

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 6.9 and 7.2 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 SMIA station. The SMIB station did record pH levels that exceeded the upper standard of 8.5 units, with values reaching 9.1 pH units. This occurred briefly on July 12th and for short periods in the time range of July 25th-28th. In both of these cases, it appears that the biotic community in the vicinity of the SMIB station built up during a significant stretch of time with no rainfall, causing the diurnal pH (and DO) cycles to increase in magnitude. Under these conditions, the pH in the creek increased in the afternoon and briefly exceeded the 8.5 standard.

Storm Events

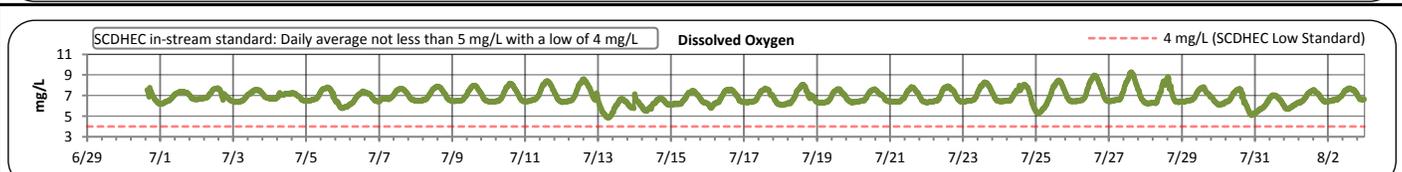
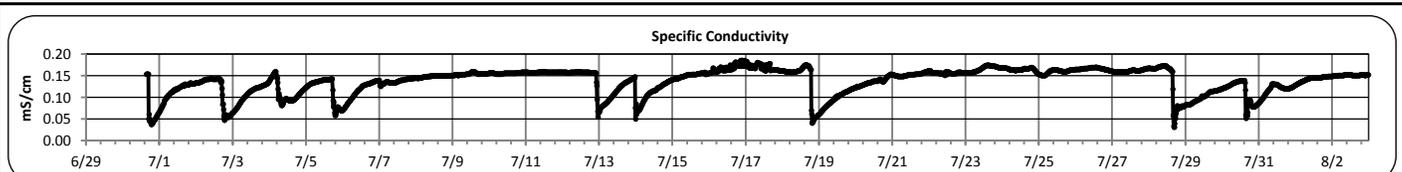
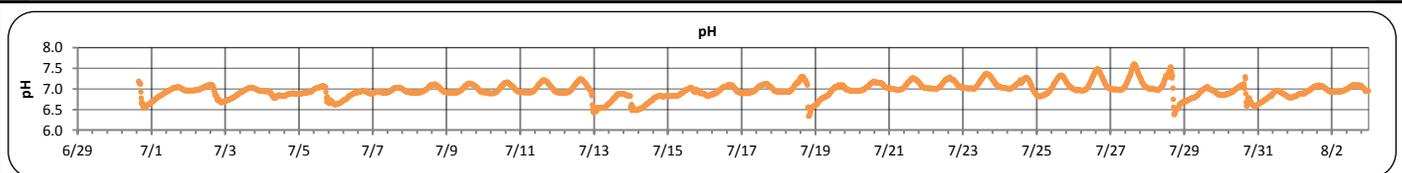
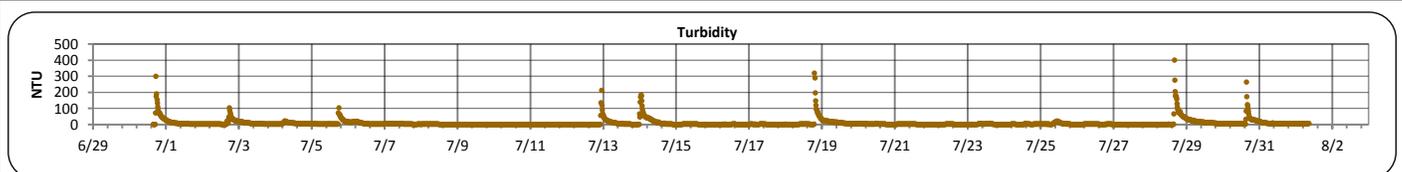
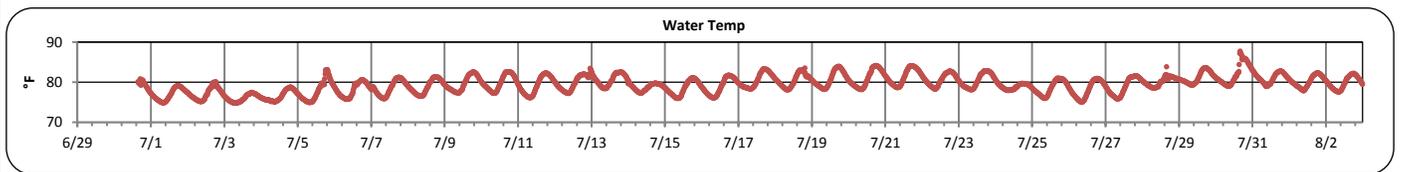
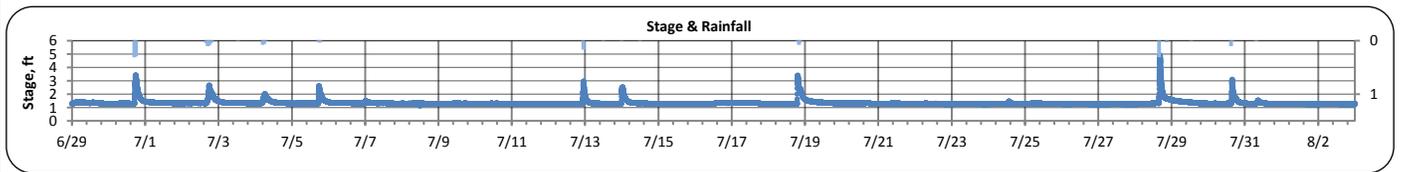
- At the beginning of this deployment period, the U.S. Drought Monitor classified Richland County as “abnormally Dry” and by the end of the deployment had moved the county into a state of “Moderate Drought”.⁴ The SMIB rain gage recorded 2 inches of rainfall while the SMIB station recorded just 1.1 inches.

Potential Illicit Discharges and Abnormal Events

- The SMIA station recorded one period of abnormal data that may have been connected to an illicit discharge. From July 16th to 17th, the specific conductivity data increased slightly and sporadically at the same time as a slight increase in stage was noted.

Smith Branch A (June 29, 2015 -- August 2, 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):	1.1	4.9	1.3	1.4	0.2
LOCATION:	Earlewood Park	TEMPERATURE (°F):	75	88	79	79	2
ADDRESS:	1111 Parkside Dr Columbia, SC 29201	TURBIDITY (NTU):	1	401	3	9	23
COORDINATES:	34.027289,-81.04265	pH:	6.3	7.6	7.0	7.0	0.2
TMDL/IMPAIRMENT:	Fecal Coliform	SPECIFIC CONDUCTIVITY (mS/cm):	0.031	0.186	0.150	0.138	0.030
NEIGHBORING LANDUSE:	Residential and commercial	DISSOLVED OXYGEN (mg/L):	4.8	9.3	6.7	6.9	0.7
SPATIAL LOCATION:	Most upstream site						
TOTAL NO. STORMS OVER 0.1 INCH:	7						
MAX. DAILY RAINFALL:	0.6 inches						
TOTAL RAINFALL (FOR PERIOD):	2.0 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 A (June 29, 2015 -- August 2, 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.

