NEW HAMPSHIRE WATER SUPPLY AND POLLUTION CONTROL COMMISSION

LAKE TROPHIC DATA

MORPHOMETRIC:

LAKE	Chalk Pond	LAKE AREA (HA)	17.8
TOWN	New Durham	MAXIMUM DEPTH (M)	3.2
COUNTY	Strafford	MEAN DEPTH (M)	1.8
RIVER BASIN	Coastal	VOLUME (M^3)	3,128,000
LATITUDE	43° 28' N	MUD SURFACE AREA (HA)	17.80
LONGITUDE	71° 08' W	RELATIVE DEPTH	0.7
ELEVATION (FT)	868	SHORE CONFIGURATION	1.81
SHORE LENGTH (M)	2700	AREAL WATER LOAD (M/YR)	4.89
WATERSHED AREA (HA)	158.1	FLUSHING RATE (YR^{-1})	2.8
% WATERSHED PONDED	0	PHOSPHORUS RETENTION COEFF.	0.66

BIOLOGICAL: DATE	22 Jan 1985	22 AUG 1984
DOM. PHYTOPLANKTON (% total) 1	Rhizosolenia (90%)	Dinobryon (60%)
2		Chrysosphaerella (30%)
NUMBER OF ALGAL GENERA	7	6
SPECIES DIVERSITY	0.68	1.26
CHLOROPHYLL a (µg/L)		1.93
DOM. ZOOPLANKTON (% total) 1	Keratella (40%)	Nauplius larva (30%)
2	Ciliate Spp. (15%)	Calanoid copepod (20%)
ROTIFERS/LITER	166	70
MICROCRUSTACEA/LITER	26	194
TOTAL ZOOPLANK. CNTS (cells/L)	235	264
VASCULAR PLANT ABUNDANCE		Common
DOMINANT VASCULAR PLANTS 1		Brasenia schreberi
2		Sparganium
3		Potamogeton
SECCHI DISK TRANSPARENCY (M)		2.3
BOTTOM DISS. OXYGEN (mg/L)	11.2	8.0
SEDIMENT: % ORGANIC MATTER		

LAKE TYPE: Natural pond raised by damming.

SUMMER THERMAL STRATIFICATION: YES ____ NO X WEAK ____

IF YES, VOLUME OF HYPOLIMNION _____ (m^3) THERMOCLINE DEPTH _____ (m)

CHEMICAL: (mg/L unless indicated otherwise) LAKE: Chalk Pond

	WINTER		SUMMER		
DATE	22 Jan 1985		22 AUG 1984		
DEPTH (M)	1.0	2.0	1.0	2.0	
pH (UNITS)	6.5	6.5	6.8	6.7	
ALKALINITY (I. P.)	4.9	4.8	3.3	3.4	
ALKALINITY (F.E.P.)	6.9	6.7	5.1	5.0	
NITRITE+NITRATE NITROGEN					
TOTAL KJELDAHL NITROGEN					
TOTAL PHOSPHORUS	0.016	0.015	.015	.014	
SPEC. CONDUCT. (µMhos/cm)	32.7	30.4	24.3	25.0	
APPARENT COLOR (UNITS)	10	10	20	20	
TRUE COLOR (440 nm)(UNITS)	5	5	10	9	
MAGNESIUM			.26		
CALCIUM			1.5		
SODIUM			1		
POTASSIUM			.30		
CHLORIDE			2	2	
TN : TP					
INORG-N : INORG-P					
[Mg+Ca] : [Na+K]			1.35		
CALCITE SATURATION INDEX			3.8		

* = NOT DEFENSIBLE NR = NO RESULT

TROPHIC CLASSIFICATION: 1984

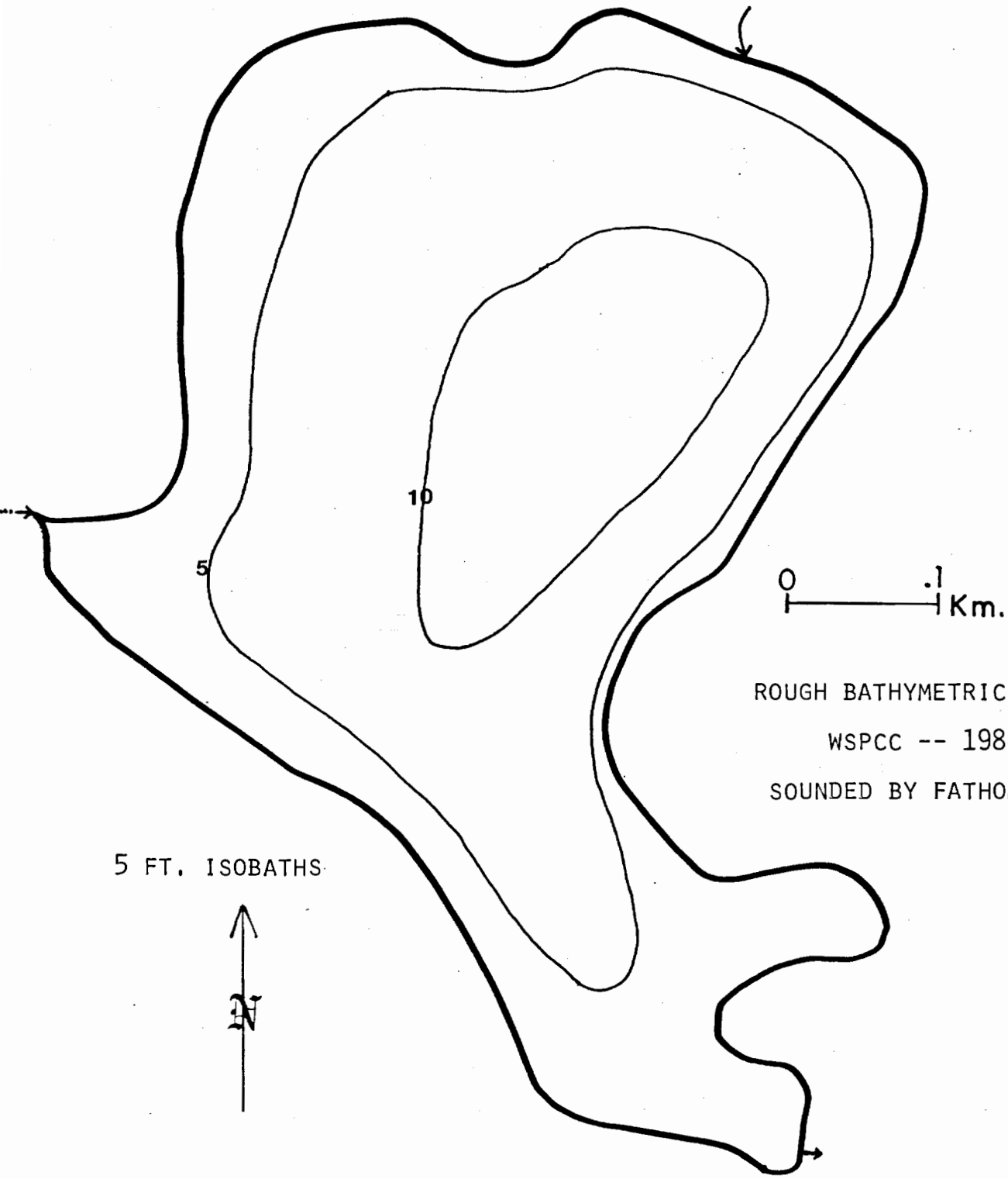
	D.O.	S.D.	PLANT ABUND.	CHL a	TOTAL PTS.	TROPHIC CLASS.
CLASSIFICATION POINTS:	-	2	2	0	4	MESO.

COMMENTS:

1. No thermal stratification was present during the summer.

CHALK POND

NEW DURHAM



ROUGH BATHYMETRIC CHART

WSPCC -- 1984

SOUNDED BY FATHOMETER

FIELD DATA SHEET

WATER BODY Chalk Pond TOWN New Durham BY WSPCC

DATE COLLECTED 22 August 1984 WEATHER Sunny

STATION	DEPTH (M)	TEMP. (°C)	*DISSOLVED OXYGEN	OXYGEN: % SATURATION			
Deep Spot	0.0	23.8	7.8	92%			
	0.5	23.8	7.8				
	1.0	23.6	7.8				
	1.5	23.4	7.9				
	2.0	23.2	8.0				
	2.5	23.0	8.0	92%			

SECCHI DISK (M) 2.3

BOTTOM DEPTH (M) 3.0

TIME 1015

COMMENTS:

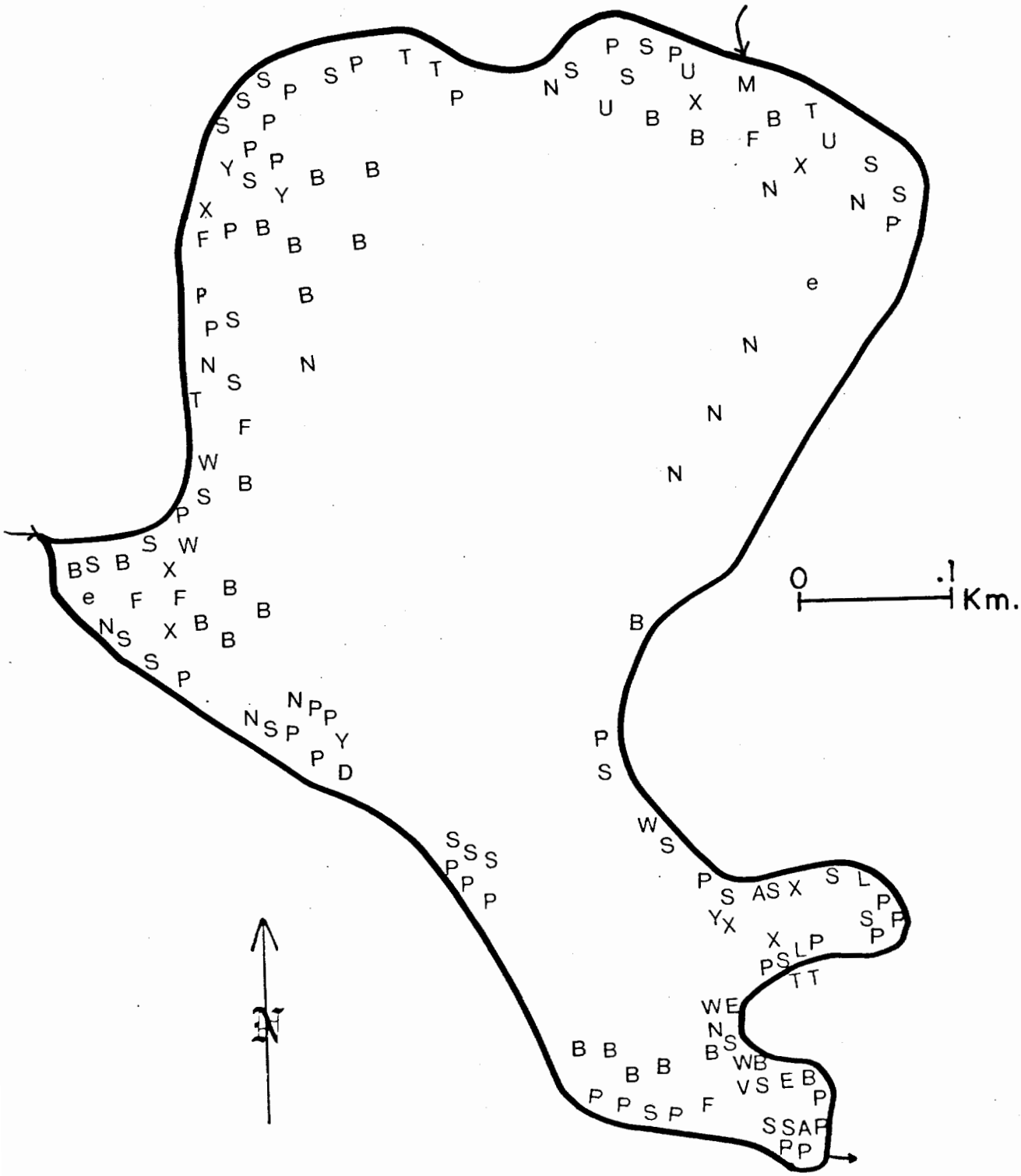
* Dissolved oxygen values in mg/L

CHALK POND

NEW DURHAM

AQUATIC PLANTS

22 AUG 1984



AQUATIC PLANT SURVEY

LAKE Chalk Pond TOWN New Durham DATE 8/22/84 BY WSPCC

Key	PLANT NAME		ABUNDANCE
	GENERIC	COMMON	
P	Pontederia cordata	Pickerelweed	Common
B	Brasenia schreberi	Water Shield	Abundant
W	Potamogeton	Pondweed	Common
S	Sparganium	Bur Reed	Common
E	Eriocaulon septangulare	Pipewort	Sparse
Y	Nuphar	Yellow Water Lily	Scattered
T	Typha	Cattail	Sparse
L	Lobelia dortmanna	Water Lobelia	Scattered
F	Nymphoides cordatum	Floating Heart	Scattered
A	Sagittaria	Arrowhead	Scattered
N	Nymphaea	White Water Lily	Common
e	Eleocharis	Spike Rush	Sparse
M	Myriophyllum	Water Milfoil	Sparse
U	Utricularia	Bladderwort	Common
d	Dulichium arundinaceum	Three-way Sedge	Scattered
V	Vallisneria americana	Tape Grass	Sparse
X		Sterile Thread-like Leaves	Common

OVERALL ABUNDANCE Common

GENERAL OBSERVATIONS:

1. Plants were abundant in the coves, and over much of the visible bottom; they were common elsewhere.
2. The bottom was relatively rocky
3. Numerous turtles were observed.
4. The water milfoil was probably M. humile.