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

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake:	RUSSELL RESERVOIR	Lake Area (ha):	10.52
Town:	HARRISVILLE	Maximum depth (m):	4.7
County:	Cheshire	Mean depth (m):	1.6
River Basin:	Connecticut	Volume (m^3):	170000
Latitude:	42°55'45" N	Relative depth:	1.3
Longitude:	72°08'30" W	Shore configuration:	1.64
Elevation (ft):	1160	Areal water load (m/yr):	149.3
Shore length (m):	1900	Flushing rate (yr^{-1}):	93.50
Watershed area (ha):	2845.4	P retention coeff.:	0.14
% watershed ponded:	7.5	Lake type:	artificial

BIOLOGICAL:	28 February 1989	25 August 1988
DOM. PHYTOPLANKTON (% TOTAL) #1	DINOBRYON 95%	MALLOMONAS 25%
#2		CHRYSOSPHAERELLA 15%
#3		DINOBRYON 15%
PHYTOPLANKTON ABUNDANCE (cells/mL)		165.0
CHLOROPHYLL-A (µg/L)		1.95
DOM. ZOOPLANKTON (% TOTAL) #1	SPARSE - NO DOMINANT	NAUPLIUS LARVA 67%
#2		CYCLOPOID COPEPOD 13%
#3		KERATELLA 9%
ROTIFERS/LITER	4	25
MICROCRUSTACEA/LITER	0	149
ZOOPLANKTON ABUNDANCE (#/L)	6	174
VASCULAR PLANT ABUNDANCE		Very abundant
SECCHI DISK TRANSPARENCY (m)		2.5
BOTTOM DISSOLVED OXYGEN (mg/L)	11.4	7.9
BACTERIA (fecal col., #/100 ml) #1		1
#2		< 1
#3		

SUMMER THERMAL STRATIFICATION:

not stratified

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

CHEMICAL:

Lake: RUSSELL RESERVOIR
Town: HARRISVILLE

	28 February 1989		25 August 1988		
DEPTH (m)	1.0	2.0	1.0		2.5
pH (units)	5.8	6.0	5.8		5.9
A.N.C. (Alkalinity)	1.5	1.4	2.1		2.2
NITRATE NITROGEN	0.28	0.28	< 0.05		< 0.05
TOTAL KJELDAHL NITROGEN	0.38	0.41	0.37		0.52
TOTAL PHOSPHORUS	0.024	0.026	0.006		0.008
CONDUCTIVITY (µ mhos/cm)	69.8	69.8	45.6		45.6
APPARENT COLOR (cpu)	32	32	55		52
MAGNESIUM			0.57		
CALCIUM			1.9		
SODIUM			5.2		
POTASSIUM			0.50		
CHLORIDE	14	14	7		7
SULFATE	6	6	5		5
TN : TP	28	27	62		65
CALCITE SATURATION INDEX			4.9		

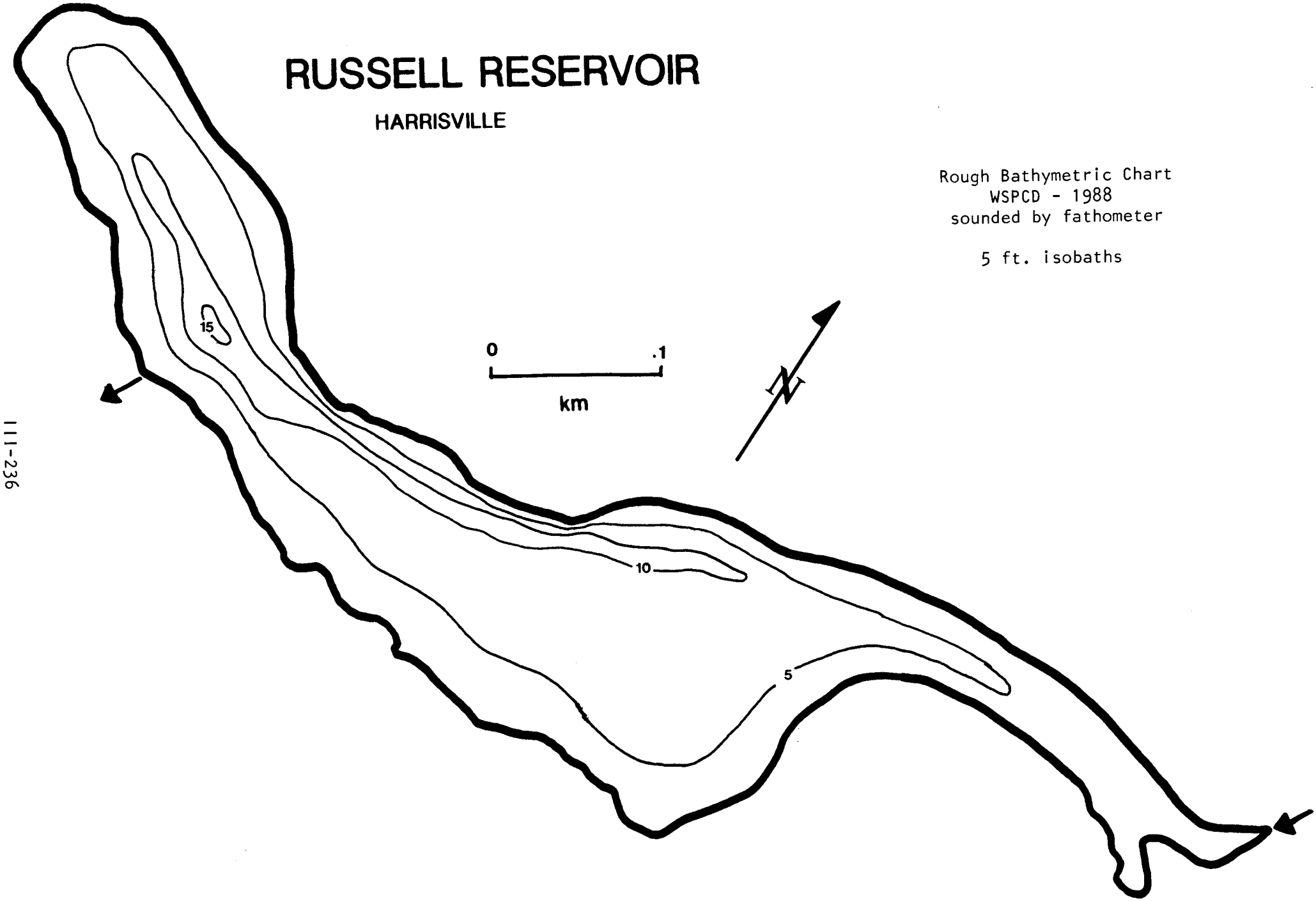
All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1988

D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
**	3	6	0	9	Meso.

COMMENTS:

1. No public access or boat launch area; town beach was present but sign said 'no boats allowed at beach';
2. The southern shoreline was mostly developed.
3. Water was tea-colored.
4. Cryptomonads (40%) were the dominant class of whole-water phytoplankton; Cryptomonas (25%) and Chroomonas (15%) were the dominant genera.


RUSSELL RESERVOIR
HARRISVILLE
Rough Bathymetric Chart
WSPCD - 1988
sounded by fathometer
5 ft. isobaths
0
.1
km
N
15
10
5

FIELD DATA SHEET

LAKE: RUSSELL RESERVOIR TOWN: HARRISVILLE
DATE: 08/25/88 WEATHER: OVERCAST

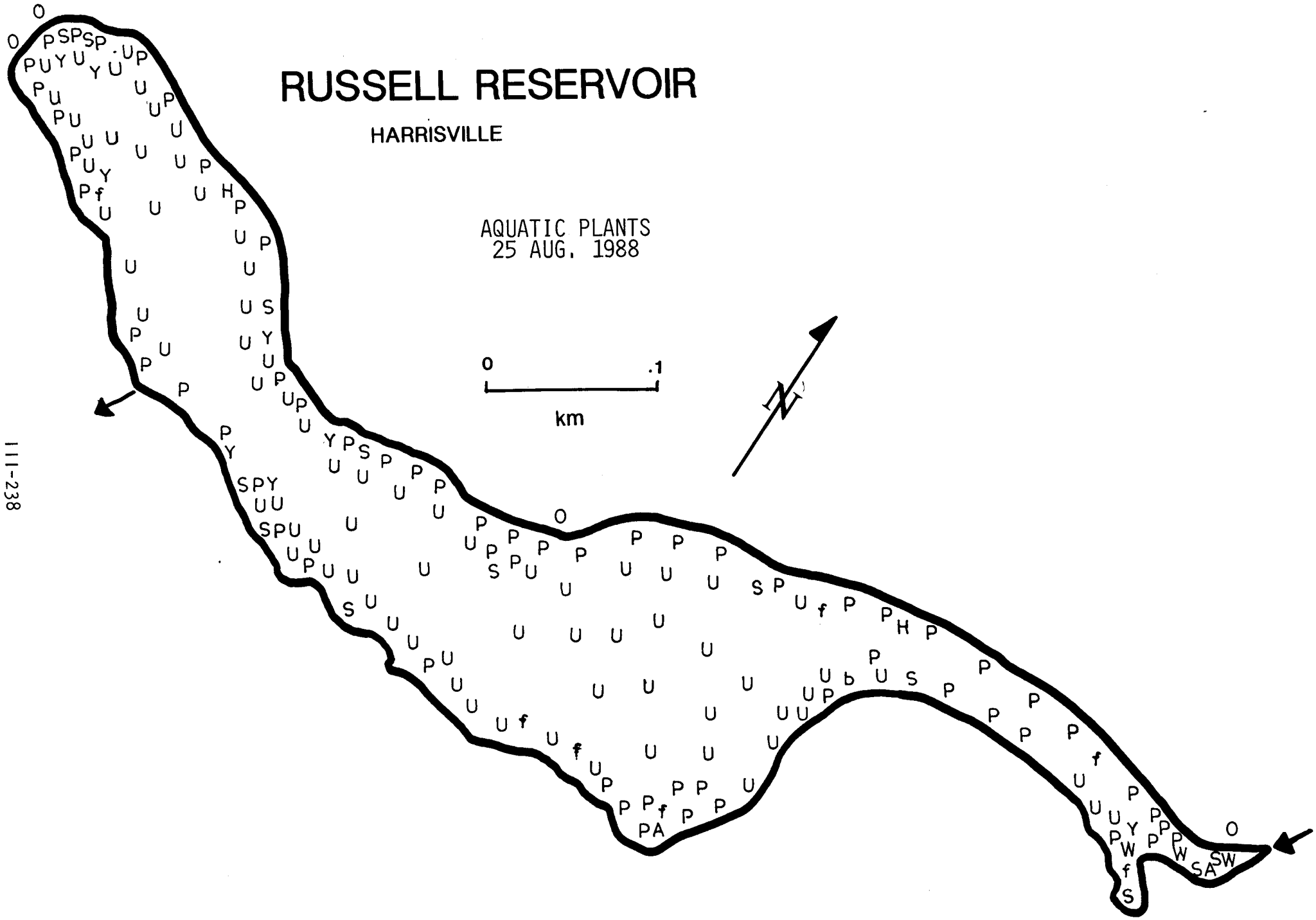
	DEPTH (M)	TEMP (°C)	*DISSOLVED OXYGEN	OXYGEN SATURATION
	0.1	19.0	7.1	76 %
	1.0	18.1	7.9	81 %
	2.0	18.0	7.9	82 %
	2.5	18.0	7.9	82 %

SECCHI DISK (m): 2.5 COMMENTS:

BOTTOM DEPTH (m): 2.8

TIME: 1207

*Dissolved oxygen values are in mg/L


RUSSELL RESERVOIR
HARRISVILLE
AQUATIC PLANTS
25 AUG. 1988
0
.1
km
N

AQUATIC PLANT SURVEY

LAKE: RUSSELL RESERVOIR TOWN: HARRISVILLE DATE: 08/25/88

Key	PLANT NAME		ABUNDANCE
	GENERIC	COMMON	
P	Pontederia cordata	Pickerelweed	Common
U	Utricularia	Bladderwort	Very abundant
S	Sparganium	Bur reed	Sparse
Y	Nuphar	Yellow water lily	Sparse
f	Chlorophyceae	Filamentous green algae	Scattered
O	Cephalanthus occidentalis	Buttonbush	Sparse
H	Equisetum	Horsetail	Sparse
W	Potamogeton	Pondweed	Sparse
A	Sagittaria	Arrowhead	Sparse
b	Scirpus	Bulrush	Sparse

OVERALL ABUNDANCE: Very abundant

GENERAL OBSERVATIONS:

1. Thick growth of bladderwort was throughout the pond.