DEPARTMENT of ENVIRONMENTAL SERVICES
Water Division - Watershed Management Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake:	BERRY POND	**Lake Area (ha):**	19.02
Town:	MOULTONBORO	**Maximum Depth (m):**	4.6
County:	CARROLL	**Mean Depth (m):**	2.4
River Basin:	MERRIMACK	**Volume (m^3):**	452000
Latitude:	43°43'45" N	**Relative depth:**	0.9
Longititude:	71°71'23" W	**Shore Configuration:**	1.36
Elevation (ft) :	563	**Areal water load (m/yr):**	50
Shore length (m):	2100	**Flushing Rate (yr^{-1}):**	21
% Watershed Ponded:	0	**P retention coeff.:**	0.36
Watershed Area (ha)	1968.4	**Lake Type**	natural

BIOLOGICAL:		**10-Feb-04**	**07-Aug-03**
DOM. PHYTOPLANKTON (% TOTAL)	**#1**	DINOBRYON 75%	CHRYSOSPHAERELLA 55%
	#2	ASTERIONELLA 9%	DINOBRYON 35%
	#3	PERIDINIUM 7%	MELOSIRA 4%
CHLOROPHYLL-A (ug/L)			6.42
DOM. ZOOPLANKTON (% TOTAL)	**#1**	KERATELLA 30%	KERATELLA 43%
	#2	ciliate spp. 27%	NAUPLIUS LARVA 16%
	#3	TINTINNIDIUM 25%	POLYARTHRA 14%
ROTIFERS/LITER		175	107
MICROCRUSTACEA/LITER		65	58
ZOOPLANKTON ABUNDANCE (#/L)		512	181
VASCULAR PLANT ABUNDANCE			Abundant
SECCHI DISK TRANSPARENCY (m)			3.2
BOTTOM DISSOLVED OXYGEN (mg/L)		6	1.9
BACTERIA (E. coli, #/100ml)	**#1**		<10
	#2		<10
	#3		

SUMMER THERMAL STRATIFICATION:

not stratified

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

CHEMICAL:

Lake: BERRY POND
Town: MOULTONBORO

	10-Feb-04		07-Aug-03		
DEPTH (M)	1.0	3.0	1.0		2.5
pH (units)	6.0	6.0	6.5		6.4
A.N.C. (Alkalinity)	8.1	8.3	6.0		6.4
NITRATE NITROGEN	0.07	0.06	< 0.05		< 0.05
TOTAL KJELDHAL NITROGEN	0.40	0.30	0.40		0.40
TOTAL PHOSPHORUS	0.011	0.012	0.011		0.011
CONDUCTIVITY (umhos/cm)	150.9	149.2	157.3		163.0
APPARENT COLOR (CPU)	44	43	33		36
MAGNESIUM			0.97		
CALCIUM			6.1		
SODIUM			19.5		
POTASSIUM			0.76		
CHLORIDE	31	31	36		36
SULFATE	4	4	3		2
TN : TP	43	30	39		39
CALCITE SATURATION INDEX					

