



AQUATIC CONSULTING & TESTING, INC.

1525 W. University Drive, Suite 106
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Lic. No. AZ0003

LABORATORY REPORT

Client: White Mountain Lakes
2015 Silver Creek Dr
Show Low, AZ 85901

Date Submitted: 08/05/22
Date Reported: 08/26/22

Attn: Mark Homberges

Project: White Mountain Lakes

RESULTS

Client ID: Basic Lake Water
ACT Lab No.: CE06238

Sample Type: Surface Water
Sample Time: 08/04/22 13:00

<u>Parameter</u>	<u>Analysis Date</u>		<u>Method No.</u>	<u>Result</u>	<u>Unit</u>
	<u>Start</u>	<u>End</u>			
Algae Count	08/19/22	08/19/22	SM 10200 F	See Attached	cells/mL
Algae Identification	08/19/22	08/19/22		See Attached	

Reviewed by:

Frederick A. Amalfi, Ph.D.
Laboratory Director

ALGAE IDENTIFICATION

AC&T Lab No.	CE06238	Date Collected	08/04/22
Client I.D.	White Mountain Lakes	Collected By	Client

Divisions: bac=Bacillariophyta; chl=Chlorophyta; cry=Chrysophyta; cyn=Cyanophyta; eug=Euglenophyta; hap=Haptophyta; pyr=Pyrrhophyta
Forms: u=unicell; c=colony; f=filament; g= flagellate

Genus	Div.-Form	Rel. Count	Total per mL	Comp.	Genus	Div.-Form	Rel. Count	Total per mL.	Comp
<i>Achnanthes</i>	bac-u				<i>Microcystis</i>	cyn-c	25	920	29.41%
<i>Anabaena</i>	cyn-f				<i>Microspora</i>	chl-f			
<i>Ankistrodesmus</i>	chl-u				<i>Mougeotia</i>	chl-f			
<i>Aphanocapsa</i>	cyn-c				<i>Navicula</i>	bac-u			
<i>Asterionella</i>	bac-c				<i>Nitzschia</i>	bac-u			
<i>Botryococcus</i>	cry-c				<i>Oocystis</i>	chl-c	4	147	4.71%
<i>Carteria</i>	chl-ug				<i>Oscillatoria</i>	cyn-f			
<i>Ceratium</i>	pyr-ug				<i>Pandorina</i>	chl-cg			
<i>Chaetoceros</i>	bac-c				<i>Pediastrum</i>	chl-c			
<i>Chlamydomonas</i>	chl-ug	14	515	16.47%	<i>Peridinium</i>	pyr-ug			
<i>Chlorella</i>	chl-u	1	37	1.18%	<i>Phacotus</i>	chl-ug			
<i>Chlorococcum</i>	chl-c				<i>Phacus</i>	chl-ug			
<i>Chroococcus</i>	cyn-c				<i>Pinnularia</i>	bac-u			
<i>Chroomonas</i>	crp-ug	31	1141	36.47%	<i>Planktosphaeria</i>	chl-c			
<i>Closterium</i>	chl-u	1	37	1.18%	<i>Prymnesium</i>	hap-ug			
<i>Cocconeis</i>	bac-u				<i>Rhizoclonium</i>	chl-f			
<i>Coelastrum</i>	chl-c				<i>Rhoicosphenia</i>	bac-u			
<i>Cosmarium</i>	chl-u				<i>Rhopalodia</i>	bac-u			
<i>Cosmocladium</i>	chl-c				<i>Scenedesmus</i>	chl-c			
<i>Crucigenia</i>	chl-c				<i>Schoederia</i>	chl-u	1	37	1.18%
<i>Cryptomonas</i>	crp-ug	1	37	1.18%	<i>Selanastrum</i>	chl-u			
<i>Cyclotella</i>	bac-u	1	37	1.18%	<i>Sphaerocystis</i>	chl-c			
<i>Cylindrospermopsis</i>	cyn-f	2	74	2.35%	<i>Spondylumorum</i>	chl-c			
<i>Diatoma</i>	bac-u				<i>Spirogyra</i>	chl-f			
<i>Dinobryon</i>	cry-c				<i>Spirotaenia</i>	chl-u			
<i>Dunaliella</i>	chl-ug				<i>Stephanodiscus</i>	bac-u			
<i>Epithemia</i>	bac-u				<i>Stigeoclonium</i>	chl-f			
<i>Euglena</i>	eug-ug				<i>Surirella</i>	bac-u			
<i>Fragilaria</i>	bac-u				<i>Synechococcus</i>	cyn-u			
<i>Frustulia</i>	bac-u				<i>Synechocystis</i>	cyn-c			
<i>Glenodinium</i>	pyr-ug				<i>Synedra</i>	bac-u			
<i>Golenkinia</i>	chl-c	1	37	1.18%	<i>Synura</i>	cry-cg			
<i>Gomphonema</i>	bac-u				<i>Tetraedron</i>	chl-u			
<i>Gonium</i>	chl-cg				<i>Tetrastrum</i>	chl-c			
<i>Gyrosigma</i>	bac-u				<i>Trachelomonas</i>	eug-ug	3	110	3.53%
<i>Holopedium</i>	cyn-c				<i>Vaucheria</i>	chl-f			
<i>Hydrodictyon</i>	chl-c				<i>Volvox</i>	chl-cg			
<i>Lobomonas</i>	chl-ug				<i>Zygnema</i>	chl-f			
<i>Mastigloia</i>	bac-u								
<i>Meridion</i>	bac-u								
<i>Mesotaenium</i>	chl-u								

check 100.00%

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cells/mL	
Total count	3.13E+03
Blue-green algae	9.94E+02



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AQUATIC CONSULTING & TESTING, INC. ALGAE IDENTIFICATION PROCEDURES

Portions of the algae samples were refrigerated and either examined within 48 hours or preserved upon receipt with Lugol's Iodine Solution. As needed, additional portions were acid treated and burn mounted to accommodate diatom identifications. Golden algae screens were analyzed same day following concentration by centrifugation. Organism identifications were made using a Nikon Diaphot inverted phase/contrast microscope. If required, samples were concentrated using an Utermohl settling chamber. Organism densities were computed using the settling chamber, concentration factor, and micrometer-measured sample area or using Sedgwick-Rafter counting cells. Algae identifications were made with the aid of the following taxonomic keys:

Baker, A.L. *Algae, PS (Protista), Cyanobacteria, and Other Aquatic Objects*. University of New Hampshire PhycoKey. <http://www.cfb.unh.edu/phycokey/phycokey.htm>.

Benson, C.E. and S.R. Rutherford. 1975. *The Algal Flora of Huntington Canyon, Utah, U.S.A.* A.R. Gantner Verlag, Germany. 177 pp.

Bold, H. and M.J. Wynne. 1985. *Introduction to the Algae*. Prentice Hall, Inc., Englewood, Cliffs, NJ. 720 pp.

Chapman, V.J. 1964. *The Algae*. St. Martin's Press, New York, NY. 472 pp.

Crawford, R.M., D.G. Mann, and F.E. Round. 1990. *The Diatoms: Biology and Morphology of the Genera*. Cambridge University Press, Cambridge, England. 747 pp.

Czarnecki, D.B. and D.W. Blinn. 1978. *The Diatoms of the Colorado River*. Strauss and Kramer. 181 pp.

Dillard, G.E. 1989. *Freshwater Algae of the Southeastern United States*. Vol. 1-6. J. Cramer, Berlin, Germany. 163 pp.

Dodd, J.F. 1987. *Diatoms*. Southern Illinois Press, Carbondale, IL. 477 pp.

Hein, M.K. 1990. *Flora of Adak Island, Alaska: Bacillariophyceae (diatoms)*. J. Cramer. Stuttgart. 133 pp.

Patrick, R. and C.W. Reimer. 1966. *The Diatoms of the United States*. Monographs ANS No. 13, Vol. 1. Academy of Natural Sciences, Philadelphia, PA.

Patrick, R. and C.W. Reimer. 1975. *The Diatoms of the United States*. Monographs ANS No. 13, Vol. 2. Academy of Natural Sciences, Philadelphia, PA.

Prescott, G.W. 1978. *How to Know the Freshwater Algae*. William C. Brown Publishers, Dubuque, IA. 348 pp.

Prescott, G.W. 1962. *Algae of the Western Great Lakes*. William C. Brown Publishers, Dubuque, IA. 977 pp.

Rivers, I. 1978. *Algae of the Western Great Basin*. Desert Research Institute, Pub. 50008. University of Nevada, Las Vegas, NV. 390 pp.

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Spaulding, S.A., Lubinski, D.J. and Potapova, M. (2010). *Diatoms of the United States*. <http://westerndiatoms.colorado.edu>

Sze, P. 1986. *The Biology of the Algae*. William C. Brown Publishers, Dubuque, IA. 251 pp.

Tilden, J. *The Myxophyceae of North America*. Verlag Von J. Cramer, New York, NY. 328 pp.

