

# Rocky Branch Monitoring Sites

## Monitoring Data Summary for December 12<sup>th</sup>, 2019 – January 16<sup>th</sup>, 2020

### *Data Gaps*

- At the ROCA station, DO and turbidity data was deleted from December 23<sup>rd</sup>-30<sup>th</sup> due to the sensors becoming buried in sediment
- No interruptions were observed in the water quality data at the ROCB station during this monitoring period.
- The website experienced reporting issues with the CS451 pressure transducers at the ROCB station for a brief period on January 30<sup>th</sup>-31<sup>st</sup>, therefore no CS451 stage data was recorded during that time.

### *SCDHEC Standards*

- During this monitoring period, the ROCA and ROCB stations recorded minimum pH values of 5.7 and 5.6, respectively, which are slightly below the acceptable SCDHEC range of 6 to 8.5.
- The ROCA and ROCB stations recorded average DO concentrations of 9.1 mg/L and 9.7 mg/L, respectively, which are above the SCDHEC daily average minimum standard of 5 mg/L.
- The minimum DO concentration recorded was 7.6 mg/L at ROCA station which is above the SCDHEC discrete minimum standard of 4 mg/L. The ROCB station recorded a minimum DO concentration of 2 mg/L which is below the SCDHEC discrete minimum standard of 4 mg/L. The low DO values at ROCB occurred during a large storm event on December 12<sup>th</sup>-13<sup>th</sup>.

### *Storm Events*

- The ROCA station recorded 9 storm events during this monitoring period, resulting in 12.4 inches of total precipitation. The ROCB station also recorded 8 storm events during this monitoring period, resulting in 12.4 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 8.3 days in the Rocky Branch watershed occurring prior to the January 12<sup>th</sup> storm event.

