Prepared by:
Douglas K. Miller

Undergraduate research students (UNC Asheville):
Adam Goodman, Alexa Kaley, Akarion Kozma, Andrew Price, Stephen Reams, Lucas Shelton, Cameryn Shochet, and Ben Zeidell

Volunteer assistants (other):
Don Elliott (Waynesville Watershed Field Manager), Mark Miller, Paul Super

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Status

Table 1: Gauge visits during the autumn 2025 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
6 Oct 2025	104, 110	Doug	DD, MN, CV, BR
7 Oct 2025	105, 111, 112, 311	Doug	DD, MN, CV, BR
10 Oct 2025	101, 102, 103, 105, 108	Doug, Andrew	DD, MN, CV, BR
11 Oct 2025	303s, 306, 308	Doug, Akarion, Cameryn	DD, MN, CV, BR
17 Oct 2025	4; 10; 106	Doug, Akarion	DD, MN, CV, BR
19 Oct 2025*A	3: 11;	Doug, Zachary, Cameryn	DD, MN, CV, BR
24 Oct 2025	304, 307s	Doug, Ben, Alexa	DD, MN, CV, BR, CA
25 Oct 2025	305, 309, 310	Doug, Alexa, Adam	DD, MN, CV, BR
31 Oct 2025	100T, 107, 109	Doug, Stephen	DD, MN, CV, BR
1 Nov 2025	~~301~~*B, 302, 300	Doug, Lucas, Akarion	DD, MN, CV, BR
7 Nov 2025	2; 5; 8; 3; 11	Doug, Don, Mark	DD, MN, CV, BR

*A: moderate rain predicted with frontal passage
*B: unable to visit gauge #301 due to large falling rime ice chunks

Gauge visitation in support of the Duke Great Smoky Mountains Rain Gauge Network (GSMRGN) during the autumn 2025 occurred over ten days spanning a period of five weeks in October - November 2025. The primary purpose of the visits in the autumn 2025 was [1] to perform downloads of gauge tip observations since the previous gauge visits in the summer 2025, [2] to complete maintenance tasks, [3] to clear vegetation and tree limbs, and [4] to replace ALL data logger lithium batteries in anticipation of cold winter weather, when lithium batteries respond with a drop in operating voltage. Eleven 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 **<u>every</u>** 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 lithium batteries [BR in Table 1] in anticipation of cold winter weather, when lithium batteries respond with a drop in operating voltage. 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. Older ML1-FL and newer ML1A-FL data logger times have been adjusted (using the time adjust [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, tree branches,

rhododendron, and mountain laurel within a five-foot radius of the gauge using clippers or a saw. Task (4) was completed successfully in every data logger at all but one of the rain gauge locations (g #301).

A specialized task was the upgrade of ML1A-FL firmware at gauges #112, 100T, 108, 004, and 300 allowing the TA command to accept manual input and allow the field manager to determine the logger time adjustment rather than relying on the firmware to make the decision. All data loggers will eventually require the installation of the updated firmware allowing a manual time adjustment. There will also be a period when the optimal TA will be determined for each data logger, hopefully by the end of calendar year 2026. Other specialized tasks were the calibration trials (CA) completed at gauges #307s and 304 located along the Balsam Mountain Ridge trail. The gauges were previously difficult to reach due to the poor condition of the Heintooga Loop Road caused by heavy rainfall associated with Helene. A special "Thank you!" is due to NPS Ranger Paul Super who drove us to the trailhead, making the calibration trials possible.

The rain gauge at Ski Cataloochee (g #104) was moved in April 2025 to protect it from heavy equipment needed to install a new quad ski lift at the resort. As of autumn 2025, a pile of tree debris blocks its original location and the rain gauge will continue to be located underneath a tree [!!!] until a contractor picks up the debris pile and clears the spot. Rain gauge #103 was found to have its cover (gauge funnel) knocked off the base, presumably by a bear. It appears to have happened soon after 21 September 2025, amid a worsening drought in western NC. On 25 October the lithium battery of the logger at rain gauge #309 was found to be dead and inspection of the logger showed it happened late on 17 September 2025. On the same day, the mesh cap on top of the rain gauge cover of g #305 was replaced as the old one was damaged by a curious bear. Ascent to the Appalachian Trail on 1 November was met with a surprisingly thick layer of rime ice on the trees located near rain gauges #302 and 301 (Mt. Guyot) and began to melt as we reached the trail. Some ice chunks were large enough (see photo, p. 6 below) that field manager Miller decided it was too risky to scale Mt Guyot as a concussion or bad fall were possible given the volume of falling ice.

Weather during the first half of the rain gauge visit campaign in fall 2025 was nearly ideal and caused only a single postponement of the ten originally scheduled visits. We continue to inquire 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 g #310 (~5,800 feet ASL). The newer ML1A-FL loggers record an internal temperature estimate that can be used as a proxy for discerning tips due to rain compared to those due to melting snow.

Details of every gauge visit along with precipitation raw and CSV files can be found via Google Drive

https://drive.google.com/file/d/1DtHV017yQC86CcR6vf3Gg68alaRxyPJM/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 July – September 2025 observed at KAVL are highlighted in yellow in **Appendix A**. An extended dry period between mid-august through most of September contributed to a dry period leading up to the autumn rain gauge visit campaign.

Plans for the spring months of 2026

Table 2: Planned gauge visits during the spring 2026 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/??/2026	3; 11	Doug, one student	DD, MN, CA, CV
3/??/2026	2; 5; 8	Doug, one student	DD, MN, CA, CV
3/??/2026	100T, 105, 104	Doug, one student	DD, MN, CA, CV
3/??/2026	300, 308	Doug, two students	DD, MN, CA, CV
4/??/2026	106, 10	Doug, one student	DD, MN, CA, CV
4/??/2026	304, 307s	Doug, two students	DD, MN, CV
4/??/2026	4, 108, 109	Doug, one student	DD, MN, CA, CV
4/??/2026	311, 110	Doug, one student	DD, MN, CA, CV
4/??/2026	111, 112, 107	Doug, one student	DD, MN, CA, CV
5/??/2026	303s, 306	Doug, two students	DD, MN, CA, CV
5/??/2026	101, 102, 103	Doug, two students	DD, MN, CA, CV
5/??/2026	305, 309, 310	Doug, two students	DD, MN, CA, CV
5/??/2026	301, 302	Doug, two students	DD, MN, CA, CV

Gauge visitation in support of the Duke GSMRGN during the spring 2026 will occur over at least thirteen days spanning March through mid-May 2026. The primary purpose of the visits will be to download precipitation observations that were made since the previous gauge visits in October - November 2025 [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 30 of 32 rain gauges [most recent calibration was in spring 2025 for all but g #304 and 307s, CA in Table 2], and clear vegetation (and tree branches) from overhanging gauges [CV in Table 2]. Calibrations are scheduled at 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 2025-2026 academic year consists of Adam Goodman, Alexa Kaley, Akarion Kozma, Dylan Metcalf, Bennett Moreno, Zachary Moss, Obi Osaro, Andrew Price, Stephen Reams, Lucas Shelton, Cameryn Shochet, Tyler Smith, and Ben Zeidell. New undergraduate research students at UNC Asheville will be recruited as field technicians for the Duke GSMRGN project in the fall 2026. Akarion Kozma, Zachary Moss, Obi Osaro, and Andrew Price will be graduating in May 2026.

Table 3: The Duke Great Smoky Mountains Rain Gauge Network is currently (valid as of 13 November 2025) composed of 32 tipping bucket rain gauges.

Gauge #	Location	Latitude	Longitude	Elevation
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

Photo credit: Akarion Kozma

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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577
CXUS52 KGSP 010817
CF6AVL
PRELIMINARY LOCAL CLIMATOLOGICAL DATA (WS FORM: F-6)

                                    STATION:   ASHEVILLE NC
                                    MONTH:     JULY
                                    YEAR:      2025
                                    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  88  67  78   4   0  13 0.33  0.0    0  3.7 20 220   M    M   5 13     30 240
 2  87  67  77   2   0  12 0.00  0.0    0  8.3 22 340   M    M   3        33 340
 3  88  63  76   1   0  11 0.00  0.0    0  6.6 16 330   M    M   1        29 330
 4  87  65  76   1   0  11 0.00  0.0    0  3.4 10 340   M    M   2 18     18 330
 5  86  63  75   0   0  10 0.00  0.0    0  2.5  9 130   M    M   2 18     16 150
 6  89  63  76   1   0  11 0.00  0.0    0  5.9 21 320   M    M   0        30 320
 7  88  64  76   1   0  11    T  0.0    0  2.9 13 330   M    M   2 3      21 330
 8  91  65  78   3   0  13 0.08  0.0    0  2.4 23 340   M    M   3 13     33 330
 9  89  66  78   3   0  13 0.63  0.0    0  2.2 23 330   M    M   4 123    34 320
10  81  69  75   0   0  10 0.01  0.0    0  3.5 10 240   M    M   4 13     18 330
11  87  68  78   3   0  13 0.05  0.0    0  4.5 18 330   M    M   4 13     30 300
12  85  68  77   2   0  12 0.01  0.0    0  6.0 20 160   M    M   3 13     29 340
13  89  69  79   4   0  14    T  0.0    0  6.3 18 330   M    M   1 3      27 320
14  91  69  80   5   0  15 0.00  0.0    0  4.6 15 250   M    M   0 38     22 260
15  89  67  78   3   0  13 0.06  0.0    0  3.7 14 210   M    M   2 3      23 330
16  87  70  79   4   0  14 0.21  0.0    0  6.3 15 190   M    M   5 13     26 180
17  87  71  79   4   0  14 0.26  0.0    0  5.4 17 180   M    M   5 13     23 170
18  89  69  79   4   0  14    T  0.0    0  4.8 16 310   M    M   5 123    21 320
19  87  71  79   4   0  14 0.35  0.0    0  3.7 16 220   M    M   3 13     22 210
20  88  72  80   5   0  15 0.37  0.0    0  5.6 16 300   M    M   2 138    25 320
21  90  69  80   5   0  15 0.00  0.0    0  6.6 15 330   M    M   1 1      22 350
22  85  70  78   3   0  13 0.75  0.0    0  3.1 13 290   M    M   5 13     17 110
23  84  67  76   1   0  11 0.00  0.0    0  3.5 10 130   M    M   6        16 140
24  86  62  74  -1   0   9 0.00  0.0    0  3.1 12 160   M    M   2 1      17 180
25  88  69  79   4   0  14 0.02  0.0    0  2.9 13 180   M    M   5 1      19 260
26  90  68  79   4   0  14 0.00  0.0    0  4.2 12 350   M    M   1 8      20 350
27  92  73  83   8   0  18    T  0.0    0  7.0 15 330   M    M   2        29 330
28  91  72  82   7   0  17 0.55  0.0    0  7.2 20 350   M    M   1 13     35  10
29  92  70  81   6   0  16 2.68  0.0    0  5.0 24 240   M    M   4 123    38 220
30  87  71  79   4   0  14 0.08  0.0    0  3.3 20 200   M    M   6 1238   26 200
31  87  71  79   4   0  14    T  0.0    0  3.0 12 340   M    M   3 138    20 330
================================================================================
SM 2725 2108         0 408  6.44  0.0       141.2           M       92
```

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===============================================================================
AV 87.9 68.0                            4.6 FASTST   M    M   3     MAX(MPH)
                             MISC ---->   24 240                    38 220
===============================================================================
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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:      2025
                                    LATITUDE:  35 25 N
                                    LONGITUDE: 82 33 W
```

