Smith Branch Monitoring Sites Monitoring Data Summary for November 1st, 2018 – December 5th, 2018

Data Gaps

- The SMIA turbidity data was removed from November 6th-7th, on November 26th, and on December 1st due to a buildup of sediment and leaf debris covering the turbidity sensor. The SMIA sonde became buried from November 16th-19th and 21st-24th, so all water quality parameters were removed from the dataset. Because of the location of the specific conductivity sensor, this parameter was not impacted by the buried sonde from November 16th-19th.
- The SMIB station experienced some noisy turbidity data on November 13th and from November 29th-30th. These periods of turbidity were removed from the dataset as result of potential sensor fouling. The DO membrane on the SMIB sonde was severely scratched which caused bad DO data from November 4th-8th and this portion of the data was also removed from the dataset.

SCDHEC Standards

- Neither of the Smith Branch stations recorded pH values outside of the acceptable SCDHEC range of 6 to 8.5.
- Both the SMIA and SMIB station recorded average DO concentration of 9.1 mg/L, which is well above the SCDHEC daily average standard of 5 mg/L.
- The minimum DO concentration recorded at the SMIA station was 7.2 mg/L and 7.5 mg/L at the SMIB station, which are well above the SCDHEC discrete minimum standard of 4.0 mg/L.

Storm Events

- The SMIA station recorded 9 storms (at least 0.1 inches) in this monitoring period that resulted in 8.2 inches of precipitation. The SMIB station recorded 8 storms (at least 0.1 inches) in this monitoring period that resulted in 7.4 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 8.4 days at both Smith Branch monitoring stations occurring prior to the storm event on November 23rd.

Potential Illicit Discharges and Abnormal Events

• There were no abnormal events observed at the Smith Branch stations during this deployment period.

Flow Measurements

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



Continuous Water Quality Monitoring Periodic Report



Smith Branch A (November 1, 2018 -- December 5, 2018)

		CONTINUOUS	SUMMARY STATISTICS					
PARAMETER	DESCRIPTION	WATER QUALITY PARAMETERS:	MINIMUM OBSERVED	MAXIMUM OBSERVED	MEDIAN OBSERVED	MEAN OBSERVED	STANDARD DEVIATION	
STREAM NAME:	Smith Branch	STAGE (FT):	1.7	5.2	1.8	2.0	0.4	
LOCATION:	Earlewood Park	TEMPERATURE						
ADDRESS:	1111 Parkside Dr Columbia, SC 29201	(°F):	46	69	57	58	5	
COORDINATES:	34.027289,-81.04265	TURBIDITY (NTU):	3	651	15	27	39	
TMDL/IMPAIRMENT:	Fecal Coliform	TORBIDITT (NTO).	3	051	13	21	33	
NEIGHBORING LANDUSE:	Residential and commercial	pH:	6.6	7.2	7.0	6.9	0.1	
SPATIAL LOCATION:	Most upstream site							
TOTAL NO. STORMS OVER 0.1 INCH:	9	SPECIFIC CONDUCTIVITY (mS/cm):	0.023	0.166	0.142	0.132	0.031	
MAX. DAILY RAINFALL:	2.0 inches	DISSOLVED						
TOTAL RAINFALL (FOR PERIOD):	8.2 inches	OXYGEN (mg/L):	7.2	11.5	9.0	9.1	0.7	
9		Stage & Rair	nfall				0	
							Rainfall, in	
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F 55		~~~	<u>~</u> ~~			~~~	•	
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SCOHEC in-stream stan	dard: Daily average not less than 5 mg/L w	ith a low of 4 mg/l Discall	ad Ovygan			4 mg/L (SCDHEC	Low Standard)	
13	Can a. Daily average not less than 3 flg/L W	DISSOIV	ed Oxygen			T III S (SCOTTEC	2014 Standard)	
ح ٥ +			1					
11 12 9 E 7			+					
11/1 11/3 11/	5 11/7 11/9 11/11 1:	1/13 11/15 11/17 1	1/19 11/21	11/23 11/25	11/27 11/29	12/1 12/3	12/5	

Continuous Water Quality Monitoring Periodic Report

Smith Branch A (November 1, 2018 -- December 5, 2018)

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	
	11/20/2018							
(units)	Time	Result	Time	Result	Time	Result	Time	Result
Escherichia coli (MPN/100mL)	10:57	402						
Total Suspended Solids (mg/L)								
Total Phosphorus (mg/L)								
Total Nitrogen (mg/L)								

Note:



Continuous Water Quality Monitoring Periodic Report



Smith Branch B (November 1, 2018 -- December 5, 2018)

		CONTINUOUS	SUMMARY STATISTICS					
PARAMETER	DESCRIPTION	WATER QUALITY PARAMETERS:	MINIMUM OBSERVED	MAXIMUM OBSERVED	MEDIAN OBSERVED	MEAN OBSERVED	STANDARD DEVIATION	
STREAM NAME:	Smith Branch	STAGE (FT):		4.9	0.3	0.4	0.5	
LOCATION:	Off Mountain Drive							
NEAREST ADDRESS:	3950 Clement Rd Columbia, SC 29203	TEMPERATURE (°F):	44	68	56	57	5	
COORDINATES:	34.037933,-81.0591	TURRIDITY (AITU).	4	007	0	22	42	
TMDL/IMPAIRMENT:	Fecal Coliform	TURBIDITY (NTU):	1	827	9	22	43	
NEIGHBORING LANDUSE:	Residential and commercial	pH:	6.0	7.2	7.0	7.0	0.2	
SPATIAL LOCATION:	Most Downstream Site	pri.	0.0	1.2	7.0	7.0	0.2	
TOTAL NO. STORMS OVER 0.1 INCH:	8	SPECIFIC CONDUCTIVITY (mS/cm):	0.019	0.155	0.124	0.115	0.029	
MAX. DAILY RAINFALL: TOTAL RAINFALL (FOR	1.7 inches	DISSOLVED OXYGEN (mg/L):	7.5	10.7	9.2	9.1	0.6	
PERIOD):		Stage & Rainf		ļ	ļ	ļ	<u> </u>	
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250 0 11/1 11/3 11/5	11/7 11/9 11/11 11/	Turbidity 1/13 11/15 11/17 11/17 1/13 11/15 11/17 11,		1/23 11/25 1	11/27 11/29	12/1 12/3	12/5	
7.4 7.0 E 6.6 6.2 5.8		pH				-W		
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0.20		Specific Cond	ductivity					
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13 11 9 8 7 5 3	ndard: Daily average not less than 5 mg/L			11/32 41/75	11/37 41/30	4 mg/L (SCDHEC L		
11/1 11/3 11/5	5 11/7 11/9 11/11 1	1/13 11/15 11/17 11	./19 11/21	11/23 11/25	11/27 11/29	12/1 12/3	12/5	

Continuous Water Quality Monitoring Periodic Report

Smith Branch B (November 1, 2018 -- December 5, 2018)

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	Sample 1		Sample 2		Sample 3		Sample 4	
	10/20/2018							
(units)	Time	Result	Time	Result	Time	Result	Time	Result
Escherichia coli (MPN/100mL)	11:23	482						
Total Suspended Solids (mg/L)								
Total Phosphorus (mg/L)								
Total Nitrogen (mg/L)								

Note: