Gills Creek Monitoring Sites Monitoring Data Summary for June 4th, 2020 – July 19th, 2020

Data Gaps

- The GILA station experienced turbidity sensor fouling from June 13th to June 18th, June 23rd to June 24th, and June 26th to June 29th. GILA station DO and pH sensors experienced fouling from June 23rd to June 24th and June 26th to June 29th. These periods of data were removed from the dataset.
- The GILB station experienced turbidity sensor fouling from June 27th to June 29th. This period of turbidity data was removed from the dataset.
- The GILC station experienced turbidity sensor fouling from July 1st to July 4th, July 4th to July 5th, and July 18th to July 19th. These periods of turbidity data were removed from the dataset.

SCDHEC Standards

- None of the Gills Creek monitoring stations recorded any pH readings outside of the acceptable SCDHEC range of 6 to 8.5
- The GILA station recorded an average DO value of 7.3 mg/L, the GILB station recorded an average DO value of 6.5 mg/L, and the GILC station recorded an average DO value of 5.8 mg/L, all of which are above the SCDHEC daily average DO standard of 5 mg/L.
- During this deployment period, the GILA, GILB, and GILC stations recorded minimum DO levels of 6.1 mg/L, 5.1 mg/L, and 4.7 mg/L, respectively. All stations did not record any DO values below the SCDHEC instantaneous minimum standard of 4 mg/L.

Storm Events

- The GILA station recorded 13 storm events resulting in approximately 7.4 inches of rainfall. The GILB station recorded 14 storms that resulted in approximately 7.0 inches of rainfall. The GILC station recorded 9 storms that resulted in approximately 5.6 inches of rainfall.
- The monitored water quality parameters all displayed typical storm event response patterns during the recorded storm events in the Gills Creek watershed.

Potential Illicit Discharges and Abnormal Events

- At the GILA station, the specific conductivity increased several times during this deployment period. These specific conductivity spikes occurred on the following dates: June 9th, June 19th, July 6th-7th, and July 14th.
- At the GILB station, the specific conductivity increased several times during this deployment period. These specific conductivity spikes occurred on the following dates: June 10th and July 6th-7th.

Flow Measurements

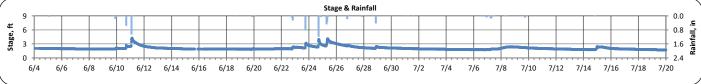
No flow measurements were taken in Gills Creek during this monitoring period.

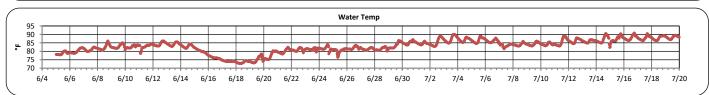


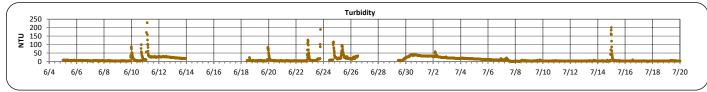
Continuous Water Quality Monitoring Periodic Report

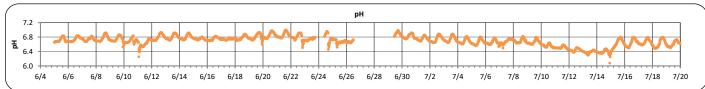


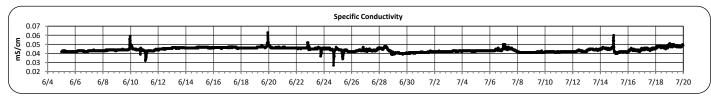
| Gills Creek A (June 4, 2020 - July 19, 2020) | | | | | | | | | |
|--|--|---------------------------|---------------------|---------------------|--------------------|------------------|-----------------------|--|--|
| | | CONTINUOUS | SUMMARY STATISTICS | | | | | | |
| PARAMETER | DESCRIPTION | WATER QUALITY PARAMETERS: | MINIMUM OBSERVED | MAXIMUM OBSERVED | MEDIAN OBSERVED | MEAN OBSERVED | STANDARD DEVIATION | | |
| STREAM NAME: | Gills Creek | STAGE (FT): | 1.8 | 4.3 | 2.0 | 2.1 | 0.4 | | |
| LOCATION: | Forest Drive Bridge | | | | | | | | |
| ADDRESS: | 4840 Forest Drive, Columbia, SC 29206 | TEMPERATURE (°F): | 73 | 91 | 83 | 83 | 4 | | |
| COORDINATES: | 34.019826, -80.963566 | TURBIDITY (NTU): | 1 | 230 | 6 | 13 | 16 | | |
| TMDL/IMPAIRMENT: | Fecal & Dissolved Oxygen | | | | | | | | |
| NEIGHBORING LANDUSE: | Residential and commercial | pH: | 6.1 | 7.0 | 6.7 | 6.7 | 0.1 | | |
| APPROX. DRAINAGE AREA: | 48 square miles | pri. | 0.1 | | | | | | |
| SPATIAL LOCATION: | Most upstream site | SPECIFIC | | | | | | | |
| TOTAL NO. STORMS OVER 0.1 INCH: | 13 | CONDUCTIVITY (mS/cm): | 0.027 | 0.063 | 0.044 | 0.044 | 0.002 | | |
| MAX. DAILY RAINFALL: | 1.3 inches | DISSOLVED | | | 7.4 | 7.3 | 0.5 | | |
| TOTAL RAINFALL (FOR PERIOD): | 7.4 inches | OXYGEN (mg/L): | 6.1 | 8.5 | | | | | |
| | | Stage & Raint | fall | | | | | | |
| Sage 3 | | | | | | | 7.4 Rainfall in 0.0 | | |

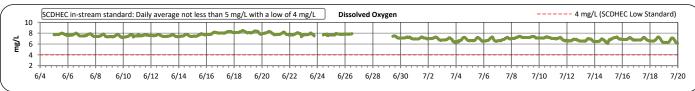












Note: Data gaps appear when the sonde is removed for calibration or when the flow depth is below the sensors

Continuous Water Quality Monitoring Periodic Report

Gills Creek A (June 4, 2020 - July 19, 2020)

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:

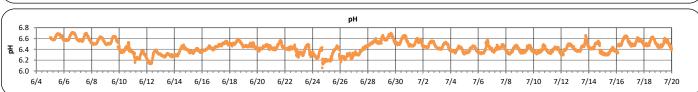
No samples were taken at GILA during this monitoring period.

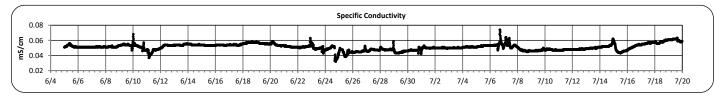


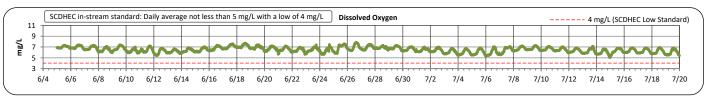
Continuous Water Quality Monitoring Periodic Report



| | | CONTINUOUS | TICS | | | | | |
|------------------------------------|---|-------------------------------------|---------------------|---------------------|--------------------|------------------|--|--|
| PARAMETER | DESCRIPTION | WATER QUALITY PARAMETERS: | MINIMUM OBSERVED | MAXIMUM OBSERVED | MEDIAN OBSERVED | MEAN OBSERVED | STANDARI DEVIATIO | |
| STREAM NAME: | Gills Creek | DISCHARGE (CFS): | 34.9 | 469.0 | 58.3 | 81.7 | 63.5 | |
| LOCATION: ADDRESS: | Devine Street bridge 4716 Devine Street | TEMPERATURE (°F): | 71 | 93 | 83 | 82 | 4 | |
| COORDINATES: | Columbia, SC 29209 33.989656, -80.97433 | TURRIDITY (AITU). | 6 | 579 | 25 | 48 | 74 | |
| TMDL/IMPAIRMENT: | Fecal & Dissolved Oxygen | TURBIDITY (NTU): | 0 | 579 | 25 | 46 | /4 | |
| NEIGHBORING LANDUSE: | Residential and commercial | pH: | 6.1 | 6.7 | 6.4 | 6.4 | 0.1 | |
| APPROX. DRAINAGE AREA: | 59 square miles | | | | | | | |
| SPATIAL LOCATION: | Middle site | SPECIFIC | | 0.074 | 0.051 | 0.051 | 0.004 | |
| TOTAL NO. STORMS OVER 0.1 INCH: | 14 | CONDUCTIVITY (mS/cm): | 0.032 | | | | | |
| MAX. DAILY RAINFALL: | 1.5 inches | DISSOLVED | | 7.9 | | 6.5 | | |
| TOTAL RAINFALL (FOR PERIOD): | 7.0 inches | OXYGEN (mg/L): | 5.1 | | 6.6 | | 0.5 | |
| This discharge data is fr | om the USGS 02169570 Gills Creek station. 10 6/12 6/14 6/16 6/18 6/2 | Discharge & R 0 6/22 6/24 6/26 6/28 | " " | 7/4 7/6 7/ | (8 7/10 7/12 | 7/14 7/16 7, | 0.00 0.75 1.50 2.25 /18 7/20 | |
| 95 | | Water Tem | ıp | | | | | |
| 85 75 66/4 6/6 6/8 6/4 | 10 6/12 6/14 6/16 6/18 6/2 | 0 6/22 6/24 6/26 6/2 | 28 6/30 7/2 | 7/4 7/6 7 | /8 7/10 7/12 | 7/14 7/16 | 7/18 7/20 | |
| 600 | | Turbidity | | | | | | |
| P 300 | 6/10 6/12 6/14 6/16 6/18 6 | /20 6/22 6/24 6/26 6/ | /28 6/30 7/2 | 7/4 7/6 | 7/8 7/10 7/12 | 7/14 7/16 | 7/18 7/20 | |







Continuous Water Quality Monitoring Periodic Report

Gills Creek B (June 4, 2020 - July 19, 2020)

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) | Sam | ple 1 | Sam | ple 2 | Sample 3 | | Sample 4 | | | |
|------------------|-------|-----------|-------|---------|----------|---------|----------|---------|--|--|
| | 6/22, | 6/22/2020 | | | | | | | | |
| | Time | Results | Time | Results | Time | Results | Time | Results | | |
| Escherichia coli | 12:02 | 426 | | | | | | | | |
| (MPN/100mL) | | 420 | | | | | | | | |
| Total Suspended | 12:02 | 12.02 | 12.02 | 14 | | | | | | |
| Solids (mg/L) | | 14 | | | | | | | | |
| Total Phosphorus | | | | | | | | | | |
| (mg/L) | | | | | | | | | | |
| Total Nitrogen | | | | | | | | | | |
| (mg/L) | | | | | | | | | | |

Notes:

Sample 1 was taken during dry weather conditions.



Continuous Water Quality Monitoring Periodic Report



Gills Creek C (June 4, 2020 - July 19, 2020)

| | CONTINUOUS | | | SUMMARY STATISTICS | | | | | |
|---------------------------------------|---|--|---------------------|---------------------|---|--------------------|-----------------------|--|--|
| PARAMETER | DESCRIPTION | WATER QUALITY PARAMETERS: | MINIMUM OBSERVED | MAXIMUM OBSERVED | MEDIAN OBSERVED | MEAN OBSERVED | STANDARD DEVIATION | | |
| STREAM NAME: | Gills Creek | STAGE (FT): | 3.1 | 7.2 | 3.7 | 4.0 | 0.9 | | |
| LOCATION: | Bluff Road bridge | TEMPERATURE (%F) | 00 | 0.7 | 00 | 00 | 4 | | |
| ADDRESS: | 3009 Bluff Rd. Columbia, SC 29209 | TEMPERATURE (°F): | 69 | 87 | 80 | 80 | 4 | | |
| COORDINATES: | 33.948043, -80.9889 | TURRIDITY (MTU) | 7 | 440 | 44 | 40 | 44 | | |
| TMDL/IMPAIRMENT: | Fecal & Dissolved Oxygen | TURBIDITY (NTU): | 7 | 119 | 14 | 18 | 11 | | |
| NEIGHBORING LANDUSE: | Residential and commercial | -11- | 0.4 | 0.0 | 0.4 | 0.4 | 0.4 | | |
| APPROX. DRAINAGE AREA: | 64 square miles | pH: | 6.1 | 6.6 | 6.4 | 6.4 | 0.1 | | |
| SPATIAL LOCATION: | Most downstream site | SPECIFIC | | | | | | | |
| TOTAL NO. STORMS OVER 0.1 INCH: | 9 | CONDUCTIVITY (mS/cm): | 0.044 | 0.075 | 0.064 | 0.064 | 0.005 | | |
| MAX. DAILY RAINFALL: | 1.33 inches | DISSOLVED | 4.7 | 7.1 | 5.7 | 5.8 | 0.5 | | |
| TOTAL RAINFALL (FOR PERIOD): | 5.6 inches | OXYGEN (mg/L): | | | O | 0.0 | 0.0 | | |
| | | Stage & Rain | fall | | | | | | |
| ± 8 | r. | | 4 | Y | | | 0.0 | | |
| 8 6 | | | | | | | 0.5 1.0 1.5 | | |
| 5 4 2 | | | | | | | 2.0 | | |
| 6/4 6/6 6/8 6/2 | 10 6/12 6/14 6/16 6/18 6/2 | 20 6/22 6/24 6/26 6/2 | 8 6/30 7/2 | 7/4 7/6 7 | /8 7/10 7/12 | 7/14 7/16 7 | /18 7/20 | | |
| | | | | | | | | | |
| 90 | | Water Tem | р | | | | | | |
| 85 | | | 0000 | ~~~~ | ~~~ | ~~~ | ~ ~ | | |
| ₽ 80 75 | ~ | ~ | | | | | | | |
| 70 65 | | | | | | | | | |
| 6/4 6/6 6/8 6/ | 10 6/12 6/14 6/16 6/18 6/ | 20 6/22 6/24 6/26 6/ | 28 6/30 7/2 | 7/4 7/6 | 7/8 7/10 7/12 | 7/14 7/16 | 7/18 7/20 | | |
| | | | | | | | | | |
| 125 | | Turbidity | | | | | | | |
| P 75 | | | | | | | | | |
| E 75 50 25 | | ما تا الصديد | | | Name of the local division in the last of | | | | |
| 0 | 6/10 6/12 6/14 6/16 6/18 | 5/20 6/22 6/24 6/26 6 | 3/28 6/30 7/2 | 7/4 7/6 | | 7/14 7/16 | 7/18 7/20 | | |
| 6/4 6/6 6/8 | 0/10 0/12 0/14 0/10 0/18 (| 3/20 0/22 0/24 0/20 0 | 1/28 0/30 1/2 | 7/4 7/0 | 7/8 7/10 7/12 | . 7/14 7/10 | 7/16 7/20 | | |
| | | рН | | | | | | | |
| 6.8 | | | | | | | | | |
| 표 6.4 | | ~ | ~~~ | ~~~ | | ~ ~ | ~ ~ | | |
| 6.2 | | - WW | | | | | | | |
| 6.0 + | 10 6/12 6/14 6/16 6/18 6/ | (20 6/22 6/24 6/26 6 | /28 6/30 7/2 | 7/4 7/6 | 7/8 7/10 7/12 | 7/14 7/16 | 7/18 7/20 | | |
| | | | | | | | | | |
| | | Specific Conc | luctivity | | | | | | |
| 0.08 | | | | | | | | | |
| 0.07 0.06 0.05 | day | ~~~ | | | 7 | ~~~ | | | |
| | M | TWO THE PERSON NAMED IN COLUMN TO TH | + + + + | | + + + | - | | | |
| 0.04 | /10 6/12 6/14 6/16 6/18 6 | 5/20 6/22 6/24 6/26 6 | i/28 6/30 7/2 | 7/4 7/6 | 7/8 7/10 7/1 | | 7/18 7/20 | | |
| 6/4 6/6 6/8 6 | ,10 0/12 0/14 0/10 0/18 b | ,,20 0,22 0,24 0,26 b | 1/20 0/30 //2 | //4 //0 | //0 //10 //1 | 2 //14 //10 | //10 //20 | | |
| | ard: Daily average not less than 5 mg/L wit | h a low of 4 mg/L Dissolv | ed Oxygen | | | 4 mg/L (SCDHEC Lov | Standard) | | |
| 10 | | | | | | | | | |
| . 8 + | | | 1 1 1 | | | | | | |
| 1 6 1 1 1 1 1 1 1 1 1 1 | | ~~~~~ | | ~~~ | | ~~~ | ~~~ | | |
| | | | ~~~ | | | ~~~ | ^~~ | | |

6/4 6/6

6/8

7/6

7/8 7/10 7/12 7/14 7/16 7/18 7/20

6/10 6/12 6/14 6/16 6/18 6/20 6/22 6/24 6/26 6/28 6/30 7/2 7/4

Continuous Water Quality Monitoring Periodic Report

Gills Creek C (June 4, 2020 - July 19, 2020)

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) | Sam | ple 1 | Sam | ple 2 | Sample 3 | | Sample 4 | |
|---------------------------------|-----------|---------|------|---------|----------|---------|----------|---------|
| | 6/22/2020 | | | | | | | |
| | Time | Results | Time | Results | Time | Results | Time | Results |
| Escherichia coli (MPN/100mL) | 11:37 | 1,446 | | | | | | |
| Total Suspended Solids (mg/L) | 11:37 | 11.7 | | | | | | |
| Total Phosphorus | | | | | | | | |
| (mg/L) | | | | | | | | |
| Total Nitrogen | | | | | | | | |
| (mg/L) | | | | | | | | |

Notes:

All samples were taken during dry weather conditions.