City of Columbia, SC Stormwater Management
Partnering for clean waterways

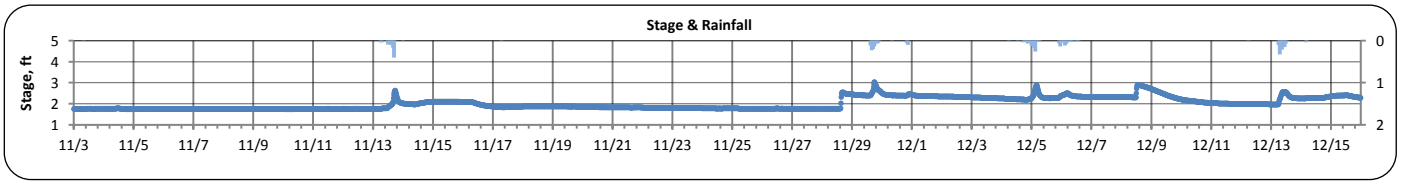
Continuous Water Quality Monitoring Periodic Report

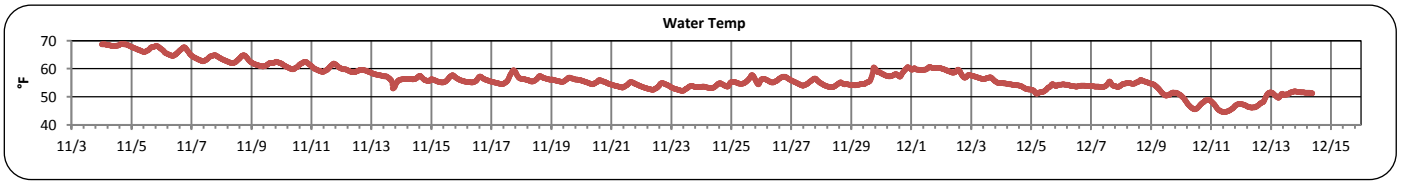
WOOLPERT

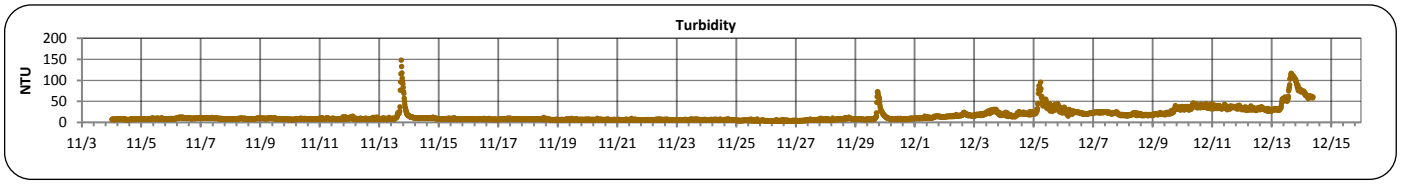
Gills Creek A (November 3, 2016 -- December 15, 2016)

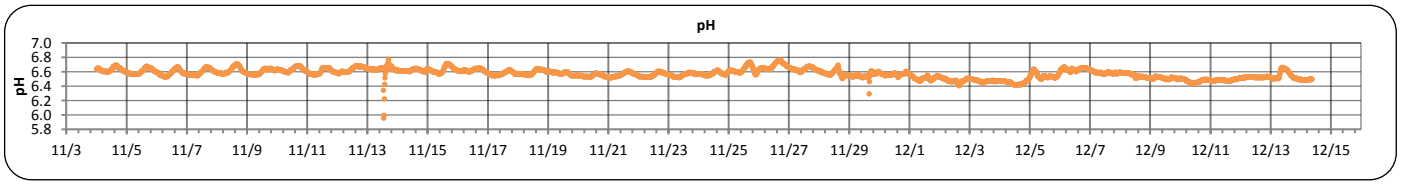
PARAMETER	DESCRIPTION
STREAM NAME:	Gills Creek
LOCATION:	Forest Drive Bridge
ADDRESS:	4840 Forest Drive, Columbia, SC 29206
COORDINATES:	34.019826, -80.963566
TMDL/IMPAIRMENT:	Fecal & Dissolved Oxygen
NEIGHBORING LANDUSE:	Residential and commercial
APPROX. DRAINAGE AREA:	48 square miles
SPATIAL LOCATION:	Most upstream site
TOTAL NO. STORMS OVER 0.1 INCH:	6
MAX. DAILY RAINFALL:	1.0 inches
TOTAL RAINFALL (FOR PERIOD):	4.7 inches

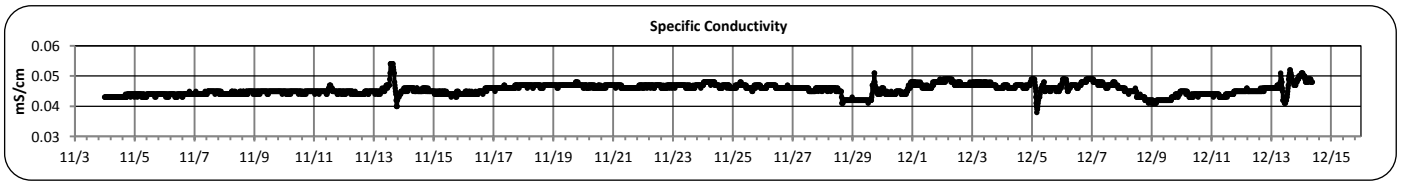
CONTINUOUS WATER QUALITY PARAMETERS:	SUMMARY STATISTICS				
	MINIMUM OBSERVED	MAXIMUM OBSERVED	MEDIAN OBSERVED	MEAN OBSERVED	STANDARD DEVIATION
STAGE (FT):	1.7	3.0	1.9	2.0	0.3
TEMPERATURE (°F):	45	69	56	56	5
TURBIDITY (NTU):	4	148	9	16	15
pH:	5.96	6.8	6.6	6.6	0.1
SPECIFIC CONDUCTIVITY (mS/cm):	0.038	0.054	0.046	0.046	0.002
DISSOLVED OXYGEN (mg/L):	8.2	11.1	10.0	9.8	0.6

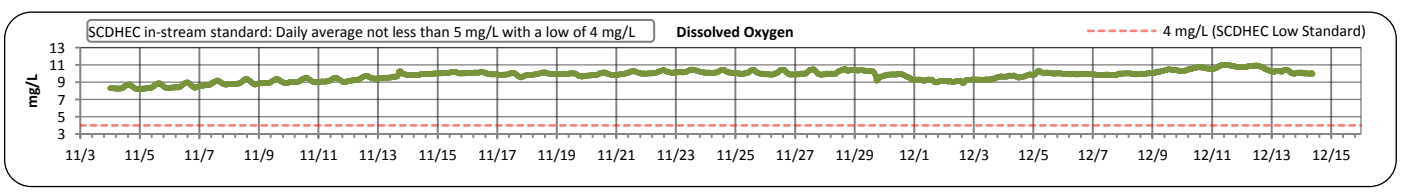












Note: Data gaps appear when the sonde is removed for calibration or when the flow depth is below the sensors

REPORT GENERATED ON 1/6/2017

Continuous Water Quality
Monitoring Periodic Report

Gills Creek A (November 3, 2016 -- December 15, 2016)

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	
	12/5/2016		12/5/2016		12/5/2016	
	Time	Results	Time	Results	Time	Results
Escherichia coli (MPN/100mL)	9:56	626	12:17	550	14:49	394
Total Suspended Solids (mg/L)	9:56	20.6	12:17	16.5	14:49	16.8
Total Phosphorus (mg/L)	9:56	0.038	12:17	0.034	14:49	0.029
Total Nitrogen (mg/L)	9:56	0.54	12:17	0.54	14:49	0.46

Notes:

Analyte (units)	Sample 4		Sample 5		Sample 6	
	12/6/2016		12/6/2016		12/6/2016	
	Time	Results	Time	Results	Time	Results
Escherichia coli (MPN/100mL)	9:13	882	11:03	1,188	13:40	1,166
Total Suspended Solids (mg/L)	9:13	19.2	11:03	20.2	13:40	18.8
Total Phosphorus (mg/L)	9:13	0.038	11:03	0.04	13:40	0.037
Total Nitrogen (mg/L)	9:13	0.92	11:03	0.56	13:40	0.52

Notes:

Analyte (units)	Sample 7		Sample 8		Sample 9		Sample 10	
	12/13/2016		12/13/2016		12/13/2016		12/13/2016	
	Time	Results	Time	Results	Time	Results	Time	Results
Escherichia coli (MPN/100mL)	8:30	10,950	10:00	3,836	12:50	2,666	14:15	2,842
Total Suspended Solids (mg/L)	8:30	65.2	10:00	49.6	12:50	35	14:15	67
Total Phosphorus (mg/L)	8:30	0.11	10:00	0.074	12:50	0.054	14:15	0.075
Total Nitrogen (mg/L)	8:30	0.78	10:00	0.7	12:50	0.6	14:15	0.73

Notes:

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

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City of Columbia, SC Stormwater Management
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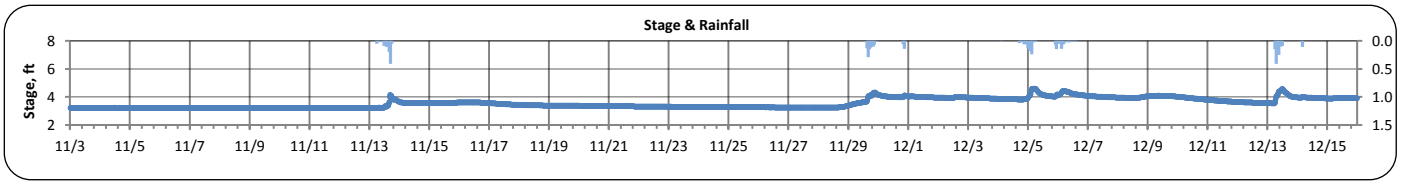
Continuous Water Quality Monitoring Periodic Report

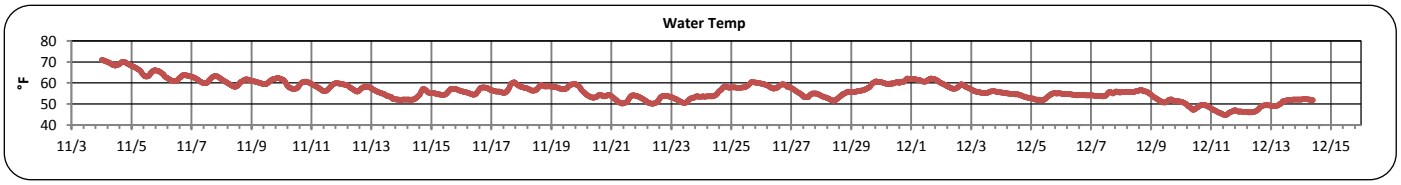
WOOLPERT

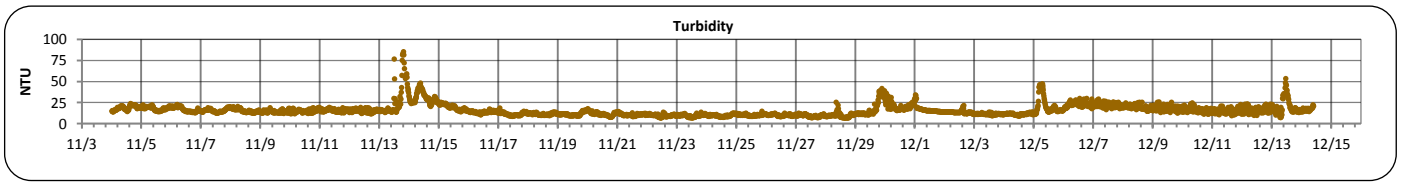
Gills Creek B (November 3, 2016 -- December 15, 2016)

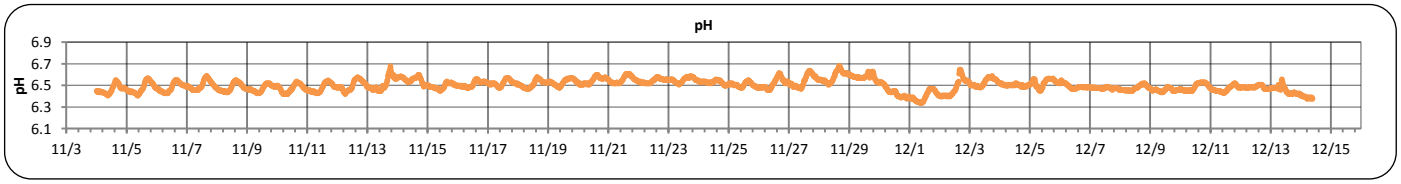
PARAMETER	DESCRIPTION
STREAM NAME:	Gills Creek
LOCATION:	Devine Street bridge
ADDRESS:	4716 Devine Street Columbia, SC 29209
COORDINATES:	33.989656, -80.97433
TMDL/IMPAIRMENT:	Fecal & Dissolved Oxygen
NEIGHBORING LANDUSE:	Residential and commercial
APPROX. DRAINAGE AREA:	59 square miles
SPATIAL LOCATION:	Middle site
TOTAL NO. STORMS OVER 0.1 INCH:	7
MAX. DAILY RAINFALL:	1.2 inches
TOTAL RAINFALL (FOR PERIOD):	5.3 inches

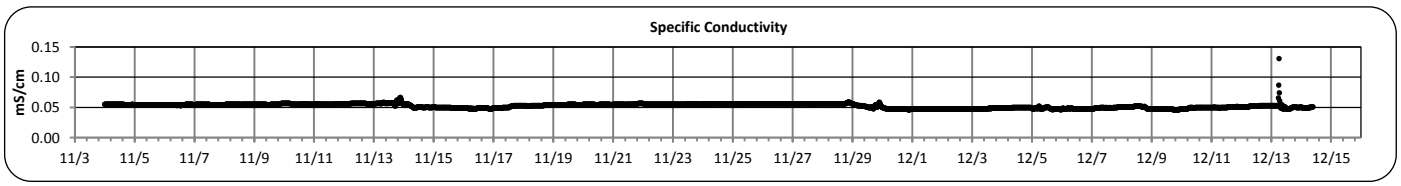
CONTINUOUS WATER QUALITY PARAMETERS:	SUMMARY STATISTICS				
	MINIMUM OBSERVED	MAXIMUM OBSERVED	MEDIAN OBSERVED	MEAN OBSERVED	STANDARD DEVIATION
STAGE (FT):	3.2	4.6	3.4	3.6	0.3
TEMPERATURE (°F):	45	71	56	56	5
TURBIDITY (NTU):	7	86	15	16	7
pH:	6.3	6.7	6.5	6.5	0.1
SPECIFIC CONDUCTIVITY (mS/cm):	0.046	0.131	0.054	0.053	0.004
DISSOLVED OXYGEN (mg/L):	7.2	11.4	9.6	9.5	0.8

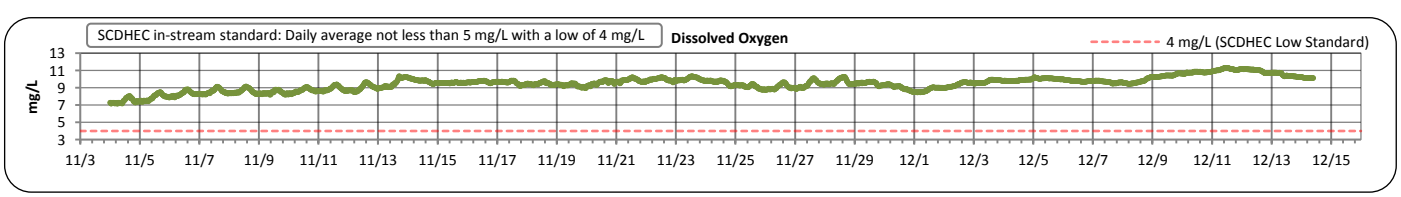












Note: Data gaps appear when the sonde is removed for calibration or when the flow depth is below the sensors

REPORT GENERATED ON 1/6/2017

Continuous Water Quality
Monitoring Periodic Report

Gills Creek B (November 3, 2016 -- December 15, 2016)

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	
	12/5/2016		12/5/2016		12/5/2016	
	Time	Results	Time	Results	Time	Results
Escherichia coli (MPN/100mL)	10:19	990	12:46	1,666	15:10	2,078
Total Suspended Solids (mg/L)	10:19	14.8	12:46	13	15:10	15.6
Total Phosphorus (mg/L)	10:19	0.044	12:46	0.04	15:10	0.048
Total Nitrogen (mg/L)	10:19	0.59	12:46	0.99	15:10	0.6

Notes:

Analyte (units)	Sample 4		Sample 5		Sample 6	
	12/6/2016		12/6/2016		12/6/2016	
	Time	Results	Time	Results	Time	Results
Escherichia coli (MPN/100mL)	9:31	900	11:23	870	14:04	1,820
Total Suspended Solids (mg/L)	9:31	16.6	11:23	18	14:04	15.4
Total Phosphorus (mg/L)	9:31	0.038	11:23	0.04	14:04	0.052
Total Nitrogen (mg/L)	9:31	0.68	11:23	0.58	14:04	0.63

Notes:

Analyte (units)	Sample 7		Sample 8		Sample 9		Sample 10	
	12/13/2016		12/13/2016		12/13/2016		12/13/2016	
	Time	Results	Time	Results	Time	Results	Time	Results
Escherichia coli (MPN/100mL)	9:00	4,448	10:15	2,472	13:10	2,356	14:35	1,210
Total Suspended Solids (mg/L)	9:00	35.2	10:15	51.5	13:10	33.4	14:35	22.6
Total Phosphorus (mg/L)	9:00	0.068	10:15	0.078	13:10	0.066	14:35	0.051
Total Nitrogen (mg/L)	9:00	0.71	10:15	0.55	13:10	0.66	14:35	0.64

Notes:

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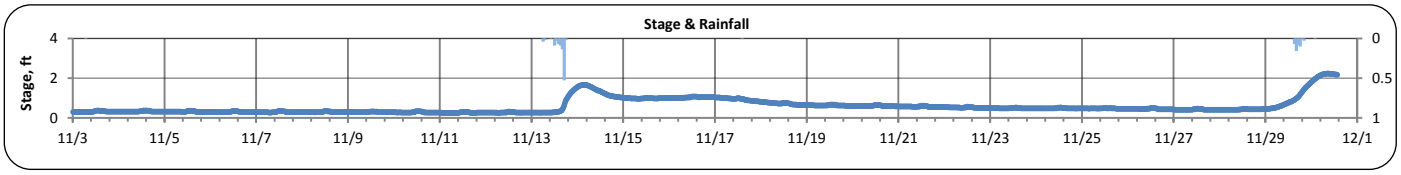
Continuous Water Quality Monitoring Periodic Report

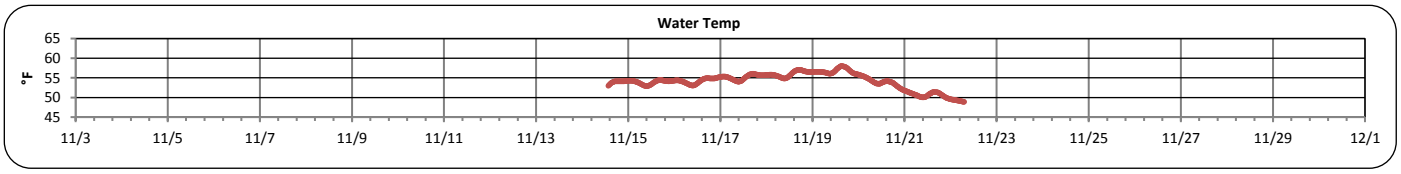
WOOLPERT

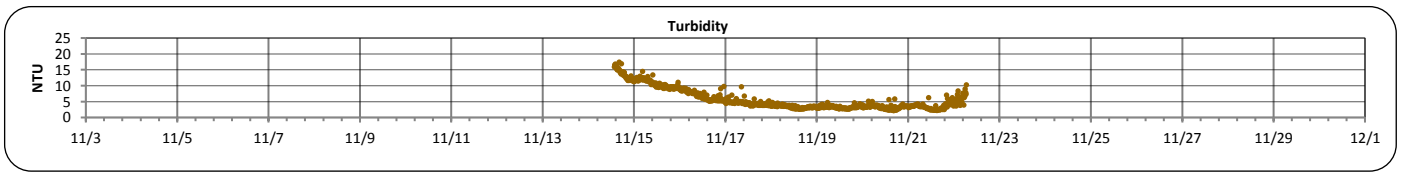
Gills Creek C (November 3, 2016 -- November 30, 2016)

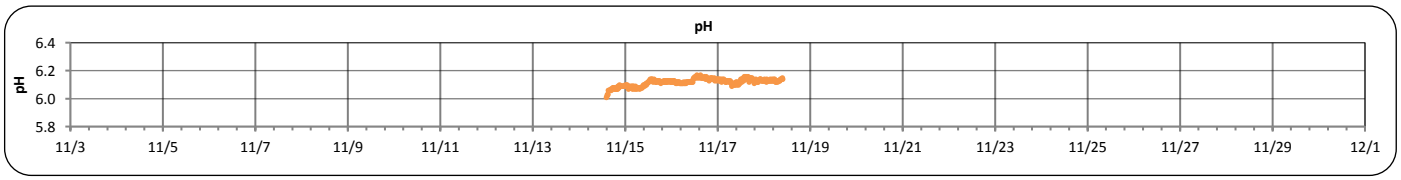
PARAMETER	DESCRIPTION
STREAM NAME:	Gills Creek
LOCATION:	Bluff Road bridge
ADDRESS:	3009 Bluff Rd. Columbia, SC 29209
COORDINATES:	33.948043, -80.9889
TMDL/IMPAIRMENT:	Fecal & Dissolved Oxygen
NEIGHBORING LANDUSE:	Residential and commercial
APPROX. DRAINAGE AREA:	64 square miles
SPATIAL LOCATION:	Most downstream site
TOTAL NO. STORMS OVER 0.1 INCH:	2
MAX. DAILY RAINFALL:	1.04 inches
TOTAL RAINFALL (FOR PERIOD):	2.0 inches

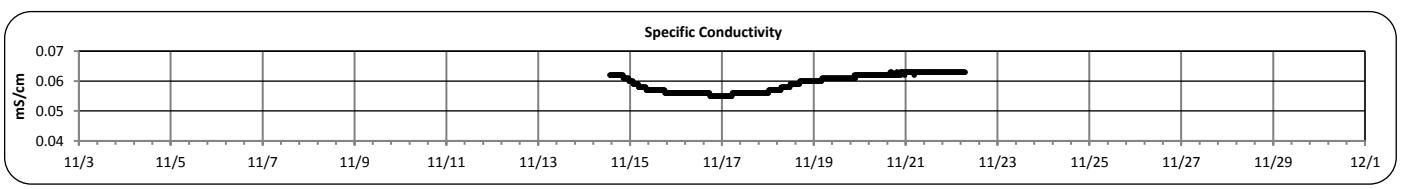
CONTINUOUS WATER QUALITY PARAMETERS:	SUMMARY STATISTICS				
	MINIMUM OBSERVED	MAXIMUM OBSERVED	MEDIAN OBSERVED	MEAN OBSERVED	STANDARD DEVIATION
STAGE (FT):	0.3	2.2	0.5	0.6	0.4
TEMPERATURE (°F):	49	58	54	54	2
TURBIDITY (NTU):	2	18	4	6	3
pH:	6.0	6.2	6.1	6.1	0.0
SPECIFIC CONDUCTIVITY (mS/cm):	0.055	0.063	0.06	0.059	0.003
DISSOLVED OXYGEN (mg/L):	8.0	9.2	8.3	8.4	0.3

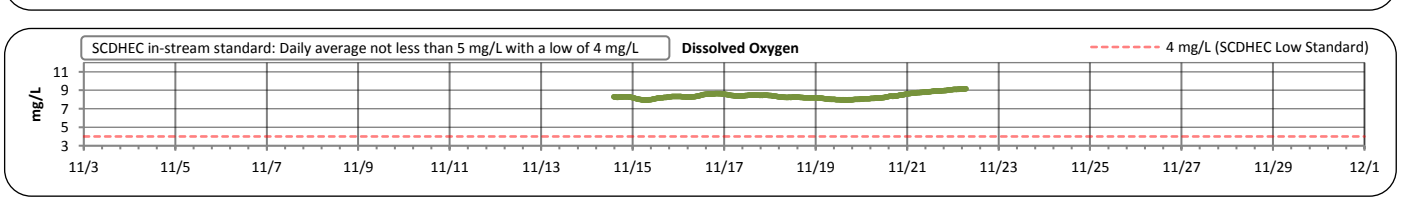












The Gil C sonde was calibrated on 11/30/2016. Data for the remainder of the reporting period (12/01/2016-12/15/2016) will be included in the next periodic report.

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 C (November 3, 2016 -- November 30, 2016)

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	
	12/5/2016		12/5/2016		12/5/2016	
	Time	Results	Time	Results	Time	Results
Escherichia coli (MPN/100mL)	10:47	1,090	13:13	1,074	15:27	1,166
Total Suspended Solids (mg/L)	10:47	9.2	13:13	10.2	15:27	9.6
Total Phosphorus (mg/L)	10:47	0.047	13:13	0.084	15:27	0.043
Total Nitrogen (mg/L)	10:47	0.47	13:13	0.49	15:27	0.44

Notes:

Analyte (units)	Sample 4		Sample 5		Sample 6	
	12/6/2016		12/6/2016		12/6/2016	
	Time	Results	Time	Results	Time	Results
Escherichia coli (MPN/100mL)	9:59	654	11:41	610	14:24	828
Total Suspended Solids (mg/L)	9:59	7.9	11:41	8	14:24	8.5
Total Phosphorus (mg/L)	9:59	0.051	11:41	0.033	14:24	0.041
Total Nitrogen (mg/L)	9:59	0.69	11:41	0.34	14:24	0.44

Notes:

Analyte (units)	Sample 7		Sample 8		Sample 9		Sample 10	
	12/13/2016		12/13/2016		12/13/2016		12/13/2016	
	Time	Results	Time	Results	Time	Results	Time	Results
Escherichia coli (MPN/100mL)	9:20	914	10:35	2,668	13:25	1,434	14:55	1,162
Total Suspended Solids (mg/L)	9:20	13.7	10:35	34.5	13:25	18.3	14:55	17
Total Phosphorus (mg/L)	9:20	0.042	10:35	0.079	13:25	0.058	14:55	0.052
Total Nitrogen (mg/L)	9:20	0.65	10:35	0.78	13:25	0.52	14:55	0.56

Notes:

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

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