

Smith Branch Monitoring Sites

Data Gaps

- The SMIA and SMIB stations did not experience any data interruptions during this monitoring period.

SCDHEC Standards

- The SMIA and SMIB stations recorded average DO levels of 7.3 and 7.5 mg/L, respectively, well above the SCDHEC daily average standard of 5 mg/L. Neither of the stations recorded any DO levels below the 4 mg/L instantaneous standard.
- The pH standard was not violated at the SMIB station. The SMIB station did record pH levels that fell below the lower pH standard of 6, reaching a minimum value of 5.7. The observed low pH levels were recorded during the large storm events in this monitoring period. Rain in the Southeastern United States is acidic and often has the effect of lowering stream pH, particularly when compounded with the low pH of soils in this area.

Storm Events

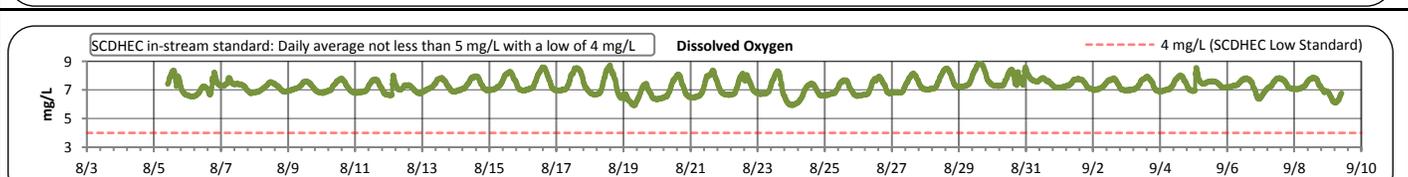
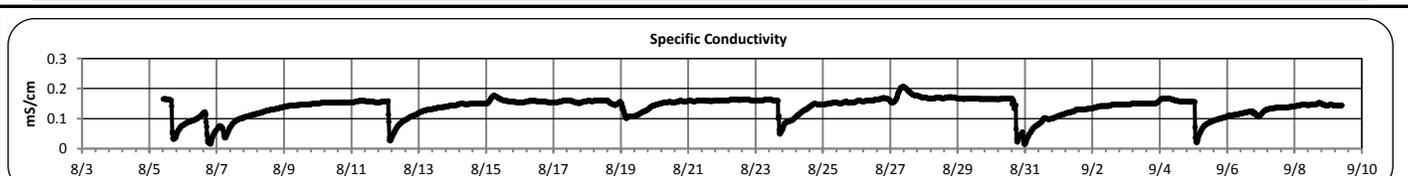
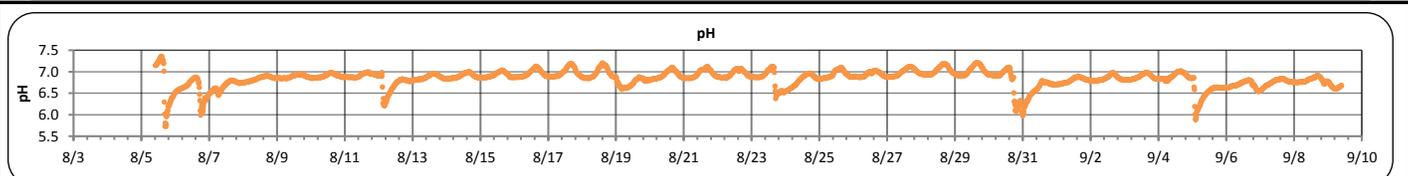
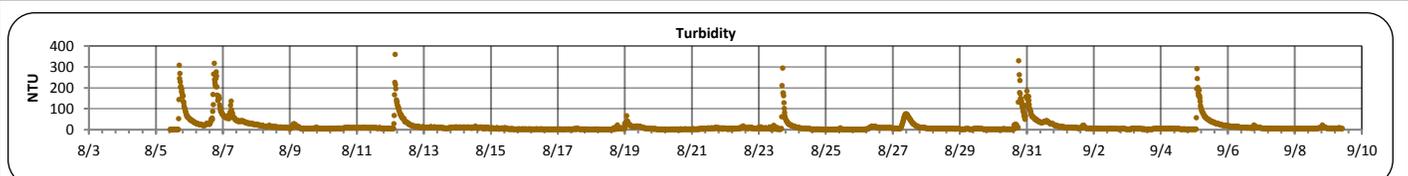
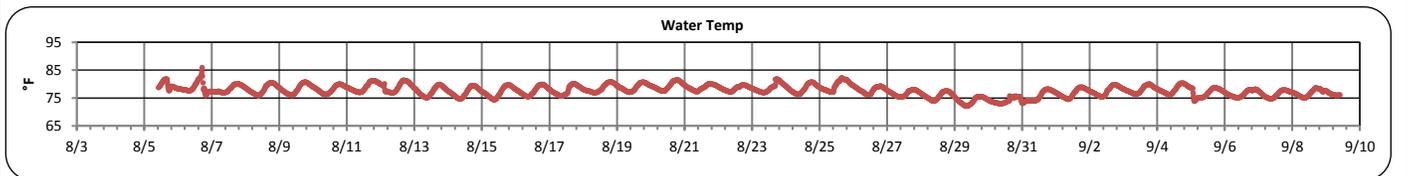
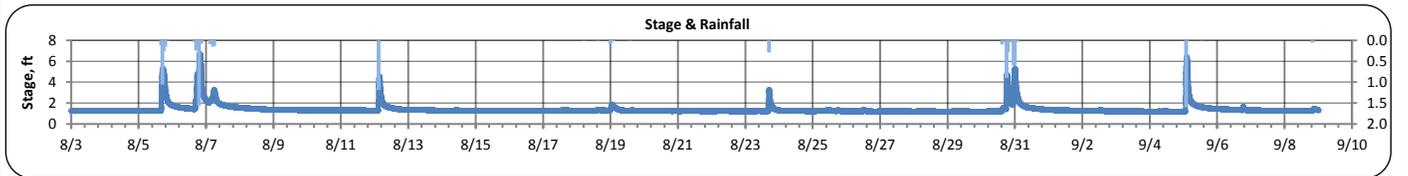
- The Smith Branch watershed recorded a significant amount of rainfall during this deployment period with both rain gages recording at least 10 inches of rainfall. The majority of this rain fell during significant storm events on August 5th, 6th, and 30th, as well as on September 5th.

Potential Illicit Discharges and Abnormal Events

- Two potential illicit discharge events were recorded at both the upstream and downstream Smith Branch monitoring stations. On August 15th, a slight increase in specific conductivity levels was recorded at SMIA, and, a short time later, at SMIB. On August 27th, an increase in both specific conductivity and turbidity was noted at SMIA, and, a short time later, at the SMIB station.

Smith Branch A (August 3, 2015 -- September 9, 2015)

PARAMETER	DESCRIPTION	CONTINUOUS WATER QUALITY PARAMETERS:	SUMMARY STATISTICS				
			MINIMUM OBSERVED	MAXIMUM OBSERVED	MEDIAN OBSERVED	MEAN OBSERVED	STANDARD DEVIATION
STREAM NAME:	Smith Branch	STAGE (FT):	1.2	6.8	1.3	1.4	0.5
LOCATION:	Earlewood Park	TEMPERATURE (°F):	72	86	78	78	2
ADDRESS:	1111 Parkside Dr Columbia, SC 29201	TURBIDITY (NTU):	1	361	7	17	33
COORDINATES:	34.027289,-81.04265	pH:	5.7	7.4	6.9	6.8	0.2
TMDL/IMPAIRMENT:	Fecal Coliform	SPECIFIC CONDUCTIVITY (mS/cm):	0.015	0.207	0.150	0.138	0.032
NEIGHBORING LANDUSE:	Residential and commercial	DISSOLVED OXYGEN (mg/L):	5.9	8.9	7.2	7.3	0.5
SPATIAL LOCATION:	Most upstream site						
TOTAL NO. STORMS OVER 0.1 INCH:	8						
MAX. DAILY RAINFALL:	2.6 inches						
TOTAL RAINFALL (FOR PERIOD):	10.2 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 3, 2015 -- September 9, 2015)

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.

