

Camp Sewataro

2022 Vegetation Survey & Water Quality Report

Sudbury, Massachusetts

Prepared On: January 23, 2023

Prepared by: SOLitude Lake Management
590 Lake Street
Shrewsbury, MA 01545

Prepared for: Camp Sewataro
% Emmy Niinimaki
Sudbury, MA 01776

In accordance with the existing aquatic vegetation survey contract between SOLitude Lake Management and Camp Sewataro, this report reflects the work performed throughout the 2022 management season.

AQUATIC VEGETATION SURVEY RESULTS

An aquatic vegetation survey was performed on July 22, 2022 by SOLitude specialists. Two species were identified in Fish Pond at this time: Arrowhead (*Sagittaria latifolia*), and large-leaf pondweed (*Potamogeton amplifolius*). Filamentous alga was also identified at this time in low abundance concentrated at the shoreline. No plants were found at Swim Pond.

WATER QUALITY RESULTS

SOLitude specialists collected monthly (April-September) water quality samples and data from both Swim and Fish Pond at Camp Sewataro. The objective of the water quality sampling was to gain an understanding of the nutrient levels within the two ponds. Parameters collected between April & September include: water temperature, dissolved oxygen, hardness, turbidity, alkalinity, conductance, total phosphorus, soluble phosphorus, and pH. Additionally, true color, apparent color, nitrate, total nitrogen, and Total Kjeldahl Nitrogen were sampled on August 23. These results are included in **Table 1 & 2** below.



Table 1: Temperature/Dissolved Oxygen Profiles

April 28, 2022							
Fishing Pond				Swimming Pond			
Depth (ft)	Temp (°C)	DO (mg/L)	DO % Saturation	Depth (ft)	Temp(°C)	DO (mg/L)	DO % Saturation
SW	13.9	12.18	117.88	SW	14.1	12.6	122.48
3.0	13.4	12.2	116.77	3.0	14.0	12.8	124.15
6.0	12.7	12.4	116.85	6.0	13.7	12.9	124.3
9.0	12.2	12.2	113.68	9.0	12.7	13.3	125.33
				10	12.7	13.55	127.69
May 10, 2022							
Fishing Pond				Swimming Pond			
Depth (ft)	Temp (°C)	DO (mg/L)	DO % Saturation	Depth (ft)	Temp (°C)	DO (mg/L)	DO % Saturation
SW	20.5	11.52	127.92	SW	20.3	12.5	138.26
3.0	19.7	12.0	131.15	3.0	19.0	12.7	136.86
6.0	16.7	12.7	130.52	6.0	18.5	12.8	136.54
9.0	15.0	12.7	125.89	9.0	18.0	12.8	135.15
June 6, 2022							
Fishing Pond				Swimming Pond			
Depth (ft)	Temp (°C)	DO (mg/L)	DO % Saturation	Depth (ft)	Temp (°C)	DO (mg/L)	DO % Saturation
SW	21.7	11.7	133.01	SW	23.5	12.3	144.75
3.0	20.5	12.2	135.47	3.0	20.2	12.8	141.29
6.0	18.7	12.7	136.03	6.0	19.0	12.9	139.01
9.0	16.9	12.9	133.13	9.0	18.2	13.0	137.82
July 21, 2022							
Fishing Pond				Swimming Pond			
Depth (ft)	Temp (°C)	DO (mg/L)	DO % Saturation	Depth (ft)	Temp (°C)	DO (mg/L)	DO % Saturation
SW	20.1	11.9	131.1	SW	21.5	12.8	144.95
3.0	19.4	12.5	135.79	3.0	19.7	12.9	140.98
6.0	18.2	12.3	130.4	6.0	18.7	12.6	134.95
9.0	15.9	12.8	129.35	9.0	18.1	13.1	138.6



August 23, 2022							
Fishing Pond				Swimming Pond			
Depth (ft)	Temp (°C)	DO (mg/L)	DO % Saturation	Depth (ft)	Temp (°C)	DO (mg/L)	DO % Saturation
SW	25.1	7.28	88.27	SW	25.1	7.28	88.27
3.0	24.8	7.21	86.94	3.0	24.1	7.88	93.79
6.0	22.7	6.55	75.91	6.0	23.2	7.91	92.56
9.0	17.9	4.11	43.31	9.0	19.3	8.02	86.95

Dissolved Oxygen & Temperature (Table 1) readings were collected in the middle of each pond with a YSI ProDO meter. At Fish Pond, dissolved oxygen was at ideal levels through July, ranging between 12.9 mg/L and 11.5mg/L. In August, the dissolved oxygen was lower but still at acceptable levels. Near the bottom of Fish Pond, the dissolved oxygen dropped, which is common near the sediment where oxygen exchange is at a minimum and oxygen demand is highest. Temperature has ranged from 13.9°C (57.02°F) to 25.1°C (77.18°F). At Swim Pond dissolved oxygen levels ranged from 13.3 mg/L to 7.3 mg/L. Temperatures ranged from 14.1°C (57.4°F) to 21.5°C (77.18°F). The highest temperature reached in both ponds was in August. Temperature and dissolved oxygen was not measured in September due to equipment failure.

Table 2: Water Quality Results

Fish Pond								
Parameter	Units	Detection Limit	April 28	May 10	June 6	July 21	August 23	Sept 6
Hardness	mg/L	0.66	61.8	NS	74.3	76.8	75.0	71.2
Turbidity	NTU	0.2	1.9	1.7	3.9	2.8	2.8	2.8
Total Alkalinity	mg CaCO3/L	2	30.4	33.4	36.4	40.9	46.1	48.2
Specific Conductance	umhos/cm	10	340	350	350	370	NS	360
pH	SU	-	6.9	8.2	8.0	8.6	NS	7.5
Total Phosphorus	mg/L	0.01	0.015	0.018	0.014	0.047	NS	0.054
Soluble Phosphorus	mg/L	0.01	0.030	ND	ND	ND	NS	0.011
True/Apparent Color	A.P.C.U.	5.0	NS	NS	NS	NS	12/44	NS
Nitrate/Nitrogen	mg/L	0.10	NS	NS	NS	NS	ND	NS
Total Nitrogen	mg/L	0.30	NS	NS	NS	NS	0.53	NS
Total Kjeldahl Nitrogen	mg/L	0.300	NS	NS	NS	NS	0.531	NS
Swim Pond								
Parameter	Units	Detection Limit	April 28	May 10	June 6	July 21	August 23	Sept 6
Hardness	mg/L	0.66	81.3	NS	78.3	69.9	72.8	72.3
Turbidity	NTU	0.2	1.4	1.4	2.4	4.4	3.1	2.2
Total Alkalinity	mg CaCO3/L	2	32.4	33.5	36.5	40.7	46.7	47.8
Specific Conductance	umhos/cm	10	390	360	360	370	NS	360
pH	SU	-	7.4	8.0	7.6	8.6	NS	7.6



Swim Pond								
Parameter	Units	Detection Limit	April 28	May 10	June 6	July 21	August 23	Sept 6
Total Phosphorus	mg/L	0.01	0.011	0.010	0.013	0.037	NS	0.016
Soluble Phosphorus	mg/L	0.01	0.036	ND	ND	ND	NS	ND
True/Apparent Color	A.P.C.U.	5.0	NS	NS	NS	NS	12/20	NS
Nitrate/Nitrogen	mg/L	0.10	NS	NS	NS	NS	ND	NS
Total Nitrogen	mg/L	0.30	NS	NS	NS	NS	0.54	NS
Total Kjeldahl Nitrogen	mg/L	0.300	NS	NS	NS	NS	0.541	NS

*ND= non-detected; NS=not sampled

Hardness (Table 2) Hardness is a measure of dissolved salts in the water, usually calcium, but also magnesium and iron. Hardness is usually influenced by the geology and soil types of the watershed, and the amount of runoff over these surfaces. Hardness can be measured for only calcium content (Hardness (Ca)), or for all three salts, called Total Hardness. Water with Hardness (Ca) less than 10 mg/L can only support sparse aquatic biota. Freshwater typically has a Hardness (Ca) level from 4 to 100 mg/L. **Swim & Fish Ponds saw a range of 69.9 to 81.3 mg/l and 61.8 to 76.8 mg/l, respectively. Hardness was not collected during the May sampling event.**

Turbidity (Table 2) is a measure of the relative clarity of the water and is measured in NTU. Suspended solids in the water column such as clay particles, silt, and organic matter can cause an increase in turbidity; therefore, the lower the turbidity measurement, the clearer the water is. The leading sources of turbidity include soil erosion, waste discharge, urban runoff, flooding, dredging operations, increased flow rates, or algal blooms. An overabundance of bottom feeding fish, such as carp, can also increase turbidity due to constant grazing and disturbing of fine bottom sediments. Turbidity can affect a lake in many ways. These include temperature increases, reduced light penetration, and negative impacts to fish. In most freshwater systems, turbidity rarely rises above 5 NTU's. **Turbidity remained below the suggested 5 NTU threshold for all sampling months, but came close to reaching the threshold in the Swim Pond in July. This increase of turbidity is likely due to the recreational activities that occur in the pond.**

Total Alkalinity (Table 2) is a measure of the buffering capacity of a waterbody against acid additions such as acid rain and pollution, which can be detrimental to wildlife populations. Total alkalinity measures the presence of carbonates, bicarbonates and hydroxides. Values below 20 mg/l are a signal that the pond may be susceptible to fluctuations in pH. **Alkalinity remained stable during the six sampling events, ranging from 30.4 mg CaCO3/L to 48.2 mg CaCO3/L.**

Specific Conductance (Table 2) is the measure of water's ability to conduct an electrical current, and is measured in umhos/cm. The higher the number of charged particles (ions) in the water, the easier for electricity to pass through it. Conductivity is useful in lake management by estimating the dissolved ionic matter in the water. The lower the conductivity, the higher the quality of water (oligotrophic). A higher conductivity usually indicates an abundance of plant nutrients (total phosphorous and nitrate), or



eutrophic conditions. Conductivity can be increased by industrial discharge, road salt runoff, and septic tank leaching. Distilled water has a conductivity of 0.5 to 2.0 umhos/cm, while drinking water conductivity typically ranges from 50 to 1,500 umhos/cm. Conductivity below 500 umhos/cm is considered ideal in a lake system. **The conductivity levels in Fish/Swim Ponds displayed desirable levels (between 350 and 400 umhos/cm) for New England waterbodies. Conductance was not sampled in July or August.**

pH (Table 2) is a measurement of the acidity of the waterbody. The pH scale ranges from 0 (acidic) to 14 (basic) with 7 being neutral. Natural pH values of most freshwater systems in this region range between 6 and 8. Extreme pH values (less than 5 and greater than 9) have detrimental effects on organism physiology and can result in the direct loss of sensitive species. Diurnal fluctuations in pH are common in freshwater ponds and lakes. The extent to which the pH fluctuates depends on how well the freshwater system is buffered. **The pH in Fish Pond ranged from 6.9 to 8.6. The reading of 8.6 is a higher value than is desired. Swim Pond pH values were similar, ranging between 7.4 to 8.6. The pH in both ponds seem to be naturally higher than average, as the monthly sampling has displayed. pH can be influenced by several factors and does not seem to negatively influence the overall ecology of the two ponds.**

Total Phosphorus (Table 2) is a chemical compound derived from phosphorus and oxygen. Total phosphorus is usually present in freshwater in low concentrations and is often the limiting nutrient to aquatic plant and algae growth. However, man-made sources of phosphorus include septic system leaching, fertilizer runoff, and improperly treated wastewater. These phosphorus inputs usually enter a freshwater lake system during rain events, and bank erosion. A total phosphorus level greater than 0.03 mg/L can promote excessive aquatic plant growth and decomposition, either in the form of algal blooms, or nuisance quantities of aquatic plants. As a result of this excessive growth, recreational activities, such as swimming, boating, and fishing in the lake can be negatively impacted. In addition, aerobic bacteria will thrive under these conditions, causing a decrease in dissolved oxygen levels which can negatively impact aquatic biota. **The total phosphorus in Fish Pond ranged from 14 ppm to 54 ppm (not sampled in August). The phosphorus levels in Swim Pond ranged from 10 ppm to 37 ppm. Both were above the suggested threshold of 30 ppm at certain points during the summer.**

Soluble phosphorus (Table 2) is phosphorus that remains in the water after filtration to remove particulate matter. Soluble phosphorus can be a special problem because a) it is highly “bioavailable” to algae (i.e. it supports rapid algal growth and reproduction), and b) soluble phosphorus remains in the water while particulate phosphorus settles to lake bottoms where it may no longer be available to algae. Generally, soluble phosphorus over 20 parts per billion (ppb; or 0.02 mg/l) is the threshold at which algal growth can become problematic. **The majority of the soluble phosphorus was below 20 ppm, aside from the April sampling where soluble phosphorus was detected in Fish Pond at 30 ppm and Swim Pond at 36 ppm. It was not sampled in August.**

Algae ID & Enumeration (Table 3)

All sampling events for the contract period for algal species & enumeration have occurred at Camp Sewataro (April 28, May 10, June 6, July 21, August 23, and September 6). **Table 3** below displays the



species observed and the cell count associated with each species. MA DPH regards harmful algal blooms at a cell count of 70,000 cells/mL. **Although results displayed relatively low, non-harmful algal/cyanobacteria cell counts during all sample months, the non-cyanobacteria algae counts were relatively high in April and May.**

Table 3: Algal/Cyanobacteria Sampling Results April-September

April 28, 2022	FISH POND	SWIM POND
Genus	Cell Count	Cell Count
Filamentous Cyanobacteria	140	340
Total Cyanobacteria Cell Count	140	340
Diatoms	9,600	7,100
Navicula	29	29
Chlorophytes	6,900	6,000
Chrysophytes	58	10
Total Algae Cell Count	16,587	13,139
May 10, 2022	FISH POND	SWIM POND
Genus	Cell Count	Cell Count
Cyanobacteria spp.	-	-
Total Cyanobacteria Cell Count	0	0
Diatoms	19,490	12,477
Chlorophytes	10	10
Chrysophytes	-	8,100
Nitzschia	-	19
Tribonema	-	190
Staurastrum	-	10
Dinobryon	-	11,000
Scenedesmus	-	29
Total Algae Cell Count	19,500	31,835



June 6, 2022	FISH POND	SWIM POND
Genus	Cell Count	Cell Count
Unicellular Cyanobacteria		
Aphanocapsa	-	340
Filamentous Cyanobacteria		
Pseudanabaena	1,200	96
Total Cyanobacteria Cell Count	1,200	436
Diatoms	286	799
Nitzschia	130	130
Amphipleura	29	29
Chlorophytes	29	668
Tribonema	48	77
Desmids	19	29
Dinobryons	1,000	380
Total Algae Cell Count	1,541	2,112
July 21, 2022	FISH POND	SWIM POND
Genus	Cell Count	Cell Count
Unicellular Cyanobacteria		
Aphanocapsa	-	340
Filamentous Cyanobacteria		
Pseudanabaena	1,200	96
Total Cyanobacteria Cell Count	1,200	436
Diatoms	286	799
Desmids	19	29
Ceratium	10	-
Biraphid pennate	159	159
Chrysophytes	1,000	380
Tribophytes/Eustigmatophytes	48	-
Chlorophyta	58	668
Total Algae Cell Count	1,580	2,035



August 23, 2022	FISH POND	SWIM POND
Genus	Cell Count	Cell Count
Unicellular Cyanobacteria		
None	-	-
Filamentous Cyanobacteria		
Aphanizomenon	-	10
Total Cyanobacteria Cell Count	0	10
Diatoms	740	1,100
Chrysophytes	-	29
Chlorophytes	410	-
Total Algae Cell Count	1,150	1,499
September 6, 2022	FISH POND	SWIM POND
Genus	Cell Count	Cell Count
Unicellular Cyanobacteria		
None	-	-
Filamentous Cyanobacteria		
Pseudanabaena	3,600	-
Total Cyanobacteria Cell Count	3,600	0
Diatoms	1,258	207
Chlorophyta	49	187
Desmids	67	170
Chrysophytes	290	38
Total Algae Cell Count	1,664	602

SEDIMENT POLING

On July 22nd, a ten-foot pole was used to measure water depth, sediment depth and sediment type in both ponds. The water depth was measured from the surface of the pond to the top of the sediment layer. The sediment depth was measured from the top of the sediment layer to a solid refusal layer. Measurements were taken at predetermined points around each pond (**Figure 1**). Fish Pond had mostly organic matter with a sediment depth of 1-2 ft (**Table 4**). Swim Pond had mostly sand with a sediment depth of 1 ft (**Table 5**). A visual representation of the data is in **Figure 2**. The sediment layer was not sampled at water depths greater than 10 ft.



Table 4: Fish Pond Sediment Depth

Point Number	WATER DEPTH (Ft.)	SEDIMENT DEPTH (Ft.)	SEDIMENT TYPE
1	5'	2'	Organic Matter
2	5'	1'	Organic Matter
3	8'	1'	Mix organic matter/sand
4	7'	2'	Mix organic matter/sand
5	7'	2'	Mix organic matter/sand
6	9'	1'	Mix organic matter/sand
7	7'	1'	Sand
8	10'	Not Sampled	Not Sampled
9	9'	1' plus	Organic Matter
10	4'	1'	Organic Matter
11	9'	1' plus	Organic Matter
12	5'	1'	Organic Matter
13	3'	1'	Sand
14	5'	1'	Organic Matter
15	3'	1'	Organic Matter

Table 5: Swim Pond Sediment Depth

Point Number	WATER DEPTH (Ft.)	SEDIMENT DEPTH (Ft.)	SEDIMENT TYPE
1	10' plus	Not Sampled	Cement
2	6'	0	Cement
3	9'	1'	Sand
4	9'	1'	Sand
5	10' plus	Not Sampled	Not Sampled



SEDIMENT SAMPLING

Table 6: Sediment Chemistry Results

Sample ID	% Solids (% Dry Wt)	Labile (mg P/kg)	Reductant-Soluble (mg P/kg)	Metal-Oxide (mg P/kg) AL-P	Organic (mg P/kg)	Apatite & Residual (mg P/kg)
Fish Pond	16	4	129	454	386	310
Swim Pond	17	3	79	235	182	383

The above analysis parses out the different forms of phosphorus in the pond sediment. Labile P, or loosely bound, is that phosphorus that is in dissolved form in the sediment porewater or that which releases easily from the soil particles and is mostly available for plant and algae growth. Labile P levels were relatively low. Reductant soluble P is that which is bound to metals like iron and which can be released under low oxygen conditions at the sediment-water interface. Desirable reductant-soluble P levels are < 250 mg/Kg, so these levels are also relatively low. Metal-oxide P is phosphorus that is bound with metals such as aluminum and is generally not released under normal pond conditions. Organic P is phosphorus that is contained in more complex organic compounds such as proteins and which must be decomposed before potentially becoming available for algae growth. Apatite and Residual P is phosphorus that is tied up in mineral form and not available for biological growth.

In most cases, it is labile P and Organic P that is potentially released by the sediments and can be available to fuel algae growth. If the pond regularly experiences low or no oxygen at the bottom, reductant P can also be released during the summer month and potentially fuel algae blooms. For both ponds, the labile P and reductant P were within desirable ranges. As is typical for many ponds, organic P levels were moderate and therefore will affect the amount of phosphorus available to algae.

SUMMARY

- Limited aquatic vegetation exists in Fish Pond and Swim Pond.
- Both Fish and Swim Ponds displayed ideal nutrient levels for most of the season, but each pond exceeded desirable levels at different points, mostly in late summer.
- Algae and cyanobacteria cell counts remained at desirable levels with higher non-cyanobacteria counts in May and April.
- Sediment phosphorus levels were low to moderate, with most of the potentially available phosphorus being present as undecomposed organic material.

RECOMMENDATIONS

Based on this year's results, a continuation of monthly monitoring is recommended to track the water quality. If the cyanobacteria reaches high levels, an algaecide treatment could be necessary. At this time no plant control is necessary, but another vegetation survey is recommended next season to monitor for invasive or nuisance species.



It does not appear that a high dose, sediment inactivation treatment using alum is needed at either pond. Low-dose treatment targeting water column phosphorus levels however may be needed periodically due to organic decomposition in the sediments and loading from the watershed. The need for low-dose water column treatment should be guided by regular testing of the pond water for total and soluble phosphorus.

FIGURE 1: Sediment Poling Sample Points

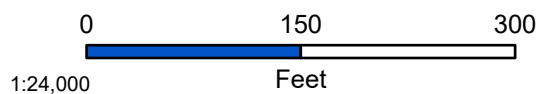


Esri Community Maps Contributors, MassGIS, © OpenStreetMap, Microsoft, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/ NASA, USGS, EPA, NPS, US Census Bureau, USDA, Maxar, Microsoft

Camp Sewataro
Sudbury, MA

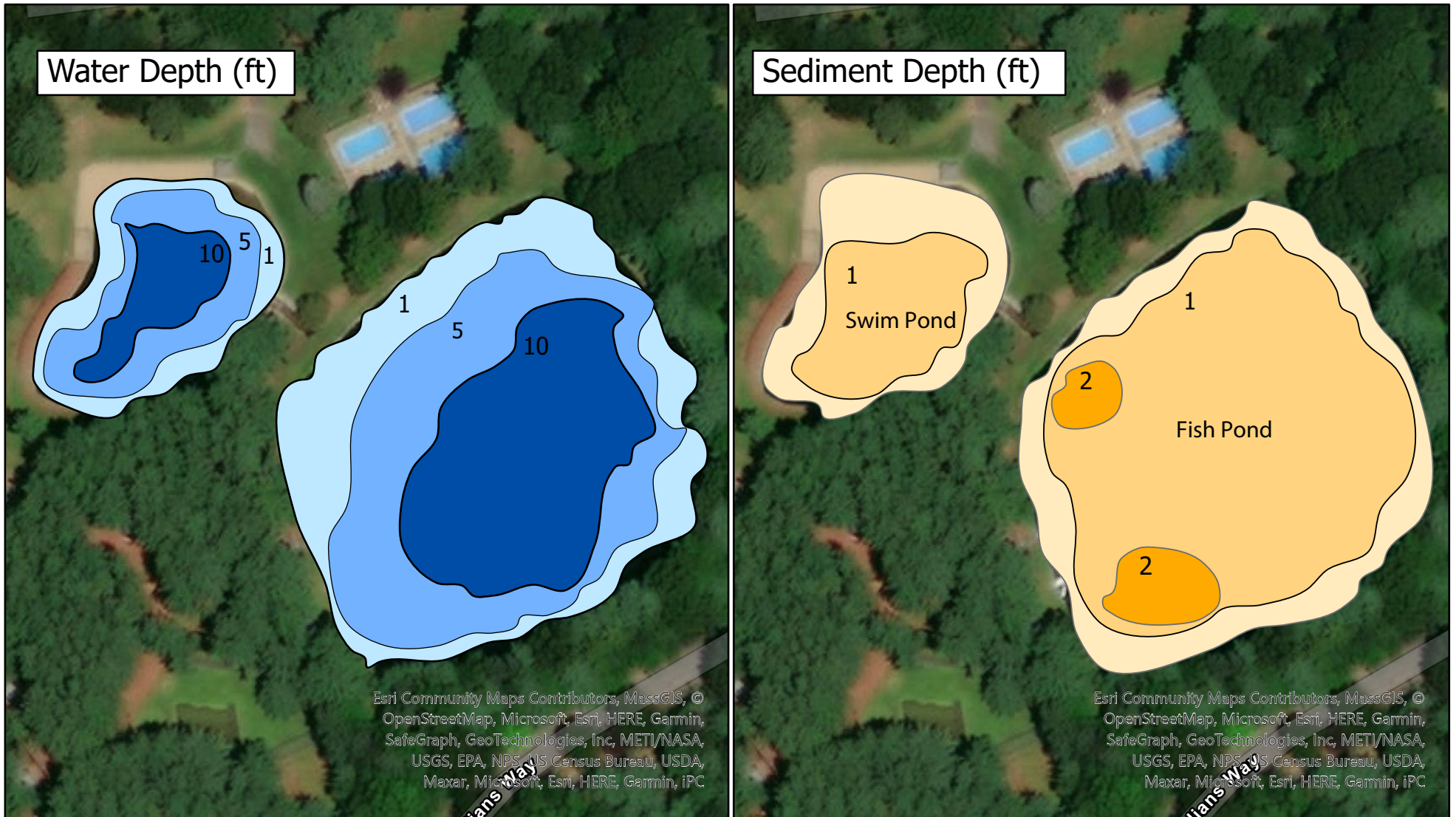


Camp Sewataro



Map Date: 01/20/2023
Prepared by: SM
Office: SHREWSBURY, MA

FIGURE 2: Swim and Fish Ponds Sediment Depth



Camp Sewataro
Sudbury, MA

Camp Sewataro

0 70 140 280 Feet

1:1,449

Survey Date: 07/22/2022
Prepared by: SB
Office: SHREWSBURY, MA

Appendix A

1. Alpha Analytical, Inc. Nutrient Analysis Laboratory Results
2. Northeast Laboratories Algal Results
3. SePro Research & Technology Campus Sediment Analysis



ANALYTICAL REPORT

Lab Number:	L2222364
Client:	Solitude Lake Management, LLC 590 Lake Street Shrewsbury, MA 01545
ATTN:	Amanda Mahaney
Phone:	(508) 865-1000
Project Name:	CAMP SEWATARO
Project Number:	Not Specified
Report Date:	05/24/22

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name: CAMP SEWATARO
Project Number: Not Specified

Lab Number: L2222364
Report Date: 05/24/22

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2222364-01	FISH POND	WATER	SUDBURY, MA	04/28/22 14:00	04/28/22
L2222364-02	SWIM POND	WATER	SUDBURY, MA	04/28/22 14:30	04/28/22

Project Name: CAMP SEWATARO
Project Number: Not Specified

Lab Number: L2222364
Report Date: 05/24/22

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name: CAMP SEWATARO
Project Number: Not Specified

Lab Number: L2222364
Report Date: 05/24/22

Case Narrative (continued)

Sample Receipt

The samples were received at the laboratory above the required temperature range. The samples were delivered directly from the sampling site but were not on ice.

Phosphorus, Soluble

L2222364-01 and -02: The SPHOS result is slightly higher than the TPHOS result; however, the results are less than five times the reporting limits. Therefore, no further action was taken.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:  Tiffani Morrissey

Title: Technical Director/Representative

Date: 05/24/22

METALS

Project Name: CAMP SEWATARO

Lab Number: L2222364

Project Number: Not Specified

Report Date: 05/24/22

SAMPLE RESULTS

Lab ID: L2222364-01

Date Collected: 04/28/22 14:00

Client ID: FISH POND

Date Received: 04/28/22

Sample Location: SUDBURY, MA

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
-----------	--------	-----------	-------	----	-----	-----------------	---------------	---------------	-------------	-------------------	---------

Total Hardness by SM 2340B - Mansfield Lab

Hardness	61.8		mg/l	0.660	NA	1	05/17/22 19:05	05/23/22 18:07	EPA 3005A	1,6010D	EW
----------	------	--	------	-------	----	---	----------------	----------------	-----------	---------	----



Project Name: CAMP SEWATARO

Lab Number: L2222364

Project Number: Not Specified

Report Date: 05/24/22

SAMPLE RESULTS

Lab ID: L2222364-02

Date Collected: 04/28/22 14:30

Client ID: SWIM POND

Date Received: 04/28/22

Sample Location: SUDBURY, MA

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	81.3		mg/l	0.660	NA	1	05/17/22 19:05	05/23/22 18:11	EPA 3005A	1,6010D	EW



Project Name: CAMP SEWATARO

Lab Number: L2222364

Project Number: Not Specified

Report Date: 05/24/22

Method Blank Analysis Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Hardness by SM 2340B - Mansfield Lab for sample(s): 01-02 Batch: WG1639019-1										
Hardness	ND		mg/l	0.660	NA	1	05/17/22 19:05	05/23/22 17:58	1,6010D	EW

Prep Information

Digestion Method: EPA 3005A

Lab Control Sample Analysis Batch Quality Control

Project Name: CAMP SEWATARO
Project Number: Not Specified

Lab Number: L2222364
Report Date: 05/24/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01-02 Batch: WG1639019-2								
Hardness	104		-		80-120	-		

Matrix Spike Analysis Batch Quality Control

Project Name: CAMP SEWATARO
Project Number: Not Specified

Lab Number: L2222364
Report Date: 05/24/22

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1639019-3 QC Sample: L2222404-02 Client ID: MS Sample												
Hardness	401	66.2	453	79		-	-		75-125	-		20

Lab Duplicate Analysis
Batch Quality Control

Project Name: CAMP SEWATARO

Project Number: Not Specified

Lab Number: L2222364

Report Date: 05/24/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1639019-4 QC Sample: L2222404-02 Client ID: DUP Sample						
Hardness	401	408	mg/l	2		20

INORGANICS & MISCELLANEOUS

Project Name: CAMP SEWATARO

Lab Number: L2222364

Project Number: Not Specified

Report Date: 05/24/22

SAMPLE RESULTS

Lab ID: L2222364-01
 Client ID: FISH POND
 Sample Location: SUDBURY, MA

Date Collected: 04/28/22 14:00
 Date Received: 04/28/22
 Field Prep: Not Specified

Sample Depth:
 Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Turbidity	1.9		NTU	0.20	--	1	-	04/29/22 09:57	121,2130B	KP
Alkalinity, Total	30.4		mg CaCO3/L	2.00	NA	1	-	05/10/22 08:38	121,2320B	MT
Specific Conductance @ 25 C	340		umhos/cm	10	--	1	-	04/29/22 23:41	1,9050A	AS
pH (H)	6.9		SU	-	NA	1	-	04/29/22 18:14	1,9040C	AS
Phosphorus, Total	0.015		mg/l	0.010	--	1	05/04/22 07:30	05/04/22 15:37	121,4500P-E	SD
Phosphorus, Soluble	0.030		mg/l	0.010	--	1	05/12/22 11:00	05/12/22 12:06	121,4500P-E	SD



Project Name: CAMP SEWATARO
Project Number: Not Specified

Lab Number: L2222364
Report Date: 05/24/22

SAMPLE RESULTS

Lab ID: L2222364-02
Client ID: SWIM POND
Sample Location: SUDBURY, MA

Date Collected: 04/28/22 14:30
Date Received: 04/28/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Turbidity	1.4		NTU	0.20	--	1	-	04/29/22 09:57	121,2130B	KP
Alkalinity, Total	32.4		mg CaCO3/L	2.00	NA	1	-	05/10/22 08:38	121,2320B	MT
Specific Conductance @ 25 C	390		umhos/cm	10	--	1	-	04/29/22 23:41	1,9050A	AS
pH (H)	7.4		SU	-	NA	1	-	04/29/22 18:14	1,9040C	AS
Phosphorus, Total	0.011		mg/l	0.010	--	1	05/04/22 07:30	05/04/22 15:38	121,4500P-E	SD
Phosphorus, Soluble	0.036		mg/l	0.010	--	1	05/12/22 11:00	05/12/22 12:07	121,4500P-E	SD



Project Name: CAMP SEWATARO

Lab Number: L2222364

Project Number: Not Specified

Report Date: 05/24/22

Method Blank Analysis
Batch Quality Control

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1632496-1									
Turbidity	ND	NTU	0.20	--	1	-	04/29/22 09:57	121,2130B	KP
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1634132-1									
Phosphorus, Total	ND	mg/l	0.010	--	1	05/04/22 07:30	05/04/22 15:10	121,4500P-E	SD
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1636219-1									
Phosphorus, Soluble	ND	mg/l	0.010	--	1	05/12/22 11:00	05/12/22 11:55	121,4500P-E	SD
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1636481-1									
Alkalinity, Total	ND	mg CaCO3/L	2.00	NA	1	-	05/10/22 08:38	121,2320B	MT

Lab Control Sample Analysis

Batch Quality Control

Project Name: CAMP SEWATARO

Project Number: Not Specified

Lab Number: L2222364

Report Date: 05/24/22

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1632496-2								
Turbidity	91		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1632696-1								
pH	100		-		99-101	-		5
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1632718-1								
Specific Conductance	101		-		99-101	-		
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1634132-2								
Phosphorus, Total	108		-		80-120	-		
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1636219-2								
Phosphorus, Soluble	105		-		80-120	-		
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1636481-2								
Alkalinity, Total	102		-		90-110	-		10

Matrix Spike Analysis Batch Quality Control

Project Name: CAMP SEWATARO
Project Number: Not Specified

Lab Number: L2222364
Report Date: 05/24/22

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Qual	MSD Found	MSD %Recovery	MSD Qual	Recovery Limits	RPD	RPD Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1634132-4 QC Sample: L2221884-05 Client ID: MS Sample												
Phosphorus, Total	0.339	0.5	0.736	79	-	-	-	-	75-125	-	-	20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1636219-4 QC Sample: L2222209-01 Client ID: MS Sample												
Phosphorus, Soluble	0.144	0.5	0.624	97	-	-	-	-	75-125	-	-	20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1636481-4 QC Sample: L2222586-01 Client ID: MS Sample												
Alkalinity, Total	513	100	623	110	-	-	-	-	86-116	-	-	10

Lab Duplicate Analysis

Batch Quality Control

Project Name: CAMP SEWATARO

Project Number: Not Specified

Lab Number: L2222364

Report Date: 05/24/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1632496-3 QC Sample: L2222364-02 Client ID: SWIM POND						
Turbidity	1.4	1.4	NTU	0		13
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1632696-2 QC Sample: L2221919-01 Client ID: DUP Sample						
pH	7.3	7.3	SU	0		5
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1632718-2 QC Sample: L2222364-01 Client ID: FISH POND						
Specific Conductance @ 25 C	340	330	umhos/cm	3		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1634132-3 QC Sample: L2221884-02 Client ID: DUP Sample						
Phosphorus, Total	0.066	0.071	mg/l	7		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1636219-3 QC Sample: L2222209-01 Client ID: DUP Sample						
Phosphorus, Soluble	0.144	0.142	mg/l	1		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1636481-3 QC Sample: L2222586-01 Client ID: DUP Sample						
Alkalinity, Total	513	524	mg CaCO3/L	2		10

Project Name: CAMP SEWATARO**Lab Number:** L2222364**Project Number:** Not Specified**Report Date:** 05/24/22**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2222364-01A	Plastic 250ml unpreserved/No Headspace	A	NA		16.7	Y	Absent		ALK-T-2320(14)
L2222364-01B	Plastic 250ml unpreserved	A	7	7	16.7	Y	Absent		FILTER(1)
L2222364-01C	Plastic 250ml unpreserved	A	7	7	16.7	Y	Absent		TURB-2130(2),PH-9040(1),COND-9050(28)
L2222364-01D	Plastic 250ml H2SO4 preserved	A	<2	<2	16.7	Y	Absent		TPHOS-4500(28)
L2222364-01E	Plastic 250ml HNO3 preserved	A	<2	<2	16.7	Y	Absent		HARDT(180)
L2222364-01X	Plastic 250ml H2SO4 preserved Filtrates	A	NA		16.7	Y	Absent		SPHOS-4500(28)
L2222364-02A	Plastic 250ml unpreserved/No Headspace	A	NA		16.7	Y	Absent		ALK-T-2320(14)
L2222364-02B	Plastic 250ml unpreserved	A	7	7	16.7	Y	Absent		FILTER(1)
L2222364-02C	Plastic 250ml unpreserved	A	7	7	16.7	Y	Absent		TURB-2130(2),PH-9040(1),COND-9050(28)
L2222364-02D	Plastic 250ml H2SO4 preserved	A	<2	<2	16.7	Y	Absent		TPHOS-4500(28)
L2222364-02E	Plastic 250ml HNO3 preserved	A	<2	<2	16.7	Y	Absent		HARDT(180)
L2222364-02X	Plastic 250ml H2SO4 preserved Filtrates	A	NA		16.7	Y	Absent		SPHOS-4500(28)

Project Name: CAMP SEWATARO
Project Number: Not Specified

Lab Number: L2222364
Report Date: 05/24/22

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: Data Usability Report



Project Name: CAMP SEWATARO
Project Number: Not Specified

Lab Number: L2222364
Report Date: 05/24/22

Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA, this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- ND** - Not detected at the reporting limit (RL) for the sample.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where

Report Format: Data Usability Report



Project Name: CAMP SEWATARO
Project Number: Not Specified

Lab Number: L2222364
Report Date: 05/24/22

Data Qualifiers

the identification is based on a mass spectral library search.

- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- V** - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)
- Z** - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Project Name: CAMP SEWATARO

Lab Number: L2222364

Project Number: Not Specified

Report Date: 05/24/22

REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.
- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility

EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene

EPA 625/625.1: alpha-Terpineol

EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.

EPA 8270D/8270E: NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.

SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO₂, NO₃.

Mansfield Facility

SM 2540D: TSS

EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.

EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water

EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE,**

EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B

EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.

Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.**

Non-Potable Water

SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1:**

Ammonia-N, **LCHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E,**

SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.

EPA 624.1: Volatile Halocarbons & Aromatics,

EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II,

Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water

EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1 Hg.**

EPA 522, EPA 537.1.

Non-Potable Water

EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.

EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.

EPA 245.1 Hg.

SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.



CHAIN OF CUSTODY

PAGE _____ OF _____

Date Rec'd in Lab: 4/28/22

ALPHA Job #: 2222364

8 Walkup Drive
Westboro, MA 01581
Tel: 508-898-9220

320 Forbes Blvd
Mansfield, MA 02048
Tel: 508-822-9300

Project Information

Project Name: Camp Sewataro

Project Location: Sudbury, MA

Project #:

Project Manager:

ALPHA Quote #:

Report Information - Data Deliverables

ADEX EMAIL

Billing Information

Same as Client info PO #:

Client Information

Client: Solitude Lake Management

Address: 590 Lake St
Shrewsbury, MA 01545

Phone:

Email: amahomey@solitudelake.com

Turn-Around Time

Standard RUSH (only confirmed if pre-approved)

Date Due:

Regulatory Requirements & Project Information Requirements

Yes No MA MCP Analytical Methods Yes No CT RCP Analytical Methods

Yes No Matrix Spike Required on this SDG? (Required for MCP Inorganics)

Yes No GW1 Standards (Info Required for Metals & EPH with Targets)

Yes No NPDES RGP

Other State /Fed Program _____ Criteria _____

Additional Project Information:

ANALYSIS	VOC: <input type="checkbox"/> 8260 <input type="checkbox"/> 624 <input type="checkbox"/> 524.2	COND/PH/TURB.
SVOC: <input type="checkbox"/> ABN <input type="checkbox"/> PAH	METALS: <input type="checkbox"/> MCP 13 <input type="checkbox"/> MCP 14 <input type="checkbox"/> RCP 15	SPMS
METALS: <input type="checkbox"/> RCRA5 <input type="checkbox"/> RCRA8	EPH: <input type="checkbox"/> Ranges & Targets <input type="checkbox"/> Ranges Only	Hardness
EPH: <input type="checkbox"/> Ranges & Targets <input type="checkbox"/> Ranges Only	VPH: <input type="checkbox"/> Ranges & Targets <input type="checkbox"/> Ranges Only	TPMS
VPH: <input type="checkbox"/> Ranges & Targets <input type="checkbox"/> Ranges Only	TPH: <input type="checkbox"/> Quant Only <input type="checkbox"/> Fingerprint	AlkT
TPH: <input type="checkbox"/> Quant Only <input type="checkbox"/> Fingerprint		

SAMPLE INFO

Filtration
 Field
 Lab to do

Preservation
 Lab to do

TOTAL # BOTTLES

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler Initials
		Date	Time		
<u>22364-01</u>	<u>Fish Pond</u>	<u>4/28/22</u>	<u>2:00</u>	<u>SW</u>	<u>KV</u>
<u>02</u>	<u>Swim Pond</u>	<u>4/28/22</u>	<u>2:30</u>	<u>SW</u>	<u>KV</u>

Container Type
P= Plastic
A= Amber glass
V= Vial
G= Glass
B= Bacteria cup
C= Cube
O= Other
E= Encore
D= BOD Bottle

Preservative
A= None
B= HCl
C= HNO₃
D= H₂SO₄
E= NaOH
F= MeOH
G= NaHSO₄
H= Na₂S₂O₃
I= Ascorbic Acid
J= NH₄Cl
K= Zn Acetate
O= Other

Container Type	
Preservative	

Relinquished By:	Date/Time	Received By:	Date/Time
<u>Rosemary White</u>	<u>4/28/22 3:40pm</u>	<u>[Signature]</u>	<u>4/28/22 15:4</u>

All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.
FORM NO: 01-01 (rev. 12-Mar-2012)



ANALYTICAL REPORT

Lab Number:	L2224658
Client:	Solitude Lake Management, LLC 590 Lake Street Shrewsbury, MA 01545
ATTN:	Amanda Mahaney
Phone:	(508) 865-1000
Project Name:	CAMP SEWATARO
Project Number:	Not Specified
Report Date:	06/01/22

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name: CAMP SEWATARO
Project Number: Not Specified

Lab Number: L2224658
Report Date: 06/01/22

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2224658-01	FISHING POND	WATER	SUDBURY, MA	05/10/22 14:40	05/10/22
L2224658-02	SWIMMING POND	WATER	SUDBURY, MA	05/10/22 15:00	05/10/22

Project Name: CAMP SEWATARO
Project Number: Not Specified

Lab Number: L2224658
Report Date: 06/01/22

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name: CAMP SEWATARO
Project Number: Not Specified

Lab Number: L2224658
Report Date: 06/01/22

Case Narrative (continued)

Sample Receipt

The samples were received at the laboratory above the required temperature range. The samples were delivered directly from the sampling site but were not on ice.

L2224658-02: Headspace was noted in the sample containers submitted for Total Alkalinity - SM 2320.

