

Mt. Kemble Lake

Solitude Annual Reports - 2011 thru 2021

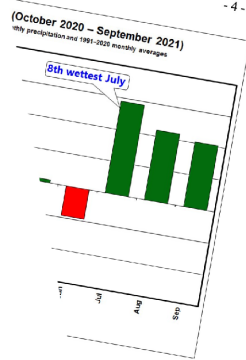
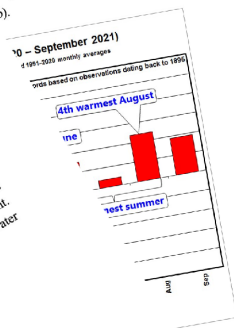
Mount Kemble Lake
2021 Year End Water Quality Summary
Mount Kemble Lake Association, Inc.
Morristown, NJ

Lake Management Water Quality
Station, New Jersey. This report
summarizes phytoplankton surveys, and
provides recommendations for Mount
Kemble Lake management strategies in the 2022
field data, reference guides,

Common Name
Curly-leaf Pondweed
Spiny Pondweed
Duckweed
Water Hyacinth

four (4) different
invasive species
in the water

when it came to lake management. In terms of
the treatment season and May being the only two months
the warmest season endured the 6th warmest
increases in aquatic plant and algae growth.
support warmer than average temperatures.
but the year was above average; however,
and tropical systems that contained heavy
and dropped record amounts of rainfall in
the quantities of nutrients, which allow
the warm temperatures experienced
(table).



through September
perform *in situ*
water quality analysis
for the collection
of each survey,
the season,
water control
One (1)
page
table, and

secured limnological
data, and total
phosphorus and lake
water quality data
for: ammonia,
chlorophyll
a, and phytoplankton
community
structure
data results.

Wed	Target Species
	Curly-leaf Pondweed
	Unicellular algae
	Unicellular algae
	Unicellular algae

Year	6/3/21	7/21/21	8/25/21	Limits
Temp	19.1	23.6	24.0	Na
DO	8.65	11.24	11.24	Na
Chlorophyll a	88	86	10.3	Na
Chlorophyll b	7.0	12.0	0.3	Na
Chlorophyll c	0.09	0.06	0.08	Na
Chlorophyll total	0.26	0.18	0.18	Na
NO3	0.05	0.06	0.08	Na
NO2	0.05	0.06	0.08	Na
NOx	0.10	0.12	0.16	Na
TP	ND	ND	ND	0.02

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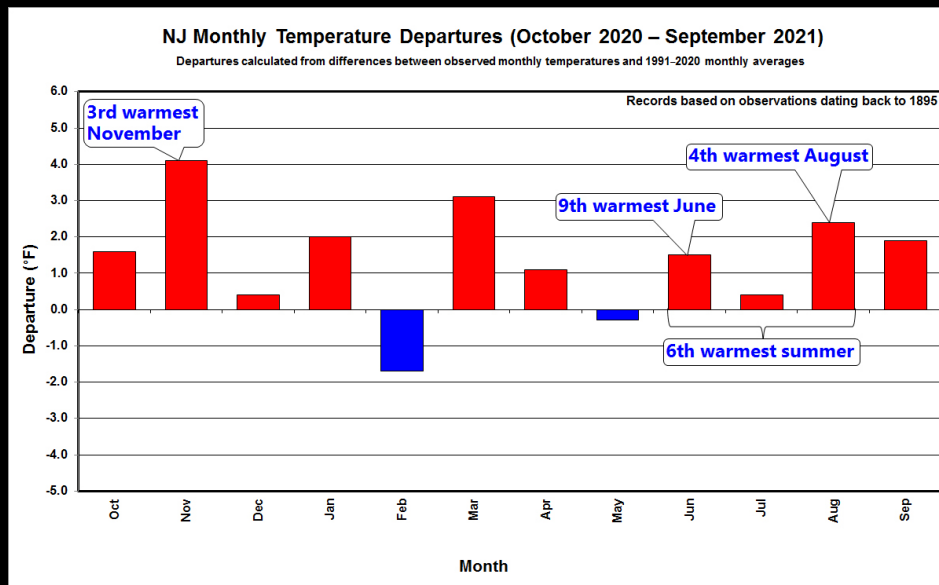
Year	Limits
Temp	0.05
DO	0.02

Annual Report Format

- Introduction
- Weather Discussion
- Lake Management
- Water Quality Monitoring Program
- Plankton Surveys
 - Phytoplankton & Zooplankton
- Discussion

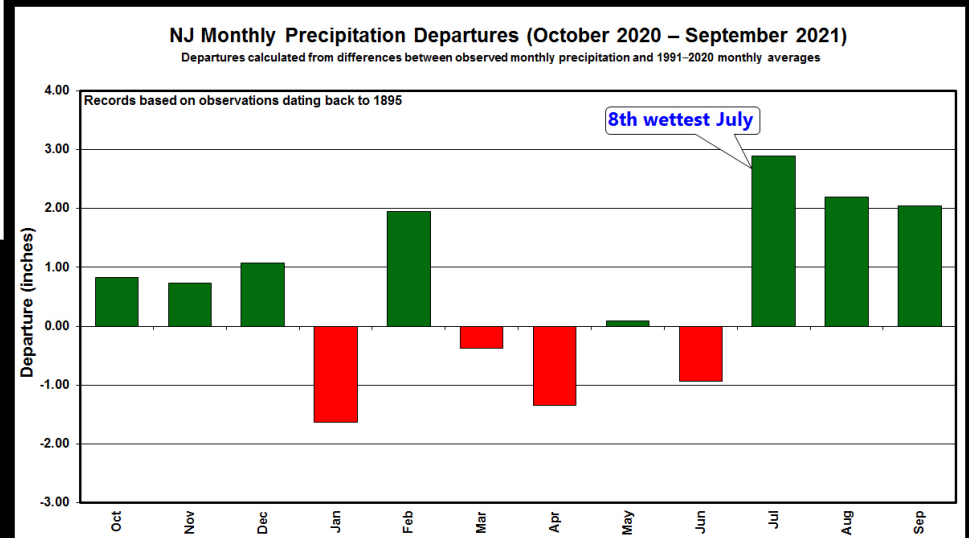
Weather

Temperature and Rainfall



Warm

Dry/Wet



Lake Management Treatments

Date	Service Performed	Acres Treated	Target Species
5/20/2021	Tribune	4	Curly-leaf Pondweed
6/17/2021	Copper Sulfate	6.5	Unicellular algae
7/8/2021	Copper Sulfate	6.5	Unicellular algae
7/22/2021	Copper Sulfate	6.5	Unicellular algae

Table 2: Mount Kemble Lake 2021 Treatment Log

4 visits; 4 Ac Weeds and 19.5 Ac Algae

Water Quality Monitoring Program

Water Chemistry Data

WATER QUALITY MONITORING STATIONS



Station	Latitude	Longitude
A	40.74484570	-74.52300800
B	40.74532720	-74.52228910
C	40.74604280	-74.52134310
D	40.74632930	-74.52091710
E	40.74042750	-74.52600700

Mount Kemble Lake
Harding Township, NJ
April 18, 2019

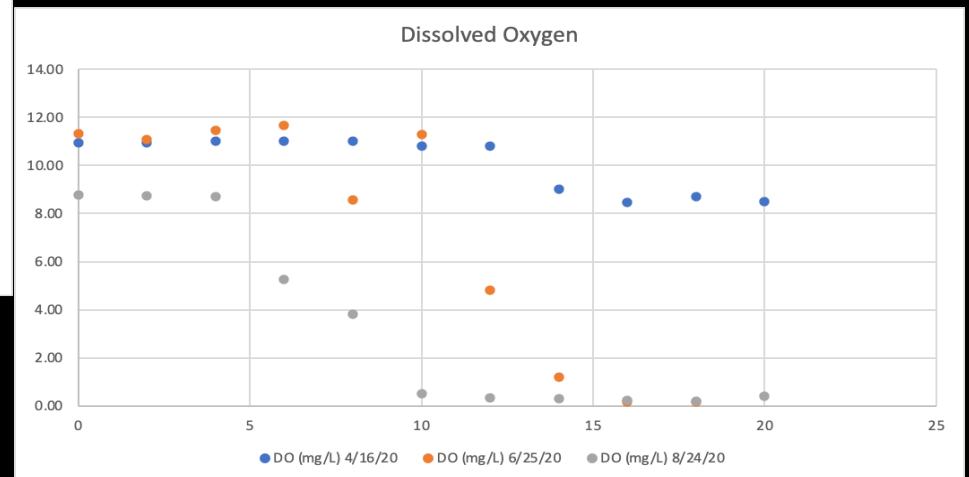
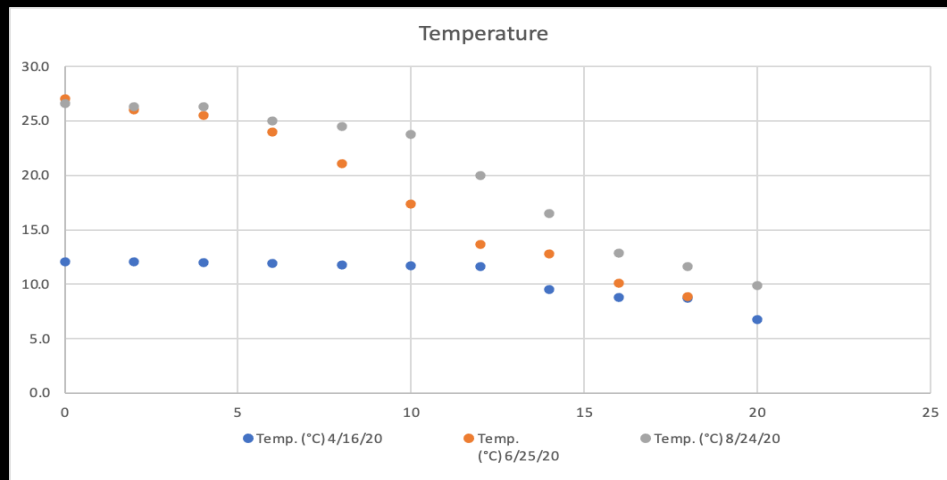
Mount Kemble Lake Water Quality Results- Surface					
Parameter	Units	4/20/21	6/3/21	8/25/21	Limits
Temperature	°C	13.7	19.1	25.6	NA
Dissolved Oxygen	mg/L	11.02	8.60	11.24	<4.0
pH	SU	8.0	8.0	8.5	9
Alkalinity	mg/L	72	88	80	NA
Total Hardness	mg/L	100	140	120	NA
Transparency	feet	12 +	7.0	6.0	<4'
Ammonia	mg/L	0.289	0.09	0.086	0.3
Conductivity	umhos/cm	320	330	280	1500
Nitrate	mg/L	0.959	0.325	ND	0.3
Total Phosphorous	mg/L	0.011	0.033	0.058	0.03
Total Suspended Solids	mg/L	ND	ND	ND	25

Table 3. 2021 Mount Kemble Lake Water Quality Results

Results highlighted in red identify those that are outside the acceptable lake management limit.

Depth Profiles

Temperature and Dissolved Oxygen

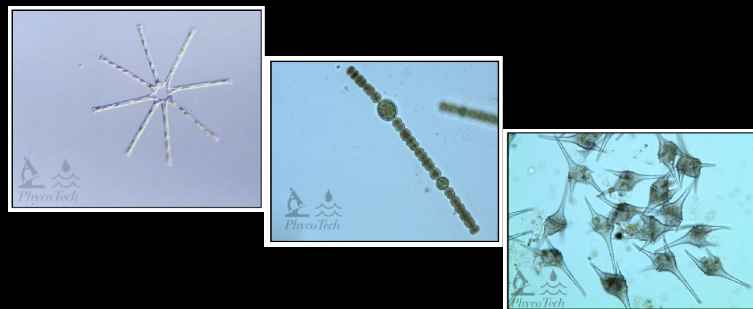


Plankton Surveys

Phytoplankton & Zooplankton

Algal Group			
% Abundance	4/20/21`	6/3/21	8/25/21
Diatoms	68.6%	6.3%	8.6%
Golden Algae	19.6%	74.6%	
Protozoa			
Green Algae	9.8%	7.9%	11.4%
Blue-green Algae	2.0%	3.2%	
Dinoflagellates		4.0%	80.0%
Euglenoids			
Total Orgs. / mL	510	630	2100

Table 14. Mt. Kemble Phytoplankton Assemblage Lake Station



Zooplankton Group	4/20/2021	6/3/2021	8/25/2021
Rotifers	43.8%	65.3%	74.6%
Cladocera	25.9%	26.3%	1.5%
Copepoda	30.3%	8.3%	29.3%
Total Zooplankton (Orgs. / mL)	896	349	668

Table 16. Mount Kemble Lake 2021 Zooplankton Group Percent Abundance Distribution



Trichocerca.

