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.



Continuous Water Quality Monitoring Periodic Report



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

		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	4.1	1.8	1.9	0.2	
LOCATION:	Earlewood Park	TEMPERATURE						
ADDRESS:	1111 Parkside Dr Columbia, SC 29201	(°F):	44	64	51	52	4	
COORDINATES:	34.027289,-81.04265	TURBIDITY (NTU):	2 781	781	8	16	30	
TMDL/IMPAIRMENT:	Fecal Coliform	, ,		701				
NEIGHBORING LANDUSE:	Residential and commercial	pH:	6.7	7.2	7.0	7.0	0.1	
SPATIAL LOCATION:	Most upstream site							
TOTAL NO. STORMS OVER 0.1 INCH:	5	SPECIFIC CONDUCTIVITY (mS/cm):	0.033	0.194	0.154	0.149	0.020	
MAX. DAILY RAINFALL:	1.0 inches	DISSOLVED		44.0	40.2	40.4	4.0	
TOTAL RAINFALL (FOR PERIOD):	2.7 inches	OXYGEN (mg/L):	3.5	11.8	10.3	10.1	1.0	
5.5		Stage & Rai	nfall				0.0	
# 4.5							- 0.5	
8 3.5 2.5 1.5							1.0	
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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:

Analyta	Sample 1		Sample 2		Sample 3		Sample 4	
Analyte (units)								
(units)	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:



Continuous Water Quality Monitoring Periodic Report



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

		CONTINUOUS		SUM			
PARAMETER	DESCRIPTION	WATER QUALITY PARAMETERS:	MINIMUM OBSERVED	MAXIMUM OBSERVED	MEDIAN OBSERVED	MEAN OBSERVED	STANDARD DEVIATION
STREAM NAME:	Smith Branch	STAGE (FT):	0.2	3.3	0.4	0.4	0.2
LOCATION:	Off Mountain Drive						,
NEAREST ADDRESS:	3950 Clement Rd Columbia, SC 29203	TEMPERATURE (°F):	42	63	50	51	4
COORDINATES:	34.037933,-81.0591	TURBIDITY (NTU):	1	301	12	18	25
TMDL/IMPAIRMENT:	Fecal Coliform	TOKBIBITT (NTO).	'	301	12	10	23
NEIGHBORING LANDUSE:	Residential and commercial	pH:	6.4	7.7	7.1	7.1	0.1
SPATIAL LOCATION:	Most Downstream Site		U				
TOTAL NO. STORMS OVER 0.1 INCH:	4	SPECIFIC CONDUCTIVITY (mS/cm):	0.033	0.183	0.145	0.139	0.019
MAX. DAILY RAINFALL:	1.0 inches	DISSOLVED OXYGEN	8.9	12.6	10.8	10.7	0.8
TOTAL RAINFALL (FOR PERIOD):	2.7 inches	(mg/L):	0.0	12.0	10.0	10.7	0.0
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		T				'	
Stage, T						+ + .	0.5 1.0
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70		Water Tem	ip				
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375 300 225 150		22 1/24 1/26 1/28 Turbidity	8 1/30 2	2/1 2/3	2/5 2/7	2/9 2/11	2/13
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375 375 375 375 375 375 375 375	4 1/16 1/18 1/20 1/ 1/16 1/18 1/20 1/	Turbidity pH 22 1/24 1/26 1/26 7	8 1/30 2 28 1/30 28 1/30	2/1 2/3	2/5 2/7	2/9 2/11	2/13
8.0 1/10 1/10 1/12 1/14 8.0 1/10 1/12 1/14 8.0 1/10 1/12 1/14 8.0 1/10 1/12 1/14 8.0 1/10 1/12 1/14 8.0 1/10 1/12 1/14 8.0 1/10 1/12 1/14 8.0 1/10 1/12 1/14 8.0 1/10 1/12 1/14 8.0 1/10 1/10 1/12 1/14 8.0 1/10	4 1/16 1/18 1/20 1/ 1/16 1/18 1/20 1/	Turbidity pH 22 1/24 1/26 1/26 7	8 1/30 2 28 1/30 28 1/30	2/1 2/3	2/5 2/7	2/9 2/11	2/13

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Sampled Data:

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Analyte								
(units)	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: