

A SOMEWHAT MILD BUT STORMY YEAR THAT 2007!

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After an unseasonably warm start to the year (and winter) temperatures took a nose-dive late January and remained in the freezer for much of February and part of March. Temperatures during spring continued to be quite volatile and even though temperatures averaged above normal, a rather severe cold wave hit in April (more on that below). Summer across the region started out dry and ended up wet, giving much of the area near normal rainfall. However, with the notable dry spell late June into July, some crops and vegetation suffered and the later rains were just that, too late. Without a doubt, the most pleasant of the seasons in 2007 was the autumn. Unseasonably warm but again, dry conditions prevailed right into late fall. A foreboding that there was a change in the wind was announced by way of an unusually late and potent severe weather event in October (more on that below, too). After, progressively colder, more typical late fall and early winter weather dominated the region to year's end.

Like in 2006, the year of 2007 was also warmer than normal but unlike last year, the only city to place in the top 20 warmest years was Flint /14th/ (and this is partially because their official climate records are of shorter duration). One of the main differences between 2006 and 2007 was overall, 2007 was a notable drier year. While all three cities placed in the top 20 wettest years in 2007, none placed this year. In fact, all came in below normal for rainfall in 2007 ranging from less than a quarter inch /-0.22/ at Detroit to over three inches below /-3.02/ at Saginaw.

STORMY WEATHER

Even with a relatively light and sporadic spring severe beginning, the severe weather events and warnings took off during the summer (especially August) and lasted into the fall with the October outbreak. Total severe weather events for 2007 were approximately 266 distinct events, the most ever recorded since the data base started in the mid 80s /1986/. The three of the most notable events are hyperlinked below:

<http://www.crh.noaa.gov/images/dtx/events/svrmay07.htm>

<http://www.crh.noaa.gov/dtx/?n=aug07tor>

<http://www.crh.noaa.gov/dtx/?n=oct18tor>

Detroit 2007 Temperature and Precipitation Statistics

	DETROIT	2007	STATS
	TEMP		PCPN
	<u>2007</u>		<u>2007</u>
JAN	29.6		3.02
FEB	19.3		0.82
MAR	40.1		3.09
APR	47.7		2.68
MAY	61.7		2.56
JUN	71.3		3.10
JUL	72.8		2.10
AUG	73.8		6.61
SEP	66.7		1.44
OCT	59.1		2.00
NOV	39.9		1.77
DEC	29.6		3.48
AVE	50.9	TOTAL	32.67
DEP	+1.2		-0.22

Additional statistical data for 2007 can be obtained at:
<http://www.weather.gov/climate/index.php?wfo=dtx>

Seasonal and Monthly Highlights

WINTER 2006-07:

IT WAS THE WARMEST OF TIMES AND THE COLDEST OF TIMES WITH A BUSY STORM TRACK

When the phrase is used “the normals are just the averages of the extremes” the Winter of 2006-07 could be used as a prime example. The first half of the winter was exceptionally mild while the second half was notably cold. When all was said and done, the warm temperatures won out over the cold in regards to the winter average temperature, but the *entire winter was anything but just above normal*. Southeast Lower Michigan saw some of its warmest winter weather and some of its coldest in the same season, somewhat uncommon but certainly not unheard of. **The first six weeks of the winter season (through mid January) was downright balmy for any winter with average temperatures holding in the mid to upper 30s. This was a good 10-12 degrees above the normal for the winter.**

The second half of the three winter months brought a rude awakening to some, while fulfilling forebodings of others. As though right on cue in mid-season, the jet stream shifted from a dominant southwest flow to northwest, bringing down all the Arctic cold that had stored up in the Polar Region for so long. One of the colder periods the region has experienced in a winter extended from mid January through mid February. The cold along with its persistence were noteworthy, especially coming after such early winter warmth (also, along with its persistence). The core of the cold arrived the first half of February with temperatures averaging about half of what they should have.

Though precipitation came in around normal, snowfall was below normal (averaging about a foot below) across the entire region but not because of a lack of storms/low pressure systems. It was a fairly busy winter but the abnormal warmth and rain the first six weeks or so, we lost ground for snow accumulation.

Spring 2007:

A MILD SPRING WITH A COLD HEART CONTAINING NORMAL TO ABOVE NORMAL PRECIPITATION

Spring lived up to its volatile reputation (and then some) across Southeast Lower Michigan with wide temperature ranges and a variety of weather conditions. **March itself wasn't a day old when snow, rain (some of it freezing), thunderstorms and strong winds buffeted the region.** The first third of the month brought the coldest weather with temperatures averaging in the mid 20s by the 10th (about ten degrees below the monthly normal). As though on cue, spring's calendar arrival /20th/ truly announced the arrival of the spring weather. **The last 10 days of the month were unseasonably warm, particularly the 24th-27th with record highs /81/ on both 26-27th.** This was especially noteworthy since the entire month of March previously had only six record highs in the lower 80s which took 136 Marches /1871-2007/ to establish and then we get two in the same month/year. Along with the warmth came the stormy weather as some severe weather and flooding blossomed on the 27th. Most areas reported thunderstorms and very heavy rains with a few areas reporting hail and/or flooding rains but this turned out to be one of the few severe weather outbreaks in the spring.

April's Chill

Nobody across Southeast Lower Michigan had to be told the first part of April was cold around these parts. Spring visited us on cue /Mar 21st/ with temperatures reaching as high as around 80 degrees for a day or two in late March. When April arrived, the warm breezes of spring took a hike after the first three days and lasted into mid month.

Checking out the first half of April is demoralizing if you are a gardener, an outdoor sports enthusiast or just a warm weather lover. Note the average temperatures and departures for the first 15 days of the month (keep in mind that these stats included the first three warm days of April which averaged about 10 degrees above normal over the region). Ironically, those average temperatures for the first half of April (mid to upper 30s) were about average for the first day of spring (3/20) - so basically, we went no place fast in the first four weeks of (3/20 - 4/15 of spring). The green-up process slowed over the region, with some vegetation barely advancing through mid April.

LOCATION	April 1- 15th Ave Temp	Departure	NORMAL FOR ALL OF APRIL	NORMAL FOR MAR 20TH
DETROIT	39.9	-5.3	48.1	39
FLINT	36.4	-6.1	45.4	36
SAGINAW	35.3	-7.1	45.5	35

A national view of this late season cold wave can be found at:

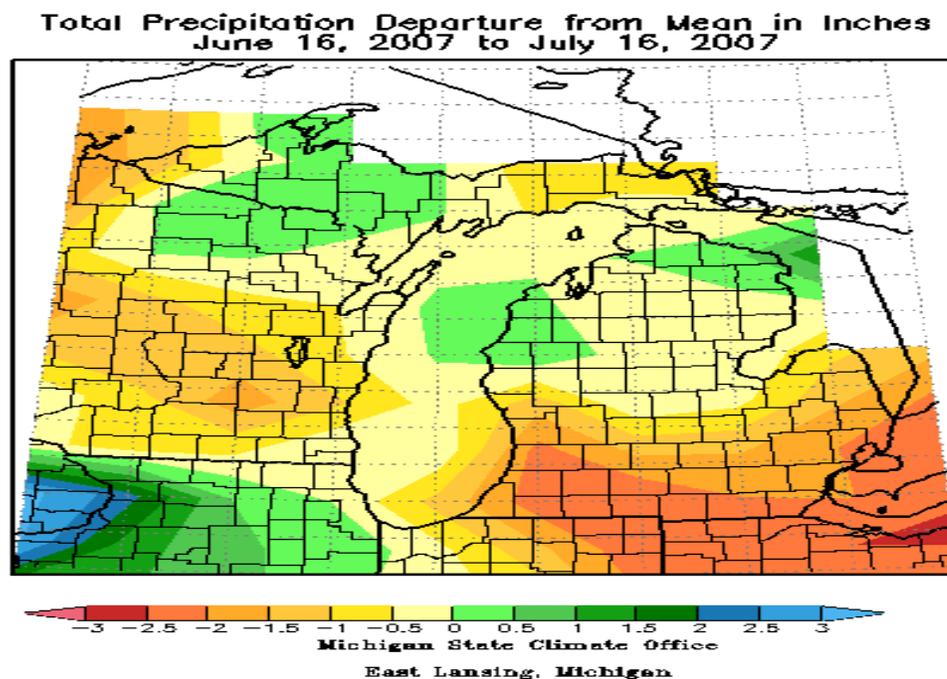
<http://www.ncdc.noaa.gov/oa/climate/research/2007/apr/apr-cold-event.php>

Temperatures continued to largely oscillate during the month of May leading to some of May's warmest and coldest days. The most potent May chill moved into the region mid month when on the morning of the 13th, lows dropped well down into the 30s (and even a few upper 20s). Scattered frost and some freezing temperatures were commonplace across the region. Then, not 48 hours later, readings chased after the 90 degree mark on the 15th. For the most part, warmer temperatures took more control later in the month. There was really just one really notable severe weather event in May and that was on the 15th. (the most widespread of the very limited spring severe weather season). Strong storms brought hail and high winds at a number of locations resulting in tree damage and some downed wires. Several reports of estimated wind gusts of at least 60-70 mph were received along with numerous hail observations, some locations close to an inch in diameter.

WARM AND "WET" SUMMER OF 2007

The Summer of 2007 will be **remembered mostly for its notable dry spell early-midsummer and ironically, very wet and stormy ending in August**. The main period of dry weather hit at one the worst times for agriculture and garden interests, coming in mid June to mid-late July. August brought a complete change from the relatively cool and dry July to warm and muggy conditions with several rounds of severe thunderstorms and very heavy rains. A good term to use for the Summer of '07 is Feast and Famine (or in better sequence, Famine and Feast). After the long duration of dry weather, as mentioned above, August broke loose with several bouts of heavy rain and severe weather.

How Dry We Were

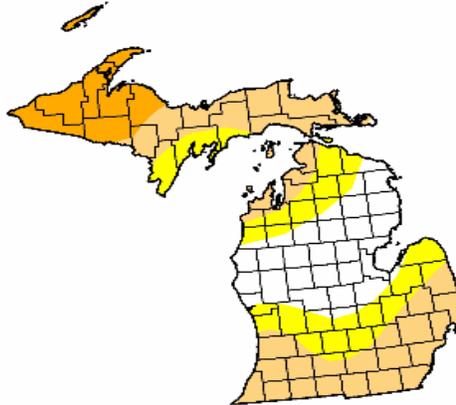


U.S. Drought Monitor

Michigan

July 17, 2007
Valid 7 a.m. EST

	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	26.1	73.9	50.8	12.3	0.0	0.0
Last Week (07/10/2007 map)	27.2	72.8	35.5	12.0	0.0	0.0
3 Months Ago (04/24/2007 map)	81.2	18.8	0.4	0.4	0.0	0.0
Start of Calendar Year (01/02/2007 map)	66.2	33.9	23.6	15.5	0.0	0.0
Start of Water Year (10/03/2006 map)	72.9	27.1	1.6	0.0	0.0	0.0
One Year Ago (07/18/2006 map)	62.7	37.3	12.5	2.3	0.0	0.0



Intensity:

- D0 Abnormally Dry
- D1 Drought - Moderate
- D2 Drought - Severe
- D3 Drought - Extreme
- D4 Drought - Exceptional

