Gills Creek Monitoring Sites
Monitoring Data Summary for
June 4th, 2020 – July 19th, 2020

Data Gaps

- The GILA station experienced turbidity sensor fouling from June 13th to June 18th, June 23rd to June 24th, and June 26th to June 29th. GILA station DO and pH sensors experienced fouling from June 23rd to June 24th and June 26th to June 29th. These periods of data were removed from the dataset.
- The GILB station experienced turbidity sensor fouling from June 27th to June 29th. This period of turbidity data was removed from the dataset.
- The GILC station experienced turbidity sensor fouling from July 1st to July 4th, July 4th to July 5th, and July 18th to July 19th. These periods of turbidity data were removed from the dataset.

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 7.3 mg/L, the GILB station recorded an average DO value of 6.5 mg/L, and the GILC station recorded an average DO value of 5.8 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 6.1 mg/L, 5.1 mg/L, and 4.7 mg/L, respectively. All stations did not record any DO values below the SCDHEC instantaneous minimum standard of 4 mg/L.

Storm Events

- The GILA station recorded 13 storm events resulting in approximately 7.4 inches of rainfall. The GILB station recorded 14 storms that resulted in approximately 7.0 inches of rainfall. The GILC station recorded 9 storms that resulted in approximately 5.6 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: June 9th, June 19th, July 6th-7th, and July 14th.
- At the GILB station, the specific conductivity increased several times during this deployment period. These specific conductivity spikes occurred on the following dates: June 10th and July 6th-7th.

Flow Measurements

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

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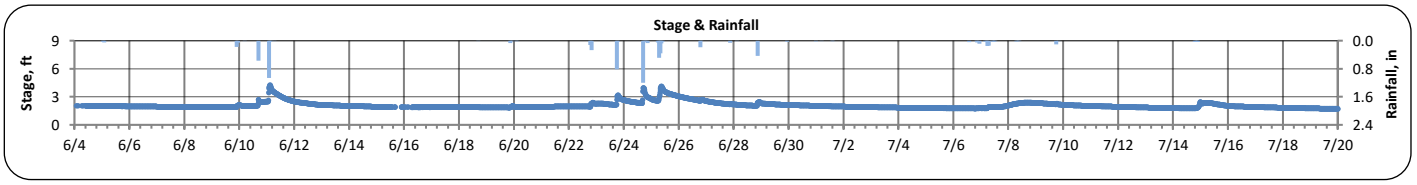
Continuous Water Quality Monitoring Periodic Report

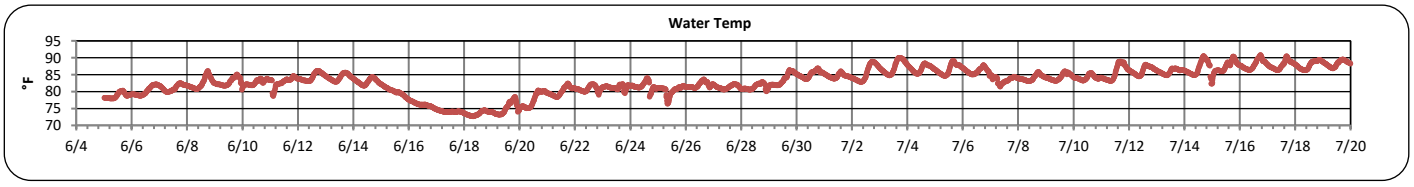
WOOLPERT

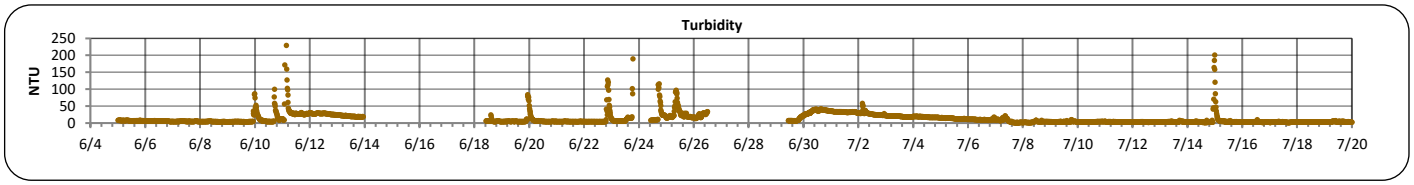
Gills Creek A (June 4, 2020 - July 19, 2020)

