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Table 1: Gauge visits during the spring 2023 campaign. Comments: DD=gauge data download, MN=general gauge maintenance (cleaning, re-level), CA= rain gauge calibration, CV= vegetation clearing, ECC=electric contact cleaning treatment, and BR = data logger battery replacement.

Date	Gauges Visited	Technicians	Comments	Vehicle
3/17/2023*A	100T, 105	Doug, Nick	DD, MN, CV, CA	any vehicle
3/18/2023*B	111, 112	Doug, Drew	DD, MN, CV, CA	any vehicle
3/24/2023	101, 102, 103	Doug, Nick	DD, MN, CV, CA	any vehicle
3/25/2023	100T, 105	Doug, Jacob	DD, MN, CV, CA	any vehicle
3/31/2023	4; 106; 109	Doug, Lisa	DD, MN, CV, CA	any vehicle
4/1/2023*C	305, 309, 310	Doug, Wayne, Drew	DD, MN, CV, CA	4wd needed
4/2/2023	111, 112	Doug	DD, MN, CV, CA	any vehicle
4/8/2023*D	305, 309, 310	Doug, Drew, Josh	DD, MN, CV, CA	4wd needed
4/9/2023	104, 100T	Doug, Josh, Nick	DD, MN, CV, CA	4wd needed
4/16/2023*E	311; 107	Doug, Jacob, Brooks	DD, MN, CV, CA	any vehicle
4/18/2023	311; 107	Doug	DD, MN, CV, CA	any vehicle
4/21/2023	108, 110	Doug, Jackson	DD, MN, CV, CA	any vehicle
4/22/2023*F	301, 302	Doug, Josh, Kaitlyn, Zachary	DD, MN, CV, CA	any vehicle
4/26/2023*G	11; 3, 10	Doug, Sara, Kaitlyn	DD, MN, CV, CA	4wd needed
4/28/2023*H	304, 307	Doug, Jackson, Wayne	DD, MN, CV, CA	4wd needed
4/29/2023	305, 309, 310	Doug, Sara, Kaitlyn	DD, MN, CV, CA	4wd needed
5/3/2023	11*I; 3*I, 10	Doug	DD, MN, CV, CA	4wd needed
5/5/2023	300, 308	Doug, Zachary	DD, MN, CV, CA	any vehicle
5/8/2023*J	303s, 306	Doug, Brooks, Josh	DD, MN, CV, CA	any vehicle
5/10/2023	303s, 306	Doug, Brooks	DD, MN, CV, CA	any vehicle
5/17/2023*K	301, 302	Doug, Brooks	DD, MN, CV, CA	any vehicle
5/19/2023	2; 5; 8	Doug	DD, MN, CV, CA	any vehicle
5/21/2023	11; 3	Doug	DD, MN, CV, CA	4wd needed
5/26/2023	301, 302	Doug, Zachary, Drew	DD, MN, CV, CA	any vehicle

*A==> daylong rain makes calibrations impossible, *B==> below-freezing temperatures and windy conditions, *C==> high wind warning (50 - 60 mph gusts predicted at high elevations), *D==> daylong rain, cold, and afternoon winds, *E==> morning rain and predicted afternoon T-storms, *F==> frontal passage and heavy rain in the morning, *G==> cold air damming w/ associated rain, *H==> localized rains make calibration trials impossible, *I==> tree blown across main road since 9 April 2023 blocking access to CDB gauges, *J==> morning rain and predicted afternoon T-storms, and *K==> fast-flowing creek at second water crossing (due to previous night's T-storms) forces us to turn back on Snake Den Ridge Trail.

Gauge visitation in support of the Duke Great Smoky Mountain Rain Gauge Network (GSMRGN) during the spring 2023 campaign occurred over fifteen days spanning a period of ten weeks in March - May 2023. The primary purpose of the visits in the spring 2023 was [1] to perform downloads of gauge tip observations since

the previous gauge visits in the autumn 2022, [2] to complete rain gauge and data logger maintenance tasks, [3] to clear vegetation and tree limbs and, [4] to calibrate ALL rain gauges since field calibrations were last completed in the spring 2022. Twelve technicians and volunteers (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) clear vegetation within a five foot radius of the rain gauge [CV in Table 1], and, (4) calibration of rain gauges using a single trial of the 50, 100, and 300 mm nozzles [CA in Table 1]. The primary specialized task was the reconnection of the gauge experiencing interrupted service due to tampering by elk (g #112). Gauge #112 was reported by the landowner to have been pushed over by a group of bull elk between 22 December 2022 and 2 January 2023. Their ‘rough-housing’ with the gauge caused the logger to become only intermittently connected with the gauge switch over the remaining period until the spring gauge visit on 2 April 2023. A secondary specialized task was dealing with aging loggers and their replacement. Gauges #309 and #306 (Mt Sterling Ridge, near Big Cataloochee Mtn and Sunup Knob, respectively) were found to have batteries completely drained by the time of their spring 2023 visit, even though they had been supplied with fresh lithium batteries in autumn 2022. The logger in g #309 was replaced with a new ML1A-FL logger (#22-59) on 29 April 2023 and the logger in g #306 was replaced with an older (reliable) logger on 10 May 2023 that will be replaced in summer 2023 when brand new data loggers are received. A final specialized task occurred at g #302 (Snake Den Ridge Trail) when logger issues seemed to arise soon after the 22 October 2022 visit. It is hypothesized that the connection to the battery was loosened after replacing the logger cover in the autumn so that only occasional tips and temperatures were recorded in the relatively new ML1A-FL logger. It is currently being tested in a freezer before re-deploying the logger during the summer 2023 campaign. 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 screenshot 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 and ML1A-FL data logger times have been adjusted (using “TA” command) during previous gauge visits to coincide with the EDT given by the GPS locator. 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 and other emerging vegetation during the spring season within a five foot radius of the gauge using clippers or weeding by hand. Task (4) was completed successfully in every data logger at each of the functional rain gauge locations, except at g #307 and #304 due to very localized heavy rains. The strict weather requirements for conducting field calibration trials required multiple visits at three gauge locations (g #100T, #302 and #301) when developing rain or strong wind conditions made completion of the trials during the initial visit impossible. Calibration trials will have to take place in summer 2023 at g #307 and #304 where localized heavy rains made calibrations on 28 April 2023 impossible. Unfavorable weather conditions (strong winds, cold temperatures, and/or rain) forced the postponement of seven scheduled treks (highlighted in yellow in Table 1) and delayed completion of the Spring 2023 gauge visit campaign by one week.

Another continuous challenge continues to be the poor performance of the ML1 software ‘TA’ setting in the older loggers (e.g., g #107 and #110), which seems to have a poor time adjustment algorithm, forcing TA to be shut “off” until the next gauge visit. New data loggers have gradually replaced old loggers at the most remote rain gauge locations of the GSMNP.

Details of every gauge visit along with raw precipitation text and CSV format files are found via Google Drive https://drive.google.com/file/d/10aurQ9eGjo51Nlu3pcls6ynvBpoCkgLj/view?usp=share_link 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 October 2022 – February 2023 as observed at KAVL are highlighted in yellow in **Appendix A**. The autumn months (Oct. and Nov.) fluctuated substantially between below- and above-normal amounts, whereas the winter months (Dec. – Feb.) had smaller amplitude fluctuations.

Plans for the summer months of 2023

Table 2: Planned gauge visits during the summer 2023 campaign. DD=gauge data download, MN=general gauge maintenance (cleaning, re-level), CA= rain gauge calibration, CV= vegetation clearing, ECC=electric contact cleaning treatment, and BR = data logger battery replacement.

Date	Gauges Visited	Technicians	Comments
7/??/2023	3; 11; 107; 109	Doug + 1 field technician	DD, MN, CV, ECC
7/??/2023	2; 5; 8; 106; 10	Doug + 1 field technician	DD, MN, CV, ECC
7/??/2023	4; 104, 110, 105	Doug + 1 field technician	DD, MN, CV, ECC
7/??/2023	111, 112, 311	Doug + 1 field technician	DD, MN, CV, ECC
7/??/2023	101, 102, 103, 100T, 108	Doug + 1 field technician	DD, MN, CV, ECC
7/??/2023	303s, 306, 308	Doug + 2 field technicians	DD, MN, CV, ECC
7/??/2023	304, 307	Doug + 2 field technicians	DD, MN, CV, ECC
8/??/2023	305, 309, 310	Doug + 2 field technicians	DD, MN, CV, ECC
8/??/2023	301, 302, 300	Doug + 2 field technicians	DD, MN, CV, ECC

Gauge visitation in support of the Duke GSMRGN during the summer 2023 will occur over at least nine days spanning July and August 2023. The primary purpose of the visits will be to download precipitation observations that were made since the previous gauge visits in March - May 2023 [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], and clear vegetation (and tree branches) from overhanging gauges [CV in Table 2], and electronic contact cleaning [ECC in Table 2]. Gauge parts and loggers may have to be replaced during some of the visits if less-than-acceptable conditions show no signs of improvement, as noted in the previous section description.

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 technician roster during the 2022-2023 academic year consisted of Jackson Coley, Kaitlyn Duckett, Drew Griffith, Nick Kleis, Sara Michelson, Wayne Morley, Zachary Moss, Brooks Rogow, Jacob Sonney, Josh Ward. New undergraduate research students at UNC Asheville will be recruited as field technicians for the Duke GSMRGN project in the Fall 2023. Field technicians Drew Griffith and Nick Kleis graduated in May 2023.

Table 3: The Duke Great Smoky Mountain Rain Gauge Network is currently (valid as of 30 May 2023) 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
RG307s	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

 000
 CXUS52 KGSP 010817
 CF6AVL
 PRELIMINARY LOCAL CLIMATOLOGICAL DATA (WS FORM: F-6)

STATION: ASHEVILLE NC
 MONTH: OCTOBER
 YEAR: 2022
 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	
				AVG	MAX	MIN	AVG	12Z	AVG	MX	2MIN								
1	59	49	54	-9	11	0	0.05	0.0	0	10.5	21	330	M	M	10	1	27	330	
2	58	50	54	-9	11	0	0.00	0.0	0	11.4	22	330	M	M	8		31	350	
3	63	49	56	-7	9	0	0.00	0.0	0	8.8	21	330	M	M	4		27	340	
4	68	45	57	-5	8	0	0.00	0.0	0	7.5	21	340	M	M	3	12	26	330	
5	69	43	56	-6	9	0	0.00	0.0	0	8.3	21	330	M	M	0		26	330	
6	74	41	58	-4	7	0	0.00	0.0	0	3.3	13	330	M	M	0		16	300	
7	75	43	59	-2	6	0	0.00	0.0	0	4.0	15	340	M	M	0		21	320	
8	65	47	56	-5	9	0	0.00	0.0	0	9.5	20	330	M	M	2		27	330	
9	64	44	54	-6	11	0	0.00	0.0	0	3.5	12	160	M	M	7		15	170	
10	68	40	54	-6	11	0	0.00	0.0	0	2.7	12	320	M	M	1	12	16	340	
11	70	44	57	-3	8	0	0.00	0.0	0	3.5	14	170	M	M	5		20	170	
12	65	56	61	2	4	0	0.01	0.0	0	4.5	12	190	M	M	9	1	18	140	
13	76	51	64	5	1	0	0.00	0.0	0	9.2	24	330	M	M	2	1	30	330	
14	70	37	54	-5	11	0	0.00	0.0	0	2.6	14	300	M	M	0		19	280	
15	79	37	58	0	7	0	0.00	0.0	0	3.2	18	300	M	M	0		26	310	
16	74	45	60	2	5	0	0.05	0.0	0	3.4	17	340	M	M	3	1	24	350	
17	72	44	58	0	7	0	0.02	0.0	0	9.6	21	320	M	M	3	1	26	320	
18	44	32	38	-19	27	0	0.00	0.0	0	14.3	31	330	M	M	4		38	330	
19	55	33	44	-13	21	0	0.00	0.0	0	9.2	21	340	M	M	3		28	340	
20	59	26	43	-13	22	0	0.00	0.0	0	3.9	14	190	M	M	0		17	200	
21	64	28	46	-10	19	0	0.00	0.0	0	2.3	12	170	M	M	0		15	120	
22	69	30	50	-6	15	0	0.00	0.0	0	1.9	13	180	M	M	0		17	180	
23	74	33	54	-1	11	0	0.00	0.0	0	2.2	10	160	M	M	0		15	130	
24	74	34	54	-1	11	0	0.00	0.0	0	1.8	12	170	M	M	0		16	170	
25	70	36	53	-2	12	0	0.00	0.0	0	5.1	17	170	M	M	1		22	180	
26	63	50	57	3	8	0	0.11	0.0	0	10.3	25	330	M	M	6	1	32	330	
27	66	43	55	1	10	0	0.00	0.0	0	6.9	21	330	M	M	2		26	330	
28	63	40	52	-2	13	0	0.00	0.0	0	1.8	9	160	M	M	2		12	170	
29	61	34	48	-5	17	0	T	0.0	0	3.5	10	180	M	M	7	1	13	200	
30	56	51	54	1	11	0	0.09	0.0	0	6.0	12	170	M	M	10	1	15	170	
31	67	49	58	6	7	0	0.35	0.0	0	5.6	15	200	M	M	7	12	18	210	
SM	2054	1284			339	0	0.68	0.0		180.3			M		99				
AV	66.3	41.4								5.8	FASTST	M	M	3		MAX (MPH)			
											MISC ---->	31	330					38	330

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: OCTOBER
YEAR: 2022
LATITUDE: 35 25 N
LONGITUDE: 82 33 W

[TEMPERATURE DATA] [PRECIPITATION DATA] SYMBOLS USED IN COLUMN 16
AVERAGE MONTHLY: 53.8 TOTAL FOR MONTH: 0.68
DPTR FM NORMAL: -4.1 DPTR FM NORMAL: -2.69
HIGHEST: 79 ON 15 GRTST 24HR 0.61 ON 30- 1
LOWEST: 26 ON 20
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: 7
MAX 90 OR ABOVE: 0 0.10 INCH OR MORE: 2
MIN 32 OR BELOW: 4 0.50 INCH OR MORE: 0
MIN 0 OR BELOW: 0 1.00 INCH OR MORE: 0

[HDD (BASE 65)]
TOTAL THIS MO. 339 CLEAR (SCALE 0-3) 20
DPTR FM NORMAL 100 PTCLDY (SCALE 4-7) 7
TOTAL FM JUL 1 396 CLOUDY (SCALE 8-10) 4
DPTR FM NORMAL 122

[CDD (BASE 65)]
TOTAL THIS MO. 0
DPTR FM NORMAL -19 [PRESSURE DATA]
TOTAL FM JAN 1 1017 HIGHEST SLP 30.41 ON 29
DPTR FM NORMAL -30 LOWEST SLP 29.66 ON 17

[REMARKS]
#FINAL-10-22#

000
CXUS52 KGSP 011713
CF6AVL
PRELIMINARY LOCAL CLIMATOLOGICAL DATA (WS FORM: F-6)

STATION: ASHEVILLE NC
MONTH: NOVEMBER
YEAR: 2022
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
12Z AVG MX 2MIN
DY MAX MIN AVG DEP HDD CDD WTR SNW DPTH SPD SPD DIR MIN PSBL S-S WX SPD DR
=====

MIN 0 OR BELOW: 0 1.00 INCH OR MORE: 2

[HDD (BASE 65)]
 TOTAL THIS MO. 507 CLEAR (SCALE 0-3) 14
 DPTR FM NORMAL -10 PTCLDY (SCALE 4-7) 12
 TOTAL FM JUL 1 903 CLOUDY (SCALE 8-10) 4
 DPTR FM NORMAL 112

[CDD (BASE 65)]
 TOTAL THIS MO. 5
 DPTR FM NORMAL 4 [PRESSURE DATA]
 TOTAL FM JAN 1 1022 HIGHEST SLP 30.50 ON 9
 DPTR FM NORMAL -26 LOWEST SLP 29.54 ON 11

[REMARKS]
 #FINAL-11-22#

000
 CXUS52 KGSP 010917
 CF6AVL
 PRELIMINARY LOCAL CLIMATOLOGICAL DATA (WS FORM: F-6)

STATION: ASHEVILLE NC
 MONTH: DECEMBER
 YEAR: 2022
 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
=====																		
12Z AVG MX 2MIN																		
DY	MAX	MIN	AVG	DEP	HDD	CDD	WTR	SNW	DPTH	SPD	SPD	DIR	MIN	PSBL	S-S	WX	SPD	DR
=====																		
1	53	28	41	-3	24	0	0.00	0.0	0	8.9	24	340	M	M	0		35	340
2	56	26	41	-3	24	0	0.00	0.0	0	6.6	23	170	M	M	6		36	190
3	64	46	55	11	10	0	0.03	0.0	0	10.0	22	190	M	M	6	1	29	180
4	50	33	42	-1	23	0	0.00	0.0	0	2.8	14	340	M	M	2		16	340
5	43	38	41	-2	24	0	0.32	0.0	0	6.4	10	150	M	M	10	1	15	160
6	55	40	48	5	17	0	0.30	0.0	0	5.2	10	160	M	M	9	1	13	160
7	63	49	56	13	9	0	0.41	0.0	0	2.5	9	340	M	M	10	12	13	340
8	61	55	58	15	7	0	0.45	0.0	0	2.2	9	140	M	M	10	1	13	110
9	56	46	51	9	14	0	0.11	0.0	0	4.3	12	140	M	M	10	1	15	170
10	49	44	47	5	18	0	0.00	0.0	0	5.8	12	170	M	M	10	1	13	130
11	50	44	47	5	18	0	T	0.0	0	3.5	8	330	M	M	10	1	12	140
12	58	45	52	10	13	0	0.00	0.0	0	4.1	9	160	M	M	6		13	150
13	46	37	42	0	23	0	0.00	0.0	0	5.7	10	150	M	M	10		14	150
14	42	37	40	-2	25	0	0.76	0.0	0	7.3	13	200	M	M	10	1	16	170
15	48	37	43	1	22	0	0.81	0.0	0	4.6	12	340	M	M	9	1	15	180
16	50	31	41	0	24	0	0.00	0.0	0	6.1	17	300	M	M	0		25	290
17	50	27	39	-2	26	0	0.00	0.0	0	4.3	17	330	M	M	0		23	310
18	40	28	34	-7	31	0	0.00	0.0	0	9.3	21	340	M	M	0		26	350
19	46	21	34	-7	31	0	0.00	0.0	0	3.4	13	330	M	M	1		15	330
20	40	28	34	-7	31	0	0.00	0.0	0	2.3	10	180	M	M	8		13	190
21	47	29	38	-2	27	0	T	0.0	0	5.3	14	180	M	M	8	1	17	170
22	45	33	39	-1	26	0	0.14	0.0	0	5.2	17	170	M	M	10	1	22	170
23	41	2	22	-18	43	0	0.10	0.0	0	15.0	33	300	M	M	2	1	42	300
24	24	0	12	-28	53	0	0.00	0.0	0	13.9	26	330	M	M	0		34	350
25	31	12	22	-18	43	0	0.00	0.0	0	12.2	21	320	M	M	0		27	340
26	34	12	23	-17	42	0	0.00	0.0	0	3.8	15	340	M	M	3		19	340
27	45	24	35	-5	30	0	0.00	0.0	0	4.6	14	340	M	M	2		17	350

```

28 52 19 36 -4 29 0 0.00 0.0 0 2.0 12 160 M M 0 15 170
29 62 23 43 3 22 0 0.00 0.0 0 3.4 16 210 M M 1 20 210
30 53 28 41 2 24 0 0.03 0.0 0 2.9 9 180 M M 8 12 12 160
31 54 46 50 11 15 0 0.13 0.0 0 3.2 9 120 M M 10 12 14 110
=====
SM 1508 968 768 0 3.59 0.0 176.8 M 171
=====
AV 48.6 31.2 5.7 FASTST M M 6 MAX(MPH)
MISC ----> 33 300 42 300
=====

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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: DECEMBER
YEAR: 2022
LATITUDE: 35 25 N
LONGITUDE: 82 33 W

[TEMPERATURE DATA]	[PRECIPITATION DATA]	SYMBOLS USED IN COLUMN 16
AVERAGE MONTHLY: 39.9	TOTAL FOR MONTH: 3.59	1 = FOG OR MIST
DPTR FM NORMAL: -1.5	DPTR FM NORMAL: -0.59	2 = FOG REDUCING VISIBILITY TO 1/4 MILE OR LESS
HIGHEST: 64 ON 3	GRTST 24HR 1.57 ON 14-15	3 = THUNDER
LOWEST: 0 ON 24		4 = ICE PELLETS
	SNOW, ICE PELLETS, HAIL	5 = HAIL
	TOTAL MONTH: 0.0 INCH	6 = FREEZING RAIN OR DRIZZLE
	GRTST 24HR 0.0	7 = DUSTSTORM OR SANDSTORM: VSBY 1/2 MILE OR LESS
	GRTST DEPTH: 0	8 = SMOKE OR HAZE
		9 = BLOWING SNOW
		X = TORNADO
[NO. OF DAYS WITH]	[WEATHER - DAYS WITH]	
MAX 32 OR BELOW: 2	0.01 INCH OR MORE: 12	
MAX 90 OR ABOVE: 0	0.10 INCH OR MORE: 10	
MIN 32 OR BELOW: 16	0.50 INCH OR MORE: 2	
MIN 0 OR BELOW: 1	1.00 INCH OR MORE: 0	

[HDD (BASE 65)]	
TOTAL THIS MO. 768	CLEAR (SCALE 0-3) 13
DPTR FM NORMAL 36	PTCLDY (SCALE 4-7) 5
TOTAL FM JUL 1 1671	CLOUDY (SCALE 8-10) 13
DPTR FM NORMAL 150	

[CDD (BASE 65)]	
TOTAL THIS MO. 0	
DPTR FM NORMAL 0	[PRESSURE DATA]
TOTAL FM JAN 1 1022	HIGHEST SLP 30.52 ON 2
DPTR FM NORMAL -26	LOWEST SLP 29.50 ON 23

[REMARKS]
#FINAL-12-22#

000
CXUS52 KGSP 010917
CF6AVL
PRELIMINARY LOCAL CLIMATOLOGICAL DATA (WS FORM: F-6)

STATION: ASHEVILLE NC
MONTH: JANUARY

YEAR: 2023
 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	
				12Z		AVG		MX		2MIN									
DY	MAX	MIN	AVG	DEP	HDD	CDD	WTR	SNW	DPTH	SPD	SPD	DIR	MIN	PSBL	S-S	WX	SPD	DR	
1	65	41	53	14	12	0	0.00	0.0	0	2.3	9	330	M	M	6	12	12	330	
2	66	41	54	15	11	0	0.00	0.0	0	2.6	13	220	M	M	7	12	16	210	
3	63	53	58	19	7	0	0.44	0.0	0	9.9	24	320	M	M	9	13	32	320	
4	61	43	52	13	13	0	1.00	0.0	0	5.2	15	340	M	M	7	123	19	210	
5	59	33	46	7	19	0	0.00	0.0	0	5.6	20	300	M	M	0	1	26	330	
6	51	33	42	3	23	0	0.00	0.0	0	9.5	20	330	M	M	0		24	330	
7	49	29	39	0	26	0	T	0.0	0	4.0	13	340	M	M	6		15	340	
8	44	39	42	3	23	0	0.33	0.0	0	4.9	12	330	M	M	10	1	16	340	
9	48	28	38	0	27	0	0.00	0.0	0	10.1	22	330	M	M	4		30	340	
10	56	26	41	3	24	0	0.00	0.0	0	1.8	6	340	M	M	0	1	8	190	
11	54	29	42	4	23	0	0.00	0.0	0	3.3	14	150	M	M	3		20	150	
12	62	38	50	12	15	0	0.86	0.0	0	6.3	32	290	M	M	7	13	47	290	
13	48	29	39	1	26	0	0.01	T	0	17.4	29	330	M	M	6	1	40	330	
14	33	25	29	-9	36	0	T	T	T	18.5	30	340	M	M	7		42	330	
15	51	23	37	-1	28	0	0.00	0.0	0	8.3	36	330	M	M	0		42	340	
16	52	23	38	0	27	0	0.00	0.0	0	1.9	8	150	M	M	0		11	140	
17	62	40	51	13	14	0	T	0.0	0	4.0	14	330	M	M	5		22	310	
18	63	33	48	10	17	0	0.08	0.0	0	3.2	16	340	M	M	2	1	17	340	
19	63	51	57	19	8	0	0.16	0.0	0	9.2	21	190	M	M	6	1	28	190	
20	51	37	44	6	21	0	0.00	0.0	0	11.0	20	310	M	M	0		28	350	
21	49	29	39	0	26	0	0.00	0.0	0	6.7	21	340	M	M	0		26	330	
22	42	34	38	-1	27	0	0.40	0.0	0	5.8	13	160	M	M	10	1	16	180	
23	42	30	36	-3	29	0	0.10	T	0	14.4	28	330	M	M	5	1	33	340	
24	53	28	41	2	24	0	0.00	0.0	0	6.8	16	330	M	M	0		22	360	
25	53	35	44	5	21	0	1.24	0.0	0	8.3	18	190	M	M	7	1	24	350	
26	43	31	37	-2	28	0	T	0.0	0	8.9	21	330	M	M	5		28	330	
27	47	27	37	-2	28	0	0.00	0.0	0	5.7	17	290	M	M	2		23	290	
28	55	22	39	0	26	0	0.00	0.0	0	4.0	15	180	M	M	0		19	170	
29	51	38	45	6	20	0	0.07	0.0	0	5.0	10	330	M	M	8		13	170	
30	62	42	52	13	13	0	0.21	0.0	0	3.3	9	330	M	M	7	1	15	330	
31	59	43	51	11	14	0	0.09	0.0	0	3.1	13	330	M	M	8	12	14	330	
SM	1657	1053			656	0	4.99	T		211.0			M		137				
AV	53.5	34.0								6.8	FASTST		M	M	4		MAX (MPH)		
										MISC	---->	36	330				47	290	

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: JANUARY
 YEAR: 2023
 LATITUDE: 35 25 N
 LONGITUDE: 82 33 W

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

AVERAGE MONTHLY: 43.7 TOTAL FOR MONTH: 4.99 1 = FOG OR MIST
 DPTR FM NORMAL: 5.0 DPTR FM NORMAL: 0.86 2 = FOG REDUCING VISIBILITY
 HIGHEST: 66 ON 2 GRTST 24HR 2.37 ON 3- 4 TO 1/4 MILE OR LESS
 LOWEST: 22 ON 28 3 = THUNDER

19	57	33	45	2	20	0	0.00	0.0	0	8.6	28	190	M	M	1	36	180
20	68	36	52	9	13	0	T	0.0	0	4.4	24	250	M	M	4	35	240
21	70	45	58	15	7	0	0.04	0.0	0	5.1	21	330	M	M	5	31	310
22	71	42	57	13	8	0	0.00	0.0	0	8.0	24	210	M	M	2	32	180
23	74	53	64	20	1	0	0.02	0.0	0	7.8	18	190	M	M	7	26	180
24	67	48	58	14	7	0	0.01	0.0	0	8.1	24	340	M	M	5	31	330
25	52	43	48	4	17	0	0.09	0.0	0	7.6	14	330	M	M	10	17	340
26	64	44	54	10	11	0	T	0.0	0	6.9	20	330	M	M	2	23	330
27	65	46	56	12	9	0	0.08	0.0	0	8.4	29	310	M	M	4	42	310
28	73	46	60	15	5	0	0.00	0.0	0	7.5	20	280	M	M	0	28	290

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=====
SM 1661 1061          451  0  2.78      T      218.2          M      108
=====
AV 59.3 37.9          7.8 FASTST      M      M      4      MAX(MPH)
                                MISC ---->      35 330          43 340
=====

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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: FEBRUARY
YEAR: 2023
LATITUDE: 35 25 N
LONGITUDE: 82 33 W

[TEMPERATURE DATA]	[PRECIPITATION DATA]	SYMBOLS USED IN COLUMN 16
AVERAGE MONTHLY: 48.6	TOTAL FOR MONTH: 2.78	1 = FOG OR MIST
DPTR FM NORMAL: 6.5	DPTR FM NORMAL: -0.68	2 = FOG REDUCING VISIBILITY TO 1/4 MILE OR LESS
HIGHEST: 74 ON 23	GRTST 24HR 1.21 ON 16-17	3 = THUNDER
LOWEST: 20 ON 4	SNOW, ICE PELLETS, HAIL	4 = ICE PELLETS
	TOTAL MONTH: T	5 = HAIL
	GRTST 24HR T ON 11-11	6 = FREEZING RAIN OR DRIZZLE
	GRTST DEPTH: 0	7 = DUSTSTORM OR SANDSTORM: VSBY 1/2 MILE OR LESS
		8 = SMOKE OR HAZE
[NO. OF DAYS WITH]	[WEATHER - DAYS WITH]	9 = BLOWING SNOW
		X = TORNADO

MAX 32 OR BELOW: 0	0.01 INCH OR MORE: 12
MAX 90 OR ABOVE: 0	0.10 INCH OR MORE: 4
MIN 32 OR BELOW: 8	0.50 INCH OR MORE: 1
MIN 0 OR BELOW: 0	1.00 INCH OR MORE: 1

[HDD (BASE 65)]	
TOTAL THIS MO. 451	CLEAR (SCALE 0-3) 14
DPTR FM NORMAL -192	PTCLDY (SCALE 4-7) 10
TOTAL FM JUL 1 2778	CLOUDY (SCALE 8-10) 4
DPTR FM NORMAL -199	

[CDD (BASE 65)]	
TOTAL THIS MO. 0	
DPTR FM NORMAL 0	[PRESSURE DATA]
TOTAL FM JAN 1 0	HIGHEST SLP 30.57 ON 4
DPTR FM NORMAL 0	LOWEST SLP 29.55 ON 27

[REMARKS]
#FINAL-02-23#