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Status

Table 1: Gauge visits during the autumn 2018 campaign. Comments: DD=gauge data download, MN=general gauge maintenance (cleaning, re-level), CA= rain gauge calibration, CV= vegetation clearing, and BR = data logger battery replacement.

Date	Gauges Visited	Technicians	Comments
5 Oct 2018	3; 11; 10, 4	Doug	DD, MN, CV, BR
12 Oct 2018	107, 109, 104, 108	Doug, Andrew	DD, MN, CV, BR
13 Oct 2018	110, 105, 111, 112	Doug, Andrew, Matthew	DD, MN, CV, BR
27 Oct 2018	304, 307	Doug, Meredith, Zachary	DD, MN, CV, BR
29 Oct 2018	101, 102, 103, 100T	Doug, Lyn	DD, MN, CV, BR
3 Nov 2018	303s, 306, 308	Doug, Tyler	DD, MN, CV, BR
10 Nov 2018	305, 309, 310	Doug, Meredith, Carly	DD, MN, CV, BR
21 Nov 2018	311;	Doug	DD, MN, CV, BR
30 Nov 2018	2; 5; 8; 106	Doug, Don Elliot	DD, MN, CV, BR
18 Dec 2018	301**, 302, 300	Doug	DD, MN, CV, BR

** unable to visit due to inaccessibility (snow, ice, and limited daylight hours)

Gauge visitation in support of the Duke Great Smoky Mountain Rain Gauge Network (GSMRGN) during the autumn 2018 occurred over ten days spanning a period of ten weeks in October - December 2018. The primary purpose of the visits in the autumn 2018 was [1] to perform downloads of gauge tip observations since the previous gauge visits in the summer 2018, [2] to complete maintenance tasks, [3] to clear vegetation and tree limbs and, [4] to replace ALL data logger batteries in anticipation of cold winter weather, when lithium batteries respond with a drop in operating voltage. Eight technicians and volunteers and (listed on the front page) made the visits and performed the required work. It is important to note that the volunteers were NOT directly involved in any critical gauge visit tasks, but were volunteering primarily to assist with personal safety should someone get injured during a particular series of gauge visits.

The general tasks completed at **every** gauge visit consist of (1) gauge data download from the data loggers [DD in Table 1], (2) general gauge maintenance and ML1 logger condition monitoring [MN in Table 1], (3) to clear vegetation and tree limbs [CV in Table 1] and, (4) to replace ALL data logger batteries [BR in Table 1] in anticipation of cold winter weather, when lithium batteries respond with a drop in operating voltage. A specialized task was the replacement of four AA batteries of the T/RH sensor at the fire tower on Mount Sterling (near g310) to record air temperature during the cool season. Task (1) merely required a serial port link between the field study laptop and the gauge data logger and consisted of pulling the data (often in files having raw [*.txt] and CSV formats) onto a desktop folder on the laptop, checking for completeness of the data, and comparing the data logger time and date to the actual GPS time and date (making a screen capture of the time comparison). The standard that has been chosen for this study is to maintain the clocks on Eastern Daylight Time, since most of the “warm” precipitation will be occurring during the season when EDT is in effect. Most ML1-FL data logger times have been adjusted (using “TA” command) during previous gauge visits to coincide with the EDT given by the GPS locator. Two ML1 loggers showed a poor response using the TA command (g011 and g110, TA error “Adjustment too big”) and might require replacement during the spring 2019 visit. Task (2) required the cleaning of debris from the funnel filter, cleaning the tipping buckets of debris (if necessary), cleaning the gauge drain ports and siphon, re-leveling the gauge if it has come unlevelled, and fixing or replacing the gauge mesh if it had been damaged. Task (3) consisted of cutting briars, tree branches,

rhododendron, and mountain laurel within a five foot radius of the gauge using clippers or a saw. One gauge site (g105) had tree limbs removed using a hand saw and one location (g311) will need tree limbs cleared during the spring 2019 visit. Task (4) was completed successfully in every data logger at each of the rain gauge locations. The lithium battery voltage of the ML1-420 and ML1-FL loggers was good (greater than 3.50 Volts) at all but two (g010 and g304) of the gauge locations upon arrival during the autumn months. Several data loggers (especially ML1-420 models) show signs of recent more frequent problems and will need to be replaced when the project is extended beyond June 2019 in order to maintain the continuity of the Duke GSMRGN observations record.

The ML1 logger at g110 continued to show significant time drift and a poor response using the TA command and will require replacement during the spring 2019 visit if improvement isn't noted. The lithium battery voltage of the ML1 logger at g304 was found to have dropped to 0.00V and was replaced during the autumn 2018 visit. Comparing the g304 rain record to that of nearby g307, the low-voltage logger was able to detect all precipitation events through 21 September 2018. The ML1-420 logger at g010 was also dead upon arrival on 5 October 2018 and was replaced with a different logger. Fortunately, a HOBO backup logger at g010 maintained a constant record covering the period after the ML1-420 logger registered its final tip on 25 July 2018. Liquid wrench was needed at g101, g103 and g108 during the autumn 2018 visits as the nut in one of the bolt ports had become rusty in need of replacement. It effectively loosened the nuts and bolts at g101 and g103, but failed to help loosen the nut and bolt at g108. The latter may have to be cut off with a lock cutter and replaced. No overgrowth by vegetation was found at any rain gauge during the autumn 2018 visit campaign. Erosion at g301 is becoming more severe and has started impacting the level of the gauge post. A new small metal fence post will be installed during the spring 2019 visit to stabilize the gauge post and cement base to keep it level. Two locations (g311 and g008) will need tree limbs cleared using an extension saw during the spring 2019 visit. The ML1-420 logger at g302 required replacement as tips were marked by an 'R' character rather than with date and time of bucket tip.

Challenges encountered during some of the gauge visits in the autumn 2018 were; (i) ant nest in g108 due to the unusually wet weather experienced in autumn 2018 (ii) the continued severe time drift at g110 which was seemingly unresponsive to the 'TA' command, and (iii) weather-related gauge visit postponements that pushed the final day of gauge visits to 18 December 2018. Unfortunately, the snow and ice covering the north-facing slope of Mt Guyot made the visit to g301 impossible during the autumn 2018 gauge visit campaign. Otherwise, the gauge network was functioning as smoothly as is possible. We have inquired with Mr. Edwin Warren, of Duke Power, on the possibility of gaining access to weather station observations taken near the Mount Sterling fire tower, next to g310 (~5,800 feet ASL). The weather observations will help discern the source of tips in the cool season; rain or melting snow.

Details of every gauge visit along with precipitation raw and CSV files can be found via Google Drive <https://drive.google.com/open?id=1hhX6Ps2T134TcCNXN01CUL7gLRLQj53V>

which contains sub-folders for each gauge that consist of the individual data files (often having at least two different formats), pictures taken at the gauge site during the visit, screenshots of the GPS (laptop) and ML1 logger time comparison, and a MS Word document that mirrors the notes made in the field journal during each visit.

Noteworthy precipitation events of July – September 2018 as observed at KAVL are highlighted in yellow in **Appendix A**. Of particular interest for investigation is the record rainfall in July and August 2018, each having a significant amount of above-normal monthly precipitation. The remnants of Hurricane Florence (16 September 2018) barely registered precipitation of note in western North Carolina.

Table 2: Planned gauge visits during the spring 2019 campaign. DD=gauge data download, MN=general gauge maintenance (cleaning, re-level), CA= rain gauge calibration, CV= vegetation clearing, and BR = data logger battery replacement.

Date	Gauges Visited	Technicians	Comments
3/??/2019	3; 11	Doug, two students	DD, MN, CA, CV
3/??/2019	2; 5; 8	Doug, one student	DD, MN, CA, CV
3/??/2019	100T, 105, 104	Doug, one student	DD, MN, CA, CV
3/??/2019	300, 308	Doug, two students	DD, MN, CA, CV
4/??/2019	106, 10	Doug, one student	DD, MN, CA, CV
4/??/2019	304, 307	Doug, two students	DD, MN, CA, CV
4/??/2019	4, 108, 109	Doug, one student	DD, MN, CA, CV
4/??/2019	311, 110	Doug, one student	DD, MN, CA, CV
4/??/2019	111, 112, 107	Doug, one student	DD, MN, CA, CV
5/??/2019	303s, 306	Doug, two students	DD, MN, CA, CV
5/??/2019	101, 102, 103	Doug, two students	DD, MN, CA, CV
5/??/2019	305, 309, 310	Doug, two students	DD, MN, CA, CV
5/??/2019	301, 302	Doug, two students	DD, MN, CA, CV

Gauge visitation in support of the Duke GSMRGN during the spring 2019 will occur over at least thirteen days spanning March through early May 2019. The primary purpose of the visits will be to download precipitation observations that were made since the previous gauge visits in October - December 2018 [DD in Table 2], perform maintenance and check if the ML1 logger times have drifted between visits and make the corresponding needed adjustments [MN in Table 2], calibrate every rain gauge [last calibration in spring 2018, CA in Table 2], and clear vegetation (and tree branches) from overhanging gauges [CV in Table 2]. Calibrations are scheduled at **ALL** rain gauge locations during the spring season due to the increased availability of daylight hours (over autumn) and to a seasonal (March, April, May) minimum in precipitation observed in the Pigeon River Basin (WaF, February 2018).

Details of every gauge visit along with each gauge precipitation record will be posted online and shall contain sub-folders for each gauge that consist of the individual data files (often having at least two different formats), pictures taken at the gauge site during the visit, screenshots of the GPS (laptop) and ML1 logger time comparison, and a MS Word document that mirrors the notes made in the field journal during the visit.

The current technician roster during the 2018-2019 academic year consists of Meredith Avison, Lyn Comer, Alex Flynt, Andrew Hill, Tyler Moore, Carly Narotsky, Zachary Tuggle. New undergraduate research students at UNC Asheville will be recruited as field technicians for the Duke GSMRGN project in the spring 2019 as Alex, Tyler, Carly, and Zachary will be graduating from UNC Asheville by May 2019.

Table 3: The Duke Great Smoky Mountain Rain Gauge Network is currently (valid as of 20 December 2018) composed of 32 tipping bucket rain gauges.

Gauge #	Location	Latitude	Longitude	Altitude
RG002	Lickstone Bald	35°25.5' N	82°58.2' W	5680 ft.
RG003	High Top	35°23.0' N	82°54.9' W	5280 ft.
RG004	Lickstone Ridge S	35°22.0' N	82°59.4' W	6305 ft.
RG005	Deep Gap	35°24.5' N	82°57.8' W	4986 ft.
RG008	Double Summer Gap	35°22.9' N	82°58.4' W	5700 ft.
RG010	Beaty Summer Gap	35°27.3' N	82°56.8' W	4849 ft.
RG011	near Deep Gap	35°23.7' N	82°54.9' W	4081 ft.
RG100T	Purchase Knob	35°35.1' N	83°04.3' W	4905 ft.
RG101	The Swag	35°34.5' N	83°05.2' W	4986 ft.
RG102	Hemphill Bald	35°33.8' N	83°06.2' W	5365 ft.
RG103	JR Property	35°33.2' N	83°07.0' W	5539 ft.
RG104	Cat. Ski Area	35°33.2' N	83°05.2' W	5208 ft.
RG105	KH Property	35°38.0' N	83°02.4' W	4412 ft
RG106	Pinnacle Ridge	35°25.9' N	83°01.7' W	3969 ft
RG107	Lookout Point	35°34.0' N	82°54.4' W	4459 ft
RG108	Utah Mountain	35°33.2' N	82°59.3' W	4188 ft
RG109	Eaglesnest Ridge	35°29.7' N	83°02.4' W	4922 ft
RG110	JH Property	35°32.8' N	83°08.8' W	5128 ft
RG111	Hurricane Ridge	35°43.7' N	82°56.8' W	4573 ft
RG112	Ore Knob	35°45.0' N	82°57.8' W	3884 ft
RG300	Camel Hump Knob	35°43.5' N	83°13.0' W	5110 ft
RG301	Mt Guyot	35°42.3' N	83°15.3' W	6570 ft
RG302	Snake Den Ridge	35°43.2' N	83°14.8' W	6104 ft
RG303s	Mt Cammerer	35°45.7' N	83°09.7' W	4887 ft

RG304	Big Cataloochee	35°40.2'N	83°10.9'W	5971 ft
RG305	Mt Sterling 1	35°41.4'N	83°07.9'W	5349 ft
RG306	Sunup Knob	35°44.7'N	83°10.2'W	5039 ft
RG307	Balsam Mountain	35°39.0'N	83°11.9'W	5327 ft
RG308	Cosby Knob	35°43.8' N	83°10.9'W	4826 ft
RG309	Mt Sterling 2	35°40.9'N	83°09.0'W	5262 ft
RG310	Mt Sterling 3	35°42.1'N	83°07.3'W	5761 ft
RG311	Big Creek	35°45.9'N	83°08.4'W	3398 ft

Appendix A

These data are preliminary and have not undergone final quality control by the National Climatic Data Center (NCDC). Therefore, these data are subject to revision. Final and certified climate data can be accessed at the NCDC - <http://www.ncdc.noaa.gov>.

WFO Monthly/Daily Climate Data

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 CXUS52 KGSP 011159
 CF6AVL

PRELIMINARY LOCAL CLIMATOLOGICAL DATA (WS FORM: F-6)

STATION: ASHEVILLE NC
 MONTH: JULY
 YEAR: 2018
 LATITUDE: 35 25 N
 LONGITUDE: 82 33 W

TEMPERATURE IN F:				:PCPN:			SNOW:		WIND			:SUNSHINE:			SKY		:PK WND	
1	2	3	4	5	6A	6B	7	8	9	10	11	12	13	14	15	16	17	18
DY	MAX	MIN	AVG	DEP	HDD	CDD	WTR	SNW	DPTH	SPD	SPD	DIR	MIN	PSBL	S-S	WX	SPD	DR
1	85	69	77	4	0	12	0.01	0.0	0	4.3	16	150	M	M	5	13	23	150
2	85	70	78	5	0	13	0.00	0.0	0	3.8	13	150	M	M	6	13	19	130
3	91	70	81	8	0	16	0.04	0.0	0	2.8	13	120	M	M	2	3	20	110
4	88	68	78	4	0	13	0.00	0.0	0	2.7	10	40	M	M	2	1	16	130
5	86	70	78	4	0	13	0.25	0.0	0	3.2	10	170	M	M	6	138	15	170
6	86	68	77	3	0	12	0.49	0.0	0	4.4	16	340	M	M	4	138	20	310
7	72	67	70	-4	0	5	0.29	0.0	0	2.6	13	360	M	M	9	1	17	350
8	81	63	72	-2	0	7	T	0.0	0	2.8	13	160	M	M	3		16	170
9	85	56	71	-3	0	6	0.00	0.0	0	5.6	20	340	M	M	1	12	27	340
10	87	60	74	0	0	9	0.00	0.0	0	6.6	20	330	M	M	1	1	25	350
11	90	65	78	4	0	13	0.00	0.0	0	4.0	13	350	M	M	1	1	17	340
12	86	67	77	3	0	12	0.01	0.0	0	4.1	14	340	M	M	3	1	16	330
13	84	70	77	3	0	12	0.50	0.0	0	4.6	14	130	M	M	8	1	20	110
14	83	70	77	3	0	12	0.20	0.0	0	4.6	13	160	M	M	6	1	16	170
15	86	67	77	3	0	12	T	0.0	0	3.1	14	180	M	M	5	13	17	160
16	82	71	77	3	0	12	0.04	0.0	0	3.5	13	150	M	M	6	13	16	160
17	87	71	79	5	0	14	0.01	0.0	0	8.0	25	350	M	M	5	3	33	340
18	86	69	78	4	0	13	0.00	0.0	0	8.6	16	340	M	M	3		19	340
19	75	65	70	-4	0	5	0.00	0.0	0	3.1	9	170	M	M	8	8	15	110
20	82	65	74	0	0	9	0.24	0.0	0	4.2	23	360	M	M	7	13	34	360
21	84	63	74	0	0	9	0.29	0.0	0	4.6	21	340	M	M	5	13	23	340
22	79	66	73	-1	0	8	1.16	0.0	0	4.1	15	180	M	M	5	13	21	180
23	77	65	71	-3	0	6	0.31	0.0	0	3.3	12	130	M	M	7	13	18	130
24	82	65	74	0	0	9	1.19	0.0	0	2.7	13	140	M	M	7	138	19	140
25	82	65	74	0	0	9	0.27	0.0	0	4.4	14	310	M	M	6	1	17	310
26	87	61	74	0	0	9	0.00	0.0	0	3.1	12	340	M	M	5	12	14	340
27	87	63	75	1	0	10	0.00	0.0	0	5.1	15	340	M	M	1	3	19	350
28	84	67	76	2	0	11	0.00	0.0	0	8.1	20	330	M	M	3		24	350
29	84	63	74	0	0	9	0.00	0.0	0	3.6	15	170	M	M	3		19	160
30	85	68	77	3	0	12	1.21	0.0	0	4.9	28	190	M	M	5	13	35	200
31	81	68	75	1	0	10	0.07	0.0	0	6.0	13	180	M	M	6	13	16	180

SM 2599 2055 0 322 6.58 0.0 136.5 M 144

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AV 83.8 66.3 4.4 FASTST M M 5 MAX (MPH)
 MISC ----> # 28 190 # 35 200
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NOTES:
LAST OF SEVERAL OCCURRENCES

COLUMN 17 PEAK WIND IN M.P.H.

PRELIMINARY LOCAL CLIMATOLOGICAL DATA (WS FORM: F-6) , PAGE 2

STATION: ASHEVILLE NC
MONTH: JULY
YEAR: 2018
LATITUDE: 35 25 N
LONGITUDE: 82 33 W

[TEMPERATURE DATA] [PRECIPITATION DATA] SYMBOLS USED IN COLUMN 16

AVERAGE MONTHLY: 75.1 TOTAL FOR MONTH: 6.58 1 = FOG OR MIST
DPTR FM NORMAL: 1.3 DPTR FM NORMAL: 2.27 2 = FOG REDUCING VISIBILITY
 GRTST 24HR 1.23 ON 30-31 TO 1/4 MILE OR LESS
HIGHEST: 91 ON 3 SNOW, ICE PELLETS, HAIL 3 = THUNDER
LOWEST: 56 ON 9 TOTAL MONTH: 0.0 INCH 4 = ICE PELLETS
 GRTST 24HR 0.0 5 = HAIL
 GRTST DEPTH: 0 6 = FREEZING RAIN OR DRIZZLE

[NO. OF DAYS WITH] [WEATHER - DAYS WITH] 7 = DUSTSTORM OR SANDSTORM:
 VSBY 1/2 MILE OR LESS
 8 = SMOKE OR HAZE
 9 = BLOWING SNOW
 X = TORNADO
MAX 32 OR BELOW: 0 0.01 INCH OR MORE: 18
MAX 90 OR ABOVE: 2 0.10 INCH OR MORE: 12
MIN 32 OR BELOW: 0 0.50 INCH OR MORE: 4
MIN 0 OR BELOW: 0 1.00 INCH OR MORE: 3

[HDD (BASE 65)]
TOTAL THIS MO. 0 CLEAR (SCALE 0-3) 9
DPTR FM NORMAL 0 PTCLDY (SCALE 4-7) 19
TOTAL FM JUL 1 0 CLOUDY (SCALE 8-10) 3
DPTR FM NORMAL 0

[CDD (BASE 65)]
TOTAL THIS MO. 322 [PRESSURE DATA]
DPTR FM NORMAL 47 HIGHEST SLP 30.32 ON 8
TOTAL FM JAN 1 779 LOWEST SLP 29.71 ON 22
DPTR FM NORMAL 269

[REMARKS]
#FINAL-07-18#

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CXUS52 KGSP 010817
CF6AVL
PRELIMINARY LOCAL CLIMATOLOGICAL DATA (WS FORM: F-6)

STATION: ASHEVILLE NC
MONTH: AUGUST
YEAR: 2018

LATITUDE: 35 25 N
 LONGITUDE: 82 33 W

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TEMPERATURE IN F:					:PCPN:			SNOW:		WIND			:SUNSHINE:			SKY		:PK WND	
1	2	3	4	5	6A	6B	7	8	9	10	11	12	13	14	15	16	17	18	
DY	MAX	MIN	AVG	DEP	HDD	CDD	WTR	SNW	DPTH	SPD	SPD	DIR	MIN	PSBL	S-S	WX	SPD	DR	

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1	74	66	70	-4	0	5	1.56	0.0	0	5.5	13	330	M	M	9	1	15	210
2	72	67	70	-4	0	5	1.29	0.0	0	1.8	6	170	M	M	9	1	9	150
3	83	67	75	1	0	10	0.87	0.0	0	2.8	8	180	M	M	6	1	11	360
4	84	65	75	1	0	10	0.00	0.0	0	2.9	10	160	M	M	5	123	14	150
5	87	67	77	3	0	12	0.00	0.0	0	4.6	13	330	M	M	4	123	20	340
6	89	66	78	4	0	13	0.07	0.0	0	3.8	15	310	M	M	1	13	23	260
7	86	68	77	3	0	12	0.09	0.0	0	4.0	17	220	M	M	4	123	23	210
8	86	66	76	2	0	11	1.08	0.0	0	5.0	31	330	M	M	6	1238	40	320
9	84	66	75	1	0	10	0.20	0.0	0	6.6	16	340	M	M	3	13	20	330
10	81	67	74	0	0	9	1.21	0.0	0	5.6	17	340	M	M	4	13	20	340
11	84	68	76	2	0	11	T	0.0	0	6.4	16	340	M	M	5	1	22	350
12	86	64	75	1	0	10	T	0.0	0	4.1	16	340	M	M	2	123	20	340
13	83	63	73	0	0	8	0.00	0.0	0	6.1	17	340	M	M	3	1	21	340
14	84	60	72	-1	0	7	0.00	0.0	0	3.6	12	330	M	M	2	1	16	340
15	83	63	73	0	0	8	0.00	0.0	0	2.9	9	350	M	M	3	1	13	330
16	87	64	76	3	0	11	0.00	0.0	0	3.0	12	180	M	M	3	123	14	170
17	83	64	74	1	0	9	1.09	0.0	0	4.5	17	220	M	M	2	13	21	220
18	81	67	74	1	0	9	0.34	0.0	0	2.6	15	350	M	M	5	1	20	340
19	84	67	76	3	0	11	0.31	0.0	0	2.4	18	180	M	M	7	13	22	180
20	83	69	76	3	0	11	2.00	0.0	0	3.6	9	180	M	M	6	123	M	M
21	81	69	75	2	0	10	0.01	0.0	0	6.5	17	200	M	M	6	1	24	200
22	81	64	73	1	0	8	T	0.0	0	8.7	17	340	M	M	4	1	24	330
23	79	58	69	-3	0	4	0.00	0.0	0	6.9	21	340	M	M	0		24	340
24	77	52	65	-7	0	0	0.00	0.0	0	2.9	12	170	M	M	0		15	180
25	83	54	69	-3	0	4	0.00	0.0	0	2.7	10	350	M	M	1		13	320
26	86	61	74	2	0	9	0.01	0.0	0	3.3	15	350	M	M	3	123	20	330
27	87	67	77	5	0	12	0.00	0.0	0	3.4	13	160	M	M	5	12	16	170
28	87	63	75	3	0	10	0.00	0.0	0	2.5	10	330	M	M	1	1	13	350
29	88	64	76	5	0	11	0.00	0.0	0	3.7	13	220	M	M	1	3	16	230
30	89	66	78	7	0	13	0.28	0.0	0	4.3	26	340	M	M	1	138	37	340
31	85	64	75	4	0	10	T	0.0	0	3.1	14	190	M	M	3	1	20	180

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SM	2587	1996			0	283	10.41		0.0	129.8			M		114				
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AV	83.5	64.4								4.2	FASTST	M	M	4	MAX (MPH)				
										MISC	---->	#	31	330	#	40	320		

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NOTES:
 # LAST OF SEVERAL OCCURRENCES

COLUMN 17 PEAK WIND IN M.P.H.

PRELIMINARY LOCAL CLIMATOLOGICAL DATA (WS FORM: F-6) , PAGE 2

STATION: ASHEVILLE NC
 MONTH: AUGUST
 YEAR: 2018
 LATITUDE: 35 25 N
 LONGITUDE: 82 33 W

[TEMPERATURE DATA] [PRECIPITATION DATA] SYMBOLS USED IN COLUMN 16

AVERAGE MONTHLY: 73.9 TOTAL FOR MONTH: 10.41
 DPTR FM NORMAL: 1.0 DPTR FM NORMAL: 6.01
 HIGHEST: 89 ON 30, 6 GRTST 24HR 2.00 ON 20-20
 LOWEST: 52 ON 24

SNOW, ICE PELLETS, HAIL
 TOTAL MONTH: 0.0 INCH
 GRTST 24HR 0.0
 GRTST DEPTH: 0

- 1 = FOG OR MIST
- 2 = FOG REDUCING VISIBILITY TO 1/4 MILE OR LESS
- 3 = THUNDER
- 4 = ICE PELLETS
- 5 = HAIL
- 6 = FREEZING RAIN OR DRIZZLE
- 7 = DUSTSTORM OR SANDSTORM: VSBY 1/2 MILE OR LESS
- 8 = SMOKE OR HAZE
- 9 = BLOWING SNOW
- X = TORNADO

[NO. OF DAYS WITH] [WEATHER - DAYS WITH]

MAX 32 OR BELOW: 0 0.01 INCH OR MORE: 15
 MAX 90 OR ABOVE: 0 0.10 INCH OR MORE: 11
 MIN 32 OR BELOW: 0 0.50 INCH OR MORE: 7
 MIN 0 OR BELOW: 0 1.00 INCH OR MORE: 6

[HDD (BASE 65)]

TOTAL THIS MO. 0 CLEAR (SCALE 0-3) 11
 DPTR FM NORMAL -2 PTCLDY (SCALE 4-7) 18
 TOTAL FM JUL 1 0 CLOUDY (SCALE 8-10) 2
 DPTR FM NORMAL -2

[CDD (BASE 65)]

TOTAL THIS MO. 283
 DPTR FM NORMAL 36 [PRESSURE DATA]
 TOTAL FM JAN 1 1062 HIGHEST SLP 30.28 ON 26
 DPTR FM NORMAL 305 LOWEST SLP 29.90 ON 21

[REMARKS]
 #FINAL-08-18#

753
 CXUS52 KGSP 011952
 CF6AVL

PRELIMINARY LOCAL CLIMATOLOGICAL DATA (WS FORM: F-6)

STATION: ASHEVILLE NC
 MONTH: SEPTEMBER
 YEAR: 2018
 LATITUDE: 35 25 N
 LONGITUDE: 82 33 W

TEMPERATURE IN F:					:PCPN:		SNOW:		WIND		:SUNSHINE:			SKY		:PK WND		
1	2	3	4	5	6A	6B	7	8	9	10	11	12	13	14	15	16	17	18
				DEP	HDD	CDD	WTR	SNW	DPTH	SPD	SPD	DIR	MIN	PSBL	S-S	WX	SPD	DR
1	87	65	76	5	0	11	0.00	0.0	0	2.5	12	170	M	M	3	12	15	170
2	87	69	78	8	0	13	0.00	0.0	0	3.6	15	150	M	M	4	3	21	150
3	87	66	77	7	0	12	0.00	0.0	0	3.2	12	160	M	M	3	1	18	130
4	86	66	76	6	0	11	T	0.0	0	1.3	9	170	M	M	3	3	13	160
5	84	68	76	6	0	11	0.00	0.0	0	2.1	12	160	M	M	3	1	16	160
6	86	67	77	7	0	12	T	0.0	0	2.6	13	170	M	M	2	1	16	150
7	87	63	75	6	0	10	0.00	0.0	0	2.6	9	130	M	M	1		12	130
8	84	64	74	5	0	9	0.11	0.0	0	1.8	14	180	M	M	3	12	16	180

TOTAL THIS MO.	0	CLEAR (SCALE 0-3)	8
DPTR FM NORMAL	-55	PTCLDY (SCALE 4-7)	16
TOTAL FM JUL 1	0	CLOUDY (SCALE 8-10)	6
DPTR FM NORMAL	-57		

[CDD (BASE 65)]

TOTAL THIS MO.	279		
DPTR FM NORMAL	184	[PRESSURE DATA]	
TOTAL FM JAN 1	1341	HIGHEST SLP 30.32 ON	3
DPTR FM NORMAL	489	LOWEST SLP 29.77 ON	16

[REMARKS]

#FINAL-09-18#