

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

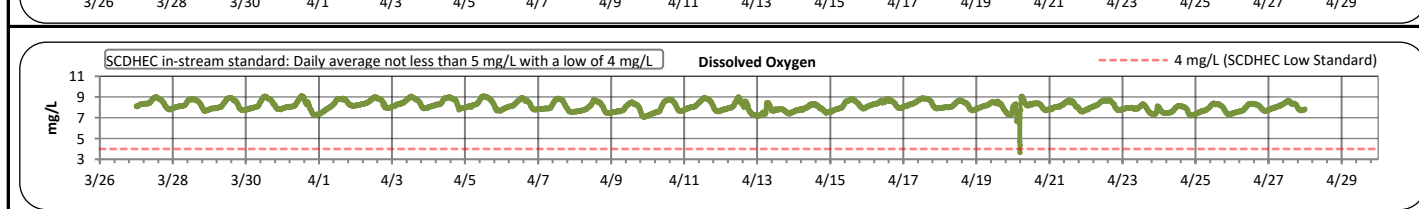
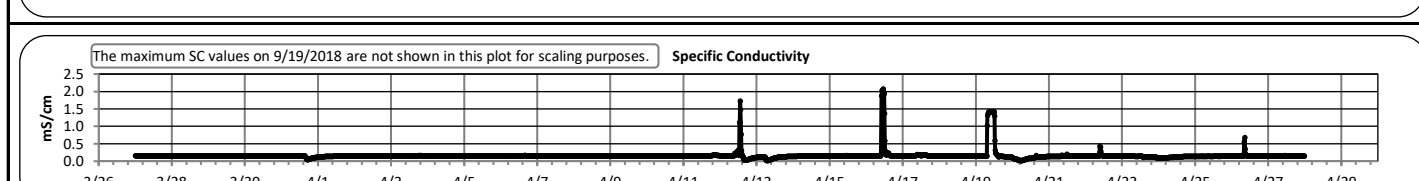
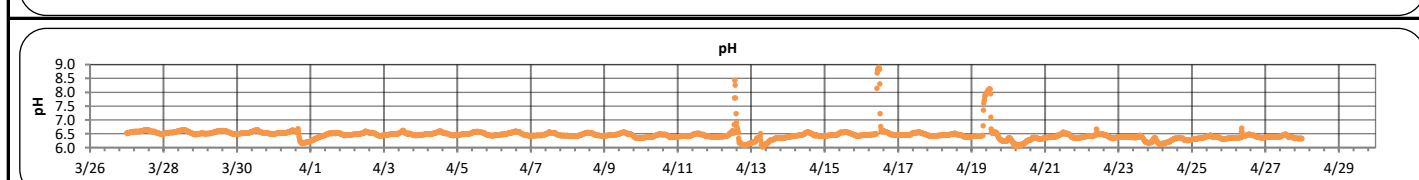
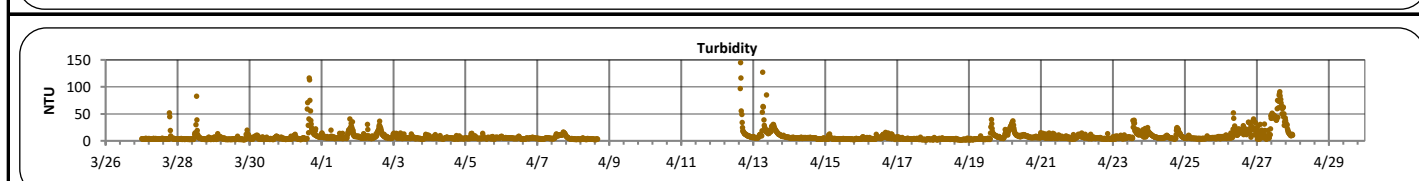
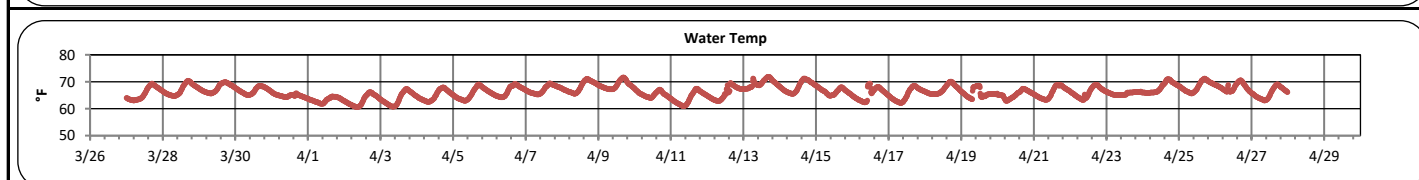
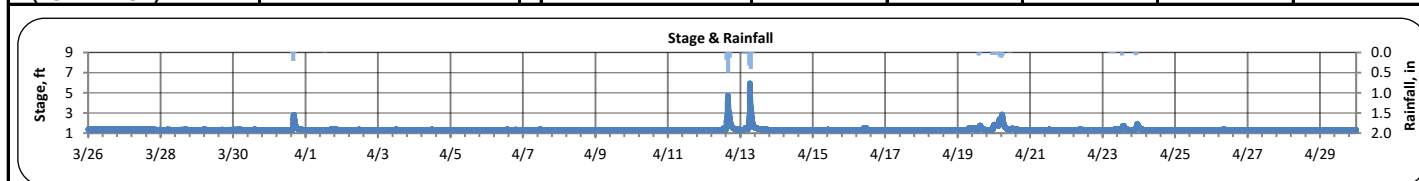
- At the ROCA station, several increased levels of specific conductivity were recorded simultaneously with increased levels of pH. These occurrences were observed on April 12th, 16th, 19th, 22nd, and 26th. These elevated levels of specific conductivity and pH were likely a result of the Maxcy Gregg pool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

Rocky Branch A (March 26, 2020 - April 29, 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	6.0	1.4	1.4	0.2
LOCATION:	Maxcy Gregg Park	TEMPERATURE (°F):	61	72	66	66	2
ADDRESS:	1650 Park Circle Columbia, SC 29201	TURBIDITY (NTU):	2	145	5	8	11
COORDINATES:	33.995864, -81.021842	pH:	6.0	8.9	6.5	6.5	0.2
TMDL/IMPAIRMENT:	Fecal Coliform	SPECIFIC CONDUCTIVITY (mS/cm):	0.021	2.07	0.156	0.165	0.149
NEIGHBORING LANDUSE:	Residential and commercial	DISSOLVED OXYGEN (mg/L):	3.7	9.1	8.1	8.1	0.5
SPATIAL LOCATION:	Most upstream site						
TOTAL NO. STORMS OVER 0.1 INCH:	6						
MAX. DAILY RAINFALL:	0.8 inches						
TOTAL RAINFALL (FOR PERIOD):	2.9 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 (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.

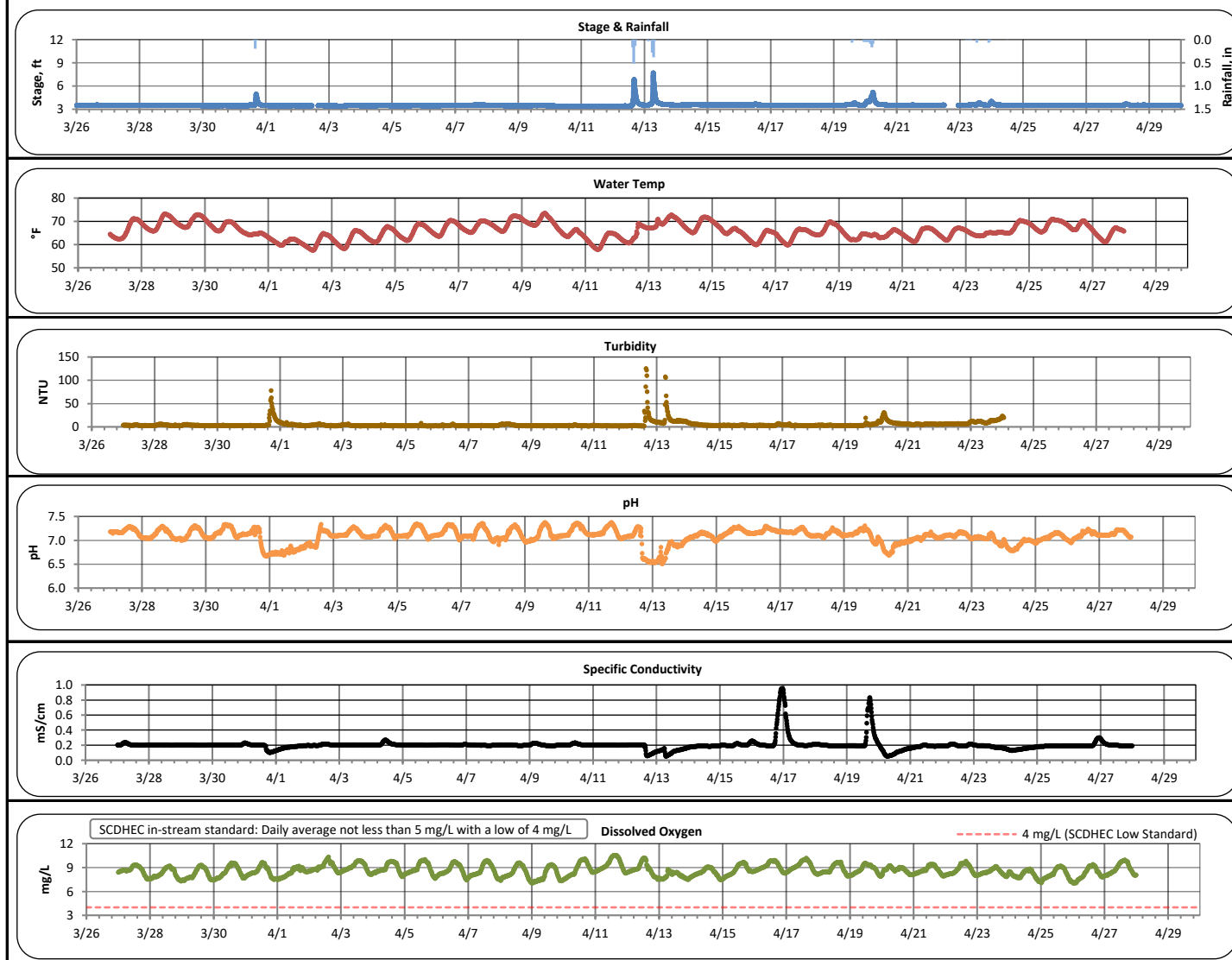
Grab Sample Data:

Analyte (units)	Sample 1		Sample 2		Sample 3		Sample 4	
	4/6/2020		4/13/2020					
	Time	Result	Time	Result	Time	Result	Time	Result
<i>Escherichia coli</i> (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.

Rocky Branch B (March 26, 2020 - April 29, 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):	3.4	7.7	3.5	3.5	0.2
LOCATION:	Olympia Ave Crossing	TEMPERATURE (°F):	58	74	66	66	3
ADDRESS:	510 Heyward St Columbia, SC 29201	TURBIDITY (NTU):	2	126	4	5	7
COORDINATES:	33.982578, -81.035036	pH:	6.5	7.4	7.1	7.1	0.2
TMDL/IMPAIRMENT:	Fecal Coliform	SPECIFIC CONDUCTIVITY (mS/cm):	0.054	0.957	0.201	0.203	0.079
NEIGHBORING LANDUSE:	Residential and commercial	DISSOLVED OXYGEN (mg/L):	7.0	10.6	8.6	8.6	0.7
SPATIAL LOCATION:	Most Downstream Site						
TOTAL NO. STORMS OVER 0.1 INCH:	7						
MAX. DAILY RAINFALL:	0.8 inches						
TOTAL RAINFALL (FOR PERIOD):	2.8 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 (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.

Sampled Data:

Analyte (units)	Sample 1		Sample 2		Sample 3		Sample 4	
	4/6/2020		4/13/2020					
	Time	Result	Time	Result	Time	Result	Time	Result
<i>Escherichia coli</i> (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.