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***Lake Thunderbird TMDL Monitoring Plan Implementation:  
Sample Year (SY) 2017- June Report***

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**SY2017 Monthly Report**

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*Lake Thunderbird TMDL Monitoring Plan Implementation:*

*June 2017 Monitoring Report*

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

Sampling for June 2017 occurred on the sixth and was considered a base flow collection. Water samples were collected at all ten locations, in addition to discharge measurements being conducted, with the exception of LDB-1, LT-1, and JB-1. Discharge was not measured at these locations as a result of low water levels. Mesonet data for Norman shows 0.20 inches of precipitation occurring in the 72 hours prior to sampling, and no precipitation occurring on the sixth, or in the 72 hours after the sampling event. The total rainfall amount in Norman for the month of June was 0.66 inches. All water level gages were operational for the month, with the exception of LDB-1. The station was vandalized earlier in the month, but has since been repaired and is transmitting data as expected.

## RESULTS

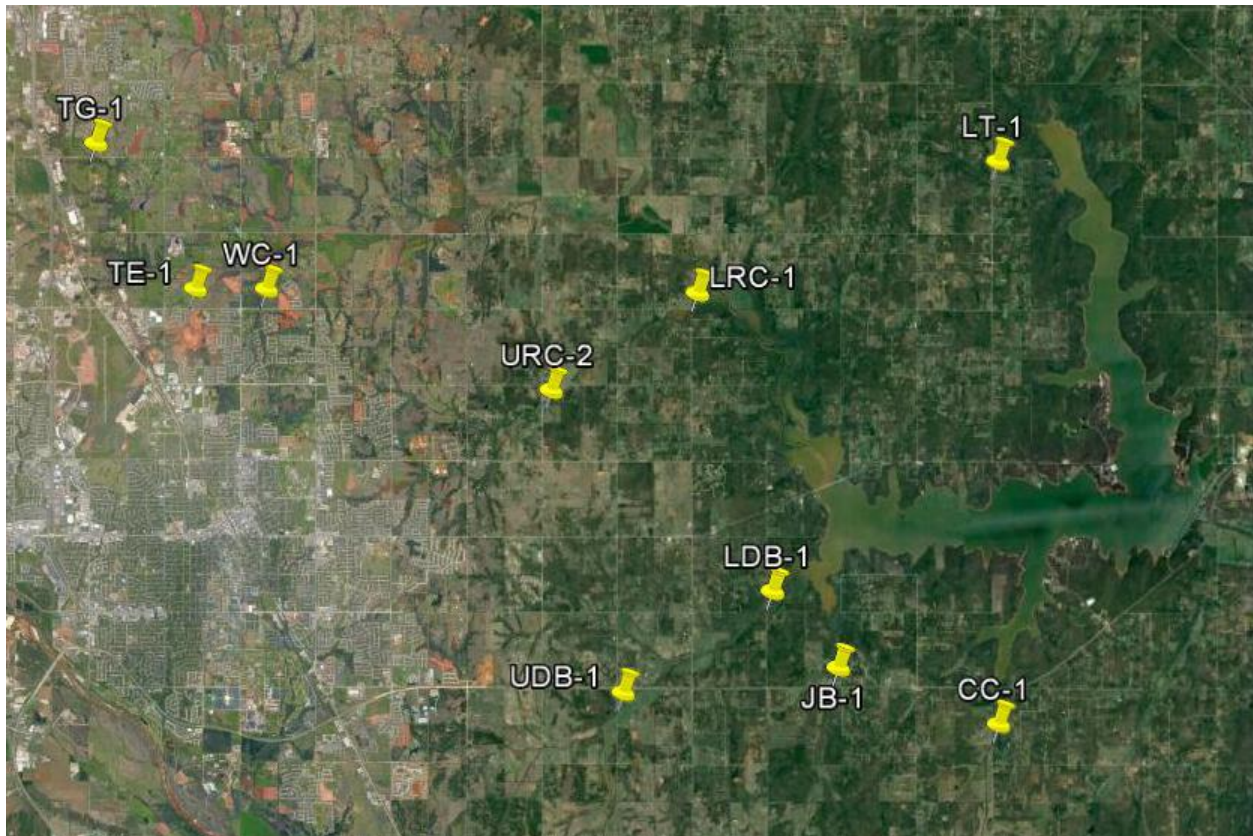


Figure 1 Monitoring Station Map

## Field Data Form

**Field Measurement Record**

**Reviewed By:** \_\_\_\_\_ **SD** \_\_\_\_\_

Station	Date	Time	Field Crew	Temp C°	DO mg/L	SpC µS	pH	Turb (NTU)	Notes
cc-1	6/6/2017	14:05	jw	23.5	7.7	624.0	7.8	10.0	
tg-1	6/6/2017	17:10	jw	N/A	N/A	N/A	N/A	0.0	Field Blank
lt-1	6/6/2017	9:00	jw	20.9	2.0	503.0	6.9	14.0	channel disconnected, no flow taken
lrc-1	6/6/2017	9:55	jw	22.3	5.1	737.0	7.5	9.0	
urc-2	6/6/2017	10:45	jw	23.8	8.5	686.0	7.3	12.0	
wc-1	6/6/2017	11:30	jw	22.7	5.5	971.0	7.5	8.0	RP1 not over water, used RP2
te-1	6/6/2017	12:10	jw	24.4	5.6	914.0	7.5	24.0	
tg-1	6/6/2017	13:10	jw	26.1	10.6	976.0	7.8	8.0	
jb-1	6/6/2017	14:30	jw	23.8	7.3	998.0	7.5	10.0	visible flow less than 0.1 cfs
ldb-1	6/6/2017	14:55	jw	23.8	7.1	990.0	7.8	18.0	negative visual flow
udb-1	6/6/2017	15:30	jw	24.1	9.5	953.0	7.9	7.0	

Table 1 Field Data Form

Site Name	TKN (mg/L)	Nitrate/Nitrite (mg/L)	TP (mg/L)	TSS (mg/L)
TG-1	0.465	0.063	0.043	19.8
CC-1	0.832	0.251	0.051	8.70
JB-1	0.614	0.070	0.068	11.4
UDB-1	0.245	0.299	0.031	5.20
LDB-1	0.105	<0.050	0.029	18.0
LRC-1	0.470	<0.050	0.028	7.60
URC-2	0.295	<0.050	0.038	18.0
WC-1	0.443	<0.050	0.064	10.9
TE-1	0.559	<0.050	0.041	17.8
LT-1	0.678	<0.050	0.094	7.40

Table 2 Laboratory Analysis Summary

Site Name	TKN	Nitrate/Nitrite	TP	TSS
Field Blank	<0.050 mg/L	<0.050 mg/L	<0.015 mg/L	<2.50 mg/L
Duplicate	0.432 mg/L	0.269 mg/L	0.052 mg/L	8.20 mg/L
Duplicate RPD	63.29%* <sub>1</sub>	6.92%	1.94%	5.92%

Table 3 QA/QC Data Where Subscript 1 Denotes a Level 4 RPD

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.

SITE	TG-1	CC-1	JB-1	UDB-1	LDB-1	LRC-1	URC-2	WC-1	TE-1	LT-1
STAGE (ft)	9.19	0.40	15.79	17.59	17.25	17.59	11.27	9.26	11.56	2.1
DISCHARGE (ft <sup>3</sup> /s)	0.890	0.702	N/A	0.648	N/A	0.354	-0.016	-0.014	-0.028	N/A

Table 4 Station Discharge Summary

# Discharge Measurement Summary

Date Generated: Mon Jun 26 2017

## File Information

File Name WC10606.WAD  
Start Date and Time 2017/06/06 09:11:08

## Site Details

Site Name WC1  
Operator(s) JW

## System Information

Sensor Type FlowTracker  
Serial # P4713  
CPU Firmware Version 3.9  
Software Ver 2.30  
Mounting Correction 0.0%

## Units (English Units)

Distance ft  
Velocity ft/s  
Area ft<sup>2</sup>  
Discharge cfs

## Discharge Uncertainty

Category	ISO	Stats
Accuracy	1.0%	1.0%
Depth	0.9%	3.8%
Velocity	16.4%	70.4%
Width	0.3%	0.3%
Method	4.6%	-
# Stations	3.1%	-
<b>Overall</b>	<b>17.4%</b>	<b>70.5%</b>

## Summary

Averaging Int. 40 # Stations 16  
Start Edge LEW Total Width 12.500  
Mean SNR 40.7 dB Total Area 3.824  
Mean Temp 72.50 °F Mean Depth 0.306  
Disch. Equation Mid-Section Mean Velocity -0.0037  
**Total Discharge -0.0143**

## Supplemental Data

#	Time	Location	Gauge Height	Rated Flow	Comments
1	Tue Jun 6 09:38:37 CDT 2017	12.500	9.260		

## Measurement Results

St	Clock	Loc	Method	Depth	%Dep	MeasD	Vel	CorrFact	MeanV	Area	Flow	%Q
0	09:11	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>09:11</i>	<i>1.00</i>	<i>0.6</i>	<i>0.300</i>	<i>0.6</i>	<i>0.120</i>	<i>-0.0043</i>	<i>1.00</i>	<i>-0.0043</i>	<i>0.225</i>	<i>-0.0010</i>	<i>6.7</i>
<i>2</i>	<i>09:12</i>	<i>1.50</i>	<i>0.6</i>	<i>0.300</i>	<i>0.6</i>	<i>0.120</i>	<i>-0.0013</i>	<i>1.00</i>	<i>-0.0013</i>	<i>0.150</i>	<i>-0.0002</i>	<i>1.4</i>
<i>3</i>	<i>09:13</i>	<i>2.00</i>	<i>0.6</i>	<i>0.300</i>	<i>0.6</i>	<i>0.120</i>	<i>-0.0052</i>	<i>1.00</i>	<i>-0.0052</i>	<i>0.825</i>	<i>-0.0043</i>	<i>30.2</i>
<i>4</i>	<i>09:17</i>	<i>7.00</i>	<i>0.6</i>	<i>0.300</i>	<i>0.6</i>	<i>0.120</i>	<i>-0.0059</i>	<i>1.00</i>	<i>-0.0059</i>	<i>0.825</i>	<i>-0.0049</i>	<i>34.0</i>
5	09:18	7.50	0.6	0.300	0.6	0.120	-0.0112	1.00	-0.0112	0.150	-0.0017	11.7
6	09:20	8.00	0.6	0.300	0.6	0.120	0.0112	1.00	0.0112	0.150	0.0017	-11.7
7	09:20	8.50	0.6	0.300	0.6	0.120	0.0043	1.00	0.0043	0.150	0.0006	-4.5
8	09:22	9.00	0.6	0.300	0.6	0.120	-0.0049	1.00	-0.0049	0.150	-0.0007	5.2
9	09:22	9.50	0.6	0.300	0.6	0.120	-0.0026	1.00	-0.0026	0.150	-0.0004	2.7
10	09:23	10.00	0.6	0.300	0.6	0.120	0.0007	1.00	0.0007	0.150	0.0001	-0.7
11	09:24	10.50	0.6	0.400	0.6	0.160	0.0167	1.00	0.0167	0.200	0.0033	-23.4
12	09:27	11.00	0.6	0.500	0.6	0.200	-0.0072	1.00	-0.0072	0.250	-0.0018	12.6
<i>13</i>	<i>09:28</i>	<i>11.50</i>	<i>0.6</i>	<i>0.500</i>	<i>0.6</i>	<i>0.200</i>	<i>-0.0131</i>	<i>1.00</i>	<i>-0.0131</i>	<i>0.250</i>	<i>-0.0033</i>	<i>22.9</i>
14	09:29	12.00	0.6	0.400	0.6	0.160	-0.0092	1.00	-0.0092	0.200	-0.0018	12.8
15	09:29	12.50	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 2 Discharge Summary WC-1

# Discharge Measurement Summary

Date Generated: Mon Jun 26 2017

## File Information

File Name TE10606.WAD  
 Start Date and Time 2017/06/06 09:53:57

## Site Details

Site Name TE1  
 Operator(s) JW

## System Information

Sensor Type FlowTracker  
 Serial # P4713  
 CPU Firmware Version 3.9  
 Software Ver 2.30  
 Mounting Correction 0.0%

## Units (English Units)

Distance ft  
 Velocity ft/s  
 Area ft<sup>2</sup>  
 Discharge cfs

## Discharge Uncertainty

Category	ISO	Stats
Accuracy	1.0%	1.0%
Depth	0.8%	6.1%
Velocity	11.9%	78.3%
Width	0.5%	0.5%
Method	7.4%	-
# Stations	3.0%	-
<b>Overall</b>	<b>14.4%</b>	<b>78.5%</b>

## Summary

Averaging Int. 40 # Stations 17  
 Start Edge LEW Total Width 8.500  
 Mean SNR 42.6 dB Total Area 6.875  
 Mean Temp 72.95 °F Mean Depth 0.809  
 Disch. Equation Mid-Section Mean Velocity -0.0040  
**Total Discharge -0.0277**

## Supplemental Data

#	Time	Location	Gauge Height	Rated Flow	Comments
1	Tue Jun 6 10:15:40 CDT 2017	8.500	11.560		

## Measurement Results

St	Clock	Loc	Method	Depth	%Dep	MeasD	Vel	CorrFact	MeanV	Area	Flow	%Q
0	09:53	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>09:54</i>	<i>1.00</i>	<i>0.6</i>	<i>0.500</i>	<i>0.6</i>	<i>0.200</i>	<i>0.0003</i>	<i>1.00</i>	<i>0.0003</i>	<i>0.375</i>	<i>0.0001</i>	<i>-0.4</i>
2	09:56	1.50	0.6	0.900	0.6	0.360	-0.0075	1.00	-0.0075	0.450	-0.0034	12.3
<i>3</i>	<i>09:57</i>	<i>2.00</i>	<i>0.6</i>	<i>1.000</i>	<i>0.6</i>	<i>0.400</i>	<i>-0.0233</i>	<i>1.00</i>	<i>-0.0233</i>	<i>0.500</i>	<i>-0.0116</i>	<i>42.0</i>
4	09:58	2.50	0.6	1.100	0.6	0.440	-0.0003	1.00	-0.0003	0.550	-0.0002	0.7
5	09:59	3.00	0.6	1.300	0.6	0.520	-0.0052	1.00	-0.0052	0.650	-0.0034	12.3
6	10:00	3.50	0.6	1.200	0.6	0.480	0.0082	1.00	0.0082	0.600	0.0049	-17.8
<i>7</i>	<i>10:01</i>	<i>4.00</i>	<i>0.6</i>	<i>1.200</i>	<i>0.6</i>	<i>0.480</i>	<i>-0.0240</i>	<i>1.00</i>	<i>-0.0240</i>	<i>0.600</i>	<i>-0.0144</i>	<i>51.9</i>
<i>8</i>	<i>10:02</i>	<i>4.50</i>	<i>0.6</i>	<i>1.100</i>	<i>0.6</i>	<i>0.440</i>	<i>-0.0272</i>	<i>1.00</i>	<i>-0.0272</i>	<i>0.550</i>	<i>-0.0150</i>	<i>54.1</i>
9	10:03	5.00	0.6	1.000	0.6	0.400	-0.0033	1.00	-0.0033	0.500	-0.0016	5.9
10	10:05	5.50	0.6	0.900	0.6	0.360	-0.0075	1.00	-0.0075	0.450	-0.0034	12.3
11	10:06	6.00	0.6	0.900	0.6	0.360	0.0043	1.00	0.0043	0.450	0.0019	-6.9
12	10:07	6.50	0.6	0.800	0.6	0.320	0.0085	1.00	0.0085	0.400	0.0034	-12.3
<i>13</i>	<i>10:08</i>	<i>7.00</i>	<i>0.6</i>	<i>0.700</i>	<i>0.6</i>	<i>0.280</i>	<i>0.0236</i>	<i>1.00</i>	<i>0.0236</i>	<i>0.350</i>	<i>0.0083</i>	<i>-29.9</i>
14	10:09	7.50	0.6	0.500	0.6	0.200	0.0036	1.00	0.0036	0.250	0.0009	-3.3
15	10:10	8.00	0.6	0.400	0.6	0.160	0.0289	1.00	0.0289	0.200	0.0058	-20.8
16	10:10	8.50	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 Summary TE-1



# Discharge Measurement Summary

Date Generated: Mon Jun 26 2017

## File Information

File Name TG10606.WAD  
Start Date and Time 2017/06/06 10:48:01

## Site Details

Site Name TG1  
Operator(s) JW

## System Information

Sensor Type FlowTracker  
Serial # P4713  
CPU Firmware Version 3.9  
Software Ver 2.30  
Mounting Correction 0.0%

## Units (English Units)

Distance ft  
Velocity ft/s  
Area ft<sup>2</sup>  
Discharge cfs

## Discharge Uncertainty

Category	ISO	Stats
Accuracy	1.0%	1.0%
Depth	0.4%	2.1%
Velocity	0.8%	4.7%
Width	0.1%	0.1%
Method	2.0%	-
# Stations	3.0%	-
<b>Overall</b>	<b>3.8%</b>	<b>5.2%</b>

## Summary

Averaging Int.	40	# Stations	17
Start Edge	LEW	Total Width	12.000
Mean SNR	25.7 dB	Total Area	3.699
Mean Temp	75.35 °F	Mean Depth	0.308
Disch. Equation	Mid-Section	Mean Velocity	0.2405
		<b>Total Discharge</b>	<b>0.8898</b>

## Supplemental Data

#	Time	Location	Gauge Height	Rated Flow	Comments
1	Tue Jun 6 11:10:05 CDT 2017	12.000	9.190		

## Measurement Results

St	Clock	Loc	Method	Depth	%Dep	MeasD	Vel	CorrFact	MeanV	Area	Flow	%Q
0	10:48	0.00	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0
1	10:48	3.00	0.6	0.300	0.6	0.120	0.2077	1.00	0.2077	0.525	0.1090	12.2
2	10:50	3.50	0.6	0.400	0.6	0.160	0.2740	1.00	0.2740	0.200	0.0548	6.2
3	10:51	4.00	0.6	0.400	0.6	0.160	0.2946	1.00	0.2946	0.200	0.0589	6.6
4	10:52	4.50	0.6	0.400	0.6	0.160	0.3094	1.00	0.3094	0.200	0.0619	7.0
5	10:53	5.00	0.6	0.500	0.6	0.200	0.2549	1.00	0.2549	0.250	0.0637	7.2
6	10:54	5.50	0.6	0.500	0.6	0.200	0.2303	1.00	0.2303	0.250	0.0576	6.5
7	10:55	6.00	0.6	0.500	0.6	0.200	0.2123	1.00	0.2123	0.250	0.0531	6.0
8	10:56	6.50	0.6	0.500	0.6	0.200	0.2431	1.00	0.2431	0.250	0.0608	6.8
9	10:57	7.00	0.6	0.500	0.6	0.200	0.2917	1.00	0.2917	0.250	0.0729	8.2
10	10:58	7.50	0.6	0.500	0.6	0.200	0.3048	1.00	0.3048	0.250	0.0762	8.6
11	11:00	8.00	0.6	0.400	0.6	0.160	0.1785	1.00	0.1785	0.200	0.0357	4.0
12	11:01	8.50	0.6	0.400	0.6	0.160	0.2608	1.00	0.2608	0.200	0.0522	5.9
13	11:02	9.00	0.6	0.300	0.6	0.120	0.1693	1.00	0.1693	0.150	0.0254	2.9
14	11:03	9.50	0.6	0.300	0.6	0.120	0.2185	1.00	0.2185	0.150	0.0328	3.7
15	11:04	10.00	0.6	0.300	0.6	0.120	0.2001	1.00	0.2001	0.375	0.0750	8.4
16	11:04	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 4 Discharge Summary TG-1

# Discharge Measurement Summary

Date Generated: Mon Jun 26 2017

## File Information

File Name CC10606.WAD  
Start Date and Time 2017/06/06 11:51:29

## Site Details

Site Name CC1  
Operator(s) JW

## System Information

Sensor Type FlowTracker  
Serial # P4713  
CPU Firmware Version 3.9  
Software Ver 2.30  
Mounting Correction 0.0%

## Units (English Units)

Distance ft  
Velocity ft/s  
Area ft<sup>2</sup>  
Discharge cfs

## Discharge Uncertainty

Category	ISO	Stats
Accuracy	1.0%	1.0%
Depth	0.6%	8.6%
Velocity	2.4%	11.1%
Width	0.2%	0.2%
Method	3.2%	-
# Stations	5.8%	-
<b>Overall</b>	<b>7.1%</b>	<b>14.1%</b>

## Summary

Averaging Int.	40	# Stations	9
Start Edge	LEW	Total Width	4.500
Mean SNR	36.7 dB	Total Area	1.775
Mean Temp	71.11 °F	Mean Depth	0.394
Disch. Equation	Mid-Section	Mean Velocity	0.3954
		<b>Total Discharge</b>	<b>0.7018</b>

## Supplemental Data

#	Time	Location	Gauge Height	Rated Flow	Comments
1	Tue Jun 6 11:50:16 CDT 2017	0.000	0.400		

## Measurement Results

St	Clock	Loc	Method	Depth	%Dep	MeasD	Vel	CorrFact	MeanV	Area	Flow	%Q
0	11:51	0.00	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0
1	11:51	1.00	0.6	0.300	0.6	0.120	0.2188	1.00	0.2188	0.225	0.0492	7.0
2	11:54	1.50	0.6	0.500	0.6	0.200	0.2674	1.00	0.2674	0.250	0.0668	9.5
3	11:56	2.00	0.6	0.500	0.6	0.200	0.2300	1.00	0.2300	0.250	0.0575	8.2
4	11:57	2.50	0.6	0.600	0.6	0.240	0.2635	1.00	0.2635	0.300	0.0790	11.3
5	11:58	3.00	0.6	0.700	0.6	0.280	0.5673	1.00	0.5673	0.350	0.1986	28.3
6	11:59	3.50	0.6	0.400	0.6	0.160	0.7877	1.00	0.7877	0.200	0.1575	22.4
7	12:00	4.00	0.6	0.400	0.6	0.160	0.4656	1.00	0.4656	0.200	0.0931	13.3
8	12:00	4.50	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 5 Discharge Summary CC-1

# Discharge Measurement Summary

Date Generated: Mon Jun 26 2017

## File Information

File Name LRC10606.WAD  
Start Date and Time 2017/06/06 07:36:15

## Site Details

Site Name LRC  
Operator(s) JW

## System Information

Sensor Type FlowTracker  
Serial # P4713  
CPU Firmware Version 3.9  
Software Ver 2.30  
Mounting Correction 0.0%

## Units (English Units)

Distance ft  
Velocity ft/s  
Area ft<sup>2</sup>  
Discharge cfs

## Discharge Uncertainty

Category	ISO	Stats
Accuracy	1.0%	1.0%
Depth	0.5%	2.5%
Velocity	4.3%	10.8%
Width	0.2%	0.2%
Method	2.7%	-
# Stations	4.2%	-
<b>Overall</b>	<b>6.7%</b>	<b>11.1%</b>

## Summary

Averaging Int.	40	# Stations	12
Start Edge	LEW	Total Width	6.000
Mean SNR	28.1 dB	Total Area	2.375
Mean Temp	69.21 °F	Mean Depth	0.396
Disch. Equation	Mid-Section	Mean Velocity	0.1489
		<b>Total Discharge</b>	<b>0.3535</b>

## Supplemental Data

#	Time	Location	Gauge Height	Rated Flow	Comments
1	Tue Jun 6 08:04:03 CDT 2017	6.000	17.590		

## Measurement Results

St	Clock	Loc	Method	Depth	%Dep	MeasD	Vel	CorrFact	MeanV	Area	Flow	%Q
0	07:36	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>07:36</i>	<i>1.00</i>	<i>0.6</i>	<i>0.300</i>	<i>0.6</i>	<i>0.120</i>	<i>-0.0089</i>	<i>1.00</i>	<i>-0.0089</i>	<i>0.225</i>	<i>-0.0020</i>	<i>-0.6</i>
<i>2</i>	<i>07:37</i>	<i>1.50</i>	<i>0.6</i>	<i>0.300</i>	<i>0.6</i>	<i>0.120</i>	<i>0.1348</i>	<i>1.00</i>	<i>0.1348</i>	<i>0.150</i>	<i>0.0202</i>	<i>5.7</i>
<i>3</i>	<i>07:38</i>	<i>2.00</i>	<i>0.6</i>	<i>0.300</i>	<i>0.6</i>	<i>0.120</i>	<i>0.1742</i>	<i>1.00</i>	<i>0.1742</i>	<i>0.150</i>	<i>0.0261</i>	<i>7.4</i>
<i>4</i>	<i>07:39</i>	<i>2.50</i>	<i>0.6</i>	<i>0.300</i>	<i>0.6</i>	<i>0.120</i>	<i>0.1890</i>	<i>1.00</i>	<i>0.1890</i>	<i>0.150</i>	<i>0.0283</i>	<i>8.0</i>
<i>5</i>	<i>07:41</i>	<i>3.00</i>	<i>0.6</i>	<i>0.400</i>	<i>0.6</i>	<i>0.160</i>	<i>0.0692</i>	<i>1.00</i>	<i>0.0692</i>	<i>0.200</i>	<i>0.0138</i>	<i>3.9</i>
<i>6</i>	<i>07:42</i>	<i>3.50</i>	<i>0.6</i>	<i>0.500</i>	<i>0.6</i>	<i>0.200</i>	<i>0.1834</i>	<i>1.00</i>	<i>0.1834</i>	<i>0.250</i>	<i>0.0458</i>	<i>13.0</i>
<i>7</i>	<i>07:43</i>	<i>4.00</i>	<i>0.6</i>	<i>0.600</i>	<i>0.6</i>	<i>0.240</i>	<i>0.1434</i>	<i>1.00</i>	<i>0.1434</i>	<i>0.300</i>	<i>0.0430</i>	<i>12.2</i>
<i>8</i>	<i>07:44</i>	<i>4.50</i>	<i>0.6</i>	<i>0.700</i>	<i>0.6</i>	<i>0.280</i>	<i>0.1696</i>	<i>1.00</i>	<i>0.1696</i>	<i>0.350</i>	<i>0.0594</i>	<i>16.8</i>
<i>9</i>	<i>07:45</i>	<i>5.00</i>	<i>0.6</i>	<i>0.700</i>	<i>0.6</i>	<i>0.280</i>	<i>0.1850</i>	<i>1.00</i>	<i>0.1850</i>	<i>0.350</i>	<i>0.0648</i>	<i>18.3</i>
<i>10</i>	<i>07:46</i>	<i>5.50</i>	<i>0.6</i>	<i>0.500</i>	<i>0.6</i>	<i>0.200</i>	<i>0.2159</i>	<i>1.00</i>	<i>0.2159</i>	<i>0.250</i>	<i>0.0540</i>	<i>15.3</i>
<i>11</i>	<i>07:46</i>	<i>6.00</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 6 Discharge Summary LRC-1

