DEPARTMENT of ENVIRONMENTAL SERVICES
Water Division - Watershed Management Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake:	LEAVITT BAY	**Lake Area (ha):**	71.31
Town:	OSSIPEE	**Maximum Depth (m):**	12.8
County:	CARROLL	**Mean Depth (m):**	3.4
River Basin:	MERRIMACK	**Volume (m^3):**	2429000
Latitude:	43°43'47" N	**Relative depth:**	1.3
Longititude:	71°71'05" W	**Shore Configuration:**	1.6
Elevation (ft) :	406	**Areal water load (m/yr):**	753.78
Shore length (m):	4800	**Flushing Rate (yr^{-1}):**	221.3
% Watershed Ponded:	1.7	**P retention coeff.:**	< 0.01
Watershed Area (ha)	92010	**Lake Type**	natural w/dam

BIOLOGICAL:		**12-Feb-04**	**30-Jul-03**
DOM. PHYTOPLANKTON (% TOTAL)	#1	RHIZOSOLENIA 35%	MICRACTINIUM 50%
	#2	DINOBRYON 20%	ASTERIONELLA 10%
	#3	TABELLARIA 20%	RHIZOSOLENIA 9%
CHLOROPHYLL-A (ug/L)			2.71
DOM. ZOOPLANKTON (% TOTAL)	#1	sparse - no dominant	NAUPLIUS LARVA 34%
	#2		KELLICOTTIA 16%
	#3		KERATELLA 16%
ROTIFERS/LITER		4	30
MICROCRUSTACEA/LITER		4	30
ZOOPLANKTON ABUNDANCE (#/L)		8	77
VASCULAR PLANT ABUNDANCE			Scattered
SECCHI DISK TRANSPARENCY (m)			4.0
BOTTOM DISSOLVED OXYGEN (mg/L)		11.2	0.7
BACTERIA (E. coli, #/100ml)	#1		<10
	#2		<10
	#3		

SUMMER THERMAL STRATIFICATION:

stratified

Depth of thermocline (m):	5.4
Hypolimnion volume (m^3):	171500
Anoxic Volume (m^3):	13500

CHEMICAL:

Lake: LEAVITT BAY
Town: OSSIPEE

	12-Feb-04		30-Jul-03		
DEPTH (M)	4.0	8.0	2.0	6.5	11.0
pH (units)	6.0	6.1	6.8	6.2	6.2
A.N.C. (Alkalinity)	3.6	3.9	5.8	5.8	7.2
NITRATE NITROGEN	0.10	0.10	< 0.05		0.17
TOTAL KJELDHAL NITROGEN	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
TOTAL PHOSPHORUS	0.014	0.009	0.006	0.008	0.010
CONDUCTIVITY (umhos/cm)	46.5	45.4	49.8	49.1	54.1
APPARENT COLOR (CPU)	24	27	17	22	45
MAGNESIUM			0.45		
CALCIUM			3.0		
SODIUM			5.2		
POTASSIUM			0.51		
CHLORIDE	6	6	7		7
SULFATE	3	3	2		2
TN : TP	16	25	25		30
CALCITE SATURATION INDEX					

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 2003

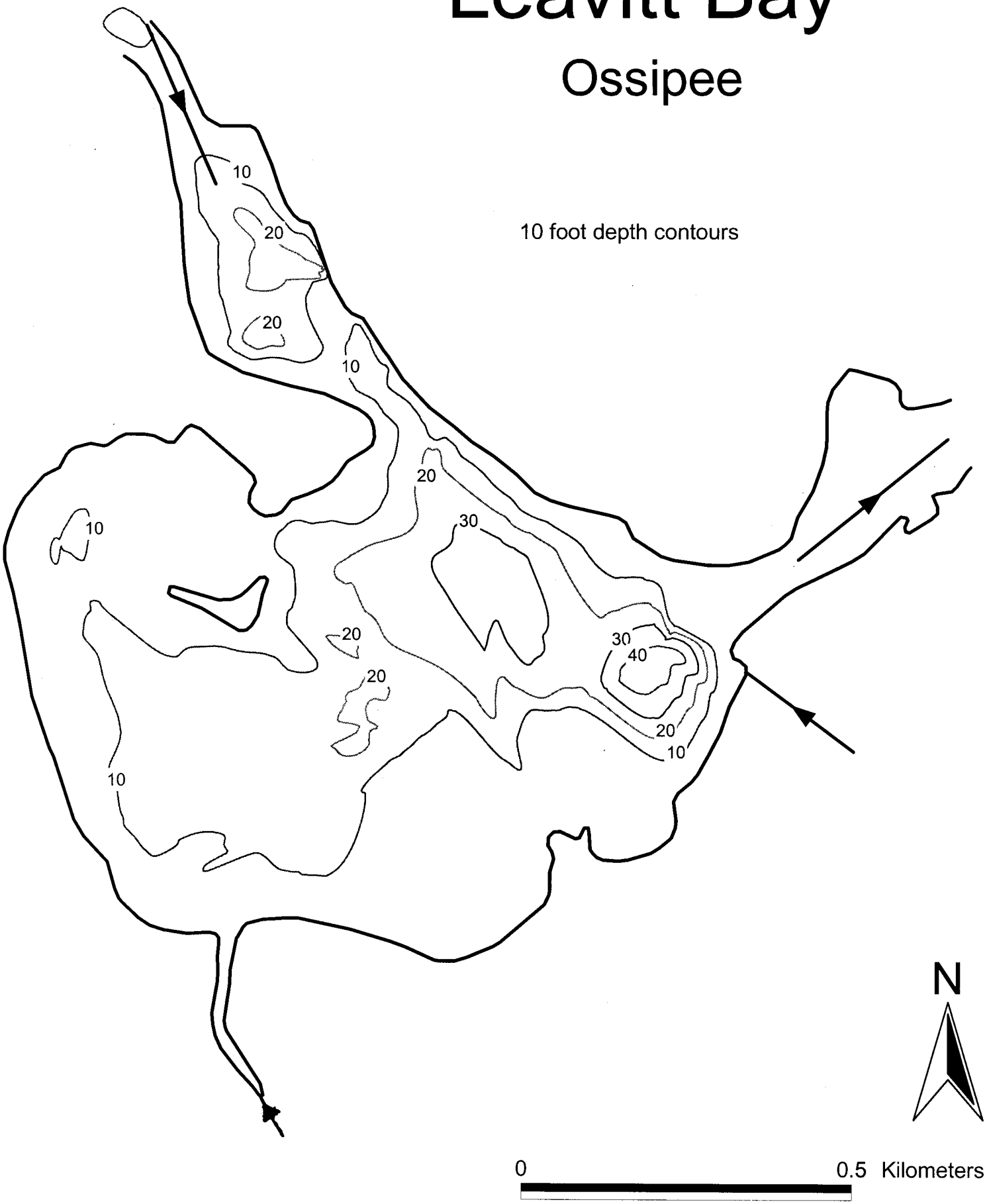
D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
3	2	1	0	6	OLIGO

COMMENTS:

1. Previously surveyed in 1980 and 1987, and joined VLAP in 1990.Trophic class is borderline oligo-mesothrophic. VLAP data shows an increasing (worsening) trend for chlorophyll and stable trends for transparency and phosphorus.
2. We accessed the bay through the Ossipee Lake Campground with the owner's permission.
3. Lots of boating activity on the bay.

Leavitt Bay

Ossipee



FIELD DATA SHEET

LAKE: LEAVITT BAY **TOWN:** OSSIPEE

DATE: 7/30/03 **WEATHER:** Mostly sunny; hot; slight breeze

	DEPTH (M)	TEMP (°C)	DISSOLVED OXYGEN (mg/L)	PERCENT SATURATED
	0.1	25.5	7.6	91.0
	1.0	25.2	7.6	91.0
	2.0	24.8	7.6	89.0
	3.0	23.4	7.3	85.0
	4.0	23.6	7.3	85.0
	5.0	22.8	6.8	77.0
	6.0	18.4	3.1	33.0
	7.0	16.3	2.6	26.0
	8.0	15.1	2.7	26.0
	9.0	14.3	2.1	20.0
	10.0	13.7	1.3	12.0
	11.0	13.6	0.9	8.0
	12.0	13.8	0.7	7.0

SECCHI DEPTH (m) : 4.0

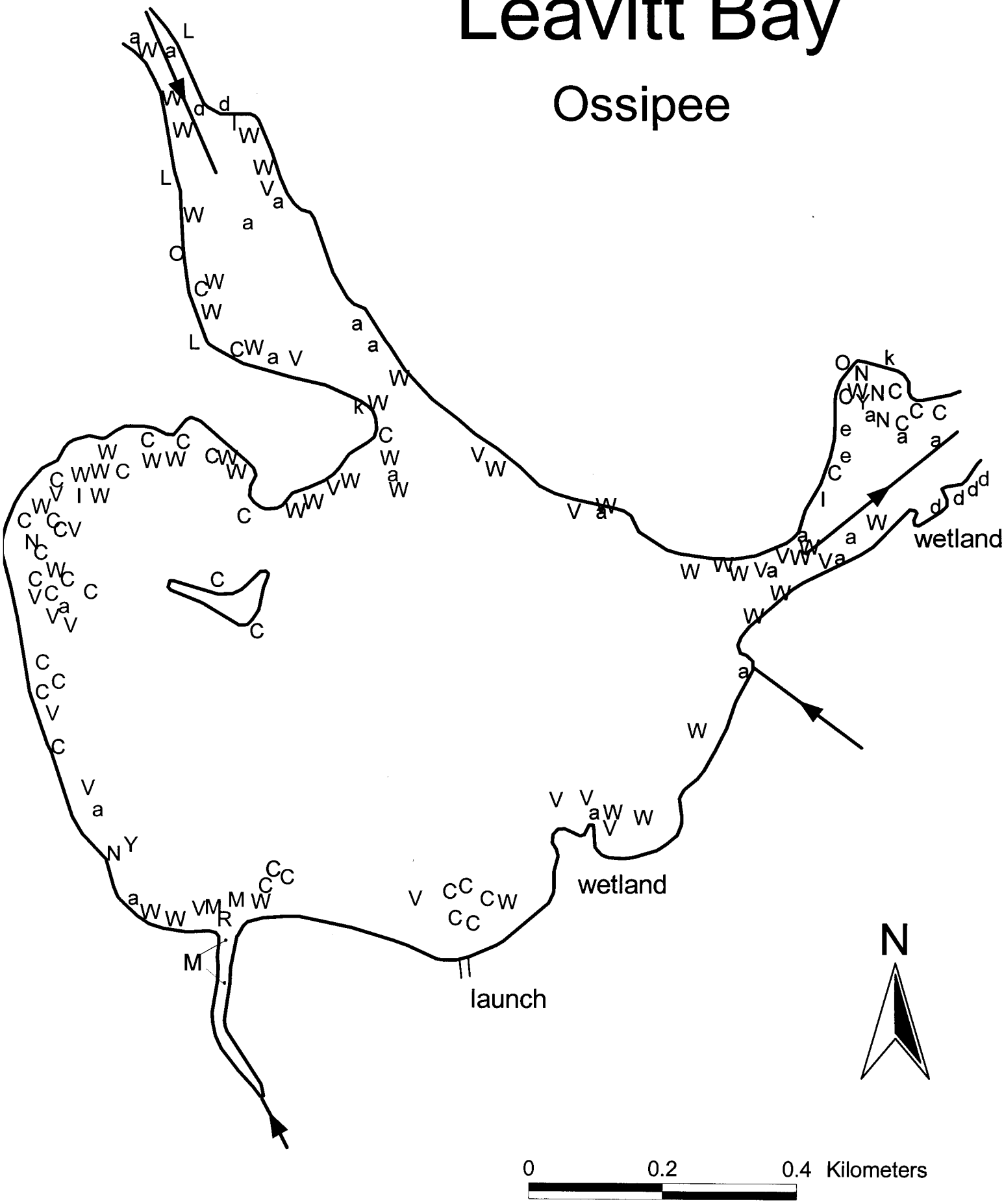
BOTTOM DEPTH (m) : 12.5

TIME: 1300

COMMENTS:

Leavitt Bay

Ossipee



AQUATIC PLANT SURVEY

LAKE: LEAVITT BAY **TOWN:** OSSIPEE **DATE:** 7/30/03

KEY	PLANT NAME		ABUNDANCE
	GENERIC	COMMON	
e	Eleocharis	Spike rush	Sparse
I	Isoetes	Quillwort	Sparse
d	Dulichium arundinaceum	Three-way sedge	Sparse
O	Cephalanthus occidentalis	Buttonbush	Sparse
L	Lysimachia terrestris	Swampcandle	Sparse
k	Carex	Sedge	Sparse
C	Cyperaceae	Non-flowering sedge	Scattered
U	Utricularia	Bladderwort	Scattered
Y	Nuphar	Yellow water lily	Sparse
N	Nymphaea	White water lily	Sparse
M	Myriophyllum heterophyllum	Water milfoil	Sparse
V	Vallisneria americana	Tape grass	Scattered
R	Potamogeton robbinsii	Robbins pondweed	Sparse
W	Potamogeton spp.	submerged pondweed	Scattered
a	Potamogeton amplifolius	Bass weed	Scattered
F	Nymphoides cordatum	Floating heart	Sparse
f	Potamogeton spp.	pondweed w/ floating leaf	Sparse
S	Sparganium	Bur reed	Sparse
		Filamentous algae	Scattered
		OVERALL ABUNDANCE :	Scattered

GENERAL OBSERVATIONS :

1. This is the first documentation of exotic milfoil (*M. heterophyllum*) in Leavitt Bay (it has been in upstream Broad Bay for several years). It was in Phillips Brook (an area that was dredged – and dredged areas are conducive for exotic plant growth) and in the bay at the mouth of Phillips Brook.

2. Clouds of filamentous algae were observed scattered around the lake but were not mapped.