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 2003

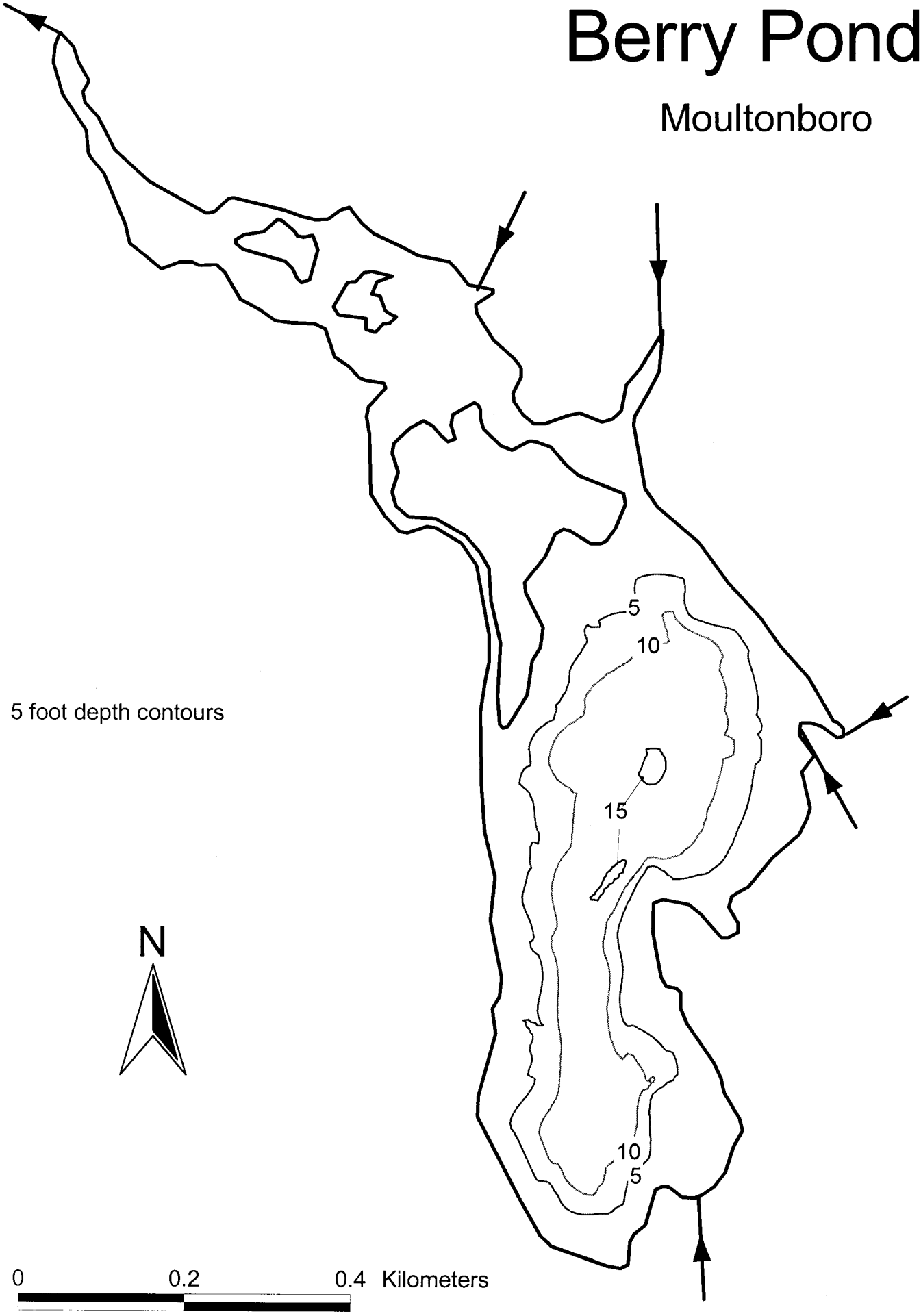
D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
**	2	5	1	8	MESO

COMMENTS:

1. Motor boats are prohibited.
2. Previously surveyed in 1983. Essentially no change in trophic parameters between the two dates. The classification changed (from eutrophic to mesotrophic) due to a revised classification system.
3. Put in canoe adjacent to the southern inlet stream.
4. Moderately elevated sodium, chloride and conductivity values suggest road salt runoff from Routes 25 and 109.
5. Zooplankton were unusually abundant during the winter, dominated by ciliates and the rotifer *Keratella*.

Berry Pond

Moultonboro



5 foot depth contours

FIELD DATA SHEET

LAKE: BERRY POND **TOWN:** MOULTONBORO

DATE: 8/7/03 **WEATHER:** Humid, overcast & calm

	DEPTH (M)	TEMP (°C)	DISSOLVED OXYGEN (mg/L)	PERCENT SATURATED
	0.1	25.7	8.2	99.0
	1.0	24.8	8.1	96.0
	2.0	24.2	7.5	88.0
	3.0	22.8	4.1	47.0
	3.5	22.4	1.9	21.0

SECCHI DEPTH (m) : 3.2

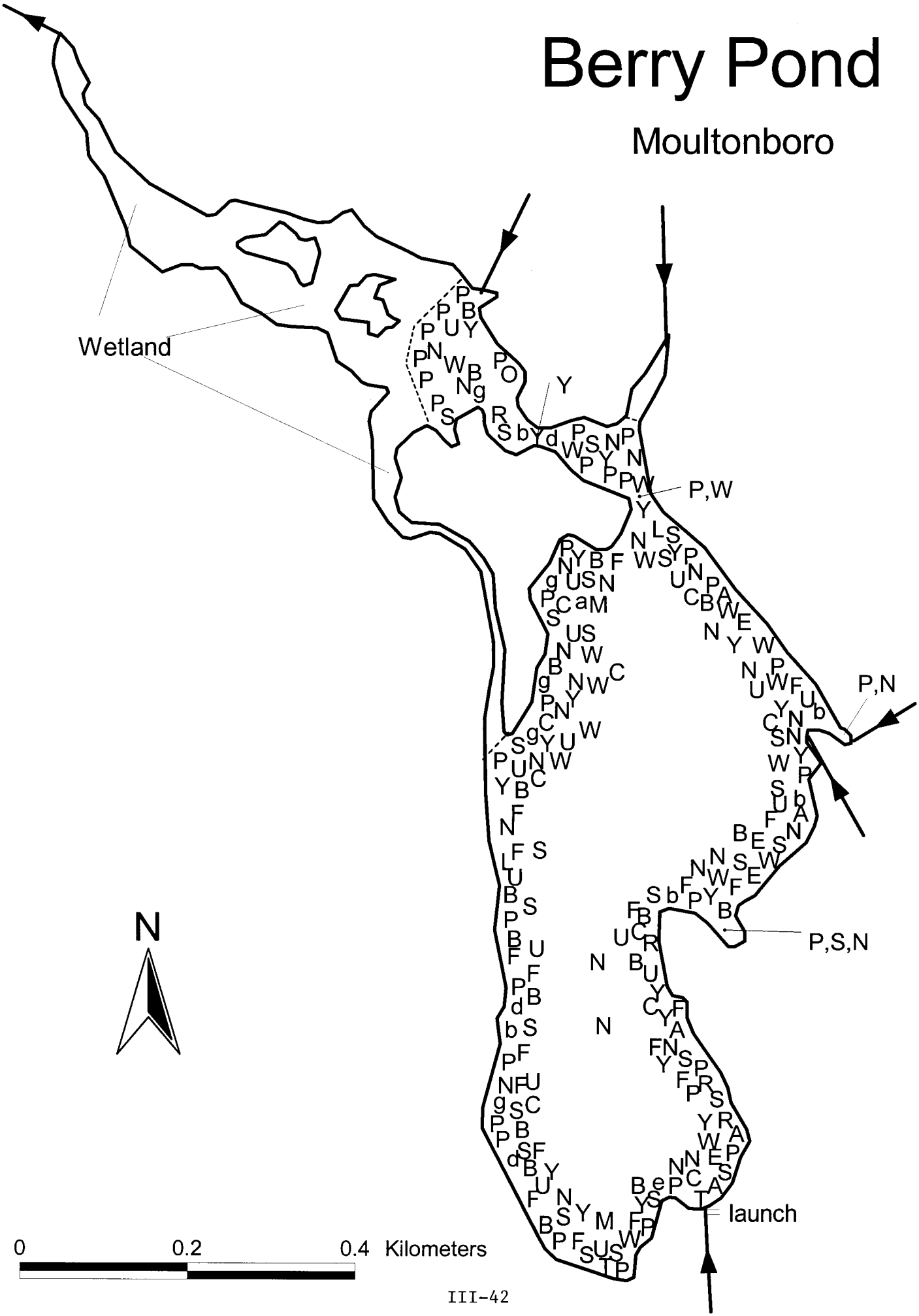
BOTTOM DEPTH (m) : 4.0

TIME: 1235

COMMENTS:

Berry Pond

Moultonboro



AQUATIC PLANT SURVEY

LAKE: BERRY POND **TOWN:** MOULTONBORO **DATE:** 8/7/03

KEY	PLANT NAME		ABUNDANCE
	GENERIC	COMMON	
A	Sagittaria	Arrowhead	Common
S	Sparganium	Bur reed	Scattered
P	Pontederia cordata	Pickerelweed	Common
E	Eriocaulon septangulare	Pipewort	Scattered
N	Nymphaea	White water lily	Common
W	Potamogeton	Pondweed	Common
B	Brasenia schreberi	Water shield	Common
a	Potamogeton amplifolius	Bass weed	Sparse
C	Cyperaceae	Non-flowering sedge	Scattered
R	Peltandra virginica	Arrow arum	Scattered
Y	Nuphar	Yellow water lily	Scattered
U	Utricularia	Bladderwort	Common
L	Lobelia cardinalis	Cardinal flower	Sparse
F	Nymphoides cordatum	Floating heart	Scattered
b	Scirpus	Bulrush	Sparse
d	Dulichium arundinaceum	Three-way sedge	Sparse
g	Myrica gale	Sweet gale	Scat/Common
O	Cephalanthus occidentalis	Buttonbush	Sparse
M	Myriophyllum	Native milfoil	Sparse
e	Eleocharis	Spike rush	Sparse
T	Typha	Cattail	Sparse
		OVERALL ABUNDANCE :	Abundant

GENERAL OBSERVATIONS :

1. Plants were abundant around the entire shoreline.
2. The northern end was an unnavigable wetland.
3. Sterile bottom growth was over the entire visible bottom but is not listed above or depicted on the map.