

Smith Branch Monitoring Sites

Monitoring Data Summary for June 8th, 2017 – July 12th, 2017

Data Gaps

- The SMIA station did not record any interruptions in the dataset during this monitoring period.
- The SMIB station experienced submergence issues throughout the deployment period which affected the specific conductivity probe. The periods affected were removed from the dataset.
- The SMIB station also experienced fouled turbidity levels on June 21st-22nd which were removed from the dataset.

SCDHEC Standards

- Neither the SMIA nor the SMIB station recorded pH values outside of the SCDHEC standards acceptable range 6 to 8.5.
- The SMIA and SMIB stations recorded average DO concentrations of 7.0 mg/L and 7.6 mg/L, respectively, well above the SCDHEC daily average standard of 5 mg/L.
- The minimum DO concentrations were 5.3 mg/L and 6.2 mg/L at the SMIA and SMIB stations, respectively, which are well above the SCDHEC minimum level of 4 mg/L.

Storm Events

- The SMIA rain gauge recorded eight storm events resulting in 4.5 inches of precipitation during this monitoring period. The SMIB rain gauge recorded seven storm events resulting in 4.9 inches of precipitation during this monitoring period.
- The Smith Branch monitoring stations recorded typical water quality responses to the storm events observed during this monitoring period.
- The maximum antecedent dry time since the last significant precipitation event (at least 0.1 inches) was approximately 9.8 days in the Smith Branch watershed, and occurred prior to the June 16th storm event.

Potential Illicit Discharges and Abnormal Events

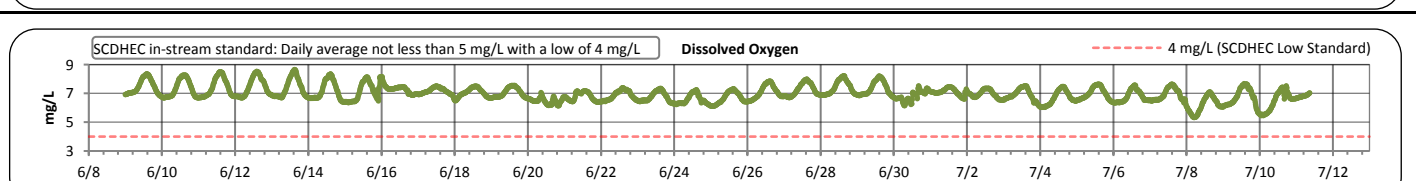
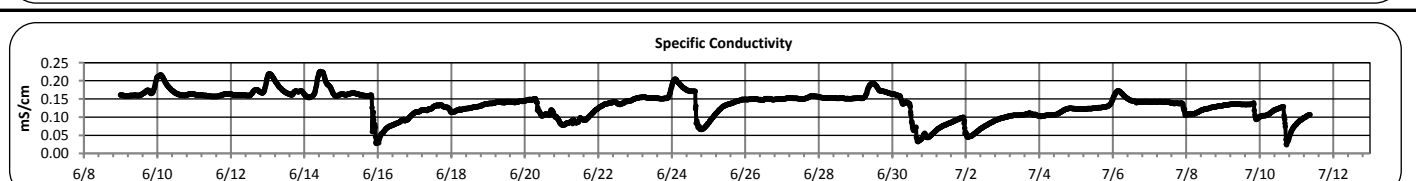
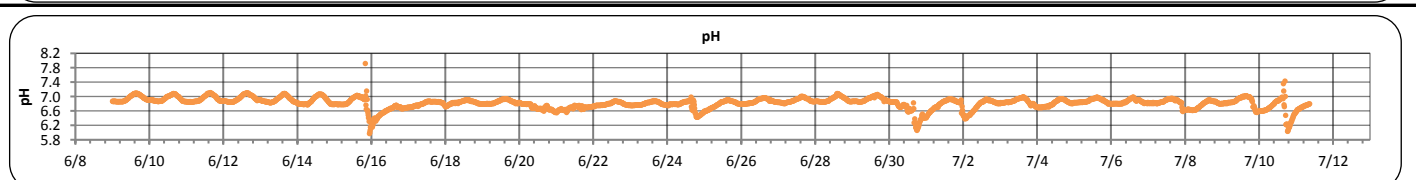
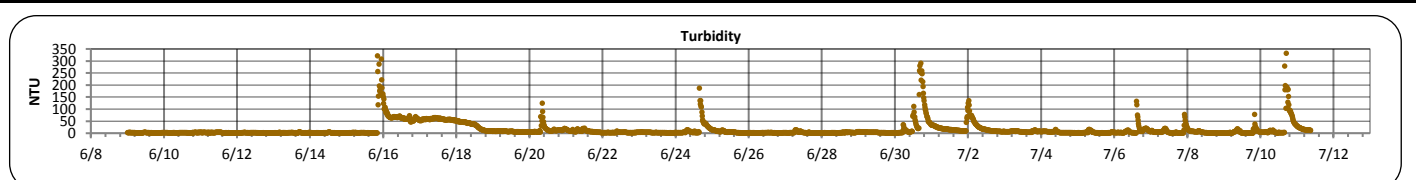
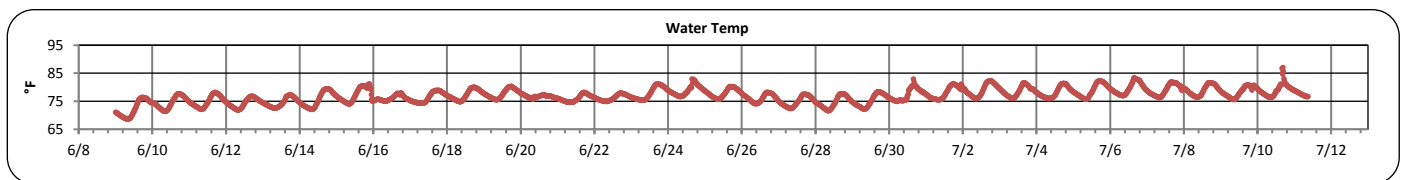
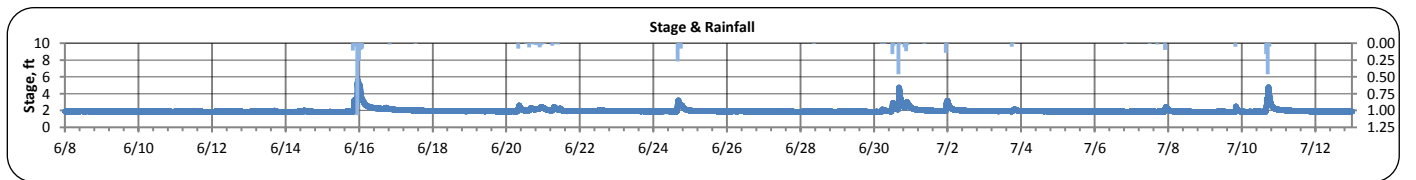
- Periods of slight increase in specific conductivity was observed at SMIA on: June 9th-10th, 12th-13th, 14th, 23rd-24th, 29th, and July 5th-6th.
- The SMIA station experienced a large turbidity response to a relatively small rain event on July 6th, which could suggest an activity upstream, like construction, contributed to the elevated turbidity levels.

Flow Measurements

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

Smith Branch A (June 8, 2017 -- July 12, 2017)

PARAMETER	DESCRIPTION	CONTINUOUS WATER QUALITY PARAMETERS:	SUMMARY STATISTICS				
			MINIMUM OBSERVED	MAXIMUM OBSERVED	MEDIAN OBSERVED	MEAN OBSERVED	STANDARD DEVIATION
STREAM NAME:	Smith Branch	STAGE (FT):	1.8	5.7	1.9	2.0	0.3
LOCATION:	Earlewood Park	TEMPERATURE (°F):	69	87	77	77	3
ADDRESS:	1111 Parkside Dr Columbia, SC 29201	TURBIDITY (NTU):	1	333	4	15	31
COORDINATES:	34.027289,-81.04265	pH:	6.0	7.9	6.9	6.8	0.2
TMDL/IMPAIRMENT:	Fecal Coliform	SPECIFIC CONDUCTIVITY (mS/cm):	0.024	0.226	0.141	0.134	0.035
NEIGHBORING LANDUSE:	Residential and commercial	DISSOLVED OXYGEN (mg/L):	5.3	8.7	7.0	7.0	0.6
SPATIAL LOCATION:	Most upstream site						
TOTAL NO. STORMS OVER 0.1 INCH:	8						
MAX. DAILY RAINFALL:	1.5 inches						
TOTAL RAINFALL (FOR PERIOD):	4.5 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**

Smith Branch A (June 8, 2017 -- July 12, 2017)

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.

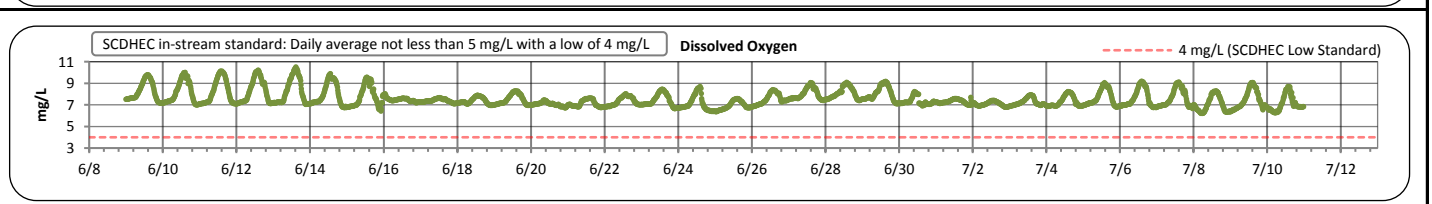
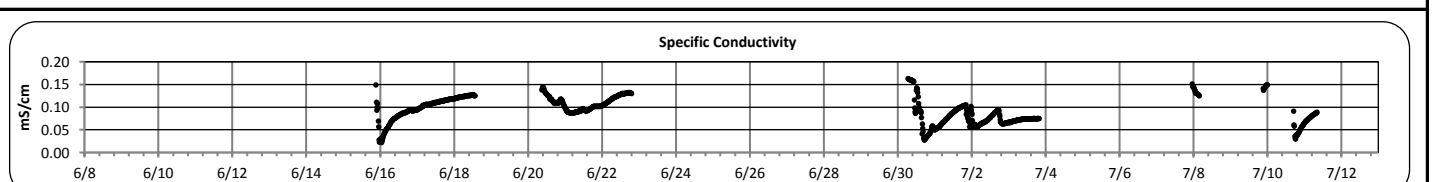
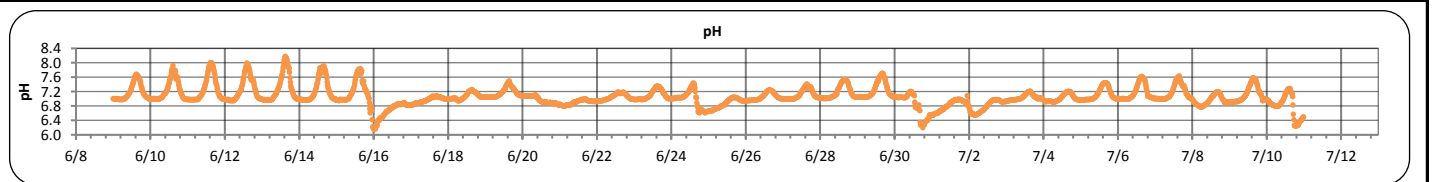
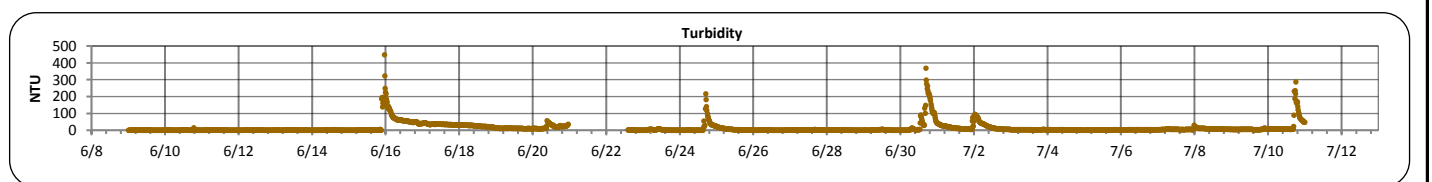
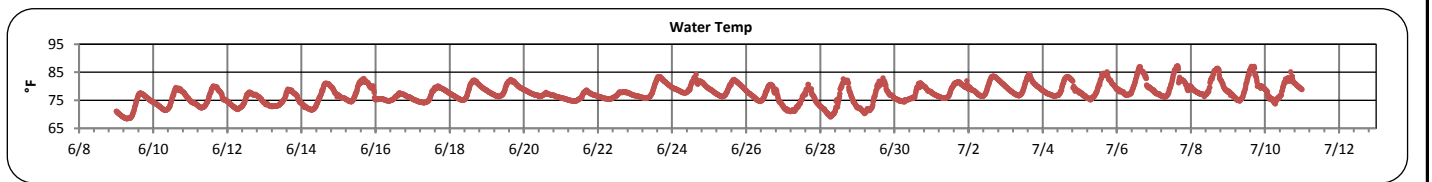
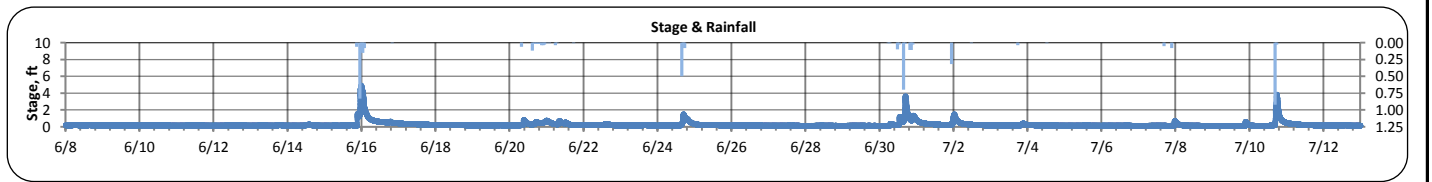
Grab Sample Data:

Analyte (units)	Sample 1		Sample 2		Sample 3		Sample 4	
	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:

Smith Branch B (June 8, 2017 -- July 12, 2017)

PARAMETER	DESCRIPTION	CONTINUOUS WATER QUALITY PARAMETERS:	SUMMARY STATISTICS				
			MINIMUM OBSERVED	MAXIMUM OBSERVED	MEDIAN OBSERVED	MEAN OBSERVED	STANDARD DEVIATION
STREAM NAME:	Smith Branch	STAGE (FT):	0.1	4.9	0.2	0.3	0.3
LOCATION:	Off Mountain Drive	TEMPERATURE (°F):	69	87	77	78	3
NEAREST ADDRESS:	3950 Clement Rd Columbia, SC 29203	TURBIDITY (NTU):	1	450	4	14	31
COORDINATES:	34.037933,-81.0591	pH:	6.2	8.2	7.0	7.1	0.3
TMDL/IMPAIRMENT:	Fecal Coliform	SPECIFIC CONDUCTIVITY (mS/cm):	0.022	0.163	0.092	0.093	0.028
NEIGHBORING LANDUSE:	Residential and commercial	DISSOLVED OXYGEN (mg/L):	6.2	10.5	7.4	7.6	0.8
SPATIAL LOCATION:	Most Downstream Site						
TOTAL NO. STORMS OVER 0.1 INCH:	7						
MAX. DAILY RAINFALL:	1.1 inches						
TOTAL RAINFALL (FOR PERIOD):	4.9 inches						



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**Continuous Water Quality
Monitoring Periodic Report**

Smith Branch B (June 8, 2017 -- July 12, 2017)

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.

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: