

Smith Branch Monitoring Sites

Monitoring Data Summary for July 20th, 2020 – August 26th, 2020

Data Gaps

- The SMIA station experienced brief periods of fouling turbidity data from July 20th-21st, July 30th-31st, and August 8th-12th. The DO sensor was fouled from August 7th-13th. These periods of data were removed from the dataset.
- At the SMIB station, the specific conductivity probe experienced multiple days of fouling which occurred on the following dates: July 20th-21st, July 27th-29th, July 31st-August 3rd, August 4th-7th, and August 12th-24th. These periods of data were removed from the dataset.

SCDHEC Standards

- The SMIA station recorded a maximum pH value of 9.1, which was above the acceptable SCDHEC range of 6 to 8.5. The SMIB station recorded a minimum value of 5.7, which was below the acceptable SCDHEC range of 6 to 8.5.
- The SMIA station recorded an average DO concentration of 6.3 mg/L and the SMIB station recorded an average DO concentration of 6.9 mg/L, which are both above the SCDHEC daily average standard of 5 mg/L.
- The minimum DO concentration recorded at the SMIA station was 2.6 mg/L, which was below the SCDHEC discrete minimum standard of 4 mg/L. The minimum DO concentration recorded at the SMIB station was 4.2 mg/L, which was above the SCDHEC discrete minimum standard of 4 mg/L.

Storm Events

- The SMIA rain gauge recorded 16 storms (at least 0.1 inches) in this monitoring period resulting in 8.5 inches of precipitation. The SMIB rain gauge recorded 15 storms (at least 0.1 inches) resulting in 6.8 inches of precipitation.
- The SMIA monitoring station recorded mostly typical water quality responses to the storm events observed during this monitoring period. During the storm event on August 24th the pH increased rapidly to a value of 9.1.
- The SMIB monitoring station recorded typical water quality responses to the storm events observed during this monitoring period.

Potential Illicit Discharges and Abnormal Events

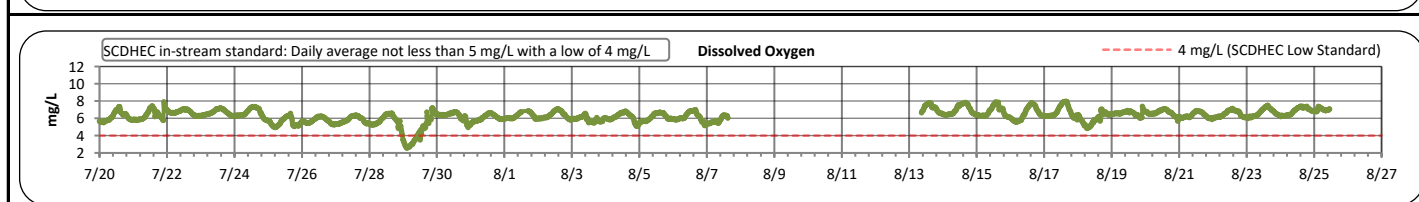
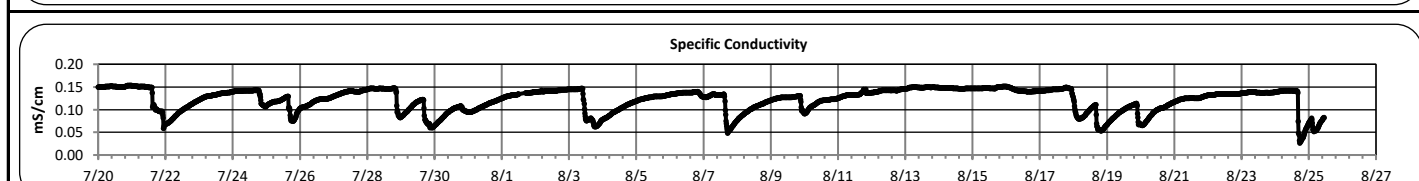
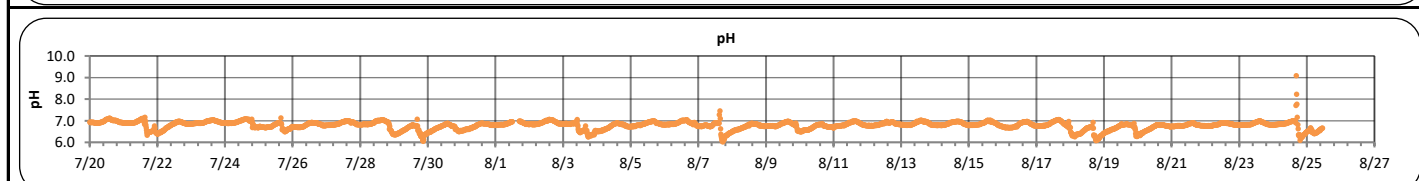
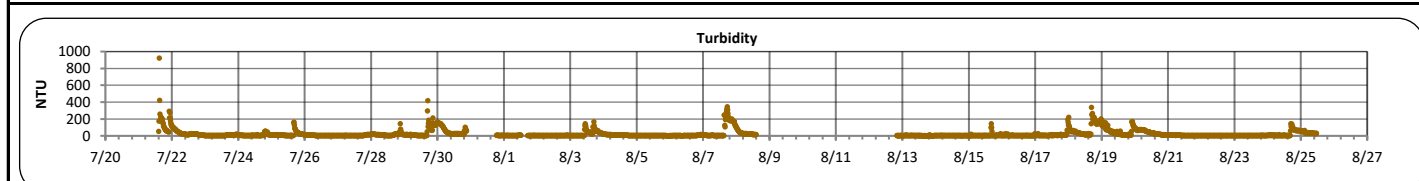
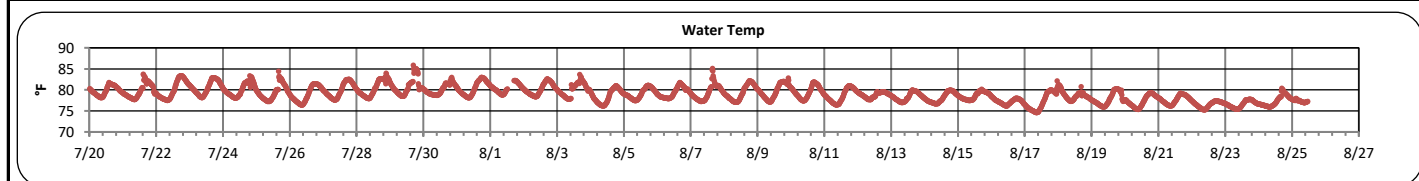
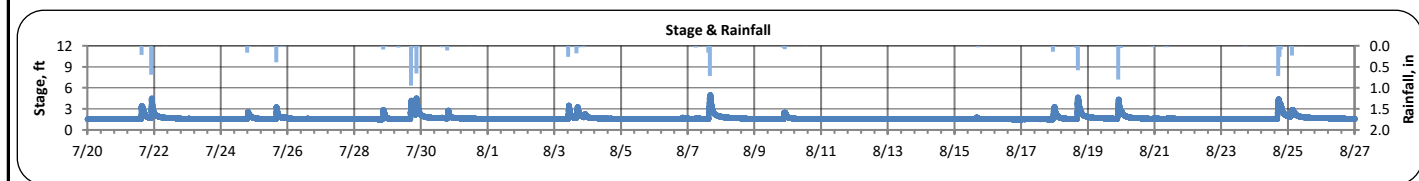
- There was a rapid increase in pH at the beginning of the storm event on August 24th.

Flow Measurements

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

Smith Branch A (July 20, 2020 - August 26, 2020)

PARAMETER	DESCRIPTION	CONTINUOUS WATER QUALITY PARAMETERS:	SUMMARY STATISTICS				
			MINIMUM OBSERVED	MAXIMUM OBSERVED	MEDIAN OBSERVED	MEAN OBSERVED	STANDARD DEVIATION
STREAM NAME:	Smith Branch	STAGE (FT):	1.5	5.0	1.6	1.7	0.3
LOCATION:	Earlewood Park	TEMPERATURE (°F):	75	86	79	79	2
ADDRESS:	1111 Parkside Dr Columbia, SC 29201	TURBIDITY (NTU):	3	925	6	24	47
COORDINATES:	34.027289,-81.04265	pH:	6.0	9.1	6.8	6.8	0.2
TMDL/IMPAIRMENT:	Fecal Coliform	SPECIFIC CONDUCTIVITY (mS/cm):	0.026	0.153	0.130	0.122	0.025
NEIGHBORING LANDUSE:	Residential and commercial	DISSOLVED OXYGEN (mg/L):	2.6	8.0	6.4	6.3	0.7
SPATIAL LOCATION:	Most upstream site						
TOTAL NO. STORMS OVER 0.1 INCH:	16						
MAX. DAILY RAINFALL:	1.8 inches						
TOTAL RAINFALL (FOR PERIOD):	8.5 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 (July 20, 2020 - August 26, 2020)

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.

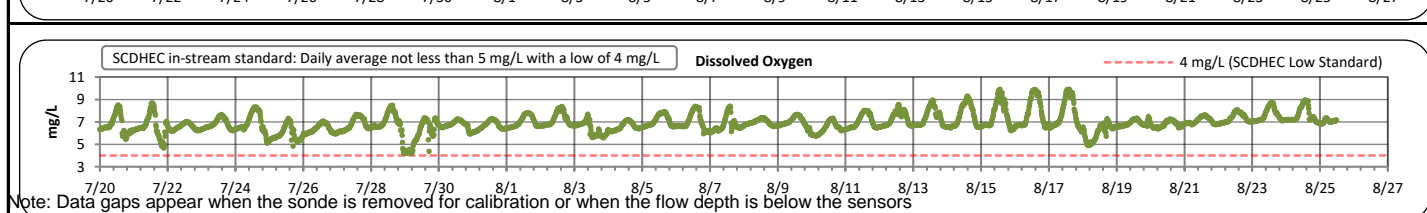
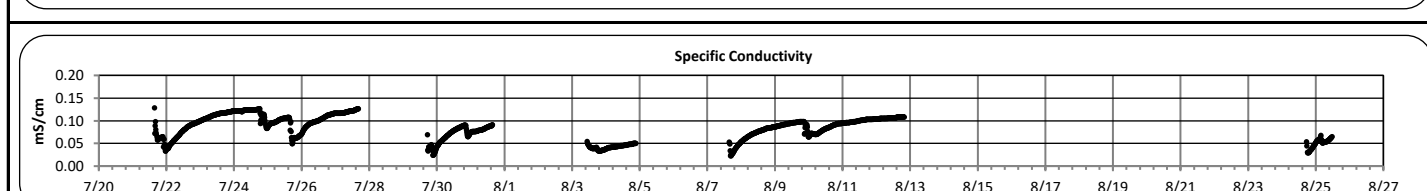
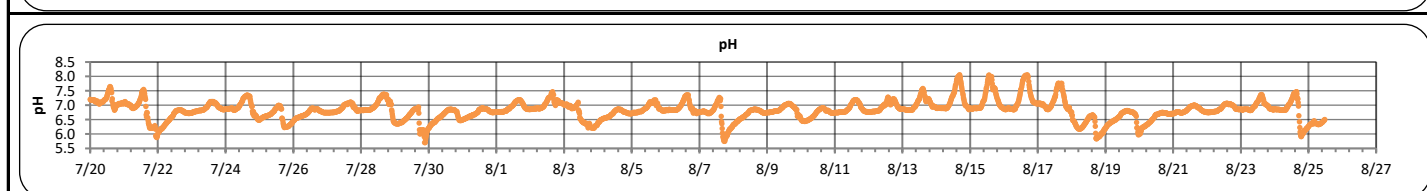
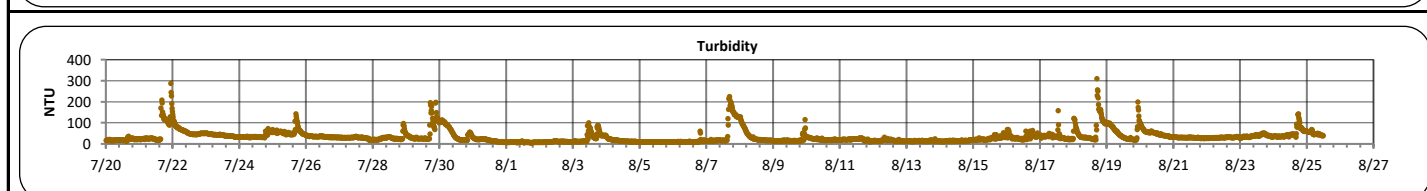
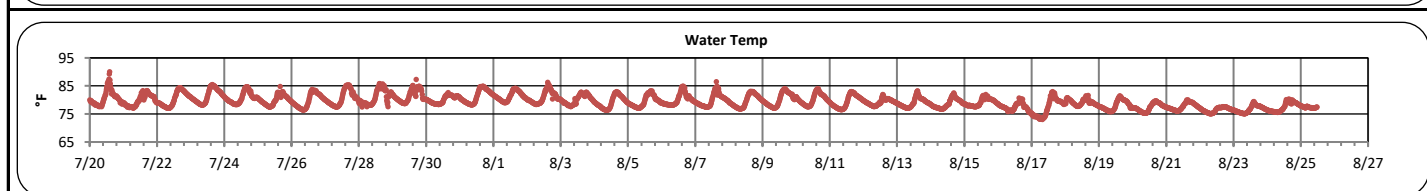
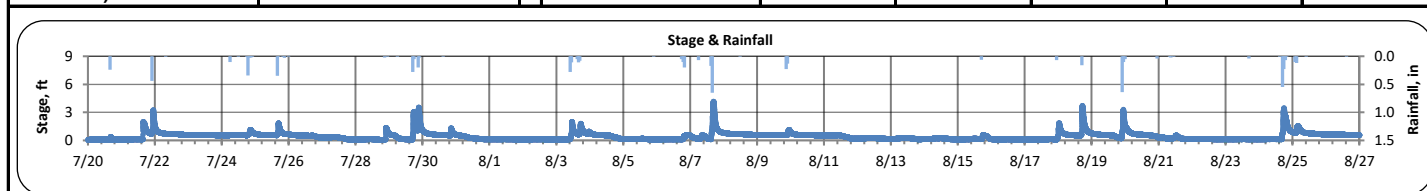
Grab Sample Data:

