2015 Project Completion Report
SONAR Herbicide Treatment Program at Foster's Pond
Andover, Massachusetts

Report Prepared by: Aquatic Control Technology
21 West Main Street
Spencer, MA 01562

Report Prepared for: Foster's Pond Corporation
c/o Stephen Cotton, President
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Andover, MA 01810

Introduction

In 2015, a treatment program using Sonar Genesis & Sonar One herbicides was conducted at Foster's Pond to control growth of non-native, invasive fanwort (*Cabomba caroliniana*). The Project Completion Report for the 2015 Sonar Herbicide Treatment Program follows. This report will serve to document the herbicide application process and the observed response of the targeted weeds.

All work performed at Foster's Pond in 2015 was conducted in accordance with the Order of Conditions (OOC) issued by the Andover Conservation Commission (DEP # 090-535) and the License to Apply Chemicals issued by the MA DEP – Office of Watershed Management (# 15048).

A chronology of this past year's management and brief description of events follows.

2015 Program Chronology

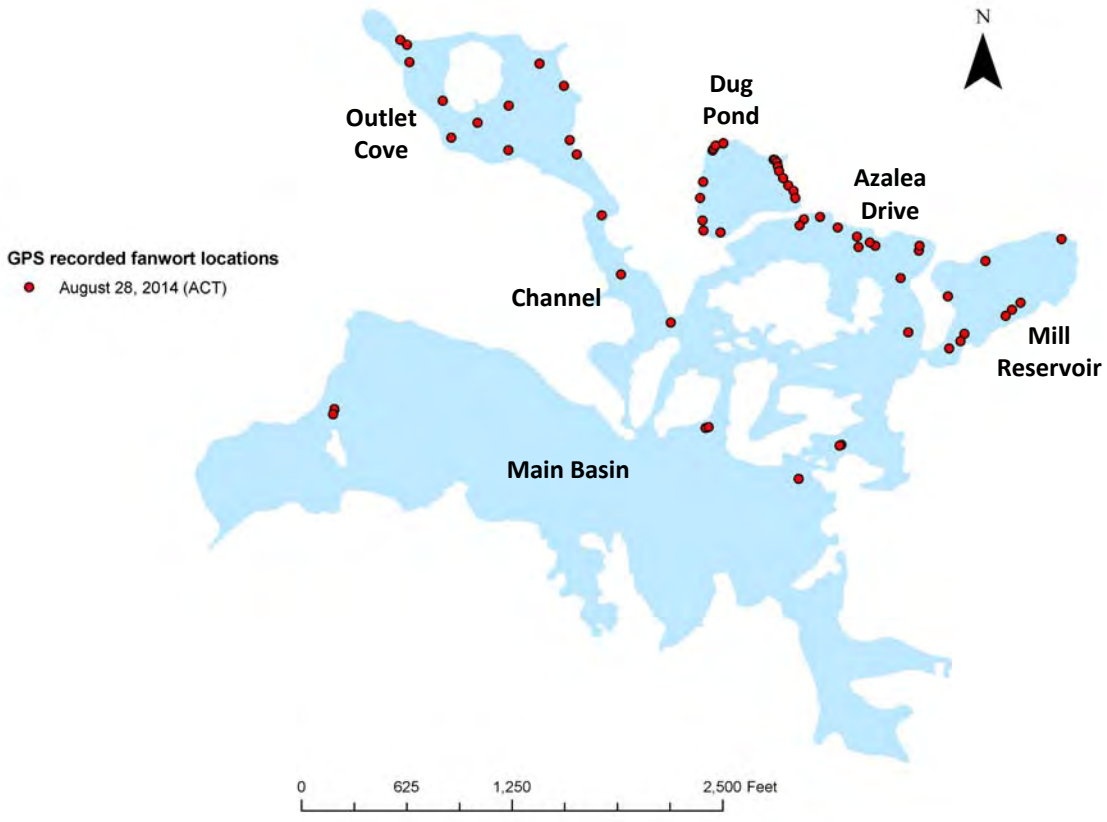
- Pre-Treatment Survey 8/28/14
- DEP License to Apply Chemicals Issued 4/21/15
- Initial Sonar Application 5/4/15
- Collection of FasTEST Immunoassay samples 5/27/15
- First Follow-up Sonar Application 5/27/15
- Collection of FasTEST Immunoassay samples 6/30/15
- Second Follow-up Sonar Application 7/10/15
- Collection of Algae samples 7/31/15
- Algaecide Application 7/31/15
- Collection of Algae samples 8/10/15
- Late Season Vegetation Survey 9/9/15

Pre-Treatment Conditions

Aquatic vegetation surveys performed by Aquatic Control documented the species composition and fanwort distribution in Foster's Pond from 2012-2014, during which time, no herbicide treatments were performed after a successful Sonar herbicide program in 2011. The annual year-end reports document regrowth extents and conditions.

In 2014, Aquatic Control surveyed Foster's Pond on August 28th. During this survey, the entire waterbody was toured and aquatic vegetation was identified and spatially referenced. A handheld GPS unit was utilized to record locations of fanwort.

Figure 1: Fanwort Locations During 2014 Survey



Fanwort was found in moderate to dense growth throughout the Outlet Cove, the Channel, Dug Pond, the perimeter of Mill Reservoir, and the deeper water depths by Azalea Drive. Isolated fanwort plants were found in the shallow channels of the central wetland and against the dense waterlily patches of the western shoreline of the Main Basin. No fanwort growth was observed along the southern and Pomeroy Road shorelines of the Main Basin. The fanwort plants were robust at this time, growing throughout the entirety of the water column.

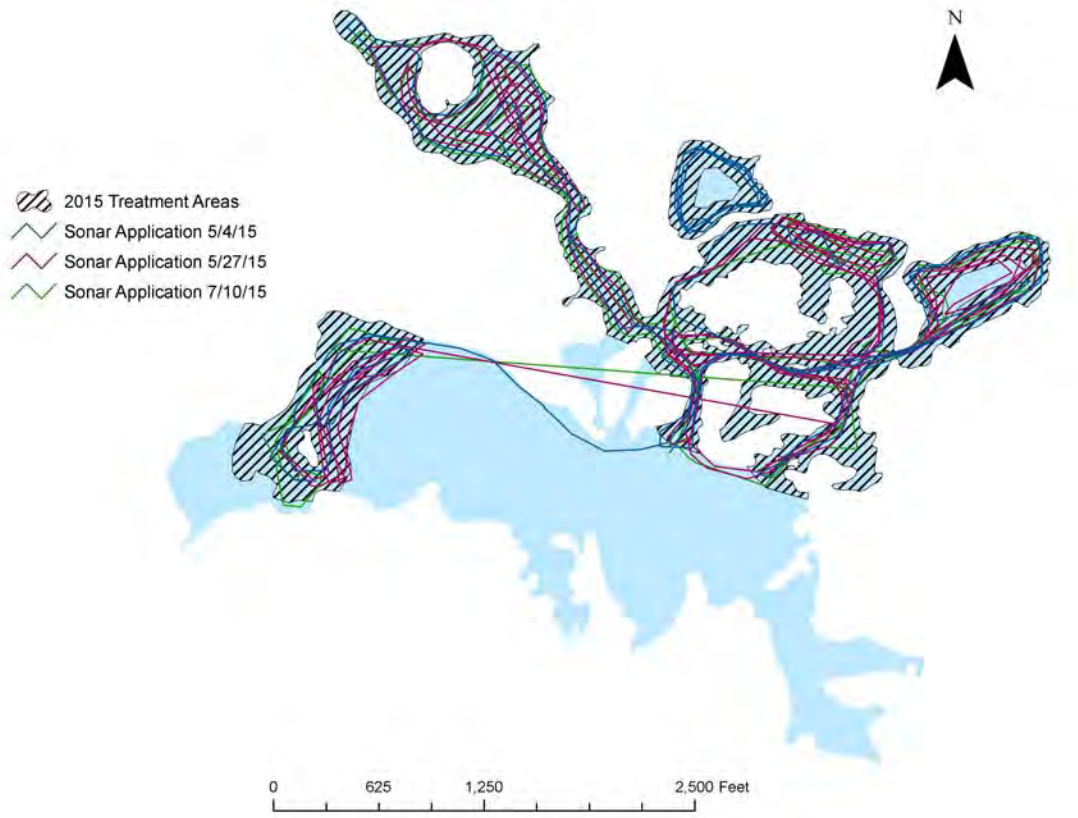
No Brazilian elodea (*Egeria densa*) has been found in Dug Pond since the pond was treated with Sonar in 2011.

Treatment Summary

Consistent with the Notice of Intent and work plans provided to the Town in February 2011, Foster's Pond was treated with Sonar (active ingredient fluridone) herbicide for control of fanwort. Two formulations of Sonar herbicide [SonarOne (pellet) - EPA Reg. No. 67690-45 and Sonar Genesis (liquid) – EPA Reg. No. 67690-54] were applied on three separate occasions.

A map depicting the extent of the treatment area and the GPS tracks recorded during each treatment follows:

Figure 2: Treatment Navigation



A complete summary of the treatment program is provided below:

Herbicide Applications:

Herbicide applications were conducted by Aquatic Control using an 18 foot airboat and a 12 foot Jon boat for Dug Pond. The SonarOne pellet formulation was applied using a calibrated spreader mounted on the bow of the airboat or by a specially designed backpack blower that evenly distributed the pellets. The Sonar Genesis liquid formulation was diluted with pond water and injected subsurface through weighted hoses using a calibrated pumping system. Each of the treatment areas were preloaded into a GPS unit that was used for navigation during the treatment to insure that the herbicide was applied accurately.

Prior to all applications notification of the treatment was submitted to the Town and posters warning of the temporary water restrictions to be imposed following treatment were posted along the shoreline of the pond.

Table 1: Sonar Treatment Dosages

Date	Product Applied	Estimated Concentration (ppb) applied	Comments
5/4/15	SonarOne	SonarOne - 13 ppb	• Water level estimated to be 1 foot below normal/full pool due to construction on outlet • Fanwort plants were starting to actively grow but were only 6-12 inches in height at the time of the initial treatment
5/27/15	SonarOne Sonar Genesis	SonarOne - 7.5 ppb Sonar AS – 12.5 ppb	• Small amount of chlorosis (whitening) noticeable on fanwort and white waterlily leaves • Water level approximately 1 foot below spillway
7/10/15	SonarOne Sonar Genesis	SonarOne – 3 ppb Sonar Genesis – 6 ppb	• Fanwort and lilies throughout pond very chlorotic
TOTALS	**SonarOne Sonar Genesis**	**SonarOne – 23.5 ppb Sonar Genesis – 18.5 ppb**	• **Totals for all three applications**

Figure 3: FasTEST Sample Locations

FasTEST Immunoassay samples were collected on two occasions during the course of the treatment to help assist in the timing and dosing of subsequent Sonar applications and ensure that ample fluridone concentrations were maintained in the pond. FasTEST samples were collected by ACT and shipped to the SePRO Laboratory in Whitakers, North Carolina, via overnight mail for analysis. Results from the FasTEST samples were used to guide timing of subsequent Sonar applications to ensure that target concentrations of fluridone were maintained in the pond for a minimum of 60 days. Results from the four samples collected at Foster's Pond in 2015 are below. Laboratory reports from SePRO are attached.

Table 2: FasTEST Results

Foster's Pond	Locations	5/27/15	6/30/15
Sample Site 1	Outlet Cove	5.3 ppb	9.5 ppb
Sample Site 2	Dug Pond	7.6 ppb	16.0 ppb
Sample Site 3	Azalea Drive	1.7 ppb	6.5 ppb
Sample Site 4	Mill Reservoir	2.0 ppb	2.6 ppb
Sample Site 5	Main Basin - West	1.3 ppb	4.7 ppb

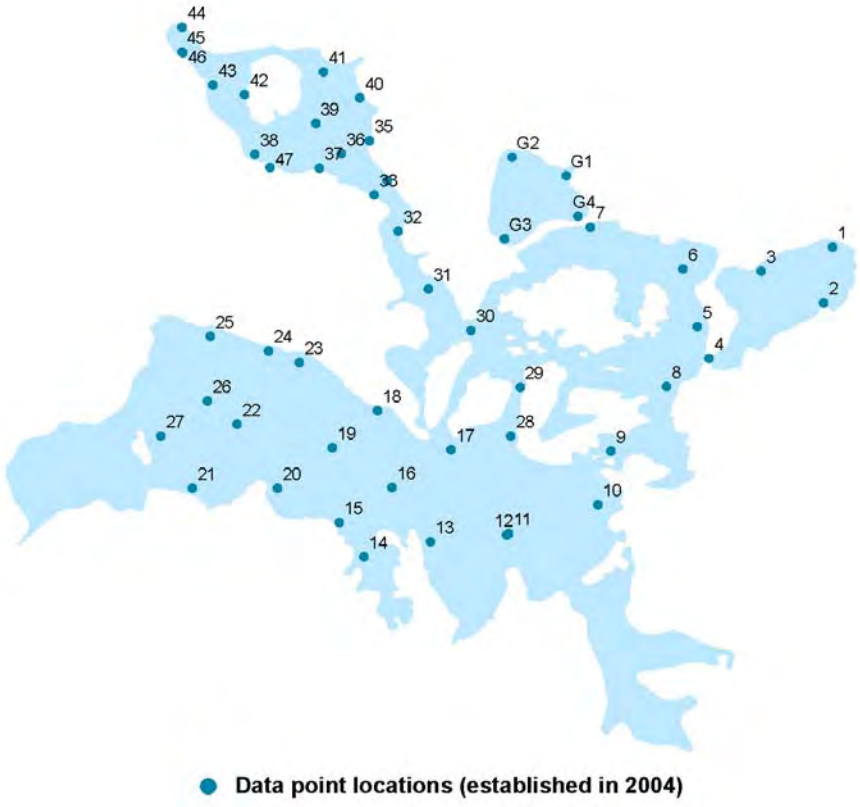
Algaecide Applications:

A decline in water clarity within the main pond basin prompted the Foster's Pond Corporation to request a copper-based algaecide treatment. Algal samples were collected prior to treatment on July 31st; secchi disk readings were also taken. The algaecide was diluted with pond water and sprayed in the Main Basin, Channel, and Outlet Cove. Post-treatment algal samples were collected on August 10th. Water clarity improved following the treatment.

Post-Treatment Survey

A post-treatment survey of Fosters Pond was conducted on September 9th to document post-treatment aquatic plant composition and distribution. The survey methodology used was consistent with surveys performed periodically since 2004, utilizing established transects and data points. In total, 50 data points were surveyed. A map depicting transect and data point location follows; the data collected is attached to this report.

Figure 4: Aquatic Plant Data Point Locations



Fanwort in Foster's Pond showed signs of fluridone exposure after the initial treatment and chlorosis or bleaching was evident at the time of the first FasTEST sample collection on 5/27/15. While fanwort remained in the water column well into early August, chlorosis persisted and progressed throughout the summer. By the time of the second FasTEST collection (6/30/15) round fanwort in the pond was bleached white in the upper 6-10 inches of the plant and in many areas had begun to collapse out of the water column.

In September, at the time of the post-treatment survey (9/9/15), evidence of prolonged fluridone exposure was apparent and many of the remaining aquatic plants were highly discolored. Consistent with previous years, vegetation in Foster's Pond was scant following treatment and what remained was dominated by white and yellow waterlilies, which, albeit thinned, remained abundant in most of the shallow cove/wetland areas. Cover of watershield, ribbonleaf pondweed, coontail, bladderwort, and nitella was also common, but where encountered growth was generally low-density and scattered. No viable growth of fanwort was found anywhere in Foster's Pond during the late season survey.

A list of the plants observed in 2015 with historical comparison of plant presence and absence follows:

Table 3: Aquatic Species List (2004-2015)

Type	Macrophyte Species	Common Name	'04	'05	'08	'09	'11	'12	'14	'15
Submersed	*Bidens beckii*	Water marigold	X			X				
	Cabomba caroliniana	Fanwort	X	X	X	X		X	X	
	Callitriche palustris	Water starwort				X				
	Ceratophyllum demersum	Coontail	X	X	X	X	X	X	X	X
	Chara vulgaris	Musk grass				X	X			
	Chlorophyta	Filamentous algae	X	X	X	X	X	X	X	X
	Egeria densa	Brazilian elodea		X	X	X				
	Elodea canadensis	Common waterweed				X				
	Hypericum boreale	Northern St. John's wort				X				
	Isoetes	Quillwort		X	X	X	X	X		
	Ludwigia palustris	Water purslane				X	X	X		
	Musci	Water moss		X	X	X		X	X	X
	Myriophyllum humile.	Lowly Milfoil		X	X	X	X		X	
	Najas flexilis	Bushy pondweed		X	X	X		X	X	
	Najas minor	Spiny naiad				X			X	
	Nitella sp.	Stonewort		X	X	X	X	X	X	X
	Potamogeton amplifolius	Largeleaf pondweed	X							
	Potamogeton epihydrus	Ribbonleaf pondweed	X		X	X	X	X	X	X
	Potamogeton gramineus	Variable-leaf pondweed	X			X		X		
	Potamogeton natans	Floating leaf pondweed			X	X			X	
	Potamogeton perfoliatus	Clasping-leaf pondweed	X							
	Potamogeton pusillus	Thin-leaf Pondweed							X	
	Sagittaria sp.	Arrowhead			X	X		X		
	Utricularia	Bladderwort	X	X	X	X	X	X	X	X
	Valliseria americana	Wild celery	X			X				
Floating Leaf	*Brasenia schreberi*	Watershield	X		X	X		X	X	X
	Lemna minor	Lesser duckweed				X				
	Nuphar variegatum	Yellow waterlily		X	X	X	X	X	X	X
	Nymphaea odorata	White waterlily	X	X	X	X	X	X	X	X
	Spirodela polyrhiza	Big duckweed				X				
Emergent	*Decodon verticillatus*	Water willow	X	X	X	X	X	X		X*
	Eleocharis sp.	Spikerush				X				
	Eriocaulon sp	Pipewort	X	X	X					
	Lythrum salicaria	Purple loosestrife	X	X	X	X	X	X	X	X*
	Peltandra viginica	Arrow arum				X				
	Pontederia cordata	Pickerelweed	X	X	X	X	X	X		
	Scirpus sp.	Rushes	X	X	X					
	Sparganium sp.	Burreed	X		X	X	X	X	X	X*
	Typha sp.	Cattail	X	X	X	X	X	X		X*

** Observed in the pond, but not at Data Point locations*

Water Quality Monitoring

Consistent with efforts in prior years, water quality sampling was performed throughout Foster's Pond in 2015. During the post-treatment survey, surface grab water samples were collected from four locations as shown below. Laboratory analysis of the samples was performed for the following parameters: pH, Alkalinity, Total Phosphorus, Turbidity, True Color, Apparent Color, and E. coli bacteria. In addition, measurements of Secchi Disk water clarity were recorded at each sampling location (see below).

Figure 5: Water Quality Sample Locations

Table 3: Water Quality Results

Parameter	Units	Mill Reservoir (WQ1)	Dug Pond (WQ2)	Main Pond (WQ3)	Outlet Cove (WQ4)
pH	S.U.	7.5	7.4	7.2	6.9
Alkalinity	mg/L CaC03	26	14	21	13
Phosphorus	mg/L	0.017	0.018	0.033	0.021
Turbidity	NTU	1.8	1.1	3.1	1.4
True Color	Pt-Co	10	5	20	10
Apparent Color	Pt-Co	15	10	25	15
E. coli	CFU/100 ml	10	<10	<10	<10
Secchi Disk	Feet	7'4"	12' (to bottom)	6'1"	-

The water quality results were similar to results reported in prior years. The pH values were slightly above neutral at all the sample locations, except for by the Outlet Cove, and are within normal ranges for freshwater systems in the Northeast. Adverse impacts to fish and other aquatic organisms are generally not observed if the pH is above 5.0 and below 9.0. Alkalinity values varied some between locations within the low end of the desirable range, but are typical for values observed in the region. Total phosphorus values were elevated in the main pond and the Outlet Cove, but within desirable thresholds at the other stations. Typically, phosphorus concentrations above 0.02 mg/L can support algal blooms. Turbidity values less than 5 NTU generally do not impact recreational uses and the values continued to be within the desired range this year. True color is a measure of filtered water and apparent color is a measure of the raw water. Values were similar to prior years and suggested that both suspended particles (e.g. algae, suspended sediment) and dissolved material (e.g. tannins) impart color to the water. The only location where E.coli was detected was in Mill Reservoir; this is a low, background concentration as the Massachusetts standard for accredited bathing beaches is <235 CFU/100mL. Secchi disk clarity readings, at this time, were generally desirable and similar to readings from prior years.

The planktonic algae growth was dominated by blue-green algae (cyanobacteria). The dominant taxa present prior to copper algaecide treatment was *Anabaena*. Other cyanobacteria present included *Pseudanabaena*,

Coelosphaerium, and *Microcystis*. The composition and density of the algae changed after the algaecide treatment. Within areas treated, cyanobacteria decreased, allowing for diatom and green-algae species to compose more of the distribution.

Conclusions and Recommendations

Overall, the treatment performed in 2015 appears to have provided excellent control of fanwort throughout the entire waterbody. As with previous Sonar treatments at Foster's Pond, we expect to see nuisance-level fanwort control through the 2016 and 2017 seasons, however, some significant re-growth may be evident by 2018. As we have seen following prior treatments, we expect that native aquatic vegetation will rebound fairly quickly and a more diverse vegetative composition should be evident by the end of next summer. Most of the more desirable native plants are annual plants which reproduce each year from seed, so recovery is possible as long as seeds exist in the pond sediment. Waterlilies and other floating leaf species that were impacted by treatment should also recover quite rapidly and dense cover of waterlilies in the shallow wetland areas should be evident next spring.

Given the trophic state of Foster's Pond and the presence of invasive, non-native aquatic vegetation, specifically fanwort, it is likely that Foster's Pond will continue to suffer from problematic aquatic weed growth in the future. Well-timed management efforts to date have successfully help curb fanwort spread while maintaining a diverse native plant assemblage, future management work will be required to maintain gains from earlier management efforts. We recommend that the Foster's Pond Corporation continue monitoring vegetation in the lake annually to assess fanwort re-growth and watch for other unwanted plant introductions.

With the registration of Clipper (flumioxazin) by the Massachusetts Department of Agricultural Resources in 2013, two herbicides are now currently available to manage fanwort infestations. Clipper has proven effective in spot-treating fanwort growth in Massachusetts lakes and ponds; unfortunately, the Department of Environmental Protection limits treatment to less than 25% of the total waterbody's acreage in one year and a treated area may not be retreated for 3 years. Since Clipper is a contact herbicide, re-growth can be expected in the year after treatment and at least several years of consecutive treatment followed by periodic re-treatment are usually required to manage the infestation. Based on annual monitoring of re-growth, a specific management program can be created to target fanwort with large area Sonar treatments or spot-treat small patches in isolated, high-use areas.

Monitoring of algal composition and densities throughout the summer allows for timely treatment with copper-based algaecides. Managing the nutrients in the pond, specifically phosphorus, will likely limit algal growth. These strategies can prevent excessive algae growth and potential closures from government agencies. We recommend further investigating nutrient management techniques and copper-based algaecide treatments if algae blooms continue to persist during the upcoming summer.

Attachments

- Aquatic plant survey field data table
- Water quality laboratory reports
- Algae count data

Foster's Pond - Aquatic Plant Survey Data Table

survey date: 9/9/15

Data Point	Water Depth (ft.)	Cc	Mu	Pe	Pp	Pn	U	Cd	Nm	Mhu	Ni	Fa	Nu	B	Ny	Sp	Nf	% Total Plant Cover	%Fanwort Cover	Biomass index
1	13										D							10	-	1
2	11										D				X			10	-	1
3	4										D				X			100	-	2
4	2										D		X	X	X			70	-	3
5	2										X	X			X			60	-	3
6	11										D							5	-	1
7	4										D				X			70	-	1
8	2										D	D	X					80	-	3
9	2							X				D						40	-	1
10	4											D						20	-	2
11	5											D						5	-	1
12	7											D						20	-	1
13	7											D						10	-	1
14	2											D			X			100	-	2
15	7											D						60	-	1
16	9																	0	-	0
17	6											D			X			30	-	2
18	6											D						20	-	1
19	10																	0	-	0
20	8																	0	-	0
21	4											X	D					30	-	4
22	9																	0	-	0
23	7											D						5	-	1
24	5											D						10	-	1
25	4											D			X			40	-	2
26	7											D						5	-	1
27	4											D			D			10	-	4
28	3											X	D					100	-	3
29	3											D						100	-	2
30	3											X						20	-	1
31	2										D				X			90	-	3
32	2										X	D						100	-	2
33	4											D						100	-	1
34	3											D						20	-	1
35	3											D						90	-	2
36	4											X			D			20	-	3
37	2											X			X			100	-	3
38	6											D			X			90	-	2
39	6																	0	-	0
40	6											D						20	-	1
41	3						X				X	X			D			60	-	3
42	5						D											5	-	1
43	7											D						90	-	2
44	3											D						100	-	3
45	6						X					D						100	-	1
G1	5						D								X			20	-	2
G2	6		D	X														5	-	1
G3	5																	0	-	0
G4	4														X			5	-	1

MICROBAC

61 Louisa Viens Drive
Dayville, CT 06241
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ANALYTICAL DATA REPORT

prepared for:

Aquatic Control Technology
21 West Main St.
Spencer , MA 01562
Nancy McGann

Report Number: E509C08
Project: Foster's Pond

Received Date: 09/10/2015
Report Date: 09/14/2015

David Dickinson
Technical Director

ACCREDITED IN ACCORDANCE WITH nelac

CT DPH #PH-0465 EPA #CT00008 MA DEP #M-CT008 MD #349 ME DHHS #CT0050
NH ELAP #2020 NY ELAP #11549 PA DEP #68-04413 RI DOH #LAO00346 VA #460279 VT DOH #VT11549

101-000000475389

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Report No: E509C08
Client: Aquatic Controls Technology
Project: Foster's Pond

CASE NARRATIVE / METHOD CONFORMANCE SUMMARY

The results presented in this report relate only to the samples received.

This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included, along with a copy of the chain of custody and any subcontracted analyses reports, if applicable, for the sample(s) in this report. Subcontractor results are identified by 'SUB' next to the analysis.

Microbac Laboratories, Inc. received four samples from Aquatic Controls Technology on 09/10/2015. The samples were analyzed for the following list of analyses in accordance with MA DEP regulations unless otherwise indicated:

Alkalinity, Total by SM2320B in DW/WW
SM2320B
E. coli by EPA Modified 1603 mTEC
1603[1603]
Turbidity by SM2130B in DW
SM2130B
Apparent and True Color
SM2120B
Phosphorus, Total as P by 365.1 in DW/WW
365.1[365.1]
pH by SM 4500-H+B
SM 4500-H+B

Non-Conformances:

Work Order:

None

Sample:

None

Analysis:

Sample 1A, Foster's Pond #1, E. coli by EPA Modified 1603 (mTEC): The holding time was exceeded prior to analysis of this sample.

Sample 2A, Foster's Pond #2, E. coli by EPA Modified 1603 (mTEC): The holding time was exceeded prior to analysis of this sample.

Sample 3A, Foster's Pond #3, E. coli by EPA Modified 1603 (mTEC): The holding time was exceeded prior to analysis of this sample.

Sample 4A, Foster's Pond #4, E. coli by EPA Modified 1603 (mTEC): The holding time was exceeded prior to analysis of this sample.

Microbac Laboratories, Inc.
Analytical Data Report

Report No: E509C08
Date Received: 09/10/2015 15:30

Customer: Aquatic Controls Technology
Project: Foster's Pond

Parameter	Result	DL	Units	Completed	By	Dilution
(1) Foster's Pond #1						
Date Collected: 09/09/2015 **Matrix: Aqueous**						
Color by SM2120B	15		Color Units	09/10/2015 21:38	ST	
True Color	10		Color Units	09/10/2015 21:38	ST	
Alkalinity by SM2320B	26	1.0	mg/L	09/11/2015 15:50	ST	
Phosphorus as P by 365.1	0.017	0.010	mg/L	09/11/2015 08:39	JJT	
Turbidity by SM2130B	1.8	0.10	NTU	09/10/2015 21:37	ST	
pH by SM 4500-H+B	7.5		pH Units	09/10/2015 21:35	ST	
E. coli by EPA Modified 1603 (mTEC)	10		col/100ml	09/10/2015 16:15	AM	10
(2) Foster's Pond #2						
Date Collected: 09/09/2015 **Matrix: Aqueous**						
Color by SM2120B	10		Color Units	09/10/2015 21:38	ST	
True Color	5		Color Units	09/10/2015 21:38	ST	
Alkalinity by SM2320B	14	1.0	mg/L	09/11/2015 15:50	ST	
Phosphorus as P by 365.1	0.018	0.010	mg/L	09/11/2015 08:39	JJT	
Turbidity by SM2130B	1.1	0.10	NTU	09/10/2015 21:37	ST	
pH by SM 4500-H+B	7.4		pH Units	09/10/2015 21:35	ST	
E. coli by EPA Modified 1603 (mTEC)	<10		col/100ml	09/10/2015 16:15	AM	10
(3) Foster's Pond #3						
Date Collected: 09/09/2015 **Matrix: Aqueous**						
Color by SM2120B	25		Color Units	09/10/2015 21:38	ST	
True Color	20		Color Units	09/10/2015 21:38	ST	
Alkalinity by SM2320B	21	1.0	mg/L	09/11/2015 15:50	ST	
Phosphorus as P by 365.1	0.033	0.010	mg/L	09/11/2015 08:40	JJT	
Turbidity by SM2130B	3.1	0.10	NTU	09/10/2015 21:37	ST	
pH by SM 4500-H+B	7.2		pH Units	09/10/2015 21:35	ST	
E. coli by EPA Modified 1603 (mTEC)	<10		col/100ml	09/10/2015 16:15	AM	10
(4) Foster's Pond #4						
Date Collected: 09/09/2015 **Matrix: Aqueous**						
Color by SM2120B	15		Color Units	09/10/2015 21:38	ST	
True Color	10		Color Units	09/10/2015 21:38	ST	
Alkalinity by SM2320B	13	1.0	mg/L	09/11/2015 15:50	ST	
Phosphorus as P by 365.1	0.021	0.010	mg/L	09/11/2015 08:40	JJT	
Turbidity by SM2130B	1.4	0.10	NTU	09/10/2015 21:37	ST	
pH by SM 4500-H+B	6.9		pH Units	09/10/2015 21:35	ST	
E. coli by EPA Modified 1603 (mTEC)	<10		col/100ml	09/10/2015 16:15	AM	10

Northeast Laboratories, Inc.

ANALYTICAL REPORT

AQUATIC CONTROL TECHNOLOGY
Attn: Mark Bellaud, President
& Brittany Laginnas
21 West Main St.
Spencer, MA 01562

EMAIL ADDRESS:
info@aquaticcontroltech.com

Report Date:	8/06/2015	**Date Sampled:**	7/31/2015
Laboratory ID#:	1563149-02	**Date Received:**	8/04/2015
		Date Tested:	8/05/2015

Sample Site: SURFACE WATER: WQ1 MILL RES

MICROSCOPIC EXAMINATION == Natural Units Count & Blue/Green Cell Counts

ORGANISM	#/ml
Diatomaceae	
Amphora	
Asterionella*	
Amphiprora	
Cocinodiscus	
Cyclotella*	120
Cymbella	
Diatoma*	
Frustulia	
Fragilaria	
Gyrosigma	
Gomphonema	
Melosira	
Meridion*	
Navicula	250
Nitzschia	
Pleurosigma	
Stephanodiscus	
Surirella	
Synedra	
Tabellaria*	
Rotifera	
Anuraea	
Asplanchna	
Brachionus	
Conochilus	
Euchlanis	
Keratella	
Notholca	
Polyarthra	
Rotifer	
Synchaeta	
Kellicottia	

ORGANISM	#/ml
Chlorophyceae	
Actinastrum	
Arthrodesmus	
Ankistrodesmus	
Chorella	
Closterium	
Coelastrum	
Cosmarium	
Dictyosphaerium*	
Eudorina*	
Elakatothrix	
Gleocystis	
Micrasterias	
Mougeotia	
Pandorina*	
Pediastrum	
Protococcus	
Quadrigula	
Scenedesmus	
Sphaerocystis	
Sphaerozosma	
Spirogyra	
Staurastrum	
Tetraspora	
Westella	
Ulothrix	
Volvox*	
Xanthidium	
Zygnema	

ORGANISM	Cell #/ml
Cyanophyceae	
Anabaena*	15,000
Anabaenopsis	
Aphanocapsa	
Aphanizomenon*	
Aphanothece	
Aulosira	
Arthrospira	
Chroococcus	
Clathrocystis*	
Coelosphaerium*	
Cylindrospermum	
Cuspidothrix	
Dactylococcopsis	
Eucapsis	
Gleocapsa	
Galucocystis	
Gloeothece	
Gomphosphaeria	
Hydrocoleum	
Microcystis	
Merismopedia	
Nostoc	
Nodularia	
Oscillaria	
Pseudanabaena	
Spirulina	
Rivularia*	
Xenococcus	
Miscellaneous	
Acarina	
Anguillula	
Bosmina	
Canthocamptus	
Cyclops	
Daphnia	
Diaptomus	

ORGANISM	#/ml
Protozoa	
Actinophrys	
Amoeba	
Arcella	
Bursaria*	
Ceratium	
Cercomonas	
Chilomonas	
Chlamydomonas	
Codonella	
Cryptomonas*	
Difflugia	
Dinobryon*	220
Euglena	
Glenodinium*	
Gonium	
Halteria	
Mallomonas*	
Monas	
Peridinium*	
Synura*	
Trachelomonas	
Uroglenopsis*	
Vorticella	
* Odor Producing	

Blue-Green Cell Count: 15,000/ml

Comments: **Results are based on sample, as submitted to Northeast Laboratories, Inc. on: 8/04/2015**

Approved by: Adam C. Drake

Laboratory Director

AQUATIC CONTROL TECHNOLOGY
Attn: Mark Bellaud, President
& Brittany Laginnas
21 West Main St.
Spencer, MA 01562

EMAIL ADDRESS:
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Report Date:	8/11/2015	Date Sampled:	7/31/2015
Laboratory ID#:	1563200-01	Date Received:	8/07/2015
		Date Tested:	8/10/2015

Sample Site: SURFACE WATER: WQ2 DUG POND

MICROSCOPIC EXAMINATION == Natural Units Count & Blue/Green Cell Counts

ORGANISM	#/ml
Diatomaceae	
Amphora	
Asterionella*	
Amphiprora	
Cocinodiscus	
Cyclotella*	180
Cymbella	
Diatoma*	
Frustulia	
Fragilaria	
Gyrosigma	
Gomphonema	
Melosira	
Meridion*	
Navicula	
Nitzschia	
Pleurosigma	
Stephanodiscus	
Surirella	
Synedra	48
Tabellaria*	
Pinnularia	40
Rotifera	
Anuraea	
Asplanchna	
Brachionus	
Conochilus	
Euchlanis	
Keratella	
Notholca	
Polyarthra	
Rotifer	
Synchaeta	
Kellicottia	

ORGANISM	#/ml
Chlorophyceae	
Actinastrum	
Arthrodesmus	
Ankistrodesmus	24
Chorella	
Closterium	64
Coelastrum	
Cosmarium	
Dictyosphaerium*	
Eudorina*	
Elakatothrix	
Gleocystis	
Micrasterias	
Mougeotia	
Pandorina*	
Pediastrum	
Protococcus	
Quadrigula	
Scenedesmus	8
Sphaerocystis	
Sphaerozosma	
Spirogyra	
Staurastrum	16
Tetraspora	
Westella	
Ulothrix	
Volvox*	
Xanthidium	
Zygnema	26

ORGANISM	Cell #/ml
Cyanophyceae	
Anabaena*	800
Anabaenopsis	
Aphanocapsa	
Aphanizomenon*	
Aphanothece	
Aulosira	
Arthrospira	
Chroococcus	
Clathrocystis*	
Coelosphaerium*	
Cylindrospermum	
Cuspidothrix	
Dactylococcopsis	
Eucapsis	
Gleocapsa	
Galucocystis	
Gloeothece	
Gomphosphaeria	
Hydrocoleum	
Microcystis	
Merismopedia	
Nostoc	
Nodularia	
Oscillaria	2600
Pseudanabaena	
Spirulina	
Rivularia*	
Xenococcus	
Miscellaneous	
Acarina	
Anguillula	
Bosmina	
Canthocamptus	
Cyclops	
Daphnia	
Diaptomus	

ORGANISM	#/ml
Protozoa	
Actinophrys	
Amoeba	
Arcella	
Bursaria*	
Ceratium	
Cercomonas	
Chilomonas	
Chlamydomonas	
Codonella	
Cryptomonas*	
Difflugia	
Dinobryon*	32
Euglena	
Glenodinium*	
Gonium	
Halteria	
Mallomonas*	
Monas	
Peridinium*	
Synura*	
Trachelomonas	
Uroglenopsis*	
Vorticella	
* Odor Producing	

BLUE/ GREEN Total: 3,600/ml

Comments: Results are based on sample, as submitted to Northeast Laboratories, Inc. on: 8/07/2015

Approved by: Adam C. Drake

Laboratory Director

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Northeast Laboratories, Inc. # ANALYTICAL REPORT

AQUATIC CONTROL TECHNOLOGY
Attn: Mark Bellaud, President
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21 West Main St.
Spencer, MA 01562

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Report Date:	**8/06/2015**	**Date Sampled:**	**7/31/2015**
Laboratory ID#:	**1563149-03**	**Date Received:**	**8/04/2015**
		Date Tested:	**8/05/2015**

Sample Site: SURFACE WATER: WQ3A MAIN BASIN WEST

MICROSCOPIC EXAMINATION == Natural Units Count & Blue/Green Cell Counts

ORGANISM	#/ml
Diatomaceae	
Amphora	
Asterionella*	
Amphiprora	
Cocinodiscus	
Cyclotella*	180
Cymbella	
Diatoma*	
Frustulia	
Fragilaria	
Gyrosigma	
Gomphonema	
Melosira	
Meridion*	
Navicula	
Nitzschia	
Pleurosigma	
Stephanodiscus	
Surirella	
Synedra	
Tabellaria*	
Rotifera	
Anuraea	
Asplanchna	
Brachionus	
Conochilus	
Euchlanis	
Keratella	
Notholca	
Polyarthra	
Rotifer	
Synchaeta	
Kellicottia	

ORGANISM	#/ml
Chlorophyceae	
Actinastrum	
Arthrodesmus	
Ankistrodesmus	200
Chorella	
Closterium	
Coelastrum	
Cosmarium	
Dictyosphaerium*	
Eudorina*	
Elakatothrix	
Gleocystis	
Micrasterias	
Mougeotia	
Pandorina*	
Pediastrum	
Protococcus	
Quadrigula	
Scenedesmus	
Sphaerocystis	
Sphaerozosma	
Spirogyra	
Staurastrum	
Tetraspora	
Westella	
Ulothrix	
Volvox*	
Xanthidium	
Zygnema	

ORGANISM	Cell #/ml
Cyanophyceae	
Anabaena*	20,000
Anabaenopsis	
Aphanocapsa	
Aphanizomenon*	
Aphanothece	
Aulosira	
Arthrospira	
Chroococcus	
Clathrocystis*	
Coelosphaerium*	30,000
Cylindrospermum	
Cuspidothrix	
Dactylococcopsis	
Eucapsis	
Gleocapsa	
Galucocystis	
Gloeothece	
Gomphosphaeria	
Hydrocoleum	
Microcystis	
Merismopedia	
Nostoc	
Nodularia	
Oscillaria	
Pseudanabaena	
Spirulina	
Rivularia*	
Xenococcus	
Miscellaneous	
Acarina	
Anguillula	
Bosmina	
Canthocamptus	
Cyclops	
Daphnia	
Diaptomus	

ORGANISM	#/ml
Protozoa	
Actinophrys	
Amoeba	
Arcella	
Bursaria*	
Ceratium	
Cercomonas	
Chilomonas	
Chlamydomonas	
Codonella	
Cryptomonas*	
Difflugia	
Dinobryon*	120
Euglena	
Glenodinium*	
Gonium	
Halteria	
Mallomonas*	
Monas	
Peridinium*	
Synura*	
Trachelomonas	
Uroglenopsis*	
Vorticella	
* Odor Producing	

Blue-Green Cell Count: 50,000/ml

Comments: **Results are based on sample, as submitted to Northeast Laboratories, Inc. on: 8/04/2015**

Approved by: Adam C. Drake

Laboratory Director

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AQUATIC CONTROL TECHNOLOGY
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Report Date:	8/06/2015	Date Sampled:	7/31/2015
Laboratory ID#:	1563149-04	Date Received:	8/04/2015
		Date Tested:	8/05/2015

Sample Site: SURFACE WATER: WQ3B MAIN BASIN EAST

MICROSCOPIC EXAMINATION == Natural Units Count & Blue/Green Cell Counts

ORGANISM	#/ml
Diatomaceae	
Amphora	
Asterionella*	
Amphiprora	
Cocinodiscus	
Cyclotella*	
Cymbella	
Diatoma*	
Frustulia	
Fragilaria	
Gyrosigma	
Gomphonema	
Melosira	
Meridion*	
Navicula	
Nitzschia	
Pleurosigma	
Stephanodiscus	
Surirella	
Synedra	100
Tabellaria*	200
Rotifera	
Anuraea	
Asplanchna	
Brachionus	
Conochilus	
Euchlanis	
Keratella	
Notholca	
Polyarthra	
Rotifer	
Synchaeta	
Kellicottia	

ORGANISM	#/ml
Chlorophyceae	
Actinastrum	
Arthrodesmus	
Ankistrodesmus	
Chorella	
Closterium	
Coelastrum	200
Cosmarium	
Dictyosphaerium*	
Eudorina*	
Elakatothrix	
Gleocystis	
Micrasterias	
Mougeotia	
Pandorina*	
Pediastrum	
Protococcus	
Quadrigula	
Scenedesmus	240
Sphaerocystis	
Sphaerozosma	
Spirogyra	
Staurastrum	
Tetraspora	
Westella	
Ulothrix	
Volvox*	
Xanthidium	
Zygnema	

ORGANISM	Cell #/ml
Cyanophyceae	
Anabaena*	40,000
Anabaenopsis	
Aphanocapsa	
Aphanizomenon*	
Aphanothece	
Aulosira	
Arthrospira	
Chroococcus	
Clathrocystis*	
Coelosphaerium*	
Cylindrospermum	
Cuspidothrix	
Dactylococcopsis	
Eucapsis	
Gleocapsa	
Galucocystis	
Gloeothece	
Gomphosphaeria	
Hydrocoleum	
Microcystis	
Merismopedia	
Nostoc	
Nodularia	
Oscillaria	
Pseudanabaena	
Spirulina	
Rivularia*	
Xenococcus	
Miscellaneous	
Acarina	
Anguillula	
Bosmina	
Canthocamptus	
Cyclops	
Daphnia	
Diaptomus	

ORGANISM	#/ml
Protozoa	
Actinophrys	
Amoeba	
Arcella	
Bursaria*	
Ceratium	
Cercomonas	
Chilomonas	
Chlamydomonas	120
Codonella	
Cryptomonas*	
Difflugia	
Dinobryon*	220
Euglena	
Glenodinium*	
Gonium	
Halteria	
Mallomonas*	
Monas	
Peridinium*	
Synura*	
Trachelomonas	
Uroglenopsis*	
Vorticella	
* Odor Producing	

Blue-Green Cell Count: 40,000/ml

Comments: **Results are based on sample, as submitted to Northeast Laboratories, Inc. on: 8/04/2015**

Approved by: Adam C. Drake

Laboratory Director

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Northeast Laboratories, Inc.

ANALYTICAL REPORT

AQUATIC CONTROL TECHNOLOGY

Attn: Mark Bellaud, President
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Report Date:	8/06/2015	Date Sampled:	7/31/2015
Laboratory ID#:	1563149-01	Date Received:	8/04/2015
		Date Tested:	8/05/2015

Sample Site: SURFACE WATER: WQ4 OUTLET COVE

MICROSCOPIC EXAMINATION == Natural Units Count & Blue/Green Cell Counts

ORGANISM	#/ml
Diatomaceae	
Amphora	
Asterionella*	
Amphiprora	
Cocinodiscus	
Cyclotella*	
Cymbella	
Diatoma*	
Frustulia	
Fragilaria	
Gyrosigma	
Gomphonema	
Melosira	
Meridion*	
Navicula	
Nitzschia	
Pleurosigma	
Stephanodiscus	
Surirella	
Synedra	
Tabellaria*	
Rotifera	
Anuraea	
Asplanchna	
Brachionus	
Conochilus	
Euchlanis	
Keratella	
Notholca	
Polyarthra	
Rotifer	
Synchaeta	
Kellicottia	

ORGANISM	#/ml
Chlorophyceae	
Actinastrum	
Arthrodesmus	
Ankistrodesmus	
Chorella	
Closterium	
Coelastrum	
Cosmarium	
Dictyosphaerium*	
Eudorina*	
Elakatothrix	
Gleocystis	
Micrasterias	
Mougeotia	
Pandorina*	
Pediastrum	
Protococcus	
Quadrigula	
Scenedesmus	
Sphaerocystis	
Sphaerozosma	
Spirogyra	
Staurastrum	
Tetraspora	
Westella	
Ulothrix	
Volvox*	
Xanthidium	
Zygnema	

ORGANISM	Cell #/ml
Cyanophyceae	
Anabaena*	5,000
Anabaenopsis	
Aphanocapsa	
Aphanizomenon*	
Aphanothece	
Aulosira	
Arthrospira	
Chroococcus	
Clathrocystis*	
Coelosphaerium*	
Cylindrospermum	
Cuspidothrix	
Dactylococcopsis	
Eucapsis	
Gleocapsa	
Galucocystis	
Gloeothece	
Gomphosphaeria	
Hydrocoleum	
Microcystis	
Merismopedia	
Nostoc	
Nodularia	
Oscillaria	
Pseudanabaena	4,000
Spirulina	
Rivularia*	
Xenococcus	
Miscellaneous	
Acarina	
Anguillula	
Bosmina	
Canthocamptus	
Cyclops	
Daphnia	
Diaptomus	

ORGANISM	#/ml
Protozoa	
Actinophrys	
Amoeba	
Arcella	
Bursaria*	
Ceratium	
Cercomonas	
Chilomonas	
Chlamydomonas	120
Codonella	
Cryptomonas*	
Difflugia	
Dinobryon*	100
Euglena	
Glenodinium*	
Gonium	
Halteria	
Mallomonas*	
Monas	
Peridinium*	
Synura*	
Trachelomonas	
Uroglenopsis*	
Vorticella	
* Odor Producing	

Blue-Green Cell Count: 9,000/ml

Comments: Results are based on sample, as submitted to Northeast Laboratories, Inc. on: 8/04/2015

Approved by: Alan C. Hawkes

Laboratory Director

AQUATIC CONTROL TECHNOLOGY
Attn: Mark Bellaud, President
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21 West Main St.
Spencer, MA 01562

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Report Date:	8/06/2015	Date Sampled:	7/31/2015
Laboratory ID#:	1563149-05	Date Received:	8/04/2015
		Date Tested:	8/05/2015

Sample Site: SURFACE WATER: WQ5 AZALEA COVE

MICROSCOPIC EXAMINATION == Natural Units Count & Blue/Green Cell Counts

ORGANISM	#/ml
Diatomaceae	
Amphora	
Asterionella*	
Amphiprora	
Cocinodiscus	
Cyclotella*	400
Cymbella	
Diatoma*	
Frustulia	
Fragilaria	
Gyrosigma	
Gomphonema	
Melosira	
Meridion*	
Navicula	
Nitzschia	
Pleurosigma	
Stephanodiscus	
Surirella	
Synedra	200
Tabellaria*	
Rotifera	
Anuraea	
Asplanchna	
Brachionus	
Conochilus	
Euchlanis	
Keratella	
Notholca	
Polyarthra	
Rotifer	
Synchaeta	
Kellicottia	

ORGANISM	#/ml
Chlorophyceae	
Actinastrum	
Arthrodesmus	
Ankistrodesmus	260
Chorella	
Closterium	
Coelastrum	
Cosmarium	
Dictyosphaerium*	
Eudorina*	
Elakatothrix	
Gleocystis	
Micrasterias	
Mougeotia	
Pandorina*	
Pediastrum	
Protococcus	
Quadrigula	
Scenedesmus	
Sphaerocystis	
Sphaerozosma	
Spirogyra	
Staurastrum	
Tetraspora	
Westella	
Ulothrix	
Volvox*	
Xanthidium	
Zygnema	

ORGANISM	Cell #/ml
Cyanophyceae	
Anabaena*	
Anabaenopsis	
Aphanocapsa	
Aphanizomenon*	
Aphanothece	
Aulosira	
Arthrospira	
Chroococcus	
Clathrocystis*	
Coelosphaerium*	
Cylindrospermum	
Cuspidothrix	
Dactylococcopsis	
Eucapsis	
Gleocapsa	
Galucocystis	
Gloeothece	
Gomphosphaeria	
Hydrocoleum	
Microcystis	35,000
Merismopedia	
Nostoc	
Nodularia	
Oscillaria	
Pseudanabaena	
Spirulina	
Rivularia*	
Xenococcus	
Miscellaneous	
Acarina	
Anguillula	
Bosmina	
Canthocamptus	
Cyclops	
Daphnia	
Diaptomus	

ORGANISM	#/ml
Protozoa	
Actinophrys	
Amoeba	
Arcella	
Bursaria*	
Ceratium	200
Cercomonas	
Chilomonas	
Chlamydomonas	
Codonella	
Cryptomonas*	
Difflugia	
Dinobryon*	1000
Euglena	
Glenodinium*	
Gonium	
Halteria	
Mallomonas*	
Monas	
Peridinium*	
Synura*	
Trachelomonas	
Uroglenopsis*	
Vorticella	
* Odor Producing	

Blue-Green Cell Count: 35,000/ml

Comments: **Results are based on sample, as submitted to Northeast Laboratories, Inc. on: 8/04/2015**

Approved by: Adam C. Drake

Laboratory Director

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Northeast Laboratories, Inc. # ANALYTICAL REPORT

AQUATIC CONTROL TECHNOLOGY
Attn: Mark Bellaud, President
& Brittany Laginnas
21 West Main St.
Spencer, MA 01562

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Report Date:	**8/18/2015**	**Date Sampled:**	**8/10/2015**
Laboratory ID#:	**1563221-01**	**Date Received:**	**8/11/2015**
		Date Tested:	**8/14/2015**

Sample Site: SURFACE WATER: WQ1

MICROSCOPIC EXAMINATION == Natural Units Count & Blue/Green Cell Counts

ORGANISM	#/ml
Diatomaceae	
Amphora	
Asterionella*	
Amphiprora	
Cocinodiscus	
Cyclotella*	
Cymbella	
Diatoma*	
Frustulia	
Fragilaria	
Gyrosigma	
Gomphonema	
Melosira	
Meridion*	
Navicula	
Nitzschia	
Pleurosigma	
Stephanodiscus	
Surirella	
Synedra	
Tabellaria*	
Pinnularia	
Rotifera	
Anuraea	
Asplanchna	
Brachionus	
Conochilus	
Euchlanis	
Keratella	
Notholca	
Polyarthra	
Rotifer	
Synchaeta	
Kellicottia	

ORGANISM	#/ml
Chlorophyceae	
Actinastrum	
Arthrodesmus	
Ankistrodesmus	
Chorella	
Closterium	
Coelastrum	
Cosmarium	
Dictyosphaerium*	
Eudorina*	
Elakatothrix	
Gleocystis	
Micrasterias	
Mougeotia	
Pandorina*	
Pediastrum	
Protococcus	
Quadrigula	
Scenedesmus	
Sphaerocystis	
Sphaerozosma	
Spirogyra	
Staurastrum	160
Tetraspora	
Westella	
Ulothrix	
Volvox*	
Xanthidium	
Zygnema	

ORGANISM	Cell #/ml
Cyanophyceae	
Anabaena*	10,000
Anabaenopsis	
Aphanocapsa	
Aphanizomenon*	
Aphanothece	
Aulosira	
Arthrospira	
Chroococcus	3,200
Clathrocystis*	
Coelosphaerium*	
Cylindrospermum	
Cuspidothrix	
Dactylococcopsis	
Eucapsis	
Gleocapsa	
Galucocystis	
Gloeothece	
Gomphosphaeria	
Hydrocoleum	
Microcystis	
Merismopedia	
Nostoc	
Nodularia	
Oscillaria	
Pseudanabaena	
Spirulina	
Rivularia*	
Xenococcus	
Miscellaneous	
Acarina	
Anguillula	
Bosmina	
Canthocamptus	
Cyclops	
Daphnia	
Diaptomus	

ORGANISM	#/ml
Protozoa	
Actinophrys	
Amoeba	
Arcella	
Bursaria*	
Ceratium	
Cercomonas	
Chilomonas	
Chlamydomonas	
Codonella	
Cryptomonas*	
Difflugia	
Dinobryon*	
Euglena	
Glenodinium*	
Gonium	
Halteria	
Mallomonas*	
Monas	
Peridinium*	
Synura*	
Trachelomonas	
Uroglenopsis*	
Vorticella	
* Odor Producing	

BLUE/ GREEN Total: 13,000/ml

Comments: **Results are based on sample, as submitted to Northeast Laboratories, Inc. on: 8/11/2015**

Approved by:

Laboratory Director

AQUATIC CONTROL TECHNOLOGY
Attn: Mark Bellaud, President
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Report Date:	8/18/2015	Date Sampled:	8/10/2015
Laboratory ID#:	1563221-02	Date Received:	8/11/2015
		Date Tested:	8/14/2015

Sample Site: SURFACE WATER: WQ2

MICROSCOPIC EXAMINATION == Natural Units Count & Blue/Green Cell Counts

ORGANISM	#/ml
Diatomaceae	
Amphora	
Asterionella*	
Amphiprora	
Cocinodiscus	
Cyclotella*	
Cymbella	
Diatoma*	
Frustulia	
Fragilaria	
Gyrosigma	
Gomphonema	
Melosira	
Meridion*	
Navicula	
Nitzschia	
Pleurosigma	
Stephanodiscus	
Surirella	
Synedra	
Tabellaria*	
Pinnularia	
Rotifera	
Anuraea	
Asplanchna	
Brachionus	
Conochilus	
Euchlanis	
Keratella	
Notholca	
Polyarthra	
Rotifer	
Synchaeta	
Kellicottia	

ORGANISM	#/ml
Chlorophyceae	
Actinastrum	
Arthrodesmus	
Ankistrodesmus	
Chorella	
Closterium	
Coelastrum	
Cosmarium	120
Dictyosphaerium*	
Eudorina*	
Elakatothrix	
Gleocystis	
Micrasterias	
Mougeotia	
Pandorina*	
Pediastrum	
Protococcus	
Quadrigula	
Scenedesmus	
Sphaerocystis	
Sphaerozosma	
Spirogyra	
Staurastrum	
Tetraspora	
Westella	
Ulothrix	
Volvox*	
Xanthidium	
Zygnema	

ORGANISM	Cell #/ml
Cyanophyceae	
Anabaena*	8,000
Anabaenopsis	
Aphanocapsa	
Aphanizomenon*	
Aphanothece	
Aulosira	
Arthrospira	
Chroococcus	
Clathrocystis*	
Coelosphaerium*	5,000
Cylindrospermum	
Cuspidothrix	
Dactylococcopsis	
Eucapsis	
Gleocapsa	
Galucocystis	
Gloeothece	
Gomphosphaeria	
Hydrocoleum	
Microcystis	62,000
Merismopedia	
Nostoc	
Nodularia	
Oscillaria	
Pseudanabaena	2,400
Spirulina	
Rivularia*	
Xenococcus	
Miscellaneous	
Acarina	
Anguillula	
Bosmina	
Canthocamptus	
Cyclops	
Daphnia	
Diaptomus	

ORGANISM	#/ml
Protozoa	
Actinophrys	
Amoeba	
Arcella	
Bursaria*	
Ceratium	
Cercomonas	
Chilomonas	
Chlamydomonas	300
Codonella	
Cryptomonas*	
Difflugia	
Dinobryon*	
Euglena	100
Glenodinium*	
Gonium	
Halteria	
Mallomonas*	
Monas	
Peridinium*	
Synura*	
Trachelomonas	
Uroglenopsis*	
Vorticella	
* Odor Producing	

BLUE/ GREEN Total: 77,000/ml

Comments: **Results are based on sample, as submitted to Northeast Laboratories, Inc. on: 8/11/2015**

Approved by: Laboratory Director

AQUATIC CONTROL TECHNOLOGY
Attn: Mark Bellaud, President
& Brittany Laginnas
21 West Main St.
Spencer, MA 01562

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Report Date:	8/18/2015	**Date Sampled:**	8/10/2015
Laboratory ID#:	1563221-03	**Date Received:**	8/11/2015
		Date Tested:	8/14/2015

Sample Site: SURFACE WATER: WQ3

MICROSCOPIC EXAMINATION == Natural Units Count & Blue/Green Cell Counts

ORGANISM	#/ml
Diatomaceae	
Amphora	
Asterionella*	
Amphiprora	
Cocinodiscus	
Cyclotella*	
Cymbella	
Diatoma*	
Frustulia	
Fragilaria	
Gyrosigma	
Gomphonema	
Melosira	
Meridion*	
Navicula	
Nitzschia	
Pleurosigma	
Stephanodiscus	
Surirella	
Synedra	
Tabellaria*	100
Pinnularia	
Rotifera	
Anuraea	
Asplanchna	
Brachionus	
Conochilus	
Euchlanis	
Keratella	
Notholca	
Polyarthra	
Rotifer	
Synchaeta	
Kellicottia	

ORGANISM	#/ml
Chlorophyceae	
Actinastrum	
Arthrodesmus	
Ankistrodesmus	300
Chorella	
Closterium	
Coelastrum	
Cosmarium	
Dictyosphaerium*	
Eudorina*	
Elakatothrix	
Gleocystis	
Micrasterias	
Mougeotia	
Pandorina*	
Pediastrum	
Protococcus	
Quadrigula	
Scenedesmus	
Sphaerocystis	
Sphaerozosma	
Spirogyra	
Staurastrum	280
Tetraspora	
Westella	
Ulothrix	
Volvox*	
Xanthidium	
Zygnema	

ORGANISM	Cell #/ml
Cyanophyceae	
Anabaena*	2,500
Anabaenopsis	
Aphanocapsa	
Aphanizomenon*	
Aphanothece	
Aulosira	
Arthrospira	
Chroococcus	
Clathrocystis*	
Coelosphaerium*	
Cylindrospermum	
Cuspidothrix	
Dactylococcopsis	
Eucapsis	
Gleocapsa	
Galucocystis	
Gloeothece	
Gomphosphaeria	
Hydrocoleum	
Microcystis	
Merismopedia	
Nostoc	
Nodularia	
Oscillaria	
Pseudanabaena	
Spirulina	
Rivularia*	
Xenococcus	
Miscellaneous	
Acarina	
Anguillula	
Bosmina	
Canthocamptus	
Cyclops	
Daphnia	
Diaptomus	

ORGANISM	#/ml
Protozoa	
Actinophrys	
Amoeba	
Arcella	
Bursaria*	
Ceratium	
Cercomonas	
Chilomonas	
Chlamydomonas	500
Codonella	
Cryptomonas*	
Difflugia	
Dinobryon*	240
Euglena	
Glenodinium*	
Gonium	
Halteria	
Mallomonas*	
Monas	
Peridinium*	
Synura*	
Trachelomonas	
Uroglenopsis*	
Vorticella	
* Odor Producing	

BLUE/ GREEN Total: 2,500/ml

Comments: **Results are based on sample, as submitted to Northeast Laboratories, Inc. on: 8/11/2015**

Approved by: Adam C. Shaw

Laboratory Director

AQUATIC CONTROL TECHNOLOGY
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Report Date:	8/18/2015	Date Sampled:	8/10/2015
Laboratory ID#:	1563221-04	Date Received:	8/11/2015
		Date Tested:	8/14/2015

Sample Site: SURFACE WATER: WQ4

MICROSCOPIC EXAMINATION == Natural Units Count & Blue/Green Cell Counts

ORGANISM	#/ml
Diatomaceae	
Amphora	
Asterionella*	
Amphiprora	
Cocinodiscus	
Cyclotella*	120
Cymbella	
Diatoma*	
Frustulia	
Fragilaria	
Gyrosigma	
Gomphonema	
Melosira	
Meridion*	
Navicula	
Nitzschia	
Pleurosigma	
Stephanodiscus	
Surirella	
Synedra	40
Tabellaria*	200
Pinnularia	
Rotifera	
Anuraea	
Asplanchna	
Brachionus	
Conochilus	
Euchlanis	
Keratella	
Notholca	
Polyarthra	
Rotifer	
Synchaeta	
Kellicottia	

ORGANISM	#/ml
Chlorophyceae	
Actinastrum	
Arthrodesmus	
Ankistrodesmus	
Chorella	
Closterium	
Coelastrum	140
Cosmarium	
Dictyosphaerium*	
Eudorina*	
Elakatothrix	
Gleocystis	
Micrasterias	
Mougeotia	
Pandorina*	
Pediastrum	
Protococcus	
Quadrigula	
Scenedesmus	
Sphaerocystis	
Sphaerozosma	
Spirogyra	
Staurastrum	
Tetraspora	
Westella	
Ulothrix	
Volvox*	
Xanthidium	
Zygnema	

ORGANISM	Cell #/ml
Cyanophyceae	
Anabaena*	
Anabaenopsis	
Aphanocapsa	
Aphanizomenon*	
Aphanothece	
Aulosira	
Arthrospira	
Chroococcus	
Clathrocystis*	
Coelosphaerium*	
Cylindrospermum	
Cuspidothrix	
Dactylococcopsis	
Eucapsis	
Gleocapsa	
Galucocystis	
Gloeothece	
Gomphosphaeria	
Hydrocoleum	
Microcystis	
Merismopedia	
Nostoc	
Nodularia	
Oscillaria	
Pseudanabaena	
Spirulina	
Rivularia*	
Xenococcus	
Miscellaneous	
Acarina	
Anguillula	
Bosmina	
Canthocamptus	
Cyclops	
Daphnia	
Diaptomus	

ORGANISM	#/ml
Protozoa	
Actinophrys	
Amoeba	
Arcella	
Bursaria*	
Ceratium	80
Cercomonas	
Chilomonas	
Chlamydomonas	
Codonella	
Cryptomonas*	
Difflugia	
Dinobryon*	200
Euglena	
Glenodinium*	
Gonium	
Halteria	
Mallomonas*	300
Monas	
Peridinium*	
Synura*	
Trachelomonas	
Uroglenopsis*	
Vorticella	
* Odor Producing	

BLUE/ GREEN Total: 0/ml

Comments: Results are based on sample, as submitted to Northeast Laboratories, Inc. on: 8/11/2015

Approved by: Laboratory Director

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Report Date:	8/18/2015	**Date Sampled:**	8/10/2015
Laboratory ID#:	1563221-05	**Date Received:**	8/11/2015
		Date Tested:	8/14/2015

Sample Site: SURFACE WATER: WQ5

MICROSCOPIC EXAMINATION == Natural Units Count & Blue/Green Cell Counts

ORGANISM	#/ml
Diatomaceae	
Amphora	
Asterionella*	100
Amphiprora	
Cocinodiscus	
Cyclotella*	500
Cymbella	
Diatoma*	
Frustulia	
Fragilaria	
Gyrosigma	
Gomphonema	
Melosira	
Meridion*	
Navicula	
Nitzschia	
Pleurosigma	
Stephanodiscus	
Surirella	
Synedra	
Tabellaria*	
Pinnularia	
Rotifera	
Anuraea	
Asplanchna	
Brachionus	
Conochilus	
Euchlanis	
Keratella	
Notholca	
Polyarthra	
Rotifer	
Synchaeta	
Kellicottia	

ORGANISM	#/ml
Chlorophyceae	
Actinastrum	
Arthrodesmus	
Ankistrodesmus	
Chorella	
Closterium	
Coelastrum	300
Cosmarium	220
Dictyosphaerium*	
Eudorina*	
Elakatothrix	
Gleocystis	
Micrasterias	
Mougeotia	
Pandorina*	
Pediastrum	
Protococcus	
Quadrigula	
Scenedesmus	
Sphaerocystis	
Sphaerozosma	
Spirogyra	
Staurastrum	
Tetraspora	
Westella	
Ulothrix	
Volvox*	
Xanthidium	
Zygnema	

ORGANISM	Cell #/ml
Cyanophyceae	
Anabaena*	
Anabaenopsis	
Aphanocapsa	
Aphanizomenon*	
Aphanothece	
Aulosira	
Arthrospira	
Chroococcus	
Clathrocystis*	
Coelosphaerium*	
Cylindrospermum	
Cuspidothrix	
Dactylococcopsis	
Eucapsis	
Gleocapsa	
Galucocystis	
Gloeothece	
Gomphosphaeria	
Hydrocoleum	
Microcystis	
Merismopedia	
Nostoc	
Nodularia	
Oscillaria	
Pseudanabaena	
Spirulina	
Rivularia*	
Xenococcus	
Miscellaneous	
Acarina	
Anguillula	
Bosmina	
Canthocamptus	
Cyclops	
Daphnia	
Diaptomus	

ORGANISM	#/ml
Protozoa	
Actinophrys	
Amoeba	
Arcella	
Bursaria*	
Ceratium	
Cercomonas	
Chilomonas	
Chlamydomonas	
Codonella	
Cryptomonas*	
Difflugia	
Dinobryon*	380
Euglena	
Glenodinium*	
Gonium	
Halteria	
Mallomonas*	
Monas	
Peridinium*	
Synura*	
Trachelomonas	
Uroglenopsis*	
Vorticella	
* Odor Producing	

BLUE/ GREEN Total: 0/ml

Comments: **Results are based on sample, as submitted to Northeast Laboratories, Inc. on: 8/11/2015**

Approved by: Adam C. Shaw

Laboratory Director

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Report Date:	8/18/2015	Date Sampled:	8/10/2015
Laboratory ID#:	1563221-06	Date Received:	8/11/2015
		Date Tested:	8/14/2015

Sample Site: SURFACE WATER: WQ6

MICROSCOPIC EXAMINATION == Natural Units Count & Blue/Green Cell Counts

ORGANISM	#/ml
Diatomaceae	
Amphora	
Asterionella*	
Amphiprora	
Cocinodiscus	
Cyclotella*	360
Cymbella	
Diatoma*	
Frustulia	
Fragilaria	
Gyrosigma	
Gomphonema	
Melosira	
Meridion*	
Navicula	
Nitzschia	
Pleurosigma	
Stephanodiscus	
Surirella	
Synedra	
Tabellaria*	660
Pinnularia	180
Rotifera	
Anuraea	
Asplanchna	
Brachionus	
Conochilus	
Euchlanis	
Keratella	
Notholca	
Polyarthra	
Rotifer	
Synchaeta	
Kellicottia	

ORGANISM	#/ml
Chlorophyceae	
Actinastrum	
Arthrodesmus	
Ankistrodesmus	2,400
Chorella	
Closterium	360
Coelastrum	
Cosmarium	
Dictyosphaerium*	
Eudorina*	
Elakatothrix	
Gleocystis	
Micrasterias	
Mougeotia	
Pandorina*	
Pediastrum	
Protococcus	
Quadrigula	
Scenedesmus	
Sphaerocystis	280
Sphaerozosma	
Spirogyra	
Staurastrum	
Tetraspora	
Westella	
Ulothrix	
Volvox*	
Xanthidium	
Zygnema	

ORGANISM	Cell #/ml
Cyanophyceae	
Anabaena*	
Anabaenopsis	
Aphanocapsa	
Aphanizomenon*	
Aphanothece	
Aulosira	
Arthrospira	
Chroococcus	
Clathrocystis*	
Coelosphaerium*	
Cylindrospermum	
Cuspidothrix	
Dactylococcopsis	
Eucapsis	
Gleocapsa	
Galucocystis	
Gloeothece	
Gomphosphaeria	9,600
Hydrocoleum	
Microcystis	
Merismopedia	
Nostoc	
Nodularia	
Oscillaria	
Pseudanabaena	
Spirulina	
Rivularia*	
Xenococcus	
Miscellaneous	
Acarina	
Anguillula	
Bosmina	
Canthocamptus	
Cyclops	
Daphnia	
Diaptomus	

ORGANISM	#/ml
Protozoa	
Actinophrys	
Amoeba	
Arcella	
Bursaria*	
Ceratium	
Cercomonas	
Chilomonas	
Chlamydomonas	
Codonella	
Cryptomonas*	
Difflugia	
Dinobryon*	800
Euglena	
Glenodinium*	
Gonium	
Halteria	
Mallomonas*	400
Monas	
Peridinium*	
Synura*	
Trachelomonas	
Uroglenopsis*	
Vorticella	
* Odor Producing	

BLUE/ GREEN Total: 9,600/ml

Comments: **Results are based on sample, as submitted to Northeast Laboratories, Inc. on: 8/11/2015**

Approved by: Laboratory Director