**LOCAL CLIMATOLOGICAL DATA**

**READING 4 SW, PENNSYLVANIA 2023 ANNUAL SUMMARY**

 ELEVATION 320 FEET ASL LATITUDE 40.316251° LONGITUDE -75.988661°

OBSERVATION TIME (LMT): 24:00

 **----- TEMPERATURES (°F) ----- PRECIPITATION (IN.) - SNOWFALL (IN.) -**

 **EXTREME ---- AVERAGE ---- TOTAL DEGREE DAYS MONTH MAX MAX MONTH MAX MAX**

 **MONTH MAX MIN MAX MIN AVG HEATNG COOLNG GROWNG TOTAL 1-DAY 24-HR TOTAL 1-DAY 24-HR MONTH**

 **JAN 62 25 47.9 33.7 40.8 740 3.90 1.04 1.04 2.9 2.9 2.9 JAN**

 **FEB 70 12 51.5 29.5 40.5 679 1.44 0.44 0.52 0.3 0.2 0.2 FEB**

 **MAR 66 22 53.4 33.7 43.5 659 86 2.75 0.93 1.24 T T T MAR**

 **APR 88 30 69.5 44.5 57.0 266 32 325 4.79 2.39 2.39 APR**

 **MAY 89 35 76.0 47.2 61.6 123 25 427 0.25 0.13 0.14 MAY**

 **JUN 97 45 82.4 57.9 70.1 7 167 599 3.05 1.32 1.32 JUN**

 **JUL 95 61 89.0 68.0 78.5 425 835 11.25 4.38 4.38 JUL**

 **AUG 92 56 84.7 64.2 74.5 301 749 4.24 1.48 1.48 AUG**

 **SEP 97 47 78.7 58.0 68.3 49 157 536 8.81 1.98 2.83 SEP**

 **OCT 86 35 69.6 47.6 58.6 225 35 338 2.10 1.09 1.09 OCT**

 **NOV 71 22 55.1 32.1 43.6 637 98 2.73 1.69 1.92 0.1 0.1 0.1 NOV**

 **DEC 60 24 48.6 33.7 41.2 734 8.75 2.08 3.48 0.6 0.4 0.4 DEC**

 **YEAR 97 12 67.3 46.0 56.6 4118 1142 3983 54.06 4.38 4.38 3.9 2.9 2.9 YEAR**

 **DEP -1 +7 +3.2 +1.4 +2.3 -823 +2 +125 +1.27 -24.4 DEP**

 ANNUAL TEMPERATURE EXTREMES AND FREEZE DATA. . .

 HIGHEST MAXIMUM TEMPERATURE, DATE(S) .....: 97, 6/02 9/07

 LOWEST MAXIMUM TEMPERATURE, DATE(S) ......: 28, 2/04

 HIGHEST MINIMUM TEMPERATURE, DATE(S) .....: 76, 7/27

 LOWEST MINIMUM TEMPERATURE, DATE(S) ......: 12, 2/04

 HIGHEST AVERAGE TEMPERATURE, DATE(S) .....: 85, 7/27

 LOWEST AVERAGE TEMPERATURE, DATE(S) ......: 20, 2/04

 NO. OF DAYS WITH MINIMUM OF 32 OR BELOW ..: 84

 NO. OF DAYS WITH MAXIMUM OF 32 OR BELOW ..: 1

 NO. OF DAYS WITH MINIMUM OF 0 OR BELOW ...: 0

 NO. OF DAYS WITH MAXIMUM OF 90 OR ABOVE ..: 31

 TEMPERATURE & DATE OF LAST SPRING FREEZE .: 32, 4/10

 TEMPERATURE & DATE OF FIRST FALL FREEZE ..: 32, 11/01

 NO. OF DAYS BETWEEN (GROWING SEASON) .....: 204 (non-inclusive)

 ANNUAL PRECIPITATION EXTREMES. . .