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements

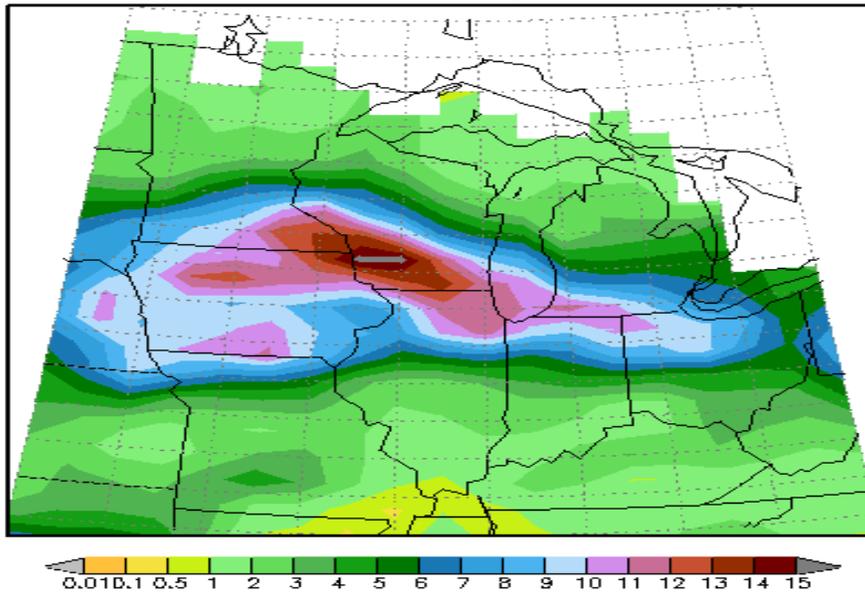
<http://drought.unl.edu/dm>



Released Thursday, July 19, 2007
Author: Brad Rippey, U.S. Department of Agriculture

And... How Wet We Were

Total Precipitation in Inches
August 1, 2007 to August 31, 2007



Midwestern Regional Climate Center
Illinois State Water Survey
Champaign, Illinois

[A BEAUTIFUL AND WARM AUTUMN \(WELL, FOR THE MOST PART\)](#)

Much of the autumn's weather across over Southeast Lower Michigan was just delightful with mainly warm, dry and tranquil conditions. Some of the nicest weather seen in these parts prevailed from September right through much of October with above normal temperatures and below normal precipitation.

It was exceptionally warm and dry during the first six weeks of the fall with temperatures averaging a good six degrees above normal. Rainfall mimicked our late June into July period with well below normal rainfall. Most areas saw a good three inches below normal with only 1½"– 2.0" of rain falling. At season's end, all of Southeast Lower Michigan had one of its **warmest falls on record** and this, in spite of a cool, below normal November. **The metro Detroit area enjoyed its 10th warmest autumn on record, the Flint region its 5th warmest and at Saginaw, its 9th warmest. Not only were the warmest falls lists achieved, so were the driest (at Flint and Saginaw). Flint with 6.08" had its 16th driest fall while Saginaw, with 5.22" had its 14th.**

As stated above, October was unseasonably warm and actually, this was partly to blame for unusual, but not unheard-of late season [scary October tornado outbreak](#). The severe weather event erupted late on the 18th into the early morning hours of the 19th. Many of the ingredients for the severe weather read like a spring severe outbreak with strong winds, high instability and tornadic shear. All this was looming in the atmosphere over most of Lower Michigan as an impressive cold front plowed through the region overnight. Numerous severe thunderstorms, some producing damaging tornadoes, moved into most of the region. While no tornadoes occurred around metro Detroit, far northwest and north portions of Southeast Lower Michigan did see the severe weather.

[Additional climate information LOCAL AND NATIONAL can be found at:](#)

[VARIOUS TYPES CLIMATE DATA:](#)

<http://www.weather.gov/climate/index.php?wfo=dtx>

<http://www.crh.noaa.gov/dtx/climate/local.php>

Archives for local climate articles and significant weather events:

<http://www.crh.noaa.gov/dtx/wxarchives.php?t2=9&s1=Submit>

While you are web surfing, check out NCDC site for the highlights and extremes in the weather for 2007...worldwide!

<http://www.ncdc.noaa.gov/img/climate/research/2007/ann/significant-extremes2007.gif>