The analyses performed were specified by the client.

pH

WG1636865: A Laboratory Duplicate was prepared with the sample batch, however, the native sample was not available for reporting; therefore, the results could not be reported.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:

 Caitlin Walukevich

Title: Technical Director/Representative

Date: 06/01/22

INORGANICS & MISCELLANEOUS

Project Name: CAMP SEWATARO

Lab Number: L2224658

Project Number: Not Specified

Report Date: 06/01/22

SAMPLE RESULTS

Lab ID: L2224658-01
 Client ID: FISHING POND
 Sample Location: SUDBURY, MA

Date Collected: 05/10/22 14:40
 Date Received: 05/10/22
 Field Prep: Not Specified

Sample Depth:
 Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Turbidity	1.7		NTU	0.20	--	1	-	05/10/22 21:26	121,2130B	AS
Alkalinity, Total	33.4		mg CaCO3/L	2.00	NA	1	-	05/23/22 07:30	121,2320B	MT
Specific Conductance @ 25 C	350		umhos/cm	10	--	1	-	05/11/22 19:53	1,9050A	AS
pH (H)	8.2		SU	-	NA	1	-	05/10/22 20:35	1,9040C	AS
Phosphorus, Total	0.018		mg/l	0.010	--	1	05/27/22 11:30	05/27/22 14:28	121,4500P-E	SD
Phosphorus, Soluble	ND		mg/l	0.010	--	1	05/31/22 11:00	05/31/22 16:15	121,4500P-E	SD



Project Name: CAMP SEWATARO

Lab Number: L2224658

Project Number: Not Specified

Report Date: 06/01/22

SAMPLE RESULTS

Lab ID: L2224658-02

Date Collected: 05/10/22 15:00

Client ID: SWIMMING POND

Date Received: 05/10/22

Sample Location: SUDBURY, MA

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Turbidity	1.4		NTU	0.20	--	1	-	05/10/22 21:26	121,2130B	AS
Alkalinity, Total	33.5		mg CaCO3/L	2.00	NA	1	-	05/23/22 07:30	121,2320B	MT
Specific Conductance @ 25 C	360		umhos/cm	10	--	1	-	05/11/22 19:53	1,9050A	AS
pH (H)	8.0		SU	-	NA	1	-	05/10/22 20:35	1,9040C	AS
Phosphorus, Total	0.010		mg/l	0.010	--	1	05/27/22 11:30	05/27/22 14:29	121,4500P-E	SD
Phosphorus, Soluble	ND		mg/l	0.010	--	1	05/31/22 11:00	05/31/22 16:17	121,4500P-E	SD



Project Name: CAMP SEWATARO

Lab Number: L2224658

Project Number: Not Specified

Report Date: 06/01/22

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1636889-1										
Turbidity	ND		NTU	0.20	--	1	-	05/10/22 21:26	121,2130B	AS
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1641553-1										
Alkalinity, Total	ND		mg CaCO3/L	2.00	NA	1	-	05/23/22 07:30	121,2320B	MT
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1643637-1										
Phosphorus, Total	ND		mg/l	0.010	--	1	05/27/22 11:30	05/27/22 14:22	121,4500P-E	SD
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1644660-1										
Phosphorus, Soluble	ND		mg/l	0.010	--	1	05/31/22 11:00	05/31/22 16:12	121,4500P-E	SD

Lab Control Sample Analysis

Batch Quality Control

Project Name: CAMP SEWATARO

Project Number: Not Specified

Lab Number: L2224658

Report Date: 06/01/22

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1636865-1								
pH	100		-		99-101	-		5
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1636889-2								
Turbidity	99		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1637402-1								
Specific Conductance	99		-		99-101	-		
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1641553-2								
Alkalinity, Total	103		-		90-110	-		10
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1643637-2								
Phosphorus, Total	100		-		80-120	-		
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1644660-2								
Phosphorus, Soluble	98		-		80-120	-		

Matrix Spike Analysis Batch Quality Control

Project Name: CAMP SEWATARO
Project Number: Not Specified

Lab Number: L2224658
Report Date: 06/01/22

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Qual	MSD Found	MSD %Recovery	MSD Qual	Recovery Limits	RPD	RPD Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1641553-4 QC Sample: L2225493-01 Client ID: MS Sample												
Alkalinity, Total	117	100	230	113	-	-	-	-	86-116	-	-	10
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1643637-4 QC Sample: L2224507-01 Client ID: MS Sample												
Phosphorus, Total	ND	0.5	0.502	100	-	-	-	-	75-125	-	-	20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1644660-3 QC Sample: L2224658-02 Client ID: SWIMMING POND												
Phosphorus, Soluble	ND	0.5	0.516	103	-	-	-	-	75-125	-	-	20

Lab Duplicate Analysis

Batch Quality Control

Project Name: CAMP SEWATARO

Project Number: Not Specified

Lab Number: L2224658

Report Date: 06/01/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1636889-3 QC Sample: L2224658-02 Client ID: SWIMMING POND						
Turbidity	1.4	1.5	NTU	7		13
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1637402-2 QC Sample: L2224658-01 Client ID: FISHING POND						
Specific Conductance @ 25 C	350	340	umhos/cm	3		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1641553-3 QC Sample: L2225493-01 Client ID: DUP Sample						
Alkalinity, Total	117	117	mg CaCO3/L	0		10
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1643637-3 QC Sample: L2224507-01 Client ID: DUP Sample						
Phosphorus, Total	ND	0.010	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1644660-4 QC Sample: L2224658-01 Client ID: FISHING POND						
Phosphorus, Soluble	ND	ND	mg/l	NC		20

Project Name: CAMP SEWATARO**Lab Number:** L2224658**Project Number:** Not Specified**Report Date:** 06/01/22**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2224658-01A	Plastic 250ml unpreserved/No Headspace	A	NA		13.6	Y	Absent		ALK-T-2320(14)
L2224658-01B	Plastic 250ml unpreserved	A	7	7	13.6	Y	Absent		FILTER(1)
L2224658-01C	Plastic 250ml unpreserved	A	7	7	13.6	Y	Absent		TURB-2130(2),PH-9040(1),COND-9050(28)
L2224658-01D	Plastic 250ml HNO3 preserved	A	<2	<2	13.6	Y	Absent		HOLD-METAL-TOTAL(180)
L2224658-01E	Plastic 250ml H2SO4 preserved	A	<2	<2	13.6	Y	Absent		TPHOS-4500(28)
L2224658-01X	Plastic 250ml H2SO4 preserved Filtrates	A	NA		13.6	Y	Absent		SPHOS-4500(28)
L2224658-02A	Plastic 250ml unpreserved/No Headspace	A	NA		13.6	Y	Absent		ALK-T-2320(14)
L2224658-02B	Plastic 250ml unpreserved	A	7	7	13.6	Y	Absent		FILTER(1)
L2224658-02C	Plastic 250ml unpreserved	A	7	7	13.6	Y	Absent		TURB-2130(2),PH-9040(1),COND-9050(28)
L2224658-02D	Plastic 250ml HNO3 preserved	A	<2	<2	13.6	Y	Absent		HOLD-METAL-TOTAL(180)
L2224658-02E	Plastic 250ml H2SO4 preserved	A	<2	<2	13.6	Y	Absent		TPHOS-4500(28)
L2224658-02X	Plastic 250ml H2SO4 preserved Filtrates	A	NA		13.6	Y	Absent		SPHOS-4500(28)

Project Name: CAMP SEWATARO
Project Number: Not Specified

Lab Number: L2224658
Report Date: 06/01/22

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: Data Usability Report



Project Name: CAMP SEWATARO
Project Number: Not Specified

Lab Number: L2224658
Report Date: 06/01/22

Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA, this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- ND** - Not detected at the reporting limit (RL) for the sample.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where

Report Format: Data Usability Report



Project Name: CAMP SEWATARO
Project Number: Not Specified

Lab Number: L2224658
Report Date: 06/01/22

Data Qualifiers

the identification is based on a mass spectral library search.

- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- V** - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)
- Z** - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Project Name: CAMP SEWATARO

Lab Number: L2224658

Project Number: Not Specified

Report Date: 06/01/22

REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.
- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility

EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene

EPA 625/625.1: alpha-Terpineol

EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.

EPA 8270D/8270E: NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.

SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO₂, NO₃.

Mansfield Facility

SM 2540D: TSS

EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.

EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water

EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE,**

EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B

EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.

Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.**

Non-Potable Water

SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1:**

Ammonia-N, **LCHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E,**

SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.

EPA 624.1: Volatile Halocarbons & Aromatics,

EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II,

Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water

EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1 Hg.**

EPA 522, EPA 537.1.

Non-Potable Water

EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.

EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.

EPA 245.1 Hg.

SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.



CHAIN OF CUSTODY

PAGE _____ OF _____

Date Rec'd in Lab: 5/10/02

ALPHA Job #: L2224658

6 Walkup Drive Westboro, MA 01581 Tel: 508-898-9220
320 Forbes Blvd Mansfield, MA 02048 Tel: 508-822-9300

Project Information

Project Name: *Camp Sewataro*
Project Location: *Sudbury, MA*
Project #:
Project Manager:
ALPHA Quote #:

Report Information - Data Deliverables

ADEx EMAIL Same as Client info PO #:

Turn-Around Time

Standard RUSH (only confirmed if pre-approved)
Date Due:

Regulatory Requirements & Project Information Requirements

Yes No MA MCP Analytical Methods Yes No CT RCP Analytical Methods
 Yes No Matrix Spike Required on this SDG? (Required for MCP Inorganics)
 Yes No GW1 Standards (Info Required for Metals & EPH with Targets)
 Yes No NPDES RGP
 Other State /Fed Program _____ Criteria _____

Client Information

Client: *Solitude Lake Management*
Address: *590 Lake St. Shrewsbury MA 01545*
Phone:
Email: *amb@haney@solitudelake.com*

Additional Project Information:

ANALYSIS

VOC: 8260 624 524.2
SVOC: ABN PAH
METALS: MCP 13 MCP 14 RCP 15
METALS: RCRA5 RCRA8 PPT13
EPH: Ranges & Targets Ranges Only
VPH: Ranges & Targets Ranges Only
 PCB PEST
TPH: Quant Only Fingerprint

alk/Spres/Cond/PH/Turb
Ames/Tiphos
Total Metals

SAMPLE INFO

Filtration
 Field
 Lab to do

Preservation
 Lab to do

TOTAL # BOTTLES

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler Initials
		Date	Time		
24658-01	<i>Fishing Pond</i>	<i>5/10</i>	<i>2:40pm</i>	<i>SW</i>	<i>RN</i>
<i>02</i>	<i>Swimming Pond</i>	<i>5/10</i>	<i>3:00pm</i>	<i>SW</i>	<i>RN</i>

- Container Type**
- P= Plastic
 - A= Amber glass
 - V= Vial
 - G= Glass
 - B= Bacteria cup
 - C= Cube
 - O= Other
 - E= Encore
 - D= BOD Bottle
- Preservative**
- A= None
 - B= HCl
 - C= HNO₃
 - D= H₂SO₄
 - E= NaOH
 - F= MeOH
 - G= NaHSO₄
 - H= Na₂S₂O₃
 - I= Ascorbic Acid
 - J= NH₄Cl
 - K= Zn Acetate
 - O= Other

Relinquished By:		Date/Time	Received By:		Date/Time
<i>Rose V</i>		<i>5/10 4:08</i>	<i>Wm Wm</i>		<i>5/10/02 1608</i>

All samples submitted are subject to Alpha's Terms and Conditions. See reverse side. FORM NO: 01-01 (rev. 12-Mar-2012)



ANALYTICAL REPORT

Lab Number:	L2229559
Client:	Solitude Lake Management, LLC 590 Lake Street Shrewsbury, MA 01545
ATTN:	Amanda Mahaney
Phone:	(508) 865-1000
Project Name:	CAMP SEWATARO
Project Number:	Not Specified
Report Date:	06/27/22

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name: CAMP SEWATARO
Project Number: Not Specified

Lab Number: L2229559
Report Date: 06/27/22

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2229559-01	FISH POND	WATER	SUDBURY, MA	06/06/22 11:20	06/06/22
L2229559-02	SWIM POND	WATER	SUDBURY, MA	06/06/22 11:40	06/06/22

Project Name: CAMP SEWATARO
Project Number: Not Specified

Lab Number: L2229559
Report Date: 06/27/22

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name: CAMP SEWATARO
Project Number: Not Specified

Lab Number: L2229559
Report Date: 06/27/22

Case Narrative (continued)

Sample Receipt

The samples were received at the laboratory above the required temperature range. The samples were delivered directly from the sampling site but were not on ice.

L2229559-02: Headspace was noted in the sample container submitted for Total Alkalinity - SM 2320. The analysis was performed at the client's request.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:  - Tiffani Morrissey

Title: Technical Director/Representative

Date: 06/27/22

METALS

Project Name: CAMP SEWATARO**Lab Number:** L2229559**Project Number:** Not Specified**Report Date:** 06/27/22**SAMPLE RESULTS**

Lab ID: L2229559-01

Date Collected: 06/06/22 11:20

Client ID: FISH POND

Date Received: 06/06/22

Sample Location: SUDBURY, MA

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	74.3		mg/l	0.660	NA	1	06/17/22 19:00	06/27/22 15:30	EPA 3005A	1,6010D	NB



Project Name: CAMP SEWATARO**Lab Number:** L2229559**Project Number:** Not Specified**Report Date:** 06/27/22**SAMPLE RESULTS**

Lab ID: L2229559-02

Date Collected: 06/06/22 11:40

Client ID: SWIM POND

Date Received: 06/06/22

Sample Location: SUDBURY, MA

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	78.3		mg/l	0.660	NA	1	06/17/22 19:00	06/27/22 15:35	EPA 3005A	1,6010D	NB



Project Name: CAMP SEWATARO

Lab Number: L2229559

Project Number: Not Specified

Report Date: 06/27/22

Method Blank Analysis Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Hardness by SM 2340B - Mansfield Lab for sample(s): 01-02 Batch: WG1651721-1										
Hardness	ND		mg/l	0.660	NA	1	06/17/22 19:00	06/27/22 14:25	1,6010D	NB

Prep Information

Digestion Method: EPA 3005A

Lab Control Sample Analysis

Batch Quality Control

Project Name: CAMP SEWATARO

Lab Number: L2229559

Project Number: Not Specified

Report Date: 06/27/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01-02 Batch: WG1651721-2								
Hardness	102		-		80-120	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: CAMP SEWATARO
Project Number: Not Specified

Lab Number: L2229559
Report Date: 06/27/22

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Qual	MSD Found	MSD %Recovery	MSD Qual	Recovery Limits	RPD	RPD Qual	RPD Limits
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1651721-3 QC Sample: L2231490-01 Client ID: MS Sample												
Hardness	74.4	66.2	138	96	-	-	-	-	75-125	-	-	20

Lab Duplicate Analysis

Batch Quality Control

Project Name: CAMP SEWATARO

Project Number: Not Specified

Lab Number: L2229559

Report Date: 06/27/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1651721-4 QC Sample: L2231490-01 Client ID: DUP Sample						
Hardness	74.4	75.6	mg/l	2		20

INORGANICS & MISCELLANEOUS

Project Name: CAMP SEWATARO

Lab Number: L2229559

Project Number: Not Specified

Report Date: 06/27/22

SAMPLE RESULTS

Lab ID: L2229559-01
 Client ID: FISH POND
 Sample Location: SUDBURY, MA

Date Collected: 06/06/22 11:20
 Date Received: 06/06/22
 Field Prep: Not Specified

Sample Depth:
 Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Turbidity	3.9		NTU	0.20	--	1	-	06/06/22 23:30	121,2130B	AS
Alkalinity, Total	36.4		mg CaCO3/L	2.00	NA	1	-	06/17/22 10:16	121,2320B	CS
Specific Conductance @ 25 C	350		umhos/cm	10	--	1	-	06/07/22 09:34	1,9050A	KS
pH (H)	8.0		SU	-	NA	1	-	06/07/22 08:34	1,9040C	KS
Phosphorus, Total	0.014		mg/l	0.010	--	1	06/23/22 10:30	06/23/22 14:42	121,4500P-E	SD
Phosphorus, Soluble	ND		mg/l	0.010	--	1	06/22/22 08:30	06/22/22 12:13	121,4500P-E	SD



Project Name: CAMP SEWATARO

Lab Number: L2229559

Project Number: Not Specified

Report Date: 06/27/22

SAMPLE RESULTS

Lab ID: L2229559-02

Date Collected: 06/06/22 11:40

Client ID: SWIM POND

Date Received: 06/06/22

Sample Location: SUDBURY, MA

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Turbidity	2.4		NTU	0.20	--	1	-	06/06/22 23:30	121,2130B	AS
Alkalinity, Total	36.5		mg CaCO3/L	2.00	NA	1	-	06/17/22 10:16	121,2320B	CS
Specific Conductance @ 25 C	360		umhos/cm	10	--	1	-	06/07/22 09:34	1,9050A	KS
pH (H)	7.6		SU	-	NA	1	-	06/07/22 08:34	1,9040C	KS
Phosphorus, Total	0.013		mg/l	0.010	--	1	06/23/22 10:30	06/23/22 14:43	121,4500P-E	SD
Phosphorus, Soluble	ND		mg/l	0.010	--	1	06/22/22 08:30	06/22/22 12:15	121,4500P-E	SD



Project Name: CAMP SEWATARO

Lab Number: L2229559

Project Number: Not Specified

Report Date: 06/27/22

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1647295-1										
Turbidity	ND		NTU	0.20	--	1	-	06/06/22 23:30	121,2130B	AS
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1651930-1										
Alkalinity, Total	ND		mg CaCO3/L	2.00	NA	1	-	06/17/22 10:16	121,2320B	CS
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1653793-1										
Phosphorus, Soluble	ND		mg/l	0.010	--	1	06/22/22 08:30	06/22/22 12:09	121,4500P-E	SD
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1654351-1										
Phosphorus, Total	ND		mg/l	0.010	--	1	06/23/22 10:30	06/23/22 14:37	121,4500P-E	SD

Lab Control Sample Analysis

Batch Quality Control

Project Name: CAMP SEWATARO

Lab Number: L2229559

Project Number: Not Specified

Report Date: 06/27/22

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1647295-2								
Turbidity	106		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1647353-1								
pH	99		-		99-101	-		5
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1647355-1								
Specific Conductance	99		-		99-101	-		
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1651930-2								
Alkalinity, Total	107		-		90-110	-		10
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1653793-2								
Phosphorus, Soluble	105		-		80-120	-		
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1654351-2								
Phosphorus, Total	100		-		80-120	-		



Matrix Spike Analysis Batch Quality Control

Project Name: CAMP SEWATARO
Project Number: Not Specified

Lab Number: L2229559
Report Date: 06/27/22

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Qual	MSD Found	MSD %Recovery	MSD Qual	Recovery Limits	RPD	RPD Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1651930-4 QC Sample: L2229095-12 Client ID: MS Sample												
Alkalinity, Total	278	100	393	115		-	-		86-116	-		10
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1651930-6 QC Sample: L2229602-03 Client ID: MS Sample												
Alkalinity, Total	204	100	323	119	Q	-	-		86-116	-		10
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1653793-3 QC Sample: L2229559-02 Client ID: SWIM POND												
Phosphorus, Soluble	ND	0.5	0.496	99		-	-		75-125	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1654351-3 QC Sample: L2229345-01 Client ID: MS Sample												
Phosphorus, Total	2.88	5	8.02	103		-	-		75-125	-		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: CAMP SEWATARO

Project Number: Not Specified

Lab Number: L2229559

Report Date: 06/27/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1647295-3 QC Sample: L2229559-02 Client ID: SWIM POND						
Turbidity	2.4	2.3	NTU	4		13
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1647353-2 QC Sample: L2229010-01 Client ID: DUP Sample						
pH	7.4	7.5	SU	1		5
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1647355-2 QC Sample: L2229484-01 Client ID: DUP Sample						
Specific Conductance	ND	ND	umhos/cm	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1651930-3 QC Sample: L2229095-12 Client ID: DUP Sample						
Alkalinity, Total	278	276	mg CaCO3/L	1		10
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1651930-5 QC Sample: L2229602-03 Client ID: DUP Sample						
Alkalinity, Total	204	207	mg CaCO3/L	1		10
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1653793-4 QC Sample: L2229559-01 Client ID: FISH POND						
Phosphorus, Soluble	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1654351-4 QC Sample: L2229345-01 Client ID: DUP Sample						
Phosphorus, Total	2.88	3.20	mg/l	11		20

Project Name: CAMP SEWATARO**Lab Number:** L2229559**Project Number:** Not Specified**Report Date:** 06/27/22**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2229559-01A	Plastic 250ml unpreserved/No Headspace	A	NA		21.4	Y	Absent		ALK-T-2320(14)
L2229559-01B	Plastic 250ml unpreserved	A	7	7	21.4	Y	Absent		FILTER(1)
L2229559-01C	Plastic 250ml unpreserved	A	7	7	21.4	Y	Absent		TURB-2130(2),PH-9040(1),COND-9050(28)
L2229559-01D	Plastic 250ml HNO3 preserved	A	<2	<2	21.4	Y	Absent		HARDT(180)
L2229559-01E	Plastic 250ml H2SO4 preserved	A	<2	<2	21.4	Y	Absent		TPHOS-4500(28)
L2229559-01X	Plastic 250ml H2SO4 preserved Filtrates	A	NA		21.4	Y	Absent		SPHOS-4500(28)
L2229559-02A	Plastic 250ml unpreserved/No Headspace	A	NA		21.4	Y	Absent		ALK-T-2320(14)
L2229559-02B	Plastic 250ml unpreserved	A	7	7	21.4	Y	Absent		FILTER(1)
L2229559-02C	Plastic 250ml unpreserved	A	7	7	21.4	Y	Absent		TURB-2130(2),PH-9040(1),COND-9050(28)
L2229559-02D	Plastic 250ml HNO3 preserved	A	<2	<2	21.4	Y	Absent		HARDT(180)
L2229559-02E	Plastic 250ml H2SO4 preserved	A	<2	<2	21.4	Y	Absent		TPHOS-4500(28)
L2229559-02X	Plastic 250ml H2SO4 preserved Filtrates	A	NA		21.4	Y	Absent		SPHOS-4500(28)

Project Name: CAMP SEWATARO
Project Number: Not Specified

Lab Number: L2229559
Report Date: 06/27/22

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: Data Usability Report



Project Name: CAMP SEWATARO
Project Number: Not Specified

Lab Number: L2229559
Report Date: 06/27/22

Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA, this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

Report Format: Data Usability Report



Project Name: CAMP SEWATARO
Project Number: Not Specified

Lab Number: L2229559
Report Date: 06/27/22

Data Qualifiers

- ND** - Not detected at the reporting limit (RL) for the sample.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- V** - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)
- Z** - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Project Name: CAMP SEWATARO
Project Number: Not Specified

Lab Number: L2229559
Report Date: 06/27/22

REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.
- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility

EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene

EPA 625/625.1: alpha-Terpineol

EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.

EPA 8270D/8270E: NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.

SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO₂, NO₃.

Mansfield Facility

SM 2540D: TSS

EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.

EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water

EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE,**

EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B

EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.

Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.**

Non-Potable Water

SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1:**

Ammonia-N, **LCHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E,**

SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.

EPA 624.1: Volatile Halocarbons & Aromatics,

EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II,

Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water

EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1 Hg.**

EPA 522, EPA 537.1.

Non-Potable Water

EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.

EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.

EPA 245.1 Hg.

SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.



CHAIN OF CUSTODY

PAGE _____ OF _____

8 Walkup Drive
Westboro, MA 01581
Tel: 508-898-9220

320 Forbes Blvd
Mansfield, MA 02048
Tel: 508-822-9300

Date Rec'd in Lab: 6/6/22

ALPHA Job #: L2229559

Client Information
 Client: Solitude Lake Management
 Address: 590 Lake St.
 Shrewsbury, MA 01545
 Phone:
 Email: amahaney@solitudelake.com

Project Information
 Project Name: Camp Sewataco
 Project Location: Sudbury, MA
 Project #:
 Project Manager:
 ALPHA Quote #:

Report Information - Data Deliverables
 ADEX EMAIL
Billing Information
 Same as Client info PO #:

Turn-Around Time
 Standard RUSH (only confirmed if pre-approved)
 Date Due:

Regulatory Requirements & Project Information Requirements
 Yes No MA MCP Analytical Methods Yes No CT RCP Analytical Methods
 Yes No Matrix Spike Required on this SDG? (Required for MCP Inorganics)
 Yes No GW1 Standards (Info Required for Metals & EPH with Targets)
 Yes No NPDES RGP
 Other State /Fed Program Criteria

Additional Project Information:

ANALYSIS		SAMPLE INFO	
VOC: <input type="checkbox"/> 8260 <input type="checkbox"/> 624 <input type="checkbox"/> 524.2	SVOC: <input type="checkbox"/> ABN <input type="checkbox"/> PAH	Filtration	<input type="checkbox"/> Field <input type="checkbox"/> Lab to do
METALS: <input type="checkbox"/> MCP 13 <input type="checkbox"/> MCP 14 <input type="checkbox"/> RCP 15	METALS: <input type="checkbox"/> RCRA5 <input type="checkbox"/> RCRA8 <input type="checkbox"/> PP13	Preservation	<input type="checkbox"/> Lab to do
EPH: <input type="checkbox"/> Ranges & Targets <input type="checkbox"/> Ranges Only	VPH: <input type="checkbox"/> Ranges & Targets <input type="checkbox"/> Ranges Only	Sample Comments	
PCB: <input type="checkbox"/> PEST	TPH: <input type="checkbox"/> Quant Only <input type="checkbox"/> Fingerprint		

Handwritten notes: All / S Pigs / T Phos and PH with other Metals

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler Initials
		Date	Time		
29559-01	Fish Pond	6/6/22	11:20am	Sw	EW
02	Swim Pond	6/6/22	11:40am	Sw	EW

Container Type
 P= Plastic
 A= Amber glass
 V= Vial
 G= Glass
 B= Bacteria cup
 C= Cube
 O= Other
 E= Encore
 D= BOD Bottle

Preservative
 A= None
 B= HCl
 C= HNO₃
 D= H₂SO₄
 E= NaOH
 F= MeOH
 G= NaHSO₄
 H= Na₂S₂O₈
 I= Ascorbic Acid
 J= NH₄Cl
 K= Zn Acetate
 O= Other

Container Type
 Preservative

Relinquished By: *[Signature]* Date/Time: 6/6 3:44
 Received By: *[Signature]* Date/Time: 6/6/22 15:44

All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.
 FORM NO: 01-01 (rev. 12-Mar-2012)



ANALYTICAL REPORT

Lab Number:	L2239167
Client:	Solitude Lake Management, LLC 590 Lake Street Shrewsbury, MA 01545
ATTN:	Amanda Mahaney
Phone:	(508) 865-1000
Project Name:	CAMP SEWATARO
Project Number:	Not Specified
Report Date:	08/11/22

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name: CAMP SEWATARO
Project Number: Not Specified

Lab Number: L2239167
Report Date: 08/11/22

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2239167-01	SWIMMING POND	WATER	SUDBURY, MA	07/21/22 15:10	07/21/22
L2239167-02	FISHING POND	WATER	SUDBURY, MA	07/21/22 16:15	07/21/22

Project Name: CAMP SEWATARO
Project Number: Not Specified

Lab Number: L2239167
Report Date: 08/11/22

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name: CAMP SEWATARO
Project Number: Not Specified

Lab Number: L2239167
Report Date: 08/11/22

Case Narrative (continued)

Sample Receipt

The samples were received at the laboratory above the required temperature range. The samples were delivered directly from the sampling site but were not on ice.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:

Tiffani Morrissey - Tiffani Morrissey

Title: Technical Director/Representative

Date: 08/11/22

METALS

Project Name: CAMP SEWATARO

Lab Number: L2239167

Project Number: Not Specified

Report Date: 08/11/22

SAMPLE RESULTS

Lab ID: L2239167-01

Date Collected: 07/21/22 15:10

Client ID: SWIMMING POND

Date Received: 07/21/22

Sample Location: SUDBURY, MA

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	69.9		mg/l	0.660	NA	1	07/22/22 14:43	07/26/22 19:35	EPA 3005A	1,6010D	EW



Project Name: CAMP SEWATARO**Lab Number:** L2239167**Project Number:** Not Specified**Report Date:** 08/11/22**SAMPLE RESULTS**

Lab ID: L2239167-02

Date Collected: 07/21/22 16:15

Client ID: FISHING POND

Date Received: 07/21/22

Sample Location: SUDBURY, MA

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	76.8		mg/l	0.660	NA	1	07/22/22 14:43	07/26/22 19:40	EPA 3005A	1,6010D	EW



Project Name: CAMP SEWATARO

Lab Number: L2239167

Project Number: Not Specified

Report Date: 08/11/22

Method Blank Analysis Batch Quality Control

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Hardness by SM 2340B - Mansfield Lab for sample(s): 01-02 Batch: WG1666210-1									
Hardness	ND	mg/l	0.660	NA	1	07/22/22 14:43	07/26/22 18:39	1,6010D	EW

Prep Information

Digestion Method: EPA 3005A

Lab Control Sample Analysis Batch Quality Control

Project Name: CAMP SEWATARO
Project Number: Not Specified

Lab Number: L2239167
Report Date: 08/11/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01-02 Batch: WG1666210-2								
Hardness	103		-		80-120	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: CAMP SEWATARO

Lab Number: L2239167

Project Number: Not Specified

Report Date: 08/11/22

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Qual	MSD Found	MSD %Recovery	MSD Qual	Recovery Limits	RPD Qual	RPD Limits
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1666210-3 QC Sample: L2200081-45 Client ID: MS Sample											
Hardness	106	66.2	160	82		-	-		75-125	-	20

INORGANICS & MISCELLANEOUS

Project Name: CAMP SEWATARO

Lab Number: L2239167

Project Number: Not Specified

Report Date: 08/11/22

SAMPLE RESULTS

Lab ID: L2239167-01

Date Collected: 07/21/22 15:10

Client ID: SWIMMING POND

Date Received: 07/21/22

Sample Location: SUDBURY, MA

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Turbidity	4.4		NTU	0.20	--	1	-	07/22/22 08:30	121,2130B	KP
Alkalinity, Total	40.7		mg CaCO3/L	2.00	NA	1	-	08/02/22 07:32	121,2320B	MT
Specific Conductance @ 25 C	370		umhos/cm	10	--	1	-	07/22/22 12:23	1,9050A	KS
pH (H)	8.6		SU	-	NA	1	-	07/21/22 22:09	1,9040C	AS
Phosphorus, Total	0.037		mg/l	0.010	--	1	08/11/22 08:30	08/11/22 13:35	121,4500P-E	SD
Phosphorus, Soluble	ND		mg/l	0.010	--	1	08/10/22 12:15	08/10/22 15:40	121,4500P-E	SD



Project Name: CAMP SEWATARO

Lab Number: L2239167

Project Number: Not Specified

Report Date: 08/11/22

SAMPLE RESULTS

Lab ID: L2239167-02

Date Collected: 07/21/22 16:15

Client ID: FISHING POND

Date Received: 07/21/22

Sample Location: SUDBURY, MA

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Turbidity	2.8		NTU	0.20	--	1	-	07/22/22 08:30	121,2130B	KP
Alkalinity, Total	40.9		mg CaCO3/L	2.00	NA	1	-	08/02/22 07:32	121,2320B	MT
Specific Conductance @ 25 C	370		umhos/cm	10	--	1	-	07/22/22 12:23	1,9050A	KS
pH (H)	8.6		SU	-	NA	1	-	07/21/22 22:09	1,9040C	AS
Phosphorus, Total	0.047		mg/l	0.010	--	1	08/11/22 08:30	08/11/22 13:37	121,4500P-E	SD
Phosphorus, Soluble	ND		mg/l	0.010	--	1	08/10/22 12:15	08/10/22 15:42	121,4500P-E	SD



Project Name: CAMP SEWATARO

Lab Number: L2239167

Project Number: Not Specified

Report Date: 08/11/22

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1666097-1										
Turbidity	ND		NTU	0.20	--	1	-	07/22/22 08:30	121,2130B	KP
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1670023-1										
Alkalinity, Total	ND		mg CaCO3/L	2.00	NA	1	-	08/02/22 07:32	121,2320B	MT
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1673511-1										
Phosphorus, Soluble	ND		mg/l	0.010	--	1	08/10/22 12:15	08/10/22 15:38	121,4500P-E	SD
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1674005-1										
Phosphorus, Total	ND		mg/l	0.010	--	1	08/11/22 08:30	08/11/22 13:30	121,4500P-E	SD

Lab Control Sample Analysis

Batch Quality Control

Project Name: CAMP SEWATARO

Project Number: Not Specified

Lab Number: L2239167

Report Date: 08/11/22

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1665455-1								
pH	99		-		99-101	-		5
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1666078-1								
Specific Conductance	99		-		99-101	-		
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1666097-2								
Turbidity	92		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1670023-2								
Alkalinity, Total	107		-		90-110	-		10
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1673511-2								
Phosphorus, Soluble	104		-		80-120	-		
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1674005-2								
Phosphorus, Total	104		-		80-120	-		

Matrix Spike Analysis Batch Quality Control

Project Name: CAMP SEWATARO
Project Number: Not Specified

Lab Number: L2239167
Report Date: 08/11/22

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Qual	MSD Found	MSD %Recovery	MSD Qual	Recovery Limits	RPD	RPD Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1670023-4 QC Sample: L2239017-02 Client ID: MS Sample												
Alkalinity, Total	223	100	329	106	-	-	-	-	86-116	-	-	10
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1673511-3 QC Sample: L2239167-02 Client ID: FISHING POND												
Phosphorus, Soluble	ND	0.5	0.521	104	-	-	-	-	75-125	-	-	20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1674005-3 QC Sample: L2239079-01 Client ID: MS Sample												
Phosphorus, Total	0.350	0.5	0.511	32	Q	-	-	-	75-125	-	-	20

Lab Duplicate Analysis

Batch Quality Control

Project Name: CAMP SEWATARO

Project Number: Not Specified

Lab Number: L2239167

Report Date: 08/11/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab	Associated sample(s): 01-02	QC Batch ID: WG1665455-2	QC Sample: L2238279-01	Client ID: DUP Sample		
pH	8.2	8.2	SU	0		5
General Chemistry - Westborough Lab	Associated sample(s): 01-02	QC Batch ID: WG1666078-2	QC Sample: L2239167-01	Client ID: SWIMMING POND		
Specific Conductance @ 25 C	370	410	umhos/cm	10		20
General Chemistry - Westborough Lab	Associated sample(s): 01-02	QC Batch ID: WG1666097-3	QC Sample: L2238860-01	Client ID: DUP Sample		
Turbidity	ND	ND	NTU	NC		13
General Chemistry - Westborough Lab	Associated sample(s): 01-02	QC Batch ID: WG1670023-3	QC Sample: L2239017-02	Client ID: DUP Sample		
Alkalinity, Total	223	222	mg CaCO3/L	0		10
General Chemistry - Westborough Lab	Associated sample(s): 01-02	QC Batch ID: WG1673511-4	QC Sample: L2239167-01	Client ID: SWIMMING POND		
Phosphorus, Soluble	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab	Associated sample(s): 01-02	QC Batch ID: WG1674005-4	QC Sample: L2239079-01	Client ID: DUP Sample		
Phosphorus, Total	0.350	0.403	mg/l	14		20

Project Name: CAMP SEWATARO**Lab Number:** L2239167**Project Number:** Not Specified**Report Date:** 08/11/22**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2239167-01A	Plastic 250ml unpreserved/No Headspace	A	NA		24.8	Y	Absent		ALK-T-2320(14)
L2239167-01B	Plastic 250ml HNO3 preserved	A	7	7	24.8	Y	Absent		HARDT(180)
L2239167-01C	Plastic 250ml H2SO4 preserved	A	<2	<2	24.8	Y	Absent		TPHOS-4500(28)
L2239167-01D	Plastic 250ml unpreserved	A	7	7	24.8	Y	Absent		TURB-2130(2),PH-9040(1),COND-9050(28)
L2239167-01E	Plastic 250ml unpreserved	A	7	7	24.8	Y	Absent		FILTER(1)
L2239167-01X	Plastic 250ml H2SO4 preserved Filtrates	A	<2	<2	24.8	Y	Absent		SPHOS-4500(28)
L2239167-02A	Plastic 250ml unpreserved/No Headspace	A	NA		24.8	Y	Absent		ALK-T-2320(14)
L2239167-02B	Plastic 250ml HNO3 preserved	A	7	7	24.8	Y	Absent		HARDT(180)
L2239167-02C	Plastic 250ml H2SO4 preserved	A	<2	<2	24.8	Y	Absent		TPHOS-4500(28)
L2239167-02D	Plastic 250ml unpreserved	A	7	7	24.8	Y	Absent		TURB-2130(2),PH-9040(1),COND-9050(28)
L2239167-02E	Plastic 250ml unpreserved	A	7	7	24.8	Y	Absent		FILTER(1)
L2239167-02X	Plastic 250ml H2SO4 preserved Filtrates	A	<2	<2	24.8	Y	Absent		SPHOS-4500(28)

Project Name: CAMP SEWATARO
Project Number: Not Specified

Lab Number: L2239167
Report Date: 08/11/22

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: Data Usability Report



Project Name: CAMP SEWATARO
Project Number: Not Specified

Lab Number: L2239167
Report Date: 08/11/22

Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA, this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

Report Format: Data Usability Report



Project Name: CAMP SEWATARO
Project Number: Not Specified

Lab Number: L2239167
Report Date: 08/11/22

Data Qualifiers

- ND** - Not detected at the reporting limit (RL) for the sample.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- V** - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)
- Z** - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Project Name: CAMP SEWATARO

Lab Number: L2239167

Project Number: Not Specified

Report Date: 08/11/22

REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.
- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility

EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene

EPA 625/625.1: alpha-Terpineol

EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.

EPA 8270D/8270E: NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.

SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO₂, NO₃.

Mansfield Facility

SM 2540D: TSS

EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.

EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water

EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE,**

EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B

EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.

Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.**

Non-Potable Water

SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1:**

Ammonia-N, **LCHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E,**

SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.

EPA 624.1: Volatile Halocarbons & Aromatics,

EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II,

Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water

EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1 Hg.**

EPA 522, EPA 537.1.

Non-Potable Water

EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.

EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.

EPA 245.1 Hg.

SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.



CHAIN OF CUSTODY

PAGE _____ OF _____

Date Rec'd in Lab: 7/21/22

ALPHA Job #: L2239167

8 Walkup Drive
Westboro, MA 01581
Tel: 508-898-9220

320 Forbes Blvd
Mansfield, MA 02048
Tel: 508-822-9300

Project Information

Project Name: Camp Sewabate

Project Location: Sudbury, MA

Project #:

Project Manager:

ALPHA Quote #:

Report Information - Data Deliverables

ADEX EMAIL

Billing Information

Same as Client info PO #:

Client Information

Client: Solitude Lake

Address: 590 Lake St

Sudbury, MA

Phone:

Email: awrahamcy@solitudelake.com

Additional Project Information:

Turn-Around Time

Standard RUSH (only confirmed if pre-approved)

Date Due:

Regulatory Requirements & Project Information Requirements

Yes No MA MCP Analytical Methods Yes No CT RCP Analytical Methods
 Yes No Matrix Spike Required on this SDG? (Required for MCP Inorganics)
 Yes No GW1 Standards (Info Required for Metals & EPH with Targets)
 Yes No NPDES RGP
 Other State /Fed Program _____ Criteria _____

ANALYSIS	VOC: <input type="checkbox"/> 8260 <input type="checkbox"/> 624 <input type="checkbox"/> 824.2	SAMPLE INFO
	SVOC: <input type="checkbox"/> ABN <input type="checkbox"/> PAH	
METALS: <input type="checkbox"/> MCP 13 <input type="checkbox"/> MCP 14 <input type="checkbox"/> RCP 15	<input type="checkbox"/> PP13	Filtration
METALS: <input type="checkbox"/> RCRA5 <input type="checkbox"/> RCRA8	<input type="checkbox"/> Ranges & Targets <input type="checkbox"/> Ranges Only	<input type="checkbox"/> Field
EPH: <input type="checkbox"/> Ranges & Targets <input type="checkbox"/> Ranges Only	<input type="checkbox"/> PCB <input type="checkbox"/> PEST	<input type="checkbox"/> Lab to do
VPH: <input type="checkbox"/> Ranges & Targets <input type="checkbox"/> Ranges Only	TPH: <input type="checkbox"/> Quant Only <input type="checkbox"/> Fingerprint	Preservation
<p><u>acid PH turb / TPAB</u></p> <p><u>S PHOS</u></p>		<input type="checkbox"/> Lab to do
<p><u>total Metals / AL-T</u></p>		Sample Comments

TOTAL # BOTTLES

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler Initials
		Date	Time		
<u>39167-01</u>	<u>Swimming Pond</u>	<u>7/21</u>	<u>3:10pm</u>	<u>Sw</u>	<u>ZN</u>
<u>-02</u>	<u>Fishing Pond</u>	<u>7/21</u>	<u>4:15pm</u>	<u>Sw</u>	<u>ZN</u>

Container Type
P= Plastic
A= Amber glass
V= Vial
G= Glass
B= Bacteria cup
C= Cube
O= Other
E= Encore
D= BOD Bottle

Preservative
A= None
B= HCl
C= HNO₃
D= H₂SO₄
E= NaOH
F= MeOH
G= NaHSO₄
H= Na₂S₂O₃
I= Ascorbic Acid
J= NH₄Cl
K= Zn Acetate
O= Other

Container Type

Preservative

Relinquished By: <u>[Signature]</u>	Date/Time <u>7/21 5:14pm</u>	Received By: <u>[Signature]</u>	Date/Time <u>7/21/22 17M</u>
----------------------------------------	---------------------------------	------------------------------------	---------------------------------

All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.
FORM NO: 01-01 (rev. 12-Mar-2012)



ANALYTICAL REPORT

Lab Number:	L2245640
Client:	Solitude Lake Management, LLC 590 Lake Street Shrewsbury, MA 01545
ATTN:	Amanda Mahaney
Phone:	(508) 865-1000
Project Name:	Not Specified
Project Number:	Not Specified
Report Date:	09/20/22

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name: Not Specified
Project Number: Not Specified

Lab Number: L2245640
Report Date: 09/20/22

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2245640-01	FISH POND	WATER	Not Specified	08/23/22 10:00	08/23/22
L2245640-02	SWIM POND	WATER	Not Specified	08/23/22 10:31	08/23/22

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L2245640
Report Date: 09/20/22

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L2245640
Report Date: 09/20/22

Case Narrative (continued)

Sample Receipt

L2245640-02: The collection date and time on the chain of custody was 23-AUG-22 10:20; however, the collection date/time on the container label was 23-AUG-22 10:31. At the client's request, the collection date/time is reported as 23-AUG-22 10:31.

Alkalinity, Total

WG1681274: A Matrix Spike and Laboratory Duplicate were not performed due to a laboratory oversight.

Nitrogen, Total Kjeldahl

The WG1684847-3 Laboratory Duplicate RPD for nitrogen, total kjeldahl (29%), performed on L2245640-02, is above the acceptance criteria; however, the sample and duplicate results are less than five times the reporting limit. Therefore, the RPD is valid.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:  Tiffani Morrissey

Title: Technical Director/Representative

Date: 09/20/22

METALS

Project Name: Not Specified

Lab Number: L2245640

Project Number: Not Specified

Report Date: 09/20/22

SAMPLE RESULTS

Lab ID: L2245640-01

Date Collected: 08/23/22 10:00

Client ID: FISH POND

Date Received: 08/23/22

Sample Location: Not Specified

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	75.0		mg/l	0.660	NA	1	08/24/22 19:44	09/19/22 21:55	EPA 3005A	1,6010D	DL



Project Name: Not Specified
Project Number: Not Specified

Lab Number: L2245640
Report Date: 09/20/22

SAMPLE RESULTS

Lab ID: L2245640-02
 Client ID: SWIM POND
 Sample Location: Not Specified

Date Collected: 08/23/22 10:31
 Date Received: 08/23/22
 Field Prep: Not Specified

Sample Depth:
 Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	72.8		mg/l	0.660	NA	1	08/24/22 19:44	09/19/22 22:55	EPA 3005A	1,6010D	DL



Project Name: Not Specified

Lab Number: L2245640

Project Number: Not Specified

Report Date: 09/20/22

Method Blank Analysis Batch Quality Control

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Hardness by SM 2340B - Mansfield Lab for sample(s): 01-02 Batch: WG1679259-1									
Hardness	ND	mg/l	0.660	NA	1	08/24/22 19:44	09/19/22 20:38	1,6010D	DL

Prep Information

Digestion Method: EPA 3005A

Lab Control Sample Analysis Batch Quality Control

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L2245640
Report Date: 09/20/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01-02 Batch: WG1679259-2								
Hardness	100		-		80-120	-		

Matrix Spike Analysis Batch Quality Control

Project Name: Not Specified

Lab Number: L2245640

Project Number: Not Specified

Report Date: 09/20/22

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1679259-3 QC Sample: L2245640-01 Client ID: FISH POND												
Hardness	75.0	66.2	138	95		-	-		75-125	-		20

Lab Duplicate Analysis
Batch Quality Control

Project Name: Not Specified

Project Number: Not Specified

Lab Number: L2245640

Report Date: 09/20/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1679259-4 QC Sample: L2245640-01 Client ID: FISH POND						
Hardness	75.0	73.4	mg/l	2		20

INORGANICS & MISCELLANEOUS

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L2245640
Report Date: 09/20/22

SAMPLE RESULTS

Lab ID: L2245640-01
Client ID: FISH POND
Sample Location: Not Specified

Date Collected: 08/23/22 10:00
Date Received: 08/23/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Microbiological Analysis - Westborough Lab										
E. Coli (MPN)	19.89		MPN/100ml	1	NA	1	-	08/23/22 17:30	121,9223B	DV
General Chemistry - Westborough Lab										
Turbidity	2.8		NTU	0.20	--	1	-	08/23/22 21:40	121,2130B	AS
Color, True	12		A.P.C.U.	5.0	--	1	-	08/24/22 03:50	121,2120B	GB
Color, Apparent	44		A.P.C.U.	10	--	2	-	08/24/22 03:50	121,2120B	GB
Alkalinity, Total	46.1		mg CaCO3/L	2.00	NA	1	-	08/30/22 09:07	121,2320B	MT
Nitrogen, Nitrate/Nitrite	ND		mg/l	0.10	--	1	-	09/07/22 09:16	121,4500NO3-F	KA
Total Nitrogen	0.53		mg/l	0.30	--	1	-	09/09/22 14:06	107,-	JO
Nitrogen, Total Kjeldahl	0.531		mg/l	0.300	--	1	09/08/22 13:51	09/09/22 10:36	121,4500NH3-H	KP



Project Name: Not Specified
Project Number: Not Specified

Lab Number: L2245640
Report Date: 09/20/22

SAMPLE RESULTS

Lab ID: L2245640-02
Client ID: SWIM POND
Sample Location: Not Specified

Date Collected: 08/23/22 10:31
Date Received: 08/23/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Microbiological Analysis - Westborough Lab										
E. Coli (MPN)	3.06		MPN/100ml	1	NA	1	-	08/23/22 17:30	121,9223B	DV
General Chemistry - Westborough Lab										
Turbidity	3.1		NTU	0.20	--	1	-	08/23/22 21:40	121,2130B	AS
Color, True	12		A.P.C.U.	5.0	--	1	-	08/24/22 03:50	121,2120B	GB
Color, Apparent	20		A.P.C.U.	5.0	--	1	-	08/24/22 03:50	121,2120B	GB
Alkalinity, Total	46.7		mg CaCO3/L	2.00	NA	1	-	08/30/22 09:07	121,2320B	MT
Nitrogen, Nitrate/Nitrite	ND		mg/l	0.10	--	1	-	09/07/22 09:18	121,4500NO3-F	KA
Total Nitrogen	0.54		mg/l	0.30	--	1	-	09/09/22 14:06	107,-	JO
Nitrogen, Total Kjeldahl	0.541		mg/l	0.300	--	1	09/08/22 13:51	09/09/22 10:39	121,4500NH3-H	KP



Project Name:
Project Number: Not Specified

Lab Number: L2245640
Report Date: 09/20/22

Method Blank Analysis
Batch Quality Control

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Microbiological Analysis - Westborough Lab for sample(s): 01-02 Batch: WG1678774-1									
E. Coli (MPN)	<1	MPN/100ml	1	NA	1	-	08/23/22 17:30	121,9223B	DV
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1678841-1									
Turbidity	ND	NTU	0.20	--	1	-	08/23/22 21:40	121,2130B	AS
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1681274-1									
Alkalinity, Total	ND	mg CaCO3/L	2.00	NA	1	-	08/30/22 09:07	121,2320B	MT
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1684190-1									
Nitrogen, Nitrate/Nitrite	ND	mg/l	0.10	--	1	-	09/07/22 05:04	121,4500NO3-F	KA
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1684847-1									
Nitrogen, Total Kjeldahl	ND	mg/l	0.300	--	1	09/08/22 13:51	09/09/22 10:33	121,4500NH3-H	KP

Lab Control Sample Analysis

Batch Quality Control

Project Name: Not Specified

Project Number: Not Specified

Lab Number: L2245640

Report Date: 09/20/22

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1678841-2								
Turbidity	104		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1681274-2								
Alkalinity, Total	106		-		90-110	-		10
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1684190-2								
Nitrogen, Nitrate/Nitrite	92		-		90-110	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1684847-2								
Nitrogen, Total Kjeldahl	98		-		78-122	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: Not Specified

Lab Number: L2245640

Project Number: Not Specified

Report Date: 09/20/22

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Qual	MSD Found	MSD %Recovery	MSD Qual	Recovery Limits	RPD	RPD Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1684190-4 QC Sample: L2245396-01 Client ID: MS Sample												
Nitrogen, Nitrate/Nitrite	ND	4	3.7	92	-	-	-	-	80-120	-	-	20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1684847-4 QC Sample: L2245640-02 Client ID: SWIM POND												
Nitrogen, Total Kjeldahl	0.541	8	8.09	94	-	-	-	-	77-111	-	-	24

Lab Duplicate Analysis

Batch Quality Control

Project Name: Not Specified

Project Number: Not Specified

Lab Number: L2245640

Report Date: 09/20/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1678841-3 QC Sample: L2245645-01 Client ID: DUP Sample						
Turbidity	6.5	6.4	NTU	2		13
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1678960-1 QC Sample: L2245640-01 Client ID: FISH POND						
Color, Apparent	44	44	A.P.C.U.	0		
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1678964-1 QC Sample: L2245640-01 Client ID: FISH POND						
Color, True	12	12	A.P.C.U.	0		
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1684190-3 QC Sample: L2245396-01 Client ID: DUP Sample						
Nitrogen, Nitrate/Nitrite	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1684847-3 QC Sample: L2245640-02 Client ID: SWIM POND						
Nitrogen, Total Kjeldahl	0.541	0.727	mg/l	29	Q	24

Project Name: Not Specified**Lab Number:** L2245640**Project Number:** Not Specified**Report Date:** 09/20/22**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2245640-01A	Bacteria Cup Na2S2O3 preserved	A	NA		6.2	Y	Absent		E-COLI-QT(.33)
L2245640-01B	Bacteria Cup Na2S2O3 preserved	A	NA		6.2	Y	Absent		E-COLI-QT(.33)
L2245640-01C	Plastic 250ml HNO3 preserved	A	<2	<2	6.2	Y	Absent		HARDT(180)
L2245640-01D	Plastic 250ml unpreserved/No Headspace	A	NA		6.2	Y	Absent		ALK-T-2320(14)
L2245640-01E	Plastic 250ml unpreserved	A	7	7	6.2	Y	Absent		TURB-2130(2)
L2245640-01F	Amber 500ml unpreserved	A	7	7	6.2	Y	Absent		COLOR-T-2120(2),COLOR-A-2120(2)
L2245640-01H	Plastic 950ml H2SO4 preserved	A	<2	<2	6.2	Y	Absent		TKN-4500(28),NO3/NO2-4500(28),TNITROGEN(28)
L2245640-02A	Bacteria Cup Na2S2O3 preserved	A	NA		6.2	Y	Absent		E-COLI-QT(.33)
L2245640-02B	Bacteria Cup Na2S2O3 preserved	A	NA		6.2	Y	Absent		E-COLI-QT(.33)
L2245640-02C	Plastic 250ml HNO3 preserved	A	<2	<2	6.2	Y	Absent		HARDT(180)
L2245640-02D	Plastic 250ml unpreserved/No Headspace	A	NA		6.2	Y	Absent		ALK-T-2320(14)
L2245640-02E	Plastic 250ml unpreserved	A	7	7	6.2	Y	Absent		TURB-2130(2)
L2245640-02F	Amber 500ml unpreserved	A	7	7	6.2	Y	Absent		COLOR-T-2120(2),COLOR-A-2120(2)
L2245640-02H	Plastic 950ml H2SO4 preserved	A	<2	<2	6.2	Y	Absent		TKN-4500(28),NO3/NO2-4500(28),TNITROGEN(28)

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L2245640
Report Date: 09/20/22

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: Data Usability Report



Project Name: Not Specified
Project Number: Not Specified

Lab Number: L2245640
Report Date: 09/20/22

Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA, this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

Report Format: Data Usability Report



Project Name: Not Specified
Project Number: Not Specified

Lab Number: L2245640
Report Date: 09/20/22

Data Qualifiers

- ND** - Not detected at the reporting limit (RL) for the sample.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- V** - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)
- Z** - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L2245640
Report Date: 09/20/22

REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.
- 107 Alpha Analytical - In-house calculation method.
- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility

EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene

EPA 625/625.1: alpha-Terpineol

EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.

EPA 8270D/8270E: NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.

SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO₂, NO₃.

Mansfield Facility

SM 2540D: TSS

EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.

EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water

EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE,**

EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B

EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.

Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.**

Non-Potable Water

SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1:**

Ammonia-N, **LCHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E,**

SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.

EPA 624.1: Volatile Halocarbons & Aromatics,

EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II,

Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water

EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1 Hg.**

EPA 522, EPA 537.1.

Non-Potable Water

EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.

EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.

EPA 245.1 Hg.

SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.



CHAIN OF CUSTODY

PAGE _____ OF _____

Date Rec'd in Lab: **8/23/22**

ALPHA Job #: **L2245640**

8 Walkup Drive Westboro, MA 01581 Tel: 508-898-9220
 320 Forbes Blvd Mansfield, MA 02048 Tel: 508-822-9300

Project Information

Project Name:

Project Location:

Project #:

Project Manager:

ALPHA Quote #:

Turn-Around Time

Standard RUSH (only confirmed if pre-approved)

Date Due:

Report Information - Data Deliverables

ADEX EMAIL

Billing Information

Same as Client info PO #:

Regulatory Requirements & Project Information Requirements

Yes No MA MCP Analytical Methods Yes No CT RCP Analytical Methods
 Yes No Matrix Spike Required on this SDG? (Required for MCP Inorganics)
 Yes No GW1 Standards (Info Required for Metals & EPH with Targets)
 Yes No NPDES RGP
 Other State /Fed Program _____ Criteria _____

Client Information

Client: **Solitude**

Address: **590 Lake St**

Phone:

Email:

Additional Project Information:

ANALYSIS	VOC: <input type="checkbox"/> 8260 <input type="checkbox"/> 824 <input type="checkbox"/> 524.2	SAMPLE INFO
	SVOC: <input type="checkbox"/> ABN <input type="checkbox"/> PAH	
METALS: <input type="checkbox"/> MCP 13 <input type="checkbox"/> MCP 14 <input type="checkbox"/> RCP 15	Filtration	
METALS: <input type="checkbox"/> RCRA5 <input type="checkbox"/> RCRA8 <input type="checkbox"/> PP13		
EPH: <input type="checkbox"/> Ranges & Targets <input type="checkbox"/> Ranges Only	<input type="checkbox"/> Field <input type="checkbox"/> Lab to do	
VPH: <input type="checkbox"/> Ranges & Targets <input type="checkbox"/> Ranges Only		
PCB <input type="checkbox"/> PEST	Preservation	
TPH: <input type="checkbox"/> Quant Only <input type="checkbox"/> Fingerprint		
<i>E. Coli</i>	<input type="checkbox"/> Lab to do	
<i>Hardness Alk-7</i>		
<i>Total Nitrogen</i>	Sample Comments	
<i>Ammonia sal fine Col or Turbidity</i>		

TOTAL # BOTTLES

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler Initials															
		Date	Time																	
45640-01	Fish Pond	8/23/22	10:00am	Surface	EG															
-02	Swim Pond	8/23/22	10:20am	Surface	EG															

Container Type
 P= Plastic
 A= Amber glass
 V= Vial
 G= Glass
 B= Bacteria cup
 C= Cube
 O= Other
 E= Encore
 D= BOD Bottle

Preservative
 A= None
 B= HCl
 C= HNO3
 D= H2SO4
 E= NaOH
 F= MeOH
 G= NaHSO4
 H= Na2S2O3
 I= Ascorbic Acid
 J= NH4Cl
 K= Zn Acetate
 O= Other

Container Type
 Preservative

Relinquished By: **Edwin Gac** Date/Time: **8/23/22 1506**
 Received By: **Kunjan AAC** Date/Time: **8/23/22 1506**

All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.
 FORM NO: 01-01 (rev. 12-Mar-2012)



ANALYTICAL REPORT

Lab Number:	L2248035
Client:	Solitude Lake Management, LLC 590 Lake Street Shrewsbury, MA 01545
ATTN:	David Manch
Phone:	(508) 865-1000
Project Name:	CAMP SEWATARO
Project Number:	Not Specified
Report Date:	10/05/22

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name: CAMP SEWATARO
Project Number: Not Specified

Lab Number: L2248035
Report Date: 10/05/22

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2248035-01	FISHING POND	WATER	SUDBURY, MA	09/06/22 10:15	09/06/22
L2248035-02	SWIM POND	WATER	SUDBURY, MA	09/06/22 10:00	09/06/22

Project Name: CAMP SEWATARO
Project Number: Not Specified

Lab Number: L2248035
Report Date: 10/05/22

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:

Melissa Sturgis Melissa Sturgis

Title: Technical Director/Representative

Date: 10/05/22

METALS

Project Name: CAMP SEWATARO

Lab Number: L2248035

Project Number: Not Specified

Report Date: 10/05/22

SAMPLE RESULTS

Lab ID: L2248035-01

Date Collected: 09/06/22 10:15

Client ID: FISHING POND

Date Received: 09/06/22

Sample Location: SUDBURY, MA

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	71.2		mg/l	0.660	NA	1	09/11/22 12:35	10/05/22 11:04	EPA 3005A	1,6010D	JF



Project Name: CAMP SEWATARO

Lab Number: L2248035

Project Number: Not Specified

Report Date: 10/05/22

SAMPLE RESULTS

Lab ID: L2248035-02

Date Collected: 09/06/22 10:00

Client ID: SWIM POND

Date Received: 09/06/22

Sample Location: SUDBURY, MA

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	72.3		mg/l	0.660	NA	1	09/11/22 12:35	10/05/22 11:01	EPA 3005A	1,6010D	JF



Project Name: CAMP SEWATARO

Lab Number: L2248035

Project Number: Not Specified

Report Date: 10/05/22

Method Blank Analysis Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Hardness by SM 2340B - Mansfield Lab for sample(s): 01-02 Batch: WG1685084-1										
Hardness	ND		mg/l	0.660	NA	1	09/11/22 12:35	10/05/22 10:47	1,6010D	JF

Prep Information

Digestion Method: EPA 3005A

Lab Control Sample Analysis

Batch Quality Control

Project Name: CAMP SEWATARO

Lab Number: L2248035

Project Number: Not Specified

Report Date: 10/05/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01-02 Batch: WG1685084-2								
Hardness	101		-		80-120	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: CAMP SEWATARO

Lab Number: L2248035

Project Number: Not Specified

Report Date: 10/05/22

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1685084-3 QC Sample: L2248035-01 Client ID: FISHING POND												
Hardness	71.2	66.2	135	96		-	-		75-125	-		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: CAMP SEWATARO

Project Number: Not Specified

Lab Number: L2248035

Report Date: 10/05/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1685084-4 QC Sample: L2248035-01 Client ID: FISHING POND						
Hardness	71.2	71.3	mg/l	0		20

INORGANICS & MISCELLANEOUS

Project Name: CAMP SEWATARO

Lab Number: L2248035

Project Number: Not Specified

Report Date: 10/05/22

SAMPLE RESULTS

Lab ID: L2248035-01

Date Collected: 09/06/22 10:15

Client ID: FISHING POND

Date Received: 09/06/22

Sample Location: SUDBURY, MA

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Turbidity	2.8		NTU	0.20	--	1	-	09/07/22 07:36	121,2130B	KP
Alkalinity, Total	48.2		mg CaCO3/L	2.00	NA	1	-	09/19/22 08:01	121,2320B	MT
Specific Conductance @ 25 C	360		umhos/cm	10	--	1	-	09/07/22 09:15	1,9050A	KS
pH (H)	7.5		SU	-	NA	1	-	09/07/22 12:39	1,9040C	KS
Phosphorus, Total	0.054		mg/l	0.010	--	1	09/21/22 09:00	09/21/22 13:00	121,4500P-E	AA
Phosphorus, Soluble	0.011		mg/l	0.010	--	1	09/13/22 08:30	09/13/22 12:26	121,4500P-E	AA



Project Name: CAMP SEWATARO
Project Number: Not Specified

Lab Number: L2248035
Report Date: 10/05/22

SAMPLE RESULTS

Lab ID: L2248035-02
Client ID: SWIM POND
Sample Location: SUDBURY, MA

Date Collected: 09/06/22 10:00
Date Received: 09/06/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Turbidity	2.2		NTU	0.20	--	1	-	09/07/22 07:36	121,2130B	KP
Alkalinity, Total	47.8		mg CaCO3/L	2.00	NA	1	-	09/19/22 08:01	121,2320B	MT
Specific Conductance @ 25 C	360		umhos/cm	10	--	1	-	09/07/22 09:15	1,9050A	KS
pH (H)	7.6		SU	-	NA	1	-	09/07/22 12:39	1,9040C	KS
Phosphorus, Total	0.016		mg/l	0.010	--	1	09/21/22 09:00	09/21/22 13:03	121,4500P-E	AA
Phosphorus, Soluble	ND		mg/l	0.010	--	1	09/13/22 08:30	09/13/22 12:27	121,4500P-E	AA



Project Name: CAMP SEWATARO
Project Number: Not Specified

Lab Number: L2248035
Report Date: 10/05/22

Method Blank Analysis
Batch Quality Control

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1684284-1									
Turbidity	ND	NTU	0.20	--	1	-	09/07/22 07:36	121,2130B	KP
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1686646-1									
Phosphorus, Soluble	ND	mg/l	0.010	--	1	09/13/22 08:30	09/13/22 12:10	121,4500P-E	AA
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1689073-1									
Alkalinity, Total	ND	mg CaCO ₃ /L	2.00	NA	1	-	09/19/22 08:01	121,2320B	MT
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1689589-1									
Phosphorus, Total	ND	mg/l	0.010	--	1	09/21/22 09:00	09/21/22 12:58	121,4500P-E	AA

Lab Control Sample Analysis

Batch Quality Control

Project Name: CAMP SEWATARO

Project Number: Not Specified

Lab Number: L2248035

Report Date: 10/05/22

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1684284-2								
Turbidity	96		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1684291-1								
Specific Conductance	100		-		99-101	-		
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1684378-1								
pH	100		-		99-101	-		5
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1686646-2								
Phosphorus, Soluble	104		-		80-120	-		
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1689073-2								
Alkalinity, Total	106		-		90-110	-		10
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1689589-2								
Phosphorus, Total	93		-		80-120	-		

Matrix Spike Analysis Batch Quality Control

Project Name: CAMP SEWATARO
Project Number: Not Specified

Lab Number: L2248035
Report Date: 10/05/22

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Qual	MSD Found	MSD %Recovery	MSD Qual	Recovery Limits	RPD	RPD Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1686646-4 QC Sample: L2245830-04 Client ID: MS Sample												
Phosphorus, Soluble	0.026	0.5	0.520	99	-	-	-	-	75-125	-	-	20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1689073-4 QC Sample: L2248394-01 Client ID: MS Sample												
Alkalinity, Total	32.6	100	138	105	-	-	-	-	86-116	-	-	10
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1689589-4 QC Sample: L2248035-01 Client ID: FISHING POND												
Phosphorus, Total	0.054	0.5	0.556	100	-	-	-	-	75-125	-	-	20

Lab Duplicate Analysis

Batch Quality Control

Project Name: CAMP SEWATARO

Project Number: Not Specified

Lab Number: L2248035

Report Date: 10/05/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1684284-3 QC Sample: L2248256-01 Client ID: DUP Sample						
Turbidity	2.4	2.4	NTU	0		13
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1684291-2 QC Sample: L2248035-01 Client ID: FISHING POND						
Specific Conductance @ 25 C	360	350	umhos/cm	3		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1684378-2 QC Sample: L2248035-01 Client ID: FISHING POND						
pH (H)	7.5	7.4	SU	1		5
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1686646-3 QC Sample: L2245830-02 Client ID: DUP Sample						
Phosphorus, Soluble	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1689073-3 QC Sample: L2248394-01 Client ID: DUP Sample						
Alkalinity, Total	32.6	33.4	mg CaCO3/L	2		10
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1689589-3 QC Sample: L2248035-01 Client ID: FISHING POND						
Phosphorus, Total	0.054	0.055	mg/l	2		20

Project Name: CAMP SEWATARO**Lab Number:** L2248035**Project Number:** Not Specified**Report Date:** 10/05/22**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2248035-01A	Plastic 250ml unpreserved/No Headspace	A	NA		6.1	Y	Absent		ALK-T-2320(14)
L2248035-01B	Plastic 250ml unpreserved	A	7	7	6.1	Y	Absent		FILTER(1)
L2248035-01C	Plastic 250ml unpreserved	A	7	7	6.1	Y	Absent		TURB-2130(2),PH-9040(1),COND-9050(28)
L2248035-01D	Plastic 250ml HNO3 preserved	A	<2	<2	6.1	Y	Absent		HARDT(180)
L2248035-01E	Plastic 250ml H2SO4 preserved	A	<2	<2	6.1	Y	Absent		TPHOS-4500(28)
L2248035-01X	Plastic 250ml H2SO4 preserved Filtrates	A	NA		6.1	Y	Absent		SPHOS-4500(28)
L2248035-02A	Plastic 250ml unpreserved/No Headspace	A	NA		6.1	Y	Absent		ALK-T-2320(14)
L2248035-02B	Plastic 250ml unpreserved	A	7	7	6.1	Y	Absent		FILTER(1)
L2248035-02C	Plastic 250ml unpreserved	A	7	7	6.1	Y	Absent		TURB-2130(2),PH-9040(1),COND-9050(28)
L2248035-02D	Plastic 250ml HNO3 preserved	A	<2	<2	6.1	Y	Absent		HARDT(180)
L2248035-02E	Plastic 250ml H2SO4 preserved	A	<2	<2	6.1	Y	Absent		TPHOS-4500(28)
L2248035-02X	Plastic 250ml H2SO4 preserved Filtrates	A	NA		6.1	Y	Absent		SPHOS-4500(28)

Project Name: CAMP SEWATARO
Project Number: Not Specified

Lab Number: L2248035
Report Date: 10/05/22

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: Data Usability Report



Project Name: CAMP SEWATARO
Project Number: Not Specified

Lab Number: L2248035
Report Date: 10/05/22

Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA, this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

Report Format: Data Usability Report



Project Name: CAMP SEWATARO**Lab Number:** L2248035**Project Number:** Not Specified**Report Date:** 10/05/22**Data Qualifiers**

- ND** - Not detected at the reporting limit (RL) for the sample.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- V** - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)
- Z** - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Project Name: CAMP SEWATARO

Lab Number: L2248035

Project Number: Not Specified

Report Date: 10/05/22

REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.
- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility

EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene

EPA 625/625.1: alpha-Terpineol

EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.

EPA 8270D/8270E: NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.

SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO₂, NO₃.

Mansfield Facility

SM 2540D: TSS

EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.

EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water

EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE,**

EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B

EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.

Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.**

Non-Potable Water

SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1:**

Ammonia-N, **LCHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E,**

SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.

EPA 624.1: Volatile Halocarbons & Aromatics,

EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II,

Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water

EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1 Hg.**

EPA 522, EPA 537.1.

Non-Potable Water

EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.

EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.

EPA 245.1 Hg.

SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.



CHAIN OF CUSTODY

PAGE OF

Project Information

Project Name: *Camp Sewataro*

Project Location: *Sudbury, MA*

Project #:

Project Manager:

ALPHA Quote #:

Turn-Around Time

Standard Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Westborough, MA Mansfield, MA
 TEL: 508-898-9220 TEL: 508-822-9300
 FAX: 508-898-9193 FAX: 508-822-3288

Client Information

Client: SOLitude Lake Management
 Address: 590 Lake Street
 Shrewsbury, MA 01545
 Phone: 508-865-1000

Fax: Email: *amahaney@solitudelake.com*

These samples have been Previously analyzed by Alpha

Other Project Specific Requirements/Comments/Detection Limits:

Please run if out of hold-time.

Date Rec'd in Lab: *9/6/12*

ALPHA Job #: *L2248035*

Report Information Data Deliverables Billing Information

FAX EMAIL
 ADEx Add'l Deliverables

Same as Client Info PO #:

Regulatory Requirements/Report Limits

State/Fed Program Criteria

ANALYSIS

ALK-T / SPHOS / PHOS

Cond T# Turb / Total Metals

SAMPLE HANDLING
Filtration
 Done
 Not Needed
 Lab to do
Preservation
 Lab to do
(Please specify below)

TOTAL # BOTTLES

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	ANALYSIS												Sample Specific Comments	
		Date	Time			ALK-T	SPHOS	PHOS	Cond	Turb	Total Metals								
<i>49835-01</i>	<i>Fishing Pond</i>	<i>9/6</i>	<i>10:15</i>	<i>SW</i>	<i>EN</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>-02</i>	<i>Swim Pond</i>	<i>9/6</i>	<i>10:06</i>	<i>SW</i>	<i>EN</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Container Type	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Preservative	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Relinquished By: *[Signature]* Date/Time: *9/6/12 10:55*
 Received By: *[Signature]* Date/Time: *9/6 10:55*

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

SOLitude Lake Management

590 Lake St.
Shrewsbury, MA 01545

Date Received: 5/03/2022

Laboratory ID#: N2287283-01

Date Tested: 5/09/2022

Report Date: 5/13/2022

Algae Species Identification (Expanded)

Sample Site: Surface Water @ Camp Sewataro Fish Pond in Sudbury, Massachusetts

Date and Time Collected: 4/28/2022 14:00

Diatoms: Centric Diatoms	
Acanthoceras	
Aulacoseira	
Cyclotella	
Melosira	
Stephanodiscus	
Other centric	

Flagellated Chlorophytes	
Chlamydomonas	
Coccomonas	
Eudorina	
Pandorina	
Pyramichlamys	
Tetraselmis	
Volvox	
Other Flagelated Greens	

Filamentous Chlorophytes	
Bulbochaete	
Chaetophora	
Cladophora	
Draparnaldia	
Hydrodictyon	
Microspora	
Oedogonium	
Pithophora	
Rhizoclonium	
Stigeoclonium	
Ulothrix	
Other Filamentous Greens	

Araphid Pennate Diatoms	
Asterionella	2,600
Diatoma	
Fragilaria	
Meridion	
Synedra	7,000
Tabellaria	
Other Araphid Pennates	
Monoraphid Pennate	
Achnantheidium	
Cocconeis	

Cocoid/Colonial Chlorophyta	
Actinastrum	
Ankistrodesmus	
Botryococcus	
Chlorella	
Chlorococcum	
Closteriopsis	
Coelastrum	
Crucigenia	
Desmodesmus	
Dictyosphaerium	
Elakatothrix	
Golenkinia	
Kirchneriella	
Lagerheimia	
Micractinium	
Monoraphidium	

Biraphid Pennate	
Amphipleura	
Amphora (#)	
Cymtopleura	
Cymbella	
Entomoneis	
Epithemia	
Eunotia	
Frustulia	
Gomphonema	
Gyrosigma	
Navicula	29
Nitzschia	
Pinnularia	
Rhoicosphenia	
Rhopalodia	
Stauroneis	
Surirella	
Other Biraphid Pennate	

Pyrrhophyta	
Ceratium	
Gymnodinium	
Peridinium	
Other Dinoflagtes	

Euglenophyta	
Euglena	
Eutrepti	
Lepocinclis	
Phacus	
Trachelomonas	
Strombomonas	
Others	

SOLitude Lake Management

590 Lake St.
Shrewsbury, MA 01545

Date Received: 5/03/2022

Laboratory ID#: N2287283-01

Date Tested: 5/09/2022

Report Date: 5/13/2022

Algae Species Identification (Expanded), cont.

Tribophytes/Eustigmatophytes	
Centritractus	
Ophiocytium	
Pseudostaurastrum	
Pseudotetraedron	
Tribonema	
Vaucheria	
Mischococcoid Taxa	
Chloramoeboid Taxa	
Rhizochlorid Taxa	
Heterogloeolid Taxa	
Other Tribophytes	
Raphidophytes	
Gonyostomum Taxa	
<u>Euglenophyta</u>	
Euglena	
Eutrepti	
Lepocinclis	
Phacus	
Trachelomonas	
Strombomonas	
Others	

Desmids	
Closterium	
Cosmarium	
Desmidium	
Euastrum	
Hyalotheca	
Micrasterias	
Mougeotia/Debarya	
Octacanthium	
Pleurotaenium/Related	
Spirogyra (#)	
Staurastrum (#)	
Staurodesmus	
Teilingia	
Xanthidium	
Zygnema/Zygnemopsis	
Others	

Flagellated Classic Chrysophytes	
Chromulina	
Chrysococcus	
Chrysophaerella	
Dinobryon	6,900
Kephyrian/Pseudokephyrian	
Mallomonas	
Ochromonas	
Synura	
Uroglena	
Uroglenopsis	
Others	
Non Motiles	
Haptophytes	

Total Cell Count: 17,000/mL

Chlorophytes	
Oocystis	
Pediastrum (#)	
Paulschulzia	
Polyedriopsis	
Pseudopediastrum	
Quadrigula	
Scenedesmus	58
Schroederia/Ankyra	
Selenastrum	
Sphaerocystis	
Tetradismus (#)	
Tetraedron	
Tetrastrum	
Treubaria	
Other Coccoid	
Other Elongate	

Comments:

- Results are based on the sample as received by Northeast Laboratories, Inc. 5/03/2022

129 Mill Street Berlin, CT 06037

www.nelabsct.com Telephone: 860-828-9787

CT Cert. #PH-0404 EPA Cert. #CT-024 FDA Reg. #086650488 CT CSL#0000624

Approved by: *Alan C. Johnson*
Alan C. Johnson, Laboratory Director

SOLitude Lake Management

590 Lake St.
Shrewsbury, MA 01545

Date Received: 5/03/2022
Laboratory ID#: N2287283-02
Date Tested: 5/10/2022
Report Date: 5/13/2022

Algae Species Identification (Expanded)

Sample Site: Surface Water @ Camp Sewataro Swim Pond in Sudbury, Massachusetts
Date and Time Collected: 4/28/2022 14:30

Diatoms: Centric Diatoms	
Acanthoceras	
Aulacoseira	
Cyclotella	
Melosira	
Stephanodiscus	
Other centric	

Flagellated Chlorophytes	
Chlamydomonas	
Coccomonas	
Eudorina	
Pandorina	
Pyramichlamys	
Tetraselmis	
Volvox	
Other Flagellated Greens	

Filamentous Chlorophytes	
Bulbochaete	
Chaetophora	
Cladophora	
Draparnaldia	
Hydrodictyon	
Microspora	
Oedogonium	
Pithophora	
Rhizoclonium	
Stigeoclonium	
Ulothrix	
Other Filamentous Greens	

Araphid Pennate Diatoms	
Asterionella	2,200
Diatoma	
Fragilaria	
Meridion	
Synedra	4,900
Tabellaria	
Other Araphid Pennates	
Monoraphid Pennate	
Achnanthisidium	
Cocconeis	

Cocoid/Colonial Chlorophyta	
Actinastrum	
Ankistrodesmus	
Botryococcus	
Chlorella	
Chlorococcum	
Closteriopsis	
Coelastrum	
Crucigenia	
Desmodesmus	
Dictyosphaerium	
Elakatothrix	
Golenkinia	
Kirchneriella	
Lagerheimia	
Micractinium	
Monoraphidium	

Biraphid Pennate	
Amphipleura	
Amphora (#)	
Cymtopleura	
Cymbella	
Entomoneis	
Epithemia	
Eunotia	
Frustulia	
Gomphonema	
Gyrosigma	
Navicula	29
Nitzschia	
Pinnularia	
Rhoicosphenia	
Rhopalodia	

Pyrrhophyta	
Ceratium	
Gymnodinium	
Peridinium	
Other Dinoflagtes	

Euglenophyta	
Euglena	
Eutrepti	
Lepocinclis	

Phacus	
Trachelomonas	
Strombomonas	
Others	

Stauroneis	
Surirella	
Other Biraphid Pennate	

SOLitude Lake Management

590 Lake St.
Shrewsbury, MA 01545

Date Received: 5/03/2022

Laboratory ID#: N2287283-02

Date Tested: 5/10/2022

Report Date: 5/13/2022

Algae Species Identification (Expanded), cont.

Tribophytes/Eustigmatophytes	
Centritractus	
Ophiocytium	
Pseudostaurastrum	
Pseudotetraedron	
Tribonema	
Vaucheria	
Mischococcoid Taxa	
Chloramoeboid Taxa	
Rhizochlorid Taxa	
Heterogloeolid Taxa	
Other Tribophytes	
Raphidophytes	
Gonyostomum Taxa	
<u>Euglenophyta</u>	
Euglena	
Eutrepti	
Lepocinclis	
Phacus	
Trachelomonas	
Strombomonas	
Others	

<u>Desmids</u>	
Closterium	
Cosmarium	
Desmidium	
Euastrum	
Hyalotheca	
Micrasterias	
Mougeotia/Debarya	
Octacanthium	
Pleurotaenium/Related	
Spirogyra (#)	
Staurastrum (#)	
Staurodesmus	
Teilingia	
Xanthidium	
Zygnema/Zygnemopsis	
Others	

<u>Flagellated Classic Chrysophytes</u>	
Chromulina	
Chrysococcus	
Chrysosphaerella	
Dinobryon	6,000
Kephyrian/Pseudokephyrian	
Mallomonas	
Ochromonas	
Synura	
Uroglena	
Uroglenopsis	
Others	
Non Motiles	
Haptophytes	

Total Cell Count: 13,000/mL

<u>Chlorophytes</u>	
Oocystis	
Pediastrum (#)	
Paulschulzia	
Polyedriopsis	
Pseudopediastrum	
Quadrigula	
Scenedesmus	10
Schroederia/Ankyra	
Selenastrum	
Sphaerocystis	
Tetrademus (#)	
Tetraedron	
Tetrastrum	

129 Mill Street Berlin, CT 06037


www.nelabsct.com Telephone: 860-828-9787

CT Cert. #PH-0404 EPA Cert. #CT-024 FDA Reg. #086650488 CT CSL#0000624

Treubaria	
Other Coccoid	
Other Elongate	

Comments:

- Results are based on the sample as received by Northeast Laboratories, Inc. 5/03/2022

Approved by: 
Alan C. Johnson, Laboratory Director

SOLitude Lake Management

590 Lake St.
Shrewsbury, MA 01545

Date Received: 5/03/2022

Laboratory ID#: N2287283-01

Date Tested: 5/09/2022

Report Date: 5/13/2022

Cyanobacteria

Sample Site: Surface Water @ Camp Sewataro Fish Pond in Sudbury, Massachusetts

Date and Time Collected: 4/28/2022 14:00

Cyanophyta: Unicellular & Colonial Forms	
Anabaena	
Aphanocapsa	
Aphanothece	
Chroococcus	
Coelosphaerium	
Dactylococcopsis	
Gomphosphaeria	
Merismpedia	
Microcystis	
Snowella	
Synechococcus/Related	
Woronichinia	
Other Coccoid Blue Greens	

Filamentous Nitrogen Fixers	
Anabaenopsis	
Aphanizomenon	
Calothrix/Rivularia	
Chrysochlorium	
Cuspidothrix	
Cylindrospermium	
Dolichospermium	
Gloeotrichia	
Hapalosiphon	
Nodularia	
Nostoc	
Raphidiopsis	
Sytonema	
Sphaerospermopsis	
Tolypothrix	
Other Filamentous Bluegreens (L)	
Other Filamentous Bluegreens (S)	

Filamentous Non-Nitrogen Fixers	
Arthrospira	
Limonothrix	
Lyngbya	
Limnoraphis	
Microseira/Plectonema	
Oscillatoria	140
Phormidium	
Planktolyngbya	
Planktothrix	
Pseudanabaena/Kromvophonon	
Spirulina	
Synechocystis	

Total Cell Count: 140/mL

Comments:

- Results are based on the sample as received by Northeast Laboratories, Inc. 5/03/2022

Approved by: *Alan C. Johnson*
 Alan C. Johnson, Laboratory Director

SOLitude Lake Management

590 Lake St.
 Shrewsbury, MA 01545

Date Received: 5/03/2022

Laboratory ID#: N2287283-02

Date Tested: 5/09/2022

Report Date: 5/13/2022

Cyanobacteria

Sample Site: Surface Water @ Camp Sewataro Swim Pond in Sudbury, Massachusetts

Date and Time Collected: 4/29/2022 14:30

Cyanophyta: Unicellular & Colonial Forms	
Anabaena	
Aphanocapsa	
Aphanothece	
Chroococcus	
Coelosphaerium	
Dactylococcopsis	
Gomphosphaeria	
Merismpedia	
Microcystis	
Snowella	
Synechococcus/Related	
Woronichinia	
Other Coccoid Blue Greens	


Filamentous Nitrogen Fixers	
Anabaenopsis	
Aphanizomenon	
Calothrix/Rivularia	
Chrysochlorium	
Cuspidothrix	
Cylindrospermium	
Dolichospermium	
Gloeotrichia	
Hapalosiphon	
Nodularia	
Nostoc	
Raphidiopsis	
Sytonema	
Sphaerospermopsis	
Tolypothrix	
Other Filamentous Bluegreens (L)	
Other Filamentous Bluegreens (S)	

Filamentous Non-Nitrogen Fixers	
Arthrospira	
Limonothrix	
Lyngbya	
Limnoraphis	
Microseira/Plectonema	
Oscillatoria	
Phormidium	
Planktolyngbya	
Planktothrix	
Pseudanabaena/Kromvophoron	340
Spirulina	
Synechocystis	

Total Cell Count: 340/mL

Comments:

- Results are based on the sample as received by Northeast Laboratories, Inc. 5/03/2022

Approved by: 
Alan C. Johnson, Laboratory Director

SOLitude Lake Management

590 Lake St.
Shrewsbury, MA 01545

Date Received: 5/11/2022

Laboratory ID#: N2287344-01

Date Tested: 5/16/2022

Report Date: 5/19/2022

Algae Species Identification (Expanded)

Sample Site: Surface Water @ Swim Pond , Camp Swataro - Sudbury, MA

Date and Time Collected: 5/10/2022 14:50

Diatoms: Centric Diatoms	
Acanthoceras	
Aulacoseira	
Cyclotella	
Melosira	
Stephanodiscus	
Other centric	

Flagellated Chlorophytes	
Chlamydomonas	
Coccomonas	
Eudorina	
Pandorina	
Pyramichlamys	
Tetraselmis	
Volvox	
Other Flagelated Greens	

Filamentous Chlorophytes	
Bulbochaete	
Chaetophora	
Cladophora	
Draparnaldia	
Hydrodictyon	
Microspora	
Oedogonium	
Pithophora	
Rhizoclonium	
Stigeoclonium	
Ulothrix	
Other Filamentous Greens	

Araphid Pennate Diatoms	
Asterionella	2400
Diatoma	
Fragilaria	77
Meridion	
Synedra	10,000
Tabellaria	
Other Araphid Pennates	
Monoraphid Pennate	
Achnanthisdium	
Cocconeis	

Cocoid/Colonial Chlorophyta	
Actinastrum	
Ankistrodesmus	
Botryococcus	
Chlorella	
Chlorococcum	
Closteriopsis	
Coelastrum	
Crucigenia	
Desmodesmus	
Dictyosphaerium	
Elakatothrix	
Golenkinia	
Kirchneriella	
Lagerheimia	
Micractinium	
Monoraphidium	10

Biraphid Pennate	
Amphipleura	
Amphora (#)	
Cymtopleura	
Cymbella	
Entomoneis	
Epithemia	
Eunotia	
Frustulia	
Gomphonema	
Gyrosigma	
Navicula	
Nitzschia	19
Pinnularia	
Rhoicosphenia	
Rhopalodia	
Stauroneis	
Surirella	

Pyrrhophyta	
Ceratium	
Gymnodinium	
Peridinium	
Other Dinoflagtes	

Euglenophyta	
Euglena	
Eutrepti	
Lepocinclis	
Phacus	
Trachelomonas	

129 Mill Street Berlin, CT 06037

www.nelabsct.com Telephone: 860-828-9787

CT Cert. #PH-0404 EPA Cert. #CT-024 FDA Reg. #086650488 CT CSL#0000624

Strombomonas	
Others	

Other Biraphid Pennate	
------------------------	--

SOLitude Lake Management

590 Lake St.
Shrewsbury, MA 01545

Date Received: 5/11/2022

Laboratory ID#: N2287344-01

Date Tested: 5/16/2022

Report Date: 5/19/2022

Algae Species Identification (Expanded), cont.

Tribophytes/Eustigmatophytes	
Centritractus	
Ophiocytium	
Pseudostaurastrum	
Pseudotetraedron	
Tribonema	
Vaucheria	
Mischococcoid Taxa	
Chloramoeboid Taxa	
Rhizochlorid Taxa	
Heterogloeolid Taxa	
Other Tribophytes	
Raphidophytes	
Gonyostomum Taxa	
<u>Euglenophyta</u>	
Euglena	
Eutrepti	
Lepocinclis	
Phacus	
Trachelomonas	
Strombomonas	
Others	

Desmids	
Closterium	
Cosmarium	
Desmidium	
Euastrum	
Hyalotheca	
Micrasterias	
Mougeotia/Debarya	
Octacanthium	
Pleurotaenium/Related	
Spirogyra (#)	
Staurastrum (#)	
Staurodesmus	
Teilingia	
Xanthidium	
Zygnema/Zygnemopsis	
Others	

Flagellated Classic Chrysophytes	
Chromulina	
Chrysococcus	
Chrysosphaerella	
Dinobryon	8100
Kephyrian/Pseudokephyrian	
Mallomonas	
Ochromonas	
Synura	
Uroglena	
Uroglenopsis	
Others	
Non Motiles	
Haptophytes	

Total Cell Count: 21,000 /mL

Chlorophytes	
Oocystis	
Pediastrum (#)	
Paulschulzia	
Polyedriopsis	
Pseudopediastrum	
Quadrigula	
Scenedesmus	19
Schroederia/Ankyra	
Selenastrum	
Sphaerocystis	
Tetrademus (#)	
Tetraedron	
Tetrastrum	
Treubaria	
Other Coccoid	

129 Mill Street Berlin, CT 06037

www.nelabsct.com Telephone: 860-828-9787

CT Cert. #PH-0404 EPA Cert. #CT-024 FDA Reg. #086650488 CT CSL#0000624

Other Elongate	
----------------	--

Comments:

- Results are based on the sample as received by Northeast Laboratories, Inc. 5/11/2022

Approved by: *Alan C. Johnson*
 Alan C. Johnson, Laboratory Director

SOLitude Lake Management

590 Lake St.
 Shrewsbury, MA 01545

Date Received: 5/11/2022

Laboratory ID#: N2287344-02

Date Tested: 5/16/2022

Report Date: 5/19/2022

Algae Species Identification (Expanded)

Sample Site: Surface Water @ Fish Pond , Camp Swataro - Sudbury, MA

Date and Time Collected: 5/10/2022 14:40

Diatoms: Centric Diatoms	
Acanthoceras	
Aulacoseira	
Cyclotella	
Melosira	
Stephanodiscus	
Other centric	

Flagellated Chlorophytes	
Chlamydomonas	
Coccomonas	
Eudorina	
Pandorina	
Pyramichlamys	
Tetraselmis	
Volvox	
Other Flagellated Greens	

Filamentous Chlorophytes	
Bulbochaete	
Chaetophora	
Cladophora	
Draparnaldia	
Hydrodictyon	
Microspora	
Oedogonium	
Pithophora	
Rhizoclonium	
Stigeoclonium	
Ulothrix	
Other Filamentous Greens	

Araphid Pennate Diatoms	
Asterionella	3000
Diatoma	
Fragilaria	490
Meridion	
Synedra	16,000
Tabellaria	
Other Araphid Pennates	
Monoraphid Pennate	
Achnanthisidium	
Cocconeis	

Cocoid/Colonial Chlorophyta	
Actinastrum	
Ankistrodesmus	
Botryococcus	
Chlorella	
Chlorococcum	
Closteriopsis	
Coelastrum	
Crucigenia	
Desmodesmus	
Dictyosphaerium	
Elakatothrix	
Golenkinia	
Kirchneriella	
Lagerheimia	
Micractinium	
Monoraphidium	10

Biraphid Pennate	
Amphipleura	
Amphora (#)	
Cymtopleura	
Cymbella	
Entomoneis	
Epithemia	
Eunotia	
Frustulia	
Gomphonema	
Gyrosigma	
Navicula	10
Nitzschia	19

Pyrrhophyta	
Ceratrium	
Gymnodinium	
Peridinium	
Other Dinoflagtes	

Euglenophyta	

129 Mill Street Berlin, CT 06037

www.nelabstct.com Telephone: 860-828-9787

CT Cert. #PH-0404 EPA Cert. #CT-024 FDA Reg. #086650488 CT CSL#0000624

Euglena	
Eutrepti	
Lepocinclis	
Phacus	
Trachelomonas	
Strombomonas	
Others	

Pinnularia	
Rhoicosphenia	
Rhopalodia	
Stauroneis	
Surirella	
Other Biraphid Pennate	

SOLitude Lake Management

590 Lake St.
Shrewsbury, MA 01545

Date Received: 5/11/2022

Laboratory ID#: N2287344-02

Date Tested: 5/16/2022

Report Date: 5/19/2022

Algae Species Identification (Expanded), cont.

Tribophytes/Eustigmatophytes	
Centritractus	
Ophiocytium	
Pseudostaurastrum	
Pseudotetraedron	
Tribonema	190
Vaucheria	
Mischococcoid Taxa	
Chloramoeboid Taxa	
Rhizochlorid Taxa	
Heterogloeolid Taxa	
Other Tribophytes	
Raphidophytes	
Gonyostomum Taxa	
<u>Euglenophyta</u>	
Euglena	
Eutrepti	
Lepocinclis	
Phacus	
Trachelomonas	
Strombomonas	
Others	

Desmids	
Closterium	
Cosmarium	
Desmidium	
Euastrum	
Hyalotheca	
Micrasterias	
Mougeotia/Debarya	
Octacanthium	
Pleurotaenium/Related	
Spirogyra (#)	
Staurastrum (#)	10
Staurodesmus	
Teilingia	
Xanthidium	
Zygnema/Zygnemopsis	
Others	

Flagellated Classic Chrysophytes	
Chromulina	
Chrysococcus	
Chrysosphaerella	
Dinobryon	11,000
Kephyrian/Pseudokephyrian	
Mallomonas	
Ochromonas	
Synura	
Uroglena	
Uroglenopsis	
Others	
Non Motiles	
Haptophytes	

Total Cell Count: 31,000/mL

Chlorophytes	
Oocystis	
Pediastrum (#)	
Paulschulzia	
Polyedriopsis	
Pseudopediastrum	
Quadrigula	
Scenedesmus	29
Schroederia/Ankyra	
Selenastrum	
Sphaerocystis	

129 Mill Street Berlin, CT 06037


www.nelabsct.com Telephone: 860-828-9787

CT Cert. #PH-0404 EPA Cert. #CT-024 FDA Reg. #086650488 CT CSL#0000624

Tetrademus (#)	
Tetraedron	
Tetrastrum	
Treubaria	
Other Coccoid	
Other Elongate	

Comments:

- Results are based on the sample as received by Northeast Laboratories, Inc. 5/11/2022

Approved by: 
Alan C. Johnson, Laboratory Director

SOLitude Lake Management

590 Lake St.
Shrewsbury, MA 01545

Date Received: 5/11/2022

Laboratory ID#: N2287344-01

Date Tested: 5/16/2022

Report Date: 5/19/2022

Cyanobacteria

Sample Site: Surface Water @ Swim Pond, Camp Swataro - Sudbury, MA

Date and Time Collected: 5/10/2022 14:50

Cyanophyta: Unicellular & Colonial Forms	
Anabaena	
Aphanocapsa	
Aphanothece	
Chroococcus	
Coelosphaerium	
Dactylococcopsis	
Gomphosphaeria	
Merismpedia	
Microcystis	
Snowella	
Synechococcus/Related	
Woronichinia	
Other Coccoid Blue Greens	


Filamentous Nitrogen Fixers	
Anabaenopsis	
Aphanizomenon	
Calothrix/Rivularia	
Chrysochlorium	
Cuspidothrix	
Cylindrospermium	
Dolichospermium	
Gloeotrichia	
Hapalosiphon	
Nodularia	
Nostoc	
Raphidiopsis	
Sytonema	
Sphaerospermopsis	
Tolypothrix	
Other Filamentous Bluegreens (L)	
Other Filamentous Bluegreens (S)	

Filamentous Non-Nitrogen Fixers	
Arthrospira	
Limonothrix	
Lyngbya	
Limnoraphis	
Microseira/Plectonema	
Oscillatoria	
Phormidium	
Planktolyngbya	
Planktothrix	
Pseudanabaena/Kromvophon	
Spirulina	
Synechocystis	

Total Cell Count: ND /mL

Comments:

- Results are based on the sample as received by Northeast Laboratories, Inc. on 5/11/2022

Approved by: 
Alan C. Johnson, Laboratory Director

SOLitude Lake Management

590 Lake St.
Shrewsbury, MA 01545

Date Received: 5/11/2022
Laboratory ID#: N2287344-02
Date Tested: 5/16/2022
Report Date: 5/19/2022

Cyanobacteria

Sample Site: Surface Water @ Fish Pond, Camp Swataro - Sudbury, MA
Date and Time Collected: 5/10/2022 14:40

Cyanophyta: Unicellular & Colonial Forms	
Anabaena	
Aphanocapsa	
Aphanothece	
Chroococcus	
Coelosphaerium	
Dactylococcopsis	
Gomphosphaeria	
Merismpedia	
Microcystis	
Snowella	
Synechococcus/Related	
Woronichinia	
Other Coccoid Blue Greens	

Filamentous Nitrogen Fixers	
Anabaenopsis	
Aphanizomenon	
Calothrix/Rivularia	
Chrysosporxium	
Cuspidothrix	
Cylindrospermium	
Dolichospermium	
Gloeotrichia	
Hapalosiphon	
Nodularia	
Nostoc	
Raphidiopsis	
Sytonema	
Sphaerospermopsis	
Tolypothrix	
Other Filamentous Bluegreens (L)	
Other Filamentous Bluegreens (S)	


Filamentous Non-Nitrogen Fixers	
Arthrospira	
Limonothrix	
Lyngbya	
Limnoraphis	
Microseira/Plectonema	
Oscillatoria	
Phormidium	
Planktolyngbya	
Planktothrix	
Pseudanabaena/Kromvophoron	
Spirulina	

Total Cell Count: ND /mL

Synechocystis	
---------------	--

Comments:

- Results are based on the sample as received by Northeast Laboratories, Inc. on 5/11/2022

Approved by: 
Alan C. Johnson, Laboratory Director

SOLitude Lake Management

590 Lake St.
Shrewsbury, MA 01545

Date Received: 7/27/2022

Laboratory ID#: N2287963-01

Date Tested: 7/28/2022

Report Date: 7/29/2022

Algae Species Identification (Expanded)

Sample Site: Surface Water @ Camp Sewataro – Swimming Pond

Date and Time Collected: 7/21/22

Diatoms: Centric Diatoms	
Acanthoceras	
Aulacoseira	
Cyclotella	
Melosira	
Stephanodiscus	
Other centric	

Flagellated Chlorophytes	
Chlamydomonas	
Coccomonas	
Eudorina	
Pandorina	
Pyramichlamys	
Tetraselmis	
Volvox	
Other Flagelated Greens	

Filamentous Chlorophytes	
Bulbochaete	
Chaetophora	
Cladophora	
Draparnaldia	
Hydrodictyon	
Microspora	
Oedogonium	
Pithophora	
Rhizoclonium	
Stigeoclonium	
Ulothrix	
Other Filamentous Greens	

Araphid Pennate Diatoms	
Asterionella	
Diatoma	
Fragilaria	19
Meridion	
Synedra	770
Tabellaria	10
Other Araphid Pennates	
Monoraphid Pennate	
Achnantheidium	
Cocconeis	

Cocoid/Colonial Chlorophyta	
Actinastrum	
Ankistrodesmus	
Botryococcus	
Chlorella	
Chlorococcum	
Closteriopsis	
Coelastrum	
Crucigenia	
Desmodesmus	
Dictyosphaerium	
Elakatothrix	
Golenkinia	
Kirchneriella	
Lagerheimia	
Micractinium	
Monoraphidium	58

Biraphid Pennate	
Amphipleura	29
Amphora (#)	
Cymtopleura	
Cymbella	
Entomoneis	
Epithemia	
Eunotia	
Frustulia	
Gomphonema	
Gyrosigma	
Navicula	
Nitzschia	130
Pinnularia	
Rhoicosphenia	
Rhopalodia	
Stauroneis	
Suirella	
Other Biraphid Pennate	

Pyrrhophyta	
Ceratium	
Gymnodinium	
Peridinium	
Other Dinoflagtes	

Euglenophyta	
Euglena	
Eutrepti	
Lepocinclis	
Phacus	
Trachelomonas	
Strombomonas	
Others	

129 Mill Street Berlin, CT 06037

www.nelabsct.com Telephone: 860-828-9787

CT Cert. #PH-0404 EPA Cert. #CT-024 FDA Reg. #086650488 CT CSL#0000624

SOLitude Lake Management

590 Lake St.
Shrewsbury, MA 01545

Date Received: 7/27/2022

Laboratory ID#: N2287963-01

Date Tested: 7/28/2022

Report Date: 7/29/2022

Algae Species Identification (Expanded), cont.

Tribophytes/Eustigmatophytes	
Centritractus	
Ophiocytium	
Pseudostaurastrum	
Pseudotetraedron	
Tribonema	77
Vaucheria	
Mischococcoid Taxa	
Chloramoeboid Taxa	
Rhizochlorid Taxa	
Heterogloeolid Taxa	
Other Tribophytes	
Raphidophytes	
Gonyostomum Taxa	
<u>Euglenophyta</u>	
Euglena	
Eutrepti	
Lepocinclis	
Phacus	
Trachelomonas	
Strombomonas	
Others	

Desmids	
Closterium	
Cosmarium	
Desmidium	
Euastrum	
Hyalotheca	
Micrasterias	
Mougeotia/Debarya	
Octacanthium	
Pleurotaenium/Related	
Spirogyra (#)	
Staurastrum (#)	10
Staurodesmus	
Teilingia	
Xanthidium	19
Zygnema/Zygnemopsis	
Others	

Flagellated Classic Chrysophytes	
Chromulina	
Chrysococcus	
Chrysosphaerella	
Dinobryon	380
Kephyrian/Pseudokephyrian	
Mallomonas	
Ochromonas	
Synura	
Uroglena	
Uroglenopsis	
Others	
Non Motiles	
Haptophytes	

Total Cell Count: 2100/mL

Chlorophytes	
Oocystis	
Pediastrum (#)	460
Paulschulzia	
Polyedriopsis	
Pseudopediastrum	
Quadrigula	
Scenedesmus	150
Schroederia/Ankyra	
Selenastrum	
Sphaerocystis	
Tetradasmus (#)	
Tetraedron	
Tetrastrum	
Treubaria	
Other Coccoid	
Other Elongate	

Alan C. J. [Signature]

129 Mill Street Berlin, CT 06037

www.nelabsct.com Telephone: 860-828-9787

CT Cert. #PH-0404 EPA Cert. #CT-024 FDA Reg. #086650488 CT CSL#0000624

SOLitude Lake Management

590 Lake St.
Shrewsbury, MA 01545

Date Received: 7/27/2022

Laboratory ID#: N2287963-02

Date Tested: 7/28/2022

Report Date: 7/29/2022

Algae Species Identification (Expanded)

Sample Site: Surface Water @ Camp Sewataro – Fishing Pond

Date and Time Collected: 7/21/22

Diatoms: Centric Diatoms	
Acanthoceras	
Aulacoseira	
Cyclotella	
Melosira	
Stephanodiscus	
Other centric	

Flagellated Chlorophytes	
Chlamydomonas	
Coccomonas	
Eudorina	
Pandorina	
Pyramichlamys	
Tetraselmis	
Volvox	
Other Flagelated Greens	

Filamentous Chlorophytes	
Bulbochaete	
Chaetophora	
Cladophora	
Draparnaldia	
Hydrodictyon	
Microspora	
Oedogonium	
Pithophora	
Rhizoclonium	
Stigeoclonium	
Ulothrix	
Other Filamentous Greens	

Araphid Pennate Diatoms	
Asterionella	67
Diatoma	
Fragilaria	29
Meridion	
Synedra	180
Tabellaria	10
Other Araphid Pennates	
Monoraphid Pennate	
Achnanthydium	
Cocconeis	

Cocoid/Colonial Chlorophyta	
Actinastrum	
Ankistrodesmus	
Botryococcus	
Chlorella	
Chlorococcum	
Closteriopsis	
Coelastrum	
Crucigenia	
Desmodesmus	
Dictyosphaerium	
Elakatothrix	
Golenkinia	
Kirchneriella	
Lagerheimia	
Micractinium	
Monoraphidium	29

Biraphid Pennate	
Amphipleura	29
Amphora (#)	
Cymtopleura	
Cymbella	
Entomoneis	
Epithemia	
Eunotia	
Frustulia	
Gomphonema	
Gyrosigma	
Navicula	
Nitzschia	130
Pinnularia	
Rhoicosphenia	
Rhopalodia	
Stauroneis	
Surirella	
Other Biraphid Pennate	

Pyrrhophyta	
Ceratium	10
Gymnodinium	
Peridinium	
Other Dinoflagtes	

Euglenophyta	
Euglena	
Eutrepti	
Lepocinclis	
Phacus	
Trachelomonas	
Strombomonas	
Others	

SOLitude Lake Management

590 Lake St.
Shrewsbury, MA 01545

Date Received: 7/27/2022

Laboratory ID#: N2287963-02

Date Tested: 7/28/2022

Report Date: 7/29/2022

Algae Species Identification (Expanded), cont.

Tribophytes/Eustigmatophytes	
Centritractus	
Ophiocytium	
Pseudostaurastrum	
Pseudotetraedron	
Tribonema	48
Vaucheria	
Mischococcoid Taxa	
Chloramoeboid Taxa	
Rhizochlorid Taxa	
Heterogloeolid Taxa	
Other Tribophytes	
Raphidophytes	
Gonyostomum Taxa	
<u>Euglenophyta</u>	
Euglena	
Eutrepti	
Lepocinclis	
Phacus	
Trachelomonas	
Strombomonas	
Others	

Desmids	
Closterium	
Cosmarium	
Desmidium	
Euastrum	
Hyalotheca	
Micrasterias	
Mougeotia/Debarya	
Octacanthium	
Pleurotaenium/Related	
Spirogyra (#)	
Staurastrum (#)	19
Staurodesmus	
Teilingia	
Xanthidium	
Zygnema/Zygnemopsis	
Others	

Flagellated Classic Chrysophytes	
Chromulina	
Chrysococcus	
Chrysophaerella	
Dinobryon	1000
Kephyrian/Pseudokephyrian	
Mallomonas	
Ochromonas	
Synura	
Uroglena	
Uroglenopsis	
Others	
Non Motiles	
Haptophytes	

Total Cell Count: 1600/mL

Chlorophytes	
Oocystis	
Pediastrum (#)	
Paulschulzia	
Polyedriopsis	
Pseudopediastrum	
Quadrigula	
Scenedesmus	58
Schroederia/Ankyra	
Selenastrum	
Sphaerocystis	
Tetrademus (#)	
Tetraedron	
Tetrastrum	
Treubaria	
Other Coccoid	
Other Elongate	

SOLitude Lake Management

590 Lake St.
Shrewsbury, MA 01545

Date Received: 7/27/2022

Laboratory ID#: N2287963-01

Date Tested: 7/28/2022

Report Date: 7/29/2022

Cyanobacteria

Sample Site: Surface Water @ Camp Sewataro – Swimming Pond

Date and Time Collected: 7/21/22

Cyanophyta: Unicellular & Colonial Forms	
Anabaena	
Aphanocapsa	340
Aphanothece	
Chroococcus	
Coelosphoerium	
Dactylococcopsis	
Gomphosphaeria	
Merismpedia	
Microcystis	
Snowella	
Synechococcus/Related	
Woronichinia	
Other Coccoid Blue Greens	

Filamentous Nitrogen Fixers	
Anabaenopsis	
Aphanizomenon	
Calothrix/Rivularia	
Chrysosporxium	
Cuspidothrix	
Cylindrospermium	
Dolichospermium	
Gloeotrichia	
Hapalosiphon	
Nodularia	
Nostoc	
Raphidiopsis	
Sytonema	
Sphaerospermopsis	
Tolypothrix	
Other Filamentous Bluegreens (L)	
Other Filamentous Bluegreens (S)	

Filamentous Non-Nitrogen Fixers	
Arthrospira	
Limonothrix	
Lyngbya	
Limnoraphis	
Microseira/Plectonema	
Oscillatoria	
Phormidium	
Planktolyngbya	
Planktothrix	
Pseudanabaena/Kromvophoron	96
Spirulina	
Synechocystis	

Total Cell Count: 440/mL

Comments:

- Results are based on the sample as received by Northeast Laboratories, Inc. on 7/27/2022

Approved by: 

Alan C. Johnson, Laboratory Director

SOLitude Lake Management
590 Lake St.
Shrewsbury, MA 01545

Date Received: 7/27/2022
Laboratory ID#: N2287963-02
Date Tested: 7/28/2022
Report Date: 7/29/2022

Cyanobacteria

Sample Site: Surface Water @ Camp Sewataro – Fishing Pond
Date and Time Collected: 7/21/22

Cyanophyta: Unicellular & Colonial Forms	
Anabaena	
Aphanocapsa	
Aphanothece	
Chroococcus	
Coelosphaerium	
Dactylococcopsis	
Gomphosphaeria	
Merismpedia	
Microcystis	
Snowella	
Synechococcus/Related	
Woronichinia	
Other Coccoid Blue Greens	

Filamentous Nitrogen Fixers	
Anabaenopsis	
Aphanizomenon	
Calothrix/Rivularia	
Chrysochlorium	
Cuspidothrix	
Cylindrospermium	
Dolichospermium	
Gloeotrichia	
Hapalosiphon	
Nodularia	
Nostoc	
Raphidiopsis	
Sytonema	
Sphaerospermopsis	
Tolypothrix	
Other Filamentous Bluegreens (L)	
Other Filamentous Bluegreens (S)	

Filamentous Non-Nitrogen Fixers	
Arthrospira	
Limonothrix	
Lyngbya	
Limnoraphis	
Microseira/Plectonema	
Oscillatoria	
Phormidium	
Planktolyngbya	
Planktothrix	
Pseudanabaena/Kromvophon	1200
Spirulina	
Synechocystis	

Total Cell Count: 1200/mL

Comments:

- Results are based on the sample as received by Northeast Laboratories, Inc. on 7/27/2022

Approved by: 
Alan C. Johnson, Laboratory Director

SOLitude Lake Management

590 Lake St.
Shrewsbury, MA 01545

Date Received: 8/25/2022

Laboratory ID#: N2288226-01

Date Tested: 9/01/2022

Report Date: 9/02/2022

Algae Species Identification (Expanded)

Sample Site: Surface Water @ Camp Sewataro, Swim Pond – Liberty Ledge, Sudbury, MA

Date and Time Collected: 8/23/22 10:24

Diatoms: Centric Diatoms	
Acanthoceras	740
Aulacoseira	
Cyclotella	
Melosira	
Stephanodiscus	
Other centric	

Flagellated Chlorophytes	
Chlamydomonas	
Coccomonas	
Eudorina	
Pandorina	
Pyramichlamys	
Tetraselmis	
Volvox	
Other Flagelated Greens	

Filamentous Chlorophytes	
Bulbochaete	
Chaetophora	
Cladophera	
Draparnaldia	
Hydrodictyon	
Microspora	
Oedogonium	
Pithophora	
Rhizoclonium	
Stigeoclonium	
Ulothrix	
Other Filamentous Greens	

Araphid Pennate Diatoms	
Asterionella	
Diatoma	
Fragilaria	
Meridion	
Synedra	360
Tabellaria	
Other Araphid Pennates	
Monoraphid Pennate	
Achnanthisidium	
Cocconeis	

Cocoid/Colonial Chlorophyta	
Actinastrum	
Ankistrodesmus	
Botryococcus	
Chlorella	
Chlorococcum	
Closteriopsis	
Coelastrum	
Crucigenia	
Desmodesmus	
Dictyosphaerium	
Elakatothrix	
Golenkinia	
Kirchneriella	
Lagerheimia	
Micractinium	
Monoraphidium	

Biraphid Pennate	
Amphipleura	
Amphora (#)	
Cymtopleura	
Cymbella	
Entomoneis	
Epithemia	
Eunotia	
Frustulia	
Gomphonema	
Gyrosigma	
Navicula	
Nitzschia	
Pinnularia	
Rhoicosphenia	
Rhopalodia	
Stauroneis	

Pyrrhophyta	
Ceratium	
Gymnodinium	
Peridinium	
Other Dinoflagetes	

Euglenophyta	
Euglena	
Eutrepti	
Lepocinclis	
Phacus	

Trachelomonas	
Strombomonas	
Others	

Surirella	
Other Biraphid Pennate	

SOLitude Lake Management

590 Lake St.
Shrewsbury, MA 01545

Date Received: 8/25/2022

Laboratory ID#: N2288226-01

Date Tested: 9/01/2022

Report Date: 9/02/2022

Algae Species Identification (Expanded), cont.

Tribophytes/Eustigmatophytes	
Centritractus	
Ophiocytium	
Pseudostaurastrum	
Pseudotetraedron	
Tribonema	
Vaucheria	
Mischococcoid Taxa	
Chloramoeboid Taxa	
Rhizochlorid Taxa	
Heterogloeoid Taxa	
Other Tribophytes	
Raphidophytes	
Gonyostomum Taxa	
<u>Euglenophyta</u>	
Euglena	
Eutrepti	
Lepocinclis	
Phacus	
Trachelomonas	
Strombomonas	
Others	

Desmids	
Closterium	
Cosmarium	
Desmidium	
Euastrum	
Hyalotheca	
Micrasterias	
Mougeotia/Debarya	
Octacanthium	
Pleurotaenium/Related	
Spirogyra (#)	
Staurastrum (#)	
Staurodesmus	
Teilingia	
Xanthidium	
Zygnema/Zygnemopsis	
Others	

Flagellated Classic Chrysophytes	
Chromulina	
Chrysococcus	
Chrysosphaerella	
Dinobryon	29
Kephyrian/Pseudokephyrian	
Mallomonas	
Ochromonas	
Synura	
Uroglena	
Uroglenopsis	
Others	
Non Motiles	
Haptophytes	

Total Cell Count: 1,100/mL

Chlorophytes	
Oocystis	
Pediastrum (#)	
Paulschulzia	
Polyedriopsis	
Pseudopediastrum	
Quadrigula	
Scenedesmus	
Schroederia/Ankyra	
Selenastrum	
Sphaerocystis	
Tetradismus (#)	
Tetraedron	
Tetrastrum	
Treubaria	

Other Coccooid	
Other Elongate	

Comments:

- Results are based on the sample as received by Northeast Laboratories, Inc. 8/25/2022

Approved by: *Alan C. Johnson*
Alan C. Johnson, Laboratory Director

SOLitude Lake Management

590 Lake St.
Shrewsbury, MA 01545

Date Received: 8/25/2022

Laboratory ID#: N2288226-02

Date Tested: 9/01/2022

Report Date: 9/02/2022

Algae Species Identification (Expanded)

Sample Site: Surface Water @ Camp Sewataro, Fish Pond – Liberty Ledge, Sudbury, MA

Date and Time Collected: 8/23/22 9:59

Diatoms: Centric Diatoms	
Acanthoceras	370
Aulacoseira	
Cyclotella	
Melosira	
Stephanodiscus	
Other centric	

Flagellated Chlorophytes	
Chlamydomonas	
Coccomonas	
Eudorina	
Pandorina	
Pyramichlamys	
Tetraselmis	
Volvox	
Other Flagelated Greens	

Filamentous Chlorophytes	
Bulbochaete	
Chaetophora	
Cladophora	
Draparnaldia	
Hydrodictyon	
Microspora	
Oedogonium	
Pithophora	
Rhizoclonium	
Stigeoclonium	410
Ulothrix	
Other Filamentous Greens	

Araphid Pennate Diatoms	
Asterionella	
Diatoma	
Fragilaria	
Meridion	
Synedra	370
Tabellaria	
Other Araphid Pennates	
Monoraphid Pennate	
Achnanthisidium	
Cocconeis	

Coccooid/Colonial Chlorophyta	
Actinastrum	
Ankistrodesmus	
Botryococcus	
Chlorella	
Chlorococcum	
Closteriopsis	
Coelastrum	
Crucigenia	
Desmodesmus	
Dictyosphaerium	
Elakatothrix	
Golenkinia	
Kirchneriella	
Lagerheimia	

Biraphid Pennate	
Amphipleura	
Amphora (#)	
Cymtopleura	
Cymbella	
Entomoneis	
Epithemia	
Eunotia	
Frustulia	
Gomphonema	
Gyrosigma	

Pyrrhophyta	
Ceratium	
Gymnodinium	
Peridinium	
Other Dinoflagtes	

129 Mill Street Berlin, CT 06037

www.nelabsct.com Telephone: 860-828-9787

CT Cert. #PH-0404 EPA Cert. #CT-024 FDA Reg. #086650488 CT CSL#0000624

Euglenophyta	
Euglena	
Eutrepti	
Lepocinclis	
Phacus	
Trachelomonas	
Strombomonas	
Others	

Micractinium	
Monoraphidium	

Navicula	
Nitzschia	
Pinnularia	
Rhoicosphenia	
Rhopalodia	
Stauroneis	
Surirella	
Other Biraphid Pennate	

SOLitude Lake Management

590 Lake St.
Shrewsbury, MA 01545

Date Received: 8/25/2022

Laboratory ID#: N2288226-02

Date Tested: 9/01/2022

Report Date: 9/02/2022

Algae Species Identification (Expanded), cont.

Tribophytes/Eustigmatophytes	
Centritractus	
Ophiocytium	
Pseudostaurastrum	
Pseudotetraedron	
Tribonema	
Vaucheria	
Mischococcoid Taxa	
Chloramoeboid Taxa	
Rhizochlorid Taxa	
Heterogloeolid Taxa	
Other Tribophytes	
Raphidophytes	
Gonyostomum Taxa	
<u>Euglenophyta</u>	
Euglena	
Eutrepti	
Lepocinclis	
Phacus	
Trachelomonas	
Strombomonas	
Others	

Desmids	
Closterium	
Cosmarium	
Desmidium	
Euastrum	
Hyalotheca	
Micrasterias	
Mougeotia/Debarya	
Octacanthium	
Pleurotaenium/Related	
Spirogyra (#)	
Staurastrum (#)	
Staurodesmus	
Teilingia	
Xanthidium	
Zygnema/Zygnemopsis	
Others	

Flagellated Classic Chrysophytes	
Chromulina	
Chrysococcus	
Chrysochaerella	
Dinobryon	
Kephyrian/Pseudokephyrian	
Mallomonas	
Ochromonas	
Synura	
Uroglena	
Uroglenopsis	
Others	
Non Motiles	
Haptophytes	

Total Cell Count: 1,200/mL

Chlorophytes	
Oocystis	
Pediastrum (#)	
Paulschulzia	
Polyedriopsis	
Pseudopediastrum	
Quadrigula	
Scenedesmus	
Schroederia/Ankyra	

129 Mill Street Berlin, CT 06037

www.nelabsct.com Telephone: 860-828-9787

CT Cert. #PH-0404 EPA Cert. #CT-024 FDA Reg. #086650488 CT CSL#0000624

Senastrum	
Sphaerocystis	
Tetrademus (#)	
Tetraedron	
Tetrastrum	
Treubaria	
Other Coccoid	
Other Elongate	

Comments:

- Results are based on the sample as received by Northeast Laboratories, Inc. 8/25/2022

Approved by: 
Alan C. Johnson, Laboratory Director

SOLitude Lake Management

590 Lake St.
Shrewsbury, MA 01545

Date Received: 8/25/2022

Laboratory ID#: N2288226-01

Date Tested: 9/01/2022

Report Date: 9/02/2022

Cyanobacteria

Sample Site: Surface Water @ Camp Sewataro, Swim Pond – Liberty Ledge, Sudbury, MA

Date and Time Collected: 8/23/22 10:24

Cyanophyta: Unicellular & Colonial Forms	
Anabaena	
Aphanocapsa	
Aphanothece	
Chroococcus	
Coelosphaerium	
Dactylococcopsis	
Gomphosphaeria	
Merismpedia	
Microcystis	
Snowella	
Synechococcus/Related	
Woronichinia	
Other Coccoid Blue Greens	

Filamentous Nitrogen Fixers	
Anabaenopsis	
Aphanizomenon	10
Calothrix/Rivularia	
Chrysochlorium	
Cuspidothrix	
Cylindrospermium	
Dolichospermium	
Gloeotrichia	
Hapalosiphon	
Nodularia	
Nostoc	
Raphidiopsis	
Sytonema	
Sphaerospermopsis	
Tolypothrix	
Other Filamentous Bluegreens (L)	
Other Filamentous Bluegreens (S)	

Filamentous Non-Nitrogen Fixers	
Arthrospira	
Limonothrix	
Lyngbya	
Limnoraphis	
Microseira/Plectonema	
Oscillatoria	
Phormidium	
Planktolyngbya	
Planktothrix	
Pseudanabaena/Kromvophon	
Spirulina	
Synechocystis	

Total Cell Count: 10 /mL

Comments:

- Results are based on the sample as received by Northeast Laboratories, Inc. on 8/25/2022

Approved by: *Alan C. Johnson*
 Alan C. Johnson, Laboratory Director

SOLitude Lake Management

590 Lake St.
 Shrewsbury, MA 01545

Date Received: 8/25/2022

Laboratory ID#: N2288226-02

Date Tested: 9/01/2022

Report Date: 9/02/2022

Cyanobacteria

Sample Site: Surface Water @ Camp Sewataro, Fish Pond – Liberty Ledge, Sudbury, MA

Date and Time Collected: 8/23/22 9:59

Cyanophyta: Unicellular & Colonial Forms	
Anabaena	
Aphanocapsa	
Aphanothece	
Chroococcus	
Coelosphaerium	
Dactylococcopsis	
Gomphosphaeria	
Merismpedia	
Microcystis	
Snowella	
Synechococcus/Related	
Woronichinia	
Other Coccoid Blue Greens	

Filamentous Nitrogen Fixers	
Anabaenopsis	
Aphanizomenon	
Calothrix/Rivularia	
Chrysosporxium	
Cuspidothrix	
Cylindrospermium	
Dolichospermium	
Gloeotrichia	
Hapalosiphon	
Nodularia	
Nostoc	
Raphidiopsis	
Sytonema	
Sphaerospermopsis	
Tolypothrix	
Other Filamentous Bluegreens (L)	
Other Filamentous Bluegreens (S)	

Filamentous Non-Nitrogen Fixers	
Arthrospira	
Limonothrix	
Lyngbya	
Limnoraphis	
Microseira/Plectonema	
Oscillatoria	
Phormidium	
Planktolyngbya	
Planktothrix	
Pseudanabaena/Kromvophoron	
Spirulina	
Synechocystis	

Total Cell Count: None Detected /mL

Comments:

- Results are based on the sample as received by Northeast Laboratories, Inc. on 8/25/2022

Approved by: 
Alan C. Johnson, Laboratory Director

SOLitude Lake Management

590 Lake St.
Shrewsbury, MA 01545

Date Received: 09/12/2022

Laboratory ID#: N2288364-01

Date Tested: 09/21/2022

Report Date: 09/26/2022

Algae Species Identification (Expanded)

Sample Site: Surface Water @ Camp Sewataro, Fish Pond – Sudbury, MA

Date and Time Collected: 09/06/22 10:15

Diatoms: Centric Diatoms	
Acanthoceras	
Aulacoseira	
Cyclotella	
Melosira	
Stephanodiscus	
Other centric	

Flagellated Chlorophytes	
Chlamydomonas	
Coccomonas	
Eudorina	
Pandorina	
Pyramichlamys	
Tetraselmis	
Volvox	
Other Flagelated Greens	

Filamentous Chlorophytes	
Bulbochaete	
Chaetophora	
Cladophora	
Draparnaldia	
Hydrodictyon	
Microspora	
Oedogonium	
Pithophora	
Rhizoclonium	
Stigeoclonium	
Ulothrix	
Other Filamentous Greens	

Araphid Pennate Diatoms	
Asterionella	
Diatoma	58
Fragilaria	
Meridion	
Synedra	1,200
Tabellaria	
Other Araphid Pennates	
Monoraphid Pennate	
Achnantheidium	
Cocconeis	

Cocoid/Colonial Chlorophyta	
Actinastrum	
Ankistrodesmus	
Botryococcus	
Chlorella	
Chlorococcum	
Closteriopsis	
Coelastrum	
Crucigenia	
Desmodesmus	
Dictyosphaerium	
Elakatothrix	
Golenkinia	
Kirchneriella	
Lagerheimia	
Micractinium	1
Monoraphidium	10

Biraphid Pennate	
Amphipleura	
Amphora (#)	
Cymtopleura	
Cymbella	
Entomoneis	
Epithemia	
Eunotia	
Frustulia	
Gomphonema	
Gyrosigma	
Navicula	
Nitzschia	110
Pinnularia	
Rhoicosphenia	
Rhopalodia	
Stauroneis	
Surirella	
Other Biraphid Pennate	

Pyrrhophyta	
Ceratium	
Gymnodinium	
Peridinium	
Other Dinoflagtes	

Euglenophyta	
Euglena	
Eutrepti	
Lepocinclis	
Phacus	
Trachelomonas	
Strombomonas	
Others	

SOLitude Lake Management

590 Lake St.
Shrewsbury, MA 01545

Date Received: 09/12/2022

Laboratory ID#: N2288364-01

Date Tested: 09/21/2022

Report Date: 09/26/2022

Algae Species Identification (Expanded), cont.

Tribophytes/Eustigmatophytes	
Centritractus	
Ophiocytium	
Pseudostaurastrum	
Pseudotetraedron	
Tribonema	
Vaucheria	
Mischococcoid Taxa	
Chloramoeboid Taxa	
Rhizochlorid Taxa	
Heterogloeolid Taxa	
Other Tribophytes	
Raphidophytes	
Gonyostomum Taxa	
<u>Euglenophyta</u>	
Euglena	
Eutrepti	
Lepocinclis	
Phacus	
Trachelomonas	
Strombomonas	
Others	

Desmids	
Closterium	
Cosmarium	
Desmidium	
Euastrum	
Hyalotheca	
Micrasterias	
Mougeotia/Debarya	
Octacanthium	
Pleurotaenium/Related	
Spirogyra (#)	
Staurastrum (#)	67
Staurodesmus	
Teilingia	
Xanthidium	
Zygnema/Zygnemopsis	
Others	

Flagellated Classic Chrysophytes	
Chromulina	
Chrysococcus	
Chrysophaerella	
Dinobryon	290
Kephyrian/Pseudokephyrian	
Mallomonas	
Ochromonas	
Synura	
Uroglena	
Uroglenopsis	
Others	
Non Motiles	
Haptophytes	

Total Cell Count: 1,800/mL

Chlorophytes	
Oocystis	
Pediastrum (#)	
Paulschulzia	
Polyedriopsis	
Pseudopediastrum	
Quadrigula	
Scenedesmus	38
Schroederia/Ankyra	
Selenastrum	
Sphaerocystis	
Tetradismus (#)	
Tetraedron	
Tetrastrum	
Treubaria	
Other Coccoid	
Other Elongate	

Comments:

- Results are based on the sample as received by Northeast Laboratories, Inc. 09/12/2022

129 Mill Street Berlin, CT 06037

www.nelabsct.com Telephone: 860-828-9787

CT Cert. #PH-0404 EPA Cert. #CT-024 FDA Reg. #086650488 CT CSL#0000624

Approved by: *Alan C. Johnson*
Alan C. Johnson, Laboratory Director

SOLitude Lake Management

590 Lake St.
Shrewsbury, MA 01545

Date Received: 09/12/2022

Laboratory ID#: N2288364-02

Date Tested: 09/21/2022

Report Date: 09/26/2022

Algae Species Identification (Expanded)

Sample Site: Surface Water @ Camp Sewataro, Swim Pond – Sudbury, MA

Date and Time Collected: 09/06/22 10:00

Diatoms: Centric Diatoms	
Acanthoceras	
Aulacoseira	
Cyclotella	
Melosira	
Stephanodiscus	
Other centric	

Araphid Pennate Diatoms	
Asterionella	
Diatoma	48
Fragilaria	
Meridion	
Synedra	140
Tabellaria	
Other Araphid Pennates	
Monoraphid Pennate	
Achnantheidium	
Cocconeis	

Pyrrhophyta	
Ceratium	
Gymnodinium	
Peridinium	
Other Dinoflagates	

Euglenophyta	
Euglena	
Eutrepti	
Lepocinclis	
Phacus	
Trachelomonas	
Strombomonas	

Flagellated Chlorophytes	
Chlamydomonas	
Coccomonas	
Eudorina	
Pandorina	
Pyramichlamys	
Tetraselmis	
Volvox	
Other Flagellated Greens	

Cocoid/Colonial Chlorophyta	
Actinastrum	
Ankistrodesmus	
Botryococcus	
Chlorella	
Chlorococcum	
Closteriopsis	
Coelastrum	
Crucigenia	
Desmodesmus	
Dictyosphaerium	
Elakatothrix	
Golenkinia	
Kirchneriella	
Lagerheimia	
Micractinium	
Monoraphidium	29

Filamentous Chlorophytes	
Bulbochaete	
Chaetophora	
Cladophora	
Draparnaldia	
Hydrodictyon	
Microspora	
Oedogonium	
Pithophora	
Rhizoclonium	
Stigeoclonium	
Ulothrix	
Other Filamentous Greens	

Biraphid Pennate	
Amphipleura	
Amphora (#)	
Cymtopleura	
Cymbella	
Entomoneis	
Epithemia	
Eunotia	
Frustulia	
Gomphonema	
Gyrosigma	
Navicula	
Nitzschia	19
Pinnularia	
Rhoicosphenia	
Rhopalodia	
Stauroneis	
Surirella	
Other Biraphid Pennate	

Others	
--------	--

SOLitude Lake Management

590 Lake St.
Shrewsbury, MA 01545

Date Received: 09/12/2022

Laboratory ID#: N2288364-02

Date Tested: 09/21/2022

Report Date: 09/26/2022

Algae Species Identification (Expanded), cont.

Tribophytes/Eustigmatophytes	
Centritractus	
Ophiocytium	
Pseudostaurastrum	
Pseudotetraedron	
Tribonema	
Vaucheria	
Mischococcoid Taxa	
Chloramoeboid Taxa	
Rhizochlorid Taxa	
Heterogloeoid Taxa	
Other Tribophytes	
Raphidophytes	
Gonyostomum Taxa	
<u>Euglenophyta</u>	
Euglena	
Eutrepti	
Lepocinclis	
Phacus	
Trachelomonas	
Strombomonas	
Others	

Desmids	
Closterium	
Cosmarium	
Desmidium	
Euastrum	
Hyalotheca	
Micrasterias	
Mougeotia/Debarya	
Octacanthium	
Pleurotaenium/Related	
Spirogyra (#)	
Staurastrum (#)	170
Staurodesmus	
Teilingia	
Xanthidium	
Zygnema/Zygnemopsis	
Others	


Flagellated Classic Chrysophytes	
Chromulina	
Chrysococcus	
Chrysosphaerella	
Dinobryon	38
Kephyrian/Pseudokephyrian	
Mallomonas	
Ochromonas	
Synura	
Uroglena	
Uroglenopsis	
Others	
Non Motiles	
Haptophytes	

Total Cell Count: 600/mL

Chlorophytes	
Oocystis	
Pediastrum (#)	120
Paulschulzia	
Polyedriopsis	
Pseudopediastrum	
Quadrigula	
Scenedesmus	38
Schroederia/Ankyra	
Selenastrum	
Sphaerocystis	
Tetrademus (#)	
Tetraedron	
Tetrastrum	
Treubaria	
Other Coccoid	
Other Elongate	

Comments:

- Results are based on the sample as received by Northeast Laboratories, Inc. 09/12/2022

Approved by: 
Alan C. Johnson, Laboratory Director

SOLitude Lake Management

590 Lake St.
Shrewsbury, MA 01545

Date Received: 09/12/2022

Laboratory ID#: N2288364-01

Date Tested: 09/21/2022

Report Date: 09/26/2022

Cyanobacteria

Sample Site: Surface Water @ Camp Sewataro, Fish Pond – Sudbury, MA

Date and Time Collected: 09/06/22 10:15

Cyanophyta: Unicellular & Colonial Forms	
Anabaena	
Aphanocapsa	
Aphanothece	
Chroococcus	
Coelosphoerium	
Dactylococcopsis	
Gomphosphaeria	
Merismpedia	
Microcystis	
Snowella	
Synechococcus/Related	
Woronichinia	
Other Coccoid Blue Greens	

Filamentous Nitrogen Fixers	
Anabaenopsis	
Aphanizomenon	
Calothrix/Rivularia	
Chrysosporxium	
Cuspidothrix	
Cylindrospermium	
Dolichospermium	
Gloeotrichia	
Hapalosiphon	
Nodularia	
Nostoc	
Raphidiopsis	
Sytonema	
Sphaerospermopsis	
Tolypothrix	
Other Filamentous Bluegreens (L)	
Other Filamentous Bluegreens (S)	

Filamentous Non-Nitrogen Fixers	
Arthrospira	
Limonothrix	
Lyngbya	
Limnoraphis	
Microseira/Plectonema	
Oscillatoria	
Phormidium	
Planktolyngbya	
Planktothrix	
Pseudanabaena/Kromvophoron	3,600
Spirulina	
Synechocystis	

Total Cell Count: 3,600 /mL

Comments:

- Results are based on the sample as received by Northeast Laboratories, Inc. on 09/12/2022

Approved by: *Alan C. Johnson*
 Alan C. Johnson, Laboratory Director

SOLitude Lake Management

590 Lake St.
 Shrewsbury, MA 01545

Date Received: 09/12/2022

Laboratory ID#: N2288364-02

Date Tested: 9/21/222

Report Date: 9/26/2022

Cyanobacteria

Sample Site: Surface Water @ Camp Sewataro, Swim Pond – Sudbury, MA

Date and Time Collected: 09/06/22 10:00

Cyanophyta: Unicellular & Colonial Forms	
Anabaena	
Aphanocapsa	
Aphanothece	
Chroococcus	
Coelosphaerium	
Dactylococcopsis	
Gomphosphaeria	
Merismpedia	
Microcystis	
Snowella	
Synechococcus/Related	
Woronichinia	
Other Coccoid Blue Greens	


Filamentous Nitrogen Fixers	
Anabaenopsis	
Aphanizomenon	
Calothrix/Rivularia	
Chrysochlorium	
Cuspidothrix	
Cylindrospermium	
Dolichospermium	
Gloeotrichia	
Hapalosiphon	
Nodularia	
Nostoc	
Raphidiopsis	
Sytonema	
Sphaerospermopsis	
Tolypothrix	
Other Filamentous Bluegreens (L)	
Other Filamentous Bluegreens (S)	

Filamentous Non-Nitrogen Fixers	
Arthrospira	
Limonothrix	
Lyngbya	
Limnoraphis	
Microseira/Plectonema	
Oscillatoria	
Phormidium	
Planktolyngbya	
Planktothrix	
Pseudanabaena/Kromvophon	
Spirulina	
Synechocystis	

Total Cell Count: None Detected /mL

Comments:

- Results are based on the sample as received by Northeast Laboratories, Inc. on 09/12/2022

Approved by: 
Alan C. Johnson, Laboratory Director



Company Name: Solitude Lake Management
Billing Address: 1320 Brookwood Drive, Ste. H
City, State, Zip: Little Rock, AR 72202
Project Name: N/A

Chain of Custody: COC13508

Report Date: 8/22/2022

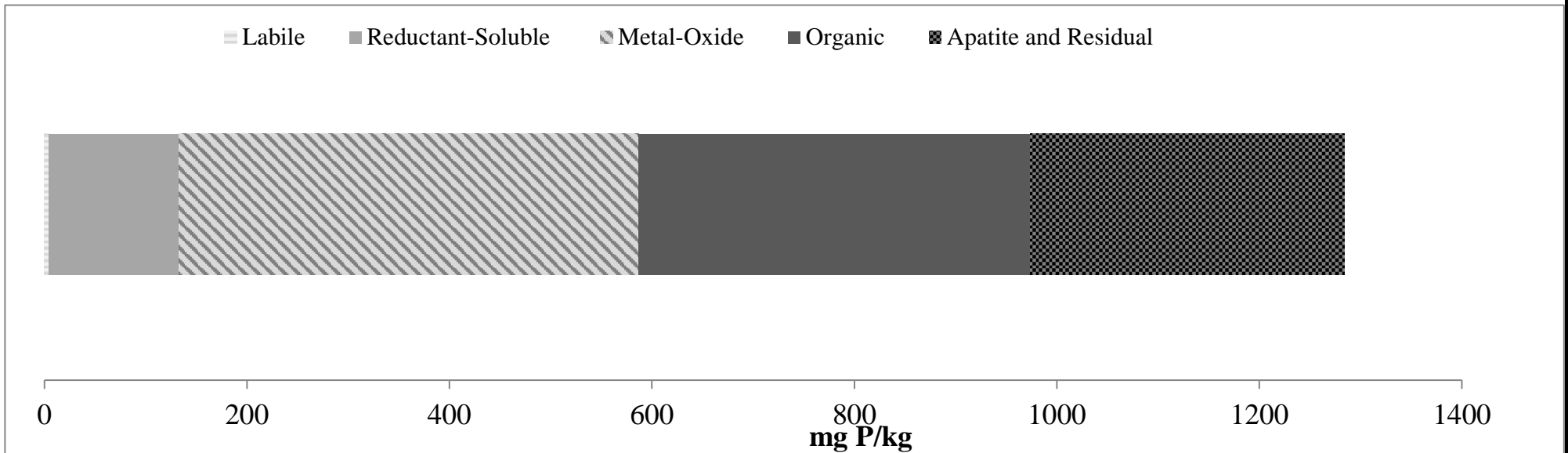
SeSCRIPT Analysis Performed: SRTC Comprehensive Level 2

Waterbody Name: Camp Sewataro
Size (ac.): N/A
Average Water Depth (ft): N/A
Sample Collection Date: N/A
Contact Person: Amanda Mahaney
Email Address: amahaney@solitudelake.com
Telephone: N/A

Sample ID	% Solids (% Dry Wt.)	Labile (mg P/kg)	Reductant-Soluble (mg P/kg)	Metal-Oxide (mg P/kg)	Organic (mg P/kg)	Apatite and Residual (mg P/kg)
CTM37954-1	16	4	129	454	386	310

* Concentration was less than reportable limits with 99% confidence

All concentrations are reported based on dry weight





Company Name: Solitude Lake Management
Billing Address: 1320 Brookwood Drive, Ste. H
City, State, Zip: Little Rock, AR 72202
Project Name: N/A

Chain of Custody: COC13508

Report Date: 8/22/2022

SeSCRIPT Analysis Performed: SRTC Comprehensive Level 2

Waterbody Name: Camp Sewataro
Size (ac.): N/A
Average Water Depth (ft): N/A
Sample Collection Date: N/A
Contact Person: Amanda Mahaney
Email Address: amahaney@solitudelake.com
Telephone: N/A

Sample ID	% Solids (% Dry Wt.)	Labile (mg P/kg)	Reductant-Soluble (mg P/kg)	Metal-Oxide (mg P/kg)	Organic (mg P/kg)	Apatite and Residual (mg P/kg)
CTM37955-1	17	3	79	235	182	383

* Concentration was less than reportable limits with 99% confidence

All concentrations are reported based on dry weight

