## Smith Branch Monitoring Sites Monitoring Data Summary for September 25<sup>th</sup>, 2020 – October 29<sup>th</sup>, 2020

#### Data Gaps

- The SMIA station experienced a period of fouling turbidity data from October 1<sup>st</sup>-10<sup>th</sup> so that period of data was removed from the dataset. No DO data was available for this reporting period because the sensor was out of commission due to repairs. The station experienced a brief gap in reporting on October 26<sup>th</sup> which affected all the sonde sensors.
- DO data at the SMIB station was not available for this reporting period because the sensor was out of commission due to repairs. Stage and rainfall data were also not available during this reporting period.

#### SCDHEC Standards

The SMIA and SMIB stations did not record any pH values outside the acceptable SCDHEC range of 6 to 8.5.

#### Storm Events

- The SMIA rain gauge recorded 5 storms (at least 0.1 inches) in this monitoring period resulting in 1.9 inches of precipitation. The SMIB rain gauge data was not available due to the power regulator issues at the site.
- The SMIA and SMIB monitoring stations recorded typical water quality responses to the storm events observed during this monitoring period.

### Potential Illicit Discharges and Abnormal Events

• At the SMIA and SMIB stations, there was an increase in pH and specific conductivity on October 2<sup>nd</sup>-3<sup>rd</sup> and October 8<sup>th</sup> that may have been the result of illicit discharges.

#### Flow Measurements

• No flow measurements were taken in this watershed during this monitoring period.



# **Continuous Water Quality Monitoring Periodic Report**



### Smith Branch A (September 25, 2020 - October 29, 2020)

|   |   | CONTINUOUS                     | SUMMARY STATISTICS      |                     |                    |                  |                       |  |
|---|---|--------------------------------|-------------------------|---------------------|--------------------|------------------|-----------------------|--|
| PARAMETER   | DESCRIPTION   | WATER QUALITY PARAMETERS:      | MINIMUM<br>OBSERVED     | MAXIMUM<br>OBSERVED | MEDIAN<br>OBSERVED | MEAN<br>OBSERVED | STANDARD<br>DEVIATION |  |
| STREAM NAME:  | Smith Branch  | STAGE (FT):                    | 1.5                     | 3.4                 | 1.6                | 1.6              | 0.2                   |  |
| LOCATION:   | Earlewood Park  |                                |                         |                     |                    |                  |                       |  |
| ADDRESS:  | 1111 Parkside Dr<br>Columbia, SC 29201                  | TEMPERATURE (°F):              | 61                      | 77                  | 69                 | 69               | 3                     |  |
| COORDINATES:  | 34.027289,-81.04265                                     | TURBIDITY (NTU):               | 2 158                   | 158                 | 5                  | 10               | 16                    |  |
| TMDL/IMPAIRMENT:  | Fecal Coliform  | , ,                            |                         |                     |                    |                  |                       |  |
| NEIGHBORING<br>LANDUSE:   | Residential and commercial                              | pH:                            | 6.3                     | 7.7                 | 6.8                | 6.8              | 0.1                   |  |
| SPATIAL LOCATION:   | Most upstream site                                      |                                |                         |                     |                    |                  |                       |  |
| TOTAL NO. STORMS<br>OVER 0.1 INCH:  | 5   | SPECIFIC CONDUCTIVITY (mS/cm): | 0.057                   | 0.181               | 0.145              | 0.137            | 0.021                 |  |
| MAX. DAILY RAINFALL:  | 0.4 inches  | DISSOLVED                      |                         |                     |                    |                  | -                     |  |
| TOTAL RAINFALL<br>(FOR PERIOD):   | 1.9 inches  | OXYGEN (mg/L):                 | -                       | -                   | -                  | -                |                       |  |
|   |   | Stage & Rain                   | fall                    |                     |                    |                  |                       |  |
| # 6   |   |                                | IF.                     |                     |                    | П                | 0.0                   |  |
| # 4   |   |                                |                         |                     |                    | <del>-</del>     | 0.6                   |  |
| 9/25 9/27 9/29  | 10/1 10/3 10/5 1  | 0/7 10/9 10/11 10/1            | 3 10/15 10/             | /17 10/19 10        | 0/21 10/23         | 10/25 10/27      | 10/29 0.9             |  |
|   |   | Water Ten                      | пр                      |                     |                    |                  |                       |  |
| 80 75   |   | 1                              | A                       |                     |                    |                  |                       |  |
| ₽ 70<br>65  | Www.  | ~~                             |                         |                     | ~~                 |                  |                       |  |
| 9/25 9/27 9/29  | 10/1 10/3 10/5 1  | 0/7 10/9 10/11 10/1            | 3 10/15 10,             | /17 10/19 1         | 0/21 10/23         | 10/25 10/27      | 10/29                 |  |
| 200   |   | Turbidit                       | <b>y</b>                |                     |                    |                  |                       |  |
| 150<br>100  | •   |                                |                         |                     |                    |                  |                       |  |
| 50  | <u> </u>  |                                | 100                     | <u> </u>            |                    |                  |                       |  |
| 9/25 9/27 9/2   | 9 10/1 10/3 10/5  | 10/7 10/9 10/11 10             | /13 10/15 1             | .0/17 10/19         | 10/21 10/23        | 10/25 10/27      | 10/29                 |  |
|   |   | рН                             |                         |                     |                    |                  |                       |  |
| 8.0<br>7.5  |   | A                              |                         |                     |                    |                  |                       |  |
| 王 7.0<br>6.5  |   |                                | ~~~                     | ~~                  | ~~~                | ~~~              |                       |  |
| 9/25 9/27 9/29  | 10/1 10/3 10/5  | 10/7 10/9 10/11 10/            | /13 10/15 1             | 0/17 10/19          | 10/21 10/23        | 10/25 10/27      | 10/29                 |  |
|   |   | Specific Con                   | ductivity               |                     |                    |                  |                       |  |
|   |   |                                |                         |                     |                    |                  |                       |  |
| 0.20<br>E 0.15  | ,   |                                |                         |                     |                    |                  | -                     |  |
| 5 0.15<br>0.10<br>0.05  |   |                                |                         |                     |                    |                  |                       |  |
|   | 10/1 10/3 10/5  | 10/7 10/9 10/11 10             | /13 10/15 1             | 10/17 10/19         | 10/21 10/23        | 10/25 10/27      | 10/29                 |  |
| 8 0.15 0.10 0.05 0.00 9/25 9/27 9/29                                      |   |                                |                         | 10/17 10/19         | 10/21 10/23        |                  |                       |  |
| 0.15<br>0.10<br>0.05<br>0.00<br>9/25 9/27 9/29<br>DO data not available b | 10/1 10/3 10/5  recause sensor was removed for repairs. |                                | /13 10/15 1<br>d Oxygen | 10/17 10/19         | 10/21 10/23        | 10/25 10/27      |                       |  |
| 8 0.15 0.10 0.05 0.00 9/25 9/27 9/29                                      |   |                                |                         | 10/17 10/19         | 10/21 10/23        |                  |                       |  |

# Continuous Water Quality Monitoring Periodic Report

Smith Branch A (September 25, 2020 - October 29, 2020)

## **Explanation of Statistics:**

| MINIMUM<br>OBSERVED   | The minimum of the values recorded by the datasonde in 15 minute intervals.                |
|-----------------------|--|
| MAXIMUM<br>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<br>DEVIATION | The standard deviation of all the values recorded by the datasonde in 15 minute intervals. |

## Sampled Data:

|                                 | Sample 1   |         | Sample 2 |         | Sample 3 |         | Sample 4 |         |
|---------------------------------|------------|---------|----------|---------|----------|---------|----------|---------|
| Analyte (units)                 | 10/22/2020 |         |          |         |          |         |          |         |
|                                 | Time       | Results | Time     | Results | Time     | Results | Time     | Results |
| Escherichia coli<br>(MPN/100mL) | 11:19      | 4,962   |          |         |          |         |          |         |
| Total Suspended Solids (mg/L)   | 11:19      | 2       |          |         |          |         |          |         |
| Total Phosphorus<br>(mg/L)      |            |         |          |         |          |         |          |         |
| Total Nitrogen<br>(mg/L)        |            |         |          |         |          |         |          |         |

Notes: Sample taken during dry weather conditions.



# Continuous Water Quality Monitoring Periodic Report



## Smith Branch B (September 25, 2020 - October 29, 2020)

|  |   | CONTINUOUS                     | SUMMARY STATISTICS                    |                     |                    |                     |                       |  |
|--|---|--------------------------------|---------------------------------------|---------------------|--------------------|---------------------|-----------------------|--|
| PARAMETER  | DESCRIPTION                             | WATER QUALITY PARAMETERS:      | MINIMUM<br>OBSERVED                   | MAXIMUM<br>OBSERVED | MEDIAN<br>OBSERVED | MEAN<br>OBSERVED    | STANDARD<br>DEVIATION |  |
| STREAM NAME:   | Smith Branch                            | STAGE (FT):                    | -                                     | -                   | -                  | -                   | -                     |  |
| LOCATION:  | Off Mountain Drive                      |                                |                                       |                     |                    | 68                  |                       |  |
| NEAREST ADDRESS:   | 3950 Clement Rd<br>Columbia, SC 29203   | TEMPERATURE (°F):              | 59                                    | 76                  | 69                 |                     | 3                     |  |
| COORDINATES:   | 34.037933,-81.0591                      | TURBIDITY (NTU):               | 2                                     | 224                 | 4                  | 7                   | 14                    |  |
| TMDL/IMPAIRMENT:   | Fecal Coliform                          | TOKBIDITT (NTO).               | 2                                     | 224                 | 4                  | ,                   | 14                    |  |
| NEIGHBORING<br>LANDUSE:  | Residential and commercial              | pH:                            | 6.5                                   | 7.7                 | 7.0                | 7.0                 | 0.2                   |  |
| SPATIAL LOCATION:  | Most Downstream Site                    | ·                              |                                       |                     |                    |                     |                       |  |
| TOTAL NO. STORMS<br>OVER 0.1 INCH:   | 0                                       | SPECIFIC CONDUCTIVITY (mS/cm): | 0.054                                 | 0.168               | 0.134              | 0.126               | 0.021                 |  |
| MAX. DAILY RAINFALL:   | 0.0 inches                              | DISSOLVED OXYGEN               |                                       |                     |                    | -                   |                       |  |
| TOTAL RAINFALL (FOR PERIOD):   | 0.0 inches                              | (mg/L):                        | -                                     | -                   | -                  |                     | -                     |  |
|  | available due to site reporting issues. | Stage & Rainf                  | all                                   |                     | •                  | •                   | •                     |  |
| g 9  |   |                                |                                       |                     |                    |                     | 0.0                   |  |
| Stage,   |   |                                |                                       |                     |                    |                     | 0.5                   |  |
| 9/25 9/27 9/29   | 10/1 10/3 10/5 10                       | /7 10/9 10/11 10/13            | 3 10/15 10/2                          | 17 10/19 10         | )/21 10/23 1       | 10/25 10/27         | 10/29                 |  |
|  |   | Water Tem                      | n                                     |                     |                    |                     |                       |  |
| 85   | _                                       |                                | <u>-</u>                              |                     |                    |                     |                       |  |
| , 75<br>65   | mon                                     | www                            | V~~                                   | WAN Y               | m                  | ~~~                 |                       |  |
| 9/25 9/27 9/29   | 10/1 10/3 10/5 1                        | )/7 10/9 10/11 10/1            | 3 10/15 10/                           | /17 10/19 1         | 0/21 10/23         | 10/25 10/27         | 10/29                 |  |
|  |   |                                |                                       |                     |                    |                     |                       |  |
| 300  |   | Turbidity                      |                                       |                     |                    |                     |                       |  |
| P 200  |   |                                |                                       |                     |                    |                     |                       |  |
| 9/25 9/27 9/2  | 9 10/1 10/3 10/5                        | 10/7 10/9 10/11 10,            | /13 10/15 10                          | 0/17 10/19          | 10/21 10/23        | 10/25 10/27         | 10/29                 |  |
| 5)25 5)21 5)1  | 3 10/1 10/3 10/3                        | 10/7 10/3 10/11 10/            | 15 10/15 10                           | 0/17 10/13          | 10/21 10/23        | 10/25 10/27         | 10/25                 |  |
| 8.0  |   | рН                             |                                       |                     |                    |                     |                       |  |
| 7.5<br>五 7.0   |   |                                | ~~~                                   | ~~~                 |                    | 1                   |                       |  |
| 6.5  |   |                                | \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ |                     |                    |                     |                       |  |
| 9/25 9/27 9/29   | 10/1 10/3 10/5 1                        | 0/7 10/9 10/11 10/             | 13 10/15 10                           | )/17 10/19          | 10/21 10/23        | 10/25 10/27         | 10/29                 |  |
|  |   |                                |                                       |                     |                    |                     |                       |  |
| 0.20   |   | Specific Cond                  | ductivity                             |                     |                    |                     |                       |  |
| \$\sum_{0.10} \\ 0.10 \\ 0.05 \\ \ 0.05 \\ \ 0.05 \\ \ 0.05 \\ \ 0.05 \\ \ 0.05 \\ \ 0.05 \\ \ 0.05 \\ \ 0.05 \\ \ 0.05 \\ \ \ 0.05 \\ \ \ 0.05 \\ \ \ 0.05 \\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ |   |                                |                                       |                     |                    |                     |                       |  |
| 0.00   | •                                       |                                |                                       |                     |                    |                     |                       |  |
| 9/25 9/27 9/2  | 9 10/1 10/3 10/5                        | 10/7 10/9 10/11 10             | /13 10/15 1                           | 0/17 10/19          | 10/21 10/23        | 10/25 10/27         | 10/29                 |  |
| DO data not available b  | ecause sensor was removed for repairs.  | Dissolved                      | Oxygen                                |                     |                    | - 4 mg/L (SCDHEC Lo | ow Standard)          |  |
| 9  |   |                                |                                       |                     |                    |                     |                       |  |
| 7/8 <b>u</b> 5   |   |                                |                                       |                     |                    |                     |                       |  |
| 3  | 1 1                                     |                                |                                       |                     |                    |                     | 1                     |  |

# Continuous Water Quality Monitoring Periodic Report

Smith Branch B (September 25, 2020 - October 29, 2020)

## **Explanation of Statistics:**

| MINIMUM<br>OBSERVED   | The minimum of the values recorded by the datasonde in 15 minute intervals.                |
|-----------------------|--|
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| MEAN OBSERVED         | The average of all the values recorded by the datasonde in 15 minute intervals.            |
| STANDARD<br>DEVIATION | The standard deviation of all the values recorded by the datasonde in 15 minute intervals. |

## Sampled Data:

No samples were taken at SMIB during this monitoring period.