Gills Creek Monitoring Sites Monitoring Data Summary for August 22nd, 2018 – September 26th, 2018

Data Gaps

- The GILA sonde was pulled from the water on September 10th to troubleshoot an issue with the turbidity probe wiper. The turbidity probe was replaced while the malfunctioning probe was sent to the manufacturer for maintenance. The sonde was redeployed on September 11th. All water quality parameters were removed from the dataset during the period when the sonde was not in the water. Wiper malfunctioning caused inaccurate turbidity data, which was removed from August 31st-September 11th.
- The GILB station experienced abnormal specific conductivity and pH readings, most likely the result of sensor fouling. This period of data was removed from the dataset.
- The GILC station did not have any interruptions in the data during this monitoring period.

SCDHEC Standards

- The GILA and GILC stations did not record any pH readings outside of the acceptable SCDHEC range of 6 to 8.5. The GILB station recorded a minimum pH reading of 5.9, which occurred during a large storm event.
- The GILA station recorded an average DO value of 6.9 mg/L and the GILB station recorded an average DO value of 5.3 mg/L, which are both above the SCDHEC daily average DO standard of 5 mg/L. The GILC station recorded a DO average of 4.2 mg/L, which is below the SCDHEC daily average DO standard.
- The GILA, GILB, and GILC stations recorded minimum DO levels of 4.3 mg/L, 1.6 mg/L, and 2.6 mg/L, respectively, during this deployment. The GILA station did not record any DO values below the SCDHEC instantaneous minimum standard of 4.0 mg/L; however, both the GILB and GILC stations did. These low values all occurred during dry periods which may have resulted in low flow/stagnant water, causing the DO to drop.

Storm Events

- The GILA station recorded 5 storm events resulting in approximately 5.7 inches of rainfall. The GILB station recorded 4 storms that resulted in approximately 5.7 inches of rainfall. The GILC station recorded 4 storms that resulted in approximately 5.8 inches of rainfall.
- There were several rain events that took place during this deployment period. The water quality parameters in the Gills Creek watershed displayed typical storm event response patterns for most of the recorded events.
- The maximum antecedent dry time since the last significant precipitation event (at least 0.1 inches) was approximately 22.7 days at GILA prior to storm event on September 11th, 24 days at GILB prior to storm event on September 12th, and 26.4 days at GILC prior to the storm event on September 15th.

Potential Illicit Discharges and Abnormal Events

• At GILA, the stage decreased on September 16th-17th and at the end of the deployment period which caused changes in water quality during those times. This was not a rapid decrease in stage, but it caused an evident decrease in DO and increase in specific conductivity.

Flow Measurements

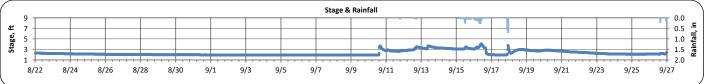
• No flow measurements were taken in Gills Creek during this monitoring period.

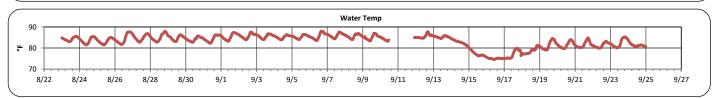


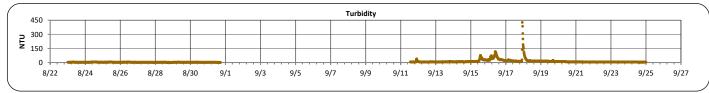


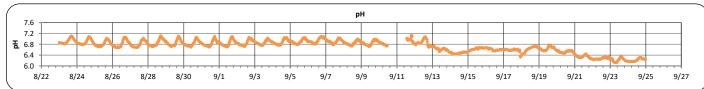
Gills Creek A (August 22, 2018 -- September 26, 2018)

