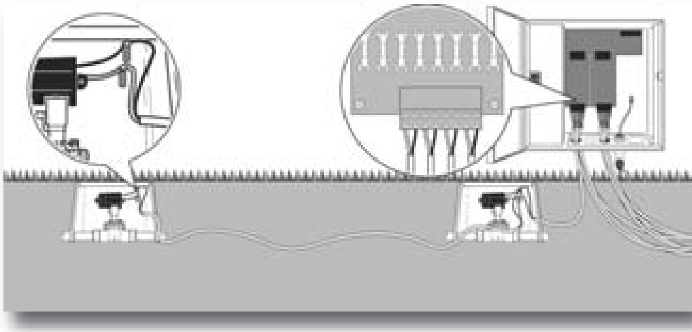


Shown is an example of a typical wire path, and connections to sprinklers, and a block valve

Possible hole design for a decoder system including block valves, single and multi station decoders, and communication/power line

The structure of a decoder system can be visualized as a two-lane country road leading off into the hills—this is the wire path—two parallel wires. On one end of the road is the central control system, a computer that is attached to a gateway which creates an interface between the operator and the irrigation system. At regular intervals this control system sends pulses of electricity (you can visualize these as cars) down the wire path in search of a given address. At any point on this wire path you can place a unique address (a decoder). When one of the cars finds the proper decoder it can then relay the message sent by the central computer. The wire path has complete freedom to branch or go in any direction provided it does not exceed a given distance from the central computer, and that a given path doesn't exceed a maximum number of decoders. For instance, if the maximum distance any decoder can be from the central computer is three miles, and the maximum number of decoders on that wire path is 50, then you have the option of having one three-mile-long wire path with 50 decoders all located at the end, or 50 three-mile-long wire paths each with one decoder leading off in every direction, or any other configuration that falls within the confines stated. This gives complete freedom to add decoders anywhere along the line. What this creates is tremendous flexibility in terms of addition of decoders.

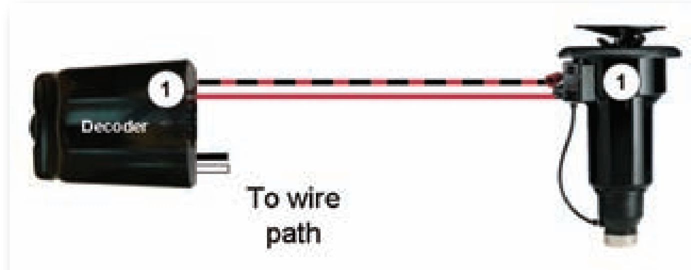


Illustration of a single station decoder

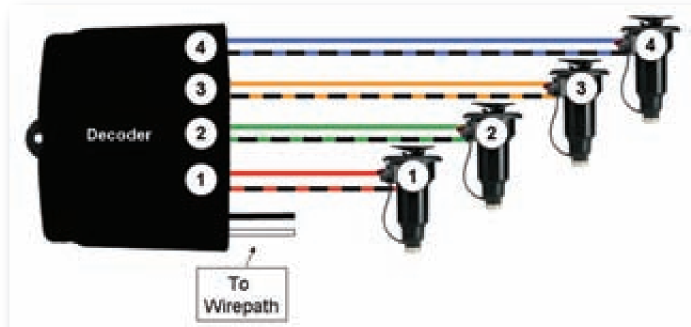


Illustration of a typical multi (four) station decoder

Multiple station decoders are also available. Multiple station decoders give you the option of operating a number of stations from a single decoder—each station with its own address. Decoders are often located underground either next to, or attached to, an irrigation head and many are direct buried as well. Of course the challenge in burying decoders is remembering where they are located and diagnosing problems should they occur.

There are two types of decoder systems in the golf irrigation market—those that operate completely on AC power, and those that operate utilizing some combination of AC and DC power. An AC system operates much the same as what we are all used to with satellite systems. The central computer sends a signal to a given decoder, which in turn applies a charge to the solenoid in order to turn it on. In order to remain on, an AC decoder requires constant electrical input. This necessarily limits the number of solenoids each wire path can operate while utilizing a given wire size. The number of solenoids that can be operated at once can be increased by increasing wire size.

