INTERLOCK**
CONCRETE PRODUCTS INC.

MULCH • STONE • PAVERS • RETAINING WALLS • FIRE ROCK
POND FILTRATION • AERATION SYSTEMS • FOUNTAINS

Farmington • 4375 170th Street West • 651-423-5048
Ham Lake • 14630 Highway 65 • 763-413-8330
Golden Valley • 9200 10th Avenue North • 763-225-0540
Stillwater • 8400 60th Street North • 651-748-3158
Plymouth • 1205 Nathan Lane North • 763-545-4400
www.hedberglandscape.com

AUTHORIZED **Aquascape PRO** DISTRIBUTOR

Pond bottom aeration and surface aeration options enhance the visual beauty of your ponds and solve water quality issues.



Turf & Ornamental

Introducing...More Control Than You Ever Thought Possible



HYDREXX finally allows you to manage nitrogen for your specific conditions and needs.

See *StabilizedNitrogen* research results at www.stabilizednitrogen.com



Now you control the performance of your urea nitrogen.

Nitrogen management is too important to leave to chance. HYDREXX™ Professional Nitrogen Stabilizer is a new fertilizer additive that gives you the power to hold urea-based soluble nitrogen in usable form in the soil for longer periods of time, regardless of environmental factors. You control the rate. You control the length of performance.

- BETTER COLOR & QUALITY
- EXTENDED NITROGEN AVAILABILITY
- INCREASED NITROGEN EFFICIENCY
- MORE ENVIRONMENTALLY SOUND FOR SOIL AND TURF

Love Those Endorphins, Don't You?

By PHIL CAMPBELL, M.S., M.A., FACHE
Author: *Ready, Set, GO! Synergy Fitness*

I love endorphins.

Endorphins are the body's natural pain medication hormones. Endorphins (endorphins), when released, make us feel better, improve our mood, increase pleasure, and minimize pain. There are some good ways, and bad ways, to increase endorphins.

Low Endorphin Levels Make Us Crave Fat

Nan Allison in her excellent book *Full & Fulfilled* describes the relationship between endorphins, food, and exercise. By permission, Nan Allison, M.S., RD writes:

High concentrations of endorphins in the brain produce a sense of euphoria, enhance pleasure, and suppress pain, both emotionally and physically. When endorphins are low, people feel anxious; they

are also more aware of pain. They have an appetite for fat and fatty foods, such as fries, cheese, creamy sauces, margarine, butter, fried chicken, potato chips, and chocolate, to name some of the most popular examples. Upon eating some fat, they will notice a change in mood, feeling more pleasure. This feeling is related to a higher concentration of endorphin. Exercise, by releasing fat from within the body, raises endorphins and causes the same mood changes.

When we have cravings for potato chips and chocolate, it may mean that we need an endorphin pill rather than all the empty calories from chips. Well, there's a problem. We don't have an endorphin pill. But we have something even better; knowledge of how to deal with these specific types of cravings.

Low Serotonin Levels Make Us Crave Sugar

Similarly, another hormone, serotonin makes us feel calm, poised, confident, and relaxed. When our serotonin levels are low, we feel nervous, irritable and stressed. We don't crave fat, now we crave sugar.

Have cravings for sugar? Nan Allison advises that trying some crackers, frozen yogurt or popcorn may help by raising serotonin levels with far less calories.

Low Dopamine Make Us Feel Foggy

Mentally "foggy" at times? This just may be caused by low dopamine levels. When we don't get adequate protein,

(Continued on Page 27)

Our Focus is on our Customers' Success.



HYDROLogic
Turf Management Systems

800-422-1487 www.hydrologic.net

Endorphins—

(Continued from Page 26)

may be caused by low dopamine levels. When we don't get adequate protein, dopamine levels drop and this makes us mentally sluggish.

The best way to raise dopamine levels, get plenty of lean protein in your diet, with moderate fat and carbs, advises Nan Allison.

You Need Carbs Before You Exercise

It's a mistake to think that exercising without adequate carbs in your system will help you lose body fat. Nan Allison explains:

Many people mistakenly believe that if they limit their carbohydrate intake, and then exercise, their body fat will be broken down. What happens, in fact, is that they are lowering their capacity to burn fat, and will lower their metabolism. The reason for this is that the body will break down muscle to form carbohydrate. In addition, the muscle breakdown raises stress hormone levels and causes carbohydrate cravings.

High-Intensity Exercise Performs Best

Researchers have shown for years that high-intensity exercise increases these hormones significantly.

"Post-exercise beta-endorphin levels correlated with the peak speed attained during the sprint and the subjects peak power to weight ratio. These results suggest that the increases in plasma adrenaline are related to those factors that reflect the stress of the exercise and the contribution of anaerobic metabolism." (Exercise intensity-related responses of beta-endorphin and catecholamines, 1987, McMurray).

The Take Home

When we experience strong cravings for sugar and high fat foods, it's probably due to a low hormone level that can be resolved with a sensible food choice.

When it comes to diet, the research is clear, the best diet is a balanced diet / in moderation.

Remember to get some high-quality carbs before workouts. This will help fuel the intensity of the workout, and increase, not lower your metabolism.

Have a great day!

CLASSIFIED ADS

FOR SALE
Summer Reel Sharpening:
Northwest MN and North
Dakota, Pickup and
Delivery
Available, Save Money
Over Dealers and All Work
Is GUARANTEED!!!!!!
Call For Pricing, Can
Sharpen Just About Any
Type Of Reel.
Contact: Dan Redig
Mayville Golf Club
763-482-9163
Office: (701) 788-2371
Cell: (763) 482-9163

WANTED
New or used windshields
for Yamaha Golf Carts
Contact: Tod Blankenship
Big Fish Golf Club
(715) 934-4660

WANTED
Toro Greens Rollers
Contact: Dave Meuleners
Timber Creek Golf Course
952-201-1225

FOR SALE
Toro Cutting units, 2 point
adjust, 11 blade-for 3000
series greens master.
NEVER BEEN USED —
\$600 OBO
Contact: Tony Rahe
Dacotah Ridge
507-644-7844

WANTED
Used Lely pull behind
fertilizer spreader
Contact: Chris Klatte
Grand View G.L.
Duluth, Mn
218-522-0812

FOR SALE
2003 Toro Flex 21 walking
greensmower, 170 Hrs.
New condition, w/ wheel
kit, \$2950.00
Contact: Mitch Fossey
Troy Burne Golf Club
715-386-2902

FOR SALE
Set of five verticut reels for
Toro 5200/5300 fairway
mower - New set of five
Toro 5200 fairways mower
reels - New
Tycrop Cross Conveyor
with Swivel Kit - New
Contact: Tim Johnson
Spring Hill Golf Club
952-476-4875

FOR SALE
1994 Club Car Carry All 1
Manual Dump Box
New Seat Covers Put On,
New Front Hood (Green)
New Battery,
Excellent Condition
\$1,650.00
Contact: Barry Hines
Izatys Resort
612-369-5540

TRY OUR Sand Wedge!

SPECIAL OFFER:

42 month lease
Only 6 payments per year
May - October
\$650.00/mo

Contact your *GreenImage* salesman
or Bruce Speirs for more details
800-950-4180 / 651-437-7747



We'd like to say

*Thank
You*

to area clubs using Best Sand:

Best 535

- *Bearpath Golf & Country Club*
- *Deacon's Lodge*
- *Edina Country Club*
- *Edinburgh Golf Club*
- *Rush Creek Golf Club*
- *The Classic at Maddens Resort*
- *The Legends at Giants Ridge*
- *The Wild's Golf Club*
- *Wayzata Country Club*
- *Woodhill Country Club*

Best Signature 50-50 Blend

OFF-WHITE BUNKER SAND - FIRM PLAYABILITY

- *Brookside Golf Club*
- *Bunker Hills Golf Club*
- *Oak Ridge Country Club*
- *Rum River Hills Golf Club*
- *Spring Hill Golf Club*
- *The Minikahda Club*
- *The Refuge Golf Club*
- *The Wilderness at Fortune Bay Casino*
- *Windsong Farm*

Best 100% Crushed Signature

WHITE BUNKER SAND - VERY FIRM PLAYABILITY

- *Northfield Country Club*

13th Hole at The Minikahda Club. Photo is courtesy of Jeff Johnson, Golf Course Superintendent.

Plaisted Companies - a reputation for results.



**Plaisted
Companies**
INCORPORATED

P.O. Box 332 • 11555 205th Ave N.W.
Elk River, MN 55330
(763) 441-1100 • Fax (763) 441-7782
Toll-free (877) 564-8013
www.plaistedcompanies.com

Construction Material • Top Dressing Blends • Bunker Sand • Cartpath Aggregate • Drantile & Decorative Rock



Paskvan Consulting

Craig Paskvan
24070 315th Ave. ~ P.O. Box 249
Akeley, MN 56433
(218) 652-3542 ~ Fax (218) 652-2949
Cell (612) 889-8546

Golf Course - Sports Turf & Environmental Consulting Services
Balanced Soil & Plant Nutrition - Consulting, Monitoring & Analytical Services

"Where success is never an accident"
www.paskvanconsulting.com

It's in the hole 



Noah Matthew Carlson

Andrew and Carrie Carlson had their first child, Noah Matthew, on April 19. He was 5 lbs, 6 oz.

Andrew is Assistant Superintendent at TPC Twin Cities in Blaine. Noah is pictured on the left with his dad.

Addison Kay Hemquist

Arik and Randi Hemquist had their first newborn, Addison Kay, on April 24. She was 20" and weighed 6 lbs, 3 oz. at birth.

Arik is Assistant Superintendent at Brackett's Crossing Country Club in Lakeville. Addison Kay is pictured on the right.



Thank You Event Sponsors!

BASF
BAYER
CYCLEWORKS OF MINNESOTA
DOW AGROSCIENCES
HYDROLOGIC
LESCO
MOM'S GARDEN MANAGEMENT
PAR AIDE PRODUCTS
PLAISTED COMPANIES
PROSOURCE ONE
SUPERIOR TECH PRODUCTS
SYNGENTA
TURFWERKS

PENNCROSS SOD &

Dominant X-treme *from Country Club Turf*

Grown by
**GOLF COURSE
PROFESSIONALS**

for
**GOLF COURSE
PROFESSIONALS**



Supplying over 200
Golf Courses Since 1987

24317 Durant St. N.E.
East Bethel, MN 55005

(763) 444-6753

"A Quality Grown Reputation"



In Bounds: Make Time To Remember the Memories

By JOHN "JACK" MACKENZIE, CGCS
North Oaks Golf Club

Last year, on a glorious mid-summer morning the dew almost burned off the emerald green turf, summer annuals really starting to pop resplendent in their spectacular color and only puffy white clouds in an otherwise clear blue sky, I had the opportunity to visit with a friend of mine, Mrs. Patz. After her third shot on the sixteenth fairway she flagged me down. Unusually alone that day we had the chance to visit for some time.

An attractive, healthy, young 69-year-old woman, Mrs. Patz has always been a treat to encounter on the course. Today's topic: families, vacations and the element of time.

She had just returned from a reunion of sorts, complete with children, grandchildren and various four-legged creatures. The gathering place was a cabin deep in the north woods of Minnesota, nestled upon one of the famous deep lakes, close enough to hear the fish jump and the mournful cry of the loon. The occasion generated ample time for swimming, fishing, campfires, smores and even a snipe hunt. But the most enjoyable for my friend was a cold and rainy day, too miserable for out-of-door activities, yet just right for stoking the fireplace and lounging.

Confined in a group, sans cell phones and ipods (when you go up north these distractions evaporate with the traffic noise), the large family socialized and told stories from their recollections. According to Mrs. Patz the moment was right to take the time to "remember the memories."

And that was her message to me on a warm June day. "As I grow more mature I realize that some of my best moments are sitting back and making time to remember all of the joyous and sometimes challenging times of my life. Jack, make it a point to create time in your very busy schedule to reflect upon your life. Take time to acknowledge your accomplishments and failures. Remember the memories and refresh them for future recall."

A couple of weeks ago I was puttering in my garage (my man space), knocking down cobwebs, reorganizing the disheveled garden tools and creating new

nooks for my man knacks. One taped cardboard box, just out of reach, had been collecting dust high upon a shelf warped with age. The carton contained pictures from my past, snapshots of my high school and college days when I was rail thin and long haired. 'What the heck Jackson,' thought I, "how about a trip down memory lane?"

Buried deep within the container and inside a graying envelope I found a photo-



graph of myself upon an F-10 fairway mower. Wow, talk about a rush of memories. I recall that exact moment as though it were yesterday. My father, carrying an eight iron, a shag bag and pocket camera, was out walking his Australian Terrier, Misty. They came upon me on the seventeenth hole at the White Bear Yacht Club while I was Sunday night mowing in preparation of the Labor Day golf events.

Smiling and admiring the good looking youth, resplendent in bright white coveralls and sporting an incredible mop of sun bleached blonde hair; I sat myself upon the fender of my boat trailer and did a little remembering about the summer of 1977.

It was the season prior to my senior year in High School. The Marshall Tucker Band, Pablo Cruise and Frank Zappa blared almost constantly from the cassette stereo player of my Mom's Buick Skyhawk, candlestick orange, whenever I was allowed to drive. My co-pilot and good friend Rolf and I would cruise to the hang out spots in White Bear Lake and Mahtomedi to get the scoop on the night life and latest gossip. "Where are the parties? Have you seen Star Wars? Let's go

skinny dip/streak in the W.B.Y.C. pool (beneath the surprised eyes of the members dining in the enclosed patio one floor above the pool deck). Any Chicks about?"

I remembered being single and missing the flavor of my former girlfriend's Bonnie Bell Lip Smacker lip gloss and dreamy Love's Baby Soft perfume. And whenever Jim Croce came on the radio my heart strings stretched and I regretted the break-up. Fortunately I had work to keep me busy during the day and golf in the evenings when I wasn't trying to be my coolest down at the Cup 'n Cone.

My 17th summer was one of transition. No longer a rookie I had moved from pushing a rotary mower up and down bunker banks and hand-clipping around trees to actually operating big pieces of equipment including the rough and fairway mowers. Hours were unlimited and I did my best to make as much overtime as I could. 65 to 70 hour weeks were not unheard of as my bank account got fatter and fatter. Granted I wasn't paid much per hour back then and my costs were minimal, but I did put \$2,000.00 away for my future. I was young, wealthy and full of energy.

Work memories that year include hand-picking the rocks from our soon to be seeded driving range, finding turtle eggs while edging the left rear bunker on the sixth green, sailing the F-10 over the hilly terrain and watching Super Steve whack weeds with a new contraption called a Weed Witch. This precursor to today's line trimmer was harness strapped to Steve's back, had two handles and the engine, to my recollection, was a two-horse Kohler that spun a line which looked like rope. He wore waders and a face shield to protect him from flying debris. And the rookies learned quickly to keep away from him as he chewed through waist-high vegetation.

Those were the days and I am grateful for the sun rises on my walk to work, the rainbows and thunderstorms, the camaraderie and diversified jobs. Everything I love about my vocation began that summer, my second on a golf course. And making time to remember the memories of that year solidifies my decision to continue to do what I enjoy the most, working on a golf course.

The camera shutter clicked, Misty barked, my father shook my hand and told me how proud he was of his son Jack. It was just yesterday.

Thanks Mrs. Patz for encouraging me to "make time to remember the memories."