

Smith Branch Monitoring Sites

Monitoring Data Summary for August 19th, 2017 – September 18th, 2017

Data Gaps

- The SMIA station did not record any interruptions in the dataset during this monitoring period.
- At the SMIB station, the specific conductivity and temperature probes were unsubmerged from the time of deployment until September 11th. Specific conductivity and temperature was removed from the dataset for this period, as well as temperature dependent parameters DO and pH.

SCDHEC Standards

- The SMIA station recorded low pH values of 5.9. SMIA recorded values lower than the acceptable SCDHEC minimum of 6 during Hurricane Irma on September 11th-12th. SMIB did not record any pH readings outside of the acceptable SCDHEC range of 6 to 8.5.
- The SMIA and SMIB stations recorded average DO concentrations of 7.0 mg/L and 7.9 mg/L, respectively, well above the SCDHEC daily average standard of 5 mg/L.
- The minimum DO concentrations were 5.2 mg/L and 7.2 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 three storm events resulting in 4.2 inches of precipitation during this monitoring period. The SMIB rain gauge recorded three storm events resulting in 4.1 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 rain event from September 11th – 12th were related to impacts from Hurricane Irma.
- The maximum antecedent dry time since the last significant precipitation event (at least 0.1 inches) was approximately 23.9 days in the Smith Branch watershed, and occurred prior to the September 11th storm event.

