Chemical Analysis Report

SO-DIST-2019-07-02-02

Florida Department of Environmental Protection
Central Laboratory
2600 Blair Stone Road
Tallahassee, FL 32399-2400
DOH Accreditation E31780

Event Description: **Caloosa Creeks**
Request ID: **RQ-2019-07-01-12**
Customer: **SO-DIST**
Project ID: **BMAP**

Send Reports to:
FL Dept. of Environmental Protection
FLDEP South District Office
2295 Victoria Ave. Suite 364
Fort Myers, FL 33901-3381
Attn: Gary Snorek

For additional information please contact
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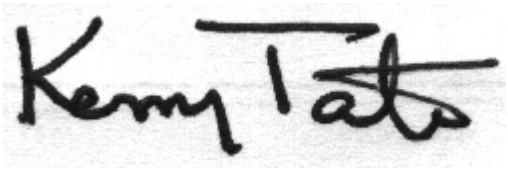
Certified by: Kerry Tate, Ph.D., Environmental Administrator

Date Certified: 15-JUL-2019 11:13



NON-CONFORMANCE REPORT INCLUDED

Case Narrative

Unless otherwise noted, all samples included in this report were received in accordance with protocols referenced in Chapter 62-160, Florida Administrative Code (F.A.C.). Results published in this report pertain only to the samples as submitted to, and received by the laboratory. All times in this report are adjusted to the applicable Eastern Time Zone (EST or EDT).

Results for the following analytical group are included in this report: Nutrients.

Scientific notation may be used in reporting very large or small values. Values reported using scientific notation will take the form of the following example: 1.3E+03, which is equivalent to 1.3×10^3 or 1300.

Unless otherwise noted, analytical values for soil and sediment samples are reported on a dry weight basis, and analytical values for waste and tissue samples are reported on a wet weight basis.

Results for TNI accredited tests met requirements established by The NELAC Institute. A double asterisk (**) is used to indicate an analyte/matrix/method for which the laboratory is not TNI accredited by the Florida Department of Health Environmental Laboratory Certification Program or where accreditation for that field of testing is not applicable.

Any significant anomalies or deviations from established protocols are documented in Non-Conformance Reports, which, where appropriate, are included within this analytical report. Additional comments related to specific analytical tests may be included as remarks following the analytical results for each sample. Such comments and remarks are for informational purposes only and are not intended to convey judgement about the usability of the reported data.

A quality control report on the performance of the test method for the submitted samples is included. Uncertainty associated with the analytical results contained in this report can be estimated from the reported quality assurance results and from published quality control acceptance limits for each analytical test. Matrix quality control results (matrix spike recoveries and matrix sample precision) pertain only to the matrix sample tested and do not necessarily reflect test method performance for other samples.

Typical matrix quality control (QC) measurements may include matrix spike recovery, matrix spike duplicate recovery, matrix spike precision and matrix sample precision. Not all matrix QC results may be available or reportable; where they are not an explanation is provided. Typical reasons for unavailable QC results include, but are not limited to, a) insufficient matrix sample to perform some or all QC measurements; b) analyte concentration in the sample replicated was too low for a meaningful measurement of precision and c) analyte concentration in the matrix sample spiked was too high (relative to the amount of analyte spiked) for a meaningful measurement of recovery. Where matrix QC results are unavailable, other method performance metrics (e.g., LCS recovery, LCS precision, surrogate recovery) may be used to assess performance of the method. Comments explaining any missing QC measurements are not intended to convey any adverse conclusions about the quality of the reported data.

Precision is reported as relative percent difference unless otherwise noted.

Quality Control codes as defined below may be used in this report to indicate results that are associated with one or more quality control elements which did not fall within established test method criteria. Such results may be qualified as estimates using a J qualifier as required by 62-160 F.A.C. Explanations are included in the report for any results that were reported as estimates for other reasons.

QC Codes used in this report may include:

LCS – Recovery for the batch Laboratory Control Sample (LCS) was outside existing control limits;
MS – Recovery for the batch matrix spike (MS) was outside existing control limits;
CCV – Recovery for a continuing calibration verification (CCV) standard was outside existing control limits;
SUR – Recovery of a surrogate (SUR) for associated analytes was outside existing control limits;
RPD – The precision, measured as relative percent difference (RPD), of batch replicate measurements was outside existing control limits;
RSD – The precision, measured as relative standard deviation (RSD), of batch replicate measurements was outside existing control limits;
SMP – Sample - used precision derived from replicate analyses of a sample;

The following data qualifiers are used, where applicable, in this report as specified in 62-160 F.A.C.

A - Value reported is the mean of two or more determinations.
B - Results based on colony counts outside the acceptable range.
I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
J - Estimated value and/or the analysis did not meet established quality control criteria.
K - Actual value is known to be less than value given.
L - Actual value is known to be greater than value given.
N - Presumptive evidence of presence of material.
O - Sampled, but analysis lost or not performed.
Q - Sample held beyond normal holding time.
T - Value reported is less than the criterion of detection.
U - Material was analyzed for but not detected. The reported value is the method detection limit for the sample analyzed.
V - Analyte was detected in both sample and method blank.
X - Too few individuals to calculate SCI value.
Y - The laboratory analysis was from an unpreserved or improperly preserved sample. The data may not be accurate.
Z - Colonies were too numerous to count (TNTC).

Quality control information from overflow laboratories may not be included in this report. Please refer to the associated report from the overflow laboratory for additional information.

Sample Location: Telegraph Creek **Collection Date/Time: 07/01/2019 12:20**

Field ID: G3SD0129 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2100083	SM 2120 B	Color (true)	400		PCU	P366623	
	SM 2320 B-97	Total Alkalinity	65		mg CaCO3/L	P366738	
	SM 2540 D-97	TSS	2	I	mg/L	P366873	
	SM 4500 F-C-97	Fluoride	0.080	I	mg F/L	P366745	
2100086	SM 5310 B-00 dissolved	Organic Carbon	35		mg C/L	P366798	
2100089	EPA 350.1 Rev. 2.0	Ammonia-N	0.060		mg N/L	P366809	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.6		mg N/L	P366890	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.043		mg N/L	P366828	
	EPA 365.1 Rev. 2.0	Total-P	0.052		mg P/L	P366775	
	SM 5310 B-00	Organic Carbon	37		mg C/L	P366798	
2100092	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.023		mg P/L	P366644	

Ref. Method and Comment:
SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: Orange River **Collection Date/Time: 07/01/2019 13:00**

Field ID: G3SD0128 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2100084	SM 2120 B	Color (true)	51	A	PCU	P366623	
	SM 2320 B-97	Total Alkalinity	214		mg CaCO3/L	P366738	
	SM 2540 D-97	TSS	6	I	mg/L	P366873	
	SM 4500 F-C-97	Fluoride	0.15		mg F/L	P366745	
2100087	SM 5310 B-00 dissolved	Organic Carbon	11		mg C/L	P366798	
2100090	EPA 350.1 Rev. 2.0	Ammonia-N	0.024		mg N/L	P366779	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.70		mg N/L	P366890	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.047		mg N/L	P366828	
	EPA 365.1 Rev. 2.0	Total-P	0.043		mg P/L	P366775	
	SM 5310 B-00	Organic Carbon	11		mg C/L	P366798	
2100093	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.010	I	mg P/L	P366646	

Ref. Method and Comment:
SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: Hancock Creek **Collection Date/Time: 07/01/2019 13:45**

Field ID: G3SD0130 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2100085	SM 2120 B	Color (true)	69		PCU	P366623	
	SM 2320 B-97	Total Alkalinity	153		mg CaCO3/L	P366738	
	SM 2540 D-97	TSS	4	I	mg/L	P366873	
	SM 4500 F-C-97	Fluoride	0.23		mg F/L	P366745	
2100088	SM 5310 B-00 dissolved	Organic Carbon	12		mg C/L	P366798	
2100091	EPA 350.1 Rev. 2.0	Ammonia-N	0.017		mg N/L	P366779	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.83		mg N/L	P366890	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.022		mg N/L	P366828	
	EPA 365.1 Rev. 2.0	Total-P	0.19		mg P/L	P366775	
	SM 5310 B-00	Organic Carbon	12		mg C/L	P366798	
2100094	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.14		mg P/L	P366646	

Ref. Method and Comment:
SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Non-Conformance Report

NCR ID: 7758

Event(s)	Job(s)	Sample(s)	Test(s)
SO-DIST-2019-07-02-02	TLH-2019-07-02-54	2100087	
SO-DIST-2019-07-02-02	TLH-2019-07-02-54	2100093	

NCR Type: SAMPLING **NCR Category: Improper Preservation**

Observation: Incorrect sample container preserved in field (W-PO4-F).

Resolution: LIMS IDs switched during the container labeling process to reflect proper preservation.

Authorized by/Date: Joshua Ayres 7/10/2019

The Non-Conformance Report details exceptions or problems encountered with the events/jobs/samples/test.
Please address questions to:

Chemistry	Colin Wright	(850) 245-8085
Biology	Cheryl Swanson	(850) 245-8177

Quality Assurance Report
Method Blank Results

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P366779

Component	Result	Code	Units
Ammonia-N	0.002	U	mg N/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P366809

Component	Result	Code	Units
Ammonia-N	0.002	U	mg N/L

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P366890

Component	Result	Code	Units
Kjeldahl Nitrogen	0.080	U	mg N/L

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P366828

Component	Result	Code	Units
NO2NO3-N	0.004	U	mg N/L

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P366775

Component	Result	Code	Units
Total-P	0.002	U	mg P/L

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P366644

Component	Result	Code	Units
O-Phosphate-P	0.004	U	mg P/L

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P366646

Component	Result	Code	Units
O-Phosphate-P	0.004	U	mg P/L

Reference Method: SM 2120 B
Batch ID: P366623

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P366738

Component	Result	Code	Units
Total Alkalinity	0.65	U	mg CaCO3/L

Quality Assurance Report
Method Blank Results

Reference Method: SM 2540 D-97
Batch ID: P366873

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P366745

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P366798

Component	Result	Code	Units
Organic Carbon	0.50	U	mg C/L

Reference Method: SM 5310 B-00 dissolved
Batch ID: P366798

Component	Result	Code	Units
Organic Carbon	0.50	U	mg C/L

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P366779

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	107		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P366809

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	102		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P366890

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	97.7		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P366828

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	100		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P366775

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	100		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P366644

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	97.1		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P366646

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	97.4		P	90 - 110

Reference Method: SM 2120 B
Batch ID: P366623

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	100		P	85 - 115

Reference Method: SM 2320 B-97
Batch ID: P366738

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	104		P	98 - 106

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: SM 4500 F-C-97
Batch ID: P366745

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	101		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P366798

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.4		P	85 - 115

Reference Method: SM 5310 B-00 dissolved
Batch ID: P366798

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.4		P	85 - 115

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P366779

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2100090	Ammonia-N	106	108	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P366809

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2099991	Ammonia-N	102	105	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P366890

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2100091	Kjeldahl Nitrogen	97.9	97.6	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P366828

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2099994	NO2NO3-N	98.2		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P366775

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2100090	Total-P	98.5	98.4	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P366644

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2099709	O-Phosphate-P	94.3	97.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P366646

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2099950	O-Phosphate-P	92.7	93.7	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P366745

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2099948	Fluoride	98.9	98.9	P/P	89 - 106

Reference Method: SM 5310 B-00
Batch ID: P366798

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2099949	Organic Carbon	93.8	94.6	P/P	85 - 115

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: SM 5310 B-00 dissolved
Batch ID: P366798

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2099949	Organic Carbon	93.8	94.6	P/P	85 - 115

Quality Assurance Report
Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P366779

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2100090	Ammonia-N	0.958	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P366809

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2099991	Ammonia-N	2.36	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P366890

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2100091	Kjeldahl Nitrogen	0.215	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P366828

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2099994	NO2NO3-N	1.74	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P366775

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2100090	Total-P	0.0927	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P366644

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2099709	O-Phosphate-P	3.03	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P366646

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2099950	O-Phosphate-P	1.07	Spike	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P366623

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2100084	Color (true)	0.275	Sample	P	0 - 20

Quality Assurance Report
Precision

Reference Method: SM 2320 B-97
Batch ID: P366738

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2099948	Total Alkalinity	0.709	Sample	P	0 - 2.8

Reference Method: SM 4500 F-C-97
Batch ID: P366745

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2099948	Fluoride	0.0	Spike	P	0 - 2.5

Reference Method: SM 5310 B-00
Batch ID: P366798

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2099949	Organic Carbon	0.612	Spike	P	0 - 20

Reference Method: SM 5310 B-00 dissolved
Batch ID: P366798

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2099949	Organic Carbon	0.612	Spike	P	0 - 20

* Sample, spike and/or laboratory control sample precision (LCS) is reported.
Replicate spike precision may be reported when sample results are below quantifiable levels.

Quality Assurance Report
Calibration Verification

Reference Method: SM 2120 B
Run ID: A92506
Included Lab Sample IDs: 2100083, 2100084, 2100085

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	101	P/P	90 - 115
Color (true)	102	102	P/P	90 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A92513
Included Lab Sample IDs: 2100092, 2100093, 2100094

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	102	96.5	P/P	90 - 110

Reference Method: SM 2320 B-97
Run ID: A92563
Included Lab Sample IDs: 2100083, 2100084, 2100085

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	102	104	P/P	90 - 110
Total Alkalinity	104	103	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Run ID: A92563
Included Lab Sample IDs: 2100083, 2100084, 2100085

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	100	100	P/P	90 - 110
Fluoride	100	100	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A92578
Included Lab Sample IDs: 2100090, 2100091

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	106	108	P/P	90 - 110

Reference Method: SM 5310 B-00
Run ID: A92585
Included Lab Sample IDs: 2100089, 2100090, 2100091

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.0	95.7	P/P	90 - 110

Reference Method: SM 5310 B-00 dissolved
Run ID: A92585
Included Lab Sample IDs: 2100086, 2100087, 2100088

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.0	95.7	P/P	90 - 110

Quality Assurance Report
Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A92596
Included Lab Sample IDs: 2100089

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	103	104	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A92605
Included Lab Sample IDs: 2100089, 2100090, 2100091

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	100	99.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A92610
Included Lab Sample IDs: 2100089, 2100091

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	102	98.6	P/P	90 - 110
Total-P	98.6	98.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A92613
Included Lab Sample IDs: 2100090

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	101	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A92675
Included Lab Sample IDs: 2100089, 2100090, 2100091

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	104	101	P/P	90 - 110

* Pass/Fail determinations are made for each bracketing calibration verification check.
Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.
Where they are different, both control limits are provided.

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision		
					LCS	SMP	MS
EPA 350.1 Rev. 2.0	Ammonia-N	107	106	108			0.958
	Ammonia-N	102	102	105			2.36
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	97.7	97.9	97.6			0.215
EPA 353.2 Rev. 2.0	NO2NO3-N	100	98.2				1.74
EPA 365.1 Rev. 2.0	Total-P	100	98.5	98.4			0.0927
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	97.1	94.3	97.2			3.03
	O-Phosphate-P	97.4	92.7	93.7			1.07
SM 2120 B	Color (true)	100				0.275	
SM 2320 B-97	Total Alkalinity	104				0.709	
SM 4500 F-C-97	Fluoride	101	98.9	98.9			0.0
SM 5310 B-00	Organic Carbon	95.4	93.8	94.6			0.612
SM 5310 B-00 dissolved	Organic Carbon	95.4	93.8	94.6			0.612

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2100089, 2100090, 2100091
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2100089, 2100090, 2100091
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2100089, 2100090, 2100091
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2100089, 2100090, 2100091
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2100092, 2100093, 2100094
SM 2120 B / E31780	True Color measured at 450 nm	2100083, 2100084, 2100085
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	2100083, 2100084, 2100085
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2100083, 2100084, 2100085
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2100083, 2100084, 2100085
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2100089, 2100090, 2100091
SM 5310 B-00 dissolved / E31780	Dissolved Nonpurgeable Organic Carbon in filtered, aqueous matrices	2100086, 2100087, 2100088

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 350.1 Rev. 2.0	07/02/2019			07/06/2019 12:01	Ping Hua	2100090
	07/02/2019			07/06/2019 12:05	Ping Hua	2100091
	07/02/2019			07/07/2019 12:21	Ping Hua	2100089
EPA 351.2 Rev. 2.0	07/02/2019	07/09/2019 12:45	Adrian Shelby	07/10/2019 11:03	Joseph Suarez	2100089
	07/02/2019	07/09/2019 12:45	Adrian Shelby	07/10/2019 11:04	Joseph Suarez	2100090
	07/02/2019	07/09/2019 12:45	Adrian Shelby	07/10/2019 11:06	Joseph Suarez	2100091
EPA 353.2 Rev. 2.0	07/02/2019			07/08/2019 12:31	Lauren Lees	2100089
	07/02/2019			07/08/2019 12:32	Lauren Lees	2100090
	07/02/2019			07/08/2019 12:33	Lauren Lees	2100091
EPA 365.1 Rev. 2.0	07/02/2019	07/05/2019 15:00	Adrian Shelby	07/08/2019 11:54	Beverly Y. Sanders	2100089
	07/02/2019	07/05/2019 15:00	Adrian Shelby	07/08/2019 11:57	Beverly Y. Sanders	2100091
	07/02/2019	07/05/2019 15:00	Adrian Shelby	07/08/2019 13:26	Beverly Y. Sanders	2100090
EPA 365.1 Rev. 2.0 dissolved	07/02/2019			07/02/2019 17:45	Jhamieka S. Greenwood	2100092
	07/02/2019			07/02/2019 17:46	Jhamieka S. Greenwood	2100093
	07/02/2019			07/02/2019 17:47	Jhamieka S. Greenwood	2100094
SM 2120 B	07/02/2019			07/02/2019 15:26	Madeline Funaro	2100084, 2100085
	07/02/2019			07/02/2019 15:50	Madeline Funaro	2100083
SM 2320 B-97	07/02/2019			07/04/2019 15:56	Dale L. Simmons	2100083
	07/02/2019			07/04/2019 16:09	Dale L. Simmons	2100084
	07/02/2019			07/04/2019 18:31	Dale L. Simmons	2100085
SM 2540 D-97	07/02/2019			07/03/2019 15:12	Yijie Li	2100083, 2100084, 2100085
SM 4500 F-C-97	07/02/2019			07/04/2019 15:56	Dale L. Simmons	2100083
	07/02/2019			07/04/2019 16:09	Dale L. Simmons	2100084
	07/02/2019			07/04/2019 18:31	Dale L. Simmons	2100085
SM 5310 B-00	07/02/2019			07/05/2019 08:14	Madeline Funaro	2100089
	07/02/2019			07/05/2019 08:28	Madeline Funaro	2100090
	07/02/2019			07/05/2019 08:45	Madeline Funaro	2100091
SM 5310 B-00 dissolved	07/02/2019			07/05/2019 07:31	Madeline Funaro	2100086
	07/02/2019			07/05/2019 07:46	Madeline Funaro	2100087
	07/02/2019			07/05/2019 07:59	Madeline Funaro	2100088