AC/DC systems are the same as AC systems until you reach the decoder. At that point the voltage is changed into direct current and applied to the solenoid in a short burst—a special type of solenoid called a DC latching solenoid is used. Each solenoid has a magnet that holds the plunger open once the current has been applied. At this point, there is no longer any need for current to be applied to the solenoid. Since no constant electrical input is required, it is possible to turn on an almost limitless number of solenoids at once, effectively removing the electrical limitation on the number of stations that can be operated at one time. This also makes it possible to run a large number of stations without changing the size of the wire for the wire path. Especially in the case of systems with large numbers of stations this can be important.

(continued on next page)

ADVANTAGES OF DECODER SYSTEMS

Flooding

There are a number of situations for which decoder systems are especially well suited. Golf courses that have flooding on a frequent basis are an excellent place for decoder systems. If all the wire splices within a decoder system are properly protected with waterproof wire splices, a decoder system can be impervious to water. Almost everything in a decoder system can be submerged completely without losing function. As more and more golf courses are built on less than ideal sites, this feature of decoder systems may become more important.

Vandalism

Since decoders are located beneath the surface of the turf, they are also an ideal solution in areas that experience a lot of vandalism. Golf courses that struggle with vandalism often devote a significant portion of their irrigation budgets to repair and replacement of satellites. The vast majority of expenditures due to vandalism can be avoided with the installation of a decoder system. Decoders can also provide an aesthetic and playability benefit, as most decoder systems have no above ground structures—nothing to see, nothing to play around, run over, etc.

Piecemeal Installation

Decoders can also be an excellent application for systems that need to be installed in stages. Since decoders can be added at any time and at any point along the wire path, a decoder system can be installed in pieces, provided it is possible to start from the central controller and work out from there. This offers tremendous flexibility in adding pieces to the system as you go. For grow-in situations this can be the ideal solution to hole-by-hole construction of the irrigation system.

Cost Savings

Perhaps the primary advantage of a decoder system is the cost savings that can be realized. A decoder system can require as little as a third of the wire that is needed for a typical satellite system. As wire prices continue to increase, this can be a significant factor when considering a new irrigation system. There are a number of factors that influence the savings that can be realized by installing a decoder system: the number of sprinklers that the system requires, the type of system you are using (AC or AC/DC), whether or not a bonding wire is used, and the number and design of the wire paths. At present, this savings can be $50,000 or more, creating a significant monetary incentive to choose a decoder system.

One factor that can significantly affect the price of a decoder system is the presence or absence of a bonding wire. Some irrigation consultants, designers, and others advocate the use of a bonding wire; others do not.

A bonding wire is a 6-gauge bare wire that is installed six inches underground over the wire path. This wire is tied to the grounding points of the wire path and creates a net of protection above the wire path that is meant to intercept lightning surge and carry it to ground before it reaches the wire path. A bonding wire can add a great deal to the cost of the system and significantly reduce the difference in price between decoder systems and satellite systems.

CONS

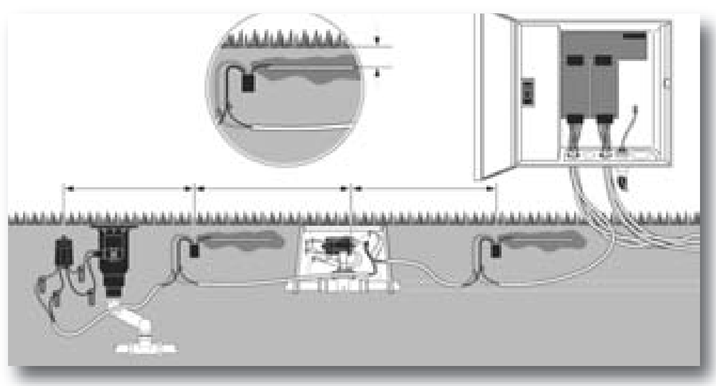
Location

Just like all irrigation systems there are some negatives associated with decoder systems. Many of the issues associated with decoders systems stem from their location underground. From upgrading, to diagnosing problems, to checking wire splices, the work on a decoder system often begins with digging, or at the very least, with opening a valve box. Decoders can be difficult to change, locate, and repair—all because of their location.

Lightning

Perhaps the biggest issue with decoder systems is lightning. Long continuous wire paths associated with a decoder system are often susceptible to lightning. In the case of satellite systems—replaceable surge protection units and grounding are the primary weapons against lighting. Satellites provide an excellent "stopping point" for surge in a typical system. If a lightning strike occurs between a sprinkler and a satellite, then surge is arrested at the satellite. If a strike occurs on the power or communication lines between satellites, this is also arrested at the satellite by replaceable surge units.

Typical decoder systems use other weapons to combat surge and in slightly different ways. At regular intervals along the wire path, grounding sites are placed. These sites consist of a ground plate or rod installed in the soil. Between the wire path and the grounding site, a surge unit is installed. This unit allows normal communication activity to occur on a daily basis, but when a large surge is applied to the wire path, the unit sends that surge to ground. Grounding points are installed at frequent intervals to assure that any surge that enters the system is close to a grounding point so that the rest of the system is protected. Decoders are being produced with internal surge protection as well, to help protect decoders from lightning. Decoder systems are becoming more effective at arresting surge on the communication line but can still be prone to damage.



Decoder installation illustrating gateway and surge installation

When lightning damage does occur, decoder systems can be difficult to diagnose. Manufacturers of decoder systems have built diagnostic capabilities into the central computer software, and these tools can be useful for initial diagnosis. These tools differ according to manufacturer, but can allow users to check communication with an individual decoder and determine operability of solenoids. This works quite well if a given decoder is completely dead. Problems arise when decoders are not working properly and create "noise" on the communication line.

Anyone who has a satellite system is familiar with modem failure and how this can compromise communication to other satellites that are not impacted. When this occurs in a decoder system, no other communication can take place on that wire path. This means that none of the sprinklers on that wire path can communicate with the central and none of them will operate. In this case, it can be very difficult to determine which of the decoders is causing the problem.

One weapon often used to deal with this problem is switches. Switches are installed at opportune points that allow the user to isolate certain parts of the wire path. This at least gives a service technician the ability to turn off certain parts of the path so you can determine which portion(s) of the path has the decoder that is causing the problem. Obviously this can be a time consuming and frustrating process in the heat of summer. There are some other tools that can be used to diagnose problems with decoder systems, but in any case, it can be a difficult and time consuming process.

Decoders are often installed right at the sprinkler head—one decoder per sprinkler head. This type of arrangement is an excellent way to decrease the impact of lightning on decoders by eliminating the impact of surge from the output side of the decoder. When multiple station decoders are used, stations must be located at some distance from the decoder. This arrangement can be slightly more cost effective because you can operate several sprinklers with a single decoder; however, the decoders are then more vulnerable to lightning as they are exposed to lightning from both the input and output sides of the decoder. Some manufacturers are starting to provide internal lightning protection within their decoders to deal with these surge issues; however, many designers still insist upon a single decoder per sprinkler to head off problems before they begin.

Redundancy

Another issue that may cause some concern with decoder systems is the lack of redundancy. Many modern satellite systems rely on communication wire to operate the satellites. The wire degrades over time, especially at splice points. Decoder systems have greater reliance on the communication/power cable than any other system because there is no redundancy. Consider that it is often difficult to maintain communication with 20 modems in a typical satellite system. With a decoder system you must maintain communication with hundreds of individual decoders.

In most decoder systems when the central computer is down the only way to operate sprinklers is manually at the sprinkler head. Some systems do offer "access points" that allow the user to tap into a com line and operate heads using handheld units hard wired to the communication line, but this only works if power is still being provided to the sprinklers by the communication line, and the line is free for communication.

Other manufacturers offer decoder satellites as well, but this removes some of the aesthetic benefits of having a decoder system, and it still won't work if the communication/power line has been compromised. In other words, a decoder system is either working completely or it is not; there is very little middle ground.

In some satellite systems, programs are stored in the satellite's memory so that they can be run with or without the central computer. Many of these same systems have stand alone modes and can be programmed in the field. If all else fails, you can still operate most satellites utilizing the internal switches—none of these options are available with decoder systems. Just as in decoder systems, satellite systems still must have power, but satellite systems give you a number of options beyond manual activation of sprinkler heads.

