

# Rocky Branch Monitoring Sites

## Monitoring Data Summary for February 20<sup>th</sup>, 2020 – March 25<sup>th</sup>, 2020

### *Data Gaps*

- At the ROCA station, heavy sediment accumulated around the turbidity sensor causing invalid NTU readings from February 29<sup>th</sup>-March 2<sup>nd</sup>. This portion of the turbidity data was deleted from the dataset.
- At the ROCB station, the turbidity sensor became buried during a storm event March 23<sup>rd</sup>. The sensor remained buried until the end of the deployment period when the sonde was removed from the field for calibrations on March 25<sup>th</sup>. This portion of turbidity data was removed from the dataset.

### *SCDHEC Standards*

- The Rocky Branch monitoring stations did not record any pH values outside of the acceptable SCDHEC range of 6 to 8.5.
- The ROCA and ROCB stations recorded average DO concentrations of 8.9 mg/L and 9.5 mg/L, respectively, which are well above the SCDHEC daily average minimum standard of 5 mg/L.
- The minimum DO concentration recorded was 7.3 mg/L at ROCA station and 6.4 mg/L at the ROCB station, which are both above the SCDHEC discrete minimum standard of 4 mg/L.

### *Storm Events*

- The ROCA station recorded 10 storm events during this monitoring period, resulting in 5.8 inches of total precipitation. The ROCB station also recorded 11 storm events during this monitoring period, resulting in 5.7 inches of total precipitation.
- Both ROCA and ROCB stations exhibited typical responses to storm events during this monitoring period.

### *Potential Illicit Discharges and Abnormal Events*

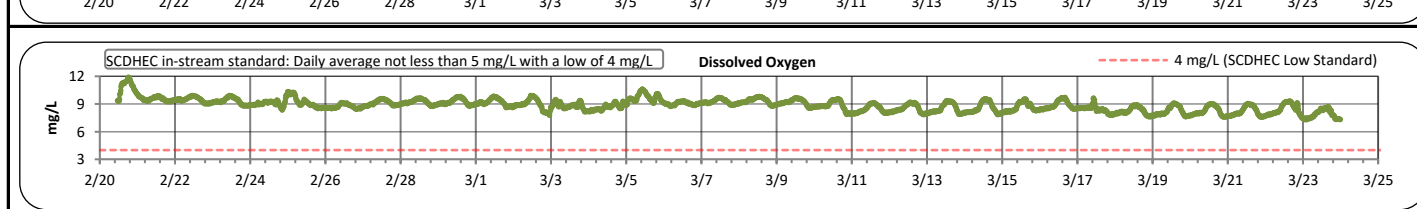
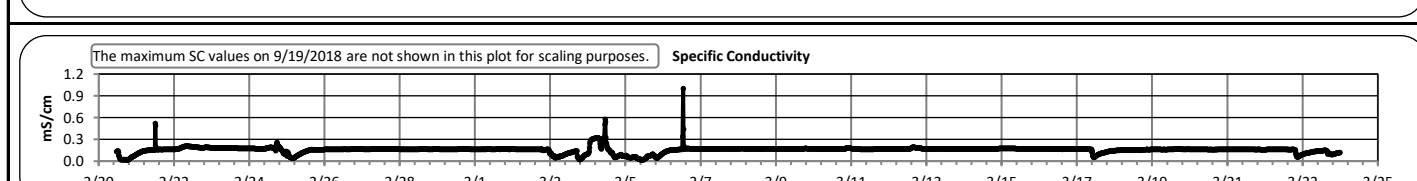
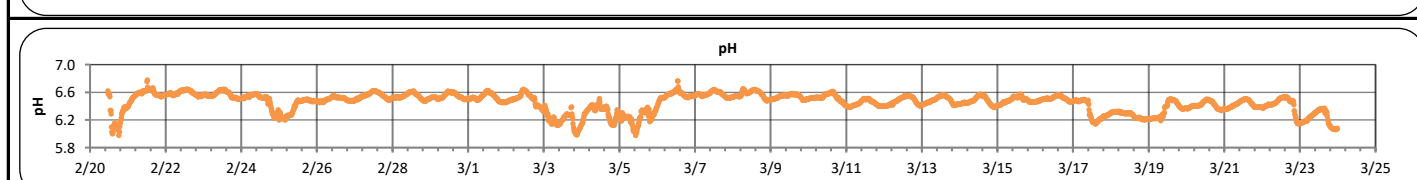
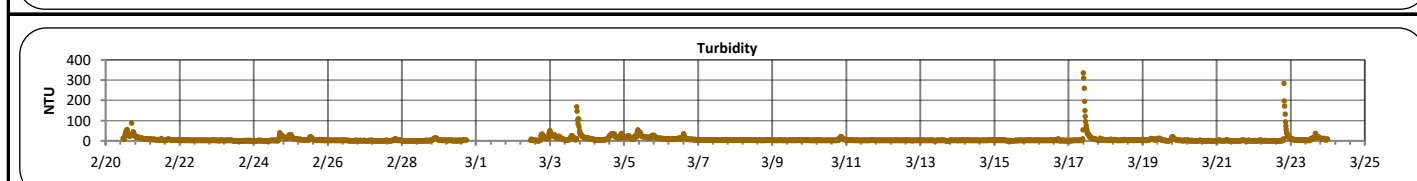
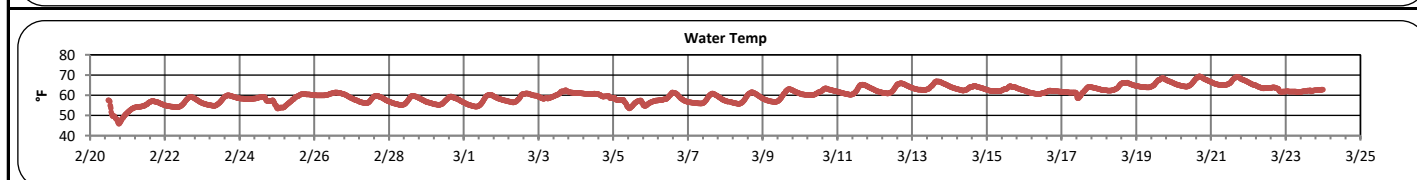
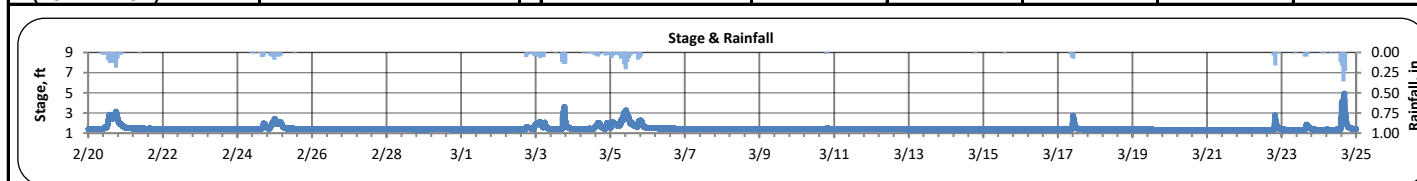
- At the ROCA station, the specific conductivity and pH levels both increased simultaneously on February 21<sup>st</sup> and on March 6<sup>th</sup>. There was no rainfall recorded during these times.
- Several periods of increased specific conductivity levels were observed at the ROCB station. These observations occurred on February 21<sup>st</sup>, 23<sup>rd</sup>-24<sup>th</sup>, and 27<sup>th</sup>, and March 1<sup>st</sup>, 6<sup>th</sup>, 8<sup>th</sup>, 9<sup>th</sup>, 11<sup>th</sup>-12<sup>th</sup>, 15<sup>th</sup>, 16<sup>th</sup>, and 21<sup>st</sup>.

### *Flow Measurements*

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

**Rocky Branch A (February 20, 2020 - March 25, 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	5.0	1.4	1.5	0.3
LOCATION:	Maxcy Gregg Park	TEMPERATURE (°F):	46	69	61	60	4
ADDRESS:	1650 Park Circle Columbia, SC 29201	TURBIDITY (NTU):	1	336	3	7	16
COORDINATES:	33.995864, -81.021842	pH:	6.0	6.8	6.5	6.5	0.1
TMDL/IMPAIRMENT:	Fecal Coliform	SPECIFIC CONDUCTIVITY (mS/cm):	0.019	1.00	0.168	0.158	0.044
NEIGHBORING LANDUSE:	Residential and commercial	DISSOLVED OXYGEN (mg/L):	7.3	11.9	8.9	8.9	0.7
SPATIAL LOCATION:	Most upstream site						
TOTAL NO. STORMS OVER 0.1 INCH:	10						
MAX. DAILY RAINFALL:	1.2 inches						
TOTAL RAINFALL (FOR PERIOD):	5.8 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 A (February 20, 2020 - March 25, 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.

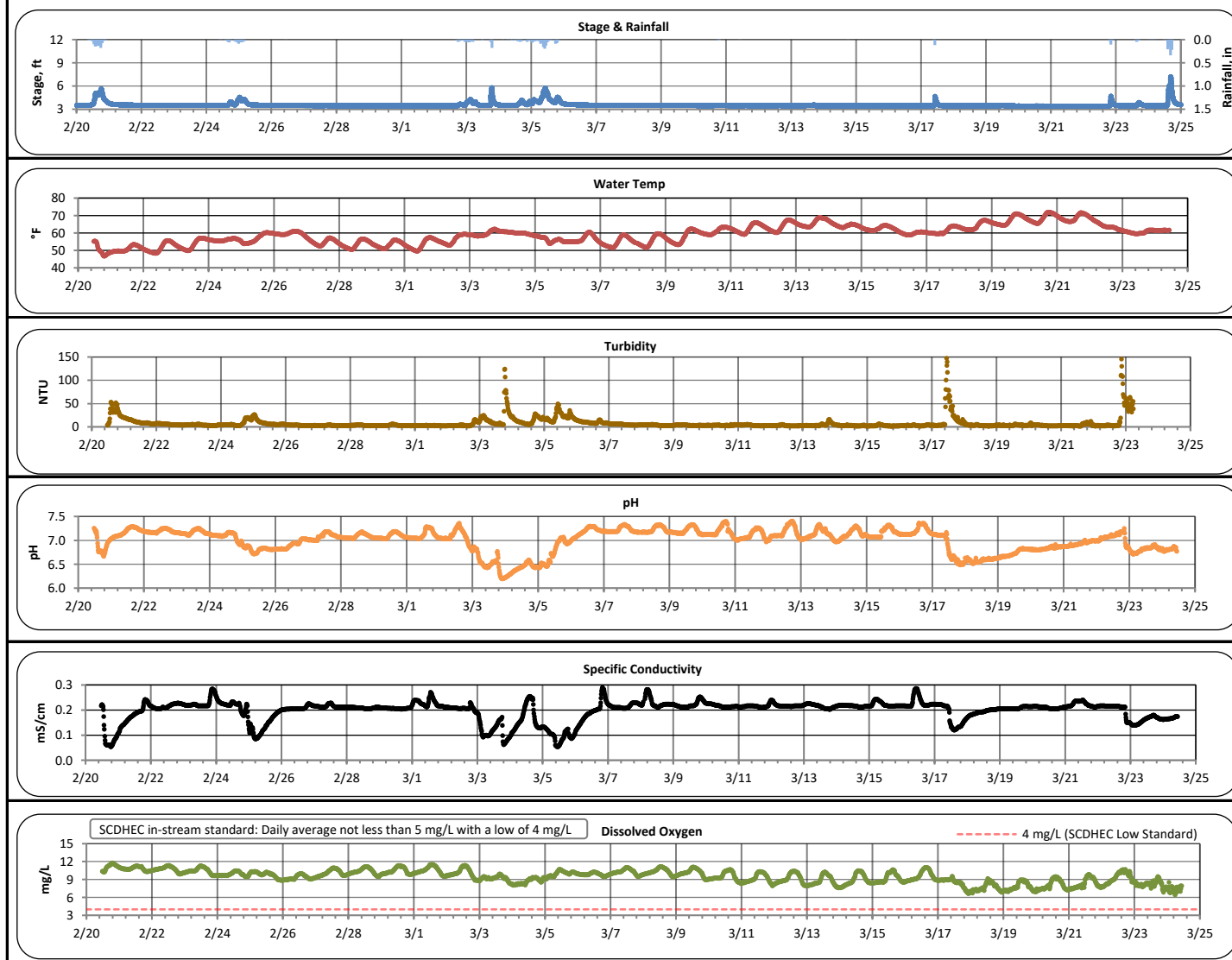
**Grab Sample Data:**

Analyte (units)	Sample 1		Sample 2		Sample 3		Sample 4		Sample 5	
	3/5/2020		3/5/2020		3/5/2020		3/5/2020		3/10/2020	
	Time	Result	Time	Result	Time	Result	Time	Result	Time	Result
<i>Escherichia coli</i> (MPN/100mL)	9:30	4564	10:47	5,974	13:15	4374	14:28	3248	14:22	168
Total Suspended Solids (mg/L)	9:30	45.6	10:47	33.7	13:15	12.5	14:28	8.1		
Total Phosphorus (mg/L)	9:30	0.075	10:47	0.055	13:15	0.0464	14:28	0.047		
Total Nitrogen (mg/L)	9:30	0.66	10:47	0.66	13:15	0.7	14:28	0.89		

Note: Samples 1, 2, 3, and 4 were collected during wet weather conditions. Sample 5 was collected during dry weather conditions.

**Rocky Branch B (February 20, 2020 - March 25, 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	7.2	3.5	3.6	0.3
LOCATION:	Olympia Ave Crossing	TEMPERATURE (°F):	47	72	60	59	5
ADDRESS:	510 Heyward St Columbia, SC 29201	TURBIDITY (NTU):	2	148	4	8	12
COORDINATES:	33.982578, -81.035036	pH:	6.2	7.4	7.1	7.0	0.2
TMDL/IMPAIRMENT:	Fecal Coliform	SPECIFIC CONDUCTIVITY (mS/cm):	0.054	0.290	0.213	0.199	0.041
NEIGHBORING LANDUSE:	Residential and commercial	DISSOLVED OXYGEN (mg/L):	6.4	11.8	9.7	9.5	1.1
SPATIAL LOCATION:	Most Downstream Site						
TOTAL NO. STORMS OVER 0.1 INCH:	11						
MAX. DAILY RAINFALL:	1.2 inches						
TOTAL RAINFALL (FOR PERIOD):	5.7 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 B (February 20, 2020 - March 25, 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		Sample 5	
	3/5/2020		3/5/2020		3/5/2020		3/5/2020		3/10/2020	
	Time	Result	Time	Result	Time	Result	Time	Result	Time	Result
<i>Escherichia coli</i> (MPN/100mL)	9:10	2,396	10:30	6152	12:52	3214	14:12	2562	14:34	1130
Total Suspended Solids (mg/L)	9:10	68.8	10:30	62.5	12:52	23.2	14:12	14.2		
Total Phosphorus (mg/L)	9:10	0.15	10:30	0.13	12:52	0.068	14:12	0.066		
Total Nitrogen (mg/L)	9:10	0.96	10:30	9.96	12:52	0.59	14:12	0.83		

Note: Samples 1, 2, 3, and 4 were collected during wet weather conditions. Sample 5 was collected during dry weather conditions.