
***Lake Thunderbird TMDL Monitoring Plan Implementation:
Sample Year (SY) 2022- March Report***



SY-2022 Monthly Report

Lake Thunderbird TMDL Monitoring Plan Implementation:

March 2022 Monitoring Report

Oklahoma Water Resources Board
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SUMMARY OF MARCH WATER QUALITY SAMPLING

Sampling for March 2022 consisted of two sampling events. The first collection occurred during base flow conditions on the fifteenth. Water samples were collected at nine locations and discharge measurements were collected at seven locations. Samples were not collected at JB-1 due to construction activity. Mesonet data shows no precipitation on the fifteenth, 0.05 inches of precipitation in the 72 hours prior to sampling, and 0.28 inches of precipitation in the 72 hours after the sampling event. The second collection occurred during a rainfall event on the twenty-first. Water samples were collected at six permanent stations, two of which were via autosampler, as well as all seven stormwater outfalls. Discharge was measured at one location. Mesonet shows 2.03 inches of precipitation on the twenty-first, 0.02 inches of precipitation in the 72 hours prior to sampling, and 0.01 inches of precipitation in the 72 hours after the sampling event. The total rainfall amount in Norman for the month of March was 2.65 inches. All water level gauges were operational for the month, except for JB-1 due to 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

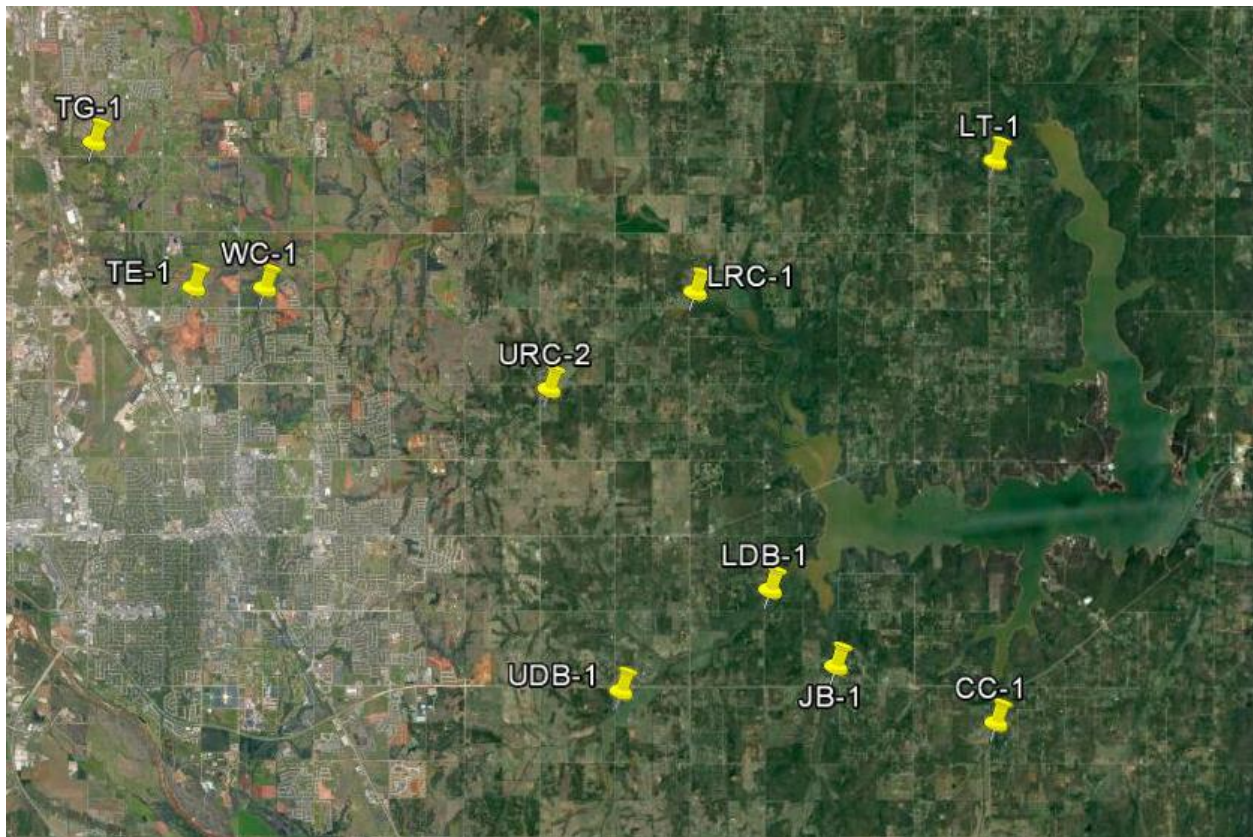


Figure 1 Monitoring Station Map

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	3/15/2022	10:30	SD	9.82	10.35	7.84	675	7	Used RP3, RP4 also over water
JB-1	Jim Blue Creek	3/15/2022	11:30	SD	N/A	N/A	N/A	N/A	N/A	Did not sample, ongoing construction on upstream, downstream pool conditions, turbid, shallow
LDB-1	Lower Dave Blue Creek	3/15/2022	11:40	SD	9.71	16.81	8.14	916	9	Not much positive visual flow, mostly none or negative
LRC-1	Lower Rock Creek	3/15/2022	13:00	SD	12.13	10.29	7.86	740	9	Verified tapedown
LT-1	Lake Laterals	3/15/2022	12:25	SD	10.48	9.43	7.73	534	2	
TE-1	Little River Tributary	3/15/2022	15:30	SD	17.49	14.47	8.12	1115	16	Very minimal visual flow, beaver dam on upstream still present, bubbly/scum on water surface
TG-1	Little River Tributary	3/15/2022	16:10	SD	15.46	18.01	8.44	1100	8	Borderline low/normal conditions, lots of filamentous algae
UDB-1	Upper Dave Blue Creek	3/15/2022	9:25	SD	9.08	8.19	7.64	960	4	Changed DCP, verified orifice clear
URC-2	Upper Rock Creek	3/15/2022	14:10	SD	12.42	15.76	7.69	874	7	Very minimal visual flow
WC-1	Woodcrest Creek	3/15/2022	14:50	SD	14.99	9.13	7.49	1063	10	Very minimal visual flow, lots of beaver sign on upstream (chewed trees, tracks)

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	<0.05	0.20	0.025	<5.0
JB-1	Jim Blue Creek	N/A	N/A	N/A	N/A
LDB-1	Lower Dave Blue Creek	<0.05	0.25	0.027	<5.0
LRC-1	Lower Rock Creek	<0.05	0.13	0.031	<5.0
LT-1	Lake Laterals	<0.05	0.26	0.013	<5.0
TE-1	Little River Tributary	<0.05	0.51	0.036	11.0
TG-1	Little River Tributary	0.46	1.73	0.057	9.0
UDB-1	Upper Dave Blue Creek	<0.05	0.21	0.022	<5.0
URC-2	Upper Rock Creek	<0.05	0.29	0.036	<5.0
WC-1	Woodcrest Creek	<0.05	0.34	0.038	7.0

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	<0.05	0.17	0.024	<5.0
Duplicate RPD	0%	16.22%*	4.08%	0%

Table 3 QA/QC Data Where the Asterisk Denotes RPD 2

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	0.59	20.70
JB-1	Jim Blue Creek	N/A	N/A
LDB-1	Lower Dave Blue Creek	1.44	15.86
LRC-1	Lower Rock Creek	0.80	4.58
LT-1	Lake Laterals	0.60	4.59
TE-1	Little River Tributary	0.05	11.07
TG-1	Little River Tributary	0.93	9.15
UDB-1	Upper Dave Blue Creek	0.33	17.44
URC-2	Upper Rock Creek	0.06	10.91
WC-1	Woodcrest Creek	0.06	7.45

Table 4 Station Discharge Summary

All rated stream discharges are provisional and subject to change.

File Information

File name: CC_20220315-085612.ft
 Start date and time: 3/15/2022 8:43 AM
 Start location latitude: 35.179
 Start location longitude: -97.265
 Calculations engine: FlowTracker2
 Data collection mode: Discharge

System Information

Discharge Summary

Start time: 3/15/2022 8:43 AM End time: 3/15/2022 8:55 AM
 # Stations: 10 Avg interval: 40
 Mean depth: 0.544 ft Max depth: 0.900 ft
 Mean velocity: 0.2422 ft/s Max velocity: 1.1597 ft/s
 Mean SNR: 47 dB Total width: 4.500 ft
 Mean temp: 49.888 °F Total area: 2.4500 ft²
 Wetted Perimeter: 4.942 ft Total discharge: 0.5934 ft³/s

Discharge Uncertainty

Viewer Controls

Chart size + Chart size -
 Reset all

Discharge Measurement Summary

Save PDF of summary

Summary overview

No changes were made to this file
 Quality control warnings

Supplemental data summary

Gauge height time	Gauge height (ft)	Rated discharge (ft³/s)	Temperature (°F)	Salinity (PSS-78)	Gauge height comments
3/15/2022 8:55 AM	20.700				

Measurement results

St#	Time	Location (ft)	Method	Depth (ft)	%Depth	Measured Depth (ft)	Samples	Velocity (ft/s)	Correct on	Mean Velocity (ft/s)	Area (ft²)	Flow (ft³/s)	%Q
0	8:43 AM	0.000	None	0.000	0.0000	0.000	0	0.0000		-0.1280	0.0000	0.0000	0.00
1	8:44 AM	0.500	0.6	0.300	0.6000	0.180	80	0.1280	-1.0000	-0.1280	0.1500	-0.0192	-3.24
2	8:46 AM	1.000	0.6	0.600	0.6000	0.360	80	0.0932	-1.0000	-0.0932	0.3000	-0.0280	-4.71
3	8:47 AM	1.500	0.6	0.600	0.6000	0.360	80	-0.0694	1.0000	-0.0694	0.3000	-0.0208	-3.51
4	8:48 AM	2.000	0.6	0.700	0.6000	0.420	80	0.1783	1.0000	0.1783	0.3500	0.0624	10.52
5	8:49 AM	2.500	0.6	0.900	0.6000	0.540	80	0.4284	1.0000	0.4284	0.4500	0.1928	32.49
6	8:51 AM	3.000	0.6	0.800	0.6000	0.480	80	1.1597	1.0000	1.1597	0.4000	0.4639	78.18
7	8:52 AM	3.500	0.6	0.600	0.6000	0.360	80	-0.0584	1.0000	-0.0584	0.3000	-0.0175	-2.95
8	8:53 AM	4.000	0.6	0.400	0.6000	0.240	80	-0.2012	1.0000	-0.2012	0.2000	-0.0402	-6.78
9	8:55 AM	4.500	None	0.000	0.0000	0.000	0	0.0000		-0.2012	0.0000	0.0000	0.00

Quality control warnings

St#	Time	Location (ft)	Method	Depth (ft)	%Depth	Measured Depth (ft)	Warnings
1	8:44 AM	0.500	0.6	0.300	0.6000	0.180	Velocity Angle > QC
2	8:46 AM	1.000	0.6	0.600	0.6000	0.360	Velocity Angle > QC
3	8:47 AM	1.500	0.6	0.600	0.6000	0.360	Velocity Angle > QC
4	8:48 AM	2.000	0.6	0.700	0.6000	0.420	Velocity Angle > QC, High Stn % Discharge
5	8:49 AM	2.500	0.6	0.900	0.6000	0.540	High Stn % Discharge
6	8:51 AM	3.000	0.6	0.800	0.6000	0.480	SNR Threshold Variation, Standard Error > QC, High Stn % Discharge
8	8:53 AM	4.000	0.6	0.400	0.6000	0.240	Velocity Angle > QC

Figure 2 Discharge Measurement Summary CC-1

File Information

File name: LRC_20220315-133732.ft
 Start date and time: 3/15/2022 6:05 AM
 Start location latitude: 35.262
 Start location longitude: -97.334
 Calculations engine: FlowTracker2
 Data collection mode: Discharge

System Information

Discharge Summary

Start time: 3/15/2022 6:06 AM End time: 3/15/2022 1:10 PM
 # Stations: 15 Avg interval: 40
 Mean depth: 0.523 ft Max depth: 0.800 ft
 Mean velocity: 0.1398 ft/s Max velocity: 0.2766 ft/s
 Mean SNR: 38 dB Total width: 11.000 ft
 Mean temp: 52.712 °F Total area: 5.7500 ft²
 Wetted Perimeter: 11.193 ft Total discharge: 0.8040 ft³/s

Discharge Uncertainty

Viewer Controls

Chart size + Chart size -
 Reset all

Discharge Measurement Summary

Save PDF of summary

Summary overview

No changes were made to this file
 Quality control warnings

Supplemental data summary

Gauge height time	Gauge height (ft)	Rated discharge (ft³/s)	Temperature (°F)	Salinity (PSS-78)	Gauge height comments
3/15/2022 1:10 PM	4.580				

Measurement results

St#	Time	Location (ft)	Method	Depth (ft)	%Depth	Measured Depth (ft)	Samples	Velocity (ft/s)	Correct on	Mean Velocity (ft/s)	Area (ft²)	Flow (ft³/s)	%Q
0	6:06 AM	0.000	None	0.000	0.0000	0.000	0	0.0000		0.0306	0.0000	0.0000	0.00
1	6:06 AM	2.000	0.6	0.300	0.6000	0.180	80	0.0306	1.0000	0.0306	0.4500	0.0138	1.71
2	6:08 AM	3.000	0.6	0.500	0.6000	0.300	80	-0.0042	1.0000	-0.0042	0.5000	-0.0021	-0.26
3	12:56 PM	4.000	0.6	0.600	0.6000	0.360	80	0.1740	1.0000	0.1740	0.4500	0.0783	9.74
4	12:58 PM	4.500	0.6	0.700	0.6000	0.420	80	0.2766	1.0000	0.2766	0.3500	0.0968	12.04
5	12:59 PM	5.000	0.6	0.800	0.6000	0.480	80	0.2615	1.0000	0.2615	0.4000	0.1046	13.01
6	1:00 PM	5.500	0.6	0.800	0.6000	0.480	80	0.2051	1.0000	0.2051	0.4000	0.0820	10.21
7	1:02 PM	6.000	0.6	0.800	0.6000	0.480	80	0.1999	1.0000	0.1999	0.4000	0.0800	9.95
8	1:03 PM	6.500	0.6	0.800	0.6000	0.480	80	0.1498	1.0000	0.1498	0.4000	0.0599	7.45
9	1:04 PM	7.000	0.6	0.800	0.6000	0.480	80	0.1498	1.0000	0.1498	0.4000	0.0599	7.45
10	1:05 PM	7.500	0.6	0.800	0.6000	0.480	80	0.0525	1.0000	0.0525	0.4000	0.0210	2.61
11	1:06 PM	8.000	0.6	0.800	0.6000	0.480	80	0.1636	1.0000	0.1636	0.6000	0.0982	12.21
12	1:08 PM	9.000	0.6	0.700	0.6000	0.420	80	0.1598	1.0000	0.1598	0.7000	0.1118	13.91
13	1:09 PM	10.000	0.6	0.300	0.6000	0.180	80	-0.0012	1.0000	-0.0012	0.3000	-0.0003	-0.04
14	1:10 PM	11.000	None	0.000	0.0000	0.000	0	0.0000		-0.0012	0.0000	0.0000	0.00

Quality control warnings

St#	Time	Location (ft)	Method	Depth (ft)	%Depth	Measured Depth (ft)	Warnings
1	6:06 AM	2.000	0.6	0.300	0.6000	0.180	SNR Threshold Variation
2	6:08 AM	3.000	0.6	0.500	0.6000	0.300	Boundary Interference, Beam SNRs Not Similar
4	12:58 PM	4.500	0.6	0.700	0.6000	0.420	High Stn % Discharge
5	12:59 PM	5.000	0.6	0.800	0.6000	0.480	High Stn % Discharge
6	1:00 PM	5.500	0.6	0.800	0.6000	0.480	High Stn % Discharge
9	1:04 PM	7.000	0.6	0.800	0.6000	0.480	Velocity Angle > QC
10	1:05 PM	7.500	0.6	0.800	0.6000	0.480	Large SNR Variation
11	1:06 PM	8.000	0.6	0.800	0.6000	0.480	High Stn % Discharge
12	1:08 PM	9.000	0.6	0.700	0.6000	0.420	High Stn % Discharge
13	1:09 PM	10.000	0.6	0.300	0.6000	0.180	SNR Threshold Variation

Figure 3 Discharge Measurement Summary LRC-1

File Information

File name: TE_20220315-152935.ft
 Start date and time: 3/15/2022 3:14 PM
 Start location latitude:
 Start location longitude:
 Calculations engine: FlowTracker2
 Data collection mode: Discharge

System Information

Discharge Summary

Start time: 3/15/2022 3:16 PM End time: 3/15/2022 3:29 PM
 # Stations: 11 Avg interval: 40
 Mean depth: 0.600 ft Max depth: 1.000 ft
 Mean velocity: 0.0072 ft/s Max velocity: 0.0567 ft/s
 Mean SNR: 53 dB Total width: 11.000 ft
 Mean temp: 62.476 °F Total area: 6.6000 ft²
 Wetted Perimeter: 11.374 ft Total discharge: 0.0477 ft³/s

Discharge Uncertainty

Viewer Controls

Chart size + Chart size -
 Reset all

Discharge Measurement Summary

Save PDF of summary

Summary overview

No changes were made to this file
 Quality control warnings

Supplemental data summary

Gauge height time	Gauge height (ft)	Rated discharge (ft³/s)	Temperature (°F)	Salinity (PSS-78)	Gauge height comments
3/15/2022 3:26 PM	11.070				

Measurement results

St#	Time	Location (ft)	Method	Depth (ft)	%Depth	Measured Depth (ft)	Samples	Velocity (ft/s)	Correct on	Mean Velocity (ft/s)	Area (ft²)	Flow (ft³/s)	%Q
0	3:16 PM	0.000	None	0.000	0.0000	0.000	0	0.0000		-0.0135	0.0000	0.0000	0.00
1	3:17 PM	1.000	0.6	0.300	0.6000	0.180	80	-0.0135	1.0000	-0.0135	0.3000	-0.0040	-8.49
2	3:18 PM	2.000	0.6	0.300	0.6000	0.180	80	0.0567	1.0000	0.0567	0.3000	0.0170	35.68
3	3:19 PM	3.000	0.6	0.800	0.6000	0.480	80	0.0244	1.0000	0.0244	0.8000	0.0195	40.87
4	3:21 PM	4.000	0.6	1.000	0.6000	0.600	80	-0.0064	1.0000	-0.0064	1.0000	-0.0064	-13.41
5	3:22 PM	5.000	0.6	0.900	0.6000	0.540	80	0.0109	1.0000	0.0109	0.9000	0.0098	20.49
6	3:23 PM	6.000	0.6	1.000	0.6000	0.600	80	0.0071	1.0000	0.0071	1.0000	0.0071	14.88
7	3:25 PM	7.000	0.6	0.800	0.6000	0.480	80	0.0267	1.0000	0.0267	0.8000	0.0214	44.85
8	3:26 PM	8.000	0.6	0.900	0.6000	0.540	80	-0.0260	1.0000	-0.0260	0.9000	-0.0234	-48.97
9	3:28 PM	9.000	0.6	0.400	0.6000	0.240	80	0.0112	1.0000	0.0112	0.6000	0.0067	14.11
10	3:29 PM	11.000	None	0.000	0.0000	0.000	0	0.0000		0.0112	0.0000	0.0000	0.00

Quality control warnings

St#	Time	Location (ft)	Method	Depth (ft)	%Depth	Measured Depth (ft)	Warnings
1	3:17 PM	1.000	0.6	0.300	0.6000	0.180	SNR Threshold Variation
2	3:18 PM	2.000	0.6	0.300	0.6000	0.180	Large SNR Variation, High Stn % Discharge
3	3:19 PM	3.000	0.6	0.800	0.6000	0.480	High Stn % Discharge
5	3:22 PM	5.000	0.6	0.900	0.6000	0.540	High Stn % Discharge
6	3:23 PM	6.000	0.6	1.000	0.6000	0.600	High Stn % Discharge
7	3:25 PM	7.000	0.6	0.800	0.6000	0.480	High Stn % Discharge
9	3:28 PM	9.000	0.6	0.400	0.6000	0.240	Large SNR Variation, High Stn % Discharge

Figure 4 Discharge Measurement Summary TE-1

File Information

File name: TG_20220315-161345.ft
 Start date and time: 3/15/2022 3:51 PM
 Start location latitude: 35.291
 Start location longitude: -97.477
 Calculations engine: FlowTracker2
 Data collection mode: Discharge

System Information

Discharge Summary

Start time: 3/15/2022 3:52 PM End time: 3/15/2022 4:13 PM
 # Stations: 17 Avg interval: 40
 Mean depth: 0.608 ft Max depth: 1.100 ft
 Mean velocity: 0.0808 ft/s Max velocity: 0.1206 ft/s
 Mean SNR: 40 dB Total width: 19.000 ft
 Mean temp: 59.772 °F Total area: 11.5500 ft²
 Wetted Perimeter: 19.303 ft Total discharge: 0.9335 ft³/s

Discharge Uncertainty

Viewer Controls

Chart size + Chart size -
 Reset all

Discharge Measurement Summary

Save PDF of summary

Summary overview

No changes were made to this file
 Quality control warnings

Supplemental data summary

Gauge height time	Gauge height (ft)	Rated discharge (ft³/s)	Temperature (°F)	Salinity (PSS-78)	Gauge height comments
3/15/2022 4:05 PM	9.150				

Measurement results

St#	Time	Location (ft)	Method	Depth (ft)	%Depth	Measured Depth (ft)	Samples	Velocity (ft/s)	Correct on	Mean Velocity (ft/s)	Area (ft²)	Flow (ft³/s)	%Q
0	3:52 PM	0.000	None	0.000	0.0000	0.000	0	0.0000		-0.0131	0.0000	0.0000	0.00
1	3:52 PM	1.000	0.6	0.600	0.6000	0.360	80	-0.0131	1.0000	-0.0131	0.6000	-0.0079	-0.84
2	3:54 PM	2.000	0.6	0.800	0.6000	0.480	80	0.0554	1.0000	0.0554	0.8000	0.0443	4.74
3	3:55 PM	3.000	0.6	1.000	0.6000	0.600	80	0.1206	1.0000	0.1206	1.0000	0.1206	12.92
4	3:57 PM	4.000	0.6	1.100	0.6000	0.660	80	0.0764	1.0000	0.0764	1.1000	0.0840	9.00
5	3:58 PM	5.000	0.6	1.100	0.6000	0.660	80	0.1181	1.0000	0.1181	1.1000	0.1299	13.92
6	3:59 PM	6.000	0.6	1.100	0.6000	0.660	80	0.0694	1.0000	0.0694	1.1000	0.0763	8.18
7	4:01 PM	7.000	0.6	1.000	0.6000	0.600	80	0.0615	1.0000	0.0615	1.0000	0.0615	6.59
8	4:02 PM	8.000	0.6	0.800	0.6000	0.480	80	0.0912	1.0000	0.0912	0.8000	0.0729	7.81
9	4:03 PM	9.000	0.6	0.700	0.6000	0.420	80	0.1170	1.0000	0.1170	0.7000	0.0819	8.78
10	4:05 PM	10.000	0.6	0.600	0.6000	0.360	80	0.1008	1.0000	0.1008	0.6000	0.0605	6.48
11	4:06 PM	11.000	0.6	0.500	0.6000	0.300	80	0.1097	1.0000	0.1097	0.5000	0.0549	5.88
12	4:08 PM	12.000	0.6	0.400	0.6000	0.240	80	0.1051	1.0000	0.1051	0.4000	0.0421	4.50
13	4:09 PM	13.000	0.6	0.300	0.6000	0.180	80	0.0906	1.0000	0.0906	0.4500	0.0408	4.37
14	4:10 PM	15.000	0.6	0.300	0.6000	0.180	80	0.0734	1.0000	0.0734	0.6000	0.0440	4.72
15	4:11 PM	17.000	0.6	0.400	0.6000	0.240	80	0.0346	1.0000	0.0346	0.8000	0.0277	2.96
16	4:13 PM	19.000	None	0.000	0.0000	0.000	0	0.0000		0.0346	0.0000	0.0000	0.00

Quality control warnings

St#	Time	Location (ft)	Method	Depth (ft)	%Depth	Measured Depth (ft)	Warnings
1	3:52 PM	1.000	0.6	0.600	0.6000	0.360	SNR Threshold Variation
3	3:55 PM	3.000	0.6	1.000	0.6000	0.600	High Stn % Discharge
5	3:58 PM	5.000	0.6	1.100	0.6000	0.660	High Stn % Discharge
12	4:08 PM	12.000	0.6	0.400	0.6000	0.240	Velocity Angle > QC
13	4:09 PM	13.000	0.6	0.300	0.6000	0.180	Large SNR Variation, Velocity Angle > QC

Figure 5 Discharge Measurement Summary TG-1

File Information

File name: UDB_20220315-075641.ft
 Start date and time: 3/15/2022 7:34 AM
 Start location latitude:
 Start location longitude:
 Calculations engine: FlowTracker2
 Data collection mode: Discharge

System Information

Discharge Summary

Start time: 3/15/2022 7:36 AM End time: 3/15/2022 7:56 AM
 # Stations: 17 Avg interval: 40
 Mean depth: 0.781 ft Max depth: 1.400 ft
 Mean velocity: 0.0265 ft/s Max velocity: 0.0637 ft/s
 Mean SNR: 47 dB Total width: 16.000 ft
 Mean temp: 48.523 °F Total area: 12.5000 ft²
 Wetted Perimeter: 16.446 ft Total discharge: 0.3318 ft³/s

Discharge Uncertainty

Viewer Controls

Chart size + Chart size -
 Reset all

Discharge Measurement Summary

Save PDF of summary

Summary overview

No changes were made to this file
 Quality control warnings

Supplemental data summary

Gauge height time	Gauge height (ft)	Rated discharge (ft³/s)	Temperature (°F)	Salinity (PSS-78)	Gauge height comments
3/15/2022 9:19 AM	17.440				

Measurement results

St#	Time	Location (ft)	Method	Depth (ft)	%Depth	Measured Depth (ft)	Samples	Velocity (ft/s)	Correcti on	Mean Velocity (ft/s)	Area (ft²)	Flow (ft³/s)	%Q	
0	7:36 AM	0.000	None	0.000	0.0000	0.000	0	0.0000		-0.0394	0.0000	0.0000	0.00	✓
1	7:36 AM	1.000	0.6	0.300	0.6000	0.180	80	-0.0394	1.0000	-0.0394	0.3000	-0.0118	-3.56	✓
2	7:39 AM	2.000	0.6	0.500	0.6000	0.300	80	-0.0178	1.0000	-0.0178	0.5000	-0.0089	-2.68	✓
3	7:40 AM	3.000	0.6	0.700	0.6000	0.420	80	-0.0075	1.0000	-0.0075	0.7000	-0.0053	-1.58	✓
4	7:41 AM	4.000	0.6	1.000	0.6000	0.600	80	0.0205	1.0000	0.0205	1.0000	0.0205	6.18	✓
5	7:42 AM	5.000	0.6	1.400	0.6000	0.840	80	0.0366	1.0000	0.0366	1.4000	0.0513	15.45	✓
6	7:43 AM	6.000	0.6	1.400	0.6000	0.840	80	0.0424	1.0000	0.0424	1.4000	0.0593	17.87	✓
7	7:45 AM	7.000	0.6	1.300	0.6000	0.780	80	0.0543	1.0000	0.0543	1.3000	0.0706	21.28	✓
8	7:46 AM	8.000	0.6	1.000	0.6000	0.600	80	0.0637	1.0000	0.0637	1.0000	0.0637	19.20	✓
9	7:48 AM	9.000	0.6	0.800	0.6000	0.480	80	0.0574	1.0000	0.0574	0.8000	0.0460	13.85	✓
10	7:49 AM	10.000	0.6	1.000	0.6000	0.600	80	0.0475	1.0000	0.0475	1.0000	0.0475	14.31	✓
11	7:50 AM	11.000	0.6	0.800	0.6000	0.480	80	0.0161	1.0000	0.0161	0.8000	0.0129	3.88	✓
12	7:51 AM	12.000	0.6	0.700	0.6000	0.420	80	0.0110	1.0000	0.0110	0.7000	0.0077	2.33	✓
13	7:52 AM	13.000	0.6	0.600	0.6000	0.360	80	-0.0229	1.0000	-0.0229	0.6000	-0.0137	-4.14	✓
14	7:54 AM	14.000	0.6	0.500	0.6000	0.300	80	-0.0080	1.0000	-0.0080	0.5000	-0.0040	-1.21	✓
15	7:55 AM	15.000	0.6	0.500	0.6000	0.300	80	-0.0078	1.0000	-0.0078	0.5000	-0.0039	-1.18	✓
16	7:56 AM	16.000	None	0.000	0.0000	0.000	0	0.0000		-0.0078	0.0000	0.0000	0.00	✓

Quality control warnings

St#	Time	Location (ft)	Method	Depth (ft)	%Depth	Measured Depth (ft)	Warnings
3	7:40 AM	3.000	0.6	0.700	0.6000	0.420	Large SNR Variation
5	7:42 AM	5.000	0.6	1.400	0.6000	0.840	High Stn % Discharge
6	7:43 AM	6.000	0.6	1.400	0.6000	0.840	High Stn % Discharge
7	7:45 AM	7.000	0.6	1.300	0.6000	0.780	High Stn % Discharge
8	7:46 AM	8.000	0.6	1.000	0.6000	0.600	High Stn % Discharge
9	7:48 AM	9.000	0.6	0.800	0.6000	0.480	High Stn % Discharge
10	7:49 AM	10.000	0.6	1.000	0.6000	0.600	High Stn % Discharge

Figure 6 Discharge Measurement Summary UDB-1

File Information

File name: URC_20220315-141923.ft
 Start date and time: 3/15/2022 2:04 PM
 Start location latitude: 35.242
 Start location longitude: -97.372
 Calculations engine: FlowTracker2
 Data collection mode: Discharge

System Information

Discharge Summary

Start time: 3/15/2022 2:05 PM End time: 3/15/2022 2:19 PM
 # Stations: 12 Avg interval: 40
 Mean depth: 0.982 ft Max depth: 1.400 ft
 Mean velocity: 0.0054 ft/s Max velocity: 0.0293 ft/s
 Mean SNR: 60 dB Total width: 11.000 ft
 Mean temp: 55.857 °F Total area: 10.8000 ft²
 Wetted Perimeter: 11.553 ft Total discharge: 0.0583 ft³/s

Discharge Uncertainty

Viewer Controls

Chart size + Chart size -
 Reset all

Discharge Measurement Summary

Save PDF of summary

Summary overview

No changes were made to this file
 Quality control warnings

Supplemental data summary

Gauge height time	Gauge height (ft)	Rated discharge (ft³/s)	Temperature (°F)	Salinity (PSS-78)	Gauge height comments
3/15/2022 2:13 PM	10.910				

Measurement results

St#	Time	Location (ft)	Method	Depth (ft)	%Depth	Measured Depth (ft)	Samples	Velocity (ft/s)	Correcti on	Mean Velocity (ft/s)	Area (ft²)	Flow (ft³/s)	%Q	
0	2:05 PM	0.000	None	0.000	0.0000	0.000	0	0.0000		0.0001	0.0000	0.0000	0.00	✓
1	2:05 PM	1.000	0.6	0.500	0.6000	0.300	80	0.0001	1.0000	0.0001	0.5000	0.0001	0.12	✓
2	2:07 PM	2.000	0.6	0.900	0.6000	0.540	80	-0.0126	1.0000	-0.0126	0.9000	-0.0113	-19.42	✓
3	2:08 PM	3.000	0.6	1.100	0.6000	0.660	80	0.0254	1.0000	0.0254	1.1000	0.0279	47.90	✓
4	2:09 PM	4.000	0.6	1.300	0.6000	0.780	80	0.0134	1.0000	0.0134	1.3000	0.0174	29.81	✓
5	2:10 PM	5.000	0.6	1.300	0.6000	0.780	80	0.0204	1.0000	0.0204	1.3000	0.0266	45.55	✓
6	2:12 PM	6.000	0.6	1.300	0.6000	0.780	80	0.0293	1.0000	0.0293	1.3000	0.0380	65.21	✓
7	2:13 PM	7.000	0.6	1.400	0.6000	0.840	80	-0.0172	1.0000	-0.0172	1.4000	-0.0241	-41.33	✓
8	2:15 PM	8.000	0.6	1.300	0.6000	0.780	80	0.0097	1.0000	0.0097	1.3000	0.0126	21.59	✓
9	2:16 PM	9.000	0.6	1.000	0.6000	0.600	80	-0.0151	1.0000	-0.0151	1.0000	-0.0151	-25.92	✓
10	2:18 PM	10.000	0.6	0.700	0.6000	0.420	80	-0.0196	1.0000	-0.0196	0.7000	-0.0137	-23.53	✓
11	2:19 PM	11.000	None	0.000	0.0000	0.000	0	0.0000		-0.0196	0.0000	0.0000	0.00	✓

Quality control warnings

St#	Time	Location (ft)	Method	Depth (ft)	%Depth	Measured Depth (ft)	Warnings
3	2:08 PM	3.000	0.6	1.100	0.6000	0.660	High Stn % Discharge
4	2:09 PM	4.000	0.6	1.300	0.6000	0.780	High Stn % Discharge
5	2:10 PM	5.000	0.6	1.300	0.6000	0.780	High Stn % Discharge
6	2:12 PM	6.000	0.6	1.300	0.6000	0.780	Large SNR Variation, SNR Threshold Variation, High Stn % Discharge
8	2:15 PM	8.000	0.6	1.300	0.6000	0.780	High Stn % Discharge
11	2:19 PM	11.000	None	0.000	0.0000	0.000	Water Depth > QC

Figure 7 Discharge Measurement Summary URC-2

File Information

File name: WC_20220315-145507.ft
 Start date and time: 3/15/2022 2:41 PM
 Start location latitude: 35.262
 Start location longitude: -97.437
 Calculations engine: FlowTracker2
 Data collection mode: Discharge

System Information

Discharge Summary

Start time: 3/15/2022 2:42 PM End time: 3/15/2022 2:54 PM
 # Stations: 11 Avg interval: 40
 Mean depth: 0.470 ft Max depth: 0.700 ft
 Mean velocity: 0.0131 ft/s Max velocity: 0.0408 ft/s
 Mean SNR: 51 dB Total width: 10.000 ft
 Mean temp: 61.460 °F Total area: 4.7000 ft²
 Wetted Perimeter: 10.269 ft Total discharge: 0.0613 ft³/s

Discharge Uncertainty

Viewer Controls

Chart size + Chart size -
 Reset all

Discharge Measurement Summary

Save PDF of summary

Summary overview

No changes were made to this file
 Quality control warnings

Supplemental data summary

Gauge height time	Gauge height (ft)	Rated discharge (ft ³ /s)	Temperature (°F)	Salinity (PSS-78)	Gauge height comments
3/15/2022 2:45 PM	7.450				

Measurement results

St#	Time	Location (ft)	Method	Depth (ft)	%Depth	Measured Depth (ft)	Samples	Velocity (ft/s)	Correct on	Mean Velocity (ft/s)	Area (ft ²)	Flow (ft ³ /s)	%Q	
0	2:42 PM	0.000	None	0.000	0.0000	0.000	0	0.0000		-0.0124	0.0000	0.0000	0.00	✓
1	2:42 PM	1.000	0.6	0.400	0.6000	0.240	80	-0.0124	1.0000	-0.0124	0.4000	-0.0050	-8.09	✓
2	2:43 PM	2.000	0.6	0.300	0.6000	0.180	80	0.0000	1.0000	0.0000	0.3000	0.0000	0.00	✓
3	2:44 PM	3.000	0.6	0.600	0.6000	0.360	80	-0.0004	1.0000	-0.0004	0.6000	-0.0002	-0.37	✓
4	2:46 PM	4.000	0.6	0.500	0.6000	0.300	80	0.0408	1.0000	0.0408	0.5000	0.0204	33.27	✓
5	2:48 PM	5.000	0.6	0.500	0.6000	0.300	80	0.0166	1.0000	0.0166	0.5000	0.0083	13.56	✓
6	2:49 PM	6.000	0.6	0.600	0.6000	0.360	80	0.0246	1.0000	0.0246	0.6000	0.0147	24.03	✓
7	2:50 PM	7.000	0.6	0.700	0.6000	0.420	80	0.0172	1.0000	0.0172	0.7000	0.0120	19.61	✓
8	2:52 PM	8.000	0.6	0.600	0.6000	0.360	80	0.0380	1.0000	0.0380	0.6000	0.0228	37.20	✓
9	2:53 PM	9.000	0.6	0.500	0.6000	0.300	80	-0.0236	1.0000	-0.0236	0.5000	-0.0118	-19.21	✓
10	2:54 PM	10.000	None	0.000	0.0000	0.000	0	0.0000		-0.0236	0.0000	0.0000	0.00	✓

Quality control warnings

St#	Time	Location (ft)	Method	Depth (ft)	%Depth	Measured Depth (ft)	Warnings
1	2:42 PM	1.000	0.6	0.400	0.6000	0.240	SNR Threshold Variation
2	2:43 PM	2.000	0.6	0.300	0.6000	0.180	SNR Threshold Variation
4	2:46 PM	4.000	0.6	0.500	0.6000	0.300	Large SNR Variation, SNR Threshold Variation, High Stn % Discharge
5	2:48 PM	5.000	0.6	0.500	0.6000	0.300	Large SNR Variation, SNR Threshold Variation, High Stn % Discharge
6	2:49 PM	6.000	0.6	0.600	0.6000	0.360	SNR Threshold Variation, High Stn % Discharge
7	2:50 PM	7.000	0.6	0.700	0.6000	0.420	Large SNR Variation, High Stn % Discharge
8	2:52 PM	8.000	0.6	0.600	0.6000	0.360	High Stn % Discharge

Figure 8 Discharge Measurement Summary WC-1

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	3/21/2022	16:30	SD	11.75	8.78	7.56	304	213	Used RP3, RP4 also over water, bankfull channel
LRC-1	Lower Rock Creek	3/21/2022	20:45	JW	*	*	7.69	221	1000	Collected T2 at 6.598 @ 20:45 , peak at 6.904 @ 21:45
TE-1	Little River Tributary	3/21/2022	15:25	SD	12.20	9.71	7.92	291	1000	Out of banks, weird backflow on REW (eddy conditions)
TG-1	Little River Tributary	3/21/2022	18:15	JW	*	*	N/A	N/A	1000	Collected T2 at 19.12 @ 18:15, collected at second peak, first peak 17.63 @ 13:30; SpCon and pH data lost
URC-2	Upper Rock Creek	3/21/2022	15:55	SD	11.59	7.59	7.45	579	111	Not flowing as heavily as expected
WC-1	Woodcrest Creek	3/21/2022	15:00	SD	12.24	9.88	8.12	152	779	Bankfull channel, floating debris mostly leaf debris
SW-01	Stormwater Outfall 01	3/21/2022	15:12	CH	12.30	9.78	7.55	194	885	This site was the most flooded of the outfalls. Turbidity much higher at this site than the others
SW-02	Stormwater Outfall 02	3/21/2022	15:55	CH	13.10	9.60	7.14	283	53	
SW-03	Stormwater Outfall 03	3/21/2022	16:16	CH	12.70	9.46	7.24	419	336	Lots of dog feces on downstream side of bridge on right bank, was being washed into creek
SW-04	Stormwater Outfall 04	3/21/2022	16:40	CH	11.80	10.12	7.35	208	441	Lots of foam. Some road construction equipment and orange tubing just upstream of site
SW-05	Stormwater Outfall 05	3/21/2022	17:00	CH	11.70	8.98	7.27	281	163	
SW-06	Stormwater Outfall 06	3/21/2022	17:33	CH	11.20	8.93	7.29	267	153	Not much water coming into the storage pond. Pond was fairly full and pretty muddy
SW-07	Stormwater Outfall 07	3/21/2022	18:00	CH	12.70	10.09	7.64	455	58	Storming heavily at this site and rain water was entering the drain quickly from the road and the upstream storage pond

Table 5 Stormwater Field Data Form Where the Asterisk Denotes a Sample from an Autosampler

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	2.25	0.633	152
LRC-1	Lower Rock Creek	0.19	3.17	1.09	1250
URC-2	Upper Rock Creek	0.09	1.07	0.223	86.0
WC-1	Woodcrest Creek	0.73	2.33	0.833	772
TE-1	Little River Tributary	0.64	1.89	0.824	795
TG-1	Little River Tributary	0.41	3.44	1.14	1610
SW-01	Stormwater Outfall 01	0.46	1.61	0.703	567
SW-02	Stormwater Outfall 02	0.82	1.84	0.314	66.0
SW-03	Stormwater Outfall 03	0.46	1.82	0.494	431
SW-04	Stormwater Outfall 04	1.92	2.36	0.631	251
SW-05	Stormwater Outfall 05	2.07	2.05	0.484	86.0
SW-06	Stormwater Outfall 06	1.21	1.33	0.154	74.0
SW-07	Stormwater Outfall 07	0.22	0.65	0.100	91.0

Table 6 Stormwater Laboratory Analysis Summary

Monitoring Location Name	Nitrate and Nitrite (mg/l)	Kjeldahl Nitrogen (mg/l)	Phosphorus (mg/l)	Total Suspended Solids (mg/l)
Duplicate	0.25	2.16	0.628	174
Duplicate RPD	3.92%	4.08%	0.79%	13.50%*

Table 7 Stormwater QA/QC Data Where the Asterisk Denotes RPD 2

Monitoring Location ID	Monitoring Location Name	Discharge (cfs)	Stream Stage (ft)
CC-1	Clear Creek	6.60	21.40
LRC-1	Lower Rock Creek	5.92	6.60
URC-2	Upper Rock Creek	3.50	11.63
WC-1	Woodcrest Creek	43.63	10.58
TE-1	Little River Tributary	161.70	14.70
TG-1	Little River Tributary	675.90	19.12

Table 8 Stormwater Discharge Summary

All rated stream discharges are provisional and subject to change.

File Information

File name: CC_20220321-165010.ft
 Start date and time: 3/21/2022 4:34 PM
 Start location latitude: 35.179
 Start location longitude: -97.265
 Calculations engine: FlowTracker2
 Data collection mode: Discharge

System Information

Discharge Summary

Start time: 3/21/2022 4:35 PM End time: 3/21/2022 4:47 PM
 # Stations: 11 Avg interval: 40
 Mean depth: 1.013 ft Max depth: 1.600 ft
 Mean velocity: 1.0859 ft/s Max velocity: 2.2394 ft/s
 Mean SNR: 66 dB Total width: 6.000 ft
 Mean temp: 53.340 °F Total area: 6.0750 ft²
 Wetted Perimeter: 7.000 ft Total discharge: 6.5970 ft³/s

Discharge Uncertainty

Viewer Controls

Chart size + Chart size -
 Reset all

Discharge Measurement Summary

Save PDF of summary

Summary overview

No changes were made to this file
 Quality control warnings

Supplemental data summary

Gauge height time	Gauge height (ft)	Rated discharge (ft ³ /s)	Temperature (°F)	Salinity (PSS-78)	Gauge height comments
3/21/2022 4:49 PM	21.400				

Measurement results

St#	Time	Location (ft)	Method	Depth (ft)	%Depth	Measured Depth (ft)	Samples	Velocity (ft/s)	Correction	Mean Velocity (ft/s)	Area (ft ²)	Flow (ft ³ /s)	%Q	
0	4:35 PM	0.000	None	0.000	0.0000	0.000	0	0.0000		0.6938	0.0000	0.0000	0.00	✓
1	4:35 PM	1.000	0.6	0.700	0.6000	0.420	80	-0.6938	-1.0000	0.6938	0.5250	0.3643	5.52	✓
2	4:37 PM	1.500	0.6	1.200	0.6000	0.720	80	1.3010	1.0000	1.3010	0.6000	0.7806	11.83	✓
3	4:39 PM	2.000	0.6	1.300	0.6000	0.780	80	0.6415	1.0000	0.6415	0.6500	0.4169	6.32	✓
4	4:40 PM	2.500	0.6	1.500	0.6000	0.900	80	-0.0951	1.0000	-0.0951	0.7500	-0.0713	-1.08	✓
5	4:41 PM	3.000	0.6	1.600	0.6000	0.960	80	1.7685	1.0000	1.7685	0.8000	1.4148	21.45	✓
6	4:42 PM	3.500	0.6	1.600	0.6000	0.960	80	1.8159	1.0000	1.8159	0.8000	1.4527	22.02	✓
7	4:43 PM	4.000	0.6	1.500	0.6000	0.900	80	2.2394	1.0000	2.2394	0.7500	1.6795	25.46	✓
8	4:45 PM	4.500	0.6	1.200	0.6000	0.720	80	1.0425	1.0000	1.0425	0.6000	0.6255	9.48	✓
9	4:46 PM	5.000	0.6	0.800	0.6000	0.480	80	-0.1102	1.0000	-0.1102	0.6000	-0.0661	-1.00	✓
10	4:47 PM	6.000	None	0.000	0.0000	0.000	0	0.0000		-0.1102	0.0000	0.0000	0.00	✓

Quality control warnings

St#	Time	Location (ft)	Method	Depth (ft)	%Depth	Measured Depth (ft)	Warnings
1	4:35 PM	1.000	0.6	0.700	0.6000	0.420	Standard Error > QC, Velocity Angle > QC
2	4:37 PM	1.500	0.6	1.200	0.6000	0.720	Standard Error > QC, High Stn % Discharge
3	4:39 PM	2.000	0.6	1.300	0.6000	0.780	Standard Error > QC
4	4:40 PM	2.500	0.6	1.500	0.6000	0.900	Velocity Angle > QC
5	4:41 PM	3.000	0.6	1.600	0.6000	0.960	Standard Error > QC, High Stn % Discharge
6	4:42 PM	3.500	0.6	1.600	0.6000	0.960	Standard Error > QC, High Stn % Discharge
7	4:43 PM	4.000	0.6	1.500	0.6000	0.900	Standard Error > QC, High Stn % Discharge
8	4:45 PM	4.500	0.6	1.200	0.6000	0.720	Standard Error > QC
9	4:46 PM	5.000	0.6	0.800	0.6000	0.480	Standard Error > QC, Velocity Angle > QC
10	4:47 PM	6.000	None	0.000	0.0000	0.000	Water Depth > QC

Figure 9 Stormwater Discharge Measurement Summary CC-1

Period Selected: 2022-03-01 00:00 - 2022-03-31 23:59

UTC Offs et: -06:00

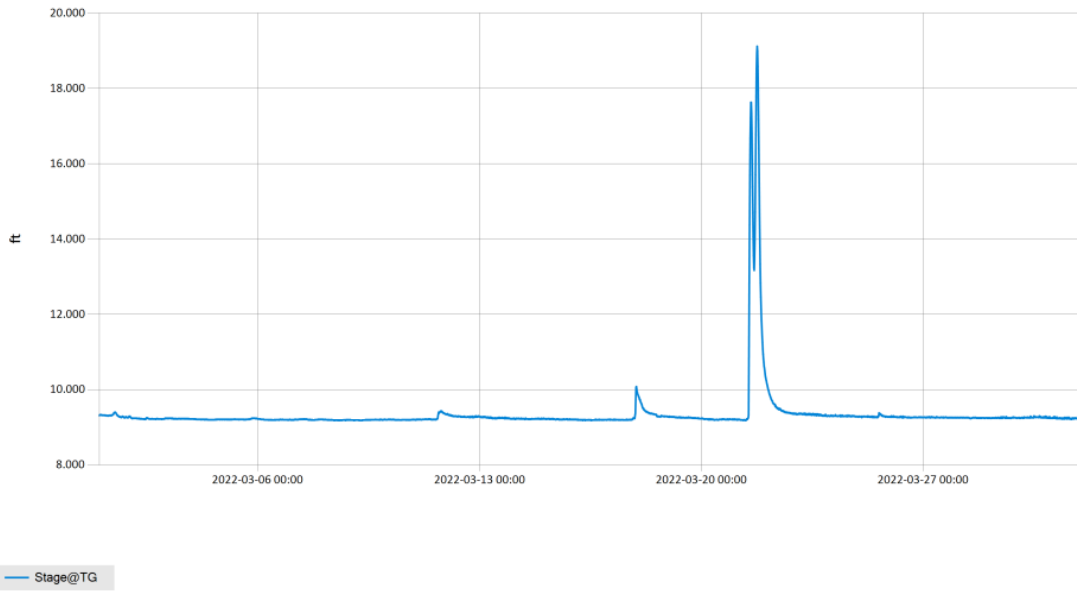


Figure 10 Monthly Hydrograph TG-1

Period Selected: 2022-03-01 00:00 - 2022-03-31 23:59

UTC Offs et: -06:00

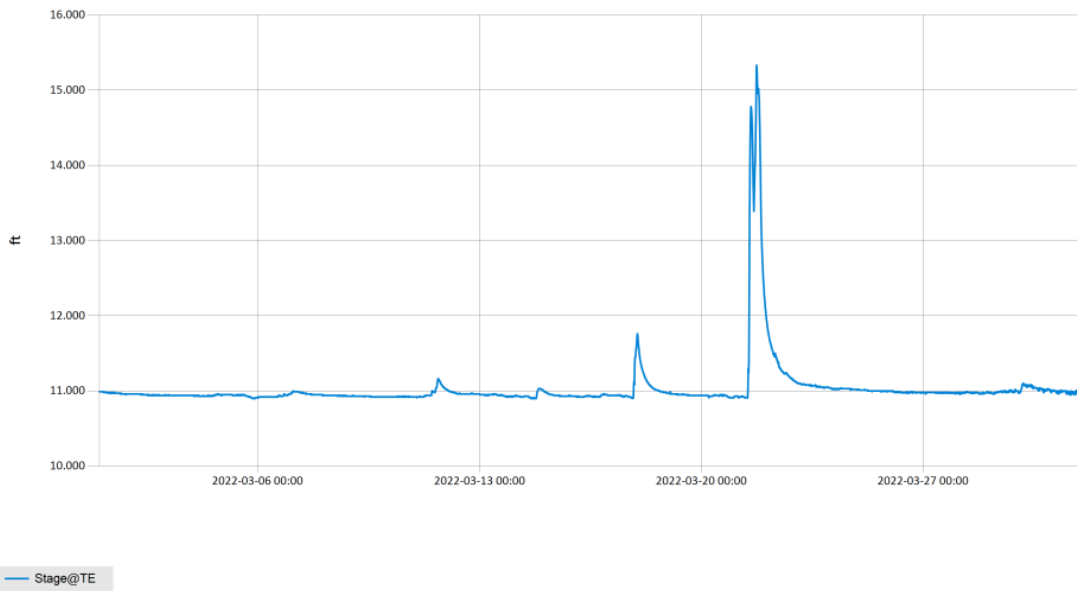


Figure 11 Monthly Hydrograph TE-1

Period Selected: 2022-03-01 00:00 - 2022-03-31 23:59

UTC Offs et: -06:00

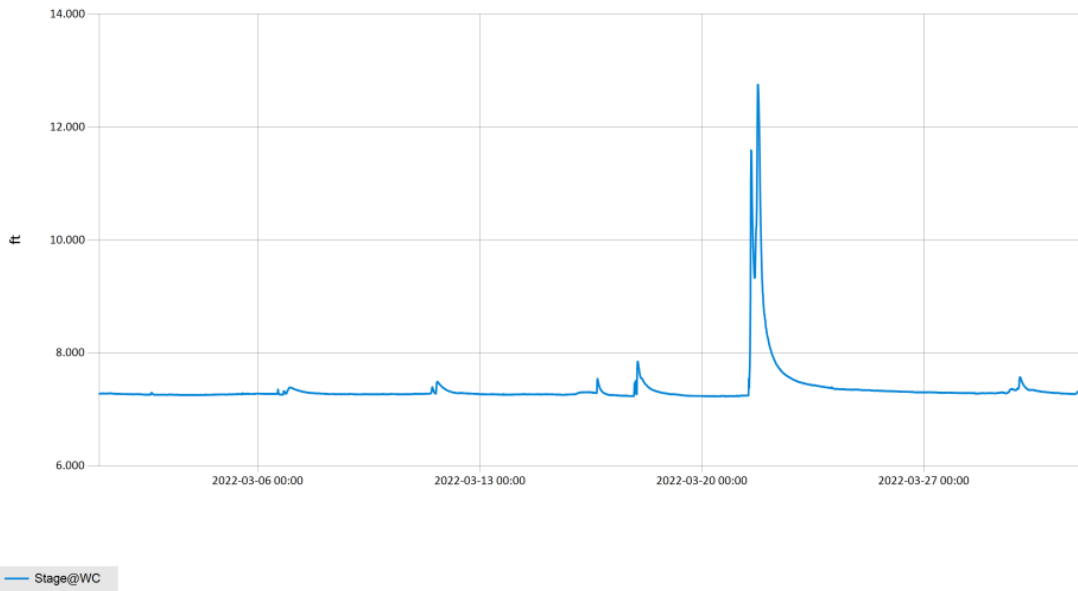


Figure 12 Monthly Hydrograph WC-1

Period Selected: 2022-03-01 00:00 - 2022-03-31 23:59

UTC Offs et: -06:00

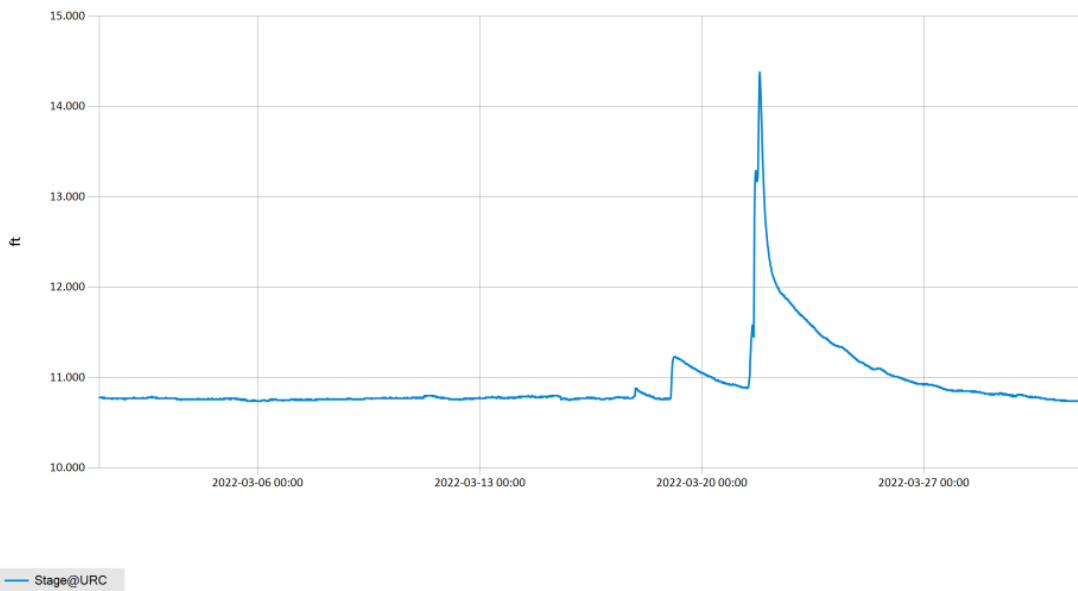
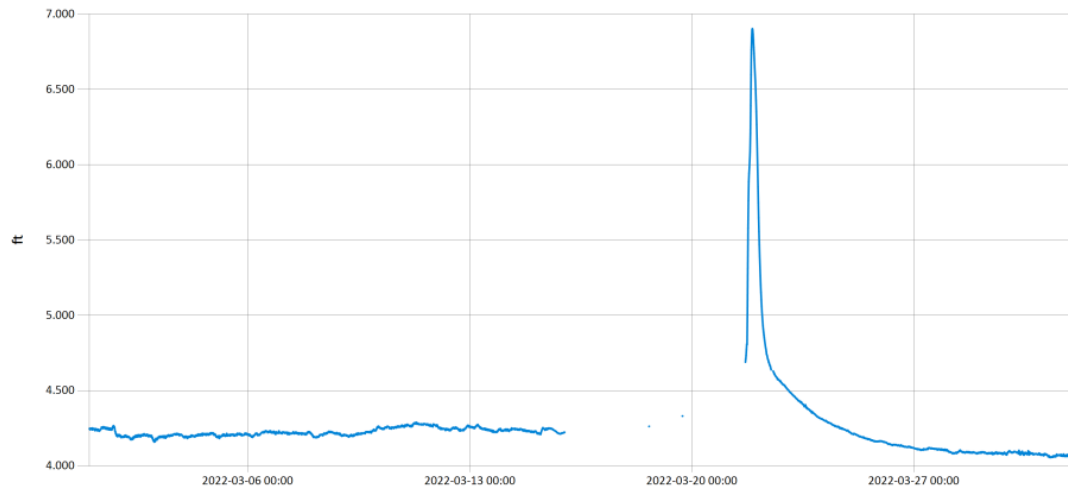


Figure 13 Monthly Hydrograph URC-2

Period Selected: 2022-03-01 00:00 - 2022-03-31 23:59

UTC Offs et: -06:00

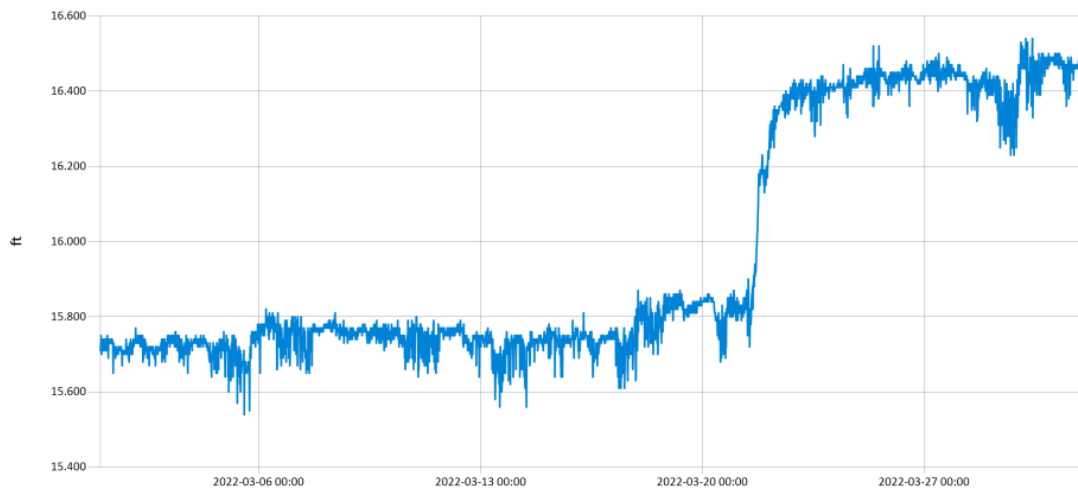


— Stage@LRC

Figure 14 Monthly Hydrograph LRC-1

Period Selected: 2022-03-01 00:00 - 2022-03-31 23:59

UTC Offs et: -06:00



— Stage@LDB

Figure 15 Monthly Hydrograph LDB-1

Period Selected: 2022-03-01 00:00 - 2022-03-31 23:59

UTC Offs et: -06:00

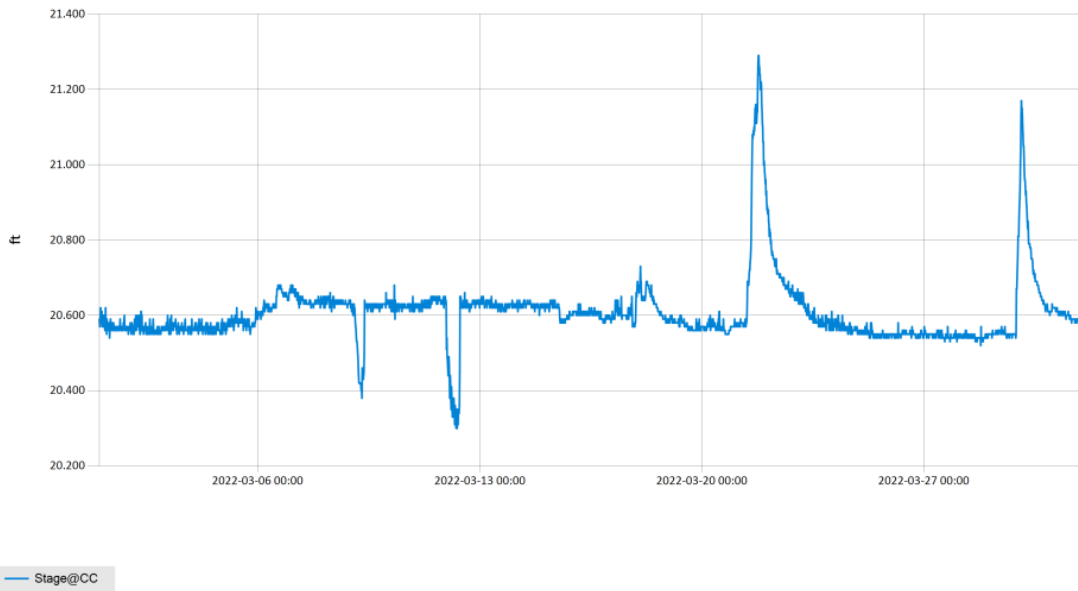


Figure 16 Monthly Hydrograph CC-1

Period Selected: 2022-03-01 00:00 - 2022-03-31 23:59

UTC Offs et: -06:00

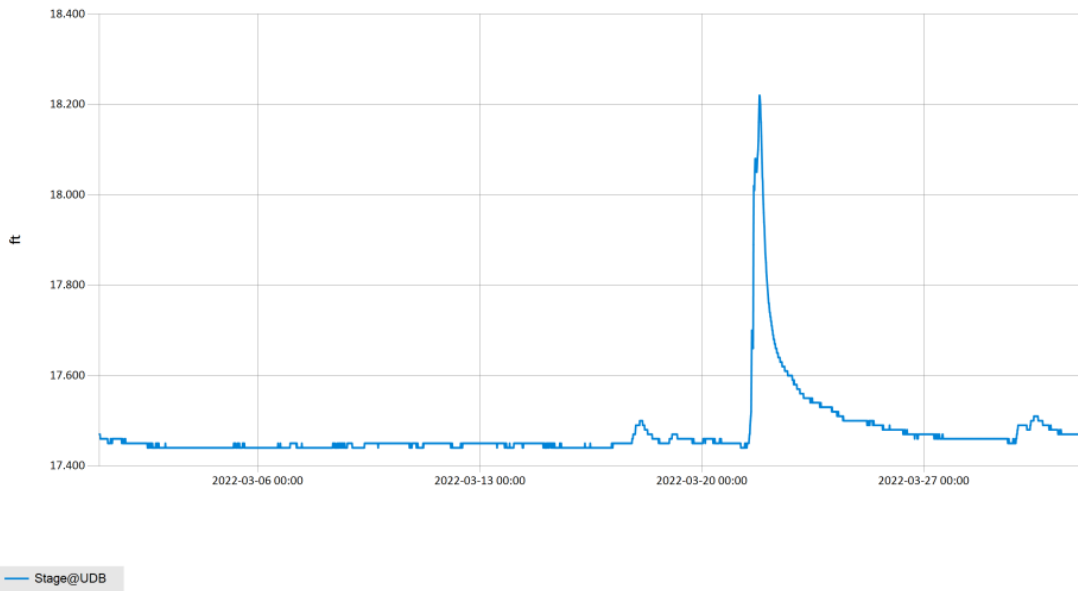


Figure 17 Monthly Hydrograph UDB-1

MESONET CLIMATOLOGICAL DATA SUMMARY		March 2022		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	4" SOIL TEMPERATURES			
	MAX	MIN	AVG	DEWPT	HDD	CDD	MAX	MIN	AVG	(in)	STN	MSL	DIR	AVG	MAX	(MJ/m ²)	SOD	BARE	MAX	MIN
1	75	30	53.3	22.6	13	0	79	11	37	0.00	28.89	30.15	S	5.2	15.1	20.00	41.4	43.8	52	37
2	77	33	55.1	26.3	10	0	78	12	39	0.00	28.88	30.13	SSW	4.0	16.6	19.66	43.5	46.1	55	38
3	79	40	60.4	30.0	5	0	61	15	35	0.00	28.86	30.11	S	6.0	19.7	19.79	45.5	48.7	57	40
4	77	51	63.0	48.0	1	0	83	35	59	0.00	28.74	29.99	SSE	11.7	28.3	12.78	48.7	52.9	59	47
5	82	50	67.2	43.0	0	1	87	11	52	0.00	28.58	29.82	S	15.3	37.0	17.44	52.3	58.1	65	54
6	50	32	37.4	29.7	24	0	94	54	74	0.12	28.77	30.02	NNW	15.2	29.0	4.24	48.4	49.8	56	44
7	41	26	33.1	22.5	31	0	83	47	66	0.00	29.03	30.29	NNW	13.2	33.5	18.78	44.5	43.6	48	40
8	44	25	33.7	20.4	30	0	81	26	60	0.00	28.88	30.13	NNE	4.6	16.4	9.65	43.6	42.0	47	39
9	56	23	40.0	22.7	26	0	86	27	54	0.00	28.78	30.03	ESE	4.5	19.5	20.98	43.2	44.0	54	36
10	55	28	38.3	26.8	23	0	79	48	64	0.00	28.77	30.01	N	11.2	32.0	15.96	44.4	46.0	52	41
11	35	23	27.4	18.7	36	0	94	45	71	0.05	29.00	30.26	N	13.3	32.6	10.85	41.4	40.3	44	38
12	56	17	38.1	15.1	28	0	86	18	45	0.05	29.06	30.31	S	7.1	25.3	21.75	40.4	39.8	47	35
13	67	34	51.3	15.9	14	0	48	11	27	0.00	28.83	30.08	S	13.9	33.7	21.99	43.2	45.2	53	38
14	66	46	54.9	38.7	9	0	84	29	57	0.00	28.71	29.95	S	13.0	29.4	10.69	46.1	49.3	55	45
15	67	44	53.6	38.0	10	0	78	36	57	0.00	28.89	30.15	NNW	8.5	23.4	21.01	48.1	52.9	61	48
16	79	40	60.9	38.4	6	0	90	18	50	0.00	28.65	29.89	S	10.8	30.2	21.65	49.1	54.2	62	47
17	73	48	62.7	45.2	4	0	93	31	55	0.26	28.43	29.66	SSE	12.8	35.4	11.81	51.6	56.7	60	53
18	59	36	46.2	33.2	17	0	93	27	64	0.02	28.71	29.96	NNW	18.5	38.7	11.94	49.3	50.2	56	46
19	73	35	54.3	26.4	11	0	81	13	40	0.00	28.87	30.12	SW	7.2	24.6	22.84	48.2	50.0	60	41
20	80	48	64.2	27.7	1	0	47	13	27	0.00	28.79	30.04	SSE	12.6	36.2	22.23	50.5	55.4	64	48
21	61	51	55.3	43.4	9	0	99	22	71	2.03	28.49	29.73	SSE	10.5	30.9	2.00	51.2	54.6	57	53
22	54	41	44.4	38.4	18	0	99	59	80	0.01	28.49	29.72	NW	17.0	36.6	5.45	49.4	50.7	53	47
23	54	33	44.0	25.6	21	0	72	30	50	0.00	28.68	29.92	NW	15.6	40.6	22.28	47.0	46.4	51	42
24	62	32	47.0	25.5	18	0	81	18	48	0.00	28.70	29.95	NW	7.8	25.7	23.53	47.3	46.5	53	40
25	71	35	52.5	32.8	12	0	83	20	51	0.00	28.85	30.10	NE	6.0	24.9	23.25	48.5	48.9	57	40
26	73	41	57.9	29.0	8	0	70	18	37	0.00	28.81	30.06	E	7.0	16.7	23.29	50.9	51.6	60	44
27	78	48	61.0	34.7	2	0	49	26	38	0.00	28.71	29.96	ENE	10.4	21.3	22.68	52.8	53.3	61	46
28	84	49	65.6	45.4	0	1	65	30	49	0.00	28.61	29.86	SSE	11.6	26.9	22.44	54.8	55.4	62	48
29	79	59	70.1	56.8	0	4	92	49	64	0.11	28.35	29.58	S	17.1	48.7	17.35	58.3	61.7	68	57
30	63	38	50.7	37.9	15	0	94	39	63	0.00	28.36	29.60	NNW	15.6	40.3	10.97	55.7	56.5	62	50
31	58	33	45.5	29.1	19	0	79	32	55	0.00	28.63	29.88	NW	8.5	26.0	23.92	51.8	52.1	60	45
	65	38	51.3	31.9	<- Monthly Averages ->						28.74	29.98	S	10.8	48.7	17.20	48.1	49.9	56	44
Temperature - Highest: 84					Degree Days - Total HDD: 423					Number of Days With:										
Lowest: 17					Total CDD: 6					Tmax ≥ 90: 0 Rainfall ≥ 0.01 inch: 8										
Rainfall: Monthly Total: 2.65 in.					Humidity - Highest: 99					Tmax ≤ 32: 0 Rainfall ≥ 0.10 inch: 4										
Greatest 24 Hr: 2.03 in.					Lowest: 11					Tmin ≤ 32: 9 Avg Wind Speed ≥ 10 mph: 19										
										Tmin ≤ 0: 0 Max Wind Speed ≥ 30 mph: 14										

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* Denotes incomplete record

Figure 18 March Mesonet Data