Wire Splices

The large number of wire splices present in any decoder system can also be a problem. Each sprinkler that is installed has, at the very least, four wire splices; two on the communication line and two on the solenoid. When you add in grounding points and switches, the number of wire splices is extensive. Multiple station decoders have even more splices. As wire splices have become more durable and reliable this issue has become less important, but it will always be one of the drawbacks of decoder systems as splices tend to degrade over time.

Upgradability

Once installed decoders are inherently difficult to replace. In a satellite system, once the equipment has been installed, it is relatively easy to replace a satellite. This becomes necessary when technology has advanced to the point where added features are desired or if the satellite has been destroyed. Some manufacturers even have satellites with upgradable firmware to allow almost instant upgrades. Upgrading decoders means replacing each unit, a lengthy and time consuming process because of their underground location.

One other interesting side note on decoders is that many operate on more than 30 volts of AC power. This brings decoder cables into another category under the national electric code. At this level these cables require 24 inches of cover at a minimum. Cables carrying less than 24 volts, like those in a typical satellite system require only 6 inches of cover. In addition, the compound in 3M DBYs and DBRs is not rated for 30 volts, so 3M's DBY6 and DBR6 are required. This increases the cost of installation and maintenance as well.

At present, decoder systems still constitute a very small percentage of the total number of irrigation systems in the United States. As technology improves and decoders gain acceptance, this percentage will undoubtedly change. Decoders are an excellent solution in certain circumstances. For more information please visit the web site of Paige Electric Company (www.paigewire.com) or contact your local irrigation distributor. **-OC**


We Make Sure the Grass is Always Greener on *Your* Side.
We combine the world's leading professional turf maintenance brands with a team of local experts to deliver the best overall turf solutions to our customers. From creating customized solutions designed to tackle site-specific issues to building customer specific application programs that achieve maximum results, our customer-driven, expert staff is dedicated to the overall success of each and every customer.
chicagolandturf
Ph: 630.268.8871 | Fx: 630.268.1357
www.chicagolandturf.com
LEADING TURF BRANDS, LOCAL EXPERTISE


Nels J. Johnson Tree Experts, Inc.
Since 1930
A Tradition of Excellence.
More than 75 years of complete, dependable and economical tree service for residential homes, municipalities, schools, industrial areas, parks and over 125 golf courses.
847-475-1877
fax: 847-475-0037
www.nelsjohnsontree.com

Lewis Reven, *Chicago Zoological Society*

What to Do with the Compost at the Zoo

The Brookfield Zoo Turf Program incorporates the use of compost, supplemental fertilization, herbicide usage, and insect control using Integrated Pest Management. Under the direction of Gail Gorski, Manager of the Grounds Department, work began on this program in 2001.

With people making use of the lawns at Brookfield Zoo, we wanted to improve the overall safety of the turf program. The main objectives were to decrease fertilizer and herbicide applications and to increase compost use in the mall areas of the park. We considered the many activities, including Special Events, that occur on our malls throughout the spring and summer season. We determined that decreasing fertilizer and herbicide use by using compost as an organic fertilizer could be both environmentally friendly and safer for our visitors. Public education could be increased with signage in our turf grass areas. New compost and chemical strategies could be promoted for use in the home environment.

In 2002, with consultation from the University of Illinois, Professor Henry Wilkinson and the Chicago District Golf Association, (CDGA), we began implementing changes in the program. The changes included cultural, mechanical, and chemical practices to maintain turfgrass health. Ultimately, we recognized that fewer chemicals will be safer for the zoo environment.

There are four graphs presented here to explain the organic turf program. These are broken down into applications of compost, fertilizer, herbicides, and insecticides. We evaluate the collective data and determine the results over the last six years.

Changes implemented after initial research determined that our program goals were to increase composting and decrease chemical usage. Dr. Wilkinson was sent this information. He then visited the zoo along with members of the CDGA, including Dr. Randy Kane and Lee Miller. Cultural factors such as mowing, watering, aerating, and composting were discussed.[1] The first thing noticed was that soil compaction was negatively impacting turf health. Cultural practices to improve turf health were recommended. Aeration would add more oxygen to the soil and also result in a deeper turf root system. Mowing heights were also increased because increased height provides more leaf area for photosynthesis. The turf population was increased by over seeding with a 100% Bluegrass mixture. The zoo's composting program is run by Dave Micheletti (Lead Groundskeeper) and under the direction of Gail Gorski. The compost consists of plant and bedding material and animal manure. A sample of our compost was delivered to the University of Illinois for analysis. By weight, it had an N-P-K percentage rating of 6-3-6. The compost is similar to milorganite, produced from solids after treating activated sludge in Milwaukee, with an N-P-K analysis of 6.2-5.17-2.63. Milorganite has been in use since the early 1900s,[2] thus we knew our compost could be successfully used as a fertilizer.

Compost Trends *(Figure 1)*

The West mall was composted for the first time in the fall of 2002. A total of 30 cubic yards was applied to an approximate depth of ¼" on the surface of the turf. The program grew in 2003 with the addition of the East mall. A total of 60 cubic yards was applied. The North mall was added in 2004 and an additional 12 cubic yards was applied. There was a slight decrease in composting in 2005 because mechanical problems prohibited fall composting. The South mall was used as a test comparison until

(continued on next page)

2006; no compost was applied there. The South mall turf did not look healthy when compared to other areas receiving compost. The turf color was pale green, and the turf density was thin. This increased the number of broadleaf weeds. Overall, it indicated a need for increased nitrogen.

Areas receiving compost-fertilizer have been adjusted at times. During the 2006 Season, the Carousel was under construction in the North mall. Areas were newly sodded in late May, and no compost was added to the North mall that year. Also in 2006, the South mall, which had been a control area, began to receive compost fertilizer. During the 2007 season, the Stingray Bay exhibit was constructed on the East mall. Construction degraded the overall appearance and condition of the turf. No compost was added to the East mall at that time.

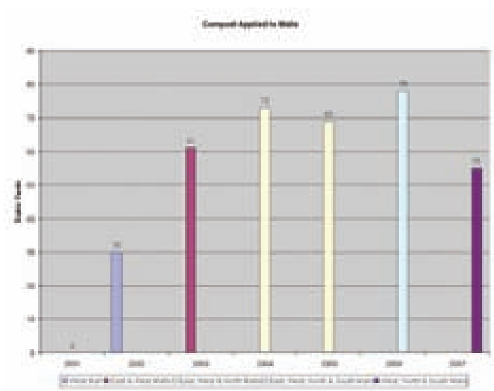


Figure #1

Integrated Pest Management

Integrated Pest Management is a very important component of the Organic Turf Program. Through scouting, we can identify potential problem areas and areas in need of treatment. The malls are scouted on a weekly basis. When a problem in the turf is spotted, cultural and mechanical controls are tried first to remove the weeds. The control of weeds is an integral part of IPM. Knotweed and spurge occur in areas with compacted soils. Mechanical controls used on the turf grass will decrease the potential for compacted soils and indicator weeds. Aeration helps the turf grass by allowing for increased oxygen in the soil and a stronger root system, thus minimizing the need for herbicides. Clover is another indicator weed showing that the turf is lacking in N. Applying a compost-fertilizer will add the N to the soil without the need for urea-based fertilizers. Spot herbicide treatment is done only when cultural and mechanical controls are impractical due to the size and area of the control site. An example of this is our west mall, where there is a problem with ground ivy. Because of stolons, this weed is difficult to control, making cultural and mechanical controls impractical. Overall, through the use of IPM, we have decreased chemical usage and increased our use of cultural and mechanical controls at the zoo.

Fertilizers *(Figure 2)*

Several trends in fertilizer use have occurred at the zoo. Spring and fall applications and the use of 32-3-10 led to an increase in N use from 2002 to 2004. The use of 32-3-10 occurred because we needed to decrease our existing inventory of old material. On average, fertilizer usage has decreased from 600 lbs in 2001, to an average of 430 lbs throughout 2002 to 2007. This is a 44% decrease. The decrease is more substantial for nitrogen use, because we are phasing out urea-based fertilizers in lieu of our compost-fertilizer. At 46% N, urea contains the highest levels of nitrogen for turf grass use.

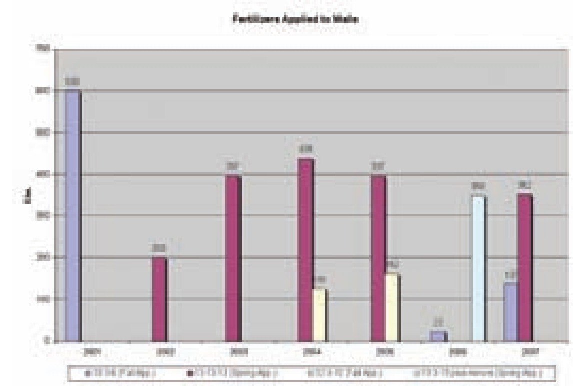


Figure #2

Herbicides

Because of the program we have shifted from broadcasting granular herbicides to spot spraying liquids. The liquid herbicide we are using is more effective, since it contains MCPP, Dicamba, and 2.4-D. Using a three-way herbicide helps control the various weeds in our malls. This reduces the use of chemicals. Figure #3 shows the amount of herbicide used from 2001 to 2007. During 2001 and 2002, granular herbicide was applied to the malls. The rate decreased from 350 to 40 lbs, an 88.5% decrease in granular usage. In 2003 we started liquid applications. The amount applied went from 150 gallons to a 90 gallon average in the period 2004 to 2006. This is a 40% decrease in herbicide usage.

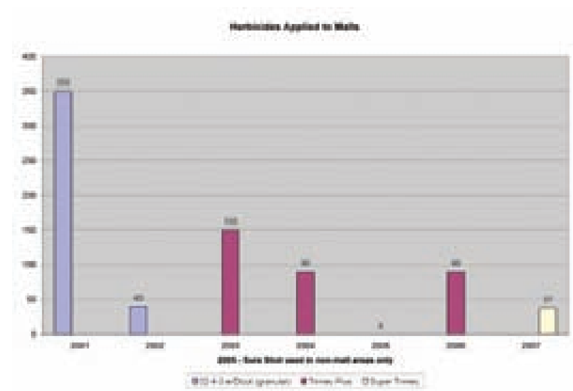


Figure #3

Turf Grass Diseases

We have not experienced many diseases on our turf. There have been cases of Pink Snow Mold (Fusarium Patch) due to wet weather and the absence of snow. Patches may increase if snow falls on unfrozen ground. The fungus turns pink with light exposure.[3] This was found in a small area of the East mall, but warmer weather brought an end to this problem in the spring. We have also had areas of rust on the turf. This is due to humid but dry periods, when grass has slowed in its growth due to the heat.[4] We can normally treat this problem with irrigation controls. No fungicides are needed to control either problem.

Insect Problems *(Figure 4)*

The only problems we have had with insects are with the larval stages of the Northern Masked Chafer and the Japanese beetle. Mapping is used as part of the IPM program. Mapping allows us to see where problems have occurred in the past. The grubs have occurred in only two areas requiring controls, these are in the North and West malls of the park. Beetle eggs are generally laid after the fourth of July, and grubs normally start feeding on turfgrass roots from late August to early October. After scouting and determining threshold counts, Dylox® 6.2G is used. The threshold is 10 to 12 grubs per square foot. In 2004 and 2007 we had very low grub populations because weather conditions were likely too wet (2004) or too dry (2007).

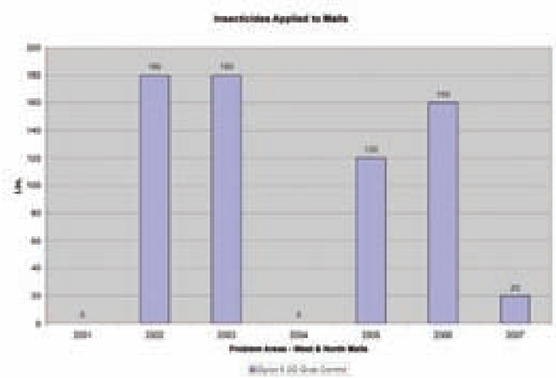


Figure #4

Conclusion of Changes *(Figure 5)*

In summary, inorganic fertilizer usage has decreased. When needed, a 13-13-13 fertilizer is applied at a rate of ½ lb N per 1,000 square feet to supplement the compost-fertilizer. The use of herbicides has also decreased. Herbicides are now used only when other IPM controls are exhausted. Turf grass disease problems have been minimal; most are fungal problems. Insect problems have been related to beetle larvae. The grub populations requiring treatment have affected only the North and West malls. Compost-fertilizer use has greatly increased on our mall areas. It provides both necessary nutrients and helps build desirable soil characteristics at the zoo.

The new compost program and other cultural changes have allowed turf density to increase (Figure 5). Changes in mowing frequency, mowing height, soil aeration, and Kentucky bluegrass over-seeding have improved plant health. This has also helped to decrease the weed population – the main difficulty in the zoo mall environment. At Brookfield Zoo, the lawns are looking good, with a decrease in chemical usage and implementation of a compost-fertility program.

Figure #5

Overall, it appears that the Zoo's Organic Turf program has been quite successful, and should continue along this path in the future. **-OC**

Bibliography

Illinois Pesticide Applicator Manual 39-1. Turf grass. University of Illinois Board of Trustees, 1996.

Milorganite, Milwaukee, WI 53204. info @ milorganite.com, 2008.

[1] *Illinois Pesticide Applicator Training Manual 39-1, Pgs 4-8. University of Illinois Board of Trustees, 1996.*

[2] *Milorganite, Milwaukee, WI 53204. info@milorganite.com, 2008.*

[3] *Illinois Pesticide Applicator Training Manual 39-1, Pg. 45. University of Illinois Board of Trustees, 1996.*

[4] *IBID Pg. 48.*

MIDWEST BREEZES

Charles Anfield, CGCS, *Heritage Bluffs Golf Course*

The Big Fill

I was playing at the MAGCS meeting at Royal Melbourne, and I was paired up with Scott Fischer of Art Hills/Steve Forrest and Associates Design. Scott is a Senior Design Associate and is the lead architect on the Chicago Highlands design project. He is based out of the Toledo, Ohio office. We played that day (not very well) and talked about his work at Chicago Highlands Golf Club. He offered to invite me out to the course the next time I was in town to tour the course and meet the owners.

Scott called me a few days before I was to arrive. We were to meet at 8:00 a.m. I arrived a little early and found a place to park out of the way of the never ending semi truck traffic. I rolled up my windows, knowing by the end of my visit the car would be coated in dust and walked around near the staging area looking for Scott.

I saw three men arrive and get out of their car. They took off their shoes and put boots on. They saw me and so I walked over. I was greeted by one of the three owners, John Baxter who had a donut in his hand. "You aren't anyone important are you"? I assured him I wasn't and was then offered a donut. John is the legal expert of the team. His gregarious nature lends him the role of membership recruiting. I then met the rest of the owner ship team. Tom Healy is originally from the Chicago area but cut his teeth working as a banker in the finance district in Manhattan, New York. Joe Hills is the third member of the team. His knowledge of golf course design and construction comes from his family ties with father, Arthur Hills. Joe and Tom met while in college. This isn't their first "rodeo" having built and developed two other courses in the Washington D.C. area. We visited for a few moments and munched on donuts while we waited for Scott, Superintendent Michael Heustis, and Mario Salas of Wadsworth Construction to arrive. As soon as we had our posse gathered, Joe took the lead and headed out on the back side down hole #11. John broke off from the group shortly, to give a tour to prospective members.

The landfill site where Chicago Highlands Golf Club is being built (I-294 and 31st St.) has been dormant since 1986. Not so any more. The site has been busy with trucks hauling fill and topsoil to the site. On an average day, 400 semi trucks drive onto to the property to dump their load. The daily record is 611 loads. Illinois regulations on fill are very strict. There is a man stationed near the entrance on a scaffold with a truck scale. Each load is carefully regulated for weight and quality—contaminated fill is not allowed.

The fill arrives from all points on the compass. The sources of fill vary but at this point in the construction phase, it is mostly black loamy soil. When it's all hauled in, the total will be more than 1.2 million cubic yards. The goal is to minimize the number of cuts and utilize mostly fill to shape the golf course features.

As we walked along the discussion ranged from additional fill and cut areas to opening site lines and finalizing details of some of the landing areas. Drainage concerns, grassing lines, bunker shapes and path routing were discussed. The mood of the group was upbeat and positive; they seemed confident they had a winner. Mario took notes as we walked along and always had the right question, "What would you like us to change"? Scott had an air of quiet confidence, making notes on a topographic map of the changes.

The eighteen hole course sits on a 272 acre site. The holes are separated by mounding that will be seeded in prairie. It will feature extra wide fairways and some decent elevation changes. All of the perimeter holes have extra high mounding to create inward views and seclude the golf course from the sights and sounds of Interstate 294.

The layout is designed to be challenging yet playable. Being a landfill course, the theme is more links than parkland. It features some holes with some unique design features not found anywhere else in a Chicago area golf course. It will have six sets of tees that range up to 7400 yards. It will have a large driving range and practice area. The Chicago skyline can be seen from many areas on the course.

The course was in the process of having the pump station installed and seeding was soon to begin. The greens will be seeded in A-1 and the fairways and tees will be seeded with Authority. Michael will start to get busier very soon. The target opening date is July in 2009.

I got the hint that my tour was over when the group said good bye and was moving off to paint some bunker shapes and make some final tweaks. Mario went back to attending to his crew installing irrigation pipe. I trudged back to my car across the hot, dusty, moonlike landscape trying to visualize the course with the grass green; bunkers filled with sand and the prairies flowering and mature.

The owners are excited about being in the Chicago market. This will be an all inclusive, resort style private club complete with clubhouse, fitness center, spa, swimming pool, paddle courts, a full size hockey rink, basketball courts, bowling lanes, jogging trail, and tennis courts. So far, the membership sales are strong. Anybody that has an extra $125K lying around is welcome to apply for membership. Chicago Highlands is going to be a great addition to the local golf scene. This place is big enough to do anything—the sky is the limit. Check it out on the Chicago Highlands website. **-OC**

THE BULL SHEET

John Gurke, CGCS, *Associate Editor*

August 2008

It is with profound sadness that we say goodbye to some old friends. James Latham, Jr., former USGA director of our Great Lakes region from 1984 to 1994, passed away on July 16th in his hometown of Hillsboro, Texas. Also, on August 4th, Patricia Clesen (the wife of Art Clesen) passed away unexpectedly. Please remember these two fine friends in your prayers.

The Chicagoland Association of Golf Course Superintendents (CAGCS) will be holding its annual Founders Cup Invitational golf outing at the venerated Olympia Fields Country Club (**Sam MacKenzie, CGCS** hosting) on the 29th of this month. This event was founded to increase awareness of the superintendent's profession to others in the golf business, to communicate the value of the Chicagoland association, and to raise funds for the CDGA Turfgrass research programs. The event teams superintendents with their invitees—club presidents, green chairmen, municipal officials, general managers, PGA professionals, or hired escorts with low handicaps in a two-man best ball format. Sign up today and take advantage of this opportunity to play one of Chicagoland's premiere golf courses.

Luke Cella teaches a group from the Kid's Golf Foundation one weekend in August at an event at Rich Harvest Farms about the golf course superintendent profession.

The 2008 MAGCS Scholarship Golf Outing was held last month at the newly-restored and historic Geneva Golf Club with **Eddie Braunsky, CGCS** hosting. I couldn't attend so I'll just "phone in" my usual blah blah blah great day, great course, great food, great fun, yadda yadda yadda. Actually, I have heard reports from actual flesh-and-bone attendees

(continued on page 23)

DATES TO REMEMBER

September 10 – Midwest Research Field Day at Midwest Golf House Sunshine Course in Lemont, IL.

September 18 – MAGCS monthly meeting and annual championship at Glen Erin Golf Club in Janesville, IL, President **Dave Braasch** host.

September 22 – 5th Annual Wee One Foundation Golf Outing at Pine Hills Country Club in Sheboygan, WI, **Rod Johnson, CGCS** host.

September 29 – CAGCS Founders Cup Invitational at Olympia Fields Country Club in Olympia Fields, IL, **Sam MacKenzie, CGCS** host.

September 29 – MAGCS Class C Outing, Cantigny Golf Club, Pat Maksymiu and Jeremy Duncan hosts. Please contact Pat at 630-260-8135 to reserve your spot today.

October 1 – 3 – Bayer Environmental Science and John Deere Golf's 3rd annual Green Start Academy in North Carolina.

October 7 – MAGCS monthly meeting at Prestwick Country Club in Frankfort, IL, **Tim White** host. *Please note the location change.*

October 16 – Annual U of I Turf Alumni Golf Outing at Indian Lakes Resort, **Chuck Barber**, host