

PAGE #1		Nov 2016 West Henrico Co. - Glen Allen Weather Center 37.65537° N. 77.56929° W. - Koontz																		
		TEMPERATURE °F				TEMPERATURE °F				SKY		PRECIPITATION			FROZ. PRECIP.		1st PERIOD			
Nov 2016	Week Day	MAX.	Time	MIN.	Time	RANGE	MEAN	CHANGE	SOIL	AM	PM	Liquid	1 Hr.	5 Min.	NEW	GROUND	START	END		
Nov-01	Tue	61.1	14:24	44.6	1:38	16.5	52.9	-2.8	61	2	2	T	T	T			2145	2150		
Nov-02	Wed	78.8	15:30	51.7	1:27	27.1	65.3	12.4	61	0	0									
Nov-03	Thu	84.1	14:18	57.7	5:40	26.4	70.9	5.7	62	1	2	0.12	0.07	0.01			1617	1648		
Nov-04	Fri	65.9	13:19	42.2	23:57	23.7	54.1	-16.9	64	0	0	0.26	0.17	0.03			0001	0410		
Nov-05	Sat	65.1	15:08	37.8	7:53	27.3	51.5	-2.6	59	0	0									
Nov-06	Sun	71.3	13:02	36.8	6:33	34.5	54.1	2.6	57	0	0									
Nov-07	Mon	59.6	14:00	36.9	23:55	22.7	48.3	-5.8	57	0	0									
Nov-08	Tue	69.0	12:50	32.7	6:27	36.3	50.9	2.6	55	0	2									
Nov-09	Wed	64.1	13:34	46.4	23:57	17.7	55.3	4.4	57	2	2	0.03	0.02	0.01			0440	0450		
Nov-10	Thu	63.0	14:01	36.3	6:52	26.7	49.7	-5.6	56	0	0									
Nov-11	Fri	68.8	13:22	38.2	6:59	30.6	53.5	3.9	55	0	1									
Nov-12	Sat	53.5	13:41	29.9	23:30	23.6	41.7	-11.8	55	0	0									
Nov-13	Sun	64.7	14:00	26.2	5:06	38.5	45.5	3.8	52	0	0									
Nov-14	Mon	48.9	11:02	29.9	3:36	19.0	39.4	-6.1	51	2	2	0.56	0.12	0.02			0930	2050		
Nov-15	Tue	61.3	13:58	39.2	23:47	22.1	50.3	10.9	52	2	1	0.01	0.01	T			0001	0255		
Nov-16	Wed	66.4	14:25	33.8	6:47	32.6	50.1	-0.1	52	0	0									
Nov-17	Thu	64.6	13:56	35.6	7:01	29.0	50.1	0.0	52	0	0									
Nov-18	Fri	72.3	14:01	36.6	5:41	35.7	54.5	4.4	52	0	0									
Nov-19	Sat	74.9	13:19	39.2	23:58	35.7	57.1	2.6	52	0	2									
Nov-20	Sun	52.6	12:42	30.6	23:54	22.0	41.6	-15.5	52	2	0									
Nov-21	Mon	51.4	13:48	25.9	23:57	25.5	38.7	-3.0	49	0	0									
Nov-22	Tue	53.7	13:18	21.8	4:21	31.9	37.8	-0.9	47	1	2									
Nov-23	Wed	56.3	14:08	25.2	7:11	31.1	40.8	3.0	46	0	2									
Nov-24	Thu	66.2	14:15	40.5	0:23	25.7	53.4	12.6	48	2	0	T	T	T			0515	0550		
Nov-25	Fri	65.4	14:58	47.0	0:01	18.4	56.2	2.9	51	2	2	T	T	T			0245	0250		
Nov-26	Sat	54.9	13:31	32.2	23:59	22.7	43.6	-12.7	52	2	1	0.02	0.02	0.01			0055	0145		
Nov-27	Sun	55.2	13:14	26.3	6:31	28.9	40.8	-2.8	49	0	0									
Nov-28	Mon	53.6	13:58	33.4	0:01	20.2	43.5	2.8	48	2	2									
Nov-29	Tue	68.7	12:15	49.7	0:01	19.0	59.2	15.7	50	2	2	0.07	0.04	0.01			0350	0615		
Nov-30	Wed	71.6	14:37	60.5	2:46	11.1	66.1	6.8	54	2	2	0.57	0.35	0.12			0355	0725		
TOTAL		1907		1125		782.2	1515.9	10.4	1608	24	27	1.64	0.80	0.21	0	0	Col.26-27			
NUMBER		30	30	30	30	30	30	30	30	30	30	8	8	7	0.0	0.0	DAILY AVE RH			
AVERAGE		63.57	13:45	37.49	10:15	26.07	50.53		53.60	0.80	0.90	Ave. Tot.	Ave.Max	Ave.Max	Ave.Tot.	Ave.Days	68.3	Percent		
NORMALS		59.94		38.10		21.85	49.02		54.03	0.94	1.06	4.09	0.87	0.14	0.0	0.0	69.9	Percent		
DEPARTURES		3.62		-0.60		4.23	1.51		-0.43	-0.14	-0.16	-2.45	-0.07	0.07	0.0	0.0	-0.4	Percent		
Max ≥70°F		Dates	84.1	60.5		38.5	70.9	15.7	64.0	Whole Day		0.57	0.35	0.12	0	0.0	Precip	24 Hr.		
6 DAYS		1	Nov-03	Nov-30		Nov-13	Nov-03	Nov-29	Nov-04	AVERAGE		0.85	Nov-30	Nov-30	Nov-30		Amount	0.57		
Departure		2								Normal		1.00					Date	Nov-14		
0.8		3								Depart.		-0.15					Date	15 th & 30 th		
MINIMUM		Dates	48.9	21.8		11.1	37.8	-16.9	46.0	SKY		AM	PM	≥= 0.10	Precip.	≥= 1.00	Precip.	≥= 2.00	Precip.	
MIN >32°F		1	Nov-14	Nov-22		Nov-30	Nov-22	Nov-04	Nov-23	CLEAR		17	15	4		DAYS	0	DAYS	0	DAYS
21		2								PT. CLO.		2	3	HOTTEST		70.9	Highest	Lowest	COOLEST	37.8
DAYS		3								CLOUDY		11	12	DAY		11-03	Mean	Mean	DAY	11-22
Departure		<=32 °F	0	<=32 °F	9	MAX.	>=80	>=75	>=70	>=65	>=60	>=55	>=50	>=45	>=40	>=35	>=30	>=25	>=20	
12.6		>=90°F	0	>=70 °F	0	DAYS	1	3	6	16	21	24	29	30	30	30	0	30	30	

PAGE #2		21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38
Nov 2016	2nd PERIOD		WIND			REL. HUMIDITY		BAROMETRIC PRESSURE											
	START	END	RUN	MAX.	TIME	MAX.	MIN.	MAX.	MIN.	AVE.	CHANGE	GLAZE	SLEET	SNOW	FOG	DEW	FROST		
Nov-01			20.5	12	12:29	97	64	30.36	30.27	30.32	0.18							4	
Nov-02			14.7	10	11:00	97	58	30.33	30.17	30.25	-0.06							3	
Nov-03	1855	2400	22.5	17	13:08	99	40	30.18	29.96	30.07	-0.18							5	
Nov-04			64.2	21	9:36	97	41	30.30	30.01	30.16	0.09							P	
Nov-05			6.3	13	10:44	98	39	30.40	30.28	30.34	0.18							4	2
Nov-06			28.5	20	13:45	99	32	30.39	30.26	30.33	-0.01							4	2
Nov-07			41.4	18	8:58	95	39	30.50	30.37	30.44	0.11							3	1
Nov-08			9.2	11	14:40	99	31	30.38	30.01	30.20	-0.24							1	3
Nov-09	0550	0945	29.9	18	20:26	95	63	30.05	29.87	29.96	-0.23							P	
Nov-10			50.4	20	3:34	93	33	30.16	29.91	30.04	0.07							3	
Nov-11			49.2	23	22:15	84	32	30.20	29.86	30.03	0.00							1	
Nov-12			56.5	18	1:11	94	35	30.45	30.19	30.32	0.29							N	
Nov-13			9.9	10	9:34	97	22	30.33	30.17	30.25	-0.07								5
Nov-14	2125	2400	11.5	9	15:46	97	63	30.17	29.98	30.08	-0.17								4
Nov-15			9.6	11	12:58	99	57	29.99	29.87	29.93	-0.15				3			P	
Nov-16			16.4	12	13:01	99	39	30.01	29.88	29.95	0.02							2	3
Nov-17			24.3	16	9:30	99	42	30.17	30.01	30.09	0.15							4	1
Nov-18			4.0	10	10:51	99	37	30.25	30.07	30.16	0.07							4	1
Nov-19			66.7	23	12:31	99	37	30.08	29.72	29.90	-0.26							4	
Nov-20			57.8	23	14:21	68	30	29.99	29.90	29.95	0.05							N	
Nov-21			29.7	21	13:59	78	25	30.15	29.95	30.05	0.10								2
Nov-22			13.4	13	12:38	85	22	30.35	30.14	30.25	0.20								4
Nov-23			7.4	9	10:51	93	28	30.40	30.26	30.33	0.08								4
Nov-24	0800	0805	29.5	15	12:19	97	52	30.27	30.13	30.20	-0.13							N	
Nov-25	2325	2330	17.3	12	23:43	100	66	30.27	30.11	30.19	-0.01							4	
Nov-26			69.6	21	14:53	91	40	30.25	30.13	30.19	0.00							P	
Nov-27			10.6	12	12:44	96	37	30.30	30.20	30.25	0.06								5
Nov-28			41.6	19	12:09	88	47	30.23	30.04	30.14	-0.12							3	2
Nov-29	1225	1445	138.8	35	15:33	100	74	30.04	29.80	29.92	-0.21							P	
Nov-30	2050	2250	90.1	32	20:34	100	78	29.93	29.59	29.76	-0.16						1	P	
TOTAL NUMBER AVERAGE	Mar. Wind Run		1041.5	504		2832	1303	906.88	901.11	904.00	TOTAL	0	0	0	1	1	15	14	
	Total		1041.5	34.7	16.8	12:59	94.40	43.43	30.23	30.04	30.13	NORMAL	0.0	0.6	0.9	2.4	0.8	10.6	8.4
NORMALS	Miles		1476.8	49.2	17.51	91.4	47.4	30.23	30.00	30.13	DEPART.	0.0	-0.6	-0.9	-1.4	0.3	4.4	5.6	
Departures	Miles		-435.3	-14.5	-0.71	3.0	-4.0	0.00	0.03	0.00	DAYS OF	GLAZE	SLEET	SNOW	FOG			DEW	FROST
MAXIMUM DATES	Dates	138.8	35		South	100	78	30.50	30.37	30.44	0.29	5. Very Heavy 4. Heavy-Unusual 3. Moderate - Ave. 2. Light - < Ave.		N- None					
	1	Nov-29	Nov-29	15:33	Nov-25	Nov-30	Nov-07	Nov-07	Nov-07	Nov-12									
	2				Nov-29	Nov-30													
	3				Nov-30														
MINIMUM DATES	Dates	4.0	9		68	22	29.93	29.59	29.76	-0.26	1. Very Light - Slight - Trace M - Event with intensity missing P - Rain hindering Dew Observation								
	1	Nov-18	Nov-14		Nov-20	Nov-13	Nov-30	Nov-30	Nov-30	Nov-19									
MIN. DAYS	<=75	<=70	<=65	<=60	<=55	<=50	<=45	<=40	<=35	<=30	<=25	<=20	<=15						
	30	30	30	29	28	27	24	21	12	7	2	0	0						

Nov 2016	REMARKS FOR THE MONTH November - 2016
Nov-01	CLOUDY COOL DAY WITH AIR OFF THE ATLANTIC AND SPRINKLES NEAR 2200
Nov-02	SOME AM CIRRUS THEN CLEAR 1300-1600 THEN CIRRUS CLOUDS AGAIN-AM EST. 20-30% CLOUDY -PM 10-20% CLOUDY
Nov-03	VERY HEAVY DEW-CIRRUS IN AM AND PM STARTED WITH CIRROSTRATUS AND THICKENED AS COLD FRONT APPROACHED
Nov-04	CUMULUS CAME INTO A CLEAR BLUE SKY AT 1100 AND DISIPATED AT 1500 BACK TO TOTALLY CLEAR-PM EST. 20% CLOUDY
Nov-05	NO CLOUDS ALL DAY-SOME ROOFS WHITE WITH FROST AND PATCHY FROST ON GRASS
Nov-06	COLDEST AM SINCE APR. 17, 2016 WHEN IT WAS 35.9°F -ONLY A FEW CIRRUS TO NORTH HORIZON TODAY
Nov-07	VERY CLEAR COOL AM BUT PLEASANT FALL AFTERNOON
Nov-08	LIGHT KILLING FROST MORE FROST THAN DEW-COLDEST AM SINCE APRIL 10, 2016 WHEN IT WAS 25.2°F -ONLY MOST SENSITIVE PLANTS KILLED BY FROST-PM EST. 65-70% CLOUDY
Nov-09	COLD FRONT CAUSED WIND SHIFT SOUTH TO NORTH AT NOON- 3RD PD. OF SPRINKLES 1155-NOON, 4TH PD. 1330-1335, 5TH PD. 1450-1540, 6TH PD. 1755-1805
Nov-10	NO FROST SEEN-CIRRUS CLOUDS ON N HORIZON 1500 TO SUNSET-AM EST. NO CLOUDS, PM EST. 15% CLOUDS
Nov-11	CIRRUS AND CIRROSTRATUS CLOUDS BECAME CUMULUS FROM 1300 THEN VERY CLOUDY AFTER 1445-PM EST. 50-60% CLOUDY
Nov-12	NO CLOUDS TODAY-COLDEST OF THE FALL AT MIDNIGHT-DEW AND FROST BY MIDNIGHT BUT NOT RATED-FROST AND DEW ONLY RATED IN MORNING-COLDEST SINCE 4/10/2016 WHEN MIN. WAS 25.2°F
Nov-13	NO CLOUDS ALL DAY - AM WAS A HARD FREEZE, THE OFFICIAL FIRST KILLING FROST- COLDEST SINCE APR. 10, 2016 WHEN IT WAS 25.2°F
Nov-14	LIGHT RAIN DURING MOST OF DAY AND HEAVIER AROUND DARKNESS WHICH WAS MUCH NEEDED
Nov-15	DRIZZLE AFTER MIDNIGHT AND MODERATE FOG THIS AM-HEAVIEST FOG OCCURRED AT 0800 WITH VISIBILITY OF 0.4 MILES-CLEARING BY 1100
Nov-16	ALMOST NO CLOUDS EXCEPT ON NE HORIZON FROM 0930-0945-AM ROOFS WHITE WITH FROST BUT DEW SENSOR INDICATED 15 AND NOT FROZEN WHICH WOULD READ ZERO
Nov-17	ANOTHER BEAUTIFUL FALL DAY WITH A DEEP BLUE SKY AND NO CLOUDS
Nov-18	WARM AND VERY CLEAR FALL DAY-SE STATES ARE UNDER SEVERE DROUGHT CONDITIONS AND SEVERAL FIRES
Nov-19	CLOUDS CAME IN AT 1400 AND COLD FRONT PASSED AREA AROUND 1600
Nov-20	CLEARING STARTED AT 1115-NOT AS WINDY AS FORECASTED (WITH GUSTS 35-40MPH)
Nov-21	NO CLOUDS ALL DAY-LIGHT AM FROST-UPPER LEVEL TROUGH PASSED AT 1900 WITH COLDER AIR BEHIND THE TROUGH
Nov-22	COLDEST AM SINCE FEB. 27, 2016 WHEN IT WAS 20.6°F -CIRRUS CAME IN AT 0900-PM CLOUDY WITH CIRROSTRATUS
Nov-23	CLOUDS CAME IN AT 1400 AND CLOUDY BY 1515 TODAY WITH A COLD FRONT TO PASS TOMORROW
Nov-24	CLEARING STARTED AT 1130 AND WAS CLEAR BY NOON-99% REL. HUMIDITY OCCURRED AT 2400-AM READING WAS 68% EXPLAINING THE LACK OF DEW
Nov-25	A SLIGHT TRACE OF PRECIP. AROUND 0250-MOISTURE SENSOR READ ONLY 3-CLOUDY AM- PM WITH WEAK SUN THROUGH CIRROSTRATUS
Nov-26	CLEARING STARTED AT 1230 AND PC MOST OF THE PM BUT THEN CLEARING BY 1815
Nov-27	VERY FROSTY START TO DAY BUT A SUNNY AFTERNOON AND NEAR AVERAGE TEMPS.
Nov-28	CIRROSTRATUS AND ALTOSTRATUS MOST OF DAY ONLY A FEW LITTLE SUN THROUGH CLOUDS
Nov-29	EVEN AFTER WINDS OF TODAY MOST OF THE OAKS STILL HAVE AN AVE. OF 30-40% OF THEIR LEAVES-I HAVE NEVER SEEN SOME MANY LEAVES ON THE TREES THIS LATE IN AUTUMN SEASON
Nov-30	THUNDER HEARD AT 0428-STILL VERY LIGHT RAIN WHICH IS MUCH NEEDED. A COLD FRONT PASSED AROUND 2100 GIVING AN ADDITIONAL 0.38 INCHES OF RAIN.
DATE	EXTENSION OF LENGTHY DAILY REMARKS
Nov-12	KILLING FROST TONIGHT AND TEMPS. TODAY ABOUT 5 DEGREES BELOW AVERAGE

The link below explains how observations are taken at the Glen Allen Weather Station - Note the Numbers match the column numbers on the Observation Sheet

www.glenallenweather.com/upload/glenallenclimate/log/2016/2016_Obs_Rules.pdf

DAILY RECORDS FOR THE MONTH

41

Nov
2016

The Glen Allen Station had 19 Records or Record Ties in November 2016

1

2

The maximum temperature on the 2nd was 78.8°F, a new 8 year HIGH daily maximum temperature record for the date - the old record was 73°F in 2013.

3

The minimum temperature on the 3rd was 57.7°F, a new 8 year warm daily minimum temperature record for the date - the old record was 51.1°F in 2015.

The maximum temperature on the 3rd was 84.1°F, a new 8 year HIGH daily maximum temperature record for the date - the old record was 74°F in 2015.

The daily precipitation on the 3rd was 0.02 inches, a new 8 year HIGH daily precipitation record for the date - the old record was 0.01 inches in 2010.

4

5

The daily temperature range on the 5th was 27.3°F, a new 8 year HIGH daily temperature range record for the date - the old record was 26°F in 2009.

6

The daily temperature range on the 6th was 34.5°F, a new 8 year HIGH daily temperature range record for the date - the old record was 28°F in 2011.

7

8

The daily temperature range on the 8th was 36.3°F, a new 8 year HIGH daily temperature range record for the date - the old record was 35°F in 2011 and 2010.

9

The minimum temperature on the 9th was 46.4°F, a new 8 year warm daily minimum temperature record for the date - the old record was 43°F in 2009.

10

11

12

13

The daily temperature range on the 13th was 38.5°F, a new 8 year HIGH daily temperature range record for the date - the old record was 37°F in 2010.

(Note But NOT a Record) The low temperature last night was 26.2°F the lowest temperature since April 10, 2016 when the low temperature was 25.2°F but NOT a record for the date.

14

The daily precipitation on the 14th was 0.56 inches, a new 8 year HIGH daily precipitation record for the date - the old record was 0.01 inches in 2014.

15

16

17

The daily temperature range on the 17th was 29°F, a new 8 year HIGH daily temperature range record for the date - the old record was 25°F in 2010.

18

The maximum temperature on the 18th was 72.3°F, a new 8 year HIGH daily maximum temperature record for the date - the old record was 72°F in 2013.

The daily temperature range on the 18th was 35.7°F, a new 8 year HIGH daily temperature range record for the date - the old record was 25°F in 2010.

19

The maximum temperature on the 19th was 75°F, a new 8 year HIGH daily maximum temperature record for the date - the old record was 67.5°F in 2015.

The daily temperature range on the 19th was 35.7°F, a new 8 year HIGH daily temperature range record for the date - the old record was 28°F in 2011.

20

21

22

23

24

25

26

27

28

29

The minimum temperature on the 29th was 49.7°F, a new 8 year warm daily minimum temperature record for the date - the old record was 44.7°F in 2015.

30

The minimum temperature on the 30th was 60.5°F, a new 8 year warm daily minimum temperature record for the date - the old record was 46°F in 2010.

The maximum temperature on the 30th was 71.6°F, a new 8 year HIGH daily maximum temperature record for the date - the old record was 69°F in 2014.

The daily precipitation on the 30th was 0.57 inches, a new 8 year HIGH daily precipitation record for the date - the old record was 0.46 inches in 2009.