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

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake:	POST POND	Lake Area (ha):	45.04
Town:	LYME	Maximum depth (m):	11.6
County:	Grafton	Mean depth (m):	7.0
River Basin:	Connecticut	Volume (m^3):	3132500
Latitude:	43°49'35" N	Relative depth:	1.5
Longitude:	72°09'04" W	Shore configuration:	1.09
Elevation (ft):	428	Areal water load (m/yr):	30.34
Shore length (m):	2600	Flushing rate (yr^{-1}):	4.40
Watershed area (ha):	3367.0	P retention coeff.:	0.43
% watershed ponded:	0.8	Lake type:	natural

BIOLOGICAL:		21 January 1998	30 July 1997
DOM. PHYTOPLANKTON (% TOTAL)	#1	ASTERIONELLA 50%	DINOBRYON 30%
	#2	MELOSIRA 30%	TABELLARIA 30%
	#3	DINOBRYON 12%	
PHYTOPLANKTON ABUNDANCE (units/mL)			
CHLOROPHYLL-A (µg/L)			15.96
DOM. ZOOPLANKTON (% TOTAL)	#1	CALANOID COPEPOD 30%	DIAPHANOSOMA(?) 36%
	#2	KELLICOTTIA 21%	ASPLANCHNA 12%
	#3	NAUPLIUS LARVA 13%	
ROTIFERS/LITER		38	16
MICROCRUSTACEA/LITER		56	42
ZOOPLANKTON ABUNDANCE (#/L)		99	58
VASCULAR PLANT ABUNDANCE			Scattered
SECCHI DISK TRANSPARENCY (m)			4.7
BOTTOM DISSOLVED OXYGEN (mg/L)		7.0	0.5
BACTERIA (E. coli, #/100 ml)	#1		< 1
	#2		< 1
	#3		

SUMMER THERMAL STRATIFICATION:

stratified

Depth of thermocline (m): 4.5
Hypolimnion volume (m^3) : 439250
Anoxic volume (m^3) : 223250

CHEMICAL:

Lake: POST POND
Town: LYME

	21 January 1998		30 July 1997		
DEPTH (m)	3.5	7.0	2.0	5.0	9.0
pH (units)	7.2	7.2	7.6	7.5	6.5
A.N.C. (Alkalinity)	20.2	22.4	21.4	18.7	17.0
NITRATE NITROGEN	0.05	< 0.05	< 0.05		0.08
TOTAL KJELDAHL NITROGEN	0.30	0.20	0.10	0.10	0.30
TOTAL PHOSPHORUS	0.007	0.006	0.008	0.010	0.014
CONDUCTIVITY (μmhos/cm)	76.1	83.1	75.1	68.6	73.2
APPARENT COLOR (cpu)	12	11	7	8	18
MAGNESIUM			0.93		
CALCIUM			9.4		
SODIUM			3.3		
POTASSIUM			0.81		
CHLORIDE	5	5	4		5
SULFATE	8	8	8		8
TN : TP	50	33	13		27
CALCITE SATURATION INDEX			1.4		

All results in mg/L unless indicated otherwise

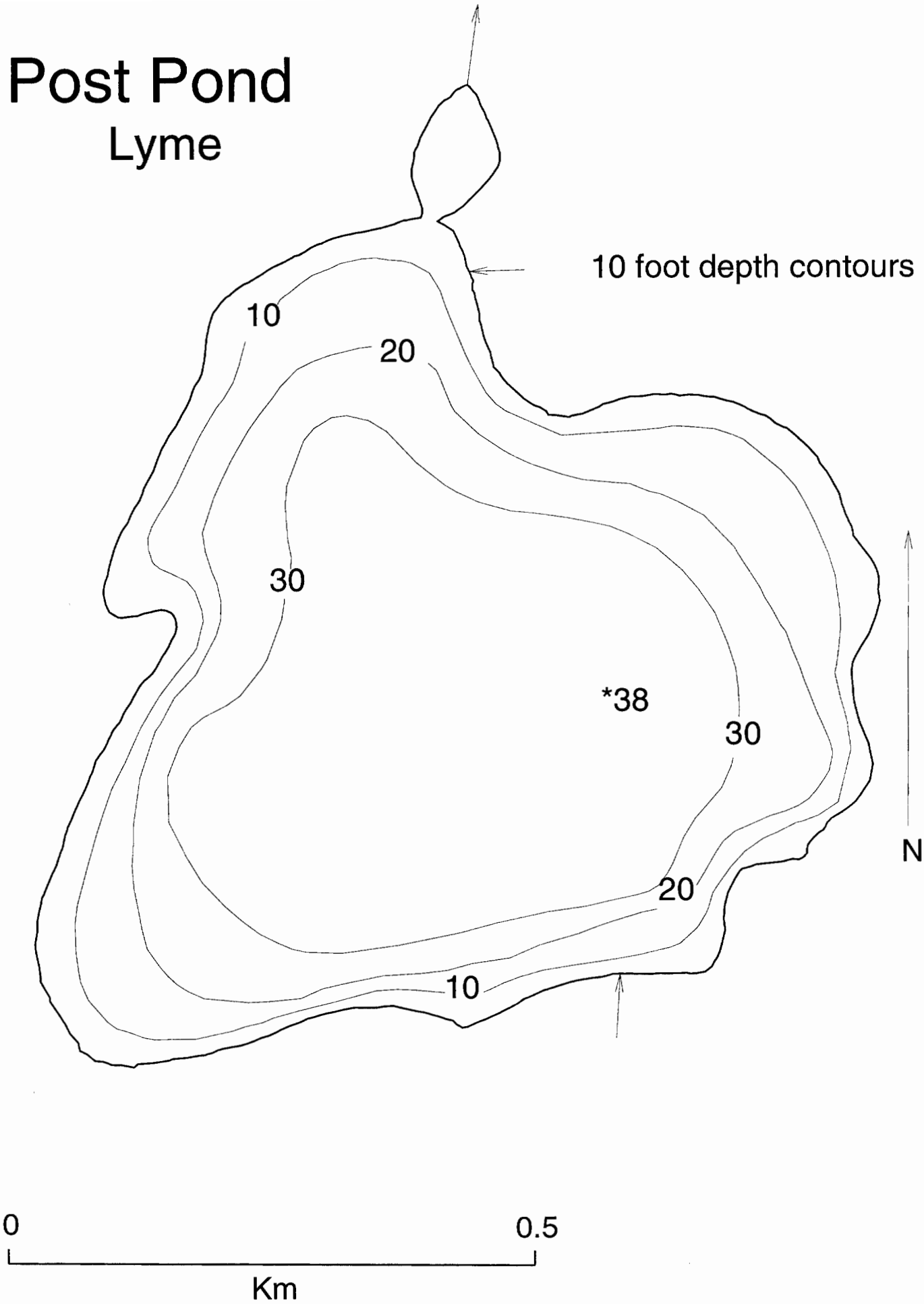
TROPHIC CLASSIFICATION: 1997

D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
6	2	1	3	12	Meso.

COMMENTS:

1. Post Pond was also classified mesotrophic in a previous survey in 1980. However, the chlorophyll was significantly higher in 1997 (less than 4 mg/m^3 in 1980).
2. ANC values are high for NH lakes; less than 4% (29 out of 750 lakes) of NH lakes have ANC values that exceed 20 mg/L.
3. Despite the elevated chlorophyll value, the net phytoplankton were relatively sparse. Apparently, nannoplankton were responsible for the chlorophyll.

Post Pond
Lyme



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FIELD DATA SHEET

LAKE: POST POND
DATE: 07/30/97

TOWN: LYME
WEATHER: CLEAR, SUNNY & WARM

	DEPTH (M)	TEMP (°C)	*DISSOLVED OXYGEN	OXYGEN SATURATION
	0.1	24.0	8.8	103 %
	1.0	23.2	9.0	105 %
	2.0	23.0	9.0	105 %
	3.0	23.0	9.2	107 %
	4.0	21.2	10.2	114 %
	5.0	16.3	12.2	123 %
	6.0	13.0	13.2	125 %
	7.0	9.8	12.4	106 %
	8.0	8.0	4.1	35 %
	9.0	7.0	0.5	4 %
	10.0	6.0	0.5	4 %

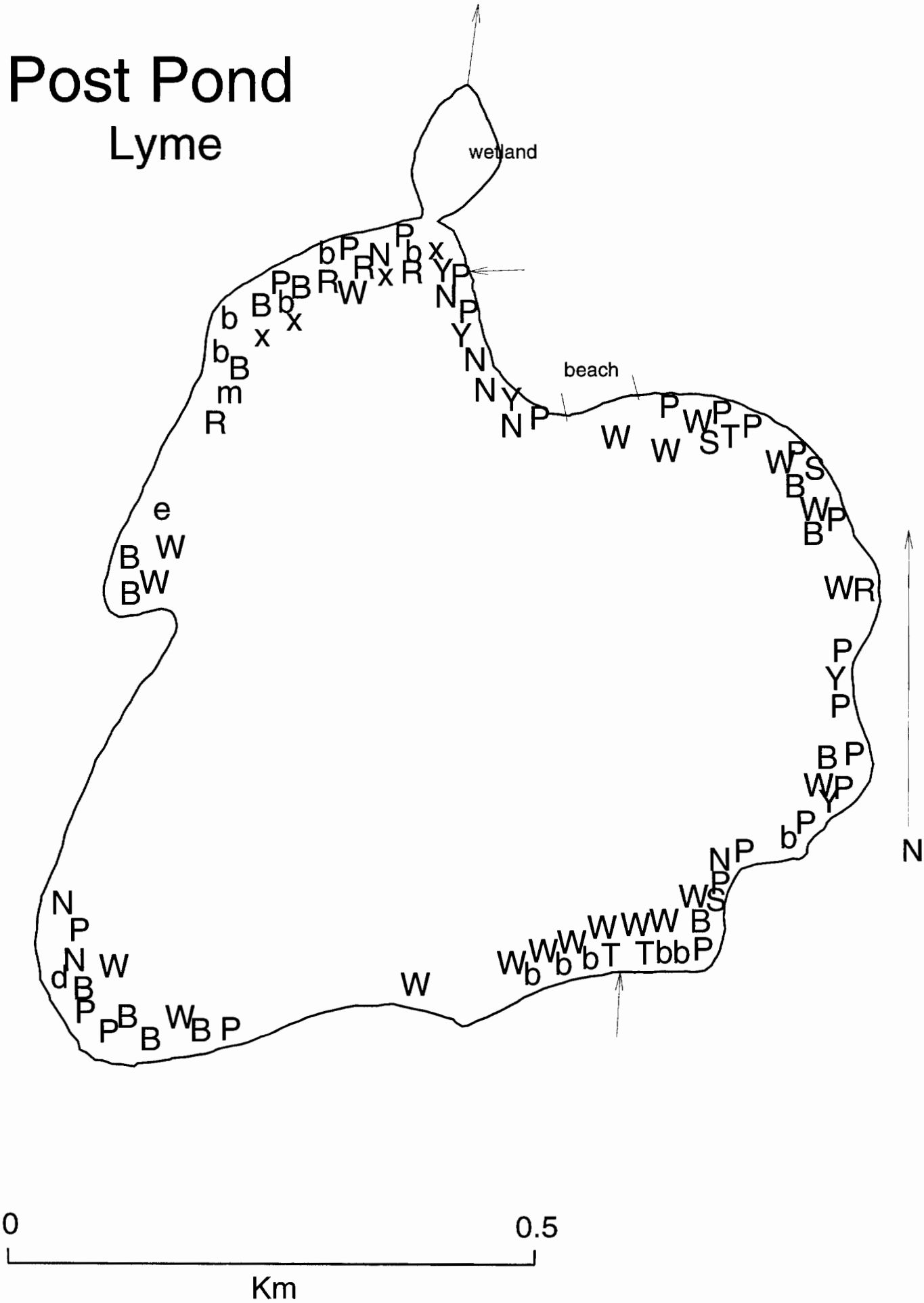
SECCHI DISK (m): 4.7
BOTTOM DEPTH (m): 10.4
TIME: 1145

COMMENTS:

*Dissolved oxygen values are in mg/L

Post Pond

Lyme



AQUATIC PLANT SURVEY

LAKE: POST POND TOWN: LYME DATE: 07/30/97

Key	PLANT NAME		ABUNDANCE
	GENERIC	COMMON	
P	Pontederia cordata	Pickerelweed	Scattered
N	Nymphaea	White water lily	Sparse
B	Brasenia schreberi	Water shield	Sparse
d	Dulichium arundinaceum	Three-way sedge	Sparse
T	Typha	Cattail	Sparse
b	Scirpus	Bulrush	Sparse
R	Potamogeton robbinsii	Robbins pondweed	Sparse
W	Potamogeton	Pondweed	Sparse
X		Bottom growth	Scattered
m	Megalodonta Beckii	Water marigold	Sparse
e	Elodea nuttallii	Waterweed	Sparse
Y	Nuphar	Yellow water lily	Sparse
S	Sparganium	Bur reed	Sparse

OVERALL ABUNDANCE: Scattered

GENERAL OBSERVATIONS:

1. Town beach was present.
2. Wetlands bordered the northern shore at the outlet.
3. Two large snapping turtles were observed.