

Rocky Branch Monitoring Sites

Monitoring Data Summary for January 19th, 2017 – February 22nd, 2017

Data Gaps

- Neither the ROCA nor the ROCB station recorded any interruptions in the dataset during this monitoring period.

SCDHEC Standards

- No violations of either the lower or the upper pH standard were observed at the Rocky Branch monitoring stations during this deployment period.
- The ROCA and ROCB stations recorded average DO concentrations of 8.5 mg/L and 9.6 mg/L, respectively, well above the SCDHEC daily average minimum standard of 5 mg/L.
- The minimum DO concentrations recorded at the ROCA and ROCB stations were 7.2 mg/L and 7.6 mg/L, respectively, well above the SCDHEC discrete minimum standard of 4 mg/L.

Storm Events

- The Rocky Branch watershed recorded six storm events during this monitoring period, resulting in 3.8 and 3.7 inches of precipitation at the ROCA and ROCB rain gauges, respectively.
- The 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 14 days in the Rocky Branch watershed and occurred prior to the January 21st rainfall event.

Potential Illicit Discharges and Abnormal Events

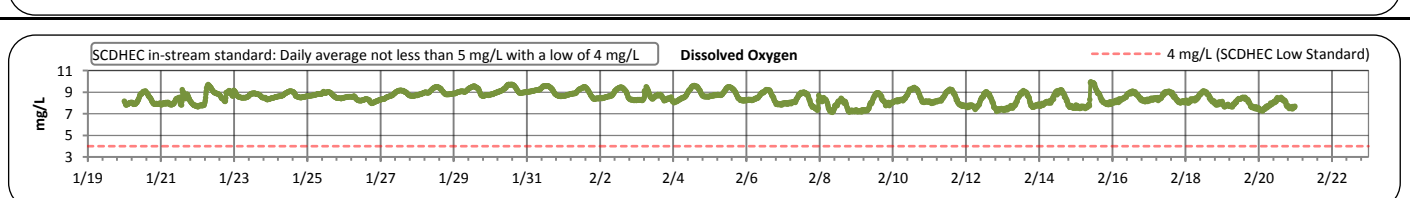
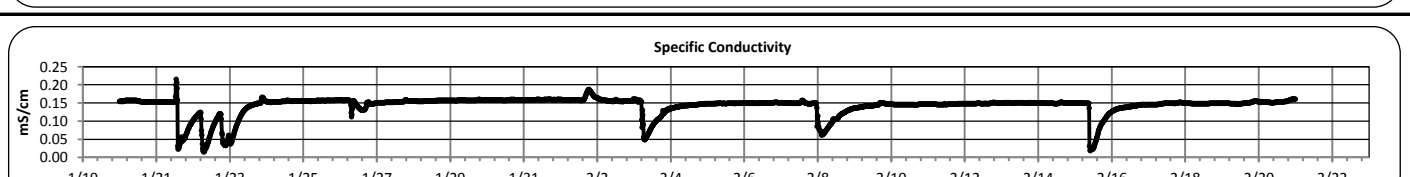
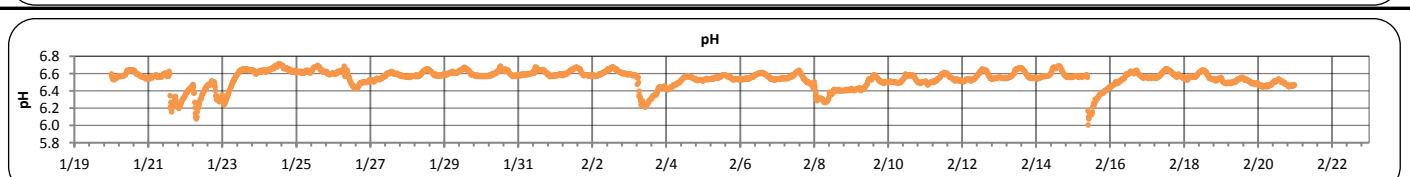
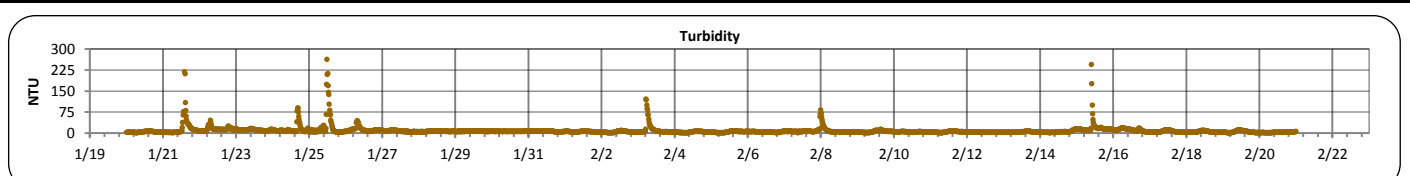
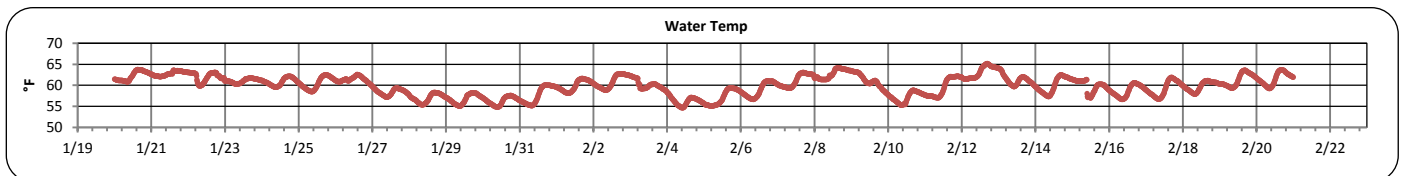
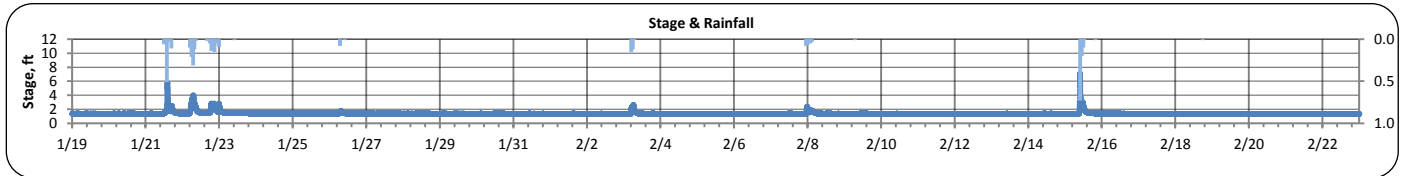
- At ROCA, three abnormal events were noted:
 - Two of the events resulted in elevated turbidity levels and were observed on January 24th and 25th.
 - One increase in specific conductivity was recorded on February 1st.
- At ROCB, 15 abnormal events were recorded, all of which involved elevated specific conductivity levels. These occurred on: January 24th, 24th-25th, 25th, 28th, 29th-30th, and 31st and February 2nd, 4th-5th, 7th, 10th, 12th, 13th, 14th, 18th, and 21st.
- The ROCB station also recorded three periods of elevated turbidity levels. These occurred from January 25th – 26th, on February 6th, and on February 8th-9th.

Flow Measurements

- Two flow measurements were taken at the ROCA station during this monitoring period. These were both wet weather measurements.

Rocky Branch A (January 19, 2017 -- February 22, 2017)

| PARAMETER | DESCRIPTION | CONTINUOUS WATER QUALITY PARAMETERS: | SUMMARY STATISTICS | | | | |
|---------------------------------|--|--------------------------------------|--------------------|------------------|-----------------|---------------|--------------------|
| | | | MINIMUM OBSERVED | MAXIMUM OBSERVED | MEDIAN OBSERVED | MEAN OBSERVED | STANDARD DEVIATION |
| STREAM NAME: | Rocky Branch | STAGE (FT): | 1.4 | 7.1 | 1.4 | 1.4 | 0.2 |
| LOCATION: | Maxcy Gregg Park | TEMPERATURE (°F): | 55 | 65 | 60 | 60 | 2 |
| ADDRESS: | 1650 Park Circle Columbia, SC 29201 | TURBIDITY (NTU): | 2 | 264 | 7 | 9 | 15 |
| COORDINATES: | 34.995864, -81.021842 | pH: | 6.0 | 6.7 | 6.6 | 6.5 | 0.1 |
| TMDL/IMPAIRMENT: | Fecal Coliform | SPECIFIC CONDUCTIVITY (mS/cm): | 0.015 | 0.215 | 0.150 | 0.143 | 0.026 |
| NEIGHBORING LANDUSE: | Residential and commercial | DISSOLVED OXYGEN (mg/L): | 7.2 | 10.0 | 8.5 | 8.5 | 0.6 |
| SPATIAL LOCATION: | Most upstream site | | | | | | |
| TOTAL NO. STORMS OVER 0.1 INCH: | 6 | | | | | | |
| MAX. DAILY RAINFALL: | 1.3 inches | | | | | | |
| TOTAL RAINFALL (FOR PERIOD): | 3.8 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 (January 19, 2017 -- February 22, 2017)

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. |

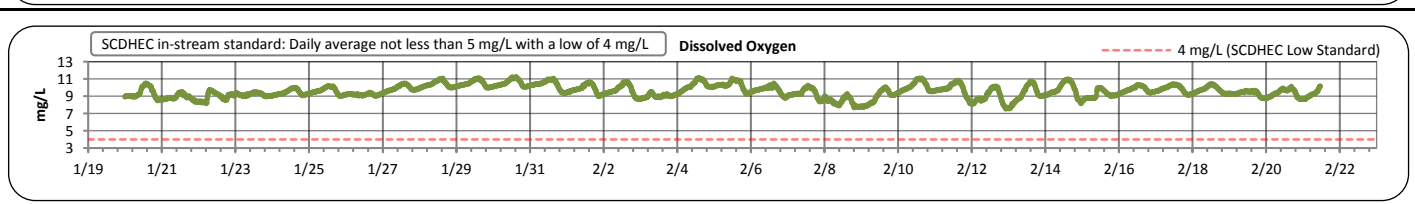
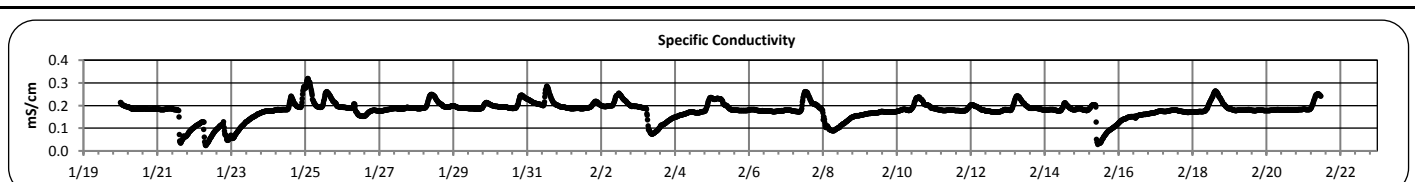
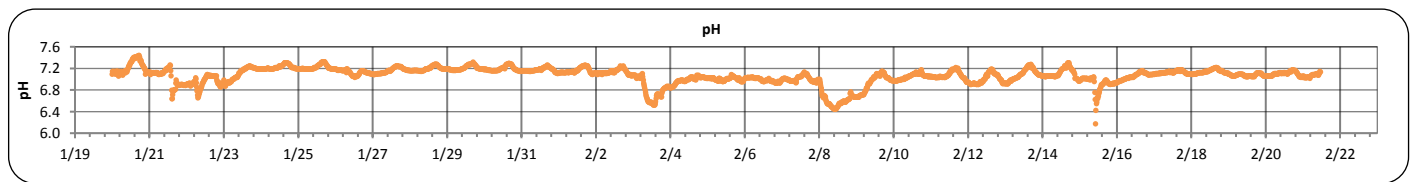
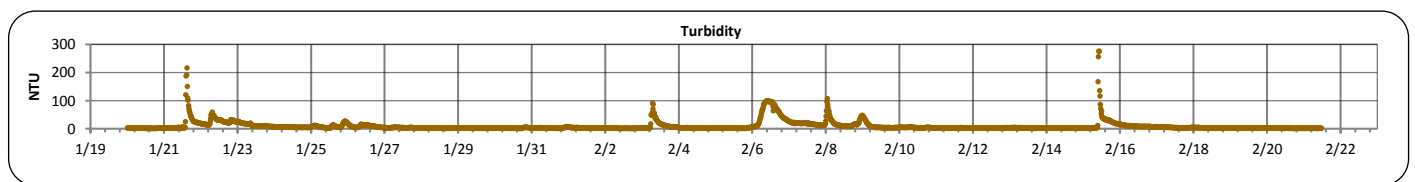
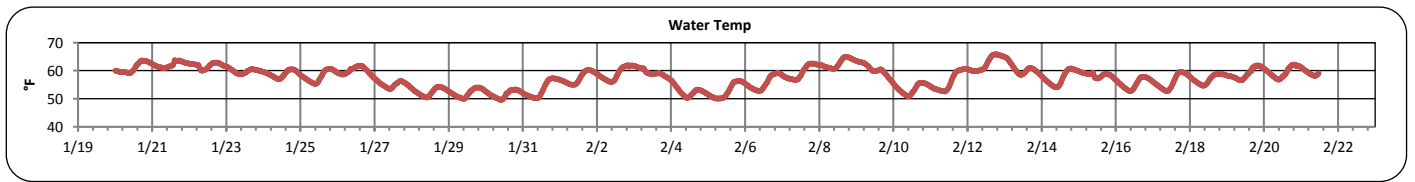
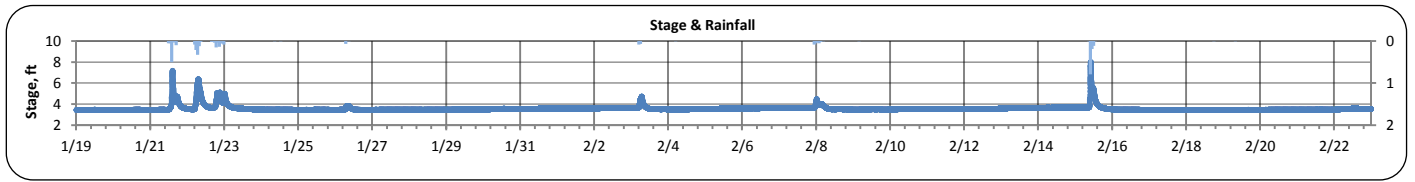
Grab Sample Data:

| Analyte (units) | Sample 1 | | Sample 2 | |
|--|-----------|--------|-----------|--------|
| | 1/23/2017 | | 1/23/2017 | |
| | Time | Result | Time | Result |
| <i>Escherichia coli</i> (MPN/100mL) | 9:24 | 914 | 11:15 | 292 |
| Total Suspended Solids (mg/L) | 9:24 | 3.6 | 11:15 | 2.8 |
| Total Phosphorus (mg/L) | 9:24 | 0.049 | 11:15 | 0.052 |
| Total Nitrogen (mg/L) | 9:24 | 1.76 | 11:15 | 1.77 |
| Note: | | | | |

| Analyte (units) | Sample 1 | | Sample 2 | | Sample 3 | | Sample 4 | |
|--|-----------|--------|-----------|--------|-----------|--------|-----------|--------|
| | 2/15/2017 | | 2/15/2017 | | 2/15/2017 | | 2/15/2017 | |
| | Time | Result | Time | Result | Time | Result | Time | Result |
| <i>Escherichia coli</i> (MPN/100mL) | 10:40 | 3,214 | 12:10 | 3,446 | 14:25 | 2,708 | 15:27 | 1,866 |
| Total Suspended Solids (mg/L) | 10:40 | 46.6 | 12:10 | 20.2 | 14:25 | 8.8 | 15:27 | 25.2 |
| Total Phosphorus (mg/L) | 10:40 | 0.13 | 12:10 | 0.14 | 14:25 | 0.066 | 15:27 | 0.072 |
| Total Nitrogen (mg/L) | 10:40 | 0.91 | 12:10 | 0.69 | 14:25 | 1.07 | 15:27 | 1.24 |
| Note: | | | | | | | | |

Rocky Branch B (January 19, 2017 -- February 22, 2017)

| 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 | 8.0 | 3.5 | 3.6 | 0.3 |
| LOCATION: | Olympia Ave Crossing | TEMPERATURE (°F): | 50 | 66 | 58 | 58 | 4 |
| ADDRESS: | 510 Heyward St Columbia, SC 29201 | TURBIDITY (NTU): | 1 | 276 | 4 | 10 | 18 |
| COORDINATES: | 33.982578, -81.035036 | pH: | 6.2 | 7.5 | 7.1 | 7.1 | 0.2 |
| TMDL/IMPAIRMENT: | Fecal Coliform | SPECIFIC CONDUCTIVITY (mS/cm): | 0.025 | 0.319 | 0.182 | 0.178 | 0.040 |
| NEIGHBORING LANDUSE: | Residential and commercial | DISSOLVED OXYGEN (mg/L): | 7.6 | 11.3 | 9.6 | 9.6 | 0.7 |
| SPATIAL LOCATION: | Most Downstream Site | | | | | | |
| TOTAL NO. STORMS OVER 0.1 INCH: | 6 | | | | | | |
| MAX. DAILY RAINFALL: | 1.3 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 B (January 19, 2017 -- February 22, 2017)

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 | |
|-------------------------------------|-----------|--------|-----------|--------|
| | 1/23/2017 | | 1/23/2017 | |
| | Time | Result | Time | Result |
| <i>Escherichia coli</i> (MPN/100mL) | 9:45 | 768.0 | 11:00 | 558 |
| Total Suspended Solids (mg/L) | 9:45 | 1.6 | 11:00 | 2.3 |
| Total Phosphorus (mg/L) | 9:45 | 0.088 | 11:00 | 0.083 |
| Total Nitrogen (mg/L) | 9:45 | 1.43 | 11:00 | 1.8 |
| Note: | | | | |

| Analyte (units) | Sample 1 | | Sample 2 | | Sample 3 | | Sample 4 | |
|-------------------------------------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|
| | 2/15/2017 | | 2/15/2017 | | 2/15/2017 | | 2/15/2017 | |
| | Time | Result | Time | Result | Time | Result | Time | Result |
| <i>Escherichia coli</i> (MPN/100mL) | 10:25 | 6,510 | 12:00 | 5,974 | 14:10 | 3,214 | 15:40 | 3,836 |
| Total Suspended Solids (mg/L) | 10:25 | 267 | 12:00 | 48.6 | 14:10 | 22.7 | 15:40 | 18.8 |
| Total Phosphorus (mg/L) | 10:25 | 0.34 | 12:00 | 0.1 | 14:10 | 0.12 | 15:40 | 0.12 |
| Total Nitrogen (mg/L) | 10:25 | 2.03 | 12:00 | 0.88 | 14:10 | 1.82 | 15:40 | 1.1 |
| Note: | | | | | | | | |