

Smith Branch Monitoring Sites

Monitoring Data Summary for December 1st, 2017 – January 3rd, 2018

Data Gaps

- During this monitoring period, the turbidity sensor at the SMIA station became fouled resulting in erroneous values that were removed from the dataset.
- At the SMIB station, the specific conductivity sensor was unsubmerged for most of the deployment period. These periods were removed from the dataset.

SCDHEC Standards

- The SMIA station did record pH readings outside of the acceptable SCDHEC range of 6 to 8.5 during the 12/6 and 12/20 storm events with a low pH value of 5.7. The SMIB station did not record pH readings outside of the acceptable SCDHEC range.
- The SMIA and SMIB stations recorded average DO concentrations of 9.5 mg/L and 10.4 mg/L, respectively, which are well above the SCDHEC daily average standard of 5 mg/L.
- The minimum DO concentrations were 7.0 mg/L and 8.4 mg/L at the SMIA and SMIB stations, respectively, which are well above the SCDHEC minimum level of 4 mg/L.

Storm Events

- Both Smith Branch rain gauges recorded four storm events resulting in 3.7 inches of precipitation during this monitoring period.
- The Smith Branch monitoring stations both 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 14.6 days at both stations occurring prior to the December 6th storm event.

Potential Illicit Discharges and Abnormal Events

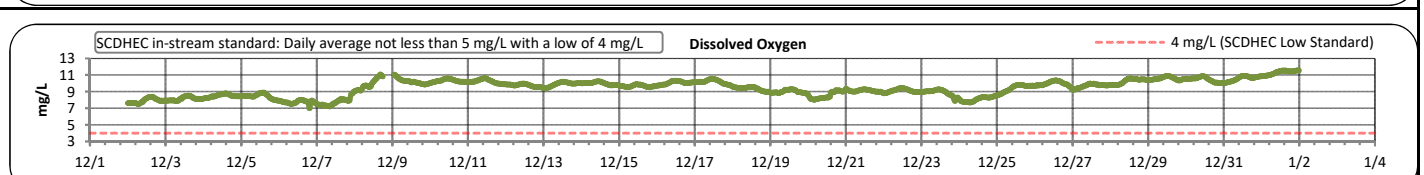
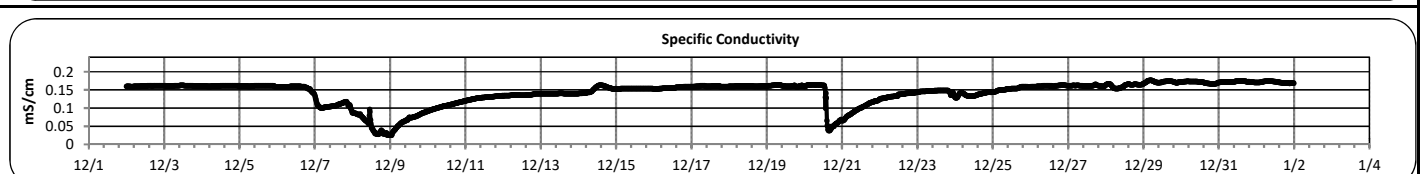
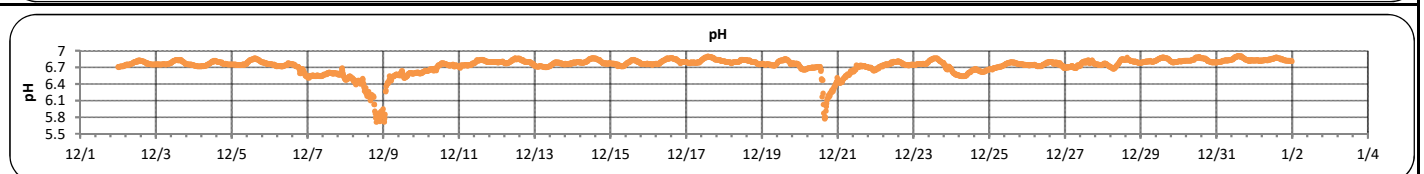
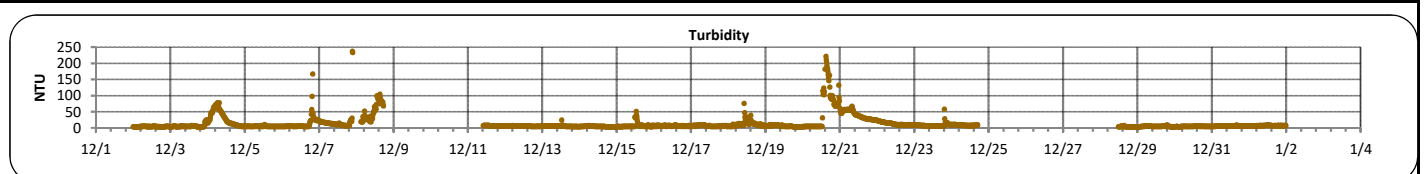
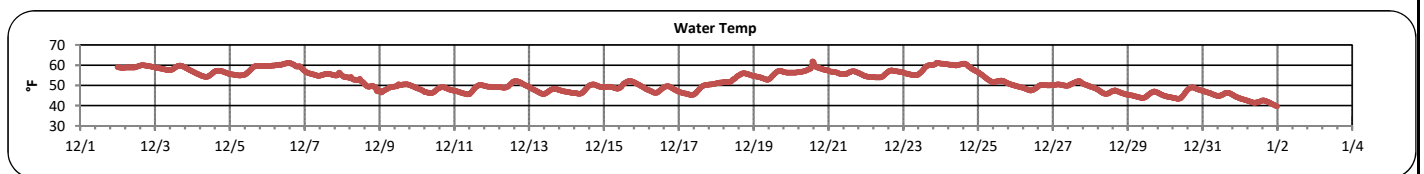
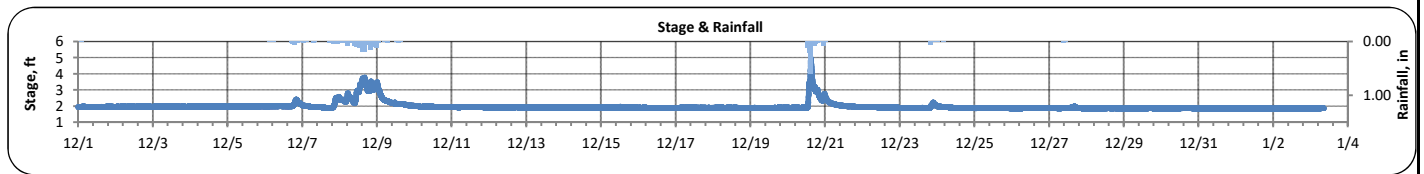
- An increase in specific conductivity was observed at the SMIA station on December 14th.
- At SMIA, increased turbidity levels were observed on December 4th, 13th, 15th, 18th, and 23rd.

Flow Measurements

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

Smith Branch A (December 1, 2017 -- January 3, 2018)

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	5.0	1.9	2.0	0.3
LOCATION:	Earlewood Park	TEMPERATURE (°F):	40	62	51	52	5
ADDRESS:	1111 Parkside Dr Columbia, SC 29201	TURBIDITY (NTU):	3	431	6	14	26
COORDINATES:	34.027289,-81.04265	pH:	5.7	6.9	6.8	6.7	0.2
TMDL/IMPAIRMENT:	Fecal Coliform	SPECIFIC CONDUCTIVITY (mS/cm):	0.025	0.177	0.158	0.143	0.032
NEIGHBORING LANDUSE:	Residential and commercial	DISSOLVED OXYGEN (mg/L):	7.0	11.6	9.7	9.5	1.0
SPATIAL LOCATION:	Most upstream site						
TOTAL NO. STORMS OVER 0.1 INCH:	4						
MAX. DAILY RAINFALL:	1.8 inches						
TOTAL RAINFALL (FOR PERIOD):	3.7 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 (December 1, 2017 -- January 3, 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.

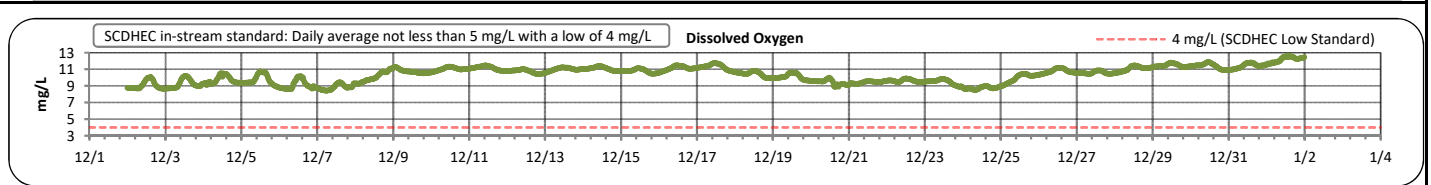
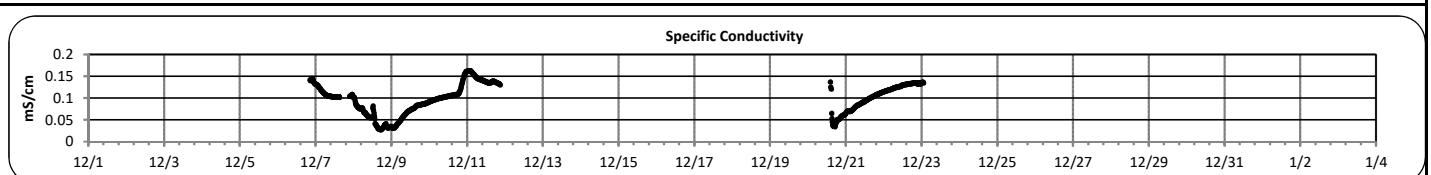
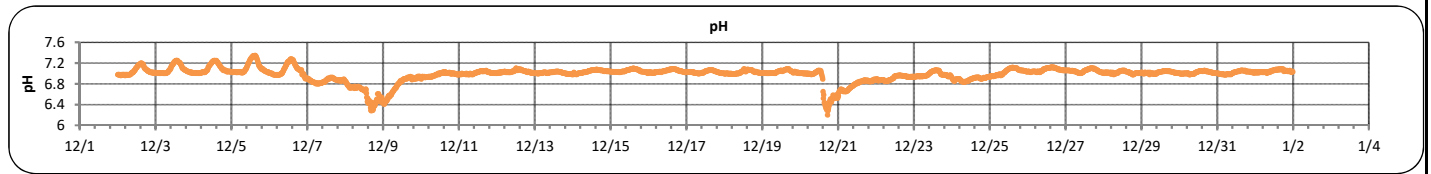
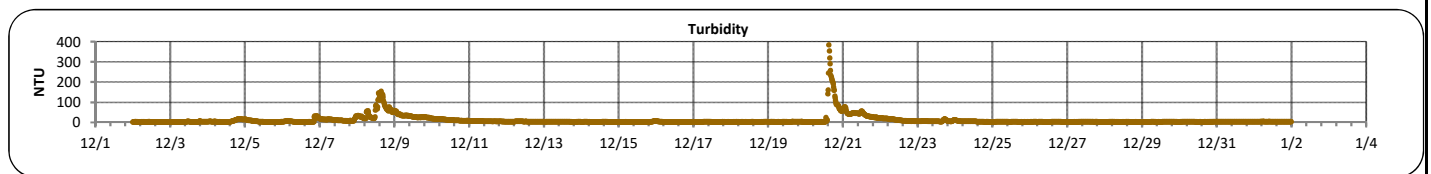
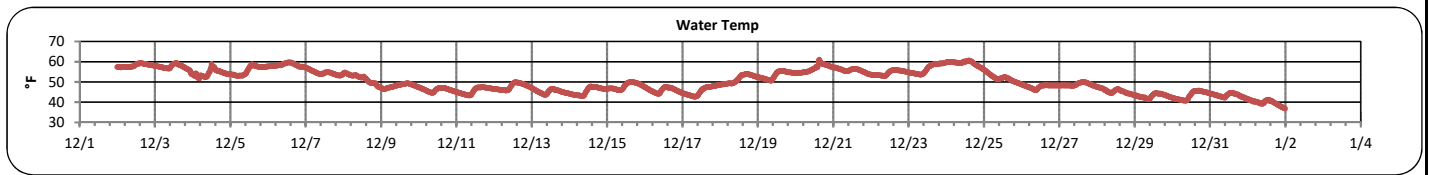
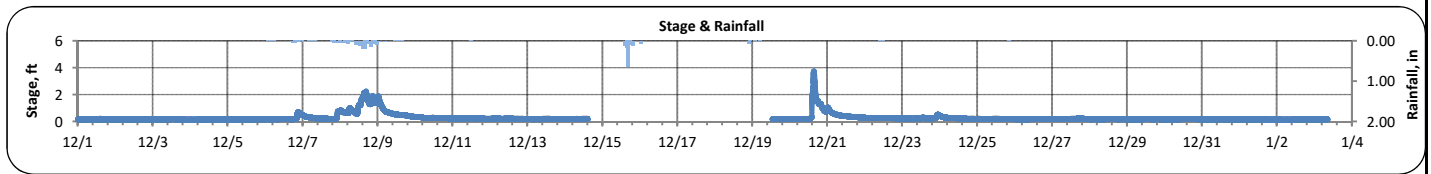
Grab Sample Data:

Analyte (units)	Sample 1		Sample 2		Sample 3		Sample 4	
	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 (December 1, 2017 -- January 3, 2018)

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	3.8	0.2	0.3	0.3
LOCATION:	Off Mountain Drive	TEMPERATURE (°F):	37	61	49	50	6
NEAREST ADDRESS:	3950 Clement Rd Columbia, SC 29203	TURBIDITY (NTU):	2	384	4	11	24
COORDINATES:	34.037933,-81.0591	pH:	6.2	7.4	7.0	7.0	0.1
TMDL/IMPAIRMENT:	Fecal Coliform	SPECIFIC CONDUCTIVITY (mS/cm):	0.027	0.162	0.103	0.098	0.035
NEIGHBORING LANDUSE:	Residential and commercial	DISSOLVED OXYGEN (mg/L):	8.4	12.7	10.6	10.4	1.0
SPATIAL LOCATION:	Most Downstream Site						
TOTAL NO. STORMS OVER 0.1 INCH:	4						
MAX. DAILY RAINFALL:	1.7 inches						
TOTAL RAINFALL (FOR PERIOD):	3.7 inches						



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**Continuous Water Quality
Monitoring Periodic Report**

Smith Branch B (December 1, 2017 -- January 3, 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.

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: