

# A Brave New Year

By **Monroe S. Miller**, Golf Course Superintendent, Blackhawk Country Club

The old year has passed and the new year has begun. It is the winter season, but I am a bit confused. Aren't these supposed to be the days of deep winter? Isn't January supposed to bring snow, more ice and more cold?

Then why aren't the lakes frozen yet and why do we have to go north of northern Wisconsin to find decent snow? The grass in our town is still green, for heaven's sake!

Skiing, snowmobiling, ice skating, sledding and other winter sports haven't really gotten started. Normally, we start hoping for a warm spell right about now, the traditional January thaw. We are still waiting for the winter freeze, at a time when our thoughts are turning back to golf, the GCSAA conference and even opening day.

This kind of winter seems to be happening with more frequency, inspiring all kinds of speculation about a changing climate. And with the more I read, the more I realize that there may be something to all those theories.

The entire past year was different, weather wise. December

2002 was warmer than normal, by about six degrees, and precipitation was below normal. January continued those conditions with temperatures reaching into the low 50s. The lack of snow cover concerned golf course superintendents and continued into February, but at least the cold temperatures returned. Many of us were hoping the below normal temperatures would take a toll on the over wintering of turf pests.

March was colder than normal, the lack of snow continued and frost was driven deep into the soil, bringing more hope of pest destruction and some of nature's good soil aeration.

Although golf courses opened within the average or normal dates, early April was still cooler than normal and grave diggers reported frost below the seven foot mark in some places in Wisconsin. By mid-month, at least northern Wisconsin was getting rain and the entire state warmed up.

May was cool and precipitation returned. Cool temperatures continued until mid-June, and rain was falling in the northern 2/3 of

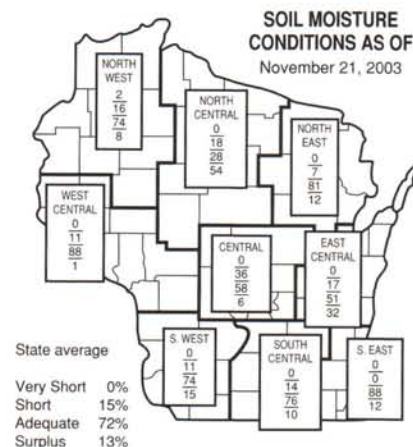
the state. By late June, the days heated up and some timely rain fell. July was dry, very dry in some places. Rainfall was hit and miss, and where I work the soil moisture deficit was crowding seven inches.

It was the same story in August - no rain and hot days. By the third week of August, 85% of Wisconsin soils were either very short or short of moisture. Golf courses struggled. Rain started to fall by mid-September, but it was still warm. By month's end, the year-to-date moisture status was nearly ten inches below normal in southern and southeast Wisconsin.

October started cold and the rainfall some so desperately needed was still scattered. Most of the state got rain during the first week of November - at our course, a slow five inches fell and helped push us back up toward soil moisture levels we needed. Heat units for the month were up, helping us wrap up the fall work in preparation for winter.

Statistics from the Wisconsin Agricultural Statistics Service are shown here and on pages 50 & 51 for your records for 2003.

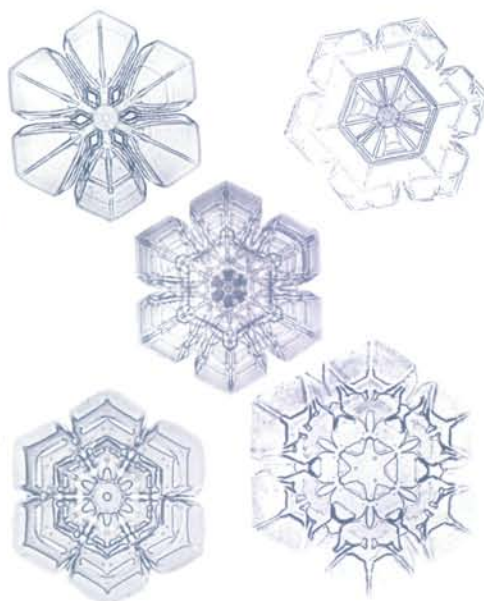
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The first cover of The Grass Roots that was done in color featured Jen Samerdyke's artistic interpretation of W.A. Bentley's snowflake photomicrographs. It was beautiful. Inside, I reported on my trip to Vermont to learn more about Bentley, the "snowflake man." In that story I found out that a large number of Bentley's photographs were in Madison, at the UW-Madison Department of Meteorology. I called the prof in charge of the snowflake photos and he confirmed that they were there.

I now have an update. The Schwerdtfeger Library at the UW-Madison's Space Science and Engineering Center now has the slides, and librarian Jean Phillips digitized the images and put them online. Anyone can see the 1,183 Bentley snowflakes, at <http://mail.ssec.wisc.edu/snow/index.html>. Enjoy!

If you subscribe to Golfweek's SuperNews, you should have received their 2004 "Superintendent's Best Friend" calendar. You have probably noticed that David Herr, golf course superintendent at the Deer Run Golf Course in Brillion, has every reason to be bursting with pride. His basset hound KJ made it into the calendar with a great photo taken on the golf course in the snow!



The calendar is sponsored by Lebanon Turf, and this year the company is initiating an annual "Dog of the Year" contest among the 14 dogs featured in the calendar. The winner will be selected by voting ONLY at the Lebanon Turf booth at the GCSAA conference and show in San Diego.

The winning dog will receive \$2000 for the local chapter - KJ belongs to the WGCSA! - and a \$500 gift certificate for the superintendent. Let's get behind this as a chapter and support Dave and KJ. Visit the Lebanon Turf booth and VOTE!

If you thought last year was hot, you were right. The year 2003 was the third hottest in nearly 150 years, according to the World Meteorological Organization. The WMO estimates the average surface temperature for the year to be 0.81 degrees F higher than the normal 57.2 degrees F.

Scientists think the warmer temperatures are due to a global warming trend. The three hottest years since accurate records began to be kept in 1861 have been in the past six years. The hottest was 1998 when the average temperature was up 0.99 degrees from the previous.

Personally, I hope we return to

normal, or below, for the next few years.

Our land grant college, the great state University of Wisconsin in Madison, has captured some attention nationally lately.

Last year the UW-Madison ranked seventh nationally in royalties and other license income from patents developed by university scientists. That ranking is up from 11th in 2001 in the annual survey of 156 leading research institutions by the Association of University Technology Managers. The amount raised was about \$32 million last year.

And this will make you proud: the most successful patent applications come from the College of Agricultural and Life Sciences.

Additionally, the UW-Madison ranked eighth in the number of U.S. patent applications filed - 204 - and fifth in patents issued - 87.

In a time of tight public money, the income generated by WARF and plowed back into the university helps the institution keep pace.

Since we have faculty members deeply involved in turfgrass research and graduate student education, this will interest Grass Roots readers. The UW-Madison granted the nation's second highest total of doctoral degrees during the one-year period of July 2001 - July 2002. The 649 PhDs ranked second behind UCAL-Berkeley.

Graduate students grind out a lot of research, adding to the new information generated by an institution like Wisconsin.

EXPO will be over by the time you read this, and many of us will be thinking about the GCSAA conference in San Diego. It will be a special year for Wisconsin and a couple of guys in particular are looking forward to the trip. Safe travel for everyone. ♻

**MONTHLY TEMPERATURES: 2003 GROWING SEASON AND NORMAL\***

District	April 1/		May 1/		June 1/		July 1/		August 1/		September 1/	
	2003	Normal	2003	Normal	2003	Normal	2003	Normal	2003	Normal	2003	Normal
Degrees Fahrenheit												
NW	40.8	41.7	52.4	54.4	61.5	63.1	68.9	68.1	70.4	65.9	58.8	56.6
NC	39.0	40.4	51.2	53.2	60.7	61.8	66.8	66.4	68.3	64.2	57.7	55.3
NE	39.3	41.3	51.4	53.6	60.9	62.5	69.0	67.0	68.0	64.8	58.9	56.0
WC	45.5	45.2	55.7	57.4	65.3	66.4	71.3	70.8	72.7	68.3	61.2	59.3
C	43.8	44.5	55.0	56.7	64.2	65.8	69.6	70.2	71.2	67.7	61.0	59.0
EC	41.5	42.8	52.0	54.6	62.0	64.1	68.8	69.5	71.2	67.9	62.1	59.8
SW	46.1	46.1	56.0	57.9	65.2	67.2	71.2	71.4	73.0	69.0	61.4	60.5
SC	45.6	45.8	55.5	57.8	65.0	67.2	71.4	71.3	72.3	68.9	62.5	60.6
SE	44.6	45.0	53.8	56.3	63.4	66.0	71.1	71.2	73.1	69.4	63.2	61.4
STATE	42.4	43.2	53.4	55.5	62.8	64.5	69.4	69.1	70.7	66.9	60.2	58.1

1/Preliminary estimates, 2003. \* Normal is defined as the 30-year average for the years 1971-2000. Source: State Climatologist.

**MONTHLY RAINFALL: 2003 GROWING SEASON AND NORMAL\***

District	April 1/		May 1/		June 1/		July 1/		August 1/		September 1/	
	2003	Normal	2003	Normal	2003	Normal	2003	Normal	2003	Normal	2003	Normal
Inches												
NW	2.53	2.39	5.02	3.29	4.34	4.19	4.08	4.29	1.14	4.44	3.12	3.89
NC	3.77	2.40	4.73	3.31	3.12	4.01	3.35	4.06	1.82	4.36	2.88	4.03
NE	3.76	2.65	3.16	3.29	3.14	3.69	4.09	3.70	2.78	3.81	4.42	3.74
WC	3.08	3.05	5.23	3.69	3.34	4.24	3.12	4.45	1.58	4.54	2.57	3.82
C	2.12	3.02	4.84	3.52	3.55	3.88	3.85	4.13	1.49	4.22	3.25	3.72
EC	2.38	2.81	4.08	2.95	2.83	3.51	5.27	3.38	1.86	3.86	3.36	3.42
SW	2.08	3.55	5.19	3.60	3.32	4.35	3.56	4.33	1.33	4.46	3.23	3.42
SC	1.92	3.47	5.66	3.40	2.69	4.19	4.09	4.07	1.57	4.24	3.48	3.51
SE	1.81	3.48	5.25	3.13	1.98	3.76	4.48	3.82	1.70	4.22	2.29	3.48
STATE	2.77	2.86	4.78	3.37	3.31	4.02	3.88	4.07	1.67	4.27	3.19	3.74

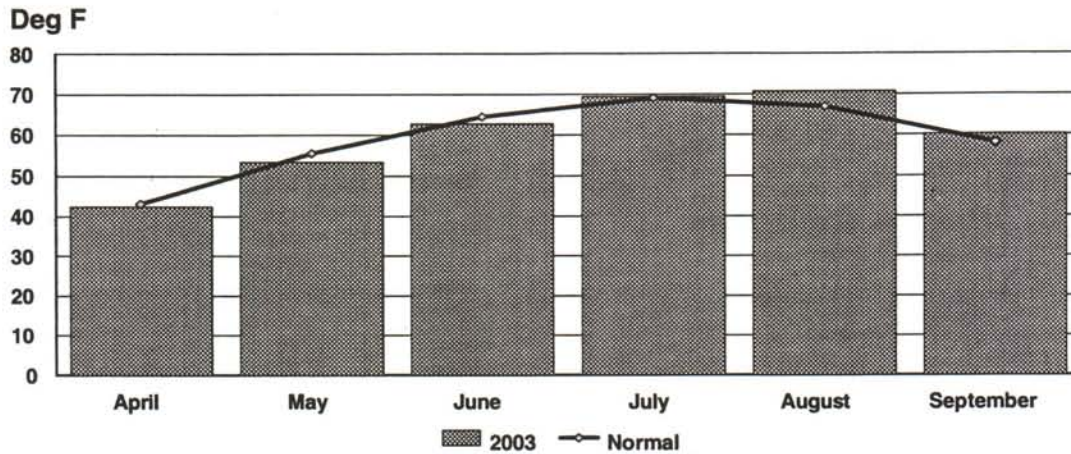
1/Preliminary estimates, 2003. \* Normal is defined as the 30-year average for the years 1971-2000. Source: State Climatologist.

**COMPARATIVE TEMPERATURE AND PRECIPITATION DATA**

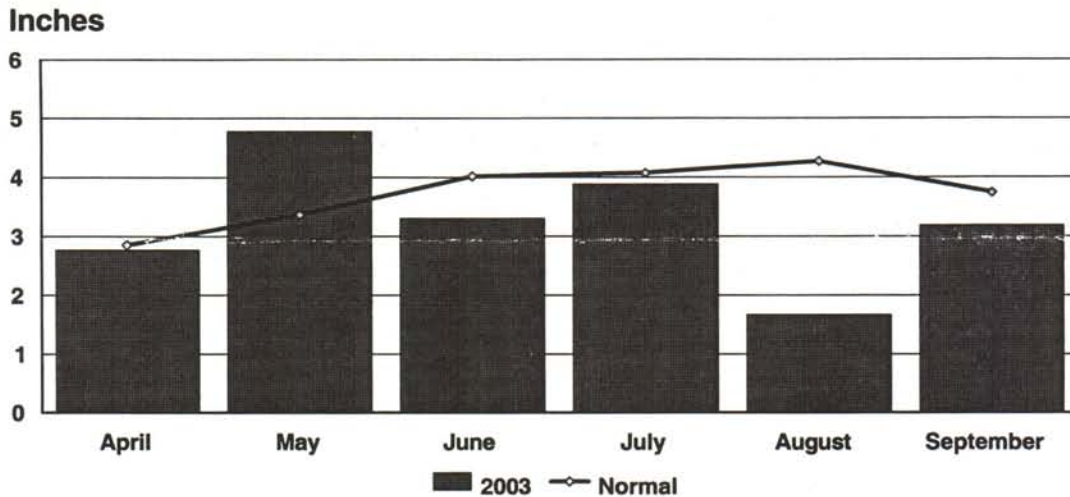
District	Average Temperature						Total Precipitation					
	June - September						April - September					
	Normal*	1999	2000	2001	2002	2003/1/	Normal*	1999	2000	2001	2002	2003 1/
Degrees Fahrenheit												
NW	63.6	64.0	61.6	64.6	65.8	64.3	22.3	29.2	21.5	25.6	28.6	20.3
NC	62.3	61.5	61.3	63.5	65.2	63.6	22.1	25.6	24.1	24.0	28.0	19.9
NE	63.0	64.1	61.6	63.6	65.3	63.6	20.9	22.8	23.0	21.3	26.9	21.3
WC	66.7	67.2	64.9	67.2	68.8	67.3	23.5	27.5	25.4	27.6	29.3	18.6
C	66.1	66.3	64.7	66.6	68.4	66.4	22.3	25.7	27.1	25.8	24.0	19.5
EC	66.0	66.6	64.7	66.7	68.3	65.8	20.0	22.4	24.5	22.4	20.1	20.3
SW	67.5	67.7	66.0	67.4	69.4	67.8	23.5	30.3	30.6	28.7	24.0	19.4
SC	67.6	68.2	66.5	67.8	70.0	67.8	22.7	28.1	30.6	27.6	20.6	19.0
SE	67.6	68.6	66.6	68.0	70.0	67.4	22.0	27.4	31.8	25.5	21.7	17.9
STATE	65.1	65.6	63.6	65.7	67.4	65.6	22.2	26.7	25.6	25.3	25.8	19.7
Inches												

1/Preliminary estimates, 2003. \* Normal is defined as the 30-year average for the years 1971-2000. Source: State Climatologist.

### AVERAGE MONTHLY TEMPERATURE, WISCONSIN, 2003



### AVERAGE MONTHLY RAINFALL, WISCONSIN, 2003



### SOIL MOISTURE RATINGS, WISCONSIN, 2003