# Discharge Measurement Summary

Date Generated: Mon Jun 26 2017

## File Information

File Name UDB10606.WAD  
Start Date and Time 2017/06/06 13:23:51

## Site Details

Site Name UDB1  
Operator(s) JW

## System Information

Sensor Type FlowTracker  
Serial # P4713  
CPU Firmware Version 3.9  
Software Ver 2.30  
Mounting Correction 0.0%

## Units (English Units)

Distance ft  
Velocity ft/s  
Area ft<sup>2</sup>  
Discharge cfs

## Discharge Uncertainty

Category	ISO	Stats
Accuracy	1.0%	1.0%
Depth	0.4%	4.7%
Velocity	1.8%	12.5%
Width	0.1%	0.1%
Method	2.0%	-
# Stations	2.4%	-
<b>Overall</b>	<b>3.7%</b>	<b>13.4%</b>

## Summary

Averaging Int. 40 # Stations 21  
Start Edge LEW Total Width 12.500  
Mean SNR 23.2 dB Total Area 7.401  
Mean Temp 72.08 °F Mean Depth 0.592  
Disch. Equation Mid-Section Mean Velocity 0.0876  
**Total Discharge 0.6484**

## Supplemental Data

#	Time	Location	Gauge Height	Rated Flow	Comments
1	Tue Jun 6 13:34:11 CDT 2017	5.000	17.590		

## Measurement Results

St	Clock	Loc	Method	Depth	%Dep	MeasD	Vel	CorrFact	MeanV	Area	Flow	%Q
0	13:23	0.00	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0
1	13:23	0.50	0.6	0.600	0.6	0.240	0.0325	1.00	0.0325	0.300	0.0097	1.5
2	13:24	1.00	0.6	0.800	0.6	0.320	0.1135	1.00	0.1135	0.400	0.0454	7.0
3	13:26	1.50	0.6	1.000	0.6	0.400	0.1493	1.00	0.1493	0.500	0.0746	11.5
4	13:27	2.00	0.6	0.600	0.6	0.240	0.1713	1.00	0.1713	0.300	0.0514	7.9
5	13:28	2.50	0.6	0.700	0.6	0.280	0.0354	1.00	0.0354	0.350	0.0124	1.9
6	13:29	3.00	0.6	0.500	0.6	0.200	0.1627	1.00	0.1627	0.250	0.0407	6.3
7	13:30	3.50	0.6	0.600	0.6	0.240	0.1358	1.00	0.1358	0.300	0.0408	6.3
8	13:31	4.00	0.6	0.700	0.6	0.280	0.0689	1.00	0.0689	0.350	0.0241	3.7
9	13:33	4.50	0.6	0.700	0.6	0.280	0.0413	1.00	0.0413	0.350	0.0145	2.2
10	13:34	5.00	0.6	0.600	0.6	0.240	0.1549	1.00	0.1549	0.300	0.0465	7.2
11	13:35	5.50	0.6	0.700	0.6	0.280	0.1158	1.00	0.1158	0.350	0.0405	6.3
12	13:36	6.00	0.6	0.500	0.6	0.200	0.0892	1.00	0.0892	0.250	0.0223	3.4
13	13:37	6.50	0.6	0.600	0.6	0.240	0.0719	1.00	0.0719	0.300	0.0216	3.3
14	13:38	7.00	0.6	0.800	0.6	0.320	0.1004	1.00	0.1004	0.400	0.0402	6.2
15	13:39	7.50	0.6	0.500	0.6	0.200	0.0804	1.00	0.0804	0.250	0.0201	3.1
16	13:40	8.00	0.6	0.700	0.6	0.280	0.0843	1.00	0.0843	0.350	0.0295	4.6
17	13:41	8.50	0.6	0.700	0.6	0.280	0.0361	1.00	0.0361	0.350	0.0126	1.9
18	13:42	9.00	0.6	0.700	0.6	0.280	0.0564	1.00	0.0564	0.525	0.0296	4.6
19	13:44	10.00	0.6	0.700	0.6	0.280	0.0587	1.00	0.0587	1.225	0.0720	11.1
20	13:44	12.50	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 7 Discharge Summary UDB-1

# Discharge Measurement Summary

Date Generated: Mon Jun 26 2017

## File Information

File Name URC10606.WAD  
Start Date and Time 2017/06/06 08:23:49

## Site Details

Site Name LRC1  
Operator(s) JW

## System Information

Sensor Type FlowTracker  
Serial # P4713  
CPU Firmware Version 3.9  
Software Ver 2.30  
Mounting Correction 0.0%

## Units (English Units)

Distance ft  
Velocity ft/s  
Area ft<sup>2</sup>  
Discharge cfs

## Discharge Uncertainty

Category	ISO	Stats
Accuracy	1.0%	1.0%
Depth	0.3%	11.6%
Velocity	16.9%	70.1%
Width	0.3%	0.3%
Method	5.1%	-
# Stations	6.6%	-
<b>Overall</b>	<b>18.9%</b>	<b>71.0%</b>

## Summary

Averaging Int. 40 # Stations 8  
Start Edge LEW Total Width 4.000  
Mean SNR 44.5 dB Total Area 4.400  
Mean Temp 67.02 °F Mean Depth 1.100  
Disch. Equation Mid-Section Mean Velocity -0.0037  
**Total Discharge -0.0163**

## Supplemental Data

#	Time	Location	Gauge Height	Rated Flow	Comments
1	Tue Jun 6 08:45:23 CDT 2017	4.000	11.270		

## Measurement Results

St	Clock	Loc	Method	Depth	%Dep	MeasD	Vel	CorrFact	MeanV	Area	Flow	%Q
0	08:23	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>08:23</i>	<i>1.00</i>	<i>0.6</i>	<i>1.400</i>	<i>0.6</i>	<i>0.560</i>	<i>0.0013</i>	<i>1.00</i>	<i>0.0013</i>	<i>1.050</i>	<i>0.0014</i>	<i>-8.5</i>
2	08:24	1.50	0.6	1.400	0.6	0.560	-0.0082	1.00	-0.0082	0.700	-0.0057	35.3
3	08:25	2.00	0.6	1.800	0.6	0.720	-0.0049	1.00	-0.0049	0.900	-0.0044	27.2
4	08:27	2.50	0.6	1.600	0.6	0.640	0.0000	1.00	0.0000	0.800	0.0000	0.0
5	08:28	3.00	0.6	1.500	0.6	0.600	-0.0108	1.00	-0.0108	0.750	-0.0081	50.0
6	08:31	3.50	0.6	0.400	0.6	0.160	0.0033	1.00	0.0033	0.200	0.0007	-4.0
7	08:31	4.00	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 8 Discharge Summary URC-2

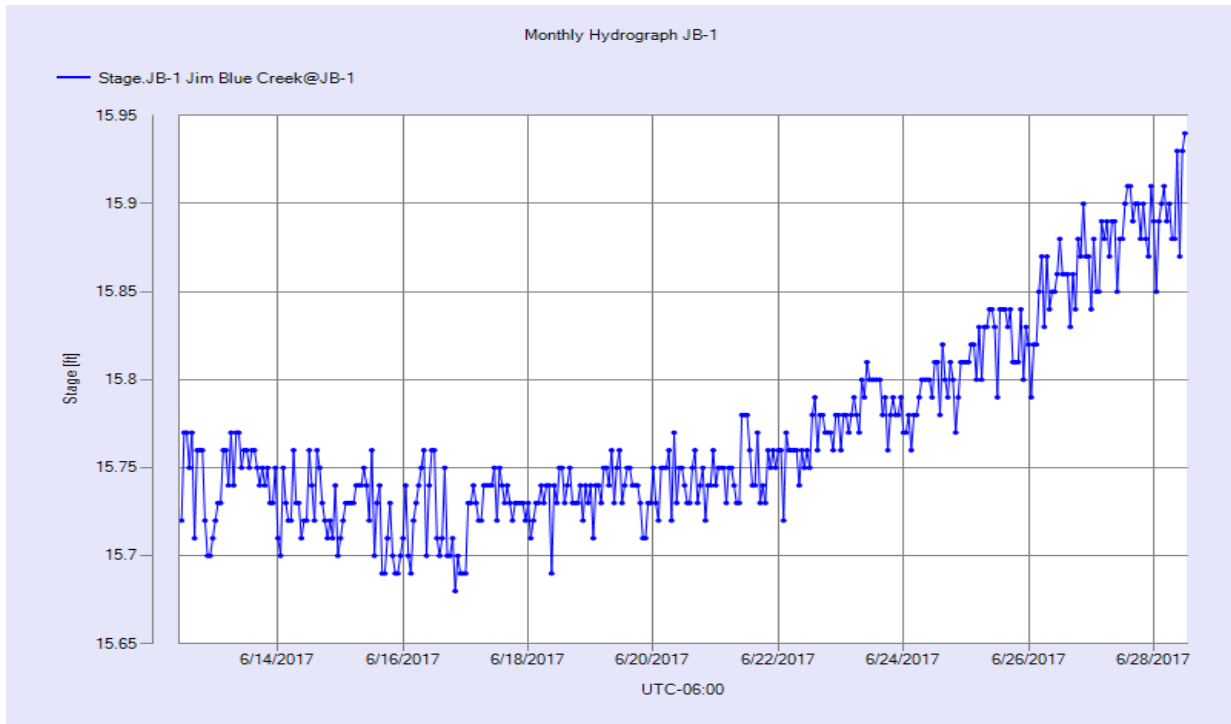


Figure 9 Monthly Hydrograph JB-1

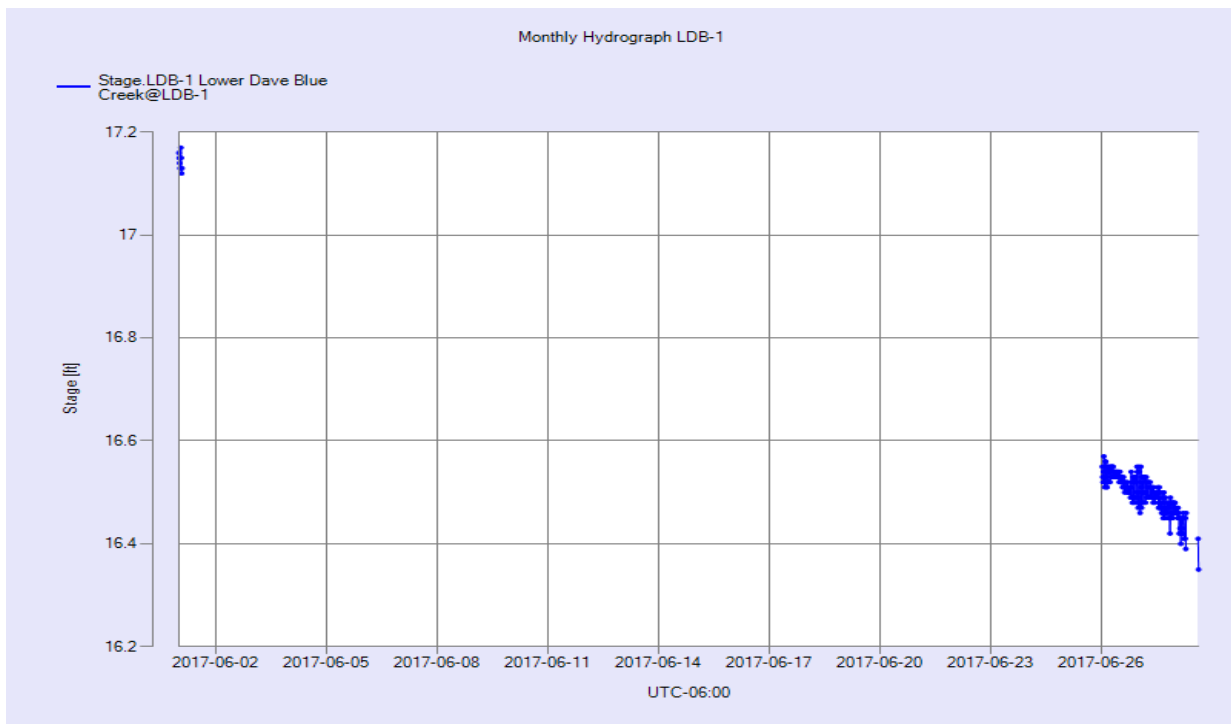


Figure 10 Monthly Hydrograph LDB-1

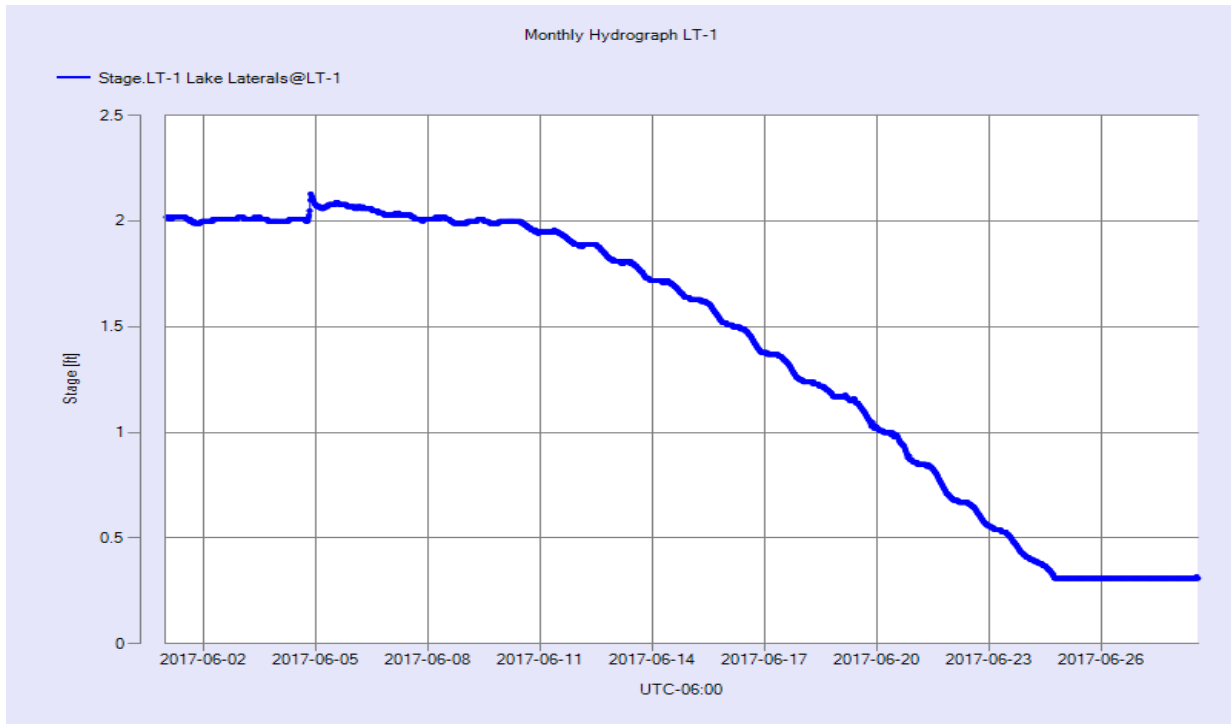


Figure 11 Monthly Hydrograph LT-1

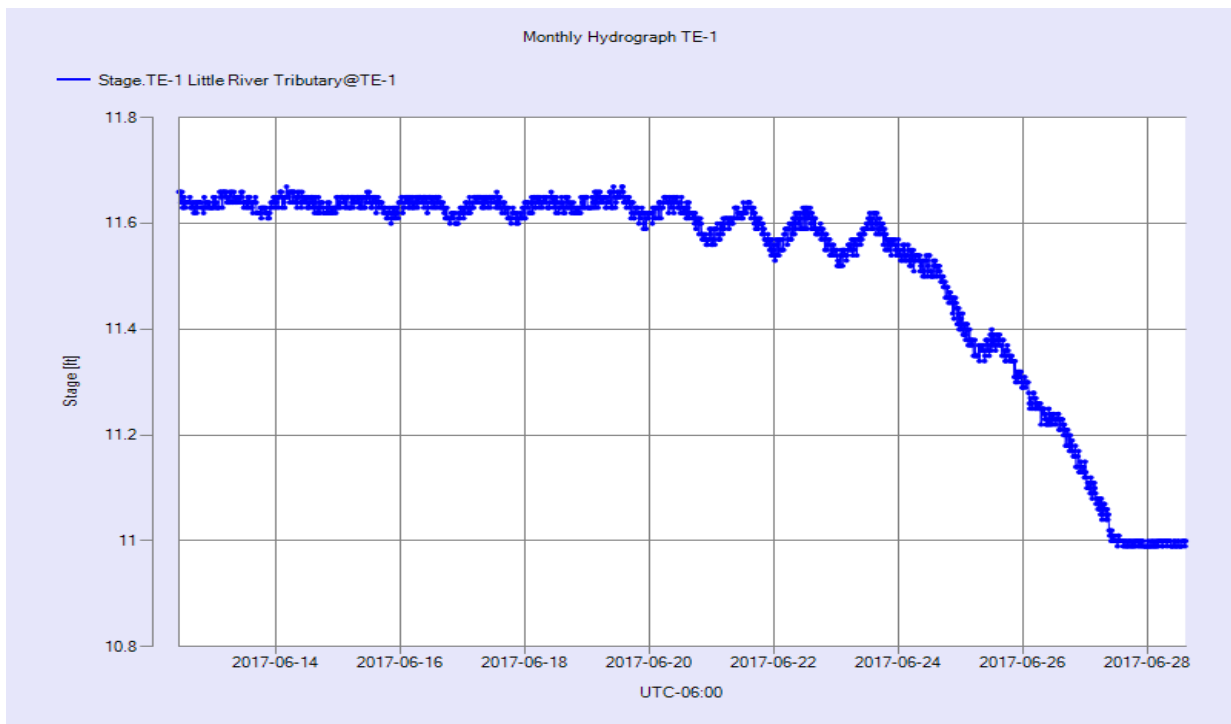


Figure 12 Monthly Hydrograph TE-1

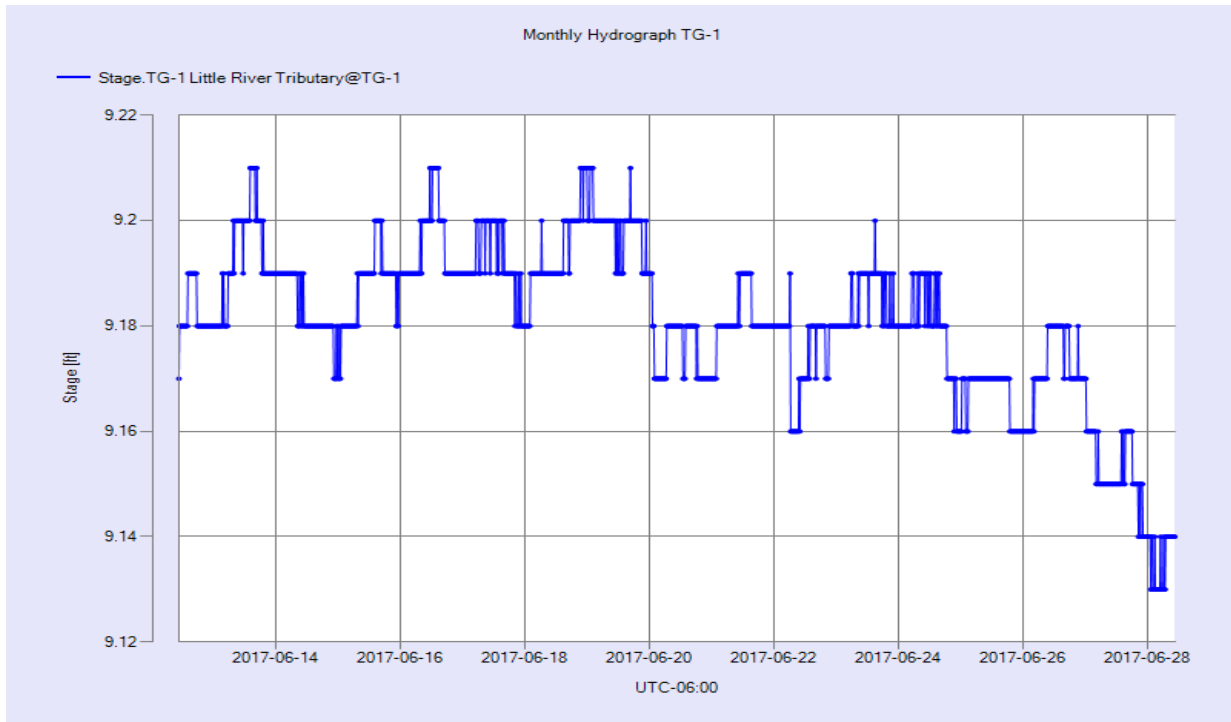


Figure 13 Monthly Hydrograph TG-1

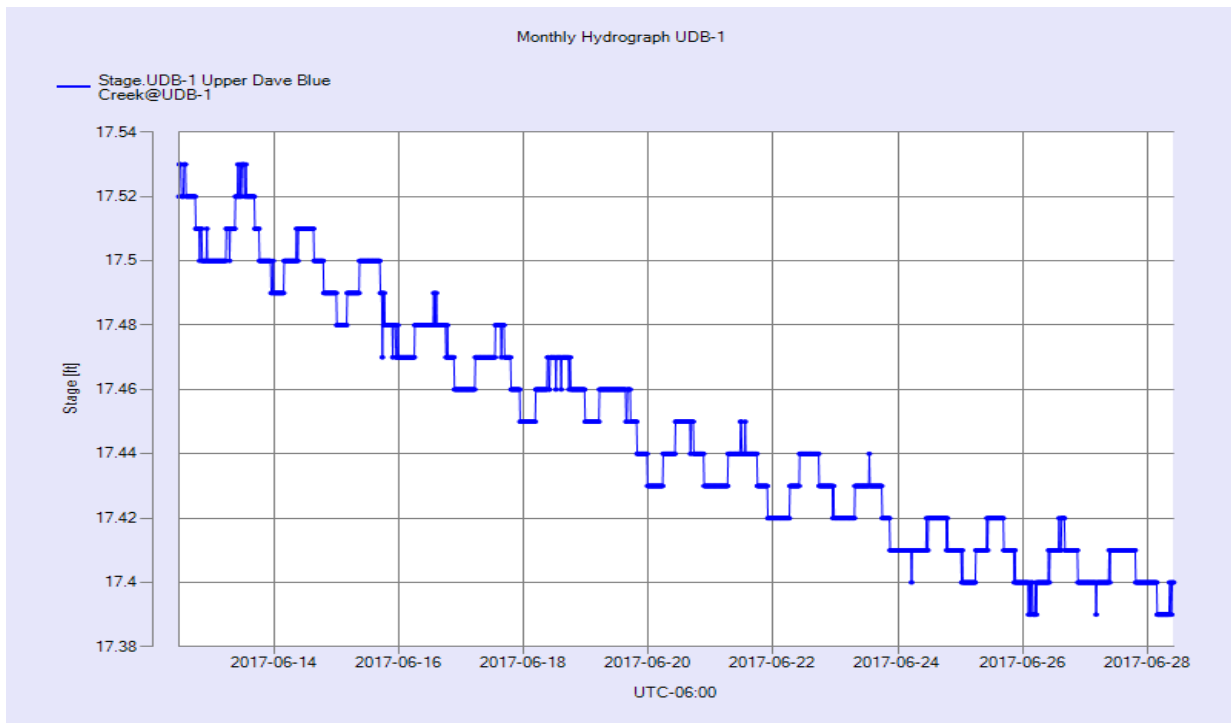


Figure 14 Monthly Hydrograph UDB-1



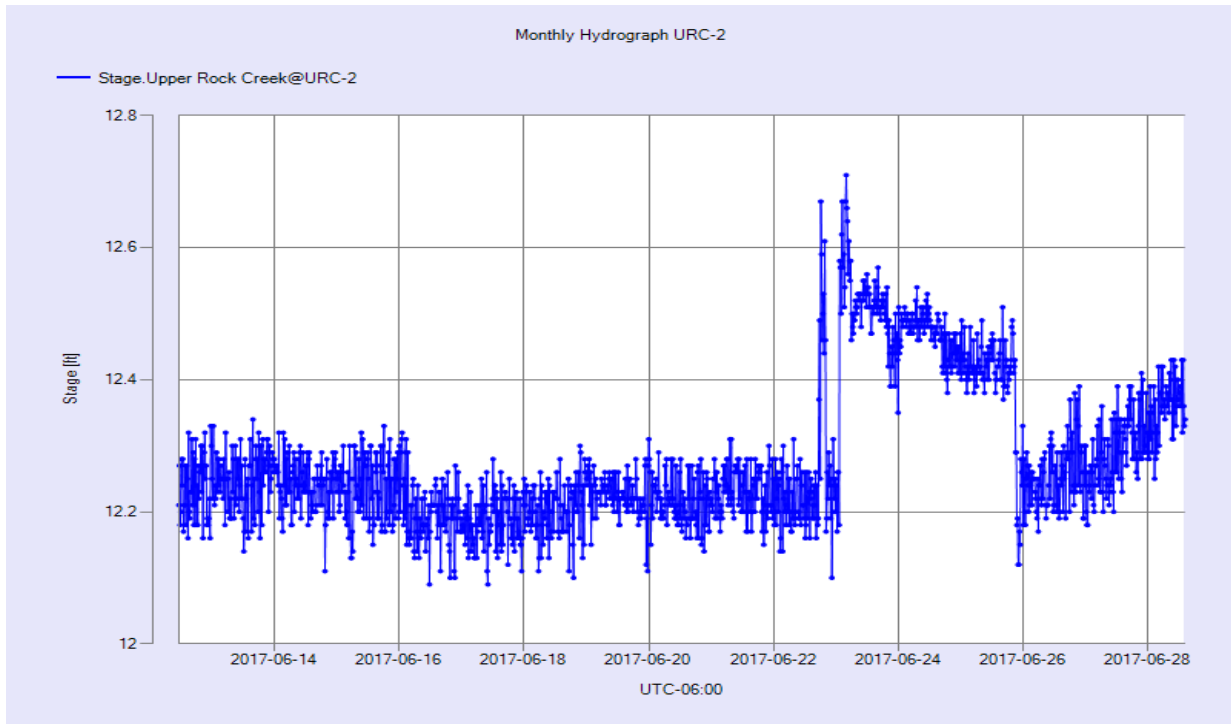


Figure 15 Monthly Hydrograph URC-2

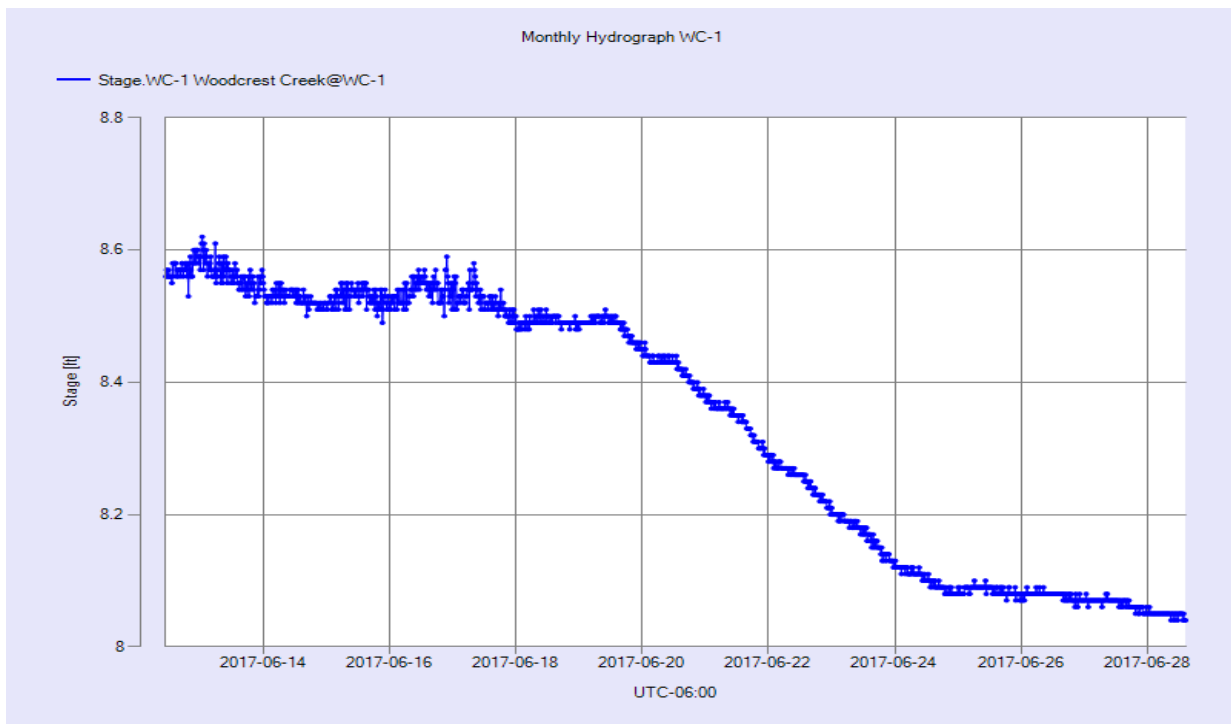


Figure 16 Monthly Hydrograph WC-1

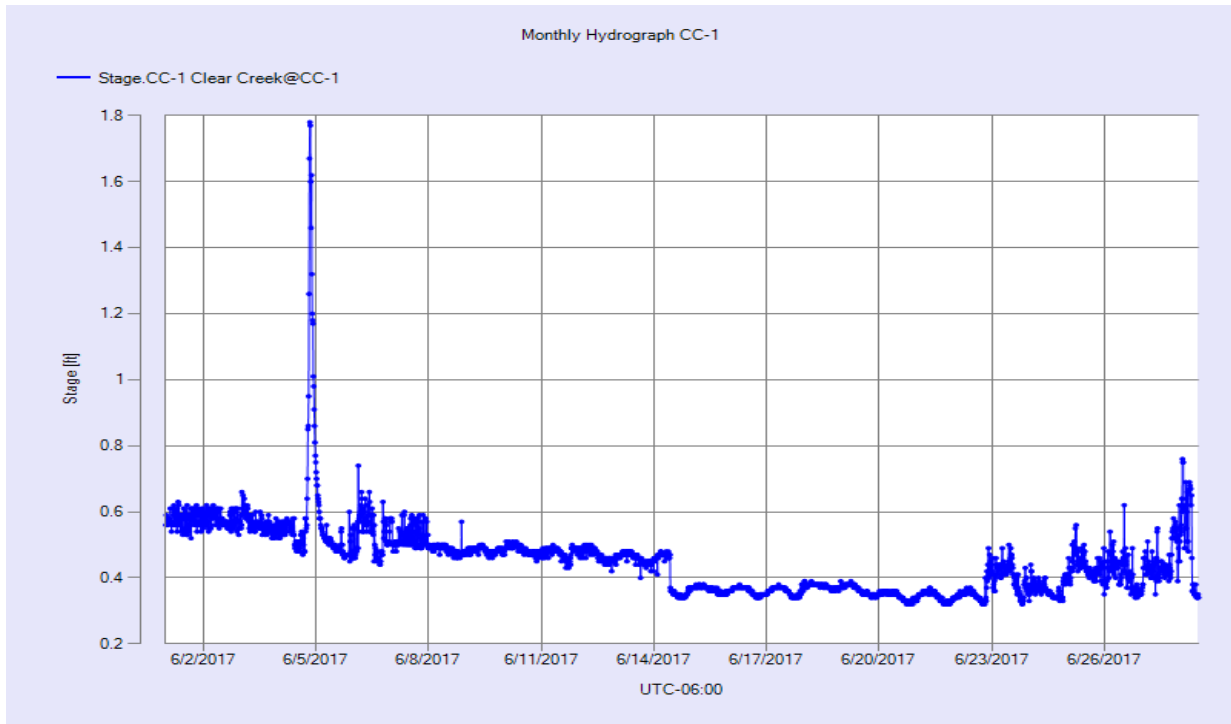


Figure 17 Monthly Hydrograph CC-1

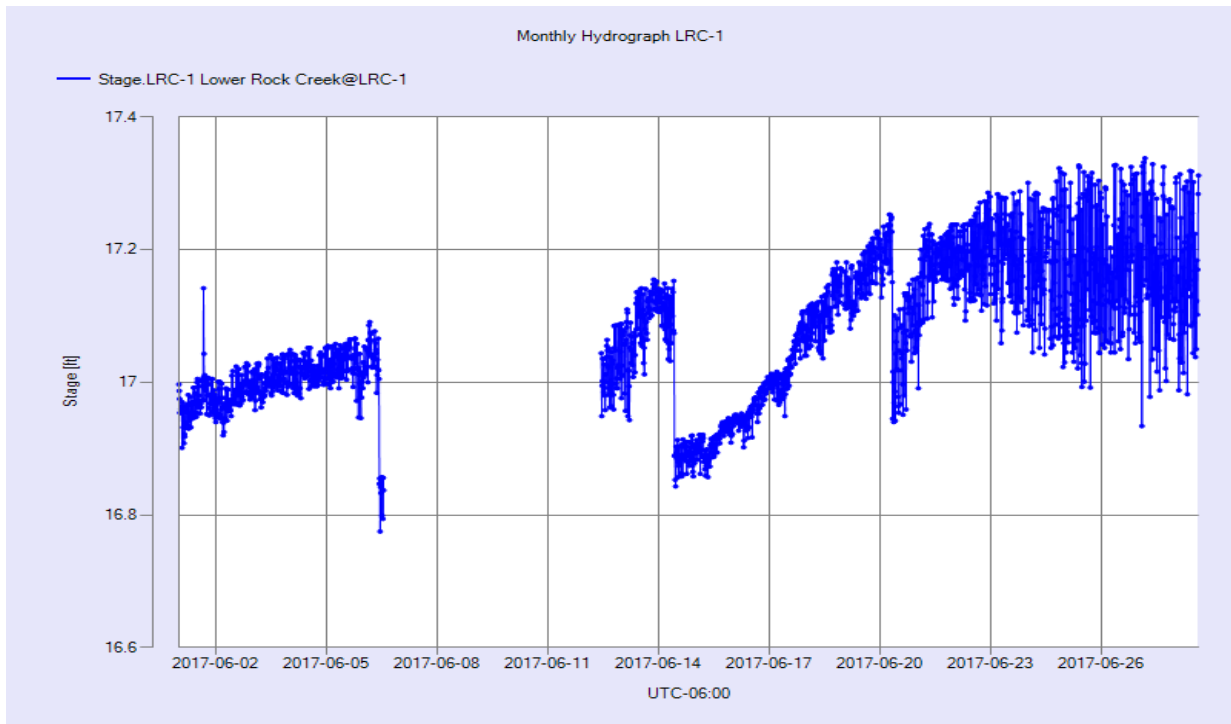


Figure 18 Monthly Hydrograph LRC-1

MESONET CLIMATOLOGICAL DATA SUMMARY				June 2017				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 <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	86	64	72.5	62.5	0	10	96	44	72	0.02	28.76	30.01	SE	6.5	40.3	22.79	74.8	80.2	89	75		
