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

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake:	BURNS POND	Lake Area (ha):	47.55
Town:	WHITEFIELD	Maximum depth (m):	6.1
County:	Coos	Mean depth (m):	2.9
River Basin:	Connecticut	Volume (m^3):	1390500
Latitude:	44°21'11" N	Relative depth:	0.8
Longitude:	71°38'31" W	Shore configuration:	1.51
Elevation (ft):	1016	Areal water load (m/yr):	11.91
Shore length (m):	3700	Flushing rate (yr^{-1}):	4.10
Watershed area (ha):	1243.2	P retention coeff.:	0.53
% watershed ponded:	6.5	Lake type:	natural w/dam

BIOLOGICAL:		11 January 1994	20 July 1993
DOM. PHYTOPLANKTON (% TOTAL)	#1	ASTERIONELLA 85%	ASTERIONELLA 40%
	#2		CHRYSOSPHAERELLA 20%
	#3		
PHYTOPLANKTON ABUNDANCE (units/mL)			650
CHLOROPHYLL-A (µg/L)			6.40
DOM. ZOOPLANKTON (% TOTAL)	#1	ROTIFER SPP. 48%	KELLICOTTIA 29%
	#2	KERATELLA 39%	NAUPLIUS LARVA 20%
	#3		KERATELLA 16%
ROTIFERS/LITER		81	177
MICROCRUSTACEA/LITER		4	144
ZOOPLANKTON ABUNDANCE (#/L)		85	321
VASCULAR PLANT ABUNDANCE			Common
SECCHI DISK TRANSPARENCY (m)			3.1
BOTTOM DISSOLVED OXYGEN (mg/L)		10.1	0.0
BACTERIA (E. coli, #/100 ml)	#1		2
	#2		1
	#3		

SUMMER THERMAL STRATIFICATION:

weakly stratified

Depth of thermocline (m): None
Hypolimnion volume (m^3) : None
Anoxic volume (m^3) : 59000

CHEMICAL:

Lake: BURNS POND
Town: WHITEFIELD

	11 January 1994		20 July 1993		
DEPTH (m)	2.0	4.0	1.0		4.0
pH (units)	6.4	6.4	6.9		6.6
A.N.C. (Alkalinity)	7.7	8.2	6.8		7.3
NITRATE NITROGEN	0.04	< 0.02	0.03		< 0.02
TOTAL KJELDAHL NITROGEN	0.40	0.40	0.40		0.32
TOTAL PHOSPHORUS	0.023	0.152	0.008		0.015
CONDUCTIVITY (µmhos/cm)	68.8	69.1	64.0		64.0
APPARENT COLOR (cpu)	50	49	47		47
MAGNESIUM			1.00		
CALCIUM			4.1		
SODIUM			5.8		
POTASSIUM			1.05		
CHLORIDE	11	11	10		10
SULFATE	5	5	5		5
TN : TP	19	3	54		21
CALCITE SATURATION INDEX			3.0		

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1993

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

COMMENTS:

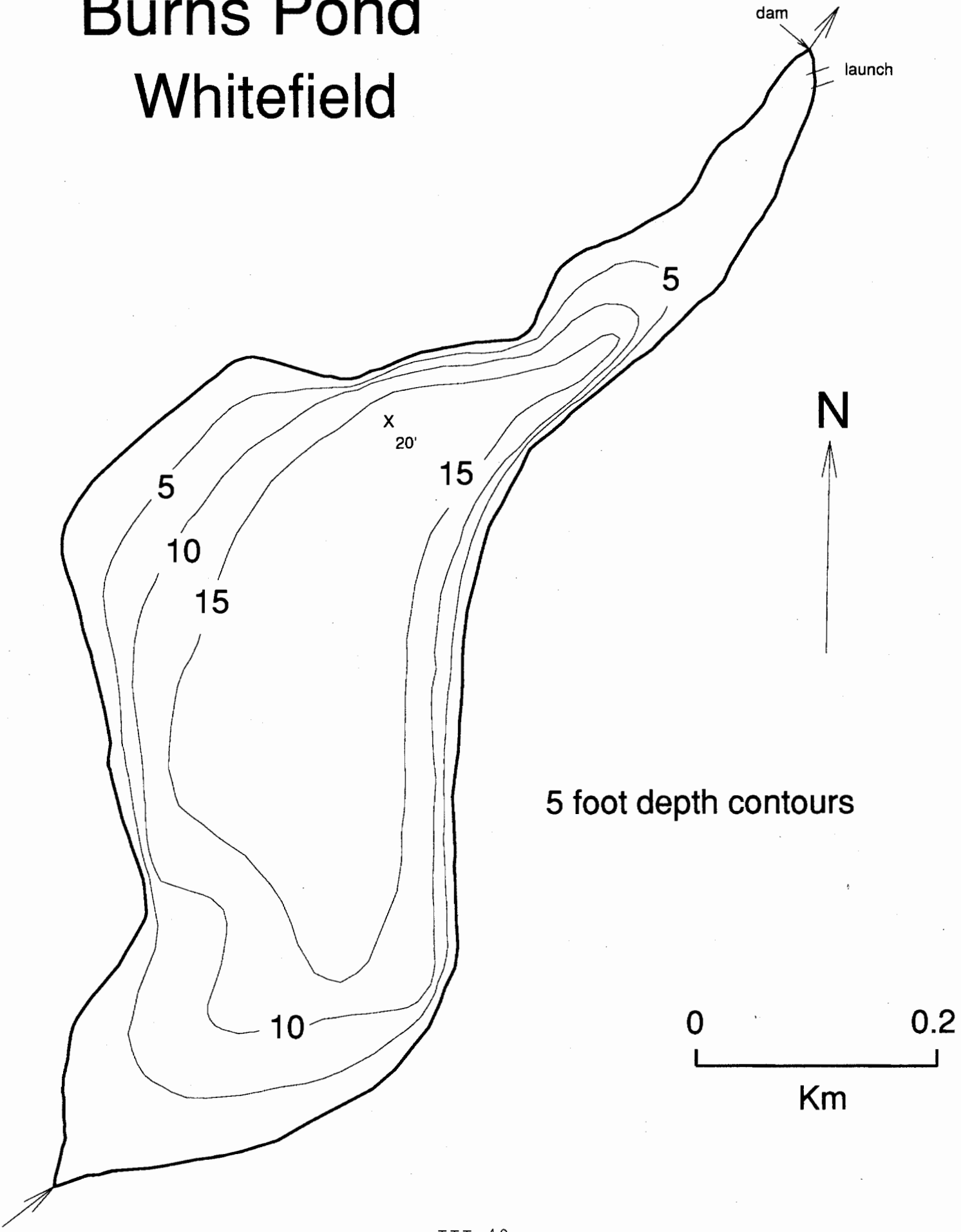
1. Also known as Long Pond.

2. This pond was previously surveyed in 1984. There was no change in trophic classification and little change in water quality.

3. The high phosphorus concentration at 4 meters in the winter is unexplainable. Other parameters were not elevated over the 2 meter concentrations, and there was plenty of dissolved oxygen in the bottom waters.

4. Decent boat launch site: dirt with gradual slope. Launch into shallow water but adequate for small boats. Parking for 4 to 6 cars with trailers.

Burns Pond
Whitefield



FIELD DATA SHEET

LAKE: BURNS POND
DATE: 07/20/93

TOWN: WHITEFIELD
WEATHER: CALM, WARM & OVERCAST

	DEPTH (M)	TEMP (°C)	*DISSOLVED OXYGEN	OXYGEN SATURATION
	0.1	22.2	9.0	103 %
	1.0	21.8	8.5	94 %
	2.0	21.2	8.2	92 %
	3.0	20.8	8.0	88 %
	4.0	17.0	2.5	26 %
	5.0	14.0	0.0	0 %

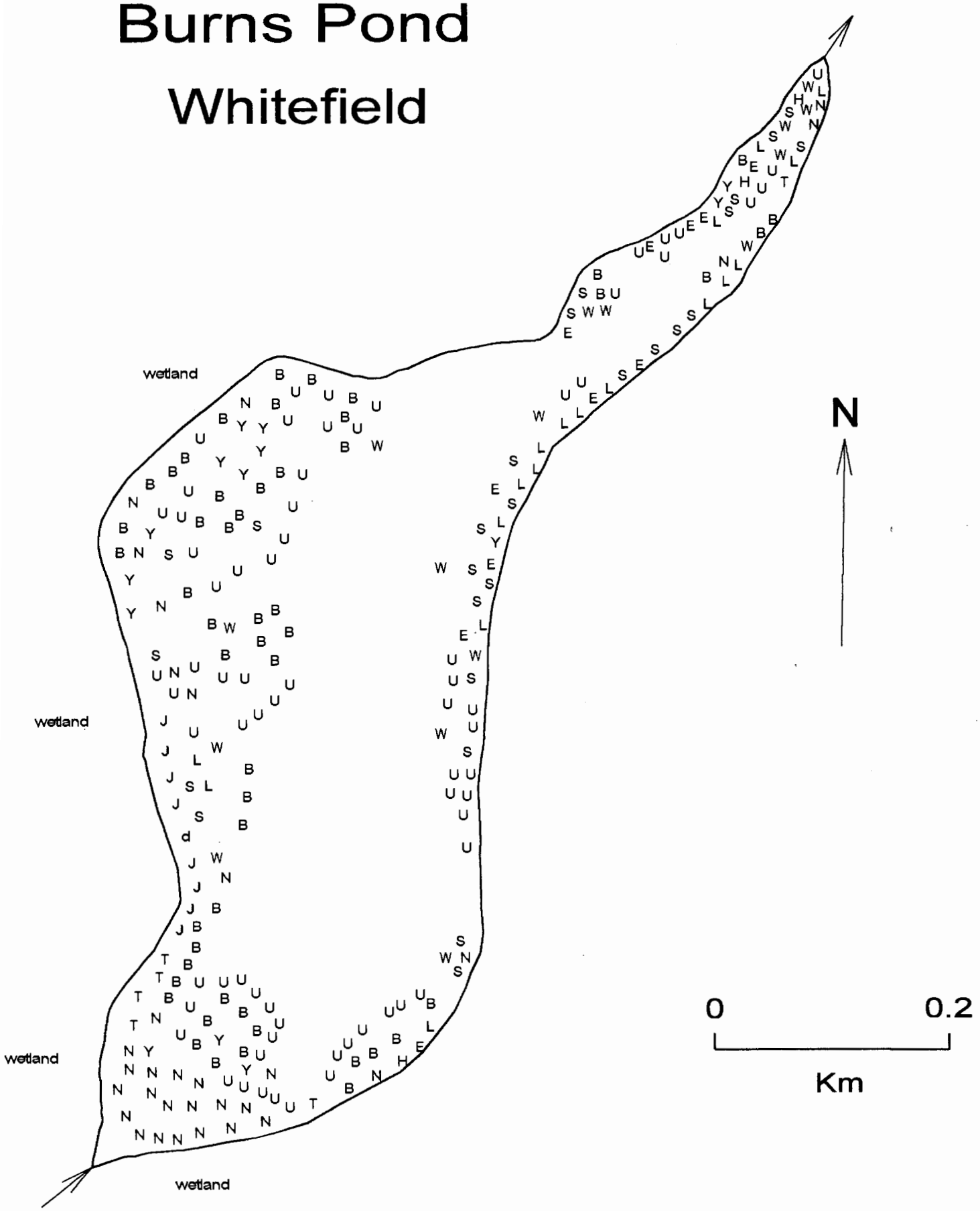
SECCHI DISK (m): 3.1
BOTTOM DEPTH (m): 5.3
TIME: 1330

COMMENTS:

*Dissolved oxygen values are in mg/L

Burns Pond

Whitefield



AQUATIC PLANT SURVEY

LAKE: BURNS POND TOWN: WHITEFIELD DATE: 07/20/93

Key	PLANT NAME		ABUNDANCE
	GENERIC	COMMON	
U	Utricularia	Bladderwort	Common
W	Potamogeton	Pondweed	Scattered
H	Equisetum	Horsetail	Scattered
S	Sparganium	Bur reed	Scattered
L	Lobelia dortmanna	Water lobelia	Scattered
B	Brasenia schreberi	Water shield	Common
E	Eriocaulon septangulare	Pipewort	Scattered
Y	Nuphar	Yellow water lily	Scattered
N	Nymphaea	White water lily	Scattered
J	Juncus	Rush	Sparse
d	Dulichium arundinaceum	Three-way sedge	Sparse
T	Typha	Cattail	Sparse
G	Gramineae	Grass family	Scattered

OVERALL ABUNDANCE: Common

GENERAL OBSERVATIONS:

1. Pair of loons were observed.
2. Numerous freshwater mussels were present.