
***Lake Thunderbird TMDL Monitoring Plan Implementation:
Sample Year (SY) 2020- August Report***



SY2020 Monthly Report

Lake Thunderbird TMDL Monitoring Plan Implementation:

August 2020 Monitoring Report

Oklahoma Water Resources Board
Water Quality Programs Division
Monitoring and Assessment Section
3800 N. Classen, Oklahoma City, Oklahoma 73118
405-530-8800

Contact

Sarah Dexter, Project Leader, sarah.dexter@owrb.ok.gov
Jason Murphy, Project Supervisor, jason.murphy@owrb.ok.gov
Lance Phillips, Streams Program Manager, lance.phillips@owrb.ok.gov
Bill Cauthron, Monitoring Coordinator, bill.cauthron@owrb.ok.gov

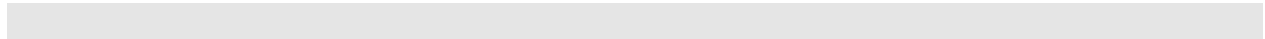


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SUMMARY OF AUGUST WATER QUALITY SAMPLING

Sampling for August 2020 occurred on the seventeenth and was considered a base flow collection. Water samples were collected at nine locations, with LT-1 being excluded as a result of dry conditions, and discharge measurements were collected at six locations. Mesonet data shows no precipitation on the seventeenth, 0.01 inches of precipitation in the 72 hours prior to sampling, and no precipitation in the 72 hours after the sampling event. The total rainfall amount in Norman for the month of August was 5.15 inches. All water level gauges were operational for the month, except for LT-1 and UDB-1 due to equipment malfunction.

RESULTS

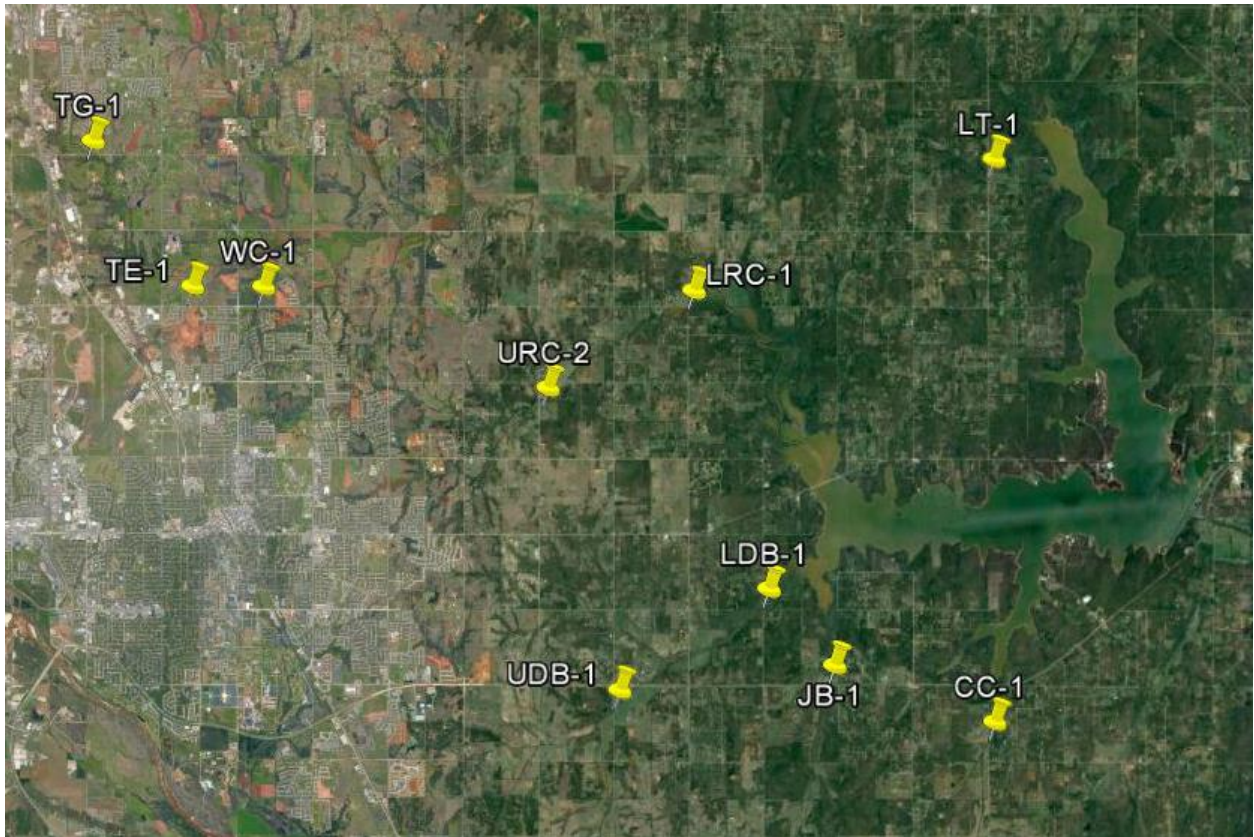


Figure 1 Monitoring Station Map

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	8/17/2020	10:55	SD	26.04	7.77	7.96	655	3	RP3 barely over water, used DCP for flow
JB-1	Jim Blue Creek	8/17/2020	11:50	SD	28.52	12.41	7.50	826	21	no RP over water, orifice out of water, used DCP for flow
LDB-1	Lower Dave Blue Creek	8/17/2020	12:50	SD	29.08	4.69	8.20	703	20	visual flow going backwards at times
LRC-1	Lower Rock Creek	8/17/2020	13:45	SD	27.41	10.09	8.03	687	5	
LT-1	Lake Laterals	8/17/2020	13:10	SD	N/A	N/A	N/A	N/A	N/A	completely dry
TE-1	Little River Tributary	8/17/2020	16:35	SD	29.33	6.04	7.72	695	7	almost disconnected
TG-1	Little River Tributary	8/17/2020	17:05	SD	29.23	8.44	7.90	714	4	
UDB-1	Upper Dave Blue Creek	8/17/2020	9:25	SD	24.70	3.49	7.64	875	9	bubbler not purging
URC-2	Upper Rock Creek	8/17/2020	14:50	SD	27.73	10.46	7.48	742	34	orifice out of water, cow activity in water
WC-1	Woodcrest Creek	8/17/2020	15:45	SD	33.48	15.00	7.93	928	8	

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	0.26	0.41	0.085	<5.0
JB-1	Jim Blue Creek	0.16	0.54	0.078	62
LDB-1	Lower Dave Blue Creek	<0.05	0.81	0.104	12
LRC-1	Lower Rock Creek	<0.05	0.23	0.055	<5.0
LT-1	Lake Laterals	N/A	N/A	N/A	N/A
TE-1	Little River Tributary	<0.05	0.66	0.030	<5.0
TG-1	Little River Tributary	0.07	0.31	0.048	<5.0
UDB-1	Upper Dave Blue Creek	<0.05	0.35	0.034	<5.0
URC-2	Upper Rock Creek	<0.05	2.25	0.094	10
WC-1	Woodcrest Creek	<0.05	0.28	0.030	<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	0.25	0.36	0.088	<5.0
Duplicate RPD	3.92%	12.99%	3.47%	0%

Table 3 QA/QC Data

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	0.20	20.54
JB-1	Jim Blue Creek	-0.02	15.18
LDB-1	Lower Dave Blue Creek	1.60	15.99
LRC-1	Lower Rock Creek	0.16	17.79
LT-1	Lake Laterals	N/A	N/A
TE-1	Little River Tributary	0.63	11.37
TG-1	Little River Tributary	0.12	9.05
UDB-1	Upper Dave Blue Creek	0.05	17.27
URC-2	Upper Rock Creek	0.01	11.05
WC-1	Woodcrest Creek	-0.02	7.58

Table 4 Station Discharge Summary

Discharge Measurement Summary

Date Generated: Mon Aug 24 2020

File Information				Site Details								
File Name	URC0817.WAD			Site Name	URC							
Start Date and Time	2020/08/17 13:57:50			Operator(s)	SCD							
System Information				Units (English Units)		Discharge Uncertainty						
Sensor Type	FlowTracker			Distance	ft		Category	ISO	Stats			
Serial #	P4713			Velocity	ft/s		Accuracy	1.0%	1.0%			
CPU Firmware Version	3.9			Area	ft^2		Depth	1.0%	7.7%			
Software Ver	2.30			Discharge	cfs		Velocity	8.4%	29.4%			
Mounting Correction	0.0%											
Width							Method	4.9%	-			
Summary												
Averaging Int.	40	# Stations	10									
Start Edge	LEW	Total Width	5.000									
Mean SNR	43.3 dB	Total Area	1.050									
Mean Temp	80.73 °F	Mean Depth	0.210									
Disch. Equation	Mid-Section	Mean Velocity	0.0095									
		Total Discharge	0.0100									
Overall												
								11.1%	30.4%			
Supplemental Data												
#	Time	Location	Gauge Height	Rated Flow	Comments							
1	Mon Aug 17 14:05:44 CDT 2020	5.000	11.050									
Measurement Results												
St	Clock	Loc	Method	Depth	%Dep	MeasD	Vel	CorrFact	MeanV	Area	Flow	%Q
0	13:57	0.00	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0
1	13:57	1.00	0.6	0.200	0.6	0.080	-0.0203	1.00	-0.0203	0.150	-0.0031	-30.6
2	13:58	1.50	0.6	0.200	0.6	0.080	0.0108	1.00	0.0108	0.100	0.0011	10.8
3	13:59	2.00	0.6	0.300	0.6	0.120	0.0095	1.00	0.0095	0.150	0.0014	14.3
4	14:00	2.50	0.6	0.300	0.6	0.120	0.0049	1.00	0.0049	0.150	0.0007	7.4
5	14:01	3.00	0.6	0.300	0.6	0.120	0.0062	1.00	0.0062	0.150	0.0009	9.4
6	14:02	3.50	0.6	0.250	0.6	0.100	0.0289	1.00	0.0289	0.125	0.0036	36.1
7	14:03	4.00	0.6	0.250	0.6	0.100	0.0276	1.00	0.0276	0.125	0.0034	34.5
8	14:04	4.50	0.6	0.200	0.6	0.080	0.0180	1.00	0.0180	0.100	0.0018	18.1
9	14:04	5.00	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0

Rows in italics indicate a QC warning. See the Quality Control page of this report for more information.

Figure 2 Discharge Measurement Summary URC-2

Discharge Measurement Summary

Date Generated: Mon Aug 24 2020

File Information		Site Details	
File Name	CC081720.WAD	Site Name	CC
Start Date and Time	2020/08/17 10:10:08	Operator(s)	SCD

System Information		Units (English Units)		Discharge Uncertainty		
Sensor Type	FlowTracker	Distance	ft	Category	ISO	Stats
Serial #	P4713	Velocity	ft/s	Accuracy	1.0%	1.0%
CPU Firmware Version	3.9	Area	ft ²	Depth	0.9%	0.0%
Software Ver	2.30	Discharge	cfs	Velocity	1.7%	21.8%
Mounting Correction	0.0%			Width	0.3%	0.3%
				Method	4.4%	-
				# Stations	9.4%	-
				Overall	10.7%	21.9%

Summary			
Averaging Int.	40	# Stations	6
Start Edge	LEW	Total Width	2.500
Mean SNR	40.1 dB	Total Area	0.400
Mean Temp	79.25 °F	Mean Depth	0.160
Disch. Equation	Mid-Section	Mean Velocity	0.5075
		Total Discharge	0.2031

Supplemental Data					
#	Time	Location	Gauge Height	Rated Flow	Comments
1	Mon Aug 17 10:14:05 CDT 2020	2.500	20.540		

Measurement Results												
St	Clock	Loc	Method	Depth	%Dep	MeasD	Vel	CorrFact	MeanV	Area	Flow	%Q
0	10:10	0.00	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0
<i>1</i>	<i>10:10</i>	<i>0.50</i>	<i>0.6</i>	<i>0.200</i>	<i>0.6</i>	<i>0.080</i>	<i>0.4787</i>	<i>1.00</i>	<i>0.4787</i>	<i>0.100</i>	<i>0.0479</i>	<i>23.6</i>
2	10:11	1.00	0.6	0.200	0.6	0.080	0.8294	1.00	0.8294	0.100	0.0830	40.9
3	10:11	1.50	0.6	0.200	0.6	0.080	0.7228	1.00	0.7228	0.100	0.0723	35.6
<i>4</i>	<i>10:12</i>	<i>2.00</i>	<i>0.6</i>	<i>0.200</i>	<i>0.6</i>	<i>0.080</i>	<i>-0.0010</i>	<i>1.00</i>	<i>-0.0010</i>	<i>0.100</i>	<i>-0.0001</i>	<i>0.0</i>
5	10:12	2.50	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0

Rows in italics indicate a QC warning. See the Quality Control page of this report for more information.

Figure 3 Discharge Measurement Summary CC-1

Discharge Measurement Summary

Date Generated: Mon Aug 24 2020

File Information				Site Details			
File Name	JB0817.WAD			Site Name	JB		
Start Date and Time	2020/08/17 10:55:28			Operator(s)	SCD		

System Information		Units (English Units)		Discharge Uncertainty		
Sensor Type	FlowTracker	Distance	ft	Category	ISO	Stats
Serial #	P4713	Velocity	ft/s	Accuracy	1.0%	1.0%
CPU Firmware Version	3.9	Area	ft ²	Depth	1.3%	6.6%
Software Ver	2.30	Discharge	cfs	Velocity	6.8%	89.2%
Mounting Correction	0.0%			Width	0.4%	0.4%
				Method	6.4%	-
				# Stations	5.1%	-
				Overall	10.7%	89.5%

Summary			
Averaging Int.	40	# Stations	10
Start Edge	LEW	Total Width	4.500
Mean SNR	49.8 dB	Total Area	1.800
Mean Temp	85.41 °F	Mean Depth	0.400
Disch. Equation	Mid-Section	Mean Velocity	-0.0124
		Total Discharge	-0.0223

Supplemental Data					
#	Time	Location	Gauge Height	Rated Flow	Comments
1	Mon Aug 17 11:03:12 CDT 2020	4.500	15.180		

Measurement Results												
St	Clock	Loc	Method	Depth	%Dep	MeasD	Vel	CorrFact	MeanV	Area	Flow	%Q
0	10:55	0.00	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0
<i>1</i>	<i>10:55</i>	<i>0.50</i>	<i>0.6</i>	<i>0.400</i>	<i>0.6</i>	<i>0.160</i>	<i>-0.0374</i>	<i>1.00</i>	<i>-0.0374</i>	<i>0.200</i>	<i>-0.0075</i>	<i>33.5</i>
2	10:56	1.00	0.6	0.500	0.6	0.200	0.0062	1.00	0.0062	0.250	0.0016	-7.0
3	10:57	1.50	0.6	0.600	0.6	0.240	-0.0052	1.00	-0.0052	0.300	-0.0016	7.1
<i>4</i>	<i>10:58</i>	<i>2.00</i>	<i>0.6</i>	<i>0.600</i>	<i>0.6</i>	<i>0.240</i>	<i>0.0092</i>	<i>1.00</i>	<i>0.0092</i>	<i>0.300</i>	<i>0.0028</i>	<i>-12.4</i>
<i>5</i>	<i>10:59</i>	<i>2.50</i>	<i>0.6</i>	<i>0.600</i>	<i>0.6</i>	<i>0.240</i>	<i>-0.0561</i>	<i>1.00</i>	<i>-0.0561</i>	<i>0.300</i>	<i>-0.0168</i>	<i>75.5</i>
6	11:00	3.00	0.6	0.400	0.6	0.160	0.0075	1.00	0.0075	0.200	0.0015	-6.8
7	11:01	3.50	0.6	0.300	0.6	0.120	-0.0007	1.00	-0.0007	0.150	-0.0001	0.4
<i>8</i>	<i>11:02</i>	<i>4.00</i>	<i>0.6</i>	<i>0.200</i>	<i>0.6</i>	<i>0.080</i>	<i>-0.0213</i>	<i>1.00</i>	<i>-0.0213</i>	<i>0.100</i>	<i>-0.0021</i>	<i>9.6</i>
9	11:02	4.50	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0

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Figure 4 Discharge Measurement Summary JB-1

Discharge Measurement Summary

Date Generated: Mon Aug 24 2020

File Information		Site Details	
File Name	LRC0817.WAD	Site Name	LRC
Start Date and Time	2020/08/17 12:44:07	Operator(s)	SCD

System Information		Units (English Units)	Discharge Uncertainty	
Sensor Type	FlowTracker	Distance	ft	
Serial #	P4713	Velocity	ft/s	
CPU Firmware Version	3.9	Area	ft ²	
Software Ver	2.30	Discharge	cfs	
Mounting Correction	0.0%			

Summary			
Averaging Int.	40	# Stations	20
Start Edge	LEW	Total Width	12.000
Mean SNR	37.2 dB	Total Area	4.650
Mean Temp	82.87 °F	Mean Depth	0.387
Disch. Equation	Mid-Section	Mean Velocity	0.0336
		Total Discharge	0.1561

Category	ISO	Stats
Accuracy	1.0%	1.0%
Depth	0.7%	1.8%
Velocity	1.7%	20.6%
Width	0.2%	0.2%
Method	3.5%	-
# Stations	2.5%	-
Overall	4.8%	20.7%

Supplemental Data					
#	Time	Location	Gauge Height	Rated Flow	Comments
1	Mon Aug 17 13:02:46 CDT 2020	12.000	17.790		

Measurement Results												
St	Clock	Loc	Method	Depth	%Dep	MeasD	Vel	CorrFact	MeanV	Area	Flow	%Q
0	12:44	0.00	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0
1	12:44	0.50	0.6	0.300	0.6	0.120	0.0007	1.00	0.0007	0.150	0.0001	0.1
2	12:45	1.00	0.6	0.400	0.6	0.160	0.0026	1.00	0.0026	0.200	0.0005	0.3
3	12:46	1.50	0.6	0.500	0.6	0.200	0.0623	1.00	0.0623	0.250	0.0156	10.0
4	12:47	2.00	0.6	0.550	0.6	0.220	0.0003	1.00	0.0003	0.275	0.0001	0.1
5	12:48	2.50	0.6	0.550	0.6	0.220	0.1388	1.00	0.1388	0.275	0.0382	24.4
6	12:49	3.00	0.6	0.550	0.6	0.220	0.1240	1.00	0.1240	0.275	0.0341	21.8
7	12:50	3.50	0.6	0.550	0.6	0.220	0.1421	1.00	0.1421	0.275	0.0391	25.0
8	12:51	4.00	0.6	0.500	0.6	0.200	0.1135	1.00	0.1135	0.250	0.0284	18.2
9	12:52	4.50	0.6	0.500	0.6	0.200	0.0000	1.00	0.0000	0.250	0.0000	0.0
10	12:53	5.00	0.6	0.400	0.6	0.160	0.0000	1.00	0.0000	0.200	0.0000	0.0
11	12:54	5.50	0.6	0.400	0.6	0.160	0.0000	1.00	0.0000	0.200	0.0000	0.0
12	12:55	6.00	0.6	0.400	0.6	0.160	-0.0003	1.00	-0.0003	0.200	-0.0001	0.0
13	12:56	6.50	0.6	0.400	0.6	0.160	-0.0003	1.00	-0.0003	0.200	-0.0001	0.0
14	12:57	7.00	0.6	0.400	0.6	0.160	0.0010	1.00	0.0010	0.300	0.0003	0.2
15	12:58	8.00	0.6	0.400	0.6	0.160	0.0000	1.00	0.0000	0.400	0.0000	0.0
16	12:59	9.00	0.6	0.400	0.6	0.160	-0.0003	1.00	-0.0003	0.400	-0.0001	-0.1
17	13:00	10.00	0.6	0.350	0.6	0.140	0.0003	1.00	0.0003	0.350	0.0001	0.1
18	13:01	11.00	0.6	0.200	0.6	0.080	0.0000	1.00	0.0000	0.200	0.0000	0.0
19	13:01	12.00	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0

Rows in italics indicate a QC warning. See the Quality Control page of this report for more information.

Figure 5 Discharge Measurement Summary LRC-1

Discharge Measurement Summary

Date Generated: Mon Aug 24 2020

File Information		Site Details	
File Name	WC0817.WAD	Site Name	WC
Start Date and Time	2020/08/17 14:49:15	Operator(s)	SCD

System Information		Units (English Units)	Discharge Uncertainty																									
Sensor Type	FlowTracker	Distance	ft	<table border="1"> <thead> <tr> <th>Category</th> <th>ISO</th> <th>Stats</th> </tr> </thead> <tbody> <tr> <td>Accuracy</td> <td>1.0%</td> <td>1.0%</td> </tr> <tr> <td>Depth</td> <td>1.1%</td> <td>6.7%</td> </tr> <tr> <td>Velocity</td> <td>15.6%</td> <td>76.8%</td> </tr> <tr> <td>Width</td> <td>0.4%</td> <td>0.4%</td> </tr> <tr> <td>Method</td> <td>5.5%</td> <td>-</td> </tr> <tr> <td># Stations</td> <td>4.2%</td> <td>-</td> </tr> <tr> <td>Overall</td> <td>17.1%</td> <td>77.1%</td> </tr> </tbody> </table>	Category	ISO	Stats	Accuracy	1.0%	1.0%	Depth	1.1%	6.7%	Velocity	15.6%	76.8%	Width	0.4%	0.4%	Method	5.5%	-	# Stations	4.2%	-	Overall	17.1%	77.1%
Category	ISO	Stats																										
Accuracy	1.0%	1.0%																										
Depth	1.1%	6.7%																										
Velocity	15.6%	76.8%																										
Width	0.4%	0.4%																										
Method	5.5%	-																										
# Stations	4.2%	-																										
Overall	17.1%	77.1%																										
Serial #	P4713	Velocity	ft/s																									
CPU Firmware Version	3.9	Area	ft^2																									
Software Ver	2.30	Discharge	cfs																									
Mounting Correction	0.0%																											

Summary			
Averaging Int.	40	# Stations	12
Start Edge	LEW	Total Width	11.000
Mean SNR	50.8 dB	Total Area	4.551
Mean Temp	89.82 °F	Mean Depth	0.414
Disch. Equation	Mid-Section	Mean Velocity	-0.0055
		Total Discharge	-0.0249

Supplemental Data					
#	Time	Location	Gauge Height	Rated Flow	Comments
1	Mon Aug 17 14:58:56 CDT 2020	11.000	7.580		

Measurement Results												
St	Clock	Loc	Method	Depth	%Dep	MeasD	Vel	CorrFact	MeanV	Area	Flow	%Q
0	14:49	0.00	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0
1	14:49	1.00	0.6	0.200	0.6	0.080	-0.0043	1.00	-0.0043	0.200	-0.0009	3.4
2	<i>14:50</i>	<i>2.00</i>	<i>0.6</i>	<i>0.350</i>	<i>0.6</i>	<i>0.140</i>	<i>-0.0213</i>	<i>1.00</i>	<i>-0.0213</i>	<i>0.350</i>	<i>-0.0075</i>	<i>29.9</i>
3	14:51	3.00	0.6	0.400	0.6	0.160	0.0046	1.00	0.0046	0.400	0.0018	-7.4
4	14:52	4.00	0.6	0.450	0.6	0.180	-0.0007	1.00	-0.0007	0.450	-0.0003	1.2
5	14:53	5.00	0.6	0.450	0.6	0.180	-0.0095	1.00	-0.0095	0.450	-0.0043	17.2
6	14:54	6.00	0.6	0.400	0.6	0.160	-0.0059	1.00	-0.0059	0.400	-0.0024	9.5
7	14:55	7.00	0.6	0.450	0.6	0.180	0.0036	1.00	0.0036	0.450	0.0016	-6.5
8	<i>14:55</i>	<i>8.00</i>	<i>0.6</i>	<i>0.550</i>	<i>0.6</i>	<i>0.220</i>	<i>-0.0272</i>	<i>1.00</i>	<i>-0.0272</i>	<i>0.550</i>	<i>-0.0150</i>	<i>60.1</i>
9	14:56	9.00	0.6	0.700	0.6	0.280	-0.0033	1.00	-0.0033	0.700	-0.0023	9.2
10	14:58	10.00	0.6	0.600	0.6	0.240	0.0069	1.00	0.0069	0.600	0.0041	-16.6
11	14:58	11.00	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0

Rows in italics indicate a QC warning. See the Quality Control page of this report for more information.

Figure 6 Discharge Measurement Summary WC-1

Discharge Measurement Summary

Date Generated: Mon Aug 24 2020

File Information		Site Details	
File Name	UDB0817.WAD	Site Name	
Start Date and Time	2020/08/17 08:42:38	Operator(s)	SCD

System Information		Units (English Units)		Discharge Uncertainty		
Sensor Type	FlowTracker	Distance	ft	Category	ISO	Stats
Serial #	P4713	Velocity	ft/s	Accuracy	1.0%	1.0%
CPU Firmware Version	3.9	Area	ft^2	Depth	0.6%	4.2%
Software Ver	2.30	Discharge	cfs	Velocity	6.4%	26.7%
Mounting Correction	0.0%			Width	0.2%	0.2%
				Method	3.2%	-
				# Stations	2.5%	-
				Overall	7.7%	27.0%

Summary			
Averaging Int.	40	# Stations	20
Start Edge	LEW	Total Width	14.000
Mean SNR	44.4 dB	Total Area	7.774
Mean Temp	75.82 °F	Mean Depth	0.555
Disch. Equation	Mid-Section	Mean Velocity	0.0068
		Total Discharge	0.0532

Supplemental Data					
#	Time	Location	Gauge Height	Rated Flow	Comments
1	Mon Aug 17 09:02:36 CDT 2020	14.000	17.270		

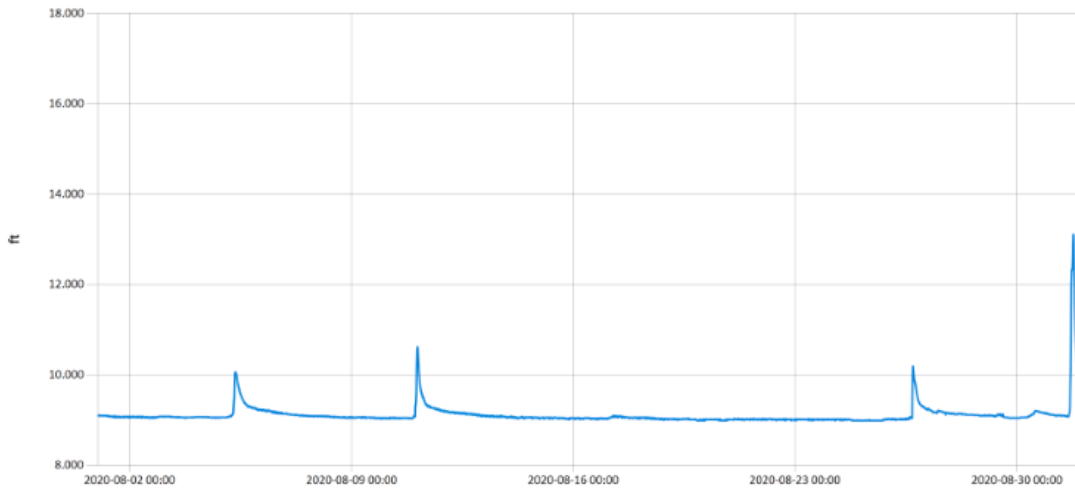
Measurement Results												
St	Clock	Loc	Method	Depth	%Dep	MeasD	Vel	CorrFact	MeanV	Area	Flow	%Q
0	08:42	0.00	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0
<i>1</i>	<i>08:42</i>	<i>1.00</i>	<i>0.6</i>	<i>0.500</i>	<i>0.6</i>	<i>0.200</i>	<i>-0.0108</i>	<i>1.00</i>	<i>-0.0108</i>	<i>0.500</i>	<i>-0.0054</i>	<i>-10.2</i>
<i>2</i>	<i>08:43</i>	<i>2.00</i>	<i>0.6</i>	<i>0.500</i>	<i>0.6</i>	<i>0.200</i>	<i>0.0036</i>	<i>1.00</i>	<i>0.0036</i>	<i>0.500</i>	<i>0.0018</i>	<i>3.4</i>
<i>3</i>	<i>08:44</i>	<i>3.00</i>	<i>0.6</i>	<i>0.600</i>	<i>0.6</i>	<i>0.240</i>	<i>0.0082</i>	<i>1.00</i>	<i>0.0082</i>	<i>0.600</i>	<i>0.0049</i>	<i>9.3</i>
<i>4</i>	<i>08:45</i>	<i>4.00</i>	<i>0.6</i>	<i>0.800</i>	<i>0.6</i>	<i>0.320</i>	<i>0.0138</i>	<i>1.00</i>	<i>0.0138</i>	<i>0.600</i>	<i>0.0083</i>	<i>15.6</i>
<i>5</i>	<i>08:47</i>	<i>4.50</i>	<i>0.6</i>	<i>0.800</i>	<i>0.6</i>	<i>0.320</i>	<i>0.0174</i>	<i>1.00</i>	<i>0.0174</i>	<i>0.400</i>	<i>0.0070</i>	<i>13.1</i>
<i>6</i>	<i>08:46</i>	<i>5.00</i>	<i>0.6</i>	<i>0.800</i>	<i>0.6</i>	<i>0.320</i>	<i>0.0289</i>	<i>1.00</i>	<i>0.0289</i>	<i>0.400</i>	<i>0.0115</i>	<i>21.7</i>
<i>7</i>	<i>08:48</i>	<i>5.50</i>	<i>0.6</i>	<i>0.800</i>	<i>0.6</i>	<i>0.320</i>	<i>0.0174</i>	<i>1.00</i>	<i>0.0174</i>	<i>0.400</i>	<i>0.0070</i>	<i>13.1</i>
<i>8</i>	<i>08:49</i>	<i>6.00</i>	<i>0.6</i>	<i>0.750</i>	<i>0.6</i>	<i>0.300</i>	<i>0.0177</i>	<i>1.00</i>	<i>0.0177</i>	<i>0.375</i>	<i>0.0066</i>	<i>12.5</i>
<i>9</i>	<i>08:51</i>	<i>6.50</i>	<i>0.6</i>	<i>0.900</i>	<i>0.6</i>	<i>0.360</i>	<i>0.0141</i>	<i>1.00</i>	<i>0.0141</i>	<i>0.450</i>	<i>0.0063</i>	<i>11.9</i>
<i>10</i>	<i>08:51</i>	<i>7.00</i>	<i>0.6</i>	<i>0.800</i>	<i>0.6</i>	<i>0.320</i>	<i>0.0056</i>	<i>1.00</i>	<i>0.0056</i>	<i>0.400</i>	<i>0.0022</i>	<i>4.2</i>
<i>11</i>	<i>08:52</i>	<i>7.50</i>	<i>0.6</i>	<i>0.800</i>	<i>0.6</i>	<i>0.320</i>	<i>0.0026</i>	<i>1.00</i>	<i>0.0026</i>	<i>0.400</i>	<i>0.0010</i>	<i>2.0</i>
<i>12</i>	<i>08:53</i>	<i>8.00</i>	<i>0.6</i>	<i>0.800</i>	<i>0.6</i>	<i>0.320</i>	<i>0.0177</i>	<i>1.00</i>	<i>0.0177</i>	<i>0.400</i>	<i>0.0071</i>	<i>13.3</i>
<i>13</i>	<i>08:54</i>	<i>8.50</i>	<i>0.6</i>	<i>0.500</i>	<i>0.6</i>	<i>0.200</i>	<i>-0.0043</i>	<i>1.00</i>	<i>-0.0043</i>	<i>0.250</i>	<i>-0.0011</i>	<i>-2.0</i>
<i>14</i>	<i>08:55</i>	<i>9.00</i>	<i>0.6</i>	<i>0.400</i>	<i>0.6</i>	<i>0.160</i>	<i>0.0118</i>	<i>1.00</i>	<i>0.0118</i>	<i>0.300</i>	<i>0.0035</i>	<i>6.7</i>
<i>15</i>	<i>08:57</i>	<i>10.00</i>	<i>0.6</i>	<i>0.600</i>	<i>0.6</i>	<i>0.240</i>	<i>-0.0026</i>	<i>1.00</i>	<i>-0.0026</i>	<i>0.600</i>	<i>-0.0016</i>	<i>-3.0</i>
<i>16</i>	<i>08:58</i>	<i>11.00</i>	<i>0.6</i>	<i>0.500</i>	<i>0.6</i>	<i>0.200</i>	<i>-0.0069</i>	<i>1.00</i>	<i>-0.0069</i>	<i>0.500</i>	<i>-0.0034</i>	<i>-6.5</i>
<i>17</i>	<i>09:00</i>	<i>12.00</i>	<i>0.6</i>	<i>0.400</i>	<i>0.6</i>	<i>0.160</i>	<i>-0.0003</i>	<i>1.00</i>	<i>-0.0003</i>	<i>0.400</i>	<i>-0.0001</i>	<i>-0.2</i>
<i>18</i>	<i>09:01</i>	<i>13.00</i>	<i>0.6</i>	<i>0.300</i>	<i>0.6</i>	<i>0.120</i>	<i>-0.0085</i>	<i>1.00</i>	<i>-0.0085</i>	<i>0.300</i>	<i>-0.0026</i>	<i>-4.8</i>
<i>19</i>	<i>09:01</i>	<i>14.00</i>	<i>None</i>	<i>0.000</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0000</i>	<i>1.00</i>	<i>0.0000</i>	<i>0.000</i>	<i>0.0000</i>	<i>0.0</i>

Rows in italics indicate a QC warning. See the Quality Control page of this report for more information.

Figure 7 Discharge Measurement Summary UDB-1

Period Selected: 2020-08-01 00:00 - 2020-08-31 23:59

UTC Offset: -06:00

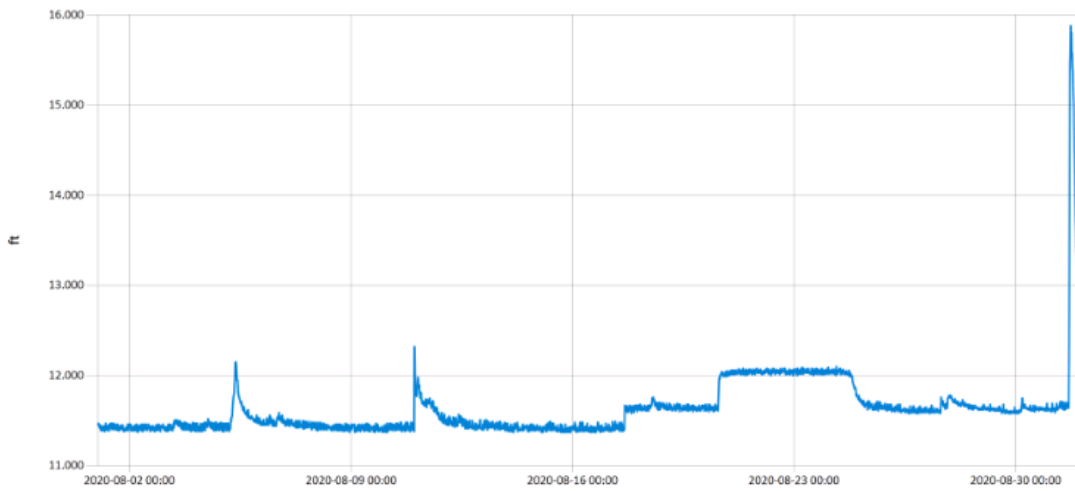


— Stage@TG

Figure 8 Monthly Hydrograph TG-1

Period Selected: 2020-08-01 00:00 - 2020-08-31 23:59

UTC Offset: -06:00

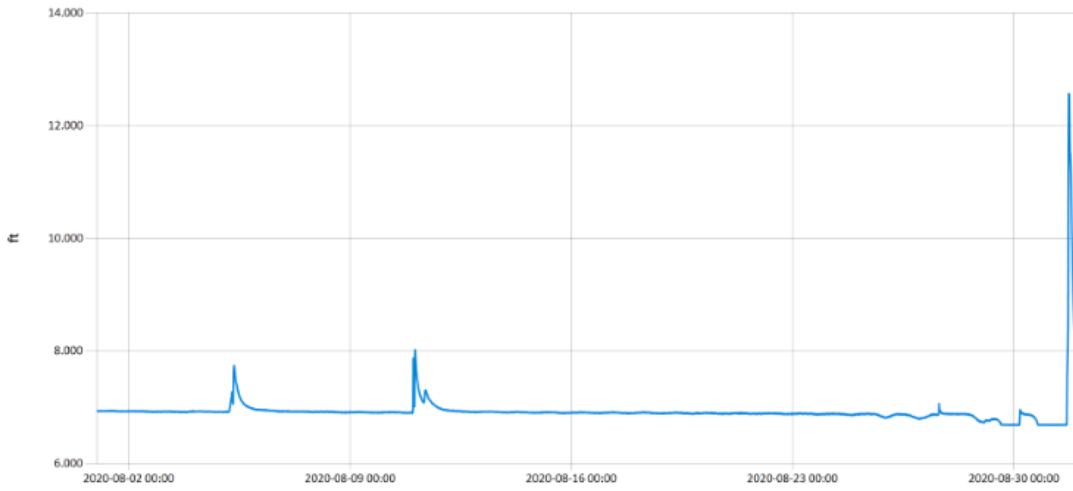


— Stage@TE

Figure 9 Monthly Hydrograph TE-1

Period Selected: 2020-08-01 00:00 - 2020-08-31 23:59

UTC Offset: -06:00

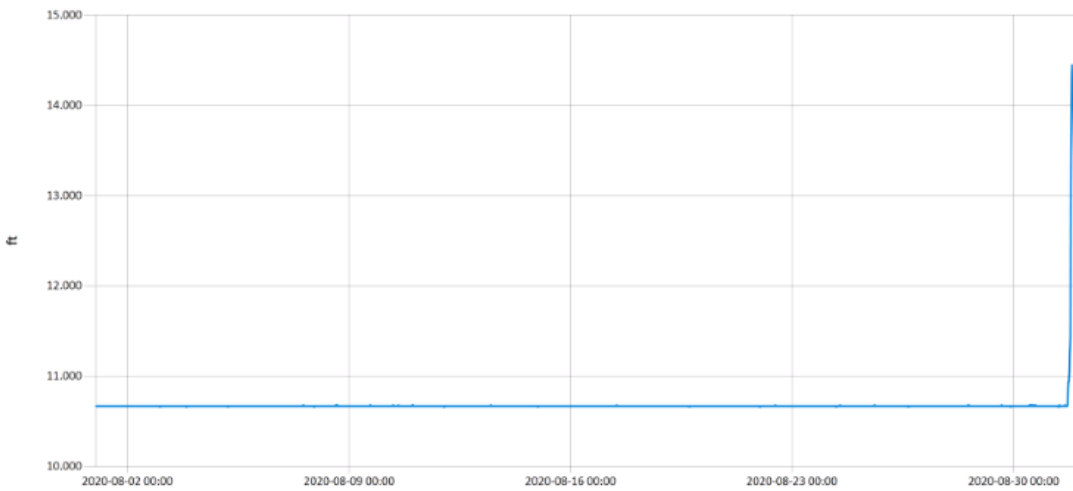


— Stage@WC

Figure 10 Monthly Hydrograph WC-1

Period Selected: 2020-08-01 00:00 - 2020-08-31 23:59

UTC Offset: -06:00



— Stage@URC

Figure 11 Monthly Hydrograph URC-2

Period Selected: 2020-08-01 00:00 - 2020-08-31 23:59

UTC Offset: -06:00

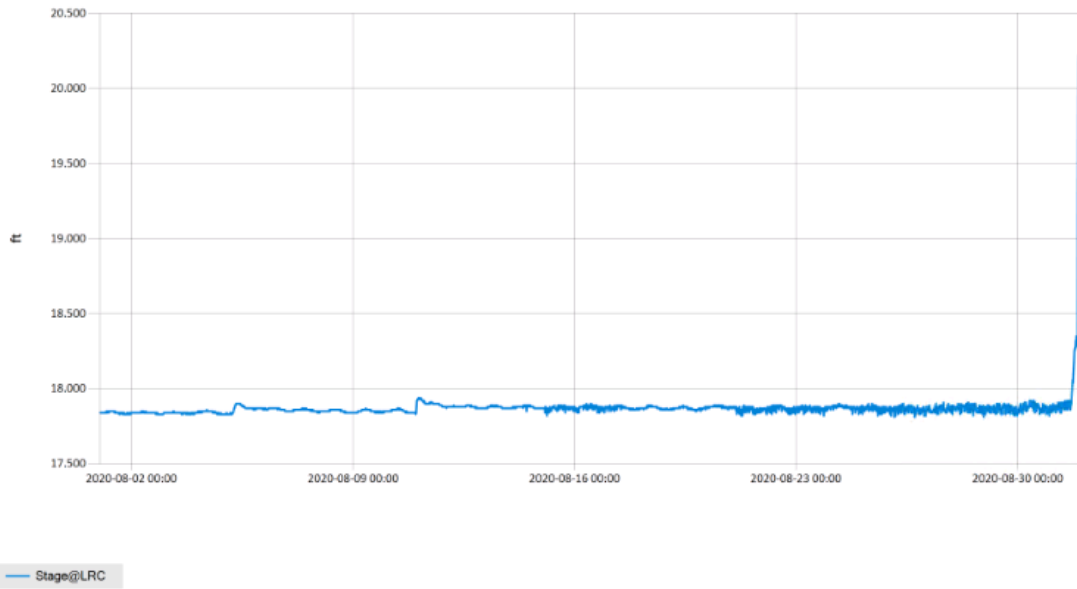


Figure 12 Monthly Hydrograph LRC-1

Period Selected: 2020-08-01 00:00 - 2020-08-31 23:59

UTC Offset: -06:00

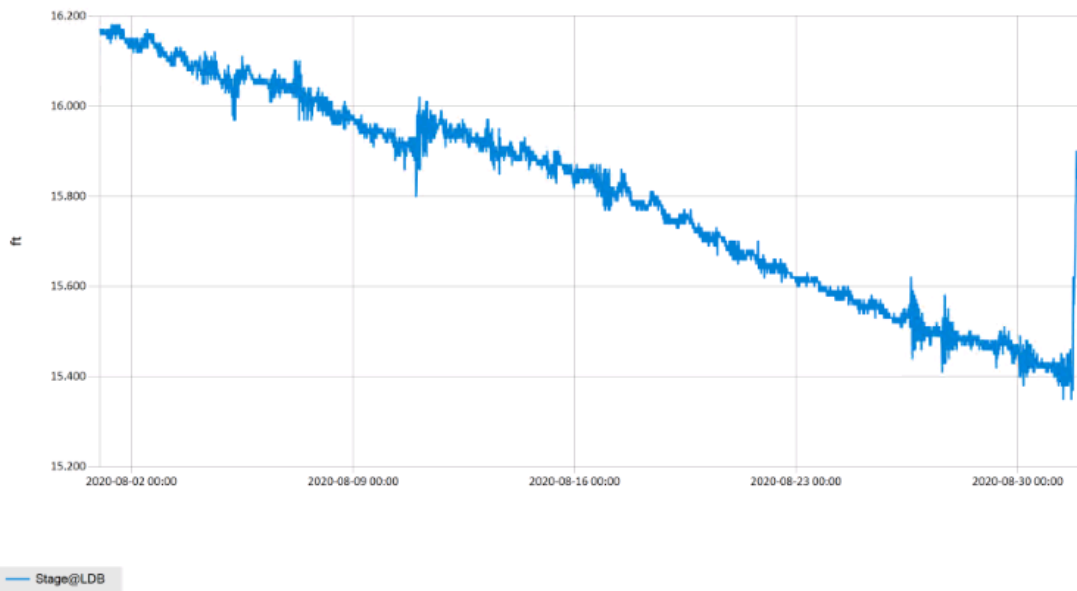


Figure 13 Monthly Hydrograph LDB-1

Period Selected: 2020-08-01 00:00 - 2020-08-31 23:59

UTC Offset: -06:00

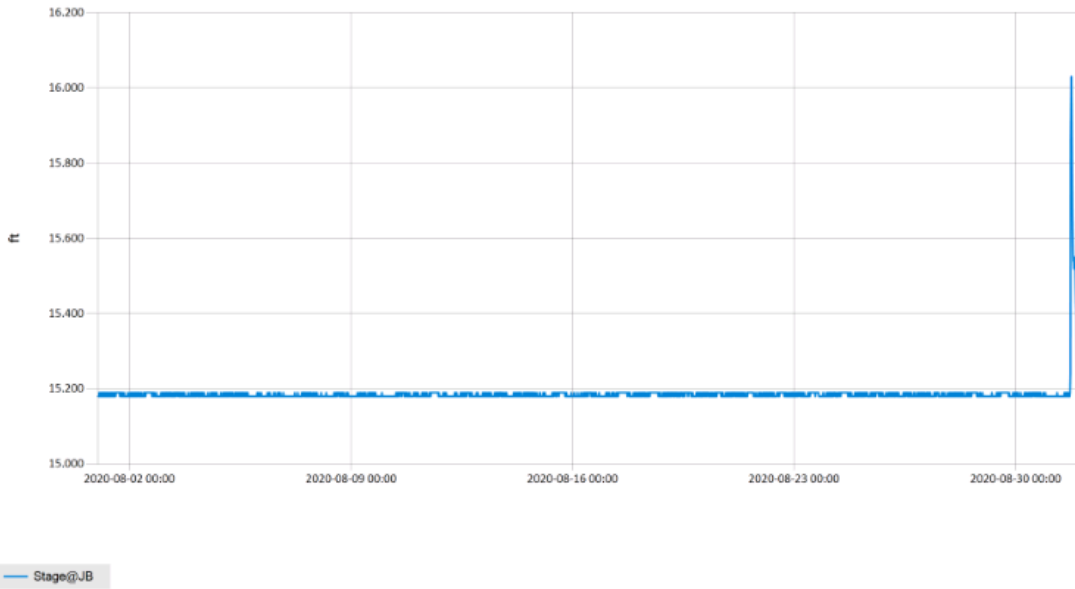


Figure 14 Monthly Hydrograph JB-1

Period Selected: 2020-08-01 00:00 - 2020-08-31 23:59

UTC Offset: -06:00

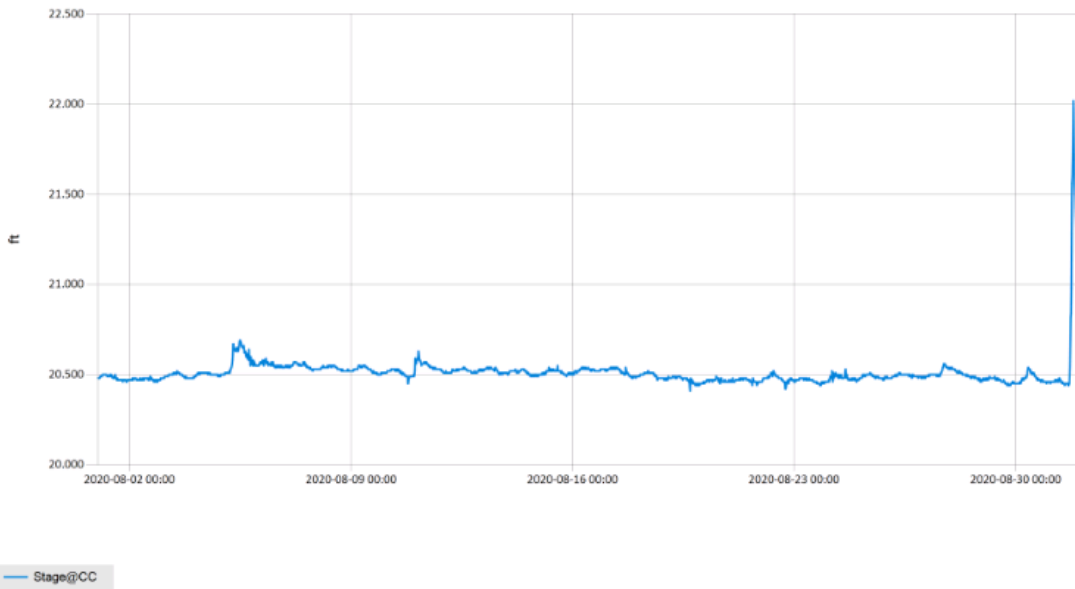


Figure 15 Monthly Hydrograph CC-1

MESONET CLIMATOLOGICAL DATA SUMMARY				August 2020				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		PRESSURE (in)			WIND SPEED (mph)		SOLAR (MJ/m ²)	4" SOIL TEMPERATURES			
	MAX	MIN	AVG	DEWPT	HDD	CDD	MAX	MIN	AVG	(in)	STN	MSL	DIR	AVG	MAX	SOD		BARE	MAX	MIN	
1	86	64	75.6	62.6	0	10	97	39	67	0.00	28.76	30.01	NNW	4.4	20.3	26.86	79.6	83.1	91	75	
2	90	64	77.4	63.5	0	12	95	41	65	0.00	28.77	30.02	NNE	5.7	19.1	24.50	79.2	84.0	91	77	
3	82	62	74.0	60.5	0	7	84	47	64	0.00	28.83	30.08	ENE	5.4	16.8	22.51	78.3	83.0	89	76	
4	82	66	73.3	58.1	0	9	72	45	60	0.00	28.83	30.08	E	7.7	17.8	21.44	77.3	81.9	88	77	
5	86	62	74.0	65.2	0	9	97	54	75	0.53	28.78	30.03	SE	8.1	30.4	24.57	77.2	79.8	85	74	
6	89	69	79.0	70.7	0	14	95	59	77	0.00	28.72	29.96	SE	9.2	21.9	17.84	78.0	79.7	86	75	
7	92	76	83.6	70.3	0	19	89	47	66	0.00	28.73	29.98	SSE	11.6	27.9	23.06	79.3	83.5	90	78	
8	95	77	85.1	67.9	0	21	77	38	58	0.00	28.76	30.01	SSE	11.3	27.3	24.79	79.8	85.5	92	79	
9	96	76	85.7	68.8	0	21	75	40	58	0.00	28.75	30.00	SSE	10.3	24.3	26.49	80.7	86.8	94	80	
10	96	69	85.9	68.2	0	17	95	41	57	0.33	28.71	29.96	S	10.8	44.4	24.84	81.6	87.9	94	82	
11	93	68	78.1	71.2	0	15	96	53	81	0.05	28.70	29.94	ESE	7.1	27.3	22.96	81.3	85.0	92	79	
12	94	70	80.6	72.8	0	17	96	50	79	0.00	28.68	29.92	SE	8.8	21.0	21.93	81.5	85.2	93	79	
13	95	75	84.0	74.0	0	20	94	50	74	0.00	28.66	29.90	SE	11.3	25.1	22.90	82.0	86.8	93	81	
14	95	76	84.3	72.1	0	20	86	46	68	0.00	28.63	29.87	SE	8.3	20.0	24.52	83.0	87.8	95	82	
15	95	75	83.8	73.4	0	20	89	50	72	0.00	28.73	29.98	ENE	7.0	18.6	24.01	83.7	88.4	95	82	
16	92	74	81.9	72.6	0	18	92	58	74	0.01	28.82	30.07	ENE	6.8	23.2	16.92	83.1	87.1	91	83	
17	92	70	80.5	65.1	0	16	90	38	62	0.00	28.87	30.12	NE	4.6	20.2	25.28	82.8	86.9	94	80	
18	90	65	78.2	60.6	0	13	85	32	58	0.00	28.83	30.08	NE	5.5	17.5	25.98	81.7	86.4	93	80	
19	88	60	74.7	57.8	0	9	94	30	60	0.00	28.76	30.01	NE	4.7	15.6	25.95	80.3	85.1	92	78	
20	90	63	77.0	59.8	0	12	86	33	58	0.00	28.69	29.93	S	5.2	15.9	25.42	80.2	85.1	93	78	
21	92*	66*	78.9*	60.3*	0*	14*	80*	33*	55*	0.00*	28.67*	29.91*	S *	5.5*	17.8*	NA	80.3*	85.5*	93*	79*	
22	93	63	79.5	59.7	0	13	90	32	53	0.00	28.69	29.94	SE	5.1	17.1	24.93	80.3	85.5	93	78	
23	94	70	81.7	61.0	0	17	82	30	52	0.00	28.76	30.01	SSE	6.3	24.9	24.83	80.4	86.0	93	79	
24	94	71	82.2	61.6	0	18	75	32	52	0.00	28.81	30.06	SSE	6.3	19.0	23.69	80.8	86.4	93	80	
25	95	65	81.3	60.4	0	15	84	25	53	0.00	28.77	30.02	SSE	4.8	19.7	25.14	80.8	86.2	93	79	
26	92	71	79.8	67.5	0	17	84	44	67	0.00	28.69	29.94	SE	7.5	32.1	21.30	81.0	86.4	92	81	
27	91	66	75.1	68.2	0	13	95	48	81	0.54	28.62	29.86	S	4.7	28.0	16.58	79.8	83.6	90	80	
28	101	67	84.3	69.7	0	19	98	35	66	0.00	28.54	29.78	SSE	6.3	18.5	23.79	80.0	83.0	92	75	
29	91	74	82.2	72.3	0	18	85	59	73	0.00	28.59	29.83	NNE	8.8	20.0	20.31	81.6	86.0	93	81	
30	92	70	81.0	70.5	0	16	97	49	72	0.11	28.53	29.77	SSE	6.6	23.5	22.93	81.2	85.6	93	79	
31	90	69	79.2	71.9	0	15	97	57	79	3.58	28.52	29.76	S	9.0	43.8	12.45	79.4	83.1	89	79	
	92*	69*	80.1*	66.4*	<- Monthly Averages ->						28.72*	29.96*	SSE*	7.2*	44.4*	22.96*	80.5*	85.0*	92*	79*	
Temperature - Highest: 101*							Degree Days - Total HDD: 0*					Number of Days With:									
Lowest: 60*							Total CDD: 471*					Tmax ≥ 90: 25* Rainfall ≥ 0.01 inch: 7*									
Rainfall: Monthly Total: 5.15* in.							Humidity - Highest: 98*					Tmax ≤ 32: 0* Rainfall ≥ 0.10 inch: 5*									
Greatest 24 Hr: 3.58* in.							Lowest: 25*					Tmin ≤ 32: 0* Avg Wind Speed ≥ 10 mph: 5*									
												Tmin ≤ 0: 0* Max Wind Speed ≥ 30 mph: 4*									

Figure 16 August Mesonet Data