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

AVERAGE MONTHLY: 78.0   TOTAL FOR MONTH: 6.44   1 = FOG OR MIST
DPTR FM NORMAL: 2.9   DPTR FM NORMAL: 1.77   2 = FOG REDUCING VISIBILITY
HIGHEST: 92 ON 29,27 GRTST 24HR 2.76 ON 29-30   TO 1/4 MILE OR LESS
LOWEST: 62 ON 24   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: 16
MAX 90 OR ABOVE: 7   0.10 INCH OR MORE: 9
MIN 32 OR BELOW: 0   0.50 INCH OR MORE: 4
MIN 0 OR BELOW: 0   1.00 INCH OR MORE: 1

[HDD (BASE 65)]
TOTAL THIS MO.   0   CLEAR (SCALE 0-3) 17
DPTR FM NORMAL   0   PTCLDY (SCALE 4-7) 14
TOTAL FM JUL 1   0   CLOUDY (SCALE 8-10) 0
DPTR FM NORMAL   0

[CDD (BASE 65)]
TOTAL THIS MO. 408
DPTR FM NORMAL   95   [PRESSURE DATA]
TOTAL FM JAN 1 805   HIGHEST SLP 30.26 ON 24
DPTR FM NORMAL 189   LOWEST SLP 29.87 ON 1

[REMARKS]
#FINAL-07-25#
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471
CXUS52 KGSP 010817
CF6AVL
PRELIMINARY LOCAL CLIMATOLOGICAL DATA (WS FORM: F-6)


                                    STATION:   ASHEVILLE NC
                                    MONTH:     AUGUST
                                    YEAR:      2025
                                    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   89   69   79    4    0   14  1.96   0.0    0  5.4 21 240   M     M    3 13    31 250
 2   71   64   68   -7    0    3  0.33   0.0    0  3.1 10 150   M     M   10 1     14 180
 3   65   59   62  -13    3    0  1.25   0.0    0  2.6  9 190   M     M   10 1     11 190
 4   70   59   65  -10    0    0  0.80   0.0    0  2.4  9 180   M     M   10 1     12 150
 5   70   63   67   -8    0    2  0.01   0.0    0  2.8  6 170   M     M   10 1      8 120
 6   79   61   70   -5    0    5     T   0.0    0  3.8 14 170   M     M    8       23 330
 7   77   66   72   -3    0    7     T   0.0    0  2.7 10 150   M     M   10       15 160
 8   79   67   73   -2    0    8  0.00   0.0    0  3.7 10 120   M     M    9       17 110
 9   77   63   70   -5    0    5  0.00   0.0    0  2.0 13 140   M     M    8 18    17 140
10   80   60   70   -5    0    5     T   0.0    0  2.0 10 160   M     M    7 1     17 160
11   80   69   75    0    0   10  0.28   0.0    0  4.8 13 150   M     M    9 1     17 140
12   84   71   78    4    0   13  0.09   0.0    0  4.2 14 180   M     M    7 1     23 180
13   85   69   77    3    0   12  0.68   0.0    0  2.6 15 340   M     M    7 13    20 350
14   89   69   79    5    0   14     T   0.0    0  5.8 18 330   M     M    4       33 340
15   87   69   78    4    0   13  0.00   0.0    0  4.6 15 160   M     M    1 3     21 170
16   87   68   78    4    0   13  0.01   0.0    0  3.2 20 320   M     M    3 3     29 310
17   89   65   77    3    0   12     T   0.0    0  5.0 16 340   M     M    3 123   27 330
18   90   67   79    5    0   14     T   0.0    0  3.8 14 190   M     M    3 3     20 190
19   82   70   76    2    0   11  0.03   0.0    0  3.5 14 140   M     M    7 13    21 150
20   89   67   78    4    0   13  1.23   0.0    0  4.6 25  10   M     M    6 13    40  10
21   83   67   75    1    0   10  0.07   0.0    0  2.5 14  10   M     M    3 38    24 340
22   79   69   74    0    0    9  0.02   0.0    0  3.9 13 140   M     M    8 1     19 160
23   77   65   71   -3    0    6     T   0.0    0  4.6 10 150   M     M    7       16 160
24   79   64   72   -1    0    7  0.10   0.0    0  4.7 20 340   M     M    6 1     30 340
25   78   63   71   -2    0    6  0.00   0.0    0  7.8 21 330   M     M    0       32 340
26   76   60   68   -5    0    3  0.00   0.0    0  6.6 17 330   M     M    2       29 330
27   75   54   65   -8    0    0  0.00   0.0    0  5.8 16 340   M     M    3       27 320
28   76   56   66   -7    0    1  0.00   0.0    0  3.6 12 340   M     M    4       18  10
29   81   52   67   -6    0    2  0.00   0.0    0  5.5 15 330   M     M    1 1     24 340
30   80   54   67   -5    0    2     T   0.0    0  2.4 10 140   M     M    3       18  80
31   75   60   68   -4    0    3  0.10   0.0    0  2.5 13 150   M     M    7 1     22 140
================================================================================
SM 2478 1979            3  223  6.96   0.0       122.5            M        179
================================================================================
AV 79.9 63.8                              4.0 FASTST  M    M    6    MAX(MPH)
                                   MISC ---->   25  10                40  10
================================================================================
NOTES:
# LAST OF SEVERAL OCCURRENCES

COLUMN 17 PEAK WIND IN M.P.H.

PRELIMINARY LOCAL CLIMATOLOGICAL DATA (WS FORM: F-6) , PAGE 2
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```
                          STATION:   ASHEVILLE NC
                          MONTH:     AUGUST
                          YEAR:      2025
                          LATITUDE:  35 25 N
                          LONGITUDE: 82 33 W


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

AVERAGE MONTHLY: 71.9     TOTAL FOR MONTH:   6.96   1 = FOG OR MIST
DPTR FM NORMAL:  -2.1     DPTR FM NORMAL:    1.92   2 = FOG REDUCING VISIBILITY
HIGHEST:    90 ON 18      GRTST 24HR  1.97 ON  1- 2     TO 1/4 MILE OR LESS
LOWEST:     52 ON 29                                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:  15
MAX 90 OR ABOVE:   1      0.10 INCH OR MORE:   9
MIN 32 OR BELOW:   0      0.50 INCH OR MORE:   5
MIN  0 OR BELOW:   0      1.00 INCH OR MORE:   3

[HDD (BASE 65) ]
TOTAL THIS MO.     3      CLEAR  (SCALE 0-3)   9
DPTR FM NORMAL     3      PTCLDY (SCALE 4-7)  14
TOTAL FM JUL 1     3      CLOUDY (SCALE 8-10)  8
DPTR FM NORMAL     3

[CDD (BASE 65) ]
TOTAL THIS MO.   223
DPTR FM NORMAL   -56      [PRESSURE DATA]
TOTAL FM JAN 1  1028      HIGHEST SLP 30.30 ON  6
DPTR FM NORMAL   133      LOWEST  SLP 29.84 ON 20

[REMARKS]
#FINAL-08-25#



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                                  10
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CXUS52 KGSP 010817

CF6AVL

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

```
                                    STATION:   ASHEVILLE NC
                                    MONTH:     SEPTEMBER
                                    YEAR:      2025
                                    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  76  60  68  -4   0   3 0.00   0.0    0   2.6 12 140   M     M     8 12     20 150
 2  76  54  65  -7   0   0 0.00   0.0    0   2.2 10 170   M     M     6        14 200
 3  73  60  67  -5   0   2 0.11   0.0    0   2.7  9 340   M     M     5 1      16 180
 4  81  57  69  -2   0   4 0.39   0.0    0   2.9 16 180   M     M     5 138    24 210
 5  84  62  73   2   0   8 0.00   0.0    0   2.6 13 220   M     M     5 12     19 210
 6  78  67  73   2   0   8    T   0.0    0   4.6 18 340   M     M     3        31 320
 7  74  58  66  -5   0   1    T   0.0    0  10.5 22 330   M     M     4        34 340
 8  73  52  63  -7   2   0 0.00   0.0    0   3.7 10 160   M     M     4        16 120
 9  75  47  61  -9   4   0 0.00   0.0    0   1.7  9 140   M     M     2 12     16 150
10  76  48  62  -8   3   0 0.00   0.0    0   5.8 21 330   M     M     1 12     32 330
11  80  50  65  -5   0   0 0.00   0.0    0   4.1 16 320   M     M     1        24 330
12  80  53  67  -3   0   2 0.00   0.0    0   2.2  9 130   M     M     3 1      15 330
13  79  56  68  -1   0   3 0.00   0.0    0   1.3  8 150   M     M     4 12     14 330
14  82  53  68  -1   0   3    T   0.0    0   2.0 17 330   M     M     3 12     27 330
15  80  55  68  -1   0   3 0.70   0.0    0   2.1 16 330   M     M     3 13     24 340
16  74  61  68   0   0   3 0.22   0.0    0   1.3 13 330   M     M     8 1      24 340
17  79  58  69   1   0   4 0.01   0.0    0   5.1 17 330   M     M     4 12     34 330
18  81  54  68   0   0   3 0.00   0.0    0   2.0 10 160   M     M     2        15 170
19  83  61  72   4   0   7 0.00   0.0    0   4.4 18 330   M     M     5 123    24 330
20  81  59  70   3   0   5 0.00   0.0    0   2.2 13 210   M     M     4 123    17 200
21  78  58  68   1   0   3 0.00   0.0    0   3.2 13 150   M     M     6 12     19 140
22  80  60  70   4   0   5 0.00   0.0    0   3.8 14 160   M     M     5 12     19 170
23  79  58  69   3   0   4 0.04   0.0    0   1.8 10 190   M     M     4 1      16 210
24  83  61  72   6   0   7 0.94   0.0    0   2.8 17 220   M     M     6 123    23 220
25  80  64  72   6   0   7 0.17   0.0    0   3.7 14 210   M     M     8 1      18 210
26  78  65  72   7   0   7 0.07   0.0    0   3.7 12 160   M     M     8 123    16 130
27  77  60  69   4   0   4 0.28   0.0    0   2.9 21 340   M     M     6 13     31 330
28  79  60  70   6   0   5    T   0.0    0   3.5 13 330   M     M     6 1      24 330
29  73  60  67   3   0   2 0.40   0.0    0   3.8 10 330   M     M     8 12     19 340
30  68  61  65   1   0   0 0.11   0.0    0   3.1  8 330   M     M    10 18     14  70
================================================================================
SM 2340 1732         9 103  3.44   0.0        98.3              M        147
================================================================================
AV 78.0 57.7                              3.3 FASTST  M     M     5    MAX(MPH)
                               MISC ---->    22 330                  # 34 340
================================================================================
```

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:     SEPTEMBER
                         YEAR:      2025
                         LATITUDE:  35 25 N
                         LONGITUDE: 82 33 W


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

AVERAGE MONTHLY: 67.9   TOTAL FOR MONTH:   3.44  1 = FOG OR MIST
DPTR FM NORMAL:  -0.4   DPTR FM NORMAL:   -0.69  2 = FOG REDUCING VISIBILITY
HIGHEST:    84 ON  5    GRTST 24HR  1.10 ON 24-25     TO 1/4 MILE OR LESS
LOWEST:     47 ON  9                             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:  12
MAX 90 OR ABOVE:   0    0.10 INCH OR MORE:   9
MIN 32 OR BELOW:   0    0.50 INCH OR MORE:   2
MIN  0 OR BELOW:   0    1.00 INCH OR MORE:   0

[HDD (BASE 65) ]
TOTAL THIS MO.     9    CLEAR  (SCALE 0-3)   6
DPTR FM NORMAL   -25    PTCLDY (SCALE 4-7)  23
TOTAL FM JUL 1    12    CLOUDY (SCALE 8-10)  1
DPTR FM NORMAL   -20

[CDD (BASE 65) ]
TOTAL THIS MO.   103
DPTR FM NORMAL   -30    [PRESSURE DATA]
TOTAL FM JAN 1  1131    HIGHEST SLP 30.25 ON  9
DPTR FM NORMAL   103    LOWEST  SLP 29.82 ON  4

[REMARKS]
#FINAL-09-25#
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