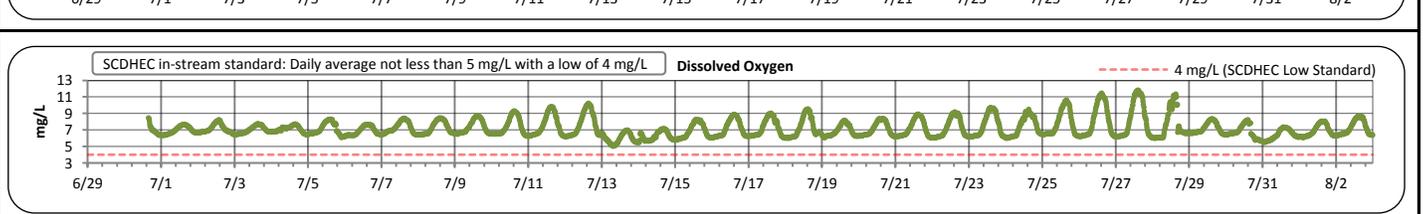
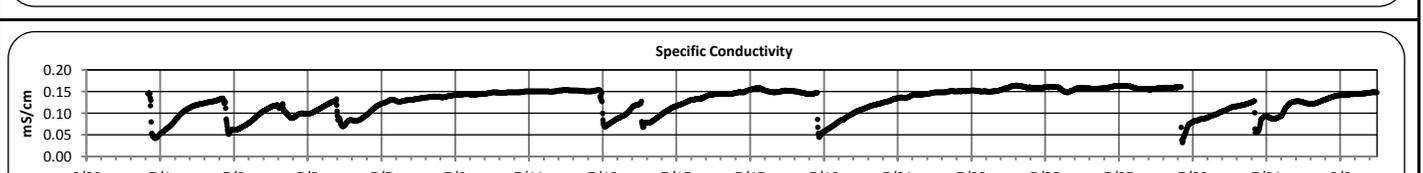
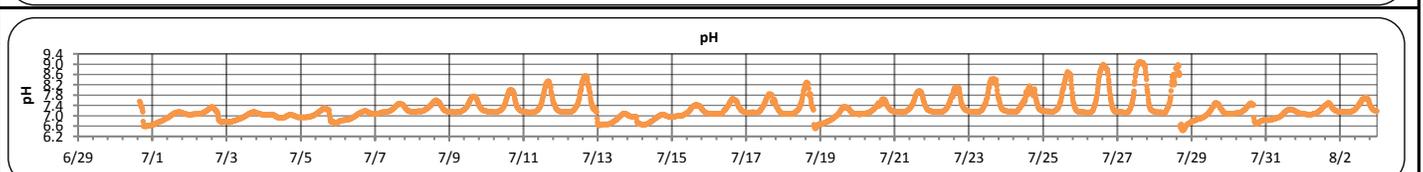
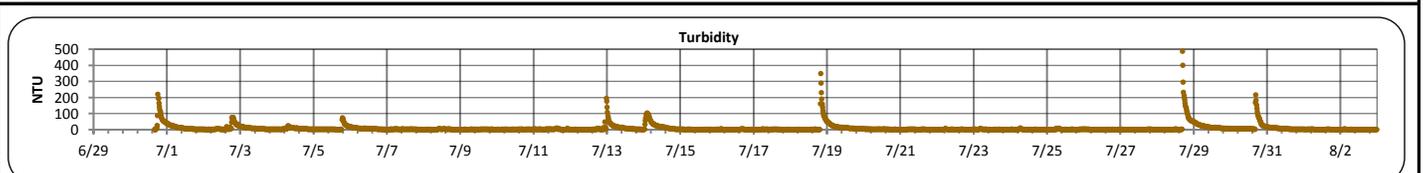
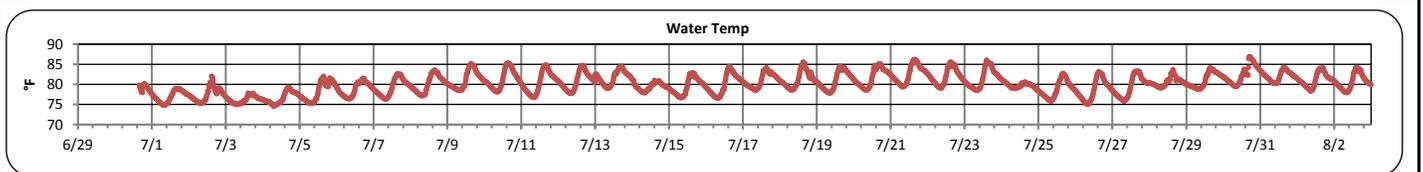
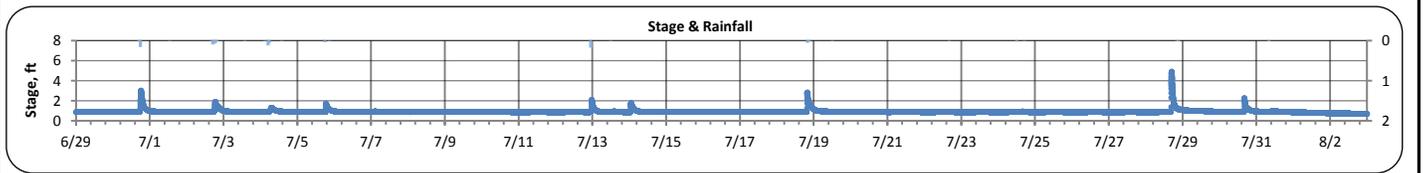
Grab Sample Data:

Analyte (units)	Sample 1		Sample 2		Sample 3		Sample 4	
	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 29, 2015 -- August 2, 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):	0.7	4.9	0.9	0.9	0.2
LOCATION:	Off Mountain Drive	TEMPERATURE (°F):	75	87	80	80	3
NEAREST ADDRESS:	3950 Clement Rd Columbia, SC 29203	TURBIDITY (NTU):	1	488	3	9	25
COORDINATES:	34.037933,-81.0591	pH:	6.4	9.1	7.2	7.3	0.4
TMDL/IMPAIRMENT:	Fecal Coliform	SPECIFIC CONDUCTIVITY (mS/cm):	0.033	0.165	0.137	0.127	0.029
NEIGHBORING LANDUSE:	Residential and commercial	DISSOLVED OXYGEN (mg/L):	5.1	11.8	6.8	7.2	1.1
SPATIAL LOCATION:	Most Downstream Site						
TOTAL NO. STORMS OVER 0.1 INCH:	4						
MAX. DAILY RAINFALL:	0.3 inches						
TOTAL RAINFALL (FOR PERIOD):	1.1 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 (June 29, 2015 -- August 2, 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	
	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: