

# Gills Creek Monitoring Sites

## Monitoring Data Summary for December 2<sup>nd</sup>, 2020 – January 5<sup>th</sup>, 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 1<sup>st</sup> to January 5<sup>th</sup>. These periods of data were removed from the dataset.
- The GILB station experienced turbidity sensor fouling from December 25<sup>th</sup> to January 5<sup>th</sup>. The DO sensor was fouled on December 8<sup>th</sup>, December 9<sup>th</sup>, and from January 3<sup>rd</sup> to January 5<sup>th</sup>. The specific conductivity sensor was fouled from January 1<sup>st</sup> to January 5<sup>th</sup>. 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 4<sup>th</sup>, December 7<sup>th</sup>, December 14<sup>th</sup>, and December 20<sup>th</sup>.
- At the GILB station, the specific conductivity increased several times during this deployment period. These specific conductivity spikes occurred on the following dates: December 4<sup>th</sup>, December 7<sup>th</sup>, December 14<sup>th</sup>, December 20<sup>th</sup>, and December 31<sup>st</sup>.
- At the GILA station, the specific conductivity increased several times during this deployment period. These specific conductivity spikes occurred on the following dates: December 4<sup>th</sup>-5<sup>th</sup>, December 20<sup>th</sup>, and December 31<sup>st</sup>.

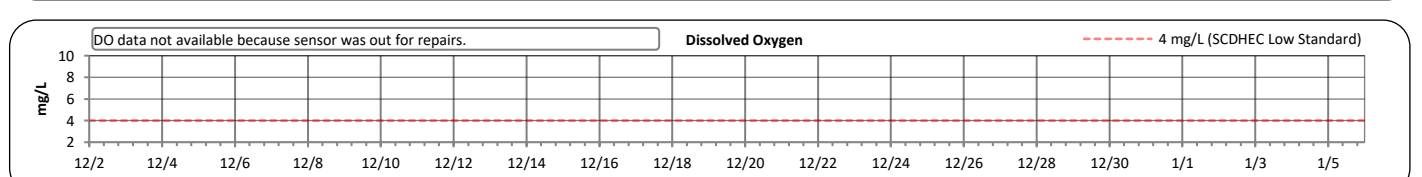
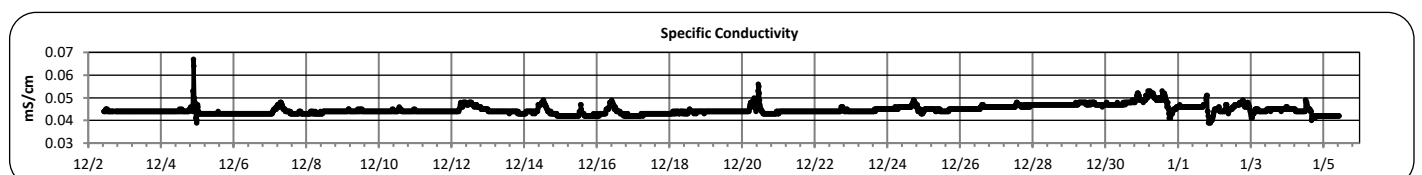
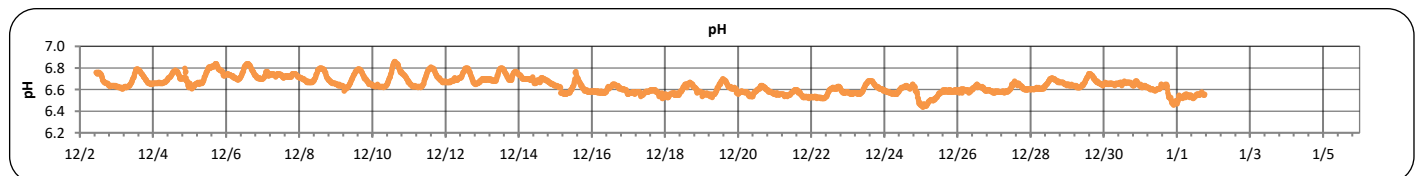
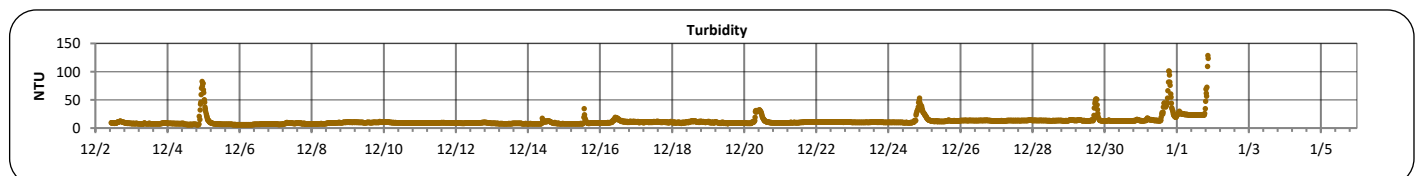
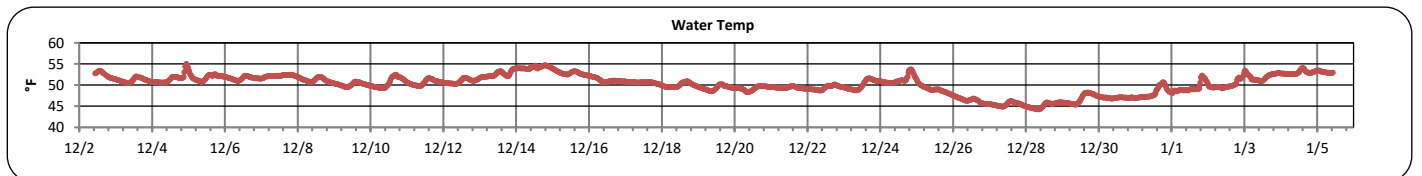
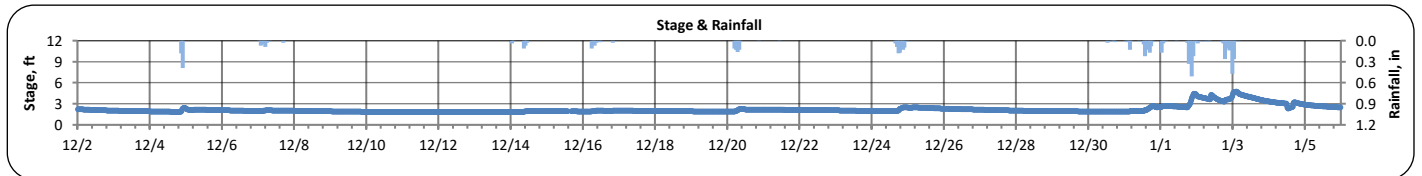
### *Flow Measurements*

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

# Continuous Water Quality Monitoring Periodic Report

Gills Creek A (December 2, 2020 - January 5, 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):	1.8	4.8	2.0	2.2	0.5
LOCATION:	Forest Drive Bridge	TEMPERATURE (°F):	44	55	51	50	2
ADDRESS:	4840 Forest Drive, Columbia, SC 29206	TURBIDITY (NTU):	6	129	10	12	8
COORDINATES:	34.019826, -80.963566	pH:	6.4	6.9	6.6	6.6	0.1
TMDL/IMPAIRMENT:	Fecal & Dissolved Oxygen	SPECIFIC CONDUCTIVITY (mS/cm):	0.039	0.067	0.044	0.045	0.002
NEIGHBORING LANDUSE:	Residential and commercial	DISSOLVED OXYGEN (mg/L):	-	-	-	-	-
APPROX. DRAINAGE AREA:	48 square miles						
SPATIAL LOCATION:	Most upstream site						
TOTAL NO. STORMS OVER 0.1 INCH:	11						
MAX. DAILY RAINFALL:	1.7 inches						
TOTAL RAINFALL (FOR PERIOD):	7.0 inches						



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

REPORT GENERATED ON 03/04/2021

**Continuous Water Quality  
Monitoring Periodic Report**

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

**Explanation of Statistics:**

<b>MINIMUM OBSERVED</b>	The minimum of the values recorded by the datasonde in 15 minute intervals.
<b>MAXIMUM OBSERVED</b>	The maximum of the values recorded by the datasonde in 15 minute intervals.
<b>MEDIAN OBSERVED</b>	The median of all the values recorded by the datasonde in 15 minute intervals.
<b>MEAN OBSERVED</b>	The average of all the values recorded by the datasonde in 15 minute intervals.
<b>STANDARD DEVIATION</b>	The standard deviation of all the values recorded by the datasonde in 15 minute intervals.

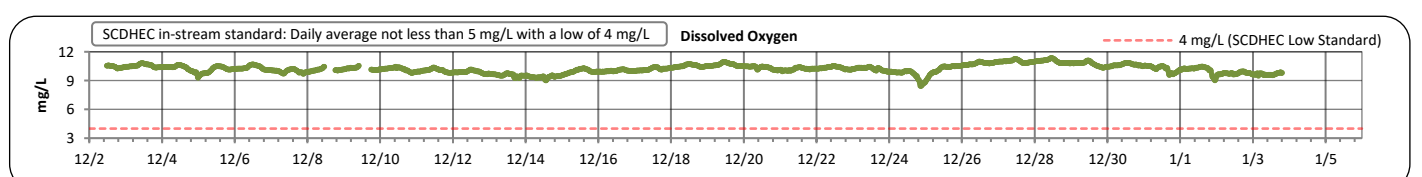
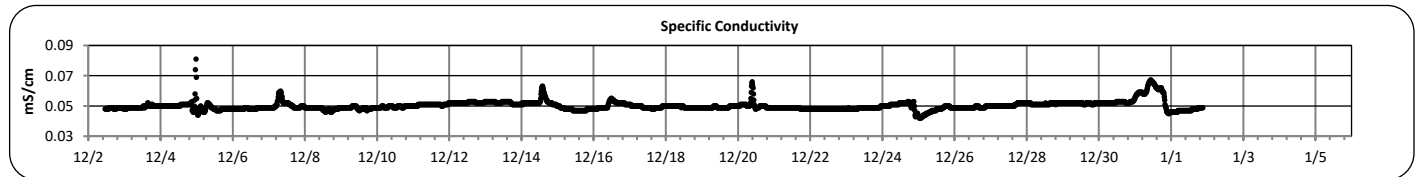
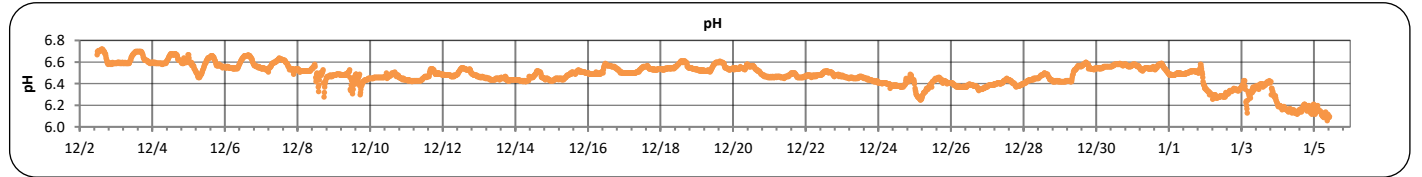
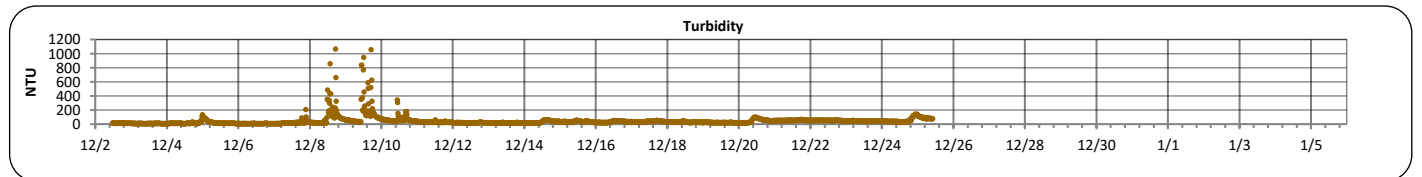
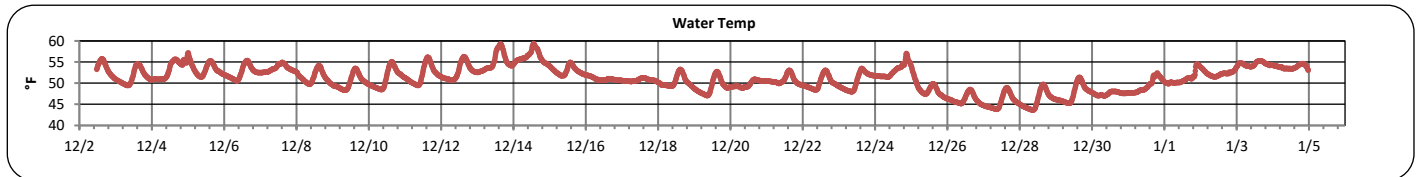
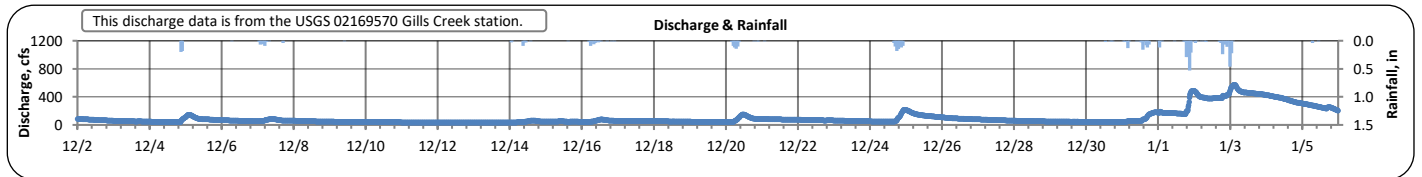
**Sampled Data:**

No samples taken at GILA during this monitoring period.

# Continuous Water Quality Monitoring Periodic Report

Gills Creek A (December 2, 2020 - January 5, 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):	36.2	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):	10	1068	34	45	68
COORDINATES:	33.989656, -80.97433	pH:	6.1	6.7	6.5	6.5	0.1
TMDL/IMPAIRMENT:	Fecal & Dissolved Oxygen	SPECIFIC CONDUCTIVITY (mS/cm):	0.042	0.081	0.050	0.050	0.003
NEIGHBORING LANDUSE:	Residential and commercial	DISSOLVED OXYGEN (mg/L):	8.5	11.4	10.3	10.3	0.4
APPROX. DRAINAGE AREA:	59 square miles						
SPATIAL LOCATION:	Middle site						
TOTAL NO. STORMS OVER 0.1 INCH:	11						
MAX. DAILY RAINFALL:	1.5 inches						
TOTAL RAINFALL (FOR PERIOD):	6.2 inches						



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

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**Continuous Water Quality  
Monitoring Periodic Report**

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

**Explanation of Statistics:**

<b>MINIMUM OBSERVED</b>	The minimum of the values recorded by the datasonde in 15 minute intervals.
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**Sampled Data:**

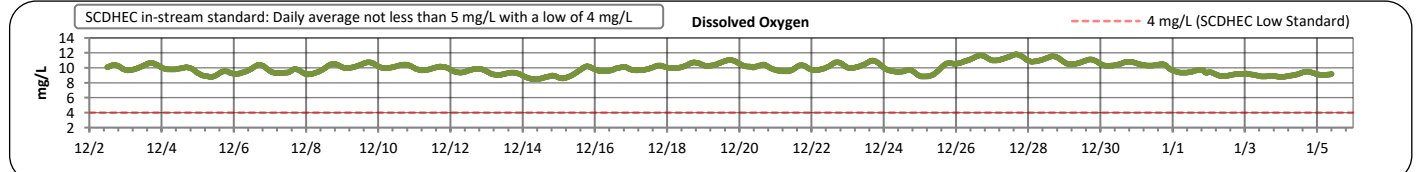
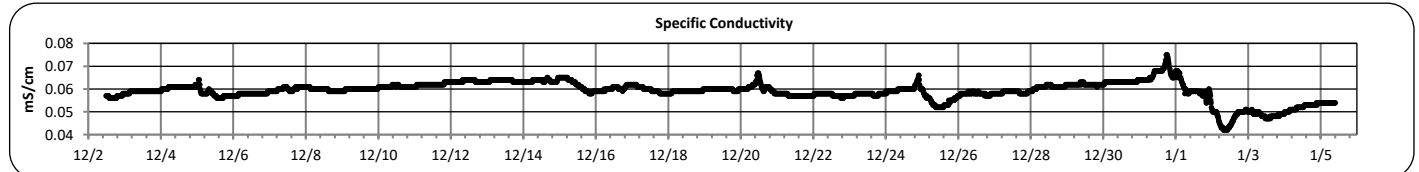
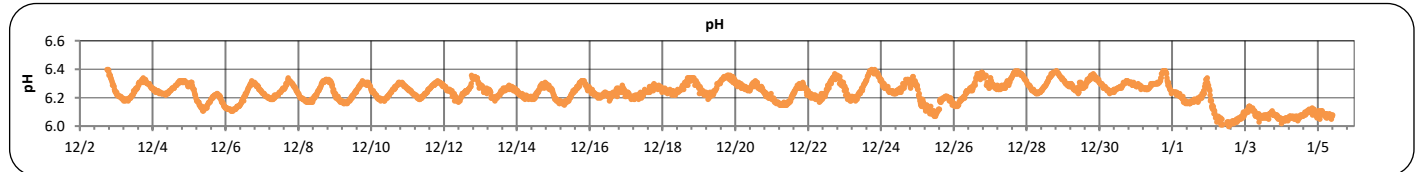
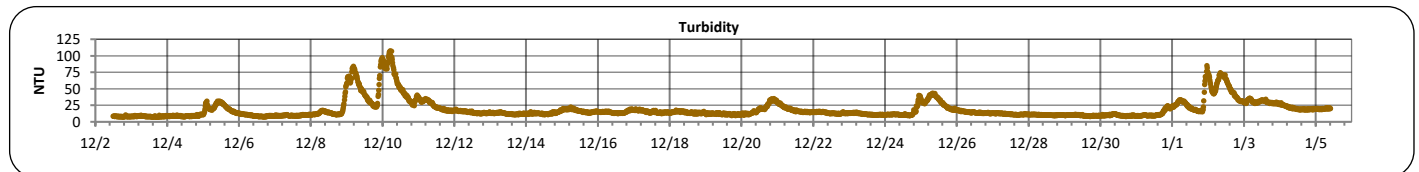
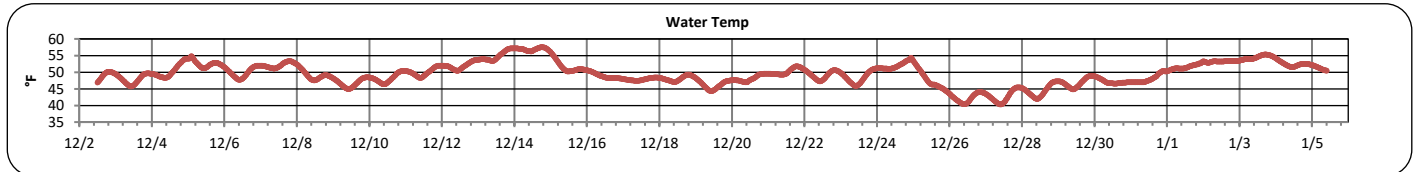
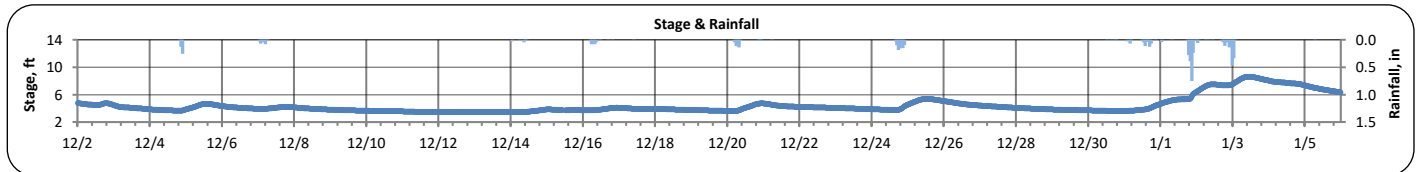
Analyte (units)	Sample 1		Sample 2		Sample 3		Sample 4	
	12/21/2020							
	Time	Results	Time	Results	Time	Results	Time	Results
<i>Escherichia coli</i> (MPN/100mL)	13:19	168						
Total Suspended Solids (mg/L)	13:19	30						
Total Phosphorus (mg/L)								
Total Nitrogen (mg/L)								

Notes: The sample was taken during dry weather conditions

# Continuous Water Quality Monitoring Periodic Report

Gills Creek A (December 2, 2020 - January 5, 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):	3.5	8.6	4.0	4.4	1.2
LOCATION:	Bluff Road bridge	TEMPERATURE (°F):	40	58	49	49	3
ADDRESS:	3009 Bluff Rd. Columbia, SC 29209	TURBIDITY (NTU):	7	108	14	19	15
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):	0.042	0.075	0.06	0.059	0.004
NEIGHBORING LANDUSE:	Residential and commercial	DISSOLVED OXYGEN (mg/L):	8.5	11.8	10.0	10.0	0.7
APPROX. DRAINAGE AREA:	64 square miles						
SPATIAL LOCATION:	Most downstream site						
TOTAL NO. STORMS OVER 0.1 INCH:	10						
MAX. DAILY RAINFALL:	1.76 inches						
TOTAL RAINFALL (FOR PERIOD):	6.2 inches						



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**Sampled Data:**

Analyte (units)	Sample 1		Sample 2		Sample 3		Sample 4	
	12/21/2020							
	Time	Results	Time	Results	Time	Results	Time	Results
<i>Escherichia coli</i> (MPN/100mL)	13:50	240						
Total Suspended Solids (mg/L)	13:50	10						
Total Phosphorus (mg/L)								
Total Nitrogen (mg/L)								

Notes: The sample was taken during dry weather conditions.