

Biological Analysis Report

CEN-DIST-2018-03-01-02

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

Overflow Analyses Performed By:
Flowers Chemical Laboratories Inc. - Altamonte
Springs
481 Newburyport Avenue
Altamonte Springs, Florida 32701
DOH Accreditation E83018

Event Description: **Six / Soldier / LWR / LW(w) / Gee / How / Bear**
Request ID: **RQ-2018-02-26-63**
Customer: **CEN-DIST**
Project ID: **SMP**

Send Reports to:
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Date Certified: 28-AUG-2018 13:31



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: Chlorophyll/Grain Size/BOD, Molecular and Overflow.

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: HOWELL CREEK @ US OF LAKE HOWELL LN **Collection Date/Time: 02/28/2018 09:34**

Field ID: G2CE0138

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1970971	SM 9223 Quanti-Tray	Escherichia Coli-Quanti-Tray	51.2		MPN/100 mL		
1970981	SOP-PCR-1.2	GULL2-qPCR**	1.1E+04	U	TSC/100 mL	P341092	LCS
	SOP-PCR-4.0	HF183 - Human Source Marker**	Below Threshold				

Ref. Method and Comment:
 SOP-PCR-1.2: No amplification of GULL2 marker.

Sample Location: HOWELL CREEK @ 150M US OF LAKE HOWELL **Collection Date/Time: 02/28/2018 09:47**

Field ID: G2CE0072

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1970972	SM 9223 Quanti-Tray	Escherichia Coli-Quanti-Tray	83.3		MPN/100 mL		
1970982	SOP-PCR-1.2	GULL2-qPCR**	8.4E+03	U	TSC/100 mL	P341092	LCS
	SOP-PCR-4.0	HF183 - Human Source Marker**	Below Threshold				

Ref. Method and Comment:
 SOP-PCR-1.2: No amplification of GULL2 marker.

Sample Location: BEAR CRK JUST NORTH OF WINTER SPRINGS BLVD IN BEAR CRK PAR **Collection Date/Time: 02/28/2018 10:14**

Field ID: G2CE0069

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1970963	SM 9223 Quanti-Tray	Escherichia Coli-Quanti-Tray	178		MPN/100 mL		
1970973	SM 10200 H (mod.)	Chlorophyll-a, Corrected	0.55	U	ug/L	P341110	
		Phaeophytin-a	0.48	I	ug/L	P341110	
		Chlorophyll-a, Uncorrected	0.86	I	ug/L	P341110	

Ref. Method and Comment:
 SM 10200 H (mod.): Precision data is not available for at least one component due to the small amount of analyte in the QC sample. Refer to QA report for available precision data.

Sample Location: GEE CREEK @ SR HWY 419 **Collection Date/Time: 02/28/2018 10:36**

Field ID: G2CE0075

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1970965	SM 9223 Quanti-Tray	Escherichia Coli-Quanti-Tray	613		MPN/100 mL		
1970975	SOP-PCR-1.0	HF183-qPCR**	200	I	GEU/100 mL	P341663	
	SOP-PCR-4.0	HF183 - Human Source Marker**	Above Threshold				

Sample Location: GEE CREEK @ ALTON RD. **Collection Date/Time: 02/28/2018 10:47**

Field ID: G2CE0161

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1970966	SM 9223 Quanti-Tray	Escherichia Coli-Quanti-Tray	921		MPN/100 mL		
1970976	SOP-PCR-1.0	HF183-qPCR**	120	T	GEU/100 mL	P342094	RPD
	SOP-PCR-4.0	HF183 - Human Source Marker**	Above Threshold				

Sample Location: SOLDIER CREEK @ JUST DOWNSTREAM OF SR HWY 419 **Collection Date/Time: 02/28/2018 11:11**

Field ID: G2CE0162

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1970969	SM 9223 Quanti-Tray	Escherichia Coli-Quanti-Tray	249		MPN/100 mL		
1970979	SOP-PCR-1.0	HF183-qPCR**	140	U	GEU/100 mL	P341087	
	SOP-PCR-4.0	HF183 - Human Source Marker**	Below Threshold				

Ref. Method and Comment:
 SOP-PCR-1.0: No amplification of HF183 marker.

Sample Location: SOLDIER CREEK @ 150M UPSTREAM OF SR HWY 419 **Collection Date/Time: 02/28/2018 11:20**

Field ID: G2CE0071

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1970970	SM 9223 Quanti-Tray	Escherichia Coli-Quanti-Tray	308		MPN/100 mL		
1970980	SOP-PCR-1.0	HF183-qPCR**	140	U	GEU/100 mL	P341092	
	SOP-PCR-4.0	HF183 - Human Source Marker**	Below Threshold				

Ref. Method and Comment:
 SOP-PCR-1.0: No amplification of HF183 marker.

Sample Location: SIX MILE @ 400M US OF LAKE JESSUP **Collection Date/Time: 02/28/2018 11:39**

Field ID: G2CE0074

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1970967	SM 9223 Quanti-Tray	Escherichia Coli-Quanti-Tray	579		MPN/100 mL		
1970977	SOP-PCR-1.0	HF183-qPCR**	96	T	GEU/100 mL	P342094	RPD
	SOP-PCR-4.0	HF183 - Human Source Marker**	Above Threshold				

Sample Location: ELDER SPRINGS RUN @ US OF MYRTLE ST **Collection Date/Time: 02/28/2018 11:49**

Field ID: G2CE0120

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1970968	SM 9223 Quanti-Tray	Escherichia Coli-Quanti-Tray	770		MPN/100 mL		
1970978	SOP-PCR-1.0	HF183-qPCR**	120	T	GEU/100 mL	P342094	RPD
	SOP-PCR-4.0	HF183 - Human Source Marker**	Above Threshold				

Sample Location: LITTLE WEKIVA (WEST) @ 150M EAST NORTHWESTERN AVE **Collection Date/Time: 02/28/2018 13:32**

Field ID: G2CE0174

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1970964	SM 9223 Quanti-Tray	Escherichia Coli-Quanti-Tray	65.7		MPN/100 mL		
1970974	SM 10200 H (mod.)	Chlorophyll-a, Corrected	5.9		ug/L	P341110	
		Phaeophytin-a	8.4		ug/L	P341110	
		Chlorophyll-a, Uncorrected	11		ug/L	P341110	

Ref. Method and Comment:
 SM 10200 H (mod.): Precision data is not available for at least one component due to the small amount of analyte in the QC sample. Refer to QA report for available precision data.

Sample Location: G2CE0087 **Collection Date/Time: 02/28/2018 12:33**

Field ID: G2CE0087

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1971564	SM 9223 Quanti-Tray	Escherichia Coli-Quanti-Tray	46.4		MPN/100 mL		

Sample Location: G2CE0140

Collection Date/Time: 02/28/2018 12:56

Field ID: G2CE0140

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1971565	SM 9223 Quanti-Tray	Escherichia Coli-Quanti-Tray	55.7		MPN/100 mL		

Sample Location: G2CE0099

Collection Date/Time: 02/28/2018 13:44

Field ID: G2CE0099

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1971566	SM 9223 Quanti-Tray	Escherichia Coli-Quanti-Tray	108		MPN/100 mL		

Quality Assurance Report
Method Blank Results

Reference Method: SM 10200 H (mod.)
Batch ID: P341110

Component	Result	Code	Units
Chlorophyll-a, Corrected	0.55	U	ug/L
Chlorophyll-a, Uncorrected	0.40	U	ug/L
Phaeophytin-a	0.40	U	ug/L

