Prepared by:
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Daniel Fairchild

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

Index

Status

Table 1: Gauge visits during the summer 2022 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
7/6/2022	10; 107; 106; 104; 110	Doug	DD, MN, CV, ECC	Minivan
7/8/2022	3; 11; 109; 4	Doug, D. Fairchild	DD, MN, CV, ECC	Journey
7/11/2022	303s, 306, 308	Doug	DD, MN, CV, ECC	Minivan
7/15/2022	101, 102, 103, 105, 108	Doug	DD, MN, CV, ECC	Minivan
7/18/2022	305, 309, 310	Doug, D. Fairchild	DD, MN, CV, ECC	Journey
7/22/2022	100T, 111, 112, 311	Doug	DD, MN, CV, ECC	Minivan
7/25/2022	301, 302, 300	Doug	DD, MN, CV, ECC	Minivan
7/29/2022	304, 307s; 110	Doug	DD, MN, CV, ECC	Journey
8/5/2022	2; 5; 8;	Doug	DD, MN, CV, ECC	Minivan

Gauge visitation in support of the Duke Great Smoky Mountain Rain Gauge Network (GSMRGN) during the summer 2022 campaign occurred over nine days spanning a period of five weeks in July - August 2022. The primary purpose of the visits in the summer 2022 was [1] to perform downloads of gauge tip observations since the previous gauge visits in the spring 2022, [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. One technician 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 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. 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 most of the rain gauge locations. Specialized tasks were (a) the return of g #110 to an upright position [it had been pushed over by a bear previously in the spring 2022 and fall 2021], (b) the replacement of four "C" batteries in the motion-activated video cameras at g #309 and #302, (c) the replacement of a data logger at g #4, and (d) the installation of a new TB3 rain gauge (g #307s) at a location in which a tree had fallen on and destroyed the old rain gauge on 3 January 2022. Five of the older data loggers (g #4, #100T, #105, #108, and #112) have shown abrupt changes of the date format corresponding to bucket tips

that requires manual editing of the rain rainfall observation files during the QA/QC procedure. Five new data loggers were ordered in June 2022. Unfortunately, the delay in delivery due to supply chain problems and delivery of the loggers to an incorrect address by UPS meant they weren't received until after the summer 2022 gauge campaign had been completed.

The primary challenge continues to be the poor performance of the ML1 software 'TA' setting in some of the older loggers, which seems to have a poor time adjustment algorithm, forcing TA to be shut "off" until the next gauge visit (g #005, #106, #109 #306). The other challenge is the premature battery voltage drainage in the newer ML1-420 loggers and one of the new ML1A-FL loggers (g #304). Rainfall observations between spring and summer 2022 were lost at two locations (g #110 and g #304) due to wildlife tampering and a drained logger battery, respectively.

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/1c_PCetb2kU9GyhWG5b1srUawqM6bMwhL/view?usp=sharing 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 2022 – June 2022 as observed at KAVL are highlighted in yellow in **Appendix A**. The fluctuations in monthly rainfall oscillated over the four month period, alternating between significantly above normal in March and May 2022 and significantly below normal in April and June 2022.

Plans for the autumn months of 2022

Table 2: Planned gauge visits during the autumn 2022 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 2022	3; 11; 10, 4	Doug + 1 technician	DD, MN, CV, BR
?? Oct 2022	107, 109, 104, 108	Doug + 1 technician	DD, MN, CV, BR
?? Oct 2022	110, 105, 111, 112	Doug + 1 technician	DD, MN, CV, BR
?? Oct 2022	304, 307s	Doug + 2 technicians	DD, MN, CV, BR
?? Oct 2022	101, 102, 103, 100T	Doug + 1 technician	DD, MN, CV, BR
?? Nov 2022	303s, 306, 308	Doug + 2 technicians	DD, MN, CV, BR
?? Nov 2022	305, 309, 310	Doug + 2 technicians	DD, MN, CV, BR
?? Nov 2022	311;	Doug + 1 technician	DD, MN, CV, BR
?? Nov 2022	2; 5; 8; 106	Doug + 1 technician	DD, MN, CV, BR
?? Nov 2022	301, 302, 300	Doug + 2 technicians	DD, MN, CV, BR

Gauge visitation in support of the Duke GSMRGN during the autumn 2022 will occur over at least ten days spanning October and November 2022. The primary purpose of the visits will be to download precipitation observations that were made since the previous gauge visits in July and August 2022 [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 2021-2022 academic year consisted of Meredith Avison, Marlee Burgess, Jackson Coley, Daniel Fairchild, Michelle Hauser, Sarah Langille, Alice Monroe, Zachary Moss, Samuel Peterson, Taylor Ross, Paige Stedina, and Josh Ward. New undergraduate research students at UNC Asheville will be recruited as field technicians for the Duke GSMRGN project in the fall 2022 semester. Field technicians Marlee Burgess, Michelle Hauser, Alice Monroe, Samuel Peterson, and Taylor Ross graduated in May 2022 and Daniel Fairchild will graduate in December 2022.

Table 3: The Duke Great Smoky Mountain Rain Gauge Network is currently (valid as of 11 August 2022) 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

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CXUS52 KGSP 011436
CF6AVL
PRELIMINARY LOCAL CLIMATOLOGICAL DATA (WS FORM: F-6)

                                  STATION:   ASHEVILLE NC
                                  MONTH:     MARCH
                                  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  65  29  47   2  18   0 0.00   0.0    0  3.3 10 330   M    M   0        14 340
 2  70  31  51   6  14   0 0.00   0.0    0  3.0 20 330   M    M   0        27 350
 3  75  35  55  10  10   0 0.00   0.0    0  6.5 22 340   M    M   0        24 350
 4  64  37  51   5  14   0 0.00   0.0    0  5.0 13 140   M    M   0        19 140
 5  70  38  54   8  11   0 0.00   0.0    0  7.1 20 200   M    M   0        27 200
 6  73  54  64  18   1   0 0.00   0.0    0 11.0 24 200   M    M   3        33 190
 7  67  49  58  12   7   0 0.23   0.0    0 10.4 25 200   M    M   5 1      34 200
 8  60  41  51   5  14   0 0.87   0.0    0  8.5 20 340   M    M   8 1      27 340
 9  53  45  49   2  16   0 0.75   0.0    0  9.2 24 340   M    M   8 1      29 330
10  47  43  45  -2  20   0 0.00   0.0    0  5.2 10 170   M    M  10        14 200
11  65  41  53   6  12   0    T   0.0    0  6.0 21 170   M    M   8 1      30 210
12  52  19  36 -11  29   0 0.24   0.3    T 18.4 35 320   M    M   4 19     47 320
13  50  16  33 -15  32   0 0.00   0.0    0  5.9 15 340   M    M   0        22 330
14  61  28  45  -3  20   0 0.00   0.0    0  5.1 18 180   M    M   0        22 160
15  61  33  47  -1  18   0 0.00   0.0    0  3.1 14 190   M    M   3        18 200
16  55  45  50   2  15   0 0.74   0.0    0  1.6  8 240   M    M  10 1      12 220
17  69  47  58  10   7   0 0.00   0.0    0  5.1 16 340   M    M   5        23 340
18  63  41  52   3  13   0 0.11   0.0    0  5.8 22 200   M    M   5 1      33 100
19  69  45  57   8   8   0 0.01   0.0    0 13.4 25 200   M    M   2        35 200
20  59  41  50   1  15   0 0.00   0.0    0 14.1 30 330   M    M   1        38 330
21  67  32  50   0  15   0 0.00   0.0    0  5.4 14 180   M    M   0        20 160
22  68  42  55   5  10   0 0.00   0.0    0  8.4 17 150   M    M   0        26 170
23  67  54  61  11   4   0 2.15   0.0    0  7.4 23 200   M    M   9 13     31 200
24  67  44  56   6   9   0 0.00   0.0    0  8.7 22 340   M    M   1        28 250
25  57  35  46  -5  19   0 0.00   0.0    0  6.9 22 330   M    M   6        27 350
26  56  41  49  -2  16   0 0.00   0.0    0 15.3 29 320   M    M   2        41 290
27  53  34  44  -7  21   0 0.00   0.0    0 14.2 31 330   M    M   0        41 330
28  55  33  44  -8  21   0 0.00   0.0    0 11.5 18 350   M    M   0        30 340
29  62  37  50  -2  15   0 0.00   0.0    0  6.6 15 140   M    M   2        22 140
30  73  39  56   4   9   0 0.00   0.0    0  8.6 23 170   M    M   4        35 210
31  72  54  63  11   2   0 0.85   0.0    0 15.1 30 180   M    M   6 1      46 190
================================================================================
SM 1945 1203      435   0 5.95   0.3      255.8           M        102
================================================================================
AV 62.7 38.8                              8.3 FASTST   M    M   3    MAX(MPH)
                                 MISC ---->    35 320               47 320
================================================================================

                                       7
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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:     MARCH
                                  YEAR:      2022
                                  LATITUDE:  35 25 N
                                  LONGITUDE: 82 33 W


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

AVERAGE MONTHLY: 50.8   TOTAL FOR MONTH:   5.95   1 = FOG OR MIST
DPTR FM NORMAL:   2.4   DPTR FM NORMAL:    2.15   2 = FOG REDUCING VISIBILITY
HIGHEST:    75 ON  3    GRTST 24HR  2.15 ON 23-23     TO 1/4 MILE OR LESS
LOWEST:     16 ON 13                               3 = THUNDER
                        SNOW, ICE PELLETS, HAIL   4 = ICE PELLETS
                        TOTAL MONTH:   0.3 INCH   5 = HAIL
                        GRTST 24HR   0.3 ON 12-12 6 = FREEZING RAIN OR DRIZZLE
                        GRTST DEPTH:  T            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:   9
MAX 90 OR ABOVE:   0    0.10 INCH OR MORE:   8
MIN 32 OR BELOW:   6    0.50 INCH OR MORE:   5
MIN  0 OR BELOW:   0    1.00 INCH OR MORE:   1

[HDD (BASE 65) ]
TOTAL THIS MO.   435    CLEAR  (SCALE 0-3)  18
DPTR FM NORMAL   -80    PTCLDY (SCALE 4-7)  10
TOTAL FM JUL 1  3251    CLOUDY (SCALE 8-10)  3
DPTR FM NORMAL  -245

[CDD (BASE 65) ]
TOTAL THIS MO.     0
DPTR FM NORMAL    -1    [PRESSURE DATA]
TOTAL FM JAN 1     0    HIGHEST SLP 30.47 ON 14
DPTR FM NORMAL    -1    LOWEST  SLP 29.47 ON 12

[REMARKS]
#FINAL-03-22#

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


                                  STATION:   ASHEVILLE NC
                                  MONTH:     APRIL
                                  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  58  43  51  -2  14   0 0.00   0.0    0 12.4 25 330   M   M  1       34 280
 2  58  31  45  -8  20   0 0.00   0.0    0  4.9 14 160   M   M  2       18 160
 3  60  41  51  -2  14   0 0.00   0.0    0 10.8 22 340   M   M  0       29 340
 4  65  34  50  -4  15   0 0.00   0.0    0  5.4 16 180   M   M  0       21 200
 5  56  38  47  -7  18   0 0.68   0.0    0  2.2 17 220   M   M  5 13    22 120
 6  78  49  64  10   1   0 0.03   0.0    0  9.1 21 200   M   M  2       27 180
 7  64  46  55   1  10   0    T   0.0    0 13.8 25 300   M   M  6 13    32 310
 8  51  34  43 -12  22   0    T   0.0    0  8.4 21 330   M   M  5       28 200
 9  45  31  38 -17  27   0 0.02     T    T  9.4 25 300   M   M  8 1     33 330
10  66  30  48  -7  17   0 0.00   0.0    0  5.6 17 330   M   M  0       22 340
11  75  37  56   0   9   0    T   0.0    0  7.1 20 210   M   M  2       28 220
12  66  51  59   3   6   0 0.08   0.0    0  4.2 17 330   M   M  6 1     20 340
13  74  53  64   8   1   0 0.00   0.0    0 10.3 25 190   M   M  1       37 190
14  70  50  60   3   5   0    T   0.0    0 10.4 26 340   M   M  3       35 340
15  69  39  54  -3  11   0 0.00   0.0    0  4.1 14 170   M   M  0       24 120
16  71  49  60   3   5   0 0.05   0.0    0  5.2 16 340   M   M  4       19 340
17  74  53  64   6   1   0 0.06   0.0    0  6.2 15 330   M   M  3 1     21 150
18  54  42  48 -10  17   0 1.01   0.0    0  6.9 24 320   M   M  8 1     32 320
19  55  36  46 -12  19   0 0.00   0.0    0 11.4 26 330   M   M  1       34 330
20  63  31  47 -11  18   0 0.00   0.0    0  6.4 15 160   M   M  0       21 170
21  68  52  60   1   5   0 0.00   0.0    0  6.9 18 180   M   M  6       24 170
22  78  45  62   3   3   0 0.00   0.0    0  3.1 13 170   M   M  0 1     18 150
23  78  49  64   5   1   0 0.00   0.0    0  5.4 17 210   M   M  0       26 190
24  78  50  64   4   1   0 0.00   0.0    0  6.0 17 170   M   M  0       22 180
25  80  48  64   4   1   0 0.00   0.0    0  4.2 17 190   M   M  1       23 210
26  73  50  62   2   3   0 0.28   0.0    0  8.4 26 340   M   M  2 1     33 340
27  65  44  55  -5  10   0 0.00   0.0    0 12.5 23 340   M   M  0       32 340
28  72  39  56  -4   9   0 0.00   0.0    0  5.2 18 310   M   M  0       23 320
29  71  45  58  -3   7   0 0.00   0.0    0  4.1 13 160   M   M  5       19 140
30  77  49  63   2   2   0 0.00   0.0    0  6.5 17 220   M   M  2       23 180
================================================================================
SM 2012 1289      292   0 2.21     T   216.5          M       73
================================================================================
AV 67.1 43.0                      7.2 FASTST  M   M  2    MAX(MPH)
                       MISC ---->  # 26 340                37 190
================================================================================
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:      2022
                              LATITUDE:  35 25 N
                              LONGITUDE: 82 33 W


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

AVERAGE MONTHLY: 55.0   TOTAL FOR MONTH:  2.21   1 = FOG OR MIST
DPTR FM NORMAL:  -2.0   DPTR FM NORMAL:   -1.96  2 = FOG REDUCING VISIBILITY
HIGHEST:   80 ON 25     GRTST 24HR  1.07 ON 17-18    TO 1/4 MILE OR LESS
LOWEST:    30 ON 10                              3 = THUNDER
                       SNOW, ICE PELLETS, HAIL  4 = ICE PELLETS
                       TOTAL MONTH:   T          5 = HAIL
                       GRTST 24HR   T   ON  9- 9 6 = FREEZING RAIN OR DRIZZLE
                       GRTST DEPTH:  T           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:   8
MAX 90 OR ABOVE:   0    0.10 INCH OR MORE:   3
MIN 32 OR BELOW:   4    0.50 INCH OR MORE:   2
MIN  0 OR BELOW:   0    1.00 INCH OR MORE:   1
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[HDD (BASE 65) ]
TOTAL THIS MO.   292    CLEAR  (SCALE 0-3)  20
DPTR FM NORMAL    38    PTCLDY (SCALE 4-7)   9
TOTAL FM JUL 1  3543    CLOUDY (SCALE 8-10)  1
DPTR FM NORMAL  -204

[CDD (BASE 65) ]
TOTAL THIS MO.     0
DPTR FM NORMAL   -14    [PRESSURE DATA]
TOTAL FM JAN 1     0    HIGHEST SLP 30.45 ON 22
DPTR FM NORMAL   -15    LOWEST  SLP 29.55 ON  5

[REMARKS]
#FINAL-04-22#

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CXUS52 KGSP 011306
CF6AVL
PRELIMINARY LOCAL CLIMATOLOGICAL DATA (WS FORM: F-6)

                                   STATION:   ASHEVILLE NC
                                   MONTH:     MAY
                                   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  76  58  67   6   0   2     T   0.0    0  8.0 16 190   M    M    4 3      24 180
 2  82  53  68   6   0   3  0.00   0.0    0  4.4 17 330   M    M    1 13     21 340
 3  84  51  68   6   0   3     T   0.0    0  7.5 23 190   M    M    0 38     30 220
 4  81  59  70   8   0   5  0.03   0.0    0  7.0 18 330   M    M    2 1      22 330
 5  80  53  67   5   0   2  0.00   0.0    0  4.7 13 180   M    M    1 8      17 150
 6  72  53  63   1   2   0  1.08   0.0    0  6.3 30 200   M    M    8 1238   39 250
 7  65  53  59  -4   6   0  0.00   0.0    0  9.8 20 340   M    M    7        28 340
 8  60  48  54  -9  11   0  0.12   0.0    0  4.1 14 330   M    M   10 1      17 330
 9  70  47  59  -4   6   0  0.00   0.0    0  3.3 10 160   M    M    5        15 170
10  81  43  62  -1   3   0  0.00   0.0    0  3.5 16 340   M    M    0        24 330
11  81  47  64   0   1   0  0.00   0.0    0  4.4 22 340   M    M    0        27 340
12  77  50  64   0   1   0  0.01   0.0    0  3.8 13 120   M    M    3        21 130
13  73  58  66   2   0   1  0.02   0.0    0  3.4 12 120   M    M    8 1      18 120
14  74  58  66   2   0   1  0.35   0.0    0  3.6 12 180   M    M    7 13     16 120
15  74  56  65   1   0   0     T   0.0    0  4.0 12 180   M    M    7 123    15 320
16  80  57  69   4   0   4     T   0.0    0  7.9 22 330   M    M    5 12     28 340
17  78  50  64  -1   1   0  0.00   0.0    0  7.1 20 330   M    M    0        26 330
18  81  49  65   0   0   0  0.00   0.0    0  6.2 20 190   M    M    0        26 200
19  89  58  74   9   0   9     T   0.0    0  4.3 20 310   M    M    0 3      25 330
20  87  59  73   7   0   8  0.00   0.0    0  6.2 22 180   M    M    0 1      29 200
21  85  61  73   7   0   8  0.03   0.0    0  3.3 17 160   M    M    2 3      22 160
22  84  63  74   8   0   9  1.39   0.0    0  5.2 20 320   M    M    4 123    27 330
23  66  63  65  -1   0   0  2.10   0.0    0  4.9 13 190   M    M   10 1      19 160
24  80  59  70   3   0   5  0.33   0.0    0  4.9 15 160   M    M    4 1      20 170
25  64  59  62  -5   3   0     T   0.0    0  7.4 13 170   M    M   10        17 170
26  68  61  65  -2   0   0  1.74   0.0    0  7.8 16 160   M    M   10 13     22 120
27  74  59  67   0   0   2  0.12   0.0    0  7.4 18 210   M    M    6 1      25 220
28  75  56  66  -2   0   1  0.00   0.0    0  7.4 18 340   M    M    3        24 350
29  78  55  67  -1   0   2  0.00   0.0    0  3.0 14 150   M    M    2 12     20 160
30  81  59  70   2   0   5  0.00   0.0    0  3.9 15 170   M    M    4        19 170
31  85  60  73   5   0   8  0.00   0.0    0  3.3 13 180   M    M    2        14 190
```

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================================================================================
SM 2385 1715      34 78  7.32  0.0    168.0         M     125
================================================================================
AV 76.9 55.3                          5.4 FASTST   M    M    4    MAX(MPH)
                           MISC ---->   30 200                    39 250
================================================================================
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:      2022
                              LATITUDE:  35 25 N
                              LONGITUDE: 82 33 W


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

AVERAGE MONTHLY: 66.1    TOTAL FOR MONTH:   7.32   1 = FOG OR MIST
DPTR FM NORMAL:   1.3    DPTR FM NORMAL:    3.19   2 = FOG REDUCING VISIBILITY
HIGHEST:     89 ON 19    GRTST 24HR  2.73 ON 22-23     TO 1/4 MILE OR LESS
LOWEST:      43 ON 10                               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:   8
MIN 32 OR BELOW:   0    0.50 INCH OR MORE:   4
MIN  0 OR BELOW:   0    1.00 INCH OR MORE:   4

[HDD (BASE 65) ]
TOTAL THIS MO.    34    CLEAR  (SCALE 0-3)  15
DPTR FM NORMAL   -50    PTCLDY (SCALE 4-7)  12
TOTAL FM JUL 1  3577    CLOUDY (SCALE 8-10)  4
DPTR FM NORMAL  -256

[CDD (BASE 65) ]
TOTAL THIS MO.    78
DPTR FM NORMAL     2    [PRESSURE DATA]
TOTAL FM JAN 1    78    HIGHEST SLP 30.31 ON 10
DPTR FM NORMAL   -13    LOWEST  SLP 29.51 ON  6

[REMARKS]
#FINAL-05-22#

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000
CXUS52 KGSP 011125
CF6AVL
PRELIMINARY LOCAL CLIMATOLOGICAL DATA (WS FORM: F-6)


                              STATION:   ASHEVILLE NC
                              MONTH:     JUNE
                              YEAR:      2022
                              LATITUDE:  35 25 N
                              LONGITUDE: 82 33 W


  TEMPERATURE IN F:       :PCPN:   SNOW:  WIND    :SUNSHINE: SKY    :PK WND
```

11

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================================================================================
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   86   59   73    4   0    8    T    0.0    0  3.8 15 180    M    M   3 3       20 340
 2   83   64   74    5   0    9  0.58   0.0    0  5.2 15 330    M    M   2 13      22 290
 3   74   63   69    0   0    4    T    0.0    0  8.0 20 330    M    M   5         24 330
 4   76   56   66   -3   0    1  0.00   0.0    0  3.8 12  10    M    M   3         16 150
 5   75   52   64   -6   1    0  0.00   0.0    0  2.1 10 150    M    M   3         17 160
 6   77   53   65   -5   0    0  0.00   0.0    0  4.8 14 150    M    M   4         20 160
 7   77   64   71    1   0    6    T    0.0    0  6.4 17 180    M    M   5         21 180
 8   82   65   74    4   0    9  0.31   0.0    0  4.2 14 190    M    M   5 138     17 180
 9   81   61   71    1   0    6  0.01   0.0    0  8.0 20 340    M    M   4 1       26 350
10   77   57   67   -4   0    2  0.00   0.0    0  4.9 10 210    M    M   2         15 210
11   80   58   69   -2   0    4  0.00   0.0    0  3.1 10 180    M    M   5         13 170
12   87   59   73    2   0    8  0.00   0.0    0  2.4 14 330    M    M   1 3       17 340
13   92   64   78    7   0   13  0.00   0.0    0  3.6 14 320    M    M   2         17 320
14   85   69   77    5   0   12  0.05   0.0    0  4.5 15 330    M    M   2 13      17 310
15   91   71   81    9   0   16    T    0.0    0  4.8 16 330    M    M   1 3       22 320
16   90   68   79    7   0   14  0.38   0.0    0  4.7 20 220    M    M   2 13      30 250
17   90   65   78    6   0   13    T    0.0    0  8.0 28 350    M    M   1 3       41 340
18   83   64   74    2   0    9  0.00   0.0    0 13.6 23 340    M    M   0         36 360
19   81   56   69   -4   0    4  0.00   0.0    0  8.6 20 330    M    M   0         25 320
20   84   49   67   -6   0    2  0.00   0.0    0  3.7 16 340    M    M   1         21 310
21   89   55   72   -1   0    7  0.00   0.0    0  6.8 24 340    M    M   0         31 330
22   91   56   74    1   0    9  0.00   0.0    0  7.2 22 330    M    M   0         30 330
23   89   67   78    5   0   13  0.00   0.0    0  8.0 20 330    M    M   1         27 340
24   82   65   74    0   0    9  0.00   0.0    0  4.2 14 160    M    M   7         19 160
25   83   68   76    2   0   11    T    0.0    0  6.6 15 190    M    M   5         20 220
26   80   64   72   -2   0    7    T    0.0    0  2.1 14 330    M    M   5         17 330
27   83   68   76    2   0   11  0.07   0.0    0  8.3 18 330    M    M   3 18      24 330
28   78   63   71   -3   0    6  0.00   0.0    0  4.3 13 160    M    M   5         18 170
29   83   66   75    1   0   10  0.26   0.0    0  2.5 14 170    M    M   6 13      17 220
30   83   65   74    0   0    9  0.00   0.0    0  3.6 13 180    M    M   5 12      18 170
================================================================================
SM 2492 1854         1  232  1.66   0.0      161.8            M        88
================================================================================
AV 83.1 61.8                             5.4 FASTST   M    M   3    MAX(MPH)
                              MISC ---->     28 350                  41 340
================================================================================
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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:      JUNE
                                    YEAR:       2022
                                    LATITUDE:   35 25 N
                                    LONGITUDE:  82 33 W
```

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

AVERAGE MONTHLY: 72.4   TOTAL FOR MONTH: 1.66   1 = FOG OR MIST
DPTR FM NORMAL: 0.6   DPTR FM NORMAL: -3.13   2 = FOG REDUCING VISIBILITY
HIGHEST: 92 ON 13   GRTST 24HR 0.58 ON 1- 2   TO 1/4 MILE OR LESS
LOWEST: 49 ON 20   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

                                      12

```
[NO. OF DAYS WITH]      [WEATHER - DAYS WITH]      9 = BLOWING SNOW
                                                   X = TORNADO

MAX 32 OR BELOW:   0   0.01 INCH OR MORE:   7
MAX 90 OR ABOVE:   5   0.10 INCH OR MORE:   4
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.     1   CLEAR  (SCALE 0-3)  16
DPTR FM NORMAL    -7   PTCLDY (SCALE 4-7)  14
TOTAL FM JUL 1  3578   CLOUDY (SCALE 8-10)  0
DPTR FM NORMAL  -260

[CDD (BASE 65) ]
TOTAL THIS MO.   232
DPTR FM NORMAL    20   [PRESSURE DATA]
TOTAL FM JAN 1   310   HIGHEST SLP 30.29 ON 20
DPTR FM NORMAL     7   LOWEST  SLP 29.77 ON  2

[REMARKS]
#FINAL-06-22#

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