Gills Creek Monitoring Sites

Monitoring Data Summary for December 2nd, 2020 – January 5th, 2020

Data Gaps

- The GILA station DO sensor was out for repairs, so no DO data was available during this monitoring period. The turbidity and pH sensors were fouled from January 1st to January 5th. These periods of data were removed from the dataset.
- The GILB station experienced turbidity sensor fouling from December 25th to January 5th. The DO sensor was fouled on December 8th, December 9th, and from January 3rd to January 5th. The specific conductivity sensor was fouled from January 1st to January 5th. These periods of data were removed from the dataset.
- The GILC station did not experience any interruptions in the data during this monitoring period.

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 GILB station recorded an average DO value of 10.3 mg/L, and the GILC station recorded an average DO value of 10.0 mg/L, both of which were above the SCDHEC daily average DO standard of 5 mg/L.
- During this deployment period, the GILB and GILC stations recorded minimum DO levels of 8.5 mg/L and 8.5 mg/L, respectively. Both stations did not record DO values below the SCDHEC instantaneous minimum standard of 4 mg/L.

Storm Events

- The GILA station recorded 11 storm events resulting in approximately 7.0 inches of rainfall. The GILB station recorded 11 storms that resulted in approximately 6.2 inches of rainfall. The GILC station recorded 10 storms that resulted in approximately 6.2 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: December 4th, December 7th, December 14th, and December 20th.
- At the GILB station, the specific conductivity increased several times during this deployment period. These specific conductivity spikes occurred on the following dates: December 4th, December 7th, December 14th, December 20th, and December 31st.
- At the GILA station, the specific conductivity increased several times during this deployment period. These specific conductivity spikes occurred on the following dates: December 4th-5th, December 20th, and December 31st.

Flow Measurements

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

Gills Creek A (December 2, 2020 - January 5, 2021)

		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	4.8	2.0	2.2	0.5
LOCATION:	Forest Drive Bridge						
ADDRESS:	4840 Forest Drive, Columbia, SC 29206	TEMPERATURE (°F):	44	55	51	50	2
COORDINATES:	34.019826, -80.963566	TURBIDITY (NTU):	6	129	10	12	8
TMDL/IMPAIRMENT:	Fecal & Dissolved Oxygen						
NEIGHBORING LANDUSE: APPROX. DRAINAGE	Residential and commercial	pH:	6.4	6.9	6.6	6.6	0.1
AREA:	48 square miles						
SPATIAL LOCATION:	Most upstream site	SPECIFIC CONDUCTIVITY	0.039	0.067	0.044	0.045	0.002
TOTAL NO. STORMS OVER 0.1 INCH:	11	(mS/cm):	0.039	0.007	0.044	0.043	0.002
MAX. DAILY RAINFALL:	1.7 inches	DISSOLVED					
TOTAL RAINFALL (FOR PERIOD):	7.0 inches	OXYGEN (mg/L):	-	-	-	-	-
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5 0.05 0.05 0.04	_^	~	<i>i</i>	-	**************************************	M-144-	~_
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DO data not available b	pecause sensor was out for repairs.	Dicealus	d Oxygen			- 4 mg/L (SCDHEC Lo	ow Standard)
10	recease sensor was out for repairs.	Dissolve					Standard,
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12/2 12/4 12/	6 12/8 12/10 12/12 12	2/14 12/16 12/18 12	/20 12/22	12/24 12/26	12/28 12/30	1/1 1/3	1/5

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

Gills Creek A (December 2, 2020 - January 5, 2021)

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 taken at GILA during this monitoring period.

Gills Creek A (December 2, 2020 - January 5, 2021)

DADAMETER	DESCRIPTION		CONTINUOUS		SUMMARY STATISTICS					
PARAMETER				QUALITY ETERS:	MINIMUM OBSERVED	MAXIMUM OBSERVED	MEDIAN OBSERVED	MEAN OBSERVED	STANDARI DEVIATION	
STREAM NAME:	Gills Creek		DISCHA	DISCHARGE (CFS):		577.0	59.2	103.6	110.4	
LOCATION:	Devine Street bridge		TEMPERATURE (°F):		44	59	51	51	3	
ADDRESS:	4716 Devine Street Columbia, SC 29209		TURBIDITY (NTU):			- 55	31	01	, j	
COORDINATES:	33.989656, -80.97433				10	1068	34	45	68	
TMDL/IMPAIRMENT: NEIGHBORING	Fecal & Dissolved Oxyger	\dashv						ļ		
LANDUSE:	Residential and commercia	al			6.1	6.7	6.5	6.5	0.1	
APPROX. DRAINAGE AREA:	59 square miles									
SPATIAL LOCATION:	Middle site		SPECIF CONDU	IC CTIVITY	0.042	0.081	0.050	0.050	0.003	
TOTAL NO. STORMS OVER 0.1 INCH:	11	_	(mS/cm			1.55.			2,000	
MAX. DAILY RAINFALL:	1.5 inches	_	DISSOL		8.5	11.4	10.3	10.3	0.4	
TOTAL RAINFALL (FOR PERIOD):	6.2 inches		OXYGE	N (mg/L):	3.0			10.0		
This discharge data is fi	om the USGS 02169570 Gills Creek s	tation.		Discharge &	Rainfall				0.0	
This discharge data is fi		1		-		7			0.0	
400									0.5 1.0 1.5	
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Note: Data gaps appear when the sonde is removed for calibration or when the flow depth is below the sensors

Gills Creek A (December 2, 2020 - January 5, 2021)

## **Explanation of Statistics:**

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### Sampled Data:

Analyte (units)	Sam	ple 1	Sample 2		Sample 3		Sample 4	
	12/21	12/21/2020						
	Time	Results	Time	Results	Time	Results	Time	Results
Escherichia coli (MPN/100mL)	13:19	168						
Total Suspended Solids (mg/L)	13:19	30						
Total Phosphorus (mg/L)								
Total Nitrogen (mg/L)								

Notes: The sample was taken during dry weather conditions

### Gills Creek A (December 2, 2020 - January 5, 2021)

		CONTINUOUS	SUMMARY STATISTICS					
PARAMETER	DESCRIPTION	WATER QUALITY PARAMETERS:	MINIMUM OBSERVED	MAXIMUM OBSERVED	MEDIAN OBSERVED	MEAN OBSERVED	STANDAR DEVIATION	
STREAM NAME:	Gills Creek	STAGE (FT):	3.5	8.6	4.0	4.4	1.2	
LOCATION:	Bluff Road bridge							
ADDRESS:	3009 Bluff Rd.	TEMPERATURE (°F):	40	58	49	49	3	
COORDINATES:	Columbia, SC 29209 33.948043, -80.9889							
TMDL/IMPAIRMENT:	Fecal & Dissolved Oxygen	TURBIDITY (NTU):	7	108	14	19	15	
NEIGHBORING	Residential and commercial							
LANDUSE: APPROX. DRAINAGE	64 square miles	pH:	6.0	6.4	6.3	6.2	0.1	
AREA: SPATIAL LOCATION:	Most downstream site							
TOTAL NO. STORMS OVER 0.1 INCH:	10	SPECIFIC CONDUCTIVITY (mS/cm):	0.042	0.075	0.06	0.059	0.004	
MAX. DAILY RAINFALL:	1.76 inches	DISSOLVED						
TOTAL RAINFALL (FOR PERIOD):	6.2 inches	OXYGEN (mg/L):	8.5	11.8	10.0	10.0	0.7	
		Stage & Rain	fall	•	ı			
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	Time	Results	Time	Results	Time	Results	Time	Results
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Total Phosphorus (mg/L)								
Total Nitrogen (mg/L)								

Notes: The sample was taken during dry weather conditions.