DEPARTMENT of ENVIRONMENTAL SERVICES
Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake:	ADDER POND	Lake Area (ha):	10.52
Town:	ANDOVER	Maximum depth (m):	7.0
County:	Merrimack	Mean depth (m):	2.8
River Basin:	Merrimack	Volume (m^3):	292500
Latitude:	43°26'45" N	Relative depth:	1.8
Longitude:	71°48'30" W	Shore configuration:	1.13
Elevation (ft):	640	Areal water load (m/yr):	5.26
Shore length (m):	1300	Flushing rate (yr^{-1}):	1.90
Watershed area (ha):	114.0	P retention coeff.:	0.65
% watershed ponded:	0.0	Lake type:	natural

BIOLOGICAL:	10 January 1990	11 July 1989
DOM. PHYTOPLANKTON (% TOTAL) #1	DINOBRYON 75%	ASTERIONELLA 45%
#2	SYNURA 25%	CERATIUM 15%
#3		COELOSPHAERIUM 10%
PHYTOPLANKTON ABUNDANCE (cells/mL)		1015.0
CHLOROPHYLL-A (µg/L)		6.28
DOM. ZOOPLANKTON (% TOTAL) #1	KERATELLA 57%	KELLICOTTIA 29%
#2	NAUPLIUS LARVA 21%	NAUPLIUS LARVA 29%
#3	KELLICOTTIA 14%	
ROTIFERS/LITER	288	120
MICROCRUSTACEA/LITER	111	109
ZOOPLANKTON ABUNDANCE (#/L)	399	237
VASCULAR PLANT ABUNDANCE		Scattered
SECCHI DISK TRANSPARENCY (m)		1.9
BOTTOM DISSOLVED OXYGEN (mg/L)	6.5	0.0
BACTERIA (fecal col., #/100 ml) #1		20
#2		10
#3		

SUMMER THERMAL STRATIFICATION:

stratified

Depth of thermocline (m): 2.5
Hypolimnion volume (m^3): None

CHEMICAL:

Lake: ADDER POND
Town: ANDOVER

	10 January 1990		11 July 1989		
DEPTH (m)	2.0	4.0	1.0	3.0	5.0
pH (units)	6.5	6.3	6.7	6.1	5.8
A.N.C. (Alkalinity)	5.8	7.7	5.6	5.8	5.0
NITRATE NITROGEN	< 0.05	0.07	< 0.05		< 0.05
TOTAL KJELDAHL NITROGEN	0.45	0.53	0.39	0.35	0.50
TOTAL PHOSPHORUS	0.016	0.014	0.014	0.017	0.035
CONDUCTIVITY (μ mhos/cm)	32.3	32.2	27.0	28.1	28.3
APPARENT COLOR (cpu)	70	68	75	55	55
MAGNESIUM			0.48		
CALCIUM			3.0		
SODIUM			< 3.0		
POTASSIUM			1.00		
CHLORIDE	< 2	< 2	< 2		< 2
SULFATE	4	3	4		5
TN : TP	28	43	28		14
CALCITE SATURATION INDEX					

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1989

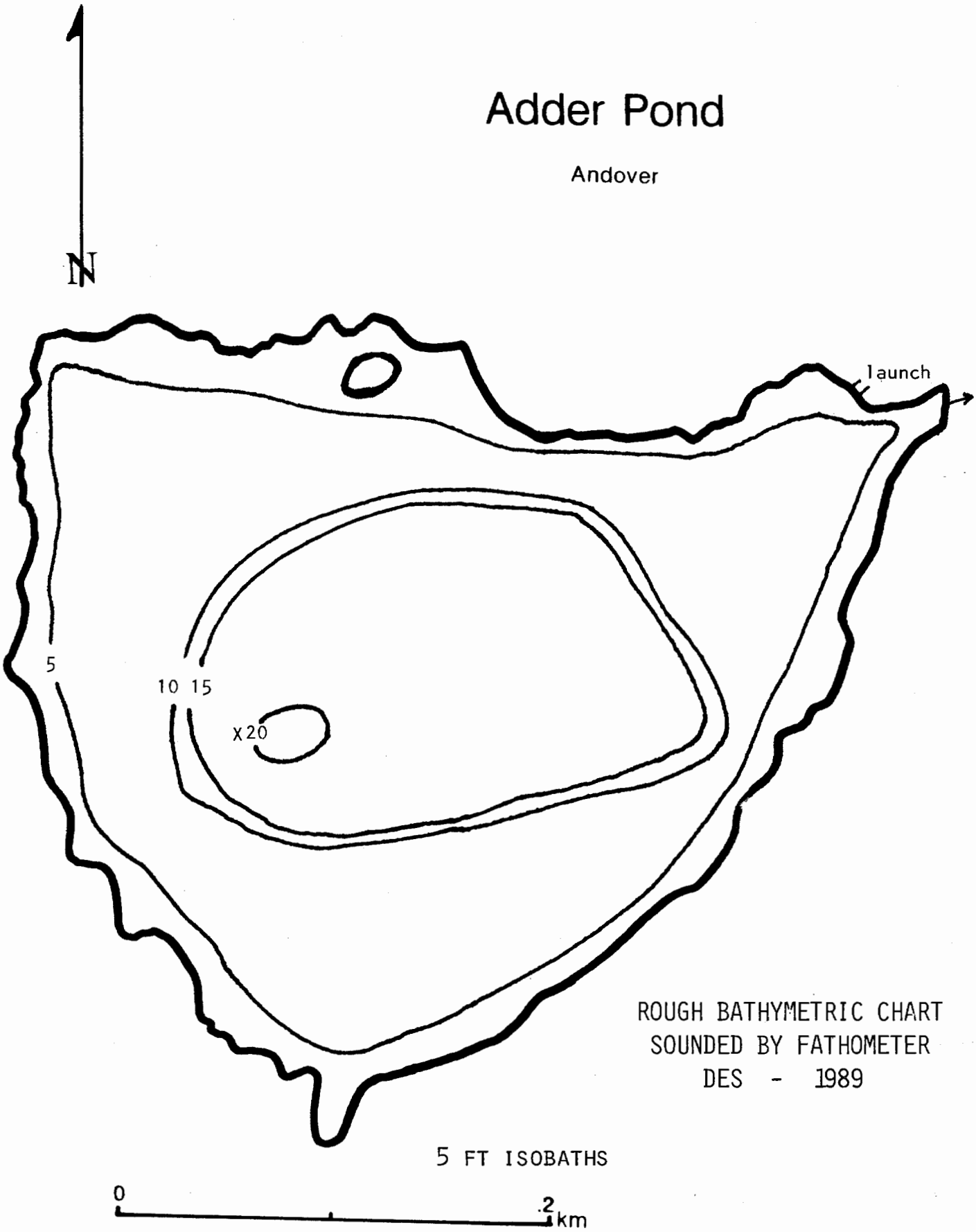
D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
**	4	1	1	6	Meso.

COMMENTS:

1. Also known as Hopkins Pond.
2. State-owned (N.H. Fish & Game Department) access to the pond via a rough dirt road; no boat ramp.
3. No outboard motors allowed on the pond.
4. Dominant whole-water phytoplankton classes were greens (40%), blue-greens (30%), and diatoms (20%). Sphaerocystis (30%) and Anacystis (15%) were the dominant genera.

Adder Pond

Andover



FIELD DATA SHEET

LAKE: ADDER POND
DATE: 07/11/89

TOWN: ANDOVER
WEATHER: SUNNY & VERY WINDY

	DEPTH (M)	TEMP (°C)	*DISSOLVED OXYGEN	OXYGEN SATURATION
	0.1	22.2	8.1	92 %
	1.0	22.0	7.4	84 %
	2.0	20.3	5.2	56 %
	3.0	15.8	2.1	21 %
	4.0	12.2	1.3	12 %
	5.0	9.8	0.0	0 %
	5.5	8.9	0.0	0 %

SECCHI DISK (m): 1.9

BOTTOM DEPTH (m): 5.8

TIME: 1130

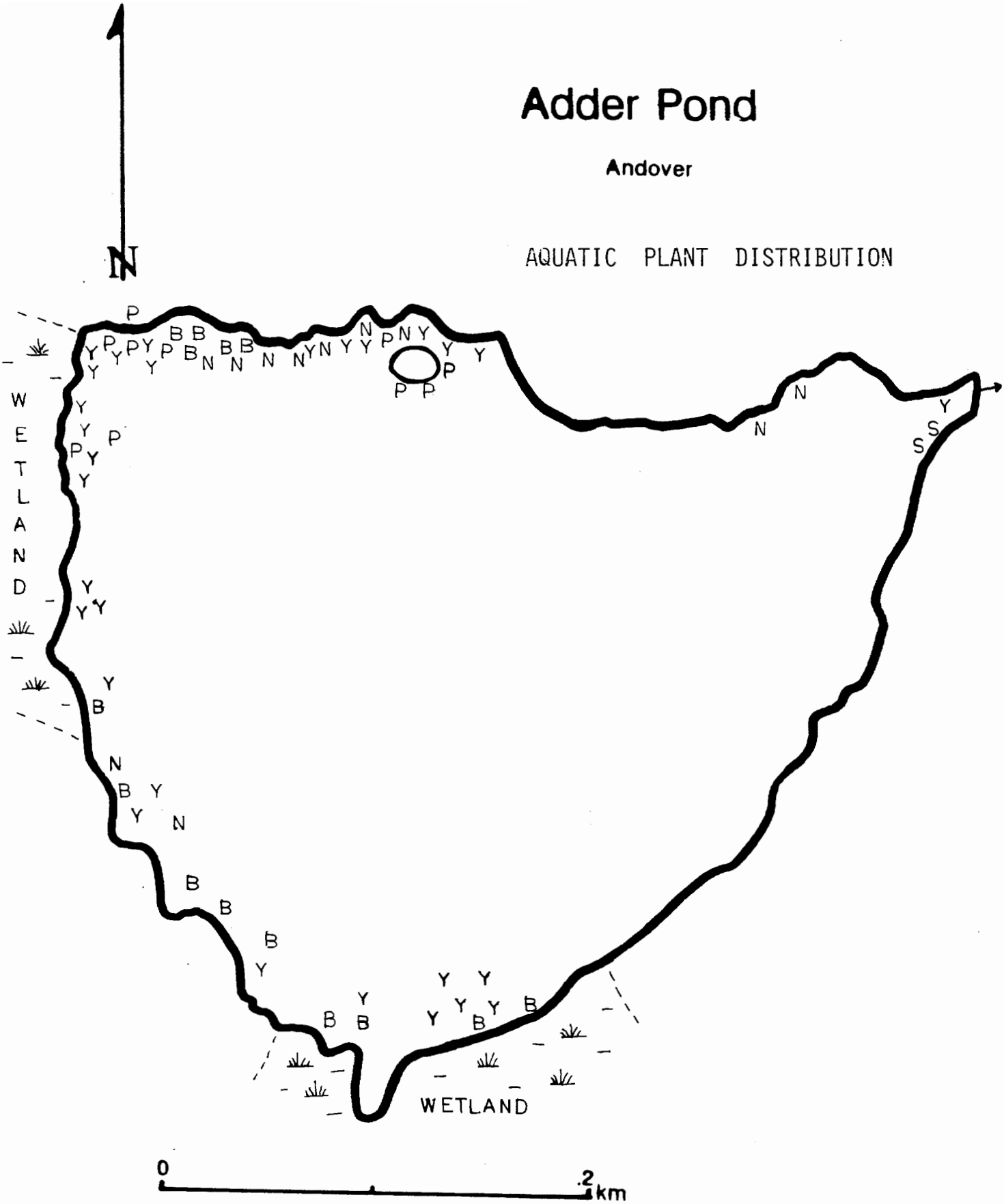
COMMENTS:

*Dissolved oxygen values are in mg/L

Adder Pond

Andover

AQUATIC PLANT DISTRIBUTION



AQUATIC PLANT SURVEY

LAKE: ADDER POND TOWN: ANDOVER DATE: 07/11/89

Key	PLANT NAME		ABUNDANCE
	GENERIC	COMMON	
B	Brasenia schreberi	Water shield	Scattered
Y	Nuphar	Yellow water lily	Scattered
N	Nymphaea	White water lily	Scattered
P	Pontederia cordata	Pickerelweed	Sparse
S	Sparganium	Bur reed	Sparse

OVERALL ABUNDANCE: Scattered

GENERAL OBSERVATIONS:

1. The shoreline above the waterline had scattered growths of leatherleaf (Chamaedaphne) and laurel (Kalmia).