Reference Method: SOP-PCR-1.0
Batch ID: P341087

Component	Result	Code	Units
HF183-qPCR	280	U	GEU/100 mL

Reference Method: SOP-PCR-1.0
Batch ID: P341092

Component	Result	Code	Units
HF183-qPCR	280	U	GEU/100 mL

Reference Method: SOP-PCR-1.0
Batch ID: P341663

Component	Result	Code	Units
HF183-qPCR	280	U	GEU/100 mL

Reference Method: SOP-PCR-1.0
Batch ID: P342094

Component	Result	Code	Units
HF183-qPCR	280	U	GEU/100 mL

Reference Method: SOP-PCR-1.2
Batch ID: P341092

Component	Result	Code	Units
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Quality Assurance Report Method Blank Results

Reference Method: SOP-PCR-1.2
Batch ID: P341092

Component	Result	Code	Units
GULL2-qPCR	1.7E+04	U	TSC/100 mL
GULL2-qPCR	1.7E+04	U	TSC/100 mL

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 10200 H (mod.)
Batch ID: P341110

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlorophyll-a, Corrected	101		P	84 - 116

Reference Method: SOP-PCR-1.0
Batch ID: P341087

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
HF183-qPCR	111	108	P/P	50 - 175

Reference Method: SOP-PCR-1.0
Batch ID: P341092

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
HF183-qPCR	128	95.1	P/P	50 - 175

Reference Method: SOP-PCR-1.0
Batch ID: P341663

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
HF183-qPCR	124	91.9	P/P	50 - 175

Reference Method: SOP-PCR-1.0
Batch ID: P342094

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
HF183-qPCR	108	102	P/P	50 - 175

Reference Method: SOP-PCR-1.2
Batch ID: P341092

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
GULL2-qPCR	39.5	105	F/P	50 - 300
GULL2-qPCR	26.0	95.9	F/P	50 - 300

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SOP-PCR-1.0
Batch ID: P341087

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1966061	HF183-qPCR	87.1		P	50 - 175

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SOP-PCR-1.0
Batch ID: P341087

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1966679	HF183-qPCR	112		P	50 - 175
1966680	HF183-qPCR	92.4		P	50 - 175
1967028	HF183-qPCR	87.3		P	50 - 175
1967029	HF183-qPCR	92.2		P	50 - 175
1968270	HF183-qPCR	90.8		P	50 - 175
1968271	HF183-qPCR	94.0		P	50 - 175
1968403	HF183-qPCR	125		P	50 - 175
1968622	HF183-qPCR	87.7		P	50 - 175
1968623	HF183-qPCR	94.6		P	50 - 175
1968635	HF183-qPCR	85.0		P	50 - 175
1970979	HF183-qPCR	79.2		P	50 - 175
1974796	HF183-qPCR	77.2	95.7	P/P	50 - 175

Reference Method: SOP-PCR-1.0
Batch ID: P341092

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1969246	HF183-qPCR	76.0		P	50 - 175
1969248	HF183-qPCR	98.2		P	50 - 175
1969853	HF183-qPCR	102		P	50 - 175
1970980	HF183-qPCR	92.3		P	50 - 175
1971017	HF183-qPCR	81.1		P	50 - 175
1974797	HF183-qPCR	95.2	96.0	P/P	50 - 175
1974798	HF183-qPCR	85.8		P	50 - 175
1974799	HF183-qPCR	94.7		P	50 - 175
1974800	HF183-qPCR	102		P	50 - 175

Reference Method: SOP-PCR-1.0
Batch ID: P341663

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1969180	HF183-qPCR	103		P	50 - 175
1969348	HF183-qPCR	96.5		P	50 - 175
1969655	HF183-qPCR	98.3		P	50 - 175
1970727	HF183-qPCR	93.5		P	50 - 175
1970728	HF183-qPCR	106		P	50 - 175
1970729	HF183-qPCR	134		P	50 - 175
1970730	HF183-qPCR	110		P	50 - 175
1970855	HF183-qPCR	81.9		P	50 - 175
1970889	HF183-qPCR	94.7		P	50 - 175
1970891	HF183-qPCR	87.0		P	50 - 175
1970975	HF183-qPCR	99.2		P	50 - 175
1971015	HF183-qPCR	95.2		P	50 - 175
1976478	HF183-qPCR	89.9	92.4	P/P	50 - 175

Reference Method: SOP-PCR-1.0
Batch ID: P342094

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1970976	HF183-qPCR	98.3		P	50 - 175
1970977	HF183-qPCR	86.0		P	50 - 175
1970978	HF183-qPCR	83.8		P	50 - 175

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SOP-PCR-1.0
Batch ID: P342094

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1971125	HF183-qPCR	96.6		P	50 - 175
1971126	HF183-qPCR	95.4		P	50 - 175
1971127	HF183-qPCR	96.3		P	50 - 175
1971128	HF183-qPCR	97.4		P	50 - 175
1971129	HF183-qPCR	101		P	50 - 175
1971426	HF183-qPCR	101		P	50 - 175
1971430	HF183-qPCR	95.4		P	50 - 175
1972701	HF183-qPCR	87.4		P	50 - 175
1972726	HF183-qPCR	76.3		P	50 - 175
1977971	HF183-qPCR	69.7	84.8	P/P	50 - 175

Reference Method: SOP-PCR-1.2
Batch ID: P341092

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1969248	GULL2-qPCR	68.5		P	50 - 300
1969853	GULL2-qPCR	62.8		P	50 - 300
1970981	GULL2-qPCR	87.1		P	50 - 300
1970982	GULL2-qPCR	81.1		P	50 - 300
1974797	GULL2-qPCR	67.0	64.8	P/P	50 - 300
1974798	GULL2-qPCR	72.9		P	50 - 300
1974799	GULL2-qPCR	84.7		P	50 - 300
1974800	GULL2-qPCR	70.6		P	50 - 300

Quality Assurance Report Precision

Reference Method: SM 10200 H (mod.)
Batch ID: P341110

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1971115	Chlorophyll-a, Corrected	9.48	Sample	P	0 - 25
1971115	Chlorophyll-a, Uncorrected	10.8	Sample	P	0 - 25

Reference Method: SOP-PCR-1.0
Batch ID: P341087

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1974796	HF183-qPCR	21.4	Spike	P	0 - 25

Reference Method: SOP-PCR-1.0
Batch ID: P341092

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1974797	HF183-qPCR	0.805	Spike	P	0 - 25

Quality Assurance Report Precision

Reference Method: SOP-PCR-1.0
Batch ID: P341663

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1976478	HF183-qPCR	2.76	Spike	P	0 - 25

Reference Method: SOP-PCR-1.0
Batch ID: P342094

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1977971	HF183-qPCR	25.2	Spike	F	0 - 25

Reference Method: SOP-PCR-1.2
Batch ID: P341092

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1974797	GULL2-qPCR	2.38	Spike	P	0 - 25
1975110	GULL2-qPCR	22.7	Spike	P	0 - 25

* 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: 1970975
Field Sample ID: G2CE0075

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
SOP-PCR-1.0	SKETA-qPCR	111	P	50 - 300

Lab Sample ID: 1970976
Field Sample ID: G2CE0161

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
SOP-PCR-1.0	SKETA-qPCR	111	P	50 - 300

Lab Sample ID: 1970977
Field Sample ID: G2CE0074

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
SOP-PCR-1.0	SKETA-qPCR	106	P	50 - 300

Lab Sample ID: 1970978
Field Sample ID: G2CE0120

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
SOP-PCR-1.0	SKETA-qPCR	105	P	50 - 300

Quality Assurance Report Surrogates

Lab Sample ID: 1970979
Field Sample ID: G2CE0162

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
SOP-PCR-1.0	SKETA-qPCR	93.8	P	50 - 300

Lab Sample ID: 1970980
Field Sample ID: G2CE0071

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
SOP-PCR-1.0	SKETA-qPCR	98.3	P	50 - 300

Lab Sample ID: 1970981
Field Sample ID: G2CE0138

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
SOP-PCR-1.2	SKETA-qPCR	101	P	50 - 300

Lab Sample ID: 1970982
Field Sample ID: G2CE0072

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
SOP-PCR-1.2	SKETA-qPCR	103	P	50 - 300

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery			MS % Recovery			LCS	Precision	
									SMP	MS
SM 10200 H (mod.)	Chlorophyll-a, Corrected	101							9.48	
	Chlorophyll-a, Uncorrected								10.8	
SOP-PCR-1.0	HF183-qPCR	108	111		112	92.4	87.3			21.4
					92.2					
	HF183-qPCR	95.1	128		81.1	76.0	98.2			0.805
					102					
	HF183-qPCR	91.9	124		103	96.5	98.3			2.76
SOP-PCR-1.2	HF183-qPCR	102	108		93.5					
					98.3	86.0	83.8			25.2
					96.6					
	GULL2-qPCR	39.5	95.9	26.0	87.1	81.1	68.5			22.7
		105			62.8					2.38

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
SM 10200 H (mod.) / E31780	Phytoplankton chlorophyll-a corrected, uncorrected, and phaeophytin by spectrophotometry	1970973, 1970974
SM 9223 Quanti-Tray / E83018	Escherichia coli by Colilert 18 Quanti-Tray method by FlowersOverflow Laboratory for Central District	1970963, 1970964, 1970965, 1970966, 1970967, 1970968, 1970969, 1970970, 1970971, 1970972, 1971564, 1971565, 1971566
SOP-PCR-1.0 / E31780	Detection and quantification of human-specific HF183 Bacteroides genetic marker with quantitative polymerase chain reaction	1970975, 1970976, 1970977, 1970978, 1970979, 1970980
SOP-PCR-1.2 / E31780	Detection and quantification of coastal bird specific Catellicoccus marimammalium Gull2 genetic marker with quantitative polymerase chain reaction	1970981, 1970982
SOP-PCR-4.0 / E31780	Preparation of Samples by Filtration and held for qPCR Analysis	1970975, 1970976, 1970977, 1970978, 1970979, 1970980, 1970981, 1970982

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 10200 H (mod.)	03/01/2018	03/01/2018 13:18	Cathy Sherrer	03/07/2018 07:45	Kim M. Spencer	1970973, 1970974
SM 9223 Quanti-Tray	02/28/2018	02/28/2018 15:30		03/01/2018 10:12	Flowers - Altamonte Springs	1970963, 1970964, 1970965, 1970966, 1970967, 1970968, 1970969, 1970970, 1970971, 1970972, 1971564, 1971565, 1971566
SOP-PCR-1.0	03/01/2018	03/01/2018 13:20	Puja Jasrotia	03/15/2018 14:58	Sarah Menz	1970979
	03/01/2018	03/01/2018 13:20	Puja Jasrotia	03/26/2018 11:00	Sarah Menz	1970975
	03/01/2018	03/01/2018 13:20	Puja Jasrotia	03/28/2018 14:34	Sarah Menz	1970976, 1970977, 1970978
	03/01/2018	03/01/2018 13:20	Sarah Menz	03/15/2018 15:43	Sarah Menz	1970980
SOP-PCR-1.2	03/01/2018	03/01/2018 13:20	Sarah Menz	03/19/2018 11:33	Sarah Menz	1970982
	03/01/2018	03/01/2018 13:20	Sarah Menz	03/29/2018 12:34	Sarah Menz	1970981
SOP-PCR-4.0	03/01/2018	03/01/2018 13:20	Angela Smith	03/23/2018 10:44	Puja Jasrotia	1970975, 1970976, 1970977, 1970978, 1970979, 1970980, 1970981, 1970982