DEPARTMENT of ENVIRONMENTAL SERVICES
Water Division - Watershed Management Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake:	OSSIPEE LAKE	**Lake Area (ha):**	1251.25
Town:	OSSIPEE	**Maximum Depth (m):**	18.5
County:	CARROLL	**Mean Depth (m):**	8.5
River Basin:	CONNECTICUT	**Volume (m^3):**	108421500
Latitude:	43°43'47" N	**Relative depth:**	0.5
Longititude:	71°71'08" W	**Shore Configuration:**	1.36
Elevation (ft) :	406	**Areal water load (m/yr):**	39.86
Shore length (m):	17100	**Flushing Rate (yr^{-1}):**	4.6
% Watershed Ponded:	1.8	**P retention coeff.:**	0.39
Watershed Area (ha)	84822.1	**Lake Type**	natural w/dam

BIOLOGICAL:		**12-Feb-04**	**14-Aug-03**
DOM. PHYTOPLANKTON (% TOTAL)	#1	RHIZOSOLENIA 75%	ASTERIONELLA 30%
	#2	ASTERIONELLA 12%	MICRACTINIUM 20%
	#3		DINOBRYON 15%
CHLOROPHYLL-A (ug/L)			1.99
DOM. ZOOPLANKTON (% TOTAL)	#1	ciliate spp. 80%	NAUPLIUS LARVA 30%
	#2	CALANOID COPEPODS 9%	KELLICOTTIA 11%
	#3	KERATELLA 4%	VORTICELLA 10%
ROTIFERS/LITER		4	24
MICROCRUSTACEA/LITER		9	29
ZOOPLANKTON ABUNDANCE (#/L)		82	73
VASCULAR PLANT ABUNDANCE			Scattered
SECCHI DISK TRANSPARENCY (m)			3.4
BOTTOM DISSOLVED OXYGEN (mg/L)		7.2	5.7
BACTERIA (E. coli, #/100ml)	#1		110
	#2		80
	#3		50

SUMMER THERMAL STRATIFICATION:

stratified

Depth of thermocline (m):	7.5
Hypolimnion volume (m^3):	41033500
Anoxic Volume (m^3):	None

CHEMICAL:

Lake: OSSIPEE LAKE
Town: OSSIPEE

	12-Feb-04		13-Aug-03		
DEPTH (M)	6.0	12.0	2.0	9.0	15.0
pH (units)	6.2	6.2	6.7	6.2	6.0
A.N.C. (Alkalinity)	3.0	2.7	5.1	3.7	3.5
NITRATE NITROGEN	0.10	0.08	< 0.05		0.13
TOTAL KJELDHAL NITROGEN	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
TOTAL PHOSPHORUS	0.008	0.009	0.007	0.006	0.008
CONDUCTIVITY (umhos/cm)	40.3	38.7	45.3	42.9	42.5
APPARENT COLOR (CPU)	25	30	30	30	30
MAGNESIUM			0.34		
CALCIUM			2.7		
SODIUM			4.6		
POTASSIUM			0.48		
CHLORIDE	5	5	6		
SULFATE	3	3	2		2
TN : TP	28	23	21		32
CALCITE SATURATION INDEX					

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 2003

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

COMMENTS:

1. Previously surveyed in 1976 and 1987. No change in trophic class and little change in trophic parameters among the three years. Secchi transparency was less in each successive sampling year but more frequently collected data is needed to determine if this is a real trend or part of the natural year-to-year variation. The lake joined VLAP in 2003 to begin to collect this additional data.

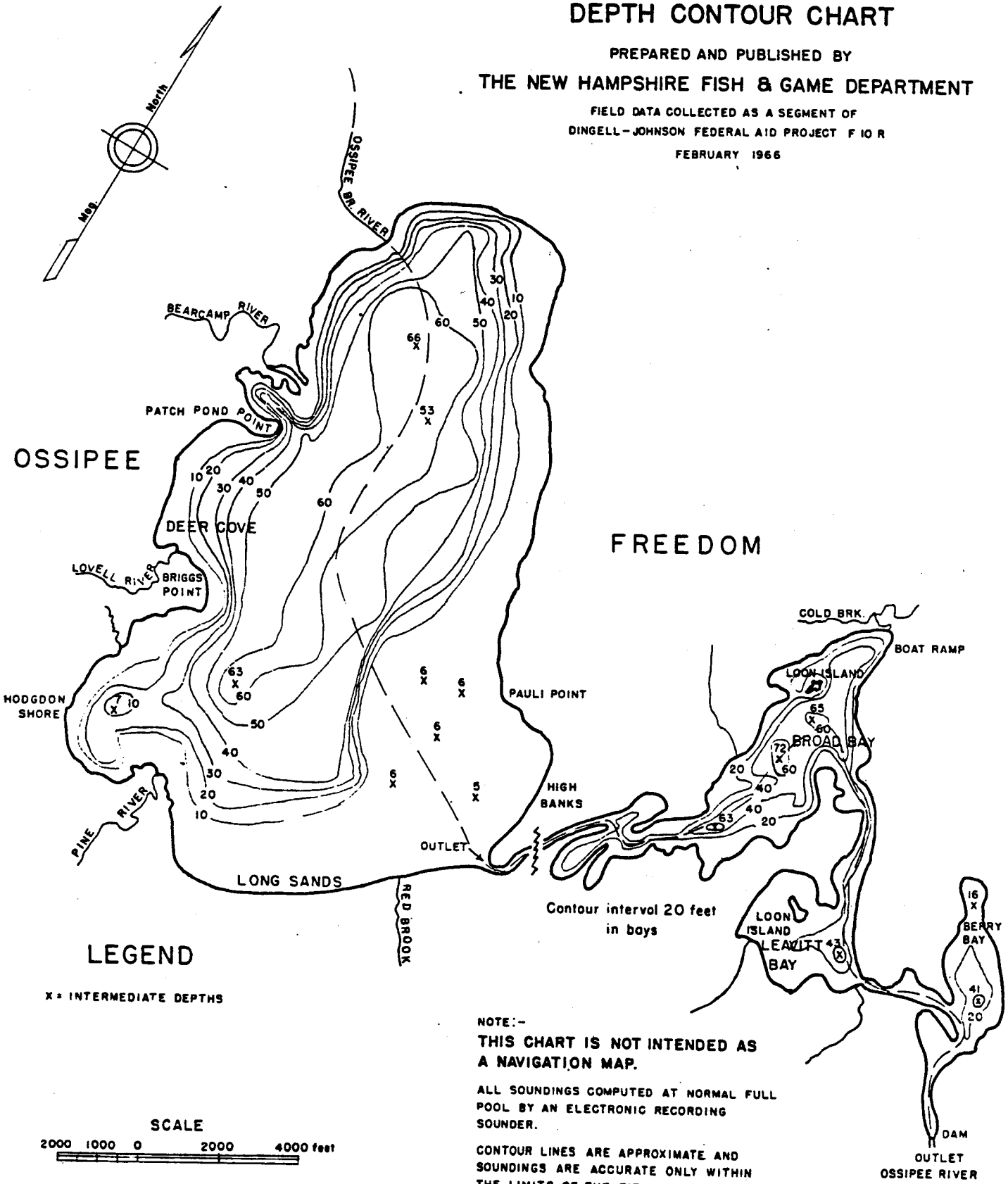
2. DRED launch site available off Route 25 into the Pine River and then downstream to the lake.

OSSIPEE LAKE
DEPTH CONTOUR CHART

PREPARED AND PUBLISHED BY

THE NEW HAMPSHIRE FISH & GAME DEPARTMENT

FIELD DATA COLLECTED AS A SEGMENT OF
DINGELL-JOHNSON FEDERAL AID PROJECT F 10 R
FEBRUARY 1966



NOTE:-

THIS CHART IS NOT INTENDED AS A NAVIGATION MAP.

ALL SOUNDINGS COMPUTED AT NORMAL FULL POOL BY AN ELECTRONIC RECORDING SOUNDER.

CONTOUR LINES ARE APPROXIMATE AND SOUNDINGS ARE ACCURATE ONLY WITHIN THE LIMITS OF THE FIELD METHODS USED.

FIELD DATA SHEET

LAKE: OSSIPEE LAKE **TOWN:** OSSIPEE

DATE: 8/13/03 **WEATHER:** Sunny, Warm and Breezy

	DEPTH (M)	TEMP (°C)	DISSOLVED OXYGEN (mg/L)	PERCENT SATURATED
	0.1	25.4	8.1	98.5
	1.0	24.6	8.1	97.4
	2.0	22.9	8.0	93.4
	3.0	22.2	7.9	90.1
	4.0	21.6	7.8	88.9
	5.0	20.4	7.7	85.2
	6.0	19.1	7.6	82.3
	7.0	17.5	7.6	79.0
	8.0	12.6	7.4	70.1
	9.0	12.0	7.5	69.3
	10.0	10.9	7.3	65.8
	11.0	9.9	7.1	62.8
	12.0	9.1	6.9	60.0
	13.0	8.8	6.8	58.2
	14.0	8.5	6.5	55.4
	15.0	8.4	6.1	51.6
	16.0	8.3	6.1	51.5
	17.0	8.3	6.1	52.2
	18.0	8.4	5.7	48.7

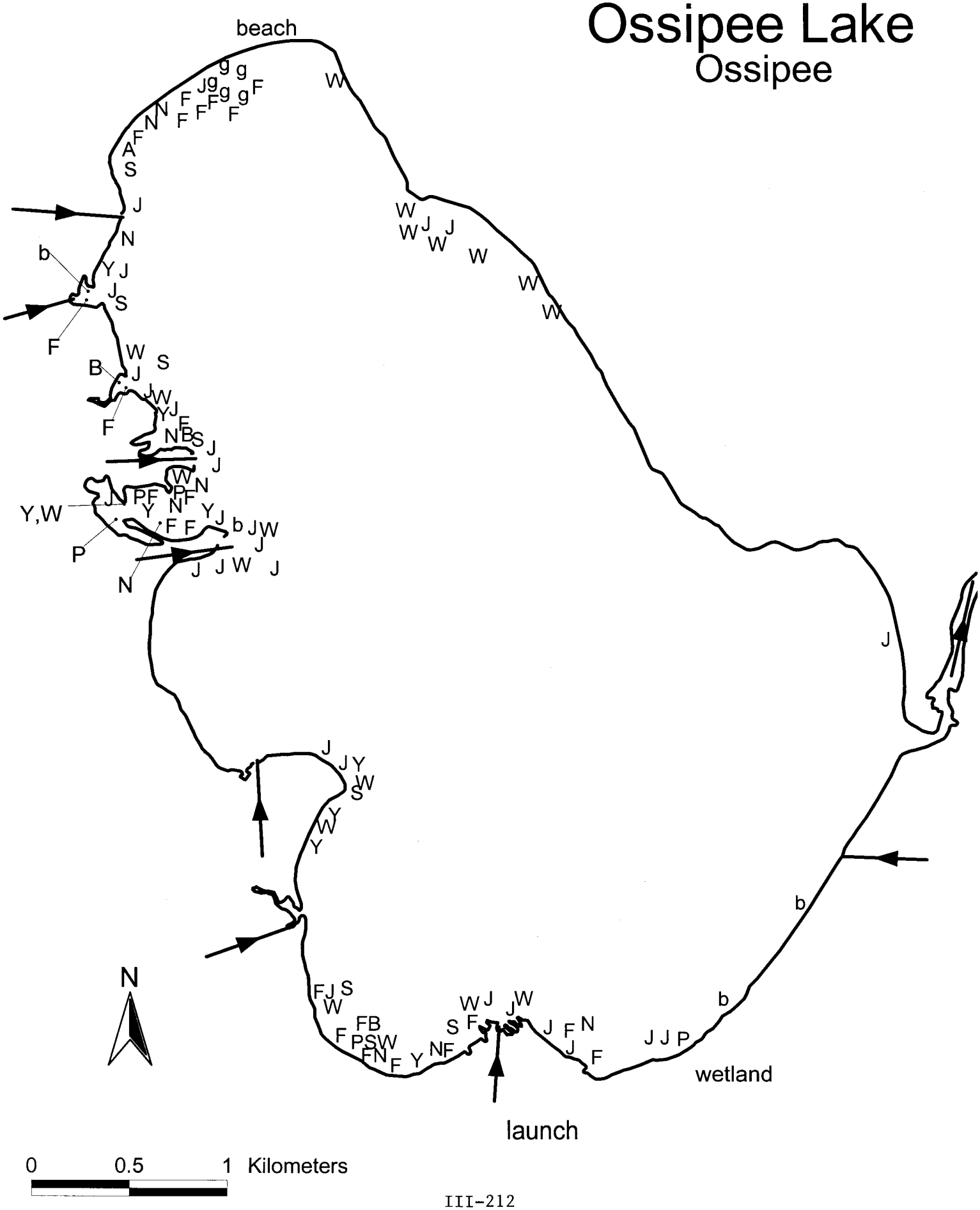
SECCHI DEPTH (m) : 3.4

BOTTOM DEPTH (m) : 18.5

TIME: 1130

COMMENTS:

Ossipee Lake
Ossipee



AQUATIC PLANT SURVEY

LAKE: OSSIPEE LAKE **TOWN:** OSSIPEE **DATE:** 8/13/03

KEY	PLANT NAME		ABUNDANCE
	GENERIC	COMMON	
J	Juncus	Rush	Scattered
F	Nymphoides cordatum	Floating heart	Scattered
Y	Nuphar	Yellow water lily	Sparse
W	Potamogeton	Pondweed	Scattered
S	Sparganium	Bur reed	Sparse
N	Nymphaea	White water lily	Sparse
B	Brasenia schreberi	Water shield	Sparse
P	Pontederia cordata	Pickerelweed	Sparse
C	Cyperaceae	Non-flowering sedge	Sparse
b	Scirpus	Bulrush	Sparse
d	Dulichium arundinaceum	Three-way sedge	Sparse
A	Sagittaria	Arrowhead	Sparse
g	Polygonum	Smartweed	Sparse
		OVERALL ABUNDANCE :	Scattered

GENERAL OBSERVATIONS :

1. Large areas of boat moorings interfered with boating close to shore in some areas, particularly along the northeastern shore. Some plant growth may have been missed.
2. Observed a bald eagle.
3. A wetland area was present along the southern shoreline and plants were common in the cove near the Bearcamp River inlet, but overall the plants were scattered.
4. Clouds of filamentous algae were observed but not listed above or depicted on the map.