Rocky Branch Monitoring Sites

Monitoring Data Summary for March 26th, 2020 – April 29th, 2020

Data Gaps

- At the ROCA station, a brief period of turbidity data from April 8th-12th was removed from the dataset due to the sensor being buried, causing the turbidity values to be obscured.
- At the ROCB station, a brief period of turbidity data at the end of the deployment period was removed from the dataset due to the sensor being buried, causing the turbidity values to be obscured.

SCDHEC Standards

- During this monitoring period, the ROCA station recorded a maximum pH value of 8.9 which is outside of the SCDHEC acceptable range of 6 to 8.5. These high pH values were observed during dry weather conditions while specific conductivity was also high at the same time. This could be a result of the Maxcy Gregg pool discharge or an illicit discharge.
- The ROCB station did not record any pH values outside of the SCDHEC acceptable range.
- The ROCA and ROCB stations recorded average DO concentrations of 8.1 mg/L and 8.6 mg/L, respectively, which are well above the SCDHEC daily average minimum standard of 5 mg/L.
- The minimum DO concentration recorded was 3.7 mg/L at ROCA station and 7.0 mg/L at the ROCB station. The ROCA station was slightly below the SCDHEC discrete minimum standard of 4 mg/L while the ROCB station was above this value.

Storm Events

- The ROCA station recorded 6 storm events during this monitoring period, resulting in 2.9 inches of total precipitation. The ROCB station also recorded 7 storm events during this monitoring period, resulting in 2.8 inches of total precipitation.
- Both ROCA and ROCB stations exhibited typical responses to storm events during this monitoring period.
- The maximum antecedent dry time since the last significant precipitation event (at least 0.1 inches) was approximately 12 days in the Rocky Branch watershed occurring prior to the April 12th storm event.

Potential Illicit Discharges and Abnormal Events

- At the ROCA station, several increased levels of specific conductivity were recorded simultaneously with increased levels of pH. These occurrences were observed on April 12th, 16th, 19th, 22nd, and 26th. These elevated levels of specific conductivity and pH were likely a result of the Maxcy Gregg pool discharge.
- At the ROCB station, specific conductivity levels were significantly elevated on April 16th-17th and April 19th-20th.

Flow Measurements

• No flow measurements were taken at the ROCA or ROCB stations during this monitoring period.



Continuous Water Quality Monitoring Periodic Report



Rocky Branch A (March 26, 2020 - April 29, 2020)

		CONTINUOUS	SUMMARY STATISTICS					
PARAMETER	DESCRIPTION	WATER QUALITY PARAMETERS:	MINIMUM OBSERVED	MAXIMUM OBSERVED	MEDIAN OBSERVED	MEAN OBSERVED	STANDARD DEVIATION	
STREAM NAME:	Rocky Branch	STAGE (FT):	1.3	6.0	1.4	1.4	0.2	
LOCATION:	Maxcy Gregg Park	TEMPERATURE						
ADDRESS:	1650 Park Circle Columbia, SC 29201	(°F):	61 72	66	66	2		
COORDINATES:	33.995864, -81.021842	TURBIDITY (NTU):	2	145	5	8	11	
TMDL/IMPAIRMENT:	Fecal Coliform	TORESION (INTO):		110	J	Ü		
NEIGHBORING LANDUSE:	Residential and commercial	pH:	6.0	8.9	6.5	6.5	0.2	
SPATIAL LOCATION:	Most upstream site							
TOTAL NO. STORMS OVER 0.1 INCH:	6	SPECIFIC CONDUCTIVITY (mS/cm):	0.021	2.07	0.156	0.165	0.149	
MAX. DAILY RAINFALL:	0.8 inches	DISSOLVED	2.7	0.4	0.4	0.4	0.5	
TOTAL RAINFALL (FOR PERIOD):	2.9 inches	OXYGEN (mg/L):	3.7	9.1	8.1	8.1	0.5	
9		Stage & Rai	nfall				0.0	
## 7 7		1					0.5 1.0 1.5	
Stage 3							1.0 1.5 2.0	
3/26 3/28 3/30	4/1 4/3 4/5 4/	/7 4/9 4/11 4/1	3 4/15 4/	/17 4/19	4/21 4/23	4/25 4/27	4/29	
		Water Te						
90		water re	mp					
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# ⁷⁰ 60	www.	Water re	mp	~~~	~~~			
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70 60 50	4/1 4/3 4/5 4	ww	~~~		4/21 4/23	4/25 4/27	4/29	
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70 60 50 3/26 3/28 3/30 150 0 3/26 3/28 3/30	\$. \$ 2 \$	/7 4/9 4/11 4/:	ty	/17 4/19		4		
70 60 50 3/26 3/28 3/30 150 0 3/26 3/28 3/30	\$. \$ 2 \$	Turbidi	ty	4/17 4/19		4		
70 60 50 3/26 3/28 3/30 150 0 3/26 3/28 3/30	\$. \$ 2 \$	Turbidi 4/7 4/9 4/11 4/2	ty //13 4/15	4/17 4/19		4		
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70 60 50 3/26 3/28 3/30 150 0 3/26 3/28 3/30 150 0 3/26 3/28 3/30	0 4/1 4/3 4/5	Turbidi 4/7 4/9 4/11 4 pH 4/7 4/9 4/11 4	13 4/15 4, //13 4/15	4/17 4/19	4/21 4/23	4/25 4/27	4/29	
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70 60 50 3/26 3/28 3/30 150 0 3/26 3/28 3/30 150 0 3/26 3/28 3/30 150 0 3/26 3/28 3/30	0 4/1 4/3 4/5 4/1 4/3 4/5 4 on 9/19/2018 are not shown in this plot for	Turbidi 4/7 4/9 4/11 4/2 pH pr scaling purposes. Specific Col	13 4/15 4, //13 4/15	4/17 4/19	4/21 4/23	4/25 4/27	4/29	
70 60 50 3/26 3/28 3/30 150 50 0 3/26 3/28 3/30 The maximum SC values of 2.0 6.5 6.0 3/26 3/28 3/30	0 4/1 4/3 4/5 4/1 4/3 4/5 4 on 9/19/2018 are not shown in this plot for	Turbidi 4/7 4/9 4/11 4/ pH pr scaling purposes. Specific Cor	13 4/15 4, ty /13 4/15 aductivity	/17 4/19 4/17 4/19	4/21 4/23 4/21 4/23	4/25 4/27	4/29	
150 3/26 3/28 3/30 150 100 50 0 3/26 3/28 3/30 150 100 3/26 3/28 3/30 150 100 3/26 3/28 3/30 150 150 100 100 100 100 100 10	0 4/1 4/3 4/5 4/1 4/3 4/5 on 9/19/2018 are not shown in this plot for	Turbidi 4/7 4/9 4/11 4/ pH pr scaling purposes. Specific Cor	13 4/15 4, ty /13 4/15 nductivity /13 4/15	/17 4/19 4/17 4/19	4/21 4/23 4/21 4/23	4/25 4/27 4/25 4/27	4/29	
9.0 3/26 3/28 3/30 150 100 3/26 3/28 3/30 150 100 3/26 3/28 3/30 150 100 3/26 3/28 3/30 100 3/26 3/28 3/30	0 4/1 4/3 4/5 4/1 4/3 4/5 on 9/19/2018 are not shown in this plot for	Turbidi 4/7 4/9 4/11 4/ pH pr scaling purposes. Specific Cor	13 4/15 4, ty /13 4/15 nductivity /13 4/15	/17 4/19 4/17 4/19	4/21 4/23 4/21 4/23	4/25 4/27 4/25 4/27	4/29	

Continuous Water Quality Monitoring Periodic Report

Rocky Branch A (March 26, 2020 - April 29, 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.

Grab Sample Data:

Analyto	Sample 1		Sample 2		Sample 3		Sample 4	
Analyte (units)	4/6/2020		4/13/2020					
(units)	Time	Result	Time	Result	Time	Result	Time	Result
Escherichia coli (MPN/100mL)	11:48	432	9:37	6,510				
Total Suspended Solids (mg/L)			9:37	6.6				
Total Phosphorus (mg/L)			9:37	0.11				
Total Nitrogen (mg/L)			9:37	1.16				

Note:

Sample 1 was collected during dry weather conditions. Sample 2 was collected during wet weather conditions.



Continuous Water Quality Monitoring Periodic Report



Rocky Branch B (March 26, 2020 - April 29, 2020)

		CONTINUOUS		SUMMARY STATISTICS			
PARAMETER	DESCRIPTION	WATER QUALITY PARAMETERS:	MINIMUM OBSERVED	MAXIMUM OBSERVED	MEDIAN OBSERVED	MEAN OBSERVED	STANDARD DEVIATION
STREAM NAME:	Rocky Branch	STAGE (FT):	3.4	7.7	3.5	3.5	0.2
LOCATION:	Olympia Ave Crossing						
ADDRESS:	510 Heyward St Columbia, SC 29201	TEMPERATURE (°F):	58	74	66	66	3
COORDINATES:	33.982578, -81.035036	TURBIDITY (NTU):	2	126	4	5	7
TMDL/IMPAIRMENT:	Fecal Coliform	TORBIDITY (NTO).	2	120	4	5	,
NEIGHBORING LANDUSE:	Residential and commercial	pH:	6.5	7.4	7.1	7.1	0.2
SPATIAL LOCATION:	Most Downstream Site	P	0.0		···		0.2
TOTAL NO. STORMS OVER 0.1 INCH:	7	SPECIFIC CONDUCTIVITY (mS/cm):	0.054	0.957	0.201	0.203	0.079
MAX. DAILY RAINFALL:	0.8 inches	DISSOLVED OXYGEN	7.0	10.6	8.6	8.6	0.7
TOTAL RAINFALL (FOR PERIOD):	2.8 inches	(mg/L):	7.0	10.6	0.0	0.0	0.7
12		Stage & Rainf	all				0.0
9 9	1						
Stage 6							0.5 1.0 1.5 1.5
3/26 3/28 3/30	4/1 4/3 4/5 4/	7 4/9 4/11 4/13	4/15 4/	17 4/19	1/21 4/23	4/25 4/27	4/29
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80		Water Tem	р				
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70 50 3/26 3/28 3/30	4/1 4/3 4/5 4	/7 4/9 4/11 4/1	3 4/15 4,	/17 4/19	4/21 4/23	4/25 4/27	4/29
70 60 50 3/26 3/28 3/30	4/1 4/3 4/5 4	77 4/9 4/11 4/1. Turbidity	3 4/15 4,	/17 4/19	4/21 4/23	4/25 4/27	4/29
70 60 50 3/26 3/28 3/30		/7 4/9 4/11 4/1 Turbidity	3 4/15 4				
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7.5 7.0 3/26 3/28 3/30 150 100 3/26 3/28 3/30 150 3/26 3/28 3/30	0 4/1 4/3 4/5	Turbidity 4/7 4/9 4/11 4/1	3 4/15 4,				
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7.5 7.5 7.0 3/26 3/28 3/30 7.5 7.0 6.5 6.0 3/26 3/28 3/30	0 4/1 4/3 4/5	Turbidity 4/7 4/9 4/11 4/1 pH	3 4/15 4 13 4/15	4/17 4/19	4/21 4/23	4/25 4/27	4/29
7.5 7.5 7.0 3/26 3/28 3/30 150 100 3/26 3/28 3/30 150 3/26 3/28 3/30	0 4/1 4/3 4/5	Turbidity 4/7 4/9 4/11 4/1 pH	3 4/15 4 13 4/15	4/17 4/19	4/21 4/23	4/25 4/27	4/29
7.5 7.0 3/26 3/28 3/30 150 100 3/26 3/28 3/30 7.5 7.0 6.5 6.0 3/26 3/28 3/30	0 4/1 4/3 4/5	Turbidity 4/7 4/9 4/11 4/1 pH	3 4/15 4, 13 4/15 4	4/17 4/19	4/21 4/23	4/25 4/27	4/29
7.5 3/26 3/28 3/30 150 3/26 3/28 3/30 150 3/26 3/28 3/30 1.0 8.5 6.5 6.0 3/26 3/28 3/30 1.0 8.0.6 92 0.4 0.2 0.0 3/26 3/28 3/30	0 4/1 4/3 4/5	77 4/9 4/11 4/1 Turbidity 4/7 4/9 4/11 4/ pH Specific Conc 4/7 4/9 4/11 4/	3 4/15 4. 13 4/15 4/15 4/15	4/17 4/19	4/21 4/23	4/25 4/27 4/25 4/27	4/29
7.5 7.0 3/26 3/28 3/30 150 100 3/26 3/28 3/30 7.5 7.0 6.5 6.0 3/26 3/28 3/30 100 100 100 100 100 100 100 1	0 4/1 4/3 4/5 4/1 4/3 4/5 4	Turbidity 4/7 4/9 4/11 4/1 pH Specific Conc 4/7 4/9 4/11 4/1	3 4/15 4. 13 4/15 4/15 4/15	4/17 4/19	4/21 4/23 4/21 4/23	4/25 4/27	4/29
7.5 3/26 3/28 3/30 150 3/26 3/28 3/30 150 3/26 3/28 3/30 100 3/26 3/28 3/30 100 3/26 3/28 3/30 100 3/26 3/28 3/30	0 4/1 4/3 4/5 4/1 4/3 4/5 4	77 4/9 4/11 4/1 Turbidity 4/7 4/9 4/11 4/ pH Specific Conc 4/7 4/9 4/11 4/	3 4/15 4. 13 4/15 4/15 4/15	4/17 4/19	4/21 4/23 4/21 4/23	4/25 4/27 4/25 4/27	4/29

Continuous Water Quality Monitoring Periodic Report

Rocky Branch B (March 26, 2020 - April 29, 2020)

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Sampled Data:

Analyto	Sample 1		Sample 2		Sample 3		Sample 4	
Analyte (units)	4/6/2020		4/13/2020					
(units)	Time	Result	Time	Result	Time	Result	Time	Result
Escherichia coli (MPN/100mL)	12:04	646	9:53	3808				
Total Suspended Solids (mg/L)			9:53	17.7				
Total Phosphorus (mg/L)			9:53	0.15				
Total Nitrogen (mg/L)			9:53	1.46				

Note:

Sample 1 was collected during dry weather conditions. Sample 2 was collected during wet weather conditions.