

Gills Creek Monitoring Sites

Monitoring Data Summary for December 1st, 2017 – January 3rd, 2018

Data Gaps

- The GILA and GILC stations did not experience interruptions in the data record during this monitoring period.
- The GILB station experienced a short period of fouled turbidity data on December 21st which was removed from the dataset.

SCDHEC Standards

- The Gills Creek stations did not record any pH readings outside of the acceptable SCDHEC range of 6 to 8.5.
- The GILA, GILB, and GILC stations recorded average DO concentrations of 10.6 mg/L, 10.2 mg/L, and 9.3 mg/L, respectively, which are well above the SCDHEC daily average standard of 5 mg/L.
- The GILA, GILB, and GILC stations recorded minimum DO levels of 9.1 mg/L, 8.4mg/L, and 7.2 mg/L, respectively, during this deployment. These values are above the SCDHEC instantaneous minimum standard of 4.0 mg/L.

Storm Events

- Each Gills Creek station recorded a total of four storm events during this deployment period, resulting in 4.0 inches, 3.5 inches, and 4.0 inches of total precipitation at the GILA, GILB, and GILC stations, respectively.
- The water quality parameters in the Gills Creek watershed displayed typical storm event response patterns in the turbidity dataset for most of recorded storm events.
- During the storm events on 12/19 and 12/20 at the GILA station and during the 12/20 storm event at the GILC station, the specific conductivity levels were observed to increase, rather than showing a decreasing pattern typical of storm conditions.
- The maximum antecedent dry time since the last significant precipitation event (at least 0.1 inches) was approximately 14.6 days at each Gills Creek station, all occurring before the storm event on December 6th.

Potential Illicit Discharges and Abnormal Events

- Specific conductivity levels increased at GILA during the storm events on 12/19 and 12/20, as well as on 12/20 at GILC.

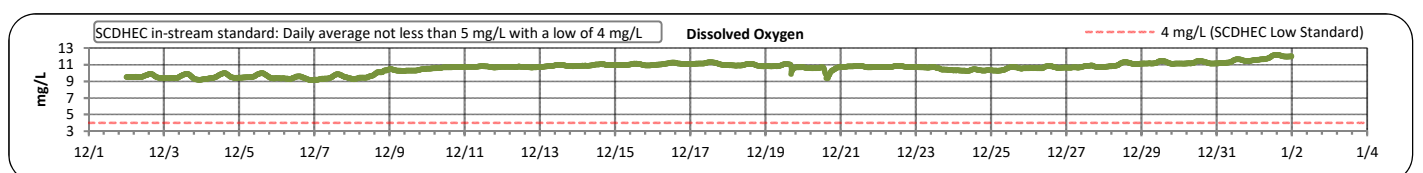
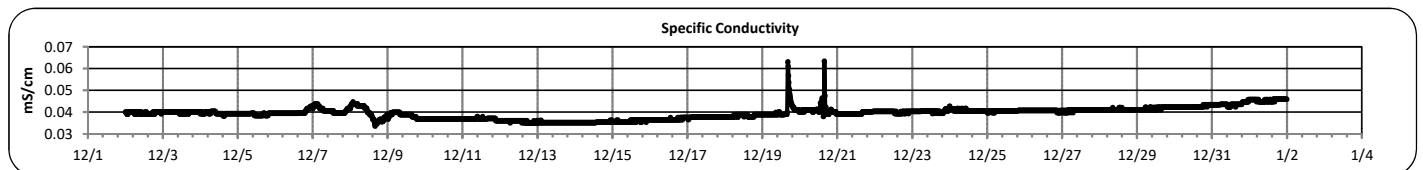
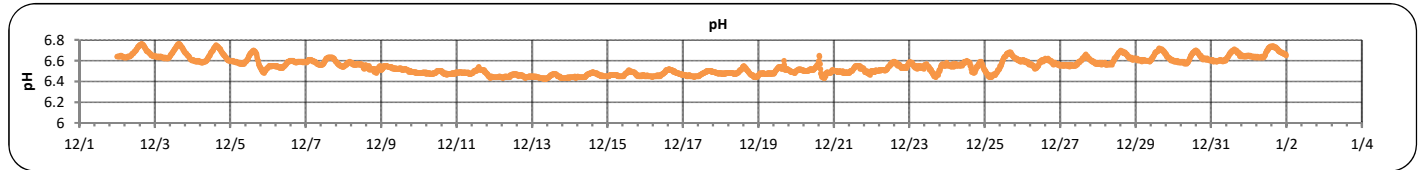
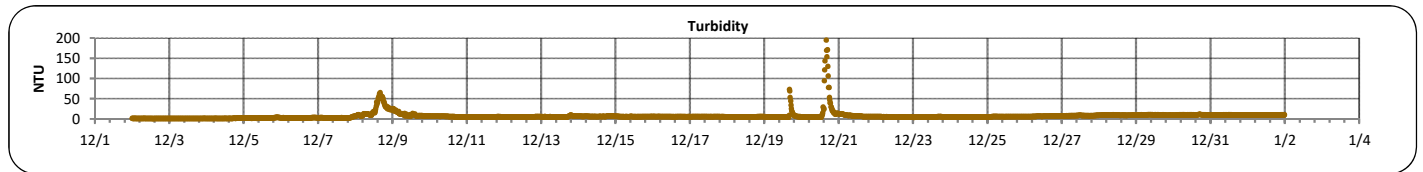
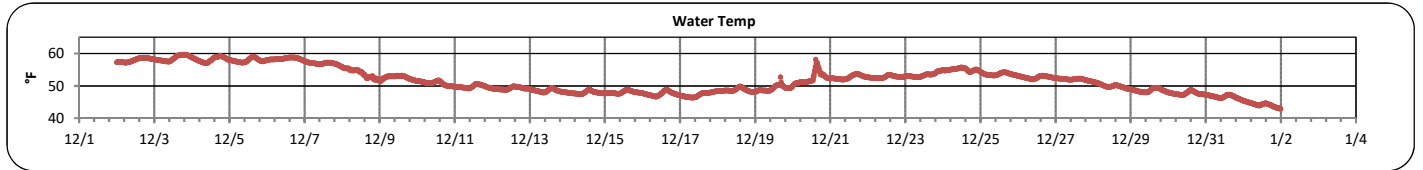
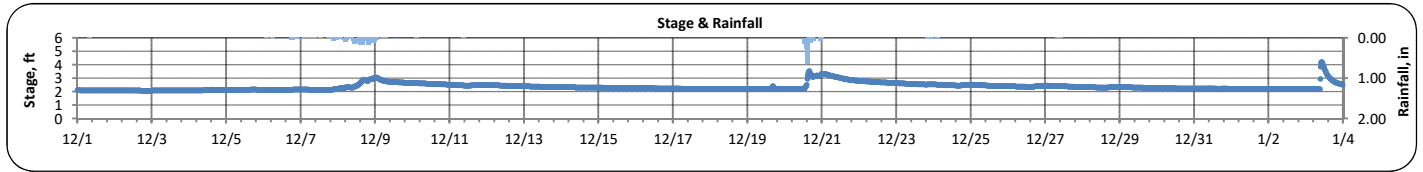
Flow Measurements

- No flow measurements were taken at any of the Gills Creek stations during this monitoring period.

Continuous Water Quality Monitoring Periodic Report

Gills Creek A (December 1, 2017 -- January 3, 2018)

PARAMETER	DESCRIPTION	CONTINUOUS WATER QUALITY PARAMETERS:	SUMMARY STATISTICS				
			MINIMUM OBSERVED	MAXIMUM OBSERVED	MEDIAN OBSERVED	MEAN OBSERVED	STANDARD DEVIATION
STREAM NAME:	Gills Creek	STAGE (FT):	2.1	4.2	2.3	2.4	0.3
LOCATION:	Forest Drive Bridge	TEMPERATURE (°F):	43	60	52	52	4
ADDRESS:	4840 Forest Drive, Columbia, SC 29206	TURBIDITY (NTU):	1	228	6	7	11
COORDINATES:	34.019826, -80.963566	pH:	6.4	6.8	6.5	6.5	0.1
TMDL/IMPAIRMENT:	Fecal & Dissolved Oxygen	SPECIFIC CONDUCTIVITY (mS/cm):	0.034	0.063	0.040	0.040	0.003
NEIGHBORING LANDUSE:	Residential and commercial	DISSOLVED OXYGEN (mg/L):	9.1	12.2	10.7	10.6	0.7
APPROX. DRAINAGE AREA:	48 square miles						
SPATIAL LOCATION:	Most upstream site						
TOTAL NO. STORMS OVER 0.1 INCH:	4						
MAX. DAILY RAINFALL:	1.9 inches						
TOTAL RAINFALL (FOR PERIOD):	4.0 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**

Gills Creek A (December 1, 2017 -- January 3, 2018)

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	
	Time	Results	Time	Results	Time	Results	Time	Results
<i>Escherichia coli</i> (MPN/100mL)								
Total Suspended Solids (mg/L)								
Total Phosphorus (mg/L)								
Total Nitrogen (mg/L)								

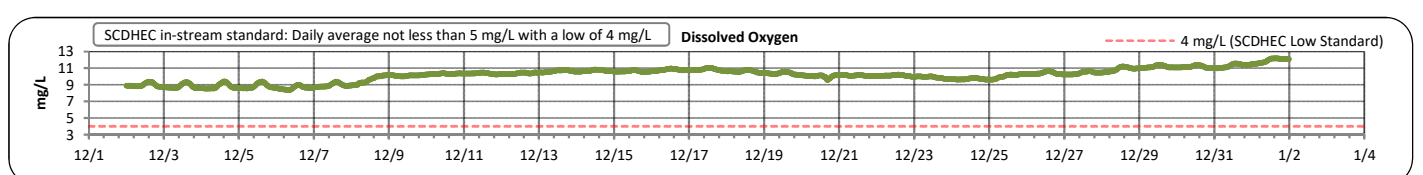
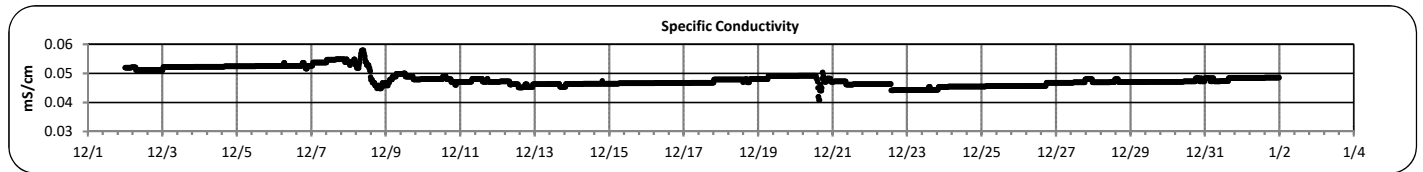
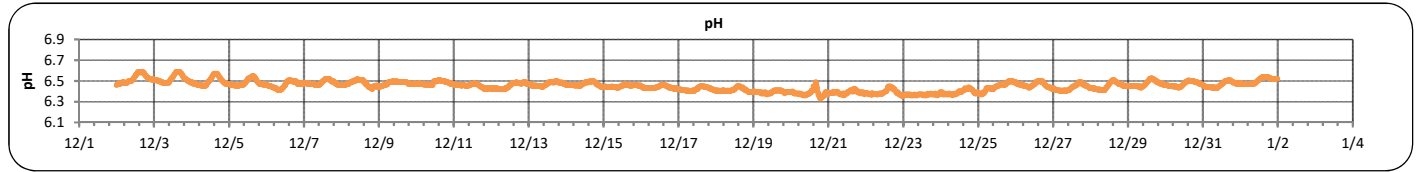
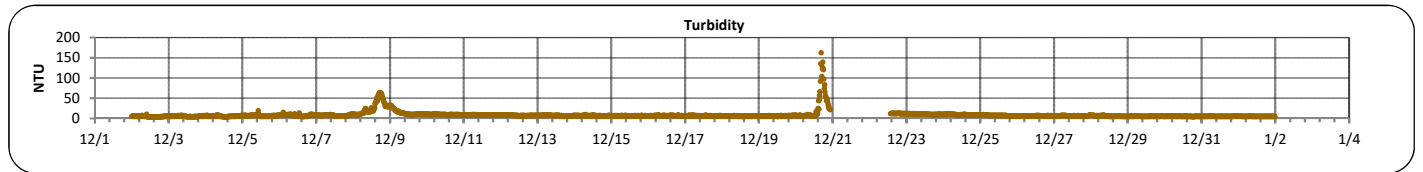
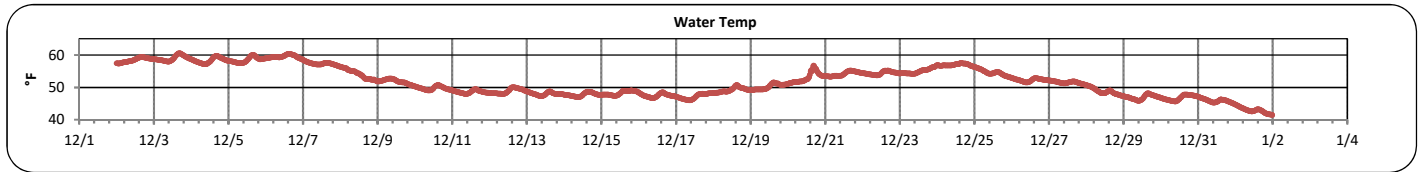
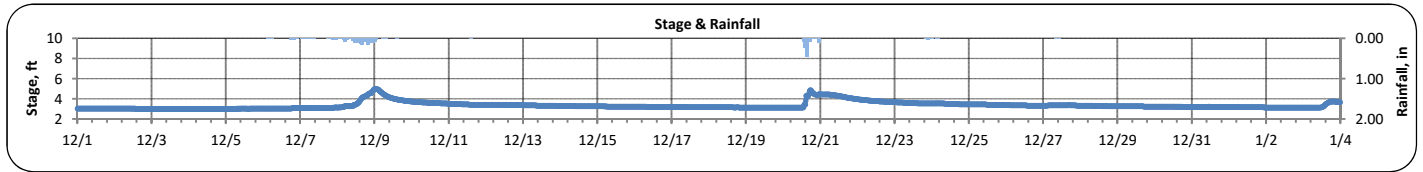
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Continuous Water Quality Monitoring Periodic Report

Gills Creek A (December 1, 2017 -- January 3, 2018)

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			MINIMUM OBSERVED	MAXIMUM OBSERVED	MEDIAN OBSERVED	MEAN OBSERVED	STANDARD DEVIATION
STREAM NAME:	Gills Creek	STAGE (FT):	3.0	5.0	3.3	3.4	0.3
LOCATION:	Devine Street bridge	TEMPERATURE (°F):	42	61	51	52	5
ADDRESS:	4716 Devine Street Columbia, SC 29209	TURBIDITY (NTU):	4	163	7	9	9
COORDINATES:	33.989656, -80.97433	pH:	6.3	6.6	6.5	6.5	0.0
TMDL/IMPAIRMENT:	Fecal & Dissolved Oxygen	SPECIFIC CONDUCTIVITY (mS/cm):	0.041	0.058	0.047	0.048	0.003
NEIGHBORING LANDUSE:	Residential and commercial	DISSOLVED OXYGEN (mg/L):	8.4	12.2	10.3	10.2	0.8
APPROX. DRAINAGE AREA:	59 square miles						
SPATIAL LOCATION:	Middle site						
TOTAL NO. STORMS OVER 0.1 INCH:	4						
MAX. DAILY RAINFALL:	1.7 inches						
TOTAL RAINFALL (FOR PERIOD):	3.5 inches						



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Monitoring Periodic Report**

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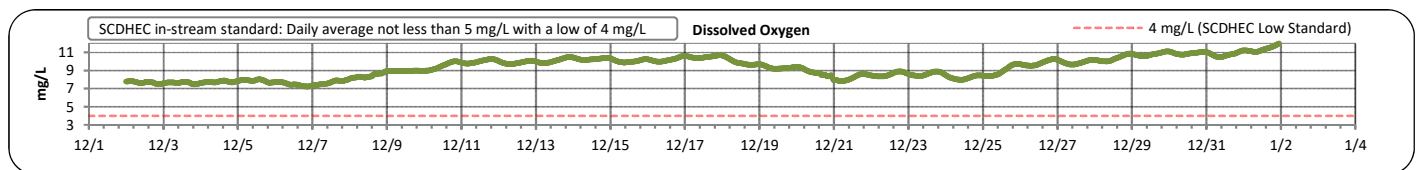
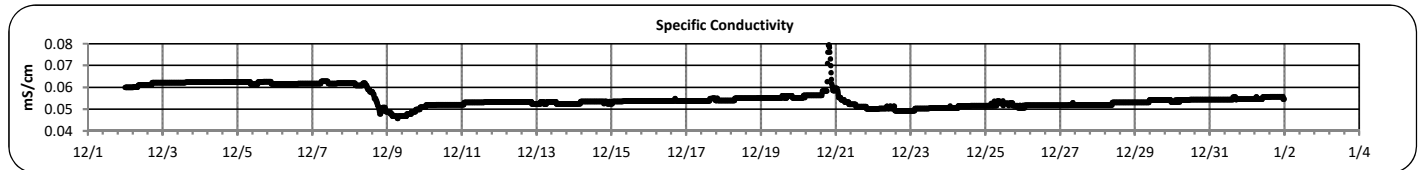
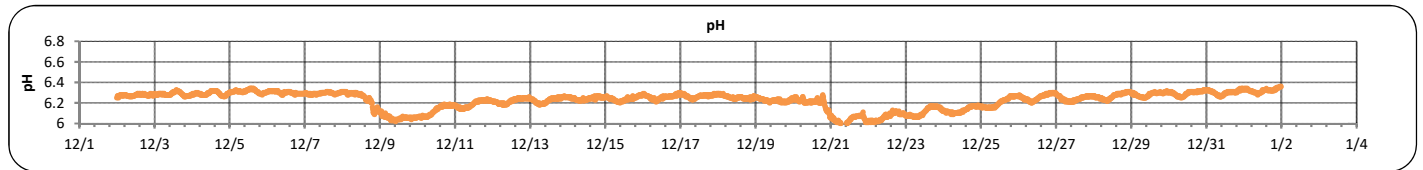
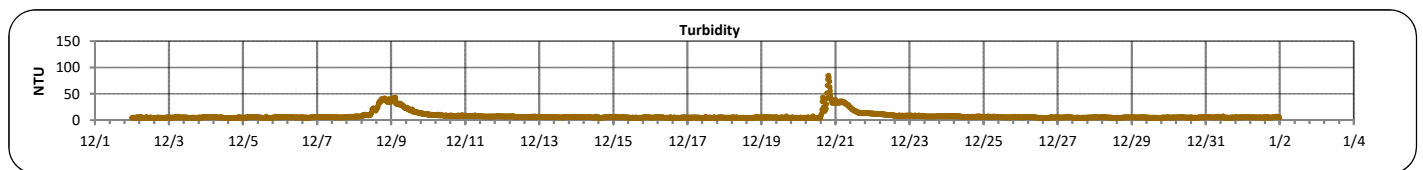
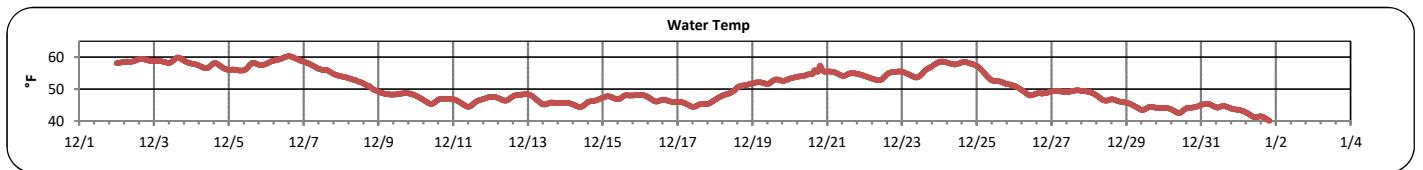
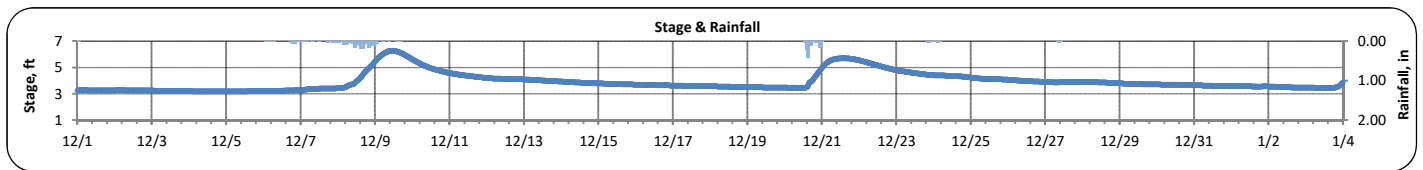
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STREAM NAME:	Gills Creek	STAGE (FT):	3.2	6.3	3.7	3.9	0.7
LOCATION:	Bluff Road bridge	TEMPERATURE (°F):	39	60	49	51	5
ADDRESS:	3009 Bluff Rd. Columbia, SC 29209	TURBIDITY (NTU):	4	85	6	8	7
COORDINATES:	33.948043, -80.9889	pH:	6.0	6.4	6.3	6.2	0.1
TMDL/IMPAIRMENT:	Fecal & Dissolved Oxygen	SPECIFIC CONDUCTIVITY (mS/cm):	0.046	0.079	0.054	0.055	0.004
NEIGHBORING LANDUSE:	Residential and commercial	DISSOLVED OXYGEN (mg/L):	7.2	12.1	9.6	9.3	1.1
APPROX. DRAINAGE AREA:	64 square miles						
SPATIAL LOCATION:	Most downstream site						
TOTAL NO. STORMS OVER 0.1 INCH:	4						
MAX. DAILY RAINFALL:	1.98 inches						
TOTAL RAINFALL (FOR PERIOD):	4.0 inches						



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