Potential Illicit Discharges and Abnormal Events

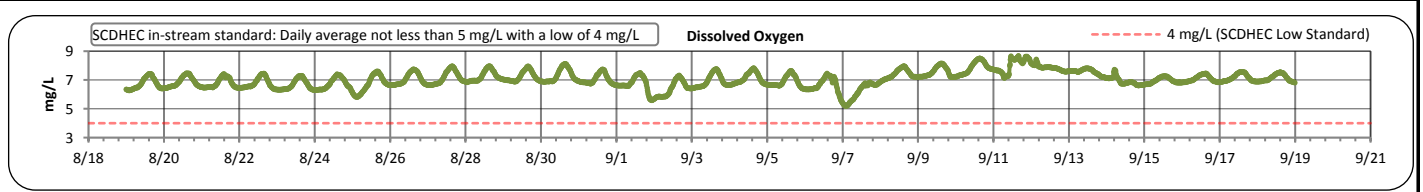
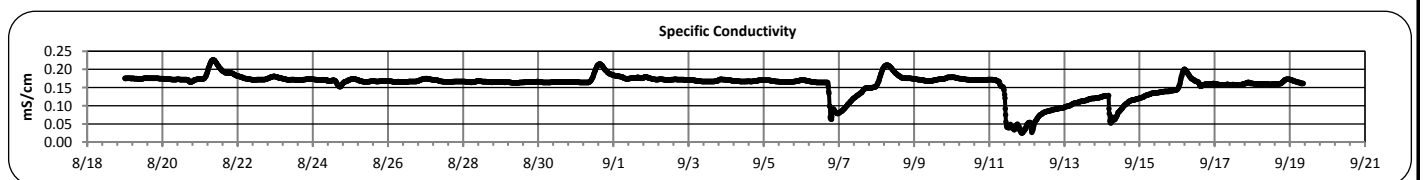
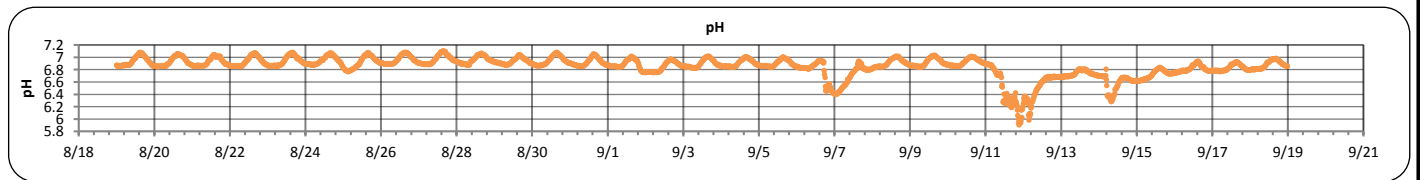
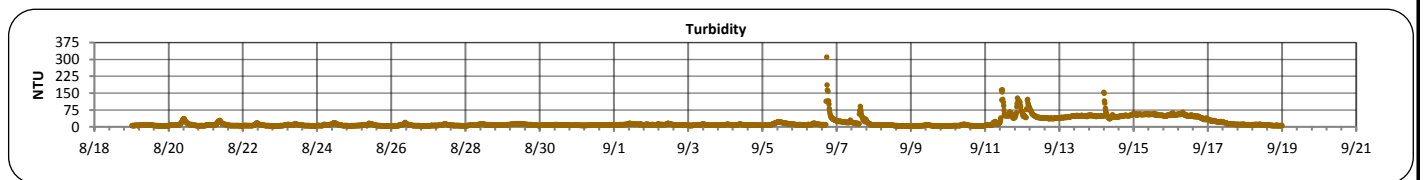
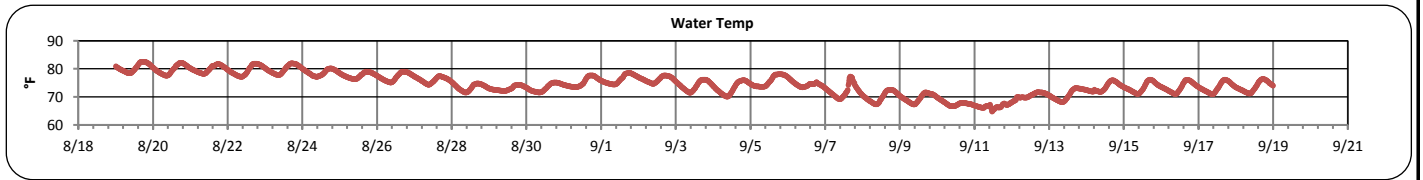
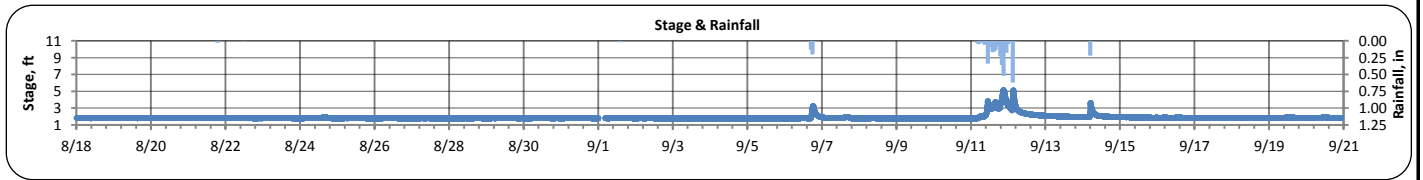
- Periods of slight increase in specific conductivity was observed at SMIA on August 21st, 24th-25th, 26th-27th, 31st-1st, September 8th, 16th, and 18th.

Flow Measurements

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

Smith Branch A (August 18, 2017 -- September 20, 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	5.2	1.8	1.9	0.3
LOCATION:	Earlewood Park	TEMPERATURE (°F):	65	83	75	75	4
ADDRESS:	1111 Parkside Dr Columbia, SC 29201	TURBIDITY (NTU):	3	310	9	18	21
COORDINATES:	34.027289,-81.04265	pH:	5.9	7.1	6.9	6.9	0.2
TMDL/IMPAIRMENT:	Fecal Coliform	SPECIFIC CONDUCTIVITY (mS/cm):	0.025	0.227	0.168	0.158	0.032
NEIGHBORING LANDUSE:	Residential and commercial	DISSOLVED OXYGEN (mg/L):	5.2	8.7	7.0	7.1	0.6
SPATIAL LOCATION:	Most upstream site						
TOTAL NO. STORMS OVER 0.1 INCH:	3						
MAX. DAILY RAINFALL:	2.9 inches						
TOTAL RAINFALL (FOR PERIOD):	4.2 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 (August 18, 2017 -- September 20, 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.

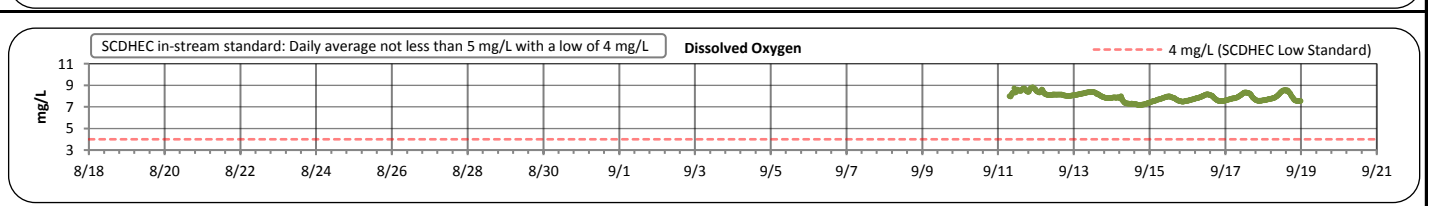
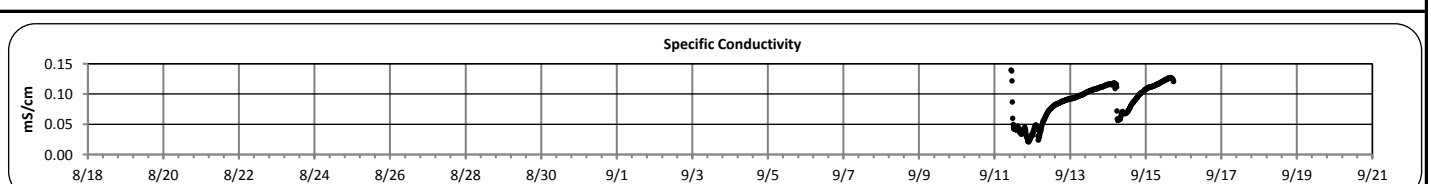
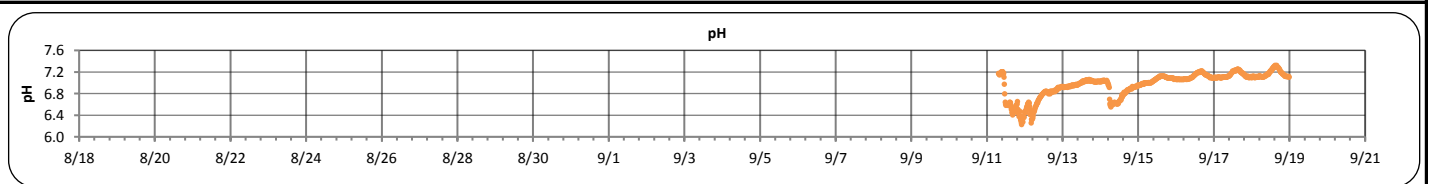
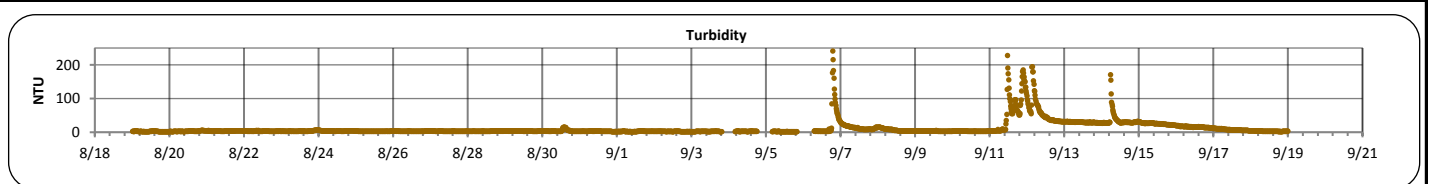
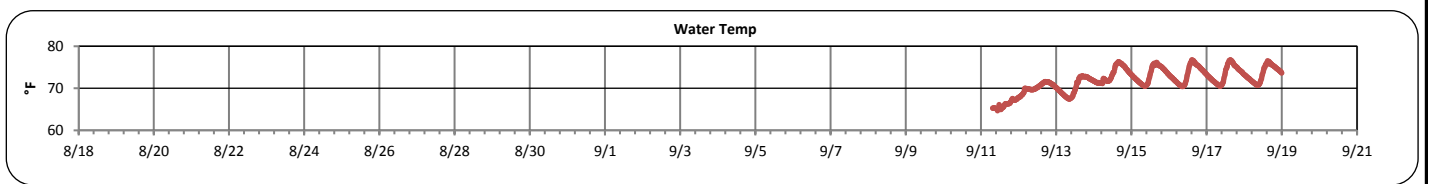
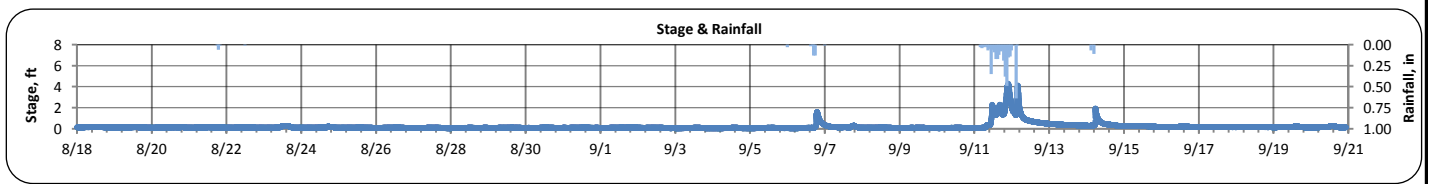
Grab Sample Data:

Analyte (units)	Sample 1		Sample 2		Sample 3		Sample 4	
	9/6/2017							
	Time	Result	Time	Result	Time	Result	Time	Result
<i>Escherichia coli</i> (MPN/100mL)	10:31	662						
Total Suspended Solids (mg/L)								
Total Phosphorus (mg/L)								
Total Nitrogen (mg/L)								

Note: The sample collected on 9/6/2017 was collected during dry weather conditions.

Smith Branch B (August 18, 2017 -- September 20, 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	4.3	0.1	0.2	0.4
LOCATION:	Off Mountain Drive	TEMPERATURE (°F):	65	77	72	72	3
NEAREST ADDRESS:	3950 Clement Rd Columbia, SC 29203	TURBIDITY (NTU):	2	242	4	12	23
COORDINATES:	34.037933,-81.0591	pH:	6.2	7.3	7.1	7.0	0.2
TMDL/IMPAIRMENT:	Fecal Coliform	SPECIFIC CONDUCTIVITY (mS/cm):	0.021	0.140	0.094	0.087	0.029
NEIGHBORING LANDUSE:	Residential and commercial	DISSOLVED OXYGEN (mg/L):	7.2	8.8	7.9	7.9	0.4
SPATIAL LOCATION:	Most Downstream Site						
TOTAL NO. STORMS OVER 0.1 INCH:	3						
MAX. DAILY RAINFALL:	2.8 inches						
TOTAL RAINFALL (FOR PERIOD):	4.1 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 B (August 18, 2017 -- September 20, 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	
	9/6/2017							
	Time	Result	Time	Result	Time	Result	Time	Result
<i>Escherichia coli</i> (MPN/100mL)	10:17	216						
Total Suspended Solids (mg/L)								
Total Phosphorus (mg/L)								
Total Nitrogen (mg/L)								

Note: The sample collected on 9/6/2017 was collected during dry weather conditions.