### *Potential Illicit Discharges and Abnormal Events*

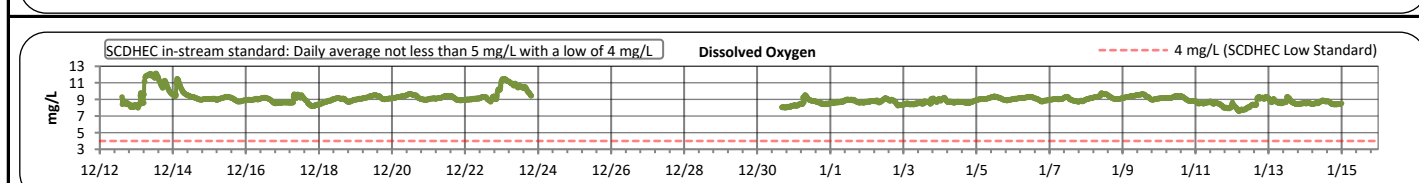
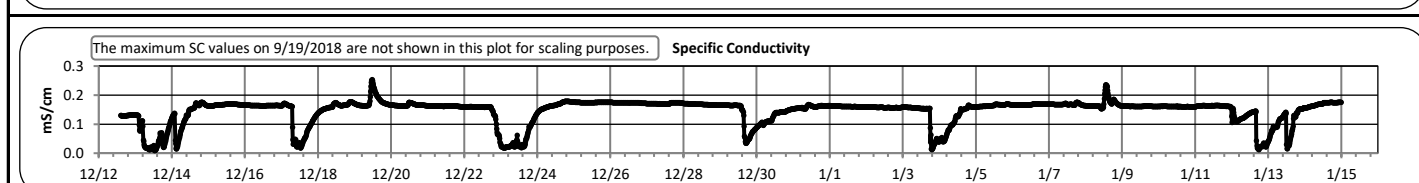
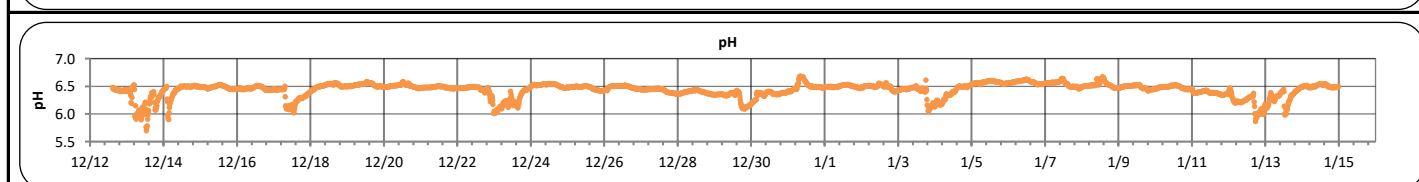
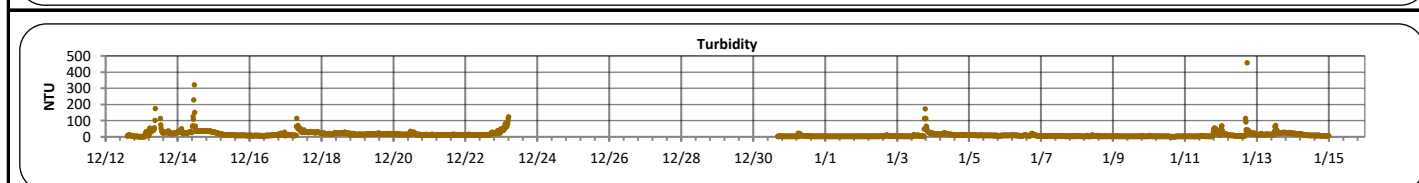
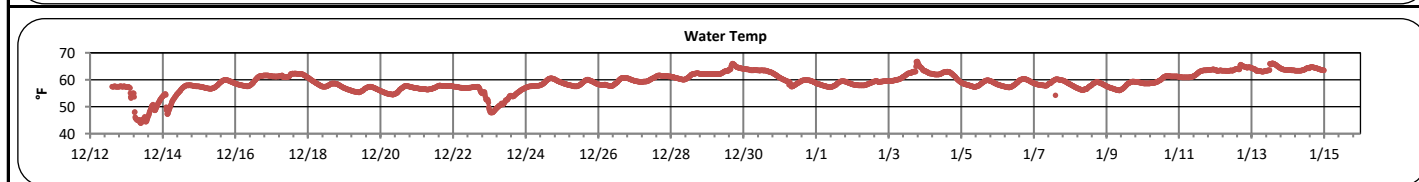
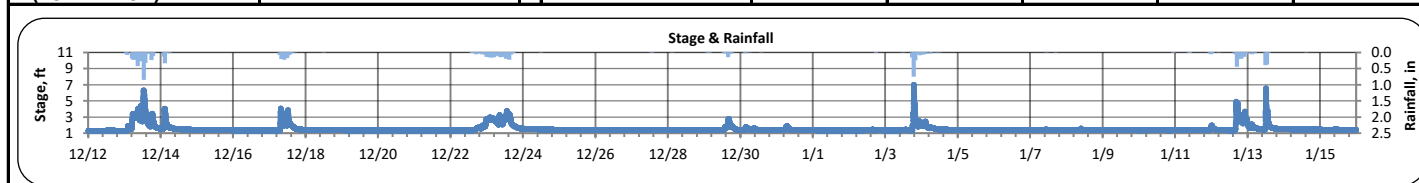
- At the ROCA station, specific conductivity levels increased significantly on December 19<sup>th</sup> and January 8<sup>th</sup>. These were likely a result of Maxcy Gregg pool flushing.
- Several periods of increased specific conductivity levels were observed at the ROCB station. These observations occurred on December 16<sup>th</sup>, 19<sup>th</sup>-20<sup>th</sup>, 22<sup>nd</sup>, 24<sup>th</sup>-25<sup>th</sup>, 28<sup>th</sup>, January 1<sup>st</sup>, 7<sup>th</sup>, 7<sup>th</sup>-8<sup>th</sup>, 8<sup>th</sup>-9<sup>th</sup>, and 10<sup>th</sup>.

### *Flow Measurements*

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

**Rocky Branch A (December 12, 2019 - January 16, 2020)**

PARAMETER	DESCRIPTION	CONTINUOUS WATER QUALITY PARAMETERS:	SUMMARY STATISTICS				
			MINIMUM OBSERVED	MAXIMUM OBSERVED	MEDIAN OBSERVED	MEAN OBSERVED	STANDARD DEVIATION
STREAM NAME:	Rocky Branch	STAGE (FT):	1.3	7.0	1.4	1.5	0.5
LOCATION:	Maxcy Gregg Park	TEMPERATURE (°F):	44	67	59	59	3
ADDRESS:	1650 Park Circle Columbia, SC 29201	TURBIDITY (NTU):	2	459	10	14	18
COORDINATES:	33.995864, -81.021842	pH:	5.7	6.7	6.5	6.4	0.1
TMDL/IMPAIRMENT:	Fecal Coliform	SPECIFIC CONDUCTIVITY (mS/cm):	0.009	0.25	0.162	0.147	0.042
NEIGHBORING LANDUSE:	Residential and commercial	DISSOLVED OXYGEN (mg/L):	7.6	12.2	9.0	9.1	0.7
SPATIAL LOCATION:	Most upstream site						
TOTAL NO. STORMS OVER 0.1 INCH:	9						
MAX. DAILY RAINFALL:	3.6 inches						
TOTAL RAINFALL (FOR PERIOD):	12.4 inches						



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**

**Rocky Branch A (December 12, 2019 - January 16, 2020)**

**Explanation of Statistics:**

<b>MINIMUM OBSERVED</b>	The minimum of the values recorded by the datasonde in 15 minute intervals.
<b>MAXIMUM OBSERVED</b>	The maximum of the values recorded by the datasonde in 15 minute intervals.
<b>MEDIAN OBSERVED</b>	The median of all the values recorded by the datasonde in 15 minute intervals.
<b>MEAN OBSERVED</b>	The average of all the values recorded by the datasonde in 15 minute intervals.
<b>STANDARD DEVIATION</b>	The standard deviation of all the values recorded by the datasonde in 15 minute intervals.

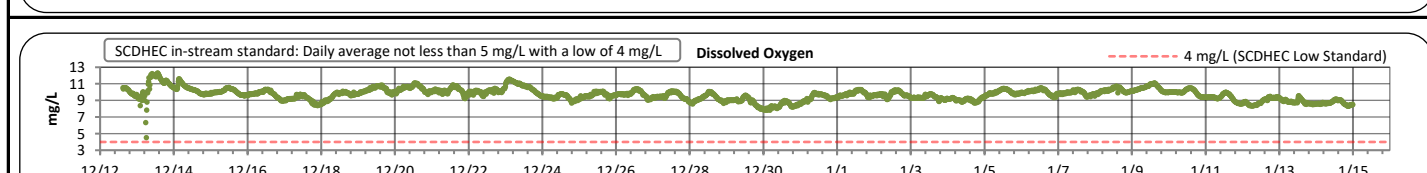
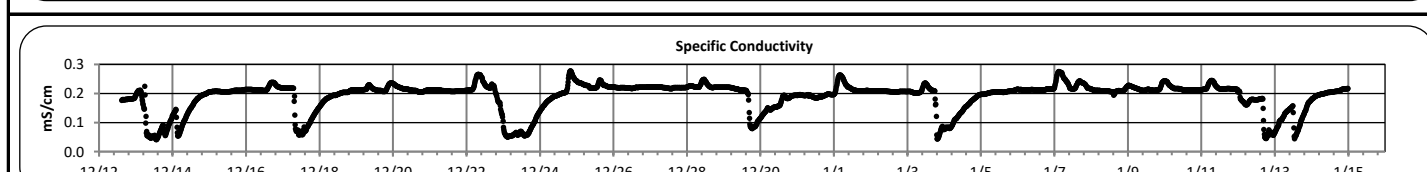
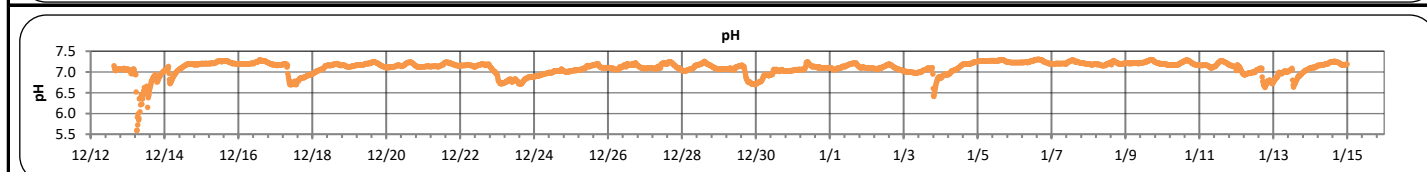
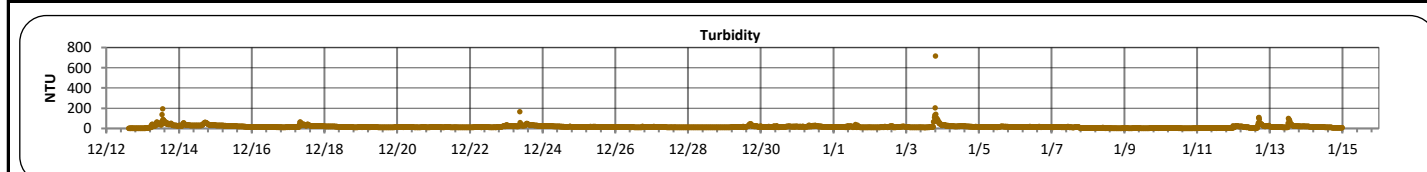
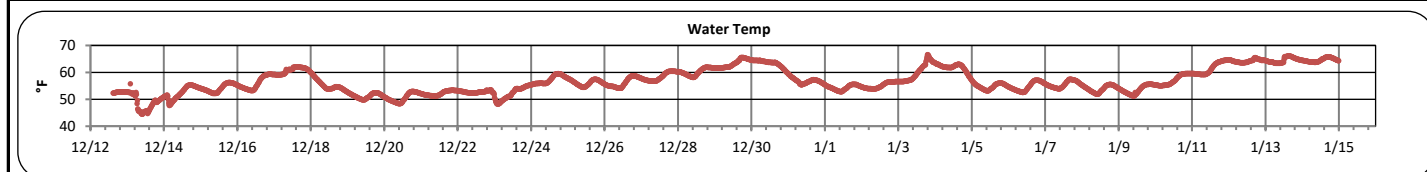
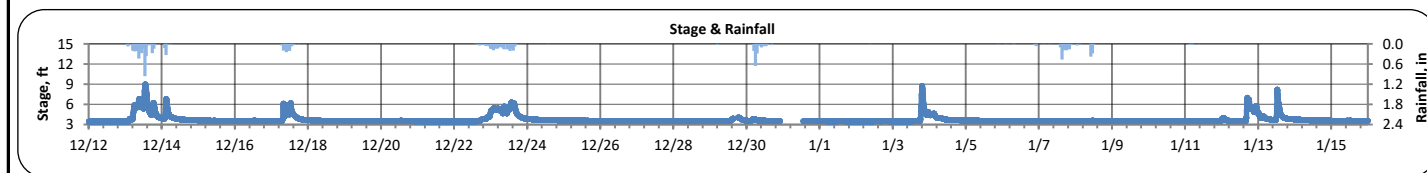
**Grab Sample Data:**

Analyte (units)	Sample 1		Sample 2		Sample 3		Sample 4	
	1/9/2020		1/13/2020		1/13/2020			
	Time	Result	Time	Result	Time	Result	Time	Result
<i>Escherichia coli</i> (MPN/100mL)	14:02	170	12:28	17,330	15:26	3684		
Total Suspended Solids (mg/L)			12:28	87.7	15:26	9.1		
Total Phosphorus (mg/L)			12:28	1.33	15:26	1.16		
Total Nitrogen (mg/L)			12:28	0.16	15:26	0.082		

Note: Sample 1 was collected during dry weather conditions. Samples 2 and 3 were collected during wet weather conditions.

**Rocky Branch B (December 12, 2019 - January 16, 2020)**

PARAMETER	DESCRIPTION	CONTINUOUS WATER QUALITY PARAMETERS:	SUMMARY STATISTICS				
			MINIMUM OBSERVED	MAXIMUM OBSERVED	MEDIAN OBSERVED	MEAN OBSERVED	STANDARD DEVIATION
STREAM NAME:	Rocky Branch	STAGE (FT):	3.5	9.0	3.6	3.7	0.6
LOCATION:	Olympia Ave Crossing	TEMPERATURE (°F):	44	67	56	57	5
ADDRESS:	510 Heyward St Columbia, SC 29201	TURBIDITY (NTU):	2	717	15	18	18
COORDINATES:	33.982578, -81.035036	pH:	5.6	7.3	7.1	7.1	0.2
TMDL/IMPAIRMENT:	Fecal Coliform	SPECIFIC CONDUCTIVITY (mS/cm):	0.041	0.278	0.210	0.191	0.049
NEIGHBORING LANDUSE:	Residential and commercial	DISSOLVED OXYGEN (mg/L):	2.0	12.3	9.8	9.7	0.7
SPATIAL LOCATION:	Most Downstream Site						
TOTAL NO. STORMS OVER 0.1 INCH:	8						
MAX. DAILY RAINFALL:	3.8 inches						
TOTAL RAINFALL (FOR PERIOD):	12.4 inches						



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**

**Rocky Branch B (December 12, 2019 - January 16, 2020)**

**Explanation of Statistics:**

<b>MINIMUM OBSERVED</b>	The minimum of the values recorded by the datasonde in 15 minute intervals.
<b>MAXIMUM OBSERVED</b>	The maximum of the values recorded by the datasonde in 15 minute intervals.
<b>MEDIAN OBSERVED</b>	The median of all the values recorded by the datasonde in 15 minute intervals.
<b>MEAN OBSERVED</b>	The average of all the values recorded by the datasonde in 15 minute intervals.
<b>STANDARD DEVIATION</b>	The standard deviation of all the values recorded by the datasonde in 15 minute intervals.

**Sampled Data:**

Analyte (units)	Sample 1		Sample 2		Sample 3		Sample 4	
	1/9/2020		1/13/2020		1/13/2020			
	Time	Result	Time	Result	Time	Result	Time	Result
<i>Escherichia coli</i> (MPN/100mL)	14:15	126	12:49	10340	15:42	6510		
Total Suspended Solids (mg/L)			12:49	130	15:42	13.6		
Total Phosphorus (mg/L)			12:49	6.25	15:42	0.99		
Total Nitrogen (mg/L)			12:49	0.16	15:42	0.11		

Note: Sample 1 was collected during dry weather conditions. Samples 2 and 3 were collected during wet weather conditions.