DEPARTMENT of ENVIRONMENTAL SERVICES
Water Division - Watershed Management Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake:	BAKER POND	Lake Area (ha):	10.12
Town:	LANCASTER	Maximum depth (m):	2.2
County:	Coos	Mean depth (m):	1.1
River Basin:	Connecticut	Volume (m^3):	111000
Latitude:	44°30'14" N	Relative depth:	0.6
Longitude:	71°34'25" W	Shore configuration:	1.77
Elevation (ft):	855	Areal water load (m/yr):	27.11
Shore length (m):	2000	Flushing rate (yr^{-1}):	24.70
Watershed area (ha):	541.2	P retention coeff.:	0.44
% watershed ponded:	0.0	Lake type:	natural

BIOLOGICAL:		20 March 2001	1 August 2000
DOM. PHYTOPLANKTON (% TOTAL)	#1	(NO PLANKTON	DINOBRYON 80%
	#2	SAMPLES COLLECTED)	CERATIUM 9%
	#3		
PHYTOPLANKTON ABUNDANCE (units/mL)			
CHLOROPHYLL-A (µg/L)			59.00
DOM. ZOOPLANKTON (% TOTAL)	#1		KERATELLA 38%
	#2		NAUPLIUS LARVA 23%
	#3		CONOCHILUS 14%
ROTIFERS/LITER			1531
MICROCRUSTACEA/LITER			853
ZOOPLANKTON ABUNDANCE (#/L)			2384
VASCULAR PLANT ABUNDANCE			Common
SECCHI DISK TRANSPARENCY (m)			0.6
BOTTOM DISSOLVED OXYGEN (mg/L)		10.5	0.4
BACTERIA (E. coli, #/100 ml)	#1		20
	#2		
	#3		

SUMMER THERMAL STRATIFICATION:

weakly stratified

Depth of thermocline (m): None
Hypolimnion volume (m^3) : None
Anoxic volume (m^3) : 13000

CHEMICAL:

Lake: BAKER POND
Town: LANCASTER

	20 March 2001		1 August 2000		
DEPTH (m)	1.0		1.0		2.0
pH (units)	7.1		7.5		7.0
A.N.C. (Alkalinity)	41.5		62.3		60.5
NITRATE NITROGEN	0.20		< 0.05		< 0.05
TOTAL KJELDAHL NITROGEN	0.50		1.06		1.29
TOTAL PHOSPHORUS	0.025		0.061		0.077
CONDUCTIVITY (µmhos/cm)	225.0		224.0		198.0
APPARENT COLOR (cpu)	80		150		150
MAGNESIUM			4.32		
CALCIUM			21.4		
SODIUM			15.1		
POTASSIUM			0.89		
CHLORIDE	38		28		21
SULFATE	7		3		2
TN : TP	28		17		17
CALCITE SATURATION INDEX					

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 2000

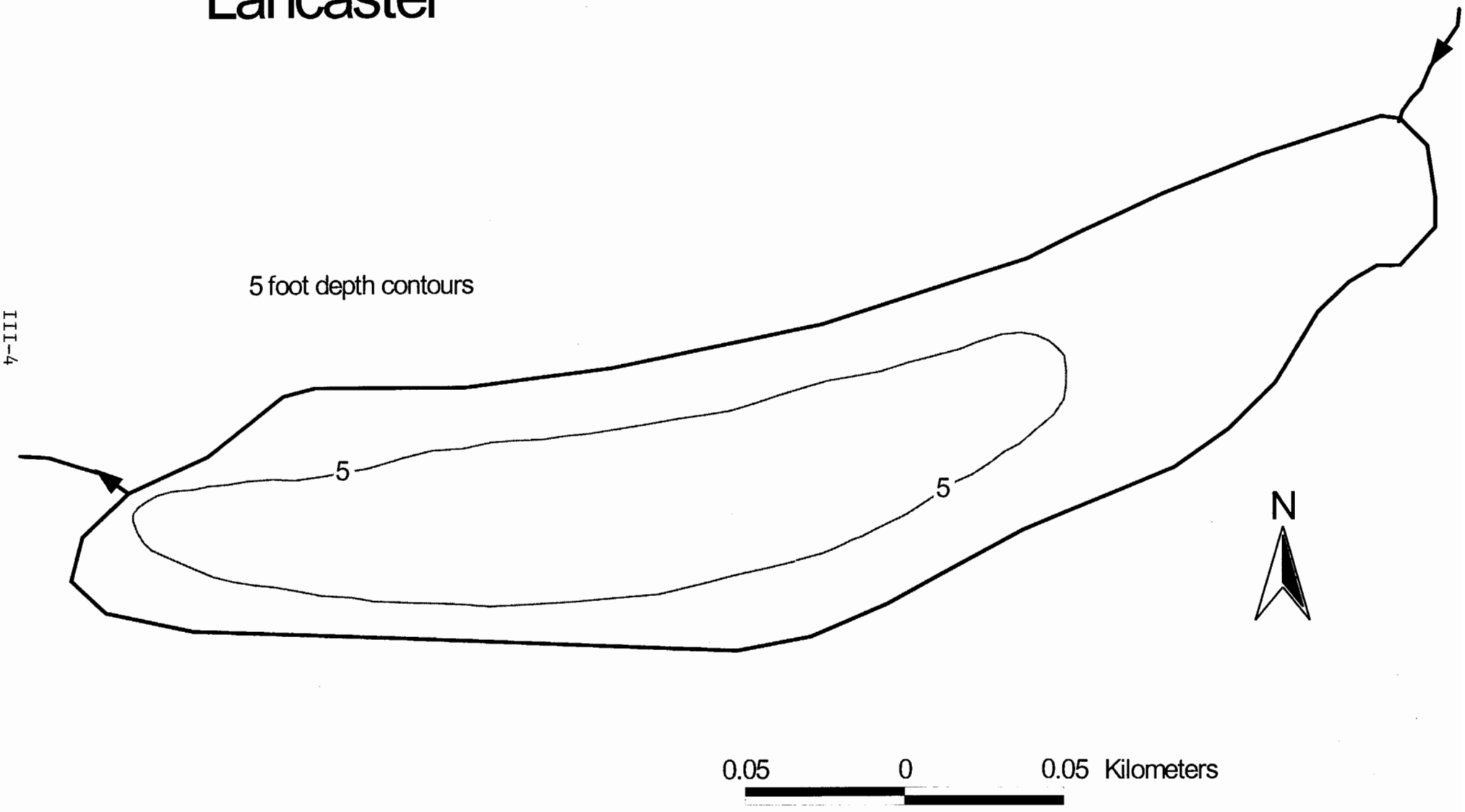
D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
**	5	3	6	14	Eutro.

COMMENTS:

1. This is a shallow, dark tea-colored, eutrophic, remnant ox-bow pond located in the Connecticut River flood plain and adjacent to corn fields. It has elevated phosphorus and algae levels and low water clarity. Conductivity, chloride and sodium values were also high, suggesting the pond receives road salt runoff from nearby Rt 3. It is not used for swimming.

2. Baker Pond was previously surveyed in 1993 and was placed on the impaired waters list because of a high chlorophyll content. This 2000 re-survey confirmed that chlorophyll continued to be elevated in the pond – in fact, was nearly three times the 1993 value.

Baker Pond
Lancaster



FIELD DATA SHEET

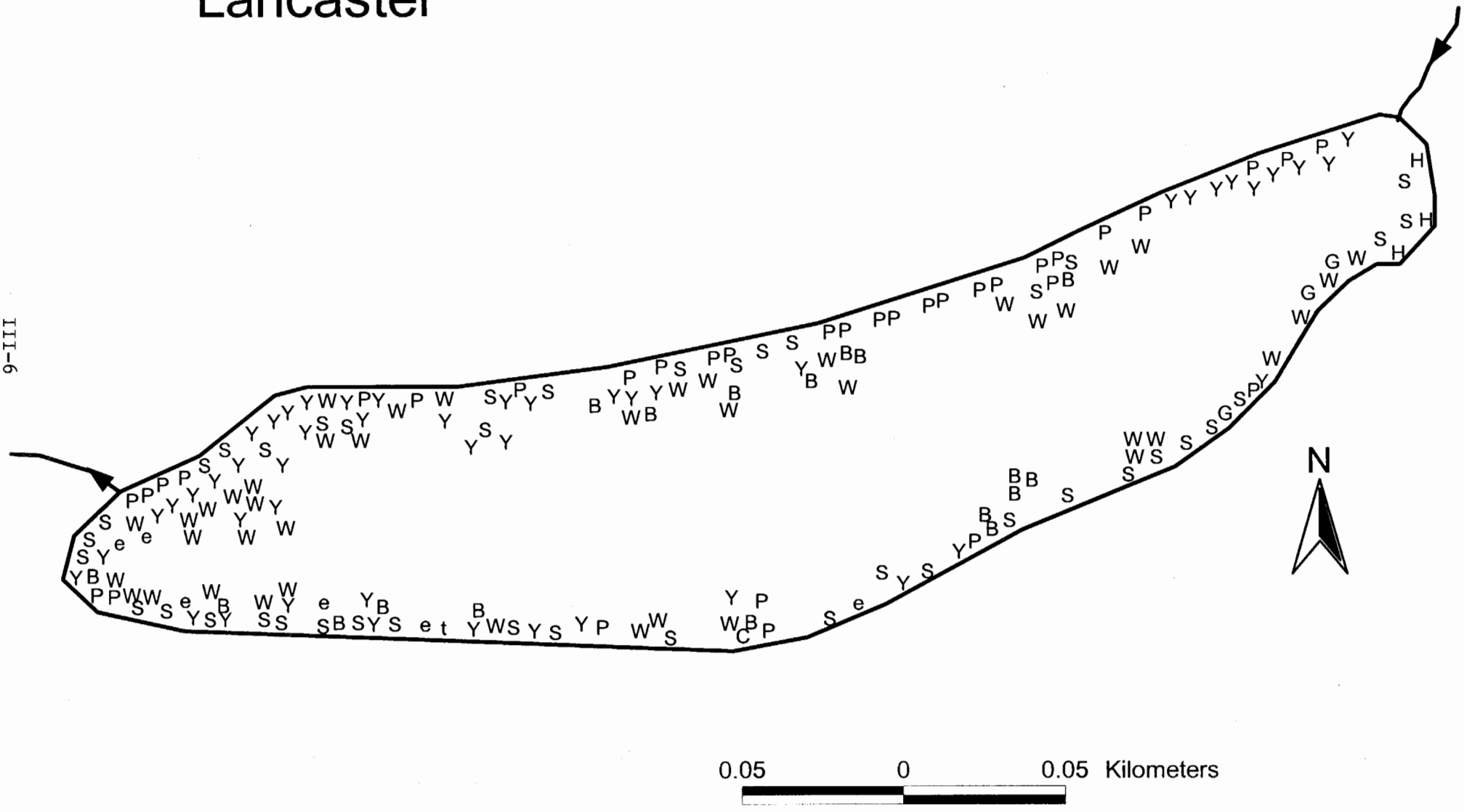
LAKE: BAKER POND TOWN: LANCASTER
DATE: 08/01/2000 WEATHER: OVERCAST

	DEPTH (M)	TEMP (°C)	*DISSOLVED OXYGEN	OXYGEN SATURATION
	0.1	22.8	7.4	84 %
	0.5	21.4	8.1	90 %
	1.0	20.7	3.9	42 %
	1.5	18.3	0.9	9 %
	2.0	14.0	0.4	4 %

SECCHI DISK (m): 0.6 COMMENTS:
BOTTOM DEPTH (m): 2.2
TIME: 1140

*Dissolved oxygen values are in mg/L

Baker Pond
Lancaster



AQUATIC PLANT SURVEY

LAKE: BAKER POND TOWN: LANCASTER DATE: 08/01/2000

Key	PLANT NAME		ABUNDANCE
	GENERIC	COMMON	
P	Pontederia cordata	Pickerelweed	Scat/Common
Y	Nuphar	Yellow water lily	Common
H	Equisetum	Horsetail	Scattered
S	Sparganium	Bur reed	Common
U	Utricularia	Bladderwort	Scattered
W	Potamogeton	Pondweed	Scat/Common
G	Gramineae	Grass family	Sparse
B	Brasenia schreberi	Water shield	Scattered
e	Eleocharis	Spike rush	Sparse
C	Ceratophyllum demersum	Coontail	Sparse
t	Potentilla palustris	Marsh cinquefoil	Sparse

OVERALL ABUNDANCE: Common

GENERAL OBSERVATIONS: