

Gills Creek Monitoring Sites

Monitoring Data Summary for January 6th, 2021 – February 17th, 2021

Data Gaps

- The GILB station did not experience any interruptions in the data during this monitoring period.
- The GILA and GILC stations did not collect data from January 6th to January 15th since the old YSI 6600 V2 Sondes were replaced with new EXO Sondes that were installed at both stations on January 15th. There were no other 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 GILA station recorded an average DO value of 11.5 mg/L, the GILB station recorded an average DO value of 10.8 mg/L, and the GILC station recorded an average DO value of 10.3 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 10.2 mg/L, 9.8 mg/L, and 8.5 mg/L, respectively. All the stations in the Gills Creek watershed recorded DO values above the SCDHEC instantaneous minimum standard of 4 mg/L.

Storm Events

- The GILA station recorded 14 storm events resulting in approximately 7.5 inches of rainfall. The GILB station recorded 13 storms that resulted in approximately 7.2 inches of rainfall. The GILC station recorded 14 storms that resulted in approximately 7.3 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

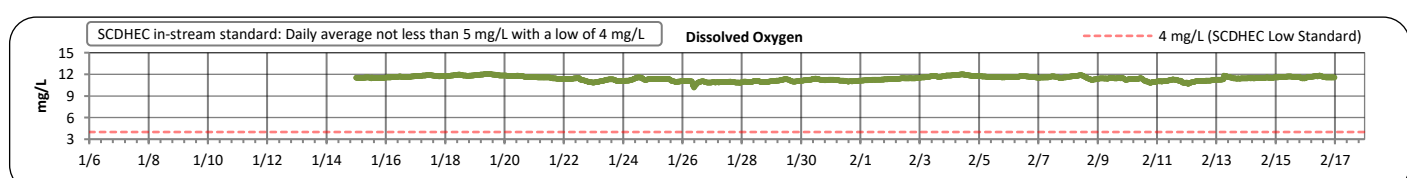
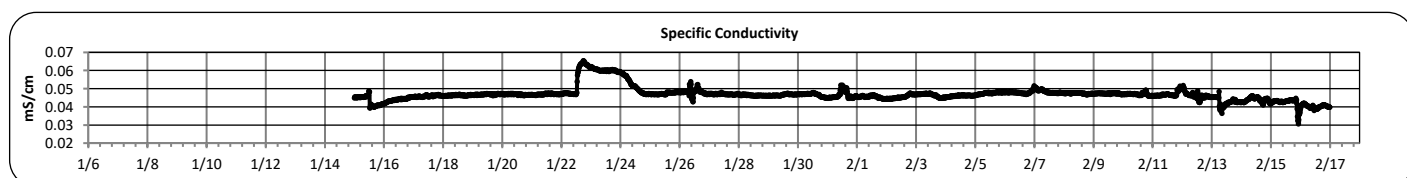
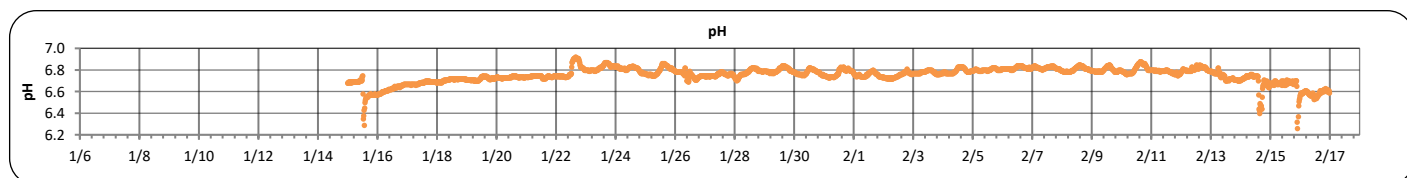
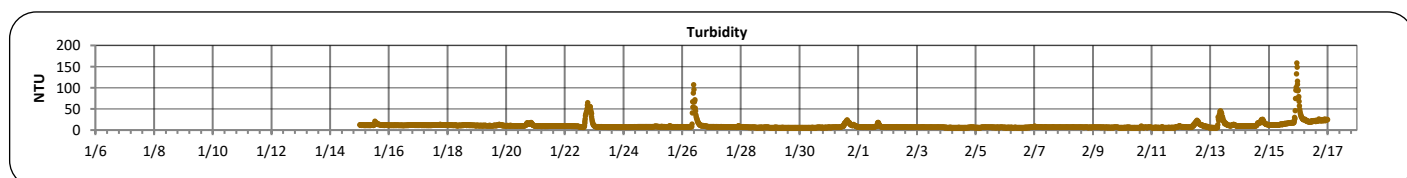
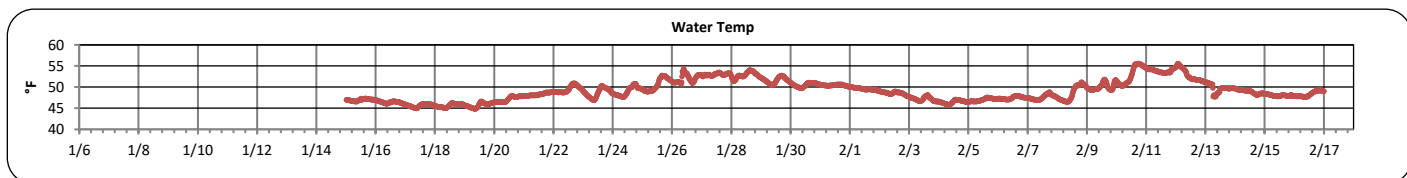
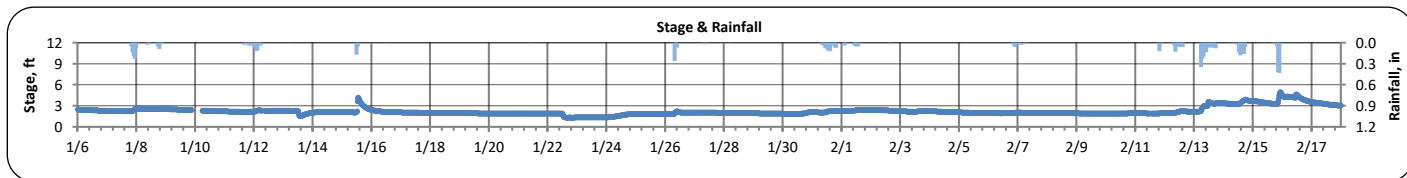
- At the GILA station, the specific conductivity increased from January 22nd to January 24th.
- At the GILB station, the specific conductivity increased from January 13th to January 17th.
- At the GILC station, the specific conductivity increased from January 15th to January 17th.

Flow Measurements

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

Gills Creek A (January 6, 2021 - February 17, 2021)

PARAMETER	DESCRIPTION	CONTINUOUS WATER QUALITY PARAMETERS:	SUMMARY STATISTICS				
			MINIMUM OBSERVED	MAXIMUM OBSERVED	MEDIAN OBSERVED	MEAN OBSERVED	STANDARD DEVIATION
STREAM NAME:	Gills Creek	STAGE (FT):	1.3	4.2	2.0	2.1	0.3
LOCATION:	Forest Drive Bridge	TEMPERATURE (°F):	45	56	49	49	2
ADDRESS:	4840 Forest Drive, Columbia, SC 29206	TURBIDITY (NTU):	6	159	8	11	9
COORDINATES:	34.019826, -80.963566	pH:	6.2	6.9	6.8	6.8	0.1
TMDL/IMPAIRMENT:	Fecal & Dissolved Oxygen	SPECIFIC CONDUCTIVITY (mS/cm):	0.031	0.065	0.047	0.047	0.004
NEIGHBORING LANDUSE:	Residential and commercial	DISSOLVED OXYGEN (mg/L):	10.2	12.1	11.5	11.5	0.3
APPROX. DRAINAGE AREA:	48 square miles						
SPATIAL LOCATION:	Most upstream site						
TOTAL NO. STORMS OVER 0.1 INCH:	14						
MAX. DAILY RAINFALL:	1.5 inches						
TOTAL RAINFALL (FOR PERIOD):	7.5 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 (January 6, 2021 - February 17, 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:

Analyte (units)	Sample 1		Sample 2		Sample 3		Sample 4	
	2/12/2021		2/12/2021		2/12/2021			
	Time	Results	Time	Results	Time	Results	Time	Results
<i>Escherichia coli</i> (MPN/100mL)	8:30	104	9:53	1,288	11:30	1,868		
Total Suspended Solids (mg/L)	8:30	8.1	9:53	17.8	11:30	36.9		
Total Phosphorus (mg/L)	8:30	0.026	9:53	0.038	11:30	0.054		
Total Nitrogen (mg/L)	8:30	0.52	9:53	0.53	11:30	0.69		

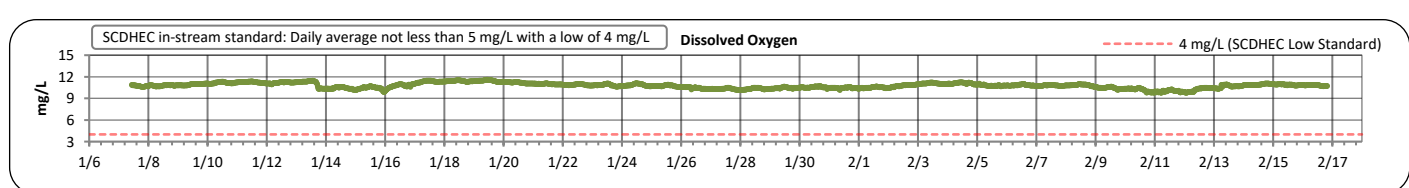
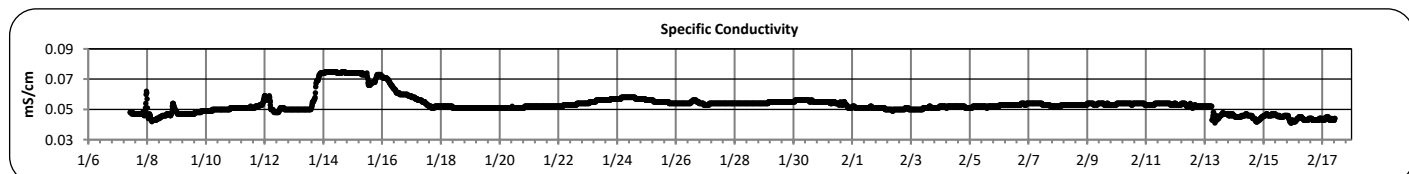
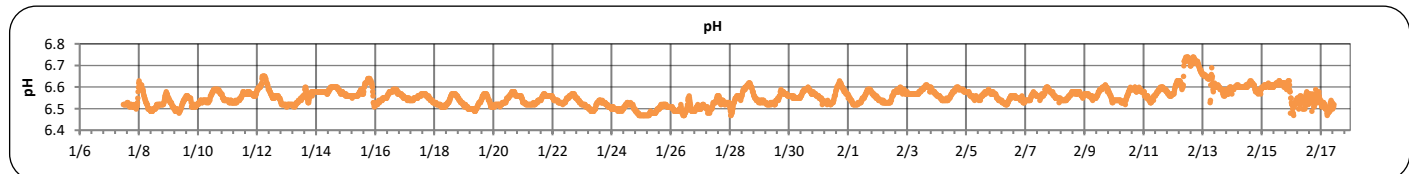
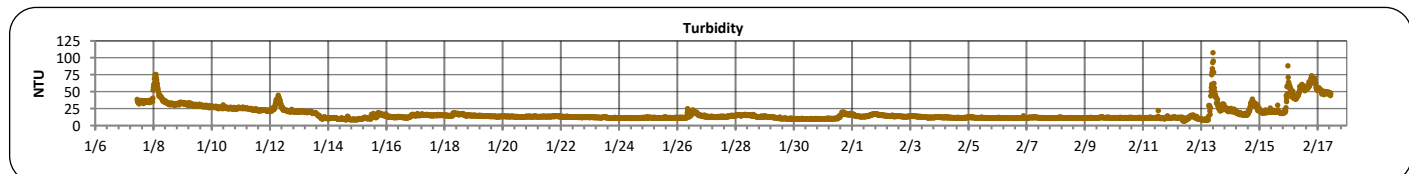
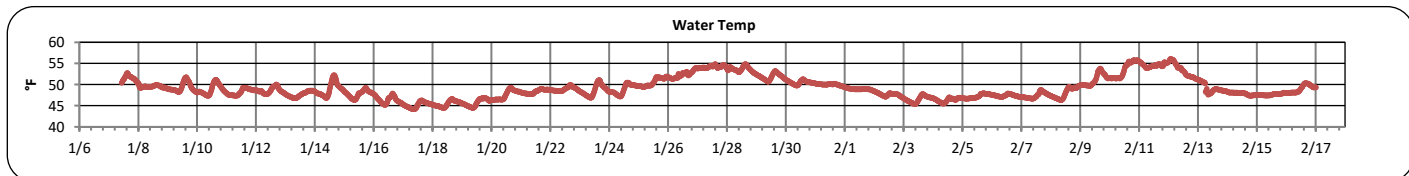
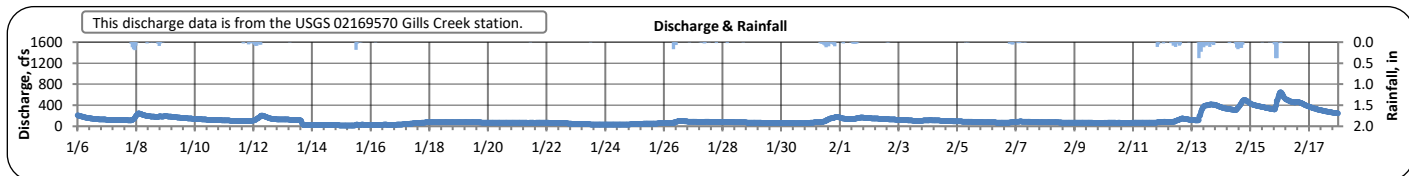
Notes: All samples were taken during wet weather conditions

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

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Gills Creek B (January 6, 2021 - February 17, 2021)

PARAMETER	DESCRIPTION	CONTINUOUS WATER QUALITY PARAMETERS:	SUMMARY STATISTICS				
			MINIMUM OBSERVED	MAXIMUM OBSERVED	MEDIAN OBSERVED	MEAN OBSERVED	STANDARD DEVIATION
STREAM NAME:	Gills Creek	DISCHARGE (CFS):	20.7	651.0	83.5	123.6	105.4
LOCATION:	Devine Street bridge	TEMPERATURE (°F):	44	56	49	49	3
ADDRESS:	4716 Devine Street Columbia, SC 29209	TURBIDITY (NTU):	7	108	13	18	11
COORDINATES:	33.989656, -80.97433	pH:	6.5	6.7	6.6	6.6	0.0
TMDL/IMPAIRMENT:	Fecal & Dissolved Oxygen	SPECIFIC CONDUCTIVITY (mS/cm):	0.041	0.075	0.052	0.053	0.006
NEIGHBORING LANDUSE:	Residential and commercial	DISSOLVED OXYGEN (mg/L):	9.8	11.6	10.8	10.8	0.4
APPROX. DRAINAGE AREA:	59 square miles						
SPATIAL LOCATION:	Middle site						
TOTAL NO. STORMS OVER 0.1 INCH:	13						
MAX. DAILY RAINFALL:	1.5 inches						
TOTAL RAINFALL (FOR PERIOD):	7.2 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 B (January 6, 2021 - February 17, 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:

Analyte (units)	Sample 1		Sample 2		Sample 3		Sample 4	
	1/21/2021		2/12/2021		2/12/2021		2/12/2021	
	Time	Results	Time	Results	Time	Results	Time	Results
<i>Escherichia coli</i> (MPN/100mL)	14:42	104	8:12	148	9:32	216	11:14	476
Total Suspended Solids (mg/L)			8:12	6.3	9:32	7.1	11:14	9.1
Total Phosphorus (mg/L)			8:12	0.024	9:32	0.026	11:14	0.023
Total Nitrogen (mg/L)			8:12	0.61	9:32	0.52	11:14	0.59

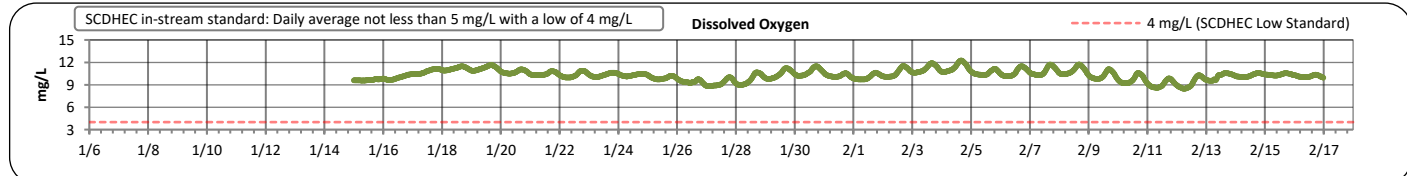
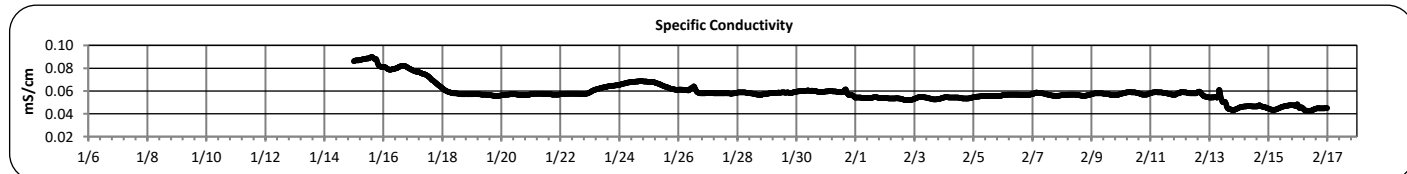
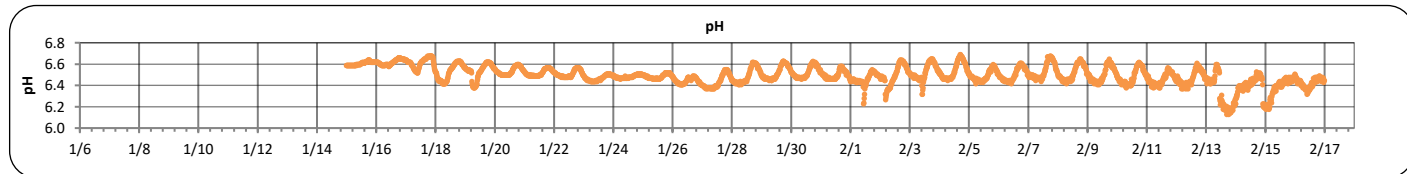
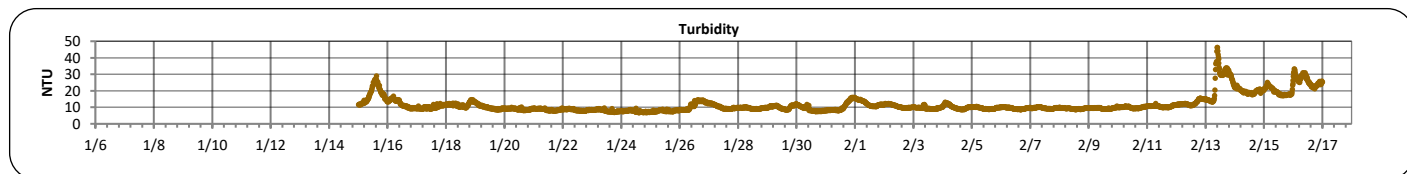
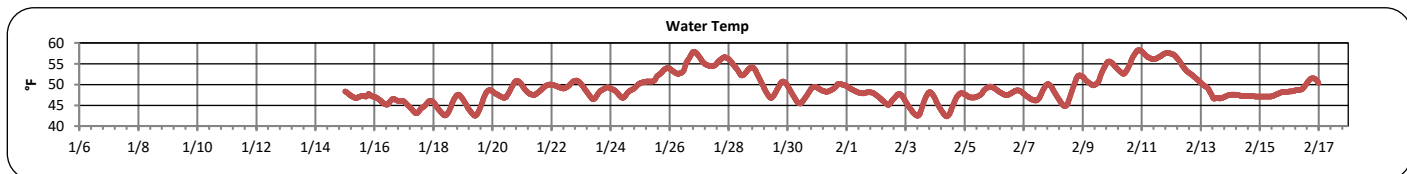
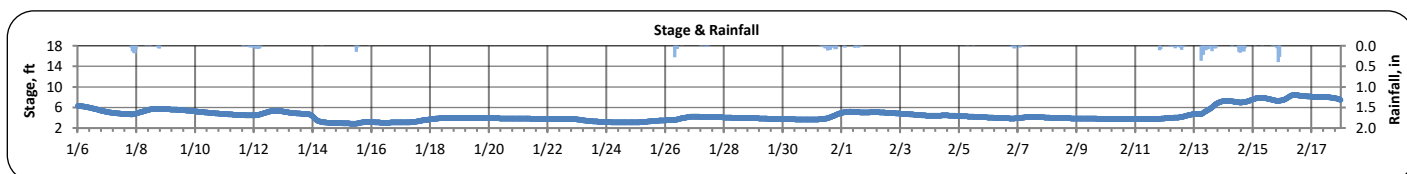
Notes: Sample 1 was taken during dry weather conditions. Samples 2-4 were taken during wet weather conditions

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

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Gills Creek C (January 6, 2021 - February 17, 2021)

PARAMETER	DESCRIPTION	CONTINUOUS WATER QUALITY PARAMETERS:	SUMMARY STATISTICS				
			MINIMUM OBSERVED	MAXIMUM OBSERVED	MEDIAN OBSERVED	MEAN OBSERVED	STANDARD DEVIATION
STREAM NAME:	Gills Creek	STAGE (FT):	2.9	6.4	4.0	4.2	0.7
LOCATION:	Bluff Road bridge	TEMPERATURE (°F):	42	58	48	49	4
ADDRESS:	3009 Bluff Rd. Columbia, SC 29209	TURBIDITY (NTU):	7	46	10	12	5
COORDINATES:	33.948043, -80.9889	pH:	6.1	6.7	6.5	6.5	0.1
TMDL/IMPAIRMENT:	Fecal & Dissolved Oxygen	SPECIFIC CONDUCTIVITY (mS/cm):	0.0425	0.09	0.0575	0.059	0.009
NEIGHBORING LANDUSE:	Residential and commercial	DISSOLVED OXYGEN (mg/L):	8.5	12.3	10.4	10.3	0.7
APPROX. DRAINAGE AREA:	64 square miles						
SPATIAL LOCATION:	Most downstream site						
TOTAL NO. STORMS OVER 0.1 INCH:	14						
MAX. DAILY RAINFALL:	1.51 inches						
TOTAL RAINFALL (FOR PERIOD):	7.3 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 C (January 6, 2021 - February 17, 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:

Analyte (units)	Sample 1		Sample 2		Sample 3		Sample 4	
	1/21/2021		2/12/2021		2/12/2021		2/12/2021	
	Time	Results	Time	Results	Time	Results	Time	Results
<i>Escherichia coli</i> (MPN/100mL)	15:05	126	9:14	316	10:27	322	11:53	342
Total Suspended Solids (mg/L)			9:14	6.2	10:27	5.9	11:53	5.8
Total Phosphorus (mg/L)			9:14	0.031	10:27	0.029	11:53	0.026
Total Nitrogen (mg/L)			9:14	0.6	10:27	0.64	11:53	0.62

Notes: Sample 1 was taken during dry weather conditions. Samples 2-4 were taken during wet weather conditions

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

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