 NO. OF DAYS WITH A TRACE OF PRECIPITATION : 32

 NO. OF DAYS WITH 0.01 TO 0.09 IN. OF PCPN : 57

 NO. OF DAYS WITH 0.10 TO 0.49 IN. OF PCPN : 43

 NO. OF DAYS WITH 0.50 TO 0.99 IN. OF PCPN : 12

 NO. OF DAYS WITH 1.00 TO 1.99 IN. OF PCPN : 15

 NO. OF DAYS WITH 2.00 OR MORE IN. OF PCPN : 3

 MAXIMUM ONE-DAY PRECIPITATION, DATE(S) ...: 4.38, 7/09

 MAXIMUM FLOATING 24-HOUR PCPN, DATE(S) ...: 4.38, 7/09-09

 NO. OF DAYS WITH A TRACE OF SNOWFALL .....: 12

 NO. OF DAYS WITH 0.1 TO 0.9 IN. OF SNOW ..: 6

 NO. OF DAYS WITH 1.0 TO 3.9 IN. OF SNOW ..: 1

 NO. OF DAYS WITH 4.0 TO 7.9 IN. OF SNOW ..: 0

 NO. OF DAYS WITH 8.0 OR MORE IN. OF SNOW .: 0

 MAXIMUM ONE-DAY SNOWFALL, DATE(S) ........: 2.9, 1/25

 MAXIMUM FLOATING 24-HOUR SNOW, DATE(S) ...: 2.9, 1/25-25

 NO. OF DAYS WITH 1 IN. OR MORE SNOW COVER : 1

 MAXIMUM DEPTH (IN.) OF SNOW & ICE, DATE ..: 3, 1/25

 THUNDER DAYS .............................: 37

**HIGHLIGHTS**

Year 2023 at Reading 4 SW ended much warmer than normal with an average temperature of 56.6°F (+2.3), second warmest to 2012 (56.9), just ahead of 1998 (56.5) and significantly warmer than 2022 (55.2). The average of the daily maximums (67.3/+3.2) and minimums (46.0/+1.4) reflected the dominance of anticyclones (high-pressure systems), which favor wider ranges in temperature during many days. This overall pattern favored long periods of low precipitation, keyed by a mere 0.25” during May, but was interrupted by bouts of excessive rainfall, especially July, September, and December, which more than offset the deficiencies and ultimately rallied past the 1991-2020 30-year annual average of 52.79” to 54.06”. Temperature excesses were more pronounced during the normally cooler months and contributed to really low snowfall and snow pack. Snowfall totaled only 3.9” (-24.4) all year and was comprised of 2.9” within three hours on 25 January plus a few coatings. That slushy blanket was reduced to scattered patches within a few hours and gone completely in a few more hours.

The several rainstorms of 2 inches or more were keyed by a deluge of 4.38” that fell within a few hours during midday Sunday of 9 July. Reading 4 SW was only a mile outside an expansive area of 5- to 9-inch rains, mostly within two hours, which covered much of the city and its northern semicircle outward several miles. Flash flooding was severe and necessitated numerous swift or high water rescues, all of which were successful resulting in no loss of life or serious injury. But property damages and impacts climbed into tens of millions USD. The deluge was triggered by rich tropical moisture interacting with a quasi-stationary front.

Other highlights:

\* Year 2023 began with a new warmest January mean temperature of 40.8, which convincingly surpassed the previous warmest of 39.6 of 2006 despite lack of unusual warmth but was keyed by only 13 days with freezing temperatures (previously 17/1998), including none below 25 (previously 19/three years) and only one day that stayed below 40. But January brought the only snowfall of more than a half inch during 2023, 2.9” on the 25th within three hours whose slushy blanket vanished almost as quickly after the snow changed to rain.

\* February averaged almost as warm (40.5) despite a brief early month bout of harsh cold which brought 2023’s coldest of 12 and the only freezing high temperature all year, both on the 4th. Afterward, no day chilled below 20 the rest of the year. And six days warmed into the 60s plus one to 70 before February ended. February was 4th driest of 41 with only 1.44” of precipitation. The only snows were bookend coatings totaling 0.3”.

\* March brought no unusual warmth nor chill with only 2.75” of precipitation including only traces of snow. First occurrence of thunder came at dawn of the 19th, but was distant.

\* April warmed to 4th warmest of 39 with mean temperature of 57.0 and was bolstered by five days which warmed to the 80s. Soaking rains, including 2.39” on the 30th, accompanied by low barometer of 29.16 in\*Hg, brought needed drought relief.

\* However, May brought only 0.25” of rain, driest May by far, and second only to 0.22” of August 1995 for driest calendar month. Then June brought only 3.05” despite eight days with audible thunder and resulted in borderline severe drought by end of June. Then several scattered days with heavy to torrential rain during July, totaling 11.25”, eased drought substantially but did not quite eliminate drought, even though the downpours, mostly from strong thunderstorms, caused minor to severe flooding within the Reading area.

\* The first 90-degree temperature came on 1 June (93) and then was followed by 30 more, last on 9 September (90). The hottest was 97 on 2 June and 7 September. Summer overall brought mostly only low heat but very little cool weather. Early summer was plagued by invasions of smoke from wildfires burning to distant north. Worst smoke wafted through during 29-30 June, brought off-the-charts unhealthful air quality, and reduced visibility down to 2 miles. The heat of 3 to 9 September was most oppressive of the year until attacked by seven days of occasional thunderstorms 7th to 13th, some strong or locally severe. Then thunder was no-show the rest of the year. These tropical-like downpours totaling 5.53” plus cooler rains totaling 3.28” summed to 8.81 during September and was enough to temporarily end the drought.

\* After cool of early autumn, warmth returned during early October when the first five days reached the 80s, highest 86. Then after seasonable autumnal coolness, a pair of 82s toward the end of October marked the end of warm weather for the year. Deficient precipitation of October (2.10”) and November (2.73”) allowed slight to locally moderate drought to return. Then copious rains of 8.75” during December, keyed by 2.44” on 10th-11th, 3.48” on 17th-18th and 1.87” on 27th-28th, plus few smaller amounts eliminated drought by end of year and resulted in a high-end normal annual total of 54.06”. Six months earlier, the running 365-day total was nearly a foot deficient. Any impact from named tropical cyclones was minor.

\* December’s mild mean temperature of 41.2 (+4.9), similar to those of January and February, contributed to a warm year mean of 56.6, and also another low-snow winter month (0.6”) which helped produce an annual snowfall total of 3.9”, which bettered 5.7” of 1998. Also, 2023 became the first year that was free of glaze ice (freezing rain). Lastly, December brought the year’s barometer extremes of 30.73 in\*Hg on the 14th and 29.13 in\*Hg on the 18th.