

# Gills Creek Monitoring Sites

## Monitoring Data Summary for March 24<sup>th</sup>, 2021 – April 27<sup>th</sup>, 2021

### *Data Gaps*

- The GILA and GILC stations did not experience any interruptions in the data during this monitoring period.
- The GILB station experienced DO sensor fouling due to pollen from March 26<sup>th</sup> to March 29<sup>th</sup> and March 31<sup>st</sup> to April 2<sup>nd</sup>. These periods of 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 8.7 mg/L, the GILB station recorded an average DO value of 7.2 mg/L, and the GILC station recorded an average DO value of 8.7 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 7.8 mg/L, 5.1 mg/L, and 7.8 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 7 storm events resulting in approximately 2.3 inches of rainfall. The GILB station recorded 7 storms that resulted in approximately 2.5 inches of rainfall. The GILC station recorded 7 storms that resulted in approximately 2.3 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*

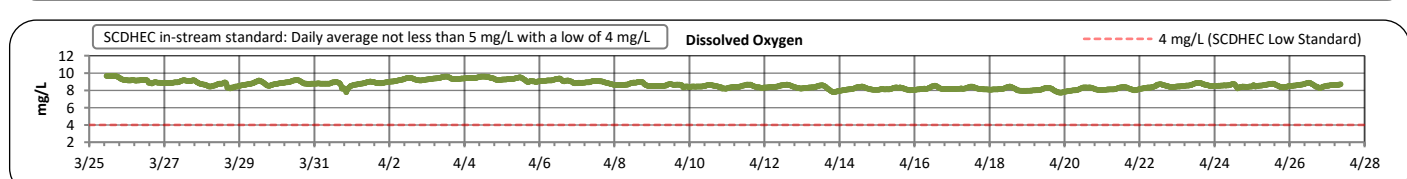
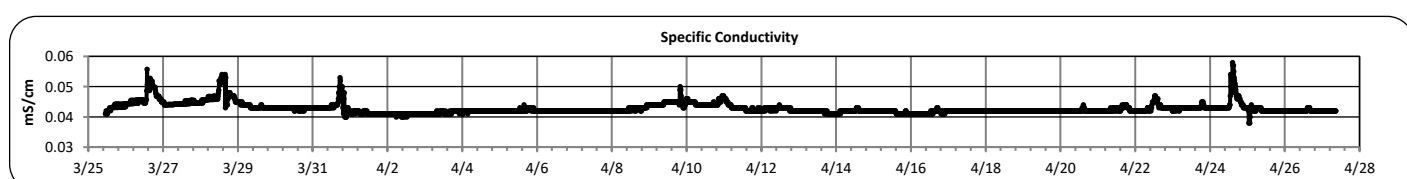
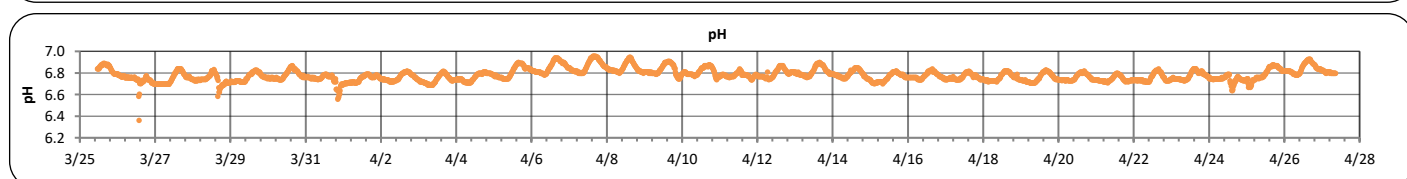
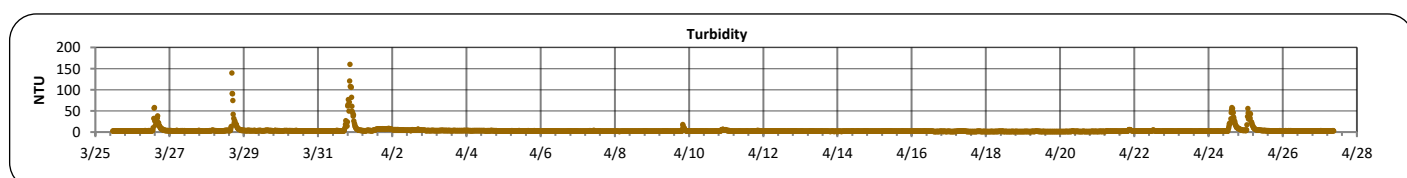
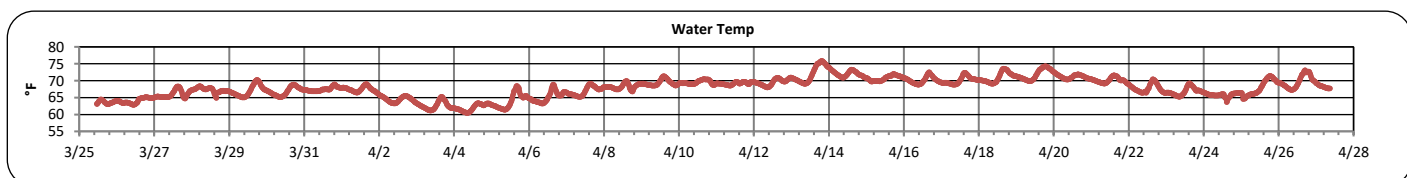
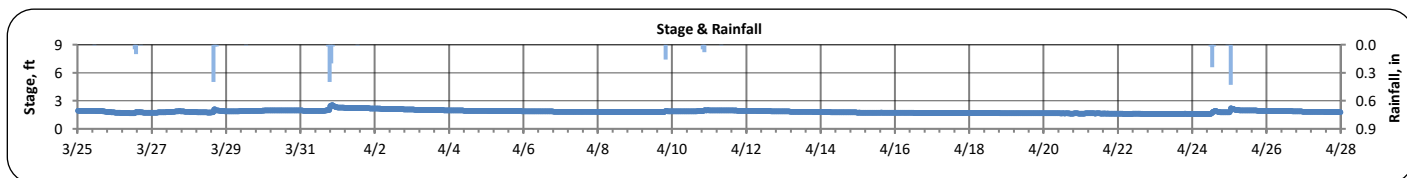
- At the GILA station, the specific conductivity increased several times during this deployment period. These specific conductivity spikes occurred on the following dates: March 26<sup>th</sup>, March 28<sup>th</sup>, March 31<sup>st</sup>, April 9<sup>th</sup>, April 22<sup>nd</sup>, and April 24<sup>th</sup>.
- At the GILB station, the specific conductivity increased several times during this deployment period. These specific conductivity spikes occurred on the following dates: April 9<sup>th</sup>-11<sup>th</sup> and April 24<sup>th</sup>.
- At the GILC station, the specific conductivity increased several times during this deployment period. These specific conductivity spikes occurred on the following dates: March 26<sup>th</sup>, March 28<sup>th</sup>, March 31<sup>st</sup>, April 9<sup>th</sup>, April 22<sup>nd</sup>, and April 24<sup>th</sup>.

### *Flow Measurements*

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

**Gills Creek A (March 24, 2021 - April 27, 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):	1.6	2.6	1.8	1.9	0.2
LOCATION:	Forest Drive Bridge	TEMPERATURE (°F):	60	76	68	68	3
ADDRESS:	4840 Forest Drive, Columbia, SC 29206	TURBIDITY (NTU):	1	160	3	4	8
COORDINATES:	34.019826, -80.963566	pH:	6.4	7.0	6.8	6.8	0.1
TMDL/IMPAIRMENT:	Fecal & Dissolved Oxygen	SPECIFIC CONDUCTIVITY (mS/cm):	0.038	0.058	0.042	0.043	0.002
NEIGHBORING LANDUSE:	Residential and commercial	DISSOLVED OXYGEN (mg/L):	7.8	9.7	8.6	8.7	0.4
APPROX. DRAINAGE AREA:	48 square miles						
SPATIAL LOCATION:	Most upstream site						
TOTAL NO. STORMS OVER 0.1 INCH:	7						
MAX. DAILY RAINFALL:	0.6 inches						
TOTAL RAINFALL (FOR PERIOD):	2.3 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 A (March 24, 2021 - April 27, 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:**

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)								

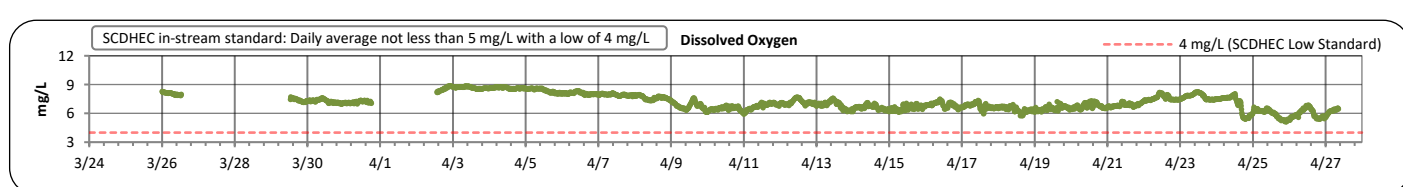
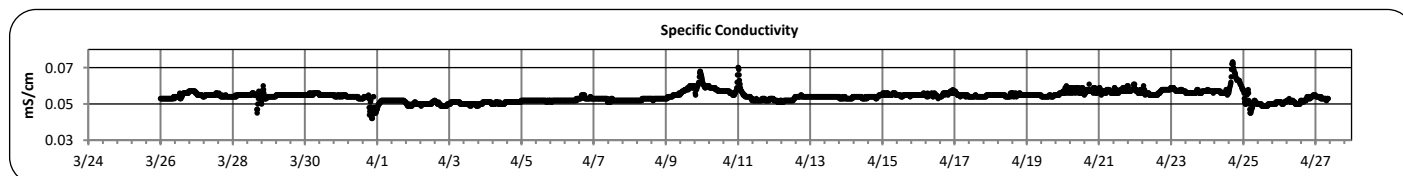
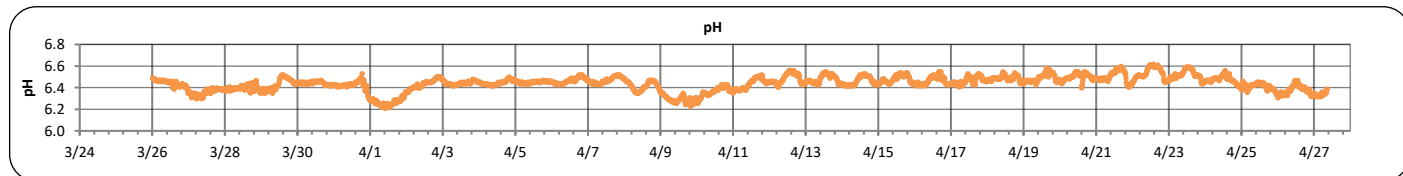
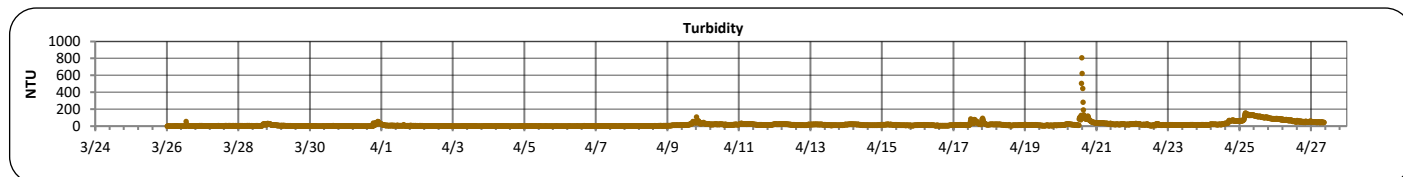
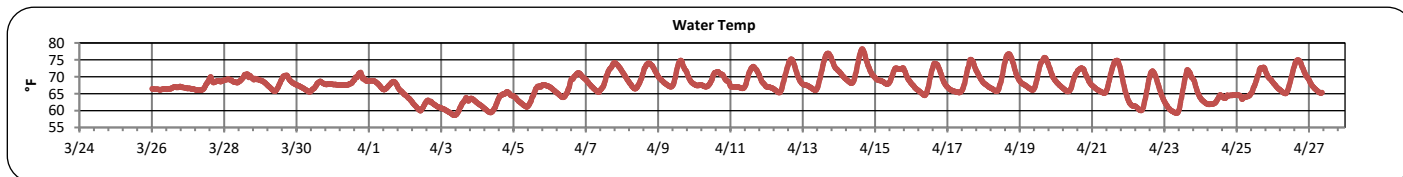
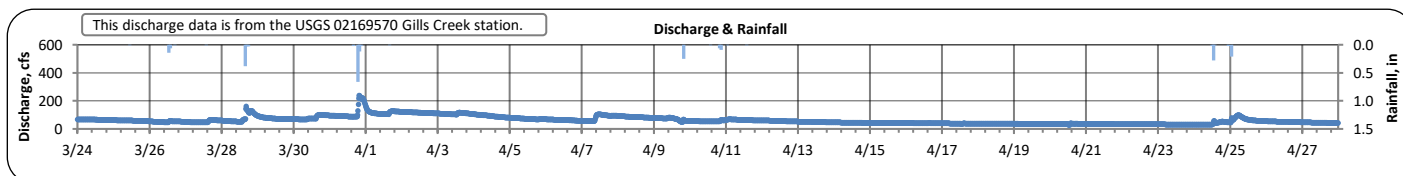
Notes: No samples were collected during this deployment period.

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 (March 24, 2021 - April 27, 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):	29.3	239.0	57.4	63.5	27.4
LOCATION:	Devine Street bridge	TEMPERATURE (°F):	59	78	68	68	4
ADDRESS:	4716 Devine Street Columbia, SC 29209	TURBIDITY (NTU):	1	808	12	20	33
COORDINATES:	33.989656, -80.97433	pH:	6.2	6.6	6.5	6.4	0.1
TMDL/IMPAIRMENT:	Fecal & Dissolved Oxygen	SPECIFIC CONDUCTIVITY (mS/cm):	0.042	0.073	0.054	0.054	0.003
NEIGHBORING LANDUSE:	Residential and commercial	DISSOLVED OXYGEN (mg/L):	5.1	8.9	7.1	7.2	0.8
APPROX. DRAINAGE AREA:	59 square miles						
SPATIAL LOCATION:	Middle site						
TOTAL NO. STORMS OVER 0.1 INCH:	7						
MAX. DAILY RAINFALL:	0.8 inches						
TOTAL RAINFALL (FOR PERIOD):	2.5 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 B (March 24, 2021 - April 27, 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:**

Analyte (units)	Sample 1		Sample 2		Sample 3		Sample 4	
	4/22/2021							
	Time	Results	Time	Results	Time	Results	Time	Results
<i>Escherichia coli</i> (MPN/100mL)	12:27	20						
Total Suspended Solids (mg/L)	12:27	27.8						
Total Phosphorus (mg/L)								
Total Nitrogen (mg/L)								

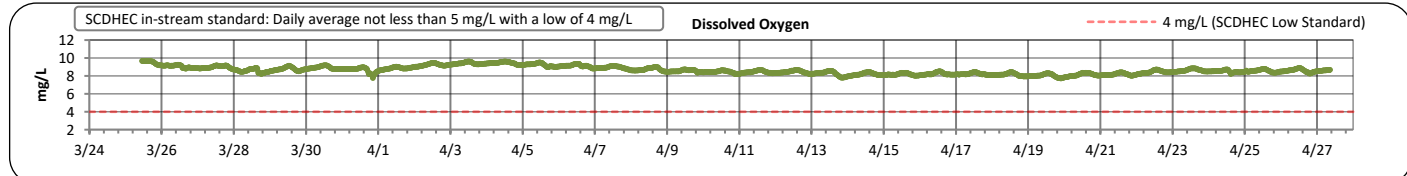
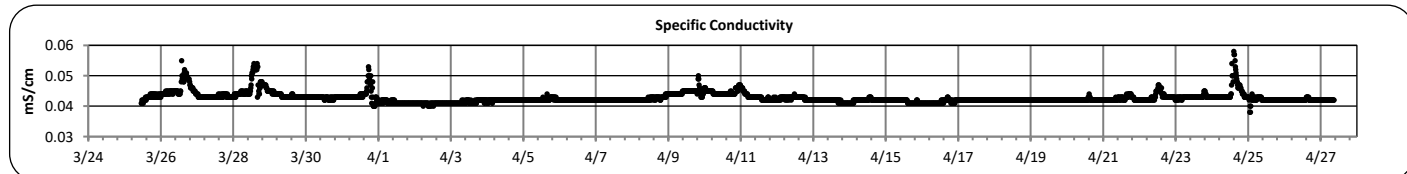
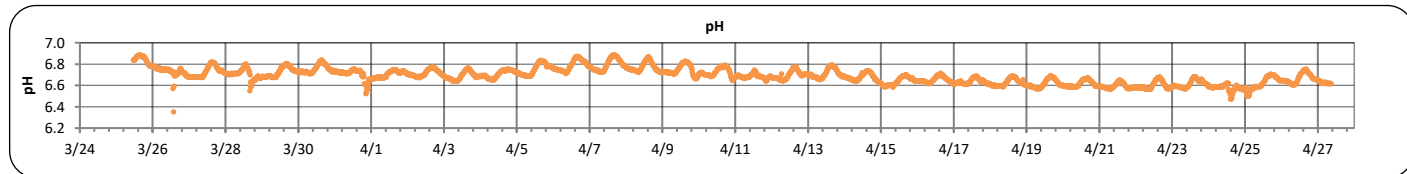
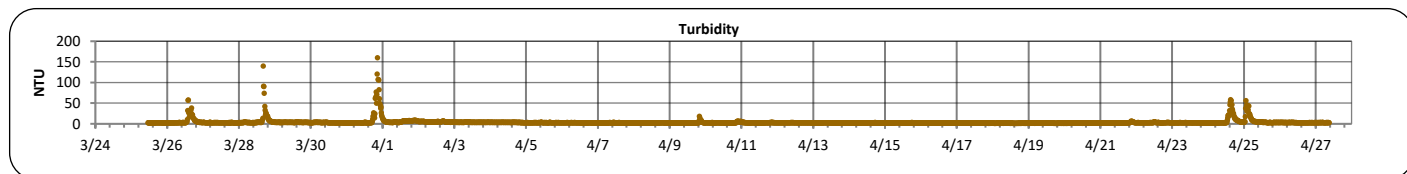
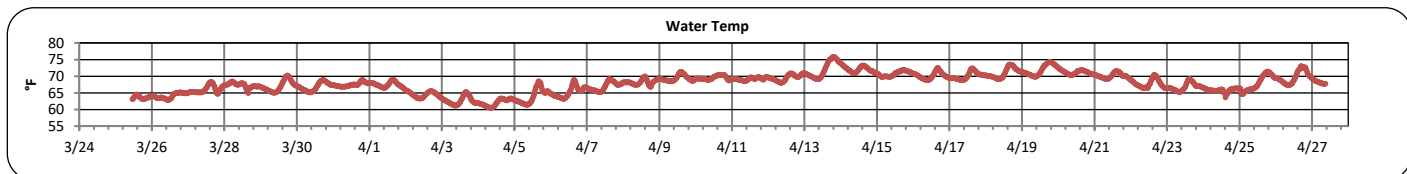
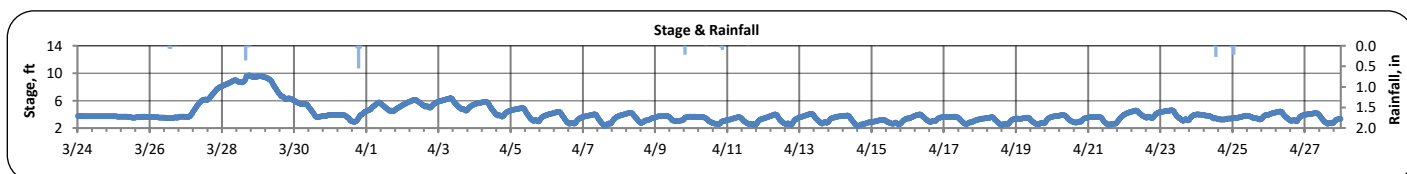
Notes: Sample 1 was collected during dry weather conditions.

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 (March 24, 2021 - April 27, 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):	2.3	9.7	3.7	4.0	1.4
LOCATION:	Bluff Road bridge	TEMPERATURE (°F):	60	76	68	68	3
ADDRESS:	3009 Bluff Rd. Columbia, SC 29209	TURBIDITY (NTU):	2	160	3	4	8
COORDINATES:	33.948043, -80.9889	pH:	6.4	6.9	6.7	6.7	0.1
TMDL/IMPAIRMENT:	Fecal & Dissolved Oxygen	SPECIFIC CONDUCTIVITY (mS/cm):	0.038	0.058	0.042	0.043	0.002
NEIGHBORING LANDUSE:	Residential and commercial	DISSOLVED OXYGEN (mg/L):	7.8	9.7	8.6	8.7	0.4
APPROX. DRAINAGE AREA:	64 square miles						
SPATIAL LOCATION:	Most downstream site						
TOTAL NO. STORMS OVER 0.1 INCH:	7						
MAX. DAILY RAINFALL:	0.69 inches						
TOTAL RAINFALL (FOR PERIOD):	2.3 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 (March 24, 2021 - April 27, 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:**

Analyte (units)	Sample 1		Sample 2		Sample 3		Sample 4	
	4/22/2021							
	Time	Results	Time	Results	Time	Results	Time	Results
<i>Escherichia coli</i> (MPN/100mL)	12:55	194						
Total Suspended Solids (mg/L)	12:55	5.1						
Total Phosphorus (mg/L)								
Total Nitrogen (mg/L)								

Notes: Sample 1 was collected during dry 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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