



1. Subzero temps descend on the Twin Cities in January. **2.** A jet slides beneath May storm clouds near Interstate 35W and Diamond Lake Road. **3.** In late March, St. Paul's Harriet Island and several buildings were surrounded by floodwaters. **4.** Pagami Creek wildfire blew up on Sept. 12 in the Boundary Waters Canoe Area Wilderness in northeastern Minnesota. **5.** Near-whiteout conditions in outstate Minnesota in March as another winter storm slammed into the state.

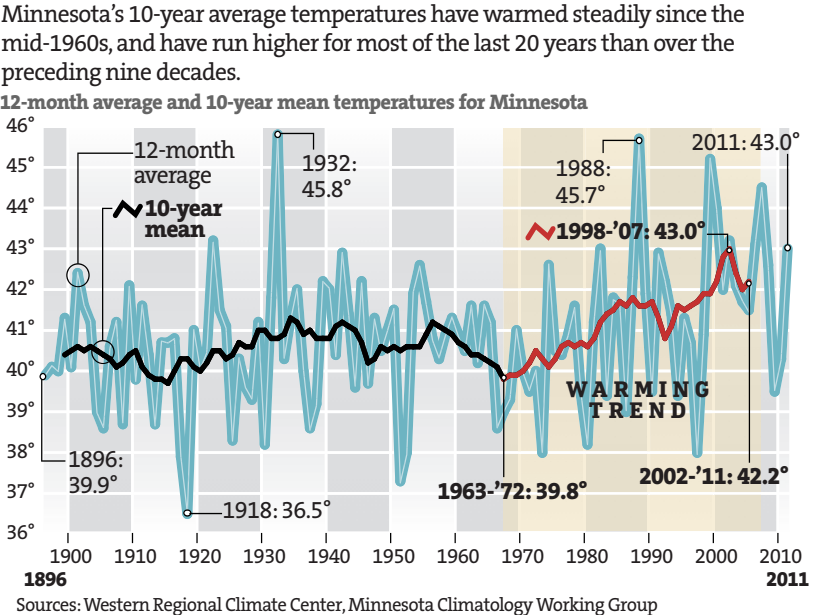
2011

A WEATHER STORY

Warmer and wetter. That was what the experts say Minnesota has become. And in 2011, wetter came first, with heavy snowfalls and a rainy spring. That was followed by high temperatures, the second-warmest July-through-December, then, in a twist, the driest autumn in the Twin Cities. Preliminary numbers show seven daily high-temperature records in the Twin Cities and only one record low, along with seven record warm-nighttime lows, a signature measure of the climate's long-term warming trend.

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A 45-YEAR WARMING TREND



THE YEAR IN weather '11

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Star Tribune photos by DAVID JOLES and BRIAN PETERSON; others by JIM MONE, Associated Press, and CLINT AUSTIN, Duluth News-Tribune

JULY

At least six tornadoes and bands of straight-line winds July 1 toppled hundreds of trees and farm buildings from southwest Minnesota into western Wisconsin. More storms July 10 spun straight-line winds that ripped up hundreds more trees in Sauk Centre. Five days later, storms dropped 7 inches of rain on Osakis. Then the heat kicked in.

The Twin Cities experienced record high overnight low temperatures on July 17 (79°), July 18 (80°) and July 20 (80°) and sweated through an all-time record dew point July 19 (82°). Moorhead set a new state dew point record (88°) the same day. The three-day July 17-19 stretch in the Twin Cities with dew points of 80° or higher was a record. It was the fifth-warmest July in the Twin Cities.

AUGUST

Delightful summer weather finally arrived, allowing crops statewide to catch up to their five-year average growth pace by Aug. 22. June, July and August were the 10th-warmest "meteorological summer" on record in the Twin Cities (despite August never reaching 90°) and saw the second-highest nighttime average temperature.

SEPTEMBER

The rains stopped. It was the driest September on record in the Twin Cities. Straight-line winds of 121 miles per hour near the northwestern Minnesota city of Donaldson Sept. 1 were the strongest ever recorded in Minnesota.

Temperatures in the 80s, strong northwest winds and dry conditions caused the Pagami Creek fire in the Boundary Waters Canoe Area Wilderness to explode Sept. 12 into the largest fire in Minnesota in 93 years.

Many cities had their first frost Sept. 16 — right on time for International Falls but two weeks early for Rochester. The Twin Cities remained frost-free for another five weeks.

OCTOBER

Summery warmth swaddled the state as the month opened. Twin Cities highs in the 80s Oct. 2-9 tied a 58-year-old record. A high of 88 on Oct. 5 was a record, as was that night's low of 71. Hallock, near the Canadian border in northwest Minnesota, saw 90 at 5 p.m. Oct. 5 (while Duluth had 59°).

Fast forward: Hallock was the coldest spot in the nation at 19 degrees on Oct. 20. The Twin Cities saw its first official frost (32 degrees) Oct. 21, two weeks later than the long-term median date. Marshall had its driest August-through-October ever, with 1.03 inches of rain. Twin Cities October precipitation was about one-fourth of normal.

NOVEMBER

November closed the driest meteorological autumn in 141 years for the Twin Cities and much of southern and western Minnesota. The Twin Cities' monthly temperature was also 5.5 degrees above normal. But Hallock hit 6-below on Nov. 17, making it the coldest spot in the nation — for one morning.

The Twin Cities saw its first measurable snow (3 inches) of the season Nov. 19. Hincley got 11 inches. Five days later, on Thanksgiving Day, Redwood Falls reached 66 degrees and the Twin Cities tied a record for the date with a high of 59°.

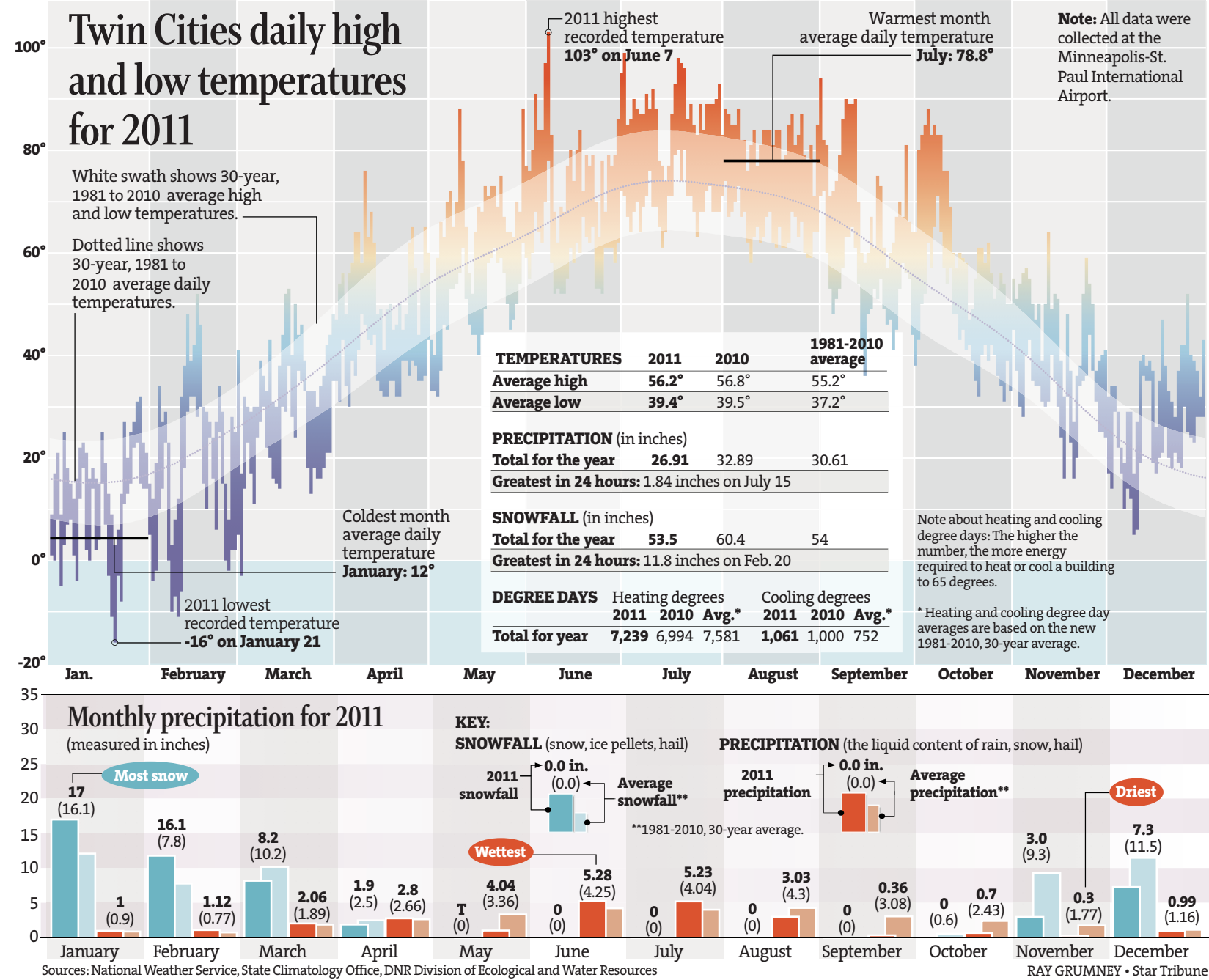
DECEMBER

Lingering drought brought an earth-toned Christmas to much of the state. The day after Christmas, Twin Cities residents received a record high of 52, and the temperature never dropped to zero in the month. Madison had a state record high of 60 Dec. 18. Lakes statewide showed either open water or dangerously thin ice. Only a few places in northern Minnesota had more than 5 inches of snow all month.

