TROPHIC CLASSIFICATION OF N.H. LAKES AND PONDS

NAME Rust Pond TOWN Wolfeboro CO Carroll RIVER BASIN Merrimack

I. POTENTIAL FOR NUTRIENT ENRICHMENT

Latitude: 43°34'N Longitude: 71°10'W

A. NATURAL PHYSICAL FACTORS

1. Area (ha) 85.13
2. Max. depth (m) 13.0
3. Mean depth (m) 2.7
4. Elevation (ft) 579
5. Shore length (m) 4,800
6. Volume (m^3) 2,303,500
7. Volume/shore length 480
8. % Stratification -
9. Watershed area (ha) 668.2
10. Watershed area / Volume 29
11. Bottom slope 1.2
12. Shore config. 1.47
13. Flushing rate 1.34
14. Water renewal time 0.74
15. Drainage density -
16. % Watershed ponded -
17. Phos. retent. coeff. R 0.71

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 8 March 1978 Weather Clear, sunny and mild 35°F

Depth(m)	4.0	8.0
Alkalinity	11.0	11.0
PO_4-P	<0.001	<0.001
Total-P	0.006	0.007
NO_2+NO_3-N	<0.05	0.06
Kjeld-N	0.21	0.24
Total-N	-	0.30
Tot-N/Tot-P	-	43
NO_2+NO_3-N/PO_4-P	50	-

Bottom: Depth 11.0m D.O. 3.8 % Sat. 28.6

% Organic matter sediment 20.8

Dom. Phytopl. 1. Tabellaria - 50%
2. Asterionella - 30%

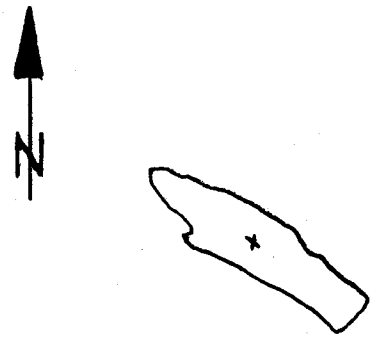
Dom. Zoopl. 1. Nauplius larva - 40%
2. Keratella - 30%

B. Summer Data:

Date 8 July 1981 Weather Hot and humid

	Mid-ep	Mid-therm	Mid-hyp
Depth (m)	3.0	8.0	11.0
pH (units)	7.1	6.9	6.2
Alkalinity	8.5	9.0	9.5
PO_4-P	<0.001	<0.001	<0.001
Total-P	0.024	0.028	0.029
NO_2+NO_3-N	<0.05	<0.05	<0.05
Kjeld-N	0.26	0.30	0.28
Total Residue	-	-	-
Color (units)	15	25	-
Turb. (NTU)	0.93	1.2	2.1
Spec. Conduct. (μMhos/cm)	47.6	45.9	49.3
Tot. Org. Carbon	-	-	-
Chloride	15	-	-
Mg	0.41	-	-
Ca	3.4	-	-
Na	4.0	-	-
K	0.5	-	-
[Mg+Ca] / [Na+K]	0.85	-	-
Tot-N/Tot-P	-	-	-
NO_2+NO_3-N/PO_4-P	-	-	-

Station Location



Bottom: Depth 12.0m D.O. 0.1 % Sat. <1

Epilimnetic alkalinity decrease -

PO_4-P ratio: epi/hyp -

Total-P ratio: epi/hyp -

Secchi disk transparency (M) 6.7

% organic Matter sediment -

Vascular Plants Sparse

Dom. Vasc. Plants: 1. 2. 3.

Ash-Free Dry Weight -

Chlorophyll a 3.68 (mg/m^3)

Tot. Zoopl. Cnts. 37.8 (cells/liter)

Dom. Phytopl. 1. Chrysosphaerella - 75% 2.

Dom. Zoopl. 1. No dominant - sparse 2.

TROPHIC CLASSIFICATION 1981 :

	D.O.	S.D.	Vasc. Plants	Chl a	Total	Class.
Classification Points:	6	1	0	0	7	Meso.

