

# Rocky Branch Monitoring Sites

## Monitoring Data Summary for November 1<sup>st</sup>, 2018 – December 5<sup>th</sup>, 2018

### *Data Gaps*

- The ROCA station experienced several periods of noisy turbidity data, due to excessive buildup of sediment covering the turbidity sensor, which was deleted from the dataset.
- The ROCB station did not have any interruptions in the dataset during this deployment period.

### *SCDHEC Standards*

- Both Rocky Branch monitoring stations did not record any pH values outside of the acceptable SCDHEC range of 6 to 8.5 during this monitoring period.
- The ROCA and ROCB stations recorded average DO concentrations of 8.3 mg/L and 9.2 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 3.8 mg/L at ROCA and 7.4 mg/L at ROCB. The ROCA station recorded some low DO values below the SCDHEC discrete minimum standard of 4.0 mg/L, which occurred during the storm event on December 2<sup>nd</sup>.

### *Storm Events*

- The ROCA station recorded 10 storm events during this monitoring period, resulting in 8.4 inches of total precipitation. The number of storms and amount of precipitation cannot be accurately computed for the ROCB station because of damage to the ROCB rain gauge (see further explanation in the *Potential Illicit Discharges and Abnormal Events* section below).
- 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 8.4 days at the ROCA station prior to the November 23<sup>rd</sup> storm event. The ROCB rain gauge was damaged, which prevented the rain gauge from recording some storm events; therefore, an accurate length of dry time cannot be computed (see further explanation in the *Potential Illicit Discharges and Abnormal Events* section below).

### *Potential Illicit Discharges and Abnormal Events*

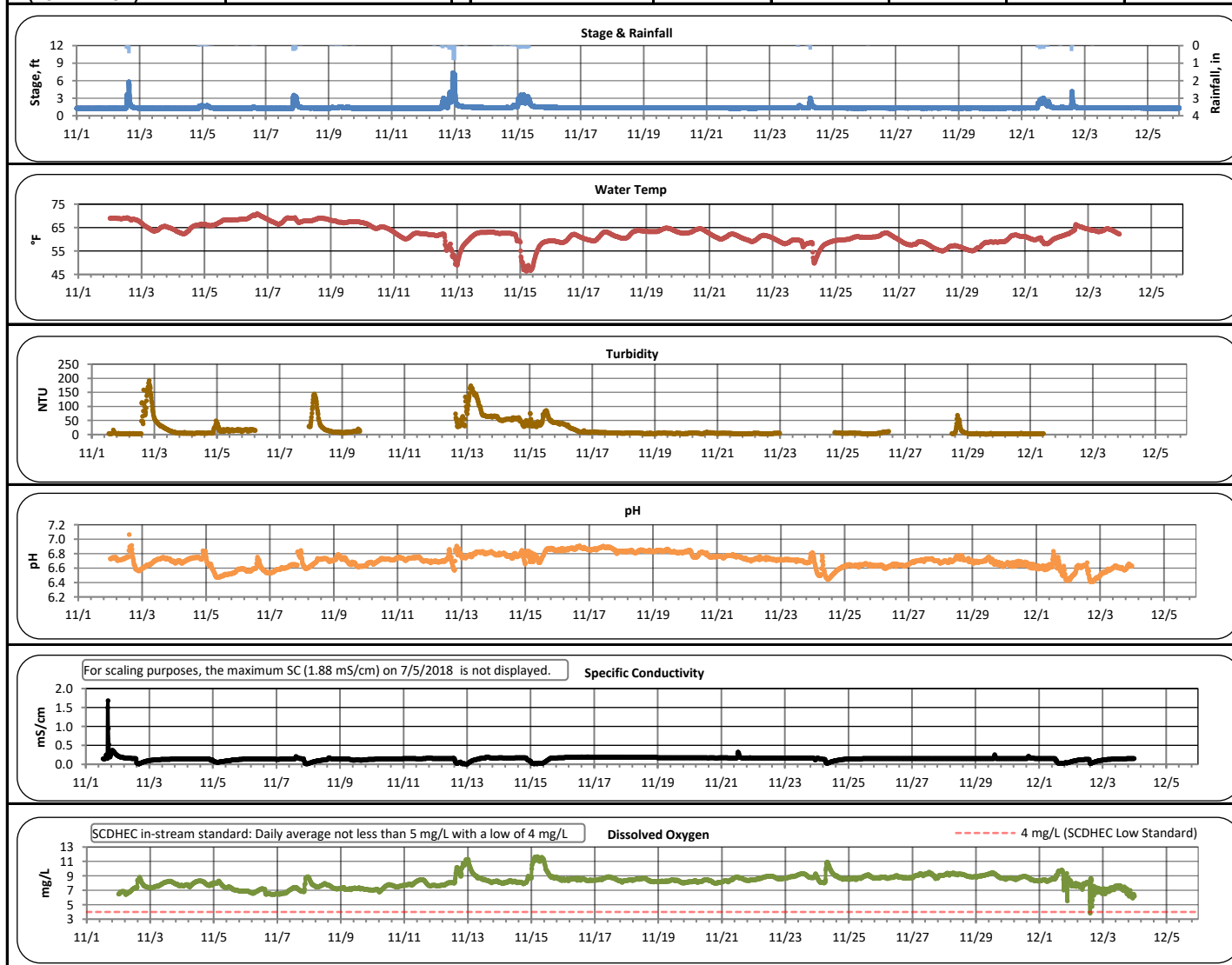
- It was observed on the monitoring website that the ROCB rain gauge was not recording some of the storm events during this deployment period. A site visit to investigate this issue determined that the ROCB rain gauge was tampered with and caused damage to the gauge, which prevented the rain gauge from recording precipitation during some of the storm events. Action was taken immediately to fix the rain gauge.
- Abnormally high specific conductivity values were observed at the ROCA site on November 1<sup>st</sup>. This high specific conductivity could likely be from the Maxcy Gregg pool.

### *Flow Measurements*

- No flow measurements were taken in the Rocky Branch watershed during this monitoring period.

**Rocky Branch A (November 1, 2018 -- December 5, 2018)**

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	7.4	1.4	1.4	0.4
LOCATION:	Maxcy Gregg Park	TEMPERATURE (°F):	46	71	62	62	4
ADDRESS:	1650 Park Circle Columbia, SC 29201	TURBIDITY (NTU):	1	192	6	20	31
COORDINATES:	33.995864, -81.021842	pH:	6.4	7.1	6.7	6.7	0.1
TMDL/IMPAIRMENT:	Fecal Coliform	SPECIFIC CONDUCTIVITY (mS/cm):	0.009	1.683	0.157	0.150	0.058
NEIGHBORING LANDUSE:	Residential and commercial	DISSOLVED OXYGEN (mg/L):	3.8	11.7	8.4	8.3	0.9
SPATIAL LOCATION:	Most upstream site						
TOTAL NO. STORMS OVER 0.1 INCH:	10						
MAX. DAILY RAINFALL:	2.7 inches						
TOTAL RAINFALL (FOR PERIOD):	8.4 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 (November 1, 2018 -- December 5, 2018)**

**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.

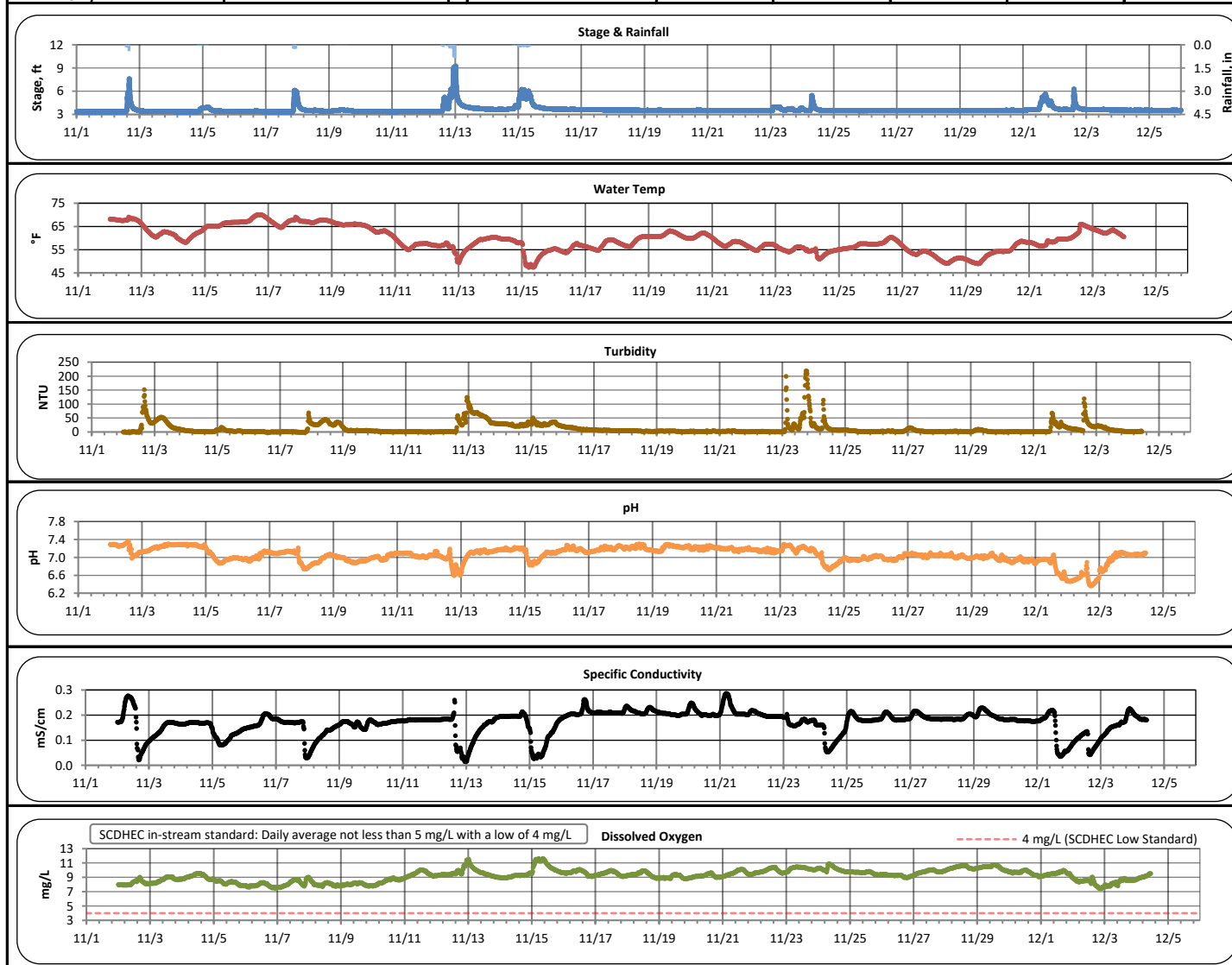
**Grab Sample Data:**

Analyte (units)	Sample 1		Sample 2		Sample 3		Sample 4	
	11/20/2018							
	Time	Result	Time	Result	Time	Result	Time	Result
<i>Escherichia coli</i> (MPN/100mL)	10:29	104						
Total Suspended Solids (mg/L)								
Total Phosphorus (mg/L)								
Total Nitrogen (mg/L)								

Note: Both samples collected were collected during dry weather conditions.

**Rocky Branch B (November 1, 2018 -- December 5, 2018)**

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	9.3	3.5	3.6	0.5
LOCATION:	Olympia Ave Crossing	TEMPERATURE (°F):	47	70	59	59	5
ADDRESS:	510 Heyward St Columbia, SC 29201	TURBIDITY (NTU):	1	220	4	13	21
COORDINATES:	33.982578, -81.035036	pH:	6.4	7.4	7.1	7.1	0.2
TMDL/IMPAIRMENT:	Fecal Coliform	SPECIFIC CONDUCTIVITY (mS/cm):	0.015	0.287	0.181	0.170	0.048
NEIGHBORING LANDUSE:	Residential and commercial	DISSOLVED OXYGEN (mg/L):	7.4	11.6	9.3	9.2	0.8
SPATIAL LOCATION:	Most Downstream Site						
TOTAL NO. STORMS OVER 0.1 INCH:	6						
MAX. DAILY RAINFALL:	2.8 inches						
TOTAL RAINFALL (FOR PERIOD):	6.4 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 (November 1, 2018 -- December 5, 2018)**

**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	
	11/20/2018							
	Time	Result	Time	Result	Time	Result	Time	Result
<i>Escherichia coli</i> (MPN/100mL)	10:14	290						
Total Suspended Solids (mg/L)								
Total Phosphorus (mg/L)								
Total Nitrogen (mg/L)								

Note: Both samples collected were collected during dry weather conditions.