

Turfgrass
Information Center

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Annual Report 2008

MICHIGAN STATE
UNIVERSITY



Turfgrass Information Center

The **Turfgrass Information Center (TIC)**, a specialized unit at the Michigan State University (MSU) Libraries, contains the most comprehensive publicly available collection of turfgrass educational materials in the world. TIC has over 142,000 records in its primary database, the Turfgrass Information File (TGIF), with over 36% linked to the full-text of the item.

The **Turfgrass Information File** is a cooperative project of MSU Libraries and the United States Golf Association (USGA).



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Discover the many ways resources in the **Turfgrass Information** **Center** can support you!

TIC hosts public full-text electronic resources that can be reached from the TIC website. TGIF users also have access to many more full-text electronic resources.



Use the Turfgrass Information File (TGIF) to find information on the use and management of turf in lawns, golf courses, shoulders on roads, athletic fields, parks, or as used in cemeteries.



Students writing interdisciplinary papers on wide ranging topics such as the impact of humans on watersheds can use TGIF to identify information relevant to the topic.

TGIF can be used to support academic programs in landscape architecture and design, horticulture, parks and recreation facility operation, grounds and landscape management, and environmental policy. Of course, TGIF is the best resource available in Turfgrass Science.







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OVERVIEW OF THE TURFGRASS INFORMATION CENTER

The Turfgrass Information Center (TIC) is a specialized unit at the Michigan State University Libraries. It contains the most comprehensive publicly available collection of turfgrass educational materials in the world. The Turfgrass Information File database (TGIF) now has over 142,000 records, and is the main access point for information on turfgrass whether it is in print, electronic, or other formats.





TIC was created in 1983 by an association between MSU Libraries and the United States Golf Association (USGA). Its actual roots began in the 1960s when an initiative to collect turfgrass publications was aided by the donation of the personal collection of pioneering turf agronomist O.J. Noer, through the O.J. Noer Foundation.

The Center has four primary functions:

-  Collect and preserve published and unpublished materials relating to turfgrass science, culture, and the management of turfgrass-based facilities, including golf courses, parks, sports fields, lawns, sod farms, roadsides, institutional grounds, and other managed landscapes.
-  Provide precise and structured online access to TIC collections, as well as other print and electronic turfgrass-related resources, via the TGIF database.
-  Assist users of the collection and online system, by helping them to identify and locate materials that meet their needs.
-  Provide user workspace and cooperative electronic infrastructure to support collaborative turfgrass scholarship.

TIC ENDOWMENT CAMPAIGN

The endowment campaign will provide the financial resources to ensure the ongoing operation of TIC. The continuation of the Center and the production of TGIF are critical because:

-  TIC activities continue a 40+ year effort to collect, inventory, and provide access to the literature of turf science and turf culture, with TGIF serving as the only bibliographic database in the world that exclusively targets these areas.
-  TIC directly supports turfgrass research. Most turfgrass investigators depend on TGIF as their primary resource for identifying turf-related literature, both past and present.
-  TIC and TGIF directly support improved turf education, including certificate, technical, undergraduate, graduate, and continuing education programs for practitioners such as golf course superintendents and sports turf managers.
-  TGIF provides access to more comprehensive information, which translates to improved management of turf facilities including athletic fields, golf courses, and other managed landscapes.

We were pleased to receive continuing multi-year commitments during 2008 from the United States Golf Association Green Section, the Golf Course Superintendents Association of America, the Midwest Association of Golf Course Superintendents, the Sports Turf Managers Association, the O.J. Noer Research Foundation, and The Sports Turf Association.

MICHIGAN STATE UNIVERSITY

Why you should consider making a donation or a further donation to the TIC endowment –

During the late 1970s, the USGA Green Section, which sponsors an enormous amount of turfgrass research, began to notice researchers submitting requests to conduct research that had already been done - often with Green Section support! Why? Because there was no index to the turfgrass literature – no place where one could search “*paspalum salinity*” or “*poa annua seedheads*” and find relevant materials published to date. Why was there no index for turfgrass when indexes for business, medicine, psychology etc. were available in virtually every library? The answer was simple economics. There were not enough turfgrass researchers to provide an adequate market for such a tool.

The research granting process of the USGA Green Section aside, no science can move forward aggressively without a classification of what had already been done. Turfgrass needed such a tool and the Green Section stepped forward to finance the production of an index by underwriting the establishment of the Turfgrass Information Center at the Michigan State University Libraries. MSU was chosen because direct access to the literature is needed for the indexing process, and the MSU Libraries has the most comprehensive collection of turfgrass literature in the world. Beginning in the early 1980s, the staff of the Center began to index and abstract the literature of turfgrass, making it available via the subscription based Turfgrass Information File or TGIF.

By the mid-1990s, TGIF was available via the Web, but subscriptions had not risen to cover operating costs, a validation that the market for such an index was inadequate. Therefore, it was decided to pursue an endowment that would generate enough yearly income to underwrite most if not all of the Center's operational costs. Started with a donation of \$1,000,000 by the Green Section, the goal of the endowment was 3 million dollars. This goal was reached in early 2008, although the value of the endowment has fallen back due to recent economic challenges, to just under 2.5 million dollars.



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In recent years, however, TGIF has been dramatically enhanced. While indexes point searchers at literature that matches their search, it does not provide the full-text of that literature. Traditionally, one went to the library to access the full-text of desired items. Unfortunately, many individuals engaged in turfgrass pursuits, such as golf course superintendents, don't have ready access to a turfgrass collection. Clearly there's a problem – but a solution was available. By digitizing materials and making the full-text available online, IN ADDITION to ongoing indexing, the Center is working to bring digital versions of the content to TGIF and its users. A recent and notable example was the project to digitize the complete back-file of *Golf Course Management* – every page of every issue. Now TGIF users can go directly to any article in any issue of *Golf Course Management* - and it is just one example of a growing list of titles for which full access already exists. Approximately 36% of the materials indexed in TGIF now have the full text available, and that percentage is growing.

While this is a “simple” answer to the problem of access for all users, it is not an inexpensive process. Bluntly put, it was HUGELY expensive to digitize more than 84,000 pages of *Golf Course Management*, as well as the costs associated with maintaining these huge files. These costs require a larger endowment. Undertaking significant full-text digitization efforts has upped the ante, and an endowment of closer to 6 million dollars is now required.

Probably none of you can make the donation that will take the endowment to 6 million dollars directly, but we hope that you will consider making a gift regardless size, and /or encouraging your course, club or membership to do the same. Help us ensure that the world of turfgrass never again finds itself without a record of and access to the literature of turfgrass.

A handwritten signature in green ink that reads "Clifford H. Haka".







Clifford H. Haka
Director, MSU Libraries

TGIF, THE DATABASE

TGIF provides bibliographic and descriptive records of all types of works related to turfgrass culture. The ultimate goal of TGIF is to provide access to all published materials reporting on any aspect of turfgrass and its maintenance.

TGIF Online: Modifications and Changes 2008

In 2008, the following modifications and changes were made to enhance the usability of the web search interfaces and TGIF output:

-  Library of Congress Subject Headings (LCSH) were added to the public web displays.
-  An 'extra software required' warning was added to the brief table display format.
-  Digital Object Identifier (DOIs) were added to the brief table display format.
-  In both TGIF search sessions and Fastlinks, links were created for sections and columns to search for records from the same serial with the same section or column.
-  Crop Science-like citations were made available for records of Fact Sheets.
-  Created modified "WANTED" statement for monographic items where TIC owns only a photocopy but still needs the original.

What is a DOI? Digital Object Identifier is a persistent identifier given to digital objects on the Internet, e.g. documents, data, and images. Unlike the URL system used on the Internet for web pages, the DOI does not change over time, even if the article is relocated. It is a way also to protect the copyright of material on the Internet.

Database Construction

TGIF indexes a wide range of materials including periodical articles, monographs, fact sheets and pamphlets, images, and web documents. Most records in TGIF contain informative abstracts; some contain full-text or are linked to web-accessible full-text. Records in TGIF are indexed using controlled vocabulary from the *Turfgrass Thesaurus*, produced by the Turfgrass Information Center, with additional identifiers where needed.

TGIF Summary Construction Statistics

This table shows the number records created each year from 2003–2008.

	2008	2007	2006	2005	2004	2003
TGIF Construction Statistics						
New records created	11,749	12,259	9,732	9,035	7,448	8,423
Toro Foundation subset	2,635	2,668	2,633	2,637	2,623	1,873
Issues closed ¹	1,483	1,782	2,351	2,015	n/a	n/a
Zero-hit issues ²	518	769	633	836	n/a	n/a
Records modified in current year, but created previously ³	34,659	20,388	18,440	14,623	n/a	n/a
% Full-text	36%	33%	24%	21%	n/a	n/a
Total records in database	142,481	130,732	118,473	108,741	99,707	92,266

¹ The issues closed are periodical issues which have had the descriptive record, indexing, and abstracting completed on all articles selected for inclusion in TGIF.

² The zero-hit issues are periodical issues which were reviewed but no articles were selected for inclusion in TGIF.

³ The records modified in the current year are records that were edited or enhanced.

Snapshot Status of TGIF: 2008

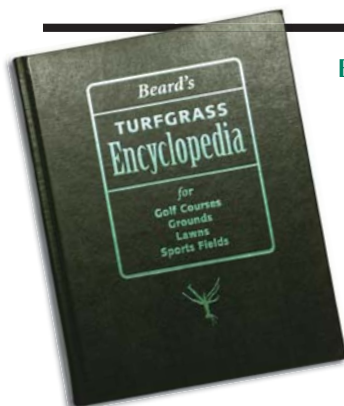
Record Completion	Number
Descriptive Records	100%
Abstracted Records	59%
Indexed Records	72%
Indexed and Abstracted Records	57%
Full-text Available Records	36%
Full-text Searchable Records	5%
Full-text Available, Indexed and Abstracted Records	22%
Full-text Available, Indexed, Abstracted Records, and Full-text Searchable Records	3%

Once a descriptive record has been created, it is in TGIF and becomes available. As such, the number of descriptive records equals the number of TGIF records. Indexing and abstracting are processes that take longer and the percentages will not equal 100% of TGIF records. The full-text searchable records process is more time intensive and requires copyright permission so the percentage of TGIF records with full-text will be less.

Toro Foundation Project

In Year VI of a series of Toro Foundation grants to support the retrospective indexing of materials published prior to 1984, a total of 2,635 new descriptive bibliographic records were added to TGIF. The periodical titles that now have additional content identifiable within TGIF include:

- ✱ *The Bull Sheet* [MAGCS]—an additional 969 records. This effort almost completes the indexing of this periodical (along with its successor, *On Course*) to provide access to the complete run of the Midwest Association of Golf Course Superintendents' periodical, fully integrated with the magazine's soon-to-be-launched archive site (covering 1948–present).
- ✱ *Agronomy Journal*—an additional 27 records, which completes the retroprocessing of the turf-related content from this important refereed journal.
- ✱ *The Golf Course*—this periodical, previously unrepresented in TGIF, was published between 1916–1921. Loaned issues from GCSAA and the Center for Research Libraries (CRL) enabled us to add 120 records from this source, now also digitized and available for browsing within the publicly accessible portion of the “Browse Full Text” section.



Beard Encyclopedia

Entries from *Beard's Turfgrass Encyclopedia for Golf Courses, Grounds, Lawns, Sports Fields* are available online! Entries for all terms from the encyclopedia are accessible, in full, through the TGIF Basic Search. If a turf-related term is typed in the search field, the encyclopedia entries related to that term will appear at the top of the search results. Clicking on the “Title,” of the result will link to the full-text version of the entry as it appears in the *Encyclopedia*. To order the printed *Encyclopedia* visit <http://msupress.msu.edu/bookTemplate.php?bookID=2549>

- ✱ *The Grass Roots* [WGCSA]—an additional 91 records. This title will be an upcoming digitization project, cooperatively with the Wisconsin Golf Course Superintendents Association (WGCSA), covering the publication's run beginning in 1975.
- ✱ *The National Greenkeeper*—an additional 811 records, which completes the retroprocessing of this important early industry periodical (1927-1933).
- ✱ *Proceedings of the National/International Golf Course Conference & Show* [GCSAA]—an additional 195 records, which completes TGIF processing of the known and available annual issues, 1927-1998, of these conference proceedings.
- ✱ Miscellaneous pre-1984 monographic sources, including 59 theses, 34 dissertations, 33 extension bulletins/fact sheets/other booklets, 62 book chapters, 93 books & technical reports, etc. (published 1865-1983)—totaling 281 records.

To view a set of sample TGIF records processed during this sixth year of processing:
<http://www.lib.msu.edu/cgi-bin/flinkss.pl?srch=Torosamples08>

As a result of the Toro Foundation's generosity, 36 student employees worked part-time within TIC to add bibliographic records for older turfgrass research and management materials.

During the six years of Toro support for the project, 15,060 records were added to TGIF.

TIC USE AND USERS

Most of the use of the Center revolves around online access to TGIF, the database. In addition, the TIC public website is used to find information about TGIF and how to use it, how to subscribe to TGIF, and other information about the Center.

Subscription information as an academic, association, corporate, or individual to TGIF can be found at: <http://tic.msu.edu/subscribe.html>

Academic Institutions with Campus Wide Access

The perpetual institutional subscribers now represent 36 states in the USA, 4 Canadian provinces, and 5 other countries.

- | | |
|---|--|
| • Abraham Baldwin Agricultural College – Georgia | • Kansas State University |
| • California Polytechnic State University | • Kishwaukee College – Illinois |
| • Central Piedmont Community College – North Carolina | • Michigan State University |
| • Clemson University – South Carolina | • Mississippi State University |
| • Colorado State University | • Myerscough College – United Kingdom |
| • Cranfield University – United Kingdom | • National Agricultural Library – USDA |
| • Elmwood College – Scotland | • New Mexico State University |
| • Fairview College – Alberta | • North Carolina State University |
| • Iowa State University | • North Dakota State University |
| | • Nova Scotia Agricultural College |
| | • The Ohio State University |

- Oklahoma State University at Oklahoma City
- Olds College - Alberta
- Oregon State University
- Pennsylvania State University
- Purdue University – Indiana
- Red River College – Manitoba
- Rutgers University – New Jersey
- Sheridan College – Wyoming
- South Dakota State University
- Southern Illinois University
- State University of New York, Cobleskill
- State University of New York, Delhi
- Sveriges Lantbruksuniversitet – Sweden
- Teagasc College of Amenity Horticulture – Ireland
- Texas A&M University – College Station
- University of Arizona
- University of Arkansas – Fayetteville
- University of Connecticut
- University of Florida
- University of Georgia
- University of Guelph – Ontario
- University of Hawaii – Manoa
- University of Illinois at Urbana – Champaign
- The University of Maryland
- University of Minnesota – Crookston
- University of Minnesota – Twin Cities
- University of Missouri – Columbia
- University of Nebraska – Lincoln
- University of Pisa – Italy
- University of Queensland – Australia
- University of Rhode Island
- University of Tennessee – Knoxville
- University of Western Australia
- University of Wisconsin – Madison
- University of Wisconsin – Stout
- Utah State University
- Writtle College – United Kingdom

Organizational Blanket-Access Agreements

Members of these organizations can access the TGIF database from within their website:

-  American Society of Golf Course Architects (ASGCA)
-  Canadian Golf Superintendents Association (CGSA)
-  Golf Course Superintendents Association of America (GCSAA) Class A or SM
-  Michigan resident (access via MeL)
-  Midwest Association of Golf Course Superintendents (MAGCS)
-  Sports Turf Association (STA)
-  Sports Turf Managers Association (STMA)
-  Turfgrass Producers International (TPI)

Corporations with Blanket Access

Several turfgrass industry corporations have arranged ongoing access for their research, technical, regulatory, or product support staff, via their own intranets.

Individual Subscribers with their own Logon

Currently individuals with their own logon can be found on 6 continents.

TIC and TGIF Summary Use Statistics

	2008	2007	2006	2005	2004	2003	2002	2001	2000
TGIF Search Statistics									
Total TGIF Searches	104,749	84,957	68,640	57,860	46,402	39,460	41,495	36,820	34,453
TIC-hosted Electronic Resource Searches	19,902	17,974	16,490	18,126	10,803	743	62	n/a	n/a
Fastlinks	776,007	248,976	186,198	76,789	18,905	10,060	4,050	2,039	573
Total Searches and Fastlinks	900,658	351,907	271,328	152,775	76,110	50,263	45,607	38,859	35,028
TIC Public Website									
Users Sessions	14,189	10,523	21,264	15,699	9,329	8,578	n/a	n/a	n/a

Total TGIF searches are the number of searches in the Web-version of TGIF. Fastlinks are found in many places, including the TIC Public Website, *The Sward*, TIC Blog, Google, TERO reports, in emails sent in response to a question or to authors who have given permission for their material to be digitized, such as dissertations and theses, and many other places. TIC Public Website User Sessions are the number of times for the year that people have gone to <http://tic.msu.edu> to either logon on to TGIF or look up information the Center provides about itself, TGIF, and TIC's activities.

What is a Fastlink? "Fastlinks" are a database capability which can be described as a form of "deep linking." Essentially, this is the ability to create a URL (= hot link) which can burrow into a database (such as TGIF) and retrieve a specific set of records (or a specific record) in a specific presentation format, without the user even necessarily being aware of what has actually occurred. To the user, it is "just another hot link."

What is a TGIF session? The set of TGIF database screens that any particular user of the database sees when online is called a 'session'. Some types of TGIF users, students for example, do not have access to extra-cost services such as document delivery. At present, all TGIF users do have access to the same database content, including full-text digitized archives.



HIGHLIGHTS OF EFFORTS FOR COOPERATORS

Digitization

Access to full-text research reports or other management content is a serious challenge for turf professionals, as most do not live next to a research library; however, this is changing. The Turfgrass Information File (TGIF), originally conceived to index and abstract the literature of turfgrass, has taken dramatic steps to increase usability for users to directly access the full-text of identified articles and other items of interest – over 36% of TGIF records now link in this way!


More needs to be done to provide full-text access to a greater percentage of the 142,000+ entries now searchable within TGIF, but the challenge in most cases is that publishers who hold the copyright to these materials may not allow TGIF to digitize and make available the back file of their publications, even when sales of older materials virtually cease.


The Turfgrass Information Center, with your help and support, stands ready to make the desire for expanded access a reality. Please contact us to discuss your organization or firm's publication(s) willingness to make these publications available in this way, and look over our digitization prospectus/operational questionnaire (Word file) (<http://tic.msu.edu/digitization-prospectus.doc>). Everyone gains from such an effort: your members or clientele, your advertisers, and the broader world of turf science in general.

A “**moving wall**” in publishing refers to the time period between the last issue of an periodical available in a given online archive and the most recently published print issue of a periodical. It is specified by publishers in their license agreements with databases (like TGIF), and TIC's currently range from one month to two years.

During 2008, TIC continued digitization of materials from its various contributors.

United States Golf Association (USGA)

 RSS (Really Simple Syndication) Feed—a popular technology for notifying users of updates to content in a website or blog—created for *TERO*:
<http://usgatero.msu.edu/taero.xml>.

Title & Location (URL)	Issues Linked in 2008	TGIF Records Added in 2008	Total TGIF Records
<i>USGA Green Section Record</i> http://turf.lib.msu.edu/gsr	6	76	5,574
<i>USGA Turfgrass and Environmental Research Online (TERO)</i>  http://usgatero.msu.edu	19	19	159
<i>USGA Turfgrass and Environmental Research Summary</i> http://tic.msu.edu/usgarsindex.html	1	64	999

USGA® GREEN SECTION RECORD

PERIODICALS SINCE 1921

Providing the Game of Golf with Pertinent Information on Turfgrass Management

Help Us Grow!



ISSN 0041-5502



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Browse a decade (year)

2000s

1990s

1980s

1970s

1960s

1950s

1940s

TERO Home

RSS Feed



Browse TERO Articles
Click Here!
sorted by



Turfgrass and Environmental Research Online

...Using Science to Benefit Golf

USGA Turfgrass and Environmental Research Online (TERO) (ISSN 1541-0277) is an online journal published by the United States Golf Association and the Michigan State University Turfgrass Information File (TGIF) at the Michigan State University of research projects funded under USGA's Turfgrass Research Program.

Past Issues sorted by:

Date

2004 | 2003 | 2002

Detail

essarakli, M., N. Gessler, and D. Kopec. 2008. Growth responses of saltgrass (*Distichlis spicata*) under sodium chloride (NaCl) salinity stress. *USGA Turfgrass and Environmental Research Online* 7(20): 1-7

United States Golf Association (USGA)
Cooperative Digital Archives

Home

Search USGA Research Summaries
Click Here!

USGA Turfgrass & Environmental Research Online
USGA Green Section Record

Terms and Conditions of Use

USGA Green Section Research Committee

Director of Green Section Research,



Turfgrass and Environmental Research Program

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Browse by Date

2000s

2008 USGA Turfgrass and Environmental Research Summary
2007 USGA Turfgrass and Environmental Research Summary
2006 USGA Turfgrass and Environmental Research Summary
2005 USGA Turfgrass and Environmental Research Summary
2004 USGA Turfgrass and Environmental Research Summary



AND PRECEDING TITLES

Full Database Search Now!
Turfgrass Information File



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Proceedings of the GCSAA Conference

The National Greenkeeper

Golf Course Management (1979-Present) | Golf Superintendent (1966-1978)

Golf Course Reporter (March 1951-1965) | Greenkeepers' Reporter/Bulletin (July 1933-January 1951)

Browse Golf Course Management (1933-Present)

Jump to: 2000 1990 1980 1970 1960 1950 1940 1930



2009
(Vol. 77)

2008
(Vol. 76)

2007
(Vol. 75)

About

Browse

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Golf Course Management

The National Greenkeeper

Full Database Search Now!
Turfgrass Information File



Browse Proceedings of the GCSAA Conference (All Years as Published 1927-1998)

Jump to: 1990 1980 1970 1960 1950 1940 1930

Have copies of issues not listed or information currently unknown in the list below? Please contact GCSAA.



1998 Conference Proceedings: 69th International Golf Course Conference & Show (#69) (Anaheim, California: February 2-8)






1997 Conference Proceedings: 68th International Golf Course Conference & Show (#68) International Summit: 68th International Golf Course Conference & Show (Las Vegas, Nevada: February 6-12)



1996 Conference Proceedings: 67th International Golf Course Conference & Show (#67) (Orlando, Florida: February 5-11)

Golf Course Superintendents Association of America (GCSAA)
Cooperative Digital Archives

Golf Course Superintendents Association of America (GCSAA)

-  Completed archive site for the *Proceedings of the GCSAA Conference* (all years as published (1927–1998).
-  Completed archive site for *The National Greenkeeper* (1927–October 1933).
-  Completed archive site for *The Golf Course* (1916–August 1921).

Title & Location (URL)	Issues Linked in 2008	TGIF Records Added in 2008	Total TGIF Records
<i>Golf Course Management</i> (and predecessor titles back to 1933) Restricted	12	354	10,927
<i>Proceedings of the GCSAA Conference</i> Restricted	58	0	1,697
<i>The National Greenkeeper</i> http://archive.lib.msu.edu/tic/ngkic/index.html	82	631	1,176
<i>The Golf Course</i> (cooperatively with the Center for Research Libraries and GCSAA) http://archive.lib.msu.edu/tic/gcmb	19	120	120

Canadian Golf Superintendents Association (CGSA)

Title & Location (URL)	Issues Linked in 2008	TGIF Records Added in 2008	Total TGIF Records
<i>GreenMaster</i> Restricted	6	161	2,036

Sports Turf Managers Association (STMA)

Title & Location (URL)	Issues Linked in 2008	TGIF Records Added in 2008	Total TGIF Records
<i>SportsTurf</i> Upcoming	Upcoming	607	1,733

Midwest Association of Golf Course Superintendents (MAGCS)




-  Preliminary design of the digital archive site for *Bull Sheet/On Course*.

Title & Location (URL)	Issues Linked in 2008	TGIF Records Added in 2008	Total TGIF Records
<i>On Course/ Bull Sheet</i> Upcoming	527	897	2,622

Wisconsin Golf Course Superintendents Association (WGCSA)

Title & Location (URL)	Issues Linked in 2008	TGIF Records Added in 2008	Total TGIF Records
<i>The Grass Roots</i> Upcoming	Upcoming	474	1,534

International Turfgrass Society (ITS)

-  Copyright permissions clearance has been sought from authors.
-  For materials within “moving wall” (see pg. 8 sidebar for explanation)
 - 820 authors granted copyright permission
 - 934 are remaining for copyright permission
-  Linked digitized PDF articles with all authors having consented to TGIF records
 - Currently 436 linked
 - 832 remaining



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FEBRUARY (FÉVRIER) | APRIL (AVRIL) | JUNE (JUIN) | AUGUST (AOÛT) | OCTOBER (OCTOBRE) | DECEMBER (DÉCEMBRE)

February 2008

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Canadian Golf
Superintendents
Association (CGSA)
Cooperative Digital
Archive



International Turfgrass Society Journals and Proceedings



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International Turfgrass Society Research Journals:

2005 [Volume 10: Llandudno, Wales, UK](#)

Editor: Daniel Thorogood

2001 [Volume 9: Toronto, Ontario, Canada](#)

Editor: K. Carey

-International Turfgrass Society Research Journal-

featuring peer-reviewed papers

See also [International Turfgrass Society Annexe - Technical Papers](#), including non-peer-reviewed papers

****For articles without links, not all authors have granted permission.****

[A print version](#) of this content is available for purchase

Browse Volume 10: July 2005 in Llandudno, Wales, UK

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Welcome...

The International Turfgrass Society

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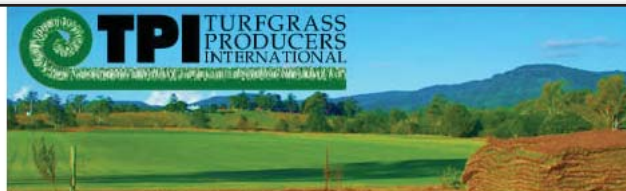
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Turf News

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[Subscription Information \(Membership\)](#)

[Full Database Search Now!](#)
Turfgrass Information File

Welcome...

Coverage: 1977-Present less 6 issues

Publisher: [Turfgrass Producers International \(TPI\)](#)

About Turf News



Turf News is the only magazine devoted exclusively to turfgrass, published bi-monthly (every other month) by Turfgrass Producers International (TPI).

The purpose of *Turf News* magazine is to provide information on turfgrass operations. The magazine's content ranges from turfgrass advancements and nutrients, to technological breakthroughs and numerous other related topics.

Browse Turf News

Coverage: 1977-Present Less 6 Issues

Gray-shaded years include issues within moving wall* of 1 year



2005	2005	2006	2007	2008	
2000-2004	2000	2001	2002	2003	2004
1995-1999	1995	1996	1997	1998	1999
1990-1994	1990	1991	1992	1993	1994
1985-1989	1985	1986	1987	1988	1989
1980-1984	1980	1981	1982	1983	1984
1977-1979			1977	1978	1979

Turfgrass Producers International (TPI)
Cooperative Digital Archive



INTERNATIONAL TURFGRASS BULLETIN



Sports Turf Research Institute (STRI)
Cooperative Digital Archives

Continues
Sports Turf Bulletin

Volumes currently online:
Publisher: [Sports Turf Research Institute](#)

Welcome...



JOURNAL OF TURFGRASS AND SPORTS SURFACE SCIENCE (2002-2007)

Continues

Journal of the Board of Greenkeeping Research (1929-1950)
The Journal of The Sports Turf Research Institute (1951-1996)
Journal of Turfgrass Science (1997-2001)



Volumes currently online: [1929-2007](#)
Publisher: [Sports Turf Research Institute](#)

ISSN: 1367-8361

Welcome...



The Sports Turf Research Institute, STRI, is an independent market leader in turfgrass research and agronomy. Located in Bingley, West Yorkshire, STRI is the UK's National Centre for Sports & Amenity Turf.

Established in 1929 by the Home Golf Unions and the Royal & Ancient Golf Club of St Andrews, STRI undertook research and provided advisory services for golf clubs. By the 1950's the work of the STRI had expanded to include sports turf and amenity grass areas.

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Turfgrass Information File

Turfgrass Producers International (TPI)

Title & Location (URL)	Issues Linked in 2008	TGIF Records Added in 2008	Total TGIF Records
<i>TurfNews</i> Restricted	6	89	2,038

Michigan Turfgrass Foundation (MTF)

Title & Location (URL)	Issues Linked in 2008	TGIF Records Added in 2008	Total TGIF Records
<i>Proceedings the Michigan Turfgrass Conference</i> Upcoming	27	0	1,660

Sports Turf Research Institute (STRI)

Final issue of *Journal of Turfgrass and Sports Surface Science* loaded.

Added the full-text of all Enquiries and Replies (over 700 records).

Title & Location (URL)	Issues Linked in 2008	TGIF Records Added in 2008	Total TGIF Records
<i>International Turfgrass Bulletin</i> Restricted	4	52	1,492
<i>Journal of Turfgrass and Sports Surface Science</i> (and predecessor titles back to 1929) Restricted	2	7	1,746

Milwaukee Metropolitan Sewerage District (MMSD)

The on-slide information from 3,819 Noer slides was harvested, completing this task for all numbered slides.

Five hundred slides were digitized in archival quality.



August 1952: Verhaalen shows a Williams levered cup-cutter.

American Society of Golf Course Architects (ASGCA)

Began construction on Thomas E. Clark gallery within the ASGCA Architect's Gallery (<http://golfarchitects.lib.msu.edu>).

Sports Turf Association (STA)

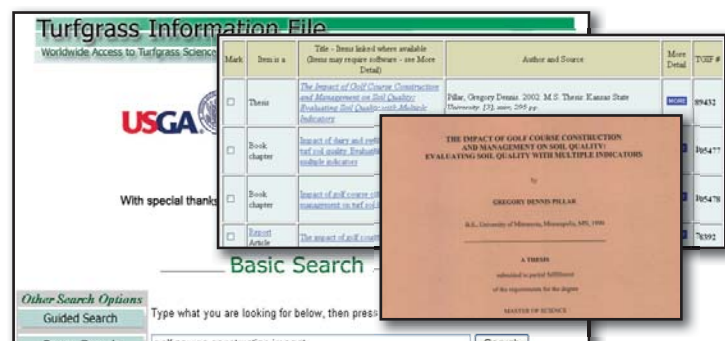
Began the design for the *Sports Turf Manager* archive site.


Theses and Dissertations

TGIF includes records for 2,103 theses and dissertations.

From the TGIF record, 239 theses/dissertations are linked as available in full-text form. Of these, 108 have been digitized by MSU Libraries. The remaining titles are linked to other internet locations.

Work continues on providing increased full-text access to turf-related theses and dissertations.





American Society of Golf Course Architects

Architect's Gallery

Featuring ASGCA members and their work

[Chronological Architect's Gallery](#)

Architects with a full Gallery entry:


[Cornish, Geoffrey S. \(Fellow\)](#)
[Dye, Alice O'Neal](#)
[Fazio, Thomas](#)
[Garbin, Ferdinand \(Fellow\)](#)
[Hills, Arthur](#)
[Jones, Rees](#)
[Maples, Dan](#)
[Marzolf, Thomas A.](#)

Architects of Distinction Prior to ASGCA

[Bendelow, Thomas](#)

Gallery entries for the remaining ASGCA members link to their current ASGCA page is provided.

ASGCA Home
About the Society
Contact ASGCA
Gallery Home
About the Gallery
Search the Gallery
Contact TIC



TIC Home

American Society of Golf Course Architects (ASGCA) Cooperative Digital Archive

Architect's Gallery

Featuring ASGCA Members and their work

Tom Fazio
1945 -
Fazio Golf Course Designers, Inc.
Jupiter, FL; Scottsdale, AZ; Hendersonville, NC

[Biographical Sketch](#)
[A Conversation with Tom Fazio](#)
[Philosophy of Design](#)

Original Course Designs by Name

Thomas Fazio

Original Course Designs by Name

[previous menu](#)
[Send Feedback!](#)

powered by the turfgrass information center **tic**

Displaying 103 items

Facility Name	Location	Construction Year
Amelia Island Plantation - Long Point Course	USA: Amelia Island, Florida	Currently not available
Barton Creek Resort - Fazio Canyons Course	USA: Austin, Texas	Currently not available



GCSAA

The National Greenkeeper

[About](#)
[Browse](#)
[Search](#)
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Full Database Search Now! Turfgrass Information File

Browse The National Greenkeeper

Year	Issues
1927	January May September
1928	January May September
1929	January May September
1930	January May September
1931	January May September




THE GOLF COURSE

(1916-1921)

A Monthly Bulletin Devoted to the Discussion of Modern Methods as Applied to Golf Course Construction and Upkeep

[About](#) [Browse](#) [Search](#) [Conditions of Use](#)

Full Database Search Now! Turfgrass Information File

Browse The Golf Course

Year	Month	Vol. #	Issue #
1916	January		1
	February		2
	March		3
	April		4
	May		5
	June	1	6
	July		7
	August		8

Digital Archives of Historical Publications, *The National Greenkeeper* and *The Golf Course*.

COLLECTIONS

James B Beard Turfgrass Library Collection

Professor James B Beard donated his turfgrass library collection to the Michigan State University Libraries in 2003. It forms a distinctive entity within the Turfgrass Information Center's Collection that had its origins in Beard's research while he served on the faculty at Michigan State University from 1961 until 1975. Since no significant body of turf materials existed in any university library, he recognized both the need for and the opportunity to build a literature collection in support of turf science, research, and teaching. His involvement was critical to both the Noer Collection and his own.

During 2008, Dr. Beard continued to transfer materials including both monographic and periodical content to MSU, totaling some 1,387 items. Other notable donations were made to the Beard Collection, including back issues of *Turf Times* (Northern Michigan Turf Manager's Association) by Mr. Michael Morris, Crystal Downs G.C.

For more information about the Beard Collection see:
<http://tic.msu.edu/beard.html>



Generous donations by James B Beard (top) and the O.J. Noer Research Foundation—in memory of O.J. Noer (bottom)—are core collections in the TIC.

O.J. Noer Memorial Turfgrass Collection

Beginning with the arrival of portions of the personal collection of O.J. Noer in 1968 (transferred to MSU via the O.J. Noer Research Foundation), the O.J. Noer Memorial Turfgrass Collection has continued as the strongest publicly accessible library of materials relating to turf science and culture in the world. The Noer Foundation continues to support Collection development, and the TIC Endowment Campaign. Our thanks for their continued vision and support!

Throughout 2008, donations and new acquisitions continued to build the Noer Collection. Newly-published turfgrass-related materials, as well as all identified, available, and affordable historic turf materials are purchased by the MSU Libraries on an ongoing basis, if publishers, authors, or interested third parties do not otherwise donate them to the Collection. TIC would, of course, prefer items to be donated, in order to use scarce resources to acquire additional materials for the Collection.

For more information about the Noer Collection see: <http://tic.msu.edu/noer.html>








Historical Acquisitions

Several items of historic significance were purchased for the Noer Collection during 2008. See the list as reflected in their TGIF records here:

<http://www.lib.msu.edu/cgi-bin/flinkss.pl?srch=NOEROLDBUYS08>

Donations to the Collection

Several significant, large-scale transfers of materials were donated, so that TIC can continue to build and further enhance the uniqueness of the Noer Collection. During 2008, we have received these donations of particular note:

-  USGA Green Section (Golf House—National Green Section Office, Research, and Regional Offices, especially the Mid-Atlantic) — A continuing stream of items, including periodicals, technical reports, books and booklets, theses and dissertations, conference proceedings, and annual research reports. The Green Section's ongoing, sustained effort to make sure we have materials in hand to both process for TGIF and build the collection is very much appreciated. Thanks especially to Jim Snow, Kimberly Erusha, and Mary McConnell at Golf House; to Mike Kenna of Turf Research; and to Stan and Marti Zontek for sustained transfer efforts from Pennsylvania.
-  Mr. Luke Cella, Midwest Association of Golf Course Superintendents — A partial run of *The Bull Sheet* and *On Course*, in support of digitization efforts on these titles.
-  Mr. Gary Mannies and Ms. Nancy Spraggins, Best Approach Publications — Multiple shipments of recent golf course yardage guides produced by Best Approach, totaling 127 in 2008. This firm is the first of the yardage guide publishers to supply these items on an ongoing basis.
-  Ms. Margo Campbell Szabo, GCSAA — Several boxes of local GCSAA affiliate newsletters & magazines, as well as the loan of a partial run of *The Golf Course*, in support of digitization of this title.
-  Mr. Jerry Davis, Golf Associates Scorecards — 21 scorecards.
-  Mr. Cliff Haka, MSU Libraries — Several partial runs of golf periodicals and a continuing supply of yardage guides and scorecards.
-  Mr. Frank Roggenbuck and Mr. Mark Collins, Hancock Turfgrass Research Center, MSU — Several boxes of turf periodicals, continuing their ongoing transfer of materials to us.

In addition, ongoing donations of items from a wide range of individuals are important, necessary and appreciated to continue to build a comprehensive collection. We thank all our donors!

Do you have materials which could help researchers, students, and scholars better understand the rich history and tradition of turf culture? Consider giving them a permanent home, accessible, retrievable, and preserved, in a known, public, and secure location as a part of the Noer Collection. See <http://tic.msu.edu/needs.html> for further information about items which we seek.

Continuing Acquisitions for the Collection

Acquisitions for the Collection continue on an aggressive basis by the MSU Libraries as a part of the ongoing efforts to build the Collection.

Of particular note during 2008 was a significant push to acquire non-English turfgrass titles, especially Chinese and German materials. The Chinese turfgrass

literature has exploded over the past ten years. Over 50 Chinese turfgrass books were acquired during 2008 and are now described within TGIF. Students working in TIC enrolled in the joint American–Sino Turfgrass Education Program did much of this processing for TGIF.

A list of sample titles acquired this past year for the Noer Collection are available at:

<http://www.lib.msu.edu/cgi-bin/flinkss.pl?srch=NOERNEWBUYS08>



A sampling of Chinese language materials available in the Turfgrass Information Center.

OUTREACH AND PUBLICITY

Currently there are two main methods of communication: *The Sward*, the quarterly publication of TIC, and the TIC blog (<http://tic.msu.edu/blog.html>). Both communication tools highlight additions and enhancements to the TGIF database and digital archives, happenings within the unit, and visits to TIC by scholars and other people of interest from around the world. Readers can also find useful tips for using TGIF, factoids about turfgrass, about TGIF, and about TIC.

Non-English 'About TIC' Webpages

In addition to the already available Spanish, French, and German language webpages which briefly describe TIC and TGIF, we are now pleased to announce the availability of a Chinese language page to do the same, as well as a Chinese 'TGIF Database Description' page linked from there. Special thanks for these to Wu Di, a student from the American–Sino Turfgrass Education Program working in TIC during Fall term, and Wen-ying Lu, a MSU Librarian, for producing these pages.

MICHIGAN STATE UNIVERSITY LIBRARIES

The Turfgrass Information Center

<ul style="list-style-type: none"> About TIC Services Advisory Council Press Releases Contact TIC About Home 	<p>密歇根州立大学图书馆草坪信息中心</p> <p>Deutsch Español Français English 中文</p> <p>密歇根州立大学图书馆于1960年代开始收藏草坪文献。1968年O. J. Noer基金会将农艺学弗罗O. J. Noer的私人藏书捐赠给本馆。之后本馆接受的捐赠包括超过十四万张Noer/Milorganite® Division MMSD无限期借给本馆的幻灯片，Scotts Company公司档案，以及最具重要性的James B Beard草坪馆藏。现今公立草坪资源馆藏中，本馆的草坪馆藏公认为最广阔。</p> <p>美国高尔夫球协会（USGA）草坪研究组于1983年至1992年间赞助USGA草坪信息数据库（TGIF）的建立。该电子数据库以Noer的捐赠为基础，有系统地记录草坪研究出版物并提供文献记录。</p> <p>点击阅读更多关于草坪信息中心20周年纪念活动</p> <div> </div> <p>如今，用户可在网上检索TGIF数据库。该数据库使用了超过十二万五千条检索款目以及超过三十万个关键词，在公共互联网上具有广泛的影响力。</p>
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STAFFING

Volunteers and Interns

Interns from library and/or information science graduate programs provide staffing for projects that might not otherwise be completed for years. These placements have historically been from the University of Michigan and Wayne State University, but TIC welcomes interns from other programs.

Volunteers such as retired faculty contribute time and expertise to work on projects that the staff and student employees would not have the time to complete or the knowledge to complete.

Dr. Douglas Hawes has provided an invaluable contribution to TIC in his continuing work of indexing the extensive collection of slides made from the photographs of O.J. Noer and others. He has also served as the guest editor for several Turf Topics including in 2008 “Soil Salinity” and “Effluent Water Use”.

Student Employees

The TIC student workforce combines the highest number of turf students ever working together for the department with students from varied degree programs including mechanical engineering, teacher education, international studies, German, criminal justice, journalism, music therapy, and others. The students do multiple tasks that include basic descriptive record inputting, indexing, abstracting, and peer-reviewed proofing. One student in particular has written nearly 6,000 abstracts for the TGIF database in the past 3 years! While abstracting is her primary task this is a remarkable achievement considering that she has been given a multitude of other “special projects”. She is the Abstracting Student Leader, along with being a full-time student, and has further designated herself the “Director of Athletic Performance and Discipline” in the student-created, after-hours “Turfgrass Basketball Association” group. The TIC students have great working relationships and their efforts are vital to helping the unit achieve our goals. We thank them for their efforts!

Full-time Staff

Sue Depoorter, *Serials Management and Supervisor of Student Employees*, has been with the MSU Libraries since 1985 and with TIC since 1999. Her primary responsibilities at TIC are overseeing the student budget, student employee hiring and supervision, handling serials, and processing orders for purchasing materials to add to the collection.

Michael Schury, *Digitization; TGIF, TIC Website, Related Websites, and Database Maintenance*. Mike was a student employee at TIC while finishing bachelor's degrees in accounting and psychology, then rejoined TIC as a full-time staff member in 2005. His current duties include project management of digitization efforts, overseeing website changes, student supervision relating to digitization projects, and development work on database structures and search interfaces for the TIC online system.

Leslie Behm, *Publicity, Outreach, Web Harvesting*, joined MSU Libraries in 1978 and has been with TIC since October 2006. Leslie's primary responsibilities in TIC include maintaining the TIC Blog, production of the TIC newsletter, *The Sward*, and training materials related to TGIF, and web harvesting.

Pete Cookingham, *Project Director*, joined the MSU Libraries in 1985 as the only full-time librarian devoted to the subject area of turfgrass. His background is in recreation and park administration with a B.S. and work on a masters from University of Wyoming. His information and library science masters is from the University of Illinois. Pete provides the oversight for TIC and the development of TGIF working closely with supporters of TIC, as well as guiding the work of the staff and the student employees of TIC.

Library Administration

- **Clifford H. Haka**, Director of MSU Libraries.
- **Faye Backie**, Associate Director for Public Services Division, of which TIC is a unit.
- **Diane Nye Mattick**, Director of Development for Libraries, Computing & Technology.

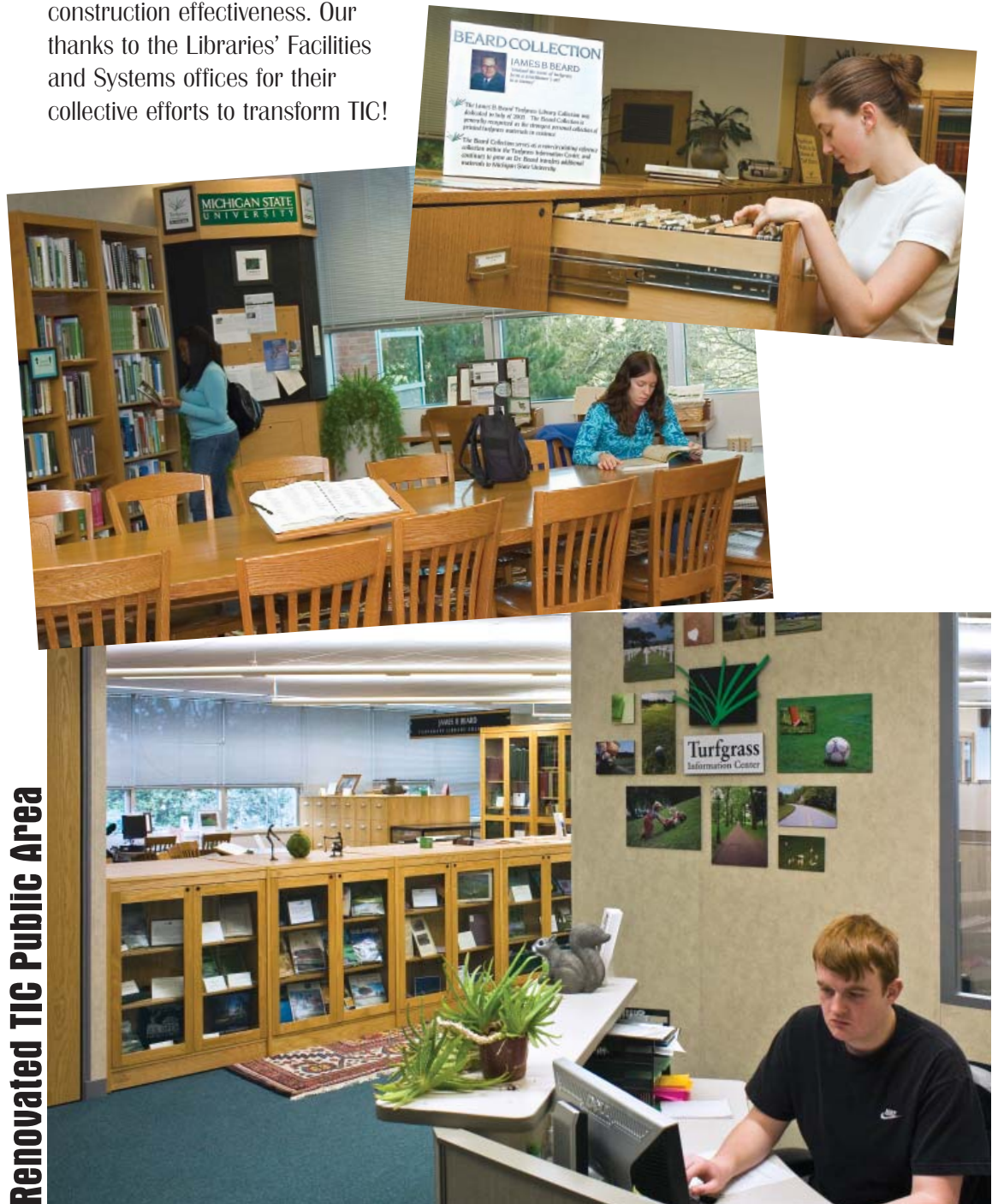


Clockwise: Diane Nye Mattick;
Clifford Haka and Faye Backie;
Pete Cookingham, Leslie
Behm, Sue Depoorter, and
Michael Schury.

FACILITIES

The Turfgrass Information Center facility provides both public and staff workspace in supporting access to the various collections and the TGIF database. The facility is normally open to the public 44 hours per week for walk-in use of the physical and digital materials, which are accessible 24/7, by all. Please call ahead if you have special needs or interests!

The Turfgrass Information Center has undergone another transformation. This one has been the most substantial improvement to date with the exception of new construction within the Beard Collection area. There are now offices for all the regular staff as well as a student workstation area that is designed for database construction effectiveness. Our thanks to the Libraries' Facilities and Systems offices for their collective efforts to transform TIC!



Renovated TIC Public Area

Renovation of the Turfgrass Information Center took place during MSU's Spring Break 2008 in order to minimize disruption of on-site access, service, and database construction. These photos illustrate the massive undertaking that was accomplished in short order with the generous help of many MSU Libraries staff.



The newly renovated Turfgrass Information Center has a welcoming entrance and service desk to assist users with their turf-related inquiries. The area is comfortable and inviting—a great place to explore turf-related topics for research, study, and scholarship. Please schedule time for a visit when you are in Michigan, or planning a sabbatical!



Student workspaces have been streamlined and organized by task to improve materials processing.



TIC Staff are now in a common area with comfortable amenities that facilitate communication and workflow.

HOW YOU CAN HELP








-  Donate needed materials to the Collections, and encourage others to the same. See <http://tic.msu.edu/needs.html> for further specifics.
-  Support the TIC Endowment Campaign yourself and/or encourage other individuals, organizations, and groups to do so as well.
-  Encourage your local, state/provincial, national, or international organizations to become a digital cooperator.
-  Volunteer time at the Center.
-  Subscribe to TGIF for yourself or for your academic institution, or encourage your professional organization to become involved.



Turfgrass
Information Center

To support the Turfgrass
Information Center with a
financial donation please visit
<http://tic.msu.edu/pledge.html>

FUTURE DIRECTIONS

-  Continue to build the TIC Endowment Fund to help guarantee future financial stability of both TIC and TGIF.
-  Continue negotiations to increase the number of turf users that can access TGIF through their professional, corporate, and academic organizations.
-  Increase availability of guidance and training materials, online and offline, to help users better utilize all TGIF has to offer.
-  Continue to push to increase the percentage of full-text material linked directly from within TGIF.
-  Explore avenues to provide greater access to the increased number of archive-like items within TIC's collections.
-  Launch a prototype image collection presentation, based on the Noer/Milorganite® Division MMSD Image Collection.
-  Aggressively process older turfgrass literature, in continuation of the Toro retrospective processing project, with the intention of 'completing' TGIF coverage for pre-1984 materials within the next several years.



Turfgrass
Information Center

tic.msu.edu

*The Turfgrass Information Center
would like to thank supporters for their ongoing contributions,
be it financial or donations of needed materials.
We appreciate your continued dedication that benefits
turfgrass research and management.*



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