

Gills Creek Monitoring Sites

Data Gaps

- The GILA station experienced several periods of unsubmergence during this monitoring period.
- The GILB sonde is experiencing maintenance issues outside of the scope of typical operations needs. The instrument was removed from deployment on November 11th and sent to the manufacturer for inspection. The gaps in turbidity data between October 20th and October 25th, and between October 26th and November 1st, were also due to these sensor malfunctions.
- The sonde typically deployed at the GILC station was returned to the manufacturer for maintenance following sporadic sensor malfunction. A temporary sonde was deployed in its place, but this sonde was not equipped with a turbidity probe. Additionally, accumulated leaf debris caused inaccurate data readings in the dissolved oxygen probe during this deployment.

SCDHEC Standards

- During this monitoring period, the average DO at all of the GIL stations was above the daily average limit of 5 mg/L. Additionally, the instantaneous DO limit of 4 mg/L was not violated at any of the GIL stations. With the colder winter water temperatures, DO levels in Gills Creek have been increasing.
- The pH lower standard of 6 was contravened briefly at the GILB site, when values of 5.96 were recorded. Neither the lower nor upper standard was violated at the other GILB sites.

Storm Events

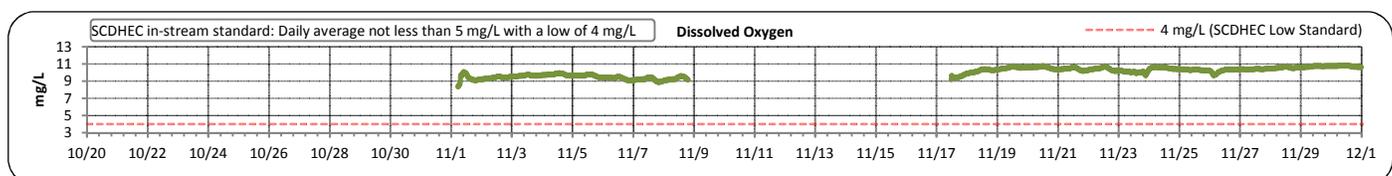
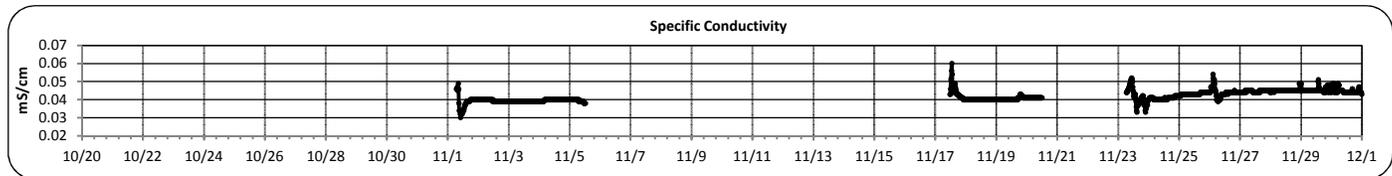
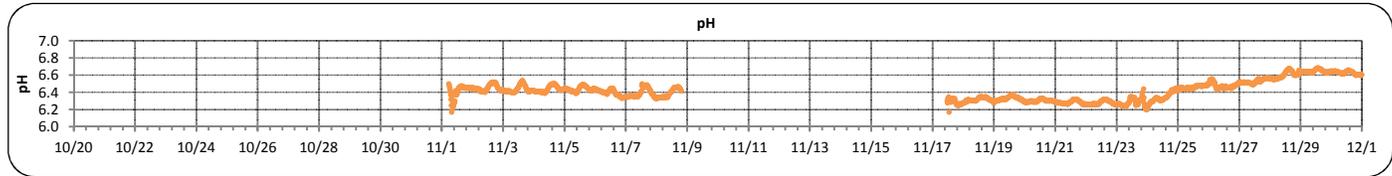
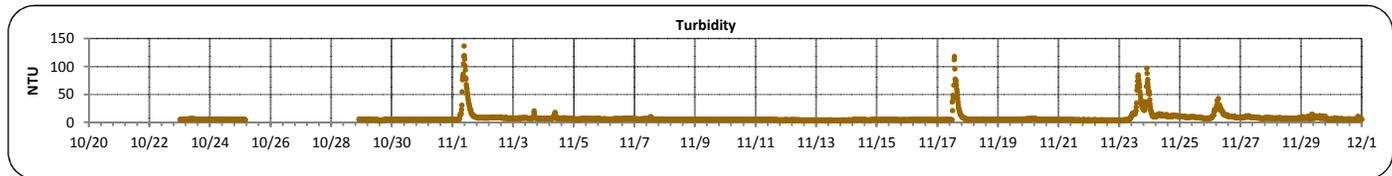
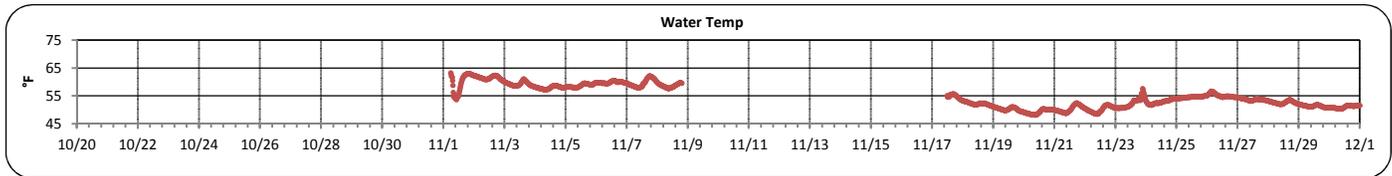
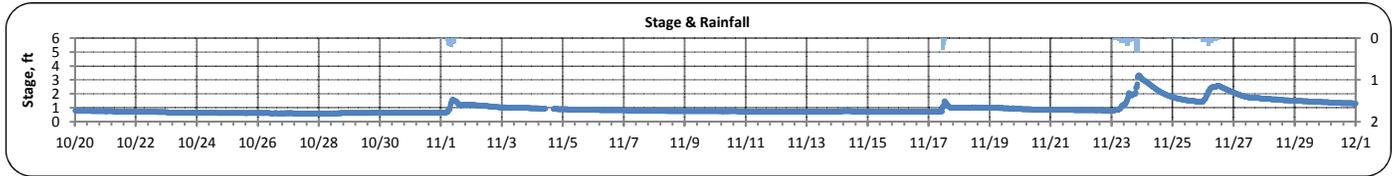
- During this period, all three Gills Creek stations recorded 4 separate storm events.
- All three of the Gills Creek monitoring sites recorded a storm event of over 2 inches during this period, with the largest recorded rainfall, at 2.5 inches, occurring at GILB.

Potential Illicit Discharges

- The GILB station recorded two potential illicit discharges during this deployment period. On October 31, 2014, there was an increase in specific conductivity coincident with a pH increase. On November 1st, there was an increase in specific conductivity towards the end of a storm event, which may have been an indicator of a sanitary sewer overflow.

Gills Creek A (Oct 20, 2014 -- Dec 1, 2014)

PARAMETER	DESCRIPTION	CONTINUOUS WATER QUALITY PARAMETERS:	SUMMARY STATISTICS				
			MINIMUM OBSERVED	MAXIMUM OBSERVED	MEDIAN OBSERVED	MEAN OBSERVED	STANDARD DEVIATION
STREAM NAME:	Gills Creek	STAGE (FT):	0.6	3.3	0.8	1.0	0.5
LOCATION:	Forest Drive Bridge	TEMPERATURE (°F):	48	63	54	55	4
ADDRESS:	4840 Forest Drive, Columbia, SC 29206	TURBIDITY (NTU):	3	137	5	8	10
COORDINATES:	34.019826, -80.963566	pH:	6.2	6.7	6.4	6.4	0.1
TMDL/IMPAIRMENT:	Fecal & Dissolved Oxygen	SPECIFIC CONDUCTIVITY (mS/cm):	0.03	0.06	0.041	0.042	0.003
NEIGHBORING LANDUSE:	Residential and commercial	DISSOLVED OXYGEN (mg/L):	8.4	10.9	10.3	10.1	0.5
APPROX. DRAINAGE AREA:	48 square miles						
SPATIAL LOCATION:	Most upstream site						
TOTAL NO. STORMS OVER 0.1 INCH:	4						
MAX. DAILY RAINFALL:	2.1 inches						
TOTAL RAINFALL (FOR PERIOD):	4.6 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 (Oct 20, 2014 -- Dec 1, 2014)

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.

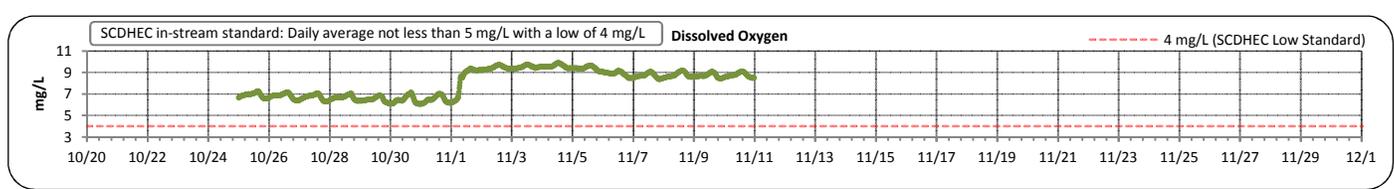
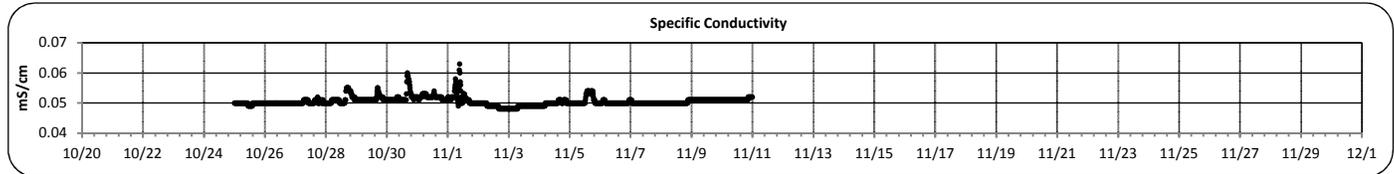
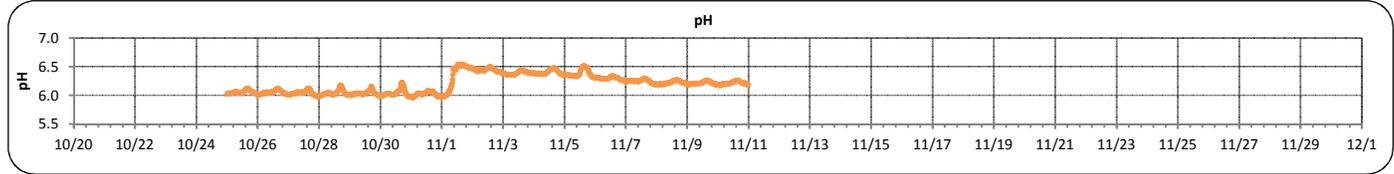
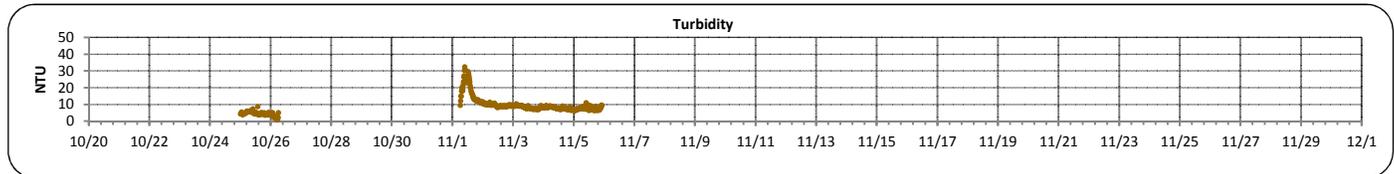
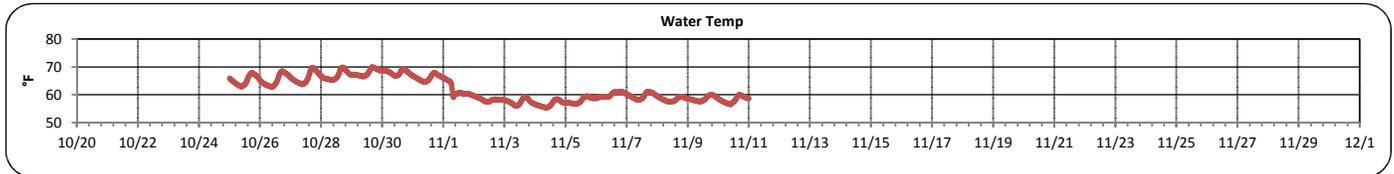
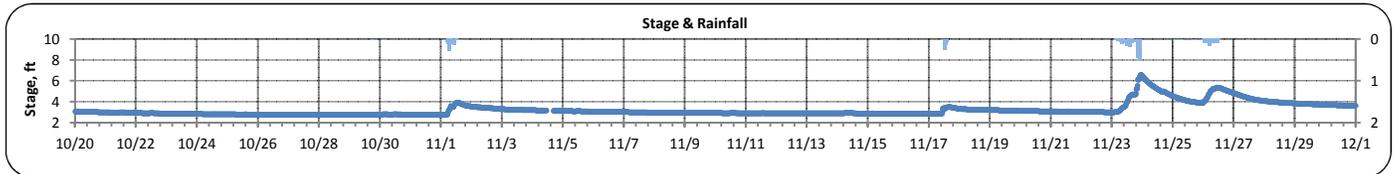
Sampled Data:

Analyte (units)	Sample 1		Sample 2		Sample 3		Sample 4	
	11/17/2014		11/17/2014		11/17/2014		11/17/2014	
	Time	Results	Time	Results	Time	Results	Time	Results
<i>Escherichia coli</i> (MPN/100mL)	10:37	259	11:46	15,530	13:12	13,000	14:35	8,164
Total Suspended Solids (mg/L)	10:37	78	11:46	106	13:12	74	14:35	44
Total Phosphorus (mg/L)	10:37	0.3	11:46	0.24	13:12	0.18	14:35	0.095
Total Nitrogen (mg/L)	10:37	1.54	11:46	1.68	13:12	1.26	14:35	0.97

Notes:

Gills Creek B (Oct 20, 2014 -- Dec 1, 2014)

PARAMETER	DESCRIPTION	CONTINUOUS WATER QUALITY PARAMETERS:	SUMMARY STATISTICS				
			MINIMUM OBSERVED	MAXIMUM OBSERVED	MEDIAN OBSERVED	MEAN OBSERVED	STANDARD DEVIATION
STREAM NAME:	Gills Creek	STAGE (FT):	2.7	6.6	3.0	3.2	0.6
LOCATION:	Devine Street bridge	TEMPERATURE (°F):	55	70	60	62	4
ADDRESS:	4716 Devine Street Columbia, SC 29209	TURBIDITY (NTU):	1	32	8	9	5
COORDINATES:	33.989656, -80.97433	pH:	5.96	6.6	6.2	6.2	0.2
TMDL/IMPAIRMENT:	Fecal & Dissolved Oxygen	SPECIFIC CONDUCTIVITY (mS/cm):	0.048	0.063	0.05	0.051	0.001
NEIGHBORING LANDUSE:	Residential and commercial	DISSOLVED OXYGEN (mg/L):	6.1	9.9	8.6	8.1	1.3
APPROX. DRAINAGE AREA:	59 square miles						
SPATIAL LOCATION:	Middle site						
TOTAL NO. STORMS OVER 0.1 INCH:	4						
MAX. DAILY RAINFALL:	2.5 inches						
TOTAL RAINFALL (FOR PERIOD):	4.9 inches						



Note: Data gaps appear when the sonde is removed for calibration or when the flow depth is below the sensors. The sonde was pulled on 11/10/2014 to send to YSI for repair.

**Continuous Water Quality
Monitoring Periodic Report**

Gills Creek B (Oct 20, 2014 -- Dec 1, 2014)

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.

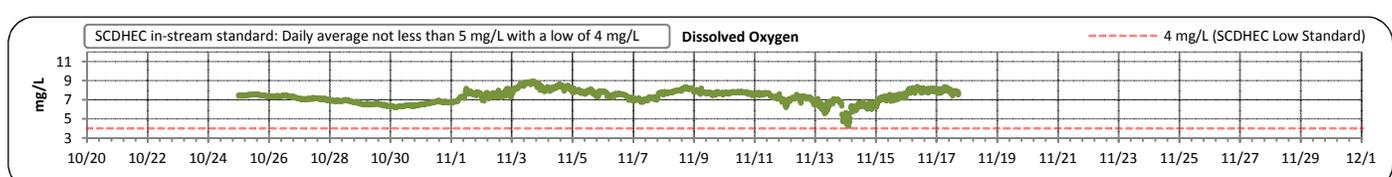
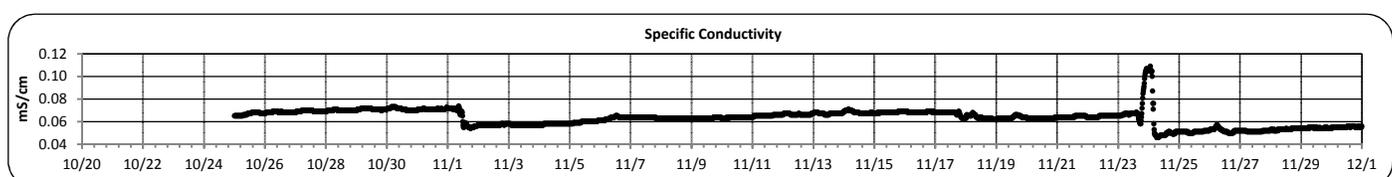
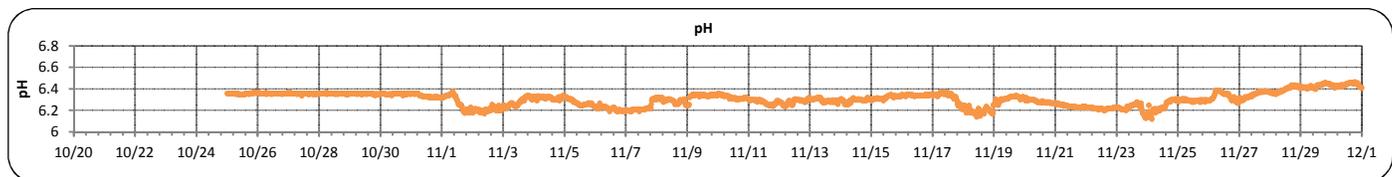
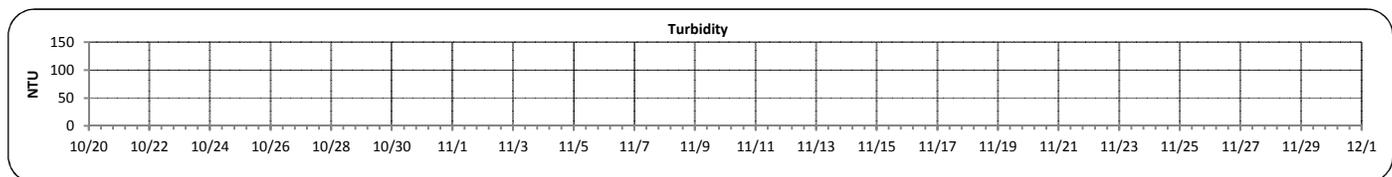
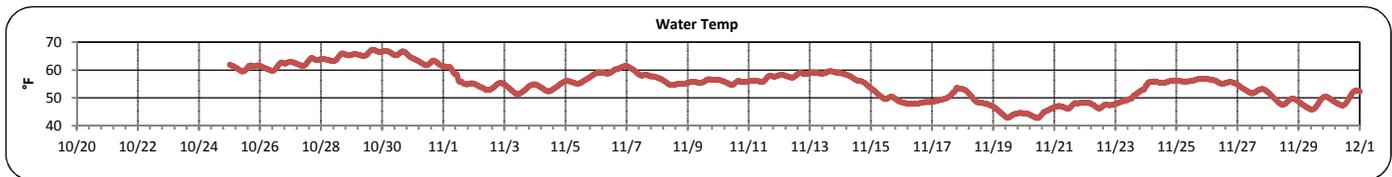
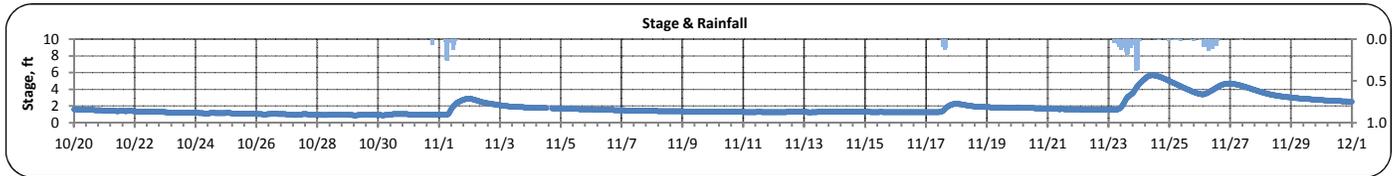
Sampled Data:

Analyte (units)	Sample 1		Sample 2		Sample 3		Sample 4	
	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: Samples were not collected at this site, as the sonde was with YSI for repair.

Gills Creek C (Oct 20, 2014 -- Dec 1, 2014)

PARAMETER	DESCRIPTION	CONTINUOUS WATER QUALITY PARAMETERS:	SUMMARY STATISTICS				
			MINIMUM OBSERVED	MAXIMUM OBSERVED	MEDIAN OBSERVED	MEAN OBSERVED	STANDARD DEVIATION
STREAM NAME:	Gills Creek	STAGE (FT):	0.9	5.7	1.5	1.9	1.0
LOCATION:	Bluff Road bridge	TEMPERATURE (°F):	43	67	55	55	6
ADDRESS:	3009 Bluff Rd. Columbia, SC 29209	TURBIDITY (NTU):	N/A	N/A	N/A	N/A	N/A
COORDINATES:	33.948043, -80.9889	pH:	6.1	6.5	6.3	6.3	0.1
TMDL/IMPAIRMENT:	Fecal & Dissolved Oxygen	SPECIFIC CONDUCTIVITY (mS/cm):	0.046	0.109	0.064	0.063	0.007
NEIGHBORING LANDUSE:	Residential and commercial	DISSOLVED OXYGEN (mg/L):	4.2	9.0	7.4	7.4	0.7
APPROX. DRAINAGE AREA:	64 square miles						
SPATIAL LOCATION:	Most downstream site						
TOTAL NO. STORMS OVER 0.1 INCH:	4						
MAX. DAILY RAINFALL:	2.24 inches						
TOTAL RAINFALL (FOR PERIOD):	4.5 inches						



Note: Data gaps appear when the sonde is removed for calibration or when the flow depth is below the sensors. A temporary sonde was used at Gil C this month and did not monitor for turbidity.

**Continuous Water Quality
Monitoring Periodic Report**

Gills Creek C (Oct 20, 2014 -- Dec 1, 2014)

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	
	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: Samples were not collected at this site, as the sonde was with YSI for repair.