DEPARTMENT of ENVIRONMENTAL SERVICES
Water Division - Watershed Management Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake:	MOUNTAIN POND	Lake Area (ha):	9.71
Town:	SANBORNTON	Maximum depth (m):	15.8
County:	Belknap	Mean depth (m):	4.5
River Basin:	Merrimack	Volume (m^3):	421500
Latitude:	43°34'38" N	Relative depth:	4.6
Longitude:	71°38'22" W	Shore configuration:	1.22
Elevation (ft):	1075	Areal water load (m/yr):	3.69
Shore length (m):	1300	Flushing rate (yr^{-1}):	0.80
Watershed area (ha):	67.3	P retention coeff.:	0.71
% watershed ponded:	0.0	Lake type:	natural w/dam

BIOLOGICAL:		27 January 2000	12 August 1999
DOM. PHYTOPLANKTON (% TOTAL)	#1	DINOBRYON 35%	PERIDINIUM 75%
	#2	PERIDINIUM 20%	STAURASTRUM 8%
	#3	RHIZOSOLENIA 18%	DINOBRYON 5%
PHYTOPLANKTON ABUNDANCE (units/mL)			
CHLOROPHYLL-A (µg/L)			8.34
DOM. ZOOPLANKTON (% TOTAL)	#1	POLYARTHRA 53%	CILIATE SPP (24%)
	#2	KERATELLA 24%	KERATELLA (16%)
	#3		NAUPLIUS LARVA (11%)
ROTIFERS/LITER		28	
MICROCRUSTACEA/LITER		9	
ZOOPLANKTON ABUNDANCE (#/L)		38	
VASCULAR PLANT ABUNDANCE			Scattered
SECCHI DISK TRANSPARENCY (m)			2.5
BOTTOM DISSOLVED OXYGEN (mg/L)		14.2	1.3
BACTERIA (E. coli, #/100 ml)	#1		
	#2		
	#3		

SUMMER THERMAL STRATIFICATION:

stratified

Depth of thermocline (m): 5.6
Hypolimnion volume (m^3) : 70900
Anoxic volume (m^3) : None

CHEMICAL:

Lake: MOUNTAIN POND
Town: SANBORNTON

	27 January 2000		12 August 1999		
DEPTH (m)	5.0	10.0	2.0	6.0	13.0
pH (units)	5.9	5.8	6.0	5.5	5.5
A.N.C. (Alkalinity)	0.8	0.7	1.1	0.7	1.7
NITRATE NITROGEN	< 0.05	< 0.05	< 0.05		< 0.05
TOTAL KJELDAHL NITROGEN	0.11	0.10	0.20	0.20	0.30
TOTAL PHOSPHORUS	0.007	0.006	0.007	0.006	0.007
CONDUCTIVITY (µmhos/cm)	17.5	18.2	17.0	18.3	19.1
APPARENT COLOR (cpu)	16	16	10	8	22
MAGNESIUM			0.42		
CALCIUM			1.0		
SODIUM			< 1.0		
POTASSIUM			0.42		
CHLORIDE	< 2	< 2	< 2		< 2
SULFATE	4	4	3		3
TN : TP	16	17	29		43
CALCITE SATURATION INDEX			5.3		

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1999

D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
2	3	1	2	8	Meso.

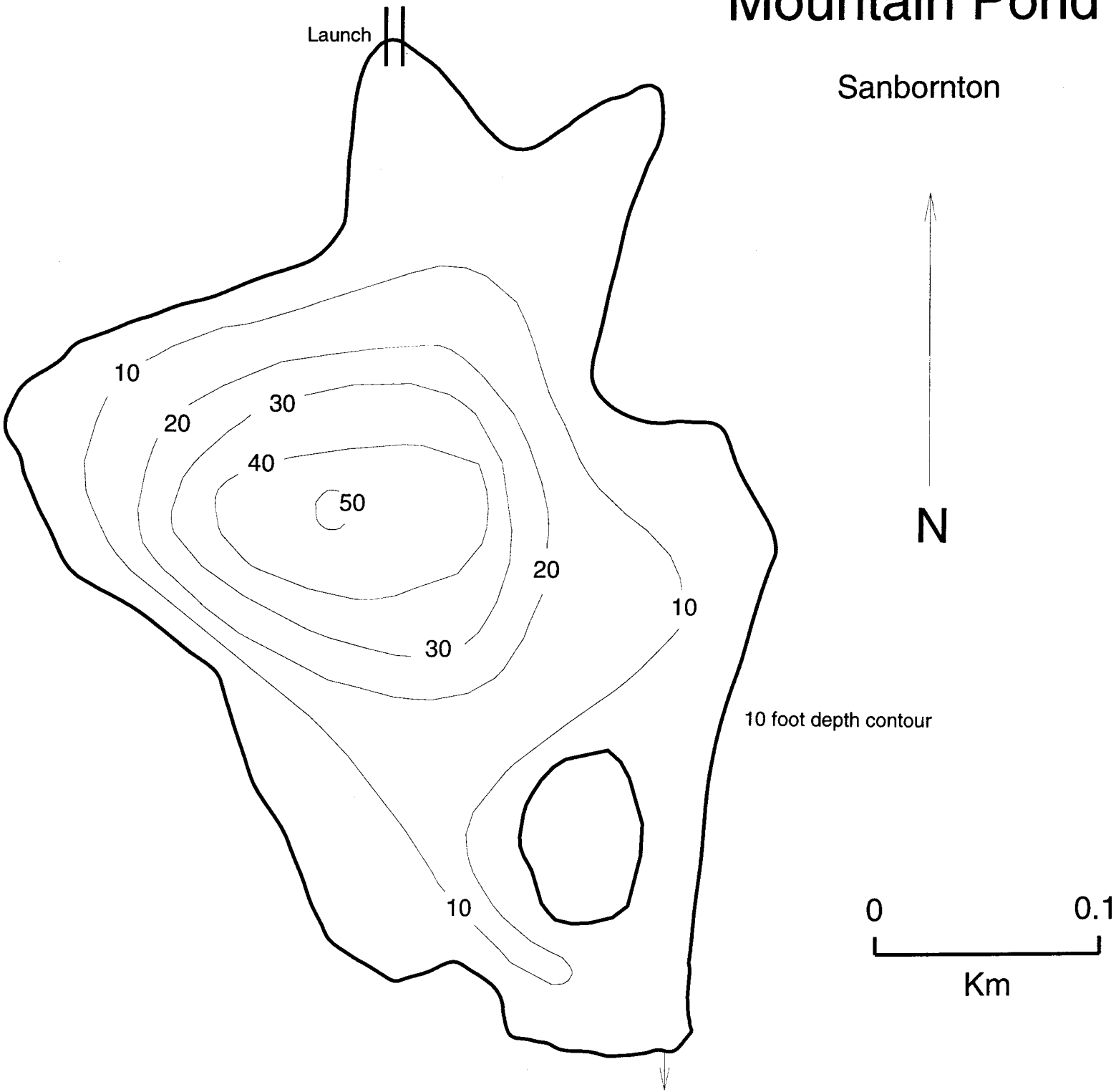
COMMENTS:

1. This is the public water supply for the Town of New Hampton. Swimming, boating and fishing are prohibited.

2. This is a relatively deep (for its surface area), moderately acidic, clear water pond with low nutrient and ion levels. Despite the relatively low phosphorus concentration, the algae (chlorophyll) were more abundant than desired and the water clarity less than expected.

Mountain Pond

Sanbornton



FIELD DATA SHEET

LAKE: MOUNTAIN POND
DATE: 08/12/1999

TOWN: SANBORNTON
WEATHER: Sunny, Warm

	DEPTH (M)	TEMP (°C)	*DISSOLVED OXYGEN	OXYGEN SATURATION
	0.1	21.6	8.7	99 %
	1.0	21.2	8.7	98 %
	2.0	21.0	8.7	98 %
	3.0	20.9	8.7	97 %
	4.0	20.6	8.4	94 %
	5.0	18.1	12.6	133 %
	6.0	12.3	12.3	115 %
	7.0	9.2	7.0	61 %
	8.0	7.4	6.4	53 %
	9.0	6.3	6.6	54 %
	10.0	5.9	5.2	42 %
	11.0	5.4	4.7	37 %
	12.0	5.3	3.6	28 %
	13.0	5.1	2.9	23 %
	14.0	5.0	1.6	13 %
	15.0	5.0	1.3	10 %

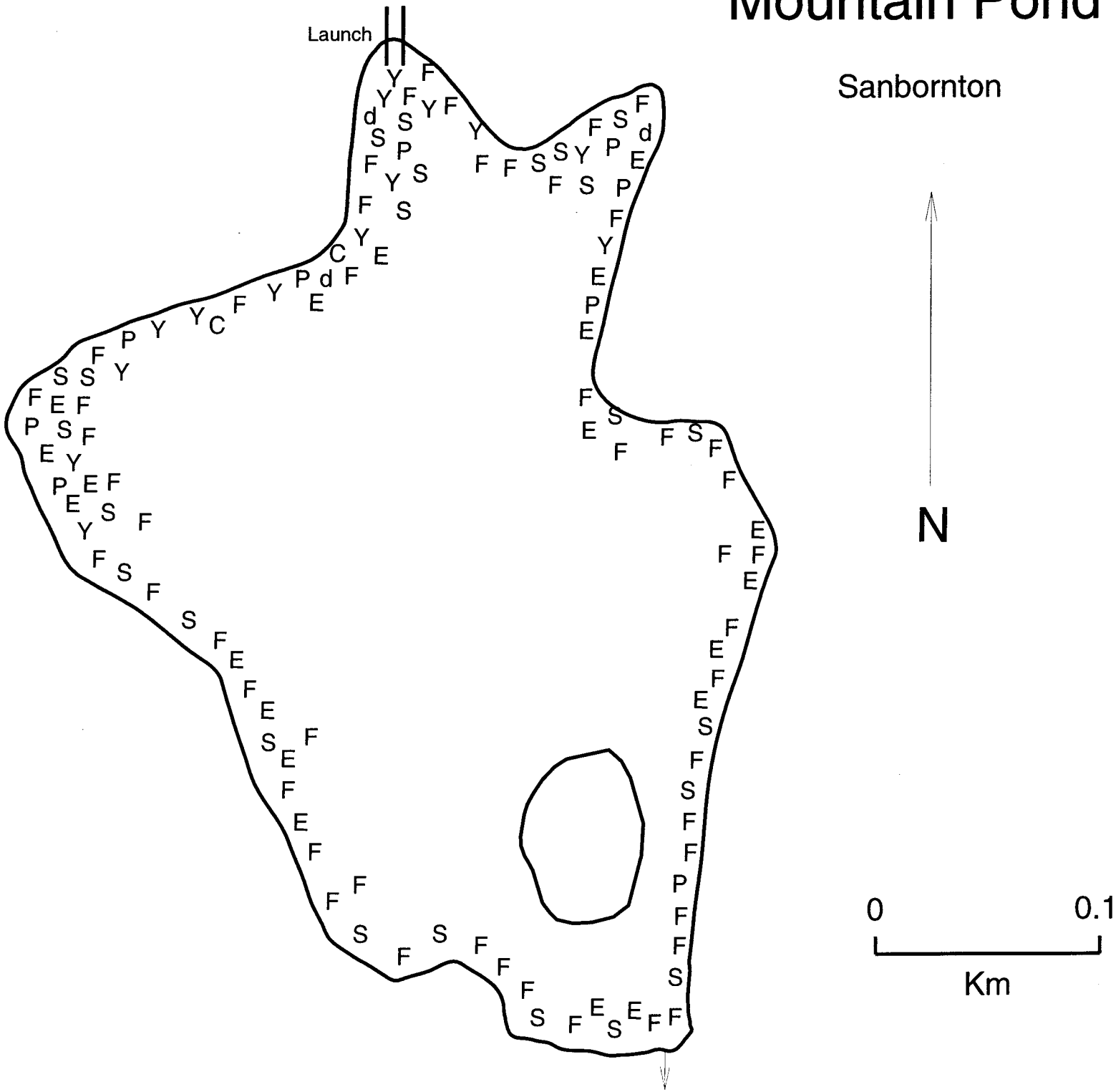
SECCHI DISK (m): 2.5
BOTTOM DEPTH (m): 15.5
TIME: 1237

COMMENTS:

*Dissolved oxygen values are in mg/L

Mountain Pond

Sanbornton



AQUATIC PLANT SURVEY

LAKE: MOUNTAIN POND TOWN: SANBORNTON DATE: 08/12/1999

Key	PLANT NAME		ABUNDANCE
	GENERIC	COMMON	
F	Nymphoides cordatum	Floating heart	Scattered
Y	Nuphar	Yellow water lily	Scattered
S	Sparganium	Bur reed	Scattered
P	Pontederia cordata	Pickerelweed	Scattered
W	Potamogeton	Pondweed	Sparse
E	Eriocaulon septangulare	Pipewort	Sparse
C	Cyperaceae	Non-flowering sedge	Sparse
d	Dulichium arundinaceum	Three-way sedge	Sparse

OVERALL ABUNDANCE: Scattered

GENERAL OBSERVATIONS:

1. Plants were scattered around most of the shoreline. Because of the sparse growth habit of floating heart and pipewort, the plants were less abundant than appears on the map.