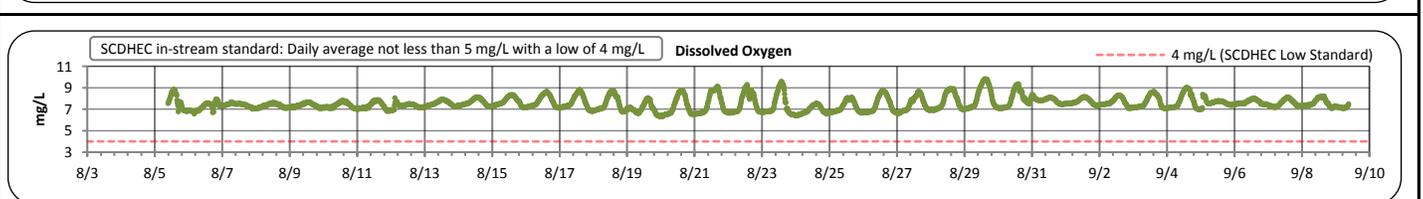
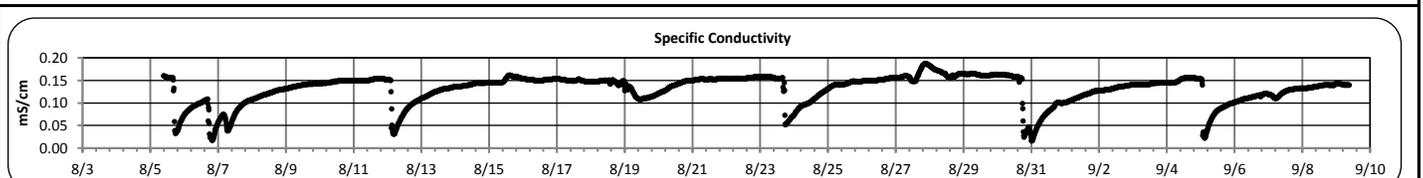
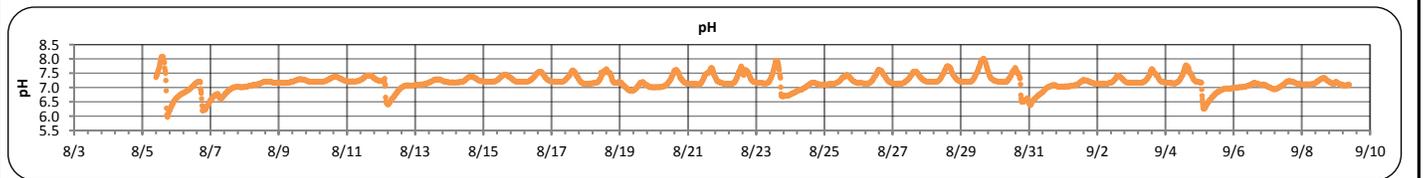
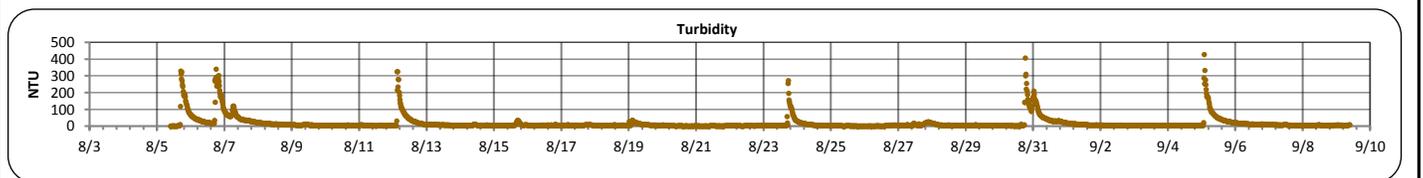
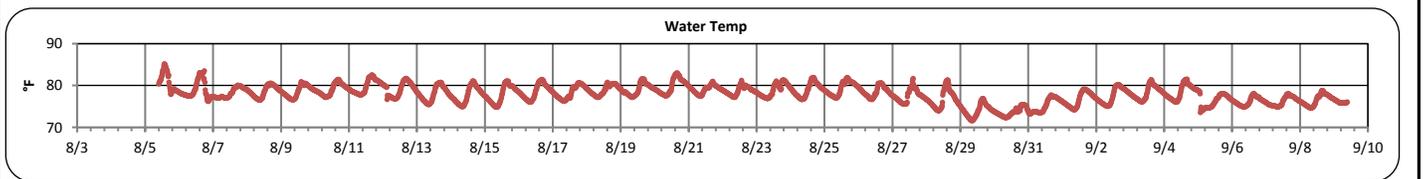
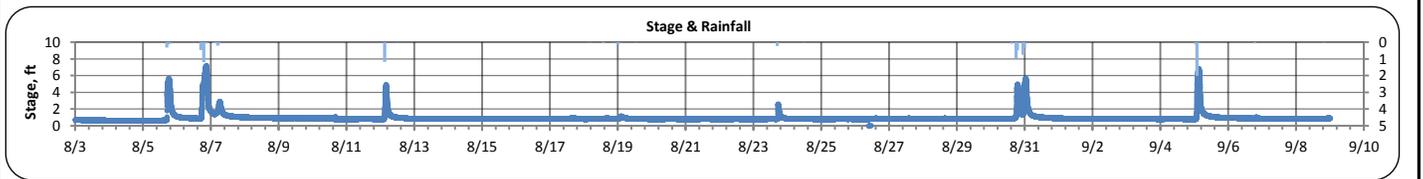
Grab Sample Data:

Analyte (units)	Sample 1		Sample 2		Sample 3		Sample 4	
	8/18/2015							
	Time	Result	Time	Result	Time	Result	Time	Result
<i>Escherichia coli</i> (MPN/100mL)	11:10	316						
Total Suspended Solids (mg/L)								
Total Phosphorus (mg/L)								
Total Nitrogen (mg/L)								

Note: Sample was collected during dry conditions at baseflow.

Smith Branch B (August 3, 2015 -- September 9, 2015)

PARAMETER	DESCRIPTION	CONTINUOUS WATER QUALITY PARAMETERS:	SUMMARY STATISTICS				
			MINIMUM OBSERVED	MAXIMUM OBSERVED	MEDIAN OBSERVED	MEAN OBSERVED	STANDARD DEVIATION
STREAM NAME:	Smith Branch	STAGE (FT):	0.0	7.2	0.8	1.0	0.6
LOCATION:	Off Mountain Drive	TEMPERATURE (°F):	72	85	78	78	2
NEAREST ADDRESS:	3950 Clement Rd Columbia, SC 29203	TURBIDITY (NTU):	1	427	5	17	40
COORDINATES:	34.037933,-81.0591	pH:	6.0	8.1	7.2	7.2	0.3
TMDL/IMPAIRED:	Fecal Coliform	SPECIFIC CONDUCTIVITY (mS/cm):	0.016	0.187	0.141	0.131	0.031
NEIGHBORING LANDUSE:	Residential and commercial	DISSOLVED OXYGEN (mg/L):	6.3	9.8	7.5	7.5	0.6
SPATIAL LOCATION:	Most Downstream Site						
TOTAL NO. STORMS OVER 0.1 INCH:	8						
MAX. DAILY RAINFALL:	2.8 inches						
TOTAL RAINFALL (FOR PERIOD):	10.0 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 3, 2015 -- September 9, 2015)

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	
	8/18/2015							
	Time	Result	Time	Result	Time	Result	Time	Result
<i>Escherichia coli</i> (MPN/100mL)	10:52	1,812						
Total Suspended Solids (mg/L)								
Total Phosphorus (mg/L)								
Total Nitrogen (mg/L)								

Note: Sample was collected during dry conditions at baseflow.