

Smith Branch Monitoring Sites

Monitoring Data Summary for April 30th, 2020 – June 3rd, 2020

Data Gaps

- The SMIA station experienced a brief period of fouling turbidity data from May 21st-22nd so this period was removed from the dataset. The DO sensor had multiple brief gaps in reporting from May 26th-30th.
- The SMIB station experienced fouling turbidity data on May 19th. This period of data was removed from the dataset. The SMIB DO and turbidity sensors became buried in sediment from May 23rd-27th which resulted in invalid DO and turbidity readings. This period of data was removed from the dataset. The SMIB sonde specific conductivity sensor experienced fouling from May 1st-18th. This period of data was removed from the dataset.
- At the SMIA station, the pressure transducer and rain gauge did not start reporting until May 22nd, so stage and rainfall data was not available before that date.

SCDHEC Standards

- The SMIA and SMIB stations did not record any pH values outside of the acceptable SCDHEC range of 6 to 8.5.
- The SMIA station recorded an average DO concentration of 7.9 mg/L and the SMIB station recorded an average DO concentration of 8.4 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 6.0 mg/L and 4.6 mg/L at the SMIB station, which are above the SCDHEC discrete minimum standard of 4 mg/L.

Storm Events

- The SMIA rain gauge did not record rainfall during the entire monitoring period. The SMIB rain gauge recorded 14 storms (at least 0.1 inches) resulting in 8.8 inches of precipitation.
- The SMIA and SMIB monitoring stations recorded typical water quality responses to the storm events observed during this monitoring period.

Potential Illicit Discharges and Abnormal Events

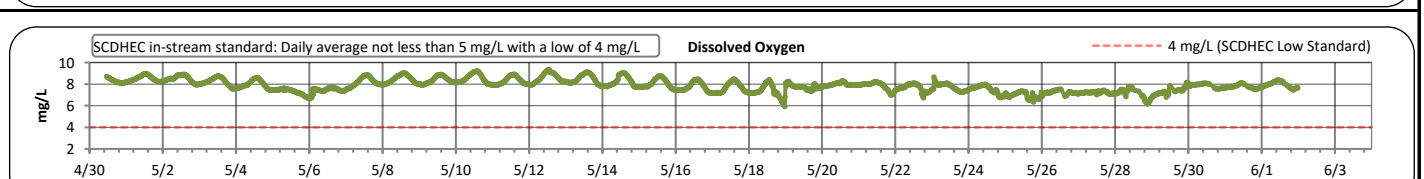
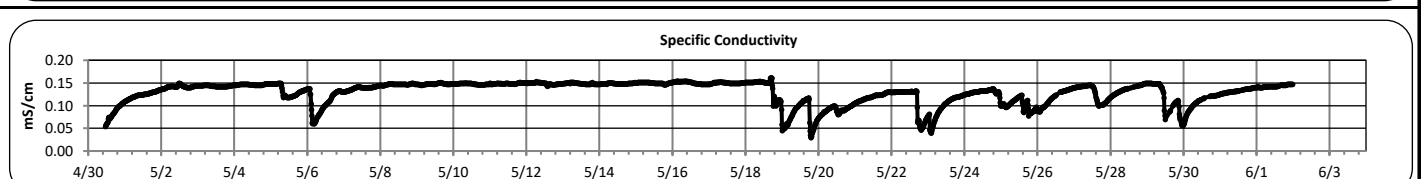
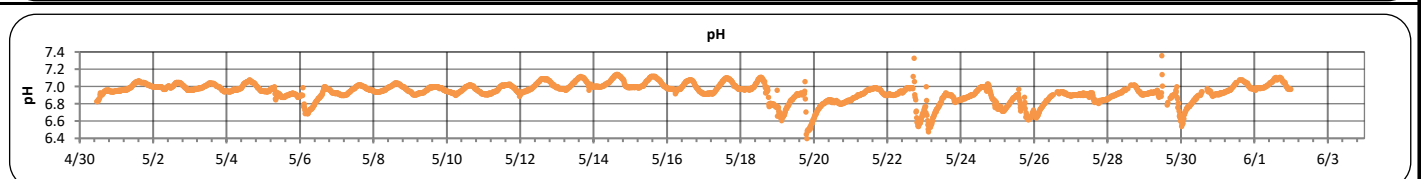
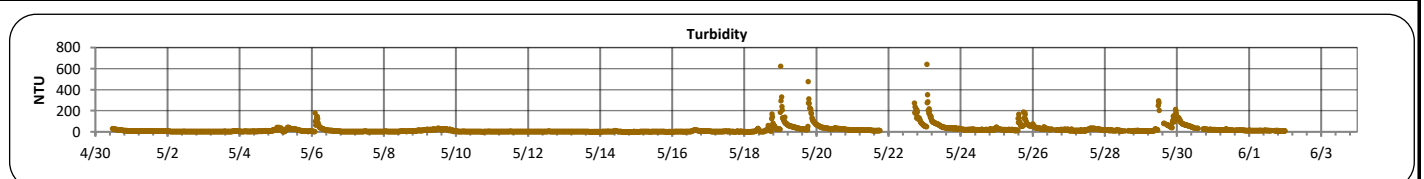
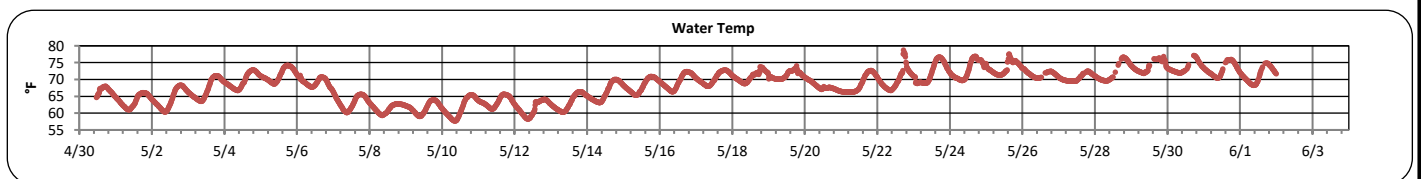
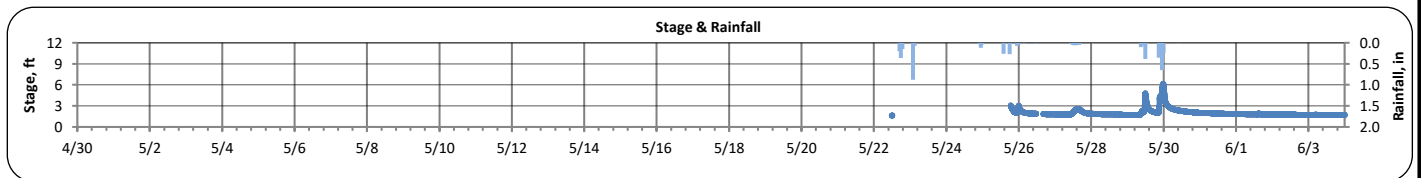
- There were no potential illicit discharges or abnormal events observed at the SMIA and SMIB stations during this monitoring period.

Flow Measurements

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

Smith Branch A (April 30, 2020 - June 3, 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):	1.7	6.2	1.8	2.0	0.5
LOCATION:	Earlewood Park	TEMPERATURE (°F):	58	79	69	68	4
ADDRESS:	1111 Parkside Dr Columbia, SC 29201	TURBIDITY (NTU):	2	643	10	21	39
COORDINATES:	34.027289,-81.04265	pH:	6.4	7.4	7.0	6.9	0.1
TMDL/IMPAIRMENT:	Fecal Coliform	SPECIFIC CONDUCTIVITY (mS/cm):	0.029	0.161	0.141	0.130	0.025
NEIGHBORING LANDUSE:	Residential and commercial	DISSOLVED OXYGEN (mg/L):	6.0	9.4	7.9	7.9	0.6
SPATIAL LOCATION:	Most upstream site						
TOTAL NO. STORMS OVER 0.1 INCH:	4						
MAX. DAILY RAINFALL:	2.0 inches						
TOTAL RAINFALL (FOR PERIOD):	4.9 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 (April 30, 2020 - June 3, 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.

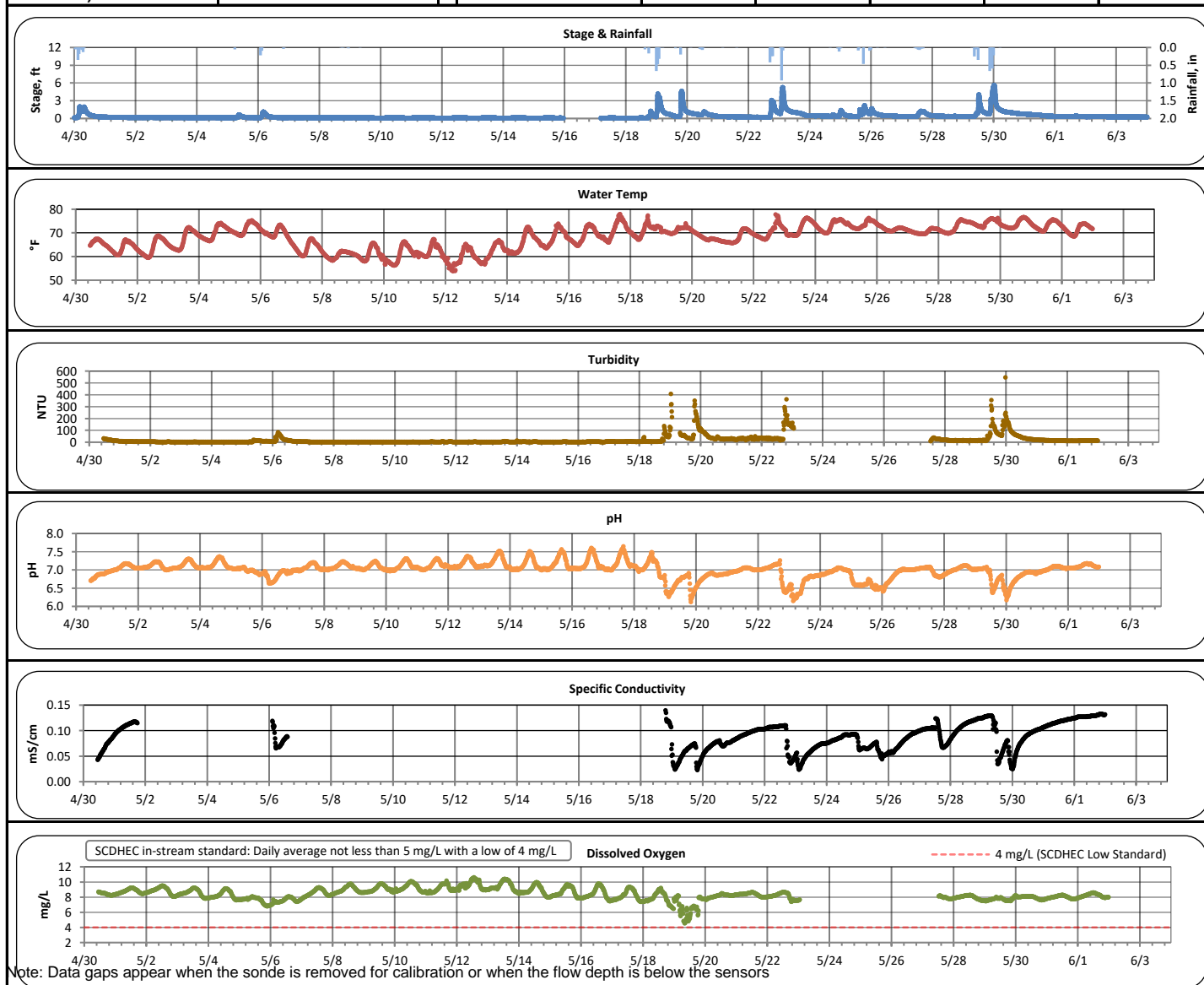
Grab Sample Data:

Analyte (units)	Sample 1		Sample 2		Sample 3		Sample 4		Sample 5	
	5/20/2020		5/20/2020		5/20/2020					
	Time	Result	Time	Result	Time	Result	Time	Result	Time	Result
<i>Escherichia coli</i> (MPN/100mL)	10:27	6152	11:50	4,374	13:02	6152				
Total Suspended Solids (mg/L)	10:27	18.7	11:50	29.5	13:02	24.2				
Total Phosphorus (mg/L)			11:50	0.09	13:02	0.072				
Total Nitrogen (mg/L)			11:50	0.99	13:02	1.41				

Note: All samples were collected during wet weather conditions.

Smith Branch B (April 30, 2020 - June 3, 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	5.3	0.2	0.4	0.5
LOCATION:	Off Mountain Drive	TEMPERATURE (°F):	54	78	69	68	5
NEAREST ADDRESS:	3950 Clement Rd Columbia, SC 29203	TURBIDITY (NTU):	2	547	6	20	40
COORDINATES:	34.037933,-81.0591	pH:	6.1	7.7	7.0	7.0	0.2
TMDL/IMPAIRMENT:	Fecal Coliform	SPECIFIC CONDUCTIVITY (mS/cm):	0.023	0.140	0.089	0.088	0.027
NEIGHBORING LANDUSE:	Residential and commercial	DISSOLVED OXYGEN (mg/L):	4.6	10.6	8.3	8.4	0.8
SPATIAL LOCATION:	Most Downstream Site						
TOTAL NO. STORMS OVER 0.1 INCH:	14						
MAX. DAILY RAINFALL:	2.2 inches						
TOTAL RAINFALL (FOR PERIOD):	8.8 inches						



**Continuous Water Quality
Monitoring Periodic Report**

Smith Branch B (April 30, 2020 - June 3, 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	
	5/20/2020		5/20/2020					
	Time	Result	Time	Result	Time	Result	Time	Result
<i>Escherichia coli</i> (MPN/100mL)	10:30	2212	12:21	2028				
Total Suspended Solids (mg/L)		10.5		18				
Total Phosphorus (mg/L)		0.065		0.12				
Total Nitrogen (mg/L)		1.11		1.03				

Note: All samples were collected during wet weather conditions.