Kinley Creek Monitoring Sites

Monitoring Data Summary for April 25th, 2019 – June 18th, 2019

Data Gaps

- The KINA station experienced abnormal water quality following the May 5th storm event. The KINA sonde was removed from the field on May 7th for maintenance. The sonde was returned to the field on May 11th with a new DO probe. The water quality data was deleted from May 5th-11th.
- The KINB station experienced a brief period of fouling turbidity from June 10th-14th, which was removed from the dataset.

SCDHEC Standards

- Both Kinley Creek monitoring stations recorded pH readings that were within the SCDHEC acceptable range of 6 to 8.5.
- The KINA station recorded an average DO concentration of 4.6 mg/L, which is lower than the SCDHEC daily average standard of 5 mg/L.
- The KINB station recorded an average DO concentration of 5.9 mg/L, which is above the SCDHEC daily average standard of 5 mg/L.
- The instantaneous minimum DO values recorded at the KINA and KINB stations were 1.2 mg/L and 2.6 mg/L, respectively, which are both lower than the SCDHEC instantaneous minimum standard of 4 mg/L.
- These low DO values were likely caused by the warm water temperature and minimal flow/stagnant water in the creek during dry conditions.

Storm Events

- The rain gauge along Kinley Creek recorded 3 storm events during this deployment period that resulted in a total of 3.2 inches of precipitation.
- Both KINA and KINB stations recorded typical response patterns to the recorded storm events during this monitoring period.
- The maximum antecedent dry time since the last significant precipitation event (at least 0.1 inches) was approximately 24.5 days in the Kinley Creek watershed, occurring prior to the storm event on June 5th.

Potential Illicit Discharges and Abnormal Events

- There were several instances at both KINA and KINB when the stage experienced abrupt increases and decreases, likely caused by activity at Lake Quail Valley upstream of the KINA station. These periods caused some impacts to water quality.
- At the KINA station, a potential illicit discharge was observed on May 15th which caused a notable increase in turbidity, as well as a slight decrease in DO and pH.

Flow Measurements

- No flow measurements were taken in the Kinley Creek watershed during this deployment period.

Notes

- Due to a delayed contract, field visits to the water quality monitoring stations were minimal during this deployment period. Only significant station and equipment maintenance needs were performed.

City of Columbia, SC Stormwater Management
Partnering for clean waterways

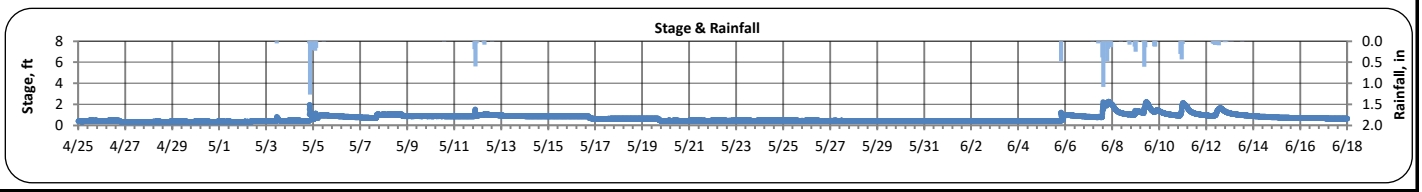
Continuous Water Quality Monitoring Periodic Report

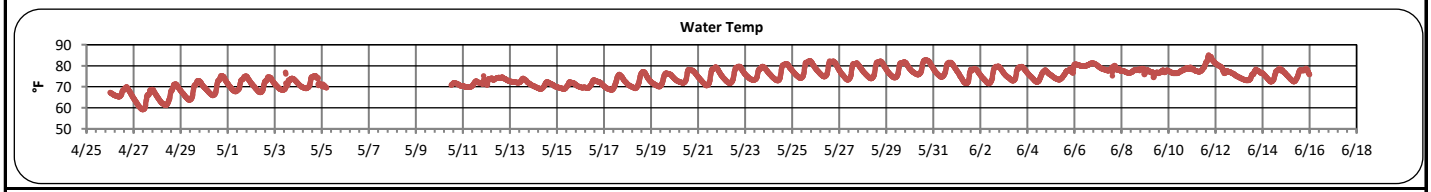
WOOLPERT

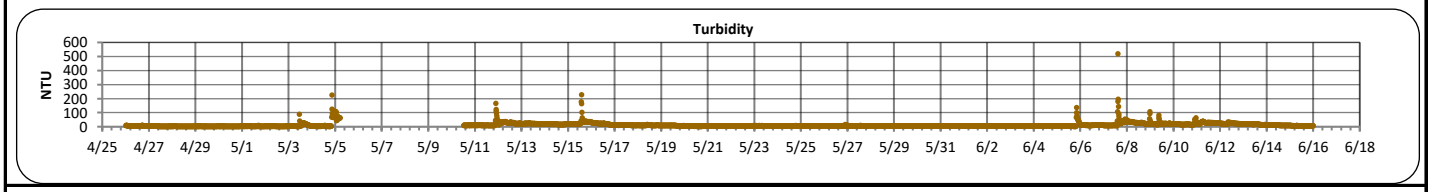
Kinley Creek A (April 25, 2019 -- June 18, 2019)

