DEPARTMENT of ENVIRONMENTAL SERVICES
Water Division - Watershed Management Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake:	KANASATKA, LAKE	**Lake Area (ha):**	150.14
Town:	MOULTONBORO	**Maximum Depth (m):**	12.2
County:	CARROLL	**Mean Depth (m):**	5.5
River Basin:	MERRIMACK	**Volume (m^3):**	8217000
Latitude:	43°43'43" N	**Relative depth:**	0.9
Longititude:	71°71'26" W	**Shore Configuration:**	1.93
Elevation (ft) :	515	**Areal water load (m/yr):**	8.38
Shore length (m):	8400	**Flushing Rate (yr^{-1}):**	1.5
% Watershed Ponded:	1.6	**P retention coeff.:**	0.57
Watershed Area (ha)	2460.5	**Lake Type**	natural w/dam

BIOLOGICAL:		**20-Jan-04**	**02-Jul-03**
DOM. PHYTOPLANKTON (% TOTAL)	#1	SYNURA 50%	DINOBRYON 35%
	#2	ASTERIONELLA 25%	ASTERIONELLA 25%
	#3	RHIZOSOLENIA 7%	MALLOMONAS 10%
CHLOROPHYLL-A (ug/L)			3.08
DOM. ZOOPLANKTON (% TOTAL)	#1	ciliate spp. 64%	ciliate spp. 39%
	#2	KERATELLA 6%	CALANOID COPEPODS 17%
	#3	CALANOID COPEPODS 6%	KELLICOTTIA 10%
ROTIFERS/LITER		11	41
MICROCRUSTACEA/LITER		16	64
ZOOPLANKTON ABUNDANCE (#/L)		90	231
VASCULAR PLANT ABUNDANCE			Sparse
SECCHI DISK TRANSPARENCY (m)			5.6
BOTTOM DISSOLVED OXYGEN (mg/L)		10	0.4
BACTERIA (E. coli, #/100ml)	#1		<10
	#2		5
	#3		

SUMMER THERMAL STRATIFICATION:

stratified

Depth of thermocline (m):	3.8
Hypolimnion volume (m^3):	340000
Anoxic Volume (m^3):	48000

CHEMICAL:

Lake: KANASATKA, LAKE
Town: MOULTONBORO

	20-Jan-04		02-Jul-03		
DEPTH (M)	4.0	8.0	2.0	8.0	12.5
pH (units)	6.9	6.6	7.2	6.8	6.3
A.N.C. (Alkalinity)	12.5	13.2	13.8	13.1	15.3
NITRATE NITROGEN	0.05	< 0.05	< 0.05		< 0.05
TOTAL KJELDHAL NITROGEN	< 0.25	< 0.25	< 0.25	< 0.25	0.50
TOTAL PHOSPHORUS	0.005	< 0.005	0.008	0.012	0.021
CONDUCTIVITY (umhos/cm)	94.7	99.2	91.6	89.9	92.6
APPARENT COLOR (CPU)	15	16	10	12	33
MAGNESIUM			0.98		
CALCIUM			6.0		
SODIUM			8.3		
POTASSIUM			0.86		
CHLORIDE	14	13	12		12
SULFATE	4	4	4		4
TN : TP	35	60	19		25
CALCITE SATURATION INDEX					

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 2003

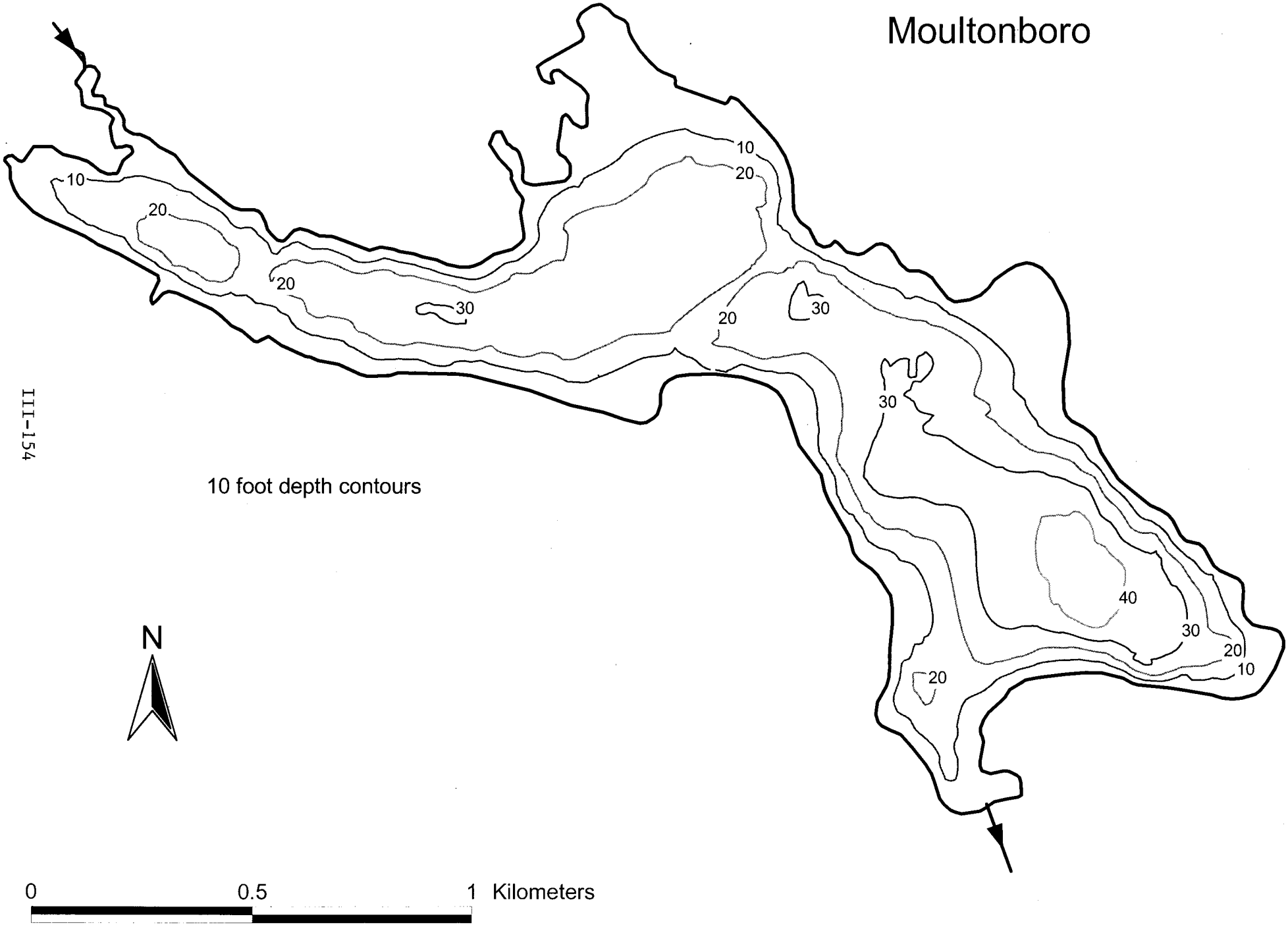
D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
3	1	0	0	4	OLIGO

COMMENTS:

1. aka Long Pond.
2. skicraft banned.
3. Previously surveyed in 1977 and 1989. Little change in trophic parameters over the period.
4. Steep, gravel boat launch at the outlet dam with adequate parking.
5. Good variety of summer plankton was present; 27 different algal genera observed.
6. Good, but unusual for NH, buffering capacity (ANC) was present.

Lake Kanasatka

Moultonboro



FIELD DATA SHEET

LAKE: KANASATKA, LAKE **TOWN:** MOULTONBORO

DATE: 7/2/03 **WEATHER:** Partly cloudy, warm & breezey

	DEPTH (M)	TEMP (°C)	DISSOLVED OXYGEN (mg/L)	PERCENT SATURATED
	0.1	25.9	10.1	124.4
	1.0	25.4	9.8	119.0
	2.0	24.9	9.9	120.1
	3.0	24.3	10.2	122.4
	4.0	21.2	12.3	137.9
	5.0	18.8	11.9	127.8
	6.0	16.9	11.3	116.7
	7.0	15.3	10.7	106.7
	8.0	14.5	10.6	103.6
	9.0	13.1	8.0	76.0
	10.0	11.4	4.8	43.6
	11.0	10.6	3.5	31.7
	12.0	9.7	1.0	8.4
	13.0	9.4	0.4	3.1

SECCHI DEPTH (m) : 5.6

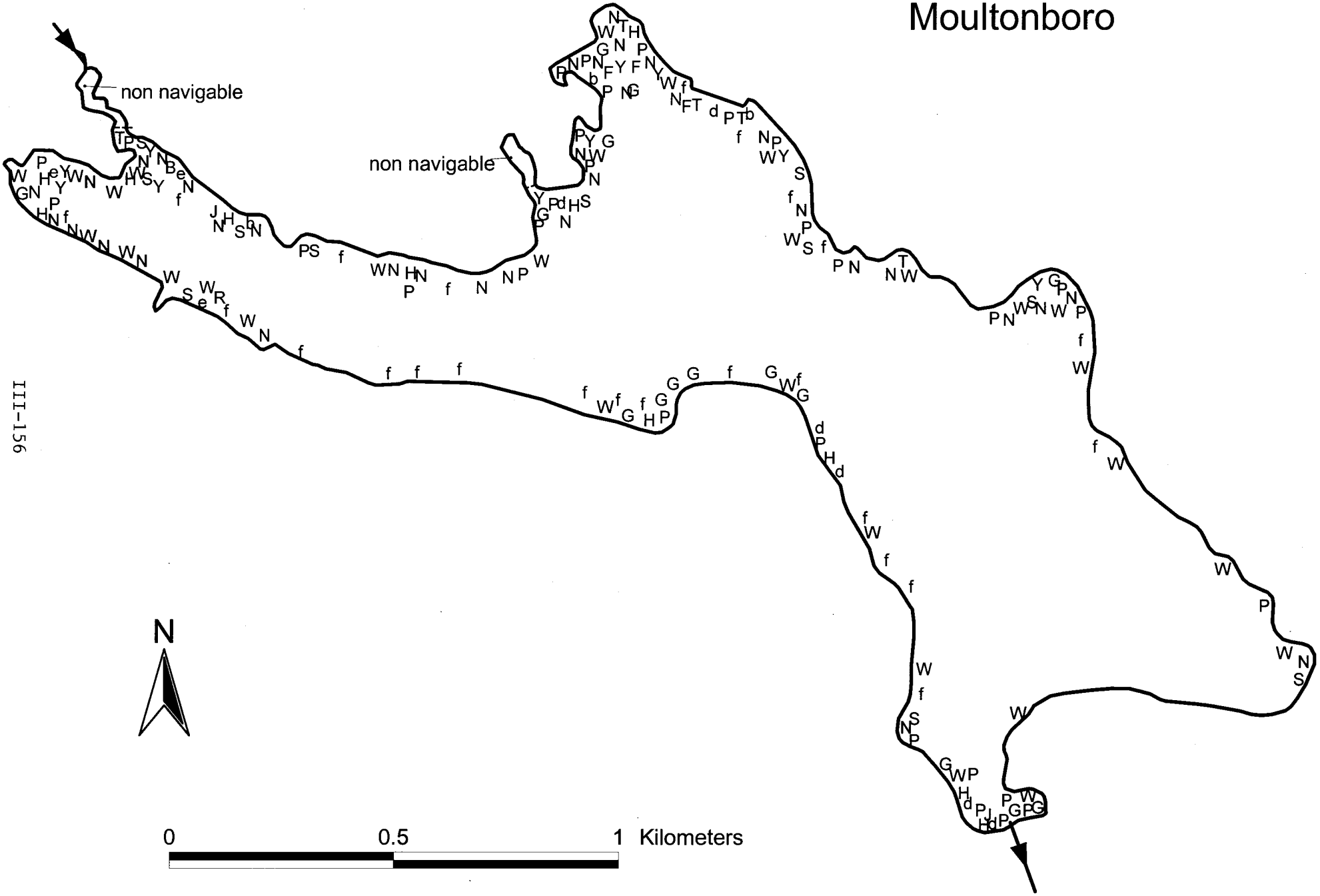
BOTTOM DEPTH (m) : 13.2

TIME: 1330

COMMENTS:

Lake Kanasatka

Moultonboro



AQUATIC PLANT SURVEY

LAKE: KANASATKA, LAKE **TOWN:** MOULTONBORO **DATE:** 7/2/03

KEY	PLANT NAME		ABUNDANCE
	GENERIC	COMMON	
P	Pontederia cordata	Pickerelweed	Sparse
d	Dulichium arundinaceum	Three-way sedge	Sparse
H	Equisetum	Horsetail	Sparse
J	Juncus	Rush	Sparse
W	Potamogeton	Pondweed	Sparse
G	Gramineae	Grass family	Sparse
N	Nymphaea	White water lily	Sparse
S	Sparganium	Bur reed	Sparse
e	Elodea nuttallii	Waterweed	Sparse
R	Potamogeton perfoliatus	Clasping-leaved pondweed	Sparse
Y	Nuphar	Yellow water lily	Sparse
F	Nymphoides cordatum	Floating heart	Sparse
B	Brasenia schreberi	Water shield	Sparse
b	Scirpus	Bulrush	Sparse
T	Typha	Cattail	Sparse
f		Filamentous algae	Scattered
		OVERALL ABUNDANCE :	Sparse

GENERAL OBSERVATIONS :

1. Clouds of filamentous algae were scattered along most of the shoreline.
2. *Potamogeton perfoliatus* was not listed in the 1977 or 1989 surveys. This plant appeared and spread like an exotic plant in Cobbetts Pond, Windham and, to a lesser extent, in Spofford Lake, Chesterfield. Residents should watch this plant closely and pull it if it begins to spread.