Continuous Water Quality Monitoring Periodic Report

Rocky Branch A (December 7, 2022 - January 10, 2023)

| | CONTINUOUS | | | SUMMARY STATISTICS | | | | | |
|--|--|---------------------------------------|---------------------|---------------------|--------------------|------------------|-----------------------|--|--|
| PARAMETER | DESCRIPTION | WATER QUALIT PARAMETERS: | I MINIMUM | MAXIMUM OBSERVED | MEDIAN OBSERVED | MEAN OBSERVED | STANDARD DEVIATION | | |
| STREAM NAME: | Rocky Branch | STAGE (FT): | 1.4 | 5.9 | 1.4 | 1.5 | 0.2 | | |
| LOCATION: | Maxcy Gregg Park | | | | | | | | |
| ADDRESS: | 1650 Park Circle Columbia, SC 29201 | TEMPERATURE | E (° F) : 47 | 65 | 58 | 57 | 4 | | |
| COORDINATES: | 33.995864, -81.021842 | TURBIDITY (NT | U): 3 | 395 | 10 | 29 | 60 | | |
| TMDL/IMPAIRMENT: | Fecal Coliform | , | <u> </u> | | | | | | |
| NEIGHBORING LANDUSE: | Residential and commercial | pH: | 6.2 | 6.9 | 6.7 | 6.7 | 0.1 | | |
| SPATIAL LOCATION: | Most upstream site | SPECIFIC | | | <u> </u> | <u> </u> | | | |
| TOTAL NO. STORMS OVER 0.1 INCH: | 8 | CONDUCTIVITY (mS/cm): | 0.020 | 0.296 | 0.153 | 0.148 | 0.031 | | |
| MAX. DAILY RAINFALL: | 0.6 inches | DISSOLVED | 7.5 | 44.0 | 0.4 | 0.0 | 0.0 | | |
| TOTAL RAINFALL (FOR PERIOD): | 3.2 inches | OXYGEN (mg/L) |): 7.5 | 11.6 | 9.1 | 9.2 | 0.8 | | |
| | | Stage | e & Rainfall | | | | | | |
| # 12 T | 1 IIIa | | | 4 | | | 0.0 | | |
| Stage, 8 8 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 | | | | | | | 0.5 | | |
| 12/7 12/9 12/11 | 12/13 12/15 12/17 12/ | 19 12/21 12/23 | 12/25 12/27 | 12/29 12/31 | 1/2 1/4 | 1/6 1/8 | 1.0 | | |
| | | 14/ | -tou Town | | | | | | |
| 80 | | Wa | ater Temp | | | | | | |
| ₽ 60 | | ~~~ | | | | ~~~ | → | | |
| 50 40 | | | | | | | | | |
| 12/7 12/9 12/11 | . 12/13 12/15 12/17 12, | 19 12/21 12/23 | 12/25 12/27 | 12/29 12/31 | 1/2 1/4 | 1/6 1/8 | 1/10 | | |
| 500 | | Т | Turbidity | | | | | | |
| 400 300 200 | | | | | 14 | | | | |
| 100 | - 1 10 1 | | | A å | A: \ | | | | |
| 12/7 12/9 12/ | 11 12/13 12/15 12/17 1 | 2/19 12/21 12/23 | 12/25 12/27 | 12/29 12/31 | 1/2 1/4 | 1/6 1/8 | 1/10 | | |
| SCDHEC in-stream standa | ard: All pH values not less than 6.0 and not | more than 8.5 | pH | | | | | | |
| 7.5 | | | | | | | | | |
| 됩 6.5 | | | | ~~~~ | ~~~ | | - | | |
| 6.0 12/7 12/9 12/11 | 12/13 12/15 12/17 12 | /19 12/21 12/23 | 12/25 12/27 | 12/29 12/31 | 1/2 1/4 | 1/6 1/8 | 1/10 | | |
| | | | | | | | | | |
| 0.4 | | Spec | cific Conductivity | | | | | | |
| | | | | | | | _ | | |
| \$\frac{\pi}{\mathbf{E}} \frac{0.3}{0.2} | | | | | | | ~_ | | |
| 0.0 12/7 12/9 12/2 | 1 12/13 12/15 12/17 1 | 2/19 12/21 12/23 | 12/25 12/27 | 12/29 12/31 | 1/2 1/4 | 1/6 1/8 | 1/10 | | |
| SCDHEC in-stream stan | dard: Daily average not less than 5 mg/L w | ith a low of 4 mg/l | Dissolved Oxygen | | | 4 mg/L (SCDHEC L | ow Standard) | | |
| 14 | 22.2.2 2.3.y average not less than 3 Hig/E w | I I I I I I I I I I I I I I I I I I I | - SSSIVEN ON YEET | | | | | | |
| 7 10 E 6 | ~~~~ | | | | ~~~ | ~ | - | | |
| | | -+ | | | | | | | |
| 2 + | 11 12/13 12/15 12/17 1 | 2/19 12/21 12/23 | | 12/29 12/31 | 1/2 1/4 | 1/6 1/8 | | | |

