

DEPARTMENT of ENVIRONMENTAL SERVICES
Water Division - Watershed Management Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake:	PINE RIVER POND	Lake Area (ha):	240.38
Town:	WAKEFIELD	Maximum Depth (m)	17.2
County:	CARROLL	Mean Depth (m):	3.7
River Basin:	SACO	Volume (m³):	8547500
Latitude:	43°37'38" N	Relative depth:	1
Longitude:	71°01'16" W	Shore Configuration:	3.57
Elevation (ft) :	584	Areal water load (m/yr):	8.08
Shore length (m):	19600	Flushing Rate (yr⁻¹):	2.2
% Watershed Poned:	0.2	P retention coeff.:	0.58
Watershed Area (ha)	3367	Lake Type	natural w/dam

BIOLOGICAL:

		23-Feb-06	19-Sep-05
DOM. PHYTOPLANKTON (% TOTAL)	#1	ASTERIONELLA 55%	CHRYSOSPHAERELLA 55%
	#2	DINOBRYON 20%	CERATIUM 20%
	#3	UROGLENOPSIS 10%	SYNURA 7%
CHLOROPHYLL-A (ug/L)			4.34
DOM. ZOOPLANKTON (% TOTAL)	#1	Ciliate spp. #1 33%	NAUPLIUS LARVA 23%
	#2	Tintinnidae ciliate spp. 25%	KERATELLA 20%
	#3	Ciliate spp. #2 25%	POLYARTHRA 13%
ROTIFERS/LITER		1	55
MICROCRUSTACEA/LITER		1	59
ZOOPLANKTON ABUNDANCE (#/L)		12	137
VASCULAR PLANT ABUNDANCE			Sparse
SECCHI DISK TRANSPARENCY (m)			5.0
BOTTOM DISSOLVED OXYGEN (mg/L)		7.3	0.7
BACTERIA (E. coli, #/100ml)	#1		10
	#2		<10
	#3		

SUMMER THERMAL STRATIFICATION:

stratified

Depth of thermocline (m):	6.5
Hypolimnion volume (m ³):	501500
Anoxic Volume (m ³):	426000

CHEMICAL:

Lake: PINE RIVER POND

Town: WAKEFIELD

	23-Feb-06		19-Sep-05		
DEPTH (M)	4.0	8.0	2.5	7.5	14.0
pH (units)	6.0	6.1	6.9	6.1	6.4
A.N.C. (Alkalinity)	6.3	6.6	6.4	6.7	15.1
NITRATE NITROGEN	0.10	0.12	< 0.05		< 0.05
TOTAL KJELDHAL NITROGEN	0.30	0.30	< 0.25	< 0.25	0.40
TOTAL PHOSPHORUS	0.008	0.008	0.007	0.008	0.017
CONDUCTIVITY (umhos/cm)	51.9	52.3	54.3	48.4	69.0
APPARENT COLOR (CPU)	11	12	17	23	120
MAGNESIUM			0.43		
CALCIUM			2.5		
SODIUM			5.7		
POTASSIUM			< 0.40		
CHLORIDE	6	6	8		8
SULFATE	3	3	2		2
TN : TP	50	53	21		25
CALCITE SATURATION INDEX					

All results in mg/L unless indicated otherwise

TROPIC CLASSIFICATION: 2005

D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
4	2	0	1	7	MESO

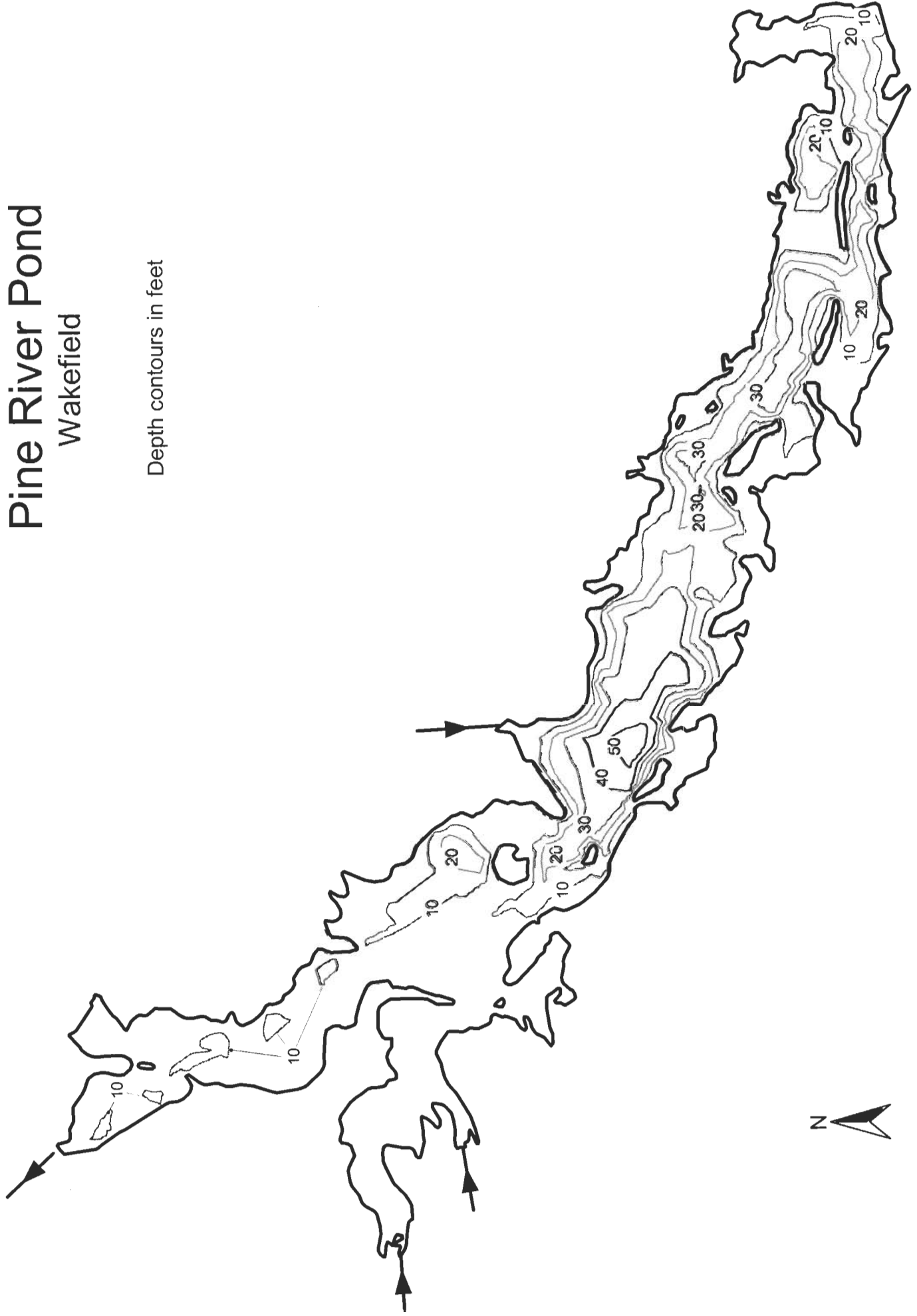
COMMENTS:

1. no jet skis.
2. No apparent public access; numerous private boat ramps observed.
3. Previously surveyed in 1980 and 1987. Little change in trophic parameters and no change in trophic class amongst the years.
4. Participant in VLAP since 1987. The trophic parameters chlorophyll, Secchi transparency and phosphorus have fluctuated over the years but showed no statistically significant increasing or decreasing trend.
5. Most of the shoreline was developed; building is now occurring at the second tier level.
6. Winter zooplankton were sparse and dominated by ciliates (>75%).
7. The anoxic summer bottom waters had elevated levels of several parameters including ANC, color, TKN and phosphorus.

Pine River Pond

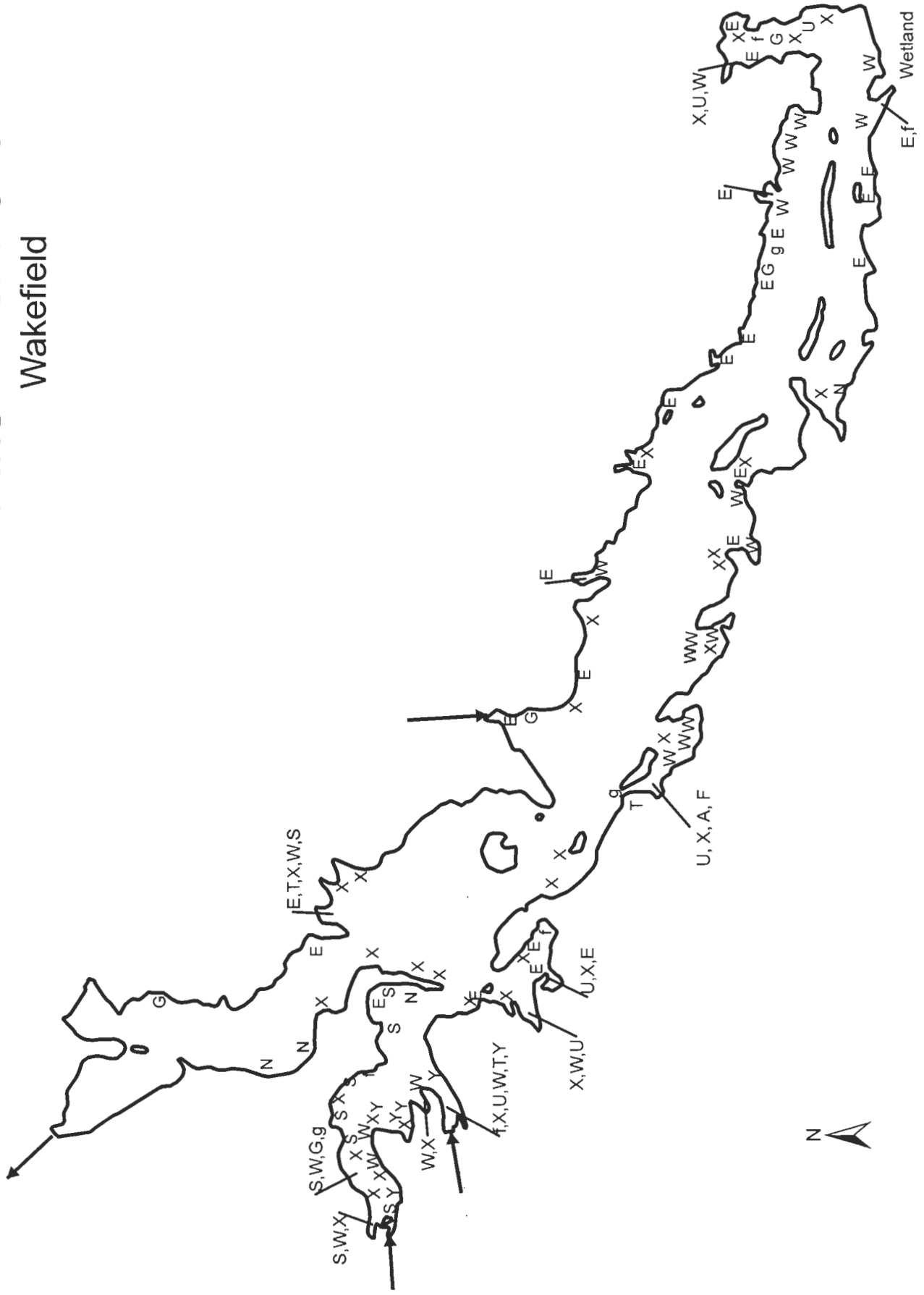
Wakefield

Depth contours in feet



0 0.5 1 Kilometers

Pine River Pond Wakefield



0 0.5 1 Kilometers

