

Rocky Branch Monitoring Sites

Monitoring Data Summary for November 7th, 2019 – December 11th, 2019

Data Gaps

- Heavy sediment accumulation at the ROCA station covered the turbidity sensor from November 17th-18th, November 28th-30th, and December 7th to the end of the deployment period. This resulted in inaccurate turbidity (NTU) readings. These periods of turbidity data were removed from the dataset.
- 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 ROCA and ROCB from November 16th-17th, therefore no CS451 stage data was recorded during that time.

SCDHEC Standards

- Both the ROCA and ROCB stations recorded pH values that were within the acceptable SCDHEC range of 6 to 8.5 during this monitoring period.
- The ROCA and ROCB stations recorded average DO concentrations of 7.8 mg/L and 9.4 mg/L, respectively, which are both above the SCDHEC daily average minimum standard of 5 mg/L.
- The minimum DO concentration recorded during this deployment period was 6 mg/L at ROCA and 6.6 mg/L at ROCB. Neither of the Rocky Branch monitoring stations recorded DO values below the SCDHEC discrete minimum standard of 4 mg/L.

Storm Events

- The ROCA station recorded 10 storm events during this monitoring period, resulting in 3.7 inches of total precipitation. The ROCB station also recorded 9 storm events during this monitoring period, resulting in 3.5 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 9.3 days at the ROCA station and approximately 9.4 days at the ROCB station, both occurring prior to December 10th.

Potential Illicit Discharges and Abnormal Events

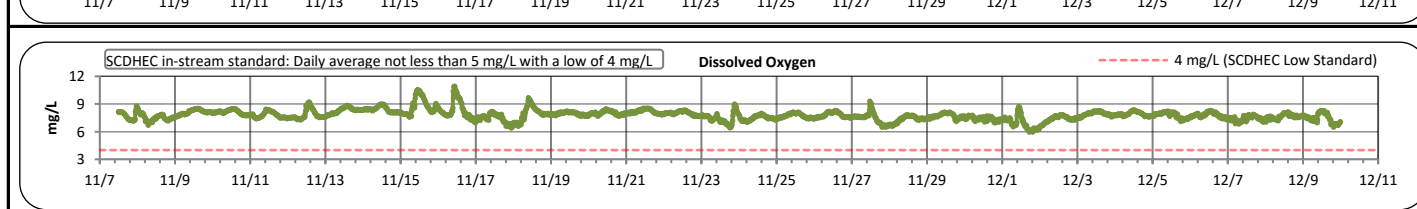
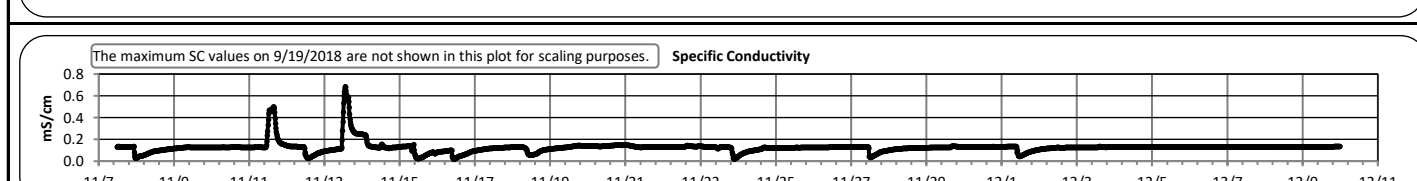
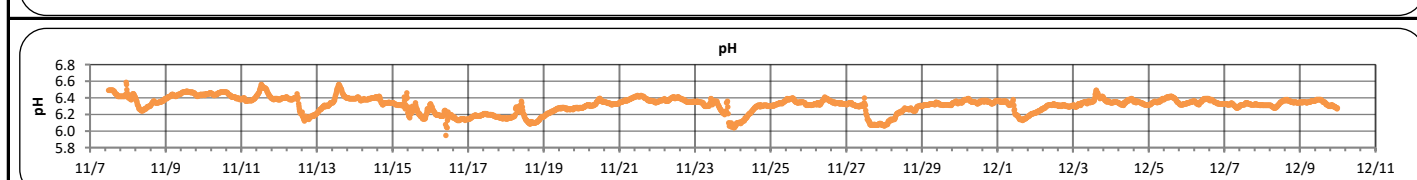
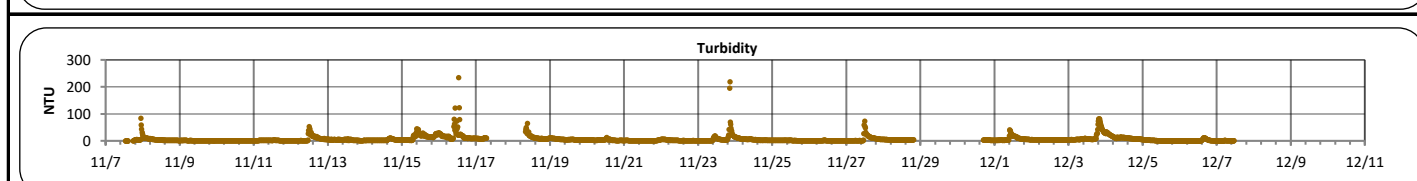
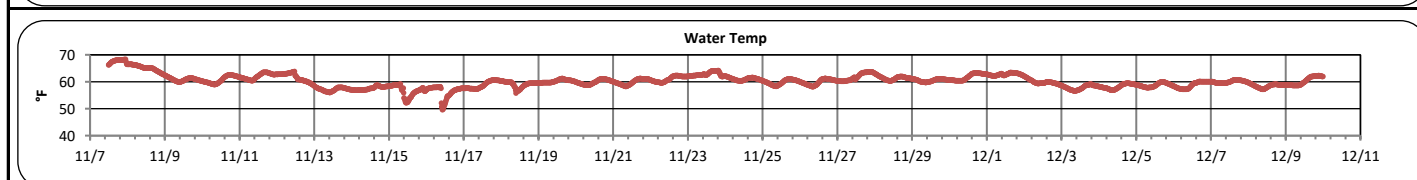
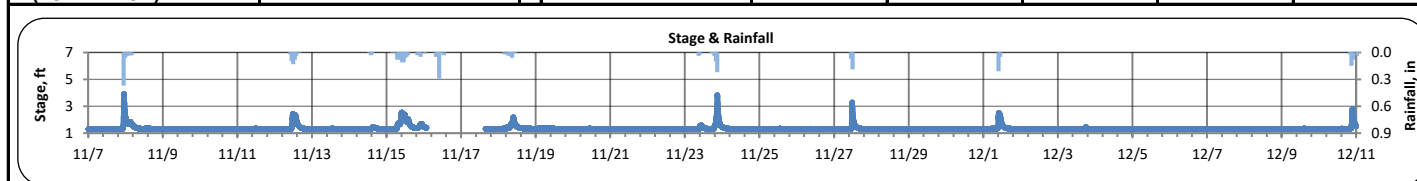
- At the ROCA station, specific conductivity levels increased significantly on November 11th-12th and November 13th-14th. These periods were likely a result of Maxcy Gregg pool flushing.
- Several periods of increased specific conductivity levels were observed at the ROCB station. These observations occurred on November 10th, 11th-12th, 13th-14th, 27th, December 4th-5th, and 8th.

Flow Measurements

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

Rocky Branch A (November 7, 2019 - December 11, 2019)

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	3.9	1.3	1.4	0.2
LOCATION:	Maxcy Gregg Park	TEMPERATURE (°F):	50	68	60	60	2
ADDRESS:	1650 Park Circle Columbia, SC 29201	TURBIDITY (NTU):	1	234	3	6	12
COORDINATES:	33.995864, -81.021842	pH:	6.0	6.6	6.3	6.3	0.1
TMDL/IMPAIRMENT:	Fecal Coliform	SPECIFIC CONDUCTIVITY (mS/cm):	0.020	0.69	0.130	0.127	0.053
NEIGHBORING LANDUSE:	Residential and commercial	DISSOLVED OXYGEN (mg/L):	6.0	10.9	7.8	7.8	0.6
SPATIAL LOCATION:	Most upstream site						
TOTAL NO. STORMS OVER 0.1 INCH:	10						
MAX. DAILY RAINFALL:	0.7 inches						
TOTAL RAINFALL (FOR PERIOD):	3.7 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 (November 7, 2019 - December 11, 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.

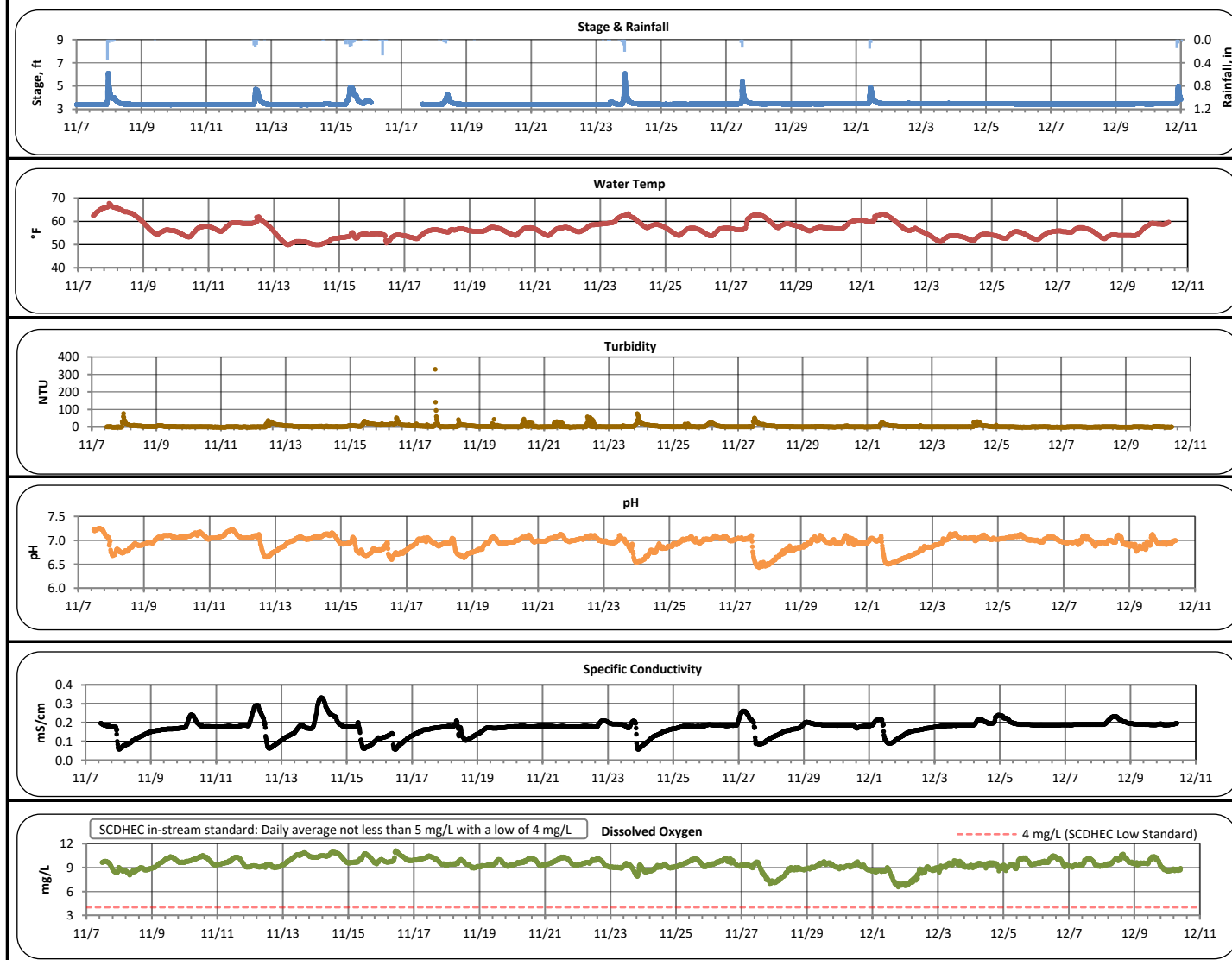
Grab Sample Data:

Analyte (units)	Sample 1		Sample 2		Sample 3		Sample 4	
	11/12/2019		11/21/2019		12/5/2019			
	Time	Result	Time	Result	Time	Result	Time	Result
<i>Escherichia coli</i> (MPN/100mL)	13:22	5510	10:32	82	9:53	104		
Total Suspended Solids (mg/L)	13:22	19.3						
Total Phosphorus (mg/L)	13:22	0.92						
Total Nitrogen (mg/L)	13:22	0.15						

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

Rocky Branch B (November 7, 2019 - December 11, 2019)

PARAMETER	DESCRIPTION	CONTINUOUS WATER QUALITY PARAMETERS:	SUMMARY STATISTICS				
			MINIMUM OBSERVED	MAXIMUM OBSERVED	MEDIAN OBSERVED	MEAN OBSERVED	STANDARD DEVIATION
STREAM NAME:	Rocky Branch	STAGE (FT):	3.4	6.1	3.5	3.5	0.2
LOCATION:	Olympia Ave Crossing	TEMPERATURE (°F):	50	68	56	57	3
ADDRESS:	510 Heyward St Columbia, SC 29201	TURBIDITY (NTU):	1	330	2	5	10
COORDINATES:	33.982578, -81.035036	pH:	6.4	7.3	7.0	6.9	0.2
TMDL/IMPAIRMENT:	Fecal Coliform	SPECIFIC CONDUCTIVITY (mS/cm):	0.058	0.332	0.181	0.173	0.040
NEIGHBORING LANDUSE:	Residential and commercial	DISSOLVED OXYGEN (mg/L):	6.6	11.2	9.4	9.4	0.7
SPATIAL LOCATION:	Most Downstream Site						
TOTAL NO. STORMS OVER 0.1 INCH:	9						
MAX. DAILY RAINFALL:	0.7 inches						
TOTAL RAINFALL (FOR PERIOD):	3.5 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 (November 7, 2019 - December 11, 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.

Sampled Data:

Analyte (units)	Sample 1		Sample 2		Sample 3		Sample 4	
	11/12/2019		11/21/2019		12/5/2019			
	Time	Result	Time	Result	Time	Result	Time	Result
<i>Escherichia coli</i> (MPN/100mL)	13:34	6,896	10:17	196	9:30	126		
Total Suspended Solids (mg/L)	13:34	24.8						
Total Phosphorus (mg/L)	13:34	1.94						
Total Nitrogen (mg/L)	13:34	0.18						

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