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Tel: (519) 763-9431, Fax: (519) 766-1704
E-mail: info@sportsturfassociation.com
Web: www.sportsturfassociation.com

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New Paradigm Communications
R.R. #8, Owen Sound, ON N4K 5W4
Tel. (519) 371-6818, Fax: (519) 371-5789
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STA OFFICE HOURS

Lee Huether is in the office from 9:00 a.m. to 2:00 p.m. Tuesday through Friday. The office phone number is (519) 763-9431. At other times, a message may be left on the voice mail system. Please include the vital information of name, telephone number with area code, and time of calling. The office may be reached at any time by faxing (519) 766-1704 or via e-mail.

The President's Desk

PAUL TURNER



Seasons Greetings...

Wow!! Time has certainly flown by this year and it is hard to believe that my term as President of the Sports Turf Association is coming to an end. I

trust you all had an enjoyable summer but this fall just wasn't the norm – too wet and cold. It reminded me of England, a country I left to stay clear of the rain!

Heading to the Falls

I would like to remind all of you to pencil in your day planners and register to attend the Ontario Turfgrass Symposium in Niagara Falls. The dates for 2004 are January 19th to 21st. There is an outstanding speaker program for all industry sectors: sports turf management, golf, lawn care, sod production and managing special events. The OTS Executive Committee has worked long and hard to provide excellent educational seminars which allow for continuing accreditation credits for golf courses and parks, new this year through the IPM-PHC Council.

OTS 2004 has an enhanced educational program because of our joint involvement with new partner the Ontario Recreation Facilities Association. Their knowledge and expertise in this type of event is unbelievable.

With the move from Toronto to the beautiful Niagara Falls area, we hope this change of venue will result in an invigorated show. The old venue was getting a little tired and if you plan to attend, I believe you will love the new location at the Sheraton on the Falls. The rooms facing the spectacular falls are selling fast, so book now!

The key to the show's success is for all of you to try and attend. Cost for the three-day program is very reasonable and I am sure we will all leave with some great

knowledge and insight. So come on members, lets go to the Falls!

The STA Annual General Meeting will be held the morning of January 21st, just prior to the start of the show. We invite you all to join us for a wonderful breakfast and take part in the AGM forum. This year we have one board member stepping down, Chris Mark from the Town of Oakville. Chris has been a long-time board member and is also a Past President of the Association. Chris, your knowledge and expertise will be greatly missed. We wish you well in your new position and look forward to your possible return to our board.

Mark your calendars now for OTS 2003, January 19-21 in Niagara Falls. Look forward to enhanced programming and a new venue!

Turf Trades

For the year 2004, we are expanding our services by launching a web employment bulletin board called *Turf Trades*. We encourage all municipalities and companies to post job listings online with STA. Our site offers a targeted audience of turf professionals and students who may be looking for employment. There is, of course, a minimal cost but it is far lower than traditional newspaper and large online employment site advertising. See page 19 for more details.

Final Perspectives

As I sit at my computer reflecting back on my last two years as President, I honestly don't know where the time has gone. It seems like only yesterday that Jane Arnett-Rivers and Lee Huether were advising me as to the duties as President and what to expect. Over the last couple of years, I believe we have... → page 4

The President's Desk *continued...*

improved the Association for the road ahead. We implemented the new website which has been a great success, and convenient Visa and MasterCard payment options for members. This alone has made life easier for Executive Manager Lee Huether and has helped with our cash flow. The office is now up to speed in the technology area and we should be in good shape in this respect for the next few years.

The Field Day, through the help of the committee members, suppliers and sponsors, has risen to never before seen levels. Attendance has increased markedly over the last three years and as a small association, we rely on this annual event for a major part of our revenue.

The Association is, however, going to be facing some potentially tough budget decisions going into the next few years. We will need to become more creative in how we do things, particularly with respect to raising revenues. Costs are rising for us all through things like insurance, printing, labour, etc., but I believe we have the people in place to make these decisions easier.

To Andrew Gaydon who will be President in 2004, I wish you all the best. To Lee, thank you for making this term whiz by efficiently. To all the other wonderful board members, thank you for also making the past two years seem like just yesterday. Wishing you all a Merry Christmas and Happy New Year. ♦



More Benefits for OTS 2004 Delegates!

PROFESSIONAL DEVELOPMENT ACCREDITATION ENHANCED

OTS, the premier education and trade show for the Ontario Turfgrass Industry being hosted January 19-21, 2004 in Niagara Falls, will provide professional development recognized and accredited by the industry's leading associations including the Sports Turf Managers Association, the Canadian Golf Superintendents Association, the Golf Course Superintendents Association of America, and the IPM-PHC Council.

The additional accreditation of the OTS educational seminars through the IPM-PHC Council this year will provide professionals with over 15 continuing education credits toward the voluntary accreditation of their companies, golf courses and parks. The expansion of accreditation opportunities reinforces the 2004 OTS theme, *Leading through Learning*. For more information and registration details visit the OTS website at www.open.uoguelph.ca/ots.

Register now for the industry event of the year!

2004 Ontario Turfgrass Symposium

**Educational Conference & Trade Show, January 19-21, 2004
Sheraton on the Falls, Niagara Falls, Ontario**

Two Ways to Save...

Visit www.open.uoguelph.ca/ots for details...

1) Association Discount. As an STA member in good standing, you qualify for lower association rates. **2) Group Discount.** Others from your facility/organization who are not STA members **when registered with a member** qualify for the lower association rates. Send the registration in the same envelope, fax it at the same time, or make just one phone call to register.

Odds and Ends

Cold... A Deadly Winter Hazard

In Canada, more than 80 people die each year from over-exposure to the cold. Over a five year period (1992 to 1996), Statistics Canada reported 411 people died from frostbite, hypothermia and other cold injuries. Exposure to extreme cold claims more lives in Canada than lightning, floods or tornadoes combined! For more details on windchill, visit, www.msc.ec.gc.ca/education/windchill/windchill_fact_sheet_aug_10_e.cfm (*Envir. Canada*)

Quotes of the Month

If all the year were playing holidays, to sport would be as tedious as to work.

— William Shakespeare, "King Henry IV Part I," Act 1 Scene 2

Winter is on my head, but eternal spring is in my heart.

— Victor Hugo (1802-1885)

STA Membership Plaques

Display membership plaques are available in executive engraved walnut for \$50 plus S&H. To order, contact Lee at the STA office.

Spring 2004 Submissions

If you have something you'd like to submit for the next issue, please forward it to the STA office by January 30, 2004.

Editorial Content

Opinions expressed in articles published in *Sports Turf Manager* are those of the author and not necessarily those of the STA, unless otherwise indicated.

Voice Your Opinion!

We appreciate member feedback. To make this process easier, we have a form on our website, www.sportsturfassociation.com, under the "newsletter" link called *Feedback*. Check it out!

Coming Events

CHECK OUT WWW.SPORTSTURFASSOCIATION.COM FOR UPDATES...

January 6-8, 2004

Ontario Golf Course Management
Conference and Trade Show
Toronto, ON
Information: (905) 602-8873 x 222

January 13-15, 2004

Landscape Ontario Congress
Toronto, ON
Information: (905) 875-1805
www.locongress.com

JANUARY 19-21, 2004

Ontario Turfgrass Symposium

Sheraton on the Falls
Niagara Falls, ON
Information: (519) 767-5000
www.open.uoguelph.ca/ots

January 21 (at the OTS)

Sports Turf Association Breakfast and Annual General Meeting

Information: (519) 763-9431
info@sportsturfassociation.com

January 21-25, 2004

Sports Turf Managers Association
(USA) Annual Conference &
Exhibition
San Diego, CA
Information: (712) 322-7862
www.sportsturfmanager.com

February 17-21, 2004

Turfgrass Producers
International Midwinter
Conference and Exhibition
Santa Barbara, California
Information: (847) 705-9898
www.TurfGrassSod.org

February 21-25, 2004

Western Canada Turfgrass
Association 41st Annual
Conference & Show
Victoria, BC
Information: (604) 467-2564
www.wctaturf.com



March 3-7, 2004

Canada Blooms, Toronto, ON
Information: (416) 447-8655,
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March 24-25, 2004

Ontario Parks Association
48th Annual Educational Seminar
and Explorations Trade Show
Hamilton, ON
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Using Compost on Turfgrass • Cover Story Continued...

APPLICATIONS HAVE REDUCED PINK AND GREY SNOW MOULD. RESULTS FROM THE GUELPH TURFGRASS INSTITUTE

proportion of organic matter may prove beneficial in a high sand content rootzone by increasing soil microbial populations and providing cation exchange sites. High levels of microbial activity in composts have been postulated as the primary mechanism of disease control by a number of researchers.

Disease suppressive composts can be used as a replacement for peat or any other organic materials used in a regular sports field topdressing mixture which generally contains 80% sand and a 20% organic source such as peat or topsoil. Another way that they can be used, particularly for snow mould control, is a once per season application of compost alone just prior to snow fall.

Although the use of compost may not control turfgrass diseases to the degree that fungicides can, their integration into current disease management practices may result in a significant reduction in disease problems on sports fields. An additional benefit derived from using compost in a fall and/or winter application is the potential for increasing spring green-up, which in turn can speed recovery from snow mould disease and winter injury.

Studies at Guelph Turfgrass Institute

Field plots were established at the Guelph Turfgrass Institute, Guelph, ON, to evaluate the ability of composts to suppress grey and pink snow mould. Research was carried out at two locations, one on a creeping bentgrass green maintained in summer at 4 mm height (green height), and one on a creeping bentgrass range maintained in summer at a 25 mm height (fairway height).

Two composts (batches A and B) were applied on December 1, 1998 at two rates of application: 48.7 and 97.6 kg (dry weight)/100 m² (100 lb, and 200 lb/1000 ft²) onto turfgrass.

To increase the level of disease, research plots (1 x 2m) were inoculated with the fungal pathogens responsible for pink and grey snow mould, *M. nivale* and

T. ishikariensis respectively. Quintozene was applied on control plots according to the manufacturers' recommended rates (318 g/100 m²).

To get a better understanding of the role nitrogen in compost has on snow mould and spring green up, a control of sulphur coated urea (25-0-0), applied at 33.3 g/m² (equivalent to the amount of nitrogen in the compost batches when applied at the 48.7 kg/100 m² (dry wt.) rate) was included. This was equivalent to the nitrogen content in compost A (1.83 N-2.00 P-0.96 K) which was higher than the nitrogen content of compost B (1.71 N-1.29 P-0.81 K).

Plots were rated visually once a week for *M. nivale* and *T. ishikariensis* on April 14 until May 4, for green-up (recovery from winter dormancy) and rated for disease severity on April 14 and 21.

Results

The two composts, along with the fungicide control, were similar in their ability to suppress snow mould diseases. In addition, fertilizer treatments generally had higher disease severity compared to compost treatments on the creeping bentgrass green and on the creeping bentgrass range. A single application of 97.4 kg/100m² gave the same level of control as the fungicide quintozene.

This study also determined the ability of fall compost applications to speed the green-up process of turfgrass in the spring. Although the two experiments were located in distinct areas of turf management, the assessments of green-up were similar.

There were significant increases in green-up in compost treated plots compared to the fungicide control. These

Mechanism of Suppression	Description
Nutrient competition	Microbial activity out-competes pathogens for nutrients, preventing their growth and germination
Antibiosis	Organisms are inhibited by metabolites of micro-organisms; may be a survival or competition mechanism
lytic and other extracellular enzymes	Enzymatic compounds are produced by a variety of microorganisms to decrease growth and survival of others; often done to decrease competition for nutrients, space and other factors
Parasitism and predation	Mycoparasites can reduce the concentration of inoculum of a pathogen by enhancing degradation of dormant propagules, interfering with their formation or inhibiting their germination
Host-mediated induction of resistance	Micro-organisms or other chemical or physical factors in organic amendments can promote plant growth or induce plants to produce certain enzymes related to defense mechanisms

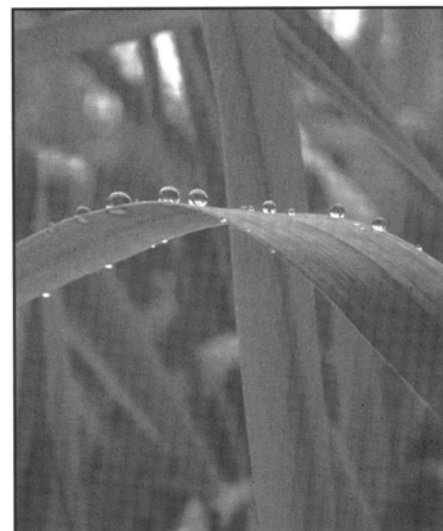
Table 1: Microbial characteristics influencing disease suppression with composts.

improved differences in green-up among treatments diminished over the four week rating period, after which the controls approached or were the same as the compost treated plots.

One interesting result of this experimentation was that fertilizer treatments displayed a lower level of green-up when compared to compost treatments. Another interesting discovery was that the higher compost rate showed a significantly higher level of green-up compared to the lower application rate on the creeping bentgrass green, although this effect was not observed at the creeping bentgrass range location.

carbohydrates. However, for composts with higher levels of nitrogen and other available nutrients, disease suppression may also have been a result of enhanced turfgrass nutrition allowing for more rapid recovery from disease (Craft and Nelson 1996).

The ability of selected composts to suppress disease in turfgrass has been reported. For example, an 80-90% reduction in disease was obtained with a late spring application of yard trimmings compost (Block 1997). Other researchers have reported that although compost did not prevent the occurrence of snow mould, it increased the recovery of grasses from



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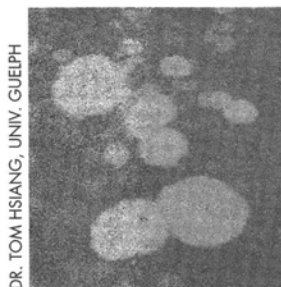
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Acknowledgements

This research was supported by an Industrial Research Assistance Program (Canada) to All Treat Farms, Arthur, Ontario, Canada. Research by G.J. Boland and J.T. Trevors was also supported by NSERC (Canada) operating grants.

One interesting result of this experiment was that fertilizer treatments displayed a lower level of green-up when compared to compost treatments. Furthermore, fall applications of compost were effective as a suppressant to pink and grey snow moulds.



DR. TOM HSIANG, UNIV. GUELPH

Discussion

In summary, field research was effective in identifying fall applications of compost as a suppressant to pink and grey snow moulds. In addition, turf that received compost applications displayed a more rapid rate of spring green-up than turf which was treated with fertilizer or fungicide.

The higher rate of compost (97.4 kg/100 m²) generally had a greater ability to suppress disease compared to the lower rate (48.7 kg/100 m²). This may have been a result of a combination of increased nutrient availability, increased antagonistic or competitive interactions among microorganism populations or their metabolites, or the darker colour density of the higher compost application rate may have increased ground heating and promoted more rapid recovery of turf.

Other than fertilizer effects, nitrogen is known to increase fungal and bacterial populations in turf and play a major role in microbial population dynamics (Liu *et al.* 1995). It is essential for the production of many compounds involved in host resistance including phenolics, phytoalexins, growth hormones, cellulose and

the disease (Block 1997). It was postulated that the dark colour of the composted material increased radiant heat absorption, increased nutrient levels and stimulated growth (Block 1997).

Most research on snow moulds has focused on biological control of *Typhula* spp. with antagonistic microorganisms. However, physiochemical factors, including colour, fertilizer effects and other factors, are often implicated in control. Researchers have generally supported the proposal that microbial populations in compost provide nutrients and other chemical compounds to competing microorganisms and plant hosts through continual breakdown of composted material. There are also a number of examples where nutrient competition has been a factor in suppression of plant pathogens.

On the creeping bentgrass green, compost applications increased the rate of green-up and playability more quickly than fertilizer applications. As a result, nutrients are not postulated to have played a significant role in green-up. However, turf height and increased available water on the green surface may have encouraged

microbial activity compared to the fairway area, allowing for breakdown and release of nutrients and other antagonistic compounds.

Other than fertility, the darker colour of the compost may have had an impact on spring soil warming, increasing turfgrass growth rate or stimulating microorganism growth and activity. A heating effect may have stimulated earlier activity of mycorrhizae, thus increasing nutrient availability to turf. In addition, the heavy compost layer may have held more water than the lighter rate, increasing water availability to turf.

Compost is becoming a more established and accepted means of suppressing plant diseases.

On fairway height creeping bentgrass, fertilizer treatments were not significantly different from compost treatments in their ability to promote early spring green-up on most rating dates. In this case, the effect of compost on green-up may have been more of a nutrient effect. A heating effect may have been less of a factor as compost may have been more rapidly incorporated into thatch, falling deeper into the stand (25 mm), which may have shaded it from early spring sunlight. Compared to the green location, the fairway height was exposed to winds and also developed increased ice cover, which may have increased desiccation and lessened microbial competitive capabilities.

Summary

Compost is becoming a more established and accepted means of suppressing plant diseases, including pink and grey snow mould in turfgrass. With the added benefit of promoting early spring green-up, use of compost seems like a win-win situation for sports turf managers. ♦

Adapted by Pam Charbonneau, Turfgrass Specialist, Ontario Ministry of Agriculture and Food, from an article written by Jeanine Boulter, Univ. of Guelph, Laboratory Services Division, for *Greenmaster Magazine*, Vol. 37, No. 2, April/02. Boulter is currently working as a microbiologist at the Univ. of Guelph.

Study Looks at Injuries with Artificial Turfgrass

TYPES AND CAUSES OF INJURIES IN CANADIAN FOOTBALL PLAYERS

NEW YORK (Reuters Health), June, 2003. A five-year study of Canadian university football players suggests that playing on an artificial surface rather than natural grass may increase a football player's risk of injury.

Artificial turf is often preferred over grass because of its durability and lower maintenance costs. Also, unlike grass, the surface does not vary according to environmental conditions, while grass can be wet or dry, hard or soft or even frozen depending on the weather.

In the current study, however, the risk of injury was as much as two times higher when the game was played or practiced on artificial turf rather than natural grass, study author Dr. Willem H. Meeuwisse and his colleagues report.

Future studies should take into consideration factors such as the players' shoe type and position, history of injury and the environmental temperature, according to Meeuwisse and his colleagues.

But the type of playing surface was not the only thing that contributed to the football player's risk of injury, the researchers report in the *American Journal of Epidemiology*.

Players injured in the past were more likely to experience an injury in the future. In fact, those with a prior neck injury were five times more likely to experience a subsequent injury, the report indicates.

In light of this finding, Meeuwisse, of the University of Calgary in Alberta, Canada, told Reuters Health that it is important that injuries be treated and players be fully rehabilitated to reduce their risk of future injury.

The players' injury risk also increased with every year of participation in the sport. Men who were approaching their fifth year of playing football, for example, were more likely to be injured than less experienced players. This was true even when the authors accounted for the players' history of injury, the report indicates.

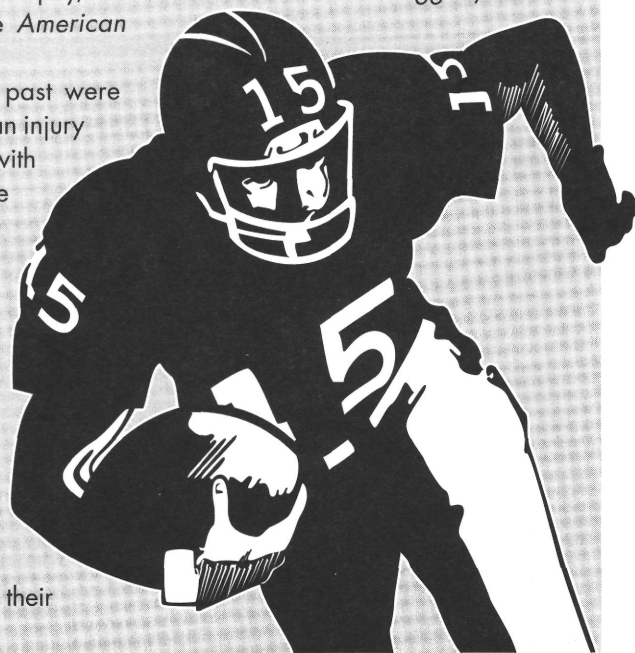
The reason for the increased injury risk among veteran players is unknown.

The athletes, in general, were 10 times more likely to be injured during games than during practice.

Overall, the injury risk factors identified in the current study may not be generalizable to different age groups and play levels since the study participants represented "survivors" who did not experience any career-ending injuries, the researchers note.

The study was conducted from 1993 to 1997 among varsity men's football players in the Canada West Universities Athletic Association. ♦

— *American Journal of Epidemiology* 2003;157:825833
(reported by Charnica E. Huggins)



Downsview Park. Honouring the Past, Building for the Present, Cultivating for the Future

GARTH HARDIE PROVIDES AN UPDATE ON CANADA'S FIRST NATIONAL URBAN PARK

Herbert Boake proudly carries a briefcase full of memories – photographs, books, newspaper clippings, shopping receipts and pamphlets – of his childhood on what is now Downsview Park. The 87-year-old vividly remembers riding his favourite horse, Vesper Bell, milking prize-winning Holsteins on his family's farm, attending morning and evening services at the nearby United Church, planting his father's favourite trees and slinging snowballs with friends in winter.

In 1824, his great grandparents Edward Boake and wife Sarah emigrated from Ireland, bought 100 acres of the present Downsview Park site, planted hay, wheat, oats and barley and raised 15 children. Edward used the money he earned as an ax man building Toronto's Bathurst Street to buy another 100 acres, and the Boakes farmed successfully for generations beside

their neighbours the Duncans, Elliots, Fars and the McGees.

Herbert remembers when de Havilland Aircraft of Canada bought 20 acres to build their first hangar in Toronto. He also remembers 1950, when the government expropriated the rest of the land to build a military base. As a soldier, wounded in Normandy, he understood the reasons. But he is delighted that the land on which he was born is now being returned to nature. After serving for more than 50 years as a Canadian Armed Forces base, the majority of the land in the heart of Greater Toronto is ready to be transformed into Downsview Park – Canada's first national urban park.

"Building a park is a great idea," Herbert Boake says of the new Downsview Park design. "It restores the land to its earlier uses and offers people in the city the opportunity to relax and enjoy their leisure time."

→ page 10



Herbert Boake



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Today, Downsview is ready for a makeover. But before the vision of an action sports complex, cultural commons, meadow, promenade, lakes, paths, forests, gardens and business development facilities to finance the park can be realized, the parklands, fallow and leached from years of non-use, must be restored to fertility in order to serve as a legacy for future generations.

David Anselmi, Vice President of Park Development, says studies have been done to help determine the best strategy going forward.

"We have studied what kinds of soil are found at Downsview, how much of each type there is and where," says David,

who is responsible for creating a park plan and implementing the design developed by Tree City Inc. "Now that the design of the park is being finalized and we can tell what parts of the land will be used for what purpose, we know what needs to be done, in each area, to create ideal conditions for success."

David says one of the biggest challenges is the level of compaction the soil has undergone for the last 50 years. Because the land was regularly tilled, plowed and used for farming, it is highly susceptible to frost penetration. This means tilling, discing and some sub-soiling will be needed. Other challenges include assessing the level of organic

matter in the soil and the presence of gravel, stone and other building materials. For now, David says the grounds are being maintained as grassland. This helps to limit frost penetration until construction of the park begins. The first step in this process is landscaping.

Reudi Hofer is a partner at PMA Landscape Architects, which is a member of the Tree City Inc. design team, designers of Downsview Park. As a prominent voice in environmentally responsible landscape architecture in Canada since 1972 and designer of some of Canada's most imaginative projects, Reudi says Downsview Park is a unique opportunity to demonstrate environmental sustainability and social responsibility in the landscaping process.

Downsview parklands, fallow and leached from years of non-use, must be restored to fertility in order to serve as a legacy for future generations of Canadians.

Reudi says the landscaping process starts with grading – creating the landforms that will give the park its distinctive look and accommodate the action, promenade and cultivation zones that are the keys to the design. This also includes installing sewer, water and hydro systems as well as a network of roads and pathways to serve the park. Then, effective water management, he says, provides opportunities for saving money and improving the environment.

"An effective water management and drainage system is important for Downsview Park," says Reudi, whose accomplishments include innovative green space projects in Erin Mills and an industrial project seamlessly integrated into the Niigon Aboriginal community in Georgian Bay. "Instead of sending the water to a storm drainage system, the goal is to manage the water collected on the site, use it efficiently, and then return it purified to the soil."

Water is needed to irrigate soccer fields and other natural sports surfaces that require maintenance. Creating lakes,