

96012

**TECHNICAL APPENDICES
TO THE
DIAGNOSTIC/FEASIBILITY STUDY OF
WEQUAQUET LAKE, BEARSE, AND LONG POND**

15 December, 1989

Prepared For:

**Town of Barnstable
Conservation Commission
367 Main Street
Hyannis, Massachusetts 02601**

Prepared By:

**IEP, Inc.
P.O. Box 1840
90 Route 6A/Sextant Hill
Sandwich, Massachusetts 02563**

and

**K-V Associates, Inc.
281 Main Street
Falmouth, Massachusetts 02541**

APPENDIX A - Results of Water Quality Analyses



*— samples taken
24-X-85*

Report of Analysis

Client: IEP, Inc.

Job No: 26-427

Project: Wequaquet

Date: November 15, 1985

Sample A Shallow 1A

Sample B Shallow 2A

Sample C Shallow 3A

Sample D Bearse 1A

Sample E Bearse 1C

Sample F

Test Results in mg/l (unless noted otherwise)

	A	B	C	D	E	F
Sample Log Number	50744	50745	50746	50747	50748	
Type of Sample	water	water	water	water	water	
Date Collected	10/24/85	10/24/85	10/24/85	10/24/85	10/24/85	
Time Collected	1500	1515	1515	1430	1430	
Collected By	BC/MN	BC/MN	BC/MN	BC/MN	BC/MN	
pH (pH Units)	5.5	5.1	5.0	6.1	6.2	
Alkalinity (as CaCO ₃)	<5	<5	<5	6	6	
Specific Conductance ¹	81	80	80	85	85	
Chloride	16.9	17.4	16.9	15.8	15.8	
Ammonia as N	0.29	<0.05	0.10	0.15	0.11	
Nitrate as N	<0.02	<0.02	<0.02	<0.02	<0.02	
Total Kjeldahl Nitrogen	0.54	0.20	0.48	0.71	0.68	
Phosphate as P:						
Total	0.005	<0.005	<0.005	<0.005	0.007	
Dissolved	<0.005	<0.005	<0.005	<0.005	0.007	
Solids:						
Total Dissolved	57	42	33	22	36	
Total Suspended	3	<2	3	4	<2	
Total Coliform ²	<10	<10	20	61	-	
Fecal Coliform ²	<10	<10	<10	40	-	

Comments: ¹Specific Conductance in umhos/cm.

²Total and Fecal Coliform/100 ml MPN.

Approved by: *Les Abbott*



Report of Analysis

Client: IEP, Inc.Job No: 26-427Project: WequaquetDate: November 15, 1985

Sample A Long Pond 1A

Sample B Long Pond 1C

Sample C Long Pond 3

Sample D WEQQT 1A

Sample E WEQQT 1C

Sample F

Test Results in mg/l (unless noted otherwise)

	A	B	C	D	E	F
Sample Log Number	50749	50750	50751	50752	50753	
Type of Sample	water	water	water	water	water	
Date Collected	10/24/85	10/24/85	10/24/85	10/24/85	10/24/85	
Time Collected	1615	1615	1630	1230	1230	
Collected By	BC/MN	BC/MN	BC/MN	BC/MN	BC/MN	
pH (pH Units)	5.9	5.9	6.0	6.2	6.1	
Alkalinity (as CaCO ₃)	<5	5	<5	6	5	
Specific Conductance	115	114	115	84	83	
Chloride	23.9	23.9	23.9	15.8	15.6	
Ammonia as N	0.09	0.05	0.08	0.05	0.05	
Nitrate as N	<0.02	<0.02	<0.02	<0.02	<0.02	
Total Kjeldahl Nitrogen	0.36	0.29	0.45	0.18	0.16	
Phosphate as P:						
Total	<0.005	<0.005	0.008	0.015	0.019	
Dissolved	<0.005	<0.005	-	0.005	0.008	
Solids:						
Total Dissolved	39	46	61	35	33	
Total Suspended	<2	3	5	2	<2	
Total Coliform ²	<10	-	120	78	-	
Fecal Coliform ²	<10	-	68	45	-	

Comments: ¹Specific Conductance in umhos/cm.
²Total and Fecal Coliform/100 ml MPN.

Approved by: [Signature]



Report of Analysis

Client: IEP, Inc.Job No: 26-427Project: WequaquetDate: November 15, 1985

Sample A WEQQT 2A

Sample B WEQQT 2C

Sample C WEQQT 3A

Sample D WEQQT 3C

Sample E WEQQT 4A

Sample F WEQQT 4C

Test Results in mg/l (unless noted otherwise)

	A	B	C	D	E	F
Sample Log Number	50754	50755	50756	50757	50758	50759
Type of Sample	water	water	water	water	water	water
Date Collected	10/24/85	10/24/85	10/24/85	10/24/85	10/24/85	10/24/85
Time Collected	1200	1200	1100	1100	1040	1045
Collected By	BC/MN	BC/MN	BC/MN	BC/MN	BC/MN	BC/MN
pH (pH Units)	6.2	6.1	6.1	5.9	6.0	6.0
Alkalinity (as CaCO ₃)	6	<5	6	5	<5	6
Specific Conductance ¹	85	83	84	82	80	83
Chloride	15.4	15.4	15.4	15.6	15.1	15.1
Ammonia as N	<0.05	0.06	<0.05	<0.05	<0.05	0.06
Nitrate as N	<0.02	<0.02	0.02	0.03	<0.02	0.02
Total Kjeldahl Nitrogen	0.41	0.63	<0.05	0.40	0.10	0.15
Phosphate as P:						
Total	0.013	0.009	0.008	0.011	0.007	0.011
Dissolved	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Solids:						
Total Dissolved	33	33	35	29	87	74
Total Suspended	<2	2	2	3	<2	<2
Total Coliform ²	20	-	<10	-	<10	-
Fecal Coliform ²	<10	-	<10	-	<10	-

Comments: ¹Specific Conductance in umhos/cm.²Total and Fecal Coliform/100 ml MPN.Approved by: *RCS*



Report of Analysis

Client: IEP, Inc.
 Project: Wequaquet

Job No: 26-427
 Date: November 18, 1985

Sample A WEQQT 5

Sample B WEQQT 6

Sample C WEQQT 7

Sample D

Sample E

Sample F

Test Results in mg/l (unless noted otherwise)

	A	B	C	D	E	F
Sample Log Number	50760	50761	50762			
Type of Sample	water	water	water			
Date Collected	10/24/85	10/24/85	10/24/85			
Time Collected	1245	1330	1130			
Collected By	BC/MN	BC/MN	BC/MN			
pH (pH Units)	4.0	5.0	5.9			
Alkalinity (as CaCO ₃)	<5	<5	5			
Specific Conductance ¹	88	110	84			
Chloride	15.1	21.1	14.5			
Ammonia as N	<0.05	0.12	<0.05			
Nitrate as N	0.09	0.56	0.02			
Total Kjeldahl Nitrogen	0.42	0.52	0.35			
Phosphate as P:						
Total	0.117	0.021	0.014			
Solids:						
Total Dissolved	97	85	64			
Total Suspended	4	2	<2			
Total Coliform ²	2,400	60	45			
Fecal Coliform ²	490	36	20			

Comments: ¹Specific Conductance in umhos/cm.
²Total and Fecal Coliform/100 ml MPN.

Approved by: *R. S. Abbott*



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Branch Laboratories:
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(413) 734-6548 (617) 832-5500

CONAM INSPECTION

CONAM INSPECTION A UNIT OF QUALICORP
California, Texas, Illinois, Pennsylvania, Minnesota, Ohio

To: IEP INC.
3179 MAIN STREET
BOX 434

Date 12/11/85

Material: WATER

BARNSTABLE MA 02630

Job No. 72954-1

Book No. 176-33-RPA

Lab No. 3593

Specifications: None

Attn: SCOTT HORSLEY

Order No. NONE

*Samples taken
25-~~VI~~-85*

Sample ID: 19 Water Samples @ NEQUAQUET

Date received: 11/25/85

	W-1A	W-1C	W-2A	W-2C
Total Coliform Bacteria (colonies/100ml)	280	---	16	---
Fecal Coliform Bacteria (colonies/100ml)	0	---	1	---
Total Alkalinity (mg/l)	7.1	7.7	7.1	7.5
Total Suspended Solids (mg/l)	2	4	2	2
Total Dissolved Solids (mg/l)	92	69	47	39
Ammonia (mg/l) as N	<0.10	<0.10	<0.10	<0.10
Nitrate (mg/l) as N	0.08	0.13	0.06	0.04
Chloride (mg/l)	18	16	19	18
pH	6.9	6.9	7.0	6.9
Phosphate, Total (dissolved) (mg/l)	0.1	0.06	0.13	0.11
Phosphate, Total (mg/l) as P	0.09	0.03	0.11	0.09
Specific Conductance (umhos/cm)	72	72	74	74
Total Kjeldahl-Nitrogen (mg/l) as N	0.46	0.62	0.78	0.63

IN WITNESS WHEREOF, I HAVE HEREUNTO SET MY HAND THIS
11TH DAY OF DECEMBER 1985
ARNOLD GREENE TESTING LABORATORIES
DIVISION OF CONAM INSPECTION

Geoffrey Coelho

Geoffrey Coelho, Lead Chemist

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California, Texas, Illinois, Pennsylvania, Minnesota, Ohio

to: IEP INC.
3179 MAIN STREET
BOX 434

Date 12/11/85
Job No. 72954-1

Material: WATER
Book No. 176-34 RPA

BARNSTABLE MA 02630

Lab No. 3593

Specifications: None

Attn: SCOTT HORSLEY

Order No. NONE

Sample ID: 19 Water Samples @ WEQUAQUET

Date received: 11/25/85

	W-3A	W-3C	W-4A	W-4C
Total Coliform Bacteria (colonies/100ml)	7	---	3	---
Fecal Coliform Bacteria (colonies/100ml)	0	---	0	---
Total Alkalinity (mg/l)	8.4	6.5	7.7	6.9
Total Suspended Solids (mg/l)	3	2	0.80	0.8
Total Dissolved Solids (mg/l)	63	15	43	59
Ammonia (mg/l) as N	<0.10	<0.10	<0.10	<0.10
Nitrate (mg/l) as N	0.04	0.03	0.12	0.09
Chloride (mg/l)	19	19	19	17
pH	7.1	6.8	7.2	6.8
Phosphate, Total (dissolved) (mg/l)	0.08	0.07	0.08	0.10
Phosphate, Total (mg/l) as P	0.08	0.06	0.14	0.14
Specific Conductance (uamhos/cm)	72	72	72	72
Total Kjeldahl-Nitrogen (mg/l) as N	0.45	0.64	0.65	0.47

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To: IEP INC.
3179 MAIN STREET
BOX 434

Date 12/11/85
Job No. 72954-1

Material: WATER
Book No. 176-35 RPA

BARNSTABLE MA 02630

Lab No. 3593

Specifications: None

Attn: SCOTT HORSLEY

Order No. NONE

Sample ID: 19 Water Samples @ WEGUAQUET & LONG POND DATE REC'D: 11/25/85

	W-5	W-6	W-7	LP-1A
Total Coliform Bacteria (colonies/100ml)	4	7	44	8
Fecal Coliform Bacteria (colonies/100ml)	0	1	0	0
Total Alkalinity (mg/l)	<1	5.0	7.3	5.4
Total Suspended Solids (mg/l)	36	2	8	2
Total Dissolved Solids (mg/l)	69	77	64	76
Ammonia (mg/l) as N	0.19	<0.1	<0.10	<0.10
Nitrate (mg/l) as N	0.02	0.92	0.16	0.25
Chloride (mg/l)	21	22	19	26
pH	4.4	5.6	7.0	6.7
Phosphate, Total (dissolved) (mg/l)	---	---	---	0.1
Phosphate, Total (mg/l) as P	0.16	0.16	0.07	0.15
Specific Conductance (umhos/cm)	91	87	70	100
Total Kjeldahl-Nitrogen (mg/l) as N	0.94	0.91	0.72	0.54

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To: IEP INC.
3179 MAIN STREET
BOX 434

Date 12/11/85
Job No. 72954-1

Material: WATER
Book No. 176-36 RPA

BARNSTABLE MA 02630

Lab No. 3593

Specifications: None

Attn: SCOTT HORSLEY

Order No. NONE

Sample ID: 19 Water Samples @ LONG POND & BEARSE Date received: 11/25/85

	LP-1C	LP-3	B-1A	B-1C
Total Coliform Bacteria (colonies/100ml)	---	28	12	---
Fecal Coliform Bacteria (colonies/100ml)	---	21	5	---
Total Alkalinity (mg/l)	6.3	6.3	8.2	7.3
Total Suspended Solids (mg/l)	2	2	1	<1
Total Dissolved Solids (mg/l)	55	47	8	61
Ammonia (mg/l) as N	<0.10	<0.10	<0.10	<0.10
Nitrate (mg/l) as N	0.23	0.20	0.06	0.02
Chloride (mg/l)	25	26	19	19
pH	6.7	6.7	7.0	6.8
Phosphate, Total (dissolved) (mg/l)	0.10	---	0.10	0.13
Phosphate, Total (mg/l) as P	0.15	0.03	0.14	0.08
Specific Conductance (umhos/cm)	102	102	74	74
Total Kjeldahl-Nitrogen (mg/l) as N	0.89	0.64	0.89	1

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CONAM INSPECTION

To: IEP INC.
6 MAPLE STREET
BOX 780

Date 1/21/86
Job No. 74240-1

Material: WATER
Book No. 185-33 RH

NORTHBORO, MA 01532

Lab No. 3719

Specifications: None

Attn:

Order No. BARNC -1

Sample ID: 15 Water Samples @ Nequaquet

Date received: 12/30/85

	SH-1	SH-2	SH-3	W-1A	W-4A
Total Coliform Bacteria (colonies/100ml)	0	0	0	0	--
Fecal Coliform Bacteria (colonies/100ml)	0	0	0	0	--
Specific Conductance (uamhos/cm)	70	68	81	74	72
	SH-1	SH-2	W-1A Surface	W-1C Bottom	W-3
Total Alkalinity (mg/l)	1.7	2.1	11	11	3.0
Total Suspended Solids (mg/l)	0.8	1.6	<0.4	0.8	<0.4
Total Dissolved Solids (mg/l)	52	43	47	53	27
Ammonia (mg/l) as N	0.24	0.24	0.058	0.030	0.21
Nitrate (mg/l) as N	0.12	0.12	0.041	0.032	0.17
Chloride (mg/l)	18	17	17	16	16
pH	5.6	5.5	6.6	6.8	5.5
Phosphate, Total (mg/l) as P	0.041	0.062	0.018	0.025	0.038
Ortho Phosphate (mg/l)	0.035	0.036	0.006	0.018	0.033
Total Kjeldahl-Nitrogen (mg/l) as N	0.97	0.95	0.80	0.62	1.0



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To: IEP INC.
6 MAPLE STREET
BOX 780

NORTHBORO, MA 01532

Date 1/21/86

Job No. 74240-1

Lab No. 3719

Order No. BARNC-1

Material: WATER

Book No. 185-34 RH


Specifications: None

Attn:

Sample ID: 15 Water Samples @ WEQUAQUET Date received: 12/30/85

	W-4A	W-4C	W-5	W-6	W-7
Total Coliform Bacteria (colonies/100ml)	0	--	0	0	0
Fecal Coliform Bacteria (colonies/100ml)	0	--	0	0	0
Total Alkalinity (mg/l)	11	12	12	12	13
Total Suspended Solids (mg/l)	0.4	<0.4	<0.4	1.2	1.2
Total Dissolved Solids (mg/l)	47	48	56	59	41
Ammonia (mg/l) as N	0.027	0.022	0.014	0.84	0.020
Nitrate (mg/l) as N	0.047	0.041	<0.0125	0.91	<0.0125
Chloride (mg/l)	17	16	19	20	15
pH	6.8	6.8	5.2	5.7	6.8
Phosphate, Total (mg/l) as P	0.043	0.058	0.120	0.030	0.037
Ortho Phosphate (mg/l)	0.036	0.036	0.115	0.020	0.029
Specific Conductance (umhos/cm)	79	72	89	93	79
Total Kjeldahl-Nitrogen (mg/l) as N	0.77	0.74	0.86	0.51	0.68

IN WITNESS WHEREOF, I HAVE HEREUNTO SET MY HAND THIS
21ST DAY OF JANUARY 1986
ARNOLD GREENE TESTING LABORATORIES
DIVISION OF CONAM INSPECTION


Geoffrey Coelho, Lead Chemist

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California, Texas, Illinois, Pennsylvania, Minnesota, Ohio

To: IEP INC.
6 MAPLE STREET
BOX 780

Date 1/21/86

Material: WATER

NORTHBORO, MA 01532

Job No. 74240-1

Book No. 185-32 rh

Lab No. 3719

Specifications: None

Attn:

Order No. barnc-1

Sample ID: 15 Water Samples @ Wequaquet

Date received: 12/30/85

	B-1 Surface	B-1 Bottom	LP-1 Surface	LP-1 Inlet	LP-3 Outlet
Total Coliform Bacteria (colonies/100ml)	0	--	2	--	10
Fecal Coliform Bacteria (colonies/100ml)	0	--	0	--	1
Total Alkalinity (mg/l)	12	12	9.9	8.0	8.9
Total Suspended Solids (mg/l)	3.2	1.2	0.4	2.0	0.8
Total Dissolved Solids (mg/l)	43	47	61	47	64
Ammonia (mg/l) as N	0.04	0.066	0.023	0.027	0.031
Nitrate (mg/l) as N	0.019	0.047	0.14	0.10	0.23
Chloride (mg/l)	17	17	25	25	24
pH	6.6	6.7	6.5	6.7	6.6
Ortho Phosphate (mg/l)	0.030	0.034	0.035	0.011	0.023
Phosphate, Total (mg/l) as P	0.056	0.046	0.041	0.016	0.029
Specific Conductance (umhos/cm)	74	74	104	108	124
Total Kjeldahl-Nitrogen (mg/l) as N	1.2	1.3	1.1	1.1	0.8

Arnold Greene Testing Laboratories

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CONAM INSPECTION

To: IEP INC.
6 MAPLE STREET
BOX 780
NORTHBORO, MA 01532

Date 2/12/86
Job No. 75443-1
Lab No. 3861
Order No. BARNC-1

Material: WATER
Book No. 193-14 - 17 RH
Specifications: None

tn:

Sample ID: 12 Water Samples @ WEEQUAQUET Date received: 1/29/86

	W-1A SURFACE	W-1C BOTTOM	W-2A SURFACE	W-2C BOTTOM	W-3A SURFACE
Total Coliform Bacteria (colonies/100ml)	7	-	3	-	1
Fecal Coliform Bacteria (colonies/100ml)	2	-	0	-	0
Total Alkalinity (mg/l)	13	12	11	12	11
Total Suspended Solids (mg/l)	1.2	4.8	0.8	1.2	0.8
Total Dissolved Solids (mg/l)	50	46	46	46	42
Ammonia (mg/l) as N	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrate (mg/l) as N	0.075	0.054	0.057	0.045	0.056
Chloride (mg/l)	15	17	16	17	17
pH	6.9	6.8	6.7	6.6	6.7
Phosphate, Total (mg/l) as P	0.035	0.035	0.025	0.02	0.026
Phosphate, Total Dissolved (mg/l)	0.031	0.018	0.022	0.008	0.022
Specific Conductance (umhos/cm)	76	76	76	74	74
Total Kjeldahl-Nitrogen (mg/l) as N	0.83	0.95	0.78	0.61	0.77

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PAGE 2
IEP - NEQUAQUET
JOB #75443-1

	W-3C BOTTOM	W-4A SURFACE	W-4C BOTTOM	W-5 INLET	W-6 INLET
Total Coliform Bacteria (colonies/100ml)	-	1	-	7	4
Fecal Coliform Bacteria (colonies/100ml)	-	0	-	1	0
Total Alkalinity (mg/l)	13	12	9.8	8.3	6.4
Total Suspended Solids (mg/l)	0.4	0.8	2	12	3.2
Total Dissolved Solids (mg/l)	52	45	44	89	107
Ammonia (mg/l) as N	<0.01	<0.01	0.012	0.014	<0.01
Nitrate (mg/l) as N	0.060	0.05	0.045	0.0125	0.93
Chloride (mg/l)	17	16	17	15	19
pH	6.7	6.7	6.8	6.3	5.4
Phosphate, Total (mg/l) as P	0.029	0.044	0.056	0.22	0.019
Phosphate, Total Dissolved (mg/l)	0.01	0.040	0.029	0.13	0.014
Specific Conductance (umhos/cm)	72	70	70	55	87
Total Kjeldahl-Nitrogen (mg/l) as N	0.90	1.2	1.1	1.25	1.4

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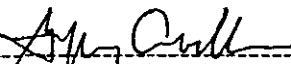
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PAGE 3
IEP - NEQUAQUET
JOB #75443-1

	W-7 SURFACE	W-8 BOTTOM
Total Coliform Bacteria (colonies/100ml)	0	0
Fecal Coliform Bacteria (colonies/100ml)	0	0
Total Alkalinity (mg/l)	12	14
Total Suspended Solids (mg/l)	2	1.2
Total Dissolved Solids (mg/l)	39	51
Ammonia (mg/l) as N	0.011	0.037
Nitrate (mg/l) as N	0.021	0.039
Chloride (mg/l)	16	18
pH	6.4	6.6
Phosphate, Total (mg/l) as P	.029	0.053
Phosphate, Total Dissolved (mg/l)	0.023	0.049
Specific Conductance (umhos/cm)	72	72
Total Kjeldahl-Nitrogen (mg/l) as N	1.2	0.74

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Geoffrey Coelho, Lead Chemist

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TO: IEP INC.
& MAPLE STREET
BOX 780

NORTHBORD, MA 01532

Date 2/12/86
Job No. 75443-1
Lab No. 3861
Order No. BARNC-1

Material: WATER
Book No. 193-14 - 17 RH
Specifications: None


Sample ID: 4 Water Samples @ LONG POND Date received: 1/29/86

	LP-1A SURFACE	LP-1C BOTTOM	LP-2 INLET	LP-3 OUTLET
Total Coliform Bacteria (colonies/100ml)	8	-	14	5
Fecal Coliform Bacteria (colonies/100ml)	0	-	2	0
Total Alkalinity (mg/l)	8.7	7.8	12	11
Total Suspended Solids (mg/l)	0.4	0.4	0.8	2
Total Dissolved Solids (mg/l)	68	64	51	61
Ammonia (mg/l) as N	0.011	0.013	<0.01	0.011
Nitrate (mg/l) as N	0.32	0.36	0.032	0.34
Chloride (mg/l)	24	26	17	26
pH	6.3	6.4	6.6	6.4
Phosphate, Total (mg/l) as P	0.043	0.040	0.038	0.023
Phosphate, Total Dissolved (mg/l)	0.037	0.040	0.013	0.020
Specific Conductance (umhos/cm)	106	106	70	104
Total Kjeldahl-Nitrogen (mg/l) as-N	0.60	0.87	0.89	0.72

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IEP INC.
6 MAPLE STREET
BOX 780
NORTHBORO, MA 01532

Date 2/12/86
Job No. 75443-1
Lab No. 3861
Order No. BARNC-1

Material: WATER
Book No. 193-14 - 17 RH
Specifications: None

Sample ID: 2 Water Samples @ BEARSE

Date received: 1/29/86

	B-1A SURFACE	B-1C BOTTOM
Total Coliform Bacteria (colonies/100ml)	2	-
Fecal Coliform Bacteria (colonies/100ml)	0	-
Total Alkalinity (mg/l)	11	12
Total Suspended Solids (mg/l)	2	0.8
Total Dissolved Solids (mg/l)	52	48
Ammonia (mg/l) as N	0.011	0.013
Nitrate (mg/l) as N	0.044	0.045
Chloride (mg/l)	17	16
pH	6.5	6.4
Phosphate, Total (mg/l) as P	0.033	0.067
Phosphate, Total Dissolved (mg/l)	0.031	0.032
Specific Conductance (umhos/cm)	72	72
Total Kjeldahl-Nitrogen (mg/l) as N	0.60	0.74

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To: IEP INC.
6 MAPLE STREET
BOX 780

Date 3/10/86
Job No. 76596-1

Material: WATER
Book No. 194-35 AP

NORTHBORO, MA 01532

Lab No. 3990

Specifications: None

Attn:

Order No. BARNC-1

Sample ID: 17 Water Samples @ Wequaquet, Long Pond, Bearse Date received: 2/24/86

	WEQUAQUET				
	W-1A	W-1C	W-2A	W-2C	W-3A
Total Coliform Bacteria (colonies/100ml)	2	-	0	-	1
Fecal Streptococcus Bacteria (colonies/100ml)	2	-	0	-	0
Total Alkalinity (mg/l)	16	10	10	11	11
Total Suspended Solids (mg/l)	6.4	5.2	10.	4.8	8.0
Total Dissolved Solids (mg/l)	72	85	91	47	85
Ammonia (mg/l) as N	0.038	0.026	0.027	0.025	0.022
Nitrate (mg/l) as N	<0.02	<0.02	<0.02	<0.02	0.04
Chloride (mg/l)	16	16	16	14	16
pH	6.5	6.7	6.8	6.8	6.8
Phosphate, Total (mg/l) as P	0.067	0.072	0.025	0.050	0.043
Phosphate, Dissolved (mg/l)	0.050	0.056	0.016	0.045	0.038
Specific Conductance (umhos/cm)	76	76	76	76	74
Total Kjeldahl-Nitrogen (mg/l) as N	0.12	0.15	0.18	0.24	0.23



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PAGE 2
IEP
JOB #76596-1

	W-3C	W-4A	W-4C	W-5	W-6	W-7
Total Coliform Bacteria (colonies/100ml)	-	1	-	0	5	0
Fecal Streptococcus Bacteria (colonies/100ml)	-	0	-	0	0	0
Total Alkalinity (mg/l)	11	11	11	<1.0	5.1	11
Total Suspended Solids (mg/l)	9.6	5.6	4.4	10	4.8	2.4
Total Dissolved Solids (mg/l)	80	80	64	106	60	49
Ammonia (mg/l) as N	0.042	0.018	0.014	0.28	0.090	0.017
Nitrate (mg/l) as N	<0.02	<0.02	<0.02	0.04	0.25	<0.02
Chloride (mg/l)	16	14	16	12	30	16
pH	6.8	6.8	6.6	4.5	5.2	6.7
Phosphate, Total (mg/l) as P	0.042	0.055	0.054	0.51	0.099	0.042
Phosphate, Dissolved (mg/l)	0.034	0.042	0.047	0.037	0.078	0.034
Specific Conductance (umhos/cm)	76	72	74	59	121	74
Total Kjeldahl-Nitrogen (mg/l) as N	0.34	0.18	0.18	0.83	0.66	0.07

LONG POND

	LP-1A	LP-1C	LP-2	LP-3
Total Coliform Bacteria (colonies/100ml)	20	-	1	1
Fecal Streptococcus Bacteria (colonies/100ml)	0	-	0	1
Total Alkalinity (mg/l)	7.2	9.0	6.5	9.0
Total Suspended Solids (mg/l)	2.8	1.2	7.6	2.4
Total Dissolved Solids (mg/l)	73	153	8.0	75

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JOB #76596-1

	LP-1A	LP-1C	LP-2	LP-3
Ammonia (mg/l) as N	0.020	0.018	0.028	0.026
Nitrate (mg/l) as N	0.32	0.28	<0.02	0.24
Chloride (mg/l)	29	25	23	26
pH	6.4	6.4	6.1	6.4
Phosphate, Total (mg/l) as P	0.020	0.047	0.058	0.041
Phosphate, Dissolved (mg/l)	0.004	0.041	0.042	0.036
Specific Conductance (umhos/cm)	110	106	74	110
Total Kjeldahl-Nitrogen (mg/l) as N	0.64	0.31	0.23	0.34
		BEARSE		
		B-1A	B-1C	
Total Coliform Bacteria (colonies/100ml)		2	-	
Fecal Streptococcus Bacteria (colonies/100ml)		0	-	
Total Alkalinity (mg/l)		11	11	
Total Suspended Solids (mg/l)		2.4	4.4	
Total Dissolved Solids (mg/l)		44	32	
Ammonia (mg/l) as N		0.022	0.027	
Nitrate (mg/l) as N		0.04	<0.02	
Chloride (mg/l)		17	16	
pH		6.6	6.7	



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	BEARSE	
	B-1A	B-1C
Phosphate, Total (mg/l) as P	0.049	0.033
Phosphate, Dissolved (mg/l)	0.034	0.019
Specific Conductance (umhos/cm)	76	76
Total Kjeldahl-Nitrogen (mg/l) as N	0.22	0.08

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Geoffrey A. Coelho, Lead Chemist



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CONAM INSPECTION A UNIT OF QUALORP
California, Texas, Illinois, Pennsylvania, Minnesota, Ohio

To: IEP INC.
6 MAPLE STREET
BOX 780

Date 3/24/86

Material: WATER

NORTHBORO, MA 01532

Job No. 77369-1

Book No. 205-1 AP

Lab No. 4068

Specifications: None

Attn:

Order No. WEQUAQUET

Sample ID: 17 Water Samples @ Wequaquet

Date received: 3/10/86

	W-1A	W-1C	W-2A	W-2C	W-3A	W-3C
Total Coliform Bacteria (colonies/100ml)	0	-	0	-	1	-
Fecal Coliform Bacteria (colonies/100ml)	0	-	0	-	0	-
Total Alkalinity (mg/l)	12	12	12	12	12	11
Total Suspended Solids (mg/l)	1.2	2.0	3.6	0.4	1.2	0.4
Total Dissolved Solids (mg/l)	48	55	61	53	37	35
Ammonia (mg/l) as N	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrate (mg/l) as N	<0.02	<0.02	0.02	<0.02	<0.02	0.03
Chloride (mg/l)	20	20	20	19	19	19
pH	6.8	6.7	6.6	6.7	6.7	6.6
Phosphate, Total (mg/l) as P	0.025	0.026	0.024	0.039	0.073	0.086
Phosphate, Dissolved (mg/l)	0.025	0.024	0.024	0.035	0.030	0.035
Specific Conductance (uamhos/cm)	74	74	74	74	74	64
Total Kjeldahl-Nitrogen (mg/l) as N	0.83	0.77	0.53	0.64	0.65	0.75



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PAGE 2
IEP
JOB #77369-1

	W-4A	W-4C	W-5	W-6	W-7	LP-1A
Total Coliform Bacteria (colonies/100ml)	2	-	13	0	5	11
Fecal Coliform Bacteria (colonies/100ml)	0	-	0	0	0	0
Total Alkalinity (mg/l)	12	12	7.8	9.6	12	9.9
Total Suspended Solids (mg/l)	0.4	4.0	1.2	0.4	0.4	0.4
Total Dissolved Solids (mg/l)	37	85	33	5.3	33	41
Ammonia (mg/l) as N	<0.01	<0.01	<0.01	0.033	<0.01	<0.01
Nitrate (mg/l) as N	0.02	0.02	<0.02	0.29	<0.02	0.09
Chloride (mg/l)	19	16	26	32	16	26
pH	6.8	6.7	5.5	5.4	6.5	6.5
Phosphate, Total (mg/l) as P	0.025	0.045	0.13	0.029	0.015	0.025
Phosphate, Dissolved (mg/l)	0.025	0.020	0.13	0.028	0.015	0.015
Specific Conductance (umhos/cm)	74	64	95	106	74	95
Total Kjeldahl-Nitrogen (mg/l) as N	0.69	0.53	1.1	0.51	0.62	0.46



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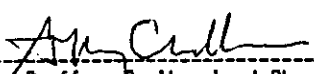
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PAGE 3
IEP
JOB #77369-1

	LP-1C	LP-2	LP-3	B-1A	B-1C
Total Coliform Bacteria (colonies/100ml)	-	880	9	0	-
Fecal Coliform Bacteria (colonies/100ml)	-	0	0	0	-
Total Alkalinity (mg/l)	11	12	7.9	10	10
Total Suspended Solids (mg/l)	0.4	0.4	1.2	0.4	4.8
Total Dissolved Solids (mg/l)	60	36	53	33	35
Ammonia (mg/l) as N	<0.01	<0.01	<0.01	0.016	0.012
Nitrate (mg/l) as N	0.12	<0.02	0.09	0.02	<0.02
Chloride (mg/l)	26	19	27	20	16
pH	6.6	6.6	6.5	6.6	6.7
Phosphate, Total (mg/l) as P	0.24	0.031	0.038	0.037	0.11
Phosphate, Dissolved (mg/l)	0.14	0.030	0.035	0.030	0.075
Specific Conductance (umhos/cm)	95	64	95	64	74
Total Kjeldahl-Nitrogen (mg/l) as N	0.64	0.86	0.59	0.87	0.58

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Geoffrey Coelho, Lead Chemist



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California, Texas, Illinois, Pennsylvania, Minnesota, Ohio

To: IEP INC.
6 MAPLE STREET
BOX 780

NORTHBORO, MA 01532

Attn:

Date 4/3 /86
Job No. 77868-1
Lab No. 4138
Order No. BARNC-1

Material: WATER
Book No. 201-36 THR. 38 RH
Specifications: None

SAMPLE ID: 18 WATER SAMPLES @ WEQUAQUET, LONG POND & BEARSE Date received: 3/24/86

	W-1A	W-1C	W-2A	W-2C	W-3A	W-3C
Total Coliform Bacteria (colonies/100ml)	0	-	1	-	0	-
Fecal Coliform Bacteria (colonies/100ml)	0	-	0	-	0	-
Total Alkalinity (mg/l)	11	13	11	12	12	12
Total Suspended Solids (mg/l)	0.4	0.8	0.8	1.2	0.4	0.8
Total Dissolved Solids (mg/l)	40	45	35	47	49	56
Ammonia (mg/l) as N	0.012	0.042	0.034	0.02	0.028	0.012
Nitrate (mg/l) as N	0.036	<0.0125	0.066	0.014	<0.0125	0.014
Chloride (mg/l)	20	20	20	20	20	20
pH	6.6	6.6	6.7	6.7	6.7	6.7
Phosphate, Total (mg/l) as P	0.070	0.13	0.085	0.115	0.085	0.175
Phosphate, Dissolved (mg/l)	0.05	0.075	0.025	0.06	0.065	0.025
Specific Conductance (umhos/cm)	77	77	77	76.0	72.0	74.0
Total Kjeldahl-Nitrogen (mg/l) as N	0.36	0.28	0.30	0.22	0.22	0.26



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CONAM INSPECTION

CONAM INSPECTION A UNIT OF **QUALICORP**
California, Texas, Illinois, Pennsylvania, Minnesota, Ohio

PAGE 2
IEP

	W-4A	W-4C	W-5	W-6	W-7	W-8
Total Colifora Bacteria (colonies/100ml)	0	-	0	0	0	-
Fecal Colifora Bacteria (colonies/100ml)	0	-	0	0	0	-
Total Alkalinity (mg/l)	11	11	<1.0	8.5	14	9
Total Suspended Solids (mg/l)	0.8	2	11	1.6	1.2	0.8
Total Dissolved Solids (mg/l)	35	55	101	83	63	68
Ammonia (mg/l) as N	0.022	<0.01	0.026	0.092	0.012	0.024
Nitrate (mg/l) as N	0.0125	0.07	0.015	0.55	0.037	0.17
Chloride (mg/l)	20	20	20	20	20	23
pH	6.8	6.8	4.8	5.4	6.6	6.7
Phosphate, Total (mg/l) as P	0.085	0.090	0.38	0.050	0.090	0.115
Phosphate, Dissolved (mg/l)	0.045	0.045	0.285	0.035	0.020	0.035
Specific Conductance (umhos/cm)	74.0	73.0	69	131.0	75	103
Total Kjeldahl-Nitrogen (mg/l) as N	0.30	0.26	1.3	0.34	0.64	0.30



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CONAM INSPECTION A UNIT OF QUALICORP
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CONAM INSPECTION

PAGE 3
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	LONG POND				BEARSE	
	LP-1A	LP-1C	LP-2	LP-3	B-1A	B-1C
Total Coliform Bacteria (colonies/100ml)	0	-	2	2	0	-
Fecal Coliform Bacteria (colonies/100ml)	0	-	1	0	0	-
Total Alkalinity (mg/l)	11	11	11	9.5	12	11
Total Suspended Solids (mg/l)	0.4	0.8	3.2	2	0.4	12
Total Dissolved Solids (mg/l)	52	59	44	56	40	51
Ammonia (mg/l) as N	0.016	0.016	0.018	0.028	0.016	0.012
Nitrate (mg/l) as N	0.17	0.28	0.23	0.20	0.034	0.028
Chloride (mg/l)	21	23	19	23	22	28
pH	6.5	6.5	6.6	6.5	6.5	6.6
Phosphate, Total (mg/l) as P	0.075	0.120	0.130	0.100	0.095	0.16
Phosphate, Dissolved (mg/l)	0.055	0.050	0.060	0.055	0.055	0.070
Specific Conductance (uahos/cm)	103.0	104	75	104	77	77
Total Kjeldahl-Nitrogen (mg/l) as N	0.23	0.32	0.34	0.32	0.33	0.51

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3RD DAY OF APRIL 1986
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Geoffrey Coelho, Lead Chemist



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MAY 12 1986

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CONAM INSPECTION A UNIT OF QUALICORP
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CONAM INSPECTION

To: IEP INC.
6 MAPLE STREET
BOX 790

Date 5/7/86

Material: WATER

NORTHBORO, MA 01532

Job No. 79522-1

Book No. 205-43 thr. 45 AP

Lab No. 4228

Specifications: None

Attn:

Order No. 8ARNC-1

Sample ID: 18 Water Samples

Date received: 4/7/86

	W-1A	W-1C	W-2A	W-2C	W-3A	W-3C
Total Coliform Bacteria (colonies/100ml)	1	-	3	-	2	-
Fecal Coliform Bacteria (colonies/100ml)	0	-	0	-	0	-
Total Alkalinity (mg/l)	12	11	12	12	12	12
Total Suspended Solids (mg/l)	3.6	0.4	4.0	0.4	<0.4	2.4
Total Dissolved Solids (mg/l)	65	43	53	35	47	68
Ammonia (mg/l) as N	0.012	0.012	0.013	0.012	0.011	0.011
Nitrate (mg/l) as N	0.02	<0.02	0.04	0.04	0.03	<0.02
Chloride (mg/l)	16	16	16	16	18	16
pH	6.2	6.0	5.9	5.9	6.1	6.2
Phosphate, Total (mg/l) as P	0.035	0.105	0.039	0.034	0.034	0.032
Phosphate, Dissolved (mg/l)	0.033	0.039	0.035	0.032	0.029	0.031
Specific Conductance (uamhos/cm)	76	77	76	77	74	75
Total Kjeldahl-Nitrogen (mg/l) as N	0.30	0.39	0.36	0.41	0.35	0.37
	W-4A	W-4C	W-5	W-6	W-7	W-8
Total Coliform Bacteria (colonies/100ml)	0	-	0	5	5	-
Fecal Coliform Bacteria (colonies/100ml)	0	-	2	0	0	-
Total Alkalinity (mg/l)	11	12	2.1	6.2	10	10

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CONAM INSPECTION

CONAM INSPECTION A UNIT OF QUALCORP
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PAGE 2
IEP
JOB# 78522-1

	W-4A	W-4C	W-5	W-6	W-7	W-8
Total Suspended Solids (mg/l)	1.6	5.2	7.2	8.0	0.4	1.2
Total Dissolved Solids (mg/l)	59	52	101	100	57	53
Ammonia (mg/l) as N	<0.010	<0.010	0.025	0.049	0.020	<0.010
Nitrate (mg/l) as N	0.05	0.02	0.05	0.47	0.06	0.03
Chloride (mg/l)	16	16	24	32	18	16
pH	6.3	6.4	5.0	5.1	6.1	6.1
Phosphate, Total (mg/l) as P	0.036	0.035	0.193	0.033	0.029	0.022
Phosphate, Dissolved (mg/l)	0.033	0.034	0.160	0.031	0.27	0.020
Specific Conductance (umhos/cm)	74	73	97	128	75	75
Total Kjeldahl-Nitrogen (mg/l) as N	0.40	0.32	0.75	0.31	0.40	0.41
	LP-1A	LP-1C	LP-2	LP-3	B-1A	B-1C
Total Coliform Bacteria (colonies/100ml)	0	-	13	7	1	-
Fecal Coliform Bacteria (colonies/100ml)	4	-	1	0	0	-
Total Alkalinity (mg/l)	10	9.5	12	11	13	12
Total Suspended Solids (mg/l)	4.0	2.8	3.2	1.2	0.4	1.2
Total Dissolved Solids (mg/l)	85	80	57	53	41	76
Ammonia (mg/l) as N	0.016	0.018	0.014	<0.010	<0.010	0.012
Nitrate (mg/l) as N	0.07	0.11	<0.02	0.15	0.02	<0.02
Chloride (mg/l)	24	24	18	24	18	18
pH	6.0	6.3	6.1	6.1	6.4	6.2

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California, Texas, Illinois, Pennsylvania, Minnesota, Ohio

PAGE 3
IEP
JOB #78522-1

	LP-1A	LP-1C	LP-2	LP-3	R-1A	R-1C
Phosphate, Total (mg/l) as P	0.016	0.017	0.020	0.022	0.036	0.027
Phosphate, Dissolved (mg/l)	0.015	0.013	0.015	0.022	0.033	0.024
Specific Conductance (umhos/cm)	101	101	76	98	78	75
Total Kjeldahl-Nitrogen (mg/l) as N	0.36	0.31	0.37	0.32	0.43	0.37

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Geoffrey Coelho, Manager



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CONAM INSPECTION

CONAM INSPECTION A UNIT OF QUALICORP
California, Texas, Illinois, Pennsylvania, Minnesota, Ohio

To: IEP INC.

Date 5/27/86

Material: WATER

P O BOX 434

Job No. 79213-1

Book No. 209-41 RH

BARNSTABLE MA 02630

Lab No. 4322

Specifications: None

Attn: DAVID WORDEN

Order No. BARNC-1

Page 1.

Sample ID: 17 Water Samples @ Wequaquet

Date received: 4/23/86

	W-1A	W-1C	W-2A	W-2C	W-3A
Total Coliform Bacteria (colonies/100ml)	0	--	0	--	0
Fecal Coliform Bacteria (colonies/100ml)	0	--	0	--	0
Total Alkalinity (mg/l)	12	11	11	11	12
Total Suspended Solids (mg/l)	2	<0.4	0.4	0.8	0.8
Total Dissolved Solids (mg/l)	23	52	49	44	51
Ammonia (mg/l) as N	0.015	<0.01	<0.01	<0.01	<0.01
Nitrate (mg/l) as N	<0.012	0.029	<0.0125	<0.0125	<0.0125
Chloride (mg/l)	18	17	18	18	17
pH	6.6	6.4	6.4	6.5	6.6
Phosphate, Total (mg/l) as P	0.034	0.032	0.022	0.013	0.026
Dissolved Phosphate (mg/l)	0.023	0.03	0.021	0.012	0.022
Specific Conductance (umhos/cm)	80	80	80	80	80
Total Kjeldahl-Nitrogen (mg/l) as N	0.27	0.25	0.34	0.34	0.23



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CONAM INSPECTION A UNIT OF QUALCON
California, Texas, Illinois, Pennsylvania, Minnesota, Ohio

CONAM INSPECTION

To: IEP INC.	Date 5/27/86	Material: WATER
P O BOX 434	Job No. 79213-1	Book No. 209-41 RH
BARNSTABLE MA 02630	Lab No. 4322	Specifications: None
Attn: DAVID WORDEN	Order No. BARNC-1	Page 2.

Sample ID: 17 Water Samples @ Wequaquet Date received: 4/23/86

	W-3C	W-4A	W-4C	W-5	W-6
Total Coliform Bacteria (colonies/100ml)	--	1	--	0	13
Fecal Coliform Bacteria (colonies/100ml)	--	0	--	0	0
Total Alkalinity (mg/l)	11	11	11	<1.0	1.3
Total Suspended Solids (mg/l)	1.2	1.24	<0.4	10	2
Total Dissolved Solids (mg/l)	41	28	47	57	103
Ammonia (mg/l) as N	<0.01	<0.01	<0.01	0.01	0.01
Nitrate (mg/l) as N	0.019	<0.0125	<0.0125	<0.0125	0.10
Chloride (mg/l)	17	16	15	15	29
pH	6.4	6.5	6.5	4.3	4.9
Phosphate, Total (mg/l) as P	0.025	0.03	0.042	0.33	0.073
Dissolved Phosphate (mg/l)	0.024	0.025	0.03	0.31	0.066
Specific Conductance (uMhos/cm)	79	78	78	67	114
Total Kjeldahl-Nitrogen (mg/l) as N	0.39	0.42	0.32	1.1	0.38



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CONAM INSPECTION

CONAM INSPECTION A UNIT OF QUALCORP

California, Texas, Illinois, Pennsylvania, Minnesota, Ohio

To: IEP INC.

Date 5/27/86

Material: WATER

P O BOX 434

Job No. 79213-1

Book No. 209-41 RH

BARNSTABLE MA 02630

Lab No. 4322

Specifications: None

Attn: DAVID WORDEN

Order No. BARNC-1

Page 3.

Sample ID: 17 Water Samples @ Nequaquet

Date received: 4/23/86

	W-7	LP-1A	LP-1C	LP-2	LP-3
Total Coliform Bacteria (colonies/100ml)	0	1	--	0	4
Fecal Coliform Bacteria (colonies/100ml)	0	0	--	0	3
Total Alkalinity (mg/l)	11	9.2	10	10	9.2
Total Suspended Solids (mg/l)	1.2	0.8	0.8	3.6	<0.4
Total Dissolved Solids (mg/l)	31	59	55	37	59
Ammonia (mg/l) as N	<0.01	0.013	0.015	<0.01	<0.01
Nitrate (mg/l) as N	<0.0125	0.13	0.079	0.017	0.053
Chloride (mg/l)	16	23	23	15	24
pH	6.4	6.4	6.3	6.3	6.4
Phosphate, Total (mg/l) as P	0.025	0.016	0.012	0.025	0.020
Dissolved Phosphate (mg/l)	0.023	0.014	<0.01	0.024	0.018
Specific Conductance (umhos/cm)	78	103	102	78	103
Total Kjeldahl-Nitrogen (mg/l) as N	0.35	0.30	0.34	0.37	0.34



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CONAM INSPECTION A UNIT OF QUALCORP
California, Texas, Illinois, Pennsylvania, Minnesota, Ohio

To: IEP INC.

Date 5/27/86

Material: WATER

P O BOX 434

Job No. 79213-1

Book No. 209-41 RH

BARNSTABLE MA 02630

Lab No. 4322

Specifications: None

Attn: DAVID WORDEN

Order No. BARNC-1

Page 4.


Sample ID: 17 Water Samples @ Nequaquet

Date received: 4/23/86

	B-1A	B-1C
Total Coliform Bacteria (colonies/100ml)	1	--
Fecal Coliform Bacteria (colonies/100ml)	1	--
Total Alkalinity (ag/l)	12	12
Total Suspended Solids (mg/l)	0.8	4
Total Dissolved Solids (mg/l)	27	45
Ammonia (ag/l) as N	<0.01	<0.01
Nitrate (ag/l) as N	<0.0125	0.015
Chloride (mg/l)	18	18
pH	6.6	6.4
Phosphate, Total (ag/l) as P	0.021	0.018
Dissolved Phosphate (ag/l)	0.018	0.015
Specific Conductance (uamhos/cm)	81	81
Total Kjeldahl-Nitrogen (ag/l) as N	0.39	0.42

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Geoffrey Coelho, Manager



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CONAM INSPECTION A UNIT OF QUALCORP
California, Texas, Illinois, Pennsylvania, Minnesota, Ohio

To: IEP INC.

Date 6/3 /66

Material: WATER

BDX 434

Job No. 79690-1

Book No. 22B-1 AP

BARNSTABLE MA 02630

Lab No. 4395

Specifications: None

ATTN: DAVE WORDEN

Order No. BARNC-1

Page 1. of 3.

Sample ID: 18 Water Samples @ Wequaquet

Date received: 5/5/86

	W-1A	W-1C	W-2A	W-2C	W-3A	W-3C
Total Colifora Bacteria (colonies/100ml)	0	-	0	-	1	-
Fecal Colifora Bacteria (colonies/100ml)	0	-	0	-	1	-
Total Alkalinity (mg/l)	12	12	11	12	12	12
Total Suspended Solids (mg/l)	10	4.0	0.8	3.2	0.8	0.8
Total Dissolved Solids (mg/l)	121	115	72	81	71	56
Ammonia (mg/l) as N	<0.010	0.012	<0.010	<0.010	<0.010	<0.010
Nitrate (mg/l) as N	0.05	<0.02	<0.02	<0.02	0.04	<0.02
Chloride (mg/l)	18	16	17	15	15	15
pH	6.9	6.8	6.8	6.9	6.6	6.4
Phosphate, Total (mg/l) as P	0.013	0.020	0.022	0.042	0.020	0.017
Ortho, Phosphate (mg/l)	0.011	0.018	0.019	0.038	0.011	0.016
Specific Conductance (uachos/cm)	82	82	81	82	81	80
Total Kjeldahl-Nitrogen (mg/l) as N	0.24	0.41	0.30	0.28	0.27	0.36



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California, Texas, Illinois, Pennsylvania, Minnesota, Ohio

To: IEP INC.
6 MAPLE STREET
BOX 780

Date 6/3/86
Job No. 79690-1
Lab No. 4395
Order No. BARNC-1

Material: WATER
Book No. 228-2-AP
Specifications: None
Page 2. of 3.

Sample ID: 18 Water Samples @ Wequaquet

Date received: 5/5/86

	W-4A	W-4C	W-5	W-6	W-7	W-8
Total Coliform Bacteria (colonies/100ml)	4	-	10	0	4	0
Fecal Coliform Bacteria (colonies/100ml)	2	-	8	0	0	0
Total Alkalinity (mg/l)	12	11	<1.0	7.9	5.4	8.8
Total Suspended Solids (mg/l)	1.6	0.4	8.4	8.4	2.0	5.2
Total Dissolved Solids (mg/l)	83	68	105	103	64	87
Ammonia (mg/l) as N	<0.010	<0.010	0.047	0.33	<0.010	0.033
Nitrate (mg/l) as N	0.04	<0.02	0.05	0.39	0.03	0.19
Chloride (mg/l)	15	17	14	29	17	35
pH	6.6	6.5	4.7	5.3	6.6	5.4
Phosphate, Total (mg/l) as P	0.025	0.031	0.420	0.015	0.033	0.010
Ortho, Phosphate (mg/l)	0.024	0.027	0.420	0.014	0.031	<0.010
Specific Conductance (umhos/cm)	80	79	74	131	81	131
Total Kjeldahl-Nitrogen (mg/l) as N	0.41	0.41	1.1	0.25	0.39	0.25



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CONAM INSPECTION A UNIT OF QUALCORP
California, Texas, Illinois, Pennsylvania, Minnesota, Ohio

To: IEP, INC.
6 MAPLE STREET
BOX 780

NORTHBORO, MA 01532

Date 6/3/86

Job No. 79690-1

Lab No. 4395

Order No. 8ARNC-1

Material: WATER

Book No. 228-3ap

Specifications: None

Page 3. of 3.

Sample ID: 18 Water Samples @ Wequaquet

Date received: 5/5/86

	LP-1A	LP-1C	LP-2	LP-3	B-1A	B-1C
Total Coliform Bacteria (colonies/100ml)	0	-	0	0	0	-
Fecal Coliform Bacteria (colonies/100ml)	0	-	0	0	0	-
Total Alkalinity (mg/l)	10	10	12	12	12	12
Total Suspended Solids (mg/l)	0.8	1.2	1.2	6.0	0.04	1.6
Total Dissolved Solids (mg/l)	75	63	45	72	56	52
Ammonia (mg/l) as N	0.017	0.016	0.012	0.016	0.012	<0.010
Nitrate (mg/l) as N	0.34	0.06	0.09	0.11	0.13	0.02
Chloride (mg/l)	22	22	15	21	15	15
pH	6.7	6.7	6.8	6.7	6.7	6.7
Phosphate, Total (mg/l) as P	0.022	0.026	0.022	0.032	0.028	0.023
Ortho, Phosphate (mg/l)	0.019	0.025	0.020	0.032	0.025	0.022
Specific Conductance (umhos/cm)	103	103	80	104	82	82
Total Kjeldahl-Nitrogen (mg/l) as N	0.38	0.29	0.33	0.59	0.53	0.50

IN WITNESS WHEREOF, I HAVE HEREUNTO SET MY HAND THIS
3RD DAY OF JUNE 1986

ARNOLD GREENE TESTING LABORATORIES
DIVISION OF CONAM INSPECTION


Geoffrey Coelho, Manager



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JUN 16 1986

CONAM INSPECTION

CONAM INSPECTION A UNIT OF QUALICORP
California, Texas, Illinois, Pennsylvania, Minnesota, Ohio

To: IEP INC.

Date 6/12/86

Material: WATER

BOX 434

Job No. 80263-1

Book No. 160-31 THR. 33 BB

BARNSTABLE, MA 01532

Lab No. 4476

Specifications: None

Attn: DAVID WORDEN

Order No. BARNC-1

Sample ID: 17 Water Samples @ Nequaquet, Long Pond, & Bearse

Date received: 5/19/86

	W-1A	W-1C	W-2A	W-2C	W-3A
Total Coliform Bacteria (colonies/100ml)	0	-	0	-	0
Fecal Coliform Bacteria (colonies/100ml)	0	-	0	-	0
Total Alkalinity (mg/l)	11	11	11	12	12
Total Suspended Solids (mg/l)	1.2	1.2	1.6	1.2	0.8
Total Dissolved Solids (mg/l)	35	37	48	53	63
Ammonia (mg/l) as N	0.015	0.010	<0.01	<0.01	<0.01
Nitrate (mg/l) as N	<0.02	<0.02	<0.02	<0.02	<0.02
Chloride (mg/l)	18	19	18	18	17
pH	6.5	6.4	6.4	6.6	6.5
Phosphate, Total (mg/l) as P	0.014	0.020	0.020	0.020	0.015
Total Dissolved Phosphate (mg/l)	<0.01	0.001	0.002	0.002	0.001
Specific Conductance (uohms/cm)	82	81	81	82	81
Total Kjeldahl-Nitrogen (mg/l) as N	0.40	0.39	0.34	0.34	0.31



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CONAM INSPECTION

CONAM INSPECTION A UNIT OF QUALICORP
California, Texas, Illinois, Pennsylvania, Minnesota, Ohio

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JOB #80263-1

WEQUAQUET

	W-3C	W-4A	W-4C	W-5	W-6
Total Coliform Bacteria (colonies/100ml)	-	0	-	0	0
Fecal Coliform Bacteria (colonies/100ml)	-	0	-	0	3
Total Alkalinity (mg/l)	12	11	11	0	7.9
Total Suspended Solids (mg/l)	2.0	1.6	1.2	14	1.2
Total Dissolved Solids (mg/l)	41	51	45	99	91
Ammonia (mg/l) as N	<0.01	<0.01	<0.01	0.01	0.052
Nitrate (mg/l) as N	<0.02	<0.02	0.05	0.03	0.56
Chloride (mg/l)	17	16	17	23	34
pH	6.6	6.4	6.3	4.0	5.2
Phosphate, Total (mg/l) as P	0.020	0.035	0.020	0.58	0.009
Total Dissolved Phosphate (mg/l)	0.003	0.004	0.002	-	<0.001
Specific Conductance (umhos/cm)	80	81	79	92	139
Total Kjeldahl-Nitrogen (mg/l) as N	0.35	0.38	0.28	0.97	0.38

LONG POND

	W-7	LP-1A	LP-1C	LP-2	LP-3
Total Coliform Bacteria (colonies/100ml)	0	0	-	20	44
Fecal Coliform Bacteria (colonies/100ml)	0	0	-	6	5
Total Alkalinity (mg/l)	11	10	9.8	11	10
Total Suspended Solids (mg/l)	2.0	0.8	1.6	4.4	0.4



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CONAM INSPECTION

CONAM INSPECTION A UNIT OF QUALCORP
California, Texas, Illinois, Pennsylvania, Minnesota, Ohio

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JOB #B0263-1

LONG POND

	W-7	LP-1A	LP-1C	LP-2	LP-3
Total Dissolved Solids (mg/l)	47	100	105	76	96
Ammonia (mg/l) as N	0.014	<0.01	<0.01	<0.01	<0.01
Nitrate (mg/l) as N	<0.02	0.063	0.063	0.025	0.10
Chloride (mg/l)	18	23	23	18	23
pH	6.2	6.5	6.4	6.4	6.4
Phosphate, Total (mg/l) as P	0.13	<0.01	0.01	0.12	0.07
Total Dissolved Phosphate (mg/l)	-	<0.01	<0.01	-	-
Specific Conductance (umhos/cm)	82	103	102	80	103
Total Kjeldahl-Nitrogen (mg/l) as N	0.39	0.28	0.31	0.28	0.29

BEARSE

	B-1A	B-1C
Total Coliform Bacteria (colonies/100ml)	2	-
Fecal Coliform Bacteria (colonies/100ml)	0	-
Total Alkalinity (mg/l)	11	11
Total Suspended Solids (mg/l)	1.2	2.0
Total Dissolved Solids (mg/l)	39	41
Ammonia (mg/l) as N	0.014	0.011
Nitrate (mg/l) as N	<0.02	<0.02
Chloride (mg/l)	18	18
pH	6.4	6.4



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BEARSE

	B-1A	B-1C
Phosphate, Total (mg/l) as P	<0.01	0.066
Total Dissolved Phosphate (mg/l)	<0.01	<0.01
Specific Conductance (umhos/cm)	82	82
Total Kjeldahl-Nitrogen (mg/l) as N	0.33	0.28

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Geoffrey A. Coelho, Manager

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CONAM INSPECTION

To: IEP INC.
6 MAPLE STREET
BOX 790
NORTHBORO, MA 01532

Date 6/19/86
Job No. 81262-1
Lab No. 4570
Order No. KV-2

Material: WATER

Book No. 160-44 thr. 46 89
Specifications: None

JUN 23 1986

Sample ID: 18 Water Samples @ Wequaguet, Long Pond, Bearse

Date received: 6/9/86

WEQUAGUET

	N-1A	N-1C	N-2A	N-2C	N-3A	N-3C
Total Coliform Bacteria (colonies/100ml)	0	-	0	-	0	-
Fecal Coliform Bacteria (colonies/100ml)	0	-	0	-	0	-
Total Alkalinity (mg/l)	13	13	13	13	13	14
Total Suspended Solids (mg/l)	11	9.3	2.0	1.2	6.4	4.0
Total Dissolved Solids (mg/l)	65	60	57	57	88	71
Ammonia (mg/l) as N	0.013	0.011	0.011	<0.01	0.012	0.013
Nitrate (mg/l) as N	0.030	0.018	0.087	0.021	0.037	0.024
Chloride (mg/l)	18	17	17	18	18	18
pH	6.7	6.8	6.9	6.8	6.9	6.5
Phosphate, Total (mg/l) as P	0.013	0.014	0.012	0.016	0.010	0.012
Phosphate, Total Dissolved (mg/l)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Specific Conductance (umhos/cm)	83	84	85	85	84	84
Total Kjeldahl-Nitrogen (mg/l) as N	0.29	0.42	0.37	0.35	0.36	0.20

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CONAM INSPECTION A UNIT OF 
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JOB #81262-1

REGADUET

	W-4A	W-4C	W-5	W-6	W-7	W-8
Total Coliform Bacteria (colonies/100ml)	0	-	TNTC	TNTC	0	-
Fecal Coliform Bacteria (colonies/100ml)	2	-	103	16	0	-
Total Alkalinity (mg/l)	12	12	0	4.5	12	13
Total Suspended Solids (mg/l)	1.6	1.6	16	0.67	3.2	2.8
Total Dissolved Solids (mg/l)	67	65	107	100	73	76
Ammonia (mg/l) as N	0.012	<0.01	<0.01	0.10	<0.01	<0.01
Nitrate (mg/l) as N	0.041	0.024	0.031	0.27	0.25	0.049
Chloride (mg/l)	17	17	22	26	16	17
pH	6.7	6.7	4.2	5.4	6.8	6.5
Phosphate, Total (mg/l) as P	<0.01	0.012	0.15	0.060	0.012	0.013
Phosphate, Total Dissolved (mg/l)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Specific Conductance (umhos/cm)	83	83	108	114	83	84
Total Kjeldahl-Nitrogen (mg/l) as N	0.15	0.17	0.23	0.32	0.39	0.26

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JOB #81262-1

LONE FOND

BEARSE

	LP-1A	LP-1C	LP-2	LP-3	B-1A	B-1C
Total Coliform Bacteria (colonies/100ml)	1	-	6	9	0	-
Fecal Coliform Bacteria (colonies/100ml)	0	-	2	4	0	-
Total Alkalinity (mg/l)	14	13	12	13	15	14
Total Suspended Solids (mg/l)	1.2	1.2	1.6	2.0	8.8	2.0
Total Dissolved Solids (mg/l)	80	69	60	72	55	59
Ammonia (mg/l) as N	0.015	0.025	0.010	0.011	<0.01	<0.01
Nitrate (mg/l) as N	0.062	0.10	0.20	0.013	0.43	0.045
Chloride (mg/l)	23	22	17	23	16	17
pH	6.6	6.6	6.6	6.7	6.5	6.5
Phosphate, Total (mg/l) as P	<0.01	<0.01	0.012	<0.01	0.01	0.01
Phosphate, Total Dissolved (mg/l)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Specific Conductance (microhos/cm)	106	107	83	108	85	86
Total Kjeldahl-Nitrogen (mg/l) as N	0.32	0.33	0.34	0.33	0.32	0.33

TNTC= Too Numerous To Count

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Stephen Coelho

Stephen Coelho, Manager

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CONAM INSPECTION A UNIT OF **QUALICORP**
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CONAM INSPECTION

To: IEP INC.
6 MAPLE STREET
BOX 780
NORTHBORD, MA 01532

Date 7/1 /86
Job No. 81955-1
Lab No. 4656
Order No. NONE

Material: WATER
Book No. 233-15 bb
Specifications: None

Sample ID: 17 Water Samples @
Nequaquet, Long, Bearse Ponds. Barac-1

Date received: 6/23/86

	W-1A	W-1C	W-2A	W-2C	W-3A	W-3C
Total Coliform Bacteria (colonies/100ml)	0	-	20	-	60	-
Fecal Coliform Bacteria (colonies/100ml)	0	-	2	-	1	-
Total Alkalinity (mg/L CaCO3)	12	11	11	12	12	12
Total Suspended Solids (mg/l)	4.8	4.8	5.2	4.0	1.6	2.4
Total Dissolved Solids (mg/l)	84	83	77	64	76	56
Ammonia (mg/l) as N	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrate (mg/l) as N	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Chloride (mg/l)	21	17	17	18	17	17
pH	6.9	6.8	6.9	6.8	6.8	6.8
Phosphate, Total (mg/l) as P	0.029	0.018	0.015	0.018	0.016	0.017
Dissolved Phosphate (mg/l)	<0.01	0.014	0.011	<0.01	<0.01	0.011
Specific Conductance (uohms/cm)	76	79	79	79	78	78
Total Kjeldahl-Nitrogen (mg/l) as N	0.22	0.23	0.23	0.27	0.22	0.27

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CONAM INSPECTION A UNIT OF QUALCORP
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To: IEP INC.
6 MAPLE STREET
BOX 780

Date 7/1 /86

Material: WATER

NORTHBORO, MA 01532

Job No. 81955-1

Book No. 233-16-bb

Lab No. 4656

Specifications: None

Page No.2.

Sample ID: 17 Water Samples @
Wequaquet, Long, Bearse Ponds Barnc-1

Date received: 6/23/86

	W-4A	A-4C	W-5	W-6	W-7	LP-1A
Total Coliform Bacteria (colonies/100ml)	30	-	70	300	30	10
Fecal Coliform Bacteria (colonies/100ml)	1	-	0	0	0	0
Total Alkalinity (mg/L CaCO ₃)	12	12	-	11	11	15
Total Suspended Solids (mg/l)	2.0	2.8	18	3.2	2.0	2.4
Total Dissolved Solids (mg/l)	69	61	107	81	71	91
Ammonia (mg/l) as N	<0.01	0.01	0.070	0.044	<0.01	0.013
Nitrate (mg/l) as N	<0.01	0.01	0.031	0.48	<0.01	<0.01
Chloride (mg/l)	19	17	19	29	18	23
pH	6.7	6.7	4.5	5.5	6.8	7.0
Phosphate, Total (mg/l) as P	0.014	0.015	0.28	<0.01	0.012	0.010
Dissolved Phosphate (mg/l)	<0.01	<0.01	0.16	<0.01	<0.01	0.013
Specific Conductance (umhos/cm)	78	78	94	120	79	99
Total Kjeldahl-Nitrogen (mg/l) as N	0.18	0.22	1.2	0.27	0.25	0.14

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IEP INC.
6 MAPLE STREET
BOX 780
NORTHBORO, MA 01532

Date 7/1/86
Job No. 81955-1
Lab No. 4656
Page No. 3

Material: WATER
Book No. 233-17-bb
Specifications: None

Sample ID: 17 Water Samples @
Nequaquet, Long, Bearse Ponds, Barn-1

Date received: 6/23/86

	LP-1C	LP-2	LP-3	B-1A	B-1C
Total Coliform Bacteria (colonies/100ml)	-	70	150	0	-
Fecal Coliform Bacteria (colonies/100ml)	-	4	0	0	-
Total Alkalinity (mg/LCaCO ₃)	12	13	13	13	13
Total Suspended Solids (mg/l)	1.6	0.4	5.2	1.6	<0.4
Total Dissolved Solids (mg/l)	80	64	71	56	60
Ammonia (mg/l) as N	0.018	0.014	<0.01	<0.01	<0.01
Nitrate (mg/l) as N	0.019	0.022	0.012	0.024	<0.01
Chloride (mg/l)	25	18	23	19	19
pH	6.8	6.9	6.9	6.9	6.9
Phosphate, Total (mg/l) as P	0.011	0.013	<0.01	0.012	0.013
Dissolved Phosphate (mg/l)	<0.01	<0.01	<0.01	<0.01	<0.01
Specific Conductance (umho/cm)	98	77	99	79	78
Total Kjeldahl-Nitrogen (mg/l) as N	0.21	0.23	0.27	0.24	0.28

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DIVISION OF CONAM INSPECTION

Geoffrey Coelho
Geoffrey Coelho, Manager

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CONAM INSPECTION A UNIT OF 
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To: IEP INC.
6 MAPLE STREET
BOX 780

NORTHBORO, MA 01532

Date 7/16/86

Material: WATER

JUL 18 1986

Job No. 82374-1

Book No. 233-33 THRU 35 BB

Lab No. 4732

Specifications: None

Attn:

Order No. BARNC-1

Sample ID: 17 Water Samples @ Wequaquet, Long Pond & Bearse

Date received: 7/7/86

	WEQUAQUET					
	N-1A	N-1C	N-2A	N-2C	N-3A	N-3B
Total Coliform Bacteria (colonies/100ml)	<10	-	20	-	20	-
Fecal Coliform Bacteria (colonies/100ml)	0	-	1	-	0	-
Total Alkalinity (mg/l)	12	11	11	12	12	12
Total Suspended Solids (mg/l)	0.8	0.4	1.2	8.4	0.4	1.2
Total Dissolved Solids (mg/l)	59	33	60	31	64	55
Ammonia (mg/l) as N	<0.01	<0.01	<0.01	0.019	<0.01	<0.01
Nitrate (mg/l) as N	<0.01	<0.01	<0.01	0.010	<0.01	<0.01
Chloride (mg/l)	16	17	17	17	17	17
pH	6.8	6.6	6.9	6.8	6.7	6.7
Phosphate, Total (mg/l) as P	0.011	0.016	0.012	0.018	<0.01	0.012
Phosphate, Total Dissolved (mg/l)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Specific Conductance (umhos/cm)	79	79	79	79	78	78
Total Kjeldahl-Nitrogen (mg/l) as N	0.18	0.33	0.26	0.36	0.26	0.31

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CONAM INSPECTION

CONAM INSPECTION A UNIT OF **QUALICORP**
California, Texas, Illinois, Pennsylvania, Minnesota, Ohio

PAGE 2
IEP
JOB #82374-1

NEQUARQUET

	W-4A	W-4C	W-5	W-6	W-7	W-8
Total Coliform Bacteria (colonies/100ml)	<10	-	100	<10	30	<10
Fecal Coliform Bacteria (colonies/100ml)	1	-	0	0	0	<2
Total Alkalinity (mg/l)	12	11	0	7.6	12	17
Total Suspended Solids (mg/l)	1.2	1.6	5.5	3.2	1.2	43
Total Dissolved Solids (mg/l)	57	65	139	88	61	121
Ammonia (mg/l) as N	<0.01	<0.01	<0.01	0.032	<0.01	<0.01
Nitrate (mg/l) as N	0.017	<0.01	0.021	0.31	0.029	0.070
Chloride (mg/l)	16	17	16	29	17	16
pH	6.6	6.8	4.0	5.4	6.8	8.4
Phosphate, Total (mg/l) as P	<0.01	<0.01	0.033	0.015	<0.01	0.013
Phosphate, Total Dissolved (mg/l)	<0.01	<0.01	-	-	-	-
Specific Conductance (umhos/cm)	77	77	92	117	78	73
Total Kjeldahl-Nitrogen (mg/l) as N	0.24	0.29	1.0	0.22	0.37	2.8



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CONAM INSPECTION A UNIT OF **QUALCORP**
California, Texas, Illinois, Pennsylvania, Minnesota, Ohio

PAGE 3
IEP
JOB #82374-1

	LONG POND			BEARSE	
	LP-1A	LP-1C	LP-3	B-1A	B-1C
Total Coliform Bacteria (colonies/100ml)	<10	-	<10	<10	-
Fecal Coliform Bacteria (colonies/100ml)	0	-	4	0	-
Total Alkalinity (mg/l)	11	12	12	11	12
Total Suspended Solids (mg/l)	1.6	1.6	2.4	2.0	1.2
Total Dissolved Solids (mg/l)	79	76	72	64	28
Ammonia (mg/l) as N	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrate (mg/l) as N	0.029	0.026	0.015	<0.01	0.022
Chloride (mg/l)	22	23	23	18	16
pH	6.7	6.6	6.7	6.5	6.6
Phosphate, Total (mg/l) as P	<0.01	0.12	0.015	0.012	0.015
Phosphate, Total Dissolved (mg/l)	<0.01	0.038	-	<0.01	<0.01
Specific Conductance (umhos/cm)	100	100	100	79	79
Total Kjeldahl-Nitrogen (mg/l) as N	0.28	0.79	0.34	0.22	0.51

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16TH DAY OF JULY 1986
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Geoffrey Coelho, Manager



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CONAM INSPECTION

CONAM INSPECTION A UNIT OF 
California, Texas, Illinois, Pennsylvania, Minnesota, Ohio

To: IEP INC.

Date 8/6/86

Material: WATER

BOX 434

Job No. 83023-1

Book No. 241-1&2 BB

BARNSTABLE, MA 02630

Lab No. 4807
JULM.W04, P. 3 & 4

Specifications: None

Attn: DAVID WORDEN

Order No. BARNC-1

AUG 10 1986

AUG 13 1986

CORRECTED REPORT

Sample ID: 16 Water Samples @ Cape Lakes

Date received: 7/21/86

	W-1A	W-1C	W-2A	W-2C	W-3A	W-3C	W-4A	W-4C
Total Coliform Bacteria (colonies/100ml)	10	-	10	-	10	-	10	-
Fecal Coliform Bacteria (colonies/100ml)	1	-	0	-	2	-	0	-
Total Alkalinity (mg/l)	5.4	5.6	5.4	5.6	5.4	5.5	5.6	5.6
Total Suspended Solids (mg/l)	<0.4	1.2	<0.4	4.0	3.6	2.4	6.4	<0.4
Total Dissolved Solids (mg/l)	60	60	61	55	59	56	59	59
Ammonia (mg/l) as N	<0.01	0.018	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrate (mg/l) as N	0.032	0.018	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Chloride (mg/l)	22	18	17	15	16	15	18	18
pH	6.7	6.6	6.6	6.4	6.7	6.7	6.8	6.7
Phosphate, Total (mg/l) as P	<0.01	0.025	<0.01	0.013	<0.01	0.013	0.013	0.026
Phosphate, Dissolved (mg/l)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Specific Conductance (umhos/cm)	79	80	79	80	79	79	78	78
Total Kjeldahl-Nitrogen (mg/l) as N	0.30	0.43	0.21	0.29	0.18	0.27	0.21	0.26



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CONAM INSPECTION A UNIT OF QUALICORP
California, Texas, Illinois, Pennsylvania, Minnesota, Ohio

PAGE 2

IEP-Cape Lakes
JOB #83023-1

AUG 13 1966

	W-5	W-6	W-7	LP-1A	LP-1C	LP-3	B-1A	B-1C
Total Coliform Bacteria (colonies/100ml)	*	20	40	20	-	90	10	-
Fecal Coliform Bacteria (colonies/100ml)	3	8	4	3	-	90	2	-
Total Alkalinity (mg/l)	<1.0	3.4	5.3	4.7	5.0	6.2	6.3	6.4
Total Suspended Solids (mg/l)	19	0.8	<0.4	<0.4	<0.4	4.4	0.8	2.4
Total Dissolved Solids (mg/l)	129	92	65	71	67	69	63	56
Ammonia (mg/l) as N	<0.01	0.028	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrate (mg/l) as N	0.037	0.24	0.014	<0.01	<0.01	<0.01	<0.01	<0.01
Chloride (mg/l)	19	28	13	22	24	24	15	17
pH	4.5	5.4	6.6	6.5	6.4	6.8	6.7	6.7
Phosphate, Total (mg/l) as P	0.332	0.014	0.025	<0.01	0.013	0.010	0.023	0.020
Phosphate, Dissolved (mg/l)	-	-	-	<0.01	<0.01	-	<0.01	<0.01
Specific Conductance (uahas/ca)	96	122	78	104	103	103	80	79
Total Kjeldahl-Nitrogen (mg/l) as N	1.6	0.19	0.29	0.17	0.25	0.21	0.11	0.27

* CONFLUENT GROWTH

IN WITNESS WHEREOF, I HAVE HEREUNTO SET MY HAND THIS
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CONAM INSPECTION A UNIT OF 
California, Texas, Illinois, Pennsylvania, Minnesota, Ohio

To: IEP INC.
6 MAPLE STREET
BOX 780

Date 8/20/86

Material: WATER

NORTHBORD, MA 01532

Job No. 83642-1

Book No. 241-13 & 14 BB

Lab No. 4882
AUGN.W15, P. 1&2

Specifications: None

Attn:

Order No. BARNC-1

Sample ID: 16 Water Samples @ Cape Lakes

Date received: 8/4/86

	W-1A	W-1C	W-2A	W-2C	W-3A	W-3C	W-4A	W-4C
Total Coliform Bacteria (colonies/100ml)	<10	--	<10	--	<10	--	1000	--
Fecal Coliform Bacteria (colonies/100ml)	0	--	0	--	0	--	0	--
Total Alkalinity (mg/l)	7.8	6.0	5.3	6.2	5.3	5.5	5.1	5.4
Total Suspended Solids (mg/l)	<0.4	3.2	<0.4	<0.4	<0.4	1.2	<0.4	<0.4
Total Dissolved Solids (mg/l)	45	44	44	35	35	52	45	48
Ammonia (mg/l) as N	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrate (mg/l) as N	0.042	0.036	0.034	0.040	0.021	0.037	0.036	0.027
Chloride (mg/l)	17	18	18	16	16	15	15	18
pH	6.9	6.8	6.8	6.8	6.8	6.7	6.7	6.7
Phosphate, Total (mg/l) as P	0.029	0.016	0.018	0.020	0.011	0.016	0.012	0.013
Phosphate, Total Dissolved (mg/l)	0.019	<0.01	<0.01	0.015	<0.01	<0.01	<0.01	<0.01
Specific Conductance (uamhos/cm)	81	82	82	82	81	81	80	80
Total Kjeldahl-Nitrogen (mg/l) as N	0.30	0.27	0.27	0.30	0.34	0.26	0.25	0.26

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CONAM INSPECTION A UNIT OF 
California, Texas, Illinois, Pennsylvania, Minnesota, Ohio

CONAM INSPECTION

PAGE 2
IEP-CAPE LAKES
JOB #83642-1

	W-7 W-5	W-6	W-5 W-7	LP-1A	LP-1C	LP-3	B-1A	B-1C
Total Coliform Bacteria (colonies/100ml)	*	*	1500	1000	--	500	400	--
Fecal Coliform Bacteria (colonies/100ml)	10	0	4	0	--	0	0	--
Total Alkalinity (mg/l)	4.7	1.5	0	5.6	5.7	5.7	6.7	5.5
Total Suspended Solids (mg/l)	<0.4	2.4	6.4	<0.4	2.0	<0.4	0.4	1.6
Total Dissolved Solids (mg/l)	**	95	117	61	63	52	40	49
Ammonia (mg/l) as N	<0.01	0.070	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrate (mg/l) as N	0.51	0.67	0.071	0.050	0.020	0.024	0.37	0.18
Chloride (mg/l)	18	25	18	25	26	26	17	18
pH	6.8	5.2	4.1	6.6	6.6	6.7	6.6	6.5
Phosphate, Total (mg/l) as P	0.011	0.051	0.57	0.015	0.013	0.016	0.011	0.015
Phosphate, Total Dissolved (mg/l)	--	--	--	<0.01	<0.01	<0.01	<0.01	<0.01
Specific Conductance (umhos/cm)	80	102	109	107	109	107	81	82
Total Kjeldahl-Nitrogen (mg/l) as N	0.25	0.57	1.5	0.31	0.35	0.42	0.27	0.29

* OVERGROWN

** LOST IN ANALYSIS

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SEP 5

CONAM INSPECTION

CONAM INSPECTION A UNIT OF QUALCORP
California, Texas, Illinois, Pennsylvania, Minnesota, Ohio

To: IEP INC.

Date 8/29/86

Material: WATER

BOX 434

Job No. 84104-1

Book No. 240-15-CN

BARNSTABLE MA 02630

Lab No. 4974
AUEU.W12-P1

Specifications: None

Attn: DAVID WARDEN

Order No. BARNC-1

Sample ID: 16 Water Samples @ 1. WEUQUAQUET LAKE Date received: 8/18/86

	#W-1A	#W-1C	#W-2A	#W-2C	#W-3A	#W-3C
Total Coliform Bacteria (colonies/100ml)	10	--	20	--	20	--
Fecal Coliform Bacteria (colonies/100ml)	0	--	0	--	0	--
Total Alkalinity (mg/l)	6.0	5.7	6.3	6.7	4.6	6.0
Total Suspended Solids (mg/l)	2.0	2.0	3.2	0.8	4.0	0.8
Total Dissolved Solids (mg/l)	63	60	56	51	57	57
Ammonia (mg/l) as N	<0.01	<0.01	<0.01	0.03	<0.01	<0.01
Nitrate (mg/l) as N	0.032	0.031	0.014	0.012	0.013	0.014
Chloride (mg/l)	19	17	17	17	17	17
pH	6.9	6.5	6.7	6.4	6.6	6.5
Phosphate, Total (mg/l) as P	0.013	<0.01	0.011	0.016	<0.01	<0.01
Dissolved Phosphate (mg/l)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Specific Conductance (umhos/cm)	78	78	78	81	79	79
Total Kjeldahl-Nitrogen (mg/l) as N	0.28	0.28	0.28	0.35	0.28	0.25



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CONAM INSPECTION

CONAM INSPECTION A UNIT OF CALSONIC
California, Texas, Illinois, Pennsylvania, Minnesota, Ohio

IEP INC. Job #84104-1 Wequaquet Lake Page 2.

	#W-4A	#W-4C	#W-5	#W-6	#W-7
Total Coliform Bacteria (colonies/100ml)	<10	—	200	800	20
Fecal Coliform Bacteria (colonies/100ml)	0	—	3	41	0
Total Alkalinity (mg/l)	4.6	4.9	4.6	3.6	4.9
Total Suspended Solids (mg/l)	3.6	<0.4	2.0	4.8	<0.4
Total Dissolved Solids (mg/l)	57	47	55	85	55
Ammonia (mg/l) as N	<0.01	<0.01	<0.01	0.025	<0.01
Nitrate (mg/l) as N	0.012	0.019	0.037	0.617	0.022
Chloride (mg/l)	16	17	16	29	16
pH	6.5	6.6	6.5	5.6	6.4
Phosphate, Total (mg/l) as P	<0.01	<0.01	0.039	<0.01	<0.01
Dissolved Phosphate (mg/l)	<0.01	<0.01	0.014	<0.01	<0.01
Specific Conductance (umhos/cm)	78	78	78	114	77
Total Kjeldahl-Nitrogen (mg/l) as N	0.35	0.30	0.44	0.14	0.27

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Geoffrey Coelho, Manager



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CONAM INSPECTION

CONAM INSPECTION A UNIT OF QUALICON
California, Texas, Illinois, Pennsylvania, Minnesota, Ohio

To: IEP INC.

Date 8/29/86

Material: WATER

BOX 434

Job No. 84104-1

Book No. 240-16-CM

SEP 5 1986

BARNSTABLE MA 02630

Lab No. 4974

Specifications: None

AUGU.#12-P3

Attn: DAVID WORDEN

Order No. BARNE-1

Sample ID: 16 Water Samples @ # LONG POND & BEARSE
Date received: 8/18/86

	#LP-1A	#LP-1C	#LP-3	#B-1A	#B-1C
Total Coliform Bacteria (colonies/100ml)	<10	--	220	<10	--
Fecal Coliform Bacteria (colonies/100ml)	0	--	24	0	--
Total Alkalinity (mg/l)	5.1	5.1	5.0	5.3	4.9
Total Suspended Solids (mg/l)	1.2	<0.4	3.2	<0.4	0.4
Total Dissolved Solids (mg/l)	72	75	69	84	77
Ammonia (mg/l) as N	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrate (mg/l) as N	0.069	0.031	0.024	0.026	0.016
Chloride (mg/l)	23	25	25	17	18
pH	6.4	6.5	6.7	6.6	6.5
Phosphate, Total (mg/l) as P	<0.01	<0.01	<0.01	<0.01	0.015
Dissolved Phosphate (mg/l)	<0.01	<0.01	<0.01	<0.01	<0.01
Specific Conductance (umhos/cm)	105	105	103	78	78
Total Kjeldahl-Nitrogen (mg/l) as N	0.29	0.33	0.29	0.34	0.29

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CONAM INSPECTION A UNIT OF **QUALICORP**
California, Texas, Illinois, Pennsylvania, Minnesota, Ohio

To: IEP INC.

Date 9/22/86

Material: WATER

BOX 434

Job No. 84831-1

Book No. 239-29 thru 31 AP

BARNSTABLE, MA 02630

Lab No. 5062

Specifications: None

Attn: DAVID WORDEN

Order No. BARNC-1

Sample ID: 17 Water Samples @ Mequaquet, Barse & Long Pond

Date received: 9/8/86

	W-1A	W-1C	W-2A	W-2C	W-3A
Total Coliform Bacteria (colonies/100ml)	60	--	30	--	<10
Fecal Coliform Bacteria (colonies/100ml)	0	--	0	--	4
Total Alkalinity (mg/l)	5.7	5.1	5.6	5.6	5.1
Total Suspended Solids (mg/l)	2.0	0.8	<0.4	1.2	2.4
Total Dissolved Solids (mg/l)	51	45	21	49	25
Ammonia (mg/l) as N	<0.010	<0.010	<0.010	<0.010	<0.010
Nitrate (mg/l) as N	0.01	0.02	0.02	0.04	0.02
Chloride (mg/l)	18	17	17	17	17
pH	6.6	6.5	6.5	6.3	6.6
Phosphate, Total (mg/l) as P	0.02	0.02	0.01	0.02	<0.01
Phosphate, Total Dissolved (mg/l)	<0.01	<0.01	<0.01	<0.01	<0.01
Specific Conductance (uahas/cm)	78	77	77	77	78
Total Kjeldahl-Nitrogen (mg/l) as N	0.71	0.60	0.69	0.39	0.38

UNLESS STIPULATED IN WRITING BY YOU, ALL SAMPLES WILL BE RETAINED FOR 30 DAYS AND THEN DISPOSED OF.
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CONAM INSPECTION A UNIT OF **QUALICORP**
California, Texas, Illinois, Pennsylvania, Minnesota, Ohio

CONAM INSPECTION

PAGE 2
IEP
JOB #84831-1

	W-3C	W-4A	W-4C	W-6 W-5	W-5 W-6
Total Coliform Bacteria (colonies/100al)	--	<10	--	30	400
Fecal Coliform Bacteria (colonies/100al)	--	0	--	1	0
Total Alkalinity (mg/l)	5.0	4.2	4.3	3.3	<1.0
Total Suspended Solids (mg/l)	1.2	<0.4	<0.4	6.8	0.4
Total Dissolved Solids (mg/l)	41	65	13	39	49
Ammonia (mg/l) as N	<0.010	<0.010	<0.010	0.036	<0.010
Nitrate (mg/l) as N	0.04	0.02	0.04	0.49	0.02
Chloride (mg/l)	17	18	16	28	18
pH	6.5	6.4	6.4	5.3	5.0
Phosphate, Total (mg/l) as P	<0.01	0.02	<0.01	0.09	0.11
Phosphate, Total Dissolved (mg/l)	<0.01	<0.01	<0.01	--	--
Specific Conductance (umhos/cm)	77	75	74	115	80
Total Kjeldahl-Nitrogen (mg/l) as N	0.37	0.36	0.38	0.33	0.80

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*duplicate
of SH-2*

PAGE 3
IEP
JOB #84831-1

	W-7	LP-1A	LP-1C	LP-2	LP-3	B-1A	B-1C
Total Coliform Bacteria (colonies/100ml)	400	70	--	--	<10	10	--
Fecal Coliform Bacteria (colonies/100ml)	0	4	--	--	0	0	--
Total Alkalinity (mg/l)	4.4	4.7	4.8	<1.0	4.5	5.3	5.5
Total Suspended Solids (mg/l)	0.6	4.7	1.8	2.0	24	0.6	0.8
Total Dissolved Solids (mg/l)	57	81	57	39	39	39	43
Ammonia (mg/l) as N	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Nitrate (mg/l) as N	0.04	0.04	0.03	0.02	0.03	<0.02	0.03
Chloride (mg/l)	19	25	25	17	26	17	18
pH	6.5	6.3	6.6	5.1	6.6	6.4	6.4
Phosphate, Total (mg/l) as P	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Phosphate, Total Dissolved (mg/l)	--	<0.01	<0.01	--	--	<0.01	<0.01
Specific Conductance (umhos/cm)	75	015	105	68	104	76	76
Total Kjeldahl-Nitrogen (mg/l) as N	0.35	0.39	0.17	0.18	0.28	0.30	0.36

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IEP INC DATE 10/17/86 MATERIAL: WATER
6 MAPLE STREET JOB NO. 86093-1 BOOK NO. 251-37-RH
P O BOX 780 LAB NO. 5205 SPECIFICATIONS: NONE
NORTHERO MA 01532 ORDER NO. BARNC-1

Sample ID: 16 Water Samples @ WEQUAQUET Date received: 9/29/86

	Total Coliform Bacteria (colonies/100ml)	Fecal coliform Bacteria (Colonies/100ml)
W-1A	0	0
W-2A	200	3
W-3A	60	5
W-4A	350	2
W-5	200	0
W-6	100	7
W-7	10	2
LP-1A	10	3
LP-3	500	400
W-1A	10	2



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PAGE 2

IEP - WEDQUAQUET

JOB # 85093-1

	W-1A	W-1C	W-2A	W-2C	W-3A	W-3C
pH	6.6	6.2	6.2	5.1	6.1	5.1
Total Alkalinity (mg/l)	5.6	5.1	5.2	5.2	4.3	5.0
Total Suspended Solids (mg/l)	2	6.4	34	1.2	2	2.4
Total Dissolved Solids (mg/l)	53	59	83	47	57	56
Chloride (mg/l)	21	22	17	17	17	17
Ammonia (mg/l)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrate (mg/l)	0.019	0.015	0.020	0.016	0.022	0.315
Phosphate, Total (mg/l)	<0.01	0.013	<0.01	<0.01	<0.01	<0.01
Dissolved Phosphate (mg/l)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Kjeldahl-Nitrogen (mg/l)	0.18	0.42	0.60	1.20	0.24	0.23
Specific Conductance (umhos/cm)	77	77	77	77	77	77

	W-4A	W-4C	W-5	W-6	W-7
pH	6.1	6.1	4.7	5.3	6.1
Total Alkalinity (mg/l)	3.4	3.2	<1.0	3.7	4.7
Total Suspended Solids (mg/l)	14	12	59	5.2	4.9
Total Dissolved Solids (mg/l)	104	59	105	91	72
Ammonia (mg/l)	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrate (mg/l)	<0.0125	0.022	0.022	0.049	0.014
Chloride (mg/l)	17	17	17	34	18
Phosphate, Total (mg/l)	0.014	<0.01	0.71	0.078	<0.01
Dissolved Phosphate (mg/l)	<0.01	<0.01	0.64	0.035	<0.01
Total Kjeldahl-Nitrogen (mg/l)	0.32	0.18	2.1	0.15	0.2
Specific Conductance (umhos/cm)	75	75	82	122	77

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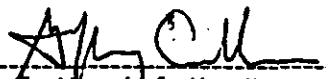
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• IEP -- WERQUAQUET

JOB # 86093-1

	LP-1A	LP-1C	LP-3	B-1A	B-1C
pH	6.2	6.2	6.4	6.1	6.2
Total Alkalinity (mg/l)	4.6	4.0	5.3	4.7	4.2
Total Suspended Solids (mg/l)	3.2	8	13.2	3.6	5.2
Total Dissolved Solids (mg/l)	91	49	57	60	88
Ammonia (mg/l)	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrate (mg/l)	0.030	0.020	0.020	<0.0125	<0.0125
Chloride (mg/l)	26	21	25	18	17
Phosphate, Total (mg/l)	<0.01	<0.01	<0.01	<0.01	<0.01
Dissolved Solids (mg/l)	<0.01	<0.01	<0.01	<0.01	<0.01
Total Kjeldahl-Nitrogen (mg/l)	1.52	0.71	0.198	0.36	1.22
Specific Conductance (uahas/cm)	106	107	107	77	77

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REVISED LOW LEVEL T-ALKALINITY IN $\mu\text{g/l}$

<u>LAB NO. 3719</u>	<u>REPORTED VALUE</u>	<u>ACTUAL VALUE</u>	<u>LAB NO. 3861, CONT.</u>	<u>REPORTED VALUE</u>	<u>ACTUAL VALUE</u>
W-1A	11	4.6	W-4C	9.8	4.1
W-1C	11	4.5	W-5	8.3	3.6
W-3	3.0	<1.0	W-6	6.4	2.6
W-4A	11	4.8	W-7	12	5.2
W-4C	12	5.1	W-8	14	6.3
W-5	12	4.9	LP-1A	8.7	3.7
W-6	12	5.0	LP-1C	7.8	3.1
W-7	13	5.7	LP-2	12	4.9
B-1A	12	5.3	LP-3	11	4.6
B-1C	12	5.4	B-1A	11	4.0
LP-1 SURFACE	9.9	3.9	B-1C	12	4.9
LP-1 INLET	8.0	3.2	SH-1	1.7	<1.0
LP-3	8.9	3.6	SH-2	2.4	<1.0
SH-1	1.7	<1.0	SH-3	1.7	<1.0
SH-2	2.1	<1.0	<u>LAB. NO. 3990</u>		
<u>LAB NO. 3861</u>			W-1A	16	6.8
W-1A	13	5.6	W-1C	10	4.3
W-1C	12	5.2	W-2A	10	4.3
W-2A	11	4.7	W-2C	11	4.6
W-2C	12	5.3	W-3A	11	5.2
W-3A	11	4.4	W-3C	11	4.9
W-3C	13	5.9	W-4A	11	4.9
W-4A	12	5.3	W-4C	11	4.9

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LOW LEVEL T-ALK.

<u>LAB NO. 3990, CONT.</u>	<u>REPORTED VALUE</u>	<u>ACTUAL VALUE</u>	<u>LAB NO. 4068, CONT.</u>	<u>REPORTED VALUE</u>	<u>ACTUAL VALUE</u>
W-5	<1.0	<1.0	W-5	7.8	2.9
W-6	5.1	2.0	W-6	9.6	4.0
W-7	11	4.9	W-7	12	5.4
LP-1A	7.2	2.6	LP-1A	9.9	4.2
LP-1C	9.0	3.8	LP-1C	11	5.1
LP-2	6.5	2.4	LP-2	12	5.4
LP-3	9.0	3.8	LP-3	7.9	3.4
B-1A	11	4.1	B-1A	10	4.7
B-1C	11	4.1	B-1C	10	4.8
SH-1	<1.0	<1.0	<u>LAB NO. 4069</u>		
SH-2	<1.0	<1.0	SH-1	<1.0	<1.0
SH-3	<1.0	<1.0	SH-2	<1.0	<1.0
<u>LAB NO. 4068</u>			SH-3	<1.0	<1.0
W-1A	12	5.6	<u>LAB NO. 413B</u>		
W-1C	12	5.6	W-1A	11	4.5
W-2A	12	5.6	W-1C	13	5.4
W-2C	12	5.5	W-2A	11	5.4
W-3A	12	5.0	W-2C	12	5.4
W-3C	11	4.8	W-3A	12	5.5
W-4A	12	5.0	W-3C	12	5.6
W-4C	12	5.0	W-4A	11	5.2

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LOW LEVEL T-ALK.

<u>LAB NO. 4138, CONT.</u>	<u>REPORTED VALUE</u>	<u>ACTUAL VALUE</u>	<u>LAB NO. 4228, CONT.</u>	<u>REPORTED VALUE</u>	<u>ACTUAL VALUE</u>
W-4C	11	4.9	W-4A	11	4.6
W-5	<1.0	<1.0	W-4C	12	5.1
W-6	8.5	3.4	W-5	2.1	<1.0
W-7	14	6.3	W-6	6.2	2.6
W-8	9.0	3.6	W-7	10	4.5
LP-1A	11	4.5	W-8	10	4.9
LP-1C	11	4.1	LP-1A	10	4.6
LP-2	11	4.7	LP-1C	9.5	4.4
LP-3	9.3	4.1	LP-2	12	5.4
B-1A	12	5.1	LP-3	11	5.0
B-1C	11	5.1	B-1A	13	6.0
<u>LAB NO. 4139</u>			B-1C	12	5.6
SH-1	<1.0	<1.0	<u>LAB NO. 4229</u>		
SH-2	1.0	<1.0	SH-1	<1.0	<1.0
SH-3	1.0	<1.0	SH-2	<1.0	<1.0
<u>LAB NO. 4228</u>			SH-3	<1.0	<1.0
W-1A	12	5.1	<u>LAB NO. 4322</u>		
W-1C	11	4.9	W-1A	12	5.7
W-2A	12	5.0	W-1C	11	5.4
W-2C	12	5.3	W-2A	11	5.4
W-3A	12	5.5	W-2C	11	5.4
W-3C	11	4.9	W-3A	12	5.9

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LOW LEVEL T-ALK.

<u>LAB NO. 4322, CONT.</u>	<u>REPORTED VALUE</u>	<u>ACTUAL VALUE</u>	<u>LAB NO. 4395, CONT.</u>	<u>REPORTED VALUE</u>	<u>ACTUAL VALUE</u>
W-3C	11	5.4	W-3C	12	5.9
W-4A	11	5.0	W-4A	12	5.6
W-4C	11	5.4	W-4C	11	5.3
W-5	<1.0	<1.0	W-5	<1.0	<1.0
W-6	1.3	<1.0	W-6	7.9	3.6
W-7	11	5.0	W-7	5.4	5.2
LP-1A	9.2	4.3	W-8	8.8	4.0
LP-1C	10	4.6	LP-1A	10	5.1
LP-2	10	4.9	LP-1C	10	5.1
LP-3	9.2	4.4	LP-2	12	5.9
B-1A	12	5.6	LP-3	12	5.5
B-1C	12	5.7	B-1A	12	6.0
<u>LAB NO. 4323</u>			B-1C	12	6.0
SH-1	<1.0	<1.0	<u>LAB NO. 4396</u>		
SH-2	1.3	<1.0	SH-1	<1.0	<1.0
SH-3	<1.0	<1.0	SH-2	1.1	<1.0
<u>LAB NO. 4395</u>			SH-3	<1.0	<1.0
W-1A	12	5.4	<u>LAB NO. 4476</u>		
W-1C	12	5.6	W-1A	11	5.0
W-2A	11	5.2	W-1C	11	5.0
W-2C	12	5.4	W-2A	11	5.0
W-3A	12	5.4	W-2C	12	5.6

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LOW LEVEL T-ALK.

<u>LAB NO. 4476, CONT.</u>	<u>REPORTED VALUE</u>	<u>ACTUAL VALUE</u>	<u>LAB NO. 4570, CONT.</u>	<u>REPORTED VALUE</u>	<u>ACTUAL VALUE</u>
W-3A	12	5.9	W-3A	13	5.8
W-3C	12	5.9	W-3C	14	6.5
W-4A	11	5.4	W-4A	12	5.4
W-4C	11	5.3	W-4C	12	5.4
W-5	0	0	W-5	0	0
W-6	7.9	3.6	W-6	4.5	1.6
W-7	11	5.3	W-7	12	5.6
LP-1A	11	4.9	W-8	13	5.7
LP-1C	9.8	4.5	LP-1A	14	6.5
LP-2	11	5.2	LP-1C	13	6.2
LP-3	10	4.8	LP-2	12	5.4
B-1A	11	5.5	LP-3	13	6.2
B-1C	11	5.5	B-1A	15	7.8
<u>LAB NO. 4477</u>			B-1C	14	6.8
SH-1	<1.0	<1.0	<u>LAB NO. 4571</u>		
SH-2	<1.0	<1.0	SH-1	1.2	<1.0
SH-3	<1.0	<1.0	SH-2	1.4	<1.0
<u>LAB NO. 4570</u>			SH-3	1.6	<1.0
W-1A	13	5.9	<u>LAB NO. 4656</u>		
W-1C	13	5.9	W-1A	12	5.8
W-2A	13	6.1	W-1C	11	5.1
W-2C	13	6.1	W-2A	11	5.1



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LOW LEVEL T-ALK.

<u>LAB NO. 4656, CONT.</u>	<u>REPORTED VALUE</u>	<u>ACTUAL VALUE</u>	<u>LAB NO. 4732, CONT.</u>	<u>REPORTED VALUE</u>	<u>ACTUAL VALUE</u>
W-2C	12	5.2	W-2C	12	5.3
W-3A	12	5.2	W-3A	12	5.5
W-3C	12	5.5	W-3C	12	5.3
W-4A	12	5.9	W-4A	12	5.4
W-4C	12	5.6	W-4C	11	5.5
W-5	--	<1.0	W-5	0	0
W-6	11	5.2	W-6	7.6	3.2
W-7	11	5.4	W-7	12	5.5
LP-1A	15	7.1	W-8	17	7.7
LP-1C	12	5.9	LP-1A	11	5.5
LP-2	13	6.3	LP-1C	12	5.9
LP-3	13	6.3	LP-3	12	6.8
B-1A	13	6.2	B-1A	11	5.3
B-1C	13	6.2	B-1C	12	5.4
<u>LAB NO. 4657</u>			<u>LAB NO. 4733</u>		
SH-1	2.1	<1.0	SH-1	1.6	<1.0
SH-2	0.8	<1.0	SH-2	0.77	<1.0
SH-3	1.6	<1.0	SH-3	0.82	<1.0
<u>LAB NO. 4732</u>					
W-1A	12	5.6			
W-1C	11	5.1			
W-2A	11	5.3			

UNLESS STIPULATED IN WRITING BY YOU, ALL SAMPLES WILL BE RETAINED FOR 30 DAYS AND THEN DISPOSED OF.
THIS REPORT IS RENDERED UPON THE CONDITION THAT IT IS NOT TO BE REPRODUCED WHOLLY OR IN PART FOR ADVERTISING AND / OR OTHER
PURPOSES OVER OUR SIGNATURE OR IN CONNECTION WITH OUR NAME WITHOUT OUR SPECIAL PERMISSION IN WRITING.

- from K-Y A
8 April 1986.

results as
ug/l (ppb)

WEQUAQUET POND

		W-1a	W-2a	W-3a	W-4
Oct. 24, 1985	chlorophyll a	.28 ppb	1.67	1	.5
	Phaeophyton	.33	-	.89	.44
Nov. 25, 1985	Chlorophyll a	1.44	1.42	.62	.37
	Phaeophyton	1.51	1.21	.63	.38
Dec. 30, 1985	Chlorophyll a	.51	NS	NS	.28
	Phaeophyton	.6	-	-	.31
Jan. 29, 1986	Chlorophyll a	1.28	1.18	1.05	.97
	Phaeophyton	1.38	1.21	1.2	1.24
Feb. 24, 1986	Chlorophyll a	2.9	2.6	1.9	1.3
	Phaeophyton	2.0	-	1.4	1.3
Mar. 10, 1986	Chlorophyll a	2.18	1.62	.59	1.64
	Phaeophyton	2.37	1.78	.62	1.64

SHALLOW POND

		SH-1	SH-2	SH-3	LP-1A	B-1a
Oct. 24, 1985	Chlorophyll a	.39	.44	1.3	.83	.86
	Phaeophyton	.39	.39	1.4	.77	.58
Nov. 25, 1985	Chlorophyll a	.24	.29	.41	.50	.57
	Phaeophyton	.31	.29	.41	.66	.55
Dec. 30, 1985	Chlorophyll a	3.8	.55	.4	.5	.65
	Phaeophyton	4.2	.65	.5	.55	.8
Jan. 29, 1986	Chlorophyll a	2.49	3.62	.49	1.12	2.53
	Phaeophyton	3.07	4.22	.67	1.4	2.81
Feb. 24, 1986	Chlorophyll a	2.8	1.2	1.06	1.2	2.6
	Phaeophyton	2.0	1.2	-	1.4	2.2
Mar. 10, 1986	Chlorophyll a	2.65	1.16	.32	.45	2.43
	Phaeophyton	3.08	1.46	.45	.57	2.43

result after acidification of sample used to determine chloro. "a"

$$\frac{OD_{663} \text{ pure chloro. "a"} (664)}{OD_{663} \text{ after acid treatment (665)} (40\% \text{ reduction in } OD_{663})} = 1.7$$

DEC 1 1986



K-V ASSOCIATES, INC.
ANALYTICAL SYSTEMS

281 MAIN STREET • P.O. BOX 574 • FALMOUTH, MASSACHUSETTS 02541 • 617-540-0561

November 26, 1986

IEP
Box 434
Barnstable, Ma. 02630
ATT: Dave Worden

Dear Dave:

Enclosed are the second set of chlorophyll a data for the Barnstable ponds. I have given you results for total chlorophyll a, uncorrected for phaeophyton, and the acidified result, which is a phaeophyton measure. Phaeophyton is the product degraded chlorophyll and is frequently subtracted from the total chl a to yield an "active" chl a value.

When the phaeophyton quantity approaches the total chl a quantity, the "active" chl a is reduced to very low levels which is probably not representative of field conditions. Several factors can account for such high phaeophyton levels: one is grazing by zooplankton, especially in sample bottles, which in our case often sat for a day before filtering and preservation. Another likely factor is changes in species composition of the phytoplankton community. Different species contain different ratios of chl a, b and c which may affect the interpretation of high phaeophyton levels. Poor water quality can also yield a low level chl a/phaeophyton ratio. The American Public Health Standard Methods from 1971 states that a healthy ratio is 1.7, which is about what pure spinach chl a (our standard) provides.

If you have any questions please call.

Sincerely,

A handwritten signature in cursive script that reads 'Sarah Allen'.

Sarah Allen

SA/lf
encl.

Chlorophyll a data for Wequaquet, Shallow, Bearse, and Long Pond (values are mg/l)

		W-1	W-2	W-3	W-4	S-1	S-2	S-3	LP	B
3-26-86	chl _a	3.46	3.88	7.66	8.51	2.12	3.40	3.40	3.35	4.68
	acid	3.19	4.68	6.80	8.51	2.66	4.47	4.47	3.24	4.47
4-8-86	chl _a	4.79	3.94	3.45	3.90	0.94	0.64	0.67	1.21	7.57
	acid	2.79	3.15	2.40	3.39	0.82	0.59	0.61	0.88	3.30
4-22-86	chl _a	6.60	7.10	7.30	5.10	2.80	2.10	0.70	3.30	9.40
	acid	5.00	3.60	5.10	3.20	2.70	1.80	0.60	2.20	5.80
5-5-86	chl _a	3.60	3.20	6.0	1.50	0.93	0.93	0.53	4.60	2.50
	acid	1.93	10.50	3.30	1.00	0.83	0.70	0.43	3.0	1.70
5-20-86	chl _a	3.52	2.10	1.70	1.30	1.55	1.42	1.29	2.45	1.16
	acid	2.64	1.55	1.35	0.90	1.32	1.29	1.26	1.70	0.80
6-10-86	chl _a	4.56	4.75	6.32	4.75	6.19	6.67	8.89	2.75	5.12
	acid	2.94	2.87	4.04	3.87	5.50	6.60	8.26	2.00	3.37
6-24-86	chl _a	1.78	2.35	1.50	2.63	1.78	2.35	4.18	4.36	1.21
	acid	1.50	2.18	1.25	1.41	1.50	2.18	3.93	2.93	0.93
7-8-86	chl _a	4.30	1.75	2.06	1.48	6.48	3.45	5.6	1.54	2.10
	acid	4.33	1.75	1.97	1.33	6.06	3.24	5.03	1.26	1.74
7-21-86	chl _a	1.12	1.12	1.51	1.85	6.36	0.57	4.44	2.54	2.20
	acid	1.12	1.14	1.42	1.97	6.67	0.48	5.18	2.50	1.51
8-4-86	chl _a	3.63	1.74	2.03	2.45	5.75	2.60	5.45	4.35	3.94
	acid	3.63	1.63	2.06	2.48	5.75	2.54	5.60	4.70	1.79
8-19-86	chl _a	4.42	3.86	1.95	4.84	6.18	7.62	5.46	2.92	3.29
	acid	2.68	2.41	1.61	2.65	4.33	5.46	3.84	2.58	3.58
9-9-86	chl _a	4.75	4.90	2.97	3.19	3.40	4.74	2.59	5.67	3.01
	acid	2.42	2.54	1.37	1.86	2.42	4.33	1.47	3.30	1.64
9-30-86	chl _a	4.21	3.73	1.68	1.6	0.65	1.84	0.50	4.84	5.75
	acid	2.23	1.88	0.94	0.85	0.46	1.06	0.33	2.26	2.94

APPENDIX B - Storm Runoff Analyses



Arnold Greene Testing Laboratories

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Inspection • Evaluation • Analysis
Research • Development



East Natick Industrial Park
6 Huron Drive • Natick, MA 01760
(617) 235-7330, 653-5950
Telex 948459 GREENELAB NTK

Branch Laboratories:
Springfield, Mass. 01109
(413) 734-6548
Auburn, Mass. 01501
(617) 832-5500

CONAM INSPECTION A UNIT OF **QUALCORP**
California, Texas, Illinois, Pennsylvania, Minnesota, Ohio

CONAM INSPECTION

To: IEP INC.
6 MAPLE STREET
BOX 780

NORTHBORD, MA 01532

Date 9/9/86

Job No. 84564-1

Lab No. 5018

Material: WATER

Book No. 239-26-AP

Specifications: None

Attn: Order No. BARNC-1 (storm runoff)

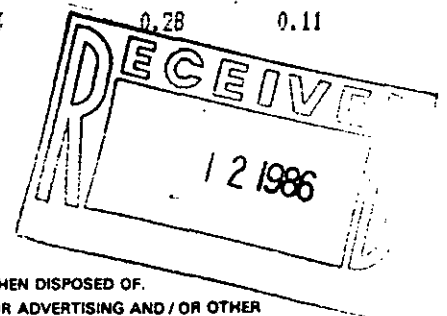
Sample ID: 6 Water Samples @ Barnc-1

Date received: 8/27/86

	WS-1	WS-2	WS-4	W-6	LP-1	LP-2
Total Coliform Bacteria (colonies/100ml)	1000	7000	4000	3000	2000	2000
Fecal Coliform Bacteria (colonies/100ml)	<10	<10	<10	<10	<10	40
Total Suspended Solids (mg/l)	284	84	67	34	46	20
Total Dissolved Solids (mg/l)	90	42	95	69	111	59
Ammonia (mg/l) as N	0.68	0.48	0.48	0.24	1.0	0.48
Nitrate (mg/l) as N	0.86	1.2	1.4	1.0	2.2	0.80
Chloride (mg/l)	17	13	32	31	18	16
Phosphate, Total (mg/l) as P	0.17	0.02	0.16	0.07	0.16	0.08
Total Kjeldahl-Nitrogen (mg/l) as N	3.8	2.1	4.1	0.91	5.0	1.6
Oil & Grease (mg/l)	--	--	<1.0	5.2	8.0	6.1
TOTAL METALS (mg/l)						
Cadmium	0.08	0.04	0.08	0.02	0.05	<0.02
Chromium	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Copper	0.07	0.02	0.02	<0.02	0.05	0.03
Iron	5.2	1.3	0.69	0.33	2.6	1.4
Lead	0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Manganese	0.16	0.12	0.19	0.09	0.08	0.06
Zinc	0.55	0.14	0.12	0.03	0.28	0.11

IN WITNESS WHEREOF, I HAVE HEREUNTO SET MY HAND THIS
9TH DAY OF SEPTEMBER 1986
ARNOLD GREENE TESTING LABORATORIES
DIVISION OF CONAM INSPECTION

Geoffrey Coelho
Geoffrey Coelho, Manager



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East Natick Industrial Park
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(617) 235-7330, 653-5950
Telex 948459 GREENELAB NTIK

CONAM INSPECTION A UNIT OF **QUALICORP**
California, Texas, Illinois, Pennsylvania, Minnesota, Ohio

CONAM INSPECTION

To: IEP INC.
4 MAPLE STREET
BOX 780
NORTHBORD, MA 01532

Date 11/21/86

Material: WATER

Job No. 87815-1

Book No. 255 39 AP

NOV 26 1986

Lab No. 5420
NOVO. W05, P.1

Specifications: None

Order No. BARNC-1

(Storm runoff)

Sample ID: 15 Water Samples @ Wequaquet Lake

Date received: 11/11/86

	LP-1	LP-2	LP-3	LP-4	LP-5	LP-6	LP-7	LP-8
Total Coliform Bacteria (colonies/100ml)	>6000	>6000	>6000	>6000	>6000	>6000	>6000	>6000
Fecal Coliform Bacteria (colonies/100ml)	>6000	>6000	>6000	>6000	>6000	>6000	>6000	>6000
Oil & Grease (mg/l)	1.4	4.4	8.0	9.4	4.2	2.8	3.6	4.0
Total Suspended Solids (mg/l)	111	35	79	92	67	48	44	51
Total Dissolved Solids (mg/l)	280	139	73	96	59	57	52	69
Ammonia (mg/l) as N	0.230	0.250	0.130	0.067	0.250	0.067	0.066	0.067
Nitrate (mg/l) as N	0.40	0.32	0.35	0.30	0.38	0.30	0.24	0.24
Chloride (mg/l)	2.8	2.4	2.4	5.3	1.1	<0.5	<0.5	.28
Phosphate, Total (mg/l) as P	0.28	0.16	0.13	0.14	0.60	0.11	0.13	0.20
Total Kjeldahl-Nitrogen (mg/l) as N	2.2	1.3	0.83	1.4	1.7	0.56	0.43	0.76



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Auburn, Mass. 01501
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CONAM INSPECTION

CONAM INSPECTION A UNIT OF QUALCORP
California, Texas, Illinois, Pennsylvania, Minnesota, Ohio

to: IEP INC.
6 MAPLE STREET
BOX 780
NORTHBORO, MA 01532

Date 11/21/86
Job No. 87815-1
Lab No. 5420
NOVO.W05, P.3
Order No. BARNC-1

Material: WATER
Book No. 255 41 AP
Specifications: None

PA 2

	LP-9	LP-10	W-1A	W-1B	W-1C
Total Coliform Bacteria (colonies/100ml)	>6000	>6000	>6000	>6000	>6000
Fecal Coliform Bacteria (colonies/100ml)	>6000	>6000	>6000	>6000	>5500
Oil & Grease (mg/l)	6.2	5.6	2.4	1.6	1.8
Total Suspended Solids (mg/l)	76	116	31	9.3	52
Total Dissolved Solids (mg/l)	57	51	45	39	24
Ammonia (mg/l) as N	0.064	0.07	0.09	<0.01	<0.01
Nitrate (mg/l) as N	0.21	0.23	0.12	0.08	0.10
Chloride (mg/l)	<0.5	1.1	1.1	<0.5	2.0
Phosphate, Total (mg/l) as P ³	0.22	0.30	0.25	0.06	0.13
Total Kjeldahl-Nitrogen (mg/l) as N	0.67	0.93	1.1	0.34	0.43



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Telex 948459 GREENELAB NTK

Branch Laboratories:
Springfield, Mass. 01109
(413) 734-6548
Auburn, Mass. 01501
(617) 832-5500

CONAM INSPECTION A UNIT OF QUALCOMP
California, Texas, Illinois, Pennsylvania, Minnesota, Ohio

CONAM INSPECTION

Client: TEP INC.
4 MAPLE STREET
PO BOX 780
NORTHBORO, MA 01532

Date 11/21/86
Job No. 87815-1
Lab No. 5420
NOVD.W05, P.4
Order No. BARNC-1

Material: WATER
Book No. 255 41 AP
Specifications: None

LP COMPOSITE W COMPOSITE

Total mg/l

Cadmium	<0.02	<0.02
Chromium	<0.02	<0.02
Copper	0.04	0.02
Iron	3.8	0.90
Lead	<0.10	<0.10
Manganese	0.06	0.03
Zinc	0.09	0.03

IN WITNESS WHEREOF, I HAVE HEREUNTO SET MY HAND THIS
21ST DAY OF NOVEMBER 1986
ARNOLD GREENE TESTING LABORATORIES
DIVISION OF CONAM INSPECTION



Geoffrey A. Coelho, Manager

GHR ANALYTICAL, INC.
26 MAIN STREET
LAKEVILLE, MA 02347
(617) 947-5077

JAN 29 1987

REPORT OF ANALYSIS

Client: IEP, Inc.
Project: BARNC-1

Job No: 32-349
Date: January 22, 1987

Date Collected: January 2, 1987
Collected by: M. Nelson

Sample Location: W-6 Detection
Storm Run Off Limit
GHR Lab ID: 63119

Parameter Test Results in mg/l (unless noted otherwise)

pH (pH Units) 4.4

Alkalinity BDL (2) 5

Specific Conductance (1) 62

Nitrate as N 0.09

Ammonia as N 0.11

Total Kjeldahl Nitrogen 0.92

Chloride 10.9

Oil & Grease BDL 5

Total Phosphate as P 0.02

Solids:

Total Dissolved 22

Total Suspended 8

- (1) Specific Conductance in umhos/cm.
(2) BDL = Below Detection Limit.

Approved by: Stephen O'Neil
Stephen O'Neil, Assistant Laboratory Director
GHR Analytical, Inc.

GHR ANALYTICAL, INC.
26 MAIN STREET
LAKEVILLE, MA 02347
(617) 947-5077

REPORT OF ANALYSIS

Client: IEP, Inc.
Project: BARNC-1

Job No: 32-349
Date: January 22, 1987

Date Collected: January 2, 1987
Collected by: M. Nelson

Sample Location: W-6 Detection
Storm Run Off Limit
GHR Lab ID: 63119

<u>Parameter</u>	<u>Test Results in mg/l (unless noted otherwise)</u>	
Cadmium	BDL (1)	0.010
Chromium	BDL	0.05
Copper	BDL	0.02
Iron	0.68	
Lead	0.004	
Manganese	0.06	
Zinc	BDL	0.02
Total Coliform (2)	1,300	
Fecal Coliform (2)	20	

- (1) BDL = Below Detection Limit.
(2) Total and Fecal Coliform/100 ml MPN.

Approved by: 

Stephen O'Neil, Assistant Laboratory Director
GHR Analytical, Inc.

APPENDIX C - Sediment Analyses and the Sediment Pollution Index



Arnold Greene Testing Laboratories

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(413) 734-6548
Auburn, Mass. 01501
(617) 832-5500

CONAM INSPECTION

CONAM INSPECTION A UNIT OF **QUALCOMP**
California, Texas, Illinois, Pennsylvania, Minnesota, Ohio

To: IEP INC.
6 MAPLE STREET
BOX 780

Date 3/6 /86

Material: SEDIMENT

NORTHBORD, MA 01532

Job No. 76761-1

Book No. 201-6 RH

Lab No. 4017A

Specifications: None

Attn:

Order No. BARNC-1

Sample ID: ^{Sediment} 6 ~~Water~~ Samples @ Wequaquet, Bearse & Long Pond Date received: 2/27/86

	W-1	W-2	W-3	W-4	BP-1	LP-1
Total Volatile Solids (%)	10.1	4.25	11.5	12.7	21.2	11.1
Nitrate (mg/kg) as N	14	2.60	9.4	21	15	17
Phosphate, Total (mg/kg) as P	32	21	88	4.97	943	45
Total Kjeldahl-Nitrogen (mg/kg) as N	6620	115	6760	8340	11700	10600
TOTAL (mg/kg):						
Cadmium	<10	<4.7	<9.1	<9.4	<13	<18
Chromium	20	<4.7	9.1	<9.4	25	26
Copper	36	17	23	19	25	61
Iron	15100	6390	11800	9340	12500	14800
Lead	102	47	91	47	64	220
Manganese	137	66	87	75	147	79
Zinc	117	47	82	71	76	184

IN WITNESS WHEREOF, I HAVE HEREUNTO SET MY HAND THIS
6TH DAY OF MARCH 1986
ARNOLD GREENE TESTING LABORATORIES
DIVISION OF CONAM INSPECTION

Geoffrey Coelho, Lead Chemist

FORMULA AND CALCULATION OF THE SEDIMENT POLLUTION INDEX (SPI)

The SPI is given by the following formula (McGinn, 1981):

$$SPI = 1/N \sum \bar{C}_i / CN_i$$

where N = total number of metals included in calculating the SPI

\bar{C}_i = average concentration of metal i

CN_i = Clarke Number of metal i

In calculating the SPI for the Wequaquet Lakes, the metal concentration from a single sample at each station was substituted for the average concentration (\bar{C}_i) specified in the above formula. Cadmium was not included in the SPI for the Wequaquet Lakes because only maximum levels and not absolute concentrations were measurable in laboratory analysis. Chromium was left out of the SPI calculations for stations W-2 and W-4 for the same reason. Below is the SPI formula with the appropriate values inserted for each station:

$$\begin{aligned} \text{W-1 SPI} &= 1/4 (20/100 + 36/55 + 102/12.5 + 117/70) \\ &= 2.67 \end{aligned}$$

$$\begin{aligned} \text{W-2 SPI} &= 1/3 (17/55 + 47/12.5 + 47/70) \\ &= 1.56 \end{aligned}$$

$$\begin{aligned} \text{W-3 SPI} &= 1/4 (9.1/100 + 23/55 + 91/12.5 + 82/70) \\ &= 2.24 \end{aligned}$$

$$\begin{aligned} \text{W-4 SPI} &= 1/3 (19/55 + 47/12.5 + 71/70) \\ &= 1.69 \end{aligned}$$

$$\begin{aligned} \text{Bearsse SPI} &= 1/4 (25/100 + 25/55 + 64/12.5 + 76/70) \\ &= 1.73 \end{aligned}$$

$$\begin{aligned} \text{Long SPI} &= 1/4 (26/100 + 61/55 + 220/12.5 + 184/70) \\ &= 5.40 \end{aligned}$$

APPENDIX D - Hydrologic and Nutrient Budgets



6 Maple Street
Northborough, MA 01532
393-8558

Client _____ Job No. BARNC-1 Sheet 1 of 2
Subject Hydrologic Budget By _____ Date _____
Wequaguet/Bearse system Ckd. _____ Rev. _____

INPUTS (annual)

a.) direct precipitation

amount of precipitation during year of study = 41.31 inches (NOAA)
= 1.05 m

surface area of Wequaguet/Bearse = 258.4 ha

$$(1.05 \text{ m})(258.4 \text{ ha}) = \underline{\underline{2,713,200 \text{ m}^3}}$$

b.) ground water inflow

amount of recharge per year = 18 inches (LeBlanc et al, 1986)
= 0.46 m

surface area of recharge area = 323.0 ha

$$(0.46 \text{ m})(323.0 \text{ ha}) = \underline{\underline{1,485,800 \text{ m}^3}}$$

c.) surface runoff/storm drains

calculated as a residual assuming no change
in storage = 2,73,342 m³

$$\text{Total Inputs} = 4,492,342 \text{ m}^3/\text{year}$$

Client _____ Job No. BARNC-1 Sheet 2 of 2
Subject Hydrologic Budget By _____ Date _____
Weguquet / Bearse system Ckd. _____ Rev. _____

LOSSES (annual)

a.) herring run outlet

average discharge rate on a year-round
basis = $6,159.87 \text{ m}^3/\text{day}$ (K-V)

$$(6,159.87 \text{ m}^3/\text{day})(365 \text{ days}) = \underline{\underline{2,248,354 \text{ m}^3}}$$

b.) evaporation

amount of evaporation per year = 25 inches (Dunne and
Leopold, 1978)
= 0.635 m

surface area of Weguquet / Bearse = 258.4 ha

$$(0.635 \text{ m})(258.4 \text{ ha}) = \underline{\underline{1,640,840 \text{ m}^3}}$$

c.) ground water outflow

amount of ground water outflow = $603,148 \text{ m}^3$ (K-V)

Total Losses = $4,492,342 \text{ m}^3/\text{year}$

Client _____ Job No. BARNC-1 Sheet 1 of 2
Subject Hydrologic Budget By _____ Date _____
Long Pond Ckd. _____ Rev. _____

INPUTS (annual)

a.) herring run inlet

identical to discharge from Wepuaguet/Bearse = 2,248,354 m³

b.) direct precipitation

amount of precipitation during year of study = 41.31 inches (NOAA)
= 1.05 m

surface area of Long Pond = 19.8 ha

(1.05 m)(19.8 ha) = 207,900 m³

c.) ground water inflow

amount of ground water inflow = 354,719 m³ (K-V)

d.) surface runoff/storm drains

assumed to be negligible

Total Inputs = 2,810,973 m³/year



6 Maple Street
Northborough, MA 01532
393-8558

Client _____ Job No. BARNG-1 Sheet 2 of 2
Subject Hydrologic Budget By _____ Date _____
Long Pond Ckd. _____ Rev. _____

LOSSES (annual)

a.) herring run outlet

calculated as a residual assuming no change

$$\text{in storage} = \underline{\underline{2,288,755 \text{ m}^3}}$$

b.) evaporation

$$\begin{aligned} \text{amount of evaporation per year} &= 25 \text{ inches (Dunne and} \\ &= 0.635 \text{ m (Leopold, 1978))} \end{aligned}$$

$$\text{surface area of Long Pond} = 19.8 \text{ ha}$$

$$(0.635 \text{ m})(19.8 \text{ ha}) = \underline{\underline{125,730 \text{ m}^3}}$$

c.) ground water outflow

$$\text{amount of ground water outflow} = \underline{\underline{396,488 \text{ m}^3}} \text{ (K-V)}$$

$$\text{Total Losses} = 2,810,973 \text{ m}^3/\text{year}$$

Client Barnstable Job No. BARNC-1 Sheet 1 of 6
Subject Nutrient budget - sources By DW Date _____
Weguagnet / Bearse system Ckd. _____ Rev. _____

1.) Surface Inputs

a.) direct precipitation

$$\text{areal loading rate} = 0.35 \text{ kg P/ha/yr}$$

(median value for annual bulk deposition of phosphorus documented in Scheider, Snyder, and Clark, 1979)

$$\text{area of Weguagnet / Bearse} = 258.4 \text{ ha}$$

$$(0.35 \text{ kg P/ha/yr})(258.4 \text{ ha}) = \underline{\underline{90.4 \text{ kg P/yr}}}$$

b.) station 5 cranberry bog

volume of water use per year = 2 acre-ft per unit area
(Dr. Karl Deubert, Cranberry Expt. Station) of bog

$$\text{area of cranberry bog} = 7.7 \text{ acres}$$

median P concentration observed during study = 0.22 mg/L

$$(2 \text{ acre-ft})(7.7 \text{ acres}) = 15.4 \text{ acre-ft}$$

$$(15.4 \text{ acre-ft})(1,233.5 \text{ m}^3/\text{acre-ft}) = 18,995.9 \text{ m}^3$$

$$(18,995.9 \text{ m}^3)(0.00022 \text{ kg P/m}^3) = \underline{\underline{4.2 \text{ kg P (annual load)}}}$$

Client Barnstable Job No. BARNC-1 Sheet 2 of 6
Subject Nutrient budget - Sources By DW Date _____
Weynaquet/Bearse system Ckd. _____ Rev. _____

c.) waterfowl / gulls

loading = 90 g P / animal / yr (data for domestic ducks;
Shannon and Brezonik, 1972)

waterfowl / gull population = 100. (estimated from observations
during year of study)

$$\begin{aligned} (90 \text{ g P / animal / yr}) (100 \text{ animals}) &= 9000 \text{ g P / yr} \\ &= \underline{\underline{9 \text{ kg P / yr}}} \end{aligned}$$

d.) shoreline lawns

loading = 0.5 lb P per 3,000 square feet of lawn area annually
(K-V Associates)

total shoreline lawn area = 106,800 ft² (K-V Associates)

$$\begin{aligned} (106,800 \text{ ft}^2) (0.5 \text{ lb P} / 3,000 \text{ ft}^2) &= 17.8 \text{ lb P} \\ &= \underline{\underline{8.1 \text{ kg P (annual load)}}} \end{aligned}$$

Client Barnstable Job No. PARNC-1 Sheet 3 of 6
Subject Nutrient budget - sources By DW Date _____
Wequaguet/Bearse system Ckd. _____ Rev. _____

e.) Storm drains (1.05 meters of precipitation during year of study)

Station WS-1 median phosphorus value = 0.17 mg/L

$$(3,680 \text{ m}^2)(1.05 \text{ m})(0.17 \text{ g/m}^3) = 657 \text{ g} = 0.66 \text{ kg}$$

Station WS-2 median phosphorus value = 0.02 mg/L

$$(583 \text{ m}^2)(1.05 \text{ m})(0.02 \text{ g/m}^3) = 12 \text{ g} = 0.01 \text{ kg}$$

Station WS-4 median phosphorus value = 0.16 mg/L

$$(584 \text{ m}^2)(1.05 \text{ m})(0.16 \text{ g/m}^3) = 98.1 \text{ g} = 0.10 \text{ kg}$$

$$\text{total} = 0.77 \approx \underline{\underline{0.8 \text{ kg P/yr}}}$$

f.) Oak Street culvert system

storm sampled 2-January, 1987

amount of precipitation received after system had reached
maximum capacity = 2.45 inches

area of culvert system drainage basin = 466 acres

$$(2.45 \text{ inches}) \left(\frac{1 \text{ ft}}{12 \text{ inches}} \right) (466 \text{ ac}) = 95.14 \text{ acre-ft of runoff}$$
$$= 117,355 \text{ m}^3 \text{ total volume of discharge}$$

phosphorus concentration of discharge = 0.02 mg/L

load of phosphorus from the above

$$\text{storm discharge} = (117,355 \text{ m}^3)(0.02 \text{ g/m}^3)$$

$$= 2347 \text{ g}$$

$$\approx \underline{\underline{2.3 \text{ kg}}}$$

Client Barnstable Job No. BARNC-1 Sheet 4 of 6
Subject Nutrient budget - Sources By DW Date _____
Weguagnet/Bearse System Ckd. _____ Rev. _____

2.) Ground Water Inputs

a) background flow into Main, Bearse, Gooseberry, and South basins.

$$\text{volume of inflow} = 1,456,518 \text{ m}^3/\text{yr} \text{ (K-V)}$$

$$\text{background level of P in ground water} = 0.05 \text{ mg/L}$$

(Frimpter and Gay, 1979)

$$(1,456,518 \text{ m}^3/\text{yr})(0.00005 \text{ kg/m}^3) = \underline{\underline{72.8 \text{ kg/yr}}}$$

b) inflow from Bearse Pond cranberry bog

$$\text{volume of inflow} = 29,282 \text{ m}^3/\text{yr} \text{ (K-V)}$$

$$\text{concentration of P in ground water} = 0.092 \text{ mg/L} \text{ (K-V)}$$

$$(29,282 \text{ m}^3/\text{yr})(0.000092 \text{ kg/m}^3) = \underline{\underline{2.7 \text{ kg/yr}}}$$



6 Maple Street
Northborough, MA 01532
393-8558

Client Barnstable Job No. BARNC-1 Sheet 5 of 6
Subject Nutrient budget - sources By DW Date _____
Weguaguet/Bearre system Ckd. _____ Rev. _____

c.) projected input from "near field" septic systems at "equilibrium" conditions (K-V, see Section 4.0)

number of developed lots within 300 feet of shoreline = 231

phosphorus loading per dwelling within 300 feet of shoreline = 0.75 lb/yr

$$(231 \text{ dwellings}) (0.75 \text{ lb P/yr}) = 173.3 \text{ lb P/yr} = \underline{\underline{78.8 \text{ kg P/yr}}}$$

d.) projected input from "far field" septic systems at "equilibrium" conditions (K-V, see Section 4.0)

number of developed lots beyond 300 feet of shoreline = 445

phosphorus load = 6.0 kg/yr

Total P Inputs (existing conditions) = 190.3 kg/yr

Total P Inputs ("equilibrium" conditions) = 275.1 kg/yr

Client Barnstable Job No. BARNC-1 Sheet 6 of 6
Subject Nutrient budget - losses By DW Date _____
Weguaguet / Bearse system Ckd. _____ Rev. _____

Losses

a.) herring run outlet (station W-7)

volume of discharge = $2,248,354 \text{ m}^3/\text{yr}$ (K-V Associates)

median P concentration observed during study = 0.025 mg/L

$$(2,248,354 \text{ m}^3/\text{yr})(0.000025 \text{ kg/m}^3) = \underline{\underline{56.2 \text{ kg/yr}}}$$

b.) ground water outflow

volume of outflow = $603,148 \text{ m}^3/\text{yr}$ (K-V Associates)

background level of P in ground water = 0.05 mg/L

(Frimpter and Gay, 1979)

$$(603,148 \text{ m}^3/\text{yr})(0.00005 \text{ kg/m}^3) = \underline{\underline{30.2 \text{ kg/yr}}}$$

c.) sedimentation

$$P \text{ lost to sediments} = \left(\begin{matrix} \text{surface} \\ \text{inputs} \end{matrix} + \begin{matrix} \text{ground} \\ \text{water} \\ \text{inputs} \end{matrix} \right) - \left(\begin{matrix} \text{surface} \\ \text{losses} \end{matrix} + \begin{matrix} \text{ground} \\ \text{water} \\ \text{losses} \end{matrix} \right)$$

$$= (114.8 \text{ kg} + 75.5 \text{ kg}) - (56.2 \text{ kg} + 30.2 \text{ kg})$$

$$= 190.3 \text{ kg} - 86.4 \text{ kg}$$

$$= \underline{\underline{103.9 \text{ kg}}} \text{ (retained in system annually)}$$

Client Barnstable Job No. BARNC-1 Sheet 1 of 4
 Subject Nutrient budget - sources By DW Date _____
Long Pond Ckd. _____ Rev. _____

1.) Surface Inputs

a.) herring run (from Weguaguet)

volume of discharge = 2,248,354 m³/yr (K-V Associates)

median P concentration observed during study = 0.025 mg/L

$$(2,248,354 \text{ m}^3/\text{yr})(0.000025 \text{ kg/m}^3) = \underline{\underline{56.2 \text{ kg/yr}}}$$

b.) direct precipitation

aerial loading rate = 0.35 kg P/ha/yr

(median value for annual bulk deposition of phosphorus documented in Scheider, Snyder, and Clark, 1979)

area of Long Pond = 19.8 ha

$$(0.35 \text{ kg P/ha/yr})(19.8 \text{ ha}) = \underline{\underline{6.9 \text{ kg P/yr}}}$$

c.) waterfowl/gulls

loading = 90 g P/animal/yr (data for domestic ducks; Shannon and Brezonik, 1972)

waterfowl/gull population = 20 (estimated from observations during year of study)

$$(90 \text{ g P/animal/yr})(20 \text{ animals}) = \underline{\underline{1.8 \text{ kg/yr}}}$$

Client Barnstable Job No. BARNC-1 Sheet 2 of 4
Subject Nutrient Budget - sources By DW Date _____
Long Pond Ckd. _____ Rev. _____

d.) shoreline lawns

loading = 0.5 lb P per 3,000 sq. feet of lawn area annually
(K-V Associates)

total shoreline lawn area = 39,400 ft² (K-V Associates)

$$(39,400 \text{ ft}^2) (0.5 \text{ lb P} / 3,000 \text{ ft}^2) = 6.6 \text{ lb P}$$
$$= \underline{\underline{3.0 \text{ kg P (annual load)}}$$

e.) storm drains (1.05 meters of precipitation during year of study)

station LPS-1 median phosphorus value = 0.20 mg/L

$$(5,145 \text{ m}^2) (1.05 \text{ m}) (0.20 \text{ g/m}^3) = 1,080 \text{ g} = 1.1 \text{ kg}$$

station LP-2 median phosphorus value = 0.08 mg/L

$$(5,542 \text{ m}^2) (1.05 \text{ m}) (0.08 \text{ g/m}^3) = 466 \text{ g} = 0.47 \text{ kg}$$

$$\text{total} = 1.57 \approx \underline{\underline{1.6 \text{ kg P/yr}}}$$

2.) Ground Water Inputs

a.) background flow

volume of inflow = 354,719 m³/yr (K-V Associates)

background level of P in ground water = 0.05 mg/L

(Frimpter and Gay, 1979)

$$(354,719 \text{ m}^3/\text{yr}) (0.00005 \text{ kg/m}^3) = \underline{\underline{17.7 \text{ kg/yr}}}$$



6 Maple Street
Northborough, MA 01532
393-8558

Client Barnstable Job No. BARUC-1 Sheet 3 of 4
Subject Nutrient Budget - Sources By DW Date _____
Long Pond Ckd. _____ Rev. _____

b.) projected input from "near field" septic systems
at "equilibrium" conditions (K-V, see Section 4.0)

number of developed lots within 300 feet
of shoreline = 40

phosphorus loading per dwelling within 300 feet
of shoreline = 0.75 lb P/yr

$$(40 \text{ dwellings}) (0.75 \text{ lb P/yr}) = 30.0 \text{ lb P/yr}$$

$$= \underline{\underline{13.6 \text{ kg P/yr}}}$$

c.) projected input from "far field" septic systems
at "equilibrium" conditions (K-V)

number of developed lots beyond 300 feet
of shoreline = 188

$$\text{phosphorus load (see Section 4.0)} = \underline{\underline{3.1 \text{ kg P/yr}}}$$

$$\text{Total P Inputs (existing conditions)} = 87.2 \text{ kg/year}$$

$$\text{Total P Inputs ("equilibrium" conditions)} = 103.9 \text{ kg/year}$$

Client Barnstable Job No. BARNC-1 Sheet 4 of 4
Subject Nutrient Budget - losses By DW Date _____
Long Pond Ckd. _____ Rev. _____

Losses

a.) herring run outlet (station LP-3)

$$\text{Volume of discharge} = 2,288,755 \text{ m}^3/\text{yr}$$

$$\text{median P concentration observed during study} = 0.02 \text{ mg/L}$$

$$(2,288,755 \text{ m}^3/\text{yr})(0.00002 \text{ kg/m}^3) = \underline{\underline{45.8 \text{ kg/yr}}}$$

b.) ground water outflow

$$\text{volume of outflow} = 396,488 \text{ m}^3/\text{yr} \text{ (K-V Associates)}$$

$$\text{background level of P in ground water} = 0.05 \text{ mg/L}$$

(Frimpter and Gay, 1979)

$$(396,488 \text{ m}^3/\text{yr})(0.00005 \text{ kg/m}^3) = \underline{\underline{19.8 \text{ kg/yr}}}$$

c.) sedimentation

$$P \text{ lost to sediments} = \left(\begin{matrix} \text{surface} \\ \text{inputs} \end{matrix} + \begin{matrix} \text{ground} \\ \text{water} \\ \text{inputs} \end{matrix} \right) - \left(\begin{matrix} \text{surface} \\ \text{losses} \end{matrix} + \begin{matrix} \text{ground} \\ \text{water} \\ \text{losses} \end{matrix} \right)$$

$$= (67.5 \text{ kg} + 17.7 \text{ kg}) - (45.8 \text{ kg} + 19.8 \text{ kg})$$

$$= 87.2 \text{ kg} - 65.6 \text{ kg}$$

$$= \underline{\underline{21.6 \text{ kg}}} \text{ (retained in system annually)}$$

APPENDIX E - Groundwater Measurements and Septic System Inventory

GROUNDWATER FLOW WORKSHEET WEQUAQUET

For use with K-V Associates, Inc. Groundwater Flowmeters, 4 channel probe

M40-2D-123

Table of LCD Readout

Probe pair	A B C		
	start	end	B-A
+1/-6	-75	-155	-80
+2/-7	-5	-82	-87
+3/-8	-6	+10	+16
+4/-9	-8	+96	+104

Operator: ces Date: 1-6-85

Station: W-86-1 Time: 3:30 PM

Location: Lewis Point west Wequaquet

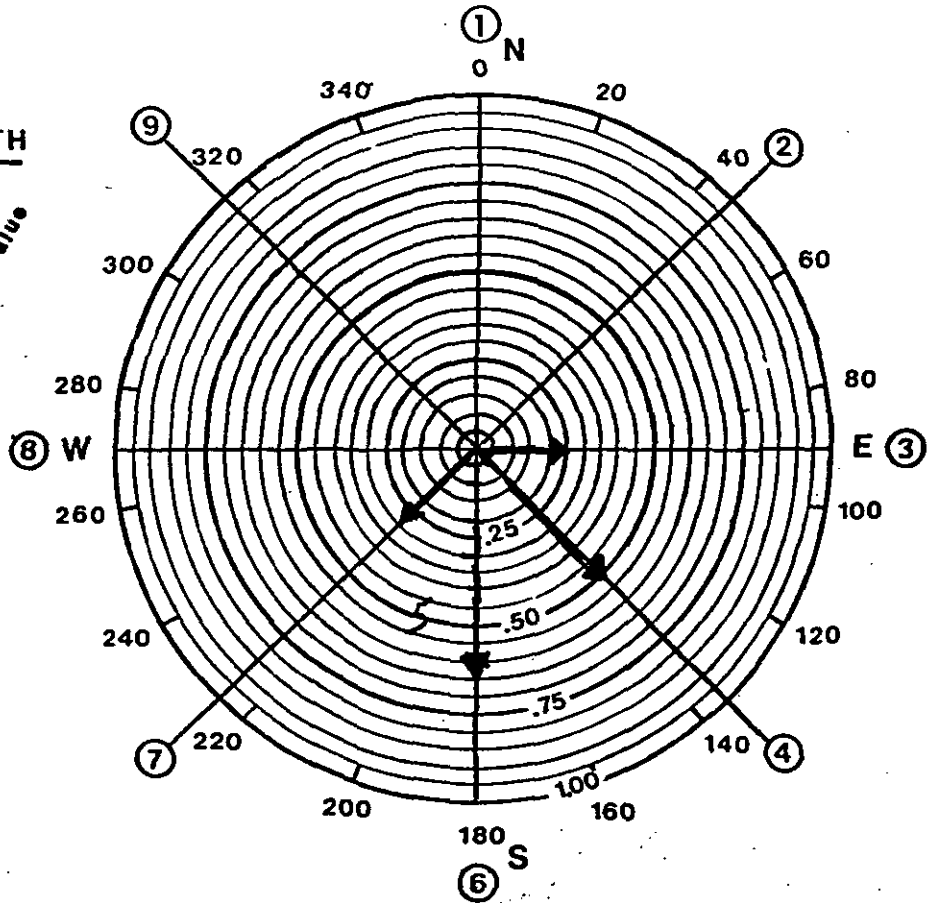
Soil Conditions: m-c. sand

Depth to Measurement: 20'

1.9 Amps

ROTATE PROBE 180° AT SAME DEPTH

Probe pair	D E S F			G N-S 2
	start	end	E-D	
+1/-6	-76	-143	-67	65
+1/-7	+25	-56	-81	-3
+3/-8	+22	+33	+11	+2.5
+1/-9	+10	+104	+94	+5



Vector Resolution to Determine Direction

1. Use KVA Vector Addition Program (TI-59/59-HP41C) calculators OR
2. Solve graphically by placing 4 individual vector segments sequentially head to tail. (See manual for detailed instructions).

Velocity Determination

Refer to your calibration curve of readout versus preferred units of flow (e.g. feet per day).

.38 FT/DAY

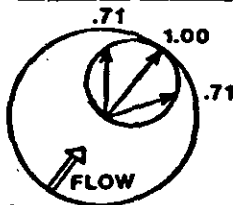
Direction: 162° Velocity: 6

Use of Table

COLUMN G - Divide each reading in column F by the largest absolute value. Draw these 4 vectors on the circle chart according to the scale provided (i.e. strongest vector = 1.00).

Cosine Test Shows Uniform Flow

Vector end points will closely fit a circle inscribed about the longest vector. Values in column G will approximate vector lengths shown at right.



GROUNDWATER FLOW WORKSHEET

For use with K-V Associates, Inc. Groundwater Flowmeters, 4 channel probe

M40-2D-123-4X-End Cap Rigid

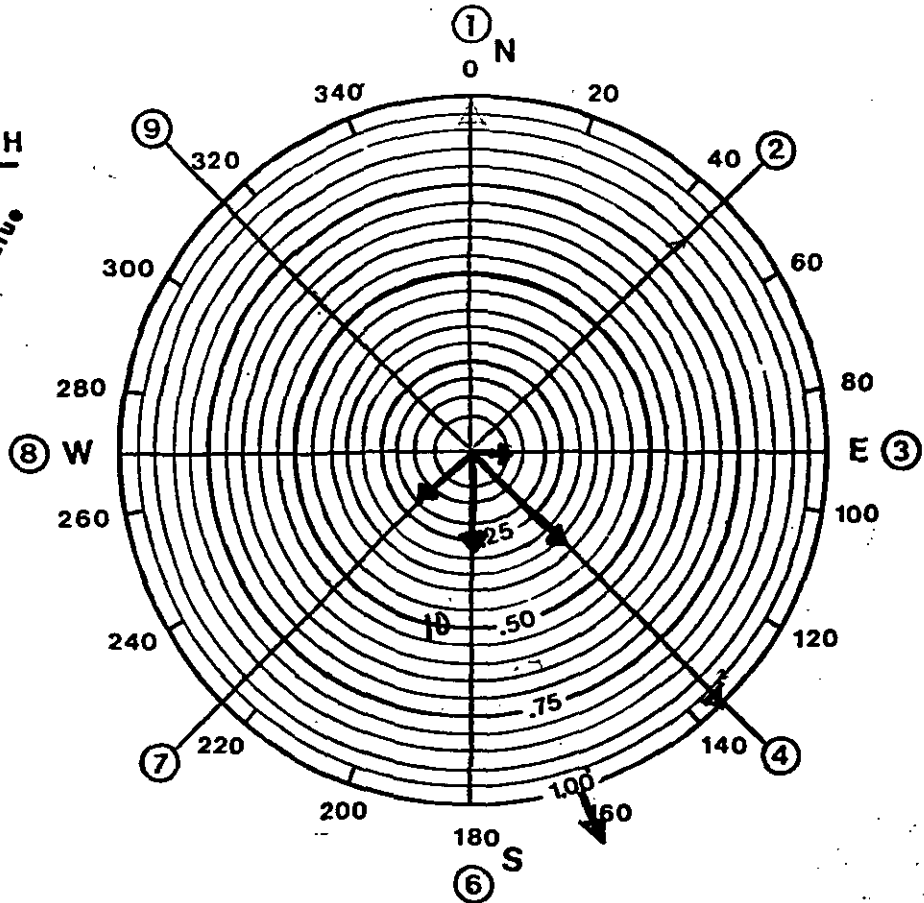
Operator: CE Date: 1-6-85 1.9 Amps
 Station: W-86-1 Time: 3:00 PM
 Location: Point on West Shore of Wequaquet Lake
 Soil Conditions: m-coarse sand overlain by sandy gravel w/ cobbles
 Depth to Measurement: 2.0'

Table of LCD Readout

1 → N	A	B	C
Probe pair	start	end	B-A
+1/-6	-85	+165	+80
+2/-7	0	-88	-88
+3/-8	-7	+8	+15
+4/-9	-5	+98	+103

ROTATE PROBE 180° AT SAME DEPTH

1 → S	D	E	S	F	G
Probe pair	start	end	E-D	N-S	F
+1/-6	-75	+144	+69	5.5	
+2/-7	+27	-54	-81	4	
+3/-8	+24	+35	+11	2	
+4/-9	+10	+98	+88	7.5	1.0

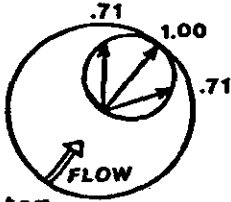


Use of Table

COLUMN G - Divide each reading in column F by the largest absolute value. Draw these 4 vectors on the circle chart according to the scale provided (i.e. strongest vector = 1.00).

Cosine Test Shows Uniform Flow

Vector end points will closely fit a circle inscribed about the longest vector. Values in column G will approximate vector lengths shown at right.



Vector Resolution to Determine Direction

1. Use KVA Vector Addition Program (TI-59/59-HP41C) calculators
2. Solve graphically by placing 4 individual vector segments sequentially head to tail. (See manual for detailed instructions).

Velocity Determination

Refer to your calibration curve of readout versus preferred units of flow (e.g. feet per day).

Direction: 162° Velocity: 7 .44 FT/DAY

average of two measurements = 10150 .41 FT/DAY

GROUNDWATER FLOW WORKSHEET Wequaquet Lake

For use with K-V Associates, Inc. Groundwater Flowmeters, 4 channel probe

Table of LCD Readout

Probe pair	A		B		C
	start	end	start	end	
+1/-6	67	142	75		
+2/-7	14	83	97		
+3/-8	0	8	8		
+4/-9	9	78	87		

Operator: CES Date: 1-7-86
 Station: W-86-2 Time: 10.20 AM
 Location: South of Lewis Point (Wequaquet)
 Soil Conditions: coarse sand
 Depth to Measurement: 12'

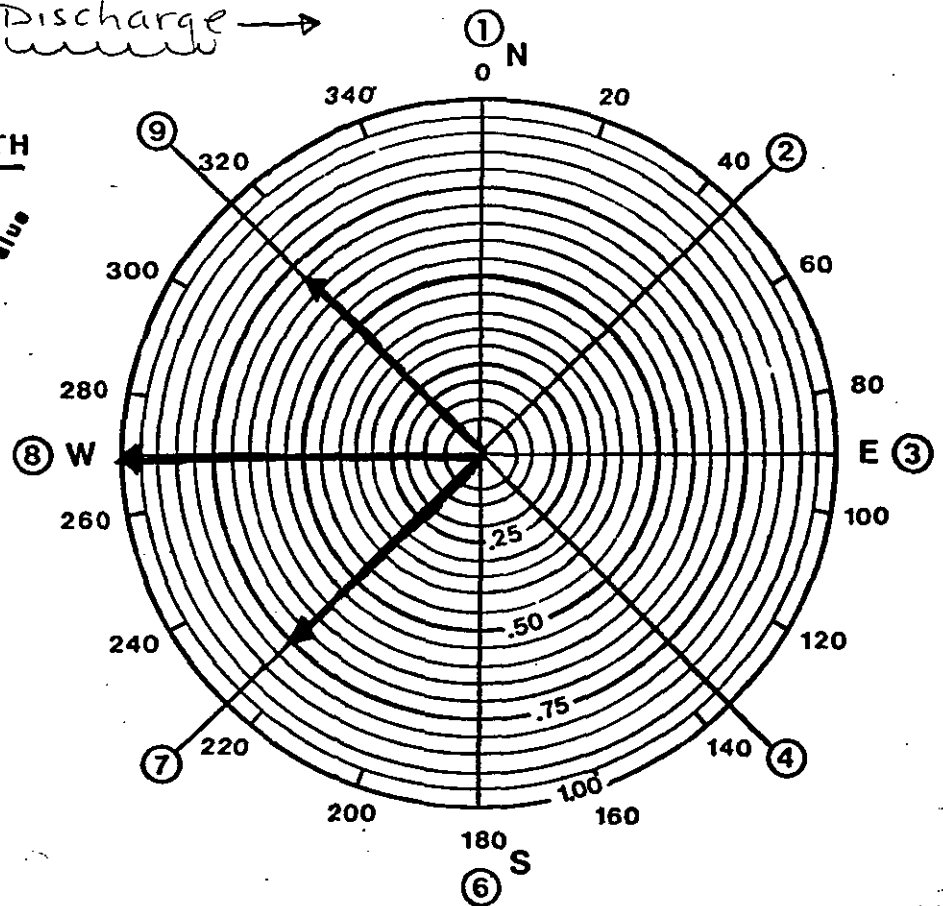
1.9amps

Discharge →

ROTATE PROBE 180° AT SAME DEPTH

Probe pair	D		E		S	F	G
	start	end	start	end			
+1/-6	-80	55	75				
+2/-7	+25	50	75				
+3/-8	+27	48	21				
+4/-9	+19	26	107				

N-S	F
$\frac{N-S}{2}$	max. value
0	0
-11	.75
-14.5	1.0
-70	.69

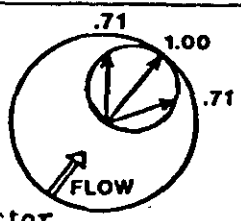


Use of Table

COLUMN G - Divide each reading in column F by the largest absolute value. Draw these 4 vectors on the circle chart according to the scale provided (e.g. strongest vector = 1.00).

Cosine Test Shows Uniform Flow

Vector end points will closely fit a circle inscribed about the longest vector. Values in column G will approximate vector lengths shown at right.



Vector Resolution to Determine Direction

1. Use KVA Vector Addition Program (TI-58/59-HP41C) calculators
- OR
2. Solve graphically by placing 4 individual vector segments sequentially head to tail. (See manual for detailed instructions).

Velocity Determination

Refer to your calibration curve of readout versus preferred units of flow (e.g. feet per day).

Direction: 269° Velocity: 15

GROUNDWATER FLOW WORKSHEET

For use with K-V Associates, Inc. Groundwater Flowmeters, 4 channel probe

M40-123 END CAP RIGID

Table of LCD Readout

1 → N	A	B	C
Probe pair	start	end	B-A
+1/-6	-83	157	67
+2/-7	+9	93	84
+3/-8	0	-11	71
+4/-9	0	180	180

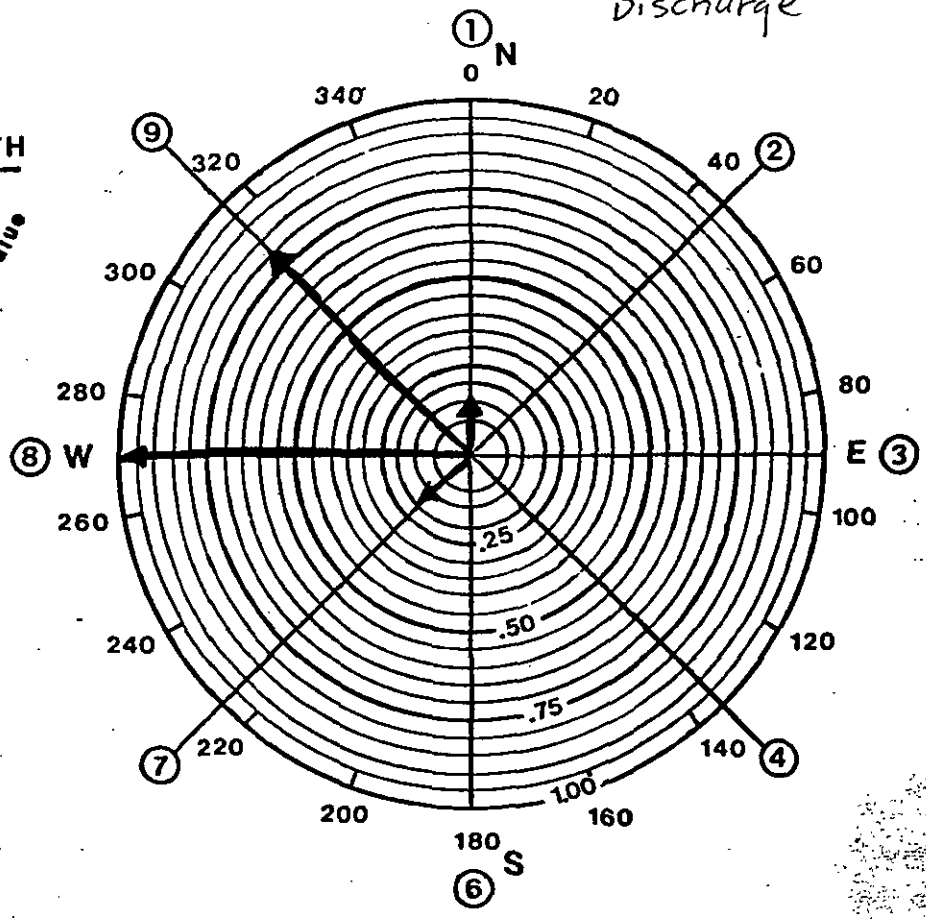
Operator: CES Date: 1-7-86
 Station: W-86-2 Time: 9:50 AM
 Location: South of Lewis Point
 Soil Conditions: Coarse sand
 Depth to Measurement: 1.2'

1.9 AMPS
28 sec.

Discharge

ROTATE PROBE 180° AT SAME DEPTH

1 → S	D	E	S	F	G
Probe pair	start	end	E-D	N-S	F
+1/-6	-80	152	72	25	12
+2/-7	53	74	77	3.5	.18
+3/-8	+21	150	59	20	1.0
+4/-9	+14	126	112	16	.80

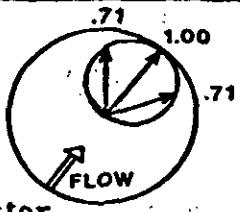


Use of Table

COLUMN G - Divide each reading in column F by the largest absolute value. Draw these 4 vectors on the circle chart according to the scale provided (i.e. strongest vector = 1.00).

Cosine Test Shows Uniform Flow

Vector end points will closely fit a circle inscribed about the longest vector. Values in column G will approximate vector lengths shown at right.



Vector Resolution to Determine Direction

1. Use KVA Vector Addition Program (TI-59/59-HP41C) calculators
2. Solve graphically by placing 4 individual vector segments sequentially head to tail. (See manual for detailed instructions).

Velocity Determination

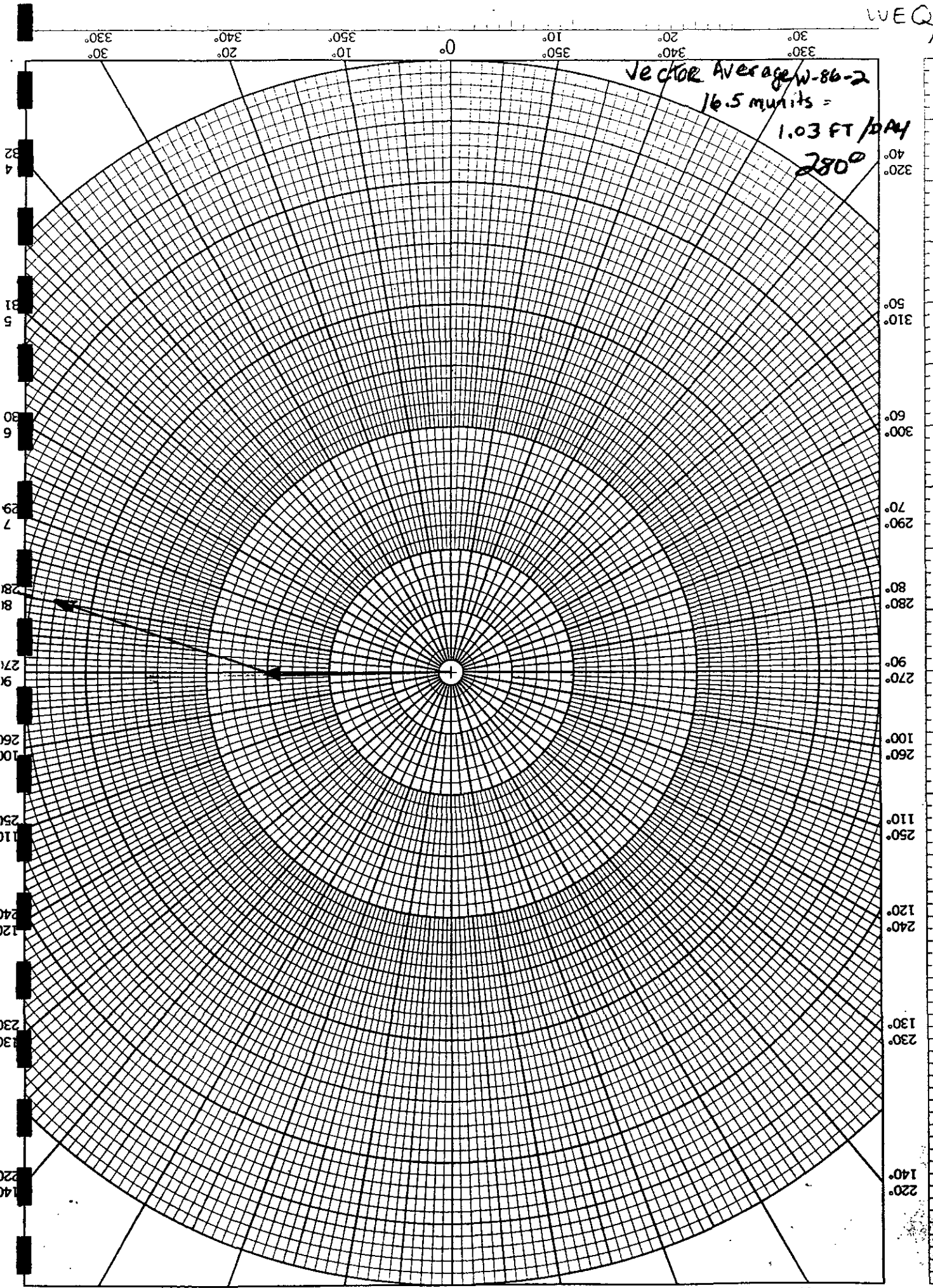
Refer to your calibration curve of readout versus preferred units of flow (e.g. feet per day).

Direction: 289° Velocity: 18

Form 104 available from your local K-V Associates, Inc. dealer.

WEQ/w

VECTOR AVERAGE W-86-2
16.5 units =
1.03 FT/DAY
280°



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KEUFEL & ESSER CO. MADE IN U.S.A.

46 4410

GROUNDWATER FLOW WORKSHEET

For use with K-V Associates, Inc. Groundwater Flowmeters, 4 channel probe

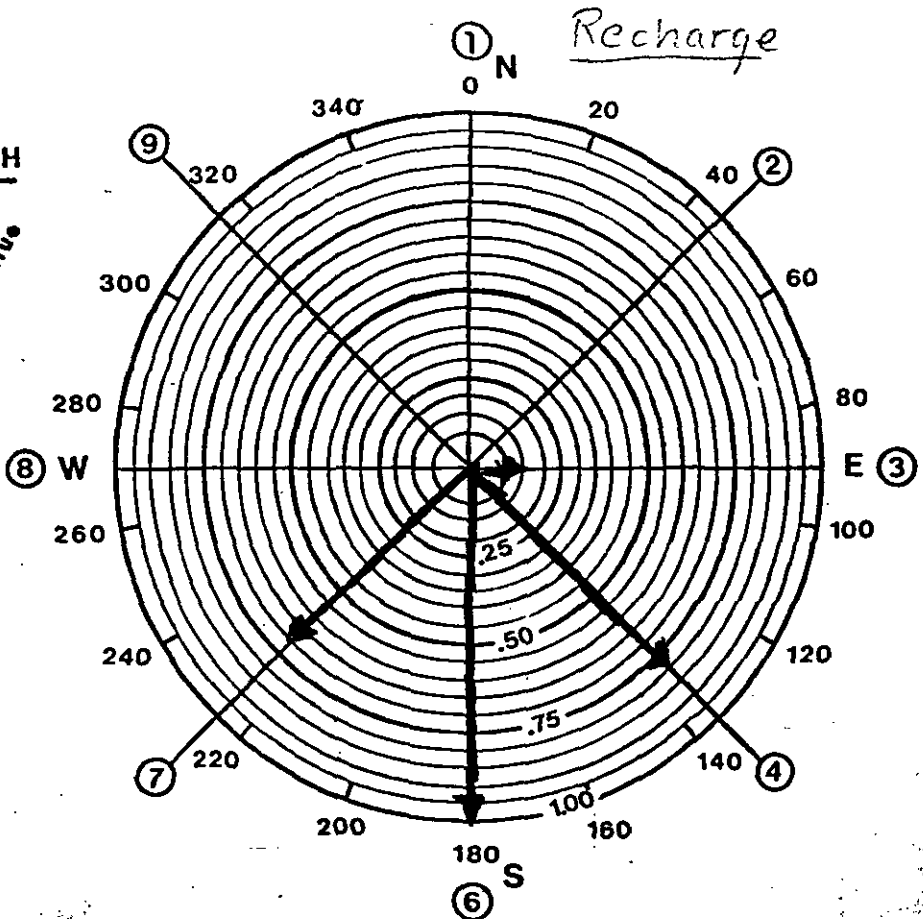
Table of LCD Readout

1 → N	A	B	C
Probe pair	start	end	B-A
+1/-6	69	162	93
+2/-7	20	78	58
+3/-8	12	25	13
+4/-9	1	115	114

Operator: CEs Date: 1-7-86
 Station: W-86-3 Time: 12:00 PM
 Location: Southwest of town beach
 Soil Conditions: c. sand & gravel
 Depth to Measurement: 1.2 1.9 amps

ROTATE PROBE 180° AT SAME DEPTH

1 → S	D	E	S	F	G
Probe pair	start	end	E-D	N-S	F
+1/-6	72	139	67	13	7.0
+2/-7	18	50	40	9	7.0
+3/-8	10	21	9	2	.15
+4/-9	4	98	94	10	.77

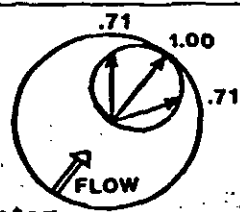


Use of Table

COLUMN G - Divide each reading in column F by the largest absolute value. Draw these 4 vectors on the circle chart according to the scale provided (i.e. strongest vector = 1.00).

Cosine Test Shows Uniform Flow

Vector end points will closely fit a circle inscribed about the longest vector. Values in column G will approximate vector lengths shown at right.



Vector Resolution to Determine Direction

1. Use KVA Vector Addition Program (TI-59/59-HP41C) calculators
- OR
2. Solve graphically by placing 4 individual vector segments sequentially head to tail. (See manual for detailed instructions).

Velocity Determination

Refer to your calibration curve of readout versus preferred units of flow (e.g. feet per day). .81 FT/DAY

Direction: 174° Velocity: 13

GROUNDWATER FLOW WORKSHEET

For use with K-V Associates, Inc. Groundwater Flowmeters, 4 channel probe

Table of LCD Readout

→ N	A	B	C
Probe pair	start	end	B-A
+1/-6	87	184	97
+2/-7	0	98	98
+3/-8	0	74	74
+4/-9	4	120	116

IN402D-123 END CAP RIGID

Operator: CES Date: 1-7-86

Station: W-76-2 Time: 11:15 Am

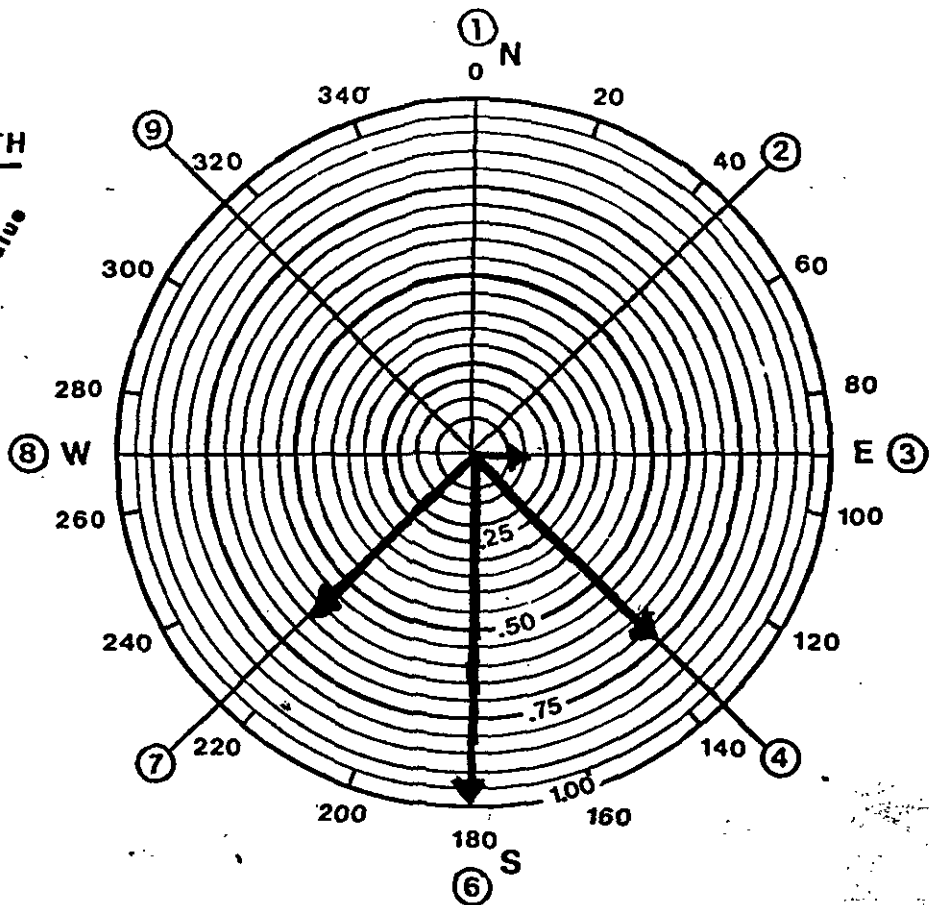
Location: SW of town landing

Soil Conditions: coarse sand & gravel

Depth to Measurement: 1.2

ROTATE PROBE 180° AT SAME DEPTH

→ S	D	E	S	F	G
Probe pair	start	end	E-D	$\frac{N-S}{2}$	F max. value
+1/-6	72	139	66	15.5	1.0
+2/-7	18	60	42	10	.65
+3/-8	12	21	9	2.5	.16
+4/-9	4	98	94	11	.71

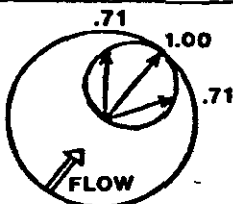


Use of Table

COLUMN G - Divide each reading in column F by the largest absolute value. Draw these 4 vectors on the circle chart according to the scale provided (i.e. strongest vector = 1.00).

Cosine Test Shows Uniform Flow

Vector end points will closely fit a circle inscribed about the longest vector. Values in column G will approximate vector lengths shown at right.



Vector Resolution to Determine Direction

1. Use KVA Vector Addition Program (TI-58/59-HP41C) calculators OR
2. Solve graphically by placing 4 individual vector segments sequentially head to tail. (See manual for detailed instructions).

Velocity Determination

Refer to your calibration curve of readout versus preferred units of flow (e.g. feet per day).

Direction: 174 Velocity: 15 .94 FT/DA

Average Flow .88 FT/DA

GROUNDWATER FLOW WORKSHEET I

For use with K-V Associates, Inc. Groundwater Flowmeters, 4 channel probe

M403D-123 - END CAP RIGID

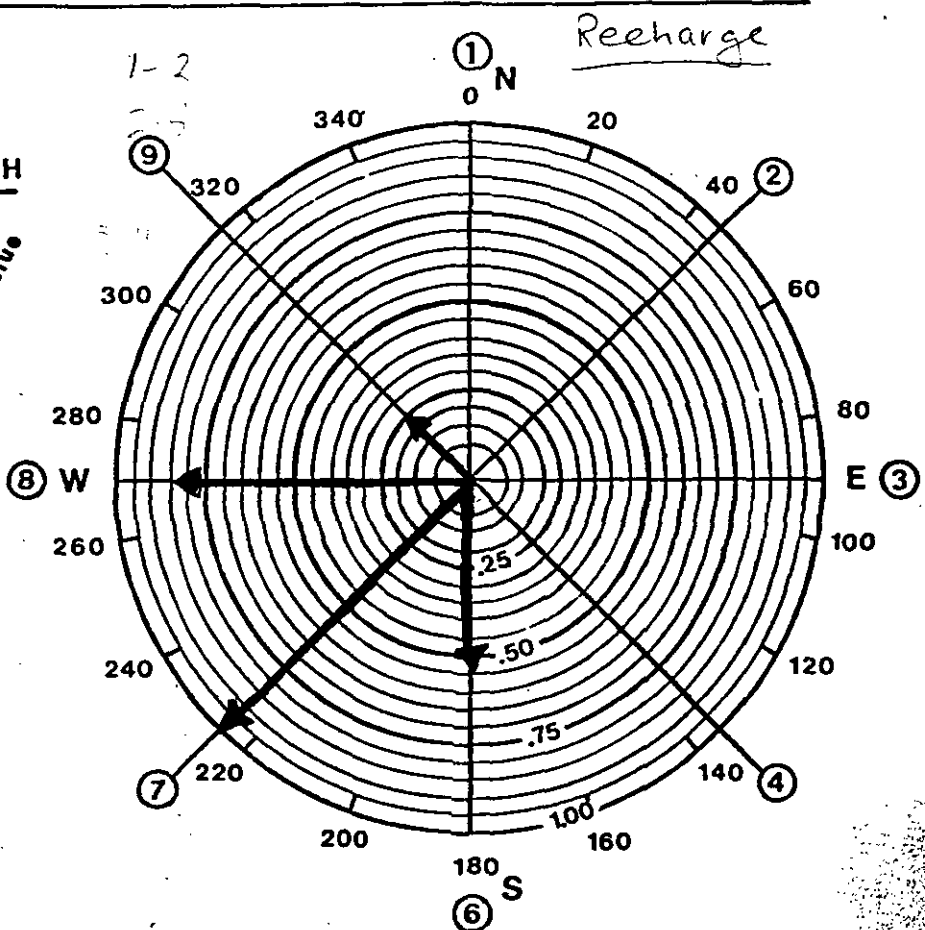
Table of LCD Readout

1 → N	A	B	C
Probe pair	start	end	B-A
+1/-6	-89	148	59
+2/-7	+10	54	44
+3/-8	+18	+39	+21
+4/-9	+20	116	+96

Operator: CS Date: 1-7-86
 Station: W-86-4 Time: 12:40 PM
 Location: near pump house north shore
 Soil Conditions: c sand & gravel 1.9 amps
 Depth to Measurement: 2.2

ROTATE PROBE 180° AT SAME DEPTH

1 → S	D	E	S	F	G
Probe pair	start	end	E-D	N-S	F max. value
+1/-6	-72	116	44	7.5	54
+2/-7	+10	25	35	14.5	1.0
+3/-8	+1	46	45	12	83
+4/-9	0	103	103	3.5	24

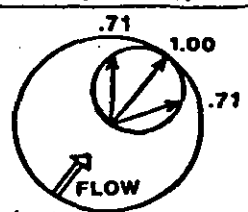


Use of Table

COLUMN G - Divide each reading in column F by the largest absolute value. Draw these 4 vectors on the circle chart according to the scale provided (i.e. strongest vector = 1.00).

Cosine Test Shows Uniform Flow

Vector end points will closely fit a circle inscribed about the longest vector. Values in column G will approximate vector lengths shown at right.



Vector Resolution to Determine Direction

1. Use KVA Vector Addition Program (TI-58/59-HP41C) calculators
- OR
2. Solve graphically by placing 4 individual vector segments sequentially head to tail. (See manual for detailed instructions).

Velocity Determination

Refer to your calibration curve of readout versus preferred units of flow (e.g. feet per day). .94 ft/day

Direction: 238° Velocity: 15

Form 104 available from your local K-V Associates, Inc. dealer.

GROUNDWATER FLOW WORKSHEET

For use with K-V Associates, Inc. Groundwater Flowmeters, 4 channel probe

Table of LCD Readout

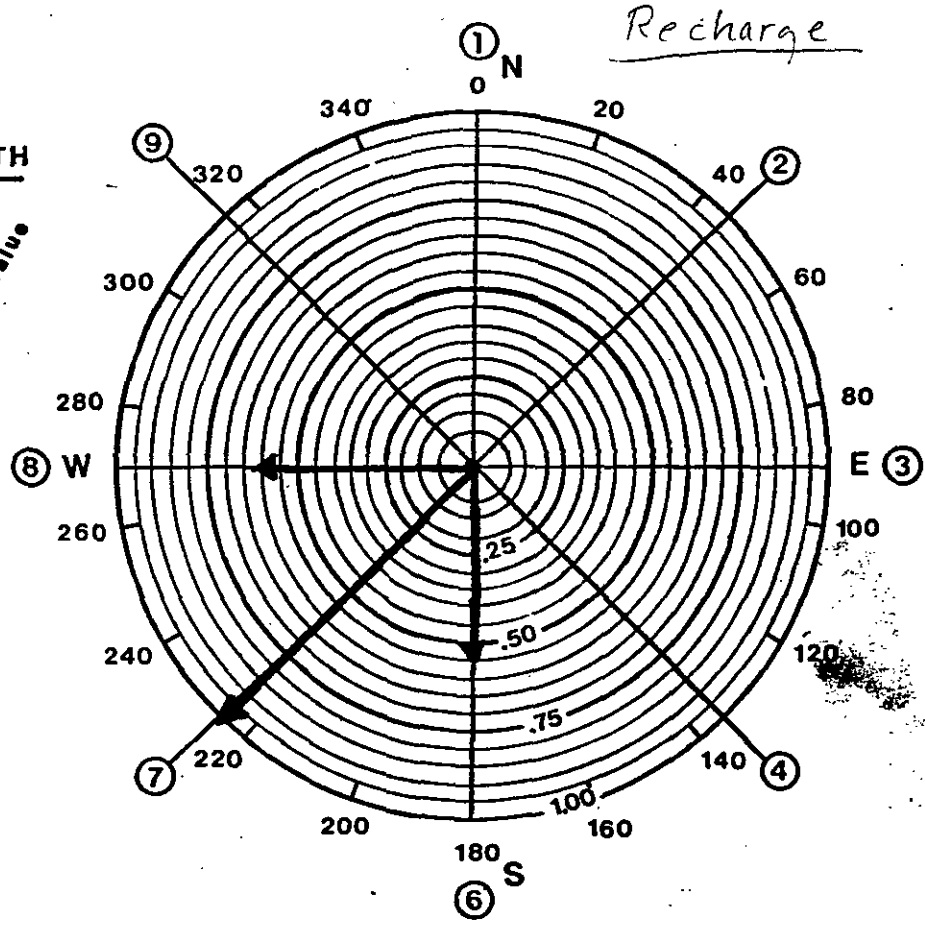
Probe pair	start	end	B-A
+1/-6	68	74	76
+2/-7	36	59	91
+3/-8	35	44	9
+4/-9	18	19	10

Operator: CES Date: 1-7-86
 Station: W-86-4 Time: 1:25 PM
 Location: Pump House Pond north
 Soil Conditions: sand & gravel
 Depth to Measurement: 2.2

1.9 amps

ROTATE PROBE 180° AT SAME DEPTH

Probe pair	start	end	E-D	N-S	F	G
+1/-6	70	117	47	14.5	55	
+2/-7	13	26	39	26	1.0	
+3/-8	2	43	41	16	.61	
+4/-9	0	103	103	1	.05	

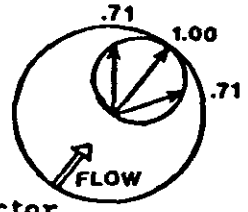


Use of Table

COLUMN G - Divide each reading in column F by the largest absolute value. Draw these 4 vectors on the circle chart according to the scale provided (i.e. strongest vector = 1.00).

Cosine Test Shows Uniform Flow

Vector end points will closely fit a circle inscribed about the longest vector. Values in column G will approximate vector lengths shown at right.



Vector Resolution to Determine Direction

1. Use KVA Vector Addition Program (TI-58/59-HP41C) calculators OR
2. Solve graphically by placing 4 individual vector segments sequentially head to tail. (See manual for detailed instructions).

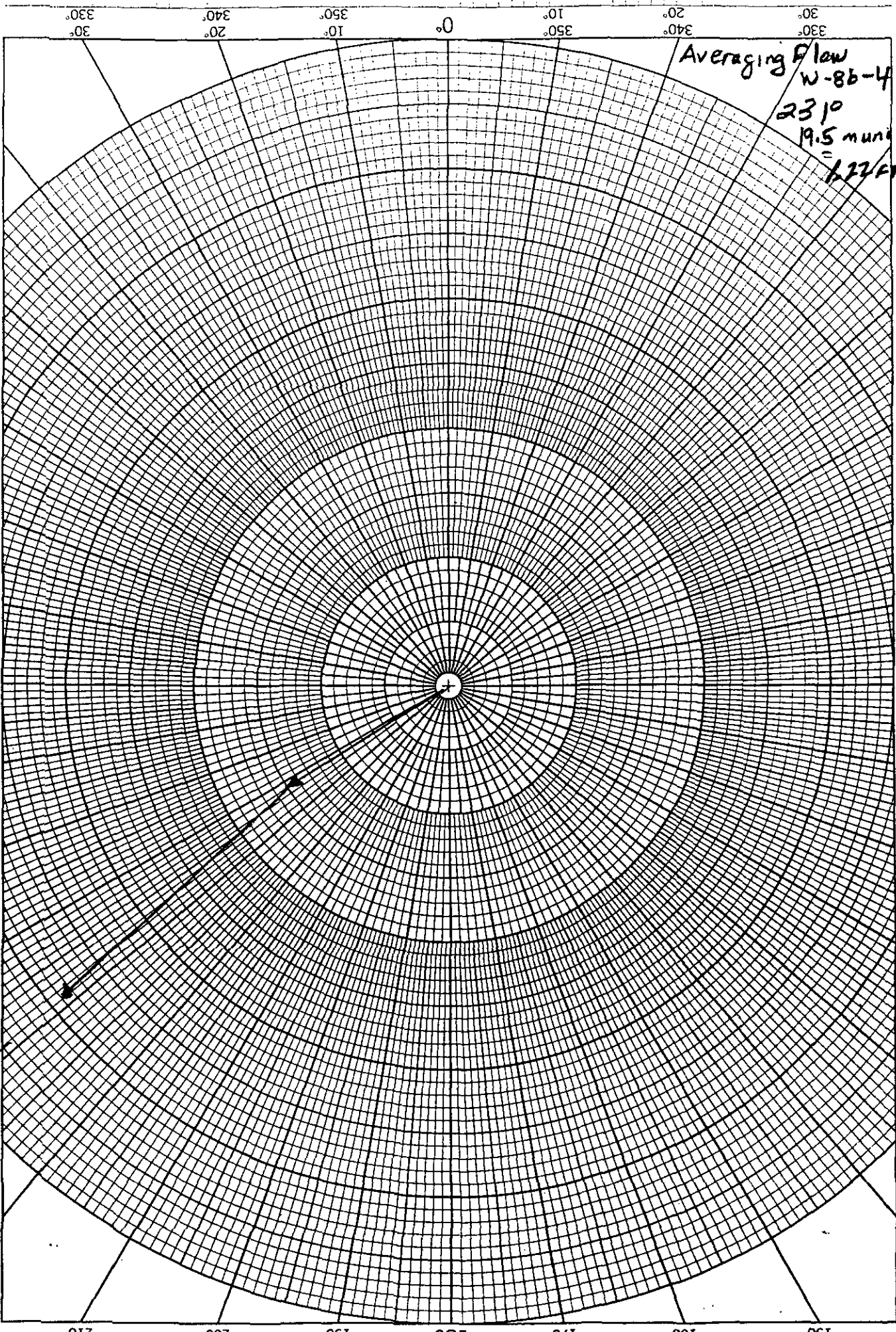
Velocity Determination

Refer to your calibration curve of readout versus preferred units of flow (e.g. feet per day).

Direction: 227° Velocity: 24

WEG

Averaging Flow
W-86-4
2310
19.5 minutes
= 122 FT/DAY



K&E
POLAR CO-ORDINATE
KEUFFEL & ESSER CO. MADE IN U.S.A.

46 4410

GROUNDWATER FLOW WORKSHEET WEQ

For use with K-V Associates, Inc. Groundwater Flowmeters, 4 channel probe

start numbers?

Table of LCD Readout

Probe pair	start	end	B-A
+1/-6	205	292	87
+2/-7	81	174	255
+3/-8	+17	+23	+6
+4/-9	+110	208	+118

M402D-123 END CHD RIGID

Operator: CES Date: 1-7-85

Station: W-86-5 Time: 2:10 PM

Location: Western shore

Soil Conditions: sandy peat!

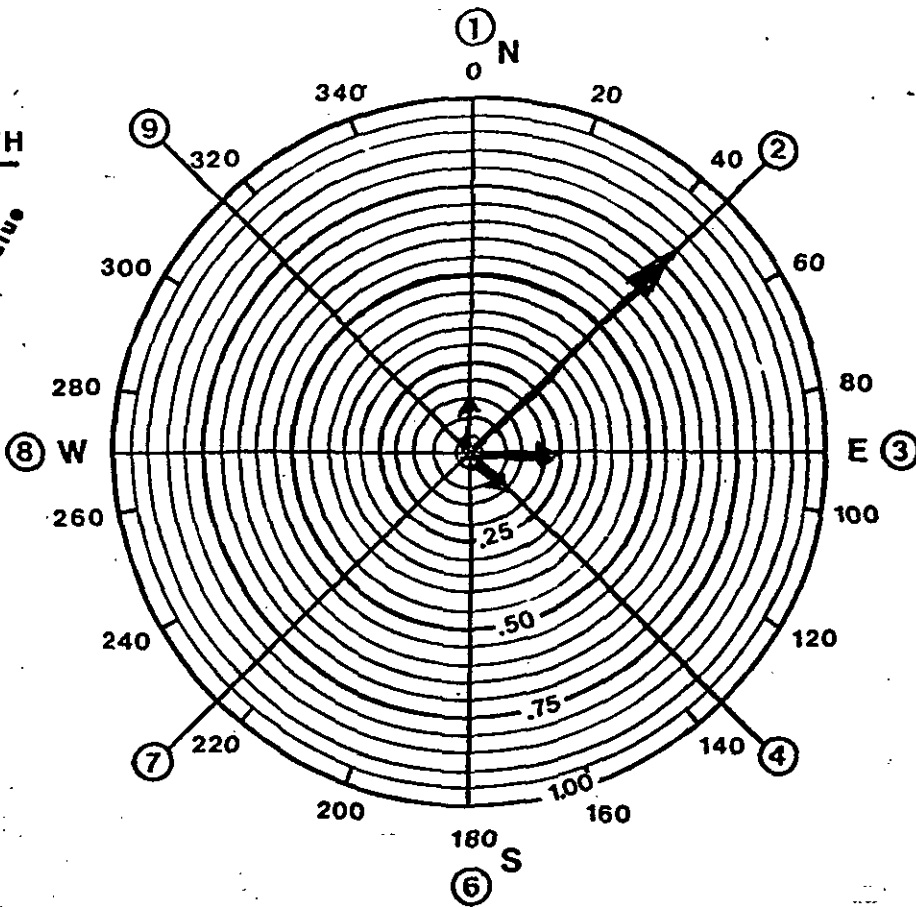
Depth to Measurement: 2.5'

1.9 amp

ROTATE PROBE 180° AT SAME DEPTH

Probe pair	start	end	E-D	N-S	F	G
+1/-6	93	13	80	3.5		
+2/-7	146	64	82	16.0		
+3/-8	38	53	15	4.5		
+4/-9	93	20	113	7.3		

Handwritten notes: -87+80, 255/10

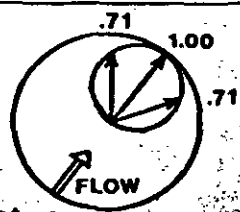


Use of Table

COLUMN G - Divide each reading in column F by the largest absolute value. Draw these 4 vectors on the circle chart according to the scale provided (i.e., strongest vector = 1.00).

Cosine Test Shows Uniform Flow

Vector end points will closely fit a circle inscribed about the longest vector. Values in column G will approximate vector lengths shown at right.



Vector Resolution to Determine Direction

1. Use KVA Vector Addition Program (TI-58/59-HP41C) calculators
2. Solve graphically by placing 4 individual vector segments sequentially head to tail. (See manual for detailed instructions).

Velocity Determination

Refer to your calibration curve of readout versus preferred units of flow (e.g. feet per day). .38 FT/DAY

Direction: 213 Velocity: 6

GROUNDWATER FLOW WORKSHEET *WEG*

For use with K-V Associates, Inc. Groundwater Flowmeters, 4 channel probe

M40-123 ERK

Table of LCD Readout

1 → N	A	B	C
Probe pair	start	end	B-A
+1/-6	-88	-87	+5
+2/-7	0	+20	+20
+3/-8	0	+30	+30
+4/-9	+5	+82	+77

Operator: CE S Date: 1-7-86

Station: W-86-6 Time: 3:00 PM

Location: bay NW

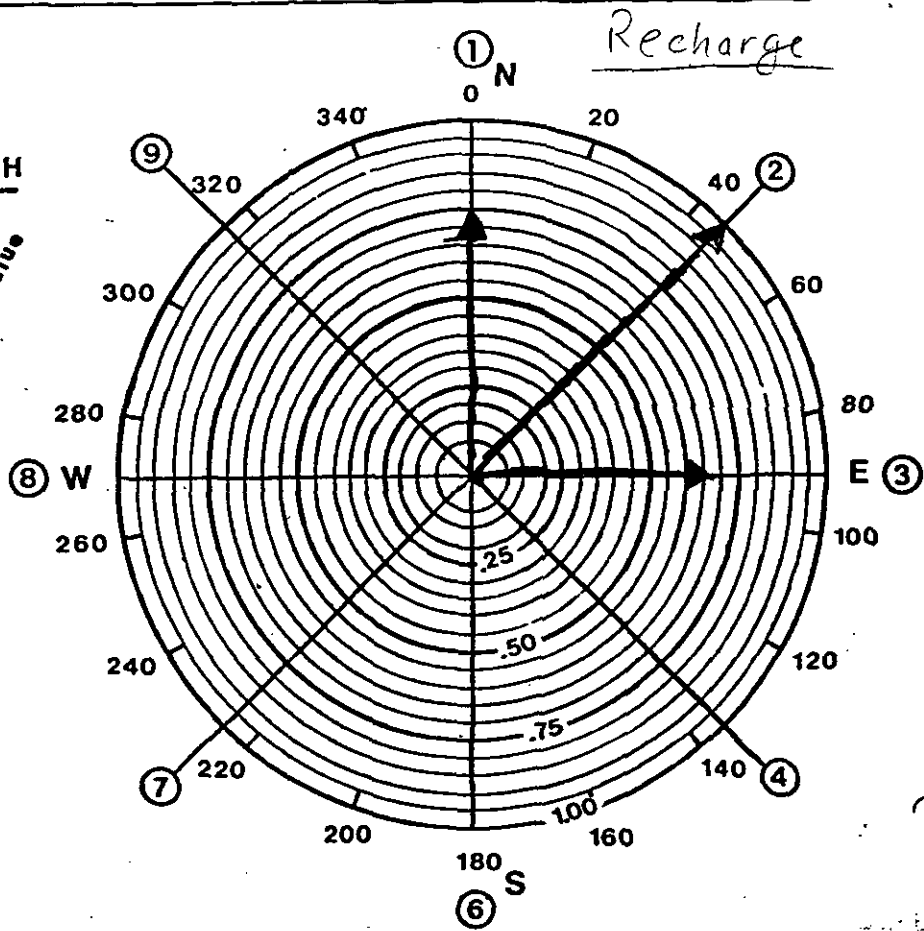
Soil Conditions: coarse sand

Depth to Measurement: 1.0

1.9 amp

OTATE PROBE 180° AT SAME DEPTH

1 → S	D	E	S	F	G
Probe pair	start	end	E-D	N-S	F
+1/-6	-65	-98	-33	+69	.75
+2/-7	-17	-18	-1	+92.5	1.0
+3/-8	+8	-83	-91	+60.5	.65
+4/-9	0	+74	+74	+1.5	.02



Vector Resolution to Determine Direction

1. Use KVA Vector Addition Program (Ti-58/59-HP41C) calculators
- OR
2. Solve graphically by placing 4 individual vector segments sequentially head to tail. (See manual for detailed instructions).

Velocity Determination

Refer to your calibration curve of readout versus preferred units of flow (e.g. feet per day).

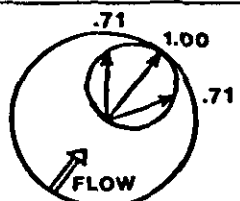
Direction: 44° Velocity: 92 *5.75 FT/DAY*

Use of Table

COLUMN G - Divide each reading in column F by the largest absolute value. Draw these 4 vectors on the circle chart according to the scale provided (i.e. strongest vector = 1.00).

Cosine Test Shows Uniform Flow

Vector end points will closely fit a circle inscribed about the longest vector. Values in column G will approximate vector lengths shown at right.



GROUNDWATER FLOW WORKSHEET

For use with K-V Associates, Inc. Groundwater Flowmeters, 4 channel probe

Table of LCD Readout

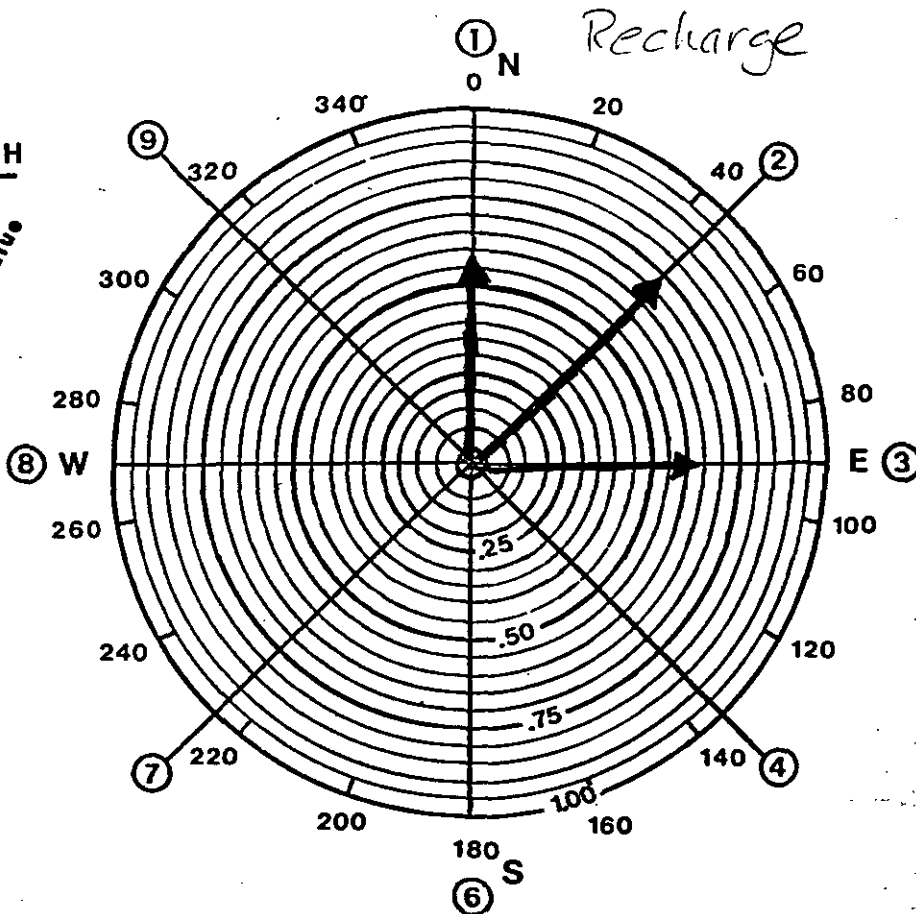
→ N	A	B	C
Probe pair	start	end	B-A
+1/-6	48	67	20
+2/-7	46	42	44
+3/-8	26	52	26
+4/-9	0	80	80

Operator: CES Date: 1-7-85
 Station: W-86-6 Time: 3:30 PM
 Location: bay northwest
 Soil Conditions: coarse sand
 Depth to Measurement: 1.0'

1.9 amps

ROTATE PROBE 180° AT SAME DEPTH

1 → S	D	E	S	F	G
Probe pair	start	end	E-D	$\frac{N-S}{2}$	F max. value
+1/-6	-68	206	138	+59	
+2/-7	+73	129	184	+71	
+3/-8	+8	-88	96	+61	
+4/-9	+4	+86	82	-1	

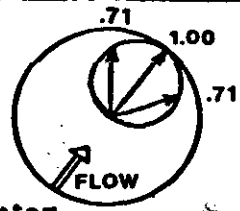


Use of Table

COLUMN G - Divide each reading in column F by the largest absolute value. Draw these 4 vectors on the circle chart according to the scale provided (i.e. strongest vector = 1.00).

Cosine Test Shows Uniform Flow

Vector end points will closely fit a circle inscribed about the longest vector. Values in column G will approximate vector lengths shown at right.



Vector Resolution to Determine Direction

1. Use KVA Vector Addition Program (TI-59/59-HP41C) calculators
2. Solve graphically by placing 4 individual vector segments sequentially head to tail. (See manual for detailed instructions).

Velocity Determination

Refer to your calibration curve of readout versus preferred units of flow (e.g. feet per day) 4.88 FT/DAY

Direction: 45° Velocity: 78

GROUNDWATER FLOW WORKSHEET

For use with K-V Associates, Inc. Groundwater Flowmeters, 4 channel probe

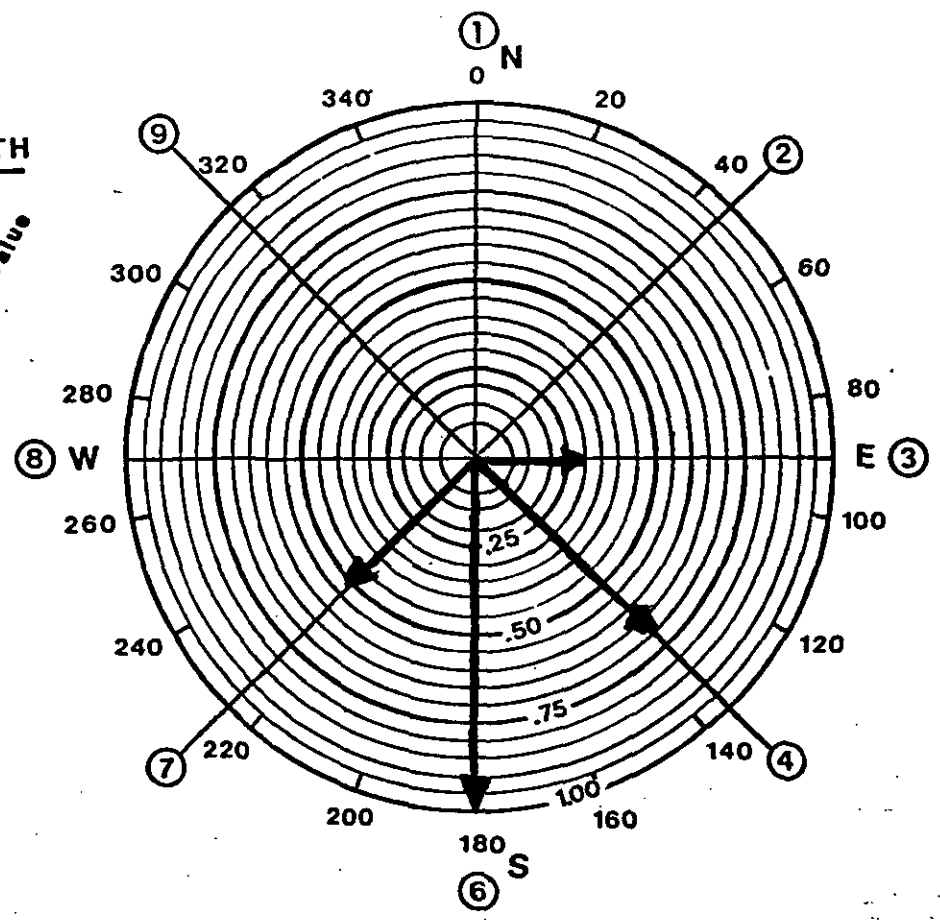
Table of LCD Readout

1 → N	A	B	C
Probe pair	start	end	B-A
+1/-6	100	-56	+44
+2/-7	11	+27	+38
+3/-8	-8	+80	+88
+4/-9	+7	+100	+93

Operator: CES Date: 1-13-86 1.9amps
 Station: W-86-7 Time: 9:50AM
 Location: Northern shore east of town beach
 Soil Conditions: m - coarse sand overlays gravel meas. in sand
 Depth to Measurement: .8'

ROTATE PROBE 180° AT SAME DEPTH

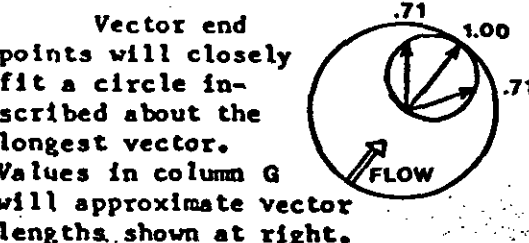
1 → S	D	E	S	F	G
Probe pair	start	end	E-D	N-S	F
+1/-6	104	-32	+72	14	1.0
+2/-7	73	+43	+56	9	
+3/-8	-9	+73	+82	3	
+4/-9	+10	+89	+79	7	.50



Use of Table

COLUMN G - Divide each reading in column F by the largest absolute value. Draw these 4 vectors on the circle chart according to the scale provided (i.e. strongest vector = 1.00).

Cosine Test Shows Uniform Flow



Vector Resolution to Determine Direction

1. Use KVA Vector Addition Program (TI-59/59-HP41C) calculators
- OR
2. Solve graphically by placing 4 individual vector segments sequentially head to tail. (See manual for detailed instructions).

Velocity Determination

Refer to your calibration curve of readout versus preferred units of flow (e.g. feet per day). .81 FT/OA

Direction: 176° Velocity: 13

GROUNDWATER FLOW WORKSHEET WEQ

For use with K-V Associates, Inc. Groundwater Flowmeters, 4 channel probe

M40-123 - Right End Bay

Table of LCD Readout

Probe pair	A		B		C
	start	end	start	end	
+1/-6	104	62	42		
+2/-7	74	21	35		
+3/-8	71	71	82		
+4/-9	70	99	89		

Operator: CES Date: 1-13-86

Station: W-86-7 Time: 10:20 AM

Location: north shore east of town

Soil Conditions: m-c coarse sand

Depth to Measurement: 8'

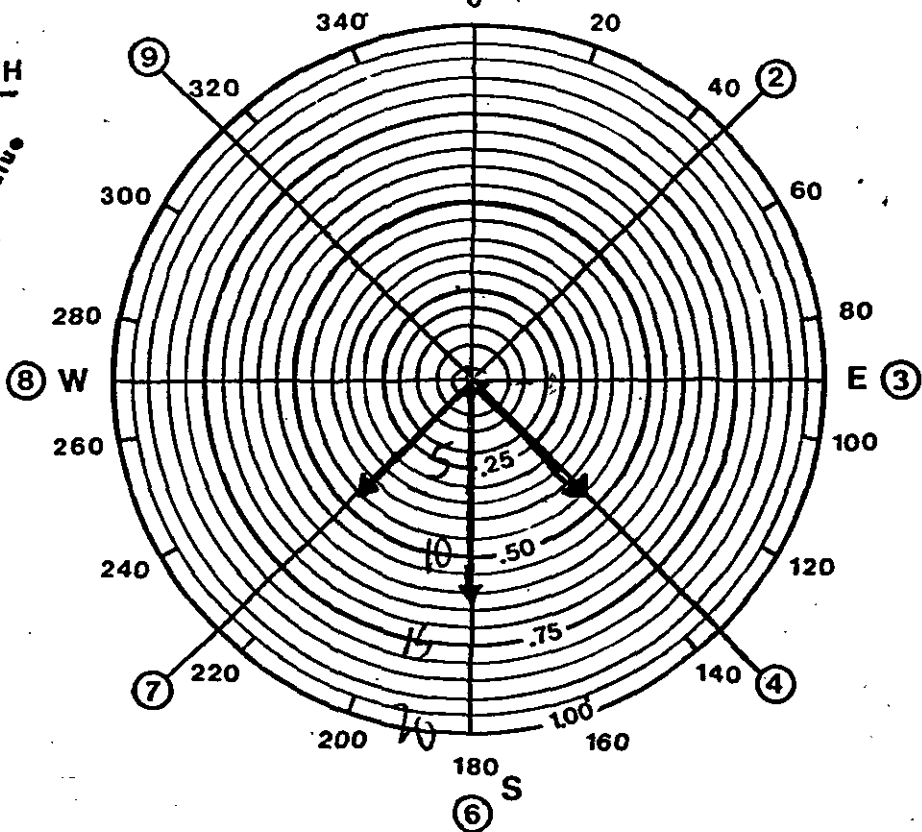
1.9 amp

ROTATE PROBE 180° AT SAME DEPTH

Probe pair	D		E		S	F	G
	start	end	start	end			
+1/-6	102	35	67				
+1/-7	-9	44	53				
+3/-8	-6	75	81				
+4/-9	+11	82	71				

N-S	F
125	
9	
1.5	
9	

① N Recharge

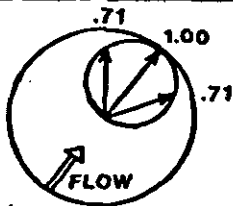


Use of Table

COLUMN G - Divide each reading in column F by the largest absolute value. Draw these 4 vectors on the circle chart according to the scale provided (i.e., strongest vector = 1.00).

Cosine Test Shows Uniform Flow

Vector end points will closely fit a circle inscribed about the longest vector. Values in column G will approximate vector lengths shown at right.



Vector Resolution to Determine Direction

1. Use KVA Vector Addition Program (TI-58/59-HP41C) calculators
- OR
2. Solve graphically by placing 4 individual vector segments sequentially head to tail. (See manual for detailed instructions).

Velocity Determination

Refer to your calibration curve of readout versus preferred units of flow (e.g. feet per day).

Direction: 179° Velocity: 13

.81 FT/DAY

GROUNDWATER FLOW WORKSHEET

For use with K-V Associates, Inc. Groundwater Flowmeters, 4 channel probe

Table of LCD Readout

1 → N	A	B	C
Probe pair	start	end	B-A
+1/-6	95	4	99
+2/-7	33	87	120
+3/-8	41	38	79
+4/-9	10	113	103

Operator: CE.S Date: 1-13-86

Station: W-86-8 Time: 11:05AM

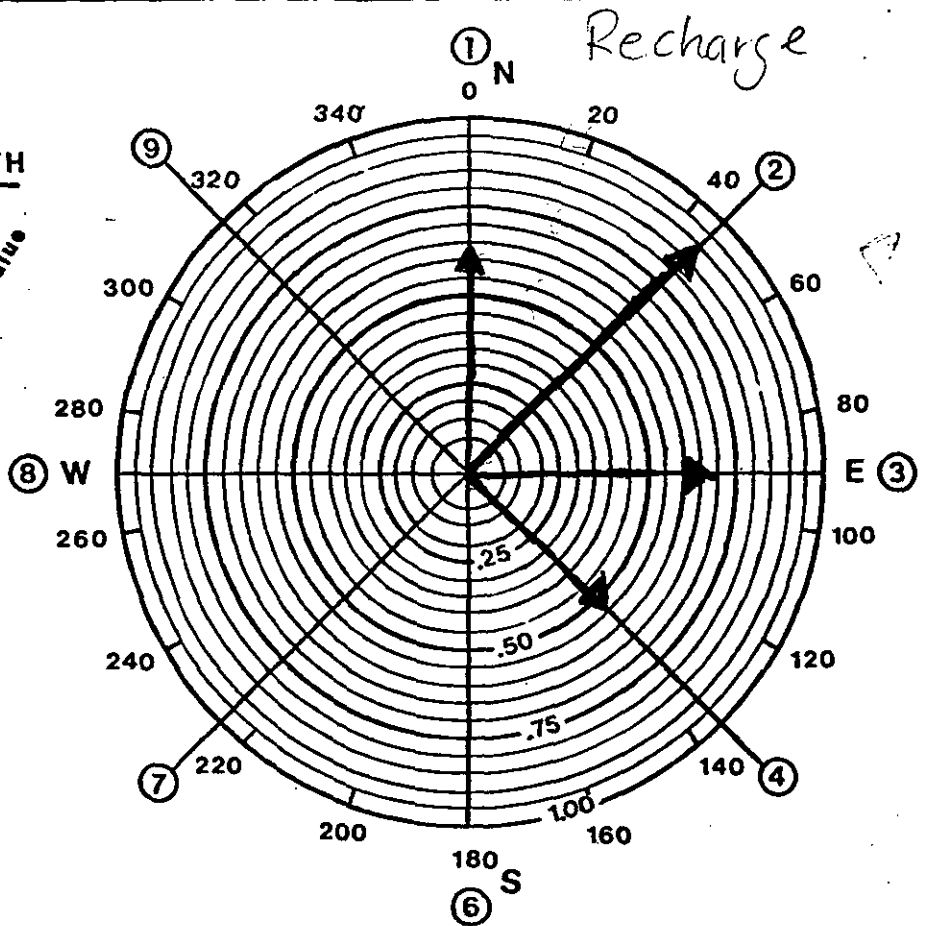
Location: west shore north of Lewis Pt.

Soil Conditions: coarse sand & gravel 1.9amps

Depth to Measurement: 1.2'

ROTATE PROBE 180° AT SAME DEPTH

1 → S	D	E	S	F	G
Probe pair	start	end	E-D	$\frac{N-S}{2}$	F max. value
+1/-6	84	0	84	7.5	
+2/-7	12	96	94	13	
+3/-8	4	166	162	9.5	
+4/-9	12	123	111	6	

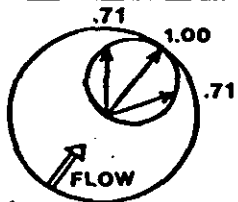


Use of Table

COLUMN G - Divide each reading in column F by the largest absolute value. Draw these 4 vectors on the circle chart according to the scale provided (i.e. strongest vector = 1.00).

Cosine Test Shows Uniform Flow

Vector end points will closely fit a circle inscribed about the longest vector. Values in column G will approximate vector lengths shown at right.



Vector Resolution to Determine Direction

1. Use KVA Vector Addition Program (TI-58/59-HP41C) calculators
- OR
2. Solve graphically by placing 4 individual vector segments sequentially head to tail. (See manual for detailed instructions).

Velocity Determination

Refer to your calibration curve of readout versus preferred units of flow (e.g. feet per day).

Direction: 60° Velocity: 13 .81 FT/DAY

GROUNDWATER FLOW WORKSHEET *WEQ*

For use with K-V Associates, Inc. Groundwater Flowmeters, 4 channel probe

M40-123

Table of LCD Readout

→ N Probe pair	start	end	B-A
	+1/-6	-66	+58
+2/-7	23	+108	+85
+3/-8	+8	+146	+138
+4/-9	0	+70	+70

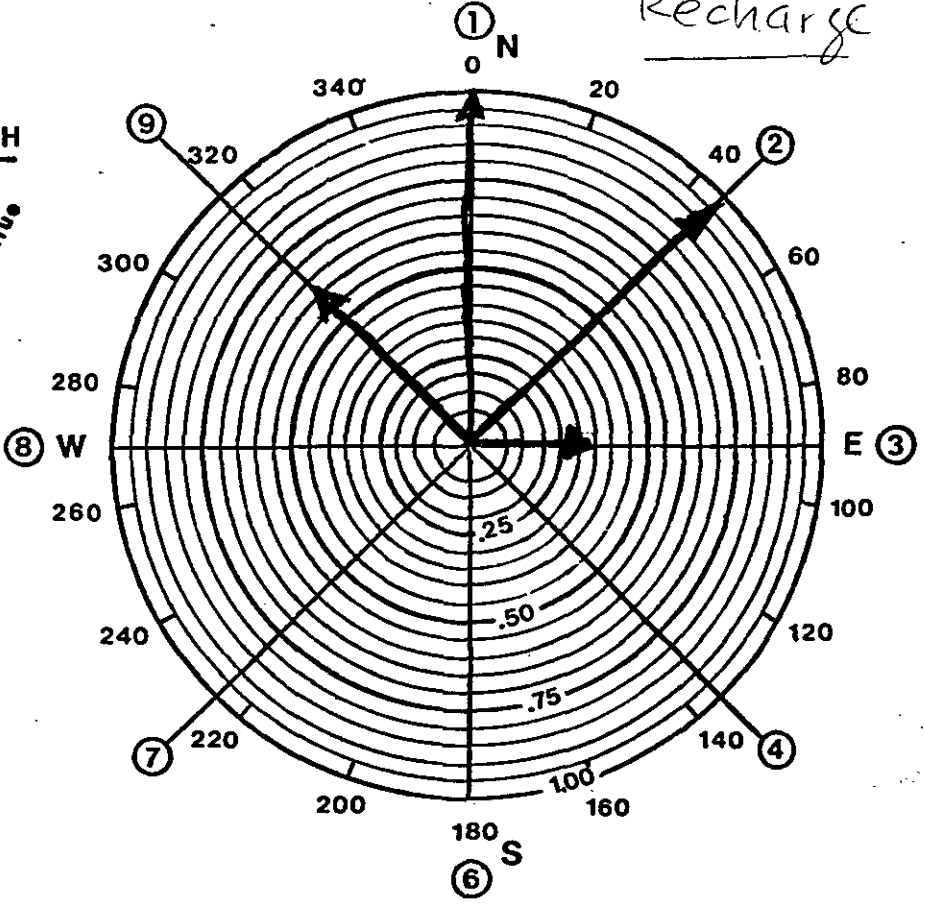
Operator: CES Date: 1-13-86
 Station: W-86-9 Time: 12:00
 Location: West shore
 Soil Conditions: Coarse sand
 Depth to Measurement: 1.0'

19amps

Recharge

ROTATE PROBE 180° AT SAME DEPTH

→ S Probe pair	start	end	E-D	N-S	F	G
	+1/-6	705	46	+39	+35	
+1/-7	79	+6	+25	+30		
+3/-8	-11	+102	+113	+125		
+1/-9	+14	+120	+104	-18		

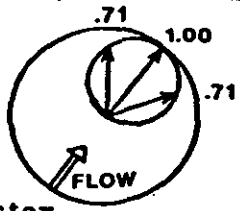


Use of Table

COLUMN G - Divide each reading in column F by the largest absolute value. Draw these 4 vectors on the circle chart according to the scale provided (i.e. strongest vector = 1.00).

Cosine Test Shows Uniform Flow

Vector end points will closely fit a circle inscribed about the longest vector. Values in column G will approximate vector lengths shown at right.



Vector Resolution to Determine Direction

1. Use KVA Vector Addition Program (TI-58/59-HP41C) calculators
2. Solve graphically by placing 4 individual vector segments sequentially head to tail. (See manual for detailed instructions).

Velocity Determination

Refer to your calibration curve of readout versus preferred units of flow (e.g. feet per day).

Direction: 18° Velocity: 35

2.19 ft/day

GROUNDWATER FLOW WORKSHEET

For use with K-V Associates, Inc. Groundwater Flowmeters, 4 channel probe

M40-123

Table of LCD Readout

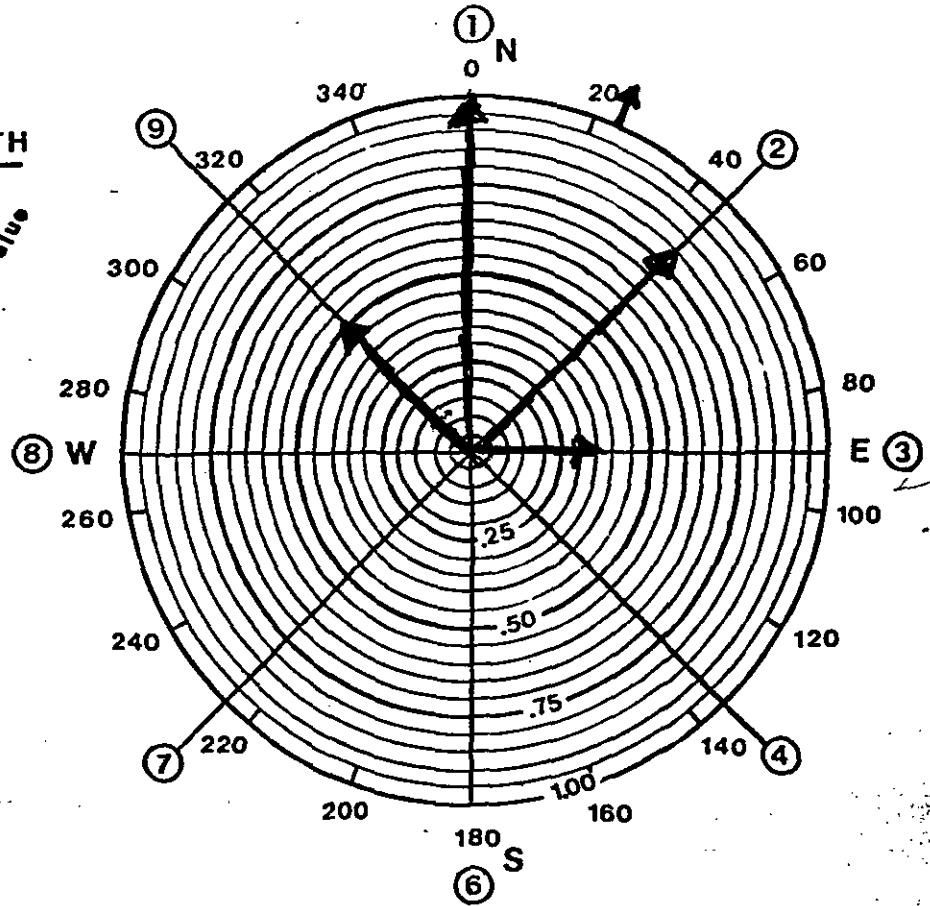
1 → N	A	B	C
Probe pair	start	end	B-A
+1/-6	-86	⁺ 100	⁺ 124
+2/-7	0	⁺ 77	⁺ 87
+3/-8	0	⁺ 133	⁺ 133
+4/-9	⁺ 7	⁺ 78	⁺ 69

Operator: *ES* Date: *1-13-86*
 Station: *W-86-9* Time: *12:30 pm*
 Location: *west shore*
 Soil Conditions: *Sand & gravel*
 Depth to Measurement: *1.0'*

17amps

ROTATE PROBE 180° AT SAME DEPTH

1 → S	D	E	S	F	G
Probe pair	start	end	E-D	N-S	F
+1/-6	111	48	⁺ 63	⁺ 315	1.0
+2/-7	28	9	⁺ 37	⁺ 25	.79
+3/-8	15	98	⁺ 113	⁺ 10	.3
+4/-9	17	126	⁺ 103	⁺ 17	.5

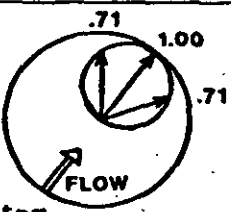


Use of Table

COLUMN G - Divide each reading in column F by the largest absolute value. Draw these 4 vectors on the circle chart according to the scale provided (i.e. strongest vector = 1.00).

Cosine Test Shows Uniform Flow

Vector end points will closely fit a circle inscribed about the longest vector. Values in column G will approximate vector lengths shown at right.



Vector Resolution to Determine Direction

1. Use KVA Vector Addition Program (TI-58/59-HP41C) calculators
- OR
2. Solve graphically by placing 4 individual vector segments sequentially head to tail. (See manual for detailed instructions).

Velocity Determination

Refer to your calibration curve of readout versus preferred units of flow (e.g. feet per day).

Direction: *23°* Velocity: *29* *1.87 FT/DA*

GROUNDWATER FLOW WORKSHEET

For use with K-V Associates, Inc. Groundwater Flowmeters, 4 channel probe

M40-123

Table of LCD Readout

Probe pair	A B C		
	start	end	B-A
+1/-6	100	26	+74
+2/-7	76	44	+60
+3/-8	-9	91	+100
+4/-9	+13	83	+70

Operator: 220 Date: 1-13-86
 Station: W-86-10 Time: _____
 Location: W. Shore
 Soil Conditions: _____
 Depth to Measurement: 1.0'

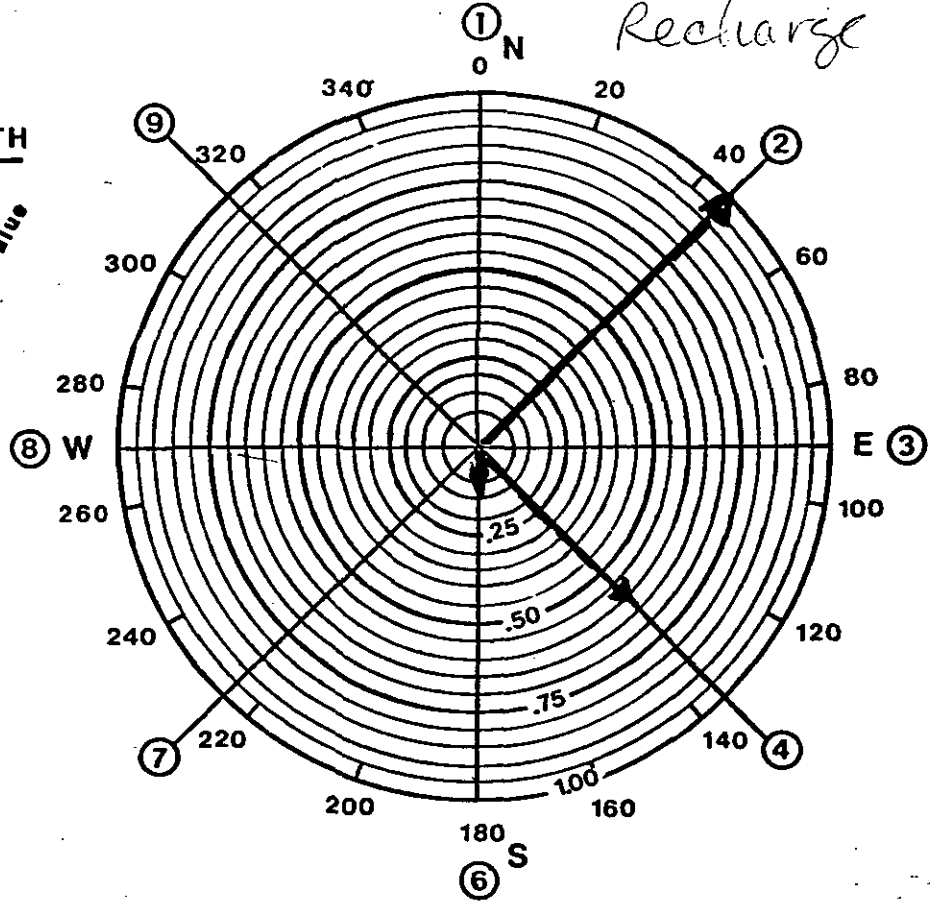
1.9 Amps

Recharge

ROTATE PROBE 180° AT SAME DEPTH

Probe pair	D E S F G		N-S 2	F max. value
	start	end		
+1/-6	111	-36	+75	
+1/-7	25	+22	+47	
+3/-8	-12	+80	+102	
+4/-9	+17	+89	+62	

-5	
+6.5	1.0
-31	.15
+4	.61

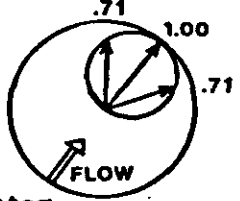


Use of Table

COLUMN G - Divide each reading in column F by the largest absolute value. Draw these 4 vectors on the circle chart according to the scale provided (i.e. strongest vector = 1.00).

Cosine Test Shows Uniform Flow

Vector end points will closely fit a circle inscribed about the longest vector. Values in column G will approximate vector lengths shown at right.



Vector Resolution to Determine Direction

1. Use KVA Vector Addition Program (TI-58/59-HP41C) calculators OR
2. Solve graphically by placing 4 individual vector segments sequentially head to tail. (See manual for detailed instructions).

Velocity Determination

Refer to your calibration curve of readout versus preferred units of flow (e.g. feet per day).

Direction: 79° Velocity: 3 .19 FT/DAY

GROUNDWATER FLOW WORKSHEET V.G. / *[Signature]*

For use with K-V Associates, Inc. Groundwater Flowmeters, 4 channel probe

M40-123

Table of LCD Readout

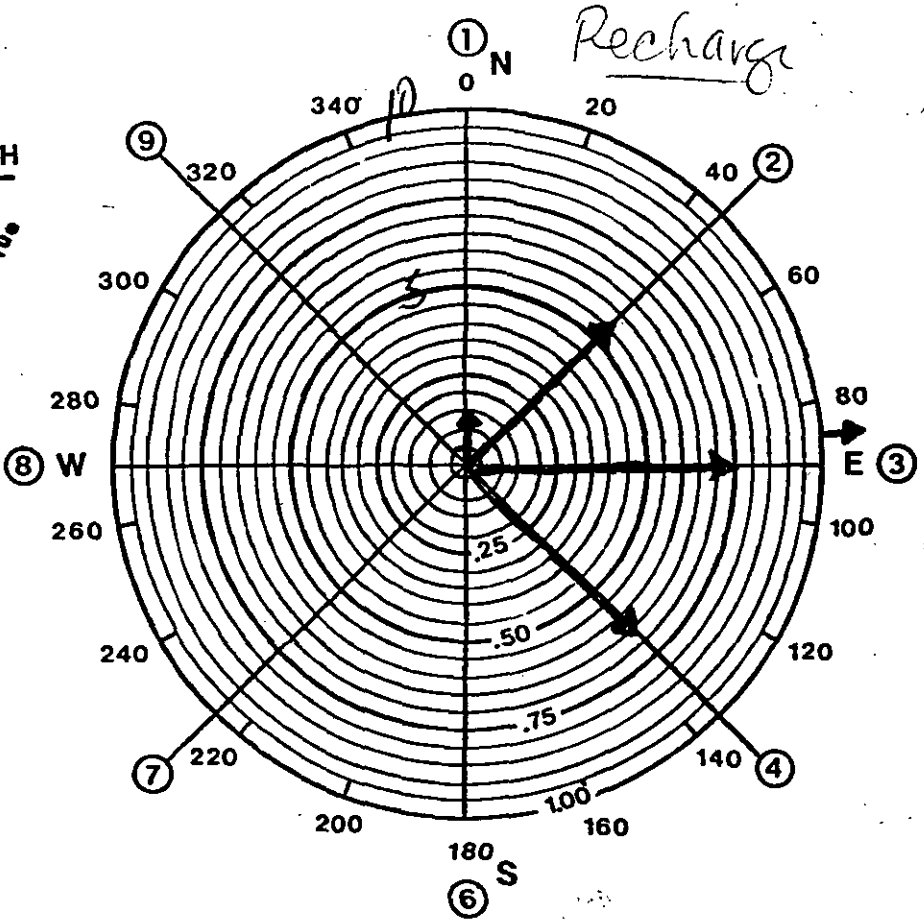
1 → N	A B C		
Probe pair	start	end	B-A
+1/-6	102	24	+78
+2/-7	77	30	+47
+3/-8	70	97	+107
+4/-9	10	88	+78

Operator: <u>CSE</u>	Date: <u>1-13-86</u>
Station: <u>W-86-10</u>	Time: <u>1:45 PM</u>
Location: <u>W. shore</u>	
Soil Conditions: <u>red sand</u>	
Depth to Measurement: <u>1.0</u>	

1.9 amps

ROTATE PROBE 180° AT SAME DEPTH

1 → S	D E S F G				
Probe pair	start	end	E-D	N-S 2	F max. value
+1/-6	106	31	+75	+1.5	
+2/-7	20	16	+36	+5.5	
+3/-8	70	82	+92	+7.5	
+4/-9	15	80	+65	+6.5	

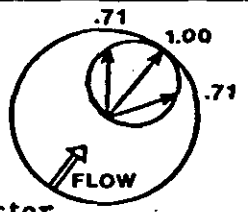


Use of Table

COLUMN G - Divide each reading in column F by the largest absolute value. Draw these 4 vectors on the circle chart according to the scale provided (i.e. strongest vector = 1.00).

Cosine Test Shows Uniform Flow

Vector end points will closely fit a circle inscribed about the longest vector. Values in column G will approximate vector lengths shown at right.



Vector Resolution to Determine Direction

1. Use KVA Vector Addition Program (TI-58/59-HP41C) calculators
- OR
2. Solve graphically by placing 4 individual vector segments sequentially head to tail. (See manual for detailed instructions).

Velocity Determination

Refer to your calibration curve of readout versus preferred units of flow (e.g. feet per day).

Direction: <u>85°</u>	Velocity: <u>5</u>
-----------------------	--------------------

0.31 FT/DA

average 87.25 FT/DA

GROUNDWATER FLOW WORKSHEET *WEG*

For use with K-V Associates, Inc. Groundwater Flowmeters, 4 channel probe

1147-123

Table of LCD Readout

Probe pair	A		B		C
	start	end	start	end	
+1/-6	111	55	59	59	
+2/-7	0	68	68	68	
+3/-8	12	146	134	134	
+4/-9	58	112	84	84	

Operator: _____ Date: 1-5-86

Station: W-86-11 Time: 2:15 PM

Location: on coast shore

Soil Conditions: m-coarse sand

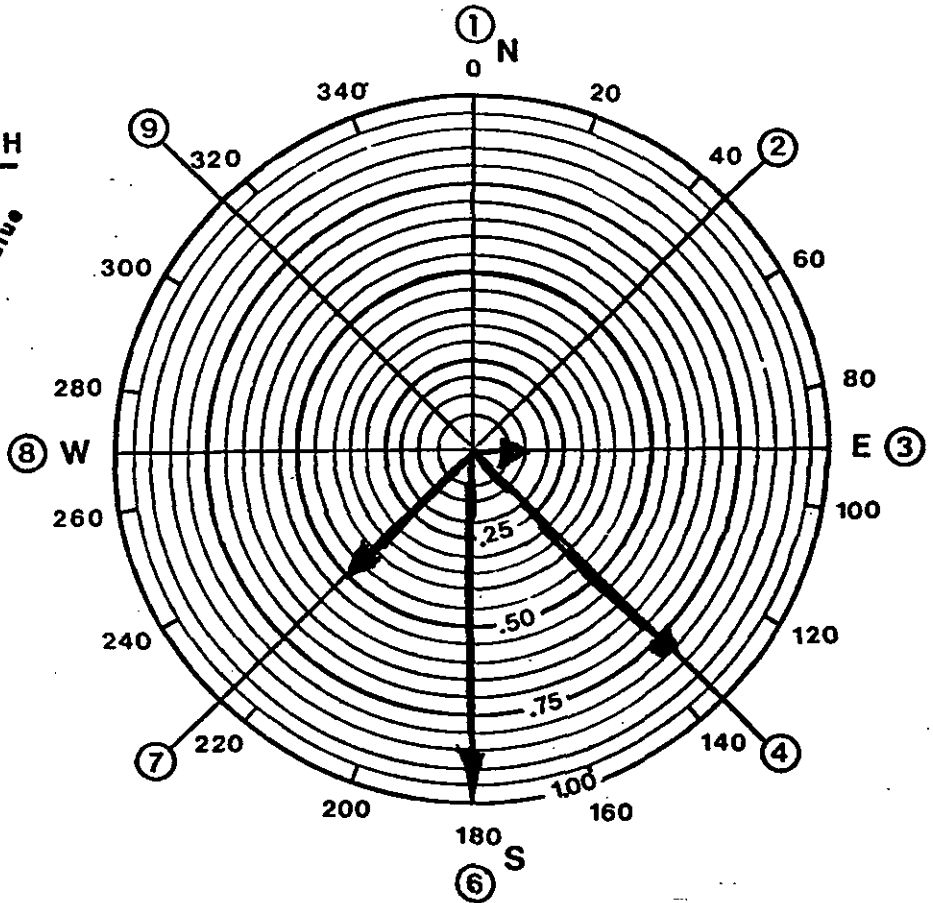
Depth to Measurement: 1.2

1.9 amp

ROTATE PROBE 180° AT SAME DEPTH

Probe pair	D		E		S	F	G
	start	end	start	end			
+1/-6	-87	14	73	73			
+2/-7	0	75	75	75			
+3/-8	-8	25	133	133			
+4/-9	0	73	73	73			

$\frac{N-S}{2}$	$\frac{F}{\text{max. value}}$
7	.1
35	.6
75	.07
55	.81

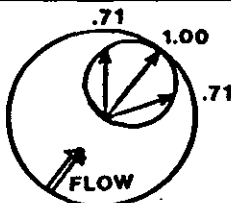


Use of Table

COLUMN G - Divide each reading in column F by the largest absolute value. Draw these 4 vectors on the circle chart according to the scale provided (i.e. strongest vector = 1.00).

Cosine Test Shows Uniform Flow

Vector end points will closely fit a circle inscribed about the longest vector. Values in column G give approximate vector lengths shown at right.



Vector Resolution to Determine Direction

1. Use KVA Vector Addition Program (TI-58/59-HP41C) calculators
- OR
2. Solve graphically by placing 4 individual vector segments sequentially head to tail. (See manual for detailed instructions).

Velocity Determination

Refer to your calibration curve of readout versus preferred units of flow (e.g. feet per day).

Direction: 172° Velocity: 7

GROUNDWATER FLOW WORKSHEET

For use with K-V Associates, Inc. Groundwater Flowmeters, 4 channel probe

Table of LCD Readout

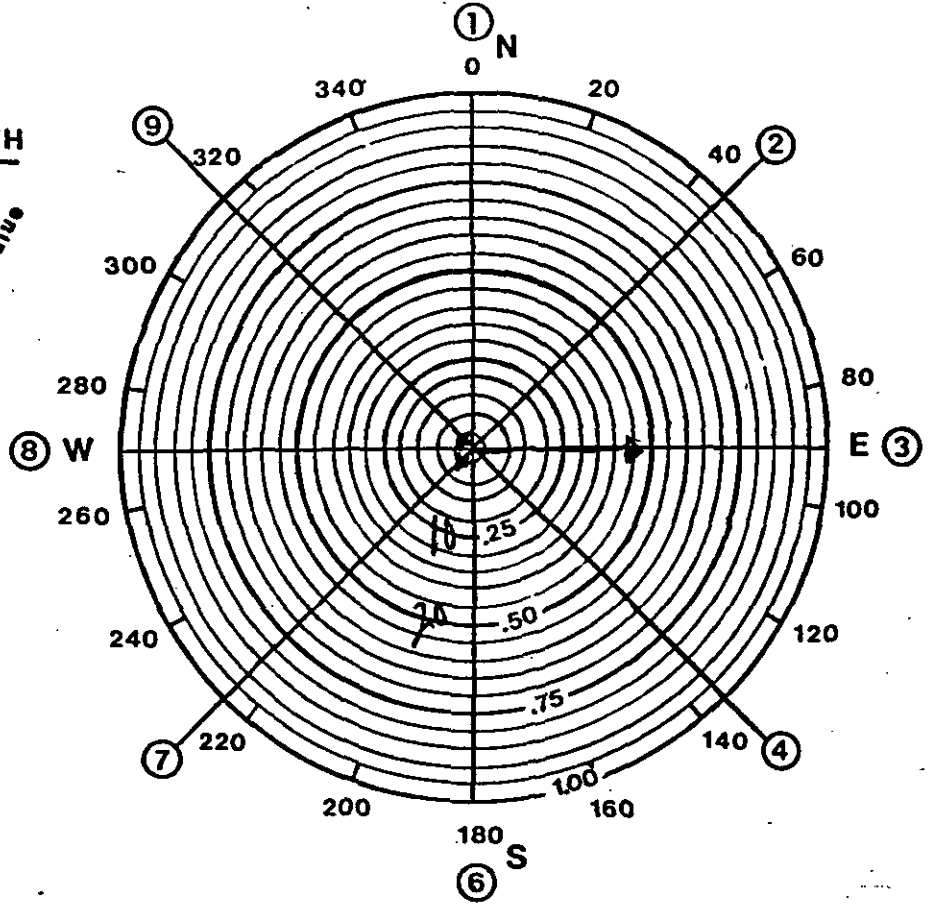
1 → N	A	B	C
Probe pair	start	end	B-A
+1/-6	128	79	59
+2/-7	22	55	77
+3/-8	7	147	140
+4/-9	39	122	83

Operator: ES Date: 1-13-76
 Station: W-86-11 Time: 2:45 PM
 Location: W shore
 Soil Conditions: M. sand
 Depth to Measurement: 1.2

1.9 amps

STATE PROBE 180° AT SAME DEPTH

1 → S	D	E	S	F	G
Probe pair	start	end	E-D	$\frac{N-S}{2}$	$\frac{F}{\text{max. value}}$
+1/-6	83	24	59	0	
+2/-7	0	65	65	3.5	
+3/-8	14	116	102	19	
+4/-9	9	70	79	2	

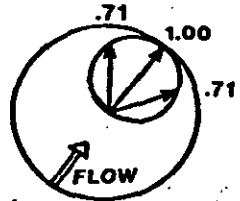


Use of Table

COLUMN G - Divide each reading in column F by the largest absolute value. Draw these 4 vectors on the circle chart according to the scale provided (i.e. strongest vector = 1.00).

Cosine Test Shows Uniform Flow

Vector end points will closely fit a circle inscribed about the longest vector. Values in column G will approximate vector lengths shown at right.



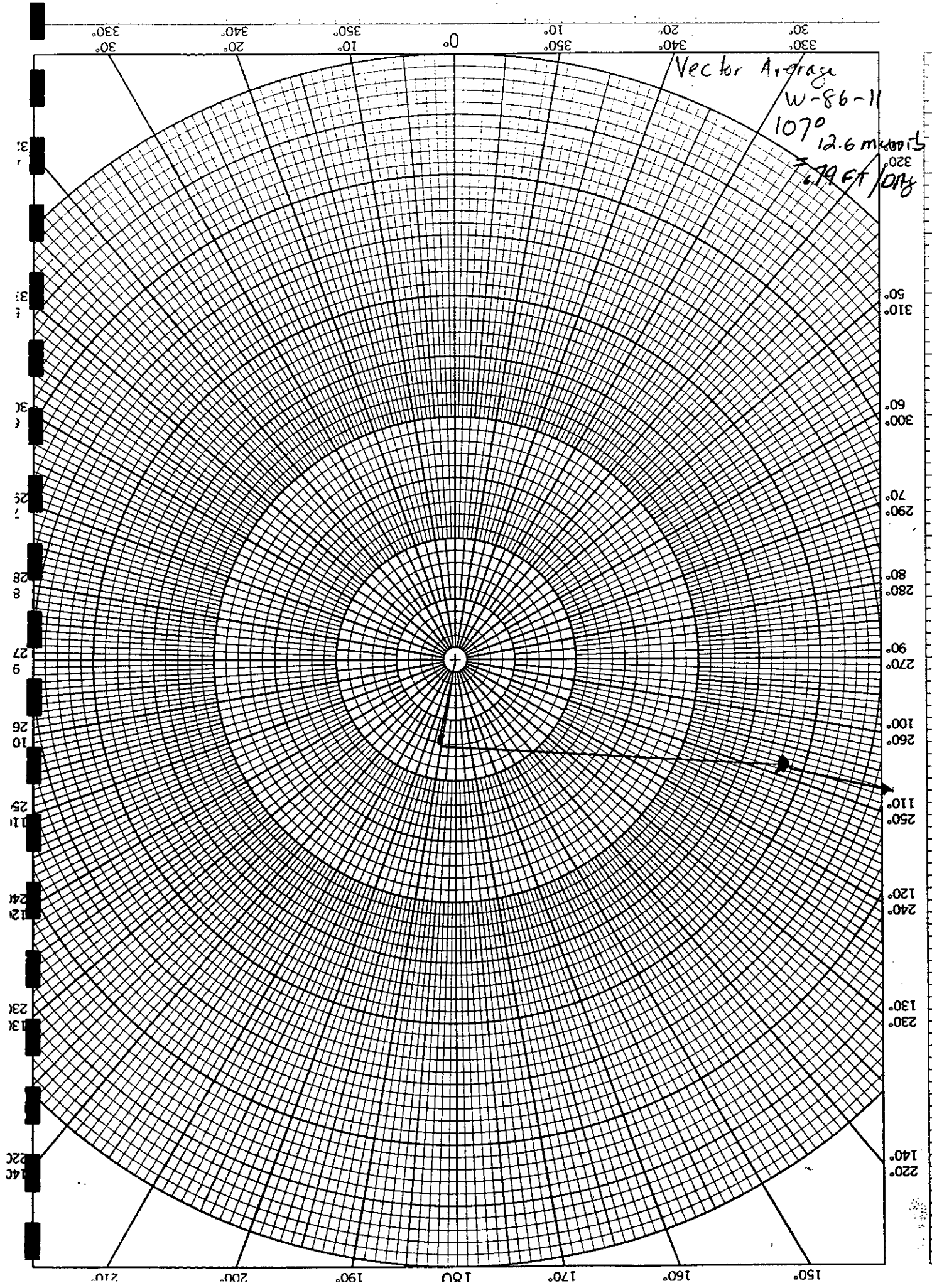
Vector Resolution to Determine Direction

1. Use KVA Vector Addition Program (TI-59/59-HP41C) calculators
- OR
2. Solve graphically by placing 4 individual vector segments sequentially head to tail. (See manual for detailed instructions).

Velocity Determination

Refer to your calibration curve of readout versus preferred units of flow (e.g. feet per day).

Direction: 102° Velocity: 9



Vector Average
W-86-11
107°
12.6 units
7.79 ft/day

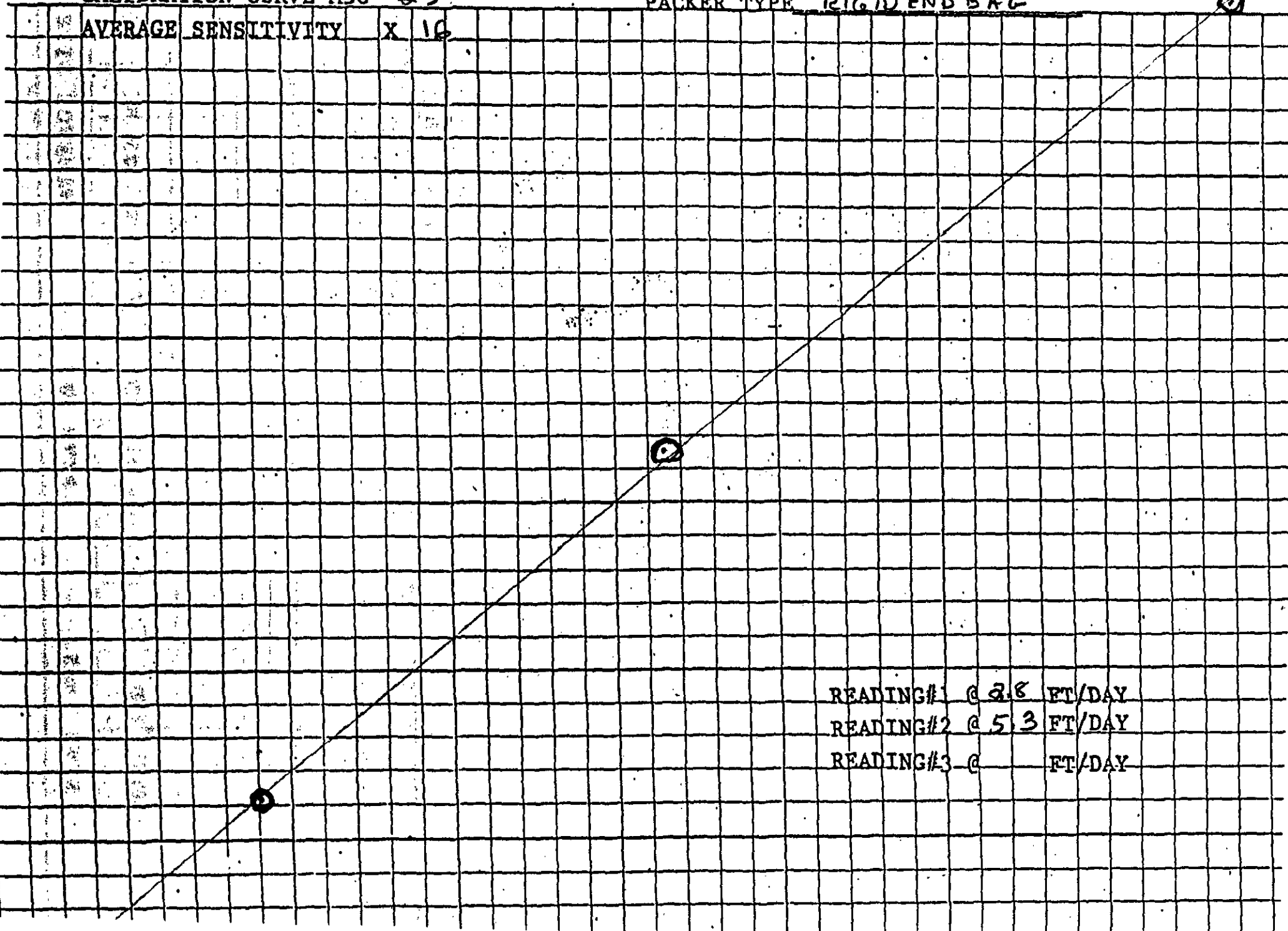
K&E POLAR CO-ORDINATE
KEUFFEL & ESSER CO. MADE IN U.S.A.

46 4410

40
CALIBRATION CURVE M30-123

MAN SWITCH @ 14 READ @ 2.5
WELL SCREEN NONE
PACKER TYPE RIGID END BAG

AVERAGE SENSITIVITY X 10



READING#1 @ 2.8 FT/DAY
READING#2 @ 5.3 FT/DAY
READING#3 @ FT/DAY

SCREEN none in sand

PACKER TYPE ^{Rigid} end cap

1.9 AMPS

BIAS Δ2

BIAS Δ3

AVERAGE BIAS

START	END	Δ
-64	109	-45
-4	-53	-49
-8	+7	+15
-8	+59	+67
~~~~~		

START	END	Δ
-63	-109	-46
0	-54	-54
-6	+7	+13
-8	+58	+66
~~~~~		

Δ1	Δ2	Δ3	AVERAGE
			-45
			-49
			+15
			+67
~~~~~			

#2

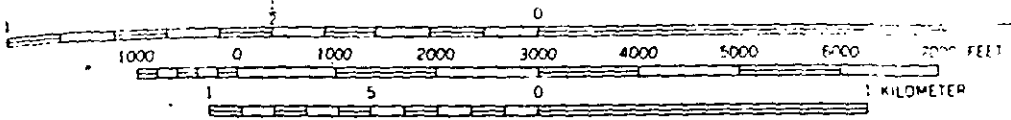
#3

START	END	Δ
-68	28	+40
-4	+19	+23
-6	+12	+18
-7	+7	+14
~~~~~		

START	END	Δ
-67	+27	+94
0	+64	+64
-5	+13	+18
-6	-28	-22
~~~~~		

$n_1 = 2.8 \text{ FT/DAY}$  PUMP RATE 7.8 ml/min = 5.3 FT/DAY PUMP RATE 13 ml/min = 8.8 FT/DAY

#2	BIAS	#2-BIAS	#3	BIAS	#3-BIAS
+40	-45	+85	+94	-45	+139
+23	-49	+72	+64	-49	+113
+18	+15	-3	+18	+15	-3
+14	+67	-53	-22	+67	-89

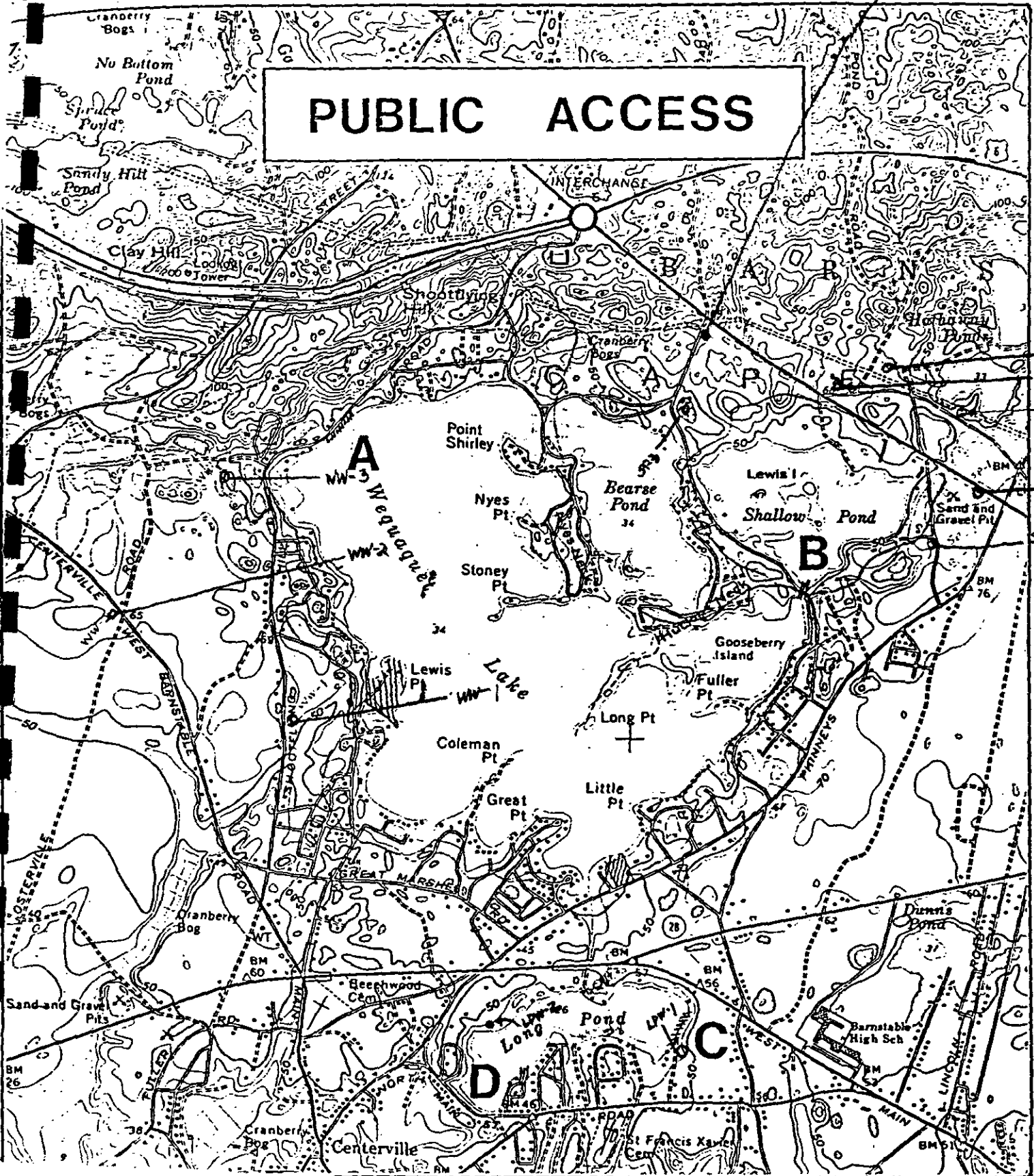


CONTOUR INTERVAL 10 FEET  
 DATUM IS MEAN SEA LEVEL

DEPTH CURVES AND SOUNDINGS IN FEET-DATUM IS MEAN LOW WATER  
 SHORELINE SHOWN REPRESENTS THE APPROXIMATE LINE OF MEAN HIGH WATER  
 THE MEAN RANGE OF TIDE IS APPROXIMATELY 9.5 FEET  
 IN CAPE COD BAY AND 3.1 FEET IN NANTUCKET SOUND

AND 1961 MAGNETIC NORTH  
 AT CENTER OF SHEET

# PUBLIC ACCESS

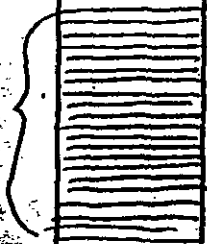


84-2  
 74-1  
 64-D  
 SPW 1  
 SPW 2

74-1  
 64-D  
 SPW 1  
 SPW 2  
 BM 76  
 BM 60  
 BM 56  
 BM 51

K-V ASSOCIATES  
MONITORING WELL LOG

BORING NUMBER: LPW-1 TOC ELEVATION: 45' DATE: 12-21-00  
 TYPE: _____ LOCATION: Lone Pond East Access NAME: CRJ  
 DRILL METHOD: Auger Blue Rock Drilling PAGE: 1 OF 1  
 WATER LEVEL encountered _____ while drilling

DEPTH IN FEET	LITH COL	SAMPLE	LITHOLOGIC DESCRIPTION	OBSERVATIONS	WELL SCHEMATIC	WELL DESIGN
0			Sand, yellow brown, <del>sp</del> fine grain, well sorted, minor gravel		2" Schedule 40 PVC	
5			Sand as above and <del>sp</del> gravel < 1"			
10						
15			Sand, medium-coarse <del>sp</del> grain reddish brn, w/ gravel + cobbles	52" .010" slot Diedrick		
18			TD = 18'			16'
20						
21						

K-V ASSOCIATES  
MONITORING WELL LOG

BORING NUMBER LP-2 TOC ELEVATION 250' DATE 12-26-85  
 TYPE _____ LOCATION Long Pond Nw NAME CES  
 DRILL METHOD Auger WATER LEVEL encountered 17' while drilling PAGE 1 OF 1

DEPTH IN FEET	LITH COL	SAMPLE	LITHOLOGIC DESCRIPTION	OBSERVATIONS	WELL SCHEMATIC	WELL DESIGN
5			<u>sm</u> silty sand, fine grain - coarse grain poorly sorted moist yellow. brw		2" Sched. 40 13.0	13.0
10			<u>sc</u> clayey sand, med. gray. wet			
15			<u>sm</u> silty sand, very fine grain, gry.	no return past 15.0		
20			TD = 23.0'			

Drill to 23'

K-V ASSOCIATES  
MONITORING WELL LOG

BORING NUMBER WW-1 TOC ELEVATION 50' DATE 12-24-81  
 TYPE Auger LOCATION Shoot Flying Hill Rd NAME CEB  
 DRILL METHOD Auger PAGE 1 OF 1  
 WATER LEVEL encountered 16.0' while drilling

DEPTH IN FEET	LITH COL	SAMPLE	LITHOLOGIC DESCRIPTION	OBSERVATIONS	WELL SCHEMATIC	WELL DESIGN
0			Clayer-Silt-Sand Redish Brown		PVC Sched. 40 2" CASING to surface	
5			sand, fed-brown, sp fine-coarse grain, moderately sorted			
10			sand, yellow-brown, sp fine grain, well sorted			
15			< wet			
20			sand, as above, sp medium grained, some coarse sand	52" Diedrich .010" 2" screen		

TO 35.0

20.8' overall



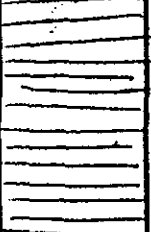
K-V ASSOCIATES  
MONITORING WELL LOG

BORING NUMBER WW-2 TOC ELEVATION 65' DATE 12-24-85  
 TYPE _____ LOCATION Pine Forest junction NAME CEP  
 DRILL METHOD Auger Patriot - w/ Barnstable K- PAGE 1 OF 2  
 WATER LEVEL encountered _____ while drilling

DEPTH IN FEET	LITH COL	SAMPLE	LITHOLOGIC DESCRIPTION	OBSERVATIONS	WELL SCHEMATIC	WELL DESIGN
0	111		clayey sand, med brown <u>gc</u>			
5			sand, yellow brown, fine grained <u>sp</u> well sorted minor gravel			
10	000		sand, brown-tan, medium grained w/ gravel < 1" well sorted <u>sp</u>			
15	000					
20	0		sand, tan, fine-grained, well-sorted minor gravel			
25						







K-V ASSOCIATES  
MONITORING WELL LOG

BORING NUMBER WW-2 TOC ELEVATION 65' DATE 12-24-85  
 TYPE _____ LOCATION _____ NAME _____  
 DRILL METHOD _____ PAGE 2 OF 2  
 WATER LEVEL encountered _____ while drilling

DEPTH IN FEET	LITH COL	SAMPLE	LITHOLOGIC DESCRIPTION	OBSERVATIONS	WELL SCHEMATIC	WELL DESIGN
30			<p>SP Sand, tan, med-coarse-grained, moderately sorted.</p>	<p>52" of 10" Dreditch Screen</p>	<p>Sch. 40 casing 2"</p> 	
35						
40						
			ID @ 48.0			

K-V ASSOCIATES  
MONITORING WELL LOG

BORING NUMBER WW-3 TOC ELEVATION 40' DATE 12-26-85  
 TYPE _____ LOCATION undeveloped Cold Springs NAME CS  
 DRILL METHOD Auger PAGE 1 OF 1  
 WATER LEVEL encountered 29.0 while drilling

DEPTH IN FEET	LITH COL	SAMPLE	LITHOLOGIC DESCRIPTION	OBSERVATIONS	WELL SCHEMATIC	WELL DESIGN
0			Sandy loam			
5			sm silty sandy fine grain gray			
10			sm sand fine grain gray-tan, well sorted			
15						
20			TD. 18.0'			

SEPTIC SYSTEM INVENTORY  
WEQUAQUET LAKE

LOT NUMBER	ADDRESS	SEPTIC/CESSPOOL	PROBLEM	AGE (YRS)	DIST (FT)	OCCUPIED	PUMPED	ADDITIVES	FLOODING	RESIDENTS	DISHWASHER	WASHING MACHINE	GARBAGE DISPOSAL	LAWN AREA	FERTILIZER
1	Lakeside Dr. West	S	-	8	70	YR	3-5	-	-	3	X	X	X	5000	-
2	"	S	-	15	150	J-Aug	3-5	-	-	2	X	X	X	0	-
3	"	Dis	-	15	40	wkend	3-5	-	-	2	X	X	-	0	-
4	"	Dis	-	18	200	YR	once	-	-	2	X	X	-	4000	Lawn Co.
5	"	S	-	20	70	YR	3-5	-	-	2	X	X	X	0	-
6	Lakeside Dr. East	DK	-	20	300	YR	DK	DK	-	3	X	X	X	4000	DK
7	"	C	-	12	80	YR	once	-	-	2	X	X	-	6000	Lawn Co.
8	"	DK	-	11	200	YR	3-5	X	-	2	X	X	-	0	-
9	"	S	-	15	70	YR	1-2	-	-	3	X	X	X	1000	Scotts (2)
10	"	S	-	13	80	YR	once	X	-	2	X	X	X	4000	Organic (3)
11	"	C	-	16	110	YR	once	-	-	2	X	X	-	2500	Scotts (3)
12	"	S	-	5	75	YR	-	-	-	2	X	X	-	2000	Scotts (2)
13	"	S	-	8	200	YR	-	-	-	3	X	X	X	300	Scotts (2)
14	Holly Pt. Rd.	S	over use	23	65	YR	1-2	-	-	2	X	X	X	1600	Scotts (1/3)
15	"	S	-	14	250	May-Oct	-	X	-	2	X	X	X	0	-
16	"	C	-	17	160	YR	3-5	DK	Heavy Rain	6	X	X	X	3200	Manure (1)
17	"	DK	-	28	170	YR	once	X	-	2	-	X	-	1000	Scotts (1)
18	"	C	DK	18	110	wkend	once	-	-	1	X	X	X	500	-
19	"	S	-	15	150	DK	DK	-	-	6	X	X	X	0	-
20	"	S	-	10	170	YR	-	-	-	4	X	X	X	3200	DK (1)

SEPTIC SYSTEM INVENTORY  
WEQUAQUET LAKE

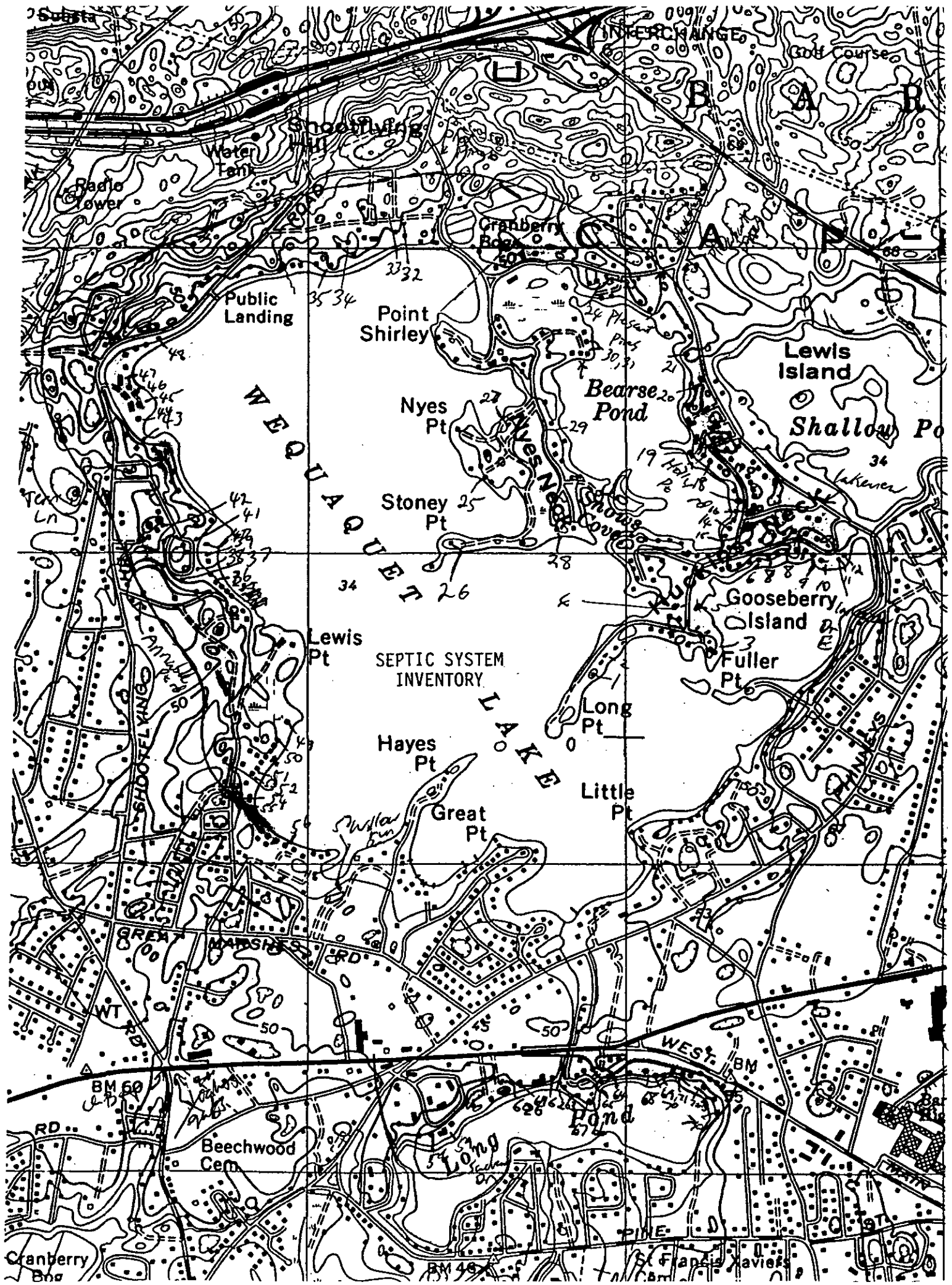
LOT NUMBER	ADDRESS	SEPTIC/CESSPOOL	PROBLEM	AGE (YRS)	DIST (FT)	OCCUPIED	PUMPED	ADDITIVES	FLOODING	RESIDENTS	DISHWASHER	WASHING MACHINE	GARBAGE DISPOSAL	LAWN AREA	FERTILIZER
21	Huckins Neck	C	over-flowed	22	80	YR	1-2	-	-	4	X	X	-	4800	-
22	Pleasant Pines	S	-	1	130	YR	-	-	-	5	X	X	-	0	-
23	"	C	-	25	100	YR	-	-	-	1	X	X	X	3200	-
24	"	S	-	15	75	YR	1-2	X	-	3	-	X	-	1600	Scotts (2)
25	"	C	-	10	40	YR	1-2	-	-	1	X	X	X	4000	Lawn Co. (4)
26	Nyes Neck	S	-	3	85	YR	-	-	-	5	X	X	-	2000	ChemLawn (3)
27	"	DK	-	5	40	YR	3-5	-	-	4	X	X	-	1600	Lawn Co. (4)
28	"	S	-	9	80	YR	-	-	-	2	X	X	-	3500	Lawn Co. (3)
29	"	C	-	15	20	YR	once	-	-	1	-	-	-	0	-
30	"	S	-	12	40	YR	3-5	-	-	2	-	X	-	1100	Scotts (½)
31	"	S	-	1	50 weekend	-	-	-	-	4	X	X	X	3200	Lawn Co. (2)
32	Pleasant Pines	C	-	30+	120	May-Oct	3-5	-	-	4	X	X	-	8000	DK (½)
33	"	S	over use	13	220	YR	3-5	X	solved	2	X	X	X	1800	-
34	"	C	-	40	160	June-Sep	10 yr	-	-	2	X	X	X	2000	-
35	Lakeview	S	-	20/35	80	YR	3-5	-	-	3	X	X	X	1600	Lawn Co. (4)
36	Lakewood	C	-	43	30	Mar-Nov	1-2	X	-	4	-	-	-	900	-
37	Tern Ln	DK	over use	20	250	YR	1-2	X	1	5	X	X	-	800	Lawn Co. (4)
38	"	S	-	2	40	May-Oct	-	-	-	2	X	X	X	1600	Lawn Co. (4)
39	"	C	-	37	30	YR	once	X	-	1	-	X	X	900	Lawn Co. (4)
40	"	S	-	1	100	YR	-	X	-	1	X	-	-	1100	Scotts (1)
41	"	DK	-	25+	40	Ju-July	DK	-	-	2	X	X	X	3600	-
42	"	DK	-	30	300	YR	DK	DK	-	5	-	X	-	1200	Scotts (1)
43	"	DK	-	20	30	1/wkend month	-	-	-	7	X	X	-	1800	Scotts (1)

SEPTIC SYSTEM INVENTORY  
WEQUAQUET LAKE

LOT NUMBER	ADDRESS	SEPTIC/CESSPOOL	PROBLEM	AGE (YRS)	DIST (FT)	OCCUPIED	PUMPED	ADDITIVES	FLOODING	RESIDENTS	DISHWASHER	WASHING MACHINE	GARBAGE DISPOSAL	LAWN AREA	FERTILIZER
44	Johnson	C	-	35+	60	YR	3-5	-	-	1	X	X	-	1800	Lawn Co. (4)
45	"	S	-	22	90	YR	once	X	-	2	X	X	-	4000	Lawn Co. (4)
46	"	S	-	22	90	may-aug	once	-	-	2	X	X	X	3500	Scotts (2)
47	"	S	over use	22	60	YR	3-5	-	-	1	X	X	-	1400	-
48	Shoot Fly-C ing Hill	C	-	1	80	YR	3-5	-	-	3	X	X	-	1200	Scotts (1)
49	Annabel Pt. Rd.	S	-	11	70	YR	3-5	X	-	3	X	X	X	800	Lawn Co. (4)
50	"	C	-	20	90	YR	3-5	-	-	1	X	X	-	500	-
51	"	S	-	25	70	YR	once	-	-	2	X	X	-	800	Scotts (2)
52	"	S	-	18	130	YR	1-2	-	-	4	-	X	-	3200	DK (1)
53	"	S	-	0	60	YR	-	-	-	3	-	-	-	1600	-
54	"	DK	poor soil	40	160	YR	1-2	X regular back-up	-	4	-	-	-	1600	-
55	"	S	-	25	150	YR	1-2	-	-	3	-	X	-	2000	cheap stuff
56	Willow Run Dr.	S	-	15	70	YR	1-2	-	-	3	-	X	-	1200	-
57	"	S	-	6	100	YR	-	-	-	4	X	X	-	1600	Scotts (1)
LONG POND															
58	Sachem	S	-	10	80	YR	1-2	- heavy rain	-	4	X	X	X	2400	Lawn Co. (4)
59	"	C	over use	18/2	70	YR	3-5	-	-	3	X	X	-	400	Scotts (1)
60	28	C	over use	15+	70	YR	3-5	-	-	3	-	-	-	300	-
61	"	C	-	23	70	YR	once	-	-	3	-	X	X	3500	-
62	"	C	-	30	90	YR	1-2	-	-	2	X	X	X	3200	Gr. Machine
63	"	DK	-	17	130	YR	-	-	-	1	X	X	X	700	Scotts (1)
64	"	S	-	15	100	YR	1-2	-	-	2	-	-	-	1000	Organic (1)

SEPTIC SYSTEM INVENTORY  
WEQUAQUET LAKE

LOT NUMBER	ADDRESS	SEPTIC/CESSPOOL	PROBLEM	AGE (YRS)	DIST (FT)	OCCUPIED	PUMPED	ADDITIVES	FLOODING	RESIDENTS	DISHWASHER	WASHING MACHINE	GARBAGE DISPOSAL	LAWN AREA	FERTILIZER
65	28	S	-	1	90	YR	-	-	-	2	-	X	-	600	-
66	"	C	over use	18	120	YR	1-2	-	-	2	-	-	-	100	-
67	"	C	-	25+	180	YR	twice	-	-	1	-	-	-	0	-
68	"	DK	-	20	40	YR	once	-	-	2	X	X	-	1400	5-10-5 (½)
69	"	C	-	20/35	80	YR	1-2	X	-	3	X	-	-	800	-
70	"	C	-	25	20	YR	1-2	-	-	1	-	-	-	0	-
71	"	S	-	35	80	YR	once	X	-	3	X	X	-	8000	-
72	"	C	-	10	120	YR	1-2	-	-	2	-	X	-	400	-
73	"	C	-	DK	120	YR	-	-	-	1	-	-	-	1600	-
74	"	C	-	20+	100	YR	-	-	-	1	-	X	-	15,000	-





APPENDIX F - Phytoplankton Analyses

ORGANISM	TALLY	c/mm ²	RELATIVE ABUNDANCE %
<b>CYANOPHYCEAE</b>			
Non-filamentous blue-green algae			
TOTAL			
Filamentous blue-green algae			
TOTAL			
<b>CHLOROPHYCEAE</b>			
Non-filamentous green algae			
SPHAEROCYSTIS		53	
GOLENKINIA		27	
CLOSTERIDOPSIS		27	
SCHROEDERIA		53	
CLOSTERIUM		27	
TOTAL			187
Filamentous green algae			
TOTAL			
Flagellated green algae			
CHLAMYDOMONAS		13	
TOTAL			13
<b>BACILLARIOPHYCEAE</b>			
Centric diatoms			

# Phytoplankton Sedgwick-Rafter Count

## Part A

STATION NUMBER: 1A

COLLECTION LOCATION: WEQUAQUET

COLLECTED BY: CHARBONNEAU / NELSON

DATE COLLECTED: 6/24/85

SAMPLE VOLUME: 1 ml.

DILUTION FACTOR: 0

DEPTH: SURFACE

AREA SCRAPED:

SUBSTRATE:

TOTAL PHYTOPLANKTON Parts A&B (cells/ml): 385 cells/ml.

IDENTIFIED BY: CHARBONNEAU

N.Q. = not quantitative





ORGANISM	TALLY	c/mm ²	RELATIVE ABUNDANCE %
<b>CYANOPHYCEAE</b>			
Non-filamentous blue-green algae			
TOTAL			
Filamentous blue-green algae			
TOTAL			
<b>CHLOROPHYCEAE</b>			
Non-filamentous green algae			
SCHROEDERIA		27	
ZOSTERIOPSIS		40	
CLOSTERIUM		13	
ANKISTRODESMUS		53	
GLOEOCYSTIS		13	
OOCYSTIS		13	
PRYTOCOCCUS		13	
TOTAL		172	
Filamentous green algae			
TOTAL			
Flagellated green algae			
CHLAMYDOMONAS		80	
TOTAL		80	
<b>BACILLARIOPHYCEAE</b>			
Centric diatoms			

# Phytoplankton Sedgwick-Rafter Count

## Part A

STATION NUMBER:  
2A

COLLECTION LOCATION:  
WEQUAQUET

COLLECTED BY:  
CHARB. / NELSON

DATE COLLECTED:  
10/24/85

SAMPLE VOLUME:  
1 ml.

DILUTION FACTOR:  
0

DEPTH:  
SURFACE

AREA SCRAPED:

SUBSTRATE:

TOTAL PHYTOPLANKTON Parts A&B (cells/ml):  
451 cells/ml.

IDENTIFIED BY:  
CHARBONNEAU

N.Q. = not quantitative



ORGANISM	TALLY	C/mm ²	RELATIVE ABUNDANCE %
<b>BACILLARIOPHYCEAE</b>			
Pennate diatoms			
FRAGILARIA	I	13	
NAVICULA	I	13	
SYNEDRA	II	27	
ASTERIONELLA	I	13	
DIATOMELLA	I	13	
TOTAL		79	
<b>CHRYSOPHYCEAE</b>			
Other pigmented algae			
Other pigmented flagellated algae			
MALLOMONAS	III I	80	
Dinobryon	III	40	
TOTAL		120	
<b>DINOPHYCEAE</b>			
Dinoflagellates			
TOTAL			
<b>PROTOZOA</b>			
TOTAL			
<b>FILAMENTOUS BACTERIA &amp; FUNGI</b>			
TOTAL			
<b>OTHERS</b>			
TOTAL			

**Phytoplankton  
Sedgwick-Rafter  
Count**

**Part B**

REMARKS:

3 STRIPS @ 200X

Rel. little

amorphous material

451 cells/ml



ORGANISM TALLY c/mm² RELATIVE ABUNDANCE %

CYANOPHYCEAE

Non-filamentous blue-green algae

TOTAL

Filamentous blue-green algae

TOTAL

CHLOROPHYCEAE

Non-filamentous green algae

SPHAEROCYSTIS	11	27
ANKISTRODESMUS	11	40
GOLENKINIA	1	13

TOTAL 80

Filamentous green algae

TOTAL

Flagellated green algae

CHLAMYDOMONAS	1	80
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TOTAL 80

BACILLARIOPHYCEAE  
Centric diatoms

Phytoplankton  
Sedgwick-Rafter  
Count

Part A

STATION NUMBER:

3

COLLECTION LOCATION:

WEQUAQUET

COLLECTED BY:

CHARBONNEAU

DATE COLLECTED:

10/24/85

SAMPLE VOLUME:

1 ml

DILUTION FACTOR:

0

DEPTH:

SURFACE

AREA SCRAPED:

SUBSTRATE:

TOTAL PHYTOPLANKTON  
Parts A&B (cells/ml):

225 cells/ml

IDENTIFIED BY:

CHARBONNEAU

N.Q. = not  
quantitative

IEP inc.

# Phytoplankton Sedgwick-Rafter Count

## Part B

ORGANISM	TALLY	c/mm ²	RELATIVE ABUNDANCE %
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### BACILLARIOPHYCEAE

#### Pennate diatoms

FRUSTULIA	1	13	
NAVICULA	1	13	
SYNEDRA	1	13	

TOTAL		39	
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### CHRYSOPHYCEAE

#### Other pigmented algae

#### Other pigmented flagellated algae

CHRYSOCOCBUS	1	13	
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TOTAL		13	
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### DINOPHYCEAE

#### Dinoflagellates

TOTAL			
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### PROTOZOA

EUGLENA	1	13	
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TOTAL		13	
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### FILAMENTOUS BACTERIA & FUNGI

TOTAL			
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### OTHERS

### REMARKS:

3 STRIPS @ 200x

Relatively little  
amorphous material.

225 cells/ml.

ORGANISM	TALLY	c/mm ²	RELATIVE ABUNDANCE %
<b>CYANOPHYCEAE</b>			
Non-filamentous blue-green algae			
<b>TOTAL</b>			
Filamentous blue-green algae			
<b>TOTAL</b>			
<b>CHLOROPHYCEAE</b>			
Non-filamentous green algae			
ANKISTRIDESMUS	1	13	
SCHROEDERIA	1	13	
SPHAEROCYSTIS	1	13	
<b>TOTAL</b>		39	
Filamentous green algae			
ULOTHRIX	1	13	
<b>TOTAL</b>		13	
Flagellated green algae			
<b>TOTAL</b>			
<b>BACILLARIOPHYCEAE</b>			
Centric diatoms			

**Phytoplankton Sedgwick-Rafter Count**

Part A

STATION NUMBER:

4

COLLECTION LOCATION:

WEQUAQUET

COLLECTED BY:

CHARBONNEAU

DATE COLLECTED:

10/24/85

SAMPLE VOLUME:

1 ml

DILUTION FACTOR:

0

DEPTH:

SURFACE

AREA SCRAPED:

SUBSTRATE:

TOTAL PHYTOPLANKTON Parts A&B (cells/ml):

118 cells/ml

IDENTIFIED BY:

CHARBONNEAU

N.Q. = not quantitative

**IEP inc.**



ORGANISM	TALLY	c/mm ²	RELATIVE ABUNDANCE %
<b>BACILLARIOPHYCEAE</b>			
<b>Pennate diatoms</b>			
NAVICULA	11	40	
FRAGILARIA	1	13	
DIATOMELLA	1	13	
	TOTAL	66	
<b>CHRYSOPHYCEAE</b>			
<b>Other pigmented algae</b>			
	TOTAL		
<b>Other pigmented flagellated algae</b>			
	TOTAL		
<b>DINOPHYCEAE</b>			
<b>Dinoflagellates</b>			
	TOTAL		
<b>PROTOZOA</b>			
	TOTAL		
<b>FILAMENTOUS BACTERIA &amp; FUNGI</b>			
	TOTAL		
<b>OTHERS</b>			

# Phytoplankton Sedgwick-Rafter Count

## Part B

REMARKS:

3 STRIPS @ 200X

Relatively little amorphous material

118 cells/ml

ORGANISM	TALLY	c/mm ²	RELATIVE ABUNDANCE %
<b>CYANOPHYCEAE</b>			
Non-filamentous blue-green algae			
TOTAL			
Filamentous blue-green algae			
TOTAL			
<b>CHLOROPHYCEAE</b>			
Non-filamentous green algae			
<i>Coscinodiscus</i>	I	13	
<i>Eudorina</i>	III	40	
<i>Aphanocapsa</i>	+++ III	106	
<i>Ankistrodesmus</i>	II	27	
<i>Closteriopsis</i>	I	13	
<i>Chlorella</i>	II	27	
<i>Rhizosolenia</i> (unidentified)	II	27	
TOTAL		253	long! spines
Filamentous green algae			
TOTAL			
Flagellated green algae			
<i>Heteronema</i>	II	27	
TOTAL		27	
<b>BACILLARIOPHYCEAE</b>			
Centric diatoms			
<i>Cocconeis</i>	II	40	
TOTAL		40	

**Periphyton  
Sedgwick-Rafter  
Count  
Part A**

STATION NUMBER: #1

COLLECTION LOCATION: Waguquet

COLLECTED BY: B.C.

DATE COLLECTED: 11/25/85

SAMPLE VOLUME: 1ml

DILUTION FACTOR: _____

DEPTH: Surface

AREA SCRAPED: _____

SUBSTRATE: _____

TOTAL PERIPHYTON:  
Parts A&B (cells/mm²):  
385 cells

IDENTIFIED BY: *Manly*

N.Q. = not quantitative





ORGANISM	TALLY	c/mm ²	RELATIVE ABUNDANCE %
<b>CYANOPHYCEAE</b>			
<b>Non-filamentous blue-green algae</b>			
TOTAL			
<b>Filamentous blue-green algae</b>			
Anabena	1	13	
TOTAL			13
<b>CHLOROPHYCEAE</b>			
<b>Non-filamentous green algae</b>			
Sphaerocyclus		80	
Chlorococcum		40	
Chlamydomonas		40	
Aphanocapsa		63	
- Chlorella	1	13	
Clusteropsis	1	13	
TOTAL			239
<b>Filamentous green algae</b>			
TOTAL			
<b>Flagellated green algae</b>			
TOTAL			
<b>BACILLARIOPHYCEAE</b>			
<b>Centric diatoms</b>			

**Periphyton  
Sedgwick-Rafter  
Count  
Part A**

STATION NUMBER:

2

COLLECTION LOCATION:

Wequaquet

COLLECTED BY:

B.C.

DATE COLLECTED:

11/25/85

SAMPLE VOLUME:

1ml

DILUTION FACTOR:

DEPTH:

Surface

AREA SCRAPED:

SUBSTRATE:

TOTAL PERIPHYTON:  
Parts A&B (cells/mm²):

317 cells

IDENTIFIED BY:

*Manly*

N.Q. = not quantitative

ORGANISM	TALLY	c/mm ²	RELATIVE ABUNDANCE %
<b>ACILLARIOPHYCEAE</b>			
<b>Pennate diatoms</b>			
<i>Surirella</i>	1	13	
<i>NAVICULA</i>	1	13	
<i>Frustulia</i>	1	13	
<b>TOTAL</b>		39	
<b>CHRYSOPHYCEAE</b>			
<b>Other pigmented algae</b>			
<b>Other pigmented flagellated algae</b>			
<i>Mallomonas</i>	1	13	
<i>divobryon</i>	1	13	
<b>TOTAL</b>		26	
<b>DINOPHYCEAE</b>			
<b>Dinoflagellates</b>			
<b>TOTAL</b>			
<b>PROTOZOA</b>			
<b>TOTAL</b>			
<b>FILAMENTOUS BACTERIA &amp; FUNGI</b>			
<b>TOTAL</b>			
<b>OTHERS</b>			
<b>TOTAL</b>			

**Periphyton  
Sedgwick-Rafter  
Count  
Part B**

REMARKS:

*3 strips @ 200x*

# Periphyton Sedgwick-Rafter Count

## Part A

STATION NUMBER:

#3

COLLECTION LOCATION:

Weguaguet

COLLECTED BY:

B. C.

DATE COLLECTED:

11/25/85

SAMPLE VOLUME:

1 ml

DILUTION FACTOR:

DEPTH:

Surface

AREA SCRAPED:

SUBSTRATE:

TOTAL PERIPHYTON:

Parts A&B (cells/mm²):

240

IDENTIFIED BY:

Mark [Signature]

N.Q. = not  
quantitative

ORGANISM	TALLY	c/mm ²	RELATIVE ABUNDANCE %
<b>CYANOPHYCEAE</b>			
Non-filamentous blue-green algae			
TOTAL			
Filamentous blue-green algae			
TOTAL			
<b>CHLOROPHYCEAE</b>			
Non-filamentous green algae			
Aphanocapsa		53	
Ankistrodesmus		27	
Chlamydomonas		27	
Chlorella		13	
Sphaerocystis		27	
Crucigonia		13	
TOTAL		160	
Filamentous green algae			
TOTAL			
Flagellated green algae			
TOTAL			
<b>BACILLARIOPHYCEAE</b>			
Centric diatoms			
Cyclotella		13	
TOTAL		13	

ORGANISM	TALLY	c/mm ²	RELATIVE ABUNDANCE %
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Periphyton  
Sedgwick-Rafter  
Count  
Part B

BACILLARIOPHYCEAE			
Pennate diatoms			
<i>Navicula</i>	##	67	
<b>TOTAL</b>		67	

REMARKS:  
*3 strips @ 200x*

CHRYSOPHYCEAE			
Other pigmented algae			
<b>TOTAL</b>			

DINOPHYCEAE			
Dinoflagellates			
<b>TOTAL</b>			

PROTOZOA			
<b>TOTAL</b>			

FILAMENTOUS BACTERIA & FUNGI			
<b>TOTAL</b>			

OTHERS			

# Periphyton Sedgwick-Rafter Count Part A

STATION NUMBER:

# 4

COLLECTION LOCATION:

Wequaquet

COLLECTED BY:

Bob Charb.

DATE COLLECTED:

11/25/85

SAMPLE VOLUME:

1ml

DILUTION FACTOR:

DEPTH:

Surface

AREA SCRAPED:

SUBSTRATE:

Surface

TOTAL PERIPHYTON:

Parts A&B (cells/mm²):

306

IDENTIFIED BY:

Mark Charb.

N.Q. = not

quantitative

ORGANISM	TALLY	c./mm ²	RELATIVE ABUNDANCE %
<b>CYANOPHYCEAE</b>			
<b>Non-filamentous blue-green algae</b>			
<del>Microcystis</del>			
TOTAL			
<b>Filamentous blue-green algae</b>			
<u>Anabena</u>	1	13	
<u>Aphanocapsa</u>	11	27	
TOTAL		40	
<b>CHLOROPHYCEAE</b>			
<b>Non-filamentous green algae</b>			
<u>Chlamydomonas</u>	1	13	
<u>Chlosteropsis</u>	1	13	
<u>Chlorococcum</u>	111	80	
<u>Sphaerocystis</u>	11	27	
TOTAL		133	
<b>Filamentous green algae</b>			
TOTAL			
<b>Flagellated green algae</b>			
<u>Euglena</u>	11	27	
TOTAL		27	
<b>BACILLARIOPHYCEAE</b>			
<b>Centric diatoms</b>			
<u>Cocconeis</u>	11	27	
<u>Cyclotella</u>	1	13	
TOTAL		40	







ORGANISM	TALLY	c/mm ²	RELATIVE ABUNDANCE %
<b>CYANOPHYCEAE</b>			
Non-filamentous blue-green algae			
TOTAL			
Filamentous blue-green algae			
<i>Aphanocapsa</i>	11	40	
TOTAL		46	
<b>CHLOROPHYCEAE</b>			
Non-filamentous green algae			
<i>Cosmarium</i>	1	13	
<i>Glosteriopsis</i>	11	27	
TOTAL		40	
Filamentous green algae			
TOTAL			
Flagellated green algae			
TOTAL			
<b>BACILLARIOPHYCEAE</b>			
Centric diatoms			
<i>Cocconeis</i>	11	27	
TOTAL		27	

# Phytoplankton Sedgwick-Rafter Count

## Part A

STATION NUMBER: 1A

COLLECTION LOCATION: Wequaguet

COLLECTED BY: B.C.

DATE COLLECTED: 12/30

SAMPLE VOLUME: 1ml

DILUTION FACTOR:

DEPTH: Surface

AREA SCRAPED:

SUBSTRATE:

TOTAL PHYTOPLANKTON Parts A&B (cells/ml): 254 cells/ml

IDENTIFIED BY: *Mark Farrow*

N.Q. = not quantitative



ORGANISM	TALLY	c/mm ²	RELATIVE ABUNDANCE %
<b>BACILLARIOPHYCEAE</b>			
Pennate diatoms			
Navicula	11	27	
Fenestrulia	44	67	
Asterionella	1	13	
Fragilaria	1	13	
TOTAL		120	
<b>CHRYSOPHYCEAE</b>			
Other pigmented algae			
Other pigmented flagellated algae			
Dinobryon	11	27	
TOTAL		27	
<b>DINOPHYCEAE</b>			
Dinoflagellates			
TOTAL			
<b>PROTOZOA</b>			
TOTAL			
<b>FILAMENTOUS BACTERIA &amp; FUNGI</b>			
TOTAL			
<b>OTHERS</b>			
TOTAL			

**Phytoplankton  
Sedgwick-Rafter  
Count  
Part B**

**REMARKS:**

*3 strips at 200x*

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ORGANISM	TALLY	c/mm ²	RELATIVE ABUNDANCE %
<b>BACILLARIOPHYCEAE</b>			
Pennate diatoms			
<i>Noctiluca</i>	1	13	
<i>Frustula</i>	1	13	
TOTAL		26	
<b>CHRYSOPHYCEAE</b>			
Other pigmented algae			
Other pigmented flagellated algae			
TOTAL			
<b>DINOPHYCEAE</b>			
Dinoflagellates			
TOTAL			
<b>PROTOZOA</b>			
TOTAL			
<b>FILAMENTOUS BACTERIA &amp; FUNGI</b>			
TOTAL			
<b>OTHERS</b>			
TOTAL			

**Phytoplankton  
Sedgwick-Rafter  
Count  
Part B**

REMARKS:

3 strips @ 200X

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ORGANISM	TALLY	c/mm ²	RELATIVE ABUNDANCE %
<b>BACILLARIOPHYCEAE</b>			
Pennate diatoms			
<i>Navicula</i>	######	123	
<i>Asterionella</i>	1	13	
<i>Melosira</i>	1	13	
<i>Fragilaria</i>	1	13	
<i>Synedra</i>	1	13	
<i>Fragularia</i>	1	13	
TOTAL		238	
<b>CHRYSOPHYCEAE</b>			
Other pigmented algae			
TOTAL			
Other pigmented flagellated algae			
TOTAL			
<b>DINOPHYCEAE</b>			
Dinoflagellates			
TOTAL			
<b>PROTOZOA</b>			
TOTAL			
<b>FILAMENTOUS BACTERIA &amp; FUNGI</b>			
TOTAL			
<b>OTHERS</b>			
TOTAL			

# Phytoplankton Sedgwick-Rafter Count

## Part B

REMARKS:

3 strips @ 200X

ORGANISM	TALLY	c/mm ²	RELATIVE ABUNDANCE %
<b>CYANOPHYCEAE</b>			
Non-filamentous blue-green algae			
TOTAL			
Filamentous blue-green algae			
TOTAL			
<b>CHLOROPHYCEAE</b>			
Non-filamentous green algae			
<i>Closteriopsis</i>		27	
<i>Gloeocystis</i>		13	
<i>Oocystis</i>		40	
TOTAL		80	
Filamentous green algae			
TOTAL			
Flagellated green algae			
<i>Cylindrocapsa</i>		27	
TOTAL		27	
<b>BACILLARIOPHYCEAE</b>			
Centric diatoms			
<i>Cyclotella</i>		67	

# Phytoplankton Sedgwick-Rafter Count

## Part A

STATION NUMBER: 2

COLLECTION LOCATION: Waququet

COLLECTED BY: Dave Worden

DATE COLLECTED: 1/29/86

SAMPLE VOLUME: 1ml

DILUTION FACTOR:  

DEPTH: surface

AREA SCRAPED:  

SUBSTRATE:  

TOTAL PHYTOPLANKTON Parts A&B (cells/ml): 413

IDENTIFIED BY: Mark Jorgensen

N.Q. = not quantitative







ORGANISM	TALLY	c/mm ²	RELATIVE ABUNDANCE %
<b>CYANOPHYCEAE</b>			
<b>Non-filamentous blue-green algae</b>			
TOTAL			
<b>Filamentous blue-green algae</b>			
TOTAL			
<b>CHLOROPHYCEAE</b>			
<b>Non-filamentous green algae</b>			
<i>ocystis</i>	11	27	
TOTAL		27	
<b>Filamentous green algae</b>			
TOTAL			
<b>Flagellated green algae</b>			
<i>Chlamydomonas</i>	HHH HHI	146	
TOTAL		146	
<b>BACILLARIOPHYCEAE</b>			
<b>Centric diatoms</b>			
TOTAL			

# Phytoplankton Sedgwick-Rafter Count

## Part A

STATION NUMBER: 1 Wequaguet

COLLECTION LOCATION: 3

COLLECTED BY: Dave Warden

DATE COLLECTED: 1/29/86

SAMPLE VOLUME: 1ml

DILUTION FACTOR: _____

DEPTH: surface

AREA SCRAPED: _____

SUBSTRATE: _____

TOTAL PHYTOPLANKTON Parts A&B (cells/ml): 386

IDENTIFIED BY: Mark Jurog

N.Q. = not quantitative



# Phytoplankton Sedgwick-Rafter Count Part B

ORGANISM	TALLY	c/mm ²	RELATIVE ABUNDANCE %
<b>BACILLARIOPHYCEAE</b>			
<b>Pennate diatoms</b>			
<i>Synedra</i>	11	27	
<i>Nannula</i>	111	48	
<i>Asterionella</i>	1	13	
<b>TOTAL</b>		80	

REMARKS:  
 3 strips @ 200x  
 mostly flagellates!

<b>CHRYSOPHYCEAE</b>			
<b>Other pigmented algae</b>			
<i>Chrysococcus</i>	44	67	
<i>Synura</i>	1	13	
<b>TOTAL</b>		80	
<b>Other pigmented flagellated algae</b>			
<b>TOTAL</b>			

<b>DINOPHYCEAE</b>			
<b>Dinoflagellates</b>			
<i>Peridinium</i>	1	13	
<b>TOTAL</b>		13	

<b>PROTOZOA</b>			
<i>Euglena</i>	111	40	
<b>TOTAL</b>		40	

<b>FILAMENTOUS BACTERIA &amp; FUNGI</b>			
<b>TOTAL</b>			

<b>OTHERS</b>			
<b>TOTAL</b>			

ORGANISM	TALLY	c/mm ²	RELATIVE ABUNDANCE %
<b>CYANOPHYCEAE</b>			
Non-filamentous blue-green algae			
TOTAL			
Filamentous blue-green algae			
TOTAL			
<b>CHLOROPHYCEAE</b>			
Non-filamentous green algae			
<i>Coeteriopsis</i>	1	13	
TOTAL		13	
Filamentous green algae			
TOTAL			
Flagellated green algae			
<i>Chlamydomonas</i>	4411	93	
TOTAL		93	
<b>BACILLARIOPHYCEAE</b>			
Centric diatoms			
<i>Ayclotella</i>	1	13	

# Phytoplankton Sedgwick-Rafter Count

## Part A

STATION NUMBER: 1 ~~2~~ #4

COLLECTION LOCATION: Waquaguet

COLLECTED BY: Dave Worden

DATE COLLECTED: 1/29/86

SAMPLE VOLUME: 1ml

DILUTION FACTOR: _____

DEPTH: surface

AREA SCRAPED: _____

SUBSTRATE: _____

TOTAL PHYTOPLANKTON Parts A&B (cells/ml): 238

IDENTIFIED BY: [Signature]

N.Q. = not quantitative



ORGANISM	TALLY	c/mm ²	RELATIVE ABUNDANCE %
<b>BACILLARIOPHYCEAE</b>			
Pennate diatoms			
<i>Navicula</i>	HH	67	
<i>Suriella</i>	1	13	
<i>Synedra</i>	1	13	
TOTAL		93	

<b>CHRYSOPHYCEAE</b>			
Other pigmented algae			
<i>dinobryon</i>	1	13	
		13	

Other pigmented flagellated algae			
TOTAL			

<b>DINOPHYCEAE</b>			
Dinoflagellates			
TOTAL			

<b>PROTOZOA</b>			
<i>unidentified Euglenoid</i>	1	13	
TOTAL		13	

<b>FILAMENTOUS BACTERIA &amp; FUNGI</b>			
TOTAL			

<b>OTHERS</b>			

**Phytoplankton  
Sedgwick-Rafter  
Count**

**Part B**

**REMARKS:**

3 strips @ 200X

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ORGANISM	TALLY	#/ml
<b>CHLOROPHYCEAE</b>		
Non-Filamentous Green Algae		
<i>Staurastrum</i>	1	13
<i>Tetradon</i>	1	13
<i>Closteriopsis</i>	1	13
TOTAL		39
Filamentous Green Algae		
TOTAL		
Flagellated Green Algae		
<i>Chlamydomonas</i>	11	27
TOTAL		27
<b>EUGLENOPHYCEAE</b>		
TOTAL		
<b>CHRYSOPHYCEAE</b>		
other Pigmented Algae		
TOTAL		
other Pigmented Flagellated Algae		
<i>Chrysooccus</i>	1	13
TOTAL		13

<b>PHYTOPLANKTON</b>
<b>SEDGWICK-RAFTER COUNT</b>
COLLECTION LOCATION: <i>Waquahutt</i>
STATION NUMBER
DATE COLLECTED <i>2/27/86</i>
DATE EXAMINED <i>2/3/86</i>
COLLECTED BY <i>MA &amp; DW</i>
ALIQOT SAMPLE VOLUME <i>1 ml</i>
DILUTION FACTOR <i>φ</i>
DEPTH <i>Surface</i>
TOTAL PHYTOPLANKTON (#/ml) <i>425 cells/ml</i>
IDENTIFIED BY <i>Mark Frazier</i>
3 STRIPS @ 200x
ENUMERATION FACTOR <i>13.3</i>

**IEP inc.**

ORGANISM	TALLY	#/ml.
<b>BACILLARIOPHYCEAE</b>		
Pennate diatoms		
<i>Synedra</i>	### III	106
<i>Navicula</i>	<del>###</del> ###	133
<i>Tetracyclus</i>	/	13
<i>Amphora</i>	III	40
<i>Tabellaria</i>	II	27
Centric diatoms		
TOTAL		319
<b>DINOPHYCEAE</b>		
TOTAL		
<b>CYANOPHYCEAE</b>		
Non-Filamentous Blue-Green Algae		
<i>Aphanocapsa</i>	II	27
TOTAL		27
Filamentous Blue-Green Algae		
TOTAL		
<b>PROTOZOA</b>		
TOTAL		
<b>FILAMENTOUS BACTERIA &amp; FUNGI</b>		
TOTAL		
<b>OTHERS</b>		
TOTAL		

**PHYTOPLANKTON  
SEDGWICK-RAFTER  
COUNT**

REMARKS and  
CALCULATIONS:









ORGANISM	TALLY	#/ml.
<b>BACILLARIOPHYCEAE</b>		
<i>Pennate diatoms</i>		
<i>Nannicula</i>	######	240
<i>Amphora</i>	I	20
<i>Frustulia</i>	II	40
<i>Fragilaria</i>	II	40
<i>Tabellaria</i>	I	20
<i>Centric diatoms</i>		
	TOTAL	360
<b>DINOPHYCEAE</b>		
	TOTAL	
<b>CYANOPHYCEAE</b>		
<i>Non-Filamentous Blue-Green Algae</i>		
	TOTAL	
<i>Filamentous Blue-Green Algae</i>		
	TOTAL	
<b>PROTOZOA</b>		
	TOTAL	
<b>FILAMENTOUS BACTERIA &amp; FUNGI</b>		
	TOTAL	
<b>OTHERS</b>		
	TOTAL	

**PHYTOPLANKTON  
SEDGWICK-RAFTER  
COUNT**

REMARKS and  
CALCULATIONS:

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ORGANISM	TALLY	#/ml
<b>CHLOROPHYCEAE</b>		
<b>Non-Filamentous Green Algae</b>		
	TOTAL	
<b>Filamentous Green Algae</b>		
	TOTAL	
<b>Flagellated Green Algae</b>		
<i>Chlamydomonas</i>	###-###	133
	TOTAL	133
<b>EUGLENOPHYCEAE</b>		
<i>Euglena</i>	1	13
	TOTAL	13
<b>CHRYSOPHYCEAE</b>		
<b>other Pigmented Algae</b>		
<i>Dinobryon</i>	1	13
	TOTAL	13
<b>other Pigmented Flagellated Algae</b>		
	TOTAL	

**PHYTOPLANKTON**

**SEDGWICK-RAFTER COUNT**

COLLECTION LOCATION: Weymouth

STATION NUMBER: 4

DATE COLLECTED: 2/27/86

DATE EXAMINED: 3/3/86

COLLECTED BY: DW & MJ

ALIQUOT SAMPLE VOLUME: 1 ml

DILUTION FACTOR: φ

DEPTH: Surface

TOTAL PHYTOPLANKTON (#/ml): 226 cells/ml

IDENTIFIED BY: Mark Janssen

3 STRIPS @ 200x

ENUMERATION FACTOR: 13.3









ORGANISM	TALLY	#/ml
<b>CHLOROPHYCEAE</b>		
<b>Non-Filamentous Green Algae</b>		
<i>Chlorella</i>	I	13
<b>Filamentous Green Algae</b>		
<b>Flagellated Green Algae</b>		
<i>Chlamydomonas</i>	IIII	67
<b>EUGLENOPHYCEAE</b>		
<b>CHRYSOPHYCEAE</b>		
<b>other Pigmented Algae</b>		
<b>other Pigmented Flagellated Algae</b>		
<i>Microcystis</i>	I	13
<i>Dinobryon</i>	IIII	40
<b>TOTAL</b>		
		53

# PHYTOPLANKTON

## SEDGWICK-RAFTER COUNT

COLLECTION LOCATION: *Weguanet*

STATION NUMBER: *ZA*

DATE COLLECTED: *3/10/86*

DATE EXAMINED: *3/14/86*

COLLECTED BY: *Dave Worden*

ALIQUOT SAMPLE VOLUME: *1 ml*

DILUTION FACTOR: *φ*

DEPTH: *surface*

TOTAL PHYTOPLANKTON (#/ml): *399 cells/ml*

IDENTIFIED BY: *Phil Switzer*

3 STRIPS @ 200X

ENUMERATION FACTOR: *13.3*





ORGANISM	TALLY	#/ml.
<b>BACILLARIOPHYCEAE</b>		
Pennate diatoms		
<i>Navicula</i>	<del>    </del>	200
<i>Asterionella</i>		27
<i>Amphora</i>		13
<i>Synedra</i>		13
Centric diatoms		
<i>Cocconeis</i>		13
TOTAL		266
<b>DINOPHYCEAE</b>		
TOTAL		
<b>CYANOPHYCEAE</b>		
Non-Filamentous Blue-Green Algae		
TOTAL		
Filamentous Blue-Green Algae		
TOTAL		
<b>PROTOZOA</b>		
TOTAL		
<b>FILAMENTOUS BACTERIA &amp; FUNGI</b>		
TOTAL		
<b>OTHERS</b>		
TOTAL		

**PHYTOPLANKTON  
SEDGWICK-RAFTER  
COUNT**

REMARKS and  
CALCULATIONS:

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ORGANISM	TALLY	%/ml
<b>CHLOROPHYCEAE</b>		
<b>Non-Filamentous Green Algae</b>		
TOTAL		
<b>Filamentous Green Algae</b>		
TOTAL		
<b>Flagellated Green Algae</b>		
<i>Chlorella</i>		13
<i>Chlamydomonas</i>		213
TOTAL		226
<b>EUGLENOPHYCEAE</b>		
TOTAL		
<b>CHRYSOPHYCEAE</b>		
<b>other Pigmented Algae</b>		
TOTAL		
<b>other Pigmented Flagellated Algae</b>		
TOTAL		

# PHYTOPLANKTON

**SEDGWICK-RAFTER  
COUNT**

COLLECTION LOCATION

*Weguanet*

STATION NUMBER

*3A*

DATE COLLECTED

*3/10/86*

DATE EXAMINED

*3/14/86*

COLLECTED BY

*Dave Worden*

ALIQOT SAMPLE VOLUME

*1 ml*

DILUTION FACTOR

*φ*

DEPTH

*Surface*

TOTAL PHYTOPLANKTON (%/ml)

*386 cells/ml*

IDENTIFIED BY

*Mark J. Jorgensen*

STRIPS @

ENUMERATION FACTOR



ORGANISM	TALLY	#/ml.
<b>BACILLARIOPHYCEAE</b>		
Pennate diatoms		
<i>Amphora</i>	1	13
<i>Sywedea</i>	11	27
<i>navicula</i>	44	67
Centric diatoms		
TOTAL		107
<b>DINOPHYCEAE</b>		
TOTAL		
<b>CYANOPHYCEAE</b>		
Non-Filamentous Blue-Green Algae		
<i>Aphanocapsa</i>	1	13
TOTAL		13
Filamentous Blue-Green Algae		
TOTAL		
<b>PROTOZOA</b>		
TOTAL		
<b>FILAMENTOUS BACTERIA &amp; FUNGI</b>		
TOTAL		
<b>OTHERS</b>		
TOTAL		

**PHYTOPLANKTON  
SEDGWICK-RAFTER  
COUNT**

REMARKS and  
CALCULATIONS:

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ORGANISM	TALLY	#/ml.
<b>BACILLARIOPHYCEAE</b>		
Pennate diatoms		
<i>Tabellaria</i>		27
<i>Synedra</i>		13
<i>Navicula</i>		40
Centric diatoms		
	TOTAL	80
<b>DINOPHYCEAE</b>		
	TOTAL	
<b>CYNANOPHYCEAE</b>		
Non-Filamentous Blue-Green Algae		
	TOTAL	
Filamentous Blue-Green Algae		
	TOTAL	
<b>PROTOZOA</b>		
	TOTAL	
<b>FILAMENTOUS BACTERIA &amp; FUNGI</b>		
	TOTAL	
<b>OTHERS</b>		
	TOTAL	

**PHYTOPLANKTON  
SEDGWICK-RAFTER  
COUNT**

REMARKS and  
CALCULATIONS:

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ORGANISM	count	7 ml
<b>CHLOROPHYCEAE</b>		
<b>Non-Filamentous Green Algae</b>		
<i>Volvox</i>		1303
<b>TOTAL</b>		
<b>Filamentous Green Algae</b>		
<b>TOTAL</b>		
<b>Flagellated Green Algae</b>		
<i>Chlamydomonas</i>		200
<b>TOTAL</b>		
<b>EUGLENOPHYCEAE</b>		
<i>Euglena</i>		13
<b>TOTAL</b>		
<b>CHRYSOPHYCEAE</b>		
<b>other Pigmented Algae</b>		
<b>TOTAL</b>		
<b>other Pigmented Flagellated Algae</b>		
<b>TOTAL</b>		

**PHYTOPLANKTON**

**SEDGWICK-RAFTER  
COUNT**

COLLECTION LOCATION  
*Wauquaset*

STATION NUMBER  
*2*

DATE COLLECTED  
*4/7/86*

DATE EXAMINED  
*4/10/86*

COLLECTED BY  
*D. Worden*

ALIQUOT SAMPLE VOLUME  
*1 ml*

DILUTION FACTOR  
*φ*

DEPTH  
*Surface*

TOTAL PHYTOPLANKTON (#/ml)  
*1623 cells/ml*

IDENTIFIED BY  
*Jaroz*

3 STRIPS @ 200X

ENUMERATION FACTOR  
*13.3*



ORGANISM	TALLY	#/ml.
<b>BACILLARIOPHYCEAE</b>		
Pennate diatoms		
<i>Navicula</i>	IIII	53
<i>Frustulia</i>	II	27
<b>Centric diatoms</b>		
<i>Cocconeis</i>	II	27
	<b>TOTAL</b>	<b>107</b>
<b>DINOPHYCEAE</b>		
	<b>TOTAL</b>	<b>12</b>
<b>CYNANOPHYCEAE</b>		
Non-Filamentous Blue-Green Algae		
	<b>TOTAL</b>	
Filamentous Blue-Green Algae		
	<b>TOTAL</b>	
<b>PROTOZOA</b>		
	<b>TOTAL</b>	
<b>FILAMENTOUS BACTERIA &amp; FUNGI</b>		
	<b>TOTAL</b>	
<b>OTHERS</b>		
	<b>TOTAL</b>	

**PHYTOPLANKTON  
SEDGWICK-RAFTER  
COUNT**

REMARKS and  
CALCULATIONS:

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CHLOROPHYCEAE

<b>Non-Filamentous Green Algae</b>								
* <i>Volvox</i>								1280
<i>Skatophrix</i>								20
TOTAL								1300

<b>Filamentous Green Algae</b>								
TOTAL								

<b>Flagellated Green Algae</b>								
<i>Chlamydomonas</i>								280
TOTAL								280

<b>EUGLENOPHYCEAE</b>								
TOTAL								

<b>CHRYCOPHYCEAE</b>								
<b>other Pigmented Algae</b>								
TOTAL								

<b>other Pigmented Flagellated Algae</b>								
TOTAL								

PHYTOPLANKTON

SEDGWICK-RAFTER COUNT

COLLECTION LOCATION  
*Weavertown*

STATION NUMBER  
*2*

DATE COLLECTED  
*4/7/86*

DATE EXAMINED  
*4/10/86*

COLLECTED BY  
*Dave Worden*

ALIQOT SAMPLE VOLUME  
*1 ml*

DILUTION FACTOR  
*φ*

DEPTH  
*surface*

TOTAL PHYTOPLANKTON (#/ml)  
*1840 cells / ml*

IDENTIFIED BY  
*Saroguer*

*2 STRIPS @ 200X*

ENUMERATION FACTOR



ORGANISM	TALLY	#/ml.
<b>BACILLARIOPHYCEAE</b>		
Pennate diatoms		
<i>Navicula</i>	11	40
Centric diatoms		
<i>Cocconeis</i>	1	20
	TOTAL	60
<b>DINOPHYCEAE</b>		
	TOTAL	
<b>CYANOPHYCEAE</b>		
Non-Filamentous Blue-Green Algae		
	TOTAL	
Filamentous Blue-Green Algae		
	TOTAL	
<b>PROTOZOA</b>		
	TOTAL	
<b>FILAMENTOUS BACTERIA &amp; FUNGI</b>		
	TOTAL	
<b>OTHERS</b>		
	TOTAL	

**PHYTOPLANKTON  
SEDGWICK-RAFTER  
COUNT**

REMARKS and  
CALCULATIONS:

* volvox visible  
with eye, very  
Abundant in all  
Wequaget Samples!

**CHLOROPHYCEAE**

**Non-Filamentous Green Algae**

*Volvox*

HHH HHH HH HH HH  
HHH HHH HH HH HH  
HH HH

1200

TOTAL

1200

**Filamentous Green Algae**

TOTAL

**Flagellated Green Algae**

*Chlamydomonas*

HHH HHH HHH

300

*Cryptomonas*

HHH HHH

200

TOTAL

500

**EUGLENOPHYCEAE**

*Heteronema*

1

20

TOTAL

**CHRYSTOPHYCEAE**

**other Pigmented Algae**

TOTAL

**other Pigmented Flagellated Algae**

*Chromulina*

HH

100

*Chrysooccus*

HH

100

TOTAL

200

**PHYTOPLANKTON**

**SEDGWICK-RAFTER**

**COUNT**

COLLECTION LOCATION

*Wauguquet LAKE*

STATION NUMBER

3

DATE COLLECTED

4/7/86

DATE EXAMINED

4/11/86

COLLECTED BY

*D. Warden*

ALIQUOT SAMPLE VOLUME

*1 ml*

DILUTION FACTOR

$\phi$

DEPTH

*surface*

TOTAL PHYTOPLANKTON (ml)

*1920 cells/ml*

IDENTIFIED BY

*Jaroyve*

2 STRIPS @ 200x

ENUMERATION FACTOR

20

**IEP** inc.

ORGANISM	TALLY	#/ml.
<b>BACILLARIOPHYCEAE</b>		
Pennate diatoms		
Centric diatoms		
	TOTAL	
<b>DINOPHYCEAE</b>		
	TOTAL	
<b>CYNANOPHYCEAE</b>		
<b>Non-Filamentous Blue-Green Algae</b>		
	TOTAL	
<b>Filamentous Blue-Green Algae</b>		
	TOTAL	
<b>PROTOZOA</b>		
	TOTAL	
<b>FILAMENTOUS BACTERIA &amp; FUNGI</b>		
	TOTAL	
<b>OTHERS</b>		
	TOTAL	

**PHYTOPLANKTON  
SEDGWICK-RAFTER  
COUNT**

REMARKS and  
CALCULATIONS:

Volvox!

**CHLOROPHYCEAE**

**Non-Filamentous Green Algae**

*Volvox*


1750

TOTAL

1700

**Filamentous Green Algae**

TOTAL

**Flagellated Green Algae**

*Chlamydomonas*

|||

60

TOTAL

60

**EUGLENOPHYCEAE**

TOTAL

**CHRYSOPHYCEAE**

**other Pigmented Algae**

TOTAL

**other Pigmented Flagellated Algae**

*Chrysochromonas*

||

40

TOTAL

40

**PHYTOPLANKTON**

**SEDGWICK-RAFTER  
COUNT**

COLLECTION LOCATION

*Wausauet*

STATION NUMBER

*4*

DATE COLLECTED

*4/7/86*

DATE EXAMINED

*4/11/86*

COLLECTED BY

*D. Worden*

ALIQOT SAMPLE VOLUME

*1 ml*

DILUTION FACTOR

*φ*

DEPTH

*surface*

TOTAL PHYTOPLANKTON (cells/ml)

*1840 cells/ml*

IDENTIFIED BY

*Sarocyna*

**2 STRIPS @ 200X**

ENUMERATION FACTOR

*20*

**IEP** inc.

ORGANISM	TALLY	#/ml.
<b>BACILLARIOPHYCEAE</b>		
Pennate diatoms		
Navicula	4	40
Centric diatoms		
	TOTAL	40
<b>DINOPHYCEAE</b>		
	TOTAL	
<b>CYNANOPHYCEAE</b>		
Non-Filamentous Blue-Green Algae		
	TOTAL	
Filamentous Blue-Green Algae		
	TOTAL	
<b>PROTOZOA</b>		
	TOTAL	
<b>FILAMENTOUS BACTERIA &amp; FUNGI</b>		
	TOTAL	
<b>OTHERS</b>		
	TOTAL	

**PHYTOPLANKTON  
SEDGWICK-RAFTER  
COUNT**

REMARKS and  
CALCULATIONS:

Volvox! - Broken  
down into small  
colonies and  
Numerous individual  
cells!

**CHLOROPHYCEAE**

**Non-Filamentous Green Algae**

	#	4H	
Volvox			200
Skatohrix	1		20
<b>TOTAL</b>			<b>220</b>

**Filamentous Green Algae**

	#	4H	
<b>TOTAL</b>			

**Flagellated Green Algae**

	#	4H	
Chlamydomonas	III		60
<b>TOTAL</b>			<b>60</b>

**EUGLENOPHYCEAE**

	#	4H	
Heteronema	III		60
<b>TOTAL</b>			<b>60</b>

**CHRYSOPHYCEAE**

**other Pigmented Algae**

	#	4H	
<b>TOTAL</b>			

**other Pigmented Flagellated Algae**

	#	4H	
<b>TOTAL</b>			

**SEDGWICK-RAFTER COUNT**

**COLLECTION LOCATION:**  
*Wloriquel*

**STATION NUMBER:**  
*1A*

**DATE COLLECTED:**  
*4/22/86*

**DATE EXAMINED:**  
*4/24/86*

**COLLECTED BY:**  
*D. Worden*

**ALIQOT SAMPLE VOLUME:**  
*1 ml*

**DILUTION FACTOR:**  
*∅*

**DEPTH:**  
*Surface*

**TOTAL PHYTOPLANKTON (#/ml):**  
*700 cells/ml*

**IDENTIFIED BY:**  
*Jarvis*

**2 STRIPS @ 200X**

**ENUMERATION FACTOR:**  
*20*









**BACILLARIOPHYCEAE**

**Pennate diatoms**

*Anomoneis*

11

40

*Navicula*

1111

80

*Frustulia*

1

20

**Centric diatoms**

TOTAL

140

**DINOPHYCEAE**

TOTAL

**CYNANOPHYCEAE**

**Non-Filamentous Blue-Green Algae**

TOTAL

**Filamentous Blue-Green Algae**

TOTAL

**PROTOZOA**

TOTAL

**FILAMENTOUS BACTERIA & FUNGI**

TOTAL

**OTHERS**

TOTAL

**PHYTOPLANKTON**

**SEDGWICK-RAFTER  
COUNT**

**REMARKS and  
CALCULATIONS:**

# CHLOROPHYCEAE

## Non-Filamentous Green Algae

Volvox	### III	260
Cladocarpus	I	20
Gleocystis	I	20
TOTAL		300

## Filamentous Green Algae

TOTAL		
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## Flagellated Green Algae

Chlamydomonas	###	200
TOTAL		200

# EUGLENOPHYCEAE

Heteronema	II	40
Euglena	I	20
TOTAL		60

# CHRYSOPHYCEAE

## other Pigmented Algae

TOTAL		
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## other Pigmented Flagellated Algae

Chrysochroma	###	100
TOTAL		100

# SEDGWICK-RAFTER COUNT

### COLLECTION LOCATION

Wagonnet Lake

### STATION NUMBER

3A

### DATE COLLECTED

4/22/86

### DATE EXAMINED

4/24/86

### COLLECTED BY

D. Wordan

### ALIQOT SAMPLE VOLUME

1 ml

### DILUTION FACTOR

φ

### DEPTH

Surface

### TOTAL PHYTOPLANKTON (#/ml)

700 cells/ml

### IDENTIFIED BY

Tarong

2 STRIPS @ 200x

### ENUMERATION FACTOR

20



PHYTOPLANKTON

SEDGWICK-RAFTER  
COUNT

BACILLARIOPHYCEAE

Pennate diatoms

*Navicula*

1

20

Centric diatoms

TOTAL

20

DINOPHYCEAE

TOTAL

CYANOPHYCEAE

Non-Filamentous Blue-Green Algae

TOTAL

Filamentous Blue-Green Algae

*Lyngbya*

1

20

TOTAL

20

PROTOZOA

TOTAL

FILAMENTOUS BACTERIA & FUNGI

TOTAL

OTHERS

TOTAL

REMARKS and  
CALCULATIONS:

**CHLOROPHYCEAE**

**Non-Filamentous Green Algae**

*Volvox*

|||||

200

TOTAL

200

**Filamentous Green Algae**

TOTAL

**Flagellated Green Algae**

*Chlamydomonas*

|||||

200

TOTAL

200

**EUGLENOPHYCEAE**

TOTAL

**CHRYSOPHYCEAE**

**other Pigmented Algae**

TOTAL

**other Pigmented Flagellated Algae**

TOTAL

**SEDGWICK-RAFTER  
COUNT**

**COLLECTION LOCATION**

*Wenauquet*

**STATION NUMBER**

*4A*

**DATE COLLECTED**

*4/22/86*

**DATE EXAMINED**

*4/24/86*

**COLLECTED BY**

*D. Warden*

**ALIQOT SAMPLE VOLUME**

*1 ml*

**DILUTION FACTOR**

*Ø*

**DEPTH**

*Surface*

**TOTAL PHYTOPLANKTON (#/ml)**

*460 cells/ml*

**IDENTIFIED BY**

*Tarocqua*

*2 STRIPS @ 200X*

**ENUMERATION FACTOR**

*20*

**IEP** inc.

ORGANISM

TALLY

7/11/11

## PHYTOPLANKTON

SEDGWICK-RAFTER  
COUNT

## BACILLARIOPHYCEAE

## Pennate diatoms

*Nannicula*

11

40

*Tabellaria*

1

20

## Centric diatoms

TOTAL

60

## DINOPHYCEAE

TOTAL

## CYNANOPHYCEAE

## Non-Filamentous Blue-Green Algae

TOTAL

## Filamentous Blue-Green Algae

TOTAL

## PROTOZOA

TOTAL

## FILAMENTOUS BACTERIA &amp; FUNGI

TOTAL

## OTHERS

TOTAL

REMARKS and  
CALCULATIONS:

IEP inc.



ORGANISM	TALLY	/mi.
<b>BACILLARIOPHYCEAE</b>		
<b>Pennate diatoms</b>		
Navicula	### IIII	180
Swedaa	IIII	80
Ernstelia	I	20
<b>Centric diatoms</b>		
	<b>TOTAL</b>	<b>280</b>
<b>DINOPHYCEAE</b>		
	<b>TOTAL</b>	
<b>CYANOPHYCEAE</b>		
<b>Non-Filamentous Blue-Green Algae</b>		
Anacystis	II	40
	<b>TOTAL</b>	<b>40</b>
<b>Filamentous Blue-Green Algae</b>		
	<b>TOTAL</b>	
<b>PROTOZOA</b>		
	<b>TOTAL</b>	
<b>FILAMENTOUS BACTERIA &amp; FUNGI</b>		
	<b>TOTAL</b>	
<b>OTHERS</b>		
	<b>TOTAL</b>	

**PHYTOPLANKTON  
SEDGWICK-RAFTER  
COUNT**

REMARKS and  
CALCULATIONS:

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CHLOROPHYCEAE		
Non-Filamentous Green Algae		
<i>Chlorella</i>	###	100
<i>Volvox</i>	///	60
<i>Cosmarium</i>	1	20
<i>Centricoccus</i>	1	20
<i>Gleocystis</i>	1	20
<i>Arthrodesmus</i>	1	20
TOTAL		240
Filamentous Green Algae		
TOTAL		
Flagellated Green Algae		
<i>Chlamydomonas</i>	###	140
<i>Carteria</i>	///	80
TOTAL		220
EUGLENOPHYCEAE		
<i>Heteronema</i>	///	60
TOTAL		60
CHRYSOPHYCEAE		
Other Pigmented Algae		
TOTAL		
Other Pigmented Flagellated Algae		
TOTAL		

**SEDGWICK-RAFTER COUNT**

COLLECTION LOCATION  
*Wequaquet Lake*

STATION NUMBER  
 2A

DATE COLLECTED  
 5/5/86

DATE EXAMINED  
 5/8/86

COLLECTED BY  
 D. Worden

ALIQOT SAMPLE VOLUME  
 1ml

DILUTION FACTOR  
 1

DEPTH  
 Surface

TOTAL PHYTOPLANKTON (cells/ml)  
 660 cells/ml

IDENTIFIED BY  
 Jarocque

Z STRIPS @ 200X  
 ENUMERATION FACTOR  
 20





ORGANISM	TALLY	#/ml.
<b>BACILLARIOPHYCEAE</b>		
<b>Pennate diatoms</b>		
<i>Asterionella</i>	II	40
<i>Navicula</i>	III	60
<i>Tabellaria</i>	I	20
<i>Frustulia</i>	I	20
<b>Centric diatoms</b>		
	TOTAL	140
<b>DINOPHYCEAE</b>		
	TOTAL	
<b>CYANOPHYCEAE</b>		
<b>Non-Filamentous Blue-Green Algae</b>		
	TOTAL	
<b>Filamentous Blue-Green Algae</b>		
	TOTAL	
<b>PROTOZOA</b>		
	TOTAL	
<b>FILAMENTOUS BACTERIA &amp; FUNGI</b>		
	TOTAL	
<b>OTHERS</b>		
	TOTAL	

**PHYTOPLANKTON  
SEDGWICK-RAFTER  
COUNT**

REMARKS and  
CALCULATIONS:

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**CHLOROPHYCEAE**

**Non-Filamentous Green Algae**

<i>Cosmarium</i>	I	20
<i>Ankistrodesmus</i>	II	40
<i>Chlorella</i>	II	40
<i>Gleocystis</i>	III	80
<i>Volvox</i>	I	20
<i>Pediastrum</i>	I	20
TOTAL		220

**Filamentous Green Algae**

TOTAL		
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**Flagellated Green Algae**

<i>Chlamydomonas</i>	III III	220
TOTAL		220

**EUGLENOPHYCEAE**

<i>Euglena</i>	III	60
TOTAL		60

**CHRYSOPHYCEAE**

**other Pigmented Algae**

TOTAL		
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**other Pigmented Flagellated Algae**

TOTAL		
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**SEDGWICK-RAFTER COUNT**

**COLLECTION LOCATION**

*Wegouquet Lake*

**STATION NUMBER**

3A

**DATE COLLECTED**

5/5/86

**DATE EXAMINED**

5/8/86

**COLLECTED BY**

*D. Worden*

**ALIQOT SAMPLE VOLUME**

1ml

**DILUTION FACTOR**

φ

**DEPTH**

*surface*

**TOTAL PHYTOPLANKTON (cells/ml)**

680 cells/ml

**IDENTIFIED BY**

*Jarvis*

2 STRIPS @ 200x

**ENUMERATION FACTOR**

20

**IEP** inc.

ORGANISM	TALLY	#/ml.
<b>BACILLARIOPHYCEAE</b>		
<b>Pennate diatoms</b>		
<i>Mavicula</i>	144 III	160
<i>Ammonia's</i>	1	20
<i>Reinhardt</i>		
<b>Centric diatoms</b>		
	TOTAL	180
<b>DINOPHYCEAE</b>		
	TOTAL	
<b>CYNANOPHYCEAE</b>		
<b>Non-Filamentous Blue-Green Algae</b>		
	TOTAL	
<b>Filamentous Blue-Green Algae</b>		
	TOTAL	
<b>PROTOZOA</b>		
	TOTAL	
<b>FILAMENTOUS BACTERIA &amp; FUNGI</b>		
	TOTAL	
<b>OTHERS</b>		
	TOTAL	

**PHYTOPLANKTON**  
**SEDGWICK-RAFTER**  
**COUNT**

REMARKS and  
CALCULATIONS:

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**CHLOROPHYCEAE**

**Non-Filamentous Green Algae**

<i>S. katotrix</i>	1	20
<i>oocystis</i>	1	20
<i>Volvox</i>	11	40
<i>Gleocystis</i>	1	20

TOTAL 100

**Filamentous Green Algae**

TOTAL

**Flagellated Green Algae**

<i>Carteria</i>	11	40
<i>Chlamydomonas</i>	1	20

TOTAL 60

**EUGLENOPHYCEAE**

TOTAL

**CHRYSOPHYCEAE**

**other Pigmented Algae**

TOTAL

**other Pigmented Flagellated Algae**

TOTAL

**SEDGWICK-RAFTER COUNT**

COLLECTION LOCATION

*Wagonquet*

STATION NUMBER

*4A*

DATE COLLECTED

*5/5/86*

DATE EXAMINED

*5/8/86*

COLLECTED BY

*D. Worden*

ALIQOT SAMPLE VOLUME

*1 ml*

DILUTION FACTOR

*Ø*

DEPTH

*Surface*

TOTAL PHYTOPLANKTON (#/ml)

*360 cells/ml*

IDENTIFIED BY

*Saragin*

*2 STRIPS @ 200x*

ENUMERATION FACTOR

*20*



ORGANISM

TALLY

-/1000.

PHYTOPLANKTON

SEDGWICK-RAFTER

COUNT

## BACILLARIOPHYCEAE

## Pennate diatoms

*Navicula*

HHH/III

180

## Centric diatoms

TOTAL

180

## DINOPHYCEAE

TOTAL

## CYNANOPHYCEAE

## Non-Filamentous Blue-Green Algae

TOTAL

## Filamentous Blue-Green Algae

*Oscillatoria*

1

20

TOTAL

20

## PROTOZOA

TOTAL

## FILAMENTOUS BACTERIA &amp; FUNGI

TOTAL

## OTHERS

TOTAL

REMARKS and  
CALCULATIONS:IEP  
inc.

**CHLOROPHYCEAE**

**Non-Filamentous Green Algae**

<i>Sphaerocystis</i>	1	13
<i>Chlorella</i>	HHH HHH HHH I	213
<i>Volvox</i>	HHH	67
<i>Cosmarium</i>	1	13
<i>Ankistrodesmus</i>	11	27
<i>Elakatothrix</i>	1	13
<i>Gleocystis</i>	11	27

TOTAL 373

**Filamentous Green Algae**

TOTAL

**Flagellated Green Algae**

<i>Chlamydomonas</i>	11	27
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TOTAL 27

**EUGLENOPHYCEAE**

<i>Euglena</i>	11	27
----------------	----	----

TOTAL 27

**CHRYSOPHYCEAE**

**other Pigmented Algae**

TOTAL

**other Pigmented Flagellated Algae**

<i>Dinobryon</i>	1	13
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TOTAL 13

**SEDGWICK-RAFTER COUNT**

COLLECTION LOCATION

*Wequaquet*

STATION NUMBER

*1A*

DATE COLLECTED

*5/19/86*

DATE EXAMINED

*5/21/86*

COLLECTED BY

*Jarocque / Warden*

ALIQOT SAMPLE VOLUME

*1 ml*

DILUTION FACTOR

*∅*

DEPTH

*Surface*

TOTAL PHYTOPLANKTON (cells)

*506 cells/ml*

IDENTIFIED BY

*Jarocque*

3 STRIPS @ 200X

ENUMERATION FACTOR

*13.3*

**BACILLARIOPHYCEAE**

**Pennate diatoms**

<i>SYNedra</i>	I	13
<i>Navicula</i>	III	40
<b>Centric diatoms</b>		
TOTAL		53

**DINOPHYCEAE**

TOTAL		

**CYNANOPHYCEAE**

**Non-Filamentous Blue-Green Algae**

<i>Aphanolaspsa</i>	I	13
TOTAL		13
<b>Filamentous Blue-Green Algae</b>		
TOTAL		

**PROTOZOA**

TOTAL		

**FILAMENTOUS BACTERIA & FUNGI**

TOTAL		

**OTHERS**

TOTAL		

**PHYTOPLANKTON  
SEDGWICK-RAFTER  
COUNT**

REMARKS and  
CALCULATIONS:




**CHLOROPHYCEAE**

**Non-Filamentous Green Algae**

<i>Volvox</i>		53
<i>Chlorella</i>		93
<i>Ankistrodesmus</i>		93
<i>Sphaerocystis</i>		13
<i>Elkatothrix</i>		40
<i>Scenedesmus</i>		13
TOTAL		305

**Filamentous Green Algae**

TOTAL		

**Flagellated Green Algae**

<i>Chlamydomonas</i>		80
TOTAL		80

**EUGLENOPHYCEAE**

TOTAL		

**CHRYSOPHYCEAE**

**other Pigmented Algae**

TOTAL		

**other Pigmented Flagellated Algae**

TOTAL		

**SEDGWICK-RAFTER COUNT**

**COLLECTION LOCATION**

Weguaguet

**STATION NUMBER**

2A

**DATE COLLECTED**

5/19/86

**DATE EXAMINED**

5/21/86

**COLLECTED BY**

Jarouque / Worden

**ALIQUT SAMPLE VOLUME**

1 ml

**DILUTION FACTOR**

0

**DEPTH**

surface

**TOTAL PHYTOPLANKTON (cells/ml)**

578 cells/ml

**IDENTIFIED BY**

Jarouque

3 STRIPS @ 200x

**ENUMERATION FACTOR**

13.3



ORGANISM

COUNT

#/ml.

## PHYTOPLANKTON

SEDGWICK-RAFTER

COUNT

## BACILLARIOPHYCEAE

## Pennate diatoms

*Navicula*

771

80

*Asterionella*

1

13

## Centric diatoms

TOTAL

93

## DINOPHYCEAE

TOTAL

## CYNANOPHYCEAE

## Non-Filamentous Blue-Green Algae

*Aphanocapsa*

1

13

TOTAL

13

## Filamentous Blue-Green Algae

*Anabaena*

11

27

TOTAL

27

## PROTOZOA

TOTAL

1

## FILAMENTOUS BACTERIA &amp; FUNGI

TOTAL

## OTHERS

TOTAL

REMARKS and  
CALCULATIONS:IEP  
INC.

**CHLOROPHYCEAE**

**Non-Filamentous Green Algae**

<i>Antistrodesmus</i>	///	40
<i>Chlorella</i>	### ##	160
<i>Gleocystis</i>	///	40
<i>Volvox</i>	### 1	80
<i>Cosmarium</i>	1	13
TOTAL		333

**Filamentous Green Algae**

TOTAL		
-------	--	--

**Flagellated Green Algae**

<i>Chlamydomonas</i>	### ## 1	146
<i>Carteria</i>	1	13
TOTAL		159

**EUGLENOPHYCEAE**

TOTAL		1
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**CHRYSOPHYCEAE**

**other Pigmented Algae**

TOTAL		
-------	--	--

**other Pigmented Flagellated Algae**

<i>Chrysochromonas</i>	11	27
TOTAL		27

**SEDGWICK-RAFTER COUNT**

COLLECTION LOCATION  
*Weymouth*

STATION NUMBER  
*3A*

DATE COLLECTED  
*5/19/86*

DATE EXAMINED  
*5/22/86*

COLLECTED BY  
*Jarocque / Worden*

ALIQOT SAMPLE VOLUME  
*1 ml*

DILUTION FACTOR  
*φ*

DEPTH  
*surface*

TOTAL PHYTOPLANKTON (cells/ml)  
*612 cells/ml*

IDENTIFIED BY  
*Jarocque*

3 STRIPS @ 200x

ENUMERATION FACTOR  
*13.3*





**CHLOROPHYCEAE**

**Non-Filamentous Green Algae**

<i>Ankistrodesmus</i>	## IIII	120
<i>Chlorocella</i>	### IIII	133
<i>Protoroccus</i>	III	40
<i>Closterium</i>	I	13
<i>Gleocystis</i>	I	13
<i>Elkatothrix</i>	I	13

TOTAL 332

**Filamentous Green Algae**

TOTAL

**Flagellated Green Algae**

<i>Chlamydomonas</i>	## III	106
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TOTAL 106

**EUGLENOPHYCEAE**

TOTAL

**CHRYSOPHYCEAE**

**other Pigmented Algae**

TOTAL

**other Pigmented Flagellated Algae**

TOTAL

**SEDGWICK-RAFTER COUNT**

**COLLECTION LOCATION**

*Weguiaquet*

**STATION NUMBER**

*4A*

**DATE COLLECTED**

*5/19/86*

**DATE EXAMINED**

*5/22/86*

**COLLECTED BY**

*Larocque / Worden*

**ALIQOT SAMPLE VOLUME**

*1 ml*

**DILUTION FACTOR**

*φ*

**DEPTH**

*surface*

**TOTAL PHYTOPLANKTON (cells)**

*477 cells/ml*

**IDENTIFIED BY**

*Larocque*

**3 STRIPS @ 200X**

**ENUMERATION FACTOR**

*13.3*





**PHYTOPLANKTON  
BEDGWICK-RAFTER  
COUNT**

REMARKS and  
CALCULATIONS:

**ACILLARIOPHYCEAE**

**Pennate diatoms**

<i>Fragilaria</i>	1	13
<i>Synedra</i>	III	67
<i>Frustulia</i>	1	13
<i>Navicula</i>	II	27

**Centric diatoms**

<i>Cocconeis</i>	1	13
TOTAL		133

**DINOPHYCEAE**

TOTAL		
-------	--	--

**CYANOPHYCEAE**

**Non-Filamentous Blue-Green Algae**

<i>Aphanocapsa</i>	III III	106
TOTAL		106

**Filamentous Blue-Green Algae**

TOTAL		
-------	--	--

**PROTOZOA**

TOTAL		
-------	--	--

**FILAMENTOUS BACTERIA & FUNGI**

TOTAL		
-------	--	--

**OTHERS**

TOTAL		
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**PHYTOPLANKTON  
SEDGWICK-RAFTER  
COUNT**

REMARKS and  
CALCULATIONS:

**ACILLARIOPHYCEAE**

**Pennate diatoms**

<i>Ernstia</i>	1	13
<i>Navicula</i>	III	40
<i>Asterionella</i>	II	27
<i>Synedra</i>	II	27

**Centric diatoms**

TOTAL 97

**DINOPHYCEAE**

TOTAL

**CYANOPHYCEAE**

**Non-Filamentous Blue-Green Algae**

<i>Aphanocapsa</i>	III	67
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TOTAL 67

**Filamentous Blue-Green Algae**

<i>Anabaena</i>	1	13
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TOTAL 13

**PROTOZOA**

TOTAL

**FILAMENTOUS BACTERIA & FUNGI**

TOTAL

**OTHERS**

TOTAL

CHLOROPHYCEAE

Non-Filamentous Green Algae		
Ankistrodesmus	11	27
Closteriopsis	1	13
Gleocystis	1	13
Desmidium	1	13
Chlorella	111	40
(G) Centricocapsa	1	13
TOTAL		119

Filamentous Green Algae		
TOTAL		

Flagellated Green Algae		
Chlamydomonas	1111	53
TOTAL		53

EUGLENOPHYCEAE		
TOTAL		

CHRYSOPHYCEAE		
other Pigmented Algae		
TOTAL		

other Pigmented Flagellated Algae		
dinobryon	1111	80
Chrysoococcus	111	40
TOTAL		

SEDGWICK-RAFTER COUNT

COLLECTION LOCATION  
Wenonaet

STATION NUMBER  
4 A

DATE COLLECTED  
6/9/86

DATE EXAMINED  
6/13/86

COLLECTED BY  
D. Worden

ALIQUOT SAMPLE VOLUME  
1 ml

DILUTION FACTOR  
1

DEPTH  
Surface

TOTAL PHOTOCENTERS (µm)  
412 cells/ml

IDENTIFIED BY  
Jarroque

3 STRIPS @ 200X

ENUMERATION FACTOR  
13.3



**PHYTOPLANKTON**

**SEDGWICK-RAFTER  
COUNT**

**ACILLARIOPHYCEAE**

**Pennate diatoms**

*Navicula*

III

40

*Synedra*

I

13

**Centric diatoms**

TOTAL

53

**DINOPHYCEAE**

TOTAL

**CYANOPHYCEAE**

**Non-Filamentous Blue-Green Algae**

*Aphanocapsa*

III

67

TOTAL

67

**Filamentous Blue-Green Algae**

TOTAL

**PROTOZOA**

TOTAL

**FILAMENTOUS BACTERIA & FUNGI**

TOTAL

**OTHERS**

TOTAL

REMARKS and  
CALCULATIONS:



**PHYTOPLANKTON**

**SEDGWICK-RAFTER  
COUNT**

**REMARKS and  
CALCULATIONS**

**LARIOPHYCEAE**

**Peripheral diatoms**

<i>Navicula</i>	###	67
<i>Asterionella</i>	1	13
<i>Synedra</i>	11	27

**Centric diatoms**

TOTAL 107

**DINOPHYCEAE**

<i>Massadia</i>	111	40
<i>Ceratium</i>	1	13

TOTAL 53

**CYANOPHYCEAE**

**Non-Filamentous Blue-Green Algae**

<i>Anacystis</i>	### ## 11	160
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TOTAL 160

**Filamentous Blue-Green Algae**

TOTAL

**PROTOZOA**

TOTAL

**FILAMENTOUS BACTERIA & FUNGI**

TOTAL

**OTHERS**

TOTAL





ORGANISM	TALLY	#/ml.
<b>BACILLARIOPHYCEAE</b>		
Pennate diatoms		
Asterionella	III 1	80
Synedra	II	27
Navicula	I	13
Centric diatoms		
TOTAL		(120)
<b>DINOPHYCEAE</b>		
Massartia	I	13
TOTAL		(13)
<b>CYNANOPHYCEAE</b>		
Non-Filamentous Blue-Green Algae		
TOTAL		
Filamentous Blue-Green Algae		
TOTAL		
<b>PROTOZOA</b>		
TOTAL		
<b>FILAMENTOUS BACTERIA &amp; FUNGI</b>		
TOTAL		
<b>OTHERS</b>		
TOTAL		

**PHYTOPLANKTON  
SEDGWICK-RAFTER  
COUNT**

REMARKS and  
CALCULATIONS:

Rel. little

amorphous mat.

Rel. sparse sample

399 cells/ml

Flagellates,  
mostly.



ORGANISM	TALLY	#/ml.
<b>BACILLARIOPHYCEAE</b>		
Pennate diatoms		
Navicula	(111)	53
Synedra		27
Centric diatoms		
TOTAL		(80)
<b>DINOPHYCEAE</b>		
Massartia		66
TOTAL		(66)
<b>CYANOPHYCEAE</b>		
Non-Filamentous Blue-Green Algae		
TOTAL		
Filamentous Blue-Green Algae		
TOTAL		
<b>PROTOZOA</b>		
TOTAL		
<b>FILAMENTOUS BACTERIA &amp; FUNGI</b>		
TOTAL		
<b>OTHERS</b>		
TOTAL		

**PHYTOPLANKTON  
- SEDGWICK-RAFTER  
COUNT**

REMARKS and  
CALCULATIONS:  
*Rel. little*  
*amorphous mat.*  
*mostly Dinobryon.*  
**705 cells/ml**





ORGANISM	TALLY	#/ml.
<b>BACILLARIOPHYCEAE</b>		
Pennate diatoms		
<i>Synedra</i>		27
Centric diatoms		
	TOTAL	(27)
<b>DINOPHYCEAE</b>		
<i>Massartia</i>		53
	TOTAL	(53)
<b>CYNANOPHYCEAE</b>		
Non-Filamentous Blue-Green Algae		
	TOTAL	
Filamentous Blue-Green Algae		
<i>Oscillatoria</i>		27
	TOTAL	(27)
<b>PROTOZOA</b>		
	TOTAL	
<b>FILAMENTOUS BACTERIA &amp; FUNGI</b>		
	TOTAL	
<b>OTHERS</b>		
	TOTAL	

**PHYTOPLANKTON  
SEDGWICK-RAFTER  
COUNT**

REMARKS and  
CALCULATIONS:  
*Rel. little*  
*amorphous mat.*  
*613 cells/ml*  
*Mostly Dinobryon.*



ORGANISM	TALLY	%/ml
<b>CHLOROPHYCEAE</b>		
<b>Non-Filamentous Green Algae</b>		
<i>Chlorella</i>		106
<i>Staurastrum</i>		13
<i>Gleocystis</i>		40
<i>Closterium</i>		40
<i>Sphaerocystis</i>		27
TOTAL		226
<b>Filamentous Green Algae</b>		
TOTAL		
<b>Flagellated Green Algae</b>		
<i>Cryptomonas</i>		27
<i>Chlamydomonas</i>		13
TOTAL		40
<b>EUGLENOPHYCEAE</b>		
TOTAL		
<b>CHRYSOPHYCEAE</b>		
<b>Other Pigmented Algae</b>		
TOTAL		
<b>Other Pigmented Flagellated Algae</b>		
<i>Dinobayer</i>		
		891
TOTAL		891

**PHYTOPLANKTON**  
**SEDGWICK-RAFTER**  
**COUNT**

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COLLECTION LOCATION  
*Waquaguet*

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STATION NUMBER  
*1A*

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DATE COLLECTED  
*7/7/86*

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DATE EXAMINED  
*7/9/86*

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COLLECTED BY  
*D. Worden*

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ALIQOT SAMPLE VOLUME  
*1ml*

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DILUTION FACTOR  
 $\emptyset$

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DEPTH  
*?*

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TOTAL PHYTOPLANKTON (%/ml)  
*1569 cells/ml*

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IDENTIFIED BY  
*Jarocque*

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3 STRIPS @ 200X

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ENUMERATION FACTOR  
*13.3*



ORGANISM	TALLY	#/ml.
<b>BACILLARIOPHYCEAE</b>		
Pennate diatoms		
Asterionella	HHH HHH HHH III	239
Fragilaria	I	13
Navicula	II	27
Centric diatoms		
	TOTAL	279
<b>DINOPHYCEAE</b>		
Massantia	HHH HHH	133
	TOTAL	133
<b>CYNANOPHYCEAE</b>		
Non-Filamentous Blue-Green Algae		
	TOTAL	
Filamentous Blue-Green Algae		
	TOTAL	
<b>PROTOZOA</b>		
	TOTAL	
<b>FILAMENTOUS BACTERIA &amp; FUNGI</b>		
	TOTAL	
<b>OTHERS</b>		
	TOTAL	

**PHYTOPLANKTON  
SEDGWICK-RAFTER  
COUNT**

REMARKS and  
CALCULATIONS:

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ORGANISM	TALLY	#/ml.
<b>BACILLARIOPHYCEAE</b>		
<b>Pennate diatoms</b>		
Asterionella	HHH HHH HHH III	239
Synedra	HHH	67
Tabellaria	II	27
Navicula	II	27
<b>Centric diatoms</b>		
	TOTAL	360
<b>DINOPHYCEAE</b>		
Massartia	HHH	67
	TOTAL	67
<b>CYNANOPHYCEAE</b>		
<b>Non-Filamentous Blue-Green Algae</b>		
	TOTAL	
<b>Filamentous Blue-Green Algae</b>		
	TOTAL	
<b>PROTOZOA</b>		
	TOTAL	
<b>FILAMENTOUS BACTERIA &amp; FUNGI</b>		
	TOTAL	
<b>OTHERS</b>		
	TOTAL	

**PHYTOPLANKTON  
SEDGWICK-RAFTER  
COUNT**

REMARKS and  
CALCULATIONS:

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ORGANISM	TALLY	#/ml.
<b>BACILLARIOPHYCEAE</b>		
<b>Pennate diatoms</b>		
<i>Asterionella</i>		106
<i>Navicula</i>		93
<b>Centric diatoms</b>		
TOTAL		199
<b>DINOPHYCEAE</b>		
<i>Massartia</i>		40
<i>Pearidinium</i>		13
TOTAL		53
<b>CYNANOPHYCEAE</b>		
<b>Non-Filamentous Blue-Green Algae</b>		
<i>Amenellum</i>		13
TOTAL		13
<b>Filamentous Blue-Green Algae</b>		
TOTAL		
<b>PROTOZOA</b>		
TOTAL		
<b>FILAMENTOUS BACTERIA &amp; FUNGI</b>		
TOTAL		
<b>OTHERS</b>		
TOTAL		

**PHYTOPLANKTON  
SEDGWICK-RAFTER  
COUNT**

REMARKS and CALCULATIONS:

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ORGANISM	TALLY	#/ml.
<b>BACILLARIOPHYCEAE</b>		
Pennate diatoms		
Navicula	1	13
Centric diatoms		
Coococopsis	1	13
	TOTAL	(26)
<b>DINOPHYCEAE</b>		
	TOTAL	
<b>CYNANOPHYCEAE</b>		
Non-Filamentous Blue-Green Algae		
	TOTAL	
Filamentous Blue-Green Algae		
	TOTAL	
<b>PROTOZOA</b>		
	TOTAL	
<b>FILAMENTOUS BACTERIA &amp; FUNGI</b>		
	TOTAL	
<b>OTHERS</b>		
	TOTAL	

**PHYTOPLANKTON  
SEDGWICK-RAFTER  
COUNT**

REMARKS and  
CALCULATIONS:

Rel little  
amorphous mats

Very Sparse  
Sample.



ORGANISM	TALLY	#/ml
<b>CHLOROPHYCEAE</b>		
<b>Non-Filamentous Green Algae</b>		
CRUCIGENIA	I	13
Pediastrum	II	27
Gleocystis	II	27
Kirchneriella	II	27
Dictyosphaerium	I	13
STAUROSTRUM	I	13
Closteriopsis	I	13
TOTAL		133
<b>Filamentous Green Algae</b>		
TOTAL		
<b>Flagellated Green Algae</b>		
Chlamydomonas	HH	67
TOTAL		67
<b>EUGLENOPHYCEAE</b>		
TOTAL		
<b>CHRYSOPHYCEAE</b>		
<b>Other Pigmented Algae</b>		
Centrastractus	I	13
TOTAL		13
<b>Other Pigmented Flagellated Algae</b>		
Dinobryon	HHH HHH HHH II	226
TOTAL		226

**PHYTOPLANKTON**

**SEDGWICK-RAFTER  
COUNT**

COLLECTION LOCATION.

*Wequaquet*

STATION NUMBER

*1*

DATE COLLECTED

*7/22/86*

DATE EXAMINED

*7/24/86*

COLLECTED BY

*D. Worden*

ALIQOT SAMPLE VOLUME

*1ml*

DILUTION FACTOR

*∅*

DEPTH

*?*

TOTAL PHYTOPLANKTON (#/ml)

*771 cells/ml*

IDENTIFIED BY

*Suroque*

STRIPS @

ENUMERATION FACTOR

**IEP** inc.

ORGANISM	TALLY	#/ml.
<b>BACILLARIOPHYCEAE</b>		
Pennate diatoms		
Amphora	I	13
Asterionella	III	40
Fragilaria	II	27
Navicula	IIII	53
Synedra	I	13
Centric diatoms		
	TOTAL	146
<b>DINOPHYCEAE</b>		
Massartia	HHH HHH III	173
Peridinium	I	13
	TOTAL	186
<b>CYNANOPHYCEAE</b>		
Non-Filamentous Blue-Green Algae		
	TOTAL	
Filamentous Blue-Green Algae		
	TOTAL	
<b>PROTOZOA</b>		
	TOTAL	
<b>FILAMENTOUS BACTERIA &amp; FUNGI</b>		
	TOTAL	
<b>OTHERS</b>		
	TOTAL	

**PHYTOPLANKTON  
SEDGWICK-RAFTER  
COUNT**

REMARKS and  
CALCULATIONS:

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ORGANISM	TALLY	#/ml.	PHYTOPLANKTON SEDGWICK-RAFTER COUNT
<b>BACILLARIOPHYCEAE</b>			
Pennate diatoms			
Navicula		53	
Synedra		27	
Asteionella	I	13	
Fragilaria	I	13	
Centric diatoms			
Coconeis		27	
	TOTAL	133	
<b>DINOPHYCEAE</b>			
Peridinium	I	13	
Massartia		40	
	TOTAL	53	
<b>CYNANOPHYCEAE</b>			
Non-Filamentous Blue-Green Algae			
	TOTAL		
Filamentous Blue-Green Algae			
	TOTAL		
<b>PROTOZOA</b>			
	TOTAL		
<b>FILAMENTOUS BACTERIA &amp; FUNGI</b>			
	TOTAL		
<b>OTHERS</b>			
	TOTAL		

REMARKS and  
CALCULATIONS:

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ORGANISM	TALLY	#/ml.
<b>BACILLARIOPHYCEAE</b>		
Pennate diatoms		
<i>Anomoneis</i>	I	13
<i>Asterionella</i>	II	27
<i>Synedra</i>	II	27
<i>Navicula</i>	III	67
Centric diatoms		
	TOTAL	134
<b>DINOPHYCEAE</b>		
<i>Peridinium</i>	III	67
<i>MASSARTIA</i>	III III	120
	TOTAL	187
<b>CYNANOPHYCEAE</b>		
Non-Filamentous Blue-Green Algae		
	TOTAL	
Filamentous Blue-Green Algae		
<i>Oscillatoria</i>	II	27
	TOTAL	27
<b>PROTOZOA</b>		
	TOTAL	
<b>FILAMENTOUS BACTERIA &amp; FUNGI</b>		
	TOTAL	
<b>OTHERS</b>		
	TOTAL	

**PHYTOPLANKTON  
SEDGWICK-RAFTER  
COUNT**

REMARKS and  
CALCULATIONS:

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ORGANISM	TALLY	#/ml.
<b>BACILLARIOPHYCEAE</b>		
Pennate diatoms		
Synedra	I	13
Navicula	I	13
Centric diatoms		
Cocconeis	IIII	53
	TOTAL	79
<b>DINOPHYCEAE</b>		
MASSARTIA	IIII-II	93
Peridinium	I	13
	TOTAL	106
<b>CYANOPHYCEAE</b>		
Non-Filamentous Blue-Green Algae		
	TOTAL	
Filamentous Blue-Green Algae		
	TOTAL	
<b>PROTOZOA</b>		
	TOTAL	
<b>FILAMENTOUS BACTERIA &amp; FUNGI</b>		
	TOTAL	
<b>OTHERS</b>		
	TOTAL	

**PHYTOPLANKTON  
SEDGWICK-RAFTER  
COUNT**

REMARKS and  
CALCULATIONS:

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ORGANISM	TALLY	°/ml
<b>CHLOROPHYCEAE</b>		
<b>Non-Filamentous Green Algae</b>		
Chlorella	1	13
Oocystis	1	13
Gleocystis	###	67
Volvox	11	27
Closteriopsis	11	27
TOTAL		147
<b>Filamentous Green Algae</b>		
TOTAL		
<b>Flagellated Green Algae</b>		
Chlamydomonas	1	13
TOTAL		13
<b>EUGLENOPHYCEAE</b>		
TOTAL		
<b>CHRYSOPHYCEAE</b>		
<b>Other Pigmented Algae</b>		
TOTAL		
<b>Other Pigmented Flagellated Algae</b>		
Mallomonas	1	13
TOTAL		13

**PHYTOPLANKTON**

**SEDGWICK-RAFTER COUNT**

COLLECTION LOCATION

*Weguaquet*

STATION NUMBER

*1A*

DATE COLLECTED

*8/4/86*

DATE EXAMINED

*8/7/86*

COLLECTED BY

*D. Worden*

ALIQUOT SAMPLE VOLUME

*1ml*

DILUTION FACTOR

*∅*

DEPTH

*Surface*

TOTAL PHYTOPLANKTON (#/ml)

*865 cells/ml*

IDENTIFIED BY

*Forogue*

3 STRIPS @ 200X

ENUMERATION FACTOR

*13.3*

ORGANISM	TALLY	#/ml.
<b>BACILLARIOPHYCEAE</b>		
<b>Pennate diatoms</b>		
<i>Navicula</i>		27
<i>Synedra</i>		
		652
<b>Centric diatoms</b>		
	TOTAL	679
<b>DINOPHYCEAE</b>		
	TOTAL	
<b>CYNANOPHYCEAE</b>		
<b>Non-Filamentous Blue-Green Algae</b>		
<i>Metismopedia</i>		13
	TOTAL	13
<b>Filamentous Blue-Green Algae</b>		
	TOTAL	
<b>PROTOZOA</b>		
	TOTAL	
<b>FILAMENTOUS BACTERIA &amp; FUNGI</b>		
	TOTAL	
<b>OTHERS</b>		
	TOTAL	

**PHYTOPLANKTON  
SEDGWICK-RAFTER  
COUNT**

REMARKS and  
CALCULATIONS:

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ORGANISM	TALLY	#/ml
<b>CHLOROPHYCEAE</b>		
<b>Non-Filamentous Green Algae</b>		
<i>Golenkinia</i>		27
<i>Volvox</i>		13
<i>Schroederia</i>		13
TOTAL		53
<b>Filamentous Green Algae</b>		
TOTAL		
<b>Flagellated Green Algae</b>		
<i>Cryptomonas</i>		27
TOTAL		27
<b>EUGLENOPHYCEAE</b>		
TOTAL		
<b>CHRYSOPHYCEAE</b>		
<b>other Pigmented Algae</b>		
TOTAL		
<b>other Pigmented Flagellated Algae</b>		
TOTAL		

<b>PHYTOPLANKTON</b>	
<b>SEDGWICK-RAFTER</b>	
<b>COUNT</b>	
COLLECTION LOCATION: <i>Weguagwet</i>	
STATION NUMBER <i>2A</i>	
DATE COLLECTED <i>8/4/86</i>	
DATE EXAMINED <i>8/7/86</i>	
COLLECTED BY <i>D. Worden</i>	
ALIQUOT SAMPLE VOLUME <i>1ml</i>	
DILUTION FACTOR <i>φ</i>	
DEPTH <i>Surface</i>	
TOTAL PHYTOPLANKTON (#/ml) <i>612 cells/ml</i>	
IDENTIFIED BY <i>Faroque</i>	
3 STRIPS @ 200X	
ENUMERATION FACTOR <i>13.3</i>	

**IEP** inc.



ORGANISM	TALLY	#/ml.
<b>BACILLARIOPHYCEAE</b>		
<b>Pennate diatoms</b>		
<i>Synedra</i>		466
<i>Navicula</i>		13
<b>Centric diatoms</b>		
TOTAL		479
<b>DINOPHYCEAE</b>		
<i>Peridinium</i>		40
TOTAL		40
<b>CYANOPHYCEAE</b>		
<b>Non-Filamentous Blue-Green Algae</b>		
TOTAL		
<b>Filamentous Blue-Green Algae</b>		
<i>Oscillatoria</i>		13
TOTAL		13
<b>PROTOZOA</b>		
TOTAL		
<b>FILAMENTOUS BACTERIA &amp; FUNGI</b>		
TOTAL		
<b>OTHERS</b>		
TOTAL		

**PHYTOPLANKTON  
SEDGWICK-RAFTER  
COUNT**

REMARKS and  
CALCULATIONS:

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ORGANISM	TALLY	•/ml
<b>CHLOROPHYCEAE</b>		
<b>Non-Filamentous Green Algae</b>		
<i>Gleocystis</i>	1	13
<i>Scenedesmus</i>	1	13
<i>Golenkinia</i>	III	40
<i>Crucigenia</i>	1	13
<i>Closteriopsis</i>	1	13
<i>Pediastrum</i>	1	13
TOTAL		105
<b>Filamentous Green Algae</b>		
TOTAL		
<b>Flagellated Green Algae</b>		
<i>Cryptomonas</i>	1	13
<i>Chlamydomonas</i>	HH III	106
TOTAL		119
<b>EUGLENOPHYCEAE</b>		
TOTAL		
<b>CHRYSOPHYCEAE</b>		
<b>Other Pigmented Algae</b>		
TOTAL		
<b>Other Pigmented Flagellated Algae</b>		
<i>Uroglenopsis</i>	1	13
TOTAL		13

**PHYTOPLANKTON  
SEDGWICK-RAFTER  
COUNT**

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COLLECTION LOCATION.  
*Wequaquet*

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STATION NUMBER  
*3A*

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DATE COLLECTED.  
*8/4/86*

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DATE EXAMINED  
*8/7/86*

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COLLECTED BY  
*D. Worden*

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ALIQUOT SAMPLE VOLUME  
*1 ml*

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DILUTION FACTOR  
*φ*

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DEPTH  
*Surface*

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TOTAL PHYTOPLANKTON (•/ml)  
*463 cells/ml*

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IDENTIFIED BY  
*Jarocque*

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**3 STRIPS @ 260x**

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ENUMERATION FACTOR  
*13.3*

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ORGANISM	TALLY	*/ml.
<b>BACILLARIOPHYCEAE</b>		
<b>Pennate diatoms</b>		
Navicula	I	13
Synedra	II	27
<b>Centric diatoms</b>		
	TOTAL	40
<b>DINOPHYCEAE</b>		
Massartia	### II	93
Peridinium	###	67
	TOTAL	160
<b>CYNANOPHYCEAE</b>		
<b>Non-Filamentous Blue-Green Algae</b>		
	TOTAL	
<b>Filamentous Blue-Green Algae</b>		
Anabaena	I	13
Oscillatoria	I	13
	TOTAL	26
<b>PROTOZOA</b>		
	TOTAL	
<b>FILAMENTOUS BACTERIA &amp; FUNGI</b>		
	TOTAL	
<b>OTHERS</b>		
	TOTAL	

**PHYTOPLANKTON  
SEDGWICK-RAFTER  
COUNT**

REMARKS and  
CALCULATIONS:

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ORGANISM	TALLY	#/ml.
<b>BACILLARIOPHYCEAE</b>		
Pennate diatoms		
Centric diatoms		
TOTAL		
<b>DINOPHYCEAE</b>		
Peridinium	III III III	200
Massartia	III III III	173
TOTAL		373
<b>CYNANOPHYCEAE</b>		
Non-Filamentous Blue-Green Algae		
TOTAL		
Filamentous Blue-Green Algae		
TOTAL		
<b>PROTOZOA</b>		
TOTAL		
<b>FILAMENTOUS BACTERIA &amp; FUNGI</b>		
TOTAL		
<b>OTHERS</b>		
TOTAL		

**PHYTOPLANKTON  
SEDGWICK-RAFTER  
COUNT**

REMARKS and  
CALCULATIONS:

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ORGANISM	TALLY	#/ml.
<b>BACILLARIOPHYCEAE</b>		
Pennate diatoms		
Synedra		
(+50)		= 2200
Asterionella		40
Navicula		40
Centric diatoms		
	TOTAL	2280
<b>DINOPHYCEAE</b>		
MASSARTIA		67
Ceratium		27
	TOTAL	94
<b>CYNANOPHYCEAE</b>		
Non-Filamentous Blue-Green Algae		
	TOTAL	
Filamentous Blue-Green Algae		
	TOTAL	
<b>PROTOZOA</b>		
	TOTAL	
<b>FILAMENTOUS BACTERIA &amp; FUNGI</b>		
	TOTAL	
<b>OTHERS</b>		
	TOTAL	

**PHYTOPLANKTON  
SEDGWICK-RAFTER  
COUNT**

REMARKS and  
CALCULATIONS:

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ORGANISM	TALLY	#/ml.
<b>BACILLARIOPHYCEAE</b>		
Pennate diatoms		
<i>Synedra</i>		
		1397
Centric diatoms		
	TOTAL	1397
<b>DINOPHYCEAE</b>		
	TOTAL	
<b>CYNANOPHYCEAE</b>		
Non-Filamentous Blue-Green Algae		
	TOTAL	
Filamentous Blue-Green Algae		
<i>Lyngbya</i>	1	13
<i>Anabaena</i>	1	13
	TOTAL	26
<b>PROTOZOA</b>		
	TOTAL	
<b>FILAMENTOUS BACTERIA &amp; FUNGI</b>		
	TOTAL	
<b>OTHERS</b>		
	TOTAL	

**PHYTOPLANKTON  
SEDGWICK-RAFTER  
COUNT**

REMARKS and  
CALCULATIONS:

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ORGANISM	TALLY	*/ml
<b>CHLOROPHYCEAE</b>		
<b>Non-Filamentous Green Algae</b>		
<i>Cosmarium</i>	I	13
<i>Golenkinia</i>	I	13
TOTAL		26
<b>Filamentous Green Algae</b>		
TOTAL		
<b>Flagellated Green Algae</b>		
<i>Chlamydomonas</i>	II	40
TOTAL		40
<b>EUGLENOPHYCEAE</b>		
TOTAL		
<b>CHRYSOPHYCEAE</b>		
<b>other Pigmented Algae</b>		
TOTAL		
<b>other Pigmented Flagellated Algae</b>		
<i>Dinobryon</i>	III	40
<i>Uroglenopsis</i>	II	27
TOTAL		67

**PHYTOPLANKTON**

**SEDGWICK-RAFTER COUNT**

COLLECTION LOCATION

*Wequaquet*

STATION NUMBER

3A

DATE COLLECTED

8/18/86

DATE EXAMINED

8/27/86

COLLECTED BY

*Sarocque*

ALIQOT SAMPLE VOLUME

1 ml

DILUTION FACTOR

φ

DEPTH

*Surface*

TOTAL PHYTOPLANKTON (*/ml)

345 cells / ml

IDENTIFIED BY

*Sarocque*

3 STRIPS @ 200x

ENUMERATION FACTOR

13.3



ORGANISM	TALLY	#/ml.
<b>BACILLARIOPHYCEAE</b>		
Pennate diatoms		
<i>Synedra</i>	HH HHI	146
Centric diatoms		
	TOTAL	146
<b>DINOPHYCEAE</b>		
<i>Peridinium</i>	I	13
<i>massartia</i>		53
	TOTAL	66
<b>CYNANOPHYCEAE</b>		
Non-Filamentous Blue-Green Algae		
	TOTAL	
Filamentous Blue-Green Algae		
	TOTAL	
<b>PROTOZOA</b>		
	TOTAL	
<b>FILAMENTOUS BACTERIA &amp; FUNGI</b>		
	TOTAL	
<b>OTHERS</b>		
	TOTAL	

**PHYTOPLANKTON  
SEDGWICK-RAFTER  
COUNT**

REMARKS and  
CALCULATIONS:

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ORGANISM	TALLY	#/ml
<b>CHLOROPHYCEAE</b>		
<b>Non-Filamentous Green Algae</b>		
<i>Eleocystis</i>		40
<i>Netrium</i>		13
<b>Filamentous Green Algae</b>		
<b>Flagellated Green Algae</b>		
<b>EUGLENOPHYCEAE</b>		
<b>CHRYSOPHYCEAE</b>		
<b>other Pigmented Algae</b>		
<b>other Pigmented Flagellated Algae</b>		
<i>Chrysooccus</i>		27
<i>Dinobryon</i>		53
<b>TOTAL</b>		<b>80</b>

# PHYTOPLANKTON

**SEDGWICK-RAFTER  
COUNT**

COLLECTION LOCATION  
*Wagonnet*

STATION NUMBER  
*4a*

DATE COLLECTED  
*8/18/86*

DATE EXAMINED  
*8/27/86*

COLLECTED BY  
*Jarocque*

ALIQOT SAMPLE VOLUME  
*1 ml*

DILUTION FACTOR  
*φ*

DEPTH  
*Surface*

TOTAL PHYTOPLANKTON (#/ml)  
*360 cells/ml*

IDENTIFIED BY  
*Jarocque*

3 STRIPS @ 200x

ENUMERATION FACTOR  
*13.3*





ORGANISM	TALLY	#/ml
<b>CHLOROPHYCEAE</b>		
<b>Non-Filamentous Green Algae</b>		
Sphaerocystis		27
Gleocystis		13
<b>Filamentous Green Algae</b>		
TOTAL		40
<b>Flagellated Green Algae</b>		
Chlamydomonas		40
Cryptomonas		13
TOTAL		53
<b>EUGLENOPHYCEAE</b>		
Trachelomonas		40
TOTAL		40
<b>CHRYSOPHYCEAE</b>		
<b>other Pigmented Algae</b>		
TOTAL		
<b>other Pigmented Flagellated Algae</b>		
Chromulina		13
TOTAL		13

**PHYTOPLANKTON**

**SEDGWICK-RAFTER COUNT**

COLLECTION LOCATION

*Wequaquet*

STATION NUMBER

*1*

DATE COLLECTED

*9/8/86*

DATE EXAMINED

*9/12/86*

COLLECTED BY

*D. Worden*

ALIQUT SAMPLE VOLUME

*1 ml*

DILUTION FACTOR

*φ*

DEPTH

*Surface*

TOTAL PHYTOPLANKTON (#/ml)

*837 cells/ml*

IDENTIFIED BY

*Jansone*

3 STRIPS @ 200x

ENUMERATION FACTOR

*13.3*



ORGANISM	TALLY	#/ml.
<b>BACILLARIOPHYCEAE</b>		
Pennate diatoms		
<i>Synedra</i>	HHH HHH HHH HHH 1	279
<i>Asterionella</i>	HHH	67
Centric diatoms		
TOTAL		346
<b>DINOPHYCEAE</b>		
<i>Massartia</i>	1	13
<i>Peridinium</i>	1	13
TOTAL		26
<b>CYNANOPHYCEAE</b>		
Non-Filamentous Blue-Green Algae		
<i>Aphanocapsa</i>	1	13
TOTAL		13
Filamentous Blue-Green Algae		
<i>Lyngbya</i>	HHH HHH HHH HHH 11	293
<i>Anabaena</i>	1	13
TOTAL		306
<b>PROTOZOA</b>		
TOTAL		
<b>FILAMENTOUS BACTERIA &amp; FUNGI</b>		
TOTAL		
<b>OTHERS</b>		
TOTAL		

**PHYTOPLANKTON  
SEDGWICK-RAFTER  
COUNT**

REMARKS and  
CALCULATIONS:

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ORGANISM	TALLY	*/ml
<b>CHLOROPHYCEAE</b>		
<b>Non-Filamentous Green Algae</b>		
<i>Chlorella</i>		80
<i>Schroederia</i>		13
<i>Anthrodesmus</i>		13
<i>Golenkinia</i>		13
<i>Cosmarium</i>		13
<i>Dictyosphaerium</i>		13
TOTAL		147
<b>Filamentous Green Algae</b>		
TOTAL		
<b>Flagellated Green Algae</b>		
<i>Carteria</i>		27
<i>Cryptomonas</i>		53
TOTAL		
<b>EUGLENOPHYCEAE</b>		
TOTAL		80
<b>CHRYSOPHYCEAE</b>		
<b>Other Pigmented Algae</b>		
TOTAL		
<b>Other Pigmented Flagellated Algae</b>		
<i>Ochromonas</i>		13
TOTAL		13

**PHYTOPLANKTON**

**SEDGWICK-RAFTER COUNT**

COLLECTION LOCATION

*Wequaquet*

STATION NUMBER

*2A*

DATE COLLECTED

*9/8/86*

DATE EXAMINED

*9/12/86*

COLLECTED BY

*D. Worden*

ALIQOT SAMPLE VOLUME

*1 ml*

DILUTION FACTOR

*∅*

DEPTH

*Surface*

TOTAL PHYTOPLANKTON (*/ml)

*718 cells/ml*

IDENTIFIED BY

*Jarvis*

**3 STRIPS @ 200X**

ENUMERATION FACTOR

*13.3*









ORGANISM	TALLY	#/ml.
<b>BACILLARIOPHYCEAE</b>		
<b>Pennate diatoms</b>		
<i>Synedra</i>		53
<i>Navicula</i>		13
<b>Centric diatoms</b>		
<i>Cyclotella</i>		13
		TOTAL
		79
<b>DINOPHYCEAE</b>		
<i>Massartia</i>		67
<i>Gymnodinium</i>		13
<i>Peridinium</i>		27
		TOTAL
		107
<b>CYNANOPHYCEAE</b>		
<b>Non-Filamentous Blue-Green Algae</b>		
		TOTAL
<b>Filamentous Blue-Green Algae</b>		
		TOTAL
<b>PROTOZOA</b>		
		TOTAL
<b>FILAMENTOUS BACTERIA &amp; FUNGI</b>		
		TOTAL
<b>OTHERS</b>		
		TOTAL
		TOTAL

**PHYTOPLANKTON  
SEDGWICK-RAFTER  
COUNT**

REMARKS and  
CALCULATIONS:

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ORGANISM	TALLY	#/ml.	PHYTOPLANKTON SEDGWICK-RAFTER COUNT
<b>BACILLARIOPHYCEAE</b>			
Pennate diatoms			
NAVICULA		27	
Centric diatoms			
	TOTAL	27	
<b>DINOPHYCEAE</b>			
MASSARTIA		93	
Gymnodinium		13	
PERIDINIUM		40	
	TOTAL	146	
<b>CYANOPHYCEAE</b>			
Non-Filamentous Blue-Green Algae			
	TOTAL		
Filamentous Blue-Green Algae			
Oscillatoria		13	
	TOTAL	13	
<b>PROTOZOA</b>			
	TOTAL		
<b>FILAMENTOUS BACTERIA &amp; FUNGI</b>			
	TOTAL		
<b>OTHERS</b>			
	TOTAL		

ORGANISM	TALLY	%/ml
<b>CHLOROPHYCEAE</b>		
<b>Non-Filamentous Green Algae</b>		
Pediastrum	//	27
Oocystis	//	27
Microactinium	//	27
Ankistrodesmus	////	53
Golenkinia		13
Closteriopsis		13
Staurastrum		13
TOTAL		173
<b>Filamentous Green Algae</b>		
TOTAL		
<b>Flagellated Green Algae</b>		
Chlamydomonas	###	133
TOTAL		133
<b>EUGLENOPHYCEAE</b>		
TOTAL		
<b>CHRYSOPHYCEAE</b>		
<b>Other Pigmented Algae</b>		
Centrictus	//	27
TOTAL		27
<b>Other Pigmented Flagellated Algae</b>		
Dinobryon	////	53
Uroglenopsis	//	27
TOTAL		80

**PHYTOPLANKTON**

**SEDGWICK-RAFTER COUNT**

COLLECTION LOCATION

Weguaguet

STATION NUMBER

1

DATE COLLECTED

9/29/86

DATE EXAMINED

10/2/86

COLLECTED BY

D. Worden

ALIQUOT SAMPLE VOLUME

1 ml

DILUTION FACTOR

$\phi$

DEPTH

Surface

TOTAL PHYTOPLANKTON (%/ml)

1491 cells/ml

IDENTIFIED BY

Faroque

3 STRIPS @ 200x

ENUMERATION FACTOR

13.3



ORGANISM	TALLY	#/ml.
<b>BACILLARIOPHYCEAE</b>		
Pennate diatoms		
Asterionella		333
Synedra		412
Navicula		53
gyrosigma		27
Centric diatoms		
TOTAL		825
<b>DINOPHYCEAE</b>		
Gymnodinium		27
TOTAL		27
<b>CYNANOPHYCEAE</b>		
Non-Filamentous Blue-Green Algae		
TOTAL		
Filamentous Blue-Green Algae		
Lyngbya		226
TOTAL		226
<b>PROTOZOA</b>		
TOTAL		
<b>FILAMENTOUS BACTERIA &amp; FUNGI</b>		
TOTAL		
<b>OTHERS</b>		
TOTAL		

**PHYTOPLANKTON  
SEDGWICK-RAFTER  
COUNT**

REMARKS and  
CALCULATIONS:

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ORGANISM	TALLY	#/ml.
<b>BACILLARIOPHYCEAE</b>		
<b>Pennate diatoms</b>		
Tabellaria		13
Asterionella		213
Synedra		333
Navicula		13
<b>Centric diatoms</b>		
	TOTAL	572
<b>DINOPHYCEAE</b>		
Massartia		53
Peridinium		13
	TOTAL	66
<b>CYANOPHYCEAE</b>		
<b>Non-Filamentous Blue-Green Algae</b>		
Aphanocapsa		13
Merismopedia		13
	TOTAL	26
<b>Filamentous Blue-Green Algae</b>		
Lyngbya		120
	TOTAL	120
<b>PROTOZOA</b>		
	TOTAL	
<b>FILAMENTOUS BACTERIA &amp; FUNGI</b>		
	TOTAL	
<b>OTHERS</b>		
	TOTAL	

**PHYTOPLANKTON  
SEDGWICK-RAFTER  
COUNT**

REMARKS and  
CALCULATIONS:

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ORGANISM	TALLY	#/ml
<b>CHLOROPHYCEAE</b>		
<b>Non-Filamentous Green Algae</b>		
Arthrodesmus	1	13
Sphaerocystis	1	13
Gleocystis	1	13
TOTAL		39
<b>Filamentous Green Algae</b>		
TOTAL		
<b>Flagellated Green Algae</b>		
Cryptomonas	11	27
TOTAL		27
<b>EUGLENOPHYCEAE</b>		
TOTAL		
<b>CHRYSOPHYCEAE</b>		
<b>other Pigmented Algae</b>		
TOTAL		
<b>other Pigmented Flagellated Algae</b>		
Dinobryon	11	27
TOTAL		27

**PHYTOPLANKTON**

**SEDGWICK-RAFTER COUNT**

COLLECTION LOCATION

Wequaquet

STATION NUMBER

3

DATE COLLECTED

9/29/86

DATE EXAMINED

10/2/86

COLLECTED BY

D. Worden

ALIQUOT SAMPLE VOLUME

1 ml

DILUTION FACTOR

∅

DEPTH

Surface

TOTAL PHYTOPLANKTON (#/ml)

293 cells/ml

IDENTIFIED BY

Jarouge

3 STRIPS @ 200X

ENUMERATION FACTOR

13.3



ORGANISM	TALLY	#/ml.
<b>BACILLARIOPHYCEAE</b>		
<b>Pennate diatoms</b>		
<i>Synedra</i>	HH IIII	120
<i>Asterionella</i>	I	13
<b>Centric diatoms</b>		
	TOTAL	133
<b>DINOPHYCEAE</b>		
<i>Massartia</i>	HHH	67
	TOTAL	67
<b>CYANOPHYCEAE</b>		
<b>Non-Filamentous Blue-Green Algae</b>		
	TOTAL	
<b>Filamentous Blue-Green Algae</b>		
	TOTAL	
<b>PROTOZOA</b>		
	TOTAL	
<b>FILAMENTOUS BACTERIA &amp; FUNGI</b>		
	TOTAL	
<b>OTHERS</b>		
	TOTAL	

**PHYTOPLANKTON  
SEDGWICK-RAFTER  
COUNT**

REMARKS and  
CALCULATIONS:

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ORGANISM	TALLY	#/ml.
<b>BACILLARIOPHYCEAE</b>		
<b>Pennate diatoms</b>		
<i>Synedra</i>	11	27
<b>Centric diatoms</b>		
	TOTAL	27
<b>DINOPHYCEAE</b>		
<i>Peridinium</i>	11	27
<i>Massartia</i>	44	67
	TOTAL	94
<b>CYANOPHYCEAE</b>		
<b>Non-Filamentous Blue-Green Algae</b>		
	TOTAL	
<b>Filamentous Blue-Green Algae</b>		
	TOTAL	
<b>PROTOZOA</b>		
	TOTAL	
<b>FILAMENTOUS BACTERIA &amp; FUNGI</b>		
	TOTAL	
<b>OTHERS</b>		
	TOTAL	

**PHYTOPLANKTON  
SEDGWICK-RAFTER  
COUNT**

REMARKS and  
CALCULATIONS:

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ORGANISM	TALLY	c/mm ²	RELATIVE ABUNDANCE %
<b>CYANOPHYCEAE</b>			
<b>Non-filamentous blue-green algae</b>			
<b>TOTAL</b>			
<b>Filamentous blue-green algae</b>			
<b>TOTAL</b>			
<b>CHLOROPHYCEAE</b>			
<b>Non-filamentous green algae</b>			
SPHAEROCYSTIS	1	20	
CLOSTERIOPSIS	1	20	
<b>TOTAL</b>		40	
<b>Filamentous green algae</b>			
<b>TOTAL</b>			
<b>Flagellated green algae</b>			
CHLAMYDOMONAS	1	20	
<b>TOTAL</b>		20	
<b>BACILLARIOPHYCEAE</b>			
<b>Centric diatoms</b>			

# Phytoplankton Sedgwick-Rafter Count

Part A  
 (2) STRIPS

STATION NUMBER: 7

COLLECTION LOCATION: BEARSE PD.

COLLECTED BY: Nelson / Charbonneau

DATE COLLECTED: 10/24/85

SAMPLE VOLUME: 1 ml.

DILUTION FACTOR: 1

DEPTH: SURFACE

AREA SCRAPED:

SUBSTRATE:

TOTAL PHYTOPLANKTON Parts A&B (cells/ml): 7960 cells/ml.

IDENTIFIED BY: CHARBONNEAU

N.Q. = not quantitative





ORGANISM	TALLY	c/mm ²	RELATIVE ABUNDANCE %
<b>CYANOPHYCEAE</b>			
Non-filamentous blue-green algae			
TOTAL			
Filamentous blue-green algae			
TOTAL			
<b>CHLOROPHYCEAE</b>			
Non-filamentous green algae			
{ <i>Chlamydomonas</i>	###1	80	
{ <i>Cryptomonas</i>		40	
<i>Sphaerocystis</i>		53	
<i>Chlorella</i>		27	
<i>Closteriopsis</i>	## ###	133	
TOTAL		333	
Filamentous green algae			
TOTAL			
Flagellated green algae			
TOTAL			
<b>BACILLARIOPHYCEAE</b>			
Centric diatoms			
<i>Cyclotella</i>	1	13	

**Periphyton  
Sedgwick-Rafter  
Count  
Part A**

STATION NUMBER: #1

COLLECTION LOCATION: Bearse Pond

COLLECTED BY: Bob

DATE COLLECTED: 11/25/85

SAMPLE VOLUME: 1ml

DILUTION FACTOR:

DEPTH: Surface

AREA SCRAPED:

SUBSTRATE:

TOTAL PERIPHYTON:  
Parts A&B (cells/mm²):  
1171 cells

IDENTIFIED BY: Mark Janssen

N.Q. = not quantitative









ORGANISM	TALLY	c/mm ²	RELATIVE ABUNDANCE %
<b>BACILLARIOPHYCEAE</b>			
<b>Pennate diatoms</b>			
<i>Asterionella</i>		532	
<i>Frustulia</i>		53	
<i>Fragilaria</i>		13	
<i>Nannocella</i>		40	
TOTAL		638	
<b>CHRYSOPHYCEAE</b>			
<b>Other pigmented algae</b>			
<b>Other pigmented flagellated algae</b>			
TOTAL			
<b>DINOPHYCEAE</b>			
<b>Dinoflagellates</b>			
TOTAL			
<b>PROTOZOA</b>			
TOTAL			
<b>FILAMENTOUS BACTERIA &amp; FUNGI</b>			
TOTAL			
<b>OTHERS</b>			
TOTAL			

# Phytoplankton Sedgwick-Rafter Count

## Part B

REMARKS:

3 strips @ 200X

ORGANISM	TALLY	c/mm ²	RELATIVE ABUNDANCE %
<b>CYANOPHYCEAE</b>			
Non-filamentous blue-green algae			
TOTAL			
Filamentous blue-green algae			
TOTAL			
<b>CHLOROPHYCEAE</b>			
Non-filamentous green algae			
<i>Closterium</i>	///	66	
TOTAL		66	
Filamentous green algae			
TOTAL			
Flagellated green algae			
<i>Chlamydomonas</i>	///	40	
TOTAL		40	
<b>BACILLARIOPHYCEAE</b>			
Centric diatoms			
<i>Cocconeis</i>	1	13	
TOTAL		13	

# Phytoplankton Sedgwick-Rafter Count

## Part A

STATION NUMBER:  
1A

COLLECTION LOCATION:  
BEARSE POND

COLLECTED BY:  
WORDEN

DATE COLLECTED:  
1/29/85

SAMPLE VOLUME:  
1 ml.

DILUTION FACTOR:  
0

DEPTH:  
surface

AREA SCRAPED:

SUBSTRATE:

TOTAL PHYTOPLANKTON  
Parts A&B (cells/ml):  
1382 cells/ml

IDENTIFIED BY:  
Charbonneau

N.Q. = not  
quantitative



ORGANISM	TALLY	c/mm ²	RELATIVE ABUNDANCE %
<b>BACILLARIOPHYCEAE</b>			
Pennate diatoms			
<i>Asterionella</i>		85	
		1130	
<i>Cymbella</i>	I	13	
<i>Synedra</i>		40	
<i>Nautcula</i>		53	
TOTAL		1236	
<b>CHRYSOPHYCEAE</b>			
Other pigmented algae			
TOTAL			
Other pigmented flagellated algae			
TOTAL			
<b>DINOPHYCEAE</b>			
Dinoflagellates			
TOTAL			
<b>PROTOZOA</b>			
<i>Euglena</i>		27	
TOTAL		27	
<b>FILAMENTOUS BACTERIA &amp; FUNGI</b>			
TOTAL			
<b>OTHERS</b>			
TOTAL			

**Phytoplankton  
Sedgwick-Rafter  
Count  
Part B**

REMARKS:

3 STRIPS @ 200X

1382 cells/ml

*Asterionella* sp.  
dominant





ORGANISM	TALLY	#/ml.
<b>BACILLARIOPHYCEAE</b>		
<b>Pennate diatoms</b>		
<i>Asterionella</i>		1040
<i>Navicula</i>		160
<b>Centric diatoms</b>		
	<b>TOTAL</b>	<b>1200</b>
<b>DINOPHYCEAE</b>		
	<b>TOTAL</b>	
<b>CYANOPHYCEAE</b>		
<b>Non-Filamentous Blue-Green Algae</b>		
	<b>TOTAL</b>	
<b>Filamentous Blue-Green Algae</b>		
	<b>TOTAL</b>	
<b>PROTOZOA</b>		
	<b>TOTAL</b>	
<b>FILAMENTOUS BACTERIA &amp; FUNGI</b>		
	<b>TOTAL</b>	
<b>OTHERS</b>		
	<b>TOTAL</b>	

**PHYTOPLANKTON  
SEDGWICK-RAFTER  
COUNT**

REMARKS and  
CALCULATIONS:

*Lots of Asterionella!*







ORGANISM	TALLY	#/ml.
<b>BACILLARIOPHYCEAE</b>		
<b>Pennate diatoms</b>		
<i>Asterionella</i>	<del>    </del>	440
<i>Navicula</i>		80
<b>Centric diatoms</b>		
	TOTAL	520
<b>DINOPHYCEAE</b>		
	TOTAL	
<b>CYANOPHYCEAE</b>		
<b>Non-Filamentous Blue-Green Algae</b>		
	TOTAL	
<b>Filamentous Blue-Green Algae</b>		
	TOTAL	
<b>PROTOZOA</b>		
	TOTAL	
<b>FILAMENTOUS BACTERIA &amp; FUNGI</b>		
	TOTAL	
<b>OTHERS</b>		
	TOTAL	

**PHYTOPLANKTON  
SEDGWICK-RAFTER  
COUNT**

**REMARKS and  
CALCULATIONS:**

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ORGANISM		/ml
<b>CHLOROPHYCEAE</b>		
<b>Non-Filamentous Green Algae</b>		
<i>Volvox</i>	//	40
<i>Sphaerocystis</i>	###	100
<i>Chlosteropsis</i>	//	40
<i>Ankistrodesmus</i>		20
<i>Elakatothrix</i>		20
<i>Tetraedron</i>		20
<i>Oocystis</i>		20
<i>Closterium</i>		20
TOTAL		280
<b>Filamentous Green Algae</b>		
TOTAL		
<b>Flagellated Green Algae</b>		
<i>Chlamydomonas</i>		20
TOTAL		20
<b>EUGLENOPHYCEAE</b>		
TOTAL		
<b>CHRYSOPHYCEAE</b>		
<b>other Pigmented Algae</b>		
TOTAL		
<b>other Pigmented Flagellated Algae</b>		
<i>Dinobryon</i>	//	40
TOTAL		40

**PHYTOPLANKTON**

**SEDGWICK-RAFTER COUNT**

COLLECTION LOCATION:

*Bearse Pond*

STATION NUMBER

*2*

DATE COLLECTED

*4/7/86*

DATE EXAMINED

*4/10/86*

COLLECTED BY

*Warden*

ALIQOT SAMPLE VOLUME

*1ml*

DILUTION FACTOR

*φ*

DEPTH

*surface*

TOTAL PHYTOPLANKTON (x/ml)

*500 cells/ml*

IDENTIFIED BY

*Jarosz*

**2 STRIPS @ 200x**

ENUMERATION FACTOR

**20**



ORGANISM	TALLY	#/ml.
<b>BACILLARIOPHYCEAE</b>		
Pennate diatoms		
<i>Navicula</i>	III	60
Centric diatoms		
	TOTAL	60
<b>DINOPHYCEAE</b>		
	TOTAL	
<b>CYNANOPHYCEAE</b>		
Non-Filamentous Blue-Green Algae		
<i>Aphanocapsa</i>	III	100
	TOTAL	100
Filamentous Blue-Green Algae		
	TOTAL	
<b>PROTOZOA</b>		
	TOTAL	
<b>FILAMENTOUS BACTERIA &amp; FUNGI</b>		
	TOTAL	
<b>OTHERS</b>		
	TOTAL	

**PHYTOPLANKTON  
SEDGWICK-RAFTER  
COUNT**

REMARKS and  
CALCULATIONS:

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**CHLOROPHYCEAE**

**Non-Filamentous Green Algae**

Volvox	III	260
Glencystis		40
Sphaerocystis		20
Centritractus		20
Cosmanium		40
Elkatothrix		20

TOTAL 400

**Filamentous Green Algae**

TOTAL

**Flagellated Green Algae**

Chlamydomonas		40
---------------	--	----

TOTAL 40

**EUGLENOPHYCEAE**

Heterodinema		40
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TOTAL 40

**CHRYSOPHYCEAE**

**other Pigmented Algae**

TOTAL

**other Pigmented Flagellated Algae**

Dinobryon		40
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TOTAL 40

**PHYTOPLANKTON  
SEDGWICK-RAFTER  
COUNT**

COLLECTION LOCATION

*Bearse's Pond*

STATION NUMBER

*TA*

DATE COLLECTED

*4/22/86*

DATE EXAMINED

*4/24/86*

COLLECTED BY

*D. Worden*

ALIQOT SAMPLE VOLUME

*1ml*

DILUTION FACTOR

*φ*

DEPTH

*surface*

TOTAL PHYTOPLANKTON (#/ml)

*680 cells/ml*

IDENTIFIED BY

*Jirog*

**2 STRIPS @ 200x**

ENUMERATION FACTOR

*20*

**IEP inc.**

ORGANISM	TALLY	/ ml.
<b>BACILLARIOPHYCEAE</b>		
Pennate diatoms		
<i>Navicula</i>	144	100
<i>Asterionella</i>	11	40
<del><i>Cyclotella</i></del>		
Centric diatoms		
TOTAL		146
<b>DINOPHYCEAE</b>		
TOTAL		
<b>CYNANOPHYCEAE</b>		
Non-Filamentous Blue-Green Algae		
TOTAL		
Filamentous Blue-Green Algae		
<i>Oscillatoria</i>	1	20
TOTAL		20
<b>PROTOZOA</b>		
TOTAL		
<b>FILAMENTOUS BACTERIA &amp; FUNGI</b>		
TOTAL		
<b>OTHERS</b>		
TOTAL		

**PHYTOPLANKTON  
SEDGWICK-RAFTER  
COUNT**

REMARKS and  
CALCULATIONS:

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CHLOROPHYCEAE		
Non-Filamentous Green Algae		
<i>Gleocystis</i>	///	60
<i>Schroederia</i>		20
<i>Closteropsis</i>		20
TOTAL		100
Filamentous Green Algae		
TOTAL		
Flagellated Green Algae		
<i>Chlamydomonas</i>	///	100
TOTAL		100
EUGLENOPHYCEAE		
<i>Heteronema</i>		20
TOTAL		20
CHRYSOPHYCEAE		
other Pigmented Algae		
TOTAL		
other Pigmented Flagellated Algae		
<i>Dinobryon</i>		20
TOTAL		20

**FIT TO PLANKTON  
SEDGWICK-RAFTER  
COUNT**

COLLECTION LOCATION

*Bearse's Pond*

STATION NUMBER

*14*

DATE COLLECTED

*5/5/86*

DATE EXAMINED

*5/6/86*

COLLECTED BY

*D. Worden*

ALIQOT SAMPLE VOLUME

*1ml*

DILUTION FACTOR

*φ*

DEPTH

*surface*

TOTAL PHYTOPLANKTON (#/ml)

*360 cells/ml*

IDENTIFIED BY

*Lorocqua*

Z STRIPS @ 200x

ENUMERATION FACTOR

*20*

**IEP** inc.

ORGANISM	TALLY	#/ml.
<b>BACILLARIOPHYCEAE</b>		
Pennate diatoms		
<i>Asterionella</i>	11	40
<i>Synedra</i>	1	20
<i>Navicula</i>	11	40
<i>Cyclotella</i>	1	20
Centric diatoms		
TOTAL		120
<b>DINOPHYCEAE</b>		
TOTAL		
<b>CYANOPHYCEAE</b>		
Non-Filamentous Blue-Green Algae		
TOTAL		
Filamentous Blue-Green Algae		
TOTAL		
<b>PROTOZOA</b>		
TOTAL		
<b>FILAMENTOUS BACTERIA &amp; FUNGI</b>		
TOTAL		
<b>OTHERS</b>		
TOTAL		

**PHYTOPLANKTON  
SEDGWICK-RAFTER  
COUNT**

REMARKS and  
CALCULATIONS:

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**CHLOROPHYCEAE**

**Non-Filamentous Green Algae**

Volvox	###	67
Gleocystis		29
Chlorella	1	13

TOTAL 107

**Filamentous Green Algae**

TOTAL

**Flagellated Green Algae**

Chlamydomonas	### # # # #	266
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TOTAL 266

**EUGLENOPHYCEAE**

TOTAL

**CHRYSOPHYCEAE**

**other Pigmented Algae**

TOTAL

**other Pigmented Flagellated Algae**

Chrooculina	###	106
Chroococcoid		53

TOTAL 159

**SEDGWICK-RAFTER COUNT**

**COLLECTION LOCATION**

Beases Pond

**STATION NUMBER**

1A

**DATE COLLECTED**

5/19/86

**DATE EXAMINED**

5/21/86

**COLLECTED BY**

Jarocque / Worden

**ALIQOT SAMPLE VOLUME**

1 ml

**DILUTION FACTOR**

∅

**DEPTH**

Surface

**TOTAL PHYTOPLANKTON (cells/ml)**

585 cells/ml

**IDENTIFIED BY**

Jarocque

3 STRIPS @ 200X

**ENUMERATION FACTOR**

13.3

**IEP** inc.



**BACILLARIOPHYCEAE**

**Pennate diatoms**

Navicula		40
Asterionella	1	13

**Centric diatoms**

TOTAL

53

**DINOPHYCEAE**

TOTAL

**CYNANOPHYCEAE**

**Non-Filamentous Blue-Green Algae**

TOTAL

**Filamentous Blue-Green Algae**

TOTAL

**PROTOZOA**

TOTAL

**FILAMENTOUS BACTERIA & FUNGI**

TOTAL

**OTHERS**

TOTAL

**PHYTOPLANKTON  
SEDGWICK-RAFTER  
COUNT**

REMARKS and  
CALCULATIONS:

(Nice kellicotia!)

**PHYTOPLANKTON**

**Non-Filamentous Green Algae**

Phaeocystis	###	67
Skatoleix	###	133
Oocystis		40
Chlorella	###	67
Pediastrum		27
Antistropheus		27
Crucigenia		13
TOTAL		374

**Filamentous Green Algae**

TOTAL		
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**Flagellated Green Algae**

Chlamydomonas		27
TOTAL		27

**EUGLENOPHYCEAE**

Euglena		27
Phacus		40
TOTAL		67

**CHRYSTOPHYCEAE**

**Other Pigmented Algae**

TOTAL		
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**Other Pigmented Flagellated Algae**

Mallomonas		27
Dinobryon		13

**SEDGWICK-RAFTER COUNT**

**COLLECTION LOCATION**  
Bearse's Pond

**STATION NUMBER**  
1A

**DATE COLLECTED**  
6/9/86

**DATE EXAMINED**  
6/12/86

**COLLECTED BY**  
D. Worden

**ALIQOT SAMPLE VOLUME**  
1 ml

**DILUTION FACTOR**  
φ

**DEPTH**  
surface

**TOTAL PHITOPLANCTON**  
694 cells/ml

**IDENTIFIED BY**  
Jarroque

**3 STRIPS @ 200x**

**ENUMERATION FACTOR**  
13.3



**PHYTOPLANKTON  
SEDGWICK-RAFTER  
COUNT**

**REMARKS and  
CALCULATIONS:**

<b>ACILLARIOPHYCEAE</b>		
<b>Pennate diatoms</b>		
<i>Synedra</i>	///	40
<i>Asterionella</i>	////	53
<b>Centric diatoms</b>		
	<b>TOTAL</b>	<b>93</b>
<b>DINOPHYCEAE</b>		
	<b>TOTAL</b>	
<b>CYANOPHYCEAE</b>		
<b>Non-Filamentous Blue-Green Algae</b>		
<i>Aphanocapsa</i>	///	80
	<b>TOTAL</b>	<b>80</b>
<b>Filamentous Blue-Green Algae</b>		
<i>Anabaena</i>	/	13
	<b>TOTAL</b>	<b>13</b>
<b>PROTOZOA</b>		
	/	
	<b>TOTAL</b>	
<b>FILAMENTOUS BACTERIA &amp; FUNGI</b>		
	<b>TOTAL</b>	
<b>OTHERS</b>		
	<b>TOTAL</b>	

REMARKS and CALCULATIONS:

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CHLOROPHYCEAE		
Non-Filamentous Green Algae		
Sphaerocystis		120
Chlorella		106
Gleocystis		53
Ankistrodesmus		53
Pediastrum		27
Elkatothrix		27
TOTAL		386
Filamentous Green Algae		
TOTAL		
Flagellated Green Algae		
Chlamydomonas		53
TOTAL		53
EUGLENOPHYCEAE		
TOTAL		
CHRYSOPHYCEAE		
other Pigmented Algae		
TOTAL		
other Pigmented Flagellated Algae		
Dinobryon		399
TOTAL		399

**SEDGWICK-RAFTER COUNT**

COLLECTION LOCATION:  
Bearss Pond

STATION NUMBER:  
1A

DATE COLLECTED:  
6/23/86

DATE EXAMINED:  
6/24/86

COLLECTED BY:  
D. Worden

ALIQOT SAMPLE VOLUME:  
1ml

DILUTION FACTOR:  
1

DEPTH:  
surface

TOTAL PHYTOPLANKTON (cells/ml):  
1397 cells/ml

IDENTIFIED BY:  
Jarroque

3 STRIPS @ 200x

ENUMERATION FACTOR:  
13.3



ORGANISM	TALLY	#/ml.
<b>BACILLARIOPHYCEAE</b>		
<b>Pennate diatoms</b>		
<i>Fragilaria</i>	/	13
<i>Asteionella</i>	III	53
<i>Navicula</i>	HH	67
<i>Synedra</i>	II	27
<b>Centric diatoms</b>		
	TOTAL	160
<b>DINOPHYCEAE</b>		
<i>MASSARTIA</i>	III	40
	TOTAL	40
<b>CYNANOPHYCEAE</b>		
<b>Non-Filamentous Blue-Green Algae</b>		
<i>ANACYSTIS</i>	HHH HHH HHH HHH HHH II	359
	TOTAL	359
<b>Filamentous Blue-Green Algae</b>		
	TOTAL	
<b>PROTOZOA</b>		
	TOTAL	
<b>FILAMENTOUS BACTERIA &amp; FUNGI</b>		
	TOTAL	
<b>OTHERS</b>		
	TOTAL	

**PHYTOPLANKTON  
SEDGWICK-RAFTER  
COUNT**

REMARKS and  
CALCULATIONS:

Dinobryon! &  
Anacystis!



ORGANISM	TALLY	%/ml
<b>CHLOROPHYCEAE</b>		
<b>Non-Filamentous Green Algae</b>		
Chlorella	###1	80
Elakatothrix	1	13
Ankistrodesmus		53
Sphaerocystis	1	13
Dictyosphaerium		53
Closteriopsis		27
TOTAL		239
<b>Filamentous Green Algae</b>		
TOTAL		
<b>Flagellated Green Algae</b>		
Cryptomonas		40
Chlamydomonas	###	67
TOTAL		107
<b>EUGLENOPHYCEAE</b>		
Euglena	1	13
TOTAL		13
<b>CHRYSOPHYCEAE</b>		
<b>Other Pigmented Algae</b>		
TOTAL		
<b>Other Pigmented Flagellated Algae</b>		
Dinobayon	### ##	
Chrysoococcus		27
Mallomonas	1	13
Continued →	### ##	1846
TOTAL		1886

# PHYTOPLANKTON

## SEDGWICK-RAFTER COUNT

COLLECTION LOCATION

Bearses Pond

STATION NUMBER

BP-1

DATE COLLECTED

7/7/86

DATE EXAMINED

7/9/86

COLLECTED BY

Jarocque

ALIQOT SAMPLE VOLUME

1 ml

DILUTION FACTOR

ϕ

DEPTH

?

TOTAL PHYTOPLANKTON (#/ml)

2565 cells/ml

IDENTIFIED BY

Jarocque

3 STRIPS @ 200X

ENUMERATION FACTOR

13.3



ORGANISM	TALLY	#/ml.
<b>BACILLARIOPHYCEAE</b>		
<b>Pennate diatoms</b>		
Asterionella	###	67
Navicula		40
Synedra	1	13
<b>Centric diatoms</b>		
	TOTAL	120
<b>DINOPHYCEAE</b>		
Peridinium	### ### ###	200
	TOTAL	200
<b>CYANOPHYCEAE</b>		
<b>Non-Filamentous Blue-Green Algae</b>		
	TOTAL	
<b>Filamentous Blue-Green Algae</b>		
	TOTAL	
<b>PROTOZOA</b>		
	TOTAL	
<b>FILAMENTOUS BACTERIA &amp; FUNGI</b>		
	TOTAL	
<b>OTHERS</b>		
	TOTAL	

**PHYTOPLANKTON  
SEDGWICK-RAFTER  
COUNT**

REMARKS and  
CALCULATIONS:

Dinobryon!!

ORGANISM	TALLY	•/ml
<b>CHLOROPHYCEAE</b>		
<b>Non-Filamentous Green Algae</b>		
Gleocystis		53
Closteriopsis		27
Pediastrum		53
Chlorella		40
Oocystis		40
Crucigenia		40
Elakatothrix		40
Sphaerocystis		13
TOTAL		306
<b>Filamentous Green Algae</b>		
TOTAL		
<b>Flagellated Green Algae</b>		
Chlamydomonas	### ## #	200
TOTAL		200
<b>EUGLENOPHYCEAE</b>		
TOTAL		
<b>CHRYSOPHYCEAE</b>		
<b>other Pigmented Algae</b>		
Centractus	###	93
TOTAL		93
<b>other Pigmented Flagellated Algae</b>		
Dinobryon	### ## # ## ## #	452
TOTAL		452

**PHYTOPLANKTON**

**SEDGWICK-RAFTER COUNT**

COLLECTION. LOCATION.  
Bearses Pond

STATION NUMBER  
1

DATE COLLECTED  
7/22/86

DATE EXAMINED  
7/24/86

COLLECTED BY  
D. Worden

ALIQUOT SAMPLE VOLUME  
1ml

DILUTION FACTOR  
Ø

DEPTH  
?

TOTAL PHYTOPLANKTON (•/ml)  
1330 cells/ml

IDENTIFIED BY  
Jarozgul

STRIPS @

ENUMERATION FACTOR







ORGANISM	TALLY	°/ml
<b>CHLOROPHYCEAE</b>		
<b>Non-Filamentous Green Algae</b>		
<i>Chlorella</i>		93
<i>Golenkinia</i>		13
<i>Cosmarium</i>		40
<i>Chlorella</i>		67
TOTAL		213
<b>Filamentous Green Algae</b>		
TOTAL		
<b>Flagellated Green Algae</b>		
<i>Cryptomonas</i>		46
<i>Chlamydomonas</i>		67
TOTAL		107
<b>EUGLENOPHYCEAE</b>		
TOTAL		
<b>CHRYSOPHYCEAE</b>		
<b>Other Pigmented Algae</b>		
TOTAL		
<b>Other Pigmented Flagellated Algae</b>		
<i>Synura</i>		13
TOTAL		13

**PHYTOPLANKTON**

**SEDGWICK-RAFTER  
COUNT**

**COLLECTION LOCATION:**

*Bearses Pond*

**STATION NUMBER**

*BP-1A*

**DATE COLLECTED**

*8/4/86*

**DATE EXAMINED**

*8/5/86*

**COLLECTED BY**

*D. Worden*

**ALIQUOT SAMPLE VOLUME**

*1 ml*

**DILUTION FACTOR**

*φ*

**DEPTH**

*Surface*

**TOTAL PHYTOPLANKTON (#/ml)**

*572 cells/ml*

**IDENTIFIED BY**

*Jaroque*

**3 STRIPS @ 200x**

**ENUMERATION FACTOR**

*13.3*

**IEP  
INC.**

ORGANISM	TALLY	#/ml.
<b>BACILLARIOPHYCEAE</b>		
<b>Pennate diatoms</b>		
<i>Navicula</i>	##	93
<i>Asterionella</i>		13
<b>Centric diatoms</b>		
TOTAL		106
<b>DINOPHYCEAE</b>		
<i>MASSARTIA</i>	##	93
<i>Pearidinium</i>		27
TOTAL		120
<b>CYANOPHYCEAE</b>		
<b>Non-Filamentous Blue-Green Algae</b>		
TOTAL		
<b>Filamentous Blue-Green Algae</b>		
<i>Calothrix</i>		13
TOTAL		13
<b>PROTOZOA</b>		
TOTAL		
<b>FILAMENTOUS BACTERIA &amp; FUNGI</b>		
TOTAL		
<b>OTHERS</b>		
TOTAL		

**PHYTOPLANKTON  
SEDGWICK-RAFTER  
COUNT**

REMARKS and  
CALCULATIONS:

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ORGANISM	TALLY	#/ml.
<b>BACILLARIOPHYCEAE</b>		
Pennate diatoms		
<i>Synedra</i>		40
<i>Asterionella</i>		27
Centric diatoms		
	TOTAL	67
<b>DINOPHYCEAE</b>		
<i>Peridinium</i>		53
	TOTAL	53
<b>CYANOPHYCEAE</b>		
Non-Filamentous Blue-Green Algae		
	TOTAL	
Filamentous Blue-Green Algae		
	TOTAL	
<b>PROTOZOA</b>		
	TOTAL	
<b>FILAMENTOUS BACTERIA &amp; FUNGI</b>		
	TOTAL	
<b>OTHERS</b>		
	TOTAL	

**PHYTOPLANKTON  
SEDGWICK-RAFTER  
COUNT**

REMARKS and  
CALCULATIONS:

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ORGANISM	TALLY	#/ml.
<b>BACILLARIOPHYCEAE</b>		
<b>Pennate diatoms</b>		
Synedra	##	80
Navicula		27
Asterionella		13
<b>Centric diatoms</b>		
<b>TOTAL</b>		
120		
<b>DINOPHYCEAE</b>		
Gymnodinium		27
<b>TOTAL</b>		
27		
<b>CYANOPHYCEAE</b>		
<b>Non-Filamentous Blue-Green Algae</b>		
<b>TOTAL</b>		
<b>Filamentous Blue-Green Algae</b>		
<b>TOTAL</b>		
<b>PROTOZOA</b>		
<b>TOTAL</b>		
<b>FILAMENTOUS BACTERIA &amp; FUNGI</b>		
<b>TOTAL</b>		
<b>OTHERS</b>		
<b>TOTAL</b>		

**PHYTOPLANKTON  
SEDGWICK-RAFTER  
COUNT**

REMARKS and CALCULATIONS:

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ORGANISM	TALLY	°/ml
<b>CHLOROPHYCEAE</b>		
<b>Non-Filamentous Green Algae</b>		
<i>Dolocystis</i>		40
<i>Closterium</i>		13
<i>Gleocystis</i>		13
<i>Arthrodesmus</i>		13
<i>Cosmarium</i>		13
TOTAL		92
<b>Filamentous Green Algae</b>		
TOTAL		
<b>Flagellated Green Algae</b>		
<i>Cryptomonas</i>		67
<i>Chlamydomonas</i>		40
TOTAL		107
<b>EUGLENOPHYCEAE</b>		
TOTAL		
<b>CHRYSOPHYCEAE</b>		
<b>Other Pigmented Algae</b>		
TOTAL		
<b>Other Pigmented Flagellated Algae</b>		
<i>Uroglanopsis</i>		53
TOTAL		53

**PHYTOPLANKTON**

**SEDGWICK-RAFTER COUNT**

COLLECTION LOCATION  
*Bearses Pond*

STATION NUMBER  
*1*

DATE COLLECTED  
*9/29/86*

DATE EXAMINED  
*9/30/86*

COLLECTED BY  
*D. Worden*

ALIQOT SAMPLE VOLUME  
*1 ml*

DILUTION FACTOR  
*φ*

DEPTH  
*Surface*

TOTAL PHYTOPLANKTON (°/ml)  
*718 cells/ml*

IDENTIFIED BY  
*Jaroque*

2 STRIPS @ 200X  
ENUMERATION FACTOR  
*13.3*





ORGANISM	TALLY	#/ml.
<b>BACILLARIOPHYCEAE</b>		
Pennate diatoms		
Synedra		266
Asterionella		67
Pinnularia		13
Anomoeoneis		13
Centric diatoms		
TOTAL		359
<b>DINOPHYCEAE</b>		
Massartia		67
Gymnodinium		40
TOTAL		107
<b>CYNANOPHYCEAE</b>		
Non-Filamentous Blue-Green Algae		
TOTAL		
Filamentous Blue-Green Algae		
TOTAL		
<b>PROTOZOA</b>		
TOTAL		
<b>FILAMENTOUS BACTERIA &amp; FUNGI</b>		
TOTAL		
<b>OTHERS</b>		
TOTAL		

**PHYTOPLANKTON  
SEDGWICK-RAFTER  
COUNT**

REMARKS and  
CALCULATIONS:

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# Periphyton Sedgwick-Rafter Count

## Part A

STATION NUMBER: 1A

COLLECTION LOCATION: Long Pond

COLLECTED BY: Bob Carbonem

DATE COLLECTED: 10/24/85

SAMPLE VOLUME: 1 ml

DILUTION FACTOR:  $\phi$

DEPTH: Surface

AREA SCRAPED:  $\phi$

SUBSTRATE:  $\phi$

TOTAL PERIPHYTON: Parts A&B (cells/mm²): 571 cells

IDENTIFIED BY: Mark Brown

N.Q. = not quantitative

ORGANISM	TALLY	C/mm ²	RELATIVE ABUNDANCE %
CYANOPHYCEAE			
Non-filamentous blue-green algae			
TOTAL			
Filamentous blue-green algae x 13.3			
Anabena	2	27	
TOTAL			27
CHLOROPHYCEAE			
Non-filamentous green algae x 13.3			
Chlorococcum	9	120	
Chorella	5	67	
Golenkinia	1	13	
Senedesmus	1	13	
TOTAL			213
Filamentous green algae			
TOTAL			
Flagellated green algae			
TOTAL			
BACILLARIOPHYCEAE			
Centric diatoms			
TOTAL			



ORGANISM	TALLY	C/MM ²	RELATIVE ABUNDANCE %
<b>BACILLARIOPHYCEAE</b>			
Pennate diatoms <span style="float: right;">X 13.3</span>			
<i>Pinnularia</i>	1	13	
<i>Nannula</i>	1	13	
<i>Tabellaria</i>	1	13	
<i>Fraustulia</i>	2	27	
TOTAL		66	
<b>CHRYSOPHYCEAE</b>			
Other pigmented algae <span style="float: right;">X 13.3</span>			
<i>Dinobryon</i>	18	239	
TOTAL		239	
Other pigmented flagellated algae			
TOTAL			
<b>DINOPHYCEAE</b>			
Dinoflagellates			
TOTAL			
<b>PROTOZOA</b>			
Unidentified	1	13	
TOTAL		13	
<b>FILAMENTOUS BACTERIA &amp; FUNGI</b>			
TOTAL			
<b>OTHERS</b>			
<i>Rotifer</i>			
<i>Keratella</i>	1	13	
TOTAL		13	

**Periphyton  
Sedgwick-Rafter  
Count  
Part B**

REMARKS:

3 strips @ 200x

*Dinobryon* Dominant

ORGANISM	TALLY	c/mm ²	RELATIVE ABUNDANCE %
<b>CYANOPHYCEAE</b>			
Non-filamentous blue-green algae			
<i>Prochlorococcus</i>	11	2	
TOTAL			
Filamentous blue-green algae			
TOTAL			
<b>CHLOROPHYCEAE</b>			
Non-filamentous green algae			
<i>Chlamydomonas</i>	111	40	
<i>Chlorella</i>	1	13	
<i>Cryptomonas</i>	1	13	
TOTAL 66			
Filamentous green algae			
TOTAL			
Flagellated green algae			
TOTAL			
<b>BACILLARIOPHYCEAE</b>			
Centric diatoms			
<i>Cyclotella</i>	1	13	
TOTAL			

**Periphyton Sedgwick-Rafter Count**

**Part A**

STATION NUMBER: _____

COLLECTION LOCATION: _____

COLLECTED BY: _____

DATE COLLECTED: _____

SAMPLE VOLUME: _____

DILUTION FACTOR: _____

DEPTH: _____

AREA SCRAPED: _____

SUBSTRATE: _____

TOTAL PERIPHYTON: Parts A&B (cells/mm²): _____

IDENTIFIED BY: _____

N.Q. = not quantitative





ORGANISM	TALLY	c/mm ²	RELATIVE ABUNDANCE %
<b>CYANOPHYCEAE</b>			
Non-filamentous blue-green algae			
TOTAL			
Filamentous blue-green algae			
TOTAL			
<b>CHLOROPHYCEAE</b>			
Non-filamentous green algae			
TOTAL			
Filamentous green algae			
TOTAL			
Flagellated green algae			
<i>Chlamydomonas</i>		133	
TOTAL		133	
<b>BACILLARIOPHYCEAE</b>			
Centric diatoms			
<i>Cyclotella</i>		40	
TOTAL		40	

**Phytoplankton  
Sedgwick-Rafter  
Count**  
Part A

STATION NUMBER: 1

COLLECTION LOCATION: Jong Pond

COLLECTED BY: B.C.

DATE COLLECTED: 12/30/85

SAMPLE VOLUME: 1ml

DILUTION FACTOR: _____

DEPTH: Surface

AREA SCRAPED: _____

SUBSTRATE: _____

TOTAL PHYTOPLANKTON  
Parts A&B (cells/ml): 266 cells/ml

IDENTIFIED BY: Mark Long

N.Q. = not quantitative



ORGANISM	TALLY	c/mm ²	RELATIVE ABUNDANCE %
<b>BACILLARIOPHYCEAE</b>			
Pennate diatoms			
<i>Fragilaria</i>		53	
<i>Fragilaria</i>		13	
TOTAL			66
<b>CHRYSOPHYCEAE</b>			
Other pigmented algae			
Other pigmented flagellated algae			
<i>Dinobryon</i>		27	
TOTAL			27
<b>DINOPHYCEAE</b>			
Dinoflagellates			
TOTAL			
<b>PROTOZOA</b>			
TOTAL			
<b>FILAMENTOUS BACTERIA &amp; FUNGI</b>			
TOTAL			
<b>OTHERS</b>			
TOTAL			

**Phytoplankton  
Sedgwick-Rafter  
Count  
Part B**

REMARKS:  
*3 strips @ 200x*







ORGANISM	TALLY	c/mm ²	RELATIVE ABUNDANCE %
<b>BACILLARIOPHYCEAE</b>			
Pennate diatoms			
Navicula		40	
Tabellaria		40	
Frustulia		27	
ANDMOENEIS		27	
Synedra		13	
TOTAL		147	
<b>CHRYSOPHYCEAE</b>			
Other pigmented algae			
Other pigmented flagellated algae			
Chrysoococcus		27	
TOTAL		27	
<b>DINOPHYCEAE</b>			
Dinoflagellates			
TOTAL			
<b>PROTOZOA</b>			
TOTAL			
<b>FILAMENTOUS BACTERIA &amp; FUNGI</b>			
TOTAL			
<b>OTHERS</b>			
TOTAL			

# Phytoplankton Sedgwick-Rafter Count

## Part B

REMARKS:  
 3 STRIPS @ 200X  
 Very sparse sample  
 227 cells/ml





ORGANISM	TALLY	#/ml.
<b>BACILLARIOPHYCEAE</b>		
<b>Pennate diatoms</b>		
Tabellaria	//	27
Synedra		53
Navicula		67
Anomoeoneis		13
<b>Centric diatoms</b>		
<b>TOTAL</b>		160
<b>DINOPHYCEAE</b>		
<b>TOTAL</b>		
<b>CYANOPHYCEAE</b>		
<b>Non-Filamentous Blue-Green Algae</b>		
<b>TOTAL</b>		
<b>Filamentous Blue-Green Algae</b>		
<b>TOTAL</b>		
<b>PROTOZOA</b>		
<b>TOTAL</b>		
<b>FILAMENTOUS BACTERIA &amp; FUNGI</b>		
<b>TOTAL</b>		
<b>OTHERS</b>		
<b>TOTAL</b>		

**PHYTOPLANKTON  
SEDGWICK-RAFTER  
COUNT**

REMARKS and  
CALCULATIONS:

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ORGANISM	TALLY	#/ml.
<b>BACILLARIOPHYCEAE</b>		
Pennate diatoms		
<i>Tabellaria</i>	II	27
<i>Navicula</i>	III	40
Centric diatoms		
TOTAL		67
<b>DINOPHYCEAE</b>		
<i>Peridinium</i>	II	27
TOTAL		27
<b>CYNANOPHYCEAE</b>		
Non-Filamentous Blue-Green Algae		
TOTAL		
Filamentous Blue-Green Algae		
TOTAL		
<b>PROTOZOA</b>		
TOTAL		
<b>FILAMENTOUS BACTERIA &amp; FUNGI</b>		
TOTAL		
<b>OTHERS</b>		
TOTAL		

**PHYTOPLANKTON**  
**SEDGWICK-RAFTER**  
**COUNT**

REMARKS and  
CALCULATIONS:

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ORGANISM

CELLS

/ml

PHYTOPLANKTON

CHLOROPHYCEAE

SEDGWICK-RAFTER  
COUNT

Non-Filamentous Green Algae

COLLECTION LOCATION

<i>Chlorella</i>	1	13
<i>Closteriopsis</i>	1	13
<i>Chlorococcum</i>	1	13
<i>Coenacium</i>	1	13
<i>Volvox</i>	III	40

*Long Pond*

STATION NUMBER

1

DATE COLLECTED

4/7/86

DATE EXAMINED

4/10/86

COLLECTED BY

Worden

ALIQOT SAMPLE VOLUME

1 ml

DILUTION FACTOR

φ

TOTAL 91

Filamentous Green Algae

TOTAL

Flagellated Green Algae

<i>Chlamydomonas</i>	III	67
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TOTAL 67

EUGLENOPHYCEAE

<i>Euglena</i>	1	13
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TOTAL 13

DEPTH

*Surface*

TOTAL PHYTOPLANKTON (*/ml)

264 cells/ml

IDENTIFIED BY

*Jarogue*

CHRYSTOPHYCEAE

other Pigmented Algae

3 STRIPS @ 200X

ENUMERATION FACTOR

13.3

TOTAL

other Pigmented Flagellated Algae

TOTAL

IEP inc.

ORGANISM	TALLY	#/ml.
<b>BACILLARIOPHYCEAE</b>		
<b>Pennate diatoms</b>		
<i>navicula</i>	///	40
<i>Synedra</i>	///	40
<i>Anomoneis</i>	1	13
<b>Centric diatoms</b>		
	TOTAL	93
<b>DINOPHYCEAE</b>		
	TOTAL	
<b>CYNANOPHYCEAE</b>		
<b>Non-Filamentous Blue-Green Algae</b>		
	TOTAL	
<b>Filamentous Blue-Green Algae</b>		
	TOTAL	
<b>PROTOZOA</b>		
	TOTAL	
<b>FILAMENTOUS BACTERIA &amp; FUNGI</b>		
	TOTAL	
<b>OTHERS</b>		
	TOTAL	

**PHYTOPLANKTON  
SEDGWICK-RAFTER  
COUNT**

REMARKS and  
CALCULATIONS:

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**CHLOROPHYCEAE**

**Non-Filamentous Green Algae**

<i>Volvox</i>	///	60
<i>Gloocystis</i>	///	40
<i>Sphaerocystis</i>	////	80
<i>Skatothrix</i>	/	20

TOTAL 200

**Filamentous Green Algae**

TOTAL

**Flagellated Green Algae**

<i>Chlamydomonas</i>	///-///	160
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TOTAL 160

**EUGLENOPHYCEAE**

<i>Euglena</i>	///	60
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TOTAL 60

**CHRYSOPHYCEAE**

**other Pigmented Algae**

TOTAL

**other Pigmented Flagellated Algae**

<i>Chrysochromus</i>	///-///	160
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TOTAL 160

**SEDGWICK-RAFTER COUNT**

**COLLECTION LOCATION**

*Long Pond*

**STATION NUMBER**

*1A*

**DATE COLLECTED**

*4/22/86*

**DATE EXAMINED**

*4/24/86*

**COLLECTED BY**

*Dave Worden*

**ALIQOT SAMPLE VOLUME**

*1 ml*

**DILUTION FACTOR**

*φ*

**DEPTH**

*surface*

**TOTAL PHYTOPLANKTON (#/ml)**

*700 cells/ml*

**IDENTIFIED BY**

*Jarvis*

**2 STRIPS @ 200x**

**ENUMERATION FACTOR**

*20*

**IEP inc.**



PHYTOPLANKTON  
SEDGWICK-RAFTER  
COUNT

BACILLARIOPHYCEAE

Pennate diatoms

*Navicula*

111

60

*Anomoeoneis*

1

20

Centric diatoms

TOTAL

80

DINOPHYCEAE

*Peridinium*

1

20

TOTAL

20

CYANOPHYCEAE

Non-Filamentous Blue-Green Algae

TOTAL

Filamentous Blue-Green Algae

*oscillatoria*

1

20

TOTAL

20

PROTOZOA

TOTAL

FILAMENTOUS BACTERIA & FUNGI

TOTAL

OTHERS

TOTAL

REMARKS and  
CALCULATIONS:

Blank lines for handwritten remarks and calculations.





ORGANISM	TALLY	#/ml.
<b>BACILLARIOPHYCEAE</b>		
Pennate diatoms		
<i>Navicula</i>	1	20
<i>Tabellaria</i>	1	20
Centric diatoms		
	TOTAL	40
<b>DINOPHYCEAE</b>		
	TOTAL	
<b>CYNANOPHYCEAE</b>		
Non-Filamentous Blue-Green Algae		
	TOTAL	
Filamentous Blue-Green Algae		
	TOTAL	
<b>PROTOZOA</b>		
	TOTAL	
<b>FILAMENTOUS BACTERIA &amp; FUNGI</b>		
	TOTAL	
<b>OTHERS</b>		
	TOTAL	

**PHYTOPLANKTON  
SEDGWICK-RAFTER  
COUNT**

REMARKS and  
CALCULATIONS:

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**CHLOROPHYCEAE**

**Non-Filamentous Green Algae**

Volvox	### III	106
Chlorella	III	40
Gleocystis	II	27
Elkatothrix	I	13
Scenedesmus	I	13

TOTAL 199

**Filamentous Green Algae**

TOTAL

**Flagellated Green Algae**

Chlamydomonas	### ##	266
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TOTAL 266

**EUGLENOPHYCEAE**

Euglena	II	27
Heteronema	I	13

TOTAL 40

**CHRYSOPHYCEAE**

**other Pigmented Algae**

TOTAL

**other Pigmented Flagellated Algae**

Chromulina	II	27
Dinobryon	I	13

TOTAL 40

**SEDGWICK-RAFTER COUNT**

**COLLECTION LOCATION**

Long Pond

**STATION NUMBER**

1A

**DATE COLLECTED**

5/19/86

**DATE EXAMINED**

5/21/86

**COLLECTED BY**

Jarocque / Norden

**ALIQOT SAMPLE VOLUME**

1 ml

**DILUTION FACTOR**

Ø

**DEPTH**

surface

**TOTAL PHYTOPLANKTON (cells/ml)**

625 cells/ml

**IDENTIFIED BY**

Jarocque

3 STRIPS @ 200X

**ENUMERATION FACTOR**

13.3

**IEP inc.**

PHYTOPLANKTON

SEDGWICK-RAFTER

COUNT

REMARKS and  
CALCULATIONS:

BACILLARIOPHYCEAE

Pennate diatoms

Navicula  
Synedra

II  
IIII

27  
53

Centric diatoms

TOTAL

80

DINOPHYCEAE

TOTAL

CYANOPHYCEAE

Non-Filamentous Blue-Green Algae

TOTAL

Filamentous Blue-Green Algae

TOTAL

PROTOZOA

TOTAL

FILAMENTOUS BACTERIA & FUNGI

TOTAL

OTHERS

TOTAL

CHLOROPHYCEAE

Non-Filamentous Green Algae

Closteriopsis	I	13
Schroederia	I	13
Ankistrodesmos	III	40
Chlorella	I	13

TOTAL 79

Filamentous Green Algae

TOTAL

Flagellated Green Algae

Chlamydomonas	III I	80
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TOTAL 80

EUGLENOPHYCEAE

Euglena	III	67
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TOTAL 67

CHRYSOPHYCEAE

other Pigmented Algae

TOTAL

other Pigmented Flagellated Algae

Chrysochroma	III I	93
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TOTAL 22

SEDGWICK-RAFTER COUNT

COLLECTION LOCATION

Kong Pond

STATION NUMBER

1A

DATE COLLECTED

6/9/86

DATE EXAMINED

6/13/86

COLLECTED BY

D. Warden

ALIQOT SAMPLE VOLUME

1 ml

DILUTION FACTOR

Ø

DEPTH

Surface

TOTAL PHYTOPLANKTON (cells/ml)

346 cells/ml

IDENTIFIED BY

Jaroque

3 STRIPS @ 200X

ENUMERATION FACTOR

13.3

IEP inc.

ACILLARIOPHYCEAE

Pennate diatoms

*Fragilaria*

11

27

Centric diatoms

TOTAL

27

DINOPHYCEAE

TOTAL

CYANOPHYCEAE

Non-Filamentous Blue-Green Algae

*Aphanocapsa*

1

TOTAL

Filamentous Blue-Green Algae

TOTAL

PROTOZOA

TOTAL

FILAMENTOUS BACTERIA & FUNGI

TOTAL

OTHERS

TOTAL

PHYTOPLANKTON  
SEDGWICK-RAFTER  
COUNT

REMARKS and  
CALCULATIONS:

Very little of  
anything









ORGANISM	TALLY	#/ml.
<b>BACILLARIOPHYCEAE</b>		
<b>Pennate diatoms</b>		
Navicula	###	80
<b>Centric diatoms</b>		
	TOTAL	80
<b>DINOPHYCEAE</b>		
Peridinium	##	93
	TOTAL	93
<b>CYNANOPHYCEAE</b>		
<b>Non-Filamentous Blue-Green Algae</b>		
Anacystis	1	13
	TOTAL	13
<b>Filamentous Blue-Green Algae</b>		
Anabaena	1	13
	TOTAL	13
<b>PROTOZOA</b>		
	TOTAL	
<b>FILAMENTOUS BACTERIA &amp; FUNGI</b>		
	TOTAL	
<b>OTHERS</b>		
	TOTAL	

**PHYTOPLANKTON  
SEDGWICK-RAFTER  
COUNT**

REMARKS and  
CALCULATIONS:

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ORGANISM	TALLY	°/ml
<b>CHLOROPHYCEAE</b>		
<b>Non-Filamentous Green Algae</b>		
Gleocystis		27
Chlorella		40
Sphaerocystis		13
Closteriopsis		13
Selenastrum		13
Radiococcus	T	13
Pediastrum		13
Golenkinia		13
Antistrodesmus		13
Scenedesmus		27
TOTAL		185
<b>Filamentous Green Algae</b>		
Nlothrix		13
TOTAL		13
<b>Flagellated Green Algae</b>		
Chlamydomonas		40
Cryptomonas		186
Carteria		27
TOTAL		253
<b>EUGLENOPHYCEAE</b>		
TOTAL		
<b>CHRYSOPHYCEAE</b>		
<b>other Pigmented Algae</b>		
Centrastractus		306
TOTAL		306
<b>other Pigmented Flagellated Algae</b>		
TOTAL		

**PHYTOPLANKTON**

**SEDGWICK-RAFTER  
COUNT**

COLLECTION LOCATION  
*Long Pond*

STATION NUMBER  
*1*

DATE COLLECTED  
*7/22/86*

DATE EXAMINED  
*7/24/86*

COLLECTED BY  
*D. Worden*

ALIQUOT SAMPLE VOLUME  
*1-ml*

DILUTION FACTOR  
*φ*

DEPTH  
*?*

TOTAL PHYTOPLANKTON (°/ml)  
*1210 cells/ml*

IDENTIFIED BY  
*Jarocque*

*3 STRIPS @ 200x*

ENUMERATION FACTOR  
*13.3*





ORGANISM	TALLY	°/ml
<b>CHLOROPHYCEAE</b>		
<b>Non-Filamentous Green Algae</b>		
Chlorella	###	120
Gleocystis		27
Golenkinia	I	13
Cosmarium	I	13
Closteriopsis		27
Scenedesmus	###I	80
TOTAL		280
<b>Filamentous Green Algae</b>		
TOTAL		
<b>Flagellated Green Algae</b>		
TOTAL		
<b>EUGLENOPHYCEAE</b>		
TOTAL		
<b>CHRYSOPHYCEAE</b>		
<b>Other Pigmented Algae</b>		
Centritractus		27
TOTAL		27
<b>Other Pigmented Flagellated Algae</b>		
Dinobryon	###   ###	253
TOTAL		253

**PHYTOPLANKTON**

**SEDGWICK-RAFTER COUNT**

COLLECTION LOCATION  
 Lana Pond

STATION NUMBER  
 LP-1A

DATE COLLECTED  
 8/4/86

DATE EXAMINED  
 8/7/86

COLLECTED BY  
 D. Worden

ALIQOT SAMPLE VOLUME  
 1 ml

DILUTION FACTOR  
 0

DEPTH  
 surface

TOTAL PHYTOPLANKTON (°/ml)  
 1039 cells/ml

IDENTIFIED BY  
 Jarroque

3 STRIPS @ 200x

ENUMERATION FACTOR  
 13.3











ORGANISM	TALLY	°/ml
<b>CHLOROPHYCEAE</b>		
<b>Non-Filamentous Green Algae</b>		
<i>Cosmarium</i>	1	13
<b>Filamentous Green Algae</b>		
<b>Flagellated Green Algae</b>		
<i>Cryptomonas</i>	11	27
<b>EUGLENOPHYCEAE</b>		
<b>CHRYSOPHYCEAE</b>		
<b>other Pigmented Algae</b>		
<b>other Pigmented Flagellated Algae</b>		
<i>Dinobryon</i>		372
<i>Synura</i>	1	13
<b>TOTAL</b>		<b>385</b>

**PHYTOPLANKTON**

**SEDGWICK-RAFTER  
COUNT**

COLLECTION LOCATION  
*Long Pond*

STATION NUMBER  
*1A*

DATE COLLECTED  
*9/8/86*

DATE EXAMINED  
*9/12/86*

COLLECTED BY  
*D. Worden*

ALIQUOT SAMPLE VOLUME  
*1 ml*

DILUTION FACTOR  
*∅*

DEPTH  
*Surface*

TOTAL PHYTOPLANKTON (#/ml)  
*505 cells/ml*

IDENTIFIED BY  
*Jarocque*

*3 STRIPS @ 200x*

ENUMERATION FACTOR  
*13.3*



ORGANISM	TALLY	#/ml.
<b>BACILLARIOPHYCEAE</b>		
Pennate diatoms		
NAVICULA	I	13
Centric diatoms		
	TOTAL	13
<b>DINOPHYCEAE</b>		
Peridinium	III	40
Massartia	II	27
	TOTAL	67
<b>CYANOPHYCEAE</b>		
Non-Filamentous Blue-Green Algae		
	TOTAL	
Filamentous Blue-Green Algae		
	TOTAL	
<b>PROTOZOA</b>		
	TOTAL	
<b>FILAMENTOUS BACTERIA &amp; FUNGI</b>		
	TOTAL	
<b>OTHERS</b>		
	TOTAL	

**PHYTOPLANKTON  
SEDGWICK-RAFTER  
COUNT**

REMARKS and  
CALCULATIONS:

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ORGANISM	TALLY	%/ml
<b>CHLOROPHYCEAE</b>		
<b>Non-Filamentous Green Algae</b>		
TOTAL		
<b>Filamentous Green Algae</b>		
TOTAL		
<b>Flagellated Green Algae</b>		
cryptomonas		133
TOTAL		133
<b>EUGLENOPHYCEAE</b>		
TOTAL		
<b>CHRYSOPHYCEAE</b>		
<b>other Pigmented Algae</b>		
TOTAL		
<b>other Pigmented Flagellated Algae</b>		
Chrysooccus		93
Dinobryon		53
TOTAL		146

**PHYTOPLANKTON**

**SEDGWICK-RAFTER COUNT**

COLLECTION LOCATION

Long Pond

STATION NUMBER

1

DATE COLLECTED

9/29/86

DATE EXAMINED

9/30/86

COLLECTED BY

D. Worden

ALIQOT SAMPLE VOLUME

1 ml

DILUTION FACTOR

φ

DEPTH

Surface

TOTAL PHYTOPLANKTON (%/ml)

319 cells/ml

IDENTIFIED BY

Jaroque

3 STRIPS @ 200x

ENUMERATION FACTOR

13.3



ORGANISM	TALLY	#/ml.
<b>BACILLARIOPHYCEAE</b>		
Pennate diatoms		
Anomoeoneis	1	13
Centric diatoms		
	TOTAL	13
<b>DINOPHYCEAE</b>		
massartia	11	27
	TOTAL	27
<b>CYNANOPHYCEAE</b>		
Non-Filamentous Blue-Green Algae		
	TOTAL	
Filamentous Blue-Green Algae		
	TOTAL	
<b>PROTOZOA</b>		
	TOTAL	
<b>FILAMENTOUS BACTERIA &amp; FUNGI</b>		
	TOTAL	
<b>OTHERS</b>		
	TOTAL	

**PHYTOPLANKTON  
SEDGWICK-RAFTER  
COUNT**

REMARKS and  
CALCULATIONS:

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