Prepared by:
Douglas K. Miller

Undergraduate research students (UNC Asheville):
Lauryn Fox, Bryce Glenn, Daniel Lamprea

Volunteer assistants (other):
Don Elliott (Waynesville Watershed Field Manager)

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Status

Table 1: Gauge visits during the summer 2024 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
7/1/2024	3; 11; 107; 4	Doug, Lauryn, Daniel	DD, MN, CV, ECC	4wd
7/5/2024	10; 109; 106; 104; 110	Doug	DD, MN, CV, ECC	Minivan
7/8/2024	303s, 306, 308	Doug, Bryce, Lauryn, Daniel	DD, MN, CV, ECC	Minivan
7/12/2024	101, 102, 103, 100T, 108	Doug, Lauryn, Daniel	DD, MN, CV, ECC	Minivan
7/15/2024	305, 309, 310	Doug, Lauryn, Daniel	DD, MN, CV, ECC	4wd
7/19/2024	105, 111, 112, 311	Doug, Bryce, Lauryn, Daniel	DD, MN, CV, ECC	Minivan
7/22/2024	304, 307s	Doug	DD, MN, CV, ECC	4wd
7/26/2024	301, 302, 300	Doug, Lauryn, Daniel	DD, MN, CV, ECC	Minivan
7/29/2024*A	2; 5; 8	Doug	DD, MN, CV, ECC	Minivan
8/2/2024	2; 5; 8	Doug	DD, MN, CV, ECC	Minivan

*A frontal passage and heavy rain predicted – gauge visits postponed

Gauge visitation in support of the Duke Great Smoky Mountain Rain Gauge Network (GSMRGN) during the summer 2024 campaign occurred over nine days spanning a period of five weeks in July - August 2024. The primary purpose of the visits in the summer 2024 was [1] to perform downloads of gauge tip observations since the previous gauge visits in the spring 2024, [2] to complete rain gauge and data logger maintenance tasks, [3] to clear vegetation and tree limbs and, [4] to clean the electronic contact between the data logger lead wires and the tipping bucket (rain gauge) switch using a chemical solvent from a spray can. Three technicians and one volunteer (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) electrical contact cleaning [ECC in Table 1]. 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 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 unleveled, and fixing or replacing the gauge mesh if it had been damaged. Task (3) consisted of cutting briars and other growing vegetation during the summer season within a five-foot radius of the gauge using clippers or weeding by hand. Task (4) was completed successfully at **all** rain gauge locations. It was a Jekyll and Hyde campaign as the weather was cooperative for hiking during the first half of July (a dry spell) and switched to a rainy period during the second half of July and early August. Specialized tasks were video downloads of the cameras at g

#110 and #304, the removal of ants from infestations at two rain gauges (g #107 and #112), and the cutting of small trees and tree limbs near the five-foot radius of the opening at several locations (g #010, #106, #110, #109, #306, #311, and #307s).

Time agreement between a GPS device and data loggers was generally good between the time when updates were made in the spring 2024 and the days of summer visits. Three loggers still exhibit difficulty with the time adjust (TA) operation (g #005, #108, and #112) and may be replaced with newer loggers in autumn 2024 if their performance doesn't improve over the next three months. One video camera at g #302 may be replaced in autumn 2024 if there is sufficient funding in place as funding for the current study is winding down. A new proposal for a follow-on study will be submitted in autumn 2024 and it is hoped funding will be seamless and support a gauge visit and calibration campaign in the spring 2025.

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/11_WZi7MVkkS-ZtIWmBzLH4zl--P5X55M/view?usp=drive_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 March – June 2024 as observed at KAVL are highlighted in yellow in **Appendix A**. The monthly rainfall "yo-yo" continued during this period, alternating between above-normal monthly accumulations in March and May, and below-normal monthly accumulations in April and June.

Plans for the autumn months of 2024

Table 2: Planned gauge visits during the autumn 2024 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
?? Oct 2024	3; 11; 10, 4	Doug + 1 technician	DD, MN, CV, BR
?? Oct 2024	107, 109, 104, 108	Doug + 1 technician	DD, MN, CV, BR
?? Oct 2024	110, 105, 111, 112	Doug + 1 technician	DD, MN, CV, BR
?? Oct 2024	304, 307s	Doug + 2 technicians	DD, MN, CV, BR
?? Oct 2024	101, 102, 103, 100T	Doug + 1 technician	DD, MN, CV, BR
?? Nov 2024	303s, 306, 308	Doug + 2 technicians	DD, MN, CV, BR
?? Nov 2024	305, 309, 310	Doug + 2 technicians	DD, MN, CV, BR
?? Nov 2024	311;	Doug + 1 technician	DD, MN, CV, BR
?? Nov 2024	2; 5; 8; 106	Doug + 1 technician	DD, MN, CV, BR
?? Nov 2024	301, 302, 300	Doug + 2 technicians	DD, MN, CV, BR

Gauge visitation in support of the Duke GSMRGN during the autumn 2024 will occur over at least ten days spanning October and November 2024. The primary purpose of the visits will be to download precipitation observations that were made since the previous gauge visits in July and August 2024 [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], clear vegetation (and tree branches) from overhanging gauges [CV in Table 2], and replace ALL logger lithium batteries in anticipation of the cold wintry weather that provides challenging conditions to the smooth operation of lithium batteries. 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 2022-2024 academic year consisted of Jackson Coley, Kaitlyn Duckett, Drew Griffith, Nick Kleis, Sara Michelson, Wayne Morley, Zachary Moss, Brooks Rogow, Jacob Sonney, and Josh Ward. New undergraduate research students at UNC Asheville will be recruited as field technicians for the Duke GSMRGN project in the fall 2024 semester. Field technicians Drew Griffith and Nick Kleis graduated in May 2024 and Wayne Morley will graduate in December 2024.

Table 3: The Duke Great Smoky Mountain Rain Gauge Network is currently (valid as of 6 August 2024) 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	35º23.7’ N	82º54.9’ 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

209
CXUS52 KGSP 010817
CF6AVL
PRELIMINARY LOCAL CLIMATOLOGICAL DATA (WS FORM: F-6)

STATION: ASHEVILLE NC
MONTH: MARCH
YEAR: 2024
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	42	36	39	-6	26	0	1.63	T	0	4.1	10	190	M	M	10	14	18	210
2	67	41	54	9	11	0	0.03	0.0	0	2.3	10	140	M	M	7	12	14	170
3	68	43	56	11	9	0	0.00	0.0	0	4.6	14	150	M	M	4	12	19	150
4	69	42	56	10	9	0	0.00	0.0	0	4.4	13	150	M	M	7	12	19	180
5	68	48	58	12	7	0	0.08	0.0	0	5.1	15	140	M	M	6	1	21	140
6	56	50	53	7	12	0	1.11	0.0	0	4.4	10	340	M	M	10	1	16	330
7	70	52	61	15	4	0	T	0.0	0	6.3	17	340	M	M	5		23	310
8	60	52	56	10	9	0	0.19	0.0	0	7.3	16	140	M	M	9	1	26	130
9	61	47	54	7	11	0	0.70	0.0	0	6.6	16	350	M	M	9	1	31	330
10	51	38	45	-2	20	0	T	0.0	0	17.2	30	330	M	M	2		43	330
11	60	35	48	1	17	0	0.00	0.0	0	12.2	31	330	M	M	0		45	330
12	70	29	50	3	15	0	0.00	0.0	0	4.9	15	330	M	M	0		28	340
13	72	35	54	6	11	0	0.00	0.0	0	3.0	16	340	M	M	0		25	340
14	78	38	58	10	7	0	0.00	0.0	0	5.3	17	190	M	M	0	8	28	210
15	66	53	60	12	5	0	0.54	0.0	0	4.0	15	360	M	M	5	13	24	10
16	72	53	63	15	2	0	T	0.0	0	7.7	16	340	M	M	3		32	330
17	68	51	60	12	5	0	0.00	0.0	0	9.6	22	330	M	M	3		33	340
18	51	31	41	-8	24	0	0.00	0.0	0	14.6	29	330	M	M	1		40	320
19	60	26	43	-6	22	0	0.00	0.0	0	7.5	15	340	M	M	0		26	330
20	69	33	51	2	14	0	0.00	0.0	0	7.4	20	300	M	M	0		27	270
21	69	38	54	4	11	0	0.00	0.0	0	6.3	13	330	M	M	0		19	330
22	60	43	52	2	13	0	0.84	0.0	0	4.4	16	170	M	M	6	1	23	160
23	58	39	49	-1	16	0	0.17	0.0	0	13.8	30	330	M	M	7	1	46	340
24	60	33	47	-3	18	0	0.00	0.0	0	8.1	20	340	M	M	0		31	360
25	56	34	45	-6	20	0	0.00	0.0	0	10.3	17	170	M	M	2		25	170
26	50	44	47	-4	18	0	0.56	0.0	0	7.4	16	150	M	M	10	1	24	150
27	69	46	58	7	7	0	0.03	0.0	0	6.9	17	340	M	M	6	1	28	340
28	58	45	52	0	13	0	0.00	0.0	0	13.5	28	320	M	M	2		40	330
29	66	31	49	-3	16	0	0.00	0.0	0	4.4	23	310	M	M	0		33	350
30	76	36	56	4	9	0	0.00	0.0	0	2.8	15	310	M	M	0		21	310
31	79	44	62	10	3	0	0.00	0.0	0	4.6	16	210	M	M	0		22	200
SM	1979	1266			384	0	5.88	T		221.0			M		114			
AV	63.8	40.8								7.1	FASTST		M	M	4		MAX(MPH)	
								MISC ---->		31	330						46	340

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: MARCH
YEAR: 2024
LATITUDE: 35 25 N
LONGITUDE: 82 33 W

[TEMPERATURE DATA]

AVERAGE MONTHLY: 52.3
DPTR FM NORMAL: 3.9
HIGHEST: 79 ON 31
LOWEST: 26 ON 19

[PRECIPITATION DATA]

TOTAL FOR MONTH: 5.88
DPTR FM NORMAL: 2.08
GRTST 24HR 1.66 ON 1- 2

SNOW, ICE PELLETS, HAIL
TOTAL MONTH: T
GRTST 24HR T ON 1- 1
GRTST DEPTH: 0

SYMBOLS USED IN COLUMN 16

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]

MAX 32 OR BELOW: 0
MAX 90 OR ABOVE: 0
MIN 32 OR BELOW: 4
MIN 0 OR BELOW: 0

[WEATHER - DAYS WITH]

0.01 INCH OR MORE: 11
0.10 INCH OR MORE: 8
0.50 INCH OR MORE: 6
1.00 INCH OR MORE: 2

[HDD (BASE 65)]
TOTAL THIS MO. 384
DPTR FM NORMAL -131
TOTAL FM JUL 1 3107
DPTR FM NORMAL -389

[CDD (BASE 65)]
TOTAL THIS MO. 0
DPTR FM NORMAL -1
TOTAL FM JAN 1 0
DPTR FM NORMAL -1

CLEAR (SCALE 0-3) 17
PTCLDY (SCALE 4-7) 9
CLOUDY (SCALE 8-10) 5

[PRESSURE DATA]
HIGHEST SLP 30.45 ON 1
LOWEST SLP 29.61 ON 9

[REMARKS]
#FINAL-03-24#

710
CXUS52 KGSP 010817
CF6AVL
PRELIMINARY LOCAL CLIMATOLOGICAL DATA (WS FORM: F-6)

STATION: ASHEVILLE NC
MONTH: APRIL
YEAR: 2024
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	78	50	64	11	1	0	0.00	0.0	0	4.1	17	210	M	M	2		25	200
2	84	63	74	21	0	9	0.00	0.0	0	9.7	22	210	M	M	1		31	170
3	67	40	54	1	11	0	0.35	0.0	0	9.6	29	320	M	M	5	13	47	310
4	50	39	45	-9	20	0	T	0.0	0	10.7	24	310	M	M	9		37	310
5	50	36	43	-11	22	0	T	0.0	0	11.4	28	340	M	M	7		39	340
6	58	37	48	-6	17	0	0.00	0.0	0	10.8	22	320	M	M	2		34	350
7	68	31	50	-4	15	0	0.00	0.0	0	3.7	14	130	M	M	0		19	140
8	75	45	60	5	5	0	0.00	0.0	0	5.6	16	190	M	M	4		25	190
9	62	54	58	3	7	0	0.44	0.0	0	4.7	14	200	M	M	10	1	21	210
10	66	53	60	5	5	0	0.07	0.0	0	8.1	24	140	M	M	8	1	37	130
11	69	53	61	5	4	0	0.44	0.0	0	12.2	31	310	M	M	10	1	42	310
12	62	46	54	-2	11	0	T	0.0	0	16.0	38	300	M	M	5		56	300
13	69	46	58	2	7	0	0.00	0.0	0	14.6	35	330	M	M	1		46	330
14	82	40	61	4	4	0	0.00	0.0	0	2.7	16	240	M	M	1		24	320
15	84	49	67	10	0	2	0.02	0.0	0	5.5	16	220	M	M	1	3	25	300
16	82	52	67	10	0	2	0.00	0.0	0	3.7	14	140	M	M	0	1	22	120
17	75	55	65	7	0	0	T	0.0	0	7.7	20	220	M	M	2		31	190
18	84	50	67	9	0	2	T	0.0	0	5.2	15	340	M	M	2		23	360
19	80	56	68	10	0	3	0.20	0.0	0	5.0	14	340	M	M	4	1	22	350
20	68	56	62	4	3	0	0.01	0.0	0	11.2	24	330	M	M	3	1	32	340
21	57	43	50	-9	15	0	0.45	0.0	0	8.7	23	340	M	M	7	1	34	330
22	62	40	51	-8	14	0	0.00	0.0	0	7.8	18	330	M	M	1		28	350
23	71	34	53	-6	12	0	0.00	0.0	0	5.3	20	200	M	M	0		29	190
24	69	44	57	-3	8	0	T	0.0	0	5.8	21	340	M	M	1		31	360
25	73	42	58	-2	7	0	0.00	0.0	0	3.1	13	170	M	M	0		17	160
26	57	48	53	-7	12	0	0.07	0.0	0	5.6	12	170	M	M	8	1	14	160
27	72	52	62	2	3	0	T	0.0	0	6.3	15	180	M	M	6	1	20	190
28	75	58	67	7	0	2	T	0.0	0	8.3	18	170	M	M	4	1	26	180
29	78	55	67	6	0	2	0.00	0.0	0	6.9	16	170	M	M	1		26	150
30	74	53	64	3	1	0	0.85	0.0	0	3.6	17	330	M	M	6	1238	24	340
SM	2101	1420		204	22	2.90		0.0		223.6			M		111			
AV	70.0	47.3								7.5	FASTST		M	M	4	MAX(MPH)		
								MISC ---->		38	300					56	300	

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: APRIL
YEAR: 2024
LATITUDE: 35 25 N
LONGITUDE: 82 33 W

[TEMPERATURE DATA]

AVERAGE MONTHLY: 58.7
DPTR FM NORMAL: 1.7
HIGHEST: 84 ON 18,15
LOWEST: 31 ON 7

[PRECIPITATION DATA]

TOTAL FOR MONTH: 2.90
DPTR FM NORMAL: -1.27
GRTST 24HR 0.85 ON 30-30

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

SYMBOLS USED IN COLUMN 16

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]

MAX 32 OR BELOW: 0
MAX 90 OR ABOVE: 0
MIN 32 OR BELOW: 1

[WEATHER - DAYS WITH]

0.01 INCH OR MORE: 10
0.10 INCH OR MORE: 6
0.50 INCH OR MORE: 1

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

[HDD (BASE 65)]
TOTAL THIS MO.   204   CLEAR (SCALE 0-3) 16
DPTR FM NORMAL   -50   PTCLDY (SCALE 4-7) 10
TOTAL FM JUL 1 3311   CLOUDY (SCALE 8-10) 4
DPTR FM NORMAL -436

[CDD (BASE 65)]
TOTAL THIS MO.   22
DPTR FM NORMAL   8   [PRESSURE DATA]
TOTAL FM JAN 1   22   HIGHEST SLP 30.41 ON 27
DPTR FM NORMAL   7   LOWEST SLP 29.33 ON 3

[REMARKS]
#FINAL-04-24#

128
CXUS52 KGSP 010817
CF6AVL
PRELIMINARY LOCAL CLIMATOLOGICAL DATA (WS FORM: F-6)

STATION: ASHEVILLE NC
MONTH: MAY
YEAR: 2024
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	80	51	66	5	0	1	0.00	0.0	0	4.4	18	320	M	M	2	12	27	310
2	81	50	66	4	0	1	0.00	0.0	0	3.9	14	140	M	M	0		22	170
3	73	55	64	2	1	0	0.01	0.0	0	2.8	10	180	M	M	5		15	200
4	76	62	69	7	0	4	0.29	0.0	0	2.9	17	200	M	M	8	13	24	200
5	79	61	70	8	0	5	0.08	0.0	0	2.3	15	210	M	M	8	1238	23	230
6	75	59	67	5	0	2	0.30	0.0	0	3.0	16	220	M	M	7	13	31	260
7	82	58	70	7	0	5	0.01	0.0	0	4.4	20	330	M	M	4	1	25	210
8	83	62	73	10	0	8	0.32	0.0	0	3.5	36	330	M	M	5	138	51	340
9	80	61	71	8	0	6	1.00	0.0	0	4.3	14	330	M	M	4	13	21	20
10	77	52	65	2	0	0	0.00	0.0	0	11.5	24	340	M	M	3		40	330
11	74	48	61	-3	4	0	0.00	0.0	0	6.5	16	330	M	M	3		24	330
12	74	47	61	-3	4	0	0.00	0.0	0	5.0	17	320	M	M	0		26	310
13	66	50	58	-6	7	0	0.01	0.0	0	4.8	14	190	M	M	5	1	23	170
14	68	56	62	-2	3	0	0.21	0.0	0	4.3	12	150	M	M	9	1	16	160
15	75	61	68	4	0	3	0.80	0.0	0	4.4	18	350	M	M	8	13	31	360
16	79	57	68	3	0	3	0.00	0.0	0	7.0	20	330	M	M	4		30	350
17	72	55	64	-1	1	0	0.09	0.0	0	3.2	10	150	M	M	6	1	17	150
18	77	62	70	5	0	5	0.69	0.0	0	3.7	35	290	M	M	7	13	52	310
19	76	61	69	4	0	4	0.31	0.0	0	1.8	10	20	M	M	8	12	16	10
20	81	58	70	4	0	5	0.01	0.0	0	3.1	12	160	M	M	7	12	17	150
21	81	60	71	5	0	6	0.00	0.0	0	3.7	15	180	M	M	3		19	160
22	83	59	71	5	0	6	0.00	0.0	0	4.6	15	160	M	M	0	1	21	170
23	81	62	72	6	0	7	0.31	0.0	0	3.6	13	230	M	M	4	13	17	240
24	85	63	74	7	0	9	0.11	0.0	0	5.7	15	330	M	M	6	13	22	340
25	80	63	72	5	0	7	T	0.0	0	4.2	14	330	M	M	2		24	340
26	84	58	71	4	0	6	0.01	0.0	0	4.0	16	360	M	M	3	123	29	360
27	82	60	71	4	0	6	0.40	0.0	0	6.7	28	330	M	M	2	13	40	330
28	80	60	70	2	0	5	0.00	0.0	0	7.2	18	340	M	M	1		27	360
29	78	55	67	-1	0	2	0.00	0.0	0	9.2	21	300	M	M	1		31	340

```
30  77  54  66  -2   0   1 0.00  0.0    0  7.9 21 330   M    M   1        31 340
31  72  50  61  -7   4   0 0.00  0.0    0  3.8 12 160   M    M   0        16 140
================================================================================
SM 2411 1770        24 107  4.96  0.0    147.4          M      126
================================================================================
AV 77.8 57.1                                  4.8 FASTST   M    M   4    MAX(MPH)
                                   MISC ---->    36 330                  52 310
================================================================================
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:     MAY
                                          YEAR:      2024
                                          LATITUDE:   35 25 N
                                          LONGITUDE:  82 33 W

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

AVERAGE MONTHLY: 67.4   TOTAL FOR MONTH:   4.96    1 = FOG OR MIST
DPTR FM NORMAL:   2.6   DPTR FM NORMAL:    0.83    2 = FOG REDUCING VISIBILITY
HIGHEST:    85 ON 24    GRTST 24HR  1.32 ON  8- 9      TO 1/4 MILE OR LESS
LOWEST:     47 ON 12                               3 = THUNDER
                        SNOW, ICE PELLETS, HAIL    4 = ICE PELLETS
                        TOTAL MONTH:   0.0 INCH    5 = HAIL
                        GRTST 24HR  0.0            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:  18
MAX 90 OR ABOVE:   0    0.10 INCH OR MORE:  11
MIN 32 OR BELOW:   0    0.50 INCH OR MORE:   3
MIN  0 OR BELOW:   0    1.00 INCH OR MORE:   1

[HDD (BASE 65) ]
TOTAL THIS MO.    24    CLEAR  (SCALE 0-3)  13
DPTR FM NORMAL   -60    PTCLDY (SCALE 4-7)  15
TOTAL FM JUL 1  3335    CLOUDY (SCALE 8-10)  3
DPTR FM NORMAL  -498

[CDD (BASE 65) ]
TOTAL THIS MO.   107
DPTR FM NORMAL    31    [PRESSURE DATA]
TOTAL FM JAN 1   129    HIGHEST SLP 30.26 ON 31
DPTR FM NORMAL    38    LOWEST  SLP 29.65 ON 15

[REMARKS]
#FINAL-05-24#


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787
CXUS52 KGSP 010817
CF6AVL
PRELIMINARY LOCAL CLIMATOLOGICAL DATA (WS FORM: F-6)

                                          STATION:   ASHEVILLE NC
                                          MONTH:     JUNE
                                          YEAR:      2024
                                          LATITUDE:   35 25 N
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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	74	49	62	-7	3	0	0.00	0.0	0	5.2	15	170	M	M	3	1	20	160
2	73	59	66	-3	0	1	0.14	0.0	0	6.0	13	190	M	M	8	1	19	160
3	80	60	70	1	0	5	0.36	0.0	0	2.7	18	210	M	M	7	123	22	210
4	82	63	73	4	0	8	T	0.0	0	5.8	18	190	M	M	7	123	27	210
5	79	67	73	3	0	8	0.05	0.0	0	7.9	15	180	M	M	7	1	29	190
6	84	64	74	4	0	9	T	0.0	0	4.0	17	310	M	M	4		25	340
7	80	62	71	1	0	6	0.04	0.0	0	7.8	18	330	M	M	1	1	27	340
8	82	54	68	-2	0	3	0.00	0.0	0	3.5	14	330	M	M	0		20	330
9	80	58	69	-1	0	4	0.71	0.0	0	5.5	18	330	M	M	5	1	29	350
10	79	59	69	-2	0	4	0.00	0.0	0	7.5	18	340	M	M	4		31	330
11	81	55	68	-3	0	3	0.00	0.0	0	4.4	12	150	M	M	3		18	340
12	80	58	69	-2	0	4	0.00	0.0	0	3.9	12	160	M	M	4		17	180
13	84	63	74	3	0	9	0.00	0.0	0	6.8	12	160	M	M	2		16	160
14	89	63	76	4	0	11	0.00	0.0	0	4.1	17	330	M	M	2		34	340
15	88	65	77	5	0	12	0.00	0.0	0	3.8	14	180	M	M	3	1	20	180
16	83	69	76	4	0	11	0.22	0.0	0	3.3	14	190	M	M	7	13	23	160
17	86	70	78	6	0	13	T	0.0	0	4.6	14	170	M	M	5	1	20	170
18	81	67	74	2	0	9	0.00	0.0	0	4.4	14	150	M	M	4	1	20	150
19	81	64	73	0	0	8	0.00	0.0	0	3.5	10	160	M	M	4	1	16	140
20	84	62	73	0	0	8	0.00	0.0	0	3.4	13	150	M	M	4		17	140
21	87	61	74	1	0	9	0.00	0.0	0	2.3	10	160	M	M	2		14	170
22	89	61	75	2	0	10	0.00	0.0	0	2.9	12	180	M	M	0		17	170
23	92	66	79	6	0	14	0.00	0.0	0	2.9	13	320	M	M	3		19	320
24	87	66	77	3	0	12	0.05	0.0	0	8.7	21	330	M	M	1		30	350
25	91	59	75	1	0	10	0.00	0.0	0	3.0	10	330	M	M	0		17	350
26	92	63	78	4	0	13	0.00	0.0	0	4.0	15	210	M	M	0		22	220
27	81	68	75	1	0	10	0.04	0.0	0	4.6	18	350	M	M	7	1	31	350
28	86	67	77	3	0	12	T	0.0	0	4.5	14	150	M	M	6	1	21	150
29	85	71	78	4	0	13	0.47	0.0	0	4.7	14	210	M	M	8	1	18	220
30	91	70	81	7	0	16	0.08	0.0	0	7.1	22	320	M	M	4	13	37	330
SM	2511	1883			3	255	2.16	0.0		142.8			M		115			
AV	83.7	62.8								4.8	FASTST		M	M	4		MAX(MPH)	
								MISC ---->			22	320					37	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: JUNE
YEAR: 2024
LATITUDE: 35 25 N
LONGITUDE: 82 33 W

[TEMPERATURE DATA]

AVERAGE MONTHLY: 73.2
DPTR FM NORMAL: 1.4
HIGHEST: 92 ON 26,23
LOWEST: 49 ON 1

[PRECIPITATION DATA]

TOTAL FOR MONTH: 2.16
DPTR FM NORMAL: -2.63
GRTST 24HR 0.71 ON 9- 9

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

SYMBOLS USED IN COLUMN 16

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

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                      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:  10
MAX 90 OR ABOVE:   4    0.10 INCH OR MORE:   5
MIN 32 OR BELOW:   0    0.50 INCH OR MORE:   1
MIN  0 OR BELOW:   0    1.00 INCH OR MORE:   0

[HDD (BASE 65) ]
TOTAL THIS MO.     3    CLEAR  (SCALE 0-3)  13
DPTR FM NORMAL    -5    PTCLDY (SCALE 4-7)  17
TOTAL FM JUL 1  3338    CLOUDY (SCALE 8-10)  0
DPTR FM NORMAL  -500

[CDD (BASE 65) ]
TOTAL THIS MO.   255
DPTR FM NORMAL    43    [PRESSURE DATA]
TOTAL FM JAN 1   384    HIGHEST SLP 30.35 ON 20
DPTR FM NORMAL    81    LOWEST  SLP 29.68 ON  6

[REMARKS]
#FINAL-06-24#

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