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 (December 7, 2022 - January 10, 2023)

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 | |
|---------------------------------|----------|---------|----------|---------|----------|---------|----------|---------|
| | 1/4/2023 | | 1/4/2023 | | 1/4/2023 | | 1/4/2023 | |
| | Time | Results | Time | Results | Time | Results | Time | Results |
| Escherichia coli (MPN/100mL) | 9:50 | 398 | 11:15 | 16,330 | 12:15 | 8,212 | 14:15 | 3,030 |
| Total Suspended Solids (mg/L) | 9:50 | 43.1 | 11:15 | 513.0 | 12:15 | 253 | 14:15 | 120 |
| Total Phosphorus (mg/L) | 9:50 | 0.180 | 11:15 | 0.620 | 12:15 | 0.500 | 14:15 | 0.340 |
| Total Nitrogen (mg/L) | 9:50 | 1.62 | 11:15 | 2.77 | 12:15 | 1.23 | 14:15 | 0.86 |

All samples were collected during wet weather conditions.

Notes:

Data Gaps

There were gaps in stage data on 12/17 and 1/9, which were likely due to equipment communication failure.

Potential Illicit Discharges and Abnormal Events:

Specific conductivity increased several times during the monitoring period, which may have been a result of the Maxcy Gregg pool discharge.

Continuous Water Quality Monitoring Periodic Report

Rocky Branch B (December 7, 2022 - January 10, 2023)

| | | SUMMARY STATISTICS | | | | | |
|---|---|--------------------------------|---------------------|--------------------|------------------|-----------------------|--------------|
| PARAMETER | DESCRIPTION | MINIMUM OBSERVED | MAXIMUM OBSERVED | MEDIAN OBSERVED | MEAN OBSERVED | STANDARD DEVIATION | |
| STREAM NAME: | Rocky Branch | STAGE (FT): | 3.3 | 7.4 | 3.4 | 3.5 | 0.2 |
| LOCATION: | Olympia Ave Crossing | | | | | | |
| ADDRESS: | 510 Heyward St Columbia, SC 29201 | TEMPERATURE (°F): | 41 | 65 | 55 | 54 | 5 |
| COORDINATES: | 33.982578, -81.035036 | TURBIDITY (NTU): | 3 | 212 | 8 | 17 | 22 |
| TMDL/IMPAIRMENT: | Fecal Coliform | | Ŭ | 212 | ŭ | ., | |
| NEIGHBORING LANDUSE: | Residential and commercial | pH: | 6.7 | 7.5 | 7.0 | 7.0 | 0.1 |
| SPATIAL LOCATION: | Most Downstream Site | SDECIFIC | | | | | |
| TOTAL NO. STORMS OVER 0.1 INCH: | 7 | SPECIFIC CONDUCTIVITY (mS/cm): | 0.034 | 0.230 | 0.171 | 0.163 | 0.033 |
| MAX. DAILY RAINFALL: TOTAL RAINFALL (FOR | 0.6 inches 3.0 inches | DISSOLVED OXYGEN (mg/L): | 7.8 | 12.2 | 9.6 | 9.8 | 0.9 |
| PERIOD): | | <u> </u> | | | | | |
| 18 | | Stage & Rainf | all | | - 1 | | 0.0 |
| # 14 # 10 | | | | | | | 0.5 |
| 12/7 12/9 12/11 | 12/13 12/15 12/17 12/2 | 19 12/21 12/23 12/2! | 5 12/27 12/ | /29 12/31 | 1/2 1/4 | 1/6 1/8 | 1/10 |
| | | | | | | | |
| 70 | | Water Tem | пр | | | | |
| 60 | ~~~ | | | | | ~~~ | |
| 40 30 | | | | | | | |
| 12/7 12/9 12/11 | 12/13 12/15 12/17 12/ | 19 12/21 12/23 12/2 | 25 12/27 12 | /29 12/31 | 1/2 1/4 | 1/6 1/8 | 1/10 |
| | | Turbidity | 1 | | | | |
| 200 | | | | | | | |
| P 200 | - M | | | | | | |
| 0 | 11 12/13 12/15 12/17 1 | 2/19 12/21 12/23 12, | /25 12/27 1 | 2/29 12/31 | 1/2 1/4 | 1/6 1/8 | 1/10 |
| SCDHEC in-stream standa | rd: All pH values not less than 6.0 and not r | nore than 8.5 pH | | | | | |
| 8.0 | | | | | | | |
| T 7.0 | ~~~ | mm | ~ | | | | |
| 6.5 12/7 12/9 12/11 | 12/13 12/15 12/17 12, | /19 12/21 12/23 12/ | 25 12/27 12 | 2/29 12/31 | 1/2 1/4 | 1/6 1/8 | 1/10 |
| | | | | | | | |
| 0.3 | | Specific Cond | ductivity | | | | |
| ₩ 0.2 ₩ 0.1 | ~~~ | <u> </u> | ~~~ | ~~~ <u>~</u> | | ~~~ | ─ |
| ê 0.1 0.0 | | | | | | | |
| 12/7 12/9 12/1 | 1 12/13 12/15 12/17 12 | 2/19 12/21 12/23 12/ | /25 12/27 1 | 2/29 12/31 | 1/2 1/4 | 1/6 1/8 | 1/10 |
| SCDHEC in-stream star | ndard: Daily average not less than 5 mg/L v | vith a low of 4 mg/L Dissolved | Oxygen | | | - A mall ISCOURCE | ou Standard) |
| 14 12 10 10 8 8 6 | , , , , , , , , , , , , , , , , , , , | Dissolveu | | | | 4 mg/L (SCDHEC L | ow Standard) |
| // B m | | | | | ~~~ | | |
| 12/7 12/9 12/1 | .1 12/13 12/15 12/17 13 | 2/19 12/21 12/23 12 | 2/25 12/27 1 | 12/29 12/31 | 1/2 1/4 | 1/6 1/8 | 1/10 |
| ,,- 12/1 | , - ,, | | | , | , -, - | | |

Note: Data gaps appear when the sonde is removed for calibration or when the flow depth is below the sensors

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Sampled Data:

| | Sample 1 | | Sample 2 | | Sample 3 | | |
|---------------------------------|----------|---------|----------|---------|----------|---------|--|
| Analyte (units) | 1/4/2023 | | 1/4/2023 | | 1/4/2023 | | |
| | Time | Results | Time | Results | Time | Results | |
| Escherichia coli (MPN/100mL) | 12:45 | 3,870 | 13:15 | 6,510 | 14:25 | 5,190 | |
| Total Suspended Solids (mg/L) | 12:45 | 139.0 | 13:15 | 203.0 | 14:25 | 118 | |
| Total Phosphorus (mg/L) | 12:45 | 0.43 | 13:15 | 0.51 | 14:25 | 0.43 | |
| Total Nitrogen (mg/L) | 12:45 | 1.52 | 13:15 | 1.68 | 14:25 | 1.32 | |

All samples were collected during wet weather conditions.

Notes:

Data Gaps

DO and turbidity had a data gap from 1/4 - 1/5 due to sensor fouling. There were gaps in stage data on 12/17 and 1/6, which were likely due to equipment communication failure.

Potential Illicit Discharges and Abnormal Events:

Specific conductivity increased several times during the monitoring period, which may have been a result of the Maxcy Gregg pool discharge.