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

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake:	PINE RIVER POND	Lake Area (ha):	240.41
Town:	WAKEFIELD	Maximum depth (m):	16.8
County:	Carroll	Mean depth (m):	3.7
River Basin:	Saco	Volume (m^3):	9000000
Latitude:	43°38' N	Relative depth:	1.0
Longitude:	71°02' W	Shore configuration:	3.57
Elevation (ft):	584	Areal water load (m/yr):	7.76
Shore length (m):	19600	Flushing rate (yr^{-1}):	2.10
Watershed area (ha):	3367.0	P retention coeff.:	0.59
% watershed ponded:	0.2	Lake type:	natural w/dam

BIOLOGICAL:	9 March 1988	25 August 1987
DOM. PHYTOPLANKTON (% TOTAL) #1	ASTERIONELLA 50%	SYNURA 30%
#2	DINOBRYON 40%	TABELLARIA 25%
#3		ASTERIONELLA 15%
PHYTOPLANKTON ABUNDANCE (cells/mL)		845.0
CHLOROPHYLL-A (µg/L)		4.24
DOM. ZOOPLANKTON (% TOTAL) #1	CILIATE SPP. 33%	NAUPLII LARVAE 27%
#2		CYCLOPOID COPEPOD 20%
#3		
ROTIFERS/LITER	15	22
MICROCRUSTACEA/LITER	15	61
ZOOPLANKTON ABUNDANCE (#/L)	46	83
VASCULAR PLANT ABUNDANCE		Sparse
SECCHI DISK TRANSPARENCY (m)		6.0
BOTTOM DISSOLVED OXYGEN (mg/L)	5.6	0.4
BACTERIA (fecal col., #/100 ml) #1		< 10
#2		
#3		

SUMMER THERMAL STRATIFICATION:

stratified

Depth of thermocline (m): 7.0
Hypolimnion volume (m^3): 350500

CHEMICAL:

Lake: PINE RIVER POND
Town: WAKEFIELD

	9 March 1988		25 August 1987		
DEPTH (m)	4.5	8.5	3.0	7.0	12.0
pH (units)	6.4	6.2	6.8	7.0	6.2
A.N.C. (Alkalinity)	6.4	6.5	5.4	5.5	7.1
NITRATE NITROGEN	0.06	0.08	< 0.05		< 0.05
TOTAL KJELDAHL NITROGEN	0.16	0.16	0.10	0.42	0.29
TOTAL PHOSPHORUS	0.003	0.006	0.008		0.020
CONDUCTIVITY (µ mhos/cm)	47.9	51.2	47.6	46.6	41.5
APPARENT COLOR (cpu)	12	13	10	12	33
MAGNESIUM			0.42		
CALCIUM			2.3		
SODIUM			5.1		
POTASSIUM			0.40		
CHLORIDE	8	8	7		6
SULFATE	3	3	3		3
TN : TP	73	40	12		14
CALCITE SATURATION INDEX			3.4		

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1987

D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
6	1	0	0	7	Meso.

COMMENTS:

1. This pond was previously surveyed and classified in 1980. There was no change in trophic state.

2. A clear water pond with a mostly sandy bottom and somewhat rocky shoreline.

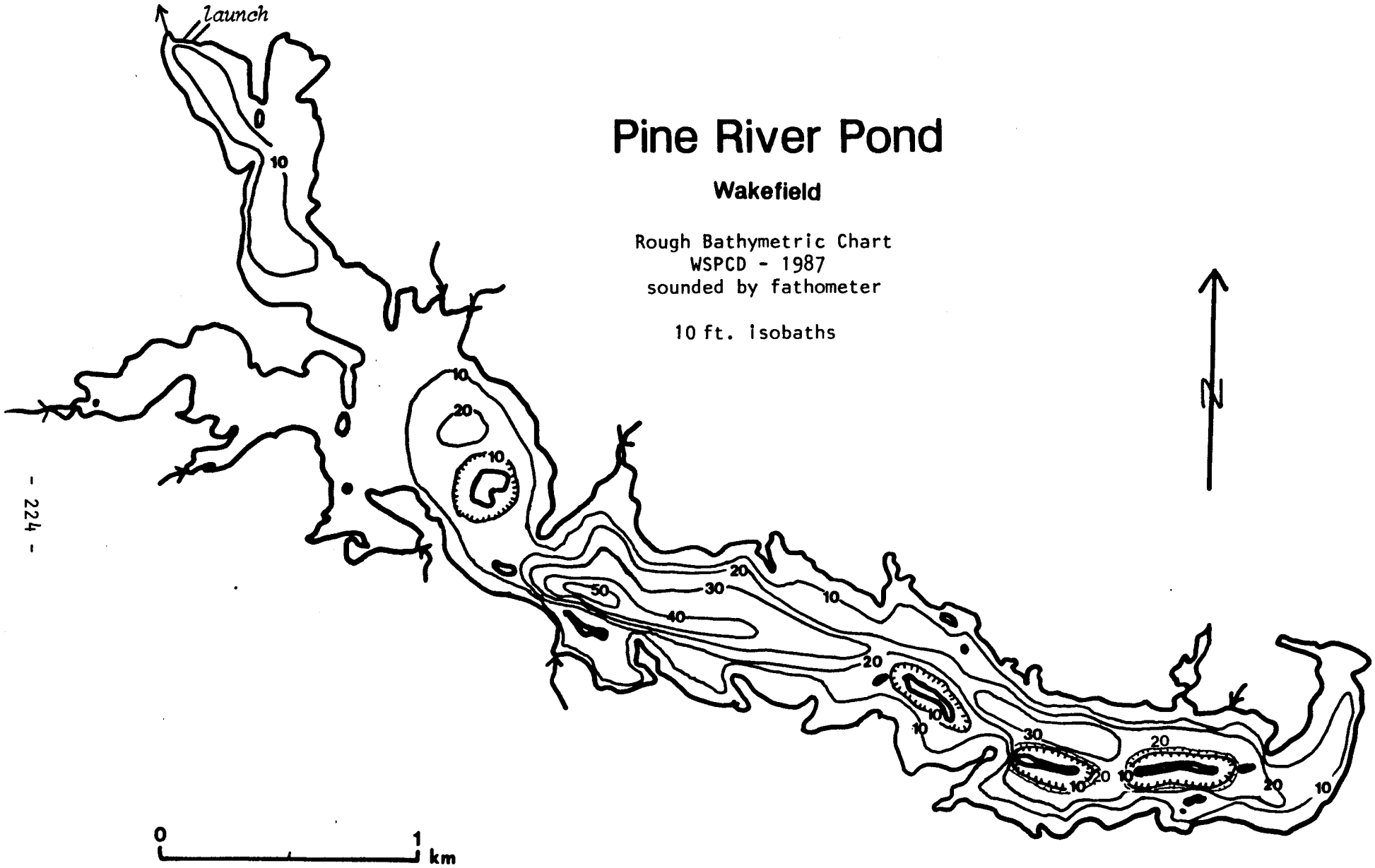
3. Greens (50%) dominated the whole-water phytoplankton community. Dominant genera were tiny green flagellates (45%), Merismopedia (15%), and Chroomonas (10%).

Pine River Pond

Wakefield

Rough Bathymetric Chart
WSPCD - 1987
sounded by fathometer

10 ft. isobaths



FIELD DATA SHEET

LAKE: PINE RIVER POND
DATE: 08/25/87

TOWN: WAKEFIELD
WEATHER: CLOUDY, STRONG WIND

	DEPTH (M)	TEMP (°C)	*DISSOLVED OXYGEN	OXYGEN SATURATION
	0.1	21.6	8.9	98 %
	1.0	21.6	8.9	98 %
	2.0	21.6	8.9	98 %
	3.0	21.5	8.9	98 %
	4.0	21.5	8.9	98 %
	5.0	21.5	8.9	98 %
	6.0	21.4	8.8	97 %
	7.0	17.2	7.7	79 %
	8.0	13.2	5.3	50 %
	9.0	11.0	3.0	27 %
	10.0	9.2	0.8	7 %
	11.0	8.5	0.4	3 %
	12.0	8.0	0.2	2 %
	13.0	7.9	0.3	2 %
	14.0	7.6	0.3	2 %
	14.5	7.6	0.4	3 %

SECCHI DISK (m): 6.0

BOTTOM DEPTH (m): 14.8

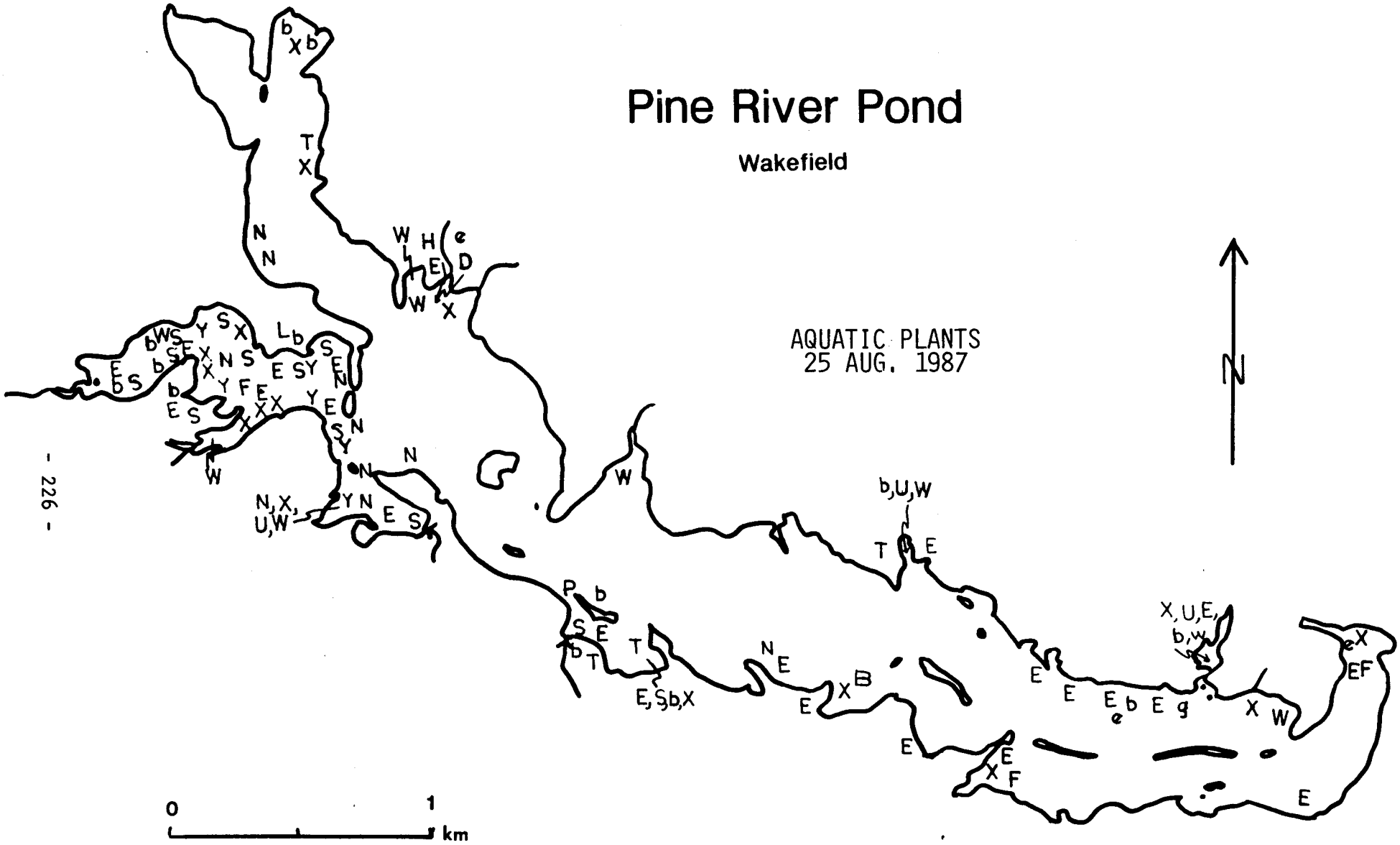
TIME: 1330

COMMENTS:

*Dissolved oxygen values are in mg/L

Pine River Pond

Wakefield



AQUATIC PLANT SURVEY

LAKE: PINE RIVER POND TOWN: WAKEFIELD DATE: 08/25/87

Key	PLANT NAME		ABUNDANCE
	GENERIC	COMMON	
f	Chlorophyceae	Filamentous green algae	Sparse
B	Brasenia schreberi	Water shield	Sparse
N	Nymphaea	White water lily	Sparse
H	Hypericum	St. John's-wort	Sparse
Y	Nuphar	Yellow water lily	Sparse
e	Eleocharis	Spike rush	Sparse
g	Polygonum	Smartweed	Sparse
D	Decodon verticillatus	Swamp loosestrife	Sparse
S	Sparganium	Bur reed	Sparse
U	Utricularia	Bladderwort	Sparse
T	Typha	Cattail	Sparse
W	Potamogeton	Pondweed	Sparse
L	Lysimachia terrestris	Swampcandle	Sparse
b	Scirpus	Bulrush	Sparse
X		Sterile thread-like leaf	Sparse
E	Eriocaulon septangulare	Pipewort	Sparse

OVERALL ABUNDANCE: Sparse

GENERAL OBSERVATIONS:

1. Plants were common to abundant in the western cove, but were relatively sparse overall.
2. A loon nesting sanctuary was present.
3. Sterile, thread-like leaves along the bottom may be more prevalent than indicated. Choppy water made it difficult to see the bottom.