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

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake:	LABRADOR POND	Lake Area (ha):	4.49
Town:	CONWAY	Maximum depth (m):	6.4
County:	Carroll	Mean depth (m):	2.6
River Basin:	Saco	Volume (m^3):	118500
Latitude:	43°56'54" N	Relative depth:	2.7
Longitude:	71°02'47" W	Shore configuration:	1.73
Elevation (ft):	550	Areal water load (m/yr):	29.37
Shore length (m):	1300	Flushing rate (yr^{-1}):	11.10
Watershed area (ha):	216.8	P retention coeff.:	0.43
% watershed ponded:	0.0	Lake type:	natural

BIOLOGICAL:		1 February 1994	17 August 1993
DOM. PHYTOPLANKTON (% TOTAL)	#1	SPARSE - NO DOMINANT	CHRYSOSPHAERELLA 60%
	#2		LYNGBYA 10%
	#3		RHIZOSOLENIA 10%
PHYTOPLANKTON ABUNDANCE (cells/mL)			2585
CHLOROPHYLL-A (μg/L)			16.44
DOM. ZOOPLANKTON (% TOTAL)	#1	KERATELLA 34%	KELLICOTTIA 30%
	#2	NAUPLIUS LARVA 13%	NAUPLIUS LARVA 23%
	#3	ROTIFER SPP. 13%	KERATELLA 21%
ROTIFERS/LITER		68	307
MICROCRUSTACEA/LITER		46	283
ZOOPLANKTON ABUNDANCE (#/L)		120	664
VASCULAR PLANT ABUNDANCE			Common/Abun
SECCHI DISK TRANSPARENCY (m)			2.0
BOTTOM DISSOLVED OXYGEN (mg/L)		3.3	0.3
BACTERIA (E. coli, #/100 ml)	#1		2
	#2		
	#3		

SUMMER THERMAL STRATIFICATION:

stratified

Depth of thermocline (m): 1.8
Hypolimnion volume (m^3) : 2500
Anoxic volume (m^3) : 44500

CHEMICAL:

Lake: LABRADOR POND
Town: CONWAY

	1 February 1994		17 August 1993		
DEPTH (m)	1.5	4.0	1.0	3.0	5.5
pH (units)	6.0	5.9	6.4	6.2	6.0
A.N.C. (Alkalinity)	5.3	5.3	4.9	5.0	6.8
NITRATE NITROGEN	0.06	0.05	< 0.02		< 0.02
TOTAL KJELDAHL NITROGEN	0.35	0.41	0.38	0.37	0.42
TOTAL PHOSPHORUS	0.012	0.015	0.020	0.022	0.037
CONDUCTIVITY (µmhos/cm)	26.6	28.9	21.0	21.5	27.3
APPARENT COLOR (cpu)			55	58	110
MAGNESIUM			0.33		
CALCIUM			1.8		
SODIUM			1.6		
POTASSIUM			< 0.40		
CHLORIDE	< 2	< 2	< 3		< 3
SULFATE	3	3	2		2
TN : TP	34	31	19		11
CALCITE SATURATION INDEX			4.0		

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1993

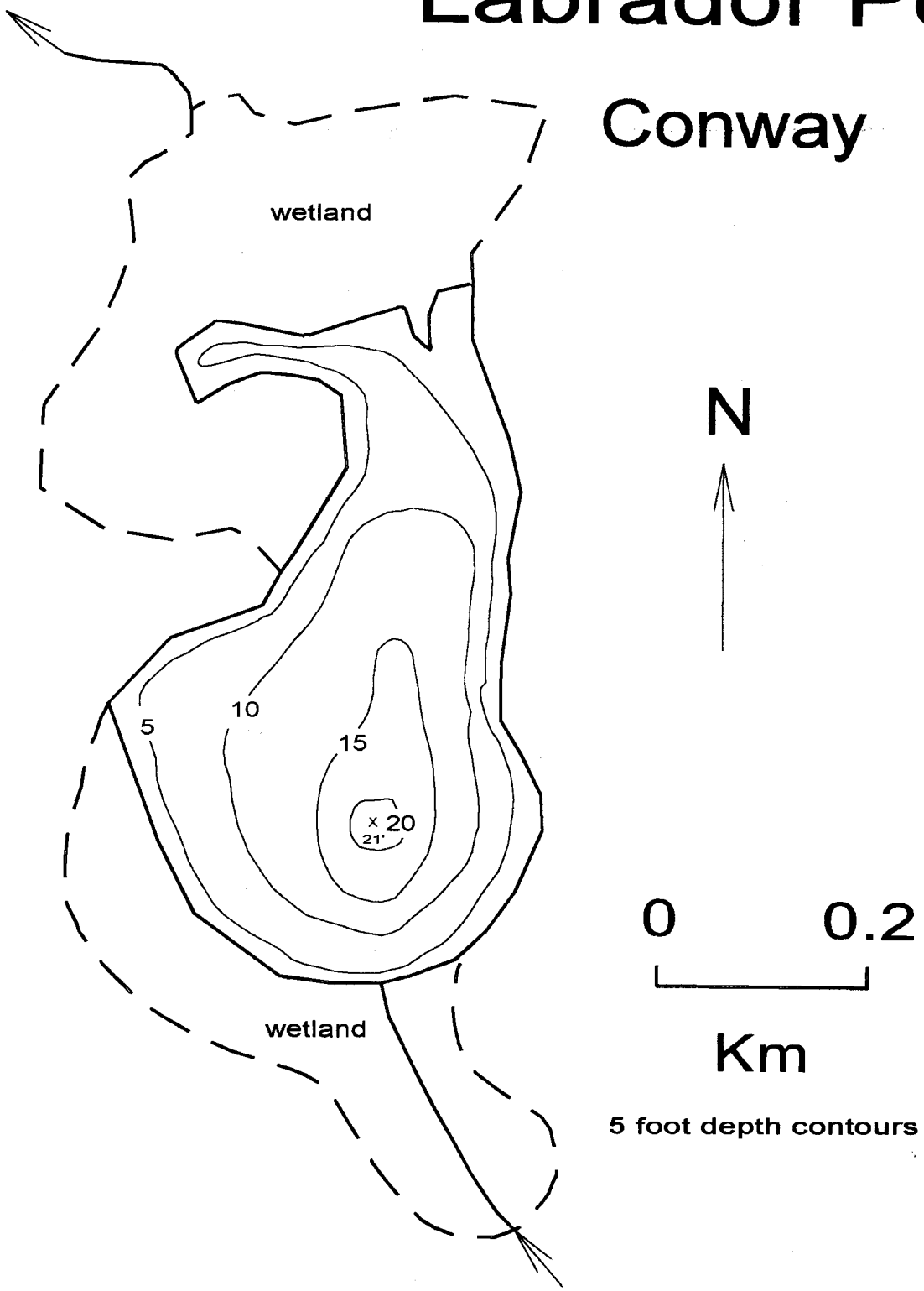
D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
4	4	4	3	15	Eutro.

COMMENTS:

1. No public access site; we accessed the pond via a foot path over private land.
2. Pond bottom was very loose, organic muck.
3. This is a eutrophic pond surrounded by wetlands.
4. Dominant genera of wholewater phytoplankton were Geminella? (20%) and Merismopedia (20%). The identification of Geminella is considered tentative; it is not usually observed in our plankton assemblages.

Labrador Pond

Conway



FIELD DATA SHEET

LAKE: LABRADOR POND
DATE: 08/17/93

TOWN: CONWAY
WEATHER: FOG & DRIZZLE; WARM

	DEPTH (M)	TEMP (°C)	*DISSOLVED OXYGEN	OXYGEN SATURATION
	0.1	22.5	6.9	78 %
	1.0	22.0	7.0	80 %
	1.5	22.0	5.1	58 %
	2.0	20.0	0.4	4 %
	3.0	16.0	0.2	2 %
	4.0	12.0	0.2	2 %
	5.0	9.5	0.2	2 %
	5.5	9.0	0.2	2 %
	6.0	8.5	0.3	3 %

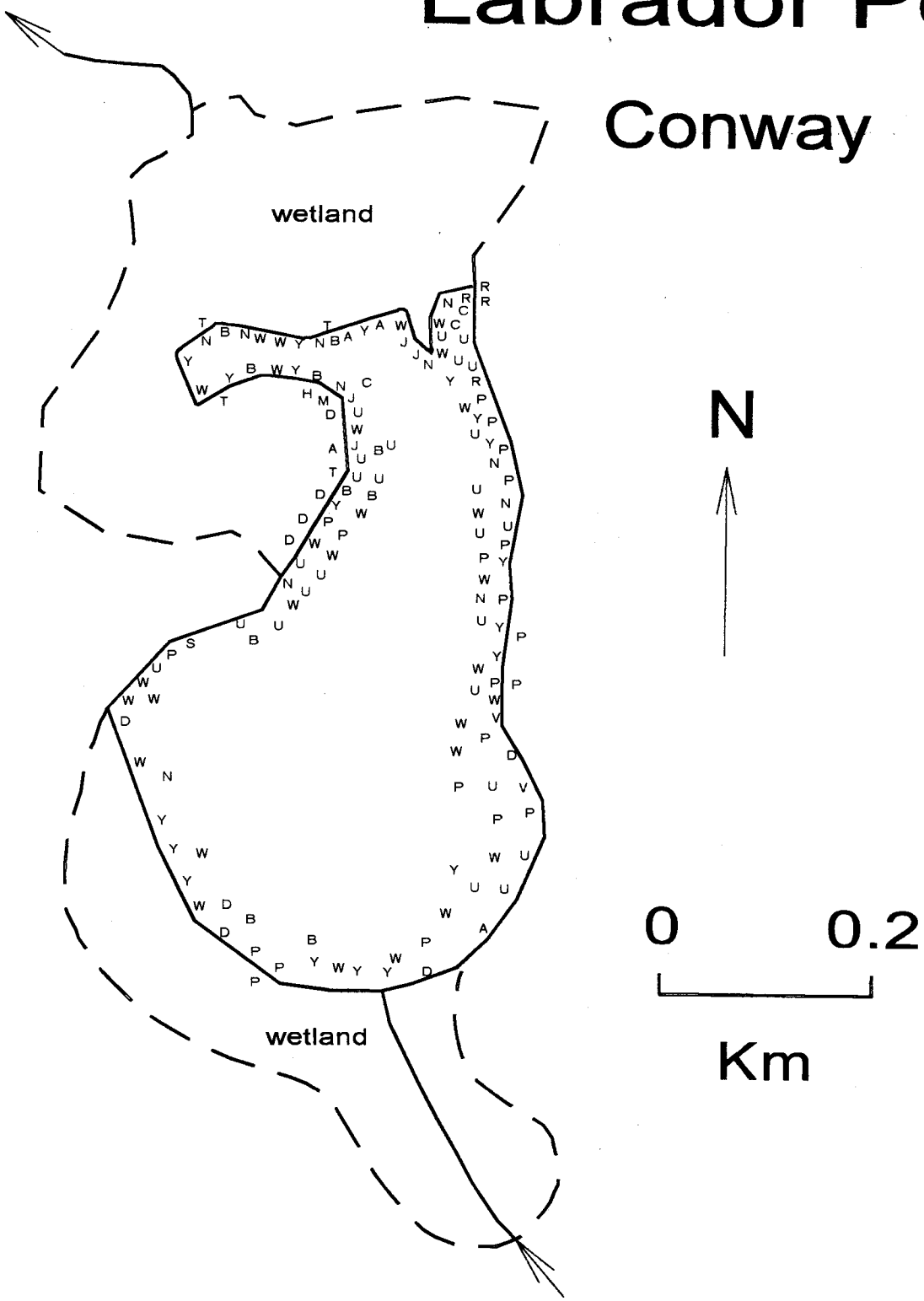
SECCHI DISK (m): 2.0
BOTTOM DEPTH (m): 6.4
TIME: 1300

COMMENTS: There was essentially no dissolved oxygen present below 2 meters.

*Dissolved oxygen values are in mg/L

Labrador Pond

Conway



AQUATIC PLANT SURVEY

LAKE: LABRADOR POND TOWN: CONWAY DATE: 08/17/93

Key	PLANT NAME		ABUNDANCE
	GENERIC	COMMON	
U	Utricularia	Bladderwort	Common
W	Potamogeton	Pondweed	Common
A	Sagittaria	Arrowhead	Scattered
C	Ceratophyllum demersum	Coontail	Sparse
J	Najas	Bushy pondweed	Sparse
B	Brasenia schreberi	Water shield	Scattered
D	Decodon verticillatus	Swamp loosestrife	Scat/Common
M	Myrica gale	Sweet gale	Scat/Common
N	Nymphaea	White water lily	Common
T	Typha	Cattail	Sparse
Y	Nuphar	Yellow water lily	Common/Abun
P	Pontederia cordata	Pickerelweed	Common
S	Sparganium	Bur reed	Sparse
V	Vallisneria americana	Tape grass	Sparse
H	Hypericum	St. John's-wort	Sparse
R	Andromeda glaucophylla	Bog rosemary	Sparse

OVERALL ABUNDANCE: Common/Abun

GENERAL OBSERVATIONS:

1. Wetlands surrounded all but the eastern shoreline, which was lined with hardwoods.
2. Wetlands were dominated by grasses, Sphagnum, Arrowhead, Cattails, loosestrife and sweet gale.
3. Clumps of filamentous green algae and some Oscillatoria clumps were present.