Analyte (units)	Sample 1		Sample 2		Sample 3		Sample 4		Sample 5	
	8/21/2020		8/24/2020							
	Time	Result	Time	Result	Time	Result	Time	Result	Time	Result
<i>Escherichia coli</i> (MPN/100mL)	10:50	3700	16:23	2,592						
Total Suspended Solids (mg/L)	10:50	2	16:23	208						
Total Phosphorus (mg/L)				0.17						
Total Nitrogen (mg/L)				1.04						

Note: All samples were collected during wet weather conditions.

Smith Branch B (July 20, 2020 - August 26, 2020)

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	4.2	0.3	0.4	0.4
LOCATION:	Off Mountain Drive	TEMPERATURE (°F):	73	90	79	79	2
NEAREST ADDRESS:	3950 Clement Rd Columbia, SC 29203	TURBIDITY (NTU):	6	310	27	35	30
COORDINATES:	34.037933,-81.0591	pH:	5.7	8.1	6.9	6.8	0.3
TMDL/IMPAIRED:	Fecal Coliform	SPECIFIC CONDUCTIVITY (mS/cm):	0.023	0.128	0.088	0.084	0.026
NEIGHBORING LANDUSE:	Residential and commercial	DISSOLVED OXYGEN (mg/L):	4.2	9.9	6.8	6.9	0.8
SPATIAL LOCATION:	Most Downstream Site						
TOTAL NO. STORMS OVER 0.1 INCH:	15						
MAX. DAILY RAINFALL:	0.9 inches						
TOTAL RAINFALL (FOR PERIOD):	6.8 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 (July 20, 2020 - August 26, 2020)

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	
	8/24/2020							
	Time	Result	Time	Result	Time	Result	Time	Result
<i>Escherichia coli</i> (MPN/100mL)	16:36	28720						
Total Suspended Solids (mg/L)	16:36	56.8						
Total Phosphorus (mg/L)	16:36	0.14						
Total Nitrogen (mg/L)	16:36	1.4						

Note: All samples were collected during wet weather conditions.