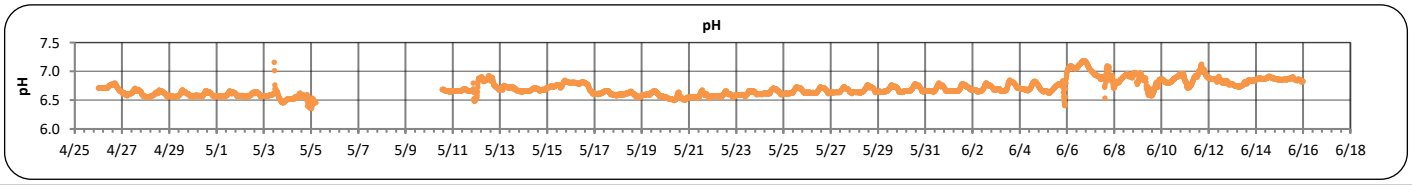
PARAMETER	DESCRIPTION
STREAM NAME:	Kinley Creek
LOCATION:	Longhorn Steakhouse
ADDRESS:	171 Harbison Blvd Columbia, SC 29212
COORDINATES:	34.069897, -81.164592
TMDL/IMPAIRMENT:	Fecal Coliform
NEIGHBORING LANDUSE:	Residential and commercial
SPATIAL LOCATION:	Most upstream site
TOTAL NO. STORMS OVER 0.1 INCH:	3
MAX. DAILY RAINFALL:	1.5 inches
TOTAL RAINFALL (FOR PERIOD):	3.2 inches

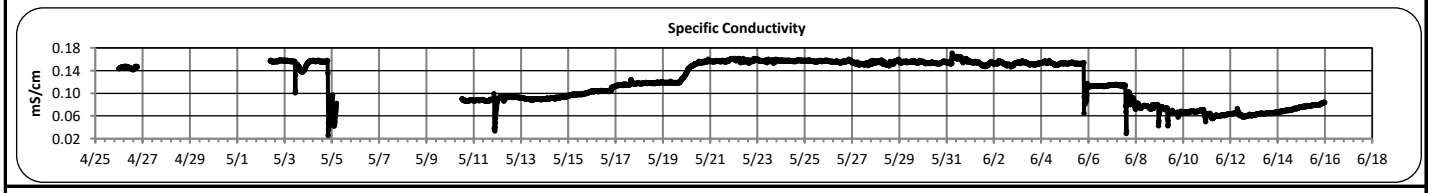
CONTINUOUS WATER QUALITY PARAMETERS:	SUMMARY STATISTICS				
	MINIMUM OBSERVED	MAXIMUM OBSERVED	MEDIAN OBSERVED	MEAN OBSERVED	STANDARD DEVIATION
STAGE (FT):	0.3	2.3	0.6	0.7	0.3
TEMPERATURE (°F):	59	85	75	74	4
TURBIDITY (NTU):	2	521	7	12	16
pH:	6.4	7.2	6.7	6.7	0.1
SPECIFIC CONDUCTIVITY (mS/cm):	0.026	0.171	0.119	0.120	0.036
DISSOLVED OXYGEN (mg/L):	1.2	8.4	4.4	4.6	1.5

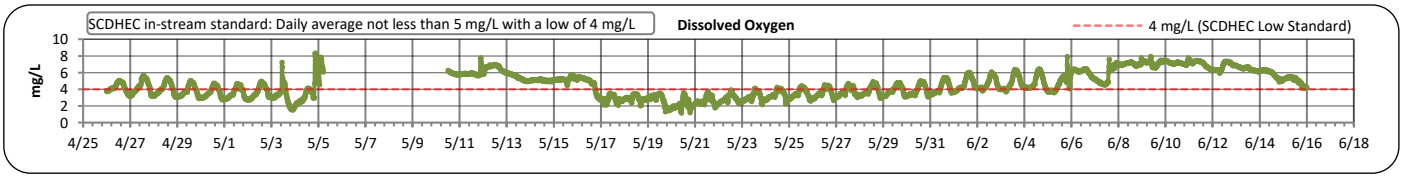












Note: Data gaps appear when the sonde is removed for calibration or when the flow depth is below the sensors

REPORT GENERATED ON 12/9/2019

Continuous Water Quality
Monitoring Periodic Report

Kinley Creek A (April 25, 2019 -- June 18, 2019)

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	
	5/2/2019		6/4/2019		6/12/2019			
	Time	Result	Time	Result	Time	Result	Time	Result
Escherichia coli (MPN/100mL)	9:10	1394	7:56	1976	9:16	992		
Total Suspended Solids (mg/L)					9:16	16.7		
Total Phosphorus (mg/L)								
Total Nitrogen (mg/L)								

Note: Sample 1 and 2 were collected during dry weather conditions. Sample 3 was collected during wet weather conditions.

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

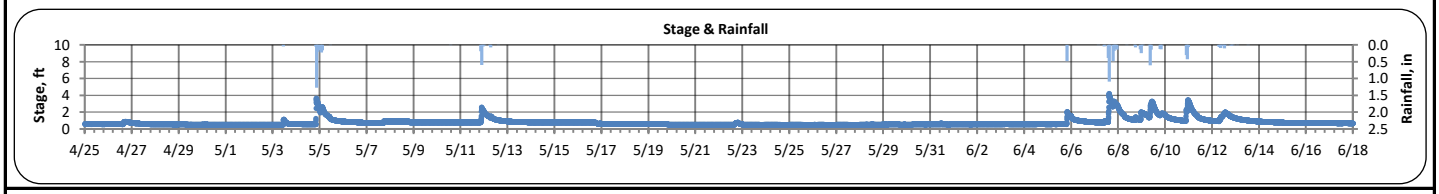
Continuous Water Quality Monitoring Periodic Report

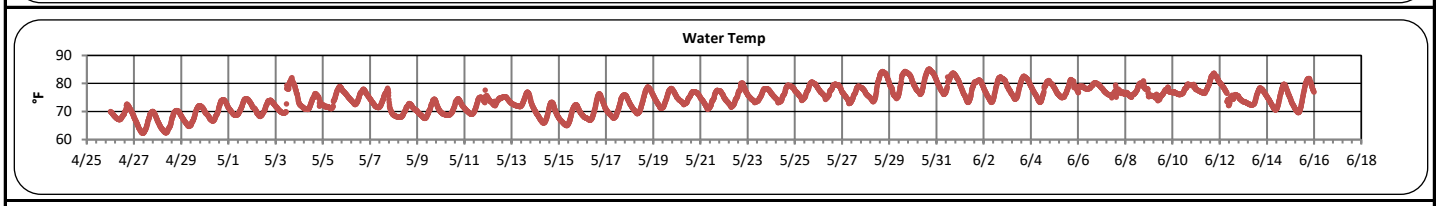
WOOLPERT

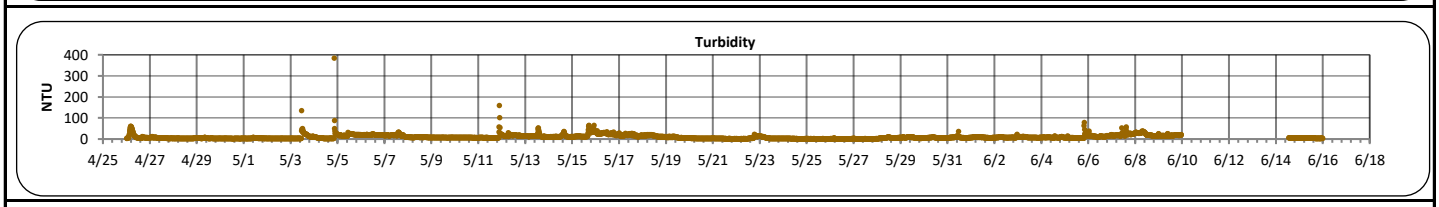
Kinley Creek B (April 25, 2019 -- June 18, 2019)

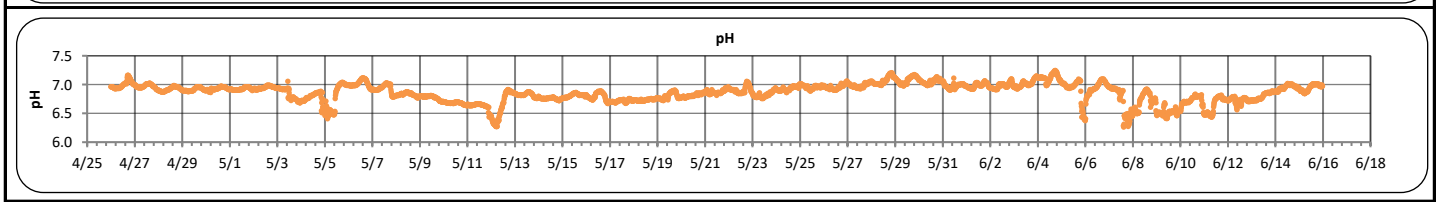
PARAMETER	DESCRIPTION
STREAM NAME:	Kinley Creek
LOCATION:	Broken Hill Rd
ADDRESS:	609 Broken Hill Rd Columbia, SC 29212
COORDINATES:	34.06635, -81.159986
TMDL/IMPAIRMENT:	Fecal Coliform
NEIGHBORING LANDUSE:	Residential and commercial
SPATIAL LOCATION:	Most downstream site
TOTAL NO. STORMS OVER 0.1 INCH:	3
MAX. DAILY RAINFALL:	1.5 inches
TOTAL RAINFALL (FOR PERIOD):	3.2 inches

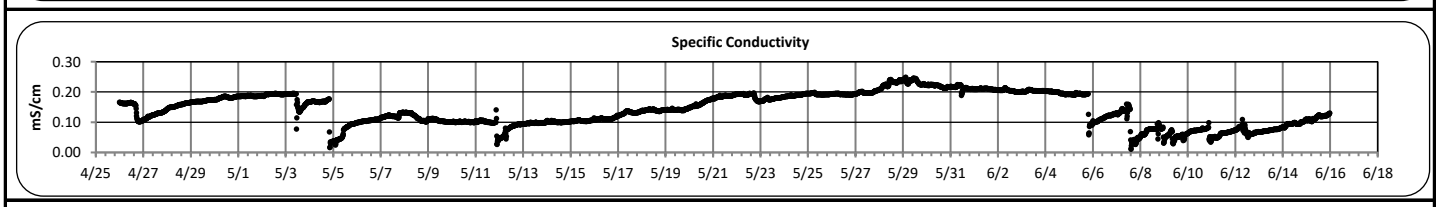
CONTINUOUS WATER QUALITY PARAMETERS:	SUMMARY STATISTICS				
	MINIMUM OBSERVED	MAXIMUM OBSERVED	MEDIAN OBSERVED	MEAN OBSERVED	STANDARD DEVIATION
STAGE (FT):	0.5	4.2	0.6	0.8	0.4
TEMPERATURE (°F):	62	85	75	75	4
TURBIDITY (NTU):	2	384	8	10	11
pH:	6.3	7.3	6.9	6.9	0.2
SPECIFIC CONDUCTIVITY (mS/cm):	0.011	0.249	0.140	0.143	0.052
DISSOLVED OXYGEN (mg/L):	2.6	8.7	5.9	5.9	1.0

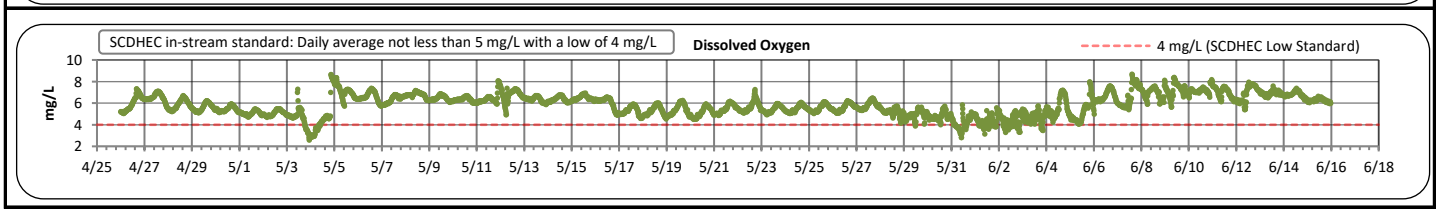












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Kinley Creek B (April 25, 2019 -- June 18, 2019)

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Sampled Data:

Analyte (units)	Sample 1		Sample 2		Sample 3		Sample 4	
	5/2/2019		6/4/2019		6/12/2019			
	Time	Result	Time	Result	Time	Result	Time	Result
Escherichia coli (MPN/100mL)	9:40	2842	8:14	808	8:57	1074		
Total Suspended Solids (mg/L)					8:57	12.8		
Total Phosphorus (mg/L)								
Total Nitrogen (mg/L)								

Note: Sample 1 and 2 were collected during dry weather conditions. Sample 3 was collected during wet weather conditions.