COMMENTS:

FIELD DATA SHEET

WATER BODY Rust Pond TOWN Wolfeboro By WSPCC

DATE COLLECTED 8 July 81 WEATHER Hot and humid

STATION	DEPTH (M)	TEMP. (°C)	*DISSOLVED OXYGEN	OXYGEN: % SATURATION			
	12.0	11.0	0.1	<1			
	11.0	11.3	0.1	<1			
	10.0	12.0	1.1	10			
	9.0	13.2	4.5	42			
	8.0	15.5	7.4	73			
	7.0	18.5	9.4	99			
	6.0	20.5	9.2	101			
	5.0	24.0	8.5	100			
	4.0	25.0	8.7	104			
	3.0	25.2	8.6	102			
	2.0	25.2	8.6	102			
	1.0	25.5	8.6	102			
	Surface	25.5	8.6	102			

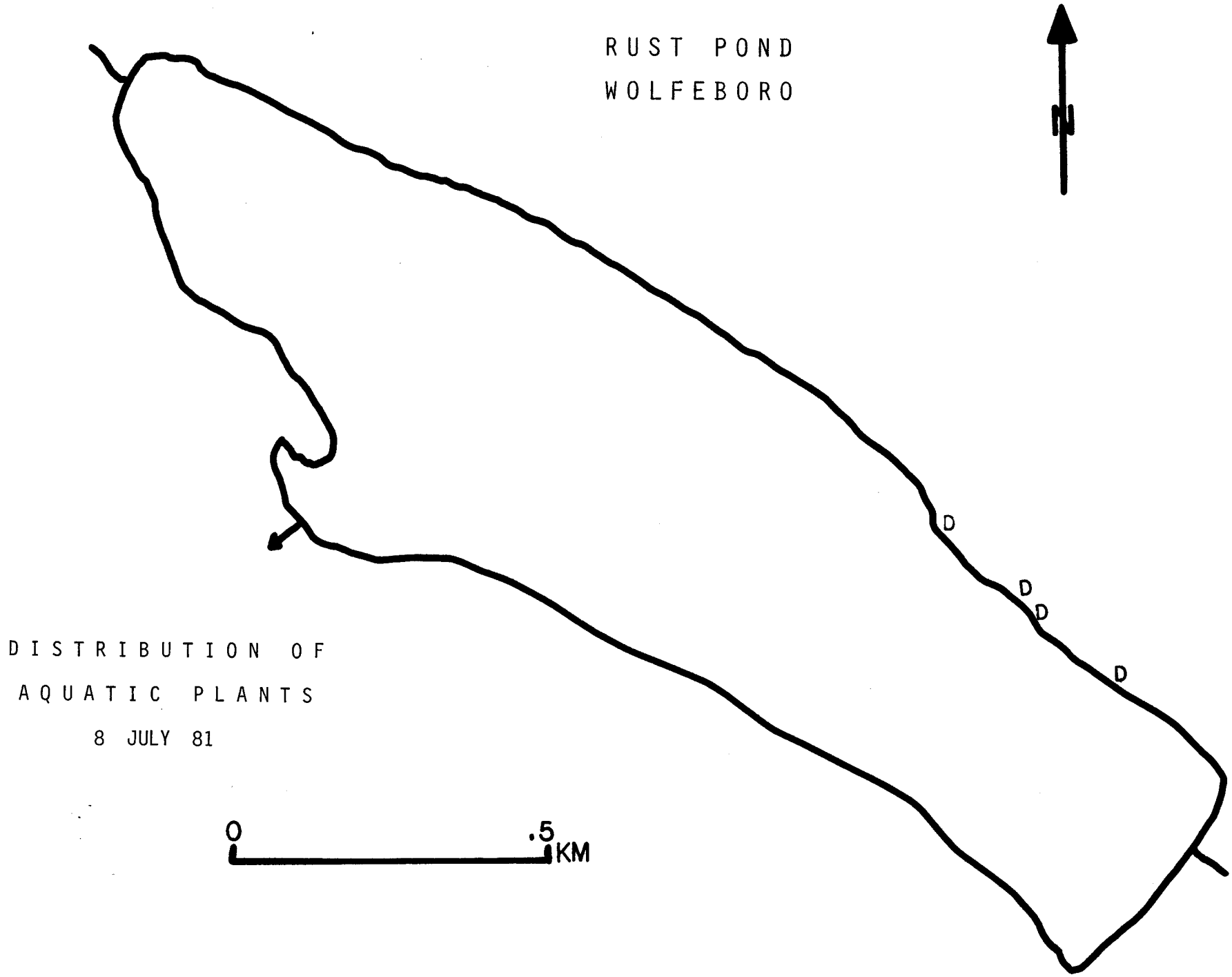
COMMENTS:

SECCHI DISK (M) 6.7

BOTTOM DEPTH (M) 13.0

TIME 12:15-12:30

* Dissolved oxygen values in mg/L


RUST POND
WOLFEBORO
N
D
D
D
D
DISTRIBUTION OF
AQUATIC PLANTS
8 JULY 81
0
.5
KM

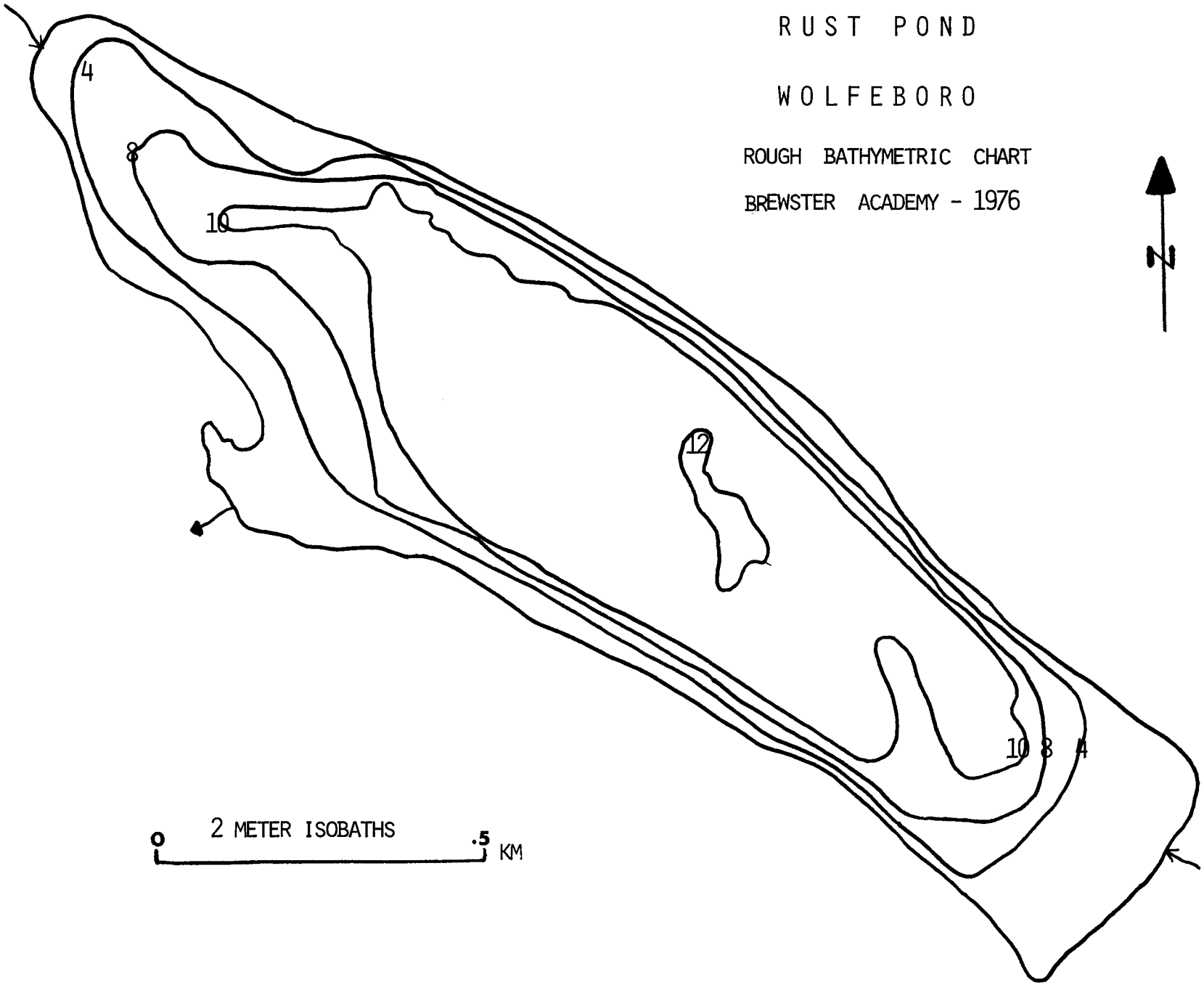
AQUATIC PLANT SURVEY

LAKE Rust Pond TOWN Wolfeboro DATE 8 July 81 BY WS+PCC

Key	PLANT NAME		ABUNDANCE
	GENERIC	COMMON	
D	Dulichium arundinaceum	Three-way Sedge	Sparse

OVERALL ABUNDANCE Sparse

GENERAL OBSERVATIONS:


RUST POND
WOLFEBORO
ROUGH BATHYMETRIC CHART
BREWSTER ACADEMY - 1976
N
4
8
10
12
10 8 4
0
2 METER ISOBATHS
.5
KM