DEPARTMENT of ENVIRONMENTAL SERVICES
Water Division - Watershed Management Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake:	PEA PORRIDGE POND, BIG	Lake Area (ha):	57.54
Town:	MADISON	Maximum depth (m):	13.7
County:	Carroll	Mean depth (m):	4.0
River Basin:	Saco	Volume (m^3):	2295500
Latitude:	43°56'22" N	Relative depth:	1.6
Longitude:	71°07'19" W	Shore configuration:	1.45
Elevation (ft):	648	Areal water load (m/yr):	5.84
Shore length (m):	3900	Flushing rate (yr^{-1}):	1.50
Watershed area (ha):	579.2	P retention coeff.:	0.63
% watershed ponded:	0.0	Lake type:	natural

BIOLOGICAL:		7 February 2002	24 July 2001
DOM. PHYTOPLANKTON (% TOTAL)	#1	UROGLENOPSIS 60%	CHRYSOSPHAERELLA 40%
	#2	DINOBRYON 20%	MALLOMONAS 20%
	#3	ASTERIONELLA 10%	ASTERIONELLA 15%
PHYTOPLANKTON ABUNDANCE (units/mL)			
CHLOROPHYLL-A (μg/L)			2.73
DOM. ZOOPLANKTON (% TOTAL)	#1	CHROMOGASTER 36%	KERATELLA 28%
	#2	NAUPLIUS LARVA 32%	NAUPLIUS LARVA 26%
	#3	CALANOID COPEPOD 19%	CALANOID COPEPOD 9%
ROTIFERS/LITER		21	40
MICROCRUSTACEA/LITER		26	52
ZOOPLANKTON ABUNDANCE (#/L)		47	110
VASCULAR PLANT ABUNDANCE			Scat/Common
SECCHI DISK TRANSPARENCY (m)			5.4
BOTTOM DISSOLVED OXYGEN (mg/L)		10.0	4.3
BACTERIA (E. coli, #/100 ml)	#1		6
	#2		1
	#3		

SUMMER THERMAL STRATIFICATION:

stratified

Depth of thermocline (m): 5.5
Hypolimnion volume (m^3) : 100500
Anoxic volume (m^3) : None

CHEMICAL:

Lake: PEA PORRIDGE POND, BIG
Town: MADISON

	7 February 2002		24 July 2001		
DEPTH (m)	4.0	8.0	2.0	6.0	9.0
pH (units)	6.5	6.4	6.6	6.3	5.8
A.N.C. (Alkalinity)	4.0	3.9	4.0	3.7	4.2
NITRATE NITROGEN	< 0.05	< 0.05	< 0.05		< 0.05
TOTAL KJELDAHL NITROGEN	0.10	0.20	0.10	0.30	0.20
TOTAL PHOSPHORUS	0.009	0.010	0.005	0.007	0.010
CONDUCTIVITY (µmhos/cm)	49.7	50.1	46.5	44.9	45.6
APPARENT COLOR (cpu)	8	8	15	18	18
MAGNESIUM			0.37		
CALCIUM			2.2		
SODIUM			5.3		
POTASSIUM			0.54		
CHLORIDE	9	9	9		7
SULFATE	3	3	3		3
TN : TP	11	20	20		20
CALCITE SATURATION INDEX			3.8		

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 2001

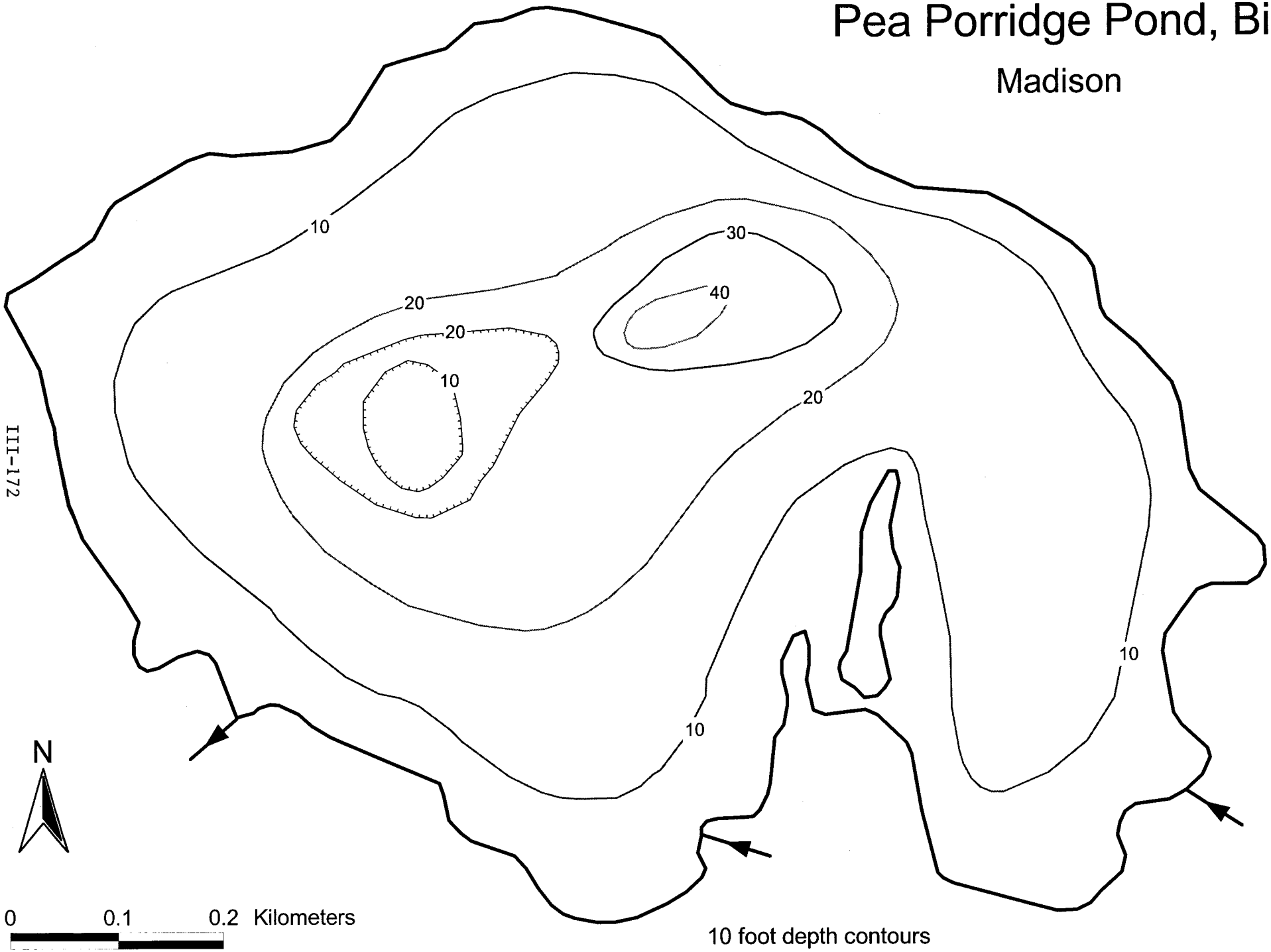
D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
0	1	2	0	3	Oligo.

COMMENTS:

1. Previously surveyed in 1979.
2. AKA Upper Pea Porridge Pond.
3. Participant in VLAP since 1995.
4. Gas motors are banned.
5. Rough, partially washed out boat ramp.
6. Observed one loon.

Pea Porridge Pond, Big

Madison



10 foot depth contours

FIELD DATA SHEET

LAKE: PEA PORRIDGE POND, BIG TOWN: MADISON
DATE: 07/24/2001 WEATHER: Hot, hazy, humid & windy

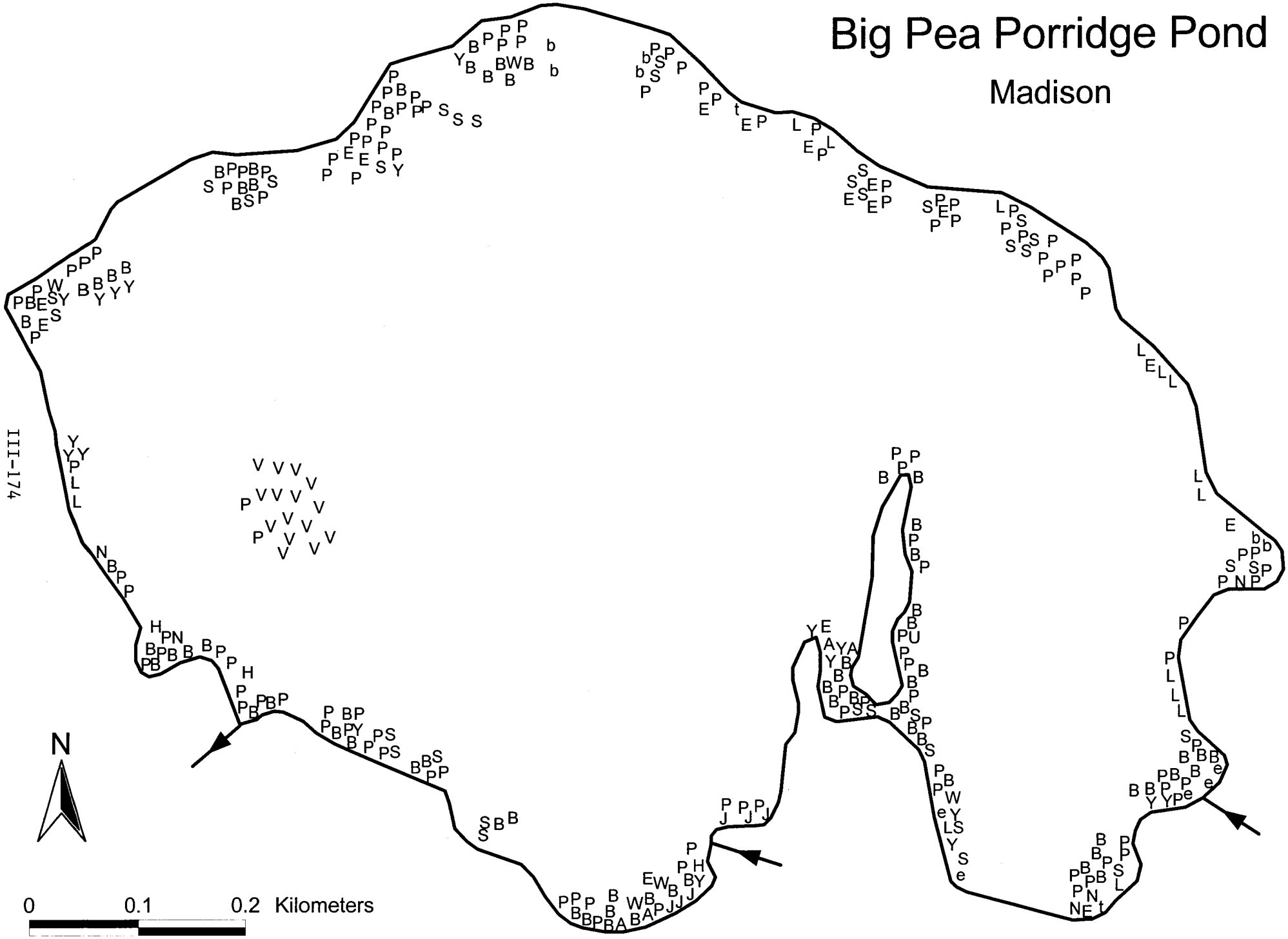
	DEPTH (M)	TEMP (°C)	*DISSOLVED OXYGEN	OXYGEN SATURATION
	0.1	25.8	6.5	80 %
	1.0	25.7	6.5	80 %
	2.0	25.7	6.6	81 %
	3.0	25.7	6.6	81 %
	4.0	25.5	6.6	80 %
	5.0	21.3	7.6	86 %
	6.0	16.3	10.0	102 %
	7.0	12.2	9.6	89 %
	8.0	10.3	7.6	67 %
	9.0	9.0	6.0	52 %
	10.0	8.5	4.3	37 %

SECCHI DISK (m): 5.4 COMMENTS:
BOTTOM DEPTH (m): 10.6
TIME: 1245

*Dissolved oxygen values are in mg/L

Big Pea Porridge Pond

Madison



AQUATIC PLANT SURVEY

LAKE: PEA PORRIDGE POND, BIG TOWN: MADISON DATE: 07/24/2001

Key	PLANT NAME		ABUNDANCE
	GENERIC	COMMON	
P	Pontederia cordata	Pickerelweed	Scat/Common
W	Potamogeton	Pondweed	Scattered
B	Brasenia schreberi	Water shield	Scat/Common
Y	Nuphar	Yellow water lily	Sparse
b	Scirpus	Bulrush	Scattered
E	Eriocaulon septangulare	Pipewort	Scat/Common
t	Lysimachia terrestris	Swampcandle	Scattered
L	Lobelia dortmanna	Water lobelia	Scattered
N	Nymphaea	White water lily	Sparse
e	Eleocharis	Spike rush	Sparse
A	Sagittaria	Arrowhead	Sparse
U	Utricularia	Bladderwort	Sparse
J	Juncus	Rush	Scattered
d	Dulichium arundinaceum	Three-way sedge	Sparse
F	Nymphoides cordatum	Floating heart	Sparse
V	Scirpus validus	Softstem bulrush	Sparse
S	Sparganium	Bur reed	Scat/Common

OVERALL ABUNDANCE: Scat/Common

GENERAL OBSERVATIONS:

1. Choppy surface – difficult to see submerged plants.
2. Much of the shoreline with sweet gale, laurel, high-bush blueberry and other heath family plants, but plants were out of the water and not listed above.
3. At least three species of *Scirpus* were observed.
4. Both erect and floating-leaf species of *Sparganium* were present.
5. Sterile thread-like plant growth was over much of the bottom (where visible) but not depicted on the map.