TROPHIC CLASSIFICATION OF N.H. LAKES AND PONDS

NAME Clark Pond TOWN New London CO Merrimack RIVER BASIN Merrimack

I. POTENTIAL FOR NUTRIENT ENRICHMENT

Latitude: 43°24'N Longitude: 71°59'W

A. NATURAL PHYSICAL FACTORS

1. Area (ha) 12.75
2. Max. depth (m) 4.3
3. Mean depth (m) 2.4
4. Elevation (ft) 1,090
5. Shore length (m) 1,400
6. Volume (m^3) 312,500
7. Volume/shore length 223.1
8. % Stratification 0%
9. Watershed area (ha) 579.3
10. Watershed area / Volume 19
11. Bottom slope 1.1
12. Shore config. 1.10
13. Flushing rate 10.8
14. Water renewal time 0.9
15. Drainage density -
16. % Watershed ponded -
17. Phos. retent. coeff. R 0.03

B. CULTURAL FACTORS

1. % Shore developed
2. Number nearshore homes
3. # nearshore homes/mile shore
4. Volume lake/# nearshore homes
5. Estimate of non-point Tot-P loading:
   a. Land Use
   b. Precipitation
   c. Subsurface disposal
   d. Other

II. INDICATORS OF TROPHIC CONDITION

(mg/l unless indicated otherwise)

A. Winter Data:

Date 26 January 1982 Weather Very cold

Depth(m)	1.0	3.0
Alkalinity	6.0	6.8
PO_4-P	0.001	0.001
Total-P	0.010	0.009
NO_2+NO_3-N	0.12	<0.05
Kjeld-N	0.42	0.42
Total-N	0.54	-
Tot-N/Tot-P	54	-
NO_2+NO_3-N/PO_4-P	120	-

Bottom: Depth 3.5m D.O. 5.3 % Sat. 39.8

% Organic matter sediment -

Dom. Phytopl. 1. Asterionella - 65%
2. Ceratium - 25%

Dom. Zoopl. 1. Keratella - 35%
2. Bosmina - 30%

B. Summer Data:

Date 6 August 1981 Weather Dark, overcast

Depth (m)	1.0	3.0	
pH (units)	6.2	6.2	
Alkalinity	4.8	5.5	
PO_4-P	<0.001	<0.001	
Total-P	0.007	0.009	
NO_2+NO_3-N	<0.05	<0.05	
Kjeld-N	0.42	0.46	
Total Residue	-	-	
Color (units)	35	35	
Turb. (NTU)	1.1	1.4	
Spec. Conduct. (μMhos/cm)	90	93	
Tot. Org. Carbon	-	-	
Chloride	21	21	
Mg	0.73	-	
Ca	3.4	-	
Na	10	-	
K	0.6	-	
[Mg+Ca] / [Na+K]	2.64	-	
Tot-N/Tot-P	-	-	
NO_2+NO_3-N/PO_4-P	-	-	

Station Location

Bottom: Depth 3.0 m D.O. 6.3 % Sat. 72

Epilimnetic alkalinity decrease -

PO_4-P ratio: epi/hyp -

Total-P ratio: epi/hyp -

Secchi disk transparency (M) 2.9

% organic Matter sediment -

Vascular Plants Common

Dom. Vasc. Plants: 1. Pontederia cordata
2. Sparganium
3. Brasenia schreberi

Ash-Free Dry Weight

Chlorophyll a 10.12 (mg/m^3)

Tot. Zoopl. Cnts. 198 (cells/liter)

Dom. Phytopl. 1. Asterionella - 70%
2. Chrysosphaerella - 20%

Dom. Zoopl. 1. Calanoid copepod -45%
2. Polyarthra - 20%

TROPHIC CLASSIFICATION 1981 :

	D.O.	S.D.	Vasc. Plants	Chl a	Total	Class.
Classification Points:	-	2	2	3	7	Eutro.

COMMENTS:

1. This pond was not thermally stratified at the time of our summer sampling.

FIELD DATA SHEET

WATER BODY Clark Pond TOWN New London By WSPCC

DATE COLLECTED 6 August 1981 WEATHER Dark overcast; brisk breeze - cool

STATION	DEPTH (M)	TEMP. (°C)	*DISSOLVED OXYGEN	OXYGEN: % SATURATION			
	3.0	22.0	6.3	72			
	2.0	23.1	8.1	93			
	1.0	23.1	8.1	93			
	surface	23.1	8.1	93			

COMMENTS:

SECCHI DISK (M) 2.9

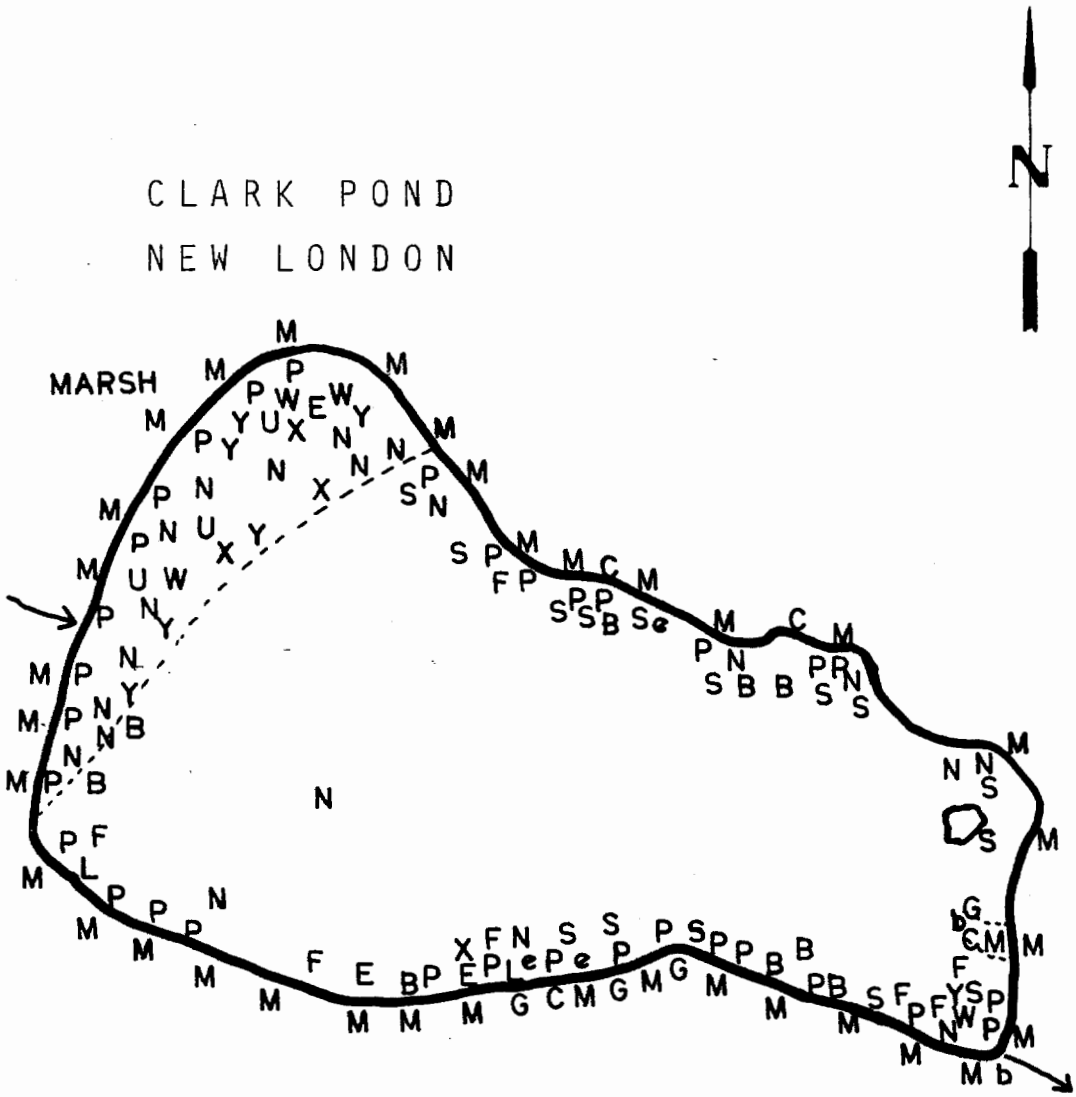
BOTTOM DEPTH (M) 3.3

TIME 11:12 - 11:18

* Dissolved oxygen values in mg/L

CLARK POND

NEW LONDON



DISTRIBUTION OF

AQUATIC PLANTS

6 AUG. 81

0 .2 KM

AQUATIC PLANT SURVEY

LAKE Clark Pond TOWN New London DATE 6 Aug. 81 BY WS&PCC

No.	PLANT NAME		ABUNDANCE
	GENERIC	COMMON	
M	Myrica Gale	Sweet Gale	Common
P	Pontederia cordata	Pickerelweed	Common
F	Nymphoides cordata	Floating Heart	Scattered
S	Sparganium	Bur Reed	Common
C	Cephalanthus occidentalis	Buttonbush	Scattered
b	Scirpus	Bulrush	Sparse
G	Gramineae	Grass Family	Sparse
N	Nymphaea	White Water Lily	Common
B	Brasenia schreberi	Water Shield	Common
e	Eleocharis	Spike Rush	Scattered
Y	Nuphar	Yellow Water Lily	Scattered
E	Eriocaulon septangulare	Pipewort	Scattered
W	Potamogeton	Pondweed	Scattered
X	?	Sterile thread-like leaves	Scattered
U	Utricularia	Bladderwort	Scattered
L	Lobelia Dortmanna	Water Lobelia	Sparse
A	Sagittaria	Arrowhead	Sparse

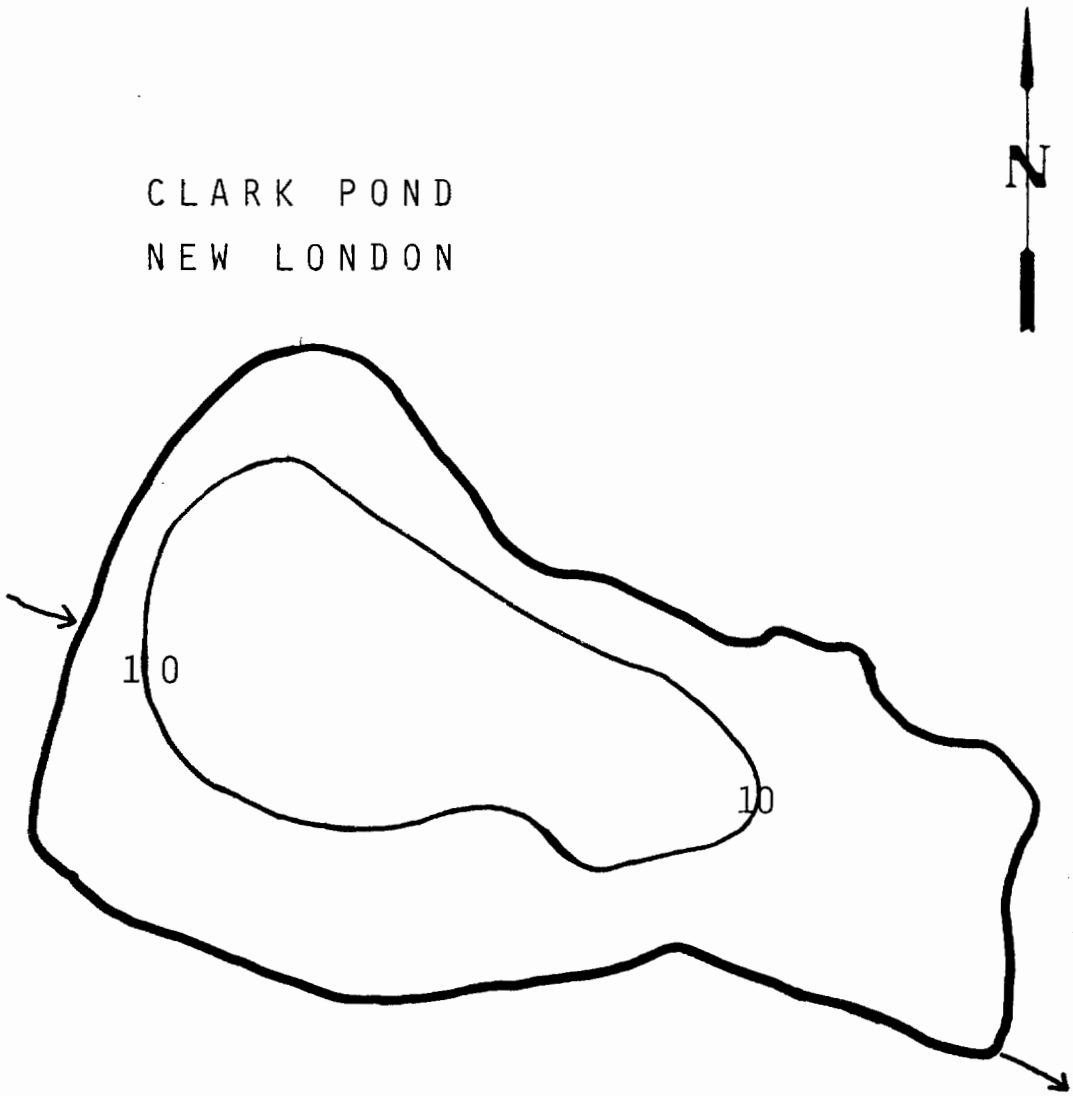
OVERALL ABUNDANCE Common

GENERAL OBSERVATIONS:

1. Plants were very common along shore, but not a nuisance to boating.

CLARK POND

NEW LONDON



ROUGH BATHYMETRIC CHART

F & G - 1938

26 SOUNDINGS

10 FT. ISOBATHS

0 .2 KM