Kinley Creek Monitoring Sites

Monitoring Data Summary for July 19th, 2018 – August 21st, 2018

Data Gaps

- There were no data gaps in the Kinley Creek datasets during this deployment period.

SCDHEC Standards

- Both Kinley Creek monitoring stations recorded high pH readings that are outside of the SCDHEC acceptable range of 6 to 8.5. The maximum pH values observed at KINA and KINB were 8.7 and 10, respectively.
- The KINA station recorded an average DO concentration of 3.9 mg/L which is below the SCDHEC daily average standard of 5 mg/L. The KINB station recorded an average DO concentration of 5 mg/L.
- The instantaneous minimum DO values recorded at the KINA and KINB stations were 0.4 mg/L and 2.1 mg/L, respectively, which are well below the SCDHEC instantaneous minimum standard of 4.0 mg/L. These low DO values are further discussed in the *Potential Illicit Discharges and Abnormal Events* section below.

Storm Events

- The rain gauge along Kinley Creek recorded 14 storm events over this deployment period that resulted in 7.4 inches of precipitation.
- Both KINA and KINB stations experienced some abnormal trends in response to storm events during this monitoring period. The pH and DO at both sites increased during some storm events, which is not a typical response pattern observed in Kinley Creek.
- The maximum antecedent dry time since the last significant precipitation event (at least 0.1 inches) was approximately 9.2 days in the Kinley Creek watershed occurring prior to the storm event on July 22nd.

Potential Illicit Discharges and Abnormal Events

- The low DO values observed at both KINA and KINB may have been the result of a combination of relatively dry conditions in the watershed and the high algal growth observed upstream, in Lake Quail Valley, this summer. The excessive algal production may have resulted in a large amount of decaying biomass in the lake and downstream in Kinley Creek, which may have consumed much of the oxygen in the stream system.
- The abnormally high pH readings in Kinley Creek are also likely due to the algae growth observed in the upstream lake.

Flow Measurements

- There were not any flow measurements taken at the Kinley Creek stations during this deployment period.

City of Columbia, SC Stormwater Management — Partnering for clean waterways

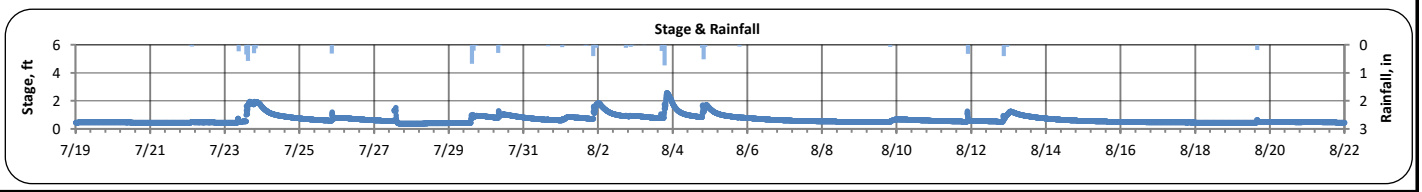
Continuous Water Quality Monitoring Periodic Report

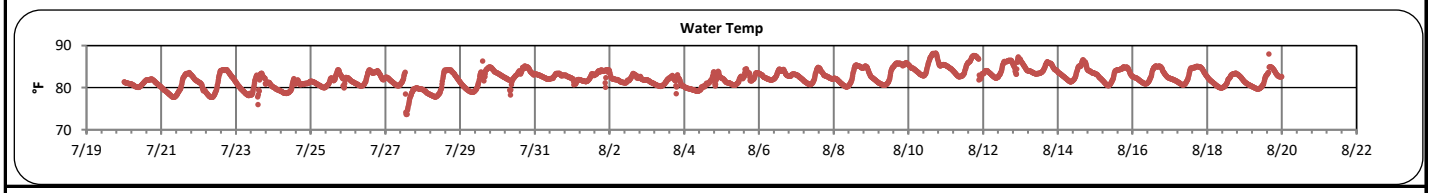
WOOLPERT

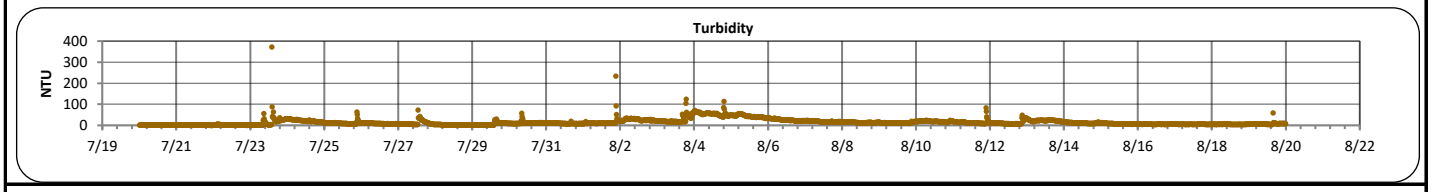
Kinley Creek A (July 19, 2018 -- August 21, 2018)

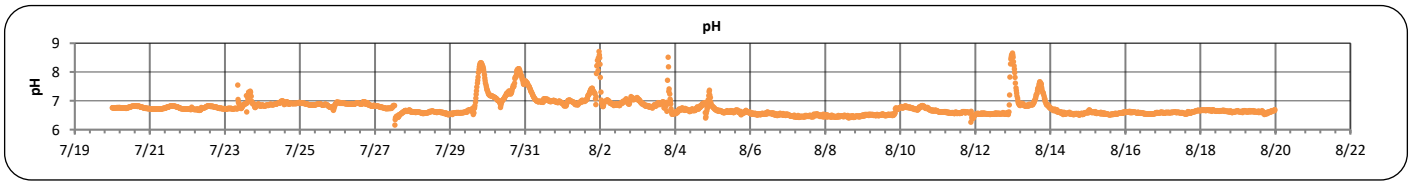
PARAMETER	DESCRIPTION
STREAM NAME:	Kinley Creek
LOCATION:	Longhorn Steakhouse
ADDRESS:	171 Harbison Blvd Columbia, SC 29212
COORDINATES:	34.069897, -81.164592
TMDL/IMPAIRMENT:	Fecal Coliform
NEIGHBORING LANDUSE:	Residential and commercial
SPATIAL LOCATION:	Most upstream site
TOTAL NO. STORMS OVER 0.1 INCH:	14
MAX. DAILY RAINFALL:	1.7 inches
TOTAL RAINFALL (FOR PERIOD):	7.4 inches

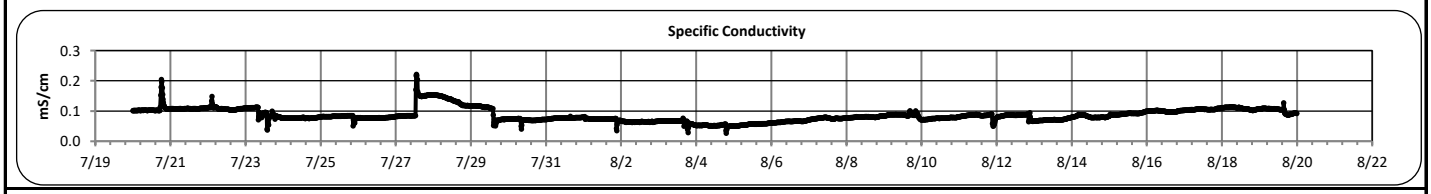
CONTINUOUS WATER QUALITY PARAMETERS:	SUMMARY STATISTICS				
	MINIMUM OBSERVED	MAXIMUM OBSERVED	MEDIAN OBSERVED	MEAN OBSERVED	STANDARD DEVIATION
STAGE (FT):	0.4	2.6	0.6	0.7	0.3
TEMPERATURE (°F):	74	88	82	82	2
TURBIDITY (NTU):	1	372	11	15	16
pH:	6.2	8.7	6.7	6.8	0.3
SPECIFIC CONDUCTIVITY (mS/cm):	0.027	0.221	0.082	0.086	0.022
DISSOLVED OXYGEN (mg/L):	0.4	8.3	3.6	3.9	2.3

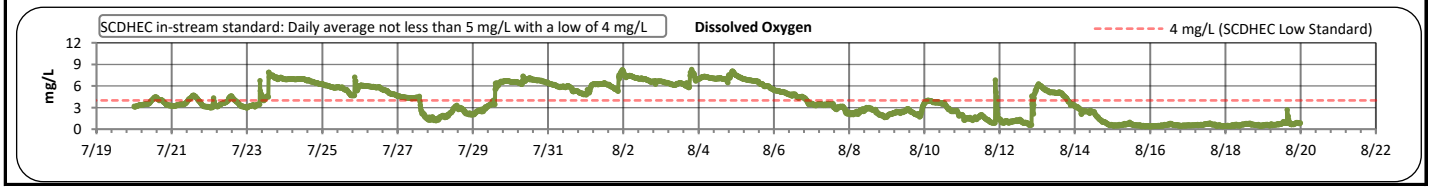












Note: Data gaps appear when the sonde is removed for calibration or when the flow depth is below the sensors

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Continuous Water Quality
Monitoring Periodic Report

Kinley Creek A (July 19, 2018 -- August 21, 2018)

Explanation of Statistics:

MINIMUM OBSERVED	The minimum of the values recorded by the datasonde in 15 minute intervals.
MAXIMUM OBSERVED	The maximum of the values recorded by the datasonde in 15 minute intervals.
MEDIAN OBSERVED	The median of all the values recorded by the datasonde in 15 minute intervals.
MEAN OBSERVED	The average of all the values recorded by the datasonde in 15 minute intervals.
STANDARD DEVIATION	The standard deviation of all the values recorded by the datasonde in 15 minute intervals.

Grab Sample Data:

Analyte (units)	Sample 1		Sample 2		Sample 3		Sample 4	
	8/17/2018							
	Time	Result	Time	Result	Time	Result	Time	Result
Escherichia coli (MPN/100mL)	8:05	5,818						
Total Suspended Solids (mg/L)								
Total Phosphorus (mg/L)								
Total Nitrogen (mg/L)								

Note: The sample collected on 8/17/2018 was collected during dry weather conditions.

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City of Columbia, SC Stormwater Management
Partnering for clean waterways

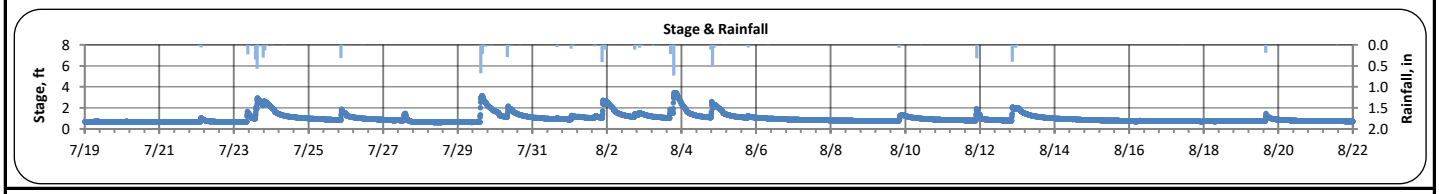
Continuous Water Quality Monitoring Periodic Report

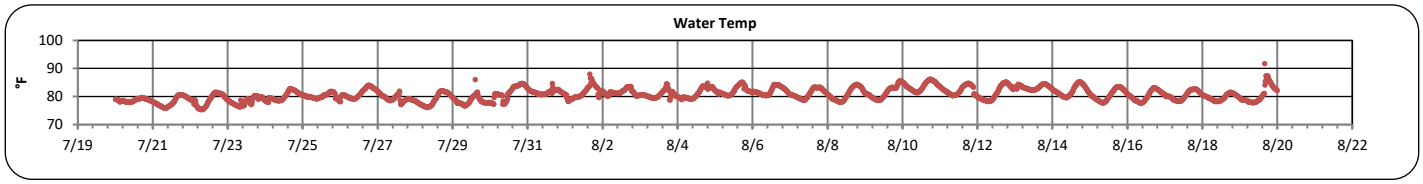
WOOLPERT

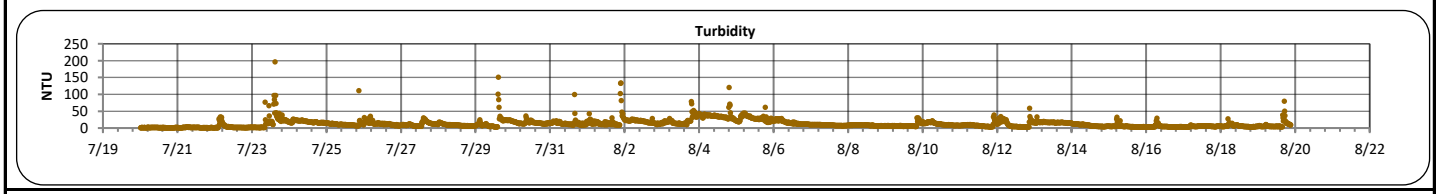
Kinley Creek A (July 19, 2018 -- August 21, 2018)

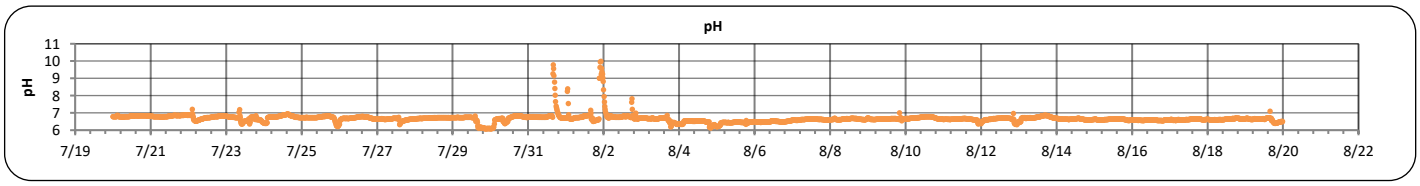
PARAMETER	DESCRIPTION
STREAM NAME:	Kinley Creek
LOCATION:	Broken Hill Rd
ADDRESS:	609 Broken Hill Rd Columbia, SC 29212
COORDINATES:	34.06635, -81.159986
TMDL/IMPAIRMENT:	Fecal Coliform
NEIGHBORING LANDUSE:	Residential and commercial
SPATIAL LOCATION:	Most downstream site
TOTAL NO. STORMS OVER 0.1 INCH:	14
MAX. DAILY RAINFALL:	1.7 inches
TOTAL RAINFALL (FOR PERIOD):	7.4 inches

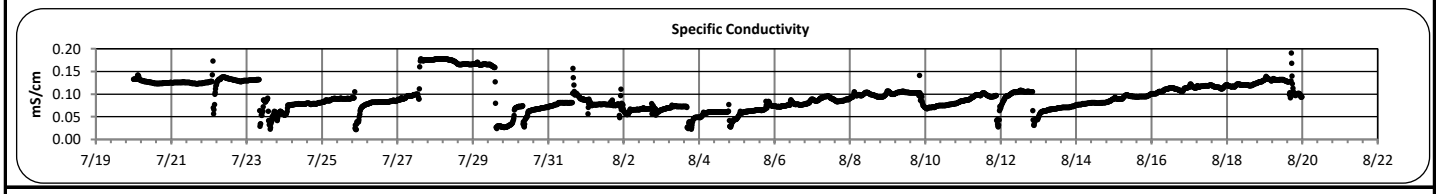
CONTINUOUS WATER QUALITY PARAMETERS:	SUMMARY STATISTICS				
	MINIMUM OBSERVED	MAXIMUM OBSERVED	MEDIAN OBSERVED	MEAN OBSERVED	STANDARD DEVIATION
STAGE (FT):	0.6	3.5	0.9	1.0	0.4
TEMPERATURE (°F):	75	92	81	81	2
TURBIDITY (NTU):	1	197	11	13	12
pH:	6.1	10.0	6.7	6.7	0.3
SPECIFIC CONDUCTIVITY (mS/cm):	0.022	0.191	0.089	0.094	0.032
DISSOLVED OXYGEN (mg/L):	2.1	8.2	4.9	5.0	1.3

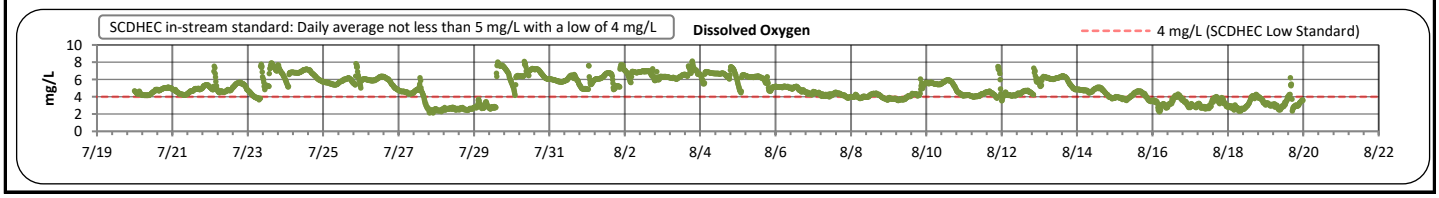












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STANDARD DEVIATION	The standard deviation of all the values recorded by the datasonde in 15 minute intervals.

Sampled Data:

Analyte (units)	Sample 1		Sample 2		Sample 3		Sample 4	
	8/17/2018							
	Time	Result	Time	Result	Time	Result	Time	Result
Escherichia coli (MPN/100mL)	8:22	196						
Total Suspended Solids (mg/L)								
Total Phosphorus (mg/L)								
Total Nitrogen (mg/L)								

Note: The sample collected on 8/17/2018 was collected during dry weather conditions.

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