## Smith Branch Monitoring Sites

## Monitoring Data Summary for October 30<sup>th</sup>, 2020 – December 1<sup>st</sup>, 2020

#### Data Gaps

- The SMIA station experienced a period of fouling turbidity data from November 3<sup>rd</sup>-4<sup>th</sup>, November 7<sup>th</sup>-9<sup>th</sup>, November 19<sup>th</sup>-24<sup>th</sup> so those periods of data were removed from the dataset. DO data was not available for this reporting period because the sensor was out of commission due to repairs.
- The SMIB station experienced a period of fouling turbidity data from November 26<sup>th</sup>-27<sup>th</sup> and periods of specific conductivity fouling from November 27<sup>th</sup>-28<sup>th</sup> and November 28<sup>th</sup>-29<sup>th</sup>, so those periods of data were removed from the dataset. DO data was not available for this reporting period because the sensor was out of commission due to repairs. Stage data was also not available during this reporting period.

#### **SCDHEC Standards**

The SMIA and SMIB stations did not record any pH values outside the acceptable SCDHEC range of 6 to 8.5.

#### Storm Events

- The SMIA rain gauge recorded 8 storms (at least 0.1 inches) in this monitoring period resulting in 3.5 inches of precipitation. The SMIB rain gauge recorded 7 storms (at least 0.1 inches) in this monitoring period resulting in 3.1 inches of precipitation.
- The SMIA and SMIB monitoring stations recorded typical water quality responses to the storm events observed during this monitoring period.

#### Potential Illicit Discharges and Abnormal Events

• At the SMIA and SMIB stations, there was an increase in pH and specific conductivity on November 10<sup>th</sup> that may have been the result of an illicit discharge.

#### Flow Measurements

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



## **Continuous Water Quality Monitoring Periodic Report**



### Smith Branch A (October 30, 2020 - December 1, 2020)

STREAM NAME: Smith Branch STAGE (FT): 1.8 4.9 1.6 1.7 0.2  LOCATION: Entreword Plank ADDRESS: 34.02729, 91.04285  COORDINATES: 34.02729, 91.04285  TITIP Parkside DY Columbia. SC 202011  COORDINATES: 34.02729, 91.04285  TITIP Parkside DY Columbia. SC 202011  COORDINATES: 34.02729, 91.04285  TITIP Parkside DY Columbia. SC 202011  TURBIDITY (NTU): 3 371 6 15 25  TITIP STATIAL LOCATION: Most upstream site OVAL NO. 500 No.			CONTINUOUS	SUMMARY STATISTICS					
COATION:   Earlewood Park	PARAMETER	DESCRIPTION						STANDARD DEVIATION	
ADDRESS: Columbia, SC 220 Dr. Columbia, SC 220 Dr. Columbia, SC 220 Br.	STREAM NAME:	Smith Branch	STAGE (FT):	1.6	4.9	1.6	1.7	0.2	
ADORESS: Columbia, SC 22201 COORDINATES: 3.4 027288, \$1,042265 TMDUIMPARMENT: Fecol Coliform MEIGHBORING Residential and commercial PH: 6.2 7.0 6.7 6.7 0.1  SPECIFIC CONDUCTIVITY 0.033 0.18 0.148 0.138 0.026  MAX. DAILY RAINFALL: 0.9 inches TOTAL NO. STORNS OVER 0.1 inches TOTAL RAINFALL: 0.9 inches TOTAL RAINFALL: 0.5 inches  DISSOLVED DXYGEN (mg/L):	LOCATION:	Earlewood Park							
TINDL/IMPAIRMENT: Fecal Colliform NEIGHBORING REIGHBORING REIGHBORING READOUSE: Residential and commercial SPATIAL LOCATION: Most upstream site TOTAL NO. STORMS OVER 0.1 INCH: 8  MAX. DAILY RAINFALL: 0.9 inches TOTAL RAINFALL (INS/IND): 0.9 inches TOTAL RAINFALL (INS/IN	ADDRESS:		TEMPERATURE (°F):	51	73	61	61	5	
TINDLIMPAIRMENT: Fecal Coliform Host upstream site Registerinal and commercial pH: 6.2 7.0 6.7 6.7 0.1 SPECIFIC CONDUCTIVITY 0.033 0.18 0.148 0.138 0.026 SPECIFIC CONDUCTIVITY 0.050ml; DISSOLVED 0.000 0.0	COORDINATES:	34.027289,-81.04265	TURBIDITY (NTU):	3	371	6	15	25	
Description	TMDL/IMPAIRMENT:	Fecal Coliform							
SPATIAL LOCATION:  Most upstream site  TOTAL NO. STORMS  8  MAX. DAILY RAINFALL:  0.9 inches  TOTAL RAINFALL:  (FOR PERIOD):  Stegs & Rainfall  DISSOLVED  OXYGEN (mg/L):  Water Temp  Water Temp  Water Temp  Specific Conditions in 11/12 11/23 11/25 11/27 11/29 12/1  Turbidity  Fig. 20  Specific Conditions in 11/2 11/23 11/25 11/27 11/29 12/1  Specific Conditions in 11/2 11/23 11/25 11/27 11/29 12/1  Specific Conditions in 11/2 11/2 11/25 11/27 11/29 12/1  Specific Conditions in 11/2 11/2 11/25 11/27 11/29 11/21 11/25 11/27 11/29 12/1  Specific Conditions in 11/2 11/2 11/25 11/27 11/29 11/21 11/25 11/27 11/29 11/21  Specific Conditions in 11/2 11/25 11/27 11/29 11/21 11/25 11/27 11/29 11/21  Specific Conditions in 11/2 11/25 11/27 11/29 11/21 11/25 11/27 11/29 11/21  Specific Conditions in 11/2 11/25 11/27 11/29 11/21 11/25 11/27 11/29 11/21  Specific Conditions in 11/2 11/25 11/27 11/29 11/21 11/25 11/27 11/29 11/21  Specific Conditions in 11/2 11/25 11/27 11/29 11/21 11/25 11/27 11/29 11/21  Specific Conditions in 11/2 11/25 11/27 11/29 11/21 11/25 11/27 11/29 11/21  Specific Conditions in 11/2 11/25 11/27 11/29 11/21 11/25 11/27 11/29 11/21 11/25 11/27 11/29 11/21  Specific Conditions in 11/2 11/25 11/27 11/29 11/21 11/25 11/27 11/29 11/21 11/25 11/27 11/29 11/21 11/25 11/27 11/29 11/21 11/25 11/27 11/29 11/21 11/25 11/27 11/29 11/21 11/25 11/27 11/29 11/21 11/25 11/27 11/29 11/21 11/25 11/25 11/27 11/29 11/21 11/25 11/25 11/27 11/29 11/21 11/25 11/25 11/27 11/29 11/21 11/25	NEIGHBORING LANDUSE:	Residential and commercial	pH:	62	7.0	6.7	6.7	0.1	
Old	SPATIAL LOCATION:	Most upstream site		0.2	7.0	0.7	0.1	0.1	
TOTAL RAINFALL  3.5 inches    DISSOLVED   NYGEN (mg/L);	TOTAL NO. STORMS OVER 0.1 INCH:	8	CONDUCTIVITY	0.033	0.18	0.148	0.138	0.026	
TOTAL RAINFALL (FOR PERIOD):  3.5 inches  OXYGEN (mg/L):  Stage & Rainfall  OXYGEN (mg/L):  Water Temp  Water Temp  Turbidity  Turbidity  Fig. 200  10/30 11/1 11/3 11/5 11/7 11/9 11/11 11/3 11/15 11/17 11/9 11/11 11/13 11/15 11/17 11/19 11/21 11/23 11/25 11/27 11/29 12/1  Specific Conductivity  Specific Conductivity  Dissolved Oxygen  4 mg/L ISCDHC (tow Standard)	MAX. DAILY RAINFALL:	0.9 inches	DISSOLVED						
Stage & Rainfall  0.0 0.4 0.8 0.8 0.8 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.9	TOTAL RAINFALL	3.5 inches		-	-	-	-	-	
Water Temp    2	(FORT EMOS).		Stage & Paint	fall	<u>,                                      </u>		<u>,                                      </u>		
0 10/30 11/1 11/3 11/5 11/7 11/9 11/11 11/13 11/15 11/17 11/19 11/21 11/23 11/25 11/27 11/29 12/1  Water Temp  Turbidity  PH  PH  Specific Conductivity  Specific Conductivity  0 0 data not available because sensor was removed for repairs.  Dissolved Oxygen  4 mg/L (SCDHeC Low Standard)			Stage & Railli	ian			7 17		
0 10/30 11/1 11/3 11/5 11/7 11/9 11/11 11/13 11/15 11/17 11/19 11/21 11/23 11/25 11/27 11/29 12/1  Water Temp  Turbidity  PH  PH  Specific Conductivity  Specific Conductivity  0 0 data not available because sensor was removed for repairs.  Dissolved Oxygen  4 mg/L (SCDHeC Low Standard)	Stage,			_			_ A M		
Water Temp  Turbidity  Turbidity  Ph  Specific Conductivity  Specific Conductivity  Specific Conductivity  Dissolved Oxygen  4 mg/L (SCDHC Low Standard)	0	3 11/5 11/7 11/9	11/11 11/13 11/15	11/17 11/19	11/21 11/2	3 11/25 11	1/27 11/29	1.2	
Turbidity    2 200							· · · · · · · · · · · · · · · · · · ·		
Turbidity  10/30 11/1 11/3 11/5 11/7 11/9 11/11 11/13 11/15 11/17 11/19 11/11 11/13 11/15 11/17	75		Water Tem	ıp					
Turbidity  10/30 11/1 11/3 11/5 11/7 11/9 11/11 11/13 11/15 11/17 11/19 11/11 11/13 11/15 11/17	70 65	~							
10/30 11/1 11/3 11/5 11/7 11/9 11/11 11/13 11/15 11/17 11/19 11/21 11/23 11/25 11/27 11/29 12/1  Turbidity  PH  Total interpretation of the ph in	55	,~~			~~~				
PH    PH   PH   PH   PH   PH   PH   PH		3 11/5 11/7 11/9	11/11 11/13 11/15	11/17 11/19	11/21 11/2	23 11/25 1	1/27 11/29	12/1	
PH    PH   PH   PH   PH   PH   PH   PH									
PH    PH   PH   PH   PH   PH   PH   PH				y		•			
0 10/30 11/1 11/3 11/5 11/7 11/9 11/11 11/13 11/15 11/17 11/19 11/21 11/23 11/25 11/27 11/29 12/1  PH  OLD  OLD  OLD  OLD  OLD  OLD  OLD  OL	F 200							•	
PH  7.70 6.66 6.67 6.70 10/30 11/1 11/3 11/5 11/7 11/9 11/11 11/13 11/15 11/17 11/19 11/21 11/23 11/25 11/27 11/29 12/1  Specific Conductivity  0.15 0.10 0.00 10/30 11/1 11/3 11/5 11/7 11/9 11/11 11/13 11/15 11/17 11/19 11/21 11/23 11/25 11/27 11/29 12/1  Dissolved Oxygen	0	1/3 11/5 11/7 11/9	11/11 11/13 11/15	11/17 11/19	11/21 11	/23 11/25			
7.0 6.6 6.6 6.7 6.7 6.7 6.7 6.7 6.7 6.7 6.7	10/30 11/1 1.	11/5	11,11 11,13 11,13	11/1/	7 11/21 11	723 11/23	11/2/ 11/25	12/1	
Specific Conductivity    10/30   11/1   11/3   11/5   11/7   11/9   11/11   11/13   11/15   11/17   11/19   11/21   11/23   11/25   11/27   11/29   12/1	72		рН						
Specific Conductivity    10/30   11/1   11/3   11/5   11/7   11/9   11/11   11/13   11/15   11/17   11/19   11/21   11/23   11/25   11/27   11/29   12/1	7.0 7.0 8.8	warmen w			~~~				
Specific Conductivity    11/3	6.4 6.2							1/	
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0.20 0.10 0.00 10/30 11/1 11/3 11/5 11/7 11/9 11/11 11/13 11/15 11/17 11/19 11/21 11/23 11/25 11/27 11/29 12/1									
0.10 0.05 0.00 10/30 11/1 11/3 11/5 11/7 11/9 11/11 11/13 11/15 11/17 11/19 11/21 11/23 11/25 11/27 11/29 12/1    DO data not available because sensor was removed for repairs.   Dissolved Oxygen	0.20		Specific Cond	ductivity					
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10/30 11/1 11/3 11/5 11/7 11/9 11/11 11/13 11/15 11/17 11/19 11/13 11/15 11/17 11/19 11/21 11/23 11/25 11/27 11/29 12/1    DO data not available because sensor was removed for repairs.   Dissolved Oxygen							<b>Y</b>	<b>*</b>	
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12 18 6 4 2	DO data not available l	because sensor was removed for repairs.	Dissolve	d Oxygen			4 mg/L (SCDHEC	Low Standard)	
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# Continuous Water Quality Monitoring Periodic Report

Smith Branch A (October 30, 2020 - December 1, 2020)

## **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:

	Sample 1		Sample 2		Sample 3		Sample 4	
Analyte (units)	11/12/2020		11/12/2020		11/12/2020		11/20/2020	
	Time	Results	Time	Results	Time	Results	Time	Results
Escherichia coli (MPN/100mL)	10:32	3,214	11:49	34,660	13:24	24,070	7:40	482
Total Suspended Solids (mg/L)	10:32	50	11:49	299	13:24	50.6	7:40	0
Total Phosphorus (mg/L)	10:32	0.500	11:49	0.46	13:24	0.17		
Total Nitrogen (mg/L)	10:32	0.09	11:49	2.14	13:24	2.07		

Notes: Samples 1-3 were taken during wet weather conditions. Sample 4 was taken during dry weather conditions.



## **Continuous Water Quality Monitoring Periodic Report**



### Smith Branch B (October 30, 2020 - December 1, 2020)

	CONTINUOUS				SUMMARY STATISTICS							
PARAMETER	DESCRIPTION		WATER QUALITY PARAMETERS:		MINIMUM OBSERVED	MAXIMUM OBSERVED	MEDIAN OBSERVED	MEAN OBSERVED	STANDARD DEVIATION			
STREAM NAME:	Smith Branch		STAGE (FT):		-	-	-	-	-			
LOCATION:	Off Mountain Drive											
NEAREST ADDRESS:	3950 Clement I Columbia, SC 29		TEMPERATURE (°F):		48	73	59	60	6			
COORDINATES:	34.037933,-81.0					400	_	40	00			
TMDL/IMPAIRMENT:	Fecal Coliforn	n	TURBIDITY (NTU):		1	406	5	10	20			
NEIGHBORING LANDUSE:	Residential and com	mercial	pH:		6.1	7.6	7.0	7.0	0.2			
SPATIAL LOCATION:	Most Downstream	n Site	·		0.1	7.0	7.0	7.0	0.2			
TOTAL NO. STORMS OVER 0.1 INCH:	7		SPECIFIC CONDUCTIVITY (mS/cm):		0.027	0.162	0.139	0.128	0.027			
MAX. DAILY RAINFALL: TOTAL RAINFALL (FOR	0.7 inches		DISSOLVED OXYGEN (mg/L):		-	-	-	-	-			
PERIOD):							l					
Stage data not available.  Stage & Rainfall  0.0												
3 - 3 - 4 # 6 # 6 # 6 # 6 # 6 # 6 # 6 # 6 # 6 #			'						0.0 u			
10/30 11/1 11/3	11/5 11/7	11/9	11/11 11/13	11/15	11/17 11/19	11/21 11/2	3 11/25 11	/27 11/29	12/1			
75				Water Tem	p							
μ 65		~~		~~	<b>1</b>		N -5	~~~				
55 45						77						
10/30 11/1 11/3	11/5 11/7	11/9	11/11 11/13	11/15	11/17 11/19	9 11/21 11/2	23 11/25 1	1/27 11/29	12/1			
500				Turbidity								
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<b>2</b> 200 100 0			المال					السميا	i			
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7.5 7.0 6.5 6.0 10/30 11/1 11/3	11/5 11/7	11/9	11/11 11/13	11/15		9 11/21 11/	723 11/25	11/27 11/29	12/1			
7.5 7.0 6.5 6.0 10/30 11/1 11/3	11/5 11/7	11/9	11/11 11/13	11/15		9 11/21 11/	723 11/25	11/27 11/29	12/1			
7.5 7.0 6.5 6.0 10/30 11/1 11/3		11/9	11/11 11/13	11/15 Specific Cond			/23 11/25	11/27 11/29	12/1			
7.5 7.0 6.5 10/30 11/1 11/3		11/9		11/15 Specific Cond	11/17 11/		1/23 11/25		12/1			
7.5 7.0 6.0 10/30 11/1 11/3 0.20 0.15 0.00 0.05 0.00 10/30 11/1 11/	(3 11/5 11/7	11/9		11/15  Specific Cond  11/15	11/17 11/		1/23 11/25	11/27 11/29	12/1			
7.5 7.0 6.5 6.0 10/30 11/1 11/3 0.20 0.15 0.00 0.00 0.00 0.00 10/30 11/1 11/1	(3 11/5 11/7	11/9		11/15  Specific Cond  11/15	11/17 11/		1/23 11/25	11/27 11/29	12/1			

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

# Continuous Water Quality Monitoring Periodic Report

Smith Branch B (October 30, 2020 - December 1, 2020)

## **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:

	Sample 1		Sample 2		Sample 3		Sample 4	
Analyte (units)	11/12/2020		11/12/2020		11/12/2020			
	Time	Results	Time	Results	Time	Results	Time	Results
Escherichia coli (MPN/100mL)	10:14	1,476	11:36	24,070	13:11	34,660		
Total Suspended Solids (mg/L)	10:14	6	11:36	655	13:11	138		
Total Phosphorus (mg/L)	10:14	0.088	11:36	0.91	13:11	0.33		
Total Nitrogen (mg/L)	10:14	0.64	11:36	4.34	13:11	0.64		

Notes: All samples were taken during wet weather conditions.