2	73	63	68.8	67.0	0	3	100	85	94	0.02	28.74	29.99	ESE	6.5	15.6	6.09	72.8	74.6	77	73		
3	76	67	71.7	67.8	0	7	100	70	88	0.17	28.70	29.95	ESE	4.4	14.8	10.61	72.8	74.0	77	72		
4	81	67	72.8	67.3	0	9	99	59	84	0.03	28.61	29.85	ENE	3.4	16.2	15.17	73.5	75.4	81	71		
5	85	68	75.9	67.3	0	12	100	53	77	0.00	28.59	29.84	NNE	8.0	21.5	26.68	74.5	79.1	88	72		
6	92	63	78.6	63.0	0	12	99	34	63	0.00	28.68	29.93	N	7.9	25.7	28.23	74.6	81.1	89	73		
7	82*	62*	73.9*	55.6*	0*	7*	78*	34*	55*	0.00*	28.78*	30.03*	NE *	6.8*	17.8*	NA	75.2*	81.8*	89*	76*		
8	83	54	72.2	56.0	0	4	96	38	59	0.00	28.73	29.98	SE	5.4	18.3	28.56	74.8	80.9	89	72		
9	83	66	74.3	62.6	0	9	85	56	67	0.00	28.64	29.88	SSE	9.3	24.8	25.16	75.3	81.4	88	75		
10	88	68	78.1	66.6	0	13	88	53	69	0.00	28.58	29.82	SSE	13.0	31.4	28.41	76.2	82.1	89	76		
11	88	71	79.1	65.3	0	15	84	51	64	0.00	28.62	29.86	SSE	12.7	31.3	29.16	77.0	83.1	90	77		
12	90	71	80.9	67.8	0	16	88	48	66	0.00	28.63	29.88	SSE	11.3	28.3	28.79	77.9	83.9	91	78		
13	90	75	81.8	69.0	0	17	89	47	67	0.00	28.60	29.85	S	12.7	30.7	27.50	78.7	84.7	91	79		
14	91	75	82.8	71.3	0	18	84	53	69	0.00	28.62	29.86	S	11.8	30.9	21.18	79.0	84.6	89	80		
15	95	75	84.3	72.2	0	20	86	49	68	0.00	28.64	29.88	S	9.9	26.8	26.59	80.2	86.1	93	80		
16	95	69	83.0	68.2	0	17	82	36	63	0.00	28.56	29.80	S	10.2	26.0	28.58	81.0	86.9	94	80		
17	92	77	83.8	72.9	0	19	83	57	70	0.00	28.44	29.67	S	11.0	28.6	24.53	81.5	87.1	93	82		
18	79	70	74.4	65.9	0	10	91	59	75	0.00	28.63	29.87	NE	10.2	29.0	8.36	78.7	82.1	86	79		
19	89	59	76.2	59.5	0	9	97	31	60	0.00	28.77	30.02	E	6.7	21.1	29.84	77.8	82.3	91	74		
20	92	63	79.7	62.9	0	12	92	33	60	0.00	28.79	30.04	SSE	5.8	18.9	29.83	79.7	84.9	93	77		
21	93	67	81.2	59.7	0	15	83	24	52	0.00	28.67	29.91	SE	7.9	21.6	29.77	80.6	85.9	93	79		
22	91	65	79.9	67.1	0	13	92	48	67	0.00	28.50	29.74	SSE	4.9	15.1	28.47	81.2	86.6	94	79		
23	92	73	82.1	66.7	0	17	91	36	62	0.00	28.62	29.86	NNE	10.1	28.6	25.53	81.8	87.2	93	82		
24	85	70	76.6	53.8	0	13	59	31	46	0.00	28.91	30.16	E	9.2	21.2	23.90	79.8	85.0	91	80		
25	87	62	76.7	52.9	0	10	85	27	47	0.00	28.97	30.22	SE	6.4	21.9	27.70	79.5	84.5	91	78		
26	87	66	77.3	57.7	0	12	77	34	53	0.00	28.87	30.13	SSE	5.9	18.7	27.00	80.4	85.0	92	79		
27	92	68	79.9	65.8	0	15	84	43	64	0.00	28.75	29.99	SSE	8.4	22.7	NA	81.2	85.7	92	80		
28	91	72	81.2	67.4	0	16	93	45	65	0.00	28.63	29.87	S	12.2	31.4	NA	81.9	86.1	92	80		
29	92	74	82.6	69.9	0	18	85	48	67	0.00	28.56	29.80	SSE	12.3	27.4	NA	82.3	86.2	92	81		
30	90	72	79.4	69.2	0	16	98	52	72	0.42	28.67	29.92	SE	9.5	25.4	NA	82.1	85.6	91	82		
88* 68* 78.0* 64.7*				<- Monthly Averages ->				28.68* 29.92*		SSE* 8.7* 40.3*			24.34*		78.2* 83.1* 89* 77*							
Temperature - Highest: 95*					Degree Days - Total HDD: 0*					Number of Days With:												
Lowest: 54*					Total CDD: 384*					Tmax ≥ 90: 15*					Rainfall ≥ 0.01 inch: 5*							
Rainfall: Monthly Total: 0.66* in.					Humidity - Highest: 100*					Tmax ≤ 32: 0*					Rainfall ≥ 0.10 inch: 2*							
Greatest 24 Hr: 0.42* in.					Lowest: 24*					Tmin ≤ 32: 0*					Avg Wind Speed ≥ 10 mph: 11*							
										Tmin ≤ 0: 0*					Max Wind Speed ≥ 30 mph: 6*							

Figure 19 June Mesonet Data