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

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake:	COLLINS POND	Lake Area (ha):	12.14
Town:	FITZWILLIAM	Maximum depth (m):	3.1
County:	Cheshire	Mean depth (m):	1.4
River Basin:	Connecticut	Volume (m^3):	173000
Latitude:	42°45'58" N	Relative depth:	0.8
Longitude:	72°08'45" W	Shore configuration:	1.00
Elevation (ft):	1070	Areal water load (m/yr):	0.47
Shore length (m):	840	Flushing rate (yr^{-1}):	0.30
Watershed area (ha):	13.3	P retention coeff.:	0.95
% watershed ponded:	0.0	Lake type:	natural

BIOLOGICAL:		17 February 1999	25 August 1998
DOM. PHYTOPLANKTON (% TOTAL)	#1	NO WINTER PLANKTON	SPONDYLOSIUM 55%
	#2	ANALYZED	STAURASTRUM 15%
	#3		PERIDINIUM 10%
PHYTOPLANKTON ABUNDANCE (units/mL)			
CHLOROPHYLL-A (μg/L)			1.82
DOM. ZOOPLANKTON (% TOTAL)	#1		BOSMINA 40%
	#2		NAUPLIUS LARVA 33%
	#3		
ROTIFERS/LITER			8
MICROCRUSTACEA/LITER			113
ZOOPLANKTON ABUNDANCE (#/L)			121
VASCULAR PLANT ABUNDANCE			Common/Abun
SECCHI DISK TRANSPARENCY (m)			3.1 Visible on bottom
BOTTOM DISSOLVED OXYGEN (mg/L)		6.6	8.1
BACTERIA (E. coli, #/100 ml)	#1		
	#2		
	#3		

SUMMER THERMAL STRATIFICATION:

not stratified

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

CHEMICAL:

Lake: COLLINS POND
Town: FITZWILLIAM

	17 February 1999		25 August 1998		
DEPTH (m)	1.0	2.0	1.0		2.5
pH (units)	5.2	5.4	6.1		5.9
A.N.C. (Alkalinity)	1.6	1.8	1.4		1.9
NITRATE NITROGEN	0.08	0.08	< 0.05		< 0.05
TOTAL KJELDAHL NITROGEN	0.30	0.30	0.30		0.30
TOTAL PHOSPHORUS	0.008	0.012	0.007		0.006
CONDUCTIVITY (µmhos/cm)	52.4	53.0	41.7		41.4
APPARENT COLOR (cpu)	14	16	11		13
MAGNESIUM			0.24		
CALCIUM			1.5		
SODIUM			5.4		
POTASSIUM			0.40		
CHLORIDE	10	10	8		8
SULFATE	4	4	3		3
TN : TP	48	32	43		50
CALCITE SATURATION INDEX			4.9		

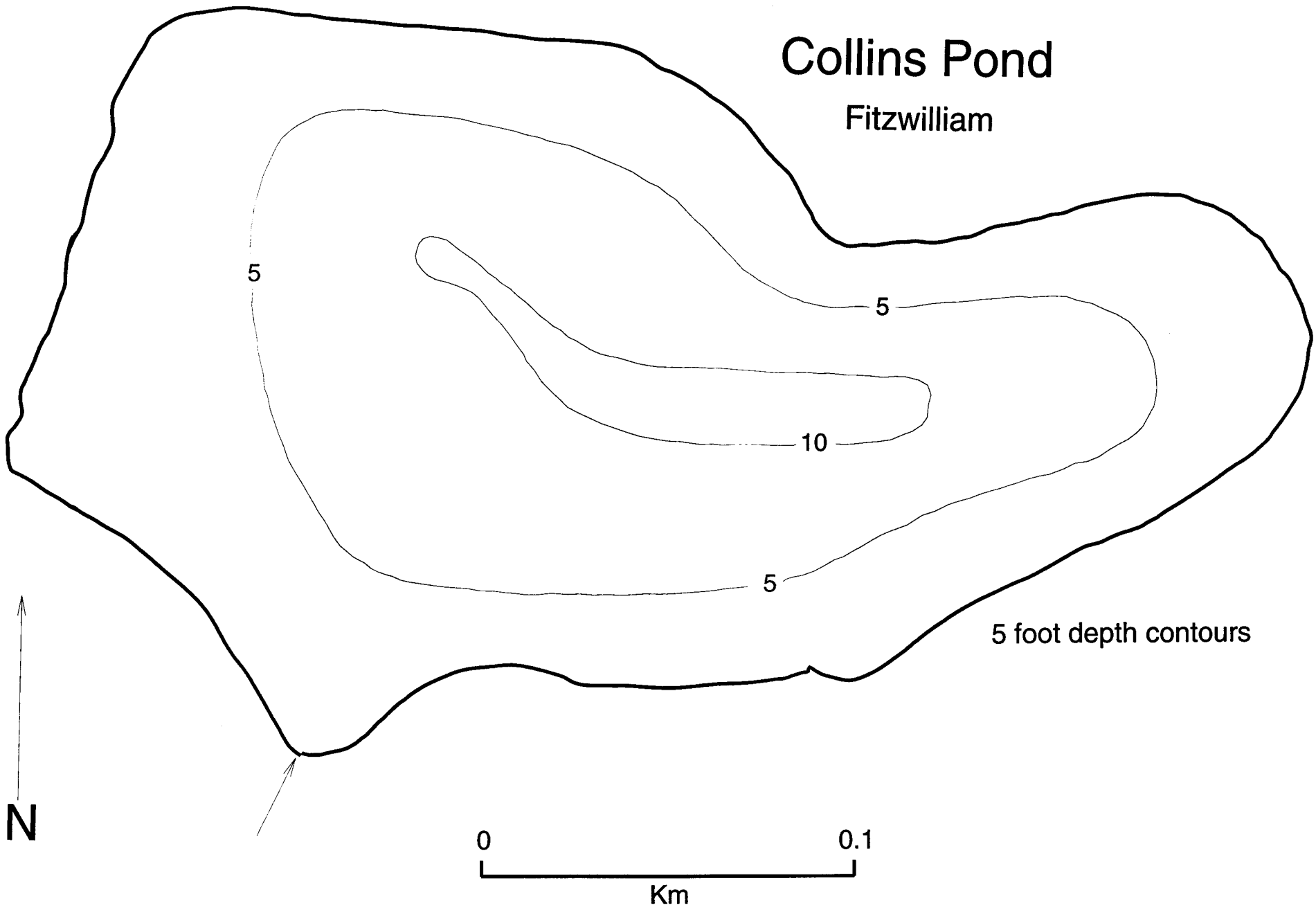
All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1998

D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
**	2	4	0	6	Meso.

COMMENTS:

1. aka Depot Pond.
2. Acidic to moderately acidic water.


Collins Pond
Fitzwilliam
5
5
10
5
5 foot depth contours
N
0
0.1
Km

FIELD DATA SHEET

LAKE: COLLINS POND
DATE: 08/25/1998

TOWN: FITZWILLIAM
WEATHER: PARTLY SUNNY; LIGHT BREEZE

	DEPTH (M)	TEMP (°C)	*DISSOLVED OXYGEN	OXYGEN SATURATION
	0.1	24.2	8.3	98 %
	0.5	24.2	8.3	98 %
	1.0	24.1	8.2	97 %
	1.5	23.9	8.1	94 %
	2.0	23.4	8.0	91 %
	2.5	23.0	8.1	94 %

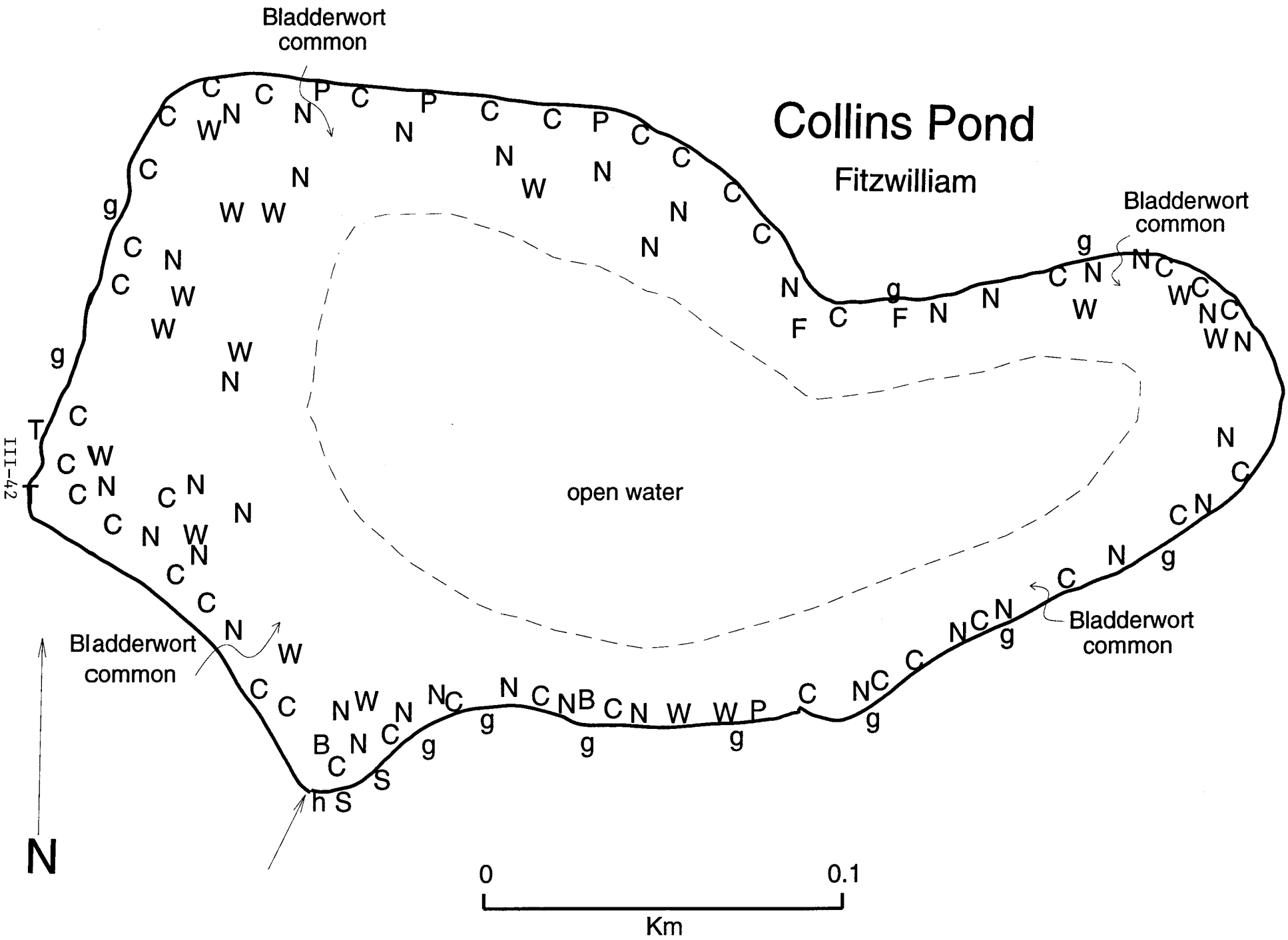
SECCHI DISK (m): 3.1 VOB

BOTTOM DEPTH (m): 3.1

TIME: 1130

COMMENTS:

*Dissolved oxygen values are in mg/L


Collins Pond
Fitzwilliam
Bladderwort
common
Bladderwort
common
Bladderwort
common
Bladderwort
common
open water
N
0
0.1
Km

AQUATIC PLANT SURVEY

LAKE: COLLINS POND TOWN: FITZWILLIAM DATE: 08/25/1998

Key	PLANT NAME		ABUNDANCE
	GENERIC	COMMON	
	Utricularia	Bladderwort	Common
N	Nymphaea	White water lily	Scattered
W	Potamogeton	Pondweed	Scattered
B	Brasenia schreberi	Water shield	Sparse
S	Sparganium	Bur reed	Sparse
C	Cyperaceae	Non-flowering sedge	Scattered
h	Hypericum	St. John's-wort	Sparse
P	Pontederia cordata	Pickerelweed	Sparse
g	Myrica gale	Sweet gale	Sparse
F	Nymphoides cordatum	Floating heart	Sparse
T	Typha	Cattail	Sparse

OVERALL ABUNDANCE: Common/Abun

GENERAL OBSERVATIONS:

1. Bladderwort was prominent along the bottom of most of the shoreline. It is not depicted on the map because of its abundance.

2. Plants were common along the entire shoreline with open water in the middle.