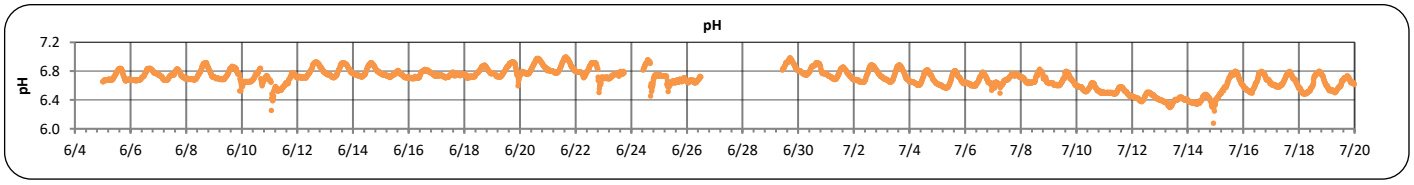
PARAMETER	DESCRIPTION
STREAM NAME:	Gills Creek
LOCATION:	Forest Drive Bridge
ADDRESS:	4840 Forest Drive, Columbia, SC 29206
COORDINATES:	34.019826, -80.963566
TMDL/IMPAIRMENT:	Fecal & Dissolved Oxygen
NEIGHBORING LANDUSE:	Residential and commercial
APPROX. DRAINAGE AREA:	48 square miles
SPATIAL LOCATION:	Most upstream site
TOTAL NO. STORMS OVER 0.1 INCH:	13
MAX. DAILY RAINFALL:	1.3 inches
TOTAL RAINFALL (FOR PERIOD):	7.4 inches

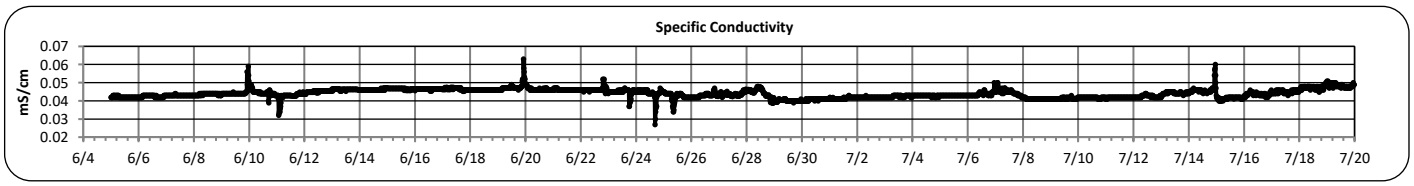
CONTINUOUS WATER QUALITY PARAMETERS:	SUMMARY STATISTICS				
	MINIMUM OBSERVED	MAXIMUM OBSERVED	MEDIAN OBSERVED	MEAN OBSERVED	STANDARD DEVIATION
STAGE (FT):	1.8	4.3	2.0	2.1	0.4
TEMPERATURE (°F):	73	91	83	83	4
TURBIDITY (NTU):	1	230	6	13	16
pH:	6.1	7.0	6.7	6.7	0.1
SPECIFIC CONDUCTIVITY (mS/cm):	0.027	0.063	0.044	0.044	0.002
DISSOLVED OXYGEN (mg/L):	6.1	8.5	7.4	7.3	0.5

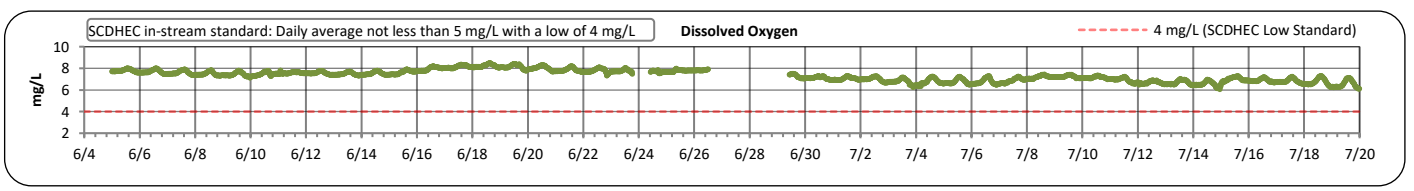












Note: Data gaps appear when the sonde is removed for calibration or when the flow depth is below the sensors

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Continuous Water Quality
Monitoring Periodic Report

Gills Creek A (June 4, 2020 - July 19, 2020)

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 were taken at GILA during this monitoring period.

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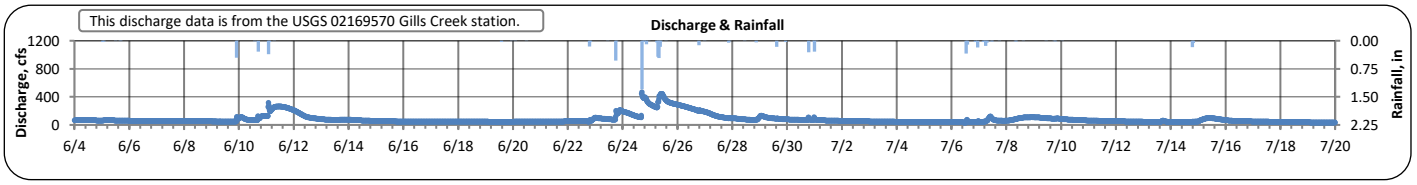
Continuous Water Quality Monitoring Periodic Report

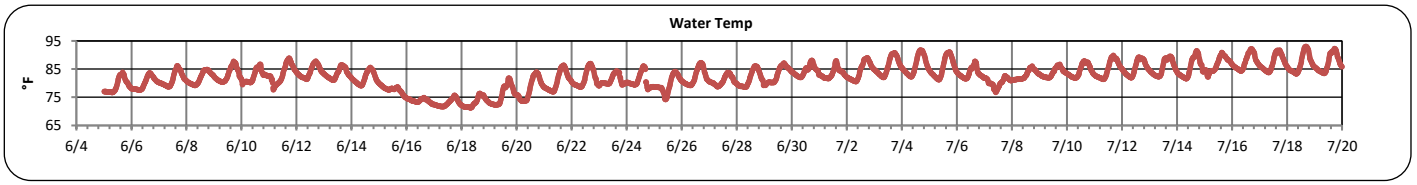
Gills Creek B (June 4, 2020 - July 19, 2020)

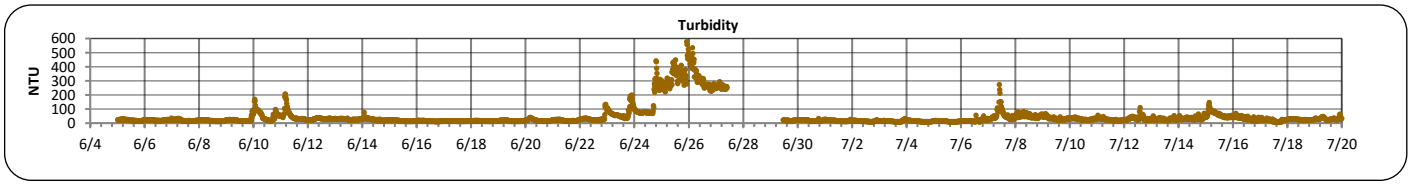
WOOLPERT

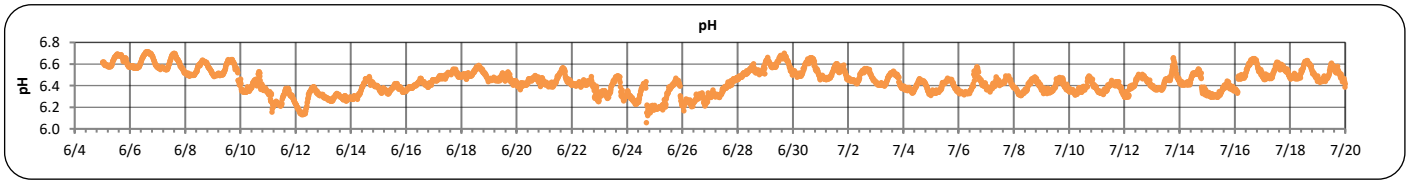
PARAMETER	DESCRIPTION
STREAM NAME:	Gills Creek
LOCATION:	Devine Street bridge
ADDRESS:	4716 Devine Street Columbia, SC 29209
COORDINATES:	33.989656, -80.97433
TMDL/IMPAIRMENT:	Fecal & Dissolved Oxygen
NEIGHBORING LANDUSE:	Residential and commercial
APPROX. DRAINAGE AREA:	59 square miles
SPATIAL LOCATION:	Middle site
TOTAL NO. STORMS OVER 0.1 INCH:	14
MAX. DAILY RAINFALL:	1.5 inches
TOTAL RAINFALL (FOR PERIOD):	7.0 inches

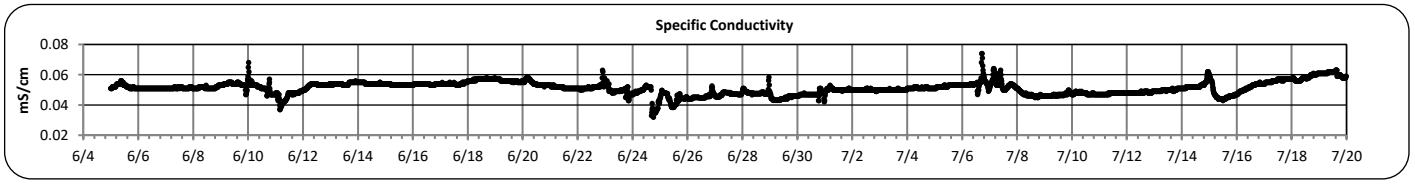
CONTINUOUS WATER QUALITY PARAMETERS:	SUMMARY STATISTICS				
	MINIMUM OBSERVED	MAXIMUM OBSERVED	MEDIAN OBSERVED	MEAN OBSERVED	STANDARD DEVIATION
DISCHARGE (CFS):	34.9	469.0	58.3	81.7	63.5
TEMPERATURE (°F):	71	93	83	82	4
TURBIDITY (NTU):	6	579	25	48	74
pH:	6.1	6.7	6.4	6.4	0.1
SPECIFIC CONDUCTIVITY (mS/cm):	0.032	0.074	0.051	0.051	0.004
DISSOLVED OXYGEN (mg/L):	5.1	7.9	6.6	6.5	0.5

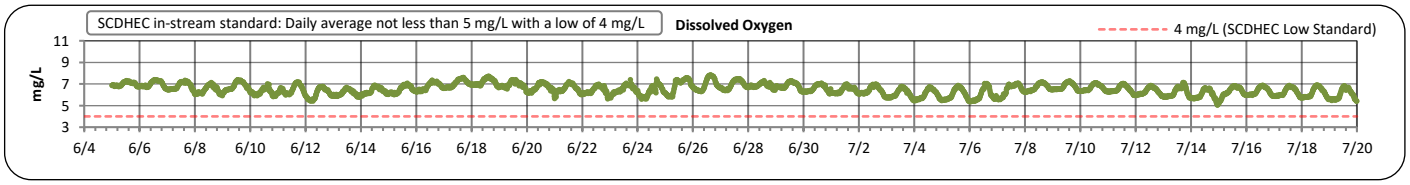












Note: Data gaps appear when the sonde is removed for calibration or when the flow depth is below the sensors

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Continuous Water Quality
Monitoring Periodic Report

Gills Creek B (June 4, 2020 - July 19, 2020)

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	
	6/22/2020							
	Time	Results	Time	Results	Time	Results	Time	Results
Escherichia coli (MPN/100mL)	12:02	426						
Total Suspended Solids (mg/L)	12:02	14						
Total Phosphorus (mg/L)								
Total Nitrogen (mg/L)								

Notes: Sample 1 was taken during dry weather conditions.

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Continuous Water Quality Monitoring Periodic Report

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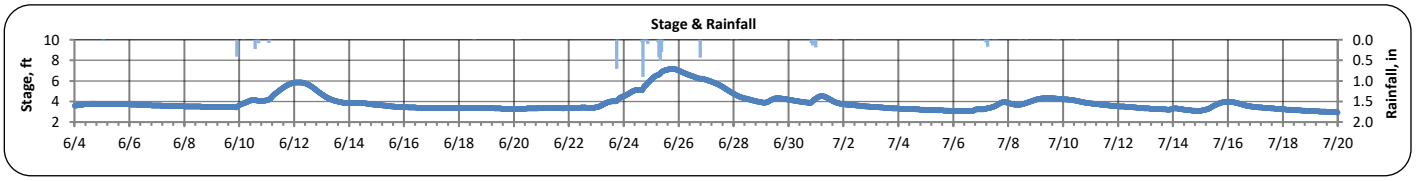
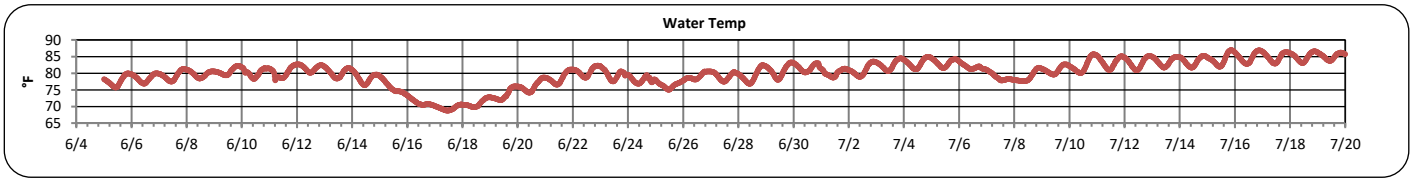
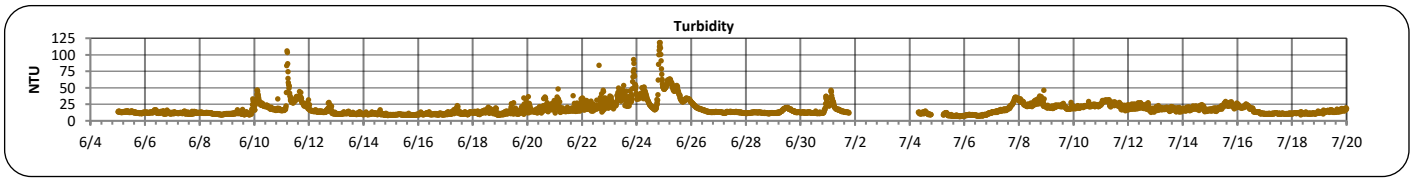
Gills Creek C (June 4, 2020 - July 19, 2020)

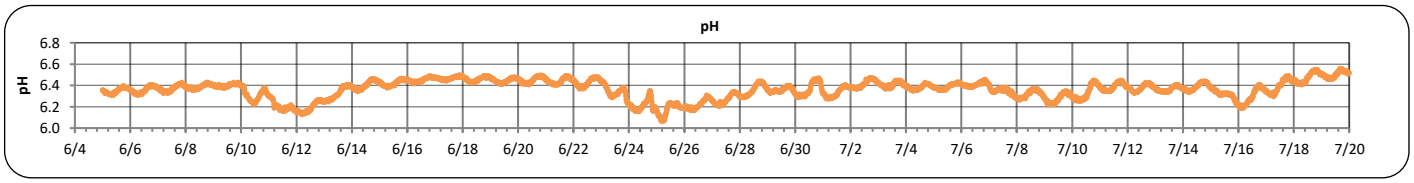
PARAMETER	DESCRIPTION
STREAM NAME:	Gills Creek
LOCATION:	Bluff Road bridge
ADDRESS:	3009 Bluff Rd. Columbia, SC 29209
COORDINATES:	33.948043, -80.9889
TMDL/IMPAIRMENT:	Fecal & Dissolved Oxygen
NEIGHBORING LANDUSE:	Residential and commercial
APPROX. DRAINAGE AREA:	64 square miles
SPATIAL LOCATION:	Most downstream site
TOTAL NO. STORMS OVER 0.1 INCH:	9
MAX. DAILY RAINFALL:	1.33 inches
TOTAL RAINFALL (FOR PERIOD):	5.6 inches

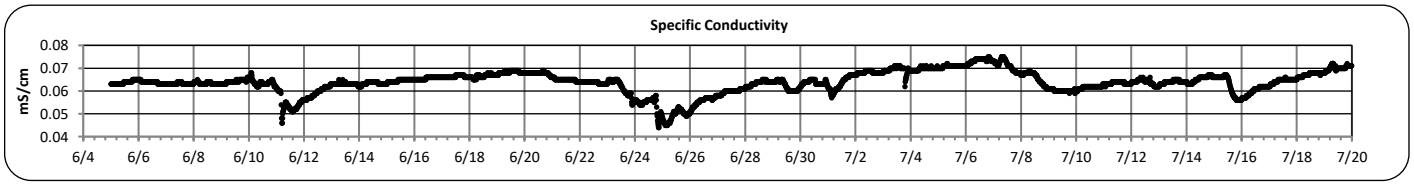
CONTINUOUS WATER QUALITY PARAMETERS:	SUMMARY STATISTICS				
	MINIMUM OBSERVED	MAXIMUM OBSERVED	MEDIAN OBSERVED	MEAN OBSERVED	STANDARD DEVIATION
STAGE (FT):	3.1	7.2	3.7	4.0	0.9
TEMPERATURE (°F):	69	87	80	80	4
TURBIDITY (NTU):	7	119	14	18	11
pH:	6.1	6.6	6.4	6.4	0.1
SPECIFIC CONDUCTIVITY (mS/cm):	0.044	0.075	0.064	0.064	0.005
DISSOLVED OXYGEN (mg/L):	4.7	7.1	5.7	5.8	0.5

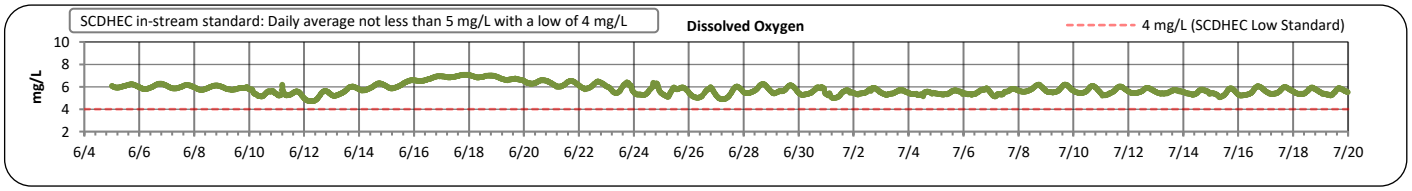












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Continuous Water Quality
Monitoring Periodic Report

Gills Creek C (June 4, 2020 - July 19, 2020)

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	
	6/22/2020							
	Time	Results	Time	Results	Time	Results	Time	Results
Escherichia coli (MPN/100mL)	11:37	1,446						
Total Suspended Solids (mg/L)	11:37	11.7						
Total Phosphorus (mg/L)								
Total Nitrogen (mg/L)								

Notes: All samples were taken during dry weather conditions.

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