

DEPARTMENT of ENVIRONMENTAL SERVICES
Water Division - Watershed Management Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: ISLAND POND, LITTLE	Lake Area (ha):	62.73
Town: PELHAM	Maximum depth (m):	15.5
County: Hillsborough	Mean depth (m):	5.2
River Basin: Merrimack	Volume (m ³):	3248500
Latitude: 42°43'39" N	Relative depth:	1.7
Longitude: 71°17'21" W	Shore configuration:	1.00
Elevation (ft): 145	Areal water load (m/yr):	2.09
Shore length (m): 2600	Flushing rate (yr ⁻¹):	0.40
Watershed area (ha): 284.9	P retention coeff.:	0.80
% watershed ponded: 0.0	Lake type:	natural w/dam

BIOLOGICAL:

3 July 2001

DOM. PHYTOPLANKTON (% TOTAL)	#1	ANACYSTIS 35%
	#2	MALLOMONAS 20%
	#3	ANABAENA 10%
PHYTOPLANKTON ABUNDANCE (units/mL)		
CHLOROPHYLL-A (µg/L)		
DOM. ZOOPLANKTON (% TOTAL)	#1	COLLOTHECA 34%
	#2	NAUPLIUS LARVA 21%
	#3	VORTICELLA 19%
ROTIFERS/LITER		69
MICROCRUSTACEA/LITER		46
ZOOPLANKTON ABUNDANCE (#/L)		150
VASCULAR PLANT ABUNDANCE		Scattered
SECCHI DISK TRANSPARENCY (m)		3.5
BOTTOM DISSOLVED OXYGEN (mg/L)		4.8
BACTERIA (E. coli, #/100 ml)	#1	
	#2	
	#3	

SUMMER THERMAL STRATIFICATION:

stratified

Depth of thermocline (m): 6.6
Hypolimnion volume (m³): 317500
Anoxic volume (m³): None

CHEMICAL:

Lake: ISLAND POND, LITTLE
Town: PELHAM

		3 July 2001		
DEPTH (m)		2.0	6.0	12.0
pH (units)		7.2	6.7	6.3
A.N.C. (Alkalinity)		8.6	8.8	8.5
NITRATE NITROGEN		< 0.05		0.12
TOTAL KJELDAHL NITROGEN		0.40	0.50	0.30
TOTAL PHOSPHORUS		0.006	0.010	0.008
CONDUCTIVITY (μ mhos/cm)		133.5	134.4	133.1
APPARENT COLOR (cpu)		15	15	20
MAGNESIUM		1.22		
CALCIUM		5.7		
SODIUM		15.6		
POTASSIUM		1.22		
CHLORIDE		26		28
SULFATE		8		8
TN : TP		67		53
CALCITE SATURATION INDEX		2.4		

All results in mg/L unless indicated otherwise

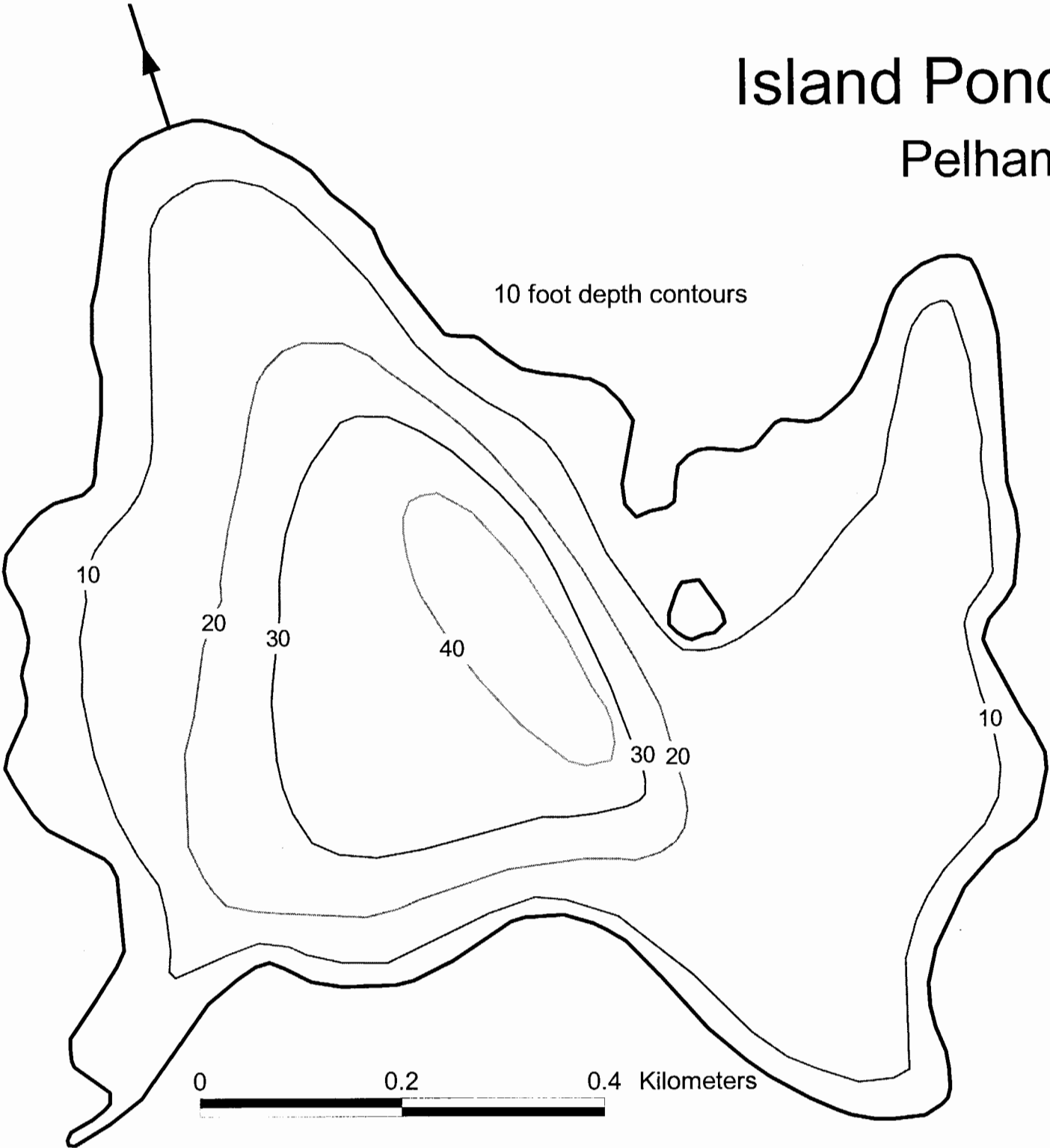
TROPHIC CLASSIFICATION: 2001

D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
0	2	1	1	4	Oligo.

COMMENTS:

1. Previously surveyed in 1978 and 1992.
2. No winter samples were collected because of thin ice.
3. Densely developed shoreline except for the northeast corner, which had a Girl Scout Camp.
4. The boat launch was very rough. The road to the launch site was marked with a sign saying "No Access", but reportedly the site is public and protected by easement. No parking was available.
5. Moderately elevated sodium, chloride and conductivity values suggest some road salt runoff.
6. No chlorophyll sample was analyzed for 2001. Chlorophyll was conservatively estimated to be between 4 and 6 mg/m³ for trophic classification purposes (chlorophyll was less than 4 in both 1978 and 1992).

Island Pond, Little Pelham



FIELD DATA SHEET

LAKE: ISLAND POND, LITTLE
 DATE: 07/03/2001

TOWN: PELHAM
 WEATHER: Sunny & breezy; mild chop

	DEPTH (M)	TEMP (°C)	*DISSOLVED OXYGEN	OXYGEN SATURATION
	0.1	24.2	6.4	76 %
	1.0	24.1	8.5	101 %
	2.0	24.1	8.7	103 %
	3.0	24.0	8.4	99 %
	4.0	23.5	8.3	97 %
	5.0	20.0	8.2	90 %
	6.0	19.9	8.2	88 %
	7.0	12.2	8.4	78 %
	8.0	9.2	7.1	62 %
	9.0	8.1	6.9	58 %
	10.0	7.7	7.0	59 %
	11.0	7.4	5.7	47 %
	12.0	7.3	5.0	41 %
	13.0	7.3	4.7	39 %
	13.5	7.4	4.6	39 %

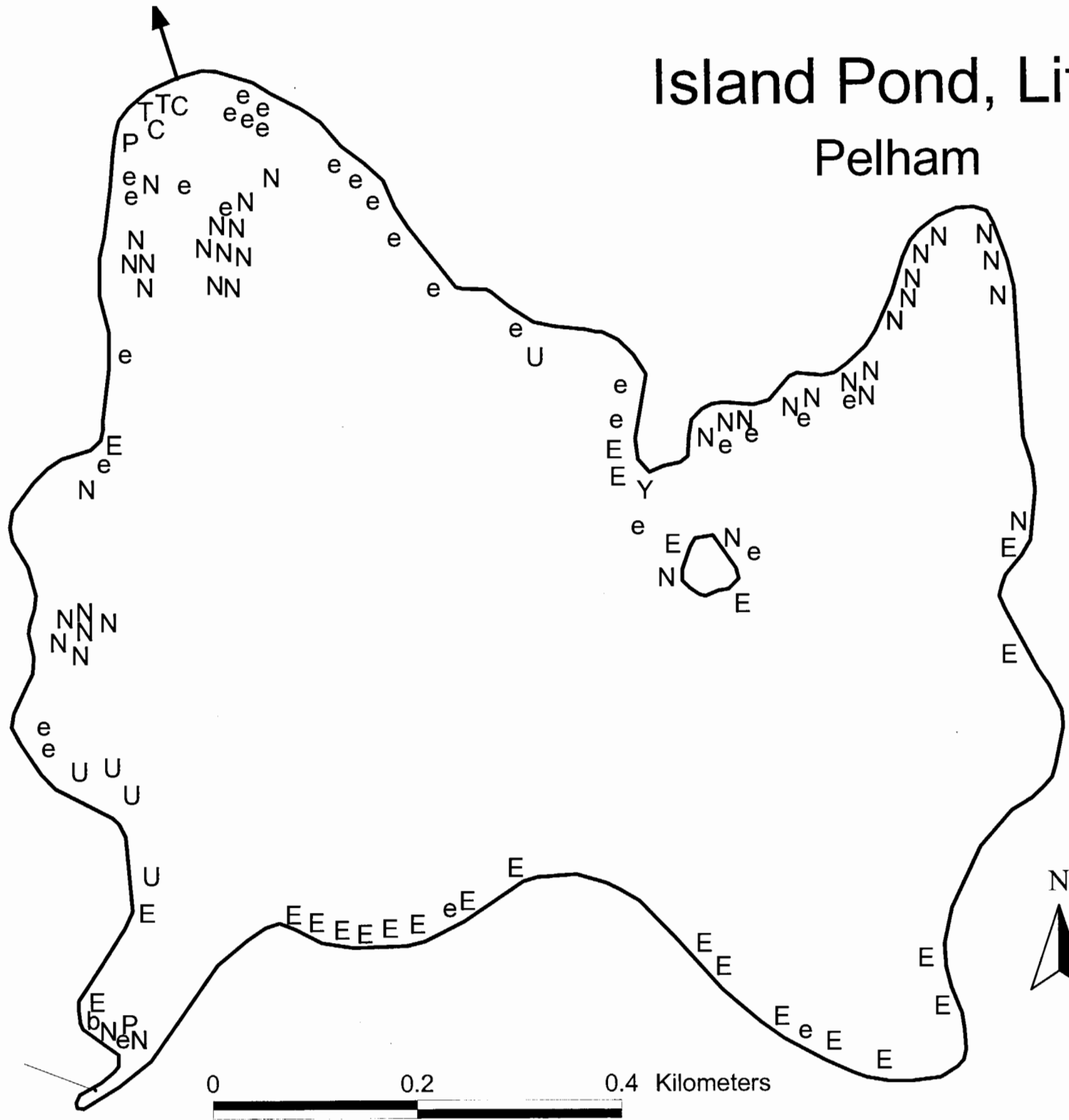
SECCHI DISK (m): 3.5 COMMENTS:
 BOTTOM DEPTH (m): 14.3
 TIME: 1145

*Dissolved oxygen values are in mg/L

Island Pond, Little Pelham

III-114

N,e,P,E,D,O,d,



0 0.2 0.4 Kilometers

