

Chemical Analysis Report

NE-DIST-2018-09-13-01

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

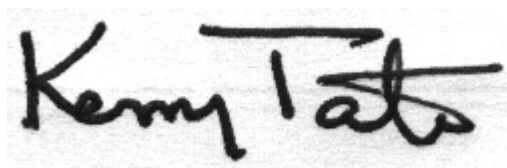
Event Description: **LSJR North Salt**
Request ID: **RQ-2018-09-10-29**
Customer: **NE-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
8800 Baymeadows Way West
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Certified by: Kerry Tate, Ph.D., Environmental Administrator

Date Certified: 03-OCT-2018 13:22

A handwritten signature in black ink that reads "Kerry Tate". The signature is written in a cursive, flowing style with a horizontal line above the first name.

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 groups are included in this report: Nutrients and Pesticides.

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 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: Deer Cr @ Tallyrand Ave

Collection Date/Time: 09/12/2018 09:20

Field ID: 20030792

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2025100	EPA 180.1 Rev. 2.0	Turbidity	16	A	NTU	P351648	
	SM 2320 B-97	Total Alkalinity	152		mg CaCO3/L	P351714	
	SM 2540 D-97	TSS	14		mg/L	P351885	
	SM 4500 F-C-97	Fluoride	0.41		mg F/L	P351718	
2025102	EPA 350.1 Rev. 2.0	Ammonia-N	0.94		mg N/L	P352036	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P351956	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.26		mg N/L	P351816	
	EPA 365.1 Rev. 2.0	Total-P	0.18		mg P/L	P351803	
	SM 5310 B-00	Organic Carbon	13		mg C/L	P352091	
2025104	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.063		mg P/L	P351617	
2025117	EPA 8321B	2,4-D	0.0042	I	ug/L	P351577	
		Bentazon	0.0034		ug/L	P351577	
		MCP	0.0020	U	ug/L	P351577	
		Triclopyr**	0.0040	U	ug/L	P351577	
		Imidacloprid	0.021		ug/L	P351577	
		Diuron	0.015		ug/L	P351577	
		Pyraclostrobin**	0.0020	U	ug/L	P351577	
		Primidone**	0.0040	U	ug/L	P351577	
		Linuron	0.0040	U	ug/L	P351577	
		Acetaminophen**	0.13		ug/L	P351577	
		Fenuron	0.016	U	ug/L	P351577	
		Imazapyr**	0.082		ug/L	P351577	
		Carbamazepine**	8.0E-04	U	ug/L	P351577	
		Fluridone**	0.0017		ug/L	P351577	
		Hydrocodone**	8.0E-04	U	ug/L	P351577	
		Naproxen**	0.015	I	ug/L	P351577	
		Ibuprofen**	0.027	I	ug/L	P351577	
		Sucralose**	0.79		ug/L	P351382	
		Acesulfame K**	0.14	I	ug/L	P351382	

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: Moncrief Cr Lem Turner Rd Br/Norwood Ave

Collection Date/Time: 09/12/2018 09:55

Field ID: 20030114

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2025101	EPA 180.1 Rev. 2.0	Turbidity	12		NTU	P351648	
	SM 2320 B-97	Total Alkalinity	109		mg CaCO3/L	P351714	
	SM 2540 D-97	TSS	16		mg/L	P351885	
	SM 4500 F-C-97	Fluoride	0.19		mg F/L	P351718	
2025103	EPA 350.1 Rev. 2.0	Ammonia-N	0.16		mg N/L	P351822	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.99		mg N/L	P351811	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.21		mg N/L	P351831	
	EPA 365.1 Rev. 2.0	Total-P	0.17		mg P/L	P351751	
	SM 5310 B-00	Organic Carbon	12		mg C/L	P351910	
2025105	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.080		mg P/L	P351615	
2025118	EPA 8321B	2,4-D	0.14		ug/L	P351577	
		Bentazon	0.0052		ug/L	P351577	
		MCP	0.0028	I	ug/L	P351577	
		Triclopyr**	0.0040	U	ug/L	P351577	
		Imidacloprid	0.037		ug/L	P351577	
		Diuron	0.0081		ug/L	P351577	
		Pyraclostrobin**	0.0020	U	ug/L	P351577	
		Primidone**	0.0040	U	ug/L	P351577	
		Linuron	0.0040	U	ug/L	P351577	
		Acetaminophen**	0.020	I	ug/L	P351577	
		Fenuron	0.016	U	ug/L	P351577	
		Imazapyr**	0.13		ug/L	P351577	
		Carbamazepine**	8.0E-04	U	ug/L	P351577	
		Fluridone**	0.026		ug/L	P351577	
		Hydrocodone**	8.0E-04	U	ug/L	P351577	
		Naproxen**	0.0080	U	ug/L	P351577	
		Ibuprofen**	0.020	U	ug/L	P351577	
		Sucralose**	0.30		ug/L	P351382	
		Acesulfame K**	0.10	U	ug/L	P351382	

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: Ribault River @ US 1

Collection Date/Time: 09/12/2018 11:00

Field ID: 20030133

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2025106	EPA 180.1 Rev. 2.0	Turbidity	11		NTU	P351648	
	SM 2320 B-97	Total Alkalinity	50		mg CaCO3/L	P351714	
	SM 2540 D-97	TSS	8	I	mg/L	P351885	
	SM 4500 F-C-97	Fluoride	0.077	I	mg F/L	P351718	
2025107	EPA 350.1 Rev. 2.0	Ammonia-N	0.068		mg N/L	P351822	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.86		mg N/L	P351811	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.087		mg N/L	P351831	
	EPA 365.1 Rev. 2.0	Total-P	0.095		mg P/L	P351752	
	SM 5310 B-00	Organic Carbon	16		mg C/L	P351910	
2025108	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.036		mg P/L	P351615	

Ref. Method and Comment:

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P351648

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P351822

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P352036

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P351811

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P351956

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P351816

Component	Result	Code	Units
NO ₂ NO ₃ -N	0.004	U	mg N/L

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P351831

Component	Result	Code	Units
NO ₂ NO ₃ -N	0.004	U	mg N/L

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P351751

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P351752

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P351803

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P351615

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P351617

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

Reference Method: EPA 8321B
Batch ID: P351382

Component	Result	Code	Units
Acesulfame K	0.10	U	ug/L
Sucralose	0.010	U	ug/L

Reference Method: EPA 8321B
Batch ID: P351577

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
Acetaminophen	0.0080	U	ug/L
Bentazon	8.0E-04	U	ug/L
Carbamazepine	8.0E-04	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.016	U	ug/L
Fluridone	4.0E-04	U	ug/L
Hydrocodone	8.0E-04	U	ug/L
Ibuprofen	0.020	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
MCP	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: SM 2320 B-97
Batch ID: P351714

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: P351885

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P351718

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P351910

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

Reference Method: SM 5310 B-00
Batch ID: P352091

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: P351822

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	98.8		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P352036

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	97.8		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P351811

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P351956

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P351816

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	101		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P351831

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	102		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P351751

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P351752

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P351803

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	98.2		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P351615

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	99.2		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P351617

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

Reference Method: EPA 8321B
Batch ID: P351382

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	78.3		P	40 - 150
Sucralose	100		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P351577

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	82.4		P	40 - 150
Acetaminophen	86.7		P	30 - 150
Bentazon	55.6		P	30 - 150
Carbamazepine	81.7		P	40 - 150
Diuron	77.3		P	40 - 150
Fenuron	85.0		P	40 - 150
Fluridone	88.6		P	40 - 150
Hydrocodone	95.3		P	40 - 150
Ibuprofen	106		P	40 - 150
Imazapyr	76.8		P	40 - 150
Imidacloprid	72.4		P	40 - 160
Linuron	66.0		P	40 - 150
MCPP	93.6		P	40 - 150
Naproxen	83.5		P	40 - 150
Primidone	71.9		P	40 - 150
Pyraclostrobin	78.5		P	40 - 150
Triclopyr	86.2		P	40 - 150

Reference Method: SM 2320 B-97
Batch ID: P351714

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	103		P	98 - 107

Reference Method: SM 4500 F-C-97
Batch ID: P351718

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.2		P	91 - 105

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 5310 B-00
Batch ID: P351910

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	101		P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P352091

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	99.2		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P351822

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2025041	Ammonia-N	102	104	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P352036

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2024932	Ammonia-N	97.0	106	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P351811

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2025107	Kjeldahl Nitrogen	103	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P351956

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2025963	Kjeldahl Nitrogen	104	97.5	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P351816

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2024539	NO2NO3-N	100	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P351831

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2025009	NO2NO3-N	101		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P351751

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2025041	Total-P	99.0	97.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P351752

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2025179	Total-P	100	98.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P351803

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2024931	Total-P	99.6	94.8	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P351615

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2025042	O-Phosphate-P	96.9	97.6	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P351617

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2024934	O-Phosphate-P	98.7	99.2	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P351382

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2023766	Acesulfame K	68.6	81.6	P/P	40 - 150
2023766	Sucralose	117	114	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P351577

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2025218	2,4-D	148	86.4	P/P	40 - 150
2025218	Acetaminophen	94.4	87.1	P/P	30 - 150
2025218	Bentazon	31.6	32.1	P/P	30 - 150
2025218	Carbamazepine	67.6	65.0	P/P	40 - 150
2025218	Diuron	57.7	58.4	P/P	40 - 150
2025218	Fenuron	73.2	70.0	P/P	40 - 150
2025218	Fluridone	84.8	81.7	P/P	40 - 150
2025218	Hydrocodone	93.7	97.5	P/P	40 - 150
2025218	Ibuprofen	101	86.1	P/P	40 - 150
2025218	Imazapyr	86.1	86.3	P/P	40 - 150
2025218	Imidacloprid	140	117	P/P	40 - 160
2025218	Linuron	61.2	56.8	P/P	40 - 150
2025218	MCP	107	105	P/P	40 - 150
2025218	Naproxen	94.5	82.0	P/P	40 - 150
2025218	Primidone	86.2	75.3	P/P	40 - 150
2025218	Pyraclostrobin	83.0	84.8	P/P	40 - 150
2025218	Triclopyr	99.1	103	P/P	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P351718

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2024833	Fluoride	98.7	98.7	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P351910

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2025040	Organic Carbon	102		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 5310 B-00
Batch ID: P352091

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2025207	Organic Carbon	98.7	98.8	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P351648

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2025100	Turbidity	4.94	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P351822

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2025041	Ammonia-N	1.26	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P352036

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2024932	Ammonia-N	4.63	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P351811

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2025107	Kjeldahl Nitrogen	0.329	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P351956

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2025963	Kjeldahl Nitrogen	5.21	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P351816

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2024539	NO2NO3-N	0.499	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P351831

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2025009	NO2NO3-N	0.619	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P351751

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2025041	Total-P	1.13	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P351752

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2025179	Total-P	1.62	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P351803

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2024931	Total-P	4.44	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P351615

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2025042	O-Phosphate-P	0.720	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P351617

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2024934	O-Phosphate-P	0.315	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P351382

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2023766	Acesulfame K	17.2	Spike	P	0 - 30
2023766	Sucralose	2.41	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P351577

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2025218	2,4-D	6.08	Spike	P	0 - 30
2025218	Acetaminophen	7.98	Spike	P	0 - 30
2025218	Bentazon	0.574	Spike	P	0 - 30
2025218	Carbamazepine	2.61	Spike	P	0 - 30
2025218	Diuron	1.18	Spike	P	0 - 30
2025218	Fenuron	4.52	Spike	P	0 - 30
2025218	Fluridone	3.76	Spike	P	0 - 30
2025218	Hydrocodone	3.90	Spike	P	0 - 30
2025218	Ibuprofen	15.6	Spike	P	0 - 30
2025218	Imazapyr	0.0992	Spike	P	0 - 30
2025218	Imidacloprid	13.5	Spike	P	0 - 30
2025218	Linuron	7.47	Spike	P	0 - 30
2025218	MCP	1.88	Spike	P	0 - 30
2025218	Naproxen	14.2	Spike	P	0 - 30
2025218	Primidone	13.4	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P351577

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2025218	Pyraclostrobin	2.13	Spike	P	0 - 30
2025218	Triclopyr	3.54	Spike	P	0 - 30

Reference Method: SM 2320 B-97
Batch ID: P351714

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2024833	Total Alkalinity	1.13	Sample	P	0 - 1.6

Reference Method: SM 4500 F-C-97
Batch ID: P351718

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2024833	Fluoride	0.0	Spike	P	0 - 3.5

Reference Method: SM 5310 B-00
Batch ID: P351910

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2025040	Organic Carbon	0.610	Spike	P	0 - 20

Reference Method: SM 5310 B-00
Batch ID: P352091

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2025207	Organic Carbon	0.0841	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 Surrogates

Lab Sample ID: 2025117
Field Sample ID: 20030792

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	79.6	P	30 - 160
EPA 8321B	Acetaminophen-d4	98.6	P	30 - 160
EPA 8321B	Carbamazepine-d10	64.6	P	30 - 160
EPA 8321B	Diuron-d6	59.6	P	30 - 160
EPA 8321B	Endothall-d6	124	P	40 - 160
EPA 8321B	Ibuprofen-d3	52.3	P	30 - 160
EPA 8321B	Primidone-d5	81.2	P	30 - 160
EPA 8321B	Sucralose-d6	118	P	40 - 160

Lab Sample ID: 2025118
Field Sample ID: 20030114

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	90.9	P	30 - 160
EPA 8321B	Acetaminophen-d4	101	P	30 - 160
EPA 8321B	Carbamazepine-d10	59.3	P	30 - 160
EPA 8321B	Diuron-d6	57.6	P	30 - 160
EPA 8321B	Endothall-d6	138	P	40 - 160
EPA 8321B	Ibuprofen-d3	66.7	P	30 - 160
EPA 8321B	Primidone-d5	77.0	P	30 - 160
EPA 8321B	Sucralose-d6	130	P	40 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A86464
Included Lab Sample IDs: 2025104, 2025105, 2025108

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.4	97.5	P/P	90 - 110
O-Phosphate-P	98.6	98.5	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A86479
Included Lab Sample IDs: 2025100, 2025101, 2025106

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	103	102	P/P	95 - 105

Reference Method: EPA 8321B
Run ID: A86482
Included Lab Sample IDs: 2025117, 2025118

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	105	94.8	P/P	60 - 160

Reference Method: SM 2320 B-97
Run ID: A86512
Included Lab Sample IDs: 2025100, 2025101, 2025106

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	103	101	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Run ID: A86512
Included Lab Sample IDs: 2025100, 2025101, 2025106

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

Reference Method: EPA 8321B
Run ID: A86520
Included Lab Sample IDs: 2025117, 2025118

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	101	91.5	P/P	60 - 160

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A86540
Included Lab Sample IDs: 2025103, 2025107

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

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A86553
Included Lab Sample IDs: 2025102

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
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Quality Assurance Report Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A86553

Included Lab Sample IDs: 2025102

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A86557

Included Lab Sample IDs: 2025103, 2025107

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A86558

Included Lab Sample IDs: 2025103, 2025107

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	102	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A86577

Included Lab Sample IDs: 2025102

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	102	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A86582

Included Lab Sample IDs: 2025103, 2025107

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	99.7	98.6	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A86587

Included Lab Sample IDs: 2025103, 2025107

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.8	99.4	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A86626

Included Lab Sample IDs: 2025102

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A86641

Included Lab Sample IDs: 2025102

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	101	103	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 5310 B-00
Run ID: A86647
Included Lab Sample IDs: 2025102

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.2	97.4	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A86696
Included Lab Sample IDs: 2025117, 2025118

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetaminophen	76.8	74.9	P/P	60 - 160
Carbamazepine	102	110	P/P	60 - 160
Diuron	107	105	P/P	60 - 150
Fenuron	98.1	92.1	P/P	60 - 150
Fluridone	77.7	102	P/P	60 - 160
Hydrocodone	91.9	96.0	P/P	60 - 150
Imazapyr	84.4	83.3	P/P	50 - 150
Imidacloprid	85.9	91.3	P/P	60 - 150
Linuron	90.3	94.3	P/P	60 - 150
Primidone	89.3	80.9	P/P	60 - 150
Pyraclostrobin	105	101	P/P	60 - 150

Reference Method: EPA 8321B
Run ID: A86770
Included Lab Sample IDs: 2025117, 2025118

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	94.2	67.7	P/P	50 - 150
Bentazon	101	91.0	P/P	50 - 160
Ibuprofen	102	81.9	P/P	50 - 160
MCP	103	101	P/P	50 - 150
Naproxen	106	131	P/P	50 - 160
Triclopyr	102	102	P/P	50 - 160

* 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		LCS	Precision	MS
						SMP	
EPA 180.1 Rev. 2.0	Turbidity					4.94	
EPA 350.1 Rev. 2.0	Ammonia-N	98.8	102	104			1.26
	Ammonia-N	97.8	97.0	106			4.63
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	101	103	102			0.329
	Kjeldahl Nitrogen	102	104	97.5			5.21
EPA 353.2 Rev. 2.0	NO2NO3-N	101	100	100			0.499
	NO2NO3-N	102	101				0.619
EPA 365.1 Rev. 2.0	Total-P	101	99.0	97.8			1.13
	Total-P	98.0	100	98.2			1.62
	Total-P	98.2	99.6	94.8			4.44
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.2	96.9	97.6			0.720
	O-Phosphate-P	100	98.7	99.2			0.315
EPA 8321B	2,4-D	82.4	148	86.4			6.08
	Acesulfame K	78.3	68.6	81.6			17.2
	Acetaminophen	86.7	94.4	87.1			7.98
	Bentazon	55.6	31.6	32.1			0.574
	Carbamazepine	81.7	67.6	65.0			2.61
	Diuron	77.3	57.7	58.4			1.18
	Fenuron	85.0	73.2	70.0			4.52
	Fluridone	88.6	84.8	81.7			3.76
	Hydrocodone	95.3	93.7	97.5			3.90
	Ibuprofen	106	101	86.1			15.6
	Imazapyr	76.8	86.1	86.3			0.0992
	Imidacloprid	72.4	140	117			13.5
	Linuron	66.0	61.2	56.8			7.47
	MCP	93.6	107	105			1.88
	Naproxen	83.5	94.5	82.0			14.2
	Primidone	71.9	86.2	75.3			13.4
	Pyraclostrobin	78.5	83.0	84.8			2.13
	Sucralose	100	117	114			2.41
	Triclopyr	86.2	99.1	103			3.54
SM 2320 B-97	Total Alkalinity	103				1.13	
SM 4500 F-C-97	Fluoride	97.2	98.7	98.7			0.0
SM 5310 B-00	Organic Carbon	101	102				0.610
	Organic Carbon	99.2	98.7	98.8			0.0841

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2025100, 2025101, 2025106
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2025102, 2025103, 2025107
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2025102, 2025103, 2025107
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2025102, 2025103, 2025107
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2025102, 2025103, 2025107
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2025104, 2025105, 2025108
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2025117, 2025118
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	2025100, 2025101, 2025106
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2025100, 2025101, 2025106

Reference Method Descriptions

Method / DoH Cert #	Description	<u>Associated Samples</u>
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2025100, 2025101, 2025106
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2025102, 2025103, 2025107

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 180.1 Rev. 2.0	09/13/2018			09/13/2018 16:38	Megan Treadwell	2025100, 2025101, 2025106
EPA 350.1 Rev. 2.0	09/13/2018			09/18/2018 12:43	Ping Hua	2025103
	09/13/2018			09/18/2018 12:45	Ping Hua	2025107
	09/13/2018			09/20/2018 14:04	Ping Hua	2025102
EPA 351.2 Rev. 2.0	09/13/2018	09/18/2018 14:10	Adrian Shelby	09/19/2018 13:35	Joseph Suarez	2025103
	09/13/2018	09/18/2018 14:10	Adrian Shelby	09/19/2018 13:36	Joseph Suarez	2025107
	09/13/2018	09/20/2018 15:00	Adrian Shelby	09/21/2018 12:38	Joseph Suarez	2025102
EPA 353.2 Rev. 2.0	09/13/2018			09/18/2018 14:21	Lauren Bottorf	2025103
	09/13/2018			09/18/2018 14:22	Lauren Bottorf	2025107
	09/13/2018			09/18/2018 15:05	Lauren Bottorf	2025102
EPA 365.1 Rev. 2.0	09/13/2018	09/17/2018 13:00	Sima Feizi	09/18/2018 08:23	Beverly Y. Sanders	2025103
	09/13/2018	09/17/2018 13:00	Sima Feizi	09/18/2018 08:32	Beverly Y. Sanders	2025107
	09/13/2018	09/18/2018 12:30	Sima Feizi	09/19/2018 10:44	Beverly Y. Sanders	2025102
EPA 365.1 Rev. 2.0 dissolved	09/13/2018			09/13/2018 15:36	Julia Storbeck	2025104
	09/13/2018			09/13/2018 16:02	Julia Storbeck	2025105
	09/13/2018			09/13/2018 16:03	Julia Storbeck	2025108
EPA 8321B	09/13/2018	09/13/2018 13:00	Mohammad Ghaffari	09/13/2018 18:55	Mohammad Ghaffari	2025117
	09/13/2018	09/13/2018 13:00	Mohammad Ghaffari	09/13/2018 19:10	Mohammad Ghaffari	2025118
	09/13/2018	09/13/2018 13:00	Mohammad Ghaffari	09/14/2018 20:56	Mohammad Ghaffari	2025117
	09/13/2018	09/13/2018 13:00	Mohammad Ghaffari	09/14/2018 21:11	Mohammad Ghaffari	2025118
	09/13/2018	09/14/2018 12:00	Hoor Shaik	09/23/2018 16:50	Mohammad Ghaffari	2025117
	09/13/2018	09/14/2018 12:00	Hoor Shaik	09/23/2018 17:25	Mohammad Ghaffari	2025118
	09/13/2018	09/14/2018 12:00	Hoor Shaik	09/26/2018 22:50	Juyoung Kim	2025117
	09/13/2018	09/14/2018 12:00	Hoor Shaik	09/26/2018 23:25	Juyoung Kim	2025118
SM 2320 B-97	09/13/2018			09/15/2018 06:14	Dale L. Simmons	2025106
	09/13/2018			09/15/2018 06:24	Dale L. Simmons	2025101
	09/13/2018			09/15/2018 06:35	Dale L. Simmons	2025100
SM 2540 D-97	09/13/2018			09/17/2018 11:30	DeAsia Armster	2025100, 2025101, 2025106
SM 4500 F-C-97	09/13/2018			09/15/2018 06:14	Dale L. Simmons	2025106
	09/13/2018			09/15/2018 06:24	Dale L. Simmons	2025101
	09/13/2018			09/15/2018 06:35	Dale L. Simmons	2025100
SM 5310 B-00	09/13/2018			09/19/2018 10:20	Megan Treadwell	2025103
	09/13/2018			09/19/2018 10:33	Megan Treadwell	2025107
	09/13/2018			09/20/2018 09:08	Megan Treadwell	2025102