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

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake:	KENISON POND	Lake Area (ha):	5.87
Town:	NOTTINGHAM	Maximum depth (m):	9.2
County:	Rockingham	Mean depth (m):	4.5
River Basin:	Coastal	Volume (m^3):	265500
Latitude:	43°09'50" N	Relative depth:	3.4
Longitude:	71°08'50" W	Shore configuration:	1.16
Elevation (ft):	305	Areal water load (m/yr):	19.66
Shore length (m):	1000	Flushing rate (yr^{-1}):	4.30
Watershed area (ha):	227.9	P retention coeff.:	0.48
% watershed ponded:	2.0	Lake type:	natural

BIOLOGICAL:	15 February 1990	24 August 1989
DOM. PHYTOPLANKTON (% TOTAL) #1	DINOBRYON 85%	ANABAENA 85%
#2		
#3		
PHYTOPLANKTON ABUNDANCE (cells/mL)		8940.0
CHLOROPHYLL-A (µg/L)		25.66
DOM. ZOOPLANKTON (% TOTAL) #1	KERATELLA 82%	NAUPLIUS LARVA 35%
#2		KERATELLA 25%
#3		COLLOTHECA 10%
ROTIFERS/LITER	61	184
MICROCRUSTACEA/LITER	2	187
ZOOPLANKTON ABUNDANCE (#/L)	72	378
VASCULAR PLANT ABUNDANCE		Scat/Common
SECCHI DISK TRANSPARENCY (m)		1.3
BOTTOM DISSOLVED OXYGEN (mg/L)	0.4	0.3
BACTERIA (fecal col., #/100 ml) #1		< 10
#2		
#3		

SUMMER THERMAL STRATIFICATION:

stratified

Depth of thermocline (m): 2.7
Hypolimnion volume (m^3): 54000

CHEMICAL:

Lake: KENISON POND
Town: NOTTINGHAM

	15 February 1990		24 August 1989		
DEPTH (m)	3.0	6.0	1.5	4.0	6.5
pH (units)	5.7	5.7	6.4	5.8	6.2
A.N.C. (Alkalinity)	3.5	3.7	3.7	5.0	11.0
NITRATE NITROGEN	0.13	0.14	< 0.05		< 0.05
TOTAL KJELDAHL NITROGEN	0.44	0.52	0.67	0.56	0.67
TOTAL PHOSPHORUS	0.021	0.021	0.027	0.025	0.041
CONDUCTIVITY (µ mhos/cm)	33.3	34.1	24.4	31.5	35.6
APPARENT COLOR (cpu)	75	85	88	100	122
MAGNESIUM			0.56		
CALCIUM			1.4		
SODIUM			3.0		
POTASSIUM			0.50		
CHLORIDE	3	3	2		2
SULFATE	4	4	2		1
TN : TP	27	31	25		16
CALCITE SATURATION INDEX			4.2		

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1989

D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
6	4	2	5	17	Eutro.

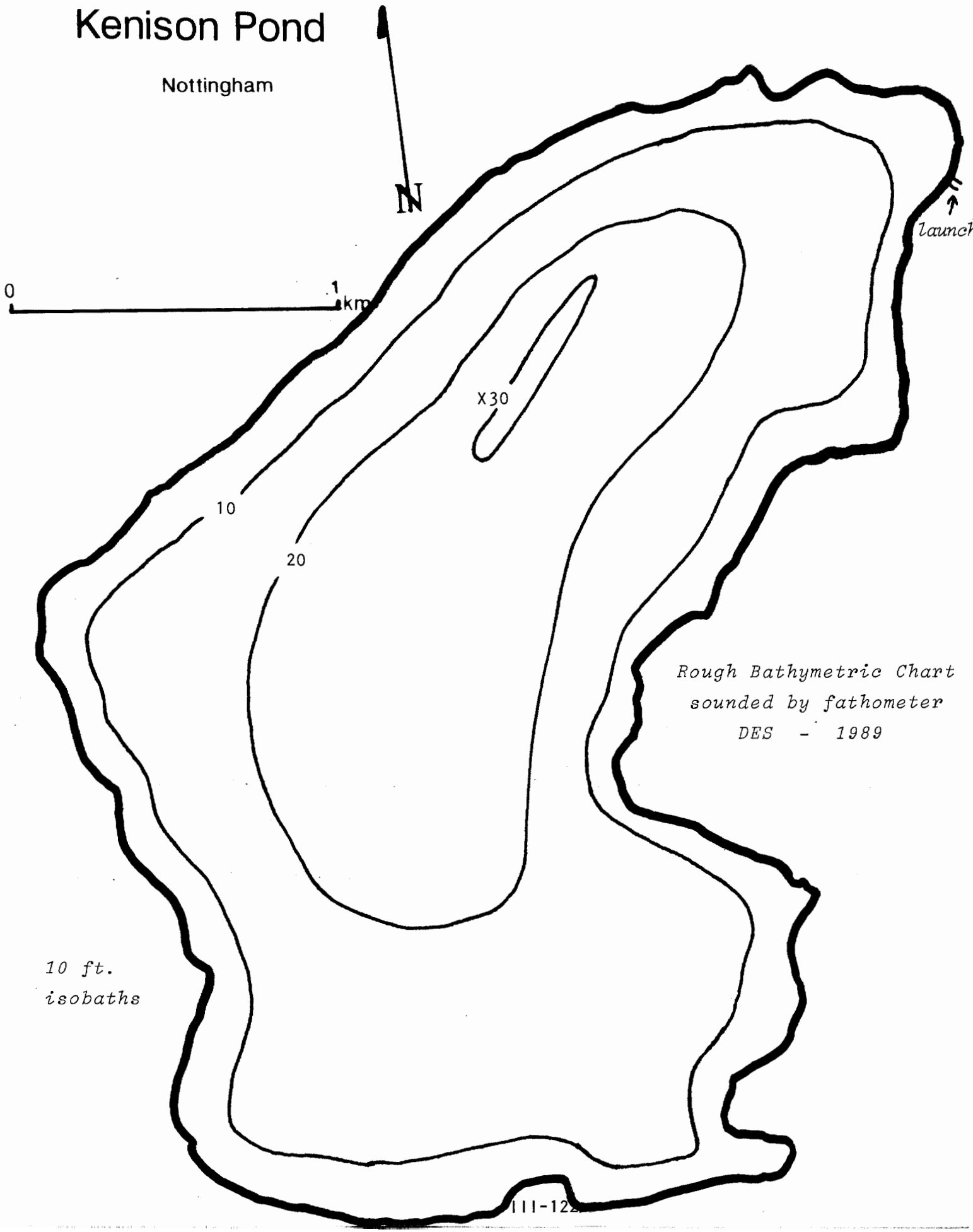
COMMENTS:

1. No public access. The road to the pond was narrow; there was no turn-around or parking.

2. Only one cottage was located along the shore.

3. The pond had dark, tea-colored water with a swampy shoreline.

4. Chlamydomonas (45%) and other tiny green flagellates (40%) were the dominant genera of whole-water phytoplankton.


Kenison Pond
Nottingham
N
0
1
km
launch
X30
10
20
Rough Bathymetric Chart
sounded by fathometer
DES - 1989
10 ft.
isobaths

FIELD DATA SHEET

LAKE: KENISON POND TOWN: NOTTINGHAM
DATE: 08/24/89 WEATHER: SUNNY & COOL

	DEPTH (M)	TEMP (°C)	*DISSOLVED OXYGEN	OXYGEN SATURATION
	0.1	23.5	8.5	98 %
	1.0	23.0	8.4	97 %
	2.0	22.0	4.0	46 %
	3.0	15.0	0.2	2 %
	4.0	11.0	0.2	2 %
	5.0	9.0	0.3	3 %
	6.0	8.0	0.3	3 %
	7.0	8.0	0.3	3 %

SECCHI DISK (m): 1.3 COMMENTS:

BOTTOM DEPTH (m): 7.6

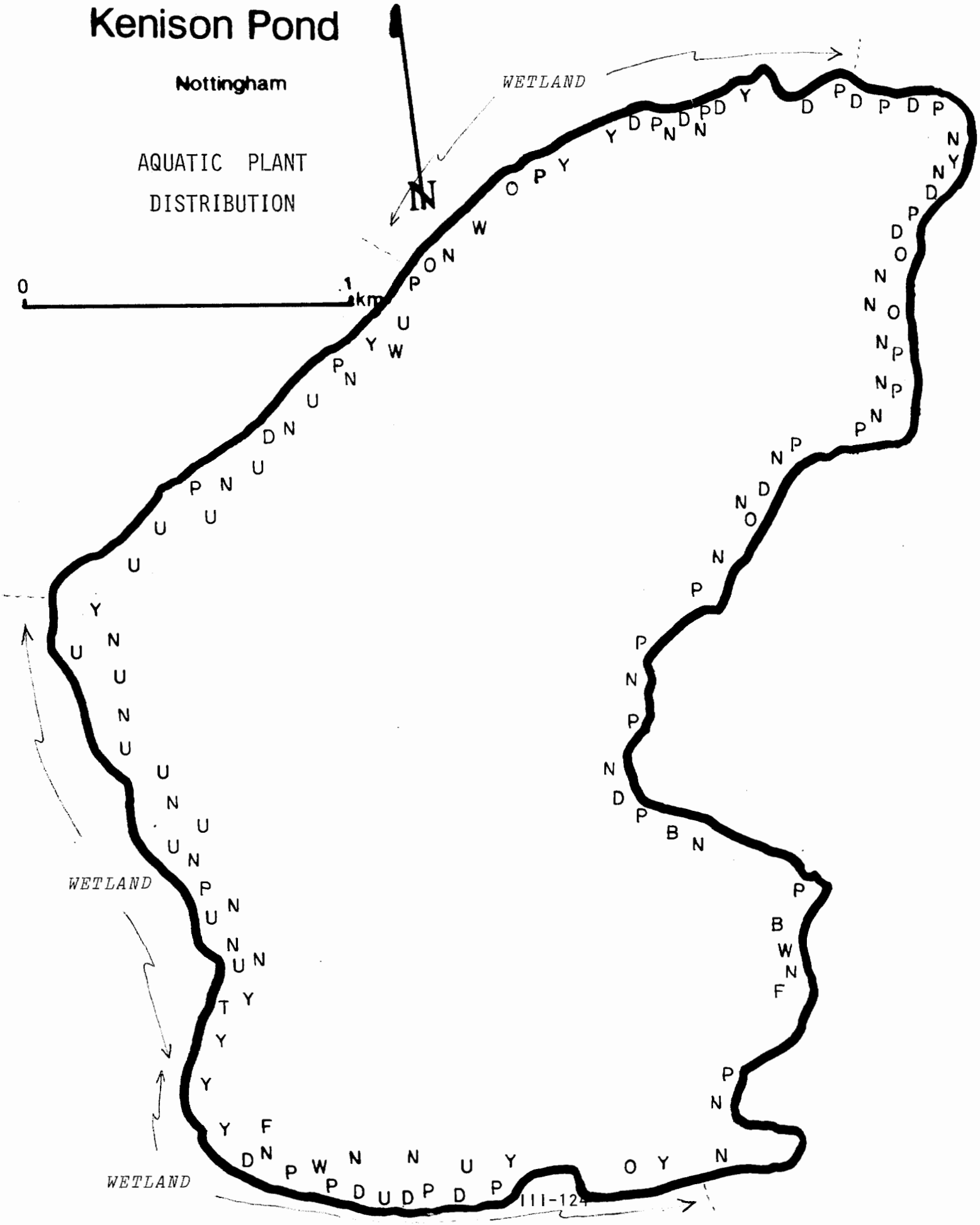
TIME: 1055

*Dissolved oxygen values are in mg/L

Kenison Pond

Nottingham

AQUATIC PLANT
DISTRIBUTION



AQUATIC PLANT SURVEY

LAKE: KENISON POND TOWN: NOTTINGHAM DATE: 08/24/89

Key	PLANT NAME		ABUNDANCE
	GENERIC	COMMON	
P	Pontederia cordata	Pickerelweed	Scattered
N	Nymphaea	White water lily	Common
D	Decodon verticillatus	Swamp loosestrife	Scattered
O	Cephalanthus occidentalis	Buttonbush	Scattered
B	Brasenia schreberi	Water shield	Sparse
U	Utricularia	Bladderwort	Common
W	Potamogeton	Pondweed	Sparse
F	Nymphoides cordatum	Floating heart	Sparse
Y	Nuphar	Yellow water lily	Scattered
T	Typha	Cattail	Sparse

OVERALL ABUNDANCE: Scat./Common

GENERAL OBSERVATIONS:

1. Most of the shoreline was surrounded by wetlands.

2. Planktonic algae were visible in the water column but were not forming a surface scum (the dominant net phytoplankton was the blue-green alga Anabaena).