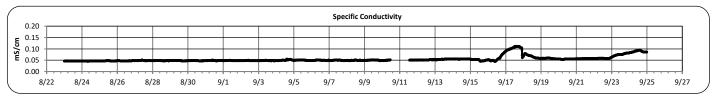
September 20, 2010)								
		CONTINUOUS	SUMMARY STATISTICS					
PARAMETER	DESCRIPTION	WATER QUALITY PARAMETERS:	MINIMUM OBSERVED	MAXIMUM OBSERVED	MEDIAN OBSERVED	MEAN OBSERVED	STANDARD DEVIATION	
STREAM NAME:	Gills Creek	STAGE (FT):	1.9	4.1	2.1	2.3	0.5	
LOCATION:	Forest Drive Bridge							
ADDRESS:	4840 Forest Drive, Columbia, SC 29206	TEMPERATURE (°F):	75	88	84	83	3	
COORDINATES:	34.019826, -80.963566	TURBIDITY (NTU):	2	428	6	11	21	
TMDL/IMPAIRMENT:	Fecal & Dissolved Oxygen							
NEIGHBORING LANDUSE:	Residential and commercial	pH:	6.1	7.2	6.8	6.7	0.2	
APPROX. DRAINAGE AREA:	48 square miles	pri.	0.1	1.2	0.0	0.7	0.2	
SPATIAL LOCATION:	Most upstream site	SPECIFIC						
TOTAL NO. STORMS OVER 0.1 INCH:	5	CONDUCTIVITY (mS/cm):	0.045	0.112	0.050	0.055	0.013	
MAX. DAILY RAINFALL:	1.8 inches	DISSOLVED						
TOTAL RAINFALL (FOR PERIOD):	5.7 inches	OXYGEN (mg/L):	4.3	9.0	7.0	6.9	0.8	
		Stage & Rain	fall					
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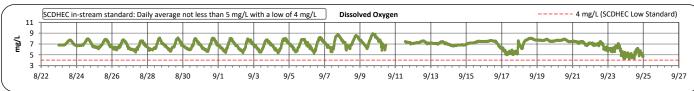












Note: Data gaps appear when the sonde is removed for calibration or when the flow depth is below the sensors

Gills Creek A (August 22, 2018 -- September 26, 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:

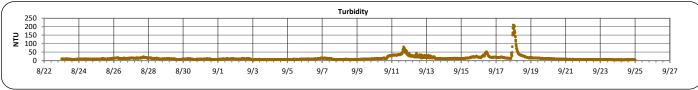
	Sam	ple 1	Sam	ple 2	Sample 3		Sample 4	
Analyte (units)								
	Time	Results	Time	Results	Time	Results	Time	Results
Escherichia coli								
(MPN/100mL)								
Total Suspended								
Solids (mg/L)								
Total Phosphorus								
(mg/L)								
Total Nitrogen								
(mg/L)								

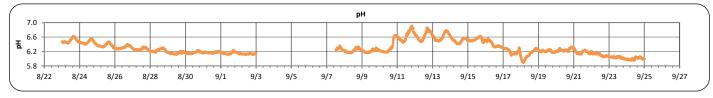
Notes:

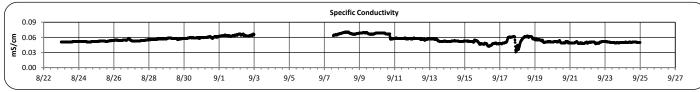


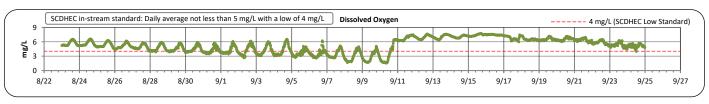


Managemen Partnering for clean waterwa	lt nys	Monitoring Peri	odic Repor	t		WOO	LPER	
	Gills Creek	B (August 22, 201	8 Septen	nber 26, 201	L8)			
		CONTINUOUS		SUM	MARY STATIS	TICS		
PARAMETER	DESCRIPTION	WATER QUALITY PARAMETERS:	MINIMUM OBSERVED	MAXIMUM OBSERVED	MEDIAN OBSERVED	MEAN OBSERVED	STANDARD DEVIATION	
STREAM NAME:	Gills Creek	STAGE (FT):	2.6	5.9	3.0	3.2	0.7	
LOCATION:	Devine Street bridge							
ADDRESS:	4716 Devine Street Columbia, SC 29209	TEMPERATURE (°F):	75	89	83	83	3	
COORDINATES:	33.989656, -80.97433	TURBIDITY (NTU):	5	211	11	14	15	
TMDL/IMPAIRMENT:	Fecal & Dissolved Oxygen	TORBIDITT (NTO).	,	211		1.7	10	
NEIGHBORING LANDUSE:	Residential and commercial	pH:	5.9	6.9	6.2	6.3	0.2	
APPROX. DRAINAGE AREA:	59 square miles	,						
SPATIAL LOCATION:	Middle site	SPECIFIC CONDUCTIVITY	0.031	0.071	0.054	0.056	0.006	
TOTAL NO. STORMS OVER 0.1 INCH:	4	(mS/cm):	0.031	0.071	0.034		0.006	
MAX. DAILY RAINFALL:	1.9 inches	DISSOLVED	4.0	7.0	.	5.0	4.5	
TOTAL RAINFALL (FOR PERIOD):	5.7 inches	OXYGEN (mg/L):		7.8	5.4	5.3	1.5	
10		Stage & Rainf	all				0.0	
8/22 8/24 8/26	8/28 8/30 9/1 9/3	9/5 9/7 9/9	9/11 9/13	9/15 9/17	9/19 9/21	9/23 9/25	0.5 1.0 1.5 2.0	
		Water Tem	ıp					
90	www	$\sim\sim$	S		_~	~~~		
70								
8/22 8/24 8/26	8/28 8/30 9/1 9/3	9/5 9/7 9/9	9/11 9/13	9/15 9/17	9/19 9/21	1 9/23 9/2	5 9/27	
		Turbidity	1					
250 200 201 200					3			
150 100 50								
8/22 8/24 8/26	5 8/28 8/30 9/1 9/3	3 9/5 9/7 9/9	9/11 9/13	9/15 9/1	7 9/19 9/2	1 9/23 9/2	25 9/27	









Gills Creek B (August 22, 2018 -- September 26, 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:

	Sam	ple 1	Sam	Sample 2		Sample 3		ple 4
Analyte (units)								
	Time	Results	Time	Results	Time	Results	Time	Results
Escherichia coli								
(MPN/100mL)								
Total Suspended								
Solids (mg/L)								
Total Phosphorus								
(mg/L)								
Total Nitrogen								
(mg/L)								

Notes:





Gills Creek C (August 22, 2018 -- September 26, 2018)

DESCRIPTION			CONTINUOUS	SUMMARY STATISTICS						
DOCATION: Bluff Road bridge 3009 Bluff Rd. Columbia SC 22000 Columbia SC 220	PARAMETER	DESCRIPTION	WATER QUALITY					STANDAR DEVIATIO		
ADDRESS Columbia SC 22008 Columbia SC 22008 Columbia SC 22009 Columbia SC 22	STREAM NAME:	Gills Creek	STAGE (FT):	2.3	7.1	3.0	3.4	1.2		
ADDRESS: Columbia, SC 29209 CORDINATES: 33,946043,-90,3869 IMDL/IMPARKENT: Fereia & Dissolved Oxygen NEG/HBORING ARRIVAL (FOR SPATIAL LOCATION: Most downstream site TOTAL NO. STORMS OVER 0.1 INCH: Most downstream site TOTAL RAINFALL: 1.72 inches TOTAL RAINFALL: 1.72 inches TOTAL RAINFALL (FOR 5.8 inches DISSOLVED DXYGEN (mg/L): 2.6 5.4 4.2 4.2 0.6 STATE AND STORMS STORMS A 4 4.2 4.2 0.6 STATE AND STORMS A 4 5.6 8/78 8/78 9/1 9/3 9/5 9/7 9/9 9/11 9/13 9/15 9/17 9/19 9/21 9/23 9/25 9/27 Water Temp PH S. Specific Conductivity Water Temp PH S. Septific Conductivity Water Temp PH S. Stage & Rainfall Stage &	LOCATION:	=	TEMPERATURE (°E).	75	9.4	90	90	2		
TURBIDITY (NTU): 4 80 8 13 12	ADDRESS:		TEMPERATURE (F).	75	04	60	60	2		
Ph:	COORDINATES:		TURRIDITY (NTU).	4	90	0	12	12		
ANDUSE: Residential and commercial pPH: 6.1 6.5 6.4 6.4 0.1 PPROX. DRAINAGE REA: PPATIAL LOCATION: Most downstream site OTOTAL NO. STORMS VER 0.1 INCH: MAX. DAILY RAINFALL: 1.72 inches OTOTAL RAINFALL (FOR 5.8 inches) DISSOLVED DXYGEN (mg/L): 2.6 5.4 4.2 4.2 0.6 PERIOD): Stage & Rainfall Water Temp Water Temp Water Temp Water Temp PH Specific CONDUCTIVITY Water Temp Water Temp PH Specific CONDUCTIVITY Water Temp PH Specific CONDUCTIVITY Water Temp PH Specific CONDUCTIVITY Water Temp Specific CONDUCTIVITY Water Temp Specific CONDUCTIVITY PH Specific CONDUCTIVITY Water Temp Specific CONDUCTIVITY PH Specific CONDUCTIVITY D.0.047	IMDL/IMPAIRMENT:	Fecal & Dissolved Oxygen	TORBIDITY (NTO).	4	60	0	13	12		
SPECIFIC CONDUCTIVITY 0.047 0.095 0.065 0.070 0.013		Residential and commercial	-11	0.4	0.5	0.4	0.4	0.4		
TOTAL NO. STORMS DVER 0.1 INCH: #AX. DAILY RAINFALL: 1.72 inches DISSOLVED DXYGEN (mg/L): 2.6 5.4 4.2 4.2 0.6 #AZERIOD): Stage & Rainfall Water Temp #AZERIOD Water Temp #AZERIOD #AZERIO		64 square miles	рн:	6.1	6.5	6.4	6.4	0.1		
OTAL RAINFALL: 1.72 inches DISSOLVED OXYGEN (mg/L): 2.6 5.4 4.2 4.2 0.6 PERIOD: Stage & Rainfall Stage & Rai	SPATIAL LOCATION:	Most downstream site								
DISSOLVED		4	•	0.047	0.095	0.065	0.070	0.013		
TOTAL RAINFALL (FOR PERIOD): 5.8 inches OXYGEN (mg/L): 2.6 5.4 4.2 4.2 0.6 preriod): 5.8 inches OXYGEN (mg/L): 2.6 5.4 4.2 4.2 0.6 preriod): 5.8 inches OXYGEN (mg/L): 2.6 5.4 4.2 4.2 0.6 preriod): 5.8 inches OXYGEN (mg/L): 2.6 5.4 4.2 4.2 0.6 preriod): 5.8 inches OXYGEN (mg/L): 2.6 5.4 4.2 4.2 0.6 preriod): 5.8 inches OXYGEN (mg/L): 2.6 5.4 4.2 4.2 0.6 preriod): 5.8 inches OXYGEN (mg/L): 2.6 5.4 4.2 4.2 0.6 preriod): 5.8 inches OXYGEN (mg/L): 2.6 5.4 4.2 4.2 0.6 preriod): 5.8 inches OXYGEN (mg/L): 2.6 5.4 4.2 4.2 0.6 preriod): 5.8 inches OXYGEN (mg/L): 2.6 5.4 4.2 4.2 0.6 preriod): 5.8 inches OXYGEN (mg/L): 2.6 5.4 4.2 4.2 0.6 preriod): 5.8 inches OXYGEN (mg/L): 2.6 5.4 4.2 4.2 0.6 preriod): 5.8 inches OXYGEN (mg/L): 2.6 5.4 4.2 4.2 0.6 preriod): 5.8 inches OXYGEN (mg/L): 2.6 5.4 4.2 4.2 4.2 0.6 preriod): 5.8 inches OXYGEN (mg/L): 2.6 5.4 4.2 4.2 4.2 0.6 preriod): 5.8 inches OXYGEN (mg/L): 5.8 inches OXYGEN (mg/L): 5.8 inches OXYGEN (mg/L): 5.4 inches OXYGEN (mg/L): 5.8 inches OXYGEN (mg/L):	MAX. DAILY RAINFALL:	1.72 inches	DISSOLVED							
#3	TOTAL RAINFALL (FOR PERIOD):	5.8 inches		2.6	5.4	5.4 4.2		0.6		
# 10	12		Stage & Rain	fall						
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8/22 8/24 8/26 8/28 8/30 9/1 9/3 9/5 9/7 9/9 9/11 9/13 9/15 9/17 9/19 9/21 9/23 9/25 9/27 pH 6.8 6.6 6.2 6.0 8/22 8/24 8/26 8/28 8/30 9/1 9/3 9/5 9/7 9/9 9/11 9/13 9/15 9/17 9/19 9/21 9/23 9/25 9/27 Specific Conductivity 0.12 0.03 0.00 0.00	100		Turbidity							
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Specific Conductivity Specific Conductivity 0.12 0.09 0.00 0.00 0.00			рН							
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0.09	0.13		Specific Cond	luctivity						
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	8/22 8/24 8/26	8/28 8/30 9/1 9/3	9/5 9/7 9/9	9/11 9/13	9/15 9/1	.7 9/19 9/	21 9/23 9	/25 9/27		
SCDHEC in-stream standard: Daily average not less than 5 mg/L with a low of 4 mg/L Dissolved Oxygen 4 mg/L (SCDHEC Low Standard)	7									

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

9/1

9/3

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9/17

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Gills Creek C (August 22, 2018 -- September 26, 2018)

Explanation of Statistics:

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Analyte (units)								
	Time	Results	Time	Results	Time	Results	Time	Results
Escherichia coli								
(MPN/100mL)								
Total Suspended								
Solids (mg/L)								
Total Phosphorus								
(mg/L)								
Total Nitrogen								
(mg/L)								

Notes: