

Smith Branch Monitoring Sites

Monitoring Data Summary for January 14th, 2021 – February 17th, 2021

Data Gaps

- The SMIA station experienced brief intermittent data gaps lasting a few hours at a time for all sensors throughout the monitoring period. This was due to a faulty battery and power regulator. The SMIA station experienced a period of fouling turbidity data from January 24th-25th and January 29th-31st, so those periods of data were removed from the dataset.
- The SMIB station did not report any water quality parameters from January 14th to January 20th because the sonde cable was broken. Data reporting resumed on January 20th when the cable was replaced. Stage data recorded from the pressure transducer was not available from January 14th to February 2nd.

SCDHEC Standards

- The SMIA station did not record any pH values outside the acceptable SCDHEC range of 6 to 8.5. The SMIB station recorded a minimum pH value of 5.9, which was below the acceptable SCDHEC range.
- The SMIA station recorded an average DO concentration of 10.4 mg/L and the SMIB station recorded an average DO concentration of 10.8 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 8.7 mg/L and 9.0 mg/L at the SMIB station, which are above the SCDHEC discrete minimum standard of 4 mg/L.

Storm Events

- The SMIA rain gauge recorded 12 storms (at least 0.1 inches) in this monitoring period resulting in 6.0 inches of precipitation. The SMIB rain gauge recorded 11 storms (at least 0.1 inches) in this monitoring period resulting in 6.0 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

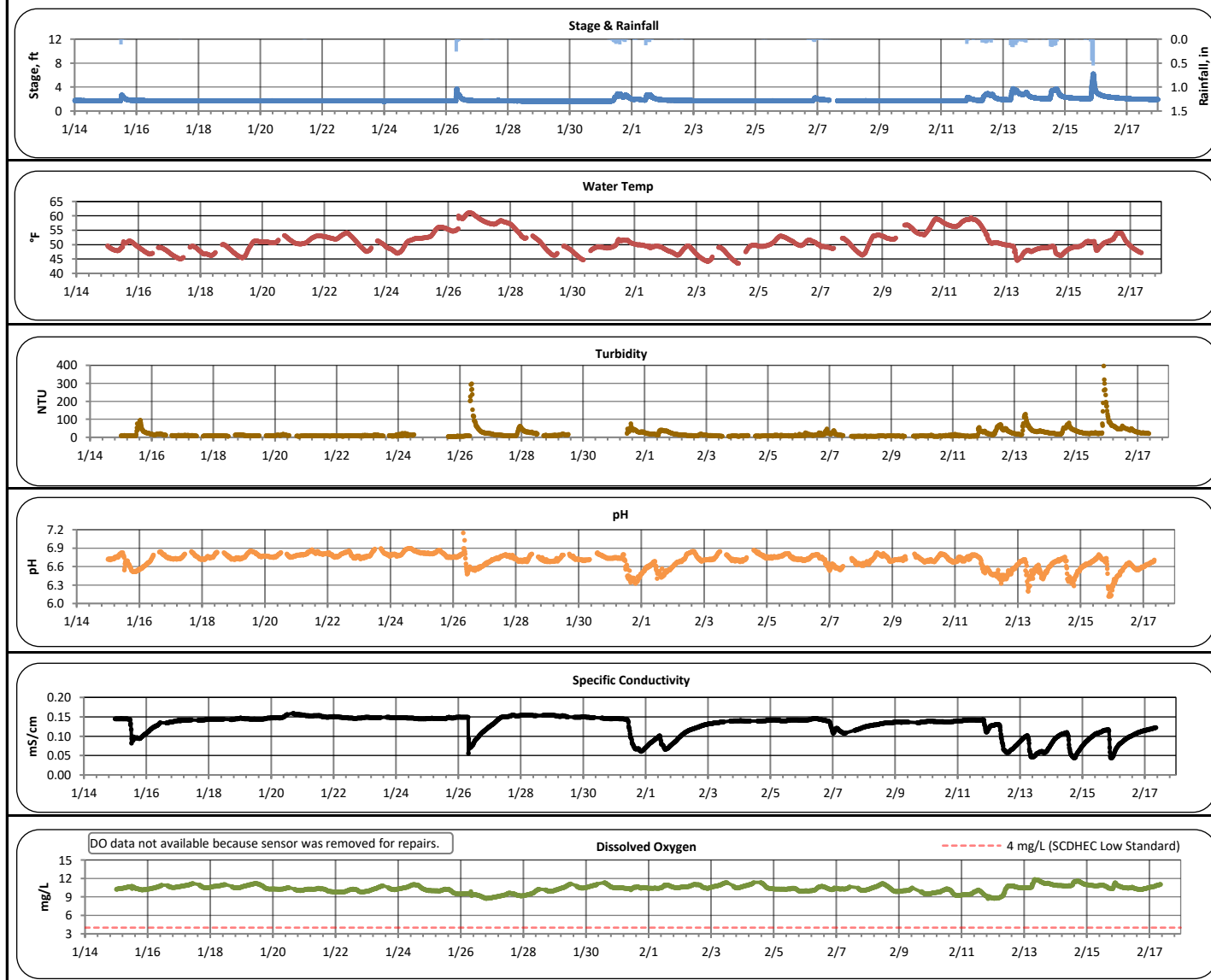
- At the SMIA station, there were no abnormal events during this monitoring period.
- At the SMIB station, there were increases in specific conductivity on January 24th, January 29th, and January 30th.

Flow Measurements

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

Smith Branch A (January 14, 2021 - February 17, 2021)

PARAMETER	DESCRIPTION	CONTINUOUS WATER QUALITY PARAMETERS:	SUMMARY STATISTICS				
			MINIMUM OBSERVED	MAXIMUM OBSERVED	MEDIAN OBSERVED	MEAN OBSERVED	STANDARD DEVIATION
STREAM NAME:	Smith Branch	STAGE (FT):	1.6	3.7	1.7	1.8	0.2
LOCATION:	Earlewood Park	TEMPERATURE (°F):	43	61	50	51	4
ADDRESS:	1111 Parkside Dr Columbia, SC 29201	TURBIDITY (NTU):	4	396	11	21	27
COORDINATES:	34.027289,-81.04265	pH:	6.1	7.2	6.7	6.7	0.1
TMDL/IMPAIRMENT:	Fecal Coliform	SPECIFIC CONDUCTIVITY (mS/cm):	0.044	0.159	0.140	0.127	0.027
NEIGHBORING LANDUSE:	Residential and commercial	DISSOLVED OXYGEN (mg/L):	8.7	11.9	10.4	10.4	0.6
SPATIAL LOCATION:	Most upstream site						
TOTAL NO. STORMS OVER 0.1 INCH:	12						
MAX. DAILY RAINFALL:	1.1 inches						
TOTAL RAINFALL (FOR PERIOD):	6.0 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 (January 14, 2021 - February 17, 2021)

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.

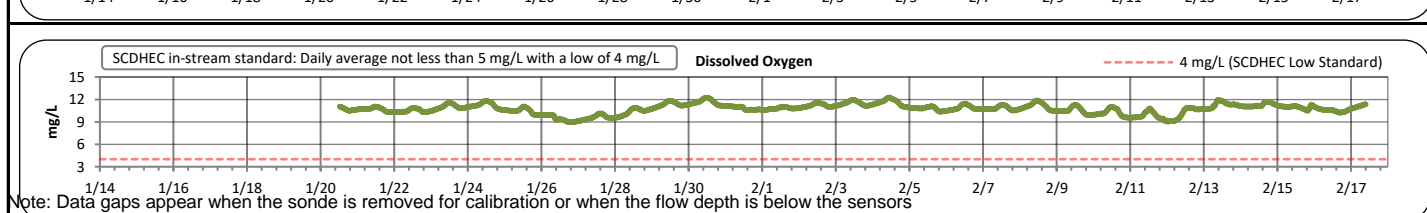
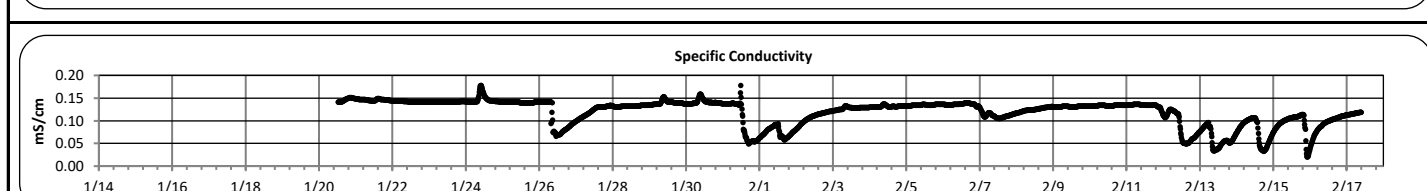
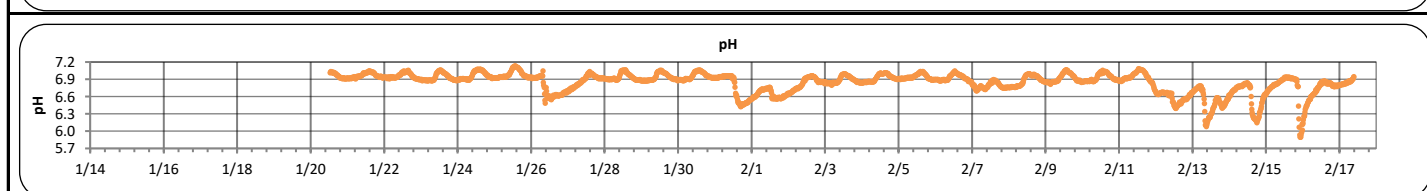
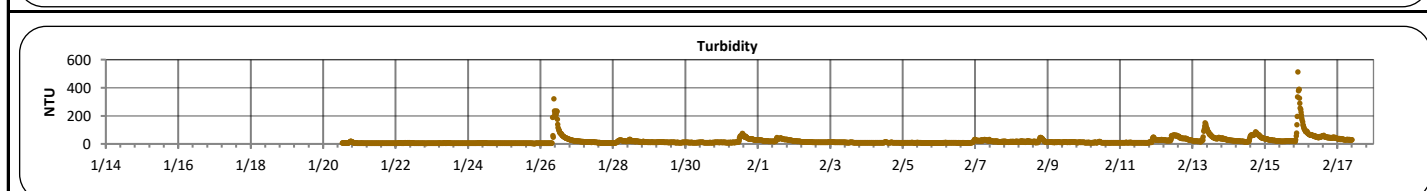
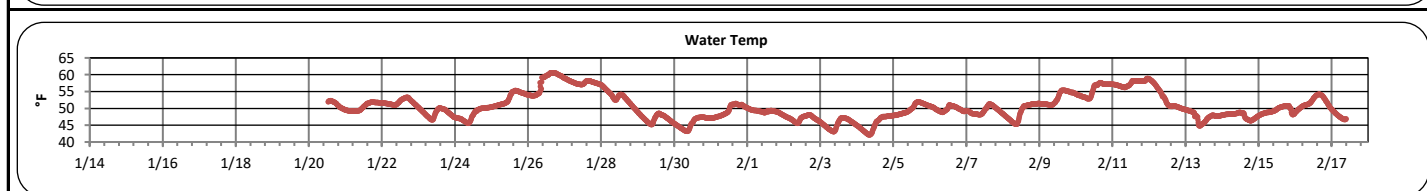
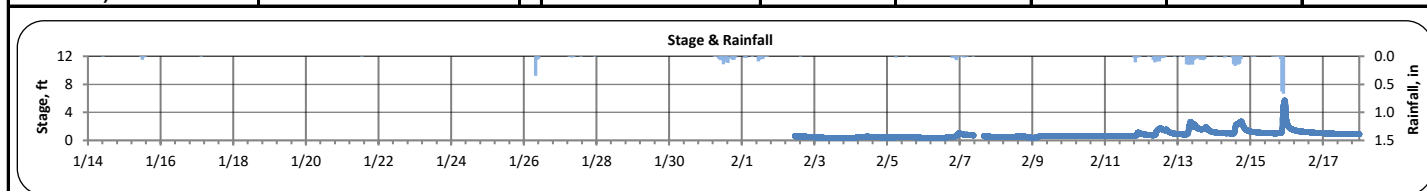
Sampled Data:

Analyte (units)	Sample 1		Sample 2		Sample 3		Sample 4	
	1/21/2021		2/12/2021		2/12/2021			
	Time	Results	Time	Results	Time	Results	Time	Results
<i>Escherichia coli</i> (MPN/100mL)	14:14	126	9:05	4,128	10:25	4,448		
Total Suspended Solids (mg/L)	14:14	1.8	9:05	45.1	10:25	63.6		
Total Phosphorus (mg/L)			9:05	0.13	10:25	0.13		
Total Nitrogen (mg/L)			9:05	1.37	10:25	1.11		

Notes: Sample 1 was collected during dry weather conditions. Samples 2 and 3 collected taken during wet weather conditions.

Smith Branch B (January 14, 2021 - February 17, 2021)

PARAMETER	DESCRIPTION	CONTINUOUS WATER QUALITY PARAMETERS:	SUMMARY STATISTICS				
			MINIMUM OBSERVED	MAXIMUM OBSERVED	MEDIAN OBSERVED	MEAN OBSERVED	STANDARD DEVIATION
STREAM NAME:	Smith Branch	STAGE (FT):	0.4	1.0	0.5	0.5	0.1
LOCATION:	Off Mountain Drive	TEMPERATURE (°F):	42	61	50	50	4
NEAREST ADDRESS:	3950 Clement Rd Columbia, SC 29203	TURBIDITY (NTU):	4	513	12	21	31
COORDINATES:	34.037933,-81.0591	pH:	5.9	7.1	6.9	6.8	0.2
TMDL/IMPAIRMENT:	Fecal Coliform	SPECIFIC CONDUCTIVITY (mS/cm):	0.020	0.178	0.132	0.120	0.028
NEIGHBORING LANDUSE:	Residential and commercial	DISSOLVED OXYGEN (mg/L):	9.0	12.3	10.8	10.8	0.7
SPATIAL LOCATION:	Most Downstream Site						
TOTAL NO. STORMS OVER 0.1 INCH:	11						
MAX. DAILY RAINFALL:	1.1 inches						
TOTAL RAINFALL (FOR PERIOD):	6.0 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 (January 14, 2021 - February 17, 2021)

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	
	2/12/2021		2/12/2021					
	Time	Results	Time	Results	Time	Results	Time	Results
<i>Escherichia coli</i> (MPN/100mL)	8:50	1,714	10:10	6,896				
Total Suspended Solids (mg/L)	8:50	20.2	10:10	71.2				
Total Phosphorus (mg/L)	8:50	0.099	10:10	0.16				
Total Nitrogen (mg/L)	8:50	1.09	10:10	1.43				

Notes: All samples were collected during wet weather conditions.