

# SPORTS TURF MANAGER

... for safe, natural sports turf

AUTUMN 2003 • VOL. 16, NO. 3

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## 16th Annual STA Field Day

RECORD BREAKING NUMBER OF DELEGATES FOR 2003!

The day dawned sunny and warm, the unknown threat of Hurricane Isobel still a few days away. The venue was awesome, Highland Creek Valley at the University of Toronto @ Scarborough a picturesque background. The registration, record breaking for this event, was buoyed by the always generous support of turfgrass industry sponsors and exhibitors. The speakers were both enthusiastic and informative. What a day! We survived both the snarl of Toronto traffic and some minor audio-visual technical difficulties!

### Hosting Soccer Championships

Rob McMulkin, Robbie International Soccer Tournament *(by Gord van Dyk)*

What started out 38 years ago as a soccer fund raiser for Robbie Wims who had cystic fibrosis has turned into a mega tournament involving some 240 teams from around the world. This international tournament showcasing players from ages 9-18 is held the Canada Day weekend throughout the GTA area.

Teams have travelled from as far away as South Africa, Ireland, Scotland and the United States to participate in 380 games

over three days. Co-operation between the City of Toronto, its staff, volunteers and soccer clubs throughout the region is paramount to the successful staging of this event.

The organization committee, complete with volunteer personnel in all front line and back-up positions, commences directly after the tournament ends each year. They run the 12 month operation necessary to partner with sponsors to ensure adequate coverage and advertising.

The 55 playing and practice fields are booked a year in advance. They are supervised by city staff for... → **page 7**



### ONTARIO TURFGRASS SYMPOSIUM, JANUARY 19-21

Mark your calendar now! Early bird registration date is December 5th. This year's conference is being held at the Sheraton on the Falls – Niagara's foremost four diamond resort hotel. Get ready for an information-packed program covering the latest in scientific research and practical turf management. See page 4 inside for further information...



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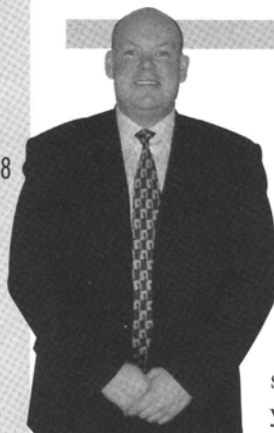
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**STA OFFICE HOURS**

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



## Gearing down...

Hello to all our members! Can someone please tell me where the summer went? It seems like just yesterday that we were gearing up for spring and now we are gearing down for the fall season. Autumn is a great time of year. In my mind, the grass never looks better and there isn't a finer time to spend a day on the links than when the trees are turning colour.

**16<sup>th</sup> Annual Field Day**

Well, we did it again. This year's field day at the University of Toronto @ Scarborough was our best yet! Attendance was the highest ever with over 105 turf professionals registered. We also had a great turn out from our suppliers with 16 companies exhibiting their products.

Without the support of our generous sponsors the day wouldn't be possible. Our thanks to each and every one of you.

We must also express our appreciation to our speakers. Rob McMulkin helped us out when we were in a bit of a bind when Larry Noon was unable to attend. Rob, thanks for stepping in at the last minute and starting off a great morning.

Our second speaker was Dave Motley and I thought he made a tremendous presentation with some amazing statistics. Dave, thanks from the committee.

Gary Supp from Turf Care was the final morning speaker. Unfortunately for Gary, we had some technical difficulties so the full effect of his PowerPoint presentation was not felt but it was an enlightening session, packed with great material.

The last speaker of the day was the colourful Jack Eggens. Jack entertained the large crowd on the field with some hands-on tips regarding turf maintenance and cultural practices. Thanks to all of our speakers for sharing their time and

expertise with us.

I would also like to thank the Field Day Committee and, of course, Lee Huether for doing an outstanding job with the planning and organization of the event.

**We Were There!**

The STA had representation in Stratford at the Communities in Bloom National Symposium on Parks and Grounds thanks to STA Directors Rick Lane and Jane Arnett-Rivers who were invited speakers.

**Ontario Turfgrass Symposium**

We have some new and exciting information regarding the OTS. In 2004, we are off to the Falls. Yes, that's correct, the new show location is Niagara Falls at the Sheraton on the Falls Hotel and Conference Centre, January 19-21st. This promises to be a great new location for the event. The Falls area has lots of entertainment, restaurants and, of course, one of Ontario's finest casinos.

We welcome a new partner this year. The Ontario Recreation Facilities Association joins the Guelph Turfgrass Institute, the Nursery Sod Growers Association of Ontario, the Ontario Ministry of Agriculture and Food, the Professional Lawn Care Association of Ontario, the Sports Turf Association and the University of Guelph in providing the most comprehensive turf show in the province. So come on out and let's have a great time! See you there.

The STA Annual General Meeting is being held during the symposium on the morning of January 21<sup>st</sup> from 7.30 to 9.00 a.m. Please come and join us for breakfast.

Nominations for the Board of Directors will also be held at the AGM. If you would like to get involved, please come and participate. The Slate of Nominees and the Invitation to the Annual General Meeting will be mailed soon so keep an eye out for this correspondence. Best wishes for the autumn season. ♦

# Ontario Turfgrass Symposium Heads to the Falls

JOIN US FOR ONTARIO'S PREMIER TURF CONFERENCE & TRADE SHOW

The Ontario Turfgrass Symposium Executive Committee is pleased to announce that OTS 2004, Ontario's premier educational turf symposium and trade show, will be hosted at the Sheraton on the Falls Hotel and Conference Centre in Niagara Falls ([www.sheratononthefalls.com](http://www.sheratononthefalls.com)).

The Sheraton on the Falls is Niagara's foremost four diamond resort hotel – and the only hotel across from the Falls offering spectacular views. Luxurious rooms and suites, an indoor swimming pool, the Fallsview Spa and Fitness Centre and the award-winning Penthouse Fallsview dining room are all part of this exciting 20-acre complex.

All under one roof, conference attendees will be able to enjoy shops and restaurants, including the Hard Rock Café, Planet Hollywood, the Rainforest Café, the MGM Studios Plaza, as well as the spectacular Casino Niagara. In addition, the Ontario Turfgrass Symposium will be held during the Niagara Falls Festival of Lights, a spectacular lighting of parks along the river as well as a nightly light show highlighting the Falls.

The Niagara Butterfly Conservatory, Niagara Parks Greenhouses, estate

wineries and factory outlet shopping are all a short drive from the hotel. The hotel complex and surrounding area holds a wide range of attractions for symposium delegates and their families.

Sheraton on the Falls provides comfortable meeting rooms and a spacious exhibit area. The education program has been enhanced this year in recognition of the Ontario Recreation Facilities Association joining the Nursery Sod Growers Association, Professional Lawn Care Association of Ontario and the Sports Turf Association in sponsoring the symposium.

A facilities management session focusing on the logistics of managing special event programming will be added to the existing golf, lawn care, sod production and sports turf management sessions covering the latest in scientific research, practical turf management, legislation, technology, human resource management and much more.

The three-day program is scheduled for January 19-21, 2004. To receive an exhibitor or delegate package, please contact the Office of Open Learning at the University of Guelph at 519-767-5000 or [info@open.uoguelph.ca](mailto:info@open.uoguelph.ca). ♦

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

### Three Ways to Save...

1. Early Bird Registration Date: Dec. 5, 2003
2. Association Discount. As an STA member in good standing, you qualify for lower association rates.
3. 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.



Visit [www.open.uoguelph.ca/OTS](http://www.open.uoguelph.ca/OTS) for details...

## Odds and Ends

### 10th Anniversary Celebrated

The Guelph Turfgrass Institute celebrated the 10<sup>th</sup> anniversary of the opening of the G.M. Frost Research & Information Centre building on August 20, 2003. Present for the festivities were building namesake Mac Frost, his wife Beth and other family members, research tour participants, and representatives from industry, government and the university. Congratulations!

### Quotes of the Month

Grass is the forgiveness of nature – her constant benediction. Forests decay, harvests perish, flowers vanish, but grass is immortal. *Brian Ingalls*

Autumn is a second spring when every leaf is a flower.

-*Albert Camus*

### STA Membership Plaques

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

### Winter 2003 Submissions

If you have something you'd like to submit for the next issue, please forward it to the STA office by October 31, 2003.

### 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 all member feedback. To make this process easier, we have a form on our website, [www.sportsturfassociation.com](http://www.sportsturfassociation.com), under the "newsletter" link called *Feedback*. Check it out!

# Coming Events

CHECK OUT [WWW.SPORTSTURFASSOCIATION.COM](http://WWW.SPORTSTURFASSOCIATION.COM) FOR UPDATES...

## October 22-23, 2003

Landscape Ontario  
Garden Expo, Toronto, ON  
Information: (905) 875-1805  
[www.landscapeontario.com](http://www.landscapeontario.com)

## November 18-20, 2003

Irrigation Association 24<sup>th</sup> Annual  
International Irrigation Show  
San Diego, CA  
Information: [www.irrigation.org/ia\\_show.htm](http://www.irrigation.org/ia_show.htm)

## 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](http://www.locongress.com)

## JANUARY 19-21, 2004

**Ontario Turfgrass Symposium**  
Niagara Falls, ON  
Information: (519) 767-5000  
[www.open.uoguelph.ca/ots](http://www.open.uoguelph.ca/ots)  
see opposite page for details

## January 21-25, 2004

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

## February 17-21, 2004

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

## February 21-25, 2004

Western Canada Turfgrass Association  
41<sup>st</sup> Annual Conference & Show  
Victoria, BC  
Information: (604) 467-2564  
[www.wctaturf.com](http://www.wctaturf.com)

## March 3-7, 2004

Canada Blooms  
Toronto, ON  
Information: (416) 447-8655,  
1-800-730-1020  
[www.canadablooms.com](http://www.canadablooms.com)

## March 24-25, 2004

Ontario Parks Association  
48<sup>th</sup> Annual Educational Seminar  
and Explorations Trade Show  
Hamilton, ON  
Information: (905) 524-3535  
[www.opassoc.on.ca](http://www.opassoc.on.ca)

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# To Crown or not to Crown...

R.W. SHEARD, Ph.D., P.Ag.

Most designers of a sports field will specify a crown on the finished surface of the field. The crown or slope from the side line to centre field may range from 0.5 to 1.5 percent. James B. Beard, in his text, *Turfgrass, Science and Culture*, recommends up to 2.5% slope. This author has read reports of fields in the UK where the crown is so great that the ball sitting on the side line is not visible to the player standing on the opposite side line.

**T**he reason most often given for having a crown on the field is that it improves drainage by removing surface water through runoff. For runoff to occur, rainfall intensity (mm/hour) must exceed the infiltration rate of the soil surface. The infiltration rate is increased by (1) increasing the sand content of the soil, (2) reducing the density of the soil, that is decreasing compaction, (3) increasing the slope and (4) increasing density of the vegetative cover.

Maximum runoff will occur on a paved surface where the infiltration rate is zero. Minimum runoff will occur on a sand-based root zone with a dense blue grass stand where the sand, even without the vegetative cover, is selected to provide an infiltration rate greater than the rainfall intensities observed in 90% of the summer storms in Ontario. Most sports fields fall between these two extremes.

## Achieving Low Infiltration Rates

Factors which might contribute to lower infiltration rates are high clay contents, low permeability, compaction, thatch, and low turf density. Compaction and thatch may be controlled by adequate coring. Low turf density can be improved by overseeding and adequate nitrogen fertilization.

Grass has been accepted, second to forest with a dense undergrowth, as the most effective vegetative cover to prevent soil and water loss. A summary of 10 experiments conducted over 70 years ago showed an average water loss due to surface runoff from grass of 10 mm per year on soils ranging from sandy loam to clay and slopes ranging from 2.0 to 16.5%.

A 14-year study in hurricane prone Missouri on a silt loam soil with a 3.7% slope showed an average yearly loss of 50 mm from bluegrass sod. These experiments were conducted prior to the understanding of the importance of nitrogen for increasing the density of grass stands. Furthermore, the maintenance program in these studies was probably hay or simulated pasture, not the density associated with a closely mowed sports field.

## The Bottom Line

What does this all mean? That drainage by surface runoff from a properly maintained sports field in Ontario, crowned or not crowned, is insignificant. Crowning the field will not cure a potential drainage problem.

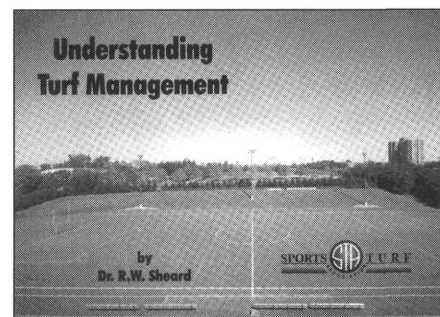
An internal drainage system for a sports field is the answer. It must be designed to meet the 10-year average rainfall intensity. In many cases this will require various types of drain installation such as tile drains, slit drains, a combination of the two, or a sand-based root zone.

Raindrops from a storm having an intensity of 25 mm per hour or less are going to be held near or at the point of contact with the soil. The soil will require an infiltration rate of 25 mm per hour to absorb the water. Storms of this intensity seldom occur more than once or twice per season and the intensity may last for less than an hour.

Since rain will not run off a well managed field and must permeate directly to deeper depths, during the rain the soil pores at the surface will become increasingly filled with water. This water

acts as a lubricant allowing soil particles to slide into closer arrangements under traffic conditions. The result is compaction. Therefore for a well managed field to perform satisfactorily, adequate internal drainage must be provided. A crown will not help this drainage role.

There is, however, a reason for placing a crown on a field. This occurs at the time of construction. If the subgrade is crowned at a 0.5% slope, surface water will not pool on the newly graded surface. Thus, following a summer thunderstorm, construction work can recommence sooner than where the field is graded level. Carrying this slope through to final grading of the surface will often result in more timely seeding. ♦



## Understanding Turf Management by Dr. Sheard

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A practical manual for the management of safer, natural turf facilities for outdoor sports. The concepts are applicable for any turf manager, from golf course superintendents to the parks supervisor, whether maintaining golf greens, sports fields or race tracks for thoroughbreds.

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# Cover Story Continued... 16th Annual STA Field Day

CONTRIBUTORS: GORD VAN DYK, ROY FORFAR, JANE ARNETT-RIVERS AND STEPHEN TOLLEY

playability and games are refereed by Ontario Soccer Association volunteers. A charity game involving former and current NHL players also raises funds.

The fields are rested for three days prior to the tournament since most multi-use facilities will see 8-10 games per day. Media representation and support is key for recognition of sponsors and promoting the tournament. During the games, a website is maintained for parents and friends to follow the teams' progress. The Robbie Tournament will surpass the \$1 million donation mark to cystic fibrosis in 2004, a remarkable achievement.

## Partnering with Municipalities

Dave Motley, Oakville Soccer Club  
(Roy Forfar)

Dave Motley was born in the land of the free and exported to the land of the brave, Jane Arnett-Rivers said jokingly as she introduced him – turf managers are a brave lot in southern Ontario!

Dave is past president of the Oakville Soccer Group. His day job is a Director with GWL Realty Advisors Inc. Dave has enjoyed a lot of soccer history. At the age of four, he was a ball boy for Sheffield United and he is also a past member of the Recreational Advisory Committee for the Town of Ajax.

The Oakville Soccer Group recently partnered with the Town of Oakville to build the Pineland Soccer Fields complex.

This cost-sharing experience brought with it expectations from both the soccer groups and the town, particularly with respect to the importance of permitting abilities on an irrigated sand field, which ultimately come down to maintenance and construction issues.

## Club Background

The not-for-profit Oakville Club is the largest in North America with 9,700 players – a logistical nightmare to deal with. The club started in 1972 with 1,200 members and by 1990 had grown to 3,785 members. From 1990 to 2001, membership went through the roof reaching close to 10,000 members, which means major field use and the need to build, build, build and renovate.

Sponsorship is a crucial component to the club's success. When the kids reach 18 years of age, many dream of landing a scholarship to play in the US. To date, 40 have been given scholarships. When they return, most work as coaches for the younger kids (8, 9 and 10-year olds) and they love it. This is accomplished through a Mentor Coach Program created by the Soccer Association.

There are 520 house league teams and 260 games per week. Also, there can be 30 rep teams in town at any one time. This

brings in a fair bit of revenue to local businesses with respect to fuel, food and lodging.

Parking is a problem, but the town and association are working together to renovate old baseball diamonds which have become weed-infested dust bowls. This helps to lesson 3:00 a.m. calls regarding parking tickets!

## Building Partnerships

Soccer clubs need the fields and the town needs their support. Soccer brings in cash and money talks! This is the way



to get things done from the municipality and get the job done properly. If there is no co-operation, it leads to confrontations, animosity and stalemates. First and foremost, a common ground and personal

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contacts need to be established. Then issues such as assessing how to better utilize the fields and deal with vandalism are discussed. Other things done through partnering include widening and lengthening fields, installation of irrigation and lighting, and the creation of six new mini fields and expanded parking through the removal old ball diamonds which had become obsolete.

There have also been cases of bad partnerships. Dave mentioned spending two years working with a principal, the school board and the town to renovate a small field (one that 10-12 year olds play on). The Parent Association in this affluent area partnered with the Soccer Association and \$7,500 was kicked in for irrigation, The town participated and the field was rebuilt with an agreement to permit usage 4-5 nights a week. This never happened. The irrigation system was not used most of the time, the field fell into a state of disrepair, and the partnership was absolved with the school board.

On the flip side of the coin, here is a recent example of a very successful partnership. A major problem in building new fields is lighting. It is best to put it in before any homes or other buildings are constructed. There is a new complex to be built by 2012. The Association managed to raise funds and have the lights put in as of 2002, thus avoiding interference from the Residents' Association in the future. The Soccer Association lent the Town money to proceed and this money was to be repaid over the next two years by the Town recouping funds through development charges like

building permits, etc. The loan has been repaid. The project was done in 2002, not 2012, and illustrates a great example of partnership.

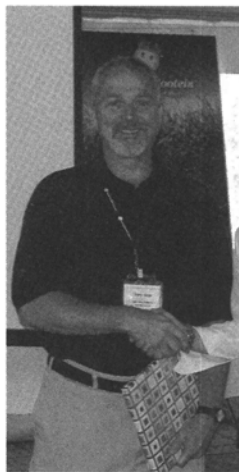
#### Looking Ahead

Between now and 2005, there are five fields proposed. Keys to the future include open dialogue, mutual involvement and respect for each others requirements and the process. For example, if there is one hour of rain four hours before a game is to be played, then the game is off. This is the only way to preserve good fields. It certainly does not always get followed, but we all try.

We, as a club, only want to play. Municipalities only want to maintain what they have. We strive to work together – even if this means keeping off the fields on rainy days!

#### Central Irrigation Control – the Future is Now!

Gary Supp, Irrigation Sales Manager,  
Turf Care Products Canada  
(Jane Arnett-Rivers)



Imagine starting your day by sitting at your desk, turning on your system and seeing that everything regarding your irrigation and lighting system is good.

Now imagine noticing a spike in water use at a field on the other end of town. Hey, at least you know about the situation before you hear about the washout from

a user group tonight! Get out there early, identify the problem, and repair it. With a Central Irrigation System, this situation will be detected, flagged, and you will be notified – long before there is expensive turf damage, or worse, an injury occurs.

Now put yourself in early August. It has been dry for weeks and you get a call hearing those nasty words, WATER BAN IN EFFECT, aaahhhh. This is tantamount to cancelling today's plans to visit each site and shut down systems. Until now, the time spent to shut down systems and start them up again was frustrating. But with a Central Irrigation System, all can be done in minutes from one location.

Whether time needs to be pumped up or ratcheted back, adjustments have never been so painless (from a time management standpoint).

Central irrigation will handle all of the above and help record and manage water use as well as flag hydro demands that occur beyond normal usage. Weather stations monitor environmental conditions and then convert them into daily evapotranspiration figures. Soil moisture sensors complete the data-monitoring package, so there is no need to guess if the east end of town got the same rain fall as the west end.

All together this spells effective watering for optimum plant health, responsible watering through environmental stewardship, and a control of the systems by the turf manager unprecedented until now. The jewel for most of us? Time, it frees up time.

For a thorough discussion of central irrigation systems, see Supp's article on page 17.



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**Sports Turf Maintenance Practices**  
An afternoon with Dr. Jack Eggens  
(Stephen Tolley)

A retired professor from the University of Guelph, Dr. Jack Eggens is very well known for his expertise in turf

management. He spoke to a group of eager turf enthusiasts about sports turf cultural practices. He enlightened us through his wit and humour and above all, his knowledge of the subject.

After a very nice lunch break, we took a walk down to the sports fields where we began the second half of our day. We were broken up into several small groups and asked to do a field assessment. After we critiqued the field (to death), we gathered around Jack where he questioned us on our findings.

After an intense discussion about the field and its current condition, Jack led us in the direction of what we should be looking for and in the proper order. This discussion moved onto the many facets of cultural practices, schedules, maintenance programs and other main components associated with turf management.

One main point that should be noted is that when overseeding, Jack recommends 20 pounds per thousand of perennial rye grass (ha, ha, ha). There goes this year's budget!

Another notable quote of his: "If it's already working for you, stick with it!"

Overall, a very worthwhile afternoon for everyone. Thanks, Jack!

And thanks to all participants, speakers, exhibitors and sponsors. See you next year! ♦



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Turn the page for a glimpse of the action-packed day and visit [www.sportsturfassociation.com](http://www.sportsturfassociation.com) for more photos.

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## CSA Releases Details on Proposed Soccer Stadium

30,000 SEAT, \$82 MILLION MULTI-USE STADIUM IN THE WORKS FOR EXHIBITION PLACE, TORONTO

**A**t a media conference held at the National Trade Centre at Exhibition Place in downtown Toronto on July 21, 2003, the Canadian Soccer Association unveiled its plans for a new 30,000-seat, \$82 million stadium complete with a FIFA recommended artificial grass playing surface designed to ideally suit international soccer while being compatible for CFL football as well as rugby, lacrosse and other field sports.

The proposed location would be at Exhibition Place in downtown Toronto. In support of the project, CSA has submitted a complete and detailed application for financial contribution to the Government of Ontario. CSA President Andy Sharpe accompanied by FIFA Vice President Jack Warner met with senior officials of the Government of Ontario and submitted a complete dossier of information related directly to this application of support. It is via the Government of Ontario as well as the Government of Canada that CSA is seeking \$62.5 million in total public financial support for the project (shared equally between the provincial and federal governments).

### Maintaining Momentum

"We are grateful to FIFA for supporting the high quality work which has occurred over the past 11 months by virtue of their financial commitment" stated CSA President Andy Sharpe. "We have stated

that this project is of the utmost importance to the future of Canadian soccer, to Canadian sport in general and we now will shift our efforts towards convincing the public that this project must move forward now, particularly with the amount of work completed."



We first reported on the plans for Toronto's new stadium in the Winter 2002 issue. At that time, press releases stated that the stadium would be natural grass – not artificial turf as is stated in this article. Stay tuned for more details as the project progresses.

FIFA Vice President Jack Warner was also in praise of the project. "With the momentum generated from this wonderful dossier of material, it is now critical that the stadium project keep moving forward and that it ultimately succeed, for the good of Canadian soccer and for the good of our sport in this confederation. With well over 800,000 young Canadians playing soccer and almost half of this number within a two hour drive of downtown Toronto, the time has arrived for this City to finally develop a proper soccer/sport facility where the world's best male and female players can compete at the highest levels."

"I am also pleased to announce that with my full support, the Canadian Soccer

Association has applied to host the FIFA Men's U-20 World Youth Championship in 2007, with this proposed stadium being one of the most important sites for the event," continued Warner. "This 24 nation 3 week tournament is the second largest Championship FIFA stages and I am

pleased that the initial response from FIFA President Blatter to the Canadian bid has been enthusiastic. I also hope that FIFA will accept an offer from CSA to host the 2007 annual FIFA Congress in Toronto as well, with 204 member nations expected to attend."

### Maximum Usage

Design plans for the stadium were completed by Stadium Consultants International, a division of Brisbin Brook Beynon, Architects, and features many unique aspects to it, including themed zones to allow for maximum enjoyment of the facility by the different user groups expected to frequent the stadium. Providing premium covered seating on the

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## 2002 General Statistics

Total **Player** Registration: 789,289  
Increase from 2001: 31,866 (4.2%)

Total **Female** Registration: 307,258  
Increase from 2001: 18,475 (6.5%)

Total **Male** Registration: 482,081  
Increase from 2001: 13,171 (2.8%)

Total **Youth** (under 18)  
Registration: 685,310  
Increase from 2001: 20,847 (3.1%)

Total **Senior** (over 18)  
Registration: 100,143  
Increase from 2001: 7,183 (7.7%)

west side for 10,000 fans, the stadium is an open air facility – something that is unavailable in the Greater Toronto area. As such it complements SkyDome as a mid-range, outdoor facility catering to the

needs of various sports not usually seen within the dome.

Intimacy was the primary factor in the design phase of the stadium and with spectators only six metres from the playing surface, this has been achieved by the architects over the past eight months of design development. The built-in capabilities for the stadium to ultimately expand up to 70,000 seats has also been achieved should ever the need for this to occur, for such events as the FIFA World Cup, the Grey Cup or for other sporting spectacles.

The stadium playing surface will feature a FIFA recommended third generation artificial grass product of the highest standard. The only major stadium facility in Canada which currently has this designation is Ottawa's Frank Clair Stadium with FieldTurf which has now hosted two national women's team matches in 2003 since receiving this approval from FIFA earlier this year. Usage of this artificial grass in the stadium will allow for extensive training and

multiple events to be staged from late March through to the end of November.

The stadium has been designed so that it perfectly meets the playing requirements of international soccer but of other rectilinear sports as well, including CFL football, rugby and lacrosse. It will seat just over 30,000 for soccer and almost 28,000 for CFL football (allowing for removable end zone seating to accommodate the longer CFL field).

The stadium, due to the efficiency of its design and artificial grass surface, will be ideal for multiple forms of community use including all levels of soccer from youth events up to and including the professional level of the sport. In addition, major inter-university sports events could easily be staged at this facility while the same could be said for national/international level rugby. It is the intent to make this facility an affordable one to use so that many sport and community groups can take advantage of the stadium.

→ page 15

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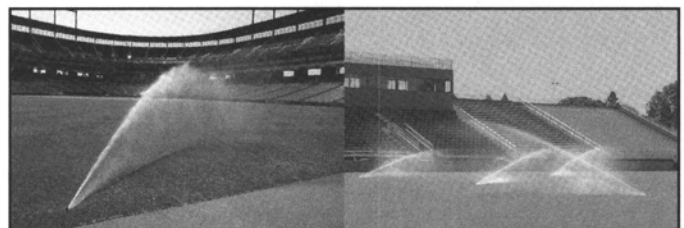
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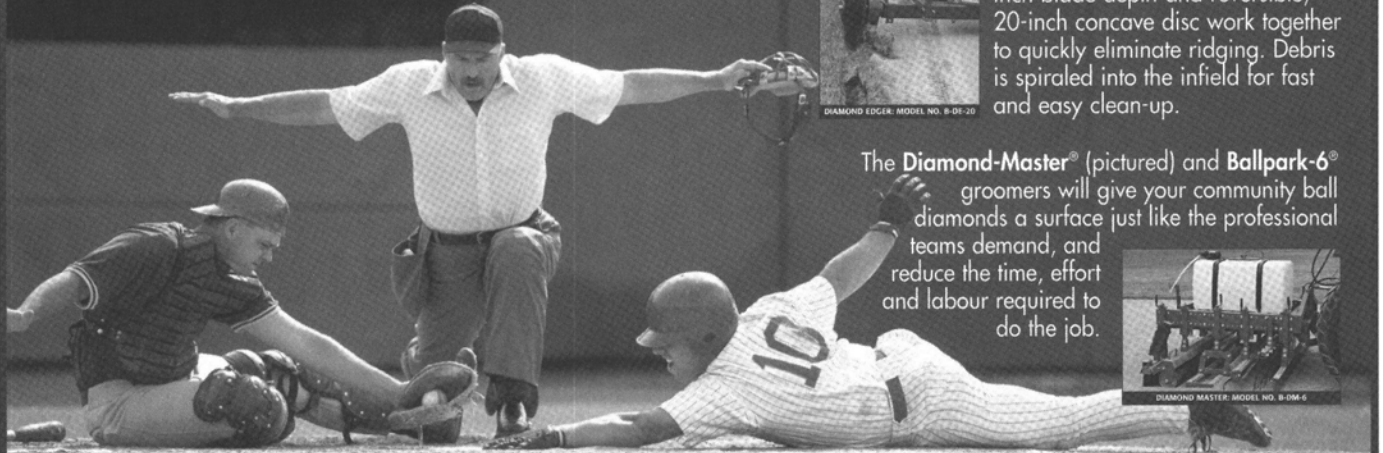
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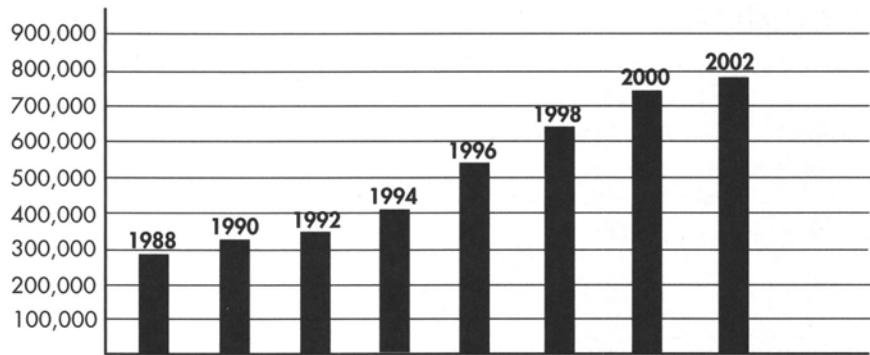
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## Financial Details

A financial and market impact assessment of the project was completed by Deloitte & Touche. Based on that analysis, the operations of the stadium would be sustainable. In addition, the study identified that the construction of the stadium could generate some \$121 million in both direct and indirect spending and 750 jobs. Once operational, it is estimated to generate almost \$7.0 million of annual spending and create about 90 jobs. The stadium is also expected to stimulate local tourism when it hosts high profile international events and exhibitions.

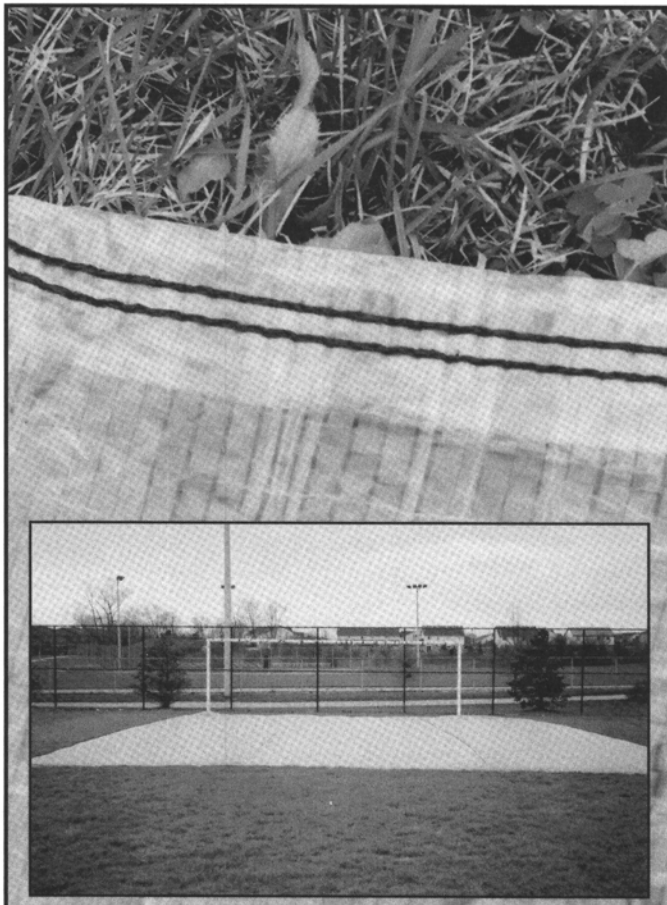
The cost of all the work to date, totaling close to \$600,000, has been supported by the Federation Internationale de Football Association (FIFA) and its overall GOAL development Program. FIFA, the international governing body for world soccer with 204 member nations and headquartered in Zurich, Switzerland, responded positively to a funding request by CSA in support of this stadium project

Canadian Soccer Association Registration Growth 1988-2002



last fall. Since then, CSA has been at work intensively with this announcement representing the culmination of this phase of the stadium project. With IMG Solutions retained as project manager and IMG Canada providing overall guidance and support, all necessary design work as well economic feasibility and impact studies have been fully completed and submitted to the Government of Ontario as part of CSA's overall application for support. Initial meetings have been held

with the City of Toronto, knowing full well that any final decision to be taken on this project must in fact be that of City Council. As well, meetings have occurred with Exhibition Place, the Government of Ontario and others. The announcement by CSA completed the initial phase of research and development. The focus will now shift to detailed meetings with potential stakeholders including all three levels of government, as well as Exhibition Place. ♦ — [www.canadasoccer.com](http://www.canadasoccer.com)



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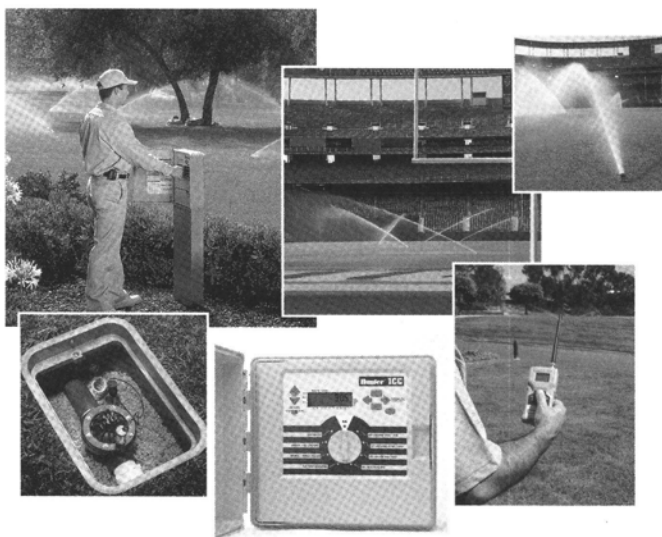
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## Central Irrigation Control Systems – It's Time to Consider

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Water is an integral part of plant health care. For sports fields we need healthy turfgrass to make sure that it is firm yet resilient enough to withstand intensive athletic activities. To maintain that turf we need supplemental watering, as normal rainfall patterns do not always mesh with community activity schedules.

**T**his additional watering can be provided by hand or hose travelers. But by far the most efficient precipitation pattern for an even distribution of water is that devised by nature in the form of rainfall. Our closest approximation to it is to design and install a uniform layout of water emitting devices either above or below soil level.

These "sprinklers" are controlled with a piping system. A series of valves allow us to introduce water into the pipe lines which are then directed over a landscaped area when and where we wish. This irrigation system makes it possible to be

an efficient water manager as well as provide for plant life maintenance.

This dual stewardship has thankfully been assisted by technology. Safe low voltage electricity can turn a valve off or on. Timing mechanisms as simple as mechanical gear boxes or as sophisticated as today's personal computer allow us to sequentially activate these watering systems. Like all other applications of automation technologies, this has freed people to pursue other activities.

Efficient management of these systems still requires frequent adjustment. If enough rain falls there is no need for

supplemental watering, so a timed landscape watering cycle needs to be halted for a period of time. If we are in the middle of a hot and dry summer or have a tournament schedule to meet, an increase in water replenishment may be required. If any cutting or aerifying equipment are needed to operate on the site, then the irrigation system must be scheduled to accommodate it.

Repair and replacement work is also a constant. Public interaction can sometimes lead to vandalism on park sites. As sprinkler systems age some of their components naturally stop performing.

This demand for irrigation system repairs and seasonal adjustments is more than possible to effectively manage for one site with just a single person dedicated to that purpose. As two, three, five or ten more sites are added for maintenance, there arises a need for assistance. This may

be in the form of trained staff or hired professional contracting firms.

From here, a multi-site landscaper or parks manager also take on the task of financial analyst. What portion of a labour budget is allocated for irrigation work? How much money is to be spent on old or inadequate sprinkler system upgrade or repair? What are the parks' water usage bills like and are there directives to limit or reduce these expenditures without sacrificing park quality? Are present staff numbers to remain the same, be allowed to increase, or required to decrease over the next 3 to 10 years?

Then there is the role of emergency coordinator. As sometimes happens, a portion of the park may have flooded or eroded because a sprinkler line broke or a valve failed to close over night. Drought weather conditions may have dictated a need for water restrictions or outright bans for landscape watering purposes.

We can resolve all of these financial and emergency scenarios with regards to landscape watering through automated off-site monitoring and control irrigation systems. Central/satellite control systems allow one to view, record and manage irrigation water use over extended areas from a single location. Through developments achieved in the electronics and communications industries, alarms and fail safe shutoffs are triggered should water or hydro use occur beyond the range of normal consumptions.

These control packages greatly speed up repair response times. Irrigation component problems are pinpointed before reaching the site. Master water valves would have already shut the lines down, without losing thousands of liters

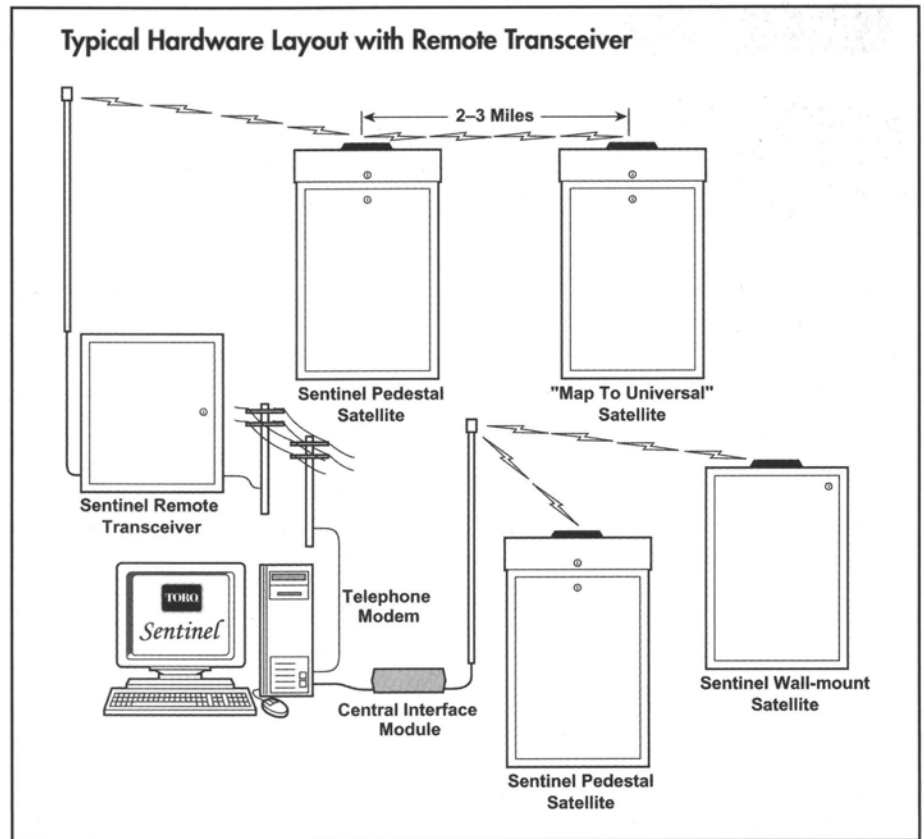


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of water to landscape runoff. Hand-held radios can then be used to turn valves on as required, eliminating the need for reaching into submerged valve box enclosures or directing additional staff to turn a timing switch device on and off.

Supplemental waterings are directed to occur based on complex programming parameters designed to step in only when nature skips a beat. Only as much water as is needed is released from the sprinkler zones to top off the soil reservoir to its optimum mix of oxygen and plant available water.

This type of control has actually been around for decades. While controlling

devices have evolved, golf courses have been making full use of central control technology with great benefit for half a century. Superintendents have been able to adjust watering schedules for their entire golf course from within their offices instead of sending staff out to press buttons on satellite timing boxes placed over hundreds of acres of land.

Golf central irrigation control has advanced to the pace of the evolution of the personal computer. Digital time keeping alone has saved millions of gallons of water over the mechanical clocks of early generation controllers. The sophistication and degree of today's golf

  
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control systems now includes pump station monitoring and evapotranspiration based watering schedules.

One of the innovations of modern golf systems occurred over 20 years ago in the use of uhf frequency radio communication. This not just as a tool for valve actuation for repair functions, but as a means for a central computer to communicate scheduling information to its satellites without having to hard wire everything together. It was this advance in communication technology that made central irrigation control a viable option for non-contiguous sites such as college campuses and cities.

Piggy-backing the telecommunications industry, central control can now transmit and receive programming operations through telephone line or short range radio. Advancing radio technologies like the cellular telephone and the promise of satellite information relay systems are bringing to focus a new all-encompassing

monitoring devices are inserted into each water service pipe line. From this analysis, service adjustments to some of the site irrigation components may be required to achieve optimum uniformity.

A master shutoff valve is also added to react to unexpected water usage. Flows during various stages of irrigation cycle operation are continually measured to ensure that all is operating when and how it should be. If not, an alarm is created while the piping system is shut down automatically. These alarms can even be qualified so that those incidents where water flows remain unstopped immediately page emergency service personnel. For public parks this can translate into a near elimination of unscheduled down time for athletic play due to water damaged landscape.

Best central control practices also require a series of environmental measuring sensors be introduced into the landscape. One or two weather stations

should be set up in regional typifying areas. They would measure several atmospheric factors such as temperature, relative humidity, wind and solar radiation levels to arrive at an accurate assessment of evapotranspiration (ET) loss during the day. This ET figure is communicated generally once a day at a time when sprinklers are not in operation through-

out the system to adjust daily watering schedules. This information is critical to ensure that only the exact water replenishment amount is released through the sprinkler system.

Rain sensors are used on each site to override scheduled irrigation cycles should a cloudburst occur between ET programming relays. More sophisticated rainfall units can even measure the amount of rainfall and relay that to a logged system data base for historical tracking – rainfall

data– stored and recorded for report and review.

Soil moisture sensors retain final veto of sprinkling operations for each site. They are designed to respond to the water holding capacity different soil bases have when being used as subterranean plant water reservoirs. For example, sand based soils would allow for more frequent watering applications due to lower moisture retention capabilities.

With this level of hydraulic control and real time environmental tracking, irrigation systems become a best management process for the plant care regimen. Water consumption may be reduced by 30 to 50 percent annually from previous non-monitored sprinkler methods. Plant material may also be trained for drought tolerance through deep infrequent cyclings of supplemental water.

Central irrigation control systems can also interact with lock and lighting systems through the use of low voltage electric relays. Utilizing a dry contact switch methodology, the system can recognize whether hydro has operated and create alarms similar to those used for water applications.

Central irrigation system control has arrived in the 20th century ready for the 21st. It carries a price in dollars which might not appear fiscally possible given present budgets. It seems initially to be a lot to pay up front for what looks like something as simple as turning water valves off and on. Like all other digital technologies, however, as hardware/software items adapt the latest circuitries unit, costs are coming down. Even at today's market prices for these systems, payback periods of two to five years are not unheard of.

Solid state circuitry continues to shrink all communication and information access into the palm of our hand. The irrigation industry is keeping pace.

The growing scope of a parks management workload that strives to meet higher community service standards demands the use of the best tools available. Water supply agencies demand conservative accountability for all water usage. It is indeed time to consider central irrigation control systems. ♦



wireless network as the communication standard of the future.

The flexibility now inherent in central to satellite would be merely electronic soup without a complete and functioning database of every working sprinkler zone. Each valve operated group of sprinkler heads must be identified and detailed. Expected station flow rates based on manufacturer's published data are then compared to actual flow rates measured through flow meters. These water flow



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