Rocky Branch Monitoring Sites
Monitoring Data Summary for
April 25th, 2019 – June 18th, 2019

Data Gaps

- At the ROCA station:
  - The datasonde became buried in sediment on May 11th and was cleared up with a field visit by Woolpert personnel on May 14th. The turbidity, temperature, pH, and DO data were deleted during this period due to sediment accumulation covering the sensors.
  - A brief period of turbidity fouling, likely caused by debris clogging the sensor, on June 7th was deleted from the dataset.
- At the ROCB station:
  - A prolonged period of turbidity sensor fouling occurred from May 22nd-June 4th and was deleted from the dataset.
  - A short period of turbidity sensor fouling occurred from June 11th-14th and was deleted from the dataset.
- The website experienced reporting issues with the CS451 pressure transducers at ROCA and ROCB from May 18th-19th, therefore no CS451 stage data was recorded during that brief period.

SCDHEC Standards

- Both the ROCA and ROCB stations recorded pH values that were within the acceptable SCDHEC range of 6 to 8.5 during this monitoring period.
- The ROCA and ROCB stations recorded average DO concentrations of 7.0 mg/L and 7.4 mg/L, respectively, which are both above the SCDHEC daily average minimum standard of 5 mg/L.
- The minimum DO concentration recorded during this deployment period was 5.1 mg/L at ROCA and 4.4 mg/L at ROCB. Neither of the Rocky Branch monitoring stations recorded DO values below the SCDHEC discrete minimum standard of 4 mg/L.

Storm Events

- Both ROCA and ROCB stations recorded 5 storm events during this monitoring period, resulting in 2.2 inches of total precipitation.
- Both ROCA and ROCB stations exhibited typical responses to storm events during this monitoring period.
- The maximum antecedent dry time since the last significant precipitation event (at least 0.1 inches) was approximately 24.7 days at the ROCA station and 24.3 days at the ROCB station, both occurring prior to the June 5th storm event.

Potential Illicit Discharges and Abnormal Events

- At the ROCA station, all WQ parameters were impacted by an illicit discharge, potentially backwash from Maxcy Gregg pool, on May 28th.
- Several periods of elevated specific conductivity were observed at both Rocky Branch monitoring stations.
  - At ROCA, these specific conductivity spikes took place on: May 14th, 15th, 17th, 18th, 24th, 28th, and June 12th.
  - At ROCB, these specific conductivity spikes took place on: April 27th, 29th, May 6th, 8th, 11th, 15th, 17th-18th, 24th-25th, 29th, April 3rd-4th, 13th, and 15th.

Flow Measurements

- No flow measurements were taken at the ROCA or ROCB stations during this monitoring period.

Notes

- Due to a delayed contract, field visits to the water quality monitoring stations were minimal during this deployment period. Only significant station and equipment maintenance needs were performed.

City of Columbia, SC Stormwater Management — Partnering for clean waterways

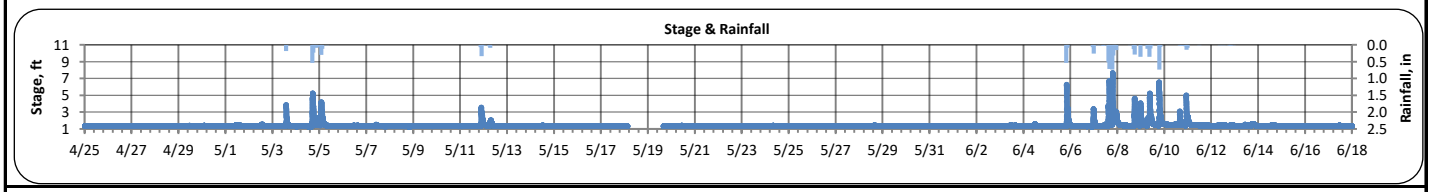
Continuous Water Quality Monitoring Periodic Report

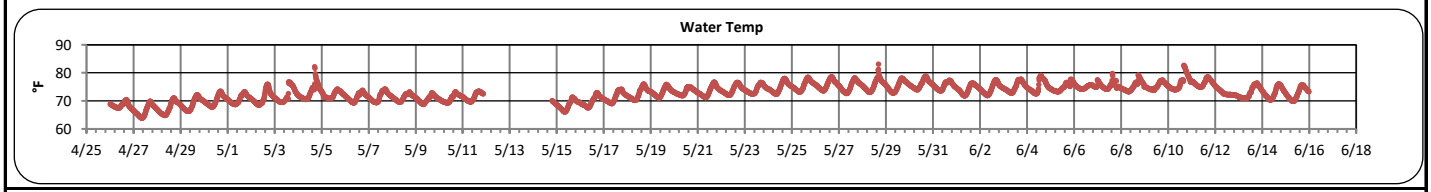
WOOLPERT

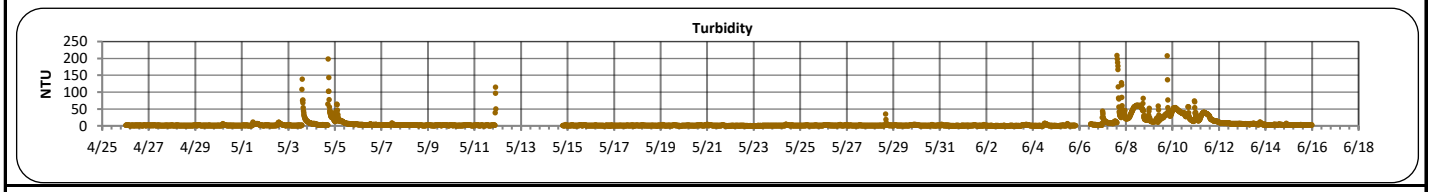
Rocky Branch A (April 25, 2019 -- June 18, 2019)

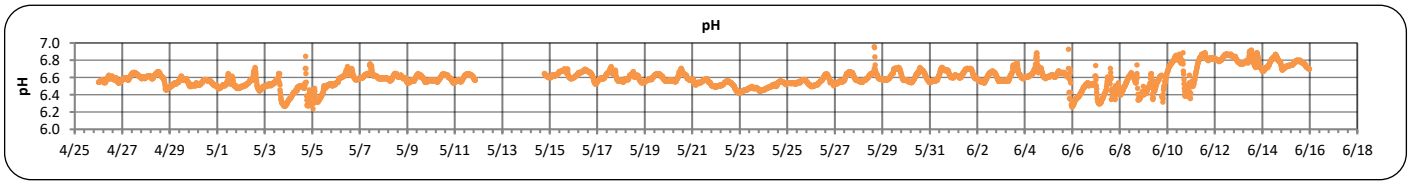
PARAMETER	DESCRIPTION
STREAM NAME:	Rocky Branch
LOCATION:	Maxcy Gregg Park
ADDRESS:	1650 Park Circle Columbia, SC 29201
COORDINATES:	33.995864, -81.021842
TMDL/IMPAIRMENT:	Fecal Coliform
NEIGHBORING LANDUSE:	Residential and commercial
SPATIAL LOCATION:	Most upstream site
TOTAL NO. STORMS OVER 0.1 INCH:	5
MAX. DAILY RAINFALL:	0.9 inches
TOTAL RAINFALL (FOR PERIOD):	2.2 inches

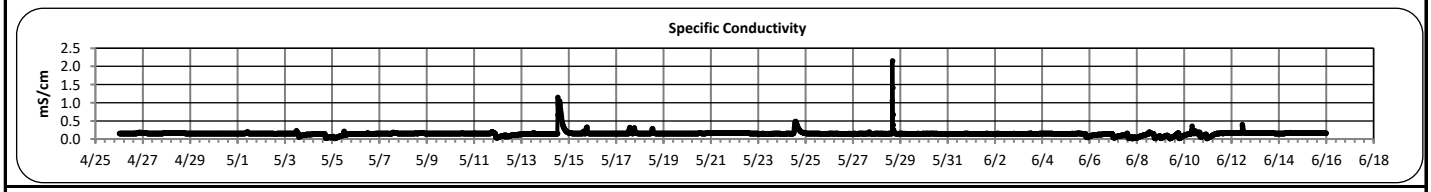
CONTINUOUS WATER QUALITY PARAMETERS:	SUMMARY STATISTICS				
	MINIMUM OBSERVED	MAXIMUM OBSERVED	MEDIAN OBSERVED	MEAN OBSERVED	STANDARD DEVIATION
STAGE (FT):	1.3	7.7	1.3	1.4	0.3
TEMPERATURE (°F):	64	83	73	73	3
TURBIDITY (NTU):	1	209	2	6	14
pH:	6.2	7.0	6.6	6.6	0.1
SPECIFIC CONDUCTIVITY (mS/cm):	0.015	2.16	0.151	0.150	0.067
DISSOLVED OXYGEN (mg/L):	5.1	8.6	7.1	7.0	0.7