La Niña had been expected to bring a colder and snowier than normal winter to Minnesota, but climatologists altered that prediction. The relatively dark, snow-free ground, which absorbs radiation rather than reflecting it, may encourage continued warmth.

Roseville meteorologist Frank Watson said the late start for winter means the Twin Cities might see only half the snow it got last winter. The high sun of mid-February, he added, is right around the corner.

"Six weeks of winter — we can do that standing on our heads," he noted.



By BILL MCAULIFFE
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JANUARY

The month of the shovel. The Twin Cities saw snow on 27 days. By Jan. 31, 60.4 inches of snow had fallen on the Twin Cities for the season — more than an entire winter's average (55.9). International Falls' temperature reached 46-below on Jan. 21, the coldest reading there since 1968.

FEBRUARY

Hibbing saw 60 degrees on Feb. 16, its highest February reading ever. But not so fast! More than a foot of snow fell Feb. 20-21 across the region; Madison, Minn., got 20 inches and the Twin Cities 13.8, with 11.8 on Feb. 20 making that the snowiest February day on record in the Twin Cities.

St. Paul declared its record ninth snow emergency of the season and Minneapolis its record eighth. Rochester finished with its snowiest meteorological winter (December through February) ever, 60.4 inches.

MARCH

The first day of spring, March 20, saw Twin Cities snow cover officially at 0 for first time since Nov. 22. Minneapolis lifted its winter parking ban the next day, after 95 days. But a March 22-23 storm dumped 4.5 inches on the Twin Cities as well as 11 inches on Redwood Falls and Isle. River communities braced for severe flooding.

TWIN CITIES MONTHLY DATA FOR 2011

	High temp.	Low temp.	Avg. temp.	Diff. from normal	Precip. (inches)	Diff. from normal	Snow* (inches)	Diff. from normal
Jan.	32	-16	12	-1.1	1.00	-0.04	17	4.9
Feb.	52	-11	18.7	-1.4	1.12	0.33	16.1	9
Mar.	53	-3	29.4	-2.7	2.06	0.20	8.2	-2
April	76	30	46.2	-0.4	2.80	0.49	1.9	-0.6
May	88	32	58.4	-0.9	4.04	0.80	T	T
June	103	52	69.5	1.1	5.28	0.94	0	0
July	99	61	78.8	5.6	5.23	1.19	0	0
Aug.	88	58	73.6	2.4	3.03	-1.27	0	0
Sept.	94	36	62.9	0.9	0.36	-2.72	0	0
Oct.	88	31	55.3	6.4	0.70	-1.73	0	-0.6
Nov.	64	16	39.2	5.5	0.30	-1.47	3	-6.3
Dec.	52	5	27.8	8.1	0.99	-0.17	7.3	-4.2
2011	56.2°	39.4°	47.7°	2.0°	26.91	-0.29	53.5	0.2

*Snow, ice pellets

APRIL

Fargo-Moorhead had its fourth-highest Red River crest, but a favorable thaw, years of flood mitigation and good old-fashioned sandbagging reduced potential damage

there and across the region. Even so, roads and bridges in the metro area, outstate Minnesota and the Dakotas were closed for extended periods. The Twin Cities saw 1.3 inches of snow April 20, the final measurable, miserable flakes of a 158-day season that was the fourth-snowiest on record (86.6 inches).

MAY

An epidemic of killer urban tornadoes spread to Minneapolis May 22.

An EF1 tornado killed one man, damaged 3,000 North Side homes and uprooted or damaged 8,000 trees. Insured damage was about \$70 million. The year ended with 31 tornadoes statewide, about average.

Snow flurries flew in the Twin Cities May 1-2, but Winnebago, Amboy and Sherburn had highs of 96 degrees on May 10, and Waseca had a dew point of 78 degrees — the highest ever measured in Minnesota in May. Wet conditions also slowed spring planting.

JUNE

A high of 103 in the Twin Cities made June 7 the hottest day in nearly 23 years; a cool, rainy siege followed. The first day of summer brought 2.33 inches of rain in one hour at St. Cloud, and a small tornado that ran from Blaine to Coon Rapids.

On June 23, the Twin Cities high was 63, the lowest high temperature recorded for that date. Moose Lake had a high of 52 that day. Lamberton, in southwest Minnesota, had 8.44 inches of rain in June; Cook, in northeast Minnesota, had a record 792. Overall, June ended 1.1 degrees above normal in the Twin Cities, ending a six-month below-normal streak.