

METEOROLOGY

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Palmer Station is Station 89061 in the World Meteorological Organization (WMO) Worldwide Network. Automated surface synoptic observations are made 8 times each day and emailed to the National Atmospheric and Oceanographic Administration (NOAA) for entry into the Global Telecommunication System (GTS).

The Palmer Automatic Weather Station (PAWS) is a collection of sensors, computers, and software that records the meteorological data and generates synoptic reports. PAWS began recording data in September of 2015. It was a replacement for the Palmer Meteorological Observing System (PalMOS) that was taken down in November 2017. The PAWS sensors and data acquisition hardware are located on a ridge in the backyard at -64.774130° -64.047440° at an elevation of 38.3 meters above sea level using the World Geodetic System-84. In addition to the synoptic and METAR reporting, PAWS also archives the current conditions at one-minute intervals and displays both raw data and graphs of the sensor data on our local intranet.

The Research Associate acts as Chief Weather Observer on station, measuring, compiling and distributing all meteorological data. Snow accumulation is physically observed by taking an average of five accumulation stakes found near the PAWS system. All weather data is archived locally and forwarded to the University of Wisconsin on the first day of each month for archiving and further distribution.

One minute weather data is archived on the AMRC website:

<http://amrc.ssec.wisc.edu/data/ftp/pub/palmer/>.

Palmer Monthly Met summary for July, 2023

Temperature
Average: -3 °C / 26.6 °F
Maximum: 4.9 °C / 40.82 °F on 3 Jul 02:57
Minimum: -11.9 °C / 10.58 °F on 21 Jul 10:38
Air Pressure
Average: 989.2 mb
Maximum: 1015.8 mb on 12 Jul 22:13
Minimum: 950.6 mb on 29 Jul 15:39
Wind
Average: 13 knots / 15 mph
Peak (5 Sec Gust): 66 knots / 76 mph on 16 Jul 20:36 from NNE (29 deg)
Prevailing Direction for Month: NE
Surface
Total Rainfall: 37.8 mm / 1.49 in
Total Snowfall: 44 cm / 17.2 in
Greatest Depth at Snow Stake: 66.4 cm / 25.9 in
WMO Sea Ice Observation: 1-5 bergs, bergy bits, growlers, brash ice, grease ice, and pancake ice
Average Sea Surface Temperature: -1.2 °C / 29.8 °F

This winter continues to be colder than 2022, with a yearly low of -11.9 °C reached on July 21, the coldest since August 2021.

Nevertheless, sea surface temperature (SST) continues to rise. This month's average SST was the highest July on record (2005-present), at -1.20 °C. Six of the last twelve months have seen record high sea surface temperatures (Figure 11).

Palmer Station Sea Surface Temperature (SST)
2005-2023

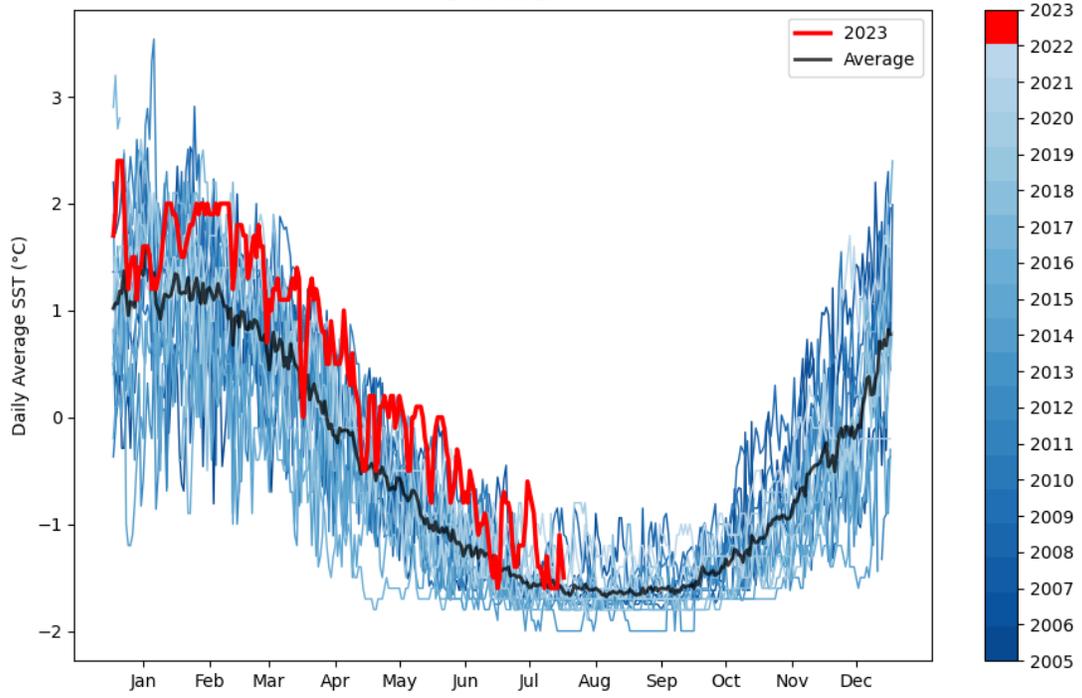


Figure 11. Palmer Station sea surface temperature, 2005 to present.