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

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake:	GEORGE POND	Lake Area (ha):	17.76
Town:	ENFIELD	Maximum depth (m):	3.0
County:	Grafton	Mean depth (m):	1.5
River Basin:	Connecticut	Volume (m^3):	274500
Latitude:	43°35' N	Relative depth:	0.6
Longitude:	72°06' W	Shore configuration:	1.94
Elevation (ft):	982	Areal water load (m/yr):	33.22
Shore length (m):	2900	Flushing rate (yr^{-1}):	21.50
Watershed area (ha):	1289.8	P retention coeff.:	0.42
% watershed ponded:	0.6	Lake type:	natural w/dam

BIOLOGICAL:	6 January 1988	7 August 1987
DOM. PHYTOPLANKTON (% TOTAL) #1	SPARSE - NO DOMINANT	RHIZOSOLENIA 25%
#2		DINOBRYON 20%
#3		TABELLARIA 20%
PHYTOPLANKTON ABUNDANCE (cells/mL)		1555.0
CHLOROPHYLL-A (µg/L)		9.45
DOM. ZOOPLANKTON (% TOTAL) #1	POLYARTHRA 65%	KERATELLA 41%
#2		POLYARTHRA 27%
#3		SYNCHAETA 12%
ROTIFERS/LITER	30	392
MICROCRUSTACEA/LITER	6	27
ZOOPLANKTON ABUNDANCE (#/L)	37	420
VASCULAR PLANT ABUNDANCE		Abundant
SECCHI DISK TRANSPARENCY (m)		1.2
BOTTOM DISSOLVED OXYGEN (mg/L)	8.4	0.0
BACTERIA (fecal col., #/100 ml) #1		< 10
#2		< 10
#3		

SUMMER THERMAL STRATIFICATION:

weakly stratified

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

CHEMICAL:

Lake: GEORGE POND
Town: ENFIELD

	6 January 1988		7 August 1987		
DEPTH (m)	1.0	3.0	1.0		3.0
pH (units)	6.1	6.2	6.9		6.5
A.N.C. (Alkalinity)	9.5	10.9	10.2		10.5
NITRATE NITROGEN	0.06	0.06	< 0.05		< 0.05
TOTAL KJELDAHL NITROGEN	0.19	0.44	1.29		0.56
TOTAL PHOSPHORUS	<0.001	0.010	0.020		0.032
CONDUCTIVITY (µ mhos/cm)	47.4	49.7	39.5		39.6
APPARENT COLOR (cpu)	55	65	95		95
MAGNESIUM			0.74		
CALCIUM			4.2		
SODIUM			1.8		
POTASSIUM			0.30		
CHLORIDE	< 2	< 2	< 2		< 2
SULFATE	7	6	4		4
TN : TP		50	64		18
CALCITE SATURATION INDEX			2.8		

All results in mg/L unless indicated otherwise

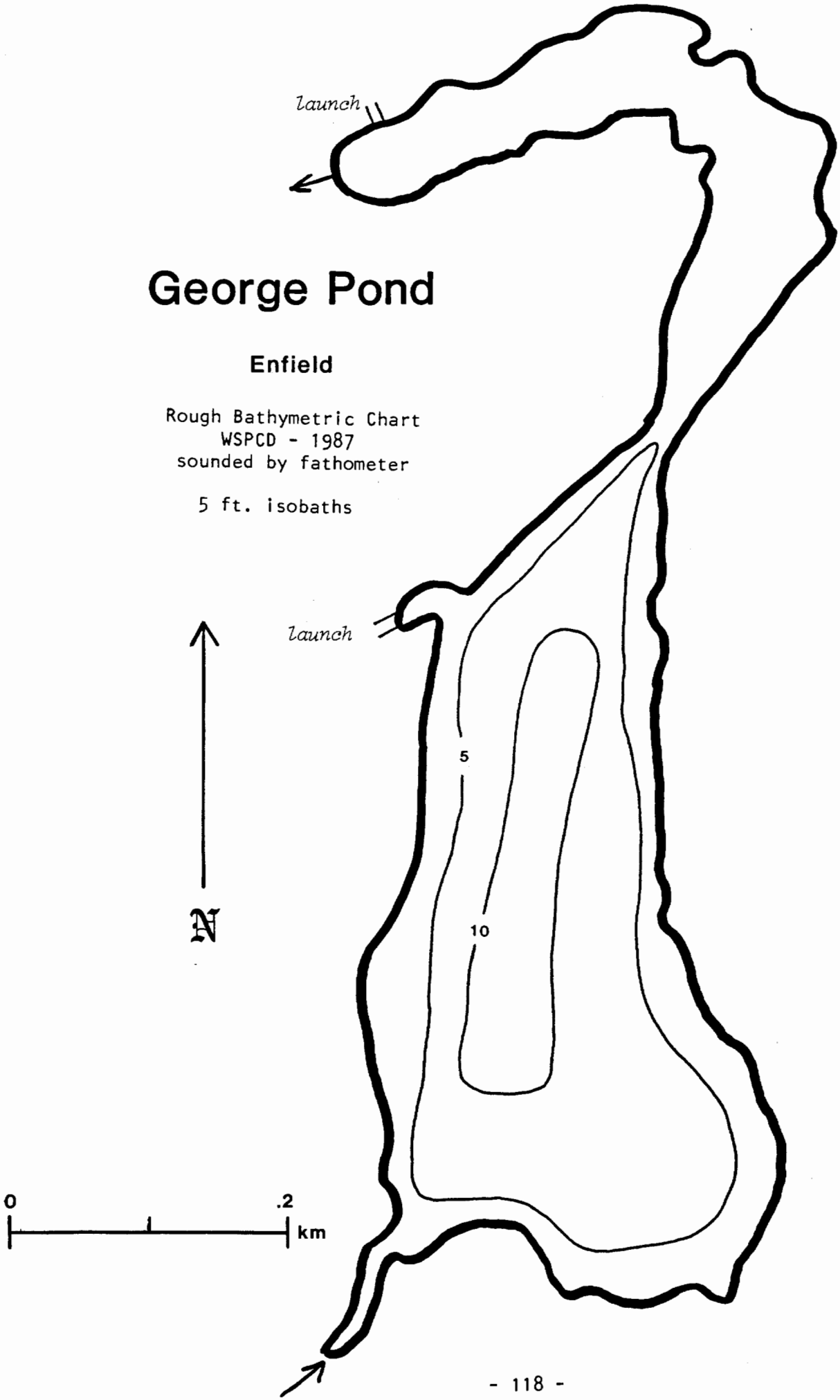
TROPHIC CLASSIFICATION: 1987

D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
5	3	3	1	12	Eutro.

COMMENTS:

1. Green algae (45%) and cryptomonads (35%) dominated the whole-water phytoplankton. Tiny green flagellates (35%) were the dominant genus.

2. Water was tea colored.


launch
George Pond
Enfield
Rough Bathymetric Chart
WSPCD - 1987
sounded by fathometer
5 ft. isobaths
launch
5
10
N
0
.2
km

FIELD DATA SHEET

LAKE: GEORGE POND
DATE: 08/07/87

TOWN: ENFIELD
WEATHER: CLEAR, SOME CLOUDS

	DEPTH (M)	TEMP (°C)	*DISSOLVED OXYGEN	OXYGEN SATURATION
	0.1	22.6	7.2	82 %
	1.0	22.5	7.2	82 %
	2.0	22.0	7.2	82 %
	3.0	19.0	0.0	0 %

SECCHI DISK (m): 1.2

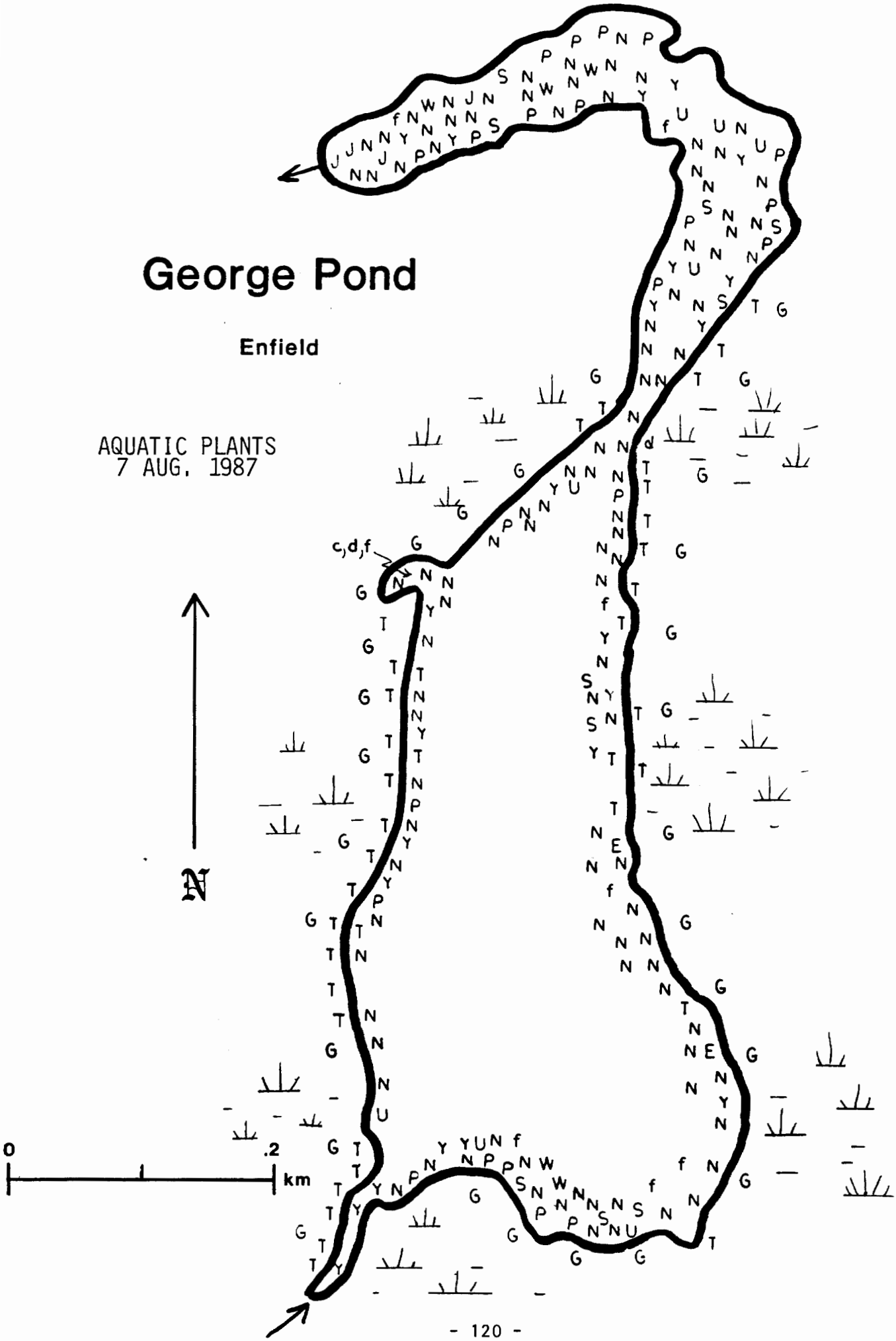
BOTTOM DEPTH (m): 3.5

TIME: 1215

COMMENTS:

A D.O. depletion occurred at the bottom despite the lack of a thermocline and hypolimnion.

*Dissolved oxygen values are in mg/L


George Pond
Enfield
AQUATIC PLANTS
7 AUG. 1987
c,d,f
N
0
.2
km

AQUATIC PLANT SURVEY

LAKE: GEORGE POND TOWN: ENFIELD DATE: 08/07/87

Key	PLANT NAME		ABUNDANCE
	GENERIC	COMMON	
N	Nymphaea	White water lily	Abundant
P	Pontederia cordata	Pickerelweed	Common
G	Gramineae	Grass family	Abundant
Y	Nuphar	Yellow water lily	Common
S	Sparganium	Bur reed	Scattered
U	Utricularia	Bladderwort	Scattered
W	Potamogeton	Pondweed	Scattered
T	Typha	Cattail	Common
C	Cyperaceae	non-flowering sedge	Sparse
d	Drosera	Sundew	Sparse
E	Eriocaulon septangulare	Pipewort	Sparse
f	Chlorophyceae	Filamentous green algae	Sparse
J	Najas	Bushy pondweed	Sparse

OVERALL ABUNDANCE: Abundant

GENERAL OBSERVATIONS:

1. This is an undeveloped, shallow, weedy pond surrounded by wetlands. It is a scenic waterfowl habitat.
2. Turtles were observed.
3. Most of the abundant grasses were not actually in the pond.