| PAGE \#1 <br> 1 | 2 | Nov <br> 3 | $2015$ |  |  | Co. - C | Glen Alle <br> 8 | Weath <br> 9 | 10 | $\begin{array}{r} 37.65537 \\ 11 \quad 12 \\ \hline 11 \end{array}$ |  | $77.56929^{\circ}$ W. - Koontz |  |  |  | 17 | 18 | 19 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 5 | 6 |  |  |  |  |  |  | 13 | 14 | 15 | 16 |  |  |  |
|  |  | TEMPERATURE |  |  |  | TEMPERATURE |  |  |  | SKY |  | PRECIPITATION |  |  | FROZ. PRECIP.NEW GROUND |  | 1st PERIOD |  |
| 2015 | Day | MAX. | Time | MIN. | Time | RANGE | MEAN | CHANGE | SOIL | AM | PM | Liquid | 1 Hr . | 5 Min . |  |  | START | END |
| Nov-01 <br> Nov-02 <br> Nov-03 <br> Nov-04 <br> Nov-05 | Sun | 66 | 14:29 | 54 | 0:05 | 11.3 | 60.0 | 12.3 | 59 | 2 | 2 | 0.03 | 0.02 | 0.01 |  |  | 0420 | 0435 |
|  | Mon | 61 | 14:56 | 55 | 23:57 | 6.2 | 58.2 | -1.7 | 61 | 2 | 2 | 0.05 | 0.04 | 0.01 |  |  | 0600 | 0845 |
|  | Tue | 74 | 13:52 | 51 | 6:54 | 22.9 | 62.6 | 4.3 | 60 | 0 | 0 |  |  |  |  |  |  |  |
|  | Wed | 76 | 13:11 | 49 | 5:04 | 27.2 | 62.3 | -0.2 | 60 | 1 | 2 | 0.33 | 0.25 | 0.06 |  |  | 1545 | 1550 |
|  | Thu | 74 | 14:35 | 60 | 6:32 | 14.4 | 67.1 | 4.8 | 62 | 2 | 1 |  |  |  |  |  |  |  |
| Nov-06 <br> Nov-07 <br> Nov-08 <br> Nov-09 <br> Nov-10 | Fri | 79 | 14:16 | 63 | 0:01 | 16.4 | 70.9 | 3.8 | 63 | 1 | 0 |  |  |  |  |  |  |  |
|  | Sat | 69 | 12:55 | 51 | 23:57 | 17.1 | 60.0 | -11.0 | 64 | 2 | 2 | 0.20 | 0.05 | 0.01 |  |  | 0755 | 0800 |
|  | Sun | 56 | 13:23 | 39 | 22:38 | 17.8 | 47.5 | -12.5 | 62 | 2 | 2 |  |  |  |  |  |  |  |
|  | Mon | 54 | 23:12 | 38 | 1:47 | 15.8 | 45.8 | -1.7 | 58 | 2 | 2 | 2.72 | 0.76 | 0.08 |  |  | 0800 | 0805 |
|  | Tue | 59 | 13:30 | 48 | 23:59 | 10.1 | 53.5 | 7.7 | 57 | 2 | 2 | 0.55 | 0.17 | 0.04 |  |  | 0001 | 0450 |
| Nov-11 <br> Nov-12 <br> Nov-13 <br> Nov-14 <br> Nov-15 | Wed | 68 | 13:28 | 42 | 6:12 | 26 | 55.0 | 1.6 | 57 | 0 | 1 |  |  |  |  |  |  |  |
|  | Thu | 72 | 14:25 | 45 | 2:37 | 26.4 | 58.5 | 3.5 | 57 | 2 | 1 | T | T | T |  |  | 1245 | 1310 |
|  | Fri | 66 | 13:33 | 41 | 23:56 | 25.2 | 53.8 | -4.7 | 57 | 1 | 0 |  |  |  |  |  |  |  |
|  | Sat | 59 | 13:10 | 36 | 23:58 | 23 | 47.0 | -6.8 | 55 | 0 | 0 |  |  |  |  |  |  |  |
|  | Sun | 66 | 13:54 | 30 | 6:22 | 36.9 | 48.0 | 1.0 | 53 | 0 | 0 |  |  |  |  |  |  |  |
| Nov-16 <br> Nov-17 <br> Nov-18 <br> Nov-19 <br> Nov-20 | Mon | 70 | 14:00 | 36 | 6:32 | 34.1 | 52.7 | 4.7 | 52 | 0 | 0 |  |  |  |  |  |  |  |
|  | Tue | 67 | 13:54 | 45 | 0:01 | 22.3 | 56.1 | 3.4 | 53 | 2 | 2 |  |  |  |  |  |  |  |
|  | Wed | 71 | 12:15 | 49 | 6:31 | 21.7 | 59.9 | 3.8 | 56 | 1 | 2 | 0.13 | 0.12 | 0.03 |  |  | 1325 | 1608 |
|  | Thu | 68 | 15:27 | 58 | 23:59 | 9.6 | 62.7 | 2.9 | 58 | 2 | 2 | 0.56 | 0.15 | 0.05 |  |  | 0224 | 1615 |
|  | Fri | 59 | 13:58 | 37 | 23:47 | 22.1 | 47.8 | -15.0 | 58 | 0 | 0 |  |  |  |  |  |  |  |
| $\begin{aligned} & \hline \text { Nov-21 } \\ & \text { Nov-22 } \\ & \text { Nov-23 } \\ & \text { Nov-24 } \\ & \text { Nov-25 } \\ & \hline \end{aligned}$ | Sat | 59 | 14:19 | 31 | 6:50 | 28 | 44.8 | -3.0 | 54 | 0 | 0 |  |  |  |  |  |  |  |
|  | Sun | 50 | 0:33 | 36 | 23:36 | 13.9 | 42.7 | -2.1 | 54 | 2 | 2 |  |  |  |  |  |  |  |
|  | Mon | 44 | 14:07 | 27 | 6:01 | 16.9 | 35.8 | -6.9 | 51 | 0 | 0 |  |  |  |  |  |  |  |
|  | Tue | 58 | 13:08 | 26 | 6:48 | 31.8 | 42.3 | 6.6 | 49 | 0 | 0 |  |  |  |  |  |  |  |
|  | Wed | 59 | 12:54 | 28 | 6:28 | 30.7 | 43.7 | 1.4 | 49 | 0 | 0 |  |  |  |  |  |  |  |
| $\begin{aligned} & \hline \text { Nov-26 } \\ & \text { Nov-27 } \\ & \text { Nov-28 } \\ & \text { Nov-29 } \\ & \text { Nov-30 } \end{aligned}$ | Thu | 67 | 14:20 | 35 | 4:42 | 31.9 | 51.0 | 7.3 | 49 | 0 | 0 |  |  |  |  |  |  |  |
|  | Fri | 69 | 12:42 | 38 | 6:48 | 30.9 | 53.6 | 2.6 | 50 | 1 | 2 |  |  |  |  |  |  |  |
|  | Sat | 71 | 14:52 | 45 | 4:18 | 26.5 | 58.0 | 4.4 | 51 | 2 | 2 |  |  |  |  |  |  |  |
|  | Sun | 60 | 3:59 | 45 | 23:41 | 15 | 52.2 | -5.8 | 54 | 2 | 2 | 0.09 | 0.03 | 0.01 |  |  | 0310 | 0315 |
|  | Mon | 45 | 0:01 | 40 | 22:36 | 4.5 | 42.7 | -9.6 | 54 | 2 | 2 | 0.37 | 0.04 | 0.07 |  |  | 0010 | 2000 |
| TOTAL |  | 1914 |  | 1277 |  | 636.6 | 1595.4 | -5.0 | 1677 | 33 | 33 | 5.03 | 1.63 | 0.37 | 0 | 0 | Col | 26-27 |
| NUM |  | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 10 | 10 | 10 | 0.0 | 0.0 | DAILY | AVE RH |
| AVE. |  | 63.79 | 12:54 | 42.57 | 11:41 | 21.22 | 53.18 |  | 55.90 | 1.10 | 1.10 | Ave. Tot. | Ave.Max | Ave.Max | Ave.Tot. | Ave.Days | 74.2 | Percent |
| Normals |  | 59.39 |  | 37.46 |  | 21.94 | 48.43 |  | 53.77 | 0.92 | 1.06 | 3.96 | 0.65 | 0.15 | 0.0 | 0.0 | 68.7 | Percent |
| Departures |  | 4.40 |  | 5.11 |  | -0.72 | 4.75 |  | 2.13 | 0.18 | 0.04 | 1.07 | 0.98 | 0.22 | 0.0 | 0.0 | 5.5 | Percent |
| MAX. Dates | Dates | 79 |  | 63 |  | 36.9 | 70.9 | 12.3 | 64.0 | Who | Day | 2.72 | 0.76 | 0.08 | 0 | 0.0 | Precip | 24 Hr . |
|  | 1 | Nov-06 |  |  |  |  | Nov-06 |  | Nov-07 | Ave. | 1.10 | Nov-09 | Nov-09 | Nov-09 |  |  | Amount | 3.07 |
|  | $\begin{aligned} & 2 \\ & 3 \end{aligned}$ |  |  |  |  |  |  |  |  | Normal Depart. | $\begin{aligned} & 0.99 \\ & 0.11 \end{aligned}$ |  |  |  |  |  | Date <br> Date | Nov-09 <br> Nov-10 |
| MIN. <br> Dates | Dates <br> 1 | $\begin{gathered} 44 \\ \text { Nov-23 } \end{gathered}$ |  | $\begin{gathered} 26 \\ \text { Nov-24 } \end{gathered}$ |  | $\begin{gathered} 4.5 \\ \text { Nov-30 } \end{gathered}$ | $35.8$ <br> Nov-23 | $\begin{gathered} -15.0 \\ \text { Nov-20 } \end{gathered}$ | $49.0$ <br> Nov-24 | SKY | AM | PM | $\begin{gathered} >=0.10 \\ 7 \\ \hline \end{gathered}$ | Precip. <br> DAYS | $\begin{array}{r} >=1.00 \\ 1 \end{array}$ | Precip. <br> DAYS | $\begin{array}{r} >=2.00 \\ 1 \end{array}$ | Precip. <br> DAYS |
|  | $\begin{aligned} & 2 \\ & 3 \end{aligned}$ |  |  |  |  |  |  |  | Nov-25 <br> Nov-26 | $\begin{gathered} \text { P.CLO. } \\ \text { CLO. } \end{gathered}$ | $\begin{gathered} 5 \\ 14 \end{gathered}$ | $\begin{gathered} 3 \\ 15 \end{gathered}$ | HOTTEST DAY | $\begin{gathered} 70.9 \\ 11-06 \end{gathered}$ | Highest <br> Mean | Lowest Mean | COOLEST <br> DAY | $\begin{gathered} \hline 35.8 \\ 11-23 \end{gathered}$ |
| $<=32{ }^{\circ} \mathrm{F}$ |  | 0 | < $=32{ }^{\circ} \mathrm{F}$ | 5 | MAX. | >=80 | >=75 | $>=70$ | >=65 | >=60 | $>=55$ | >=50 | >=45 | $>=40$ | $>=35$ | $>=30$ | >=25 | $>=20$ |
|  | $>=90^{\circ} \mathrm{F}$ | 0 | $>=70^{\circ} \mathrm{F}$ | 0 |  | 0 | 2 | 7 | 17 | 18 | 26 | 27 | 28 | 30 | 30 | 30 | 30 | 30 |

## PAGE \#1

No 2015 \begin{tabular}{ccc|}
\hline TEMPERATURE \& <br>
Time \& MIN. \& Time

 Day $\stackrel{8}{\text { TEMPERATUR }}$ 14 15 

16 \& \multicolumn{1}{r}{} \& 17 <br>
FROZ. PRECIP. \& 18 \& 19 <br>
\hline
\end{tabular} NEW GROUND START END



| 39 | 40 |
| :---: | :---: |
| Nov | REMARKS FOR THE MONTH |
| 2015 | November - 2015 |
| Nov-01 |  |
| Nov-02 |  |
| Nov-03 | BEAUTIFUL FALL DAY WITH NO CLOUDS AND A LARGE TEMP. RANGE OF $33^{\circ} \mathrm{F}$ |
| Nov-04 | VARIABLE SKY-CLOUDY SUNRISE TO 0930-VERY CLEAR TO 1315 THEN CLOUDY TO SUNSET-3RD PD. OF PRECIP. 2025-2315 |
| Nov-05 | HEAVIEST FOG AT 0830-CLEARING STARTED AT 1430 AND CLEAR BY 1515 |
| Nov-06 | DEW TRIPPED RAIN BUCKET-CLOUDY UNTIL 0745 THEN CLEAR BY 0810 THEN CLOUDY TO 1130 THEN CLEAR AGAIN |
| Nov-07 | COLD FRONT PASSED AT 1420-LIGHT RAIN MOST OF DAY AFTER 0930 |
| Nov-08 | CIRROSTRATUS ALL DAY WITH WEAK SUN FROM 1245 TO 1615 THEN SOME FIBROUS CIRRUS AND BLUE SKY AFTER THAT BUT NOT AT ZENITH |
| Nov-09 | RAIN FOR MOST OF DAY AGAIN AND MODERATE TO HEAVY AFTER DARK |
| Nov-10 | 3RD PD. OF PRECIP. 1225-1330 MAINLY DRIZZLE-CLOUDY GLOOMY DAY-SOLAR RADIATION GENERALLY LESS THAN 110 WATTS PER SQ. METER |
| Nov-11 | MOSTLY CLEAR TO NOON - ONLY A FEW CIRRUS STARTING AROUND 1100 |
| Nov-12 | CLOUDY AM BECOMING PC BY 1345 WITH CIRRUS-ONLY SPRINKLES WITH COLD FRONTAL PASSAGE |
| Nov-13 | MOSTLY CLEAR BUT CIRRUS TO NORTH AT 1100-AM CIRRUS 50-60\% CLOUDY - PM VERY CLEAR |
| Nov-14 | FROST SEEN IN PATCHES IN BACK YARD BUT NONE ON ROOF BECAUSE OF LIGHT BREEZE-MIN. DEWPOINT TODAY WAS 18.4* ${ }^{\circ} \mathrm{F}$ AT 1313 |
| Nov-15 | COLDEST NIGHT SINCE MARCH 29,2015 WHEN IT WAS $20.1{ }^{\circ} \mathrm{F}$-CLEAR ALL DAY JUST A FEW CIRRUS ON SOUTH HORIZON |
| Nov-16 | A LITTLE FROST ON ROOFS - A MOSTLY CLEAR DAY WITH A 34.1${ }^{\circ} \mathrm{F}$ TEMP. RANGE-YESTERDAY HAD A VERY LARGE 36.9${ }^{\circ} \mathrm{F}$ RANGE |
| Nov-17 | VERY CLOUDY UNTIL 0945 THEN SUN THROUGH AN OVERCAST UNTIL 1400 THEN PC FOR $11 / 2$ HOURS OF PM BUT GENERALLY CLOUDY EST. 70-80\% |
| Nov-18 |  |
| Nov-19 | LOWER VISIBILITY DURING PDS. OF DRIZZLE-LIGHT GROUND FOG JUST AFTER SUNSET THEN CLEARING |
| Nov-20 | HEAVY DEW TRIPPED RAIN GAUGE BUCKET-TOTALLY CLEAR DAY AND BREEZY |
| Nov-21 | ONLY A FEW SCATTERED CIRRUS DURING DAY |
| Nov-22 | ONLY SUN FROM 1610-1700 - COLD BREEZY FIRST WINTER-LIKE DAY |
| Nov-23 | BREEZE KEPT FROST FROM FORMING-VERY CLEAR DAY AND LOW REL. HUMIDITY- MIN. DEWPOINT 13.2²F AT 1559 |
| Nov-24 | GREAT WARMUP TODAY AND AFTERNOON WAS ALMOST CLOUDLESS |
| Nov-25 | ANOTHER BEAUTIFUL FALL AFTERNOON AFTER A COLD AND VERY FROSTY START |
| Nov-26 | HIGHEST BAROMETER READING SINCE FEB. 28, 2015 WHEN IT WAS 30.87 INCHES |
| Nov-27 | AM WAS COVERED WITH THIN CIRRUS BUT MUCH SOLAR ENERGY AND BY 1320 IT WAS MAINLY CLOUDY BUT VERY WARM FOR END OF NOV. |
| Nov-28 | VERY WARM FOR END OF NOVEMBER |
| Nov-29 | ON AND OFF DRIZZLE DURING AM - ENDED AT 1355 \& FALLING TEMPS AS A SLOW MOVING COLD FRONT PASSED AROUND 0500. 3rd PD RAIN $2205-2235$ |
| Nov-30 | DRIZZLE AND VERY LIGHT RAIN ALL DAY AND INTO THE NIGHT WITH A LIGHT FOG |
| DATE | EXTENSION OF LENGTHY DAILY REMARKS |
|  |  |
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|  |  |
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|  |  |

## DAILY RECORDS FOR THE MONTH

The minimum temperature on the 2nd was $55.1^{\circ} \mathrm{F}$, a new 7 year warm daily minimum temperature record for the date - the old record was $47^{\circ} \mathrm{F}$ in 2013 .
The daily temperature range on the 2nd was $6.2^{\circ} \mathrm{F}$, a new 7 year LOW daily temperature range record for the date - the old record was $17^{\circ} \mathrm{F}$ in 2009.
The minimum temperature on the 3rd was $51.1^{\circ} \mathrm{F}$, a new 7 year warm daily minimum temperature record for the date - the old record was $51^{\circ} \mathrm{F}$ in 2008.
The maximum temperature on the 3rd was $74^{\circ} \mathrm{F}$, a new 7 year daily HIGH maximum temperature record for the date - the old record was $68^{\circ} \mathrm{F}$ in 2009.
The maximum temperature on the 4th was $75.9^{\circ} \mathrm{F}$, a new 7 year daily HIGH maximum temperature record for the date - the old record was $74^{\circ} \mathrm{F}$ in 2014 .
The minimum temperature on the 5th was $59.9^{\circ} \mathrm{F}$, a new 7 year warm daily minimum temperature record for the date - the old record was $56^{\circ} \mathrm{F}$ in 2008. The maximum temperature on the 5th was $74.3^{\circ} \mathrm{F}$, a new 7 year daily HIGH maximum temperature record for the date - the old record was $66^{\circ} \mathrm{F}$ in 2008. The minimum temperature on the 6th was $62.7^{\circ} \mathrm{F}$, a new 7 year warm daily minimum temperature record for the date - the old record was $57^{\circ} \mathrm{F}$ in 2008. The maximum temperature on the 6th was $79.1^{\circ} \mathrm{F}$, a new 7 year daily HIGH maximum temperature record for the date - the old record was $71^{\circ} \mathrm{F}$ in 2013. The minimum temperature on the 7 th was $51.4^{\circ} \mathrm{F}$, a new 7 year warm daily minimum temperature record for the date - the old record was $50^{\circ} \mathrm{F}$ in 2008. The daily precipitation on the 7th was 0.20 inches a new 7 year HIGH daily precipitation record for the date - the old record was 0.02 inches in 2013.
The daily temperature range on the 8th was $17.8^{\circ} \mathrm{F}$, a new 7 year LOW daily temperature range record for the date - the old record was $24^{\circ} \mathrm{F}$ in 2008.
The maximum temperature on the 9th was $53.7^{\circ} \mathrm{F}$, a new 7 year cold daily maximum temperature record for the date - the old record was $59^{\circ} \mathrm{F}$ in 2014 and 2013.
The daily temperature range on the 9th was $15.8^{\circ} \mathrm{F}$, a new 7 year LOW daily temperature range record for the date - the old record was $19^{\circ} \mathrm{F}$ in 2014.
The daily precipitation on the 9th was 2.72 inches a new 7 year HIGH daily precipitation record for the date - the old record was 0.00 inches.
Today's rainfall was the most at Glen Allen since August 27, 2011 when tropical storm Irene gave Glen Allen 3.75 inches
The daily temperature range on the 10 th was $10.1^{\circ} \mathrm{F}$, a new 7 year LOW daily temperature range record for the date - the old record was $14^{\circ} \mathrm{F}$ in 2009. The daily precipitation on the 10th was 0.55 inches a new 7 year HIGH daily precipitation record for the date - the old record was 0.38 inches in 2009.

The daily temperature range on the 15 th was $36.9^{\circ} \mathrm{F}$ a new 7 year HIGH daily temperature range record for the date - the old record was $31^{\circ} \mathrm{F}$ in 2009 The daily temperature range on the 16 th was $34.1^{\circ} \mathrm{F}$ a new 7 year HIGH daily temperature range record for the date - the old record was $30^{\circ} \mathrm{F}$ in 2009 .

The minimum temperature on the 18th was $49^{\circ}$ Fand EQUALED the 7 year HIGH daily minimum temperature record for the date - the old record was set in 2013. The maximum temperature on the 19th was $67.5^{\circ} \mathrm{F}$, a new 7 year daily HIGH maximum temperature record for the date - the old record was $66^{\circ} \mathrm{F}$ in 2009 .
The minimum temperature on the 19 th was $57.9^{\circ} \mathrm{F}$, a new 7 year warm daily minimum temperature record for the date - the old record was $56^{\circ} \mathrm{F}$ in 2009 .
The daily temperature range on the 19th was $9.6^{\circ} \mathrm{F}$, a new 7 year LOW daily temperature range record for the date - the old record was $10^{\circ} \mathrm{F}$ in 2009 .
The daily precipitation on the 19th was 0.56 inches a new 7 year HIGH daily precipitation record for the date - the old record was 0.54 inches in 2009.
The daily temperature range on the 21 st was $28^{\circ} \mathrm{F}$ a new 7 year HIGH daily temperature range record for the date - the old record was $24{ }^{\circ} \mathrm{F}$ in 2012 and 2010.

The minimum temperature on the 23 rd was $27.3^{\circ} \mathrm{F}$ the lowest minimum temperature since March 29,2015 when the minimum temperature was $20.1^{\circ} \mathrm{F}$. The maximum temperature on the 23 rd was $44.2^{\circ} \mathrm{F}$, a new 7 year cold daily maximum temperature record for the date - the old record was $46^{\circ} \mathrm{F}$ in 2008 .
The minimum temperature on the 24th was $26.4^{\circ} \mathrm{F}$ the lowest minimum temperature since March 29,2015 when the minimum temperature was $20.1^{\circ} \mathrm{F}$.
The daily temperature range on the 24 th was $31.8^{\circ} \mathrm{F}$ a new 7 year HIGH daily temperature range record for the date - the old record was $29^{\circ} \mathrm{F}$ in 2008.
The maximum barometric pressure for the 26th was 30.81 inches the highest since February 28, 2015 when the maximum was 30.87 inches.
The daily temperature range on the 26 th was $31.9^{\circ} \mathrm{F}$ a new 7 year HIGH daily temperature range record for the date - the old record was $30^{\circ} \mathrm{F}$ in 2011 . The daily temperature range on the 28th was $26.5^{\circ} \mathrm{F}$ a new 7 year HIGH daily temperature range record for the date - the old record was $24^{\circ} \mathrm{F}$ in 2010 and 2009. The minimum temperature on the 29 th was $44.7^{\circ} \mathrm{F}$, a new 7 year warm daily minimum temperature record for the date - the old record was $43^{\circ} \mathrm{F}$ in 2011 .
The daily temperature range on the 29th was $15^{\circ}$ F, and EQUALED the 7 year LOW daily minimum temperature range record for the date - the old record was set in 2008.
The daily temperature range on the 30th was $4.5^{\circ} \mathrm{F}$, a new 7 year LOW daily temperature range record for the date - the old record was $9^{\circ} \mathrm{F}$ in 2008 .

