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***Lake Thunderbird TMDL Monitoring Plan Implementation:  
Sample Year (SY) 2021- July Report***

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**SY2021 Monthly Report**

*Lake Thunderbird TMDL Monitoring Plan Implementation:*

*July 2021 Monitoring Report*

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Oklahoma Water Resources Board  
Water Quality Programs Division  
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## SUMMARY OF JULY WATER QUALITY SAMPLING

Sampling for July 2021 occurred on the sixth and was considered a base flow collection. Water samples were collected at all ten locations and discharge measurements were collected at seven locations. Mesonet data shows no precipitation on the sixth, in the 72 hours prior to sampling, or in the 72 hours after the sampling event. The total rainfall amount in Norman for the month of July was 2.70 inches. All water level gauges were operational for the month, except for LRC-1 due to equipment malfunction and JB-1, which was removed for upcoming road construction. The gauge at LT-1 was removed in 2018 as a result of equipment malfunction. The equipment has not been replaced due to intermittent streamflow and dry conditions. Furthermore, this station is being reviewed for a possible location change.

## RESULTS

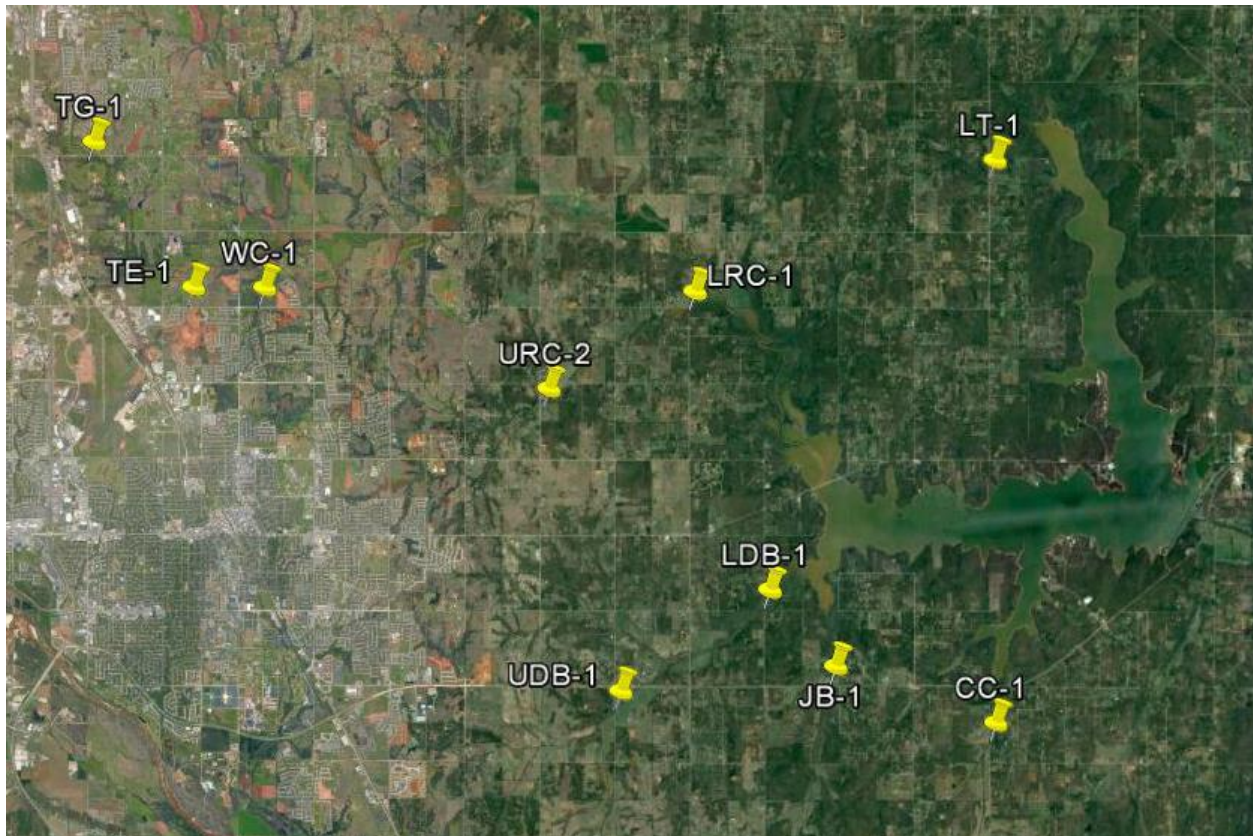


Figure 1 Monitoring Station Map

| Monitoring Location ID | Monitoring Location Name | Date     | Time  | Field Crew | Water Temperature (°C) | Dissolved Oxygen (DO) (mg/l) | pH   | Specific Conductance (mS/cm) | Turbidity (NTU) | Notes  |
|------------------------|--------------------------|----------|-------|------------|------------------------|------------------------------|------|------------------------------|-----------------|--|
| CC-1                   | Clear Creek              | 7/6/2021 | 10:25 | SD         | 21.22                  | 8.03                         | 7.82 | 715                          | 11              | Used RP3   |
| JB-1                   | Jim Blue Creek           | 7/6/2021 | 11:05 | SD         | 21.13                  | 7.47                         | 7.72 | 721                          | 9               | Neither RP over water, orifice buried in a few inches of sand, visible bubbles when purged at arrival, used arrival stage for flow |
| LDB-1                  | Lower Dave Blue Creek    | 7/6/2021 | 11:55 | SD         | 27.52                  | 5.79                         | 7.98 | 396                          | 10              | Much higher stage than normal but not much visible flow, not able to connect to dcp, ants clogged rain hat                         |
| LRC-1                  | Lower Rock Creek         | 7/6/2021 | 13:30 | SD         | 22.56                  | 7.11                         | 7.76 | 702                          | 12              | Higher stage than normal but base flow conditions, orifice not reading correct-probably buried under riprap from construction      |
| LT-1                   | Lake Laterals            | 7/6/2021 | 12:45 | SD         | 24.30                  | 4.21                         | 7.36 | 450                          | 21              | No visual flow on downstream, minimal flow on upstream, aquatic veg common on upstream   |
| TE-1                   | Little River Tributary   | 7/6/2021 | 16:35 | SD         | 29.90                  | 9.51                         | 7.79 | 766                          | 7               | Small beaver dam upstream, not much visible flow   |
| TG-1                   | Little River Tributary   | 7/6/2021 | 17:10 | SD         | 25.84                  | 8.95                         | 7.71 | 1075                         | 5               | Downstream LEW bank starting to collapse   |
| UDB-1                  | Upper Dave Blue Creek    | 7/6/2021 | 8:55  | SD         | 20.11                  | 7.85                         | 7.75 | 936                          | 9               | Above normal flow but still base conditions, hay still on edges of bridge  |
| URC-2                  | Upper Rock Creek         | 7/6/2021 | 14:55 | SD         | 23.19                  | 7.29                         | 7.71 | 737                          | 19              | Higher stage than normal but base flow conditions  |
| WC-1                   | Woodcrest Creek          | 7/6/2021 | 15:45 | SD         | 23.75                  | 7.88                         | 7.63 | 1051                         | 13              |  |

Table 1 Field Data Form

| Monitoring Location ID | Monitoring Location Name | Nitrate and Nitrite (mg/l) | Kjeldahl Nitrogen (mg/l) | Phosphorus (mg/l) | Total Suspended Solids (mg/l) |
|------------------------|--------------------------|----------------------------|--------------------------|-------------------|-------------------------------|
| CC-1                   | Clear Creek              | 0.36                       | 0.25                     | 0.050             | <5.0                          |
| JB-1                   | Jim Blue Creek           | 0.11                       | 0.44                     | 0.050             | <5.0                          |
| LDB-1                  | Lower Dave Blue Creek    | <0.05                      | 0.93                     | 0.092             | <5.0                          |
| LRC-1                  | Lower Rock Creek         | 0.22                       | 0.42                     | 0.055             | <5.0                          |
| LT-1                   | Lake Laterals            | 0.08                       | 0.86                     | 0.073             | 8.0                           |
| TE-1                   | Little River Tributary   | <0.05                      | 0.96                     | 0.117             | <5.0                          |
| TG-1                   | Little River Tributary   | 0.40                       | 0.51                     | 0.091             | 6.0                           |
| UDB-1                  | Upper Dave Blue Creek    | 0.21                       | 0.39                     | 0.040             | 6.0                           |
| URC-2                  | Upper Rock Creek         | 0.18                       | 0.51                     | 0.060             | 18.0                          |
| WC-1                   | Woodcrest Creek          | 0.46                       | 0.51                     | 0.129             | <5.0                          |

Table 2 Laboratory Analysis Summary

| Monitoring Location Name | Nitrate and Nitrite (mg/l) | Kjeldahl Nitrogen (mg/l) | Phosphorus (mg/l) | Total Suspended Solids (mg/l) |
|--------------------------|----------------------------|--------------------------|-------------------|-------------------------------|
| Field Blank              | <0.05                      | <0.10                    | <0.010            | <5.0                          |
| Duplicate                | 0.37                       | 0.22                     | 0.046             | 5.0                           |
| Duplicate RPD            | 2.74%                      | 12.77%                   | 8.33%             | 66.67%*                       |

Table 3 QA/QC Data Where the Asterisk Denotes RPD 4

Quality assurance/quality control (QA/QC) of the data includes a field blank and duplicate sample from each collection event and is qualified by the OWRB. Relative Percent Difference (RPD) of the duplicate sample can be categorized into four levels, where Level 1 likely has no QA issues and Level 4 has major QA issues, and should be used with caution.

| Monitoring Location ID | Monitoring Location Name | Discharge (cfs) | Stream Stage (ft) |
|------------------------|--------------------------|-----------------|-------------------|
| CC-1                   | Clear Creek              | 2.32            | 20.73             |
| JB-1                   | Jim Blue Creek           | 2.82            | 16.45             |
| LDB-1                  | Lower Dave Blue Creek    | 50.00           | 21.35             |
| LRC-1                  | Lower Rock Creek         | 10.00           | 7.70              |
| LT-1                   | Lake Laterals            | 0.05            | 4.31              |
| TE-1                   | Little River Tributary   | 0.20            | 11.01             |
| TG-1                   | Little River Tributary   | 3.85            | 9.15              |
| UDB-1                  | Upper Dave Blue Creek    | 6.34            | 17.66             |
| URC-2                  | Upper Rock Creek         | 3.16            | 11.54             |
| WC-1                   | Woodcrest Creek          | 0.91            | 7.58              |

Table 4 Station Discharge Summary

All rated stream discharges are provisional and subject to change.

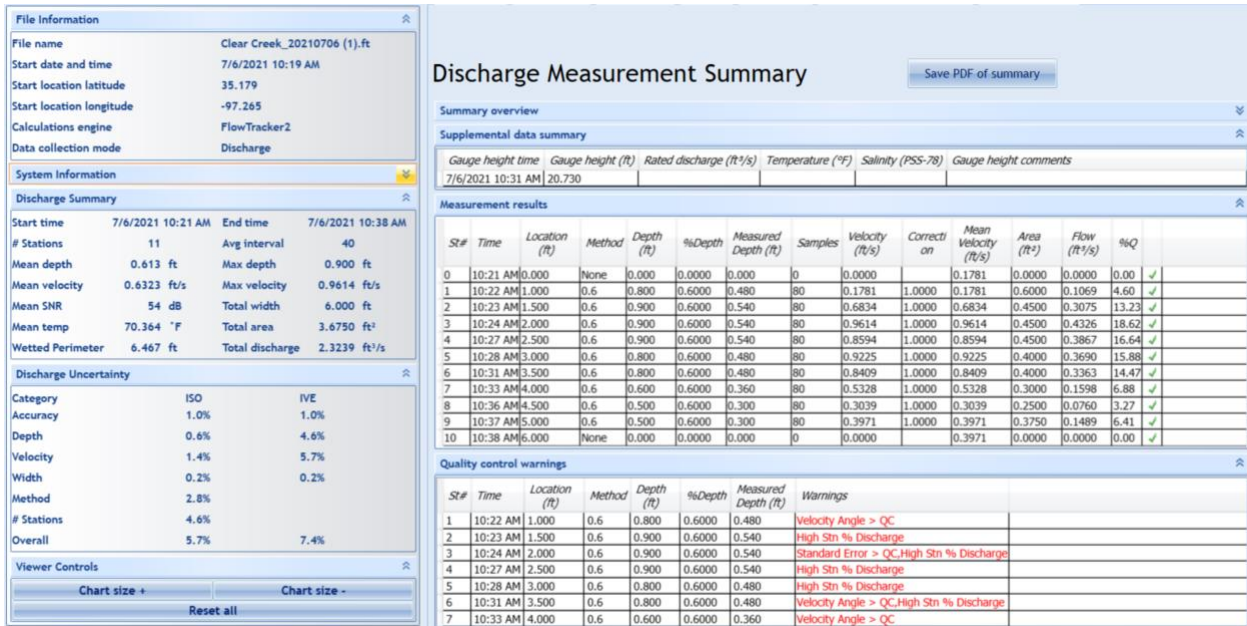


Figure 2 Discharge Measurement Summary CC-1

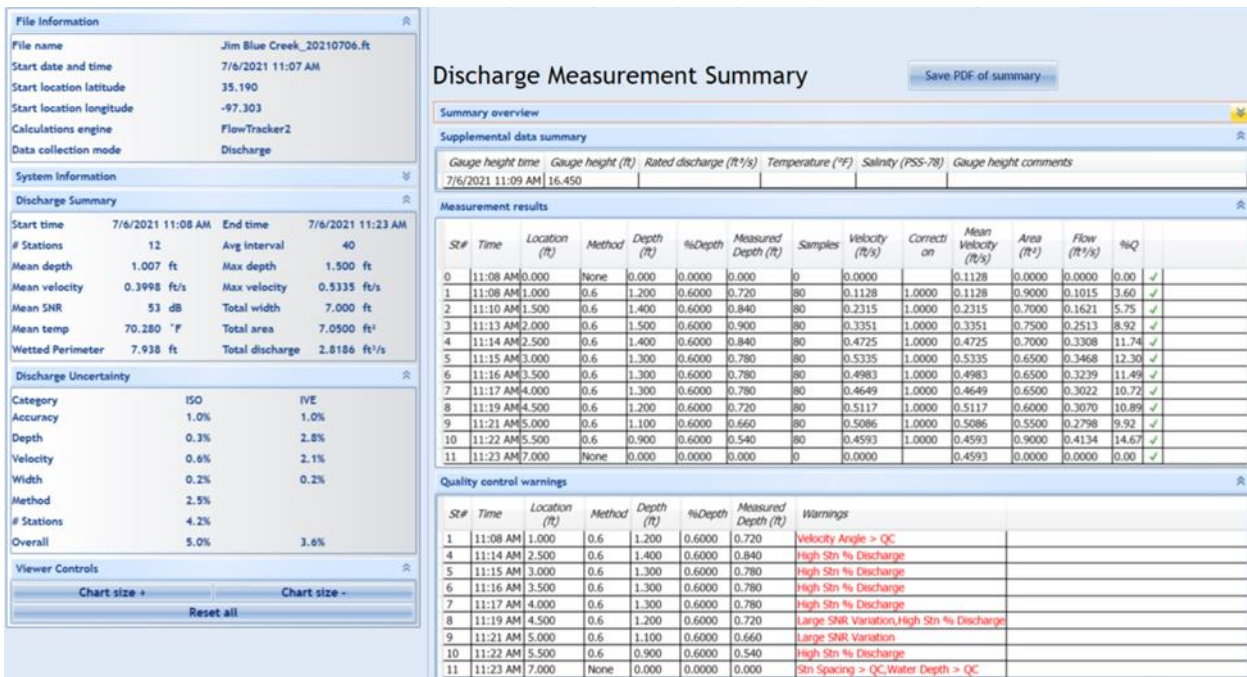


Figure 3 Discharge Measurement Summary JB-1

**File Information**

File name: Little River Tributary E\_20210706.ft  
 Start date and time: 7/6/2021 4:27 PM  
 Start location latitude  
 Start location longitude  
 Calculations engine: FlowTracker2  
 Data collection mode: Discharge

**System Information**

**Discharge Summary**

Start time: 7/6/2021 4:29 PM End time: 7/6/2021 4:43 PM  
 # Stations: 11 Avg interval: 40  
 Mean depth: 0.727 ft Max depth: 1.300 ft  
 Mean velocity: 0.0248 ft/s Max velocity: 0.0771 ft/s  
 Mean SNR: 54 dB Total width: 11.000 ft  
 Mean temp: 86.290 °F Total area: 8.0000 ft²  
 Wetted Perimeter: 11.412 ft Total discharge: 0.1984 ft³/s

**Discharge Uncertainty**

|            |      |       |
|------------|------|-------|
| Category   | ISO  | IVE   |
| Accuracy   | 1.0% | 1.0%  |
| Depth      | 0.5% | 8.6%  |
| Velocity   | 2.8% | 36.4% |
| Width      | 0.3% | 0.3%  |
| Method     | 3.8% |       |
| # Stations | 4.6% |       |
| Overall    | 6.7% | 37.5% |

**Viewer Controls**

Chart size + Chart size -  
 Reset all

## Discharge Measurement Summary

Save PDF of summary

### Summary overview

#### Measurement results

| St# | Time    | Location (ft) | Method | Depth (ft) | %Depth | Measured Depth (ft) | Samples | Velocity (ft/s) | Correction | Mean Velocity (ft/s) | Area (ft²) | Flow (ft³/s) | %Q    |
|-----|---------|---------------|--------|------------|--------|---------------------|---------|-----------------|------------|----------------------|------------|--------------|-------|
| 0   | 4:29 PM | 0.000         | None   | 0.000      | 0.0000 | 0.000               | 0       | 0.0000          |            | -0.0409              | 0.0000     | 0.0000       | 0.00  |
| 1   | 4:29 PM | 1.000         | 0.6    | 0.300      | 0.6000 | 0.180               | 80      | -0.0409         | 1.0000     | -0.0409              | 0.3000     | -0.0123      | -6.18 |
| 2   | 4:31 PM | 2.000         | 0.6    | 0.300      | 0.6000 | 0.180               | 80      | 0.0771          | 1.0000     | 0.0771               | 0.3000     | 0.0231       | 11.66 |
| 3   | 4:33 PM | 3.000         | 0.6    | 0.900      | 0.6000 | 0.540               | 80      | 0.0591          | 1.0000     | 0.0591               | 0.9000     | 0.0532       | 26.80 |
| 4   | 4:34 PM | 4.000         | 0.6    | 1.100      | 0.6000 | 0.660               | 80      | 0.0614          | 1.0000     | 0.0614               | 1.1000     | 0.0675       | 34.04 |
| 5   | 4:36 PM | 5.000         | 0.6    | 1.200      | 0.6000 | 0.720               | 80      | 0.0343          | 1.0000     | 0.0343               | 1.2000     | 0.0412       | 20.74 |
| 6   | 4:37 PM | 6.000         | 0.6    | 1.300      | 0.6000 | 0.780               | 80      | 0.0057          | 1.0000     | 0.0057               | 1.3000     | 0.0074       | 3.74  |
| 7   | 4:39 PM | 7.000         | 0.6    | 1.100      | 0.6000 | 0.660               | 80      | -0.0029         | 1.0000     | -0.0029              | 1.1000     | -0.0032      | -1.63 |
| 8   | 4:40 PM | 8.000         | 0.6    | 0.900      | 0.6000 | 0.540               | 80      | 0.0212          | 1.0000     | 0.0212               | 0.9000     | 0.0190       | 9.60  |
| 9   | 4:42 PM | 9.000         | 0.6    | 0.600      | 0.6000 | 0.360               | 80      | 0.0027          | 1.0000     | 0.0027               | 0.9000     | 0.0024       | 1.23  |
| 10  | 4:43 PM | 11.000        | None   | 0.000      | 0.0000 | 0.000               | 0       | 0.0000          |            | 0.0027               | 0.0000     | 0.0000       | 0.00  |

#### Quality control warnings

| St# | Time    | Location (ft) | Method | Depth (ft) | %Depth | Measured Depth (ft) | Warnings   |
|-----|---------|---------------|--------|------------|--------|---------------------|--|
| 2   | 4:31 PM | 2.000         | 0.6    | 0.300      | 0.6000 | 0.180               | SNR Threshold Variation, High Stn % Discharge                      |
| 3   | 4:33 PM | 3.000         | 0.6    | 0.900      | 0.6000 | 0.540               | SNR Threshold Variation, High Stn % Discharge                      |
| 4   | 4:34 PM | 4.000         | 0.6    | 1.100      | 0.6000 | 0.660               | Large SNR Variation, SNR Threshold Variation, High Stn % Discharge |
| 5   | 4:36 PM | 5.000         | 0.6    | 1.200      | 0.6000 | 0.720               | High Stn % Discharge   |
| 9   | 4:42 PM | 9.000         | 0.6    | 0.600      | 0.6000 | 0.360               | SNR Threshold Variation  |

Figure 4 Discharge Measurement Summary TE-1

**File Information**

File name: Little River\_20210706.ft  
 Start date and time: 7/6/2021 5:10 PM  
 Start location latitude  
 Start location longitude  
 Calculations engine: FlowTracker2  
 Data collection mode: Discharge

**System Information**

**Discharge Summary**

Start time: 7/6/2021 5:11 PM End time: 7/6/2021 5:36 PM  
 # Stations: 19 Avg interval: 40  
 Mean depth: 0.837 ft Max depth: 1.100 ft  
 Mean velocity: 0.2421 ft/s Max velocity: 0.3696 ft/s  
 Mean SNR: 32 dB Total width: 19.000 ft  
 Mean temp: 78.664 °F Total area: 15.9000 ft²  
 Wetted Perimeter: 19.502 ft Total discharge: 3.8499 ft³/s

**Discharge Uncertainty**

|            |      |      |
|------------|------|------|
| Category   | ISO  | IVE  |
| Accuracy   | 1.0% | 1.0% |
| Depth      | 0.3% | 2.7% |
| Velocity   | 0.3% | 1.9% |
| Width      | 0.1% | 0.1% |
| Method     | 1.9% |      |
| # Stations | 2.6% |      |
| Overall    | 3.5% | 3.5% |

**Viewer Controls**

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 Reset all

## Discharge Measurement Summary

Save PDF of summary

### Summary overview

#### Measurement results

| St# | Time    | Location (ft) | Method | Depth (ft) | %Depth | Measured Depth (ft) | Samples | Velocity (ft/s) | Correction | Mean Velocity (ft/s) | Area (ft²) | Flow (ft³/s) | %Q   |
|-----|---------|---------------|--------|------------|--------|---------------------|---------|-----------------|------------|----------------------|------------|--------------|------|
| 0   | 5:11 PM | 0.000         | None   | 0.000      | 0.0000 | 0.000               | 0       | 0.0000          |            | 0.1037               | 0.0000     | 0.0000       | 0.00 |
| 1   | 5:12 PM | 1.000         | 0.6    | 0.700      | 0.6000 | 0.420               | 80      | 0.1037          | 1.0000     | 0.1037               | 0.7000     | 0.0726       | 1.89 |
| 2   | 5:14 PM | 2.000         | 0.6    | 0.800      | 0.6000 | 0.480               | 80      | 0.1259          | 1.0000     | 0.1259               | 0.8000     | 0.1007       | 2.62 |
| 3   | 5:16 PM | 3.000         | 0.6    | 0.800      | 0.6000 | 0.480               | 80      | 0.1618          | 1.0000     | 0.1618               | 0.8000     | 0.1294       | 3.36 |
| 4   | 5:17 PM | 4.000         | 0.6    | 0.800      | 0.6000 | 0.480               | 80      | 0.1823          | 1.0000     | 0.1823               | 0.8000     | 0.1458       | 3.79 |
| 5   | 5:18 PM | 5.000         | 0.6    | 0.900      | 0.6000 | 0.540               | 80      | 0.2319          | 1.0000     | 0.2319               | 0.9000     | 0.2087       | 5.42 |
| 6   | 5:19 PM | 6.000         | 0.6    | 0.900      | 0.6000 | 0.540               | 80      | 0.2379          | 1.0000     | 0.2379               | 0.9000     | 0.2141       | 5.56 |
| 7   | 5:20 PM | 7.000         | 0.6    | 0.800      | 0.6000 | 0.480               | 80      | 0.2213          | 1.0000     | 0.2213               | 0.8000     | 0.1771       | 4.60 |
| 8   | 5:22 PM | 8.000         | 0.6    | 0.900      | 0.6000 | 0.540               | 80      | 0.2059          | 1.0000     | 0.2059               | 0.9000     | 0.1853       | 4.81 |
| 9   | 5:24 PM | 9.000         | 0.6    | 1.000      | 0.6000 | 0.600               | 80      | 0.2716          | 1.0000     | 0.2716               | 1.0000     | 0.2716       | 7.05 |
| 10  | 5:25 PM | 10.000        | 0.6    | 1.000      | 0.6000 | 0.600               | 80      | 0.3191          | 1.0000     | 0.3191               | 1.0000     | 0.3191       | 8.29 |
| 11  | 5:26 PM | 11.000        | 0.6    | 0.900      | 0.6000 | 0.540               | 80      | 0.3096          | 1.0000     | 0.3096               | 0.9000     | 0.2787       | 7.24 |
| 12  | 5:28 PM | 12.000        | 0.6    | 0.900      | 0.6000 | 0.540               | 80      | 0.3696          | 1.0000     | 0.3696               | 0.9000     | 0.3326       | 8.64 |
| 13  | 5:29 PM | 13.000        | 0.6    | 0.900      | 0.6000 | 0.540               | 80      | 0.3478          | 1.0000     | 0.3478               | 0.9000     | 0.3130       | 8.13 |
| 14  | 5:30 PM | 14.000        | 0.6    | 1.000      | 0.6000 | 0.600               | 80      | 0.3186          | 1.0000     | 0.3186               | 1.0000     | 0.3186       | 8.28 |
| 15  | 5:31 PM | 15.000        | 0.6    | 1.100      | 0.6000 | 0.660               | 80      | 0.2443          | 1.0000     | 0.2443               | 1.1000     | 0.2688       | 6.98 |
| 16  | 5:33 PM | 16.000        | 0.6    | 1.000      | 0.6000 | 0.600               | 80      | 0.2148          | 1.0000     | 0.2148               | 1.0000     | 0.2148       | 5.58 |
| 17  | 5:34 PM | 17.000        | 0.6    | 1.000      | 0.6000 | 0.600               | 80      | 0.1993          | 1.0000     | 0.1993               | 1.5000     | 0.2990       | 7.77 |
| 18  | 5:36 PM | 19.000        | None   | 0.000      | 0.0000 | 0.000               | 0       | 0.0000          |            | 0.1993               | 0.0000     | 0.0000       | 0.00 |

#### Quality control warnings

| St# | Time    | Location (ft) | Method | Depth (ft) | %Depth | Measured Depth (ft) | Warnings         |
|-----|---------|---------------|--------|------------|--------|---------------------|------------------|
| 18  | 5:36 PM | 19.000        | None   | 0.000      | 0.0000 | 0.000               | Water Depth > QC |

Figure 5 Discharge Measurement Summary TG-1



**File Information**

File name: Upper Dave Blue Creek\_20210706.ft  
 Start date and time: 7/6/2021 8:49 AM  
 Start location latitude:  
 Start location longitude:  
 Calculations engine: FlowTracker2  
 Data collection mode: Discharge

**System Information**

**Discharge Summary**

Start time: 7/6/2021 8:51 AM End time: 7/6/2021 9:22 AM  
 # Stations: 17 Avg interval: 40  
 Mean depth: 1.133 ft Max depth: 2.000 ft  
 Mean velocity: 0.3105 ft/s Max velocity: 1.0901 ft/s  
 Mean SNR: 43 dB Total width: 18.000 ft  
 Mean temp: 68.399 °F Total area: 20.4000 ft<sup>2</sup>  
 Wetted Perimeter: 18.702 ft Total discharge: 6.3352 ft<sup>3</sup>/s

**Discharge Uncertainty**

|            |      |      |
|------------|------|------|
| Category   | ISO  | IVE  |
| Accuracy   | 1.0% | 1.0% |
| Depth      | 0.2% | 3.1% |
| Velocity   | 1.3% | 8.6% |
| Width      | 0.2% | 0.2% |
| Method     | 3.2% |      |
| # Stations | 3.0% |      |
| Overall    | 4.6% | 9.2% |

**Viewer Controls**

Chart size + Chart size -  
 Reset all

## Discharge Measurement Summary

Save PDF of summary

Summary overview

Supplemental data summary

| Gauge height time | Gauge height (ft) | Rated discharge (ft <sup>3</sup> /s) | Temperature (°F) | Salinity (PSS-78) | Gauge height comments |
|-------------------|-------------------|--------------------------------------|------------------|-------------------|-----------------------|
| 7/6/2021 8:56 AM  | 17.660            |                                      |                  |                   |                       |

Measurement results

| St# | Time    | Location (ft) | Method  | Depth (ft) | %Depth | Measured Depth (ft) | Samples | Velocity (ft/s) | Correction | Mean Velocity (ft/s) | Area (ft <sup>2</sup> ) | Flow (ft <sup>3</sup> /s) | %Q    |
|-----|---------|---------------|---------|------------|--------|---------------------|---------|-----------------|------------|----------------------|-------------------------|---------------------------|-------|
| 0   | 8:51 AM | 0.000         | None    | 0.000      | 0.0000 | 0.000               | 0       | 0.0000          |            | -0.1438              | 0.0000                  | 0.000                     | 0.00  |
| 1   | 8:52 AM | 2.000         | 0.6     | 0.700      | 0.6000 | 0.420               | 80      | -0.1438         | 1.0000     | -0.1438              | 1.0500                  | -0.1510                   | -2.38 |
| 2   | 8:53 AM | 3.000         | 0.6     | 0.900      | 0.6000 | 0.540               | 80      | -0.1674         | 1.0000     | -0.1674              | 0.9000                  | -0.1506                   | -2.38 |
| 3   | 8:56 AM | 4.000         | 0.6     | 1.200      | 0.6000 | 0.720               | 80      | -0.0529         | 1.0000     | -0.0529              | 1.2000                  | -0.0635                   | -1.00 |
| 4   | 8:58 AM | 5.000         | 0.6     | 1.600      | 0.6000 | 0.960               | 80      | -0.0133         | 1.0000     | -0.0133              | 1.6000                  | -0.0213                   | -0.34 |
| 5   | 9:03 AM | 6.000         | 0.6     | 1.800      | 0.6000 | 1.080               | 80      | 0.1715          | 1.0000     | 0.1715               | 1.8000                  | 0.3086                    | 4.87  |
| 6   | 9:05 AM | 7.000         | 0.2/0.8 | 2.000      | 0.2000 | 0.400               | 80      | 0.4516          | 1.0000     | 0.3529               | 2.0000                  | 0.7057                    | 11.14 |
| 6   | 9:05 AM | 7.000         | 0.2/0.8 | 2.000      | 0.8000 | 1.600               | 80      | 0.2541          | 1.0000     | 0.3529               | 2.0000                  | 0.7057                    | 11.14 |
| 7   | 9:08 AM | 8.000         | 0.6     | 1.900      | 0.6000 | 1.140               | 80      | 0.9084          | 1.0000     | 0.9084               | 1.9000                  | 1.7259                    | 27.24 |
| 8   | 9:09 AM | 9.000         | 0.6     | 1.500      | 0.6000 | 0.900               | 80      | 1.0901          | 1.0000     | 1.0901               | 1.5000                  | 1.6351                    | 25.81 |
| 9   | 9:12 AM | 10.000        | 0.6     | 1.200      | 0.6000 | 0.720               | 80      | 0.6950          | 1.0000     | 0.6950               | 1.2000                  | 0.8340                    | 13.16 |
| 10  | 9:13 AM | 11.000        | 0.6     | 1.400      | 0.6000 | 0.840               | 80      | 0.4253          | 1.0000     | 0.4253               | 1.4000                  | 0.5954                    | 9.40  |
| 11  | 9:15 AM | 12.000        | 0.6     | 1.200      | 0.6000 | 0.720               | 80      | 0.2446          | 1.0000     | 0.2446               | 1.2000                  | 0.2936                    | 4.63  |
| 12  | 9:17 AM | 13.000        | 0.6     | 1.200      | 0.6000 | 0.720               | 80      | 0.1625          | 1.0000     | 0.1625               | 1.2000                  | 0.1930                    | 3.08  |
| 13  | 9:18 AM | 14.000        | 0.6     | 1.200      | 0.6000 | 0.720               | 80      | 0.2196          | 1.0000     | 0.2196               | 1.2000                  | 0.2636                    | 4.16  |
| 14  | 9:20 AM | 15.000        | 0.6     | 0.900      | 0.6000 | 0.540               | 80      | 0.1236          | 1.0000     | 0.1236               | 0.9000                  | 0.1113                    | 1.76  |
| 15  | 9:21 AM | 16.000        | 0.6     | 0.900      | 0.6000 | 0.540               | 80      | 0.0396          | 1.0000     | 0.0396               | 1.3500                  | 0.0534                    | 0.84  |
| 16  | 9:22 AM | 18.000        | None    | 0.000      | 0.0000 | 0.000               | 0       | 0.0000          |            | 0.0396               | 0.0000                  | 0.0000                    | 0.00  |

Quality control warnings

| St# | Time    | Location (ft) | Method  | Depth (ft) | %Depth | Measured Depth (ft) | Warnings                                     |
|-----|---------|---------------|---------|------------|--------|---------------------|--|
| 1   | 8:52 AM | 2.000         | 0.6     | 0.700      | 0.6000 | 0.420               | SNR Threshold Variation, Velocity Angle > QC |
| 2   | 8:53 AM | 3.000         | 0.6     | 0.900      | 0.6000 | 0.540               | Velocity Angle > QC                          |
| 6   | 9:05 AM | 7.000         | 0.2/0.8 | 2.000      | 0.2000 | 0.400               | High Stn % Discharge                         |
| 6   | 9:05 AM | 7.000         | 0.2/0.8 | 2.000      | 0.8000 | 1.600               | High Stn % Discharge                         |
| 7   | 9:08 AM | 8.000         | 0.6     | 1.900      | 0.6000 | 1.140               | High Stn % Discharge                         |
| 8   | 9:09 AM | 9.000         | 0.6     | 1.500      | 0.6000 | 0.900               | High Stn % Discharge                         |
| 9   | 9:12 AM | 10.000        | 0.6     | 1.200      | 0.6000 | 0.720               | High Stn % Discharge                         |
| 16  | 9:22 AM | 18.000        | None    | 0.000      | 0.0000 | 0.000               | Water Depth > QC                             |

Figure 6 Discharge Measurement Summary UDB-1

**File Information**

File name: Upper Rock Creek\_20210706.ft  
 Start date and time: 7/6/2021 2:41 PM  
 Start location latitude: 35.241  
 Start location longitude: -97.369  
 Calculations engine: FlowTracker2  
 Data collection mode: Discharge

**System Information**

**Discharge Summary**

Start time: 7/6/2021 2:43 PM End time: 7/6/2021 3:05 PM  
 # Stations: 16 Avg interval: 40  
 Mean depth: 1.425 ft Max depth: 1.900 ft  
 Mean velocity: 0.2769 ft/s Max velocity: 0.3562 ft/s  
 Mean SNR: 46 dB Total width: 8.000 ft  
 Mean temp: 73.877 °F Total area: 11.4000 ft<sup>2</sup>  
 Wetted Perimeter: 9.646 ft Total discharge: 3.1562 ft<sup>3</sup>/s

**Discharge Uncertainty**

|            |      |      |
|------------|------|------|
| Category   | ISO  | IVE  |
| Accuracy   | 1.0% | 1.0% |
| Depth      | 0.2% | 1.8% |
| Velocity   | 0.4% | 3.0% |
| Width      | 0.1% | 0.1% |
| Method     | 2.1% |      |
| # Stations | 3.1% |      |
| Overall    | 3.9% | 3.7% |

**Viewer Controls**

Chart size + Chart size -  
 Reset all

## Discharge Measurement Summary

Save PDF of summary

Summary overview

Supplemental data summary

| Gauge height time | Gauge height (ft) | Rated discharge (ft <sup>3</sup> /s) | Temperature (°F) | Salinity (PSS-78) | Gauge height comments |
|-------------------|-------------------|--------------------------------------|------------------|-------------------|-----------------------|
| 7/6/2021 2:43 PM  | 11.540            |                                      |                  |                   |                       |

Measurement results

| St# | Time    | Location (ft) | Method | Depth (ft) | %Depth | Measured Depth (ft) | Samples | Velocity (ft/s) | Correction | Mean Velocity (ft/s) | Area (ft <sup>2</sup> ) | Flow (ft <sup>3</sup> /s) | %Q    |
|-----|---------|---------------|--------|------------|--------|---------------------|---------|-----------------|------------|----------------------|-------------------------|---------------------------|-------|
| 0   | 2:43 PM | 0.000         | None   | 0.000      | 0.0000 | 0.000               | 0       | 0.0000          |            | 0.0456               | 0.0000                  | 0.000                     | 0.00  |
| 1   | 2:43 PM | 1.000         | 0.6    | 1.200      | 0.6000 | 0.720               | 80      | 0.0456          | 1.0000     | 0.0456               | 0.9000                  | 0.0411                    | 1.30  |
| 2   | 2:45 PM | 1.500         | 0.6    | 1.400      | 0.6000 | 0.840               | 80      | 0.2432          | 1.0000     | 0.2432               | 0.7000                  | 0.1703                    | 5.39  |
| 3   | 2:46 PM | 2.000         | 0.6    | 1.600      | 0.6000 | 0.960               | 80      | 0.2406          | 1.0000     | 0.2406               | 0.8000                  | 0.1925                    | 6.10  |
| 4   | 2:47 PM | 2.500         | 0.6    | 1.600      | 0.6000 | 0.960               | 80      | 0.2100          | 1.0000     | 0.2100               | 0.8000                  | 0.1680                    | 5.32  |
| 5   | 2:49 PM | 3.000         | 0.6    | 1.600      | 0.6000 | 0.960               | 80      | 0.2636          | 1.0000     | 0.2636               | 0.8000                  | 0.2109                    | 6.68  |
| 6   | 2:51 PM | 3.500         | 0.6    | 1.700      | 0.6000 | 1.020               | 80      | 0.3027          | 1.0000     | 0.3027               | 0.8500                  | 0.2573                    | 8.15  |
| 7   | 2:53 PM | 4.000         | 0.6    | 1.800      | 0.6000 | 1.080               | 80      | 0.3013          | 1.0000     | 0.3013               | 0.9000                  | 0.2712                    | 8.59  |
| 8   | 2:55 PM | 4.500         | 0.6    | 1.800      | 0.6000 | 1.080               | 80      | 0.3144          | 1.0000     | 0.3144               | 0.9000                  | 0.2830                    | 8.97  |
| 9   | 2:56 PM | 5.000         | 0.6    | 1.800      | 0.6000 | 1.080               | 80      | 0.3132          | 1.0000     | 0.3132               | 0.9000                  | 0.2819                    | 8.93  |
| 10  | 2:57 PM | 5.500         | 0.6    | 1.700      | 0.6000 | 1.020               | 80      | 0.3562          | 1.0000     | 0.3562               | 0.8500                  | 0.3027                    | 9.59  |
| 11  | 2:59 PM | 6.000         | 0.6    | 1.900      | 0.6000 | 1.140               | 80      | 0.3341          | 1.0000     | 0.3341               | 0.9500                  | 0.3174                    | 10.06 |
| 12  | 3:00 PM | 6.500         | 0.6    | 1.800      | 0.6000 | 1.080               | 80      | 0.2999          | 1.0000     | 0.2999               | 0.9000                  | 0.2699                    | 8.55  |
| 13  | 3:02 PM | 7.000         | 0.6    | 1.600      | 0.6000 | 0.960               | 80      | 0.3387          | 1.0000     | 0.3387               | 0.8000                  | 0.2709                    | 8.58  |
| 14  | 3:03 PM | 7.500         | 0.6    | 0.700      | 0.6000 | 0.420               | 80      | 0.3410          | 1.0000     | 0.3410               | 0.3500                  | 0.1193                    | 3.78  |
| 15  | 3:05 PM | 8.000         | None   | 0.000      | 0.0000 | 0.000               | 0       | 0.0000          |            | 0.3410               | 0.0000                  | 0.0000                    | 0.00  |

Quality control warnings

| St# | Time    | Location (ft) | Method | Depth (ft) | %Depth | Measured Depth (ft) | Warnings                                  |
|-----|---------|---------------|--------|------------|--------|---------------------|---|
| 7   | 2:53 PM | 4.000         | 0.6    | 1.800      | 0.6000 | 1.080               | Large SNR Variation                       |
| 11  | 2:59 PM | 6.000         | 0.6    | 1.900      | 0.6000 | 1.140               | Large SNR Variation, High Stn % Discharge |
| 15  | 3:05 PM | 8.000         | None   | 0.000      | 0.0000 | 0.000               | Water Depth > QC                          |

Figure 7 Discharge Measurement Summary URC-2

**File Information**

File name: Woodcrest Creek\_20210706.ft  
 Start date and time: 7/6/2021 3:42 PM  
 Start location latitude: 35.262  
 Start location longitude: -97.437  
 Calculations engine: FlowTracker2  
 Data collection mode: Discharge

**System Information**

**Discharge Summary**

Start time: 7/6/2021 3:43 PM    End time: 7/6/2021 4:00 PM  
 # Stations: 14    Avg interval: 40  
 Mean depth: 0.515 ft    Max depth: 0.700 ft  
 Mean velocity: 0.1365 ft/s    Max velocity: 0.3861 ft/s  
 Mean SNR: 40 dB    Total width: 13.000 ft  
 Mean temp: 74.625 °F    Total area: 6.7000 ft²  
 Wetted Perimeter: 13.325 ft    Total discharge: 0.9145 ft³/s

**Discharge Uncertainty**

|            |      |       |
|------------|------|-------|
| Category   | ISO  | IVE   |
| Accuracy   | 1.0% | 1.0%  |
| Depth      | 0.6% | 6.9%  |
| Velocity   | 0.5% | 12.6% |
| Width      | 0.2% | 0.2%  |
| Method     | 3.1% |       |
| # Stations | 3.6% |       |
| Overall    | 4.9% | 14.4% |

**Viewer Controls**

Chart size +    Chart size -  
 Reset all

## Discharge Measurement Summary

Save PDF of summary

Summary overview

Supplemental data summary

| Gauge height time | Gauge height (ft) | Rated discharge (ft³/s) | Temperature (°F) | Salinity (PSS-78) | Gauge height comments |
|-------------------|-------------------|-------------------------|------------------|-------------------|-----------------------|
| 7/6/2021 3:51 PM  | 7.580             |                         |                  |                   |                       |

Measurement results

| St# | Time    | Location (ft) | Method | Depth (ft) | %Depth | Measured Depth (ft) | Samples | Velocity (ft/s) | Correction | Mean Velocity (ft/s) | Area (ft²) | Flow (ft³/s) | %Q    |   |
|-----|---------|---------------|--------|------------|--------|---------------------|---------|-----------------|------------|----------------------|------------|--------------|-------|---|
| 0   | 3:43 PM | 0.000         | None   | 0.000      | 0.0000 | 0.000               | 0       | 0.0000          |            | -0.0249              | 0.0000     | 0.0000       | 0.00  | ✓ |
| 1   | 3:43 PM | 1.000         | 0.6    | 0.500      | 0.6000 | 0.300               | 80      | -0.0249         | 1.0000     | -0.0249              | 0.5000     | -0.0124      | -1.36 | ✓ |
| 2   | 3:45 PM | 2.000         | 0.6    | 0.600      | 0.6000 | 0.360               | 80      | 0.0108          | 1.0000     | 0.0108               | 0.6000     | 0.0065       | 0.71  | ✓ |
| 3   | 3:46 PM | 3.000         | 0.6    | 0.700      | 0.6000 | 0.420               | 80      | 0.0121          | 1.0000     | 0.0121               | 0.7000     | 0.0085       | 0.93  | ✓ |
| 4   | 3:48 PM | 4.000         | 0.6    | 0.700      | 0.6000 | 0.420               | 80      | 0.0632          | 1.0000     | 0.0632               | 0.7000     | 0.0442       | 4.84  | ✓ |
| 5   | 3:49 PM | 5.000         | 0.6    | 0.600      | 0.6000 | 0.360               | 80      | 0.0993          | 1.0000     | 0.0993               | 0.6000     | 0.0596       | 6.52  | ✓ |
| 6   | 3:51 PM | 6.000         | 0.6    | 0.500      | 0.6000 | 0.300               | 80      | 0.1285          | 1.0000     | 0.1285               | 0.5000     | 0.0642       | 7.03  | ✓ |
| 7   | 3:52 PM | 7.000         | 0.6    | 0.500      | 0.6000 | 0.300               | 80      | 0.1437          | 1.0000     | 0.1437               | 0.5000     | 0.0719       | 7.86  | ✓ |
| 8   | 3:54 PM | 8.000         | 0.6    | 0.300      | 0.6000 | 0.180               | 80      | 0.1908          | 1.0000     | 0.1908               | 0.3000     | 0.0572       | 6.26  | ✓ |
| 9   | 3:55 PM | 9.000         | 0.6    | 0.500      | 0.6000 | 0.300               | 80      | 0.1712          | 1.0000     | 0.1712               | 0.5000     | 0.0856       | 9.36  | ✓ |
| 10  | 3:56 PM | 10.000        | 0.6    | 0.600      | 0.6000 | 0.360               | 80      | 0.3584          | 1.0000     | 0.3584               | 0.6000     | 0.2151       | 23.52 | ✓ |
| 11  | 3:57 PM | 11.000        | 0.6    | 0.700      | 0.6000 | 0.420               | 80      | 0.3861          | 1.0000     | 0.3861               | 0.7000     | 0.2703       | 29.55 | ✓ |
| 12  | 3:59 PM | 12.000        | 0.6    | 0.500      | 0.6000 | 0.300               | 80      | 0.0877          | 1.0000     | 0.0877               | 0.5000     | 0.0438       | 4.79  | ✓ |
| 13  | 4:00 PM | 13.000        | None   | 0.000      | 0.0000 | 0.000               | 0       | 0.0000          |            | 0.0877               | 0.0000     | 0.0000       | 0.00  | ✓ |

Quality control warnings

| St# | Time    | Location (ft) | Method | Depth (ft) | %Depth | Measured Depth (ft) | Warnings                                  |
|-----|---------|---------------|--------|------------|--------|---------------------|---|
| 1   | 3:43 PM | 1.000         | 0.6    | 0.500      | 0.6000 | 0.300               | SNR Threshold Variation                   |
| 2   | 3:45 PM | 2.000         | 0.6    | 0.600      | 0.6000 | 0.360               | SNR Threshold Variation                   |
| 6   | 3:51 PM | 6.000         | 0.6    | 0.500      | 0.6000 | 0.300               | Velocity Angle > QC                       |
| 7   | 3:52 PM | 7.000         | 0.6    | 0.500      | 0.6000 | 0.300               | Velocity Angle > QC                       |
| 8   | 3:54 PM | 8.000         | 0.6    | 0.300      | 0.6000 | 0.180               | Velocity Angle > QC                       |
| 9   | 3:55 PM | 9.000         | 0.6    | 0.500      | 0.6000 | 0.300               | Velocity Angle > QC                       |
| 10  | 3:56 PM | 10.000        | 0.6    | 0.600      | 0.6000 | 0.360               | Velocity Angle > QC, High Stn % Discharge |
| 11  | 3:57 PM | 11.000        | 0.6    | 0.700      | 0.6000 | 0.420               | Velocity Angle > QC, High Stn % Discharge |

Figure 8 Discharge Measurement Summary WC-1

Period Selected: 2021-07-01 00:00 - 2021-07-31 23:59

UTC Offset: -06:00

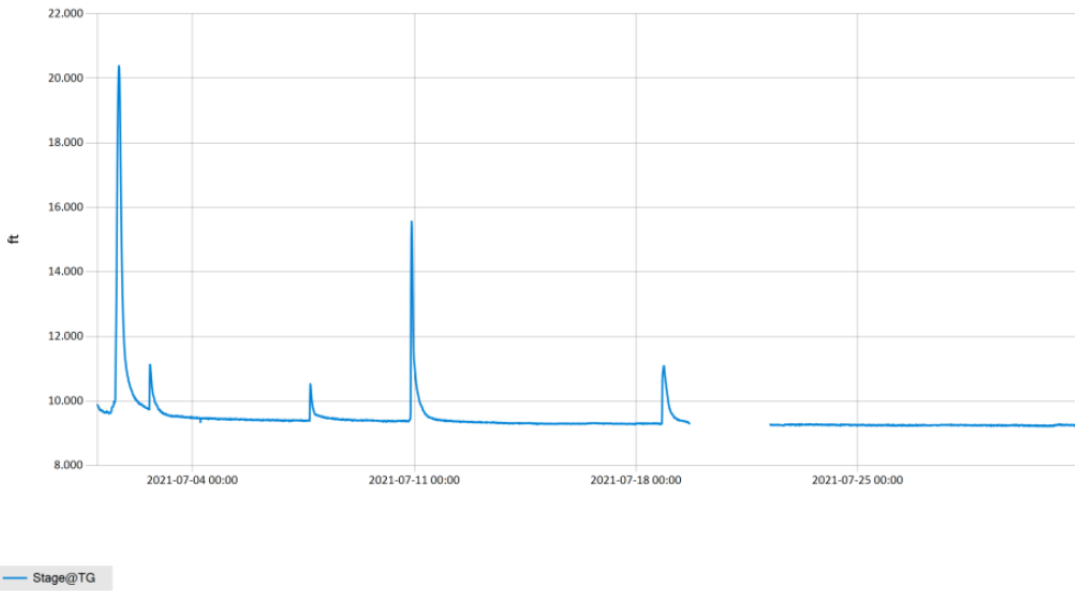


Figure 9 Monthly Hydrograph TG-1

Period Selected: 2021-07-01 00:00 - 2021-07-31 23:59

UTC Offset: -06:00

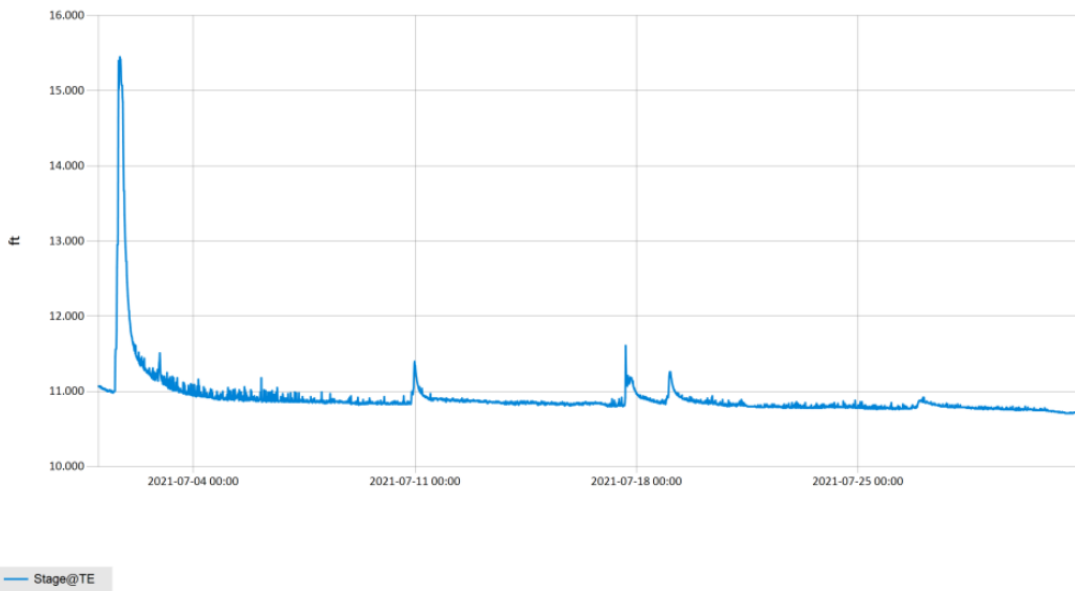


Figure 10 Monthly Hydrograph TE-1

Period Selected: 2021-07-01 00:00 - 2021-07-31 23:59

UTC Offset: -06:00

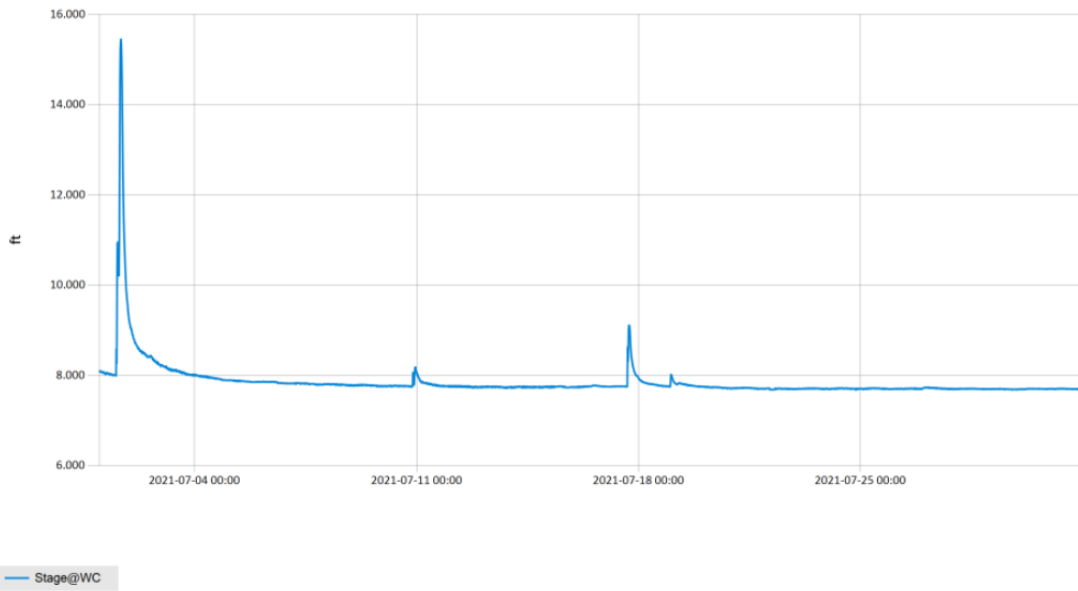


Figure 11 Monthly Hydrograph WC-1

Period Selected: 2021-07-01 00:00 - 2021-07-31 23:59

UTC Offset: -06:00

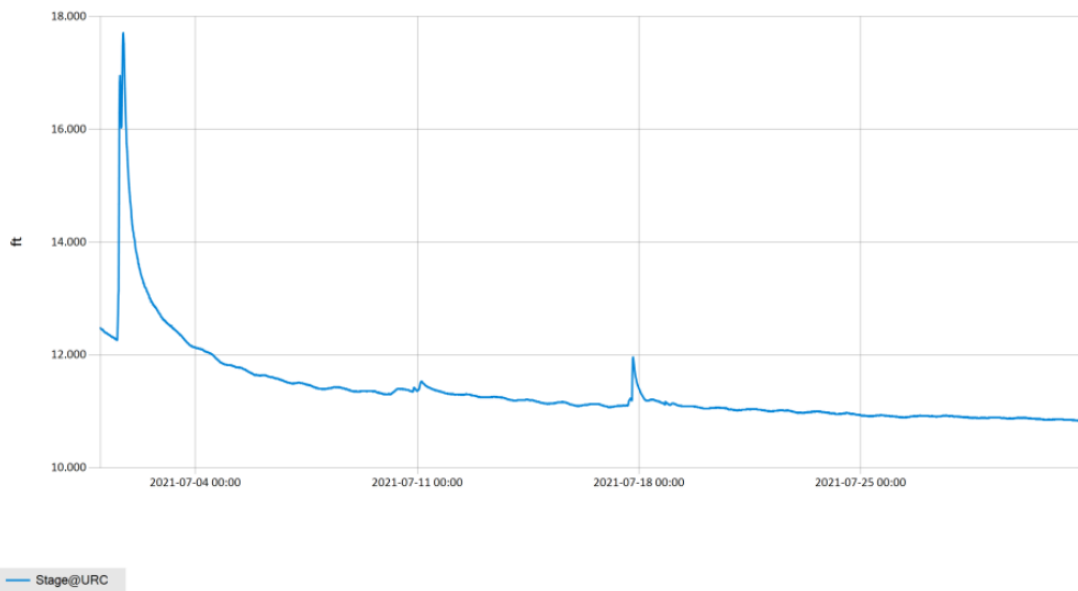
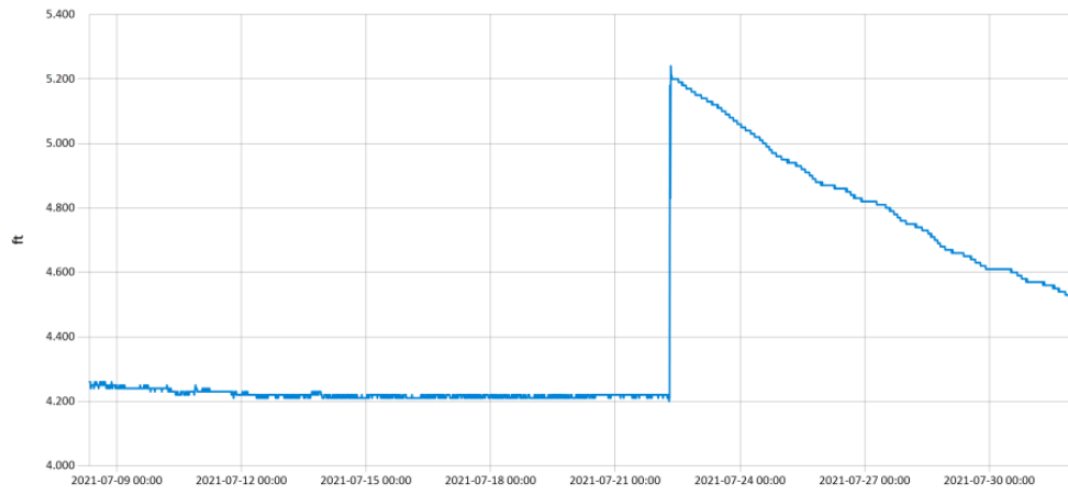


Figure 12 Monthly Hydrograph URC-2

Period Selected: 2021-07-01 00:00 - 2021-07-31 23:59

UTC Offset: -06:00

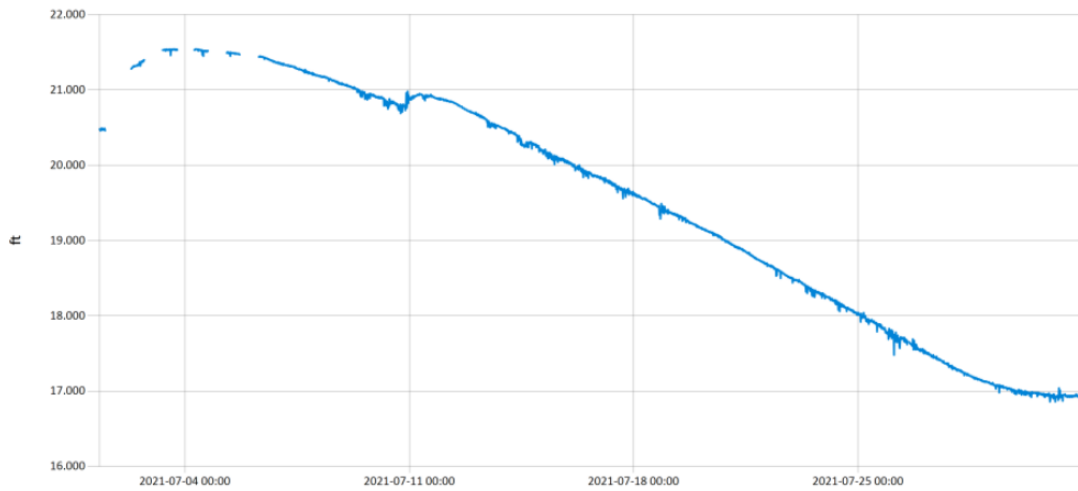


— Stage@LRC

Figure 13 Monthly Hydrograph LRC-1

Period Selected: 2021-07-01 00:00 - 2021-07-31 23:59

UTC Offset: -06:00

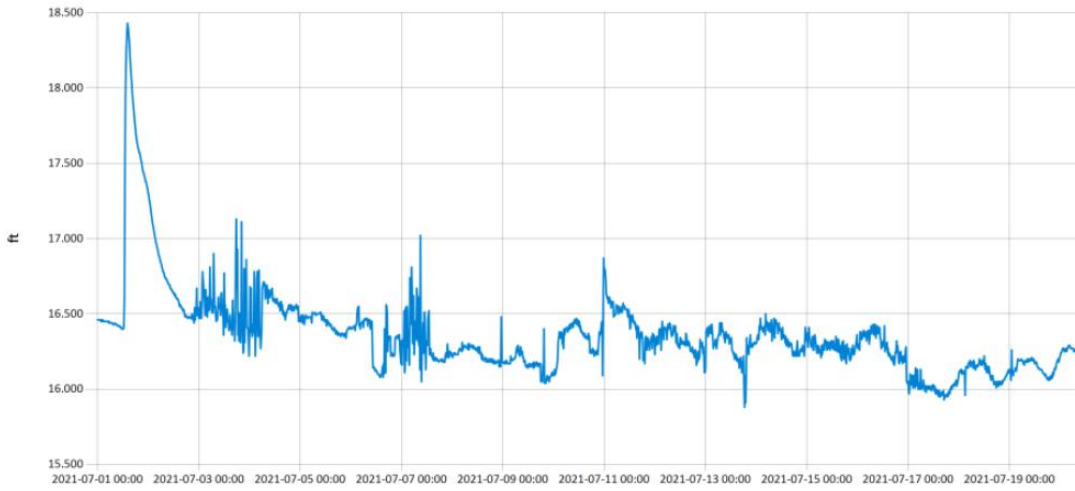


— Stage@LDB

Figure 14 Monthly Hydrograph LDB-1

Period Selected: 2021-07-01 00:00 - 2021-07-31 23:59

UTC Offset: -06:00

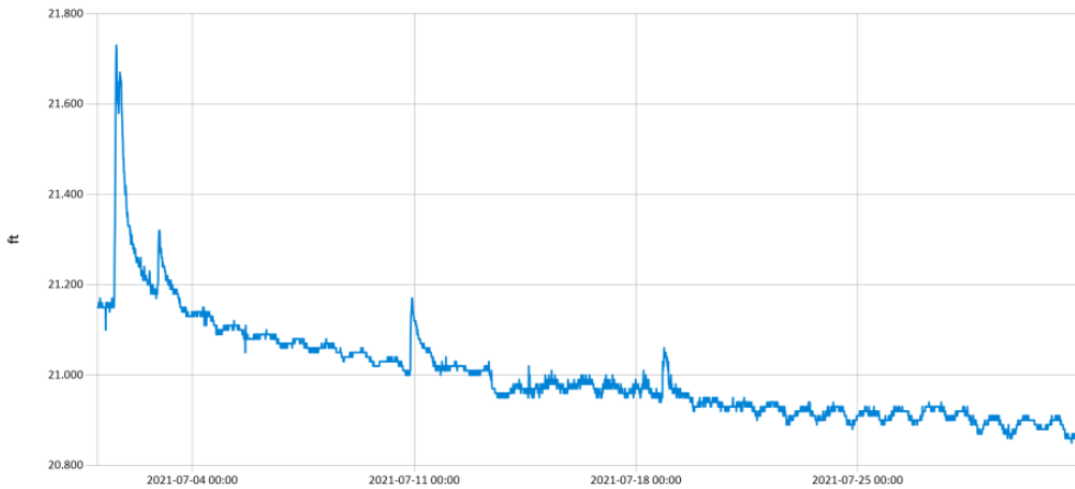


— Stage@JB

Figure 15 Monthly Hydrograph JB-1

Period Selected: 2021-07-01 00:00 - 2021-07-31 23:59

UTC Offset: -06:00



— Stage@CC

Figure 16 Monthly Hydrograph CC-1

Period Selected: 2021-07-01 00:00 - 2021-07-31 23:59 UTC Offset: -06:00

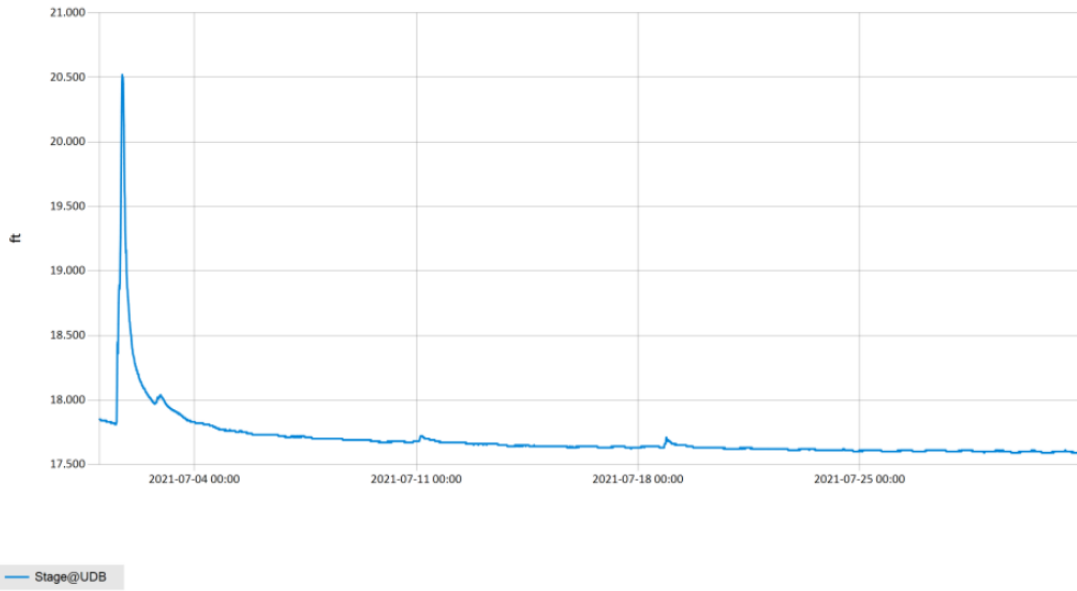


Figure 17 Monthly Hydrograph UDB-1

| MESONET CLIMATOLOGICAL DATA SUMMARY |                    |     |       | July 2021                   |                        |     |                             | Time Zone: Midnight-Midnight CST |     |           |        |   |      |                  |       |                            |                      |       |     |     |
|-------------------------------------|--------------------|-----|-------|-----------------------------|------------------------|-----|-----------------------------|----------------------------------|-----|-----------|--------|---|------|------------------|-------|----------------------------|----------------------|-------|-----|-----|
| (NRMN) Norman                       |                    |     |       | Nearest City: 2.1 NW Norman |                        |     |                             | County: Cleveland                |     |           |        |   |      |                  |       |                            |                      |       |     |     |
| Latitude: 35-14-09                  |                    |     |       | Longitude: 97-27-53         |                        |     |                             | Elevation: 1171 feet             |     |           |        |   |      |                  |       |                            |                      |       |     |     |
| DAY                                 | TEMPERATURE ( °F ) |     |       |                             | DEG DAYS               |     | HUMIDITY (%)                |                                  |     | RAIN (in) |        | PRESSURE (in)                             |      | WIND SPEED (mph) |       | SOLAR (MJ/m <sup>2</sup> ) | 4" SOIL TEMPERATURES |       |     |     |
|                                     | MAX                | MIN | AVG   | DEWPT                       | HDD                    | CDD | MAX                         | MIN                              | AVG | (in)      | STN    | MSL                                       | DIR  | AVG              | MAX   |                            | SOD                  | BARE  | MAX | MIN |
| 1                                   | 89                 | 71  | 75.6  | 71.1                        | 0                      | 15  | 98                          | 59                               | 87  | 1.77      | 28.76  | 30.01                                     | SSW  | 5.9              | 25.1  | 11.41                      | 77.1                 | 79.3  | 84  | 77  |
| 2                                   | 82                 | 71  | 75.3  | 71.4                        | 0                      | 11  | 98                          | 70                               | 88  | 0.01      | 28.78  | 30.02                                     | NE   | 5.2              | 24.2  | 15.05                      | 76.3                 | 78.2  | 82  | 75  |
| 3                                   | 84                 | 70  | 76.2  | 65.6                        | 0                      | 12  | 94                          | 47                               | 72  | 0.00      | 28.79  | 30.04                                     | ESE  | 6.3              | 15.9  | 25.64                      | 77.1                 | 79.9  | 86  | 75  |
| 4                                   | 85                 | 65  | 76.3  | 63.5                        | 0                      | 10  | 94                          | 50                               | 66  | 0.00      | 28.75  | 29.99                                     | SSE  | 5.6              | 14.5  | 25.91                      | 76.6                 | 78.6  | 83  | 74  |
| 5                                   | 85                 | 67  | 76.8  | 64.4                        | 0                      | 11  | 86                          | 52                               | 67  | 0.00      | 28.75  | 30.00                                     | ESE  | 6.0              | 15.9  | 23.64                      | 76.6                 | 77.3  | 83  | 72  |
| 6                                   | 87                 | 67  | 78.1  | 67.4                        | 0                      | 12  | 93                          | 53                               | 71  | 0.00      | 28.76  | 30.01                                     | ESE  | 4.9              | 14.3  | 21.16                      | 76.7                 | 77.6  | 83  | 72  |
| 7                                   | 91*                | 70* | 78.9* | 69.9*                       | 0*                     | 15* | 96*                         | 46*                              | 76* | 0.00*     | 28.71* | 29.96*                                    | SW * | 3.8*             | 22.0* | NA                         | 77.9*                | 79.2* | 86* | 74* |
| 8                                   | 92                 | 70  | 81.5  | 70.9                        | 0                      | 16  | 98                          | 50                               | 73  | 0.00      | 28.71  | 29.95                                     | SSE  | 4.1              | 17.3  | 27.68                      | 78.5                 | 82.0  | 90  | 74  |
| 9                                   | 89                 | 73  | 81.0  | 70.8                        | 0                      | 16  | 88                          | 56                               | 72  | 0.00      | 28.76  | 30.00                                     | S    | 9.3              | 27.3  | 28.09                      | 79.5                 | 84.2  | 91  | 78  |
| 10                                  | 89                 | 70  | 79.6  | 71.9                        | 0                      | 15  | 97                          | 62                               | 78  | 0.23      | 28.70  | 29.95                                     | SSW  | 10.0             | 33.5  | 18.77                      | 78.9                 | 83.1  | 88  | 79  |
| 11                                  | 84                 | 69  | 75.3  | 64.6                        | 0                      | 11  | 95                          | 49                               | 71  | 0.00      | 28.74  | 29.99                                     | NNW  | 8.5              | 21.9  | 23.69                      | 77.8                 | 80.1  | 84  | 76  |
| 12                                  | 85                 | 63  | 75.1  | 62.6                        | 0                      | 9   | 97                          | 42                               | 68  | 0.00      | 28.81  | 30.06                                     | SE   | 3.8              | 18.3  | 24.62                      | 76.2                 | 80.3  | 88  | 73  |
| 13                                  | 91                 | 69  | 80.6  | 67.0                        | 0                      | 15  | 88                          | 43                               | 65  | 0.00      | 28.86  | 30.11                                     | S    | 7.5              | 21.3  | 27.56                      | 77.2                 | 83.2  | 91  | 76  |
| 14                                  | 88                 | 71  | 80.0  | 67.9                        | 0                      | 14  | 84                          | 52                               | 68  | 0.00      | 28.84  | 30.09                                     | S    | 10.4             | 29.8  | 25.90                      | 77.8                 | 83.7  | 89  | 78  |
| 15                                  | 88                 | 72  | 80.0  | 69.6                        | 0                      | 15  | 86                          | 56                               | 71  | 0.00      | 28.75  | 30.00                                     | S    | 10.3             | 24.5  | 22.09                      | 77.9                 | 83.6  | 89  | 78  |
| 16                                  | 90                 | 72  | 80.7  | 71.7                        | 0                      | 16  | 92                          | 56                               | 75  | 0.14      | 28.71  | 29.95                                     | S    | 8.2              | 23.8  | 25.49                      | 78.7                 | 84.1  | 90  | 78  |
| 17                                  | 91                 | 72  | 78.3  | 72.0                        | 0                      | 16  | 98                          | 56                               | 82  | 0.08      | 28.77  | 30.02                                     | S    | 5.9              | 29.7  | 20.17                      | 79.0                 | 84.3  | 93  | 79  |
| 18                                  | 90                 | 68  | 78.4  | 71.0                        | 0                      | 14  | 99                          | 55                               | 80  | 0.06      | 28.83  | 30.08                                     | ENE  | 3.8              | 23.9  | 20.20                      | 78.3                 | 83.5  | 91  | 77  |
| 19                                  | 87                 | 70  | 78.2  | 68.5                        | 0                      | 14  | 96                          | 50                               | 74  | 0.00      | 28.83  | 30.09                                     | NNE  | 8.4              | 21.3  | 26.14                      | 78.5                 | 83.6  | 90  | 78  |
| 20                                  | 86                 | 67  | 76.2  | 65.7                        | 0                      | 11  | 93                          | 47                               | 72  | 0.00      | 28.83  | 30.08                                     | NE   | 7.1              | 19.5  | 24.55                      | 77.6                 | 83.5  | 90  | 77  |
| 21                                  | 85                 | 63  | 74.9  | 64.3                        | 0                      | 9   | 97                          | 49                               | 72  | 0.00      | 28.85  | 30.10                                     | ESE  | 4.1              | 12.4  | 22.12                      | 76.3                 | 83.2  | 90  | 77  |
| 22                                  | 88                 | 64  | 78.2  | 65.9                        | 0                      | 11  | 96                          | 48                               | 68  | 0.00      | 28.87  | 30.12                                     | SSE  | 5.5              | 16.8  | 22.44                      | 76.0                 | 83.4  | 90  | 77  |
| 23                                  | 90*                | 73* | 81.7* | 70.8*                       | 0*                     | 16* | 89*                         | 54*                              | 71* | 0.00*     | 28.81* | 30.06*                                    | SSE* | 7.9*             | 18.1* | 25.91*                     | 77.6*                | 85.6* | 93* | 79* |
| 24                                  | 94                 | 76  | 84.5  | 72.4                        | 0                      | 20  | 87                          | 47                               | 68  | 0.00      | 28.75  | 30.00                                     | S    | 7.8              | 19.7  | 25.96                      | 79.0                 | 87.6  | 95  | 81  |
| 25                                  | 95                 | 75  | 84.2  | 71.1                        | 0                      | 20  | 88                          | 44                               | 67  | 0.00      | 28.72  | 29.97                                     | S    | 6.6              | 31.9  | 25.66                      | 79.9                 | 89.1  | 96  | 82  |
| 26                                  | 94                 | 72  | 79.6  | 69.6                        | 0                      | 18  | 90                          | 48                               | 73  | 0.41      | 28.73  | 29.98                                     | ENE  | 5.6              | 46.5  | 20.53                      | 79.3                 | 87.5  | 97  | 83  |
| 27                                  | 96                 | 74  | 83.3  | 71.8                        | 0                      | 20  | 91                          | 44                               | 70  | 0.00      | 28.76  | 30.01                                     | ENE  | 4.2              | 16.7  | 21.48                      | 79.3                 | 84.7  | 91  | 79  |
| 28                                  | 94*                | 74* | 84.9* | 71.8*                       | 0*                     | 19* | 89*                         | 49*                              | 66* | 0.00*     | 28.80* | 30.05*                                    | SE * | 5.4*             | 16.2* | NA                         | 80.4*                | 87.7* | 96* | 80* |
| 29                                  | 95                 | 75  | 85.4  | 70.8                        | 0                      | 20  | 91                          | 36                               | 64  | 0.00      | 28.82  | 30.07                                     | S    | 4.7              | 14.8  | 25.73                      | 81.2                 | 89.9  | 98  | 82  |
| 30                                  | 95                 | 75  | 85.5  | 71.5                        | 0                      | 20  | 90                          | 46                               | 65  | 0.00      | 28.82  | 30.07                                     | SSE  | 4.8              | 15.8  | 23.68                      | 81.2                 | 90.3  | 97  | 83  |
| 31                                  | 97                 | 76  | 86.6  | 70.6                        | 0                      | 21  | 85                          | 40                               | 61  | 0.00      | 28.77  | 30.02                                     | S    | 6.3              | 18.3  | 26.40                      | 81.7                 | 90.9  | 99  | 84  |
|                                     | 90*                | 70* | 79.7* | 69.0*                       | <- Monthly Averages -> |     |                             |                                  |     |           | 28.78* | 30.03*                                    | S *  | 6.4*             | 46.5* | 23.37*                     | 78.3*                | 83.5* | 90* | 78* |
| Temperature - Highest: 97*          |                    |     |       |                             |                        |     | Degree Days - Total HDD: 0* |                                  |     |           |        | Number of Days With:                      |      |                  |       |                            |                      |       |     |     |
| Lowest: 63*                         |                    |     |       |                             |                        |     | Total CDD: 464*             |                                  |     |           |        | Tmax ≥ 90: 15* Rainfall ≥ 0.01 inch: 7*   |      |                  |       |                            |                      |       |     |     |
| Rainfall: Monthly Total: 2.70* in.  |                    |     |       |                             |                        |     | Humidity - Highest: 99*     |                                  |     |           |        | Tmax ≤ 32: 0* Rainfall ≥ 0.10 inch: 4*    |      |                  |       |                            |                      |       |     |     |
| Greatest 24 Hr: 1.77* in.           |                    |     |       |                             |                        |     | Lowest: 36*                 |                                  |     |           |        | Tmin ≤ 32: 0* Avg Wind Speed ≥ 10 mph: 3* |      |                  |       |                            |                      |       |     |     |
|                                     |                    |     |       |                             |                        |     |                             |                                  |     |           |        | Tmin ≤ 0: 0* Max Wind Speed ≥ 30 mph: 3*  |      |                  |       |                            |                      |       |     |     |

Figure 18 July Mesonet Data