**LOCAL CLIMATOLOGICAL DATA**

**READING 4 SW, PENNSYLVANIA 2020 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 66 18 44.5 29.1 36.8 865 3.37 1.86 1.86 3.0 1.5 1.5 JAN**

 **FEB 61 13 47.2 30.7 38.9 749 2.82 0.50 0.65 T T T FEB**

 **MAR 78 24 57.0 37.6 47.3 540 131 4.44 1.59 1.60 T T T MAR**

 **APR 74 28 60.0 39.7 49.9 448 161 6.79 2.80 2.93 APR**

 **MAY 88 32 71.5 50.0 60.7 197 71 408 2.59 0.85 0.85 MAY**

 **JUN 92 44 84.4 61.2 72.8 10 250 674 3.68 1.24 1.24 JUN**

 **JUL 98 62 90.6 69.3 80.0 470 858 6.37 1.70 1.70 JUL**

 **AUG 96 55 86.7 67.1 76.9 378 806 7.64 3.91 4.16 AUG**

 **SEP 86 37 77.4 56.0 66.7 67 125 537 4.42 2.16 2.58 SEP**

 **OCT 80 32 66.4 47.0 56.7 258 8 291 3.36 1.18 1.41 OCT**

 **NOV 78 24 60.8 38.3 49.5 458 2 183 3.56 1.42 1.42 NOV**

 **DEC 63 12 44.7 28.3 36.5 879 4.61 0.78 1.07 9.6 6.5 8.7 DEC**

 **YEAR 98 12 65.9 46.2 56.1 4471 1304 4048 53.65 3.91 4.16 12.6 6.5 8.7 YEAR**

 **DEP +1 +5 +2.1 +2.3 +2.2 -679 +233 +201 +1.67 -16.2 DEP**

 ANNUAL TEMPERATURE EXTREMES AND FREEZE DATA. . .

 HIGHEST MAXIMUM TEMPERATURE, DATE(S) .....: 98, 7/06

 LOWEST MAXIMUM TEMPERATURE, DATE(S) ......: 29, 12/26

 HIGHEST MINIMUM TEMPERATURE, DATE(S) .....: 75, 7/20 8/11

 LOWEST MINIMUM TEMPERATURE, DATE(S) ......: 12, 12/19

 HIGHEST AVERAGE TEMPERATURE, DATE(S) .....: 86, 7/20

 LOWEST AVERAGE TEMPERATURE, DATE(S) ......: 22, 12/19

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

 NO. OF DAYS WITH MAXIMUM OF 32 OR BELOW ..: 5

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

 NO. OF DAYS WITH MAXIMUM OF 90 OR ABOVE ..: 38

 TEMPERATURE & DATE OF LAST SPRING FREEZE .: 32, 5/09

 TEMPERATURE & DATE OF FIRST FALL FREEZE ..: 32, 10/31

 NO. OF DAYS BETWEEN (GROWING SEASON) .....: 174

 ANNUAL PRECIPITATION EXTREMES. . .

 NO. OF DAYS WITH A TRACE OF PRECIPITATION : 51

 NO. OF DAYS WITH 0.01 TO 0.09 IN. OF PCPN : 60

 NO. OF DAYS WITH 0.10 TO 0.49 IN. OF PCPN : 50

 NO. OF DAYS WITH 0.50 TO 0.99 IN. OF PCPN : 19

 NO. OF DAYS WITH 1.00 TO 1.99 IN. OF PCPN : 11

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

 MAXIMUM ONE-DAY PRECIPITATION, DATE(S) ...: 3.91, 8/04

 MAXIMUM FLOATING 24-HOUR PCPN, DATE(S) ...: 4.16, 8/03-04

 NO. OF DAYS WITH A TRACE OF SNOWFALL .....: 13

 NO. OF DAYS WITH 0.1 TO 0.9 IN. OF SNOW ..: 3

 NO. OF DAYS WITH 1.0 TO 3.9 IN. OF SNOW ..: 3

 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) ........: 6.5, 12/16

 MAXIMUM FLOATING 24-HOUR SNOW, DATE(S) ...: 8.7, 12/16-17

 NO. OF DAYS WITH 1 IN. OR MORE SNOW COVER : 12

 MAXIMUM DEPTH (IN.) OF SNOW & ICE, DATE ..: 8, 12/17

 THUNDER DAYS .............................: 30

**HIGHLIGHTS**

Year 2020 at Reading 4 SW ended significantly warmer than normal with an average temperature of 56.1°F (+2.2), 1.2 above the 2019 average of 54.9. The average of the daily maximums (65.9/+2.1) and minimums (46.2/+2.3) contributed nearly equally to the anomaly. Total precipitation of 53.65” during 2020 was considerably less than the previous two years but still 1.67 above normal. The three-year aggregate of 2018 through 2020 summed to an astounding 199.85. Snowfall during 2020 amounted to only 3.0” through November, measurable only in January. This added to 0.6 during late 2019 resulted in 2019-20 a new lowest snow year at 3.6. Then December added 9.8 to boost the final calendar year snowfall to 12.8. So the two calendar years with least snowfall remain 7.9 during 1991 and 5.7 during 1998. The next greater is 13.4 during 1999.

The key event of the year, in the opinion of the observer in charge, was TS Isaias which brought 4.16” of rain within 24 hours from late 3 August into 4 August. This was the middle of three heavy rain storms within six days from late 1 August into 7 August. The first and last were frontal thunderstorm complexes. These storms combined brought 6.99 to Reading 4 SW and minor flooding. Areas 2 to 15 miles to the NW, N, and NE were inundated with 10 to 14 inches combined, including 10.47 at the Reading Regional Airport (RDG), with resultant severe flooding. Of that, RDG got 5.90 from late 1 August (0.01) into morning 2 August (5.89), including 3.54 in 60 min, for new official Reading records for greatest 24-hour and calendar day precipitation in August.

Other highlights:

\* January balminess of 66 degrees either side of midnight during the 11/12 January overnight came between two minor, but greatest-of-winter, snowfalls of 1.5” each on 7-8 January and 18 January.

\* Brief polar outbreak turned cold shoulder on Valentine’s Day with low/high of 13/33 for coldest day of winter 2019-20. Only traces of snow fell during February.

\* The first three months were each significantly warmer than normal. See table above. First 70 occurrence was 73 on 9 March, then 78 on 20 March for a warm welcome to spring. \* First thunder occurrence of 2020 came as few soft rumbles during chilly, heavy rain on 28 March. Thunder was rather muted during 2020 with only 30 days of occurrence, most of which brought only distant, faint rumbles.

\* Warmer-than-normal majority switched for April, which averaged only 2.6°F warmer than March, then continued much of May. Few snowflakes were observed on slightly higher elevations on 9 May, first observation of May snowflakes in Reading area since 1977.

\* Derecho raced eastward during 3 June from central PA to NJ coast in 3 hours; blasted across the Reading area during forenoon. Damage was minimal vicinity of Reading 4 SW but severe in Reading (city) and northern suburbs. Gust of 83 mph was clocked at RDG.

\* Said derecho marked abrupt turnaround from the cool regime of spring to a toasty summer. While no triple-digit heat (max 98 on 6 July), very warm to moderately hot weather was nearly continuous and allowed very little summer coolness. Although the first/last hot (90-degree) days came rather late/early, 9 June (90) and 27 August (96) respectively, 36 more hot days occurred in between. Only a few of the remaining days failed to warm to at least 80. And only a few cooled below 60. The resulting JJA average was 76.6, second to only 77.0 of 2010. The same 76.6 average at RDG edged above 76.5 of 1949 for new warmest statistical (JJA) summer in 123 years of record.

\* September averaged near normal in temperature with offsetting late summer warmth and unusual coolness. Lows of 37, 37, 38 under clear and calm nocturnal conditions on 20-22 Sept. marked the only occurrences of sub-40 in September since 35 on 29 Sept. 2000.

\* End-of-month copious rains of 29-30 September (2.58), 29-30 October (1.63), and 30 November (1.42) relieved rather dry conditions which developed earlier each month.

\* Significantly above normal temperatures returned for November, which averaged 49.5 (+4.7), close second to 49.6 of November 2015, was keyed by eight consecutive days with highs of at least 68 (68, 69, 73, 75, 78, 77, 76, 69 on 4-11 November) and a low of 63 on the 11th.

\* December averaged slightly warmer than normal with average of 36.5 and was keyed by highs of 61 and 63 either side of midnight of Christmas Eve night but blunted by a moderately cold air mass which was chilled further by clear and calm over snow pack. The low/high of 12/32 on 19 December became the new coldest day of 2020. And that December average of 36.5 edged below the 36.8 average of January to become the coolest calendar month of 2020.

\* The major winter storm of 16-17 December laid that 8.7” of chilling snow/sleet pack, and nearly tripled the total pre-November snowfall of 2020. Also, the 8” of pack, at its deepest, became the greatest depth of snow/ice since 10” from the “welcome to spring” snowstorm of 21 March 2018.