**LOCAL CLIMATOLOGICAL DATA**

**READING 4 SW, PENNSYLVANIA 2024 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 59 9 42.0 27.6 34.8 933 6.43 1.96 2.17 8.6 3.5 3.5 JAN**

 **FEB 65 19 48.3 28.6 38.4 763 2.39 1.20 1.22 8.5 5.8 5.8 FEB**

 **MAR 78 24 57.3 36.9 47.1 548 129 6.23 1.62 1.63 T T T MAR**

 **APR 91 32 66.9 44.2 55.4 304 25 273 4.92 1.84 1.84 APR**

 **MAY 91 43 76.5 56.5 66.5 123 129 513 3.02 0.56 0.80 MAY**

 **JUN 102 48 88.9 63.3 76.1 340 734 3.12 1.10 1.27 JUN**

 **JUL 100 58 90.3 68.7 79.5 458 843 5.79 2.08 2.11 JUL**

 **AUG 97 49 85.5 63.9 74.7 4 311 737 6.65 3.57 3.61 AUG**

 **SEP 90 46 79.1 57.9 68.5 14 128 561 1.38 0.45 0.45 SEP**

 **OCT 87 31 72.8 44.1 58.5 206 11 290 0.09 0.06 0.06 OCT**

 **NOV 84 24 59.8 37.8 48.8 488 9 173 2.23 0.80 0.82 T T T NOV**

 **DEC 65 8 43.5 27.1 35.3 912 4.43 1.71 1.80 1.6 1.2 1.2 DEC**

 **YEAR 102 8 67.6 46.3 57.0 4240 1411 4343 46.68 3.57 3.61 18.7 5.8 5.8 YEAR**

 **DEP +4 +3 +3.5 +1.7 +2.7 -701 +371 +483 -6.11 -9.4 DEP**

 ANNUAL TEMPERATURE EXTREMES AND FREEZE DATA. . .

 HIGHEST MAXIMUM TEMPERATURE, DATE(S) .....: 102, 6/22

 LOWEST MAXIMUM TEMPERATURE, DATE(S) ......: 25, 1/20

 HIGHEST MINIMUM TEMPERATURE, DATE(S) .....: 80, 7/06

 LOWEST MINIMUM TEMPERATURE, DATE(S) ......: 8, 12/23

 HIGHEST AVERAGE TEMPERATURE, DATE(S) .....: 89, 7/06

 LOWEST AVERAGE TEMPERATURE, DATE(S) ......: 18, 1/17

 NO. OF DAYS WITH MINIMUM OF 32 OR BELOW ..: 78

 NO. OF DAYS WITH MAXIMUM OF 32 OR BELOW ..: 7

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

 NO. OF DAYS WITH MAXIMUM OF 90 OR ABOVE ..: 42

 TEMPERATURE & DATE OF LAST SPRING FREEZE .: 32, 4/22

 TEMPERATURE & DATE OF FIRST FALL FREEZE ..: 31, 10/28

 NO. OF DAYS BETWEEN (GROWING SEASON) .....: 188 (non-inclusive)

 ANNUAL PRECIPITATION EXTREMES. . .

 NO. OF DAYS WITH A TRACE OF PRECIPITATION : 31

 NO. OF DAYS WITH 0.01 TO 0.09 IN. OF PCPN : 62

 NO. OF DAYS WITH 0.10 TO 0.49 IN. OF PCPN : 54

 NO. OF DAYS WITH 0.50 TO 0.99 IN. OF PCPN : 13

 NO. OF DAYS WITH 1.00 TO 1.99 IN. OF PCPN : 12

 NO. OF DAYS WITH 2.00 OR MORE IN. OF PCPN : 2

 MAXIMUM ONE-DAY PRECIPITATION, DATE(S) ...: 3.57, 8/06

 MAXIMUM FLOATING 24-HOUR PCPN, DATE(S) ...: 3.61, 8/06-07

 NO. OF DAYS WITH A TRACE OF SNOWFALL .....: 8

 NO. OF DAYS WITH 0.1 TO 0.9 IN. OF SNOW ..: 4

 NO. OF DAYS WITH 1.0 TO 3.9 IN. OF SNOW ..: 5

 NO. OF DAYS WITH 4.0 TO 7.9 IN. OF SNOW ..: 1

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

 MAXIMUM ONE-DAY SNOWFALL, DATE(S) ........: 5.8, 2/13

 MAXIMUM FLOATING 24-HOUR SNOW, DATE(S) ...: 5.8, 2/13-13

 NO. OF DAYS WITH 1 IN. OR MORE SNOW COVER : 14

 MAXIMUM DEPTH (IN.) OF SNOW & ICE, DATE ..: 6, 2/13

 THUNDER DAYS .............................: 31

**HIGHLIGHTS**

Year 2024 at Reading 4 SW ended much warmer than normal with an average temperature of 57.0°F (+2.7), which edged above 2012 (56.9) to become new warmest year during 42 years at Reading 4 SW. Last year (2023) at 56.6 is now third warmest. The average of the daily maximums (67.6/+3.5) and minimums (46.3/+1.7) like 2023 reflected the dominance of anticyclones (high-pressure systems), which favored wider ranges in temperature during many days. The greatest diurnal rebound of 42 degrees (39 to 81) occurred on 9 April. This overall pattern favored long periods of low precipitation, especially from mid-August through November, during which severe drought developed, and keyed by a mere 0.09” during October, which became a new driest of any month during last 42 years. New records for driest month, three months, and floating 90-day periods were widespread throughout the Middle Atlantic States Region, even at stations with very long periods of record. Despite the aforementioned drought, total precipitation for the year of 46.68” was only 6.11 below the 1991-2020 30-year average of 52.79. Rather wet months of January (6.43), March (6.23), June (5.79), and July (6.65) prevented 2024 from becoming a very dry year. The lofty annual average temperature was bolstered by ten of the 12 months being slightly or much warmer than respective averages. August averaged near normal, and only December averaged cooler but by only 1.0 degree. June at 76.1 became a new warmest of that month. The dominance of warmer than normal temperatures moderated snowfall, which totaled 18.7” (-9.4), and limited snow packs of an inch or more to 14 days.

Other highlights:

\* January contained a majority of mild but no warmth with 12 days entirely above freezing. The year’s first snowfall of 2.1” came on the 6th but was gone in less than a day. Harsh cold set in from 15th to 22nd during which winter’s coldest of 9 occurred, and also five days entirely below freezing. Two moderate snow accumulations during this period persisted nine days with a pack of 1 to 5.5 inches. Precipitation of 6.43” was fourth wettest of 42. First thunder occurrence of 2024, 31 thunder days for year, occurred near 3 AM of the 10th.

 \* February was more consistently mild, though never warm, than January. Moderate cold at mid-month was enough for two snowfalls totaling 8.5”, the greater 5.8” on 13th. But the pack from these lasted only six days. Average temperature was ninth warmest of 40.

\* March was mostly mild with only two traces of snow despite 6.23” of precipitation, fifth wettest of 42. First temperature of at least 70 (73) came on the 13th then was followed by two more the next two days. March’s lowest of 24 came on 1st and 22nd.

\* April was highlighted by a solar eclipse (peak coverage 91% at Reading 4 SW) at mid-afternoon of the 8th and was observable despite considerable cloudiness. This month brought the year’s first 80 (81 on 9th) and then the first 90 (91 on 29th). But in between, a late freezing low temperature (32) occurred on the 22nd. No snow was observed this April.

\* May was mainly warm with only five days that failed to warm to 70 and was agreeable for early-season outside swimming. Only three days cooled below 50, lowest 43 on 11th.

\* After a low of 48 early on the 1st, June was summery and included 14 days that heated to at least 90. The hottest of 102 on the 22nd became new hottest June temperature of 41 years at Reading 4 SW and was flanked by highs of 99 and 98. A low of 78 on the 23rd added to the sultriness. Despite the heat, thunderstorms were somewhat suppressed during this June.

\* July continued the heat with 14 more days heating to at least 90, including 100 on the 16th. All days warmed to above 80, and on only one did it cool below 60, 58 on 2nd. But that was soon followed by a low of 80 on the 6th, the first such since 81 on 22 July 2011.

\* Downpours, with or without thunder, became more numerous during July into early August during which 12.02” fell within 37 days ending 9 August and was keyed by 3.57” on 6 August and 3.61 within 24 hours spanning 6-7 August. The moisture stream from post-Hurricane Debby passed 50 to 100 miles to the west during 9 August and delivered a half inch of rain to Reading 4 SW for the only significant impact from a named tropical cyclone or remnant during 2024. After this, the “spigots” reduced to infrequent trickles for nearly the remainder of the year, until 1.71” of rain on 11 December.

\* August brought nine more days that heated to at least 90, mostly late month. Then one more on 1 September was the last of 42 for the year. Though no more 90s, anomalous warmth came during mid-Autumn. High of 87 on 22 October was warmest so late. Then 85 on 31 October became new record high again for so late. Temperatures in upper 70s during dusk made it balmy for trick-or-treat. The first fall freeze, 31 on 28th, interrupted this warm spell.

\* Warmth continued into early November with 81 on the 1st then 84 on the 6th, which became new record high temperature for November and latest in a year to reach at least 80 by three days. Like late October, warmth was interrupted by a low of 32 on the 4th.

\* Warmth faded remainder of November, and cold was dominant from Thanksgiving (28 Nov) till Christmas Day. Cold peaked near the winter solstice with a low of 8 on 23December which became the coldest of 2024 and was a near-perfect inverse of the hottest near the summer solstice six months earlier. Two more days stayed below freezing for seven such days during 2024. A Late December warmup peaked at 65 on the 29th and raised the December anomaly from -3 degrees on Christmas Eve to -1 by New Year’s Eve. Light snow on 20th vanished by Christmas.