DEPARTMENT of ENVIRONMENTAL SERVICES
Water Division - Watershed Management Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake:	CHASE POND	Lake Area (ha):	15.78
Town:	WILMOT	Maximum depth (m):	3.4
County:	Merrimack	Mean depth (m):	1.9
River Basin:	Merrimack	Volume (m^3):	296000
Latitude:	43°24'55" N	Relative depth:	0.8
Longitude:	71°54'55" W	Shore configuration:	1.28
Elevation (ft):	704	Areal water load (m/yr):	117.3
Shore length (m):	1800	Flushing rate (yr^{-1}):	62.50
Watershed area (ha):	3643.1	P retention coeff.:	0.19
% watershed ponded:	6.8	Lake type:	artificial

BIOLOGICAL:		7 January 1999	13 July 1998
DOM. PHYTOPLANKTON (% TOTAL)	#1	NO WINTER PLANKTON	MELOSIRA 60%
	#2	ANALYZED	RHIZOSOLENIA 30%
	#3		
PHYTOPLANKTON ABUNDANCE (units/mL)			
CHLOROPHYLL-A (μg/L)			3.11
DOM. ZOOPLANKTON (% TOTAL)	#1		ROTIFER SPP 45%
	#2		ASPLANCHNA 16%
	#3		KERATELLA 16%
ROTIFERS/LITER			216
MICROCRUSTACEA/LITER			6
ZOOPLANKTON ABUNDANCE (#/L)			222
VASCULAR PLANT ABUNDANCE			Scattered
SECCHI DISK TRANSPARENCY (m)			2.8
BOTTOM DISSOLVED OXYGEN (mg/L)		10.9	5.7
BACTERIA (E. coli, #/100 ml)	#1		
	#2		
	#3		

SUMMER THERMAL STRATIFICATION:

weakly stratified

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

CHEMICAL:

Lake: CHASE POND
Town: WILMOT

	7 January 1999		13 July 1998		
DEPTH (m)	1.0	2.0	1.0		2.5
pH (units)	6.2	6.3	6.7		6.9
A.N.C. (Alkalinity)	8.2	7.5	6.1		6.1
NITRATE NITROGEN	0.12	0.13	< 0.05		< 0.05
TOTAL KJELDAHL NITROGEN	0.30	0.20	0.20		0.20
TOTAL PHOSPHORUS	0.012	0.011	0.008		0.009
CONDUCTIVITY (µmhos/cm)	83.2	81.1	52.0		52.9
APPARENT COLOR (cpu)	30	28	23		23
MAGNESIUM			0.58		
CALCIUM			3.3		
SODIUM			5.3		
POTASSIUM			0.62		
CHLORIDE	13	13	7		8
SULFATE	5	5	4		4
TN : TP	35	30	25		22
CALCITE SATURATION INDEX			3.3		

