Smith Branch Monitoring Sites
Monitoring Data Summary for
July 14th, 2017 – August 15th, 2017

Data Gaps

- The SMIA station did not record any interruptions in the dataset during this monitoring period.
- The SMIB station experienced submergence issues throughout the deployment period which affected the specific conductivity probe. These periods were removed from the dataset.
- The SMIB station also experienced brief periods where the temperature probe was not submerged on July 14th, 17th-18th, 20th-21st, and 22nd-23rd. Temperature was removed from the dataset for these periods, as well as temperature dependent parameters DO and pH.

SCDHEC Standards

- Both SMIA and SMIB stations recorded low pH values of 5.5 and 5.7, respectively, which is outside of the SCDHEC standards acceptable range of 6 to 8.5. Both stations recorded low pH values during the storm event on July 24th.
- The SMIA and SMIB stations recorded average DO concentrations of 7.0 mg/L and 7.4 mg/L, respectively, well above the SCDHEC daily average standard of 5 mg/L.
- The minimum DO concentrations were 5.7 mg/L and 5.8 mg/L at the SMIA and SMIB stations, respectively, which are well above the SCDHEC minimum level of 4 mg/L.

Storm Events

- The SMIA rain gauge recorded 8 storm events resulting in 6.9 inches of precipitation during this monitoring period. The SMIB rain gauge recorded 10 storm events resulting in 6.7 inches of precipitation during this monitoring period.
- The Smith Branch monitoring stations 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 inches) was approximately 18.8 days in the Smith Branch watershed, and occurred prior to the August 13th storm event.

Potential Illicit Discharges and Abnormal Events

- Periods of slight increase in specific conductivity was observed at SMIA on July 15th, August 1st, and August 8th.

Flow Measurements

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

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

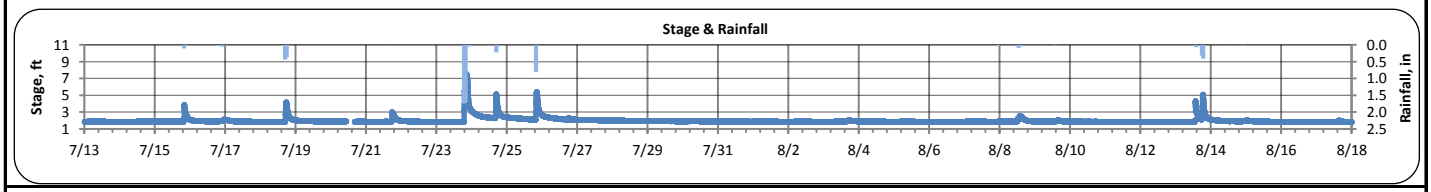
Continuous Water Quality Monitoring Periodic Report

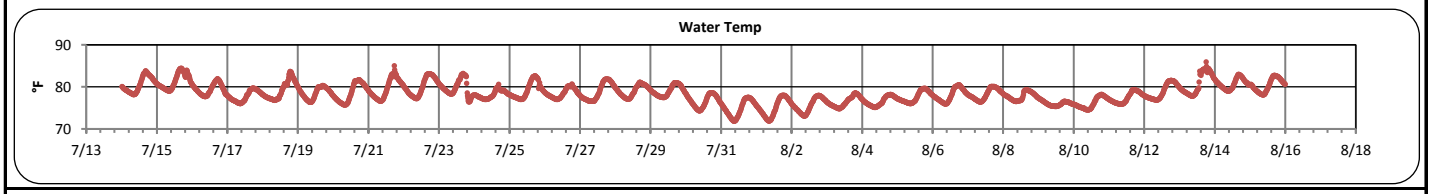
WOOLPERT

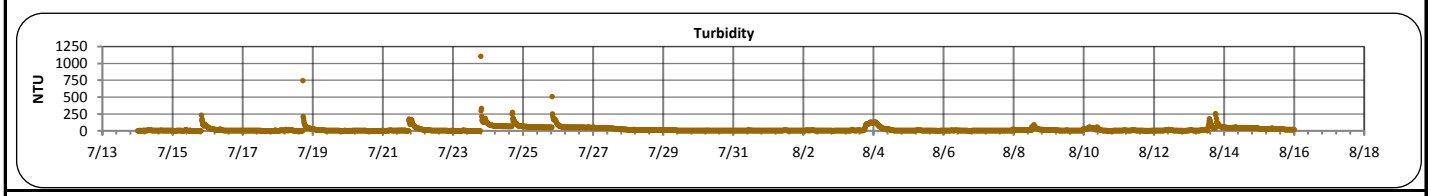
Smith Branch A (July 13, 2017 -- August 17, 2017)

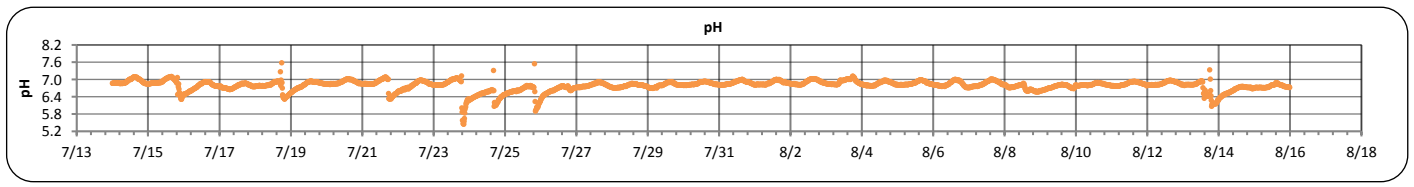
PARAMETER	DESCRIPTION
STREAM NAME:	Smith Branch
LOCATION:	Earlewood Park
ADDRESS:	1111 Parkside Dr Columbia, SC 29201
COORDINATES:	34.027289,-81.04265
TMDL/IMPAIRMENT:	Fecal Coliform
NEIGHBORING LANDUSE:	Residential and commercial
SPATIAL LOCATION:	Most upstream site
TOTAL NO. STORMS OVER 0.1 INCH:	8
MAX. DAILY RAINFALL:	3.6 inches
TOTAL RAINFALL (FOR PERIOD):	6.9 inches

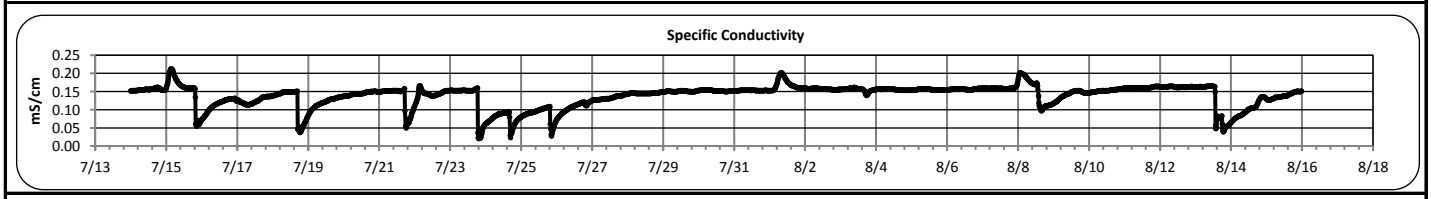
CONTINUOUS WATER QUALITY PARAMETERS:	SUMMARY STATISTICS				
	MINIMUM OBSERVED	MAXIMUM OBSERVED	MEDIAN OBSERVED	MEAN OBSERVED	STANDARD DEVIATION
STAGE (FT):	1.8	7.6	1.9	2.0	0.4
TEMPERATURE (°F):	72	86	78	78	2
TURBIDITY (NTU):	2	1107	7	23	41
pH:	5.5	7.6	6.8	6.8	0.2
SPECIFIC CONDUCTIVITY (mS/cm):	0.021	0.213	0.151	0.139	0.030
DISSOLVED OXYGEN (mg/L):	5.7	8.4	7.0	7.0	0.5

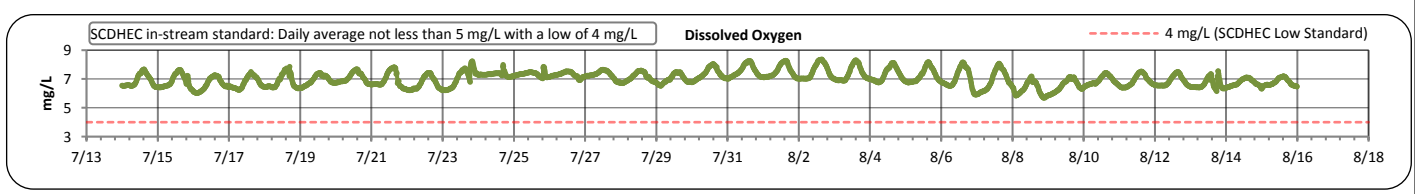












Note: Data gaps appear when the sonde is removed for calibration or when the flow depth is below the sensors

REPORT GENERATED ON 8/30/2017

Continuous Water Quality
Monitoring Periodic Report

Smith Branch A (July 13, 2017 -- August 17, 2017)

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	
	8/8/2017							
	Time	Result	Time	Result	Time	Result	Time	Result
Escherichia coli (MPN/100mL)	13:13	13,730						
Total Suspended Solids (mg/L)	13:13	54.3						
Total Phosphorus (mg/L)	13:13	0.21						
Total Nitrogen (mg/L)	13:13	2.09						

Note:

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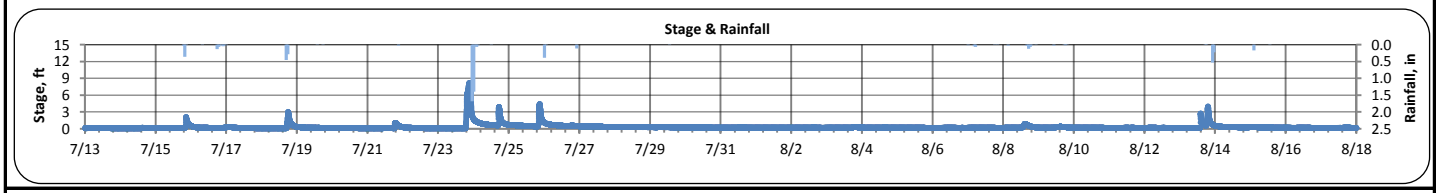
Continuous Water Quality Monitoring Periodic Report

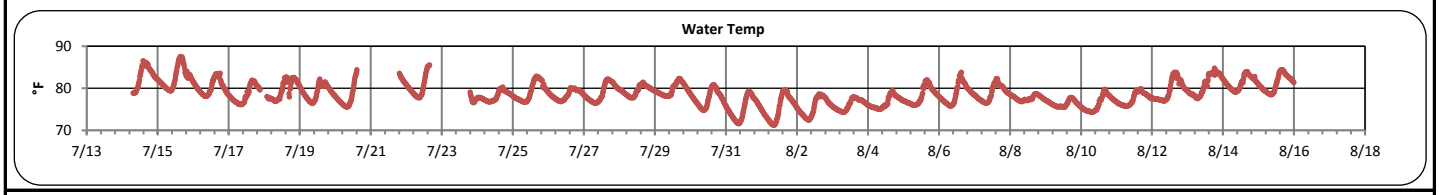
WOOLPERT

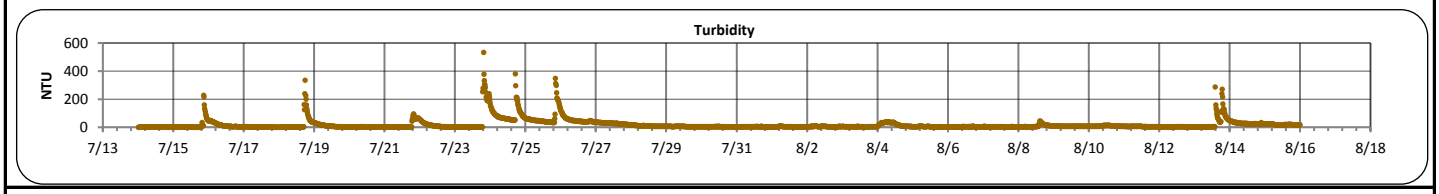
Smith Branch B (July 13, 2017 -- August 17, 2017)

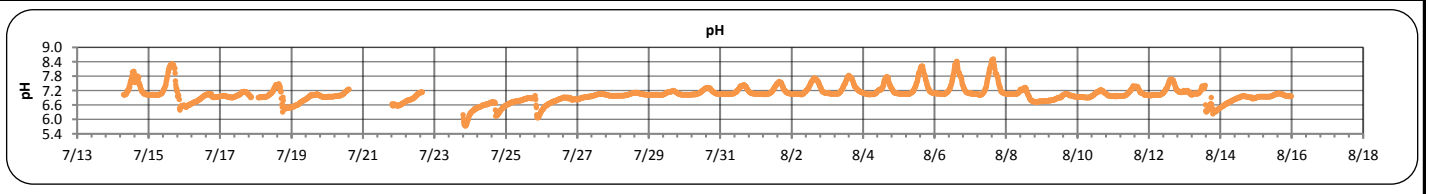
PARAMETER	DESCRIPTION
STREAM NAME:	Smith Branch
LOCATION:	Off Mountain Drive
NEAREST ADDRESS:	3950 Clement Rd Columbia, SC 29203
COORDINATES:	34.037933,-81.0591
TMDL/IMPAIRMENT:	Fecal Coliform
NEIGHBORING LANDUSE:	Residential and commercial
SPATIAL LOCATION:	Most Downstream Site
TOTAL NO. STORMS OVER 0.1 INCH:	10
MAX. DAILY RAINFALL:	3.2 inches
TOTAL RAINFALL (FOR PERIOD):	6.7 inches

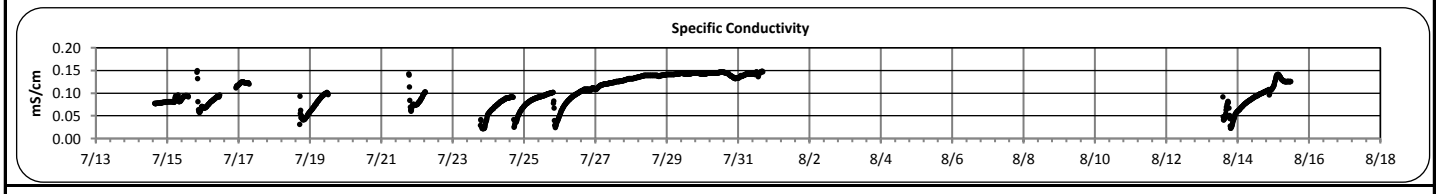
CONTINUOUS WATER QUALITY PARAMETERS:	SUMMARY STATISTICS				
	MINIMUM OBSERVED	MAXIMUM OBSERVED	MEDIAN OBSERVED	MEAN OBSERVED	STANDARD DEVIATION
STAGE (FT):	0.1	8.2	0.2	0.3	0.5
TEMPERATURE (°F):	71	88	78	79	3
TURBIDITY (NTU):	1	534	6	19	37
pH:	5.7	8.5	7.1	7.1	0.3
SPECIFIC CONDUCTIVITY (mS/cm):	0.022	0.150	0.1	0.103	0.033
DISSOLVED OXYGEN (mg/L):	5.8	10.6	7.2	7.4	0.8

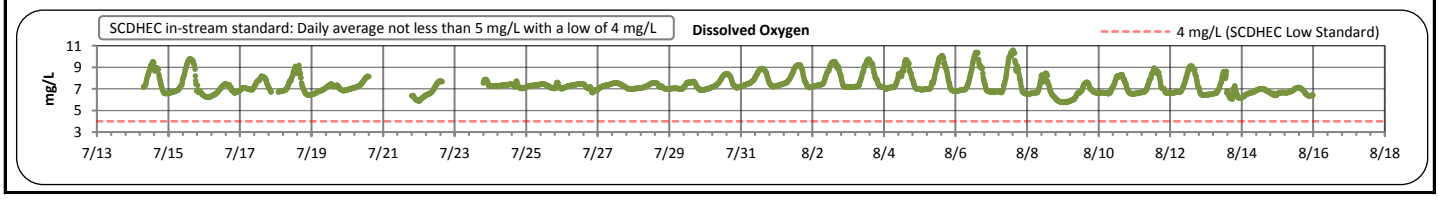












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Continuous Water Quality
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Smith Branch B (July 13, 2017 -- August 17, 2017)

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Sampled Data:

Analyte (units)	Sample 1		Sample 2		Sample 3		Sample 4	
	8/8/2017							
	Time	Result	Time	Result	Time	Result	Time	Result
Escherichia coli (MPN/100mL)	13:07	960						
Total Suspended Solids (mg/L)	13:07	5.8						
Total Phosphorus (mg/L)	13:07	0.065						
Total Nitrogen (mg/L)	13:07	1.04						

Note: