PAGE #1		Mar	2017	West H	enrico	Co G	len Alle	n Weatl	her Cer	nter 37	.65537	° N. 77.5	6929° V	V Koon	tz			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Mar	Week	TEMPERATURE °F			TEMPERATURE °F			SKY			RECIPITATI	ON	FROZ. PRECIP.		1st PERIOD			
2017	Day	MAX. Time MIN. Time			RANGE MEAN CHANGE SOIL					Liquid	1 Hr.	5 Min.	NEW GROUND		START END			
Mar-01	Wed	80.3	13:33	57.7	1:21	22.6	69.0	9.9	54	2	2	0.15	0.09	0.02		CIRCOILD	1409	1440
Mar-02	Wed	61.4	0:44	35.8	23:59	25.6	48.6	-20.4	55	0	0	0.10	0.00	0.02			1400	1440
Mar-03	Thu	50.2	13:32	27.8	23:44	22.4	39.0	-9.6	51	2	1	Т	Т	Т	Т	None	1050	1053
Mar-04	Fri	47.9	14:37	22.1	6:37	25.8	35.0	-4.0	47	0	0							
Mar-05	Sat	45.1	14:32	24.6	5:59	20.5	34.9	-0.1	46	0	0							
Mar-06	Sun	62.4	15:41	30.6	4:33	31.8	46.5	11.7	46	2	2							
Mar-07	Mon	70.6	15:41	54.2	4:24	16.4	62.4	15.9	49	2	2	0.01	0.01	Т			1605	1635
Mar-08	Tue	67.5	14:16	48.5	23:42	19	58.0	-4.4	52	1	0	0.03	0.02	0.01			0520	0715
Mar-09	Wed	73.2	14:54	46.4	6:07	26.8	59.8	1.8	51	0	0	0.01	-	-			0057	0005
Mar-10	Thu	57.0	0:08	32.1	23:58	24.9	44.6	-15.3	52	2	1	0.01	Т	Т			0657	0935
Mar-11	Fri	47.6	15:52	24.7	6:00	22.9	36.2	-8.4	48	0	0							
Mar-12	Sat	46.5	15:45	26.9	4:23	19.6	36.7	0.6	47	1	0	0.20	0.14	0.01	-	Nana	1505	2400
Mar-13 Mar 14	Sun	47.3 48.8	13:40 16:19	26.5 28.8	6:15 23:59	20.8 20	36.9 38.8	0.2	46 45	2	2	0.39	0.14	0.01	T	None None	1525 0001	2400 0855
Mar-14 Mar-15	Mon Tue	40.0 38.9	17:14	20.0 20.2	7:06	18.7	29.6	1.9 -9.3	45 44	2	0	0.74	0.16	0.02		None	0001	0600
Mar-15 Mar-16	Wed	48.0	15:21	20.5	7:21	27.5	34.3	4.7	44	0	0							
Mar-17	Thu	55.2	14:18	23.3	7:25	31.9	39.3	5.0	43	0	1	т	Т	т			2020	2025
Mar-18	Fri	64.1	15:54	43.1	7:25	21	53.6	14.4	46	2	1	0.23	0.19	0.03			0001	0035
Mar-19	Sat	52.3	15:25	37.5	8:26	14.8	44.9	-8.7	49	2	2	0.11	0.04	0.01	Т	None	0100	0840
Mar-20	Sun	57.1	16:22	28.7	7:18	28.4	42.9	-2.0	47	0	2							
Mar-21	Mon	65.9	16:42	47.4	6:48	18.5	56.7	13.8	50	2	1	0.01	0.01	Т			0240	0420
Mar-22	Tue	54.7	0:01	36.7	23:58	18	45.7	-11.0	52	0	0							
Mar-23	Wed	49.4	17:08	24.7	6:54	24.7	37.1	-8.7	49	0	0							
Mar-24	Thu	68.7	15:58	34.0	6:39	34.7	51.4	14.3	48	2	1	Т	Т	Т			1119	1120
Mar-25	Fri	79.3	15:07	57.4	7:10	21.9	68.4	17.0	51	1	1	_						
Mar-26	Sat	69.1	14:38	56.1	23:57	13	62.6	-5.8	54	2	2	T	Т	T			1450	1455
Mar-27	Sun	78.5	15:28	50.4	1:22	28.1	64.5	1.9	55	2	1	0.01	0.01	T			0250	0340
Mar-28	Mon	75.1 69.5	14:22 15:40	60.3 53.9	22:13	14.8	67.7	3.2 -6.0	57 58	2	2	0.06 T	0.04 T	0.01 T			0655	1010
Mar-29 Mar-30	Tue Wed	58.1	15:40	46.0	23:57 2:58	15.6 12.1	61.7 52.1	-6.0 -9.7	57	2	1	Т	Т	1			0055	0105
Mar-30 Mar-31	Thu	60.9	16:46	48.8	0:01	12.1	54.9	2.8	55	2	2	1.03	0.31	0.06			0040	0045
TOTAL		1851		1176	0.01	674.9	1513.2	-4.3	1547	37	31	2.78	1.04	0.17	Т	0		26 - 27
NUMBER		31	31	31	31	31	31	31	31	31	31	12	11	8	0	o		AVE RH
AVERAGE		59.70	13:57	37.93	10:50	21.77	48.81	0.	49.90	1.19	1.00	Ave Tot.	AveMax	AveMax	AveTot.	AveDays	58.3	Percent
			15.57		10.50	22.06				1.19	1.16			0.08		2.4		
NORMALS DEPARTURE		59.83 -0.13		37.77 0.15		-0.28	48.80 0.01		48.20 1.70	0.00	-0.16	3.78 -1.00	0.38	-0.02	3.6 -3.6	-2.4	64.1 -5.8	Percent
MaxTemps.		80.3		60.3		-0.28	69.0	17.0	58		e Day	1.03	0.07	0.02	-3.0 T	-2.4	-5.8 Precip	Percent 24 Hr.
201																0.0	-	
Ave		Mar-01		Mar-28		Mar-24	Mar-01	Mar-25	Mar-29	AVE. Normal	1.10 1.18	Mar-31	Mar-31	Mar-31	Mar-03 Mar-13		Amount Date	1.13 Mar-13
Departure										Depart.	-0.08				Mar-13 Mar-14		Date	Mar-13 Mar-14
MinTemps.	-	38.9		20.2		12.1	29.6	-20.4	43	SKY	-0.08 AM	PM	>= 0.10	INCHES	>= 1.00	INCHES	>= 2.00	INCHES
201		Mar-15		Mar-15		Mar-30	Mar-15	Mar-02	Mar-16	CLEAR	11	11	6	DAYS	1	DAYS	2.00 0	DAYS
Ave		and 10				Mar-30			Mar-17	P.CLO.	3	9	HOTTEST	69.0	Highest	Lowest	COOLEST	29.55
Departure									inci 217	CLO.	17	11	DAY	3-01	Mean	Mean	DAY	3-15
Days Max.		0		MAX.	≥85	≥80	≥75	≥70	≥65	≥60	≥55	≥50	≥45	≥40	≥35	≥30	≥25	≥20
Days Max.		ŏ		DAYS	0	1	4	7	11	15	20	22	30	30	31	31	31	31
					-													

PAGE #2	Mar	2017	West He	enrico C	o Gle	en Allen	Weathe	r Center	37.655	537° N.	77.56929)° W H	Koontz					
20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38
Mar	2nd PERIOD			WIND		REL. HUMIDITY		BAROMETRI		C PRESSURE						Л		
2017	START	END	RUN	MAX.	TIME	MAX.	MIN.	MAX.	MIN.	AVE.	CHANGE	GLAZE	SLEET	SNOW	FOG		DEW	FROST
Mar-01	1620	2100	186.4	46	11:46	99	45	30.04	29.66	29.85	-0.36						Р	
Mar-02			102.5	28	4:48	86	26	30.25	29.67	29.96	0.11						Р	
Mar-03			66.1	26	13:53	79	21	30.56	30.23	30.40	0.43			1				3
Mar-04			46.3	20	14:16	77	20	30.66	30.51	30.59	0.19							3
Mar-05			42.6	13	8:56	57	26	30.74	30.55	30.65	0.06							N
Mar-06			50.3	19	10:09	70	45	30.55	30.34	30.45	-0.20							N
Mar-07	1750	1755	172.2	34	13:13	71	44	30.35	30.08	30.22	-0.23						N	
Mar-08			111.5	28	2:11	86	18	30.19	30.00	30.10	-0.12						Р	
Mar-09 Mar-10	1030	1150	96.8 128.7	25 33	14:12 13:57	41 87	15 30	30.22 30.17	29.92 29.76	30.07 29.97	-0.02						N	
	1030	1150				-											IN	2
Mar-11 Mar 12			54.7 29.3	17 14	15:07	72 52	18 24	30.34 30.44	30.16	30.25	0.28							2 N
Mar-12 Mar-13			29.3 54.1	14	16:35 11:45	52 94	24 37	30.44 30.47	30.29 30.01	30.37 30.24	0.12	1	1	1				N 2
Mar-13 Mar-14			79.2	27	13:59	94	43	30.47	29.55	29.78	-0.13 -0.46	2	1	1				P
Mar-14 Mar-15		-	106.8	27	13:06	55	28	30.16	29.87	30.02	0.23	-						N N
Mar-16			44.3	20	10:19	64	20	30.28	30.14	30.21	0.20							2
Mar-17	2225	2400	34.1	23	14:19	76	21	30.43	30.17	30.30	0.09							2
Mar-18	1725	1825	51.8	23	20:37	98	39	30.21	29.88	30.05	-0.25						Р	
Mar-19			125.8	25	7:01	94	49	30.25	30.00	30.13	0.08			1			Р	
Mar-20			26.1	15	9:44	96	37	30.25	30.01	30.13	0.01							4
Mar-21			39.1	17	12:04	85	48	30.01	29.90	29.96	-0.18						Р	
Mar-22			135.7	31	9:07	79	20	30.45	29.92	30.19	0.23						1	
Mar-23			36.3	14	0:11	62	22	30.65	30.44	30.55	0.36							1
Mar-24	1150	1159	120.2	33	14:28	74	39	30.55	30.22	30.39	-0.16						Ν	
Mar-25			126.3	25	15:11	74	42	30.25	30.13	30.19	-0.20						Ν	
Mar-26			63.2	16	15:42	92	63	30.27	30.14	30.21	0.02						2	
Mar-27	0500	0530	69.2	22	11:49	98	52	30.16	29.91	30.04	-0.17						Р	
Mar-28	1730	1815	69.1	17	2:15	94	58	29.94	29.80	29.87	-0.16					1	N	
Mar-29			76.9 56.5	17 13	10:26 8:02	94 79	47 55	30.16 30.23	29.94 30.01	30.05 30.12	0.18						2 N	
Mar-30 Mar-31	0135	0140	36.7	13	9:20	98	55 78	30.23	29.59	29.81	-0.32						P	
TOTAL	Colum		2438.8	698	5.20	2477	1137	939.26	930.80	935.03	DAYS	2	2	4	0	1	3	8
	Mar. Wi	-	2430.0	31	31	31	31	939.20 31	930.80 31	935.03 31	Normal	0.9	1.8	4 2.8	3.8	2.1	5 6.9	6.0
			-		-			-	-									
AVERAGE	Total	2438.8	78.7	22.5	11:14	79.9	36.7	30.30	30.03	30.16	Depart.	1.1	0.3	1.3	-3.8	-1.1	-3.9	2.0
NORMALS	Miles	2061.3	66.5	21.0		86.0	41.8	30.18	29.93	30.05	Rating ►	<u>З</u>	2	4	0	1	5	19
Departures	Miles	377.5	12.2	1.6		-6.1	-5.1	0.12	0.10	0.11	Intensity	GLAZE	SLEET	SNOW	Ģ	R	≥	Frost
	MAXIMUM	Dates	186.4	46	South	99	78	30.74	30.55	30.65	0.43	Ľ	<u> </u>	ž	FOG	12	Dew	2 L
	DATES	1	Mar-01	Mar-01	11:46	Mar-01	Mar-31	Mar-05	Mar-05	Mar-05	Mar-03	_		S				
		2										5. Very He	•				No Dew Ob	
		3										4. Heavy-L				P- Preci	o. prevent o	DDS.
	MINIMUM	4 Dates	26.1	13		41	15	29.94	29.55	20.79	0.40	3. Modera						
			-				-			29.78	-0.46	2. Light - >						
	DATES	1	Mar-20	Mar-05 Mar-30		Mar-09	Mar-09	Mar-28	Mar-14	Mar-14	Mar-14		ght - Slight		~			
Dave Mire	-20 °F	2 14	B 41 b 1				100	< F.0		~			with inten		-	<i>c</i> 10		
Days Min		14	MIN.	≤70	≤65	≤60 24	≤55 27	≤50	≤45 10	≤40 19	≤35	≤30	≤25 7	≤20	≤15	≤10	≤05	
Days Min	2=10 F	U	DAYS	31	31	31	27	25	19	18	15	12	7	1	0	0	0	

PAGE #3 39	West Henrico Co Glen Allen Weather Center 37.65537° N. 77.56929° W Koontz
Mar	REMARKS FOR THE MONTH
2017	March - 2017
Mar-01	GLEN ALLEN WAS UNDER A SLIGHT RISK FOR SEVERE WEATHER BUT GLEN ALLEN HAD MAINLY STRONG WINDS AHEAD OF A SQUALL LINE NOT WITH PASSAGE OF CF.
Mar-02	COLD FRONT PASSED AROUND 0230-BREEZY BUT VERY SUNNY AND MUCH COOLER
Mar-03	SNOW VIRGA SEEN IN AM AND VERY LIGHT FLURRY JUST BEFORE 1100
Mar-04 Mar-05	GOOD CONDITIONS FOR FROST EXCEPT AIR TOO DRY-MIN. DEW POINT WAS 12.1°F AT 0040
Mar-05 Mar-06	AM REL. HUMIDITY ONLY 56% AND MIN. DEW POINT WAS 9.6°F -CLEAR BUT COLD COMPARED TO RECENT TEMPS. MOSTLY CLEAR FROM 0800-0930 THEN CLOUDY REST OF DAY WITH A LITTLE SUN THROUGH THIN CLOUDS
Mar-00 Mar-07	VERY WARM BUT WINDY AND CLOUDY DAY-SPRINKLES AFTER 1610- 3RD PD. OF PRECIP. 2015-2210
Mar-08	LIGHT RAIN IN EARLY AM THEN A QUICK CLEARING FROM 0900-0915-THEN A FEW CIRRUS & WARM BREEZE-BEAUTIFUL CIRRUS FIBROUS & CUMULUS IN PM SKY AROUND 1400
Mar-09	VERY CLEAR AND LOW REL. HUMIDITY & WARM FOR MARCH
Mar-10	SPRINKLES IN AM AND CLEARING STARTED AT 1215 AND NEARLY TOTALLY CLEAR BY 1530
Mar-11	MORE FROST ON GROUND THAN SKY MIRROR-VERY CLEAR BUT CHILLY DAY WITH LOW REL. HUMIDITY & LOW DEW POINT OF 4.6°F
Mar-12	SNOWSTORM IN NC AND CLOUDS FROM STORM HERE UNTIL 1000 FROM THE SOUTH & CLEAR UNTIL SUNSET
Mar-13	SKY ONLY CLEAR FROM 1130-1330-MAJOR NE STORM TONIGHT BUT TOO WARM FOR MUCH FROZEN PRECIP. HERE
Mar-14	AFTER MIDNIGHT MAINLY FREEZING RAIN WITH AT LEAST 0.1 INS. OF ICE WITH SOME SLEET MIXED IN
Mar-15	TODAY WAS CLEAR BUT VERY COLD FOR MID-MARCH-LOW DEW POINT 1.8°F AT 1647 & WIND CHILL MIN. WAS 7°F AT 0717 FROST ONLY ON GRASS-ANOTHER CLEAR DAY BUT MUCH WARMER AND LESS WIND
Mar-16 Mar-17	MOSTLY CLEAR ALL DAY UNTIL 1500 THEN CLOUDS MOVED IN WITH LIGHT RAIN TONIGHT
Mar-18	CLEARED OFF AT 1115 AND CLOUDS AGAIN WITH CIRRUS BY 1230 THEN CLEAR AGAIN 1515-1700 THEN CLOUDY AGAIN-PM EST. 60-65% CLOUDY-3RD PD. PRECIP. 2025-2245
Mar-19	HEAVY STRATOCUMULUS MOST OF DAY AND THREATENING PRECIP. WITH BREEZY CONDITIONS AND COLD FRONT PASSAGE AROUND 0830
Mar-20	CIRRUS CAME IN AROUND NOON AND BECAME THICKER UNTIL DARK
Mar-21	VARIABLE CLOUDINESS-AM SUN THROUGH CIRRUS-PM WAS MAINLY BROKEN CIRRUS EST. 55-65% CLOUDY
Mar-22	CLEAR AND WINDY DAY AS A COLD FRONT PASSED AT 0730 - WIND GAVE A MIN. WIND CHILL FACTOR OF 37°F
Mar-23	VERY DRY AIR THUS LITTLE FROST-DEEP BLUE SKY LOW HUMIDITY WAS 22% AND LOW DEW POINT OF 6°F AT 0110
Mar-24	SPRINKLES WERE VERY LIGHT GIVING A MAX. OF 15 ON MOISTURE SENSOR AND EACH SPRINKLE LASTED ONLY A FEW MINUTES
Mar-25 Mar-26	GREAT WARM-UP TODAY-SKY HAD VERY THIN CIRRUS BUT MUCH SOLAR ENERGY THROUGH CLOUDS DEW ONLY ON GRASS-ONLY A FEW DROPS OF RAIN SEEN ON CAR WINDSHIELD-MOISTURE SENSOR DIDN'T EVEN SHOW IT
Mar-20 Mar-27	3RD PD. OF SPRINKLES 0700-0905-NOT EVEN 0.01 INSWARMEST SINCE MARCH 1ST
Mar-28	THUNDER HEARD 3-4 TIMES IN PM BUT DISTANT-THUNDERSTORMS WERE WIDELY SCATTERED AND PM WAS EST. TO BE 70-75% CLOUDY
Mar-29	DEW FORMED AFTER A MIDNIGHT LIGHT SPRINKLE
Mar-30	CLOUDY ALL DAY WITH MAINLY ALTOSTRATUSE AND LOOK LIKE PRECIPITATION BUT NONE OCCURRED
Mar-31	3RD PD. OF SPRINKLES 0320-0410 4th PD. RAIN AT 0525-1450, 5th RAIN PD. 1740-1955, 6TH RAIN PD. 2030-2210 - VERY RAINY DAY AND MUCH NEEDED PRECIP.
DATE	EXTENSION OF LENGTHY DAILY REMARKS
	EQUIPMENT THIS HAS BEEN A RUSY MONTH WITH FOUNDMENT DOORIEMS. AFTER SEVERAL TESTS I FOUND THE CARLE TO THE TRIDRING RUCKET RAIN GAUGE WAS DEFECTIVE
	THIS HAS BEEN A BUSY MONTH WITH EQUIPMENT PROBLEMS. AFTER SEVERAL TESTS I FOUND THE CABLE TO THE TRIPPING BUCKET RAIN GAUGE WAS DEFECTIVE. THE CABLE WAS REPLACED ON MARCH 14TH AND HAS BEEN WORKING FINE SINCE THEN. I FOUND DAVIS HAS RELEASED A NEW TRANSMITTER AND SENSOR THAT
	IS ACCURATE TO 0.3 DEGREES F AND THE REL. HUMIDITY +/- 2% ACROSS THE ENTIRE RANGE SO THIS WAS PURCHASED AND INSTALLED ON MARCH 17TH. ALSO A NEW
	LITHIUM BATTERY WAS REPLACED IN THE NEW TRANSMITTER ON THE 17TH.
	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

Page 4 41	West Henrico Co Glen Allen Weather Center 37.65537° N. 77.56929° W Koontz DAILY RECORDS FOR THE MONTH
Mar	
2017	The Glen Allen Station had 30 Records or Record Ties in March 2017
1	The maximum temperature on the 1st was 80.3°F, a new 8-year daily HIGH maximum temperature record for the date - the old record was 73.1°F in 2016.
	The minimum temperature on the 1st was 57.7°F, a new 8-year warm daily minimum temperature record for the date - the old record was 50°F in 2012.
2	
3	
<u>4</u> 5	
6	The daily temperature range on the 6th was 31.8°F, a new 8-year HIGH daily temperature range record for the date - the old record was 28°F in 2012.
7	The minimum temperature on the 7th was 54.2°F, a new 8-year warm daily minimum temperature record for the date - the old record was 49°F in 2009.
8	The daily precipitation on the 8th was 0.03 inches, a new 8-year HIGH daily precipitation record for the date - the old record was trace in 2016 and 2012.
9	
10	
11	The maximum temperature on the 11th was 47.6°F, a new 8-year cold daily maximum temperature record for the date - the old record was 51°F in 2011.
40	The minimum temperature on the 11th was 24.7°F, a new 8-year LOW daily minimum temperature record for the date - the old record was 30°F in 2012.
12	The maximum temperature on the 12th was 46.5°F, a new 8-year cold daily maximum temperature record for the date - the old record was 58°F in 2009. The minimum temperature on the 12th was 26.9°F, a new 8-year LOW daily minimum temperature record for the date - the old record was 33°F in 2011.
13	The daily precipitation on the 13th was 0.39 inches, a new 8-year HIGH daily precipitation record for the date - the old record was 0.36 inches in 2009.
14	The daily precipitation on the 14th was 0.74 inches, a new 8-year HIGH daily precipitation record for the date - the old record was 0.46 inches in 2005.
	The daily greatest snow on the 14th was a trace, and is a new 8-year daily greatest snow record for the date - the old record was 0 inches.
15	The minimum temperature on the 15th was 20.2°F, a new 8-year LOW daily minimum temperature record for the date - the old record was 27°F in 2013.
	The maximum temperature on the 15th was 38.9°F, a new 8-year cold daily maximum temperature record for the date - the old record was 46°F in 2009.
16	The minimum temperature on the 16th was 21.7°F, a new 8-year LOW daily minimum temperature record for the date - the old record was 31°F in 2014.
	The maximum temperature on the 16th was 48°F, and EQUALED the 8 year LOW daily maximum temperature record for the date - the old record was set in 2014.
17	The minimum temperature on the 17th was 23.3°F, a new 8-year LOW daily minimum temperature record for the date - the old record was 27°F in 2014.
18 19	
20	The daily greatest snow on the 19th was a trace, and is a new 8-year daily greatest snow record for the date - the old record was 0 inches. The minimum temperature on the 20th was 28.7°F, a new 8-year LOW daily minimum temperature record for the date - the old record was 29°F in 2013.
21	The daily temperature range on the 21st was 14.6°F, a new 8-year LOW daily temperature range record for the date - the old record was 25.7 in 2015.
22	
23	The minimum temperature on the 23rd was 24.7°F, a new 8-year LOW daily minimum temperature record for the date - the old record was 25°F in 2013.
	The maximum temperature on the 23rd was 49.4°F, a new 8-year cold daily maximum temperature record for the date - the old record was 52°F in 2015.
24	The daily temperature range on the 24th was 34.7°F, a new 8-year HIGH daily temperature range record for the date - the old record was 30°F in 2010.
25	The minimum temperature on the 25th was 57.4°F, a new 8-year warm daily minimum temperature record for the date - the old record was 55.8°F in 2016.
	The maximum temperature on the 25th was 79.3°F, a new 8-year daily HIGH maximum temperature record for the date - the old record was 78.2°F in 2016.
26	The minimum temperature on the 26th was 56.2°F, a new 8-year warm daily minimum temperature record for the date - the old record was 47°F in 2012.
27	The minimum temperature on the 27th was 50.4°F, a new 8-year warm daily minimum temperature record for the date - the old record was 49.5°F in 2016.
	The maximum temperature on the 27th was 78.5°F, a new 8-year daily HIGH maximum temperature record for the date - the old record was 67.2°F in 2015.
28	The minimum temperature on the 28th was 60.3°F, a new 8-year warm daily minimum temperature record for the date - the old record was 51.8°F in 2016.
29	
30	
31	The daily precipitation on the 31st was 1.03 inches, a new 8-year HIGH daily precipitation record for the date - the old record was 0.17 inches in 2013.