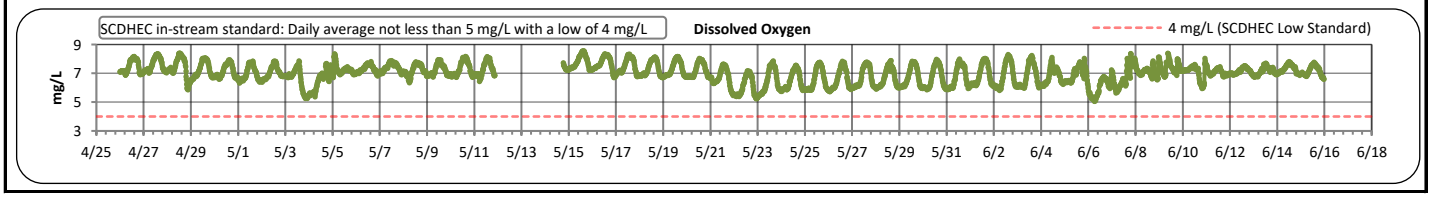












Note: Data gaps appear when the sonde is removed for calibration or when the flow depth is below the sensors

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Continuous Water Quality
Monitoring Periodic Report

Rocky Branch A (April 25, 2019 -- June 18, 2019)

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.

Grab Sample Data:

Analyte (units)	Sample 1		Sample 2		Sample 3		Sample 4	
	5/2/2019		6/4/2019					
	Time	Result	Time	Result	Time	Result	Time	Result
Escherichia coli (MPN/100mL)	9:40	598	9:03	2602				
Total Suspended Solids (mg/L)								
Total Phosphorus (mg/L)								
Total Nitrogen (mg/L)								

Note: Both samples were collected during dry weather conditions.

City of Columbia, SC Stormwater Management — Partnering for clean waterways

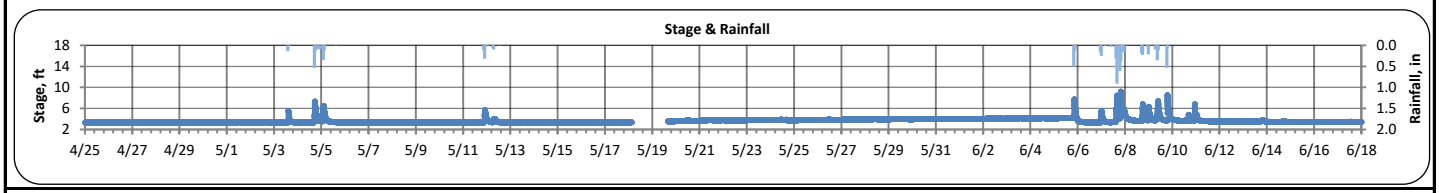
Continuous Water Quality Monitoring Periodic Report

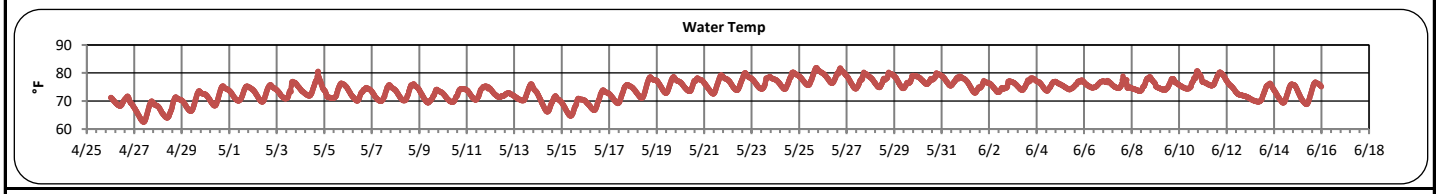
WOOLPERT

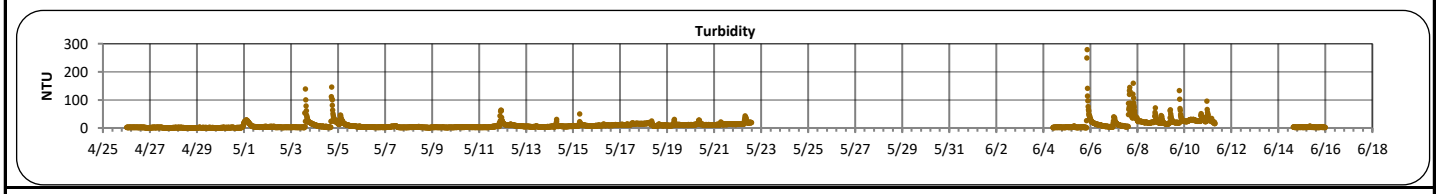
Rocky Branch B (April 25, 2019 -- June 18, 2019)

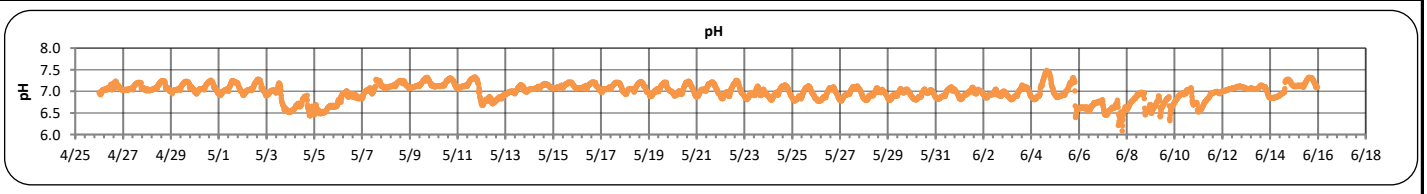
PARAMETER	DESCRIPTION
STREAM NAME:	Rocky Branch
LOCATION:	Olympia Ave Crossing
ADDRESS:	510 Heyward St Columbia, SC 29201
COORDINATES:	33.982578, -81.035036
TMDL/IMPAIRMENT:	Fecal Coliform
NEIGHBORING LANDUSE:	Residential and commercial
SPATIAL LOCATION:	Most Downstream Site
TOTAL NO. STORMS OVER 0.1 INCH:	5
MAX. DAILY RAINFALL:	0.8 inches
TOTAL RAINFALL (FOR PERIOD):	2.2 inches

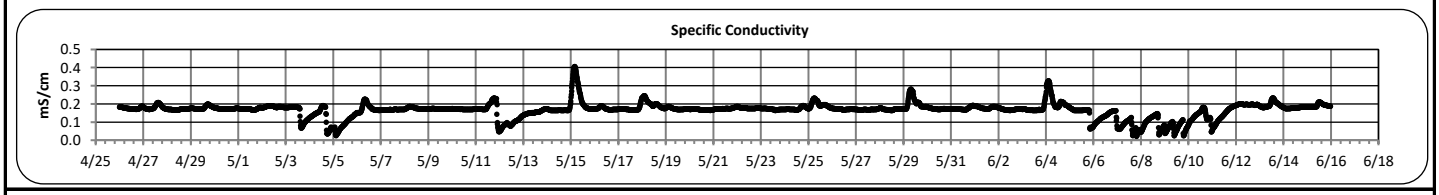
CONTINUOUS WATER QUALITY PARAMETERS:	SUMMARY STATISTICS				
	MINIMUM OBSERVED	MAXIMUM OBSERVED	MEDIAN OBSERVED	MEAN OBSERVED	STANDARD DEVIATION
STAGE (FT):	3.3	9.3	3.5	3.7	0.5
TEMPERATURE (°F):	63	82	75	74	3
TURBIDITY (NTU):	1	279	6	11	15
pH:	6.1	7.5	7.0	7.0	0.2
SPECIFIC CONDUCTIVITY (mS/cm):	0.022	0.406	0.172	0.166	0.041
DISSOLVED OXYGEN (mg/L):	4.4	9.6	7.5	7.4	0.9

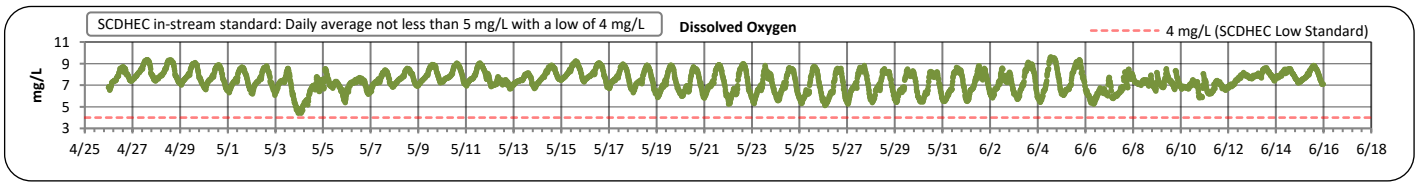












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Rocky Branch B (April 25, 2019 -- June 18, 2019)

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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	
	5/2/2019		6/4/2019					
	Time	Result	Time	Result	Time	Result	Time	Result
Escherichia coli (MPN/100mL)	10:15	1508	9:16	584				
Total Suspended Solids (mg/L)								
Total Phosphorus (mg/L)								
Total Nitrogen (mg/L)								

Note: Both samples were collected during dry weather conditions.

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