

Last Updated 3/30/2001

## Gallows 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:				HK	HK	HK	HK	TD
Parameters	units	MDL	Method	1997	1998	1999	2000	3/18/01
Coliform	/100 mls	20	9222 B					20
pH Lab	pH units	NA	4500 H+	6.36	6.29	6.5	6.26	6.56
pH Field*	pH units	0.01	Oakton pH10					6.06
Temperature Field+	Celcius	0.5	Oakton pH10	8.9	7.0	11.4	6.4	2.1
Specific Conductance	umhos/cm	4.0	120.1					38
Nitrate-N	mg/L	0.005	300.0	0.04	0.04	0.5	0.005	0.005
Nitrite-N	mg/L	0.003	200.7					0.003
Sodium	mg/L	1.0	200.7					4.7
Iron	mg/L	0.005	200.7					0.005
Manganese	mg/L	0.001	200.7					0.001
Potassium	mg/L	0.1	200.7					0.2
Calcium	mg/L	0.5	200.7					1.2
Magnesium	mg/L	0.5	200.7					0.7
Hardness	mg/L	3.0	200.7					5.9
Alkalinity	mg/L	1.0	2320 B	2.6	2.4	2	3.0	2.0
Sulfate	mg/L	1.0	300.0					4.5
Chloride	mg/L	3.0	300.0					8.8
Color	TON	5.0	2120 B					5.0
Turbidity	NTU	0.05	2130 B					0.38
Total Phosphate (P)	mg/L	0.003	4500-P	0.01	0.003	0.01	0.020	0.057
Free CO2	mg/L	NA	4500-CO2 D	3.4	3.3	2.2	4.3	3.5
Secchi Depth	m	NA	NA	6.2	4.0	6.2	7.2	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 = NO<sub>3</sub> + PO<sub>4</sub> + K + Fe + Mg + Mn

Hardness = Ca+Mg+Zn+Fe

Acid Rain = SO<sub>4</sub> + NO<sub>3</sub>

PO<sub>4</sub> = Limiting Nutrient?

Alkalinity = HCO<sub>3</sub> + 2CO<sub>3</sub> (Titrated)

Acid Neutralizing Capacity (ANC) = Sum(Basic Cations(CB)) - (Acidic Anions(AA))

Acidity = -ANC

CB = Ca + Mg + Na + K

AA = SO<sub>4</sub> + NO<sub>3</sub> + 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