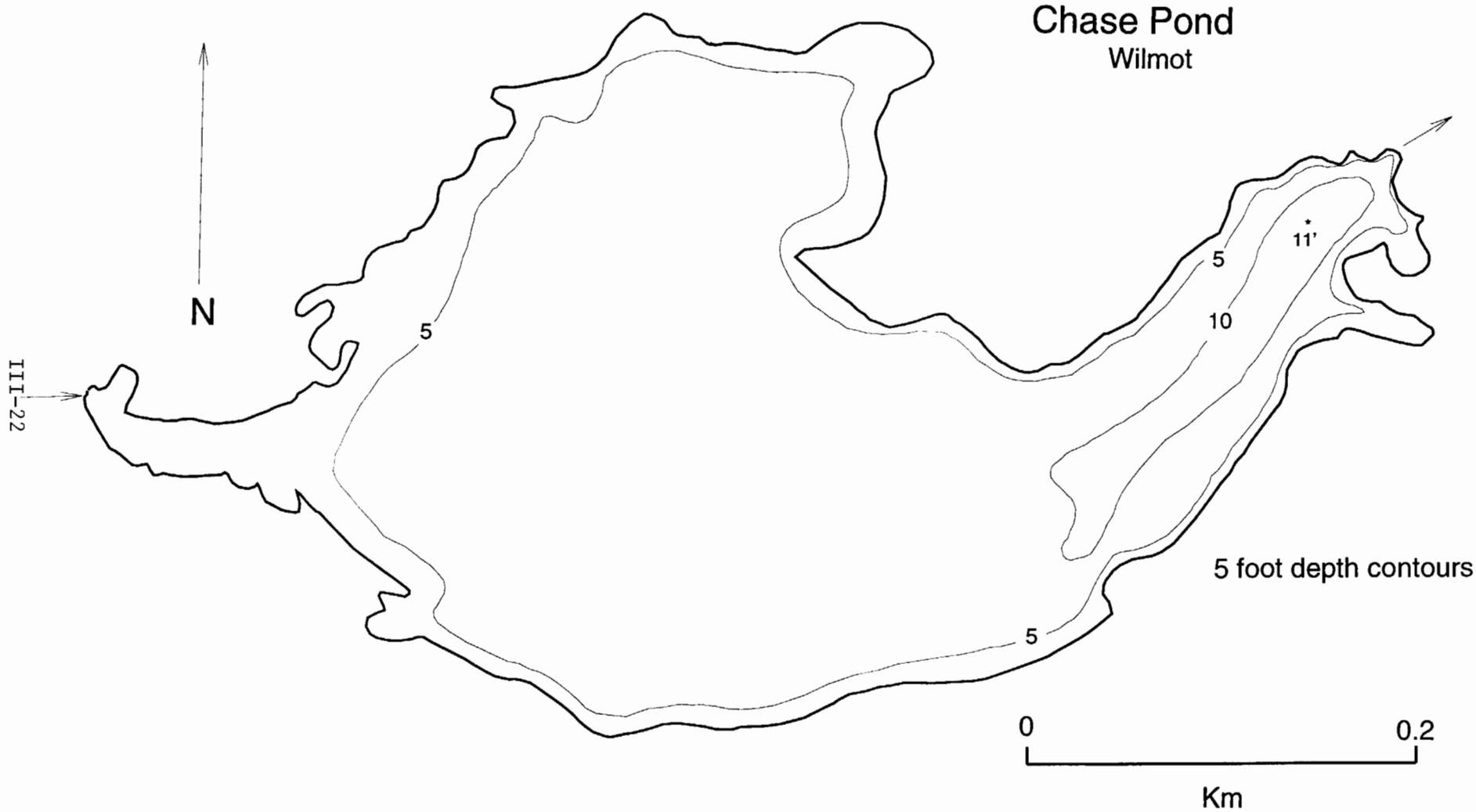
All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1998

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

COMMENTS:

1. This pond was previously surveyed and classified in 1989. There was no change in the trophic classification.
2. Chase Pond has participated in VLAP since 1988 and has exhibited relatively stable trophic quality over that time period.
3. Private pond – no public access and no motorboats are allowed.
4. Four new homes observed along the northern shoreline.


Chase Pond
Wilmot
N
5
5
10
11'
5
5 foot depth contours
0
0.2
Km

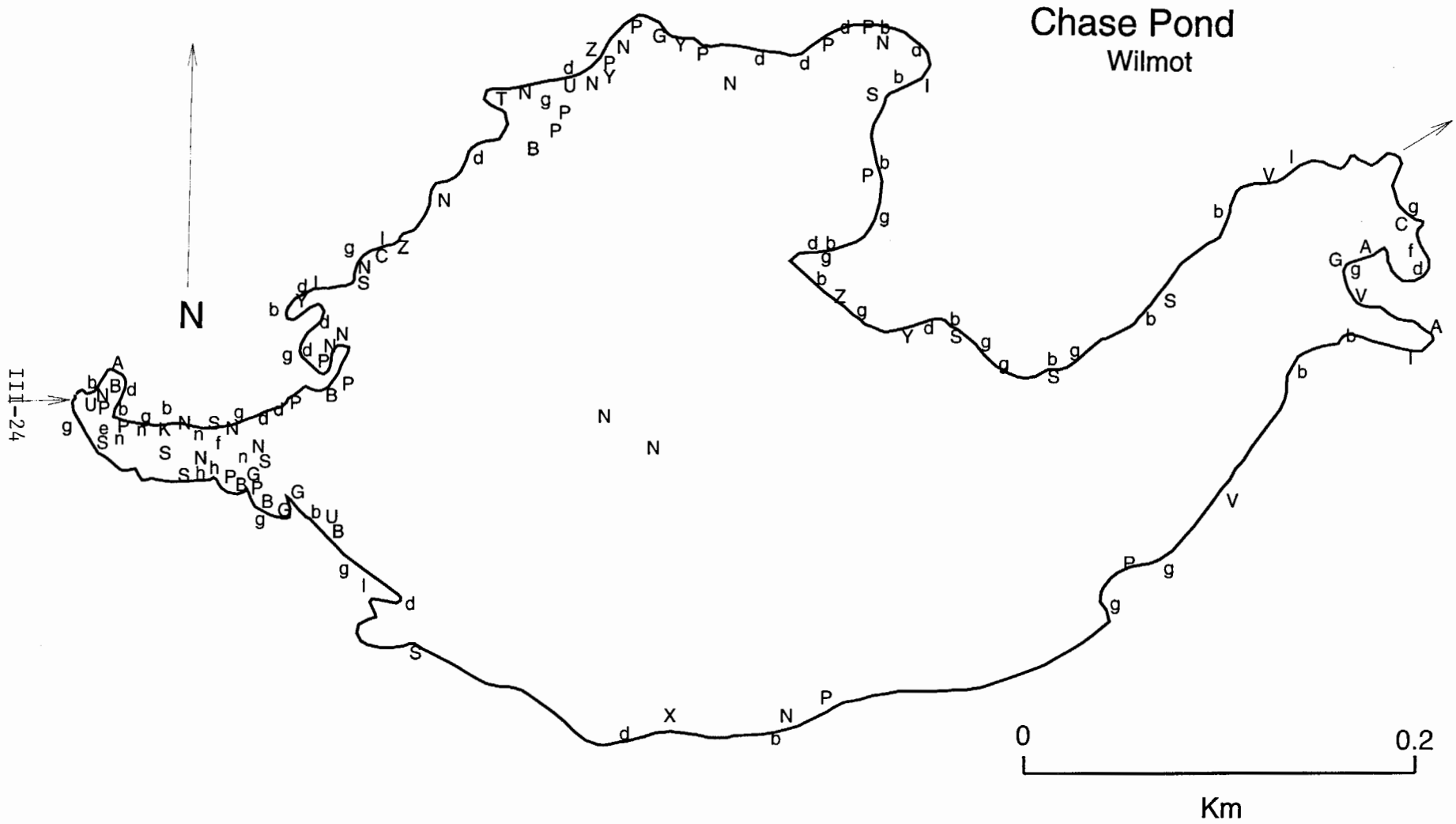
FIELD DATA SHEET

LAKE: CHASE POND TOWN: WILMOT
DATE: 07/13/1998 WEATHER: SUNNY

	DEPTH (M)	TEMP (°C)	*DISSOLVED OXYGEN	OXYGEN SATURATION
	0.1	23.6	8.5	99 %
	0.5	23.0	8.6	99 %
	1.0	22.9	8.6	97 %
	1.5	22.6	8.5	96 %
	2.0	21.2	7.8	86 %
	2.5	20.2	6.2	68 %
	3.0	20.0	5.7	62 %

SECCHI DISK (m): 2.8 COMMENTS:
BOTTOM DEPTH (m): 3.1
TIME: 1250

*Dissolved oxygen values are in mg/L


Chase Pond
Wilmot
N
0
0.2
Km

AQUATIC PLANT SURVEY

LAKE: CHASE POND TOWN: WILMOT DATE: 07/13/1998

Key	PLANT NAME		ABUNDANCE
	GENERIC	COMMON	
h	Myriophyllum humile	Water milfoil	Sparse
b	Scirpus	Bulrush	Scattered
I	Iris	Iris	Sparse
e	Elodea nuttallii	Waterweed	Sparse
U	Utricularia	Bladderwort	Sparse
S	Sparganium	Bur reed	Sparse
N	Nymphaea	White water lily	Sparse
P	Pontederia cordata	Pickerelweed	Sparse
d	Dulichium arundinaceum	Three-way sedge	Sparse
A	Sagittaria	Arrowhead	Sparse
B	Brasenia schreberi	Water shield	Sparse
J	Juncus	Rush	Sparse
H	Hypericum	St. John's-wort	Sparse
g	Myrica gale	Sweet gale	Scattered
W	Potamogeton nodosus	Pondweed	Sparse
f		Filamentous algae	Sparse
Y	Nuphar	Yellow water lily	Sparse
L	Lythrum salicaria	Purple loosestrife	Sparse
C	Carex	Sedge	Sparse
T	Typha	Cattail	Sparse
G	Gramineae	Grass family	Sparse
V	Vaccinium corymbosum	High-bush blueberry	Sparse
X		Sterile thread-like leaf	Sparse

OVERALL ABUNDANCE: Scattered

GENERAL OBSERVATIONS:

1. A small patch of *M. humile* was observed in the inlet cove.
2. Sandy shore present; few plants except in the cove near the inlet and around the small island.