Last Updated 3/30/2001

Round Pond

Collection Date: 3/18/2001 @
Date Received: 03/19/01
Sampled By: Terry Donoghue = TD, Henry Kunhardt = HK

Lab ID#: 0103185A-G

Results of Analysis: / ***Sampled By:*** / ***Parameters***	**units**	**MDL**	**Method**	**HK 1997**	**HK 1998**	**HK 1999**	**HK 2000**	**TD 3/18/01**
Coliform	/100 mls	20	9222 B					20
pH Lab	pH units	NA	4500 H+	5.93	6.23	6.6	6.27	6.26
pH Field*	pH units	0.01	Oakton pH10					6.08
Temperature Field+	Celcius	0.5	Oakton pH10	8.9	8.0	11.1	6.7	3.0
Specific Conductance	umhos/cm	4.0	120.1					53
Nitrate-N	mg/L	0.005	300.0	0.04	0.02	**0.5**	0.005	0.005
Nitrite-N	mg/L	0.003	200.7					0.003
Sodium	mg/L	1.0	200.7					6.1
Iron	mg/L	0.005	200.7					0.022
Manganese	mg/L	0.001	200.7					0.001
Potassium	mg/L	0.1	200.7					0.4
Calcium	mg/L	0.5	200.7					1.0
Magnesium	mg/L	0.5	200.7					0.8
Hardness	mg/L	3.0	200.7					5.8
Alkalinity	mg/L	1.0	2320 B	**1.2**	**1.6**	**2**	**3.1**	**1.8**
Sulfate	mg/L	1.0	300.0					5.1
Chloride	mg/L	3.0	300.0					10.5
Color	TON	5.0	2120 B					5.0
Turbitity	NTU	0.05	2130 B					0.42
Total Phosphate (P)	mg/L	0.003	4500-P	0.01	0.003	0.01	0.010	0.003
Free CO2	mg/L	NA	4500-CO2 D	2.4	2.3	2.0	4.4	3.1
Secchi Depth	m	NA	NA	7.0	4.8	3.0	5.3	NA

* = 3-point pre and 1-point post calibration check in buffer solutions within .03
\+ = 1-point pre calibration at 0C
@ = samples collected at approximately 10-20 cm depth

GENERAL GUIDELINES:

Eutrophic Levels:
- Nitrate Nitrogen >0.5
- Total Phosphorous >0.03
- Secchi <1.5

pH:
- 7 is neutral
- > 7 is alkaline
- < 7 is acidic

Alkalinity:
- <5 "Dangerous
- <2 "Critical"

Fertilizers = NO3 + PO4 + K + Fe + Mg + Mn
Hardness = Ca+Mg+Zn+Fe
Acid Rain = SO4 + N03
PO4 = Limiting Nutrient?
Alkalinity = HCO3 + 2CO3 (Titrated)
Acid Neutralizing Capacity (ANC) = Sum(Basic Cations(CB)) - (Acidic Anions(AA))
Acidity = -ANC
CB = Ca + Mg + Na + K
AA = SO4 + NO3 + Cl
ANC (microequivalents/L) >50 = good
ANC (microequivalents/L) 0-50 = marginal
ANC (microequivalents/L) <0 = poor

1997, '98, 00, 01 Lab Analyses by Envirotech Labs, Sandwich, MA
1999 Lab Analyses by Analytical Balance, Middleborough, MA
Guidelines: Dr. Paul Godfrey, Limnologist, University of Massachusetts