DEPARTMENT of ENVIRONMENTAL SERVICES
Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake:	FOREST LAKE	Lake Area (ha):	35.29
Town:	WINCHESTER	Maximum depth (m):	9.8
County:	Cheshire	Mean depth (m):	4.7
River Basin:	Connecticut	Volume (m^3):	1653000
Latitude:	42°48' N	Relative depth:	1.5
Longitude:	72°22' W	Shore configuration:	1.66
Elevation (ft):	443	Areal water load (m/yr):	23.42
Shore length (m):	3500	Flushing rate (yr^{-1}):	5.00
Watershed area (ha):	1813.0	P retention coeff.:	0.46
% watershed ponded:	0.0	Lake type:	natural w/dam

BIOLOGICAL:	9 February 1988	9 July 1987
DOM. PHYTOPLANKTON (% TOTAL) #1	SYNURA 50%	DINOBRYON 45%
#2	ASTERIONELLA 40%	CERATIUM 25%
#3		MELOSIRA 20%
PHYTOPLANKTON ABUNDANCE (cells/mL)		2555.0
CHLOROPHYLL-A (µg/L)		9.19
DOM. ZOOPLANKTON (% TOTAL) #1	ACANTHOCYSTIS 41%	NAUPLII LARVAE 24%
#2	POLYARTHRA 29%	KELLICOTTIA 16%
#3	PERITRICH CILIATE 25%	CONOCHILUS 16%
ROTIFERS/LITER	28	17
MICROCRUSTACEA/LITER	6	13
ZOOPLANKTON ABUNDANCE (#/L)	59	37
VASCULAR PLANT ABUNDANCE		Scattered
SECCHI DISK TRANSPARENCY (m)		3.8
BOTTOM DISSOLVED OXYGEN (mg/L)	7.2	0.1
BACTERIA (fecal col., #/100 ml) #1		< 10
#2		< 10
#3		

SUMMER THERMAL STRATIFICATION:

stratified

Depth of thermocline (m): 4.2
Hypolimnion volume (m^3): 160000

CHEMICAL:

Lake: FOREST LAKE
Town: WINCHESTER

	9 February 1988		9 July 1987		
DEPTH (m)	2.0	5.0	2.0	5.5	8.5
pH (units)	6.6	6.4	7.1	6.6	6.4
A.N.C. (Alkalinity)	9.6	11.9	10.4	7.9	12.9
NITRATE NITROGEN	0.14	0.16	0.08		0.05
TOTAL KJELDAHL NITROGEN	0.39	0.54	0.16	0.28	0.79
TOTAL PHOSPHORUS	0.007	0.006	0.032	0.036	0.005
CONDUCTIVITY (µ mhos/cm)	111.2	149.1	118.5	89.2	102.0
APPARENT COLOR (cpu)	22	24	24	26	55
MAGNESIUM			0.98		
CALCIUM			3.7		
SODIUM			21.9		
POTASSIUM			0.80		
CHLORIDE	22	32	16		18
SULFATE	5	5	5		4
TN : TP	76	117	8		168
CALCITE SATURATION INDEX			2.6		

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1987

D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
6	1	1	1	9	Meso.

COMMENTS:

1. This pond was previously surveyed and classified in 1977. There was no change in trophic state, although the algae level was slightly higher and the water clarity slightly lower in 1987.

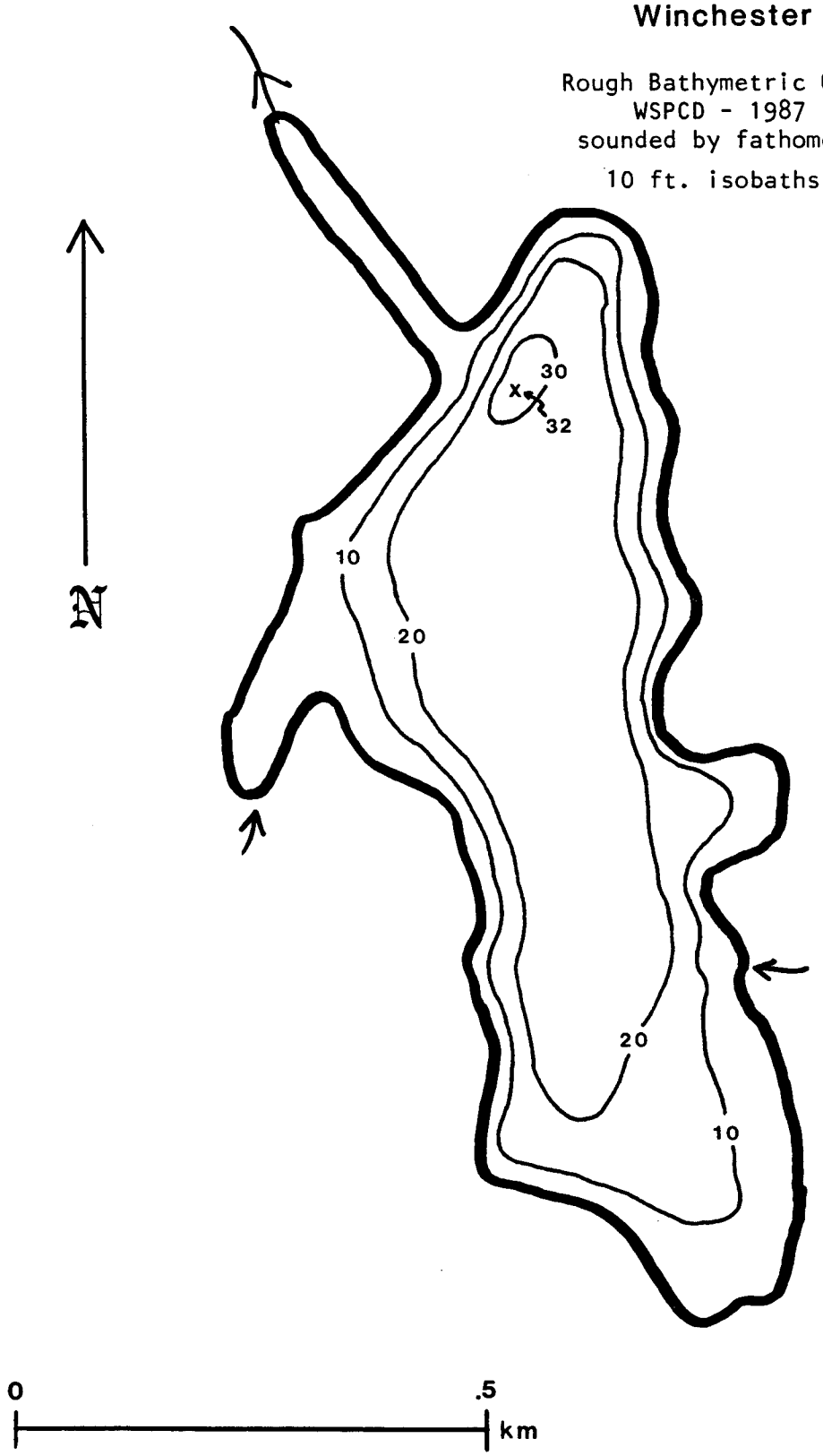
2. The whole-water phytoplankton was 50% diatoms and 35% green algae. A centric diatom (45%) and tiny green flagellates (25%) were the dominant genera.

Forest Lake

Winchester

Rough Bathymetric Chart
WSPCD - 1987
sounded by fathometer

10 ft. isobaths



FIELD DATA SHEET

LAKE: FOREST LAKE
DATE: 07/09/87

TOWN: WINCHESTER
WEATHER: OVERCAST, VERY WARM & HUMID

	DEPTH (M)	TEMP (°C)	*DISSOLVED OXYGEN	OXYGEN SATURATION
	0.1	25.0	8.9	106 %
	1.0	24.2	8.8	103 %
	2.0	23.5	8.9	102 %
	3.0	21.0	8.9	98 %
	4.0	17.5	11.2	115 %
	5.0	13.0	8.6	81 %
	6.0	10.2	2.1	19 %
	7.0	8.8	0.2	1 %
	8.0	7.6	0.1	1 %
	9.0	7.2	0.1	1 %

SECCHI DISK (m): 3.8

BOTTOM DEPTH (m): 9.4

TIME: 1230

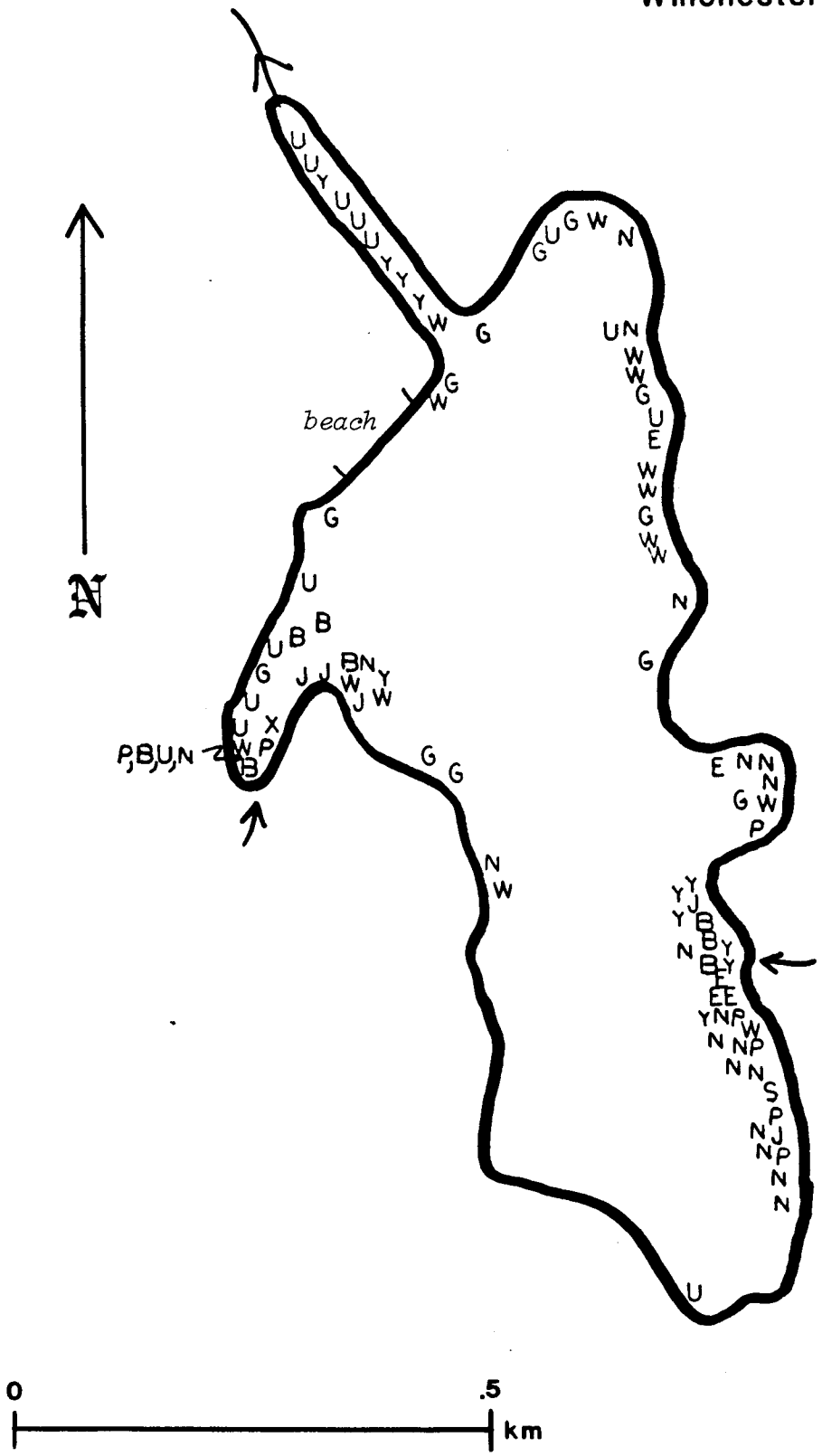
COMMENTS:

*Dissolved oxygen values are in mg/L

Forest Lake

Winchester

AQUATIC PLANTS
9 JUL. 1987



AQUATIC PLANT SURVEY

LAKE: FOREST LAKE TOWN: WINCHESTER DATE: 07/09/87

Key	PLANT NAME		ABUNDANCE
	GENERIC	COMMON	
U	Utricularia	Bladderwort	Sparse
B	Brasenia schreberi	Water shield	Sparse
X		Bottom growth	Sparse
N	Nymphaea	White water lily	Scattered
Y	Nuphar	Yellow water lily	Sparse
W	Potamogeton	Pondweed	Scattered
G	Gramineae	Grass family	Scattered
J	Juncus	Rush	Sparse
P	Pontederia cordata	Pickerelweed	Sparse
E	Elodea nuttallii	Waterweed	Sparse

OVERALL ABUNDANCE: Scattered

GENERAL OBSERVATIONS: