

Chemical Analysis Report

NE-DIST-2017-10-20-01

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

Event Description: **LSJR North**
Request ID: **RQ-2017-10-16-30**
Customer: **NE-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
8800 Baymeadows Way West
Jacksonville, FL 32256-7577
Attn: Jeremy Parrish

For additional information please contact
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Certified by: Colin Wright, Program Administrator

Date Certified: 22-NOV-2017 09:41

A handwritten signature in black ink, appearing to read "Colin Wright", is displayed on a light-colored rectangular background.

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: Metals, 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: PUNCHEON BR @ DEERWOOD PKWY

Collection Date/Time: 10/19/2017 09:15

Field ID: G2NE0874

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1939185	EPA 180.1 Rev. 2.0	Turbidity	4.6		NTU	P333793	
	EPA 300.0 Rev. 2.1	Chloride	25		mg Cl/L	P333983	
		Sulfate	22		mg SO4/L	P333986	
	SM 2120 B	Color (true)	230		PCU	P333800	
	SM 2320 B-97	Total Alkalinity	32		mg CaCO3/L	P334018	
	SM 2540 C-97	TDS	144		mg/L	P334384	
	SM 2540 D-97	TSS	3	I	mg/L	P334373	
	SM 4500 F-C-97	Fluoride	0.038	I	mg F/L	P334462	
1939187	EPA 350.1 Rev. 2.0	Ammonia-N	0.26		mg N/L	P334262	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.87		mg N/L	P334178	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.14		mg N/L	P334290	
	EPA 365.1 Rev. 2.0	Total-P	0.041		mg P/L	P334389	
	SM 5310 B-00	Organic Carbon	21		mg C/L	P334357	
1939189	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.013		mg P/L	P333818	

Ref. Method and Comment:

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

EPA 350.1 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: TERRAPIN CREEK @ FAYE ROAD

Collection Date/Time: 10/19/2017 10:55

Field ID: G2NE0660 10192017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1939186	EPA 180.1 Rev. 2.0	Turbidity	5.1		NTU	P333793	
	EPA 300.0 Rev. 2.1	Chloride	45		mg Cl/L	P333983	
		Sulfate	38		mg SO4/L	P333986	
	SM 2120 B	Color (true)	130		PCU	P333800	
	SM 2320 B-97	Total Alkalinity	28		mg CaCO3/L	P334018	
	SM 2540 C-97	TDS	194	A	mg/L	P334384	
	SM 2540 D-97	TSS	4	IA	mg/L	P334373	
	SM 4500 F-C-97	Fluoride	0.050	I	mg F/L	P334756	
1939188	EPA 350.1 Rev. 2.0	Ammonia-N	0.021		mg N/L	P334262	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.68		mg N/L	P334178	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.015		mg N/L	P334290	
	EPA 365.1 Rev. 2.0	Total-P	0.064		mg P/L	P334389	
	SM 5310 B-00	Organic Carbon	17		mg C/L	P334357	
1939190	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.022		mg P/L	P333818	

Ref. Method and Comment:

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

EPA 350.1 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: TERRAPIN CREEK @ FAYE ROAD

Collection Date/Time: 10/19/2017 10:55

Field ID: G2NE0660 10192017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1939203	EPA 8321B	Sucralose**	0.010	I	ug/L	P334171	MS

Field ID: G2NE0660 10192017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1939203	USGS O-2060-01	2,4-D	0.0020	UQ	ug/L	P335524	
		Diuron	8.0E-04	U	ug/L	P333766	
		Fenuron	0.0080	UQ	ug/L	P335524	
		Imidacloprid	8.0E-04	U	ug/L	P333766	MS
		Bentazon	8.0E-04	UQ	ug/L	P335524	
		Linuron	0.0040	U	ug/L	P333766	
		Acetaminophen**	0.0080	U	ug/L	P333766	
		MCP	0.0020	UQ	ug/L	P335524	
		Carbamazepine**	4.0E-04	UQ	ug/L	P335524	
		Triclopyr**	0.0040	UQ	ug/L	P335524	
		Primidone**	0.0040	U	ug/L	P333766	
		Fluridone**	0.028		ug/L	P333766	

Ref. Method and Comment:

USGS O-2060-01: Sample required re-extraction beyond normal holding time due to reagent performance inconsistencies.

USGS O-2060-01: MS accuracy for fluridone could not be assessed due to high concentration of parameter in the spiked sample. Carbamazepine and Fenuron: Sample required re-extraction beyond normal holding time due to reagent performance inconsistencies.

Sample Location: MONCRIEF CREEK N OF 33RD ST BRIDGE

Collection Date/Time: 10/19/2017 12:10

Field ID: G2NE032310192017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1939191	EPA 180.1 Rev. 2.0	Turbidity	4.8		NTU	P333793	
	EPA 300.0 Rev. 2.1	Chloride	13		mg Cl/L	P333983	
		Sulfate	27		mg SO4/L	P333986	
	SM 2120 B	Color (true)	48	A	PCU	P333801	
	SM 2320 B-97	Total Alkalinity	101		mg CaCO3/L	P334018	
	SM 2540 C-97	TDS	164		mg/L	P334384	
	SM 2540 D-97	TSS	4	I	mg/L	P334373	
	SM 4500 F-C-97	Fluoride	0.12		mg F/L	P334756	
1939192	EPA 350.1 Rev. 2.0	Ammonia-N	0.26		mg N/L	P334262	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.77		mg N/L	P334178	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.15		mg N/L	P334290	
	EPA 365.1 Rev. 2.0	Total-P	0.087		mg P/L	P334389	
	SM 5310 B-00	Organic Carbon	6.6		mg C/L	P334359	
1939193	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.046		mg P/L	P333819	
1939202	EPA 8321B	Sucralose**	0.028	I	ug/L	P334171	MS
	USGS O-2060-01	2,4-D	0.068	Q	ug/L	P335524	
		Diuron	0.0049		ug/L	P333766	
		Fenuron	0.0080	UQ	ug/L	P335524	
		Imidacloprid	0.034		ug/L	P333766	MS
		Bentazon	0.011	Q	ug/L	P335524	
		Linuron	0.0040	U	ug/L	P333766	
		Acetaminophen**	0.028	I	ug/L	P333766	
		MCP	0.0060	IQ	ug/L	P335524	
		Carbamazepine**	4.0E-04	UQ	ug/L	P335524	
		Triclopyr**	0.0040	UQ	ug/L	P335524	

Field ID: G2NE032310192017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1939202	USGS O-2060-01	Primidone**	0.0040	U	ug/L	P333766	
		Fluridone**	0.0023		ug/L	P333766	
1939204	EPA 200.7 Rev. 4.4	Calcium	43.4		mg/L	P333962	
		Iron	1.08E+03		ug/L	P333962	
		Magnesium	5.25		mg/L	P333962	
		Potassium	2.4		mg/L	P333962	
		Sodium	10		mg/L	P333962	
		Zinc	5.5	I	ug/L	P333962	
		Arsenic	2.47		ug/L	P333962	
	EPA 200.8 Rev. 5.4	Cadmium	0.020	U	ug/L	P333962	
		Chromium	0.44	I	ug/L	P333962	
		Copper	1.45		ug/L	P334317	
		Lead	1.02		ug/L	P334317	
		Nickel	0.75	I	ug/L	P334745	
		Silver	0.010	U	ug/L	P333962	

Ref. Method and Comment:
 SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
 EPA 350.1 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.
 USGS O-2060-01: Sample required re-extraction beyond normal holding time due to reagent performance inconsistencies.
 USGS O-2060-01: MS accuracy for fluridone could not be assessed due to high concentration of parameter in the spiked sample. Carbamazepine and Fenuron: Sample required re-extraction beyond normal holding time due to reagent performance inconsistencies.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
 Batch ID: P333793

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
 Batch ID: P333962

Component	Result	Code	Units
Calcium	0.075	U	mg/L
Iron	30	U	ug/L
Magnesium	0.040	U	mg/L
Potassium	0.30	U	mg/L
Sodium	0.50	U	mg/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
 Batch ID: P333962

Component	Result	Code	Units
Arsenic	0.050	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.40	U	ug/L
Silver	0.010	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P334317

Component	Result	Code	Units
Copper	0.20	U	ug/L
Lead	0.050	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P334745

Component	Result	Code	Units
Nickel	0.20	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P333983

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P333986

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P334262

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P334178

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P334290

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P334389

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P333818

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P333819

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

Reference Method: EPA 8321B
Batch ID: P334171

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: SM 2120 B
Batch ID: P333800

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B
Batch ID: P333801

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P334018

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

Reference Method: SM 2540 C-97
Batch ID: P334384

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P334373

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P334462

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P334756

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Quality Assurance Report Method Blank Results

Reference Method: SM 5310 B-00
 Batch ID: P334357

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

Reference Method: SM 5310 B-00
 Batch ID: P334359

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

Reference Method: USGS O-2060-01
 Batch ID: P333766

Component	Result	Code	Units
Acetaminophen	0.0080	U	ug/L
Diuron	8.0E-04	U	ug/L
Fluridone	4.0E-04	U	ug/L
Imidacloprid	8.0E-04	U	ug/L
Linuron	0.0040	U	ug/L
Primidone	0.0040	U	ug/L

Reference Method: USGS O-2060-01
 Batch ID: P335524

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
Bentazon	8.0E-04	U	ug/L
Carbamazepine	4.0E-04	U	ug/L
Fenuron	0.0080	U	ug/L
MCP	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.7 Rev. 4.4
 Batch ID: P333962

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	108		P	85 - 115
Iron	109		P	85 - 115
Magnesium	112		P	85 - 115
Potassium	107		P	85 - 115
Sodium	106		P	85 - 115
Zinc	105		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
 Batch ID: P333962

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	101		P	85 - 115
Cadmium	101		P	85 - 115
Chromium	99.7		P	85 - 115

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P333962

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Silver	97.5		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P334317

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Copper	98.1		P	85 - 115
Lead	96.8		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P334745

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Nickel	104		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P333983

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P333986

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	98.6		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P334262

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P334178

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	96.0		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P334290

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: P334389

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	98.9		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P333818

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P333819

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

Reference Method: EPA 8321B
Batch ID: P334171

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	94.2		P	40 - 150

Reference Method: SM 2320 B-97
Batch ID: P334018

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	101		P	95 - 108

Reference Method: SM 4500 F-C-97
Batch ID: P334462

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.1		P	92 - 103

Reference Method: SM 4500 F-C-97
Batch ID: P334756

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	96.4		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P334357

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.3		P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P334359

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.1		P	85 - 115

Reference Method: USGS O-2060-01
Batch ID: P333766

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetaminophen	80.5		P	30 - 150
Diuron	57.6		P	40 - 150
Fluridone	103		P	40 - 150
Imidacloprid	105		P	40 - 160

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: USGS O-2060-01
Batch ID: P333766

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Linuron	111		P	40 - 150
Primidone	102		P	40 - 150

Reference Method: USGS O-2060-01
Batch ID: P335524

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	78.0		P	40 - 150
Bentazon	82.6		P	30 - 150
Carbamazepine	101		P	40 - 150
Fenuron	98.2		P	40 - 150
MCPD	56.7		P	40 - 150
Triclopyr	61.8		P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P333962

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1939114	Calcium	97.3		P	80 - 120
1939114	Iron	105		P	80 - 120
1939114	Magnesium	107		P	80 - 120
1939114	Potassium	105		P	80 - 120
1939114	Sodium	103		P	80 - 120
1939114	Zinc	103		P	80 - 120
1939360	Calcium	102	104	P/P	80 - 120
1939360	Iron	103	106	P/P	80 - 120
1939360	Magnesium	107	110	P/P	80 - 120
1939360	Potassium	98.7	101	P/P	80 - 120
1939360	Sodium	97.8	100	P/P	80 - 120
1939360	Zinc	101	103	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P333962

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1939114	Arsenic	103		P	80 - 120
1939114	Cadmium	102		P	80 - 120
1939114	Chromium	98.4		P	80 - 120
1939114	Silver	98.3		P	80 - 120
1939360	Arsenic	102	102	P/P	80 - 120
1939360	Cadmium	105	104	P/P	80 - 120
1939360	Chromium	101	100	P/P	80 - 120
1939360	Silver	98.4	97.7	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P334317

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
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Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P334317

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1938506	Copper	92.0		P	80 - 120
1938506	Lead	94.3		P	80 - 120
1939080	Copper	96.5	95.4	P/P	80 - 120
1939080	Lead	99.1	97.7	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P334745

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1938506	Nickel	100		P	80 - 120
1942857	Nickel	101	101	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P333983

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1939163	Chloride	102		P	90 - 110
1939164	Chloride	101		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P333986

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1939163	Sulfate	100		P	90 - 110
1939164	Sulfate	99.4		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P334178

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1939168	Kjeldahl Nitrogen	104	97.2	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P334290

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1939165	NO2NO3-N	96.2	96.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P334389

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1939326	Total-P	100	99.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P333818

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1939173	O-Phosphate-P	93.8	95.7	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P333819

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1939193	O-Phosphate-P	94.7	95.1	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P334171

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1939052	Sucralose	36.0	37.6	F/F	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P334462

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1939076	Fluoride	98.6	102	P/P	91 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P334756

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1941692	Fluoride	98.3	99.5	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P334357

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1938951	Organic Carbon	93.8	94.1	P/P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P334359

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1939192	Organic Carbon	94.3	94.5	P/P	85 - 115

Reference Method: USGS O-2060-01
Batch ID: P333766

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1938977	Acetaminophen	95.0	107	P/P	30 - 150
1938977	Diuron	72.4	72.9	P/P	40 - 150
1938977	Imidacloprid	225	233	F/F	40 - 160
1938977	Linuron	97.9	103	P/P	40 - 150
1938977	Primidone	97.8	107	P/P	40 - 150

Reference Method: USGS O-2060-01
Batch ID: P335524

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1939073	2,4-D	57.5	55.7	P/P	40 - 150
1939073	Bentazon	61.8	56.7	P/P	30 - 150
1939073	Carbamazepine	75.4	72.0	P/P	40 - 150
1939073	Fenuron	80.2	70.6	P/P	40 - 150
1939073	MCPP	47.1	40.2	P/P	40 - 150
1939073	Triclopyr	45.6	43.9	P/P	40 - 150

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P333793

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1939162	Turbidity	0.395	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P333962

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1939360	Calcium	2.03	Spike	P	0 - 20
1939360	Iron	2.59	Spike	P	0 - 20
1939360	Magnesium	2.29	Spike	P	0 - 20
1939360	Potassium	2.41	Spike	P	0 - 20
1939360	Sodium	1.85	Spike	P	0 - 20
1939360	Zinc	1.81	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P333962

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1939360	Arsenic	0.702	Spike	P	0 - 20
1939360	Cadmium	0.928	Spike	P	0 - 20
1939360	Chromium	0.718	Spike	P	0 - 20
1939360	Silver	0.673	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P334317

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1939080	Copper	1.17	Spike	P	0 - 20
1939080	Lead	1.46	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P334745

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1942857	Nickel	0.222	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P333983

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1939163	Chloride	0.290	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P333986

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
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Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P333986

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1939163	Sulfate	0.166	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P334262

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1939169	Ammonia-N	0.194	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P334178

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1939168	Kjeldahl Nitrogen	4.27	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P334290

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1939165	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P334389

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1939326	Total-P	1.36	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P333818

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1939173	O-Phosphate-P	2.01	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P333819

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1939193	O-Phosphate-P	0.285	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P334171

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1939052	Sucralose	4.46	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: SM 2120 B
Batch ID: P333800

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1939146	Color (true)	4.05	Sample	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P333801

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1939191	Color (true)	2.90	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P334018

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1939076	Total Alkalinity	0.334	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P334384

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1939186	TDS	4.65	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P334462

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1939076	Fluoride	2.95	Spike	P	0 - 3.0

Reference Method: SM 4500 F-C-97
Batch ID: P334756

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1941692	Fluoride	0.964	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
Batch ID: P334357

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1938951	Organic Carbon	0.186	Spike	P	0 - 20

Reference Method: SM 5310 B-00
Batch ID: P334359

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1939192	Organic Carbon	0.157	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: USGS O-2060-01
Batch ID: P333766

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1938977	Acetaminophen	11.5	Spike	P	0 - 30
1938977	Diuron	0.533	Spike	P	0 - 30
1938977	Fluridone	7.15	Spike	P	0 - 30
1938977	Imidacloprid	2.69	Spike	P	0 - 30
1938977	Linuron	5.06	Spike	P	0 - 30
1938977	Primidone	7.79	Spike	P	0 - 30

Reference Method: USGS O-2060-01
Batch ID: P335524

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1939073	2,4-D	3.20	Spike	P	0 - 30
1939073	Bentazon	8.59	Spike	P	0 - 30
1939073	Carbamazepine	4.70	Spike	P	0 - 30
1939073	Fenuron	12.7	Spike	P	0 - 30
1939073	MCP	15.7	Spike	P	0 - 30
1939073	Triclopyr	3.84	Spike	P	0 - 30

* 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: 1939202
Field Sample ID: G2NE032310192017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	86.4	P	30 - 160
EPA 8321B	Carbamazepine-d10	90.4	P	30 - 160
EPA 8321B	Diuron-d6	79.8	P	30 - 160
EPA 8321B	Primidone-d5	129	P	30 - 160
EPA 8321B	Sucralose-d6	57.8	P	40 - 160
USGS O-2060-01	2,4-D-d3	60.0	P	30 - 160
USGS O-2060-01	Acetaminophen-d4	86.4	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	90.4	P	30 - 160
USGS O-2060-01	Diuron-d6	79.8	P	30 - 160
USGS O-2060-01	Primidone-d5	129	P	30 - 160
USGS O-2060-01	Sucralose-d6	57.8	P	40 - 160

Lab Sample ID: 1939203
Field Sample ID: G2NE0660 10192017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	124	P	30 - 160
EPA 8321B	Carbamazepine-d10	82.3	P	30 - 160
EPA 8321B	Diuron-d6	78.6	P	30 - 160
EPA 8321B	Primidone-d5	101	P	30 - 160
EPA 8321B	Sucralose-d6	92.4	P	40 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 1939203
Field Sample ID: G2NE0660 10192017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
USGS O-2060-01	2,4-D-d3	70.7	P	30 - 160
USGS O-2060-01	Acetaminophen-d4	124	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	82.3	P	30 - 160
USGS O-2060-01	Diuron-d6	78.6	P	30 - 160
USGS O-2060-01	Primidone-d5	101	P	30 - 160
USGS O-2060-01	Sucralose-d6	92.4	P	40 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A79698
Included Lab Sample IDs: 1939185, 1939186, 1939191

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	100	100	P/P	95 - 105

Reference Method: SM 2120 B
Run ID: A79699
Included Lab Sample IDs: 1939185, 1939186, 1939191

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	102	P/P	85 - 115
Color (true)	99.6	101	P/P	85 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A79712
Included Lab Sample IDs: 1939189, 1939190, 1939193

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	102	101	P/P	90 - 110
O-Phosphate-P	98.6	96.3	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A79775
Included Lab Sample IDs: 1939185, 1939186, 1939191

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	103	105	P/P	90 - 110
Sulfate	101	102	P/P	90 - 110

Reference Method: SM 2320 B-97
Run ID: A79792
Included Lab Sample IDs: 1939185, 1939186, 1939191

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	103	99.7	P/P	90 - 110
Total Alkalinity	99.5	103	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A79837

Included Lab Sample IDs: 1939204

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	106	104	P/P	90 - 110
Cadmium	103	102	P/P	90 - 110
Silver	98.2	97.3	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A79840

Included Lab Sample IDs: 1939204

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	98.7	97.7	P/P	90 - 110
Iron	100	98.4	P/P	90 - 110
Magnesium	102	100	P/P	90 - 110
Potassium	101	98.8	P/P	90 - 110
Sodium	99.1	97.8	P/P	90 - 110
Zinc	99.5	98.0	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A79878

Included Lab Sample IDs: 1939187, 1939188, 1939192

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	101	102	P/P	90 - 110
Ammonia-N	102	99.6	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A79892

Included Lab Sample IDs: 1939187, 1939188, 1939192

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A79897

Included Lab Sample IDs: 1939187, 1939188, 1939192

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	101	100	P/P	90 - 110

Reference Method: USGS O-2060-01

Run ID: A79905

Included Lab Sample IDs: 1939202, 1939203

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetaminophen	117	118	P/P	60 - 150
Acetaminophen	118	112	P/P	60 - 150
Diuron	112	115	P/P	60 - 150
Diuron	113	112	P/P	60 - 150
Fluridone	120	122	P/P	60 - 160
Fluridone	124	120	P/P	60 - 160
Imidacloprid	103	110	P/P	60 - 150
Imidacloprid	114	103	P/P	60 - 150

Quality Assurance Report Calibration Verification

Reference Method: USGS O-2060-01

Run ID: A79905

Included Lab Sample IDs: 1939202, 1939203

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Linuron	118	122	P/P	60 - 150
Linuron	119	118	P/P	60 - 150
Primidone	111	118	P/P	60 - 150
Primidone	118	114	P/P	60 - 150

Reference Method: SM 5310 B-00

Run ID: A79914

Included Lab Sample IDs: 1939187, 1939188, 1939192

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.0	97.2	P/P	90 - 110
Organic Carbon	97.2	97.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A79947

Included Lab Sample IDs: 1939188, 1939192

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

Reference Method: SM 4500 F-C-97

Run ID: A79949

Included Lab Sample IDs: 1939185

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

Reference Method: EPA 8321B

Run ID: A79950

Included Lab Sample IDs: 1939202, 1939203

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	92.0	94.4	P/P	60 - 150

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A79996

Included Lab Sample IDs: 1939187

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	101	100	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A80006

Included Lab Sample IDs: 1939204

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chromium	97.7	97.3	P/P	90 - 110
Copper	98.0	99.7	P/P	90 - 110
Lead	93.8	97.0	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 4500 F-C-97

Run ID: A80074

Included Lab Sample IDs: 1939186, 1939191

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	98.6	99.0	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A80104

Included Lab Sample IDs: 1939204

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Nickel	106	105	P/P	90 - 110

Reference Method: USGS O-2060-01

Run ID: A80386

Included Lab Sample IDs: 1939202, 1939203

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	102	102	P/P	50 - 150
Bentazon	125	122	P/P	50 - 150
Carbamazepine	127	126	P/P	60 - 150
Fenuron	126	125	P/P	60 - 150
MCP	102	104	P/P	50 - 150
Triclopyr	101	95.6	P/P	50 - 150

* 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 SMP	MS
EPA 180.1 Rev. 2.0	Turbidity				0.395	
EPA 200.7 Rev. 4.4	Calcium	108	97.3	102 104		2.03
	Iron	109	105	103 106		2.59
	Magnesium	112	107	107 110		2.29
	Potassium	107	105	98.7 101		2.41
	Sodium	106	103	97.8 100		1.85
	Zinc	105	103	101 103		1.81
EPA 200.8 Rev. 5.4	Arsenic	101	103	102 102		0.702
	Cadmium	101	102	105 104		0.928
	Chromium	99.7	98.4	101 100		0.718
	Copper	98.1	92.0	96.5 95.4		1.17
	Lead	96.8	94.3	99.1 97.7		1.46
	Nickel	104	100	101 101		0.222
	Silver	97.5	98.3	98.4 97.7		0.673
EPA 300.0 Rev. 2.1	Chloride	101	102	101	0.290	
	Sulfate	98.6	100	99.4	0.166	
EPA 350.1 Rev. 2.0	Ammonia-N	105				0.194
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	96.0	104	97.2		4.27
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	100	96.2	96.2		0.0
EPA 365.1 Rev. 2.0	Total-P	98.9	100	99.0		1.36

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	97.6	93.8	95.7		2.01
	O-Phosphate-P	100	94.7	95.1		0.285
EPA 8321B	Sucralose	94.2	36.0	37.6		4.46
SM 2120 B	Color (true)				4.05	
	Color (true)				2.90	
SM 2320 B-97	Total Alkalinity	101			0.334	
SM 2540 C-97	TDS				4.65	
SM 4500 F-C-97	Fluoride	99.1	98.6	102		2.95
	Fluoride	96.4	98.3	99.5		0.964
SM 5310 B-00	Organic Carbon	96.3	93.8	94.1		0.186
	Organic Carbon	97.1	94.3	94.5		0.157
USGS O-2060-01	2,4-D	78.0	57.5	55.7		3.20
	Acetaminophen	80.5	95.0	107		11.5
	Bentazon	82.6	61.8	56.7		8.59
	Carbamazepine	101	75.4	72.0		4.70
	Diuron	57.6	72.4	72.9		0.533
	Fenuron	98.2	80.2	70.6		12.7
	Fluridone	103				7.15
	Imidacloprid	105	225	233		2.69
	Linuron	111	97.9	103		5.06
	MCP	56.7	47.1	40.2		15.7
	Primidone	102	97.8	107		7.79
	Triclopyr	61.8	45.6	43.9		3.84

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1939185, 1939186, 1939191
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1939204
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1939204
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1939185, 1939186, 1939191
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1939185, 1939186, 1939191
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1939187, 1939188, 1939192
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1939187, 1939188, 1939192
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1939187, 1939188, 1939192
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1939187, 1939188, 1939192
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1939189, 1939190, 1939193
EPA 8321B / E31780	Analysis of sucralose in water matrices by HPLC/MS/MS	1939202, 1939203
SM 2120 B / E31780	True Color measured at 450 nm	1939185, 1939186, 1939191
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	1939185, 1939186, 1939191
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1939185, 1939186, 1939191
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1939185, 1939186, 1939191
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1939185, 1939186, 1939191
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1939187, 1939188, 1939192
USGS O-2060-01 / E31780	Chlorinated (phenoxy acid) herbicides in water matrices by HPLC/MS/MS	1939202, 1939203

Reference Method Descriptions

Method / DoH Cert #	Description	<u>Associated Samples</u>
USGS O-2060-01 / E31780	Urea herbicides and other chemicals in water matrices by HPLC/MS/MS	1939202, 1939203

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	10/20/2017			10/20/2017 15:20	DeAsia Armster	1939185, 1939186, 1939191
EPA 200.7 Rev. 4.4	10/20/2017	10/24/2017	Elliott D. Healy	10/26/2017	Betina Topolski	1939204
EPA 200.8 Rev. 5.4	10/20/2017	10/24/2017	Elliott D. Healy	10/26/2017	Nadine Brooks	1939204
	10/20/2017	10/24/2017	Elliott D. Healy	11/03/2017	Nadine Brooks	1939204
	10/20/2017	10/30/2017	Elliott D. Healy	11/03/2017	Nadine Brooks	1939204
	10/20/2017	11/06/2017	Elliott D. Healy	11/07/2017	Robert K Palmer	1939204
EPA 300.0 Rev. 2.1	10/20/2017			10/24/2017	Julia Storbeck	1939185, 1939186, 1939191
EPA 350.1 Rev. 2.0	10/20/2017			10/27/2017	Sofia Elnemr	1939187, 1939188, 1939192
EPA 351.2 Rev. 2.0	10/20/2017	10/27/2017	Adrian Shelby	10/30/2017	Tanya Welborn	1939187, 1939188, 1939192
EPA 353.2 Rev. 2.0	10/20/2017			10/30/2017	Beverly Y. Sanders	1939187, 1939188, 1939192
EPA 365.1 Rev. 2.0	10/20/2017	10/31/2017	Sima Feizi	11/01/2017	Lipi Saha	1939188, 1939192
	10/20/2017	10/31/2017	Sima Feizi	11/02/2017	Lipi Saha	1939187
EPA 365.1 Rev. 2.0 dissolved	10/20/2017			10/20/2017 15:42	Megan Treadwell	1939193
	10/20/2017			10/20/2017 16:28	Megan Treadwell	1939189
	10/20/2017			10/20/2017 16:29	Megan Treadwell	1939190
EPA 8321B	10/20/2017	10/27/2017	Julie Michelle Frank	10/28/2017	Juyoung Kim	1939202, 1939203
SM 2120 B	10/20/2017			10/20/2017 15:18	Tanya Welborn	1939186
	10/20/2017			10/20/2017 15:22	Tanya Welborn	1939191
	10/20/2017			10/20/2017 15:29	Tanya Welborn	1939185
SM 2320 B-97	10/20/2017			10/24/2017	Dale L. Simmons	1939185, 1939186, 1939191
SM 2540 C-97	10/20/2017			10/25/2017	Yijie Li	1939185, 1939186, 1939191
SM 2540 D-97	10/20/2017			10/25/2017	Yijie Li	1939185, 1939186, 1939191
SM 4500 F-C-97	10/20/2017			10/31/2017	Dale L. Simmons	1939185
	10/20/2017			11/02/2017	Dale L. Simmons	1939186, 1939191
SM 5310 B-00	10/20/2017			10/30/2017	Ping Hua	1939187, 1939188, 1939192
USGS O-2060-01	10/20/2017	10/25/2017	Hoor Shaik	10/30/2017	Julie Michelle Frank	1939202, 1939203
	10/20/2017	11/16/2017	Hoor Shaik	11/19/2017	Julie Michelle Frank	1939202, 1939203