

TROPHIC CLASSIFICATION OF N.H. LAKES AND PONDS

NAME Stevens Pond TOWN Manchester CO Hillsborough RIVER Merrimack
BASIN Merrimack

I. POTENTIAL FOR NUTRIENT ENRICHMENT

Latitude: 43°00'N

Longitude: 71°25'W

A. NATURAL PHYSICAL FACTORS

1. Area (ha) 6.27
2. Max. depth (m) 5.2
3. Mean depth (m) 1.67
4. Elevation (ft) 315
5. Shore length (m) 1900
6. Volume (m³) 105,000
7. Volume/shore length 55
8. % Stratification -
9. Watershed area (ha) 180

10. Watershed area
Volume 17
11. Bottom slope 1.8
12. Shore config. 3.8
13. Flushing rate 8.2
14. Water renewal time 0.12
15. Drainage density -
16. % Watershed ponded -
17. Phos. retent. coeff. R 0.51

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 18 FEB 81

Weather Clear, sunny, warm 50°F

Depth(m)	1.5	3.0
Alkalinity	40	41
PO ₄ -P	0.001	0.002
Total-P	0.041	0.041
NO ₂ +NO ₃ -N	0.16	0.16
Kjeld-N	0.80	0.26
Total-N	0.96	0.42
Tot-N/Tot-P	-	-
NO ₂ +NO ₃ -N/PO ₄ -P	-	-

Bottom: Depth 4.5 m D.O. 5.5 % Sat. 41

% Organic matter sediment 24.0

Dom. Phytopl. 1. Asterionella - 85%

2. -

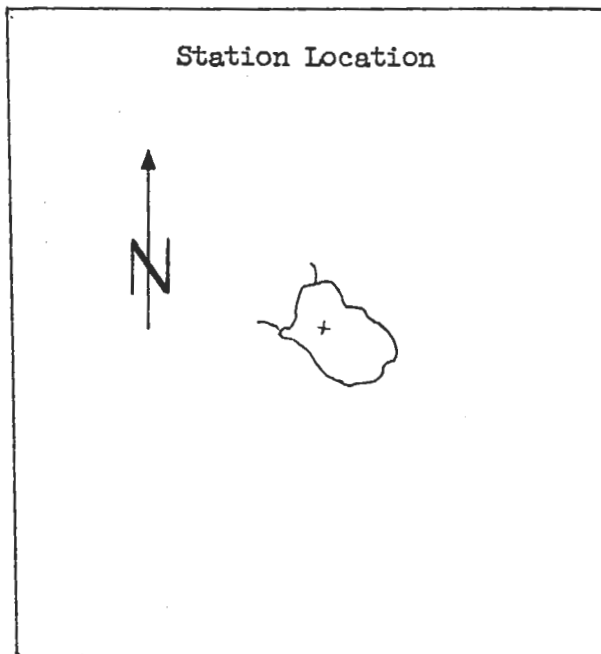
Dom. Zoopl. 1. Kellicottia - 30%

2. Calanoid copepod - 30%

B. Summer Data:

Date 29 July 81Weather Overcast 18.5°C

pH (units)	Depth (m)	1.0	4.0
Alkalinity		7.2	7.1
PO ₄ -P		33	28
Total-P		0.001	0.001
NO ₂ +NO ₃ -N		0.028	0.043
Kjeld-N		<0.05	<0.05
Total Residue		0.45	1.3
Color (units)		-	-
Turb. (NTU)		45	35
Spec. Conduct. (μMhos/cm)		3.8	22
Tot. Org. Carbon		301	332
Chloride		-	-
Mg		68	68
Ca		3.9	-
Na		21	-
K		32	-
[Mg+Ca] / [Na+K]		2.7	-
Tot-N/Tot-P		4.58	-
NO ₂ +NO ₃ -N/PO ₄ -P		-	-

Bottom: Depth 5.0 m D.O. 0.2 % Sat. 2Epilimnetic alkalinity decrease -PO₄-P ratio: epi/hyp -Total-P ratio: epi/hyp -Secchi disk transparency (M) 2.0% organic Matter sediment -Vascular Plants AbundantDom. Vasc. Plants: 1. Nymphaea2. Elodea3. NitellaAsh-Free Dry Weight -Chlorophyll a 21.20 (mg/m³)Tot. Zoopl. Cnts. 697.5 (cells/liter)Dom. Phytopl. 1. Oscillatoria - 50%2. Ceratium - 30%Dom. Zoopl. 1. Keratella 40%2. Bosmina - 15%TROPIC CLASSIFICATION 1981

Vasc.

D.O. S.D.

Plants

Chl a

Total Class.

Classification Points:

5

2

3

5

15

Eutro.

COMMENTS:

1. Interstate 93 passes along northeastern shore of pond; some filling occurred to construct the bridge abutments.

FIELD DATA SHEET

WATER BODY Stevens Pond TOWN Manchester By WSPCC
DATE COLLECTED 29 July 81 WEATHER Overcast 18.5°C

STATION	DEPTH (M)	TEMP. (°C)	*DISSOLVED OXYGEN	OXYGEN: % SATURATION			
	5.0	13.0	0.2	2			
	4.0	16.5	0.2	2			
	3.0	20.8	9.5	106			
	2.0	22.3	8.7	99			
	1.0	22.3	8.7	99			
	Surface	22.3	8.8	99			

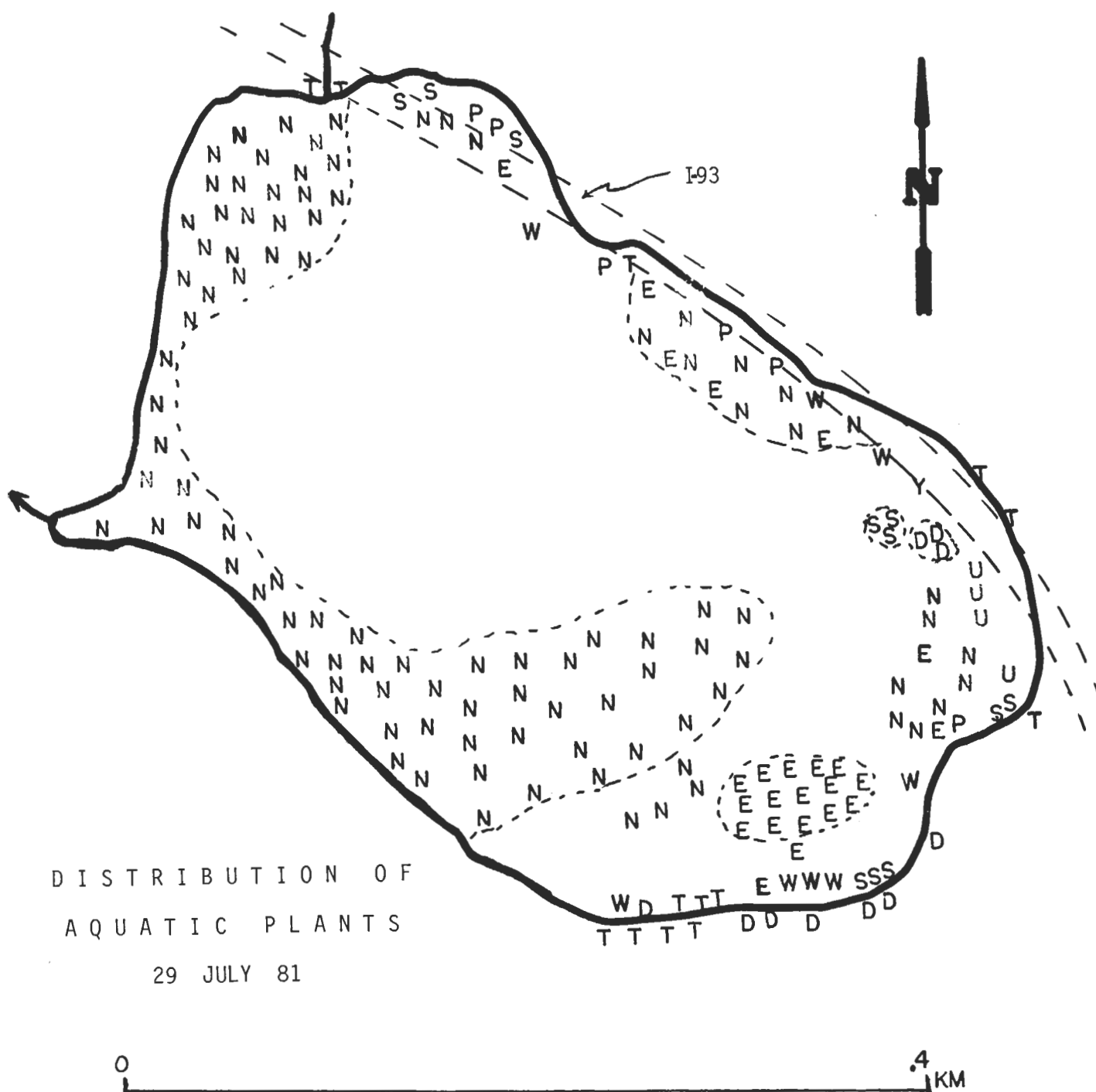
SECCHI DISK (M) 2.0

COMMENTS:

BOTTOM DEPTH (M) 5.2TIME 11:27-11:35

* Dissolved oxygen values in mg/L 331

STEVENS POND MANCHESTER



AQUATIC PLANT SURVEY

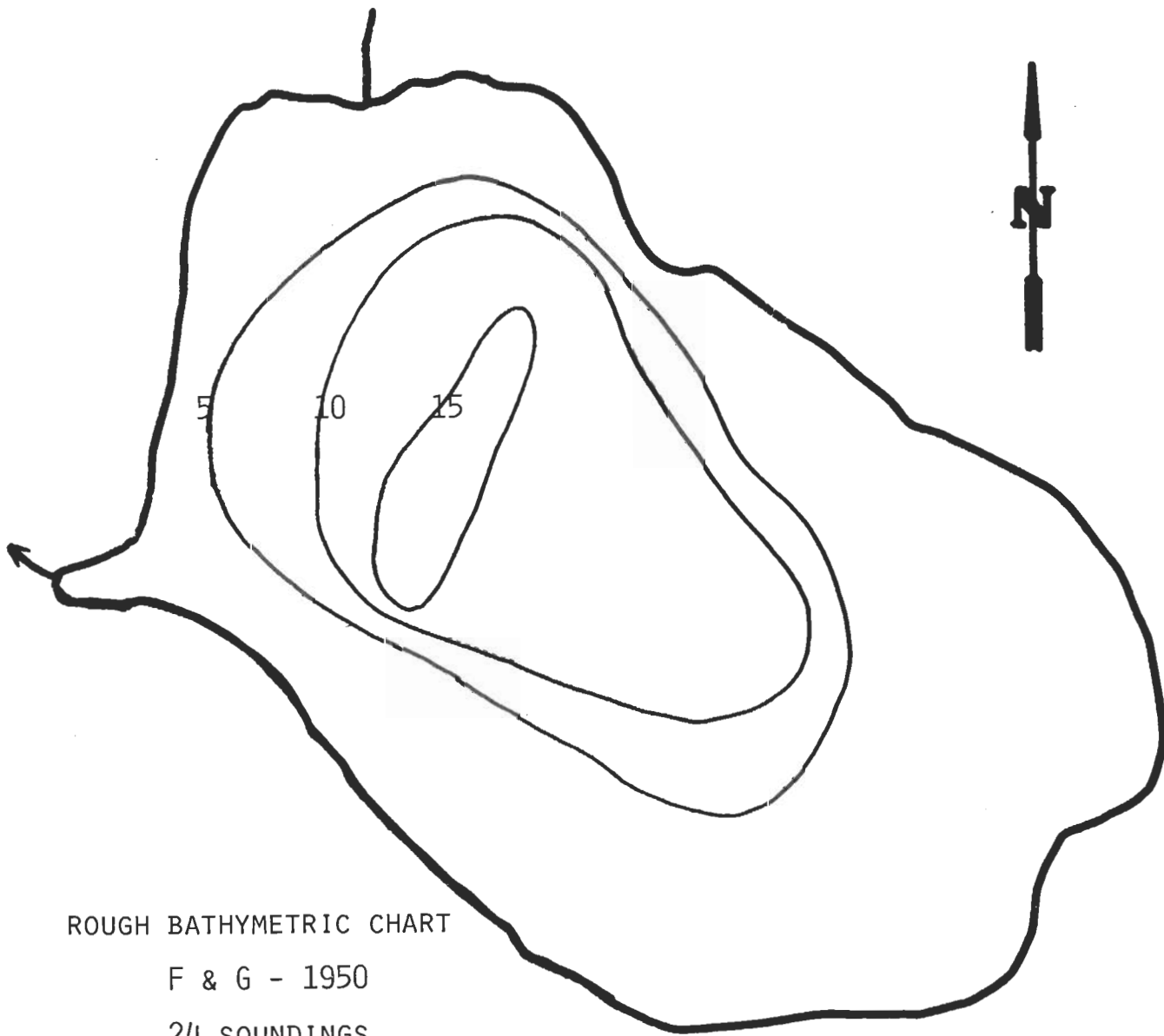
LAKE Stevens Pond TOWN Manchester DATE 29 July 81 BY WS+PCC

[illegible]

OVERALL ABUNDANCE Abundant

GENERAL OBSERVATIONS:

STEVENS POND
MANCHESTER



0 5 FT. ISOBATHS .4 KM