

# Kinley Creek Monitoring Sites

## Monitoring Data Summary for February 23<sup>rd</sup>, 2017 – March 29<sup>th</sup>, 2017

### *Data Gaps*

- The specific conductivity sensor installed on the KINA sonde began malfunctioning near the end of the deployment. Data during the period of significant fouling was removed from the dataset.
- The KINB station did not experience any gaps in the data record during this monitoring period.

### *SCDHEC Standards*

- The KINA and KINB stations did not record any pH values outside the SCDHEC standard range during this monitoring period.
- The KINA and KINB stations recorded average DO concentrations of 7.6 mg/L and 8.1 mg/L, respectively. These averages were well above the SCDHEC daily average standard minimum of 5 mg/L.
- The instantaneous minimum DO values recorded at the KINA and KINB stations were 2.5 mg/L and 4.7 mg/L, respectively. This extremely low DO minimum at KINA occurred during a period of elevated discharge from the upstream control structure as described in the “Potential Illicit Discharges and Abnormal Events” section (below).

### *Storm Events*

- The Kinley rain gauge recorded five storm events over this deployment period, resulting in 2.5 inches of precipitation.
- Both stations generally recorded typical storm event responses during this monitoring period, with the exception of the water quality impacts resulting from the Quail Valley Lake maintenance, as described further in the “Potential Illicit Discharges and Abnormal Events” section (below).
- The maximum antecedent dry time since the last significant precipitation event (at least 0.1 inches) was approximately 14.5 days in the Kinley Creek watershed, and occurred prior to the March 1<sup>st</sup>-2<sup>nd</sup> storm event.

### *Potential Illicit Discharges and Abnormal Events*

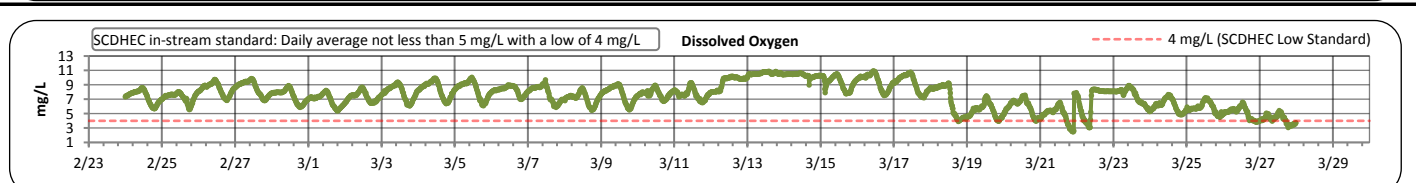
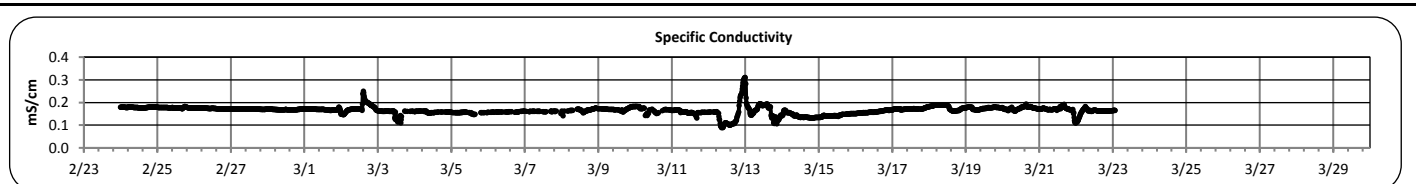
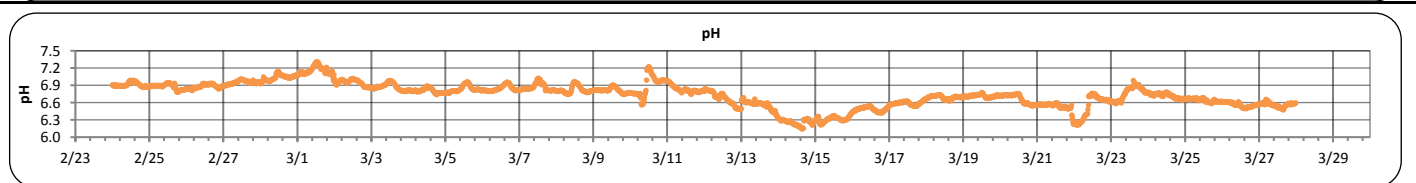
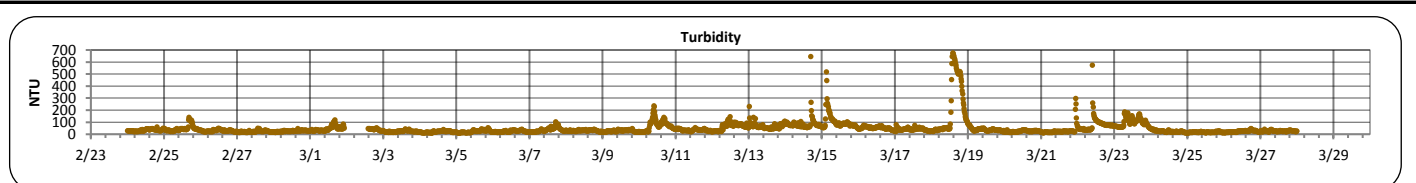
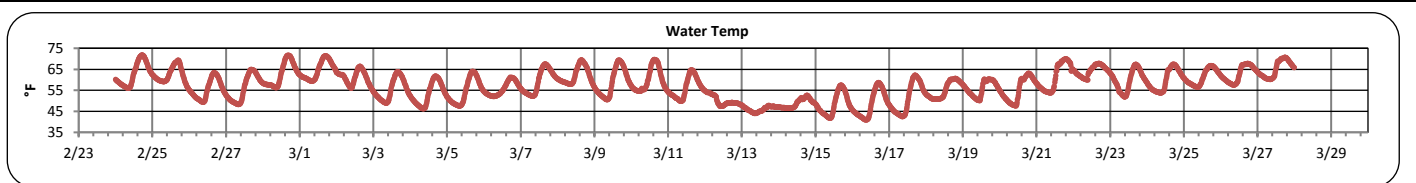
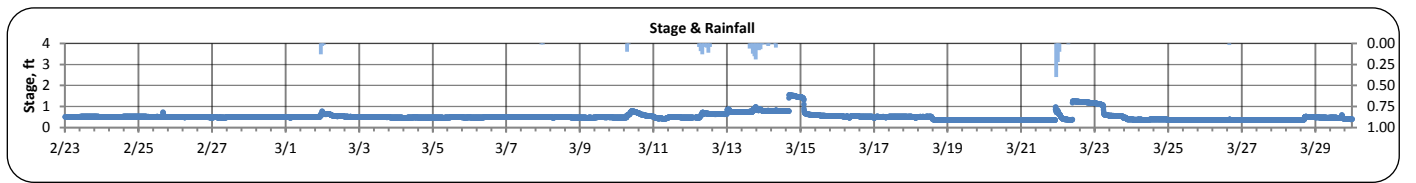
- During this monitoring period, an ongoing maintenance and dredging project at the Quail Valley Lake, upstream of the KINA station, effected water quality data at the City’s monitoring stations. Two periods of elevated stage levels were observed: from March 14<sup>th</sup>-15<sup>th</sup>, and March 22<sup>nd</sup>-23<sup>rd</sup>. These periods were associated with elevated turbidity levels and fluctuations in the specific conductivity dataset. Additionally, two periods of significantly decreased stage levels were observed: from March 18<sup>th</sup>-22<sup>nd</sup>, and March 24<sup>th</sup>-28<sup>th</sup>. These periods were associated with extremely low DO levels at the KINA station and occasionally elevated turbidity levels. During a site visit on March 22<sup>nd</sup>, field personnel noted a number of dead fish in the vicinity of the KINA monitoring station, possibly as a result of the low DO levels recorded in the previous days.
- At the KINB station, several periods of slightly elevated specific conductivity were recorded. These occurred on March 8<sup>th</sup>, 9<sup>th</sup>, and 26<sup>th</sup>. On March 26<sup>th</sup>, a slight increase in pH was recorded with the elevated specific conductivity levels.

### *Flow Measurements*

- No flow measurements were taken in this watershed during this monitoring period.

**Kinley Creek A (February 23, 2017 -- March 29, 2017)**

PARAMETER	DESCRIPTION	CONTINUOUS WATER QUALITY PARAMETERS:	SUMMARY STATISTICS				
			MINIMUM OBSERVED	MAXIMUM OBSERVED	MEDIAN OBSERVED	MEAN OBSERVED	STANDARD DEVIATION
STREAM NAME:	Kinley Creek	STAGE (FT):	0.4	1.6	0.5	0.5	0.2
LOCATION:	Longhorn Steakhouse	TEMPERATURE (°F):	41	72	58	57	7
ADDRESS:	171 Harbison Blvd Columbia, SC 29212	TURBIDITY (NTU):	12	676	33	50	62
COORDINATES:	34.069897, -81.164592	pH:	6.2	7.3	6.8	6.7	0.2
TMDL/IMPAIRMENT:	Fecal Coliform	SPECIFIC CONDUCTIVITY (mS/cm):	0.089	0.311	0.169	0.166	0.019
NEIGHBORING LANDUSE:	Residential and commercial	DISSOLVED OXYGEN (mg/L):	2.5	10.9	7.7	7.6	1.8
SPATIAL LOCATION:	Most upstream site						
TOTAL NO. STORMS OVER 0.1 INCH:	5						
MAX. DAILY RAINFALL:	0.8 inches						
TOTAL RAINFALL (FOR PERIOD):	2.5 inches						



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

**Continuous Water Quality  
Monitoring Periodic Report**

**Kinley Creek A (February 23, 2017 -- March 29, 2017)**

**Explanation of Statistics:**

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

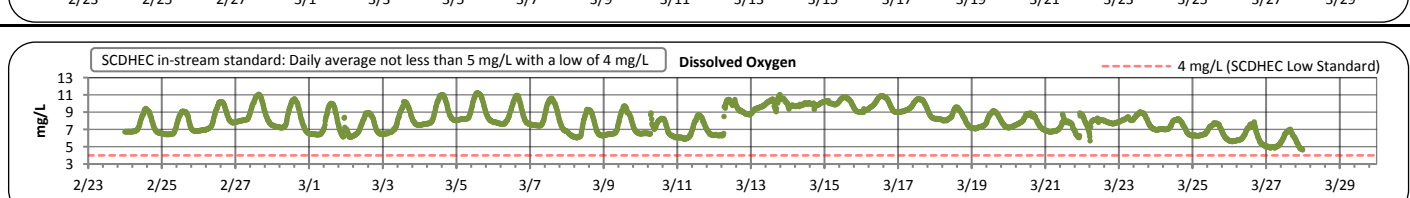
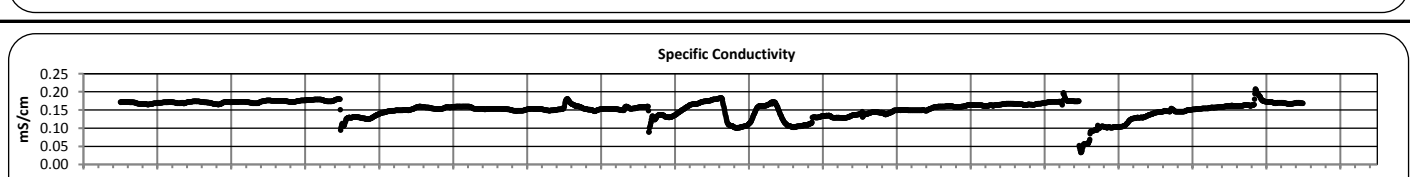
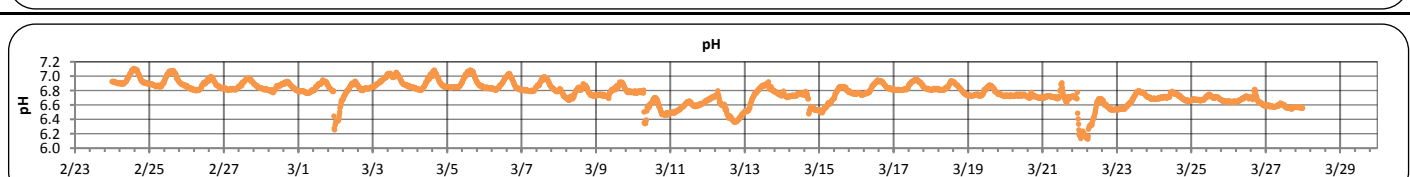
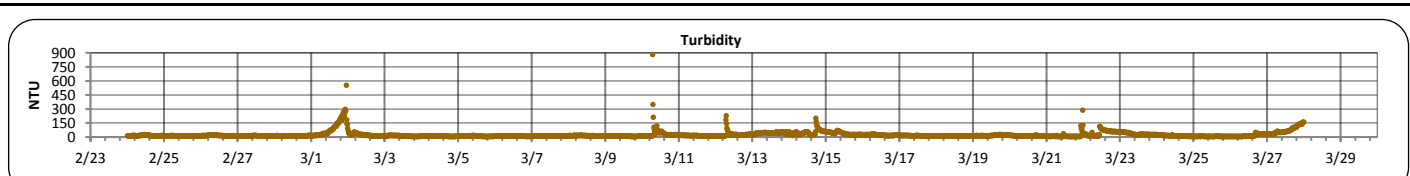
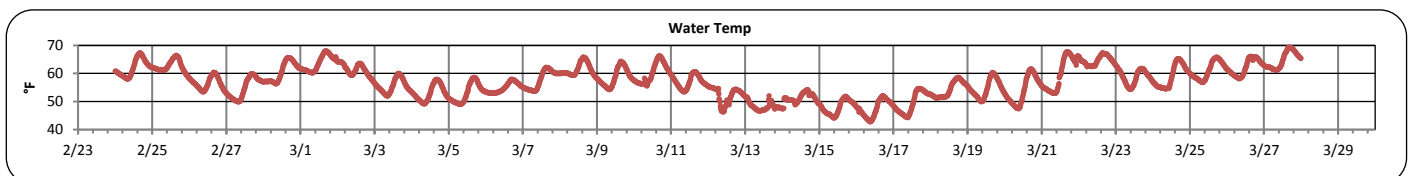
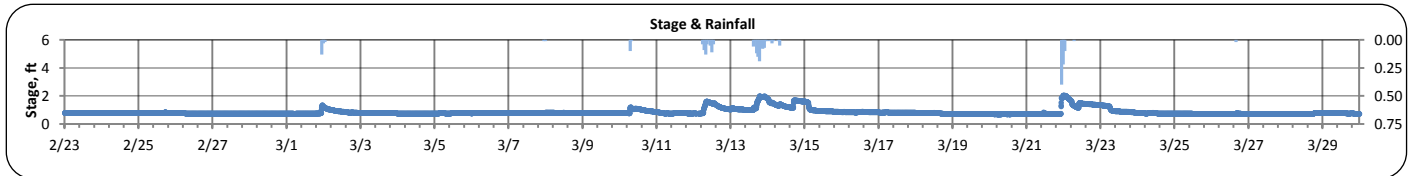
**Grab Sample Data:**

Analyte (units)	Sample 1		Sample 2		Sample 3		Sample 4	
	Time	Result	Time	Result	Time	Result	Time	Result
<i>Escherichia coli</i> (MPN/100mL)								
Total Suspended Solids (mg/L)								
Total Phosphorus (mg/L)								
Total Nitrogen (mg/L)								

Note:

**Kinley Creek B (February 23, 2017 -- March 29, 2017)**

PARAMETER	DESCRIPTION	CONTINUOUS WATER QUALITY PARAMETERS:	SUMMARY STATISTICS				
			MINIMUM OBSERVED	MAXIMUM OBSERVED	MEDIAN OBSERVED	MEAN OBSERVED	STANDARD DEVIATION
STREAM NAME:	Kinley Creek	STAGE (FT):	0.7	2.1	0.8	0.9	0.2
LOCATION:	Broken Hill Rd	TEMPERATURE (°F):	43	69	57	57	6
ADDRESS:	609 Broken Hill Rd Columbia, SC 29212	TURBIDITY (NTU):	7	883	15	26	34
COORDINATES:	34.06635, -81.159986	pH:	6.1	7.1	6.8	6.8	0.2
TMDL/IMPAIRED:	Fecal Coliform	SPECIFIC CONDUCTIVITY (mS/cm):	0.033	0.208	0.156	0.152	0.022
NEIGHBORING LANDUSE:	Residential and commercial	DISSOLVED OXYGEN (mg/L):	4.7	11.3	8.0	8.1	1.4
SPATIAL LOCATION:	Most downstream site						
TOTAL NO. STORMS OVER 0.1 INCH:	5						
MAX. DAILY RAINFALL:	0.8 inches						
TOTAL RAINFALL (FOR PERIOD):	2.5 inches						



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<b>MEDIAN OBSERVED</b>	The median of all the values recorded by the datasonde in 15 minute intervals.
<b>MEAN OBSERVED</b>	The average of all the values recorded by the datasonde in 15 minute intervals.
<b>STANDARD DEVIATION</b>	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	
	Time	Result	Time	Result	Time	Result	Time	Result
<i>Escherichia coli</i> (MPN/100mL)								
Total Suspended Solids (mg/L)								
Total Phosphorus (mg/L)								
Total Nitrogen (mg/L)								

Note: