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

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake:	HALFMOON POND	Lake Area (ha):	8.26
Town:	GRAFTON	Maximum depth (m):	14.6
County:	Grafton	Mean depth (m):	4.3
River Basin:	Merrimack	Volume (m^3):	356500
Latitude:	43°34' N	Relative depth:	4.5
Longitude:	72°00' W	Shore configuration:	1.86
Elevation (ft):	1410	Areal water load (m/yr):	18.58
Shore length (m):	1900	Flushing rate (yr^{-1}):	4.30
Watershed area (ha):	251.2	P retention coeff.:	0.48
% watershed ponded:	0.0	Lake type:	natural

BIOLOGICAL:	25 February 1988	10 July 1987
DOM. PHYTOPLANKTON (% TOTAL) #1	SPARSE - NO DOMINANT	SPARSE - NO DOMINANT
#2		
#3		
PHYTOPLANKTON ABUNDANCE (cells/mL)		1055.0
CHLOROPHYLL-A (µg/L)		3.34
DOM. ZOOPLANKTON (% TOTAL) #1	SPARSE - NO DOMINANT	KELLICOTTIA 52%
#2		NAUPLII LARVAE 41%
#3		
ROTIFERS/LITER	2	28
MICROCRUSTACEA/LITER	4	26
ZOOPLANKTON ABUNDANCE (#/L)	6	54
VASCULAR PLANT ABUNDANCE		Abundant
SECCHI DISK TRANSPARENCY (m)		4.2
BOTTOM DISSOLVED OXYGEN (mg/L)	4.4	0.6
BACTERIA (fecal col., #/100 ml) #1		< 10
#2		
#3		

SUMMER THERMAL STRATIFICATION:

stratified

Depth of thermocline (m): 3.8
Hypolimnion volume (m^3): 88000

CHEMICAL:

Lake: HALFMOON POND
Town: GRAFTON

	25 February 1988		10 July 1987		
DEPTH (m)	4.0	8.0	2.0	5.0	12.0
pH (units)	5.8	5.6	6.2	6.0	5.9
A.N.C. (Alkalinity)	2.2	2.5	1.7	1.7	4.0
NITRATE NITROGEN	< 0.05	< 0.05	< 0.05		< 0.05
TOTAL KJELDAHL NITROGEN	< 0.10	0.14	0.16	0.22	0.52
TOTAL PHOSPHORUS	<0.001	0.001	0.010	0.004	0.006
CONDUCTIVITY (µ mhos/cm)	23.2	24.1	18.2	19.4	25.1
APPARENT COLOR (cpu)	18	18	22	23	29
MAGNESIUM			0.32		
CALCIUM			1.7		
SODIUM			0.8		
POTASSIUM			0.30		
CHLORIDE	< 2	< 2	< 2		< 2
SULFATE	5	5	4		4
TN : TP		140	16		87
CALCITE SATURATION INDEX			4.6		

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1987

D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
4	1	3	0	8	Meso.

COMMENTS:

1. The DPWH launch site was never built, although the right-of-way was purchased 7-8 years ago (according to resident).

2. The whole-water phytoplankton was dominated by greens (55%) and diatoms (30%). Cymbella (20%), tiny green flagellates (20%), and Ankistrodesmus (15%) were the dominant genera.

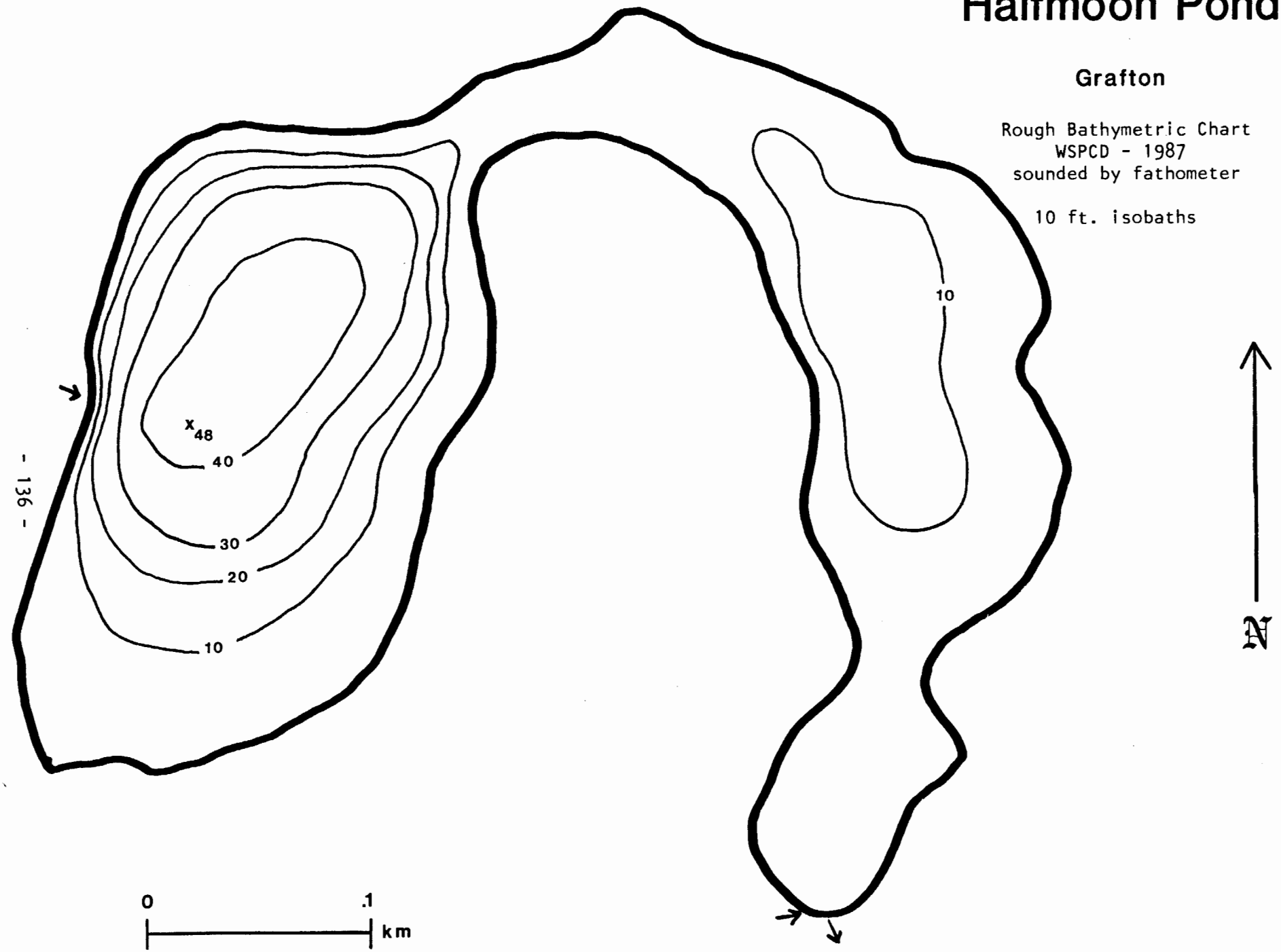
3. Two newer camps and 6 older ones were located along the shoreline.

Halfmoon Pond

Grafton

Rough Bathymetric Chart
WSPCD - 1987
sounded by fathometer

10 ft. isobaths



FIELD DATA SHEET

LAKE: HALFMOON POND
DATE: 07/10/87

TOWN: GRAFTON
WEATHER: SUNNY, LT.BREEZE...

	DEPTH (M)	TEMP (°C)	*DISSOLVED OXYGEN	OXYGEN SATURATION
	0.1	27.0	7.5	91 %
	1.0	24.0	7.9	92 %
	2.0	20.9	8.4	91 %
	3.0	18.8	8.3	87 %
	4.0	15.8	8.9	85 %
	5.0	11.8	9.0	81 %
	6.0	9.3	9.0	78 %
	7.0	8.0	8.2	69 %
	8.0	6.9	5.8	46 %
	9.0	6.1	3.0	24 %
	10.0	5.8	1.6	12 %
	11.0	5.5	0.5	4 %
	12.0	5.5	0.4	3 %
	13.0	5.4	0.5	4 %
	14.0	5.4	0.6	5 %

SECCHI DISK (m): 4.2

BOTTOM DEPTH (m): 14.6

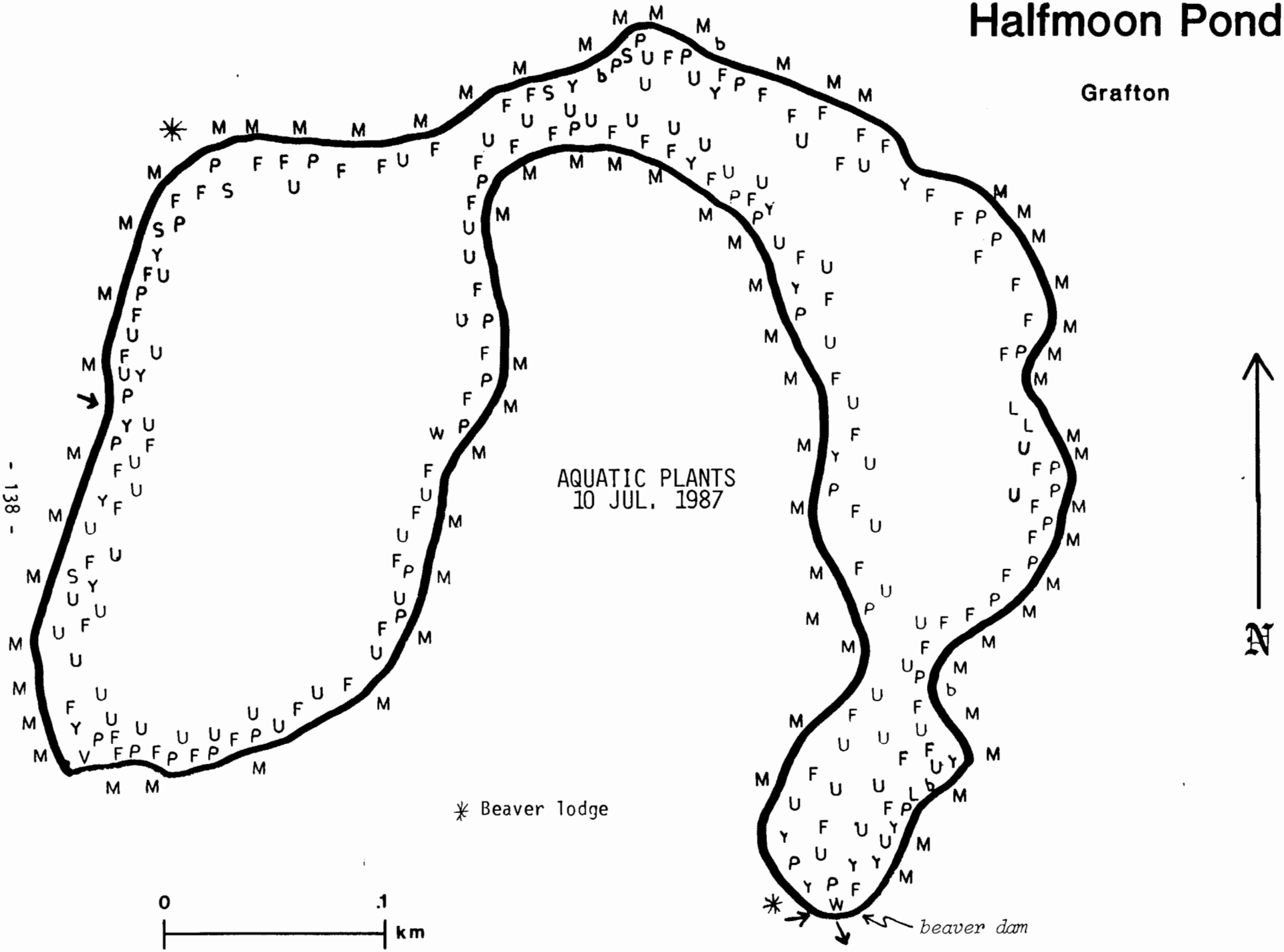
TIME: 1315

COMMENTS:

*Dissolved oxygen values are in mg/L

Halfmoon Pond

Grafton



AQUATIC PLANT SURVEY

LAKE: HALFMOON POND TOWN: GRAFTON DATE: 07/10/87

Key	PLANT NAME		ABUNDANCE
	GENERIC	COMMON	
F	Nymphoides cordatum	Floating heart	Common
S	Sparganium	Bur reed	Sparse
P	Pontederia cordata	Pickerelweed	Common
U	Utricularia	Bladderwort	Abundant
Y	Nuphar	Yellow water lily	Scattered
M	Myrica gale	Sweet gale	Common
V	Vallisneria americana	Tape grass	Sparse
W	Potamogeton	Pondweed	Sparse
b	Scirpus	Bulrush	Sparse
L	Lobelia dortmanna	Water lobelia	Sparse

OVERALL ABUNDANCE: Abundant

GENERAL OBSERVATIONS:

1. Bladderwort was over most of the bottom and in floating tangled mats along the shores.
2. Sweet gale was around the entire shoreline but not actually in the pond.
3. Pickerelweed plants appeared to be stunted.
4. Much fish activity was observed.
5. Two beaver lodges were observed.