Smith Branch Monitoring Sites
Monitoring Data Summary for
February 15th, 2019 – March 19th, 2019

Data Gaps

- The SMIA station experienced a short period of turbidity fouling, occurring overnight on March 19th-20th, which was removed from the dataset.
- The pH and DO data at SMIA were removed from March 9th-14th. The pH data was removed due to inaccurate low values impacted by pollen buildup on the sensors. The DO data was removed due to sensor fouling, resulting in significantly low DO values.
- Heavy sediment accumulation at the SMIB station covered the turbidity sensor for a brief period from March 14th-18th. This period turbidity data was removed from the dataset.
- The monitoring website experienced reporting issues with the pressure transducers at SMIA and SMIB from March 15th-16th, 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 9.4 mg/L and 9.6 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 7.4 mg/L, which is well above the SCDHEC discrete minimum standard of 4 mg/L.
- The minimum DO concentration recorded at the SMIB station was 3.6 mg/L, which is lower than the SCDHEC discrete minimum standard of 4 mg/L. The low DO values were recorded on March 10th, just one day after a large storm event. The DO gradually returned to the average DO level, likely due to the DO wiper cleaning the sensor.

Storm Events

- The SMIA station recorded 9 storms (at least 0.1 inches) in this monitoring period resulting in 4.4 inches of precipitation. The SMIB station recorded 8 storms (at least 0.1 inches) resulting in 4.9 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 10.7 days in the Smith Branch watershed, occurring after the March 9th storm event until the end of the monitoring period.

Potential Illicit Discharges and Abnormal Events

- There were no potential illicit discharges or abnormal events in the Smith Branch watershed during this monitoring period.

Flow Measurements

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

City of Columbia, SC Stormwater Management
Partnering for clean waterways

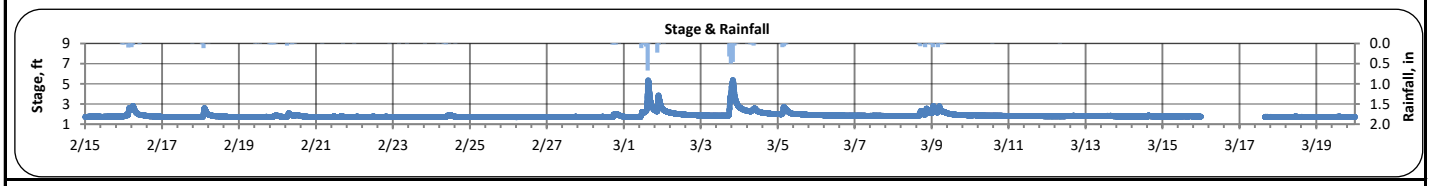
Continuous Water Quality Monitoring Periodic Report

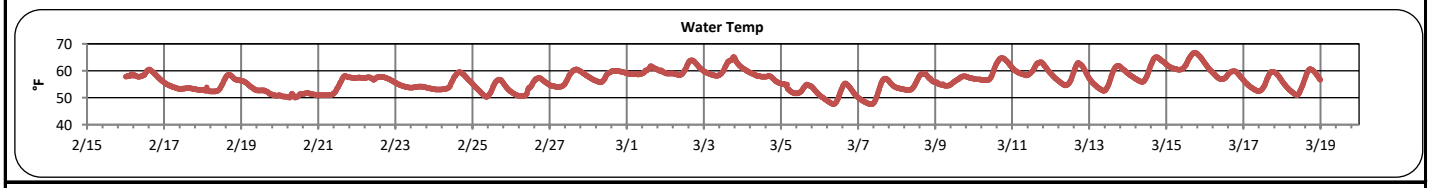
WOOLPERT

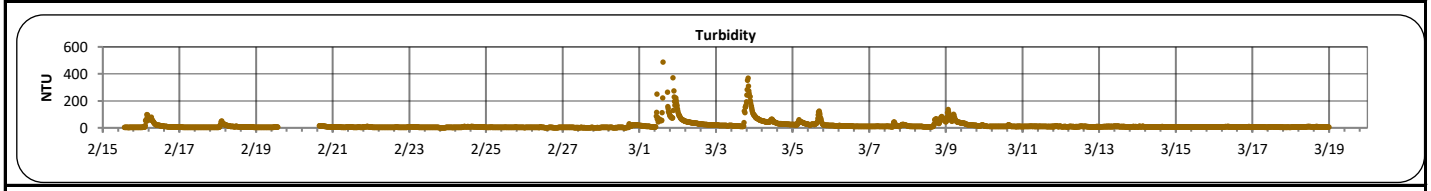
Smith Branch A (February 15, 2019 -- March 19, 2019)

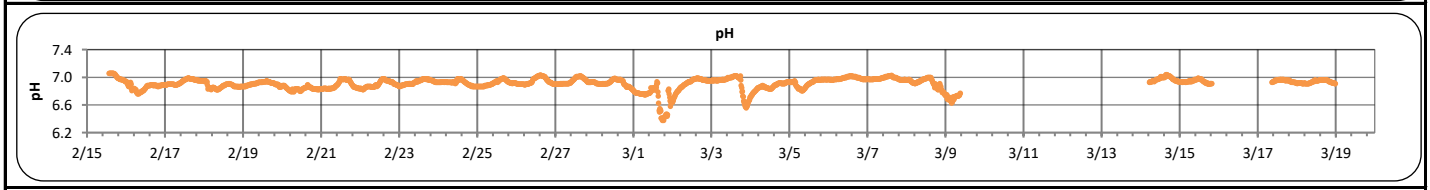
PARAMETER	DESCRIPTION
STREAM NAME:	Smith Branch
LOCATION:	Earlewood Park
ADDRESS:	1111 Parkside Dr Columbia, SC 29201
COORDINATES:	34.027289,-81.04265
TMDL/IMPAIRMENT:	Fecal Coliform
NEIGHBORING LANDUSE:	Residential and commercial
SPATIAL LOCATION:	Most upstream site
TOTAL NO. STORMS OVER 0.1 INCH:	9
MAX. DAILY RAINFALL:	1.4 inches
TOTAL RAINFALL (FOR PERIOD):	4.4 inches

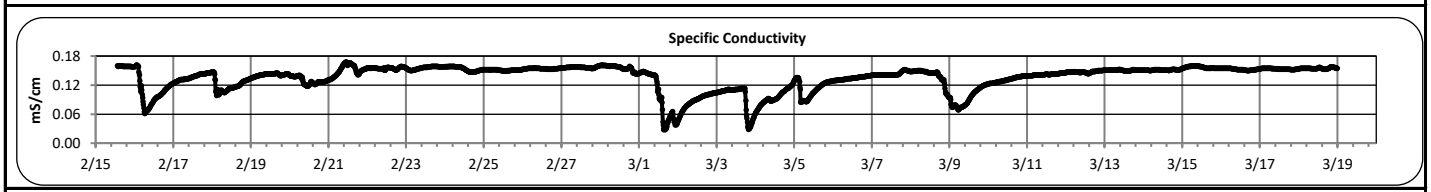
CONTINUOUS WATER QUALITY PARAMETERS:	SUMMARY STATISTICS				
	MINIMUM OBSERVED	MAXIMUM OBSERVED	MEDIAN OBSERVED	MEAN OBSERVED	STANDARD DEVIATION
STAGE (FT):	1.7	5.4	1.8	1.9	0.3
TEMPERATURE (°F):	48	67	57	57	4
TURBIDITY (NTU):	2	488	9	17	30
pH:	6.4	7.1	6.9	6.9	0.1
SPECIFIC CONDUCTIVITY (mS/cm):	0.028	0.168	0.147	0.136	0.026
DISSOLVED OXYGEN (mg/L):	7.4	11.0	9.4	9.4	0.7

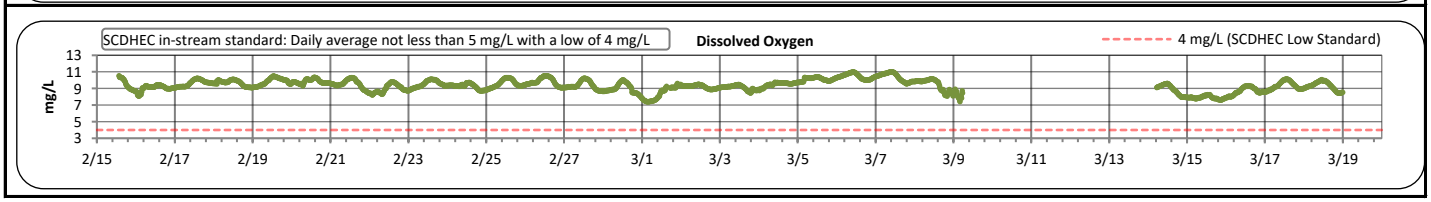












Note: Data gaps appear when the sonde is removed for calibration or when the flow depth is below the sensors

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Continuous Water Quality
Monitoring Periodic Report

Smith Branch A (February 15, 2019 -- March 19, 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	
	3/1/2019		3/1/2019					
	Time	Result	Time	Result	Time	Result	Time	Result
Escherichia coli (MPN/100mL)	10:54	2212	12:07	9222				
Total Suspended Solids (mg/L)	10:54	110	12:07	64.8				
Total Phosphorus (mg/L)	10:54	0.2	12:07	0.19				
Total Nitrogen (mg/L)	10:54	2.34	12:07	3.31				

Note:

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City of Columbia, SC Stormwater Management — Partnering for clean waterways

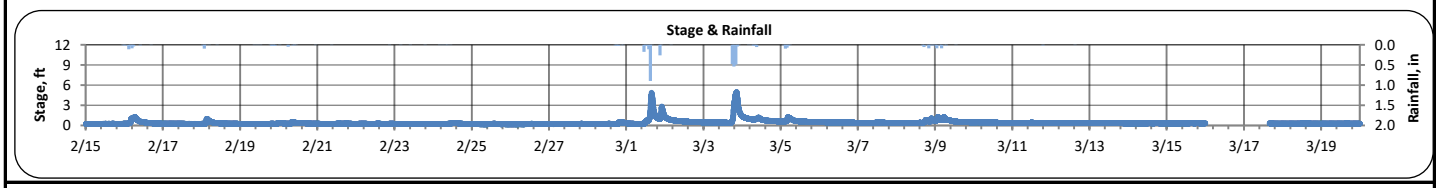
Continuous Water Quality Monitoring Periodic Report

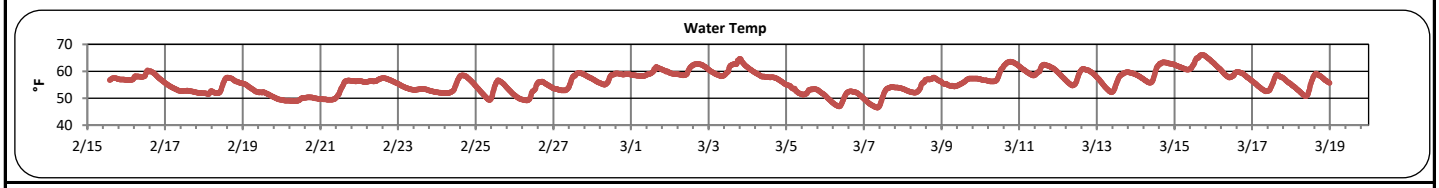
WOOLPERT

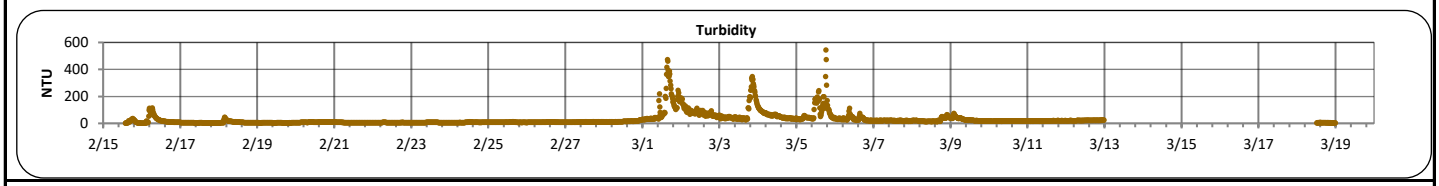
Smith Branch B (February 15, 2019 -- March 19, 2019)

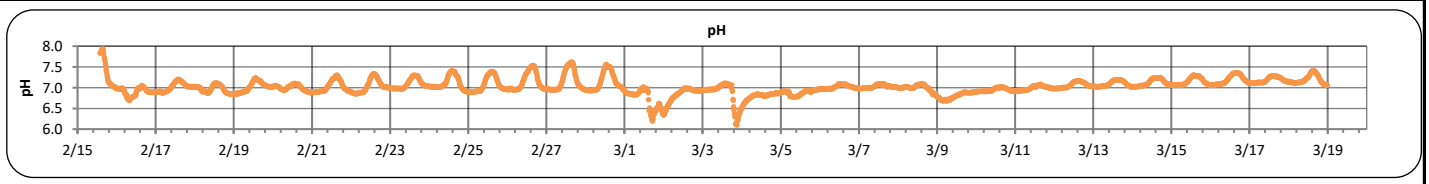
PARAMETER	DESCRIPTION
STREAM NAME:	Smith Branch
LOCATION:	Off Mountain Drive
NEAREST ADDRESS:	3950 Clement Rd Columbia, SC 29203
COORDINATES:	34.037933,-81.0591
TMDL/IMPAIRMENT:	Fecal Coliform
NEIGHBORING LANDUSE:	Residential and commercial
SPATIAL LOCATION:	Most Downstream Site
TOTAL NO. STORMS OVER 0.1 INCH:	8
MAX. DAILY RAINFALL:	1.6 inches
TOTAL RAINFALL (FOR PERIOD):	4.9 inches

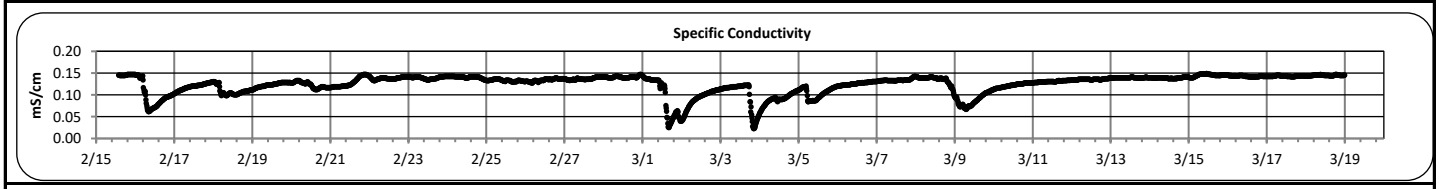
CONTINUOUS WATER QUALITY PARAMETERS:	SUMMARY STATISTICS				
	MINIMUM OBSERVED	MAXIMUM OBSERVED	MEDIAN OBSERVED	MEAN OBSERVED	STANDARD DEVIATION
STAGE (FT):	0.2	5.0	0.3	0.4	0.4
TEMPERATURE (°F):	47	66	56	56	4
TURBIDITY (NTU):	3	545	16	30	47
pH:	6.1	7.9	7.0	7.0	0.2
SPECIFIC CONDUCTIVITY (mS/cm):	0.023	0.149	0.134	0.126	0.022
DISSOLVED OXYGEN (mg/L):	3.6	12.7	9.7	9.6	1.6

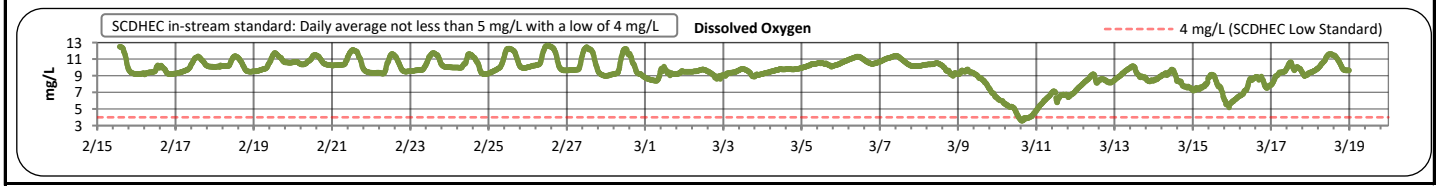












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Smith Branch B (February 15, 2019 -- March 19, 2019)

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Sampled Data:

Analyte (units)	Sample 1		Sample 2		Sample 3		Sample 4	
	3/1/2019		3/1/2019					
	Time	Result	Time	Result	Time	Result	Time	Result
Escherichia coli (MPN/100mL)	11:13	4374	12:23	2878				
Total Suspended Solids (mg/L)	11:13	12.3	12:23	45.7				
Total Phosphorus (mg/L)	11:13	0.057	12:23	0.096				
Total Nitrogen (mg/L)	11:13	1.51	12:23	1.68				

Note:

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