Smith Branch Monitoring Sites
Monitoring Data Summary for
January 10th, 2019 – February 13th, 2019

Data Gaps

- The SMIA station became buried from January 18th-20th and from January 26th-February 5th, resulting in inaccurate turbidity data. These periods of turbidity data were removed from the dataset.
- The SMIB station did not experience any interruptions in the water quality data during this monitoring period.
- The VDV website experienced reporting issues with the pressure transducers at SMIA and SMIB from January 19th-20th, therefore there is no data record during that period.

SCDHEC Standards

- Neither of the Smith Branch stations recorded pH values outside of the acceptable SCDHEC range of 6 to 8.5.
- The SMIA and SMIB stations recorded average DO concentrations of 10.1 mg/L and 10.7 mg/L, respectively, which are both well above the SCDHEC daily average standard of 5 mg/L.
- The minimum DO concentration recorded at the SMIA station was 3.5 mg/L, which is lower than the SCDHEC discrete minimum standard of 4.0 mg/L. This minimum DO value was recorded during the storm event on February 12th, which coincided with an increase in temperature.
- The minimum DO concentration recorded at the SMIB station was 8.9 mg/L, which is well above the SCDHEC discrete minimum standard of 4.0 mg/L.

Storm Events

- The SMIA station recorded 5 storms (at least 0.1 inches) in this monitoring period, while the SMIB station recorded 4 storms, both resulting in 2.7 inches of precipitation.
- The Smith Branch monitoring stations both recorded typical water quality responses to the storm events observed during this monitoring period.
- The maximum antecedent dry time since the last significant precipitation event (at least 0.1 inch) was approximately 17.8 days at both the SMIA station and SMIB station, both occurring prior to the storm event on February 11th.

Potential Illicit Discharges and Abnormal Events

- A potential turbidity illicit was observed during dry weather conditions at the SMIB station at the beginning of the deployment period on January 10th.
- Several slightly elevated specific conductivity levels occurred at both Smith Branch monitoring stations during this monitoring period.
    - At SMIA, these specific conductivity spikes took place on: January 17th-18th, 29th, and February 3rd-4th.
    - At SMIB, these specific conductivity spikes took place on: January 18th, 30th, and February 4th.

Flow Measurements

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

City of Columbia, SC Stormwater Management
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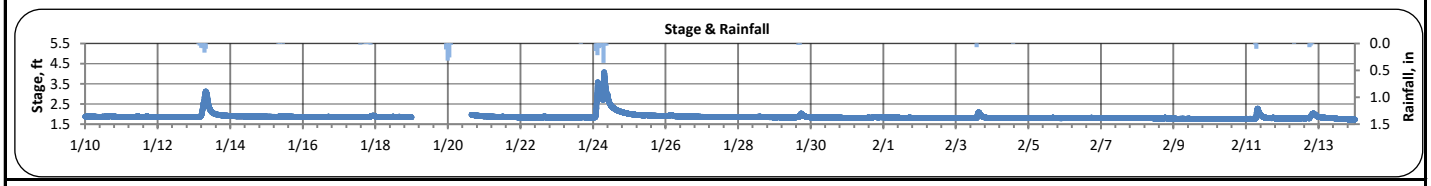
Continuous Water Quality Monitoring Periodic Report

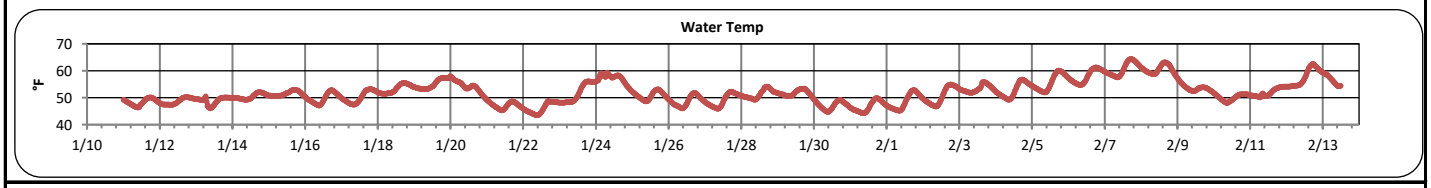
WOOLPERT

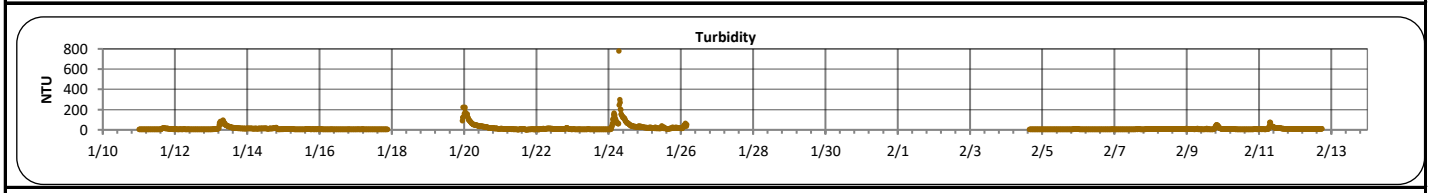
Smith Branch A (Jan 10, 2019 -- February 13, 2019)

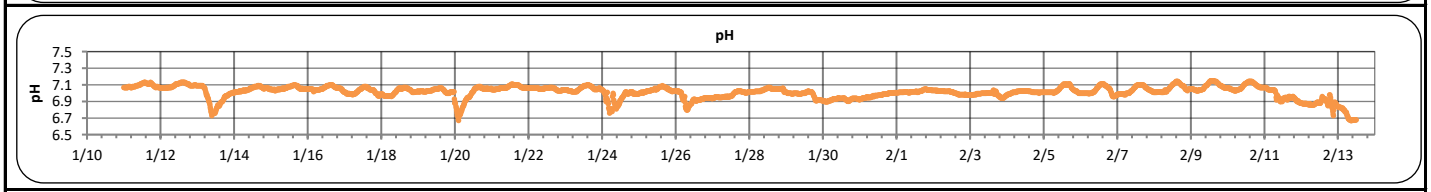
PARAMETER	DESCRIPTION
STREAM NAME:	Smith Branch
LOCATION:	Earlewood Park
ADDRESS:	1111 Parkside Dr Columbia, SC 29201
COORDINATES:	34.027289,-81.04265
TMDL/IMPAIRMENT:	Fecal Coliform
NEIGHBORING LANDUSE:	Residential and commercial
SPATIAL LOCATION:	Most upstream site
TOTAL NO. STORMS OVER 0.1 INCH:	5
MAX. DAILY RAINFALL:	1.0 inches
TOTAL RAINFALL (FOR PERIOD):	2.7 inches

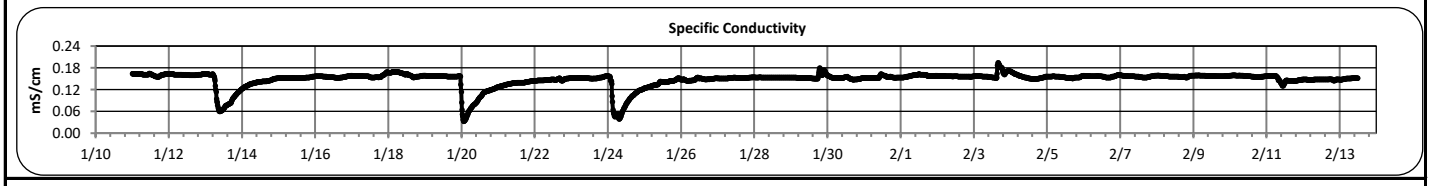
CONTINUOUS WATER QUALITY PARAMETERS:	SUMMARY STATISTICS				
	MINIMUM OBSERVED	MAXIMUM OBSERVED	MEDIAN OBSERVED	MEAN OBSERVED	STANDARD DEVIATION
STAGE (FT):	1.7	4.1	1.8	1.9	0.2
TEMPERATURE (°F):	44	64	51	52	4
TURBIDITY (NTU):	2	781	8	16	30
pH:	6.7	7.2	7.0	7.0	0.1
SPECIFIC CONDUCTIVITY (mS/cm):	0.033	0.194	0.154	0.149	0.020
DISSOLVED OXYGEN (mg/L):	3.5	11.8	10.3	10.1	1.0

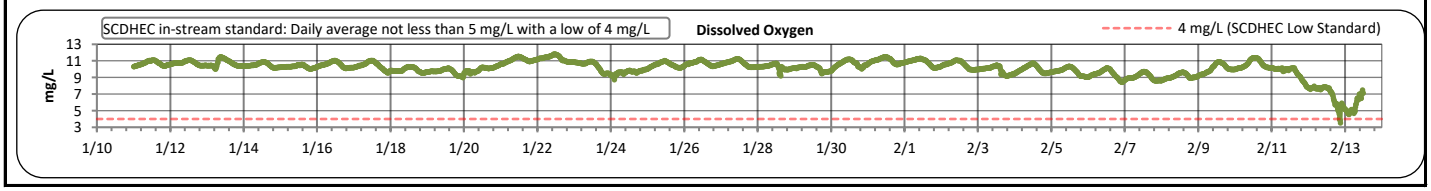












Note: Data gaps appear when the sonde is removed for calibration or when the flow depth is below the sensors

REPORT GENERATED ON 3/13/2019

Continuous Water Quality
Monitoring Periodic Report

Smith Branch A (January 10, 2019 -- February 13, 2019)

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
Escherichia coli (MPN/100mL)								
Total Suspended Solids (mg/L)								
Total Phosphorus (mg/L)								
Total Nitrogen (mg/L)								

Note:

City of Columbia, SC Stormwater Management
Partnering for clean waterways

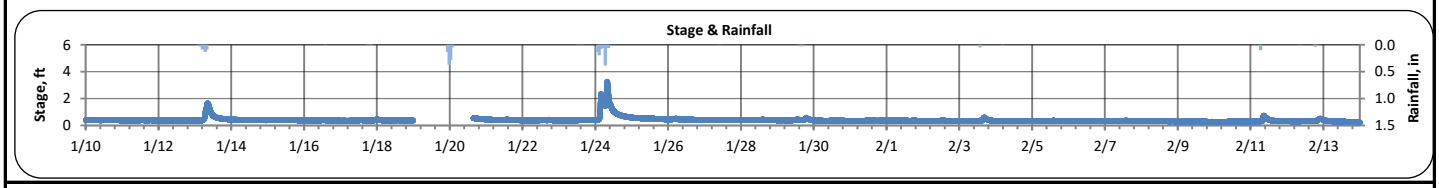
Continuous Water Quality Monitoring Periodic Report

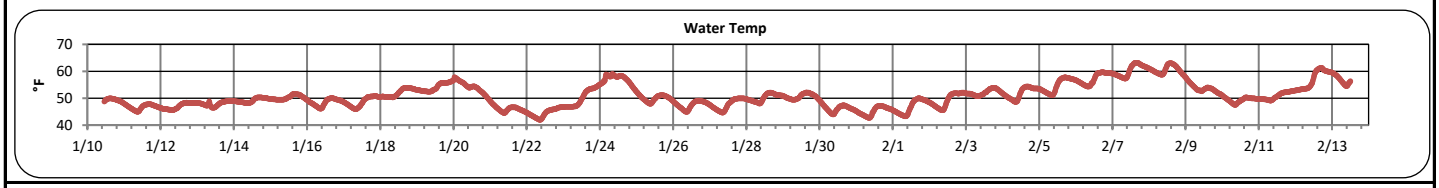
WOOLPERT

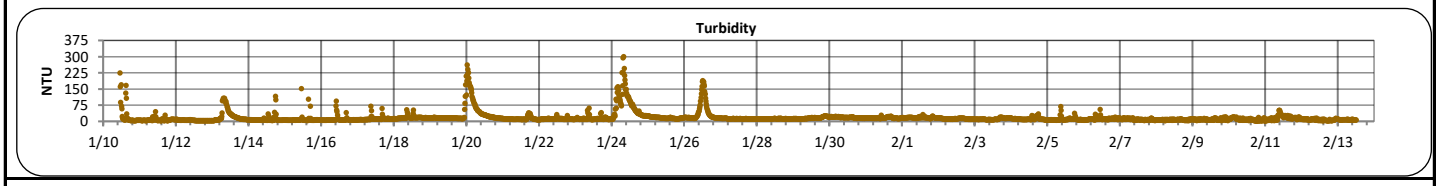
Smith Branch B (January 10, 2019 -- February 13, 2019)

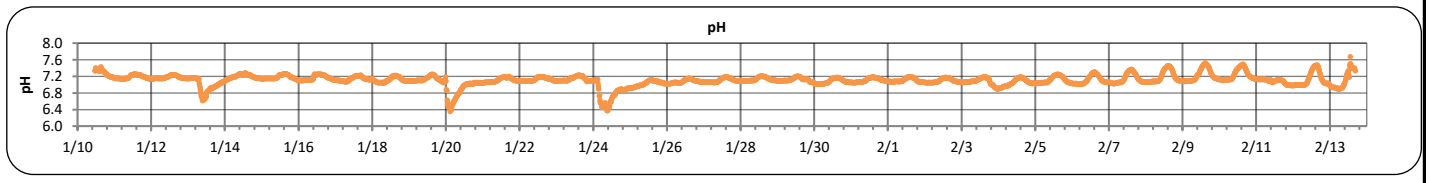
PARAMETER	DESCRIPTION
STREAM NAME:	Smith Branch
LOCATION:	Off Mountain Drive
NEAREST ADDRESS:	3950 Clement Rd Columbia, SC 29203
COORDINATES:	34.037933,-81.0591
TMDL/IMPAIRMENT:	Fecal Coliform
NEIGHBORING LANDUSE:	Residential and commercial
SPATIAL LOCATION:	Most Downstream Site
TOTAL NO. STORMS OVER 0.1 INCH:	4
MAX. DAILY RAINFALL:	1.0 inches
TOTAL RAINFALL (FOR PERIOD):	2.7 inches

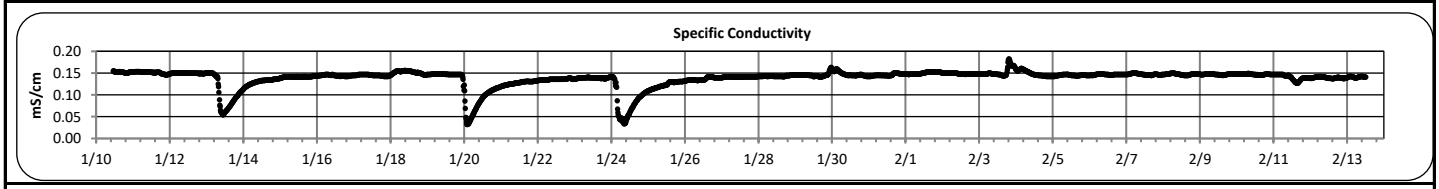
CONTINUOUS WATER QUALITY PARAMETERS:	SUMMARY STATISTICS				
	MINIMUM OBSERVED	MAXIMUM OBSERVED	MEDIAN OBSERVED	MEAN OBSERVED	STANDARD DEVIATION
STAGE (FT):	0.2	3.3	0.4	0.4	0.2
TEMPERATURE (°F):	42	63	50	51	4
TURBIDITY (NTU):	1	301	12	18	25
pH:	6.4	7.7	7.1	7.1	0.1
SPECIFIC CONDUCTIVITY (mS/cm):	0.033	0.183	0.145	0.139	0.019
DISSOLVED OXYGEN (mg/L):	8.9	12.6	10.8	10.7	0.8

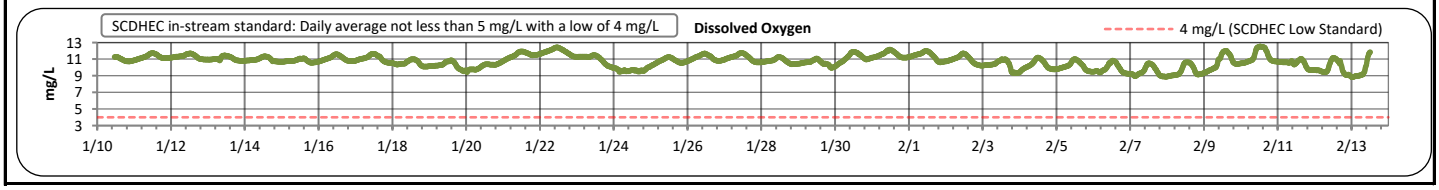












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