

## Rocky Branch Monitoring Sites

### *Data Gaps*

- The Rocky Branch monitoring stations did not experience any loss of data due to the flood event on October 4<sup>th</sup>.
- The ROCA station did experience two brief periods of turbidity fouling in the days following the flood event.

### *SCDHEC Standards*

- The ROCA and ROCB stations recorded average DO concentrations of 7.1 and 7.8 mg/L, respectively, well above the SCDHEC daily average standard of 5 mg/L. The instantaneous DO concentration at the ROC stations did not fall below the minimum instantaneous standard of 4 mg/L.
- Neither the upper nor the lower pH standard was contravened at either of the Rocky Branch monitoring stations during this deployment period.

### *Storm Events*

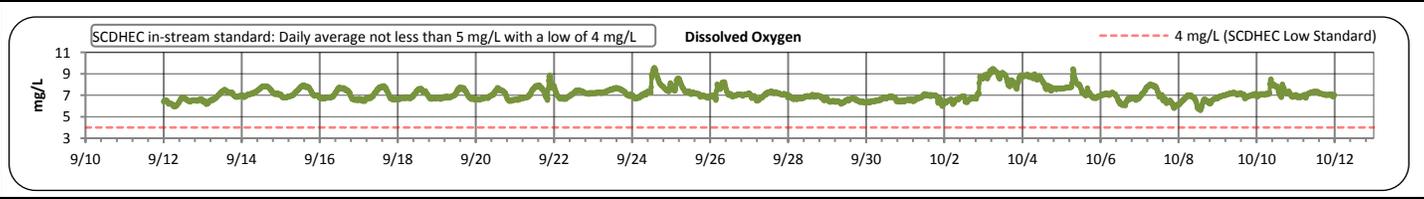
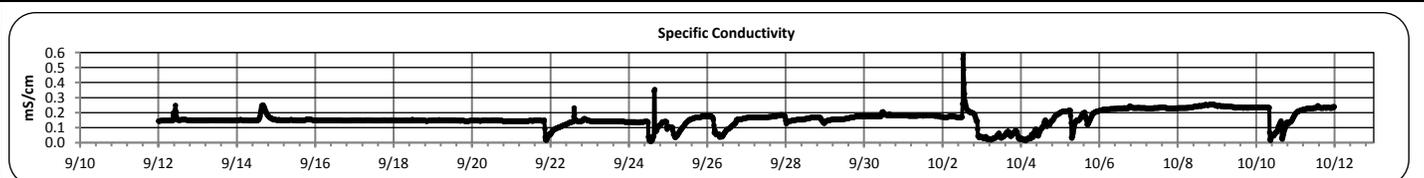
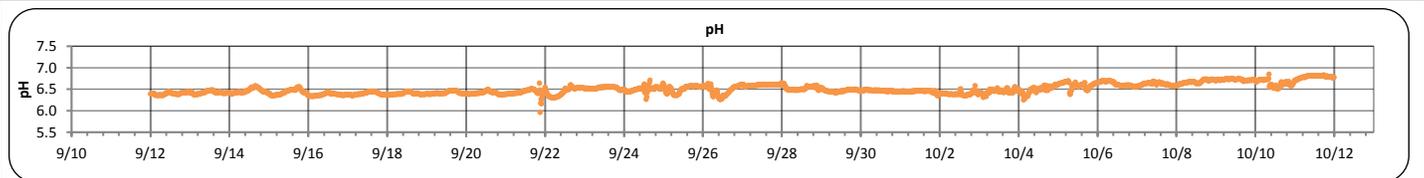
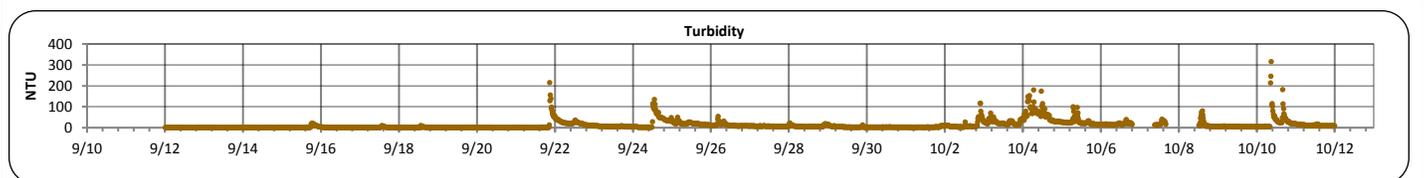
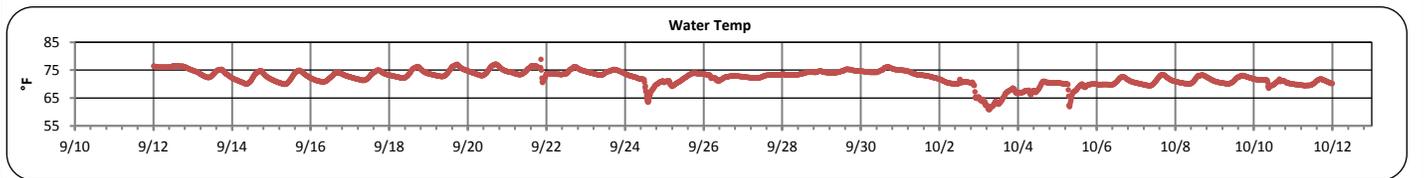
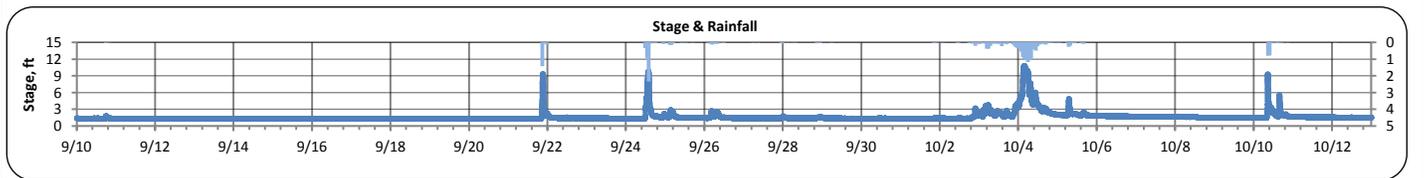
- Four significant storm events were recorded during this monitoring period, with by far the most significant event being the October 3<sup>rd</sup>-4<sup>th</sup> flood event.
- The flood event resulted in rainfall totals of 13.63 in and 12.39 inches at the ROCA and ROCB rain gages, respectively. At the ROCA station, this storm equated to a 500 year event for the 2 day, 3 day, and 4 day durations. At the ROC B station, this storm registered as a 200 year event for the 12 hour, 24 hour, 2 day, 3 day, and 4 day durations, according to the NOAA Precipitation Frequency Data Server.
- The Rocky Branch monitoring stations recorded high stage levels during the historic flood event. The specific conductivity levels in the stream decreased to very low levels during the event, and remained at low levels throughout the storm hydrograph. The turbidity at the ROCA and ROCB stations reached a maximum of 180 NTU and 207 NTU, respectively, typical of a storm event in this watershed.

### *Potential Illicit Discharges and Abnormal Events*

- At ROCA, 6 potential illicit discharges were recorded. These events caused increased specific conductivity levels.
  - 3 of these events occurred during dry conditions on September 12<sup>th</sup>, 14<sup>th</sup>, and 15<sup>th</sup>. The event on the 15<sup>th</sup> was relatively small and also impacted turbidity levels.
  - 3 of these events occurred during storm conditions on September 22<sup>nd</sup> and 24<sup>th</sup>, and October 2<sup>nd</sup>.
- At ROCB, six increases in specific conductivity were noted. These occurred on September 22<sup>nd</sup>, 23<sup>rd</sup>, 24<sup>th</sup>, and 30<sup>th</sup>, and October 6<sup>th</sup> and 7<sup>th</sup>.

**Rocky Branch A (September 10, 2015 -- October 12, 2015)**

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	10.8	1.4	1.6	0.9
LOCATION:	Maxcy Gregg Park	TEMPERATURE (°F):	61	79	73	72	3
ADDRESS:	1650 Park Circle Columbia, SC 29201	TURBIDITY (NTU):	1	317	6	13	22
COORDINATES:	34.995864, -81.021842	pH:	6.0	6.9	6.5	6.5	0.1
TMDL/IMPAIRMENT:	Fecal Coliform	SPECIFIC CONDUCTIVITY (mS/cm):	0.01	0.589	0.150	0.159	0.053
NEIGHBORING LANDUSE:	Residential and commercial	DISSOLVED OXYGEN (mg/L):	5.6	9.6	7.0	7.1	0.6
SPATIAL LOCATION:	Most upstream site						
TOTAL NO. STORMS OVER 0.1 INCH:	10						
MAX. DAILY RAINFALL:	9.1 inches						
TOTAL RAINFALL (FOR PERIOD):	22.3 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 (September 10, 2015 -- October 12, 2015)**

**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.

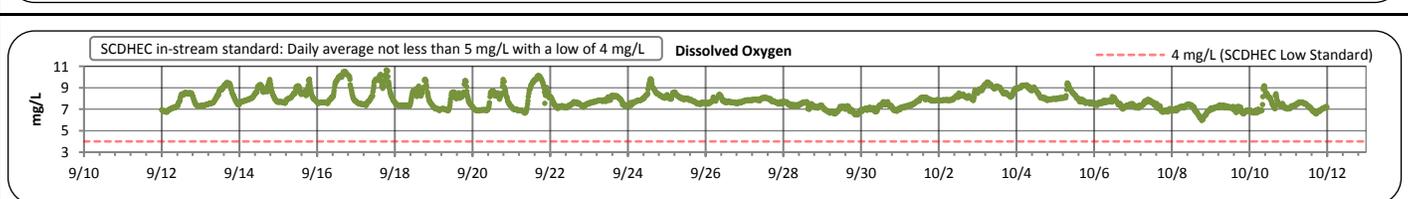
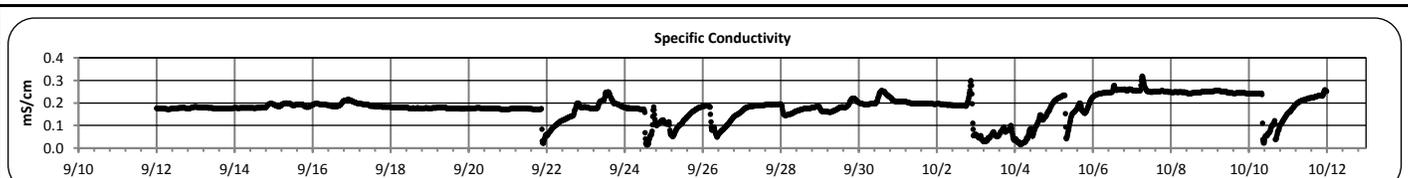
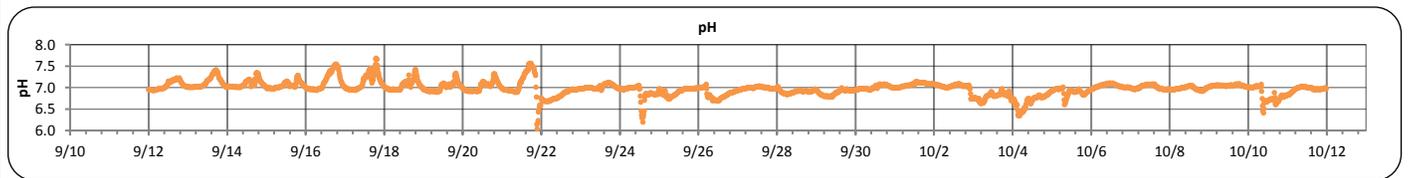
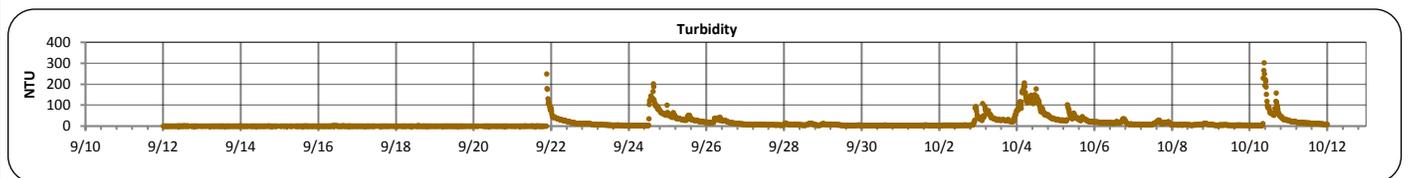
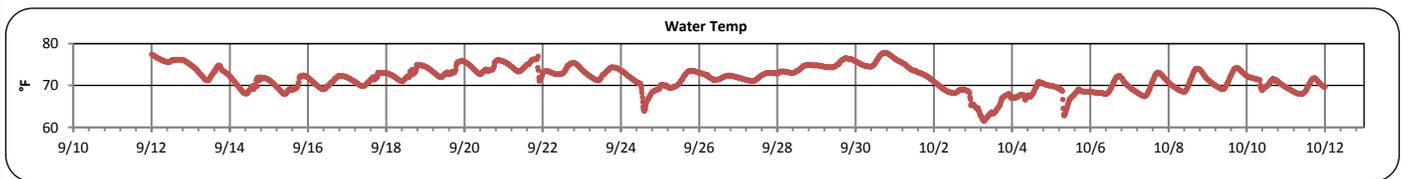
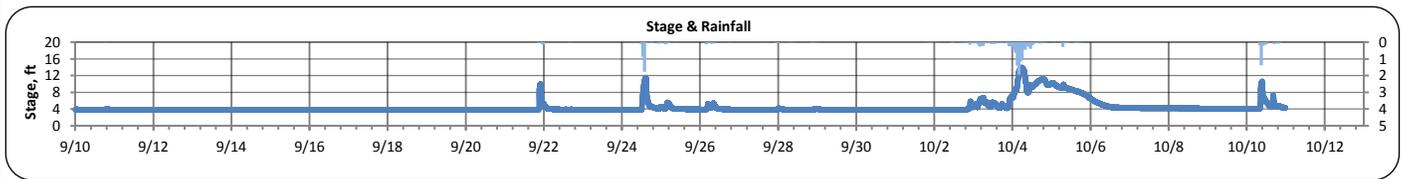
**Grab Sample Data:**

Analyte (units)	Sample 1		Sample 2		Sample 3		Sample 4	
	9/24/2015							
	Time	Result	Time	Result	Time	Result	Time	Result
<i>Escherichia coli</i> (MPN/100mL)	12:45	19,180						
Total Suspended Solids (mg/L)	12:45	120						
Total Phosphorus (mg/L)	12:45	0.2						
Total Nitrogen (mg/L)	12:45	1.021						

Note:

**Rocky Branch B (September 10, 2015 -- October 12, 2015)**

PARAMETER	DESCRIPTION	CONTINUOUS WATER QUALITY PARAMETERS:	SUMMARY STATISTICS				
			MINIMUM OBSERVED	MAXIMUM OBSERVED	MEDIAN OBSERVED	MEAN OBSERVED	STANDARD DEVIATION
STREAM NAME:	Rocky Branch	STAGE (FT):	3.8	14.0	3.9	4.4	1.5
LOCATION:	Olympia Ave Crossing	TEMPERATURE (°F):	61	78	72	72	3
ADDRESS:	510 Heyward St Columbia, SC 29201	TURBIDITY (NTU):	1	303	5	16	30
COORDINATES:	33.982578, -81.035036	pH:	6.1	7.7	7.0	7.0	0.2
TMDL/IMPAIEMENT:	Fecal Coliform	SPECIFIC CONDUCTIVITY (mS/cm):	0.014	0.319	0.181	0.178	0.053
NEIGHBORING LANDUSE:	Residential and commercial	DISSOLVED OXYGEN (mg/L):	6.0	10.7	7.7	7.8	0.8
SPATIAL LOCATION:	Most Downstream Site						
TOTAL NO. STORMS OVER 0.1 INCH:	10						
MAX. DAILY RAINFALL:	8.9 inches						
TOTAL RAINFALL (FOR PERIOD):	19.0 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 (September 10, 2015 -- October 12, 2015)**

**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	
	9/24/2015							
	Time	Result	Time	Result	Time	Result	Time	Result
<i>Escherichia coli</i> (MPN/100mL)	14:52	15,000						
Total Suspended Solids (mg/L)	14:52	160						
Total Phosphorus (mg/L)	14:52	0.31						
Total Nitrogen (mg/L)	14:52	1.36						

Note: