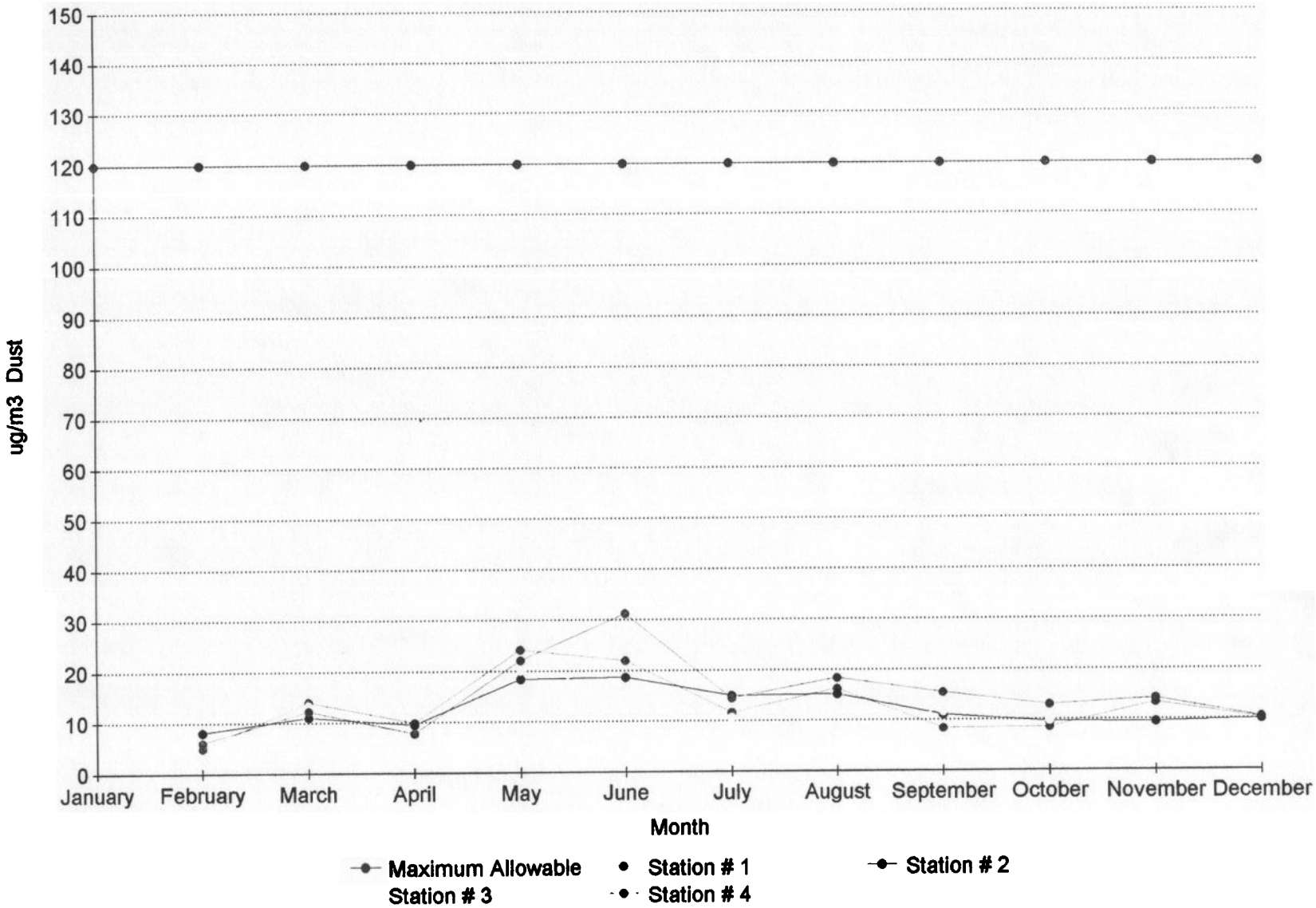
APPENDIX C

SUMMARY OF MONITORING RESULTS

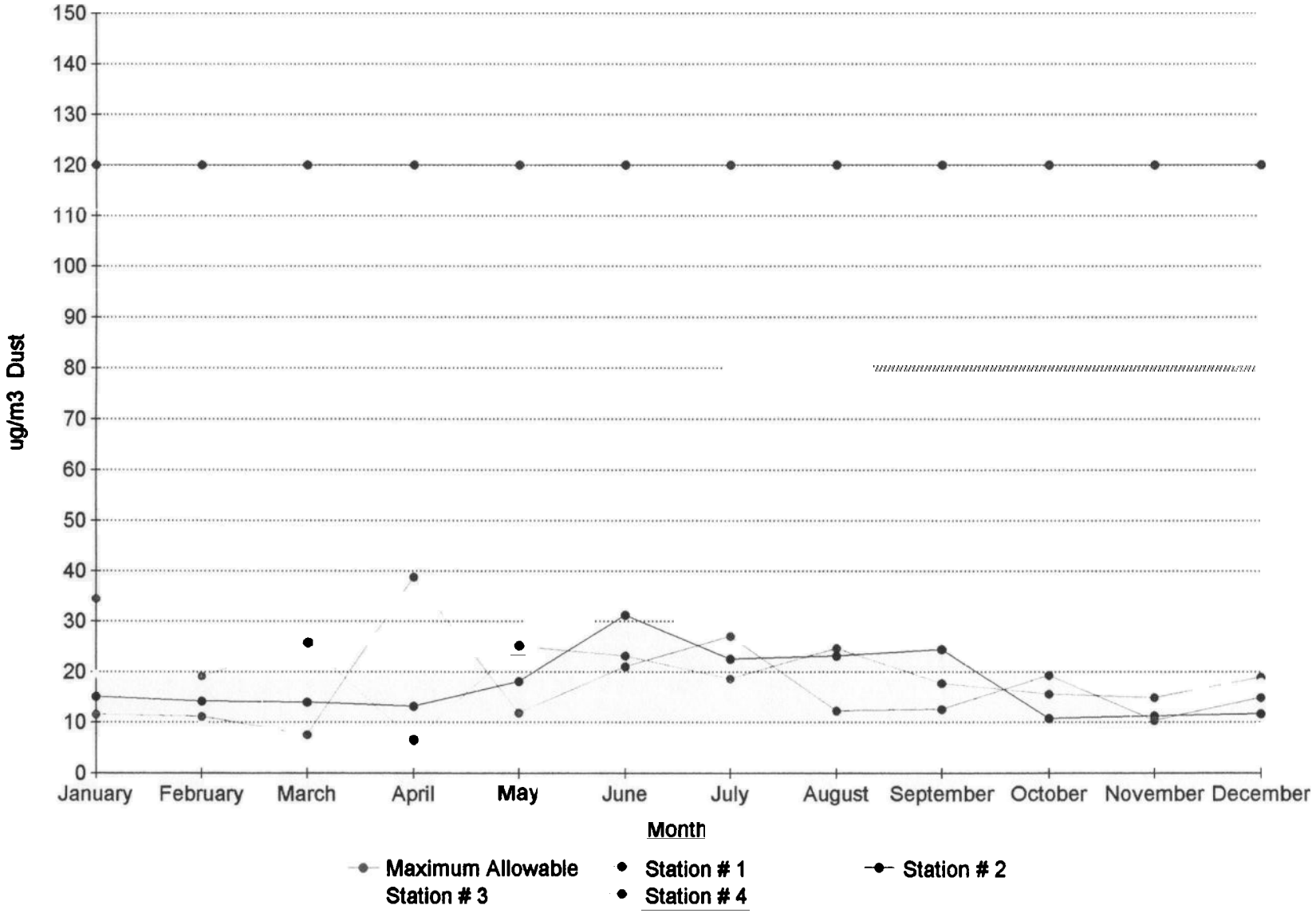
1996 Dust Monitoring Stellarton

Monthly Average Dust Monitoring Results



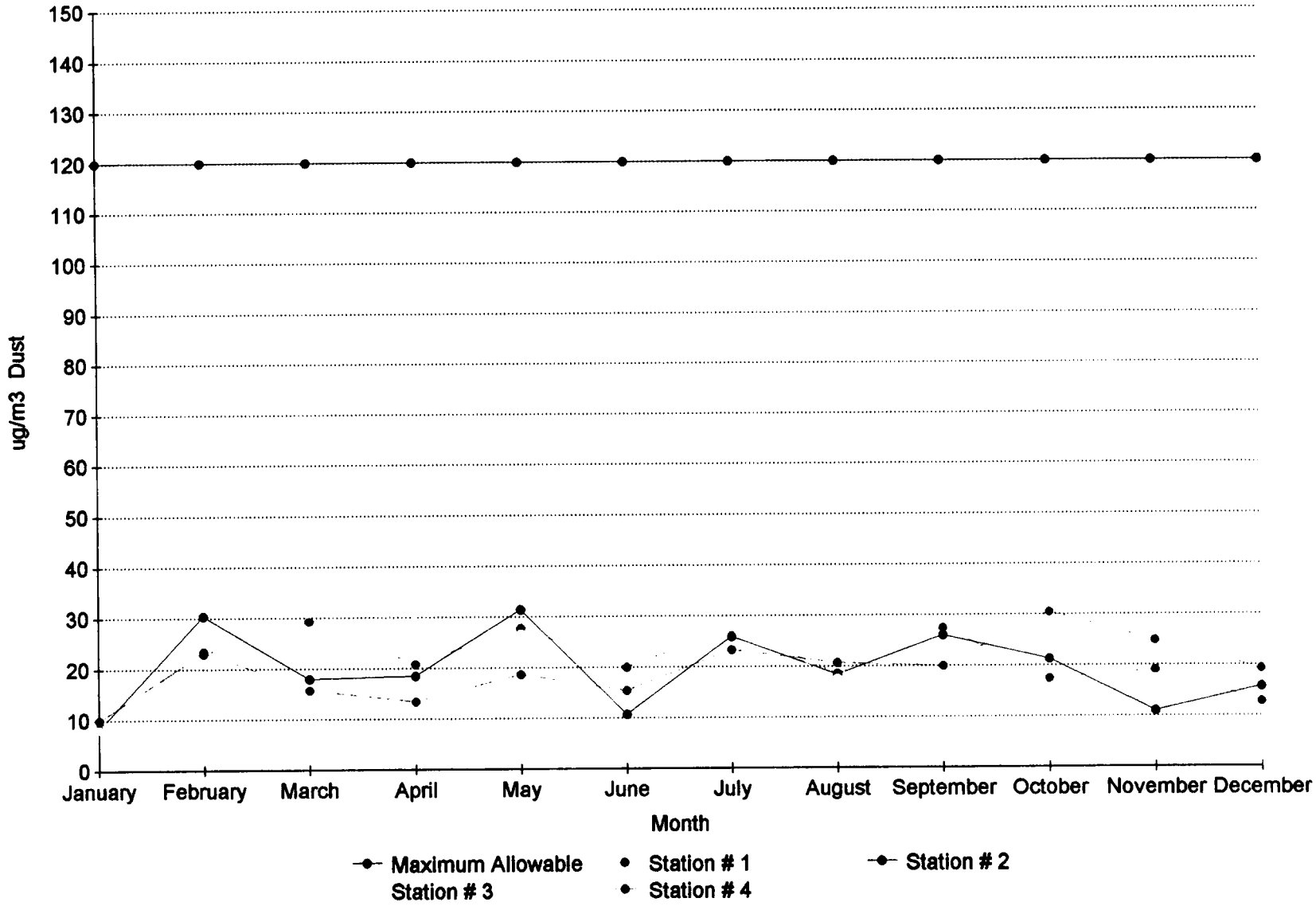
1997 Dust Monitoring Stellarton

Monthly Average Dust Monitoring Results



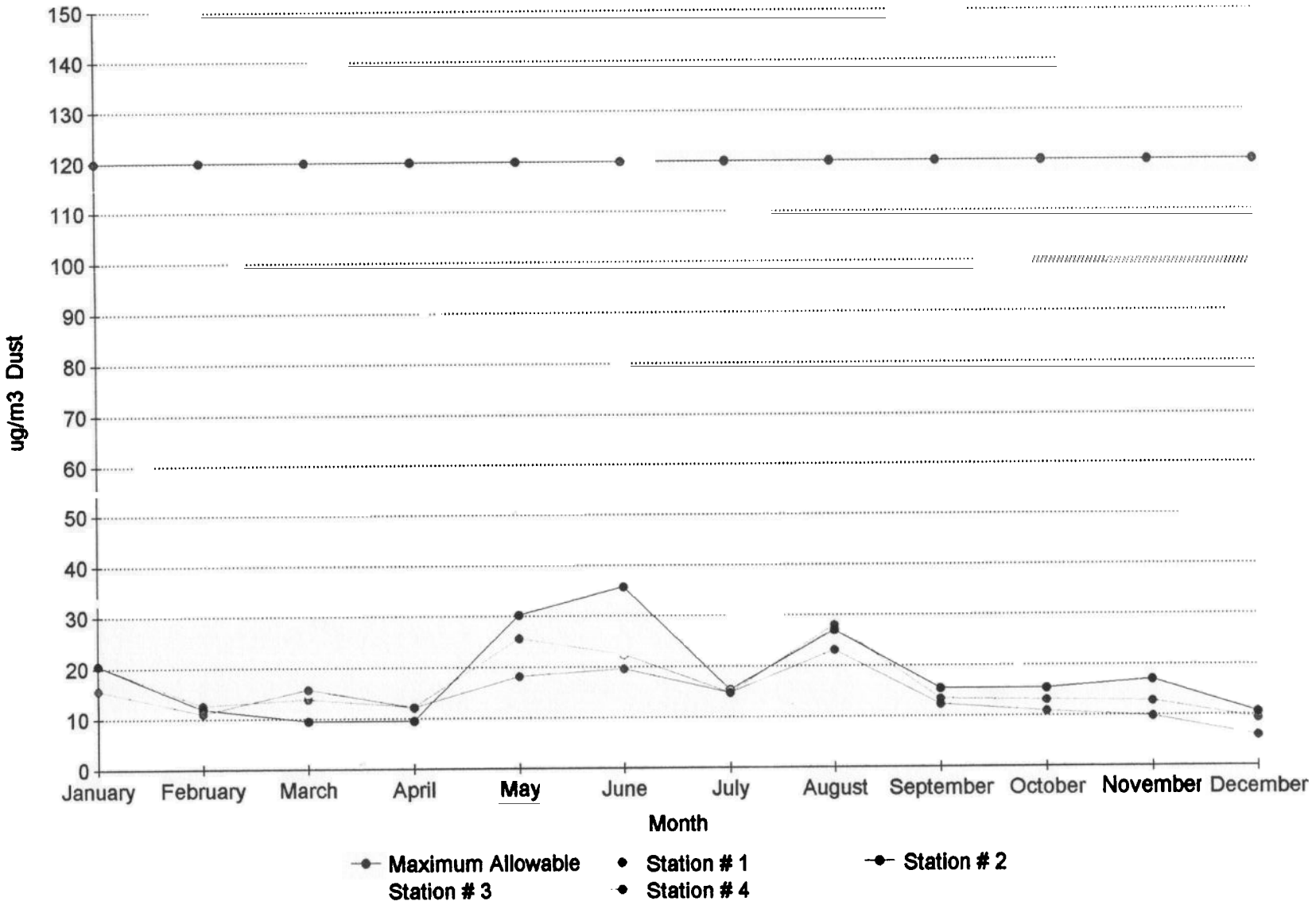
1998 Dust Monitoring Stellarton

Monthly Average Dust Monitoring Results



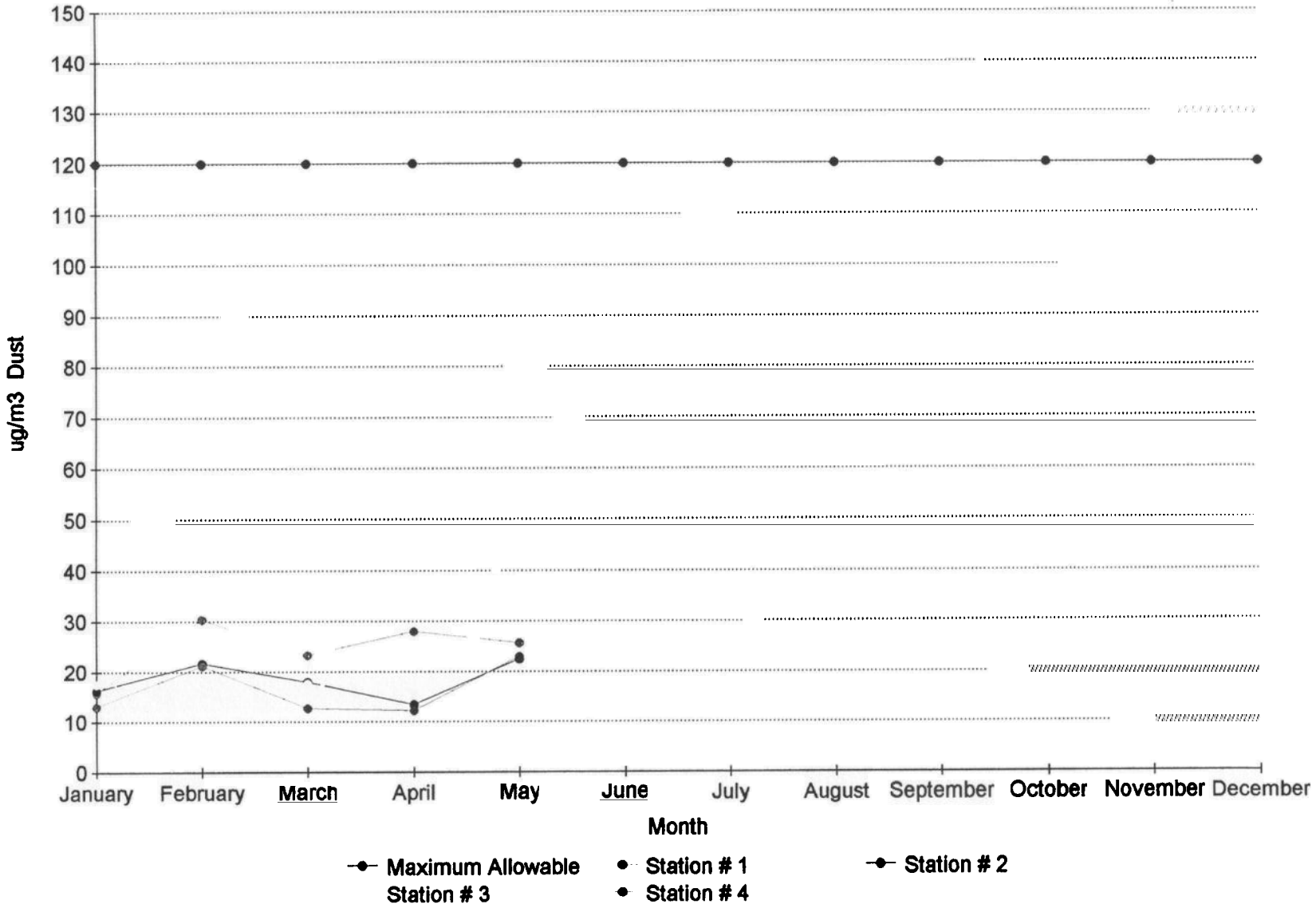
1999 Dust Monitoring Stellarton

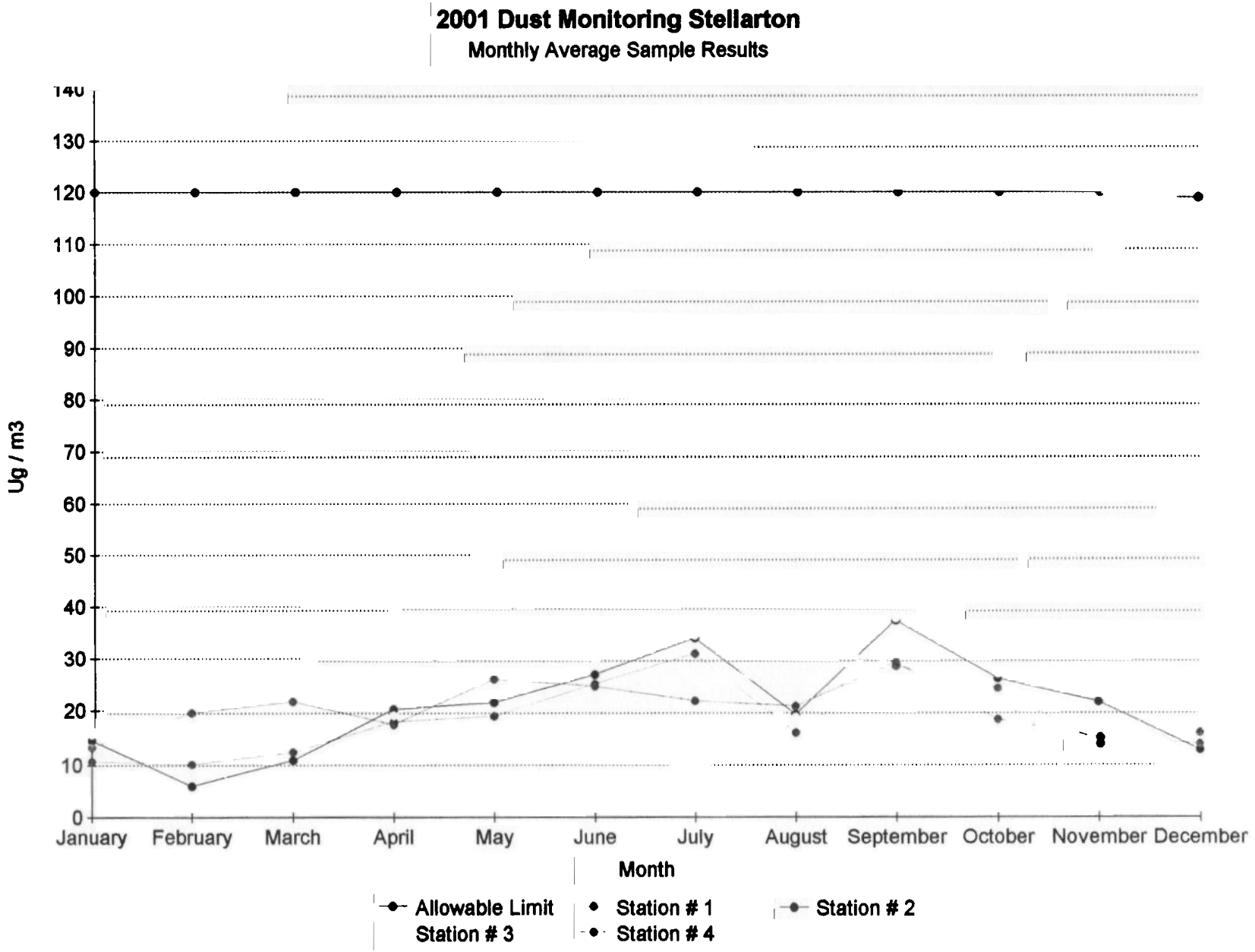
Monthly Average Dust Monitoring Results

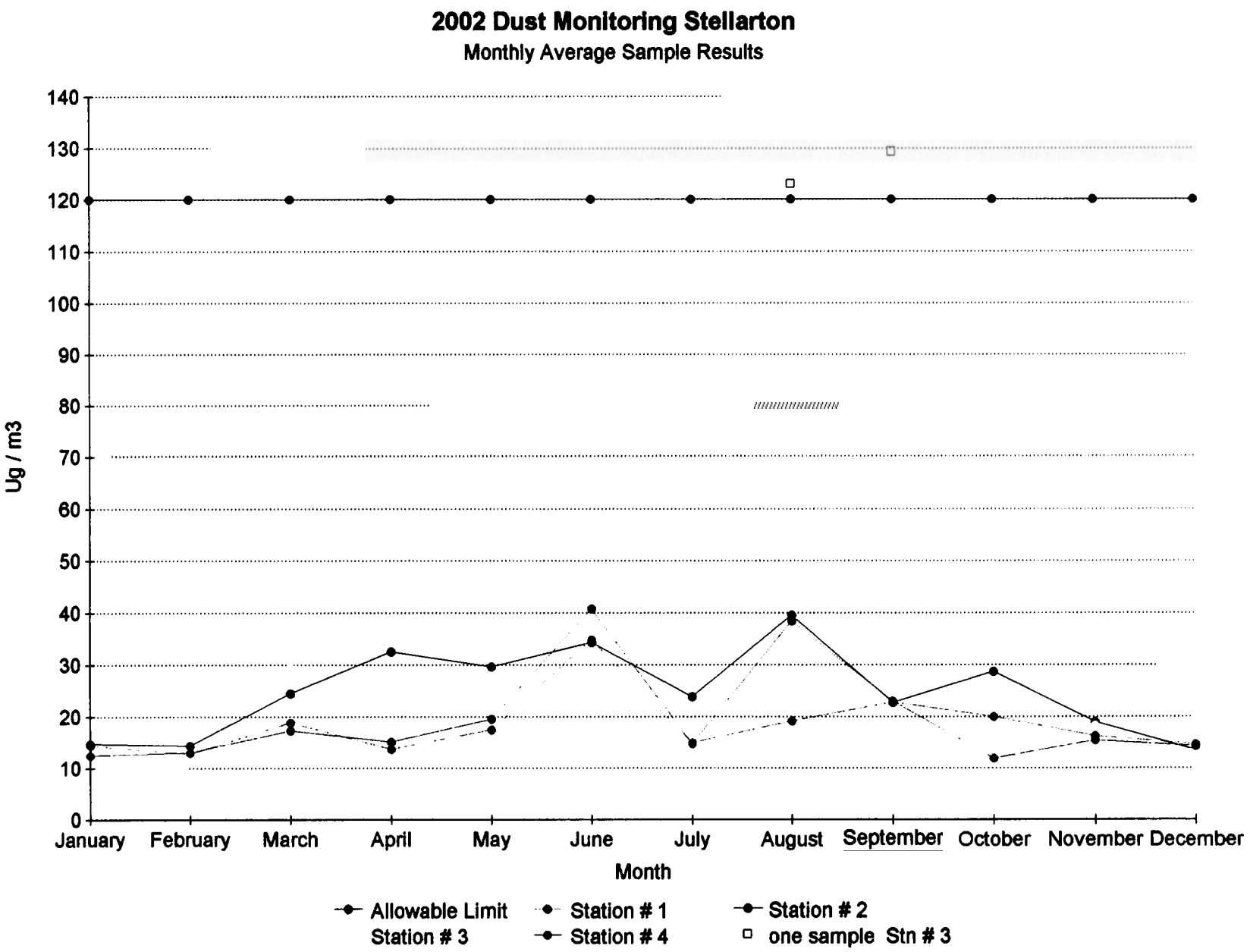


2000 Dust Monitoring Stellarton

Monthly Average Dust Monitoring Results




2001 Dust Monitoring Stellarton
Monthly Average Sample Results
Ug / m3
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
January
February
March
April
May
June
July
August
September
October
November
December
Month
Allowable Limit
Station # 1
Station # 2
Station # 3
Station # 4

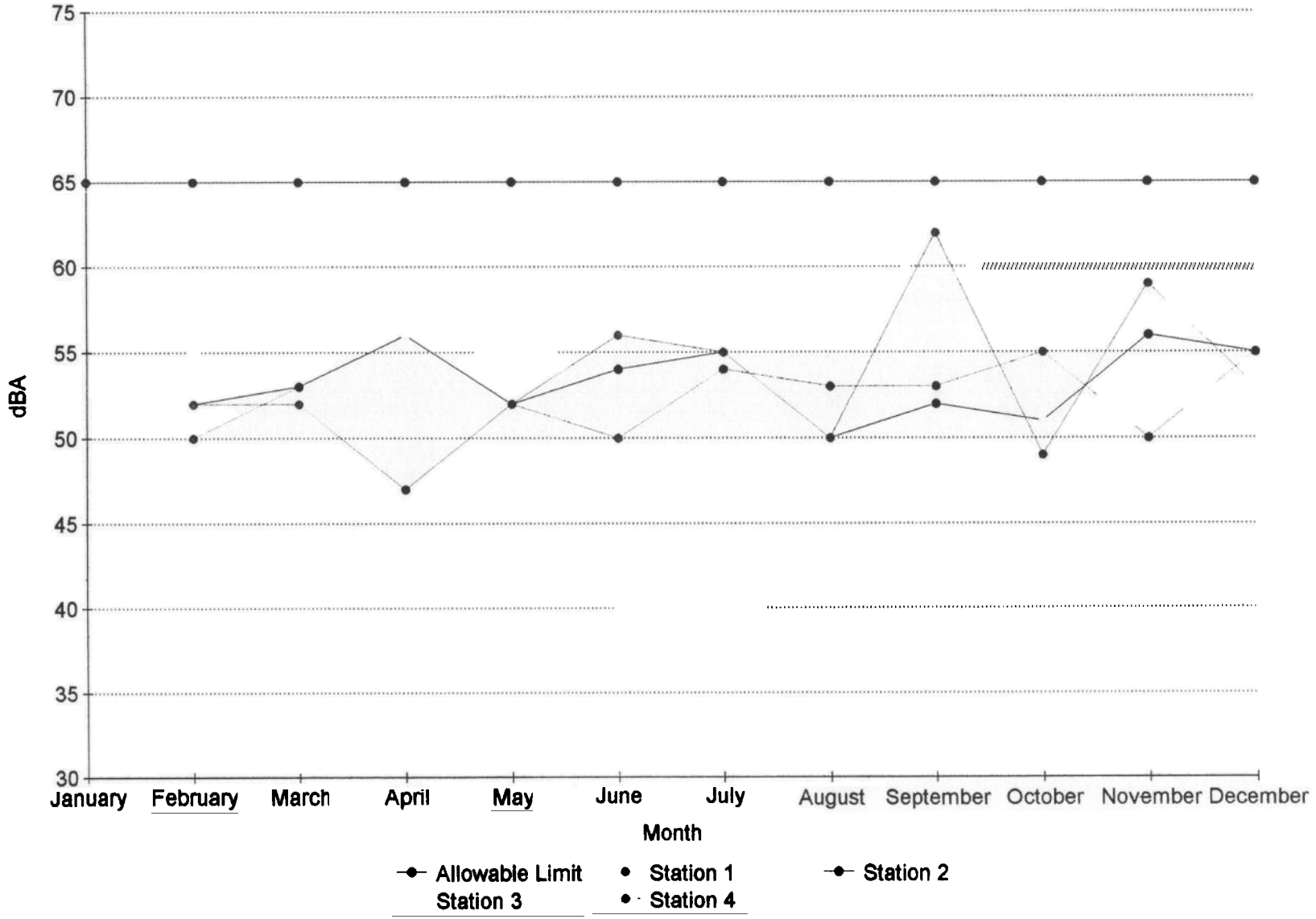

2002 Dust Monitoring Stellarton
Monthly Average Sample Results
Ug / m3
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
January
February
March
April
May
June
July
August
September
October
November
December
Month
Allowable Limit
Station # 1
Station # 2
Station # 3
Station # 4
one sample Stn # 3

APPENDIX C-2

NOISE

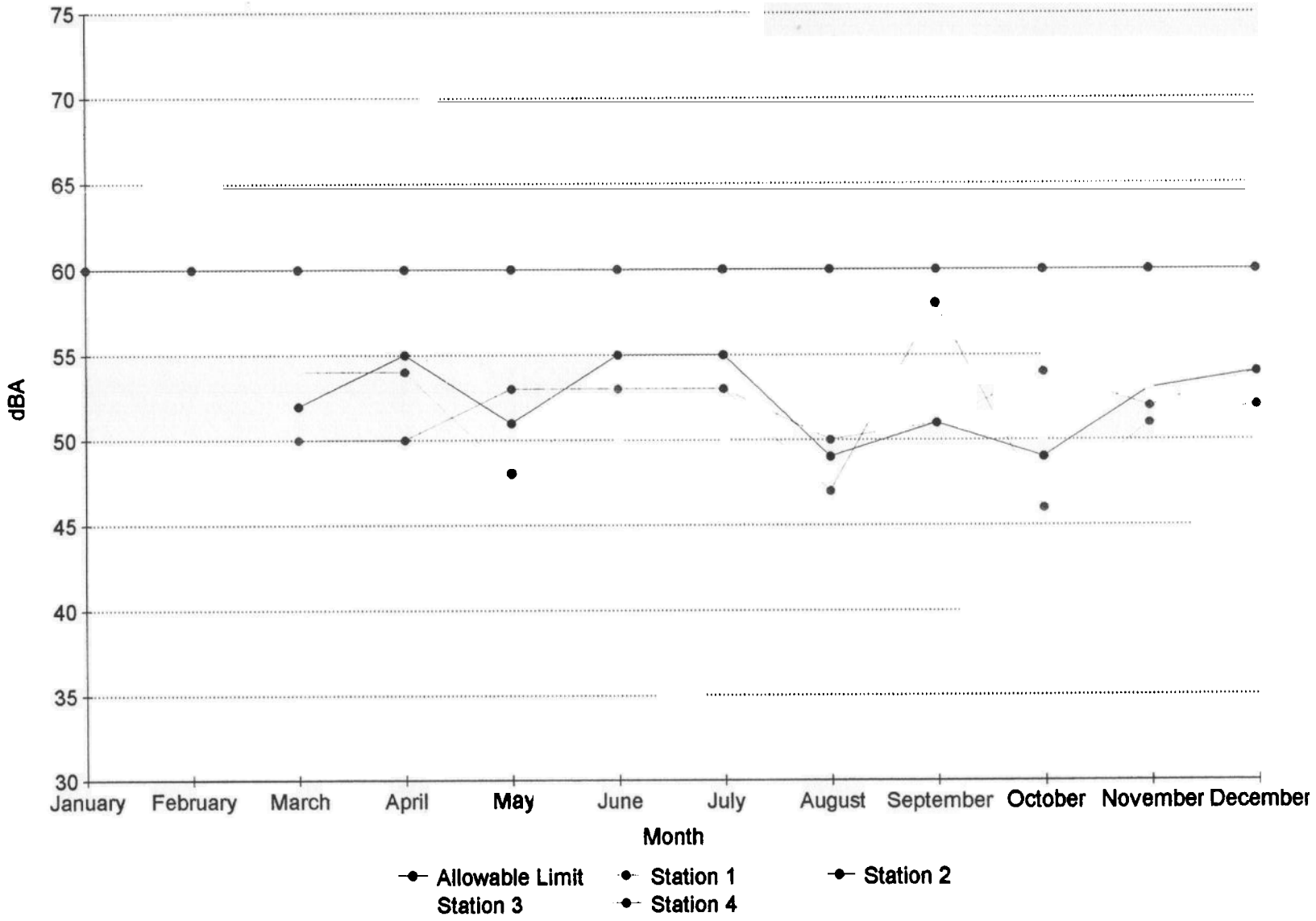
1996 Noise Monitoring Stellarton

Average Monthly Daytime Readings



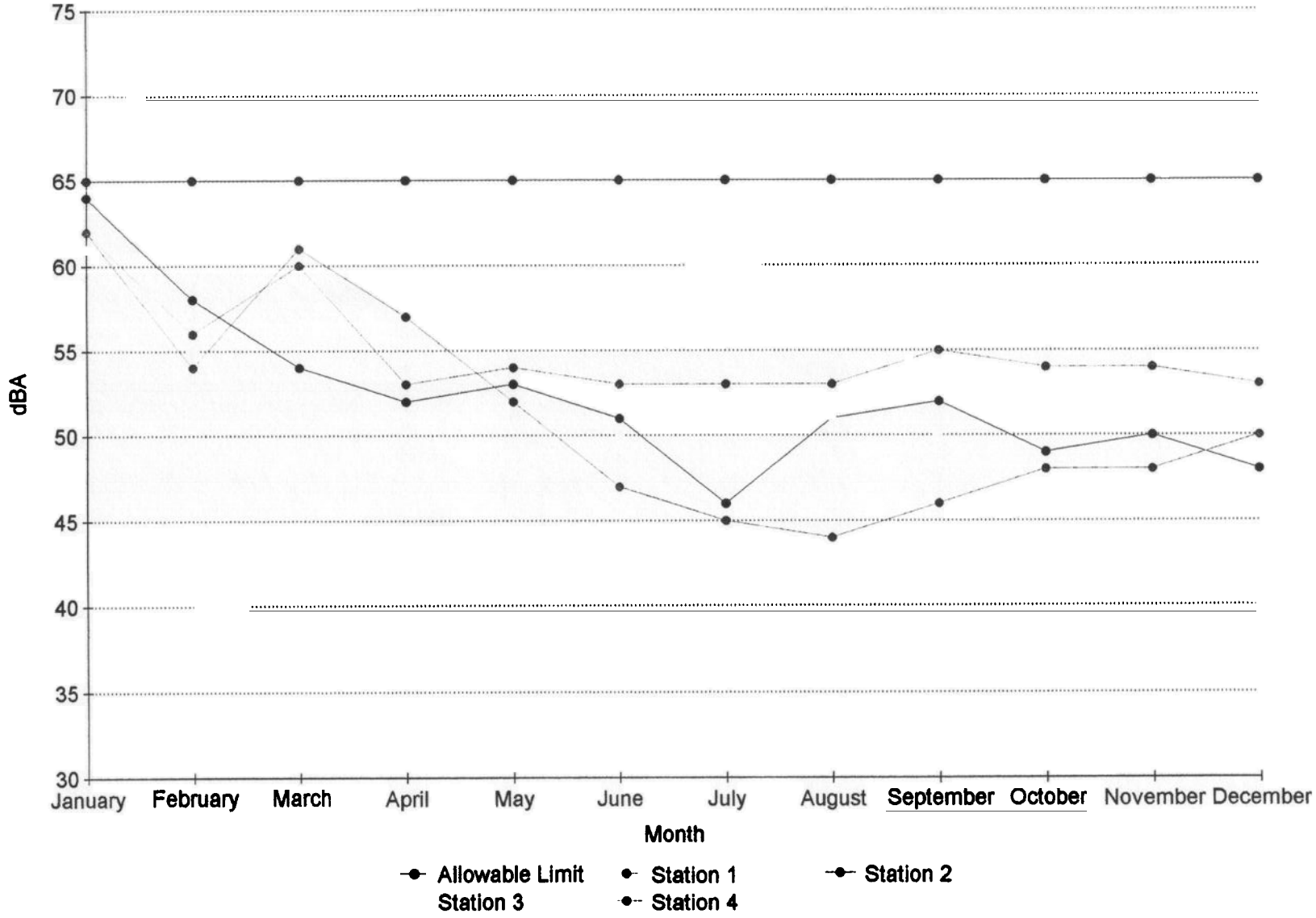
1996 Noise Monitoring Stellarton

Average Monthly Evening Readings



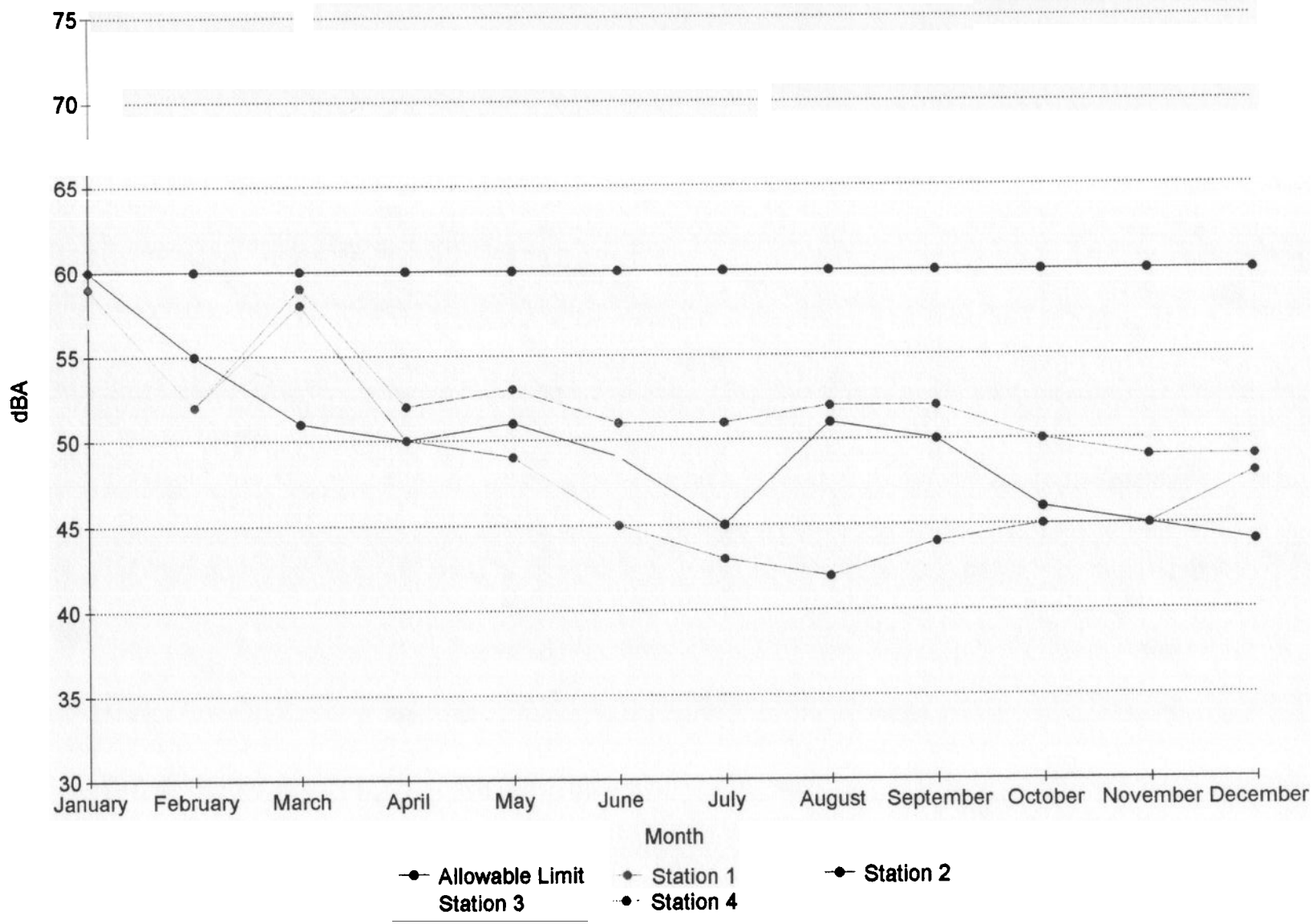
1997 Noise Monitoring Stellarton

Average Monthly Daytime Readings



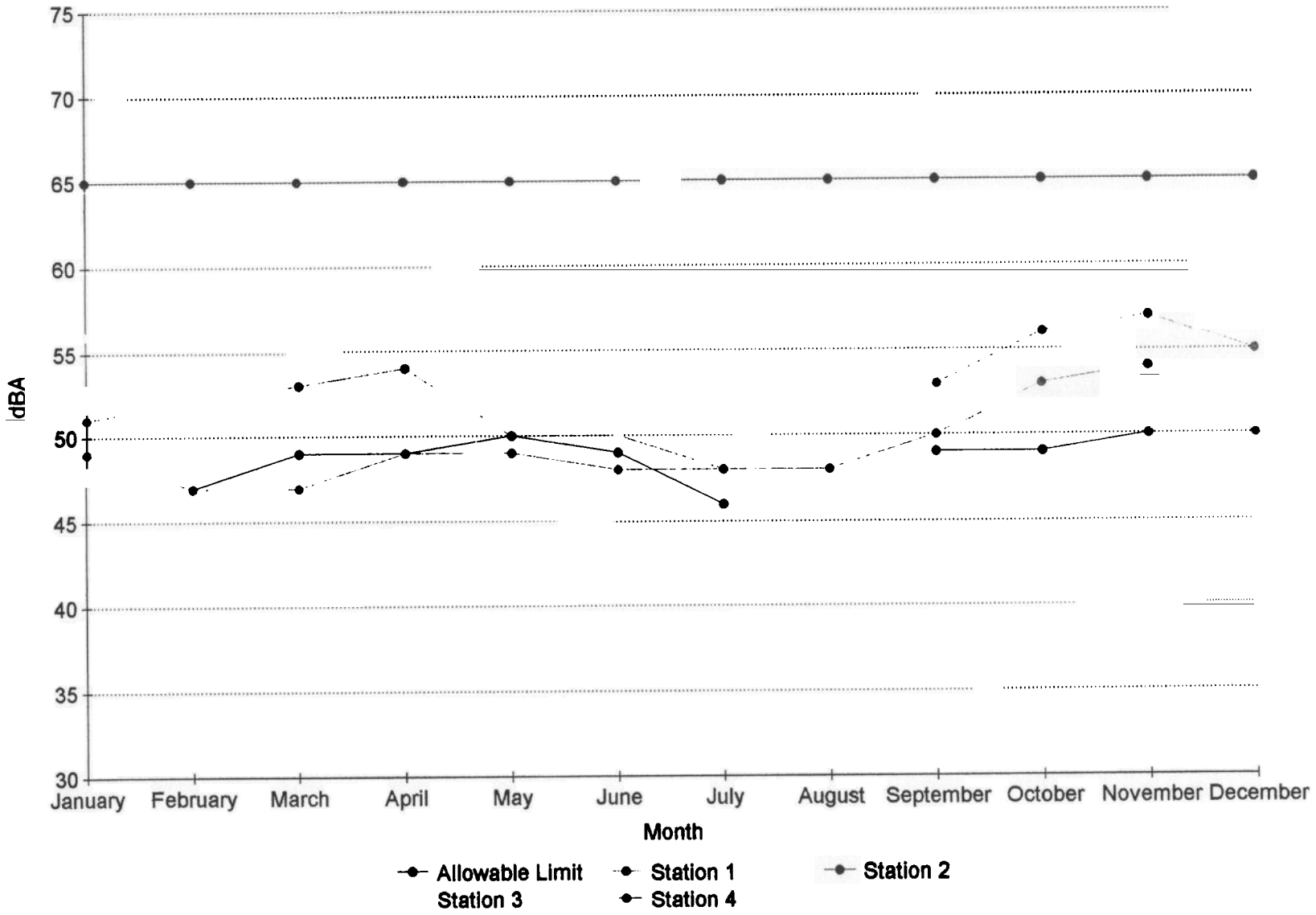
1997 Noise Monitoring Stellarton

Average Monthly Evening Readings



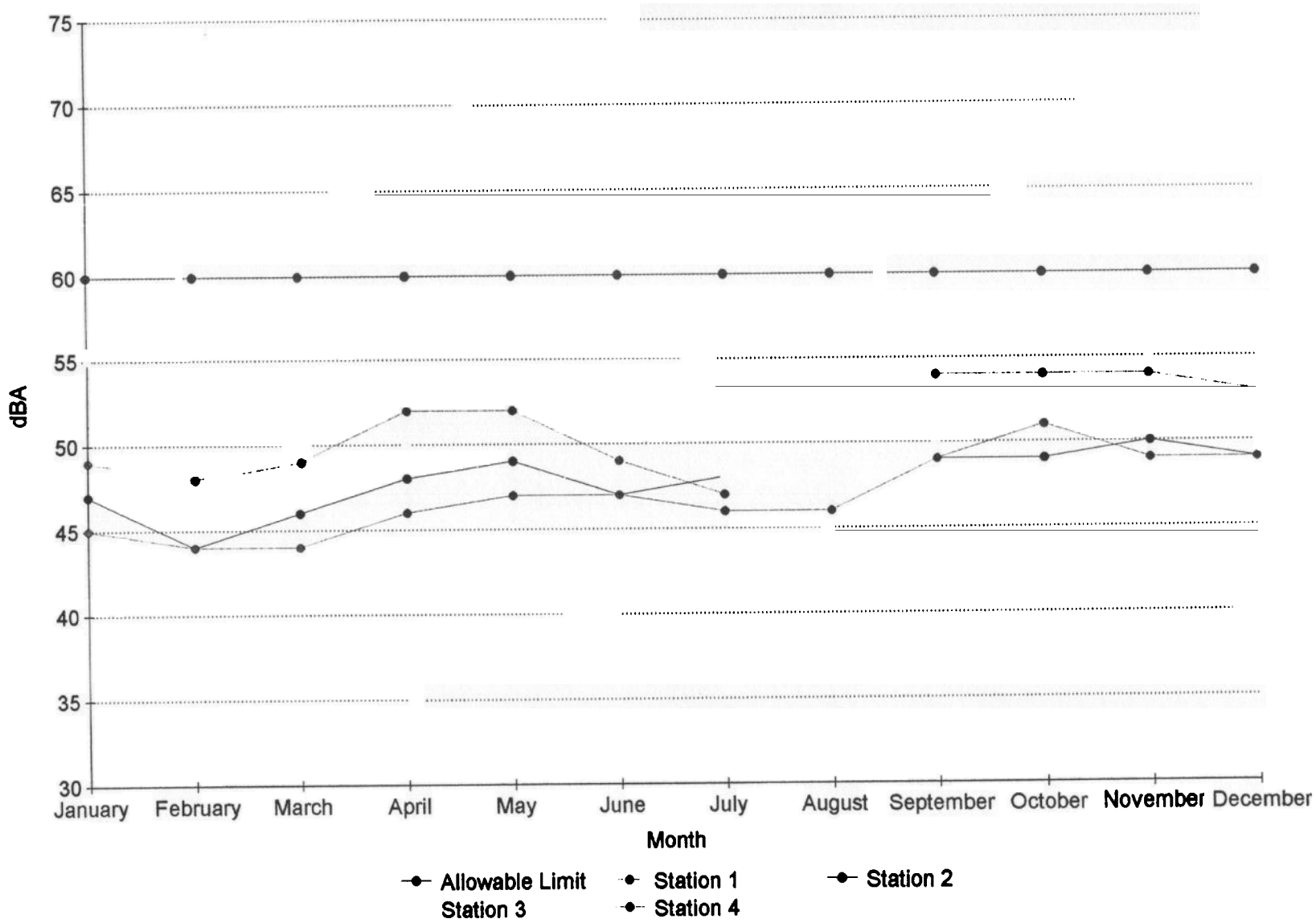
1998 Noise Monitoring Stellarton

Average Monthly Daytime Readings



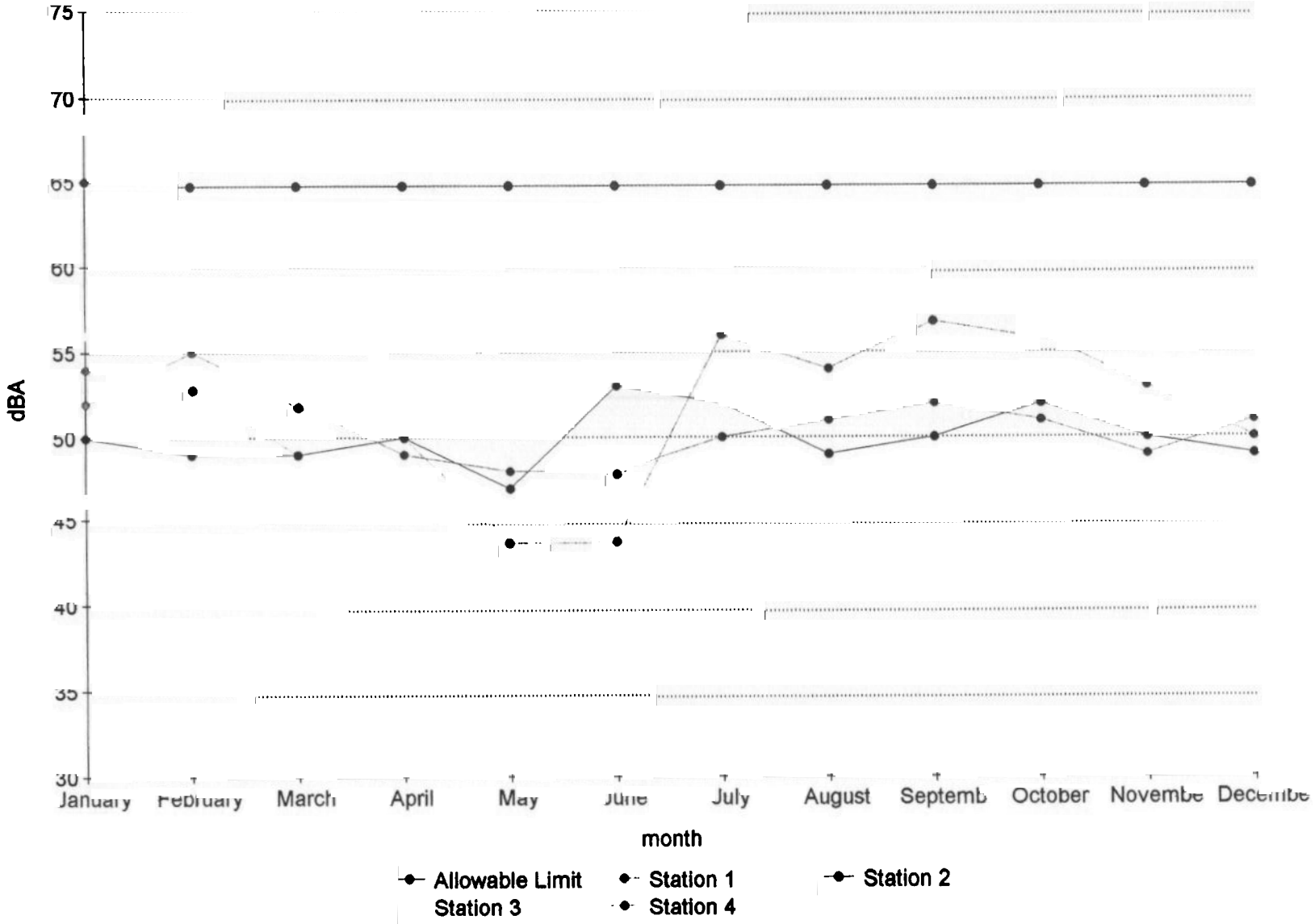
1998 Noise Monitoring Stellarton

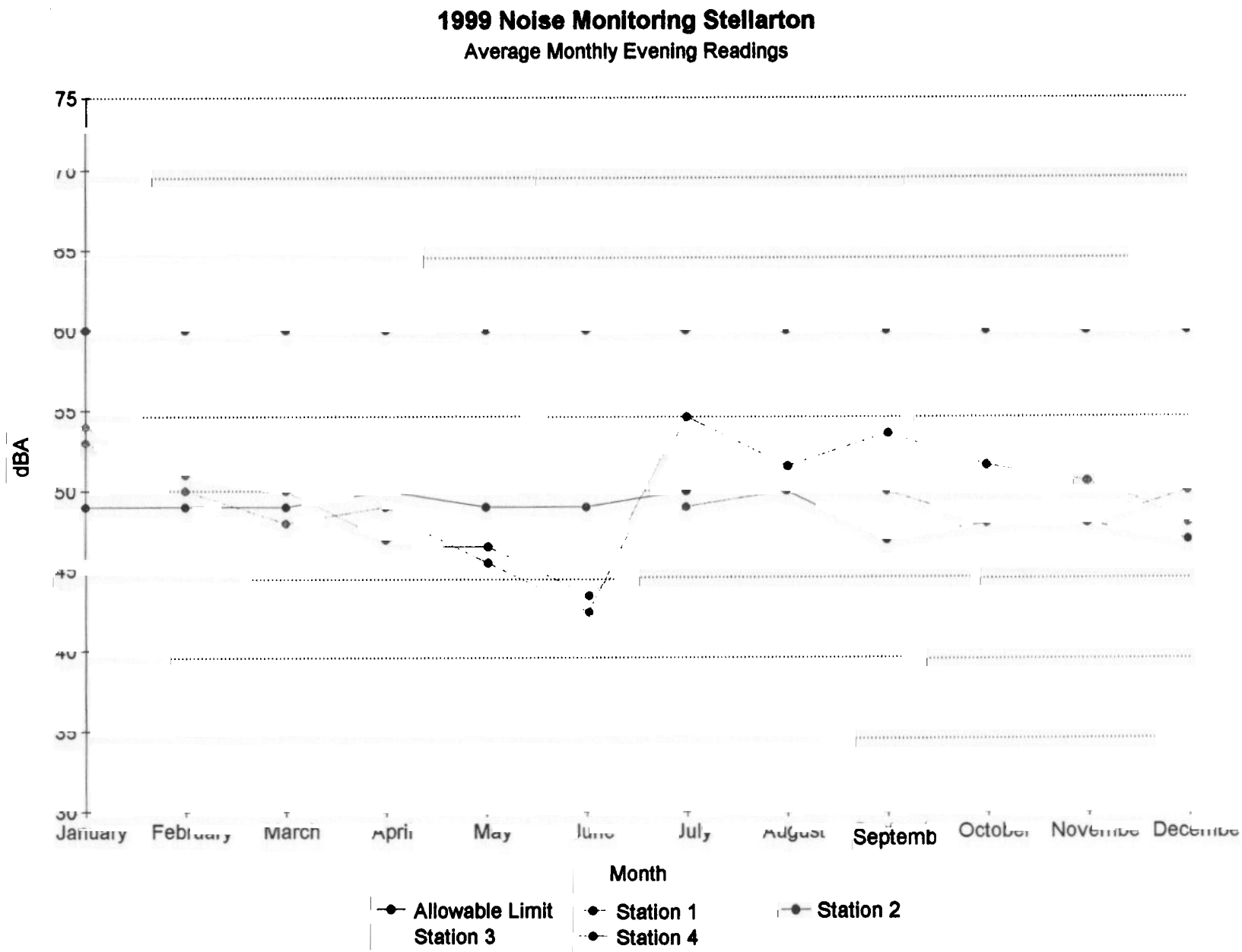
Average Monthly Evening Readings



1999 Noise Monitoring Stellarton

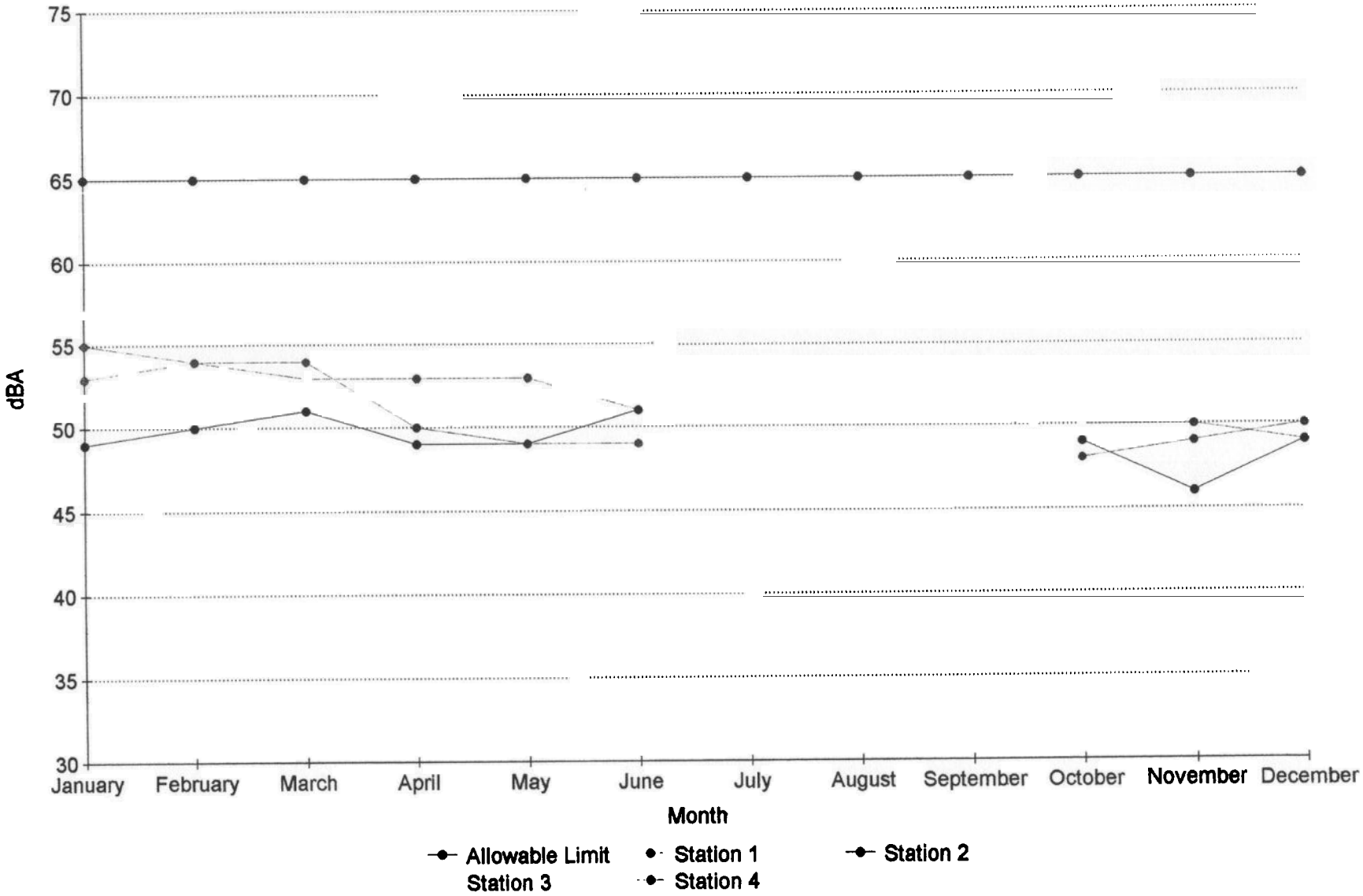
Average Monthly Daytime Readings




1999 Noise Monitoring Stellarton
Average Monthly Evening Readings
75
70
65
60
55
50
45
40
35
30
dBA
January
February
March
April
May
June
July
August
September
October
November
December
Month
Allowable Limit
Station 1
Station 2
Station 3
Station 4

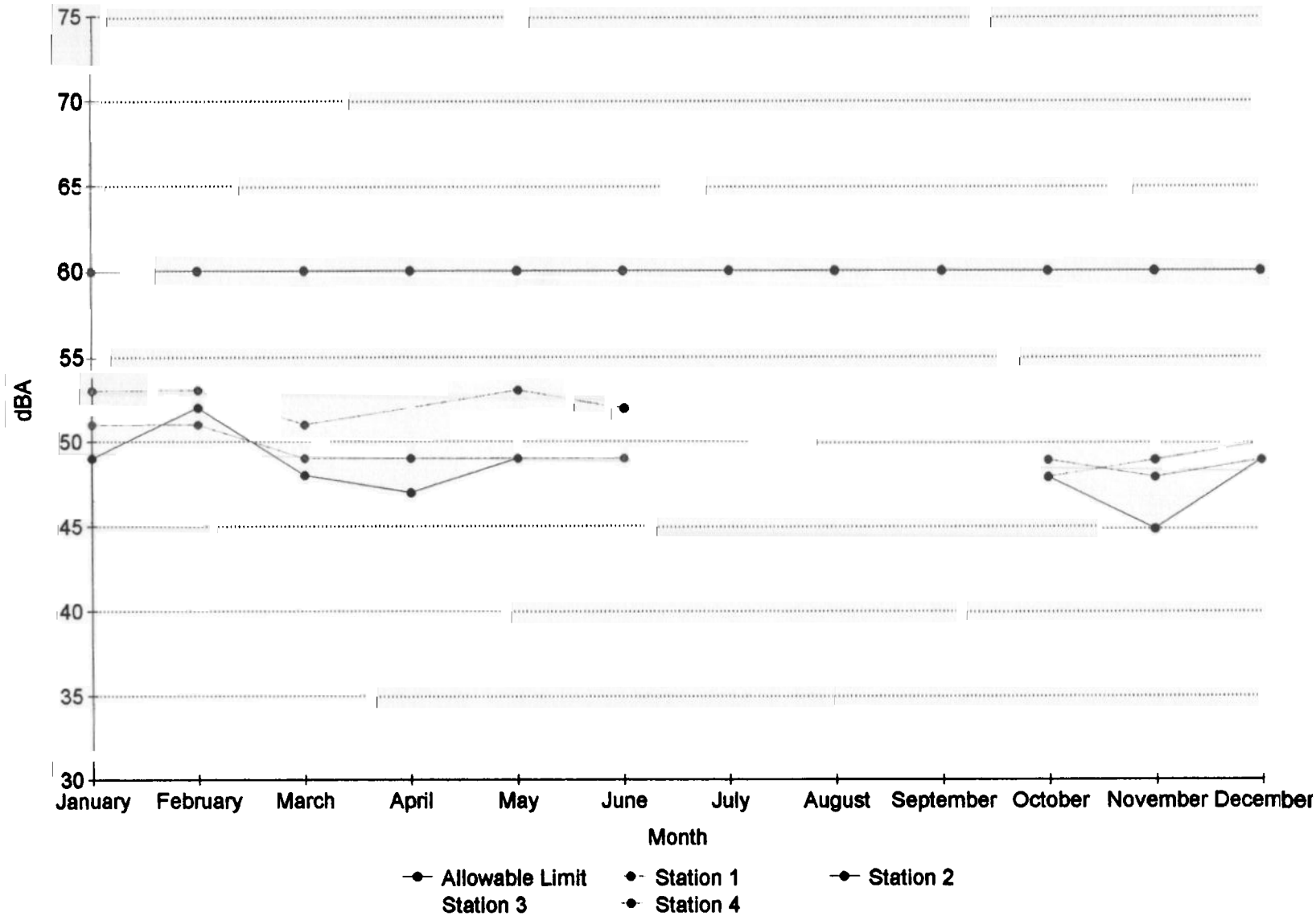
2000 Noise Monitoring Stellarton

Average Monthly Daytime Readings



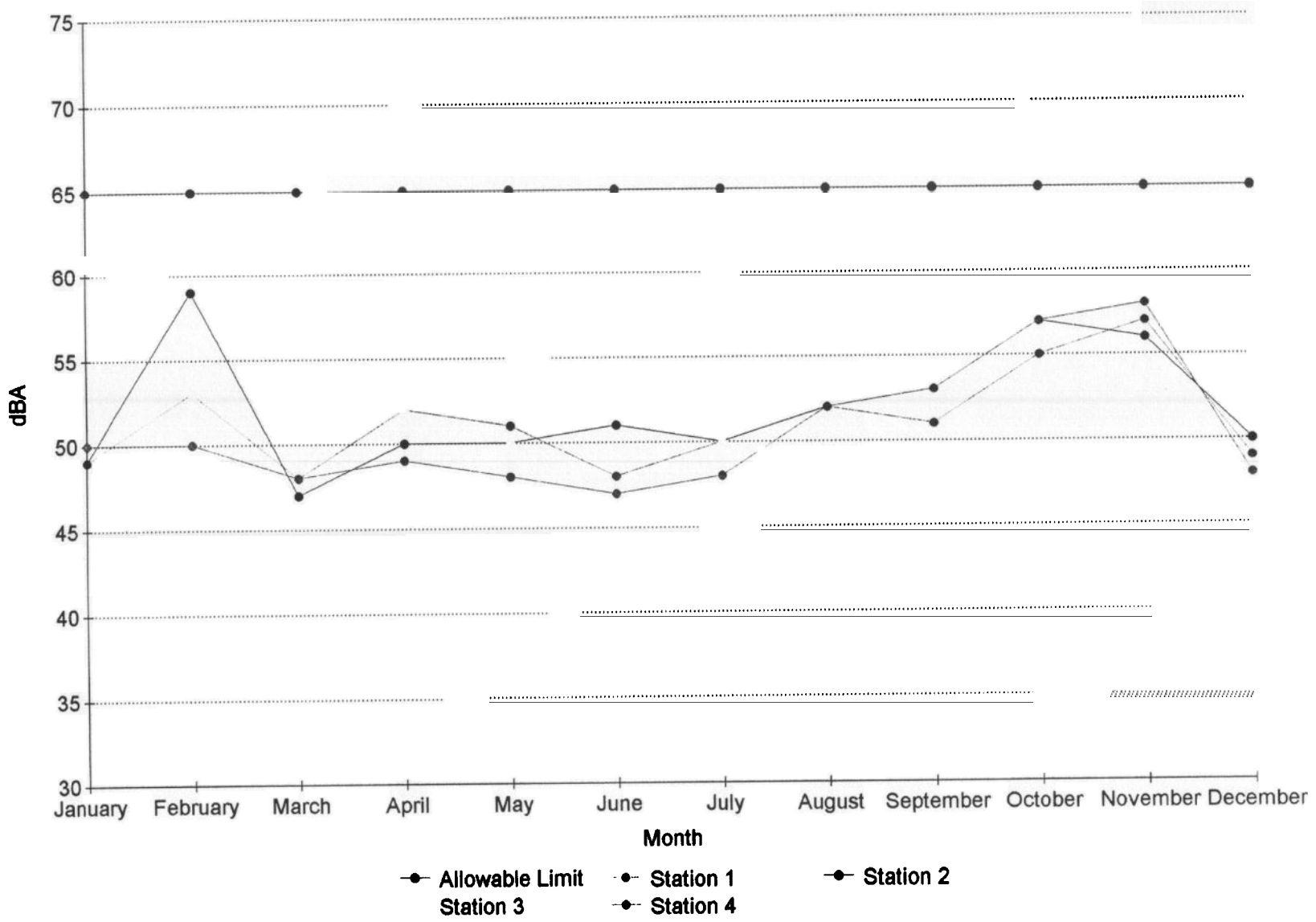
2000 Noise Monitoring Stellarton

Average Monthly Evening Readings



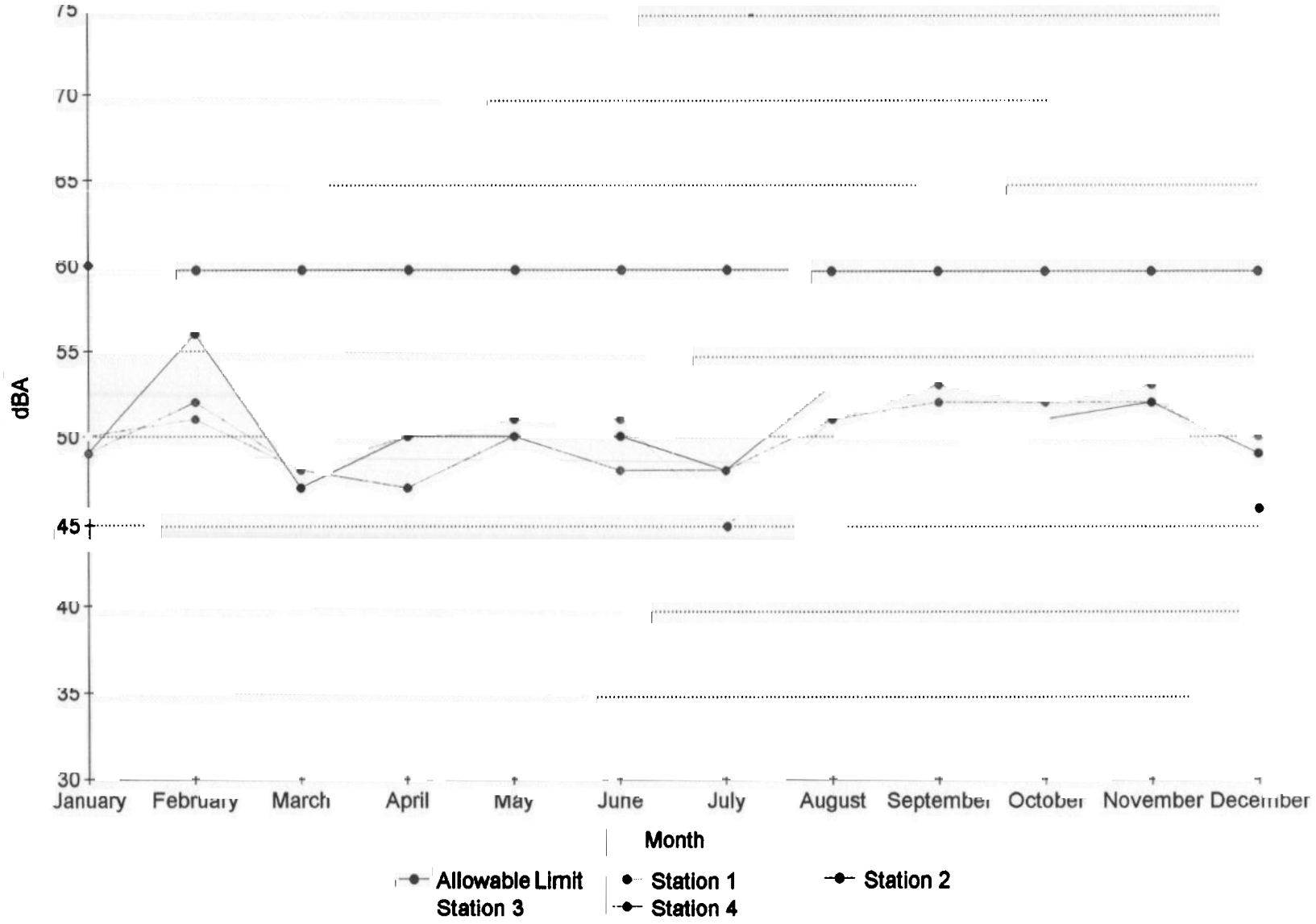
2001 Noise Monitoring Stellarton

Average Monthly Daytime Readings



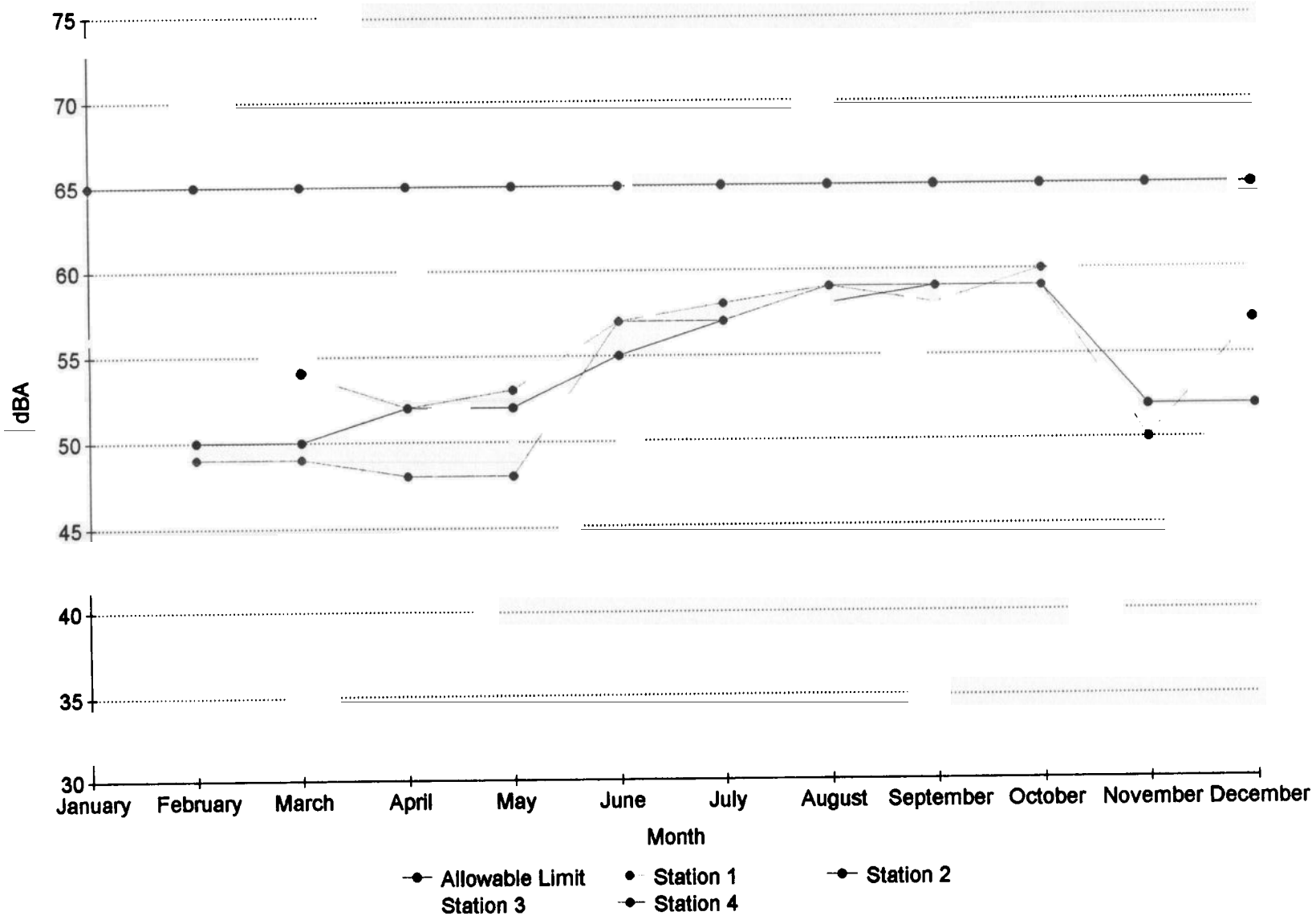
2001 Noise Monitoring Stellarton

Average Monthly Evening Readings



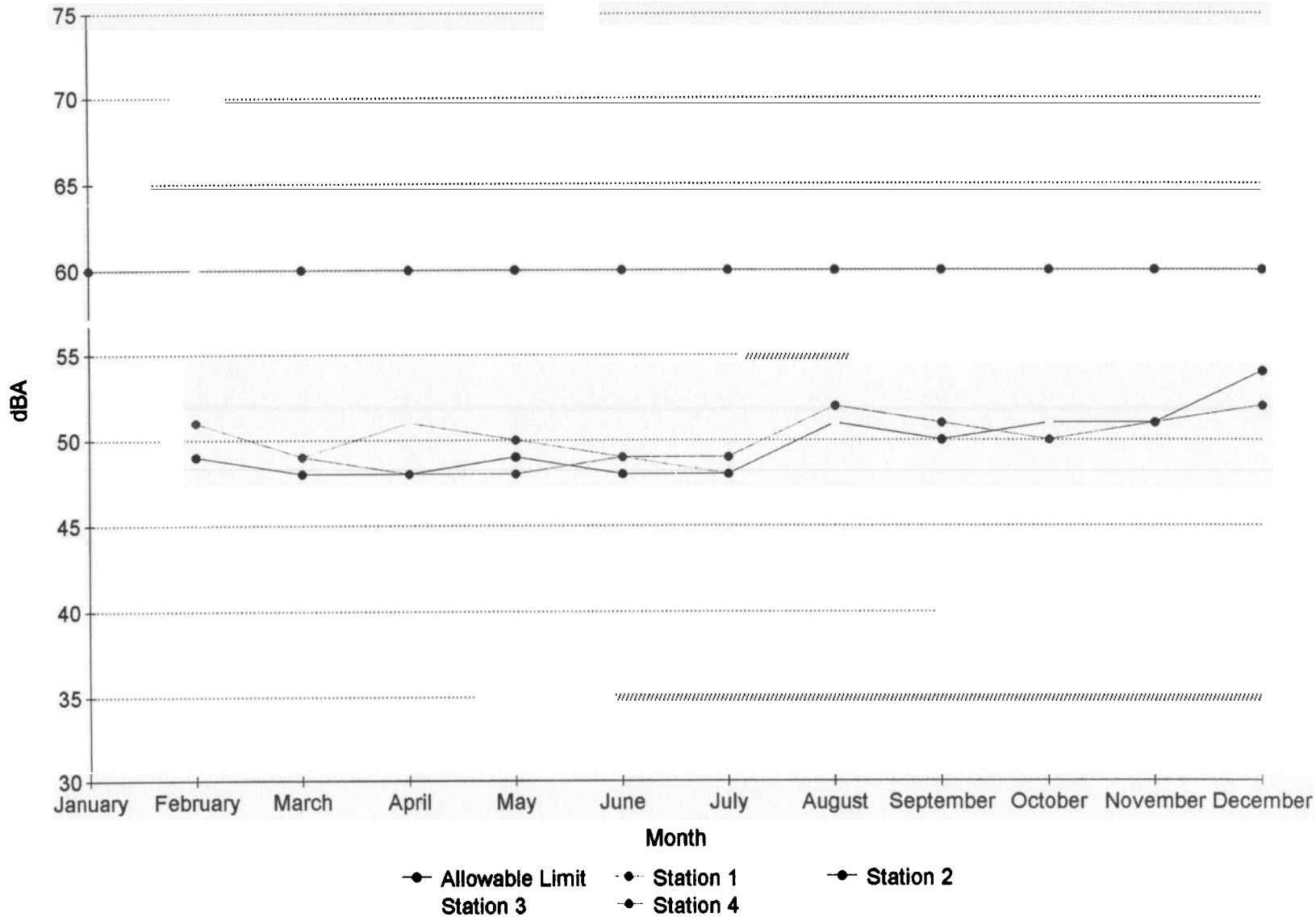
2002 Noise Monitoring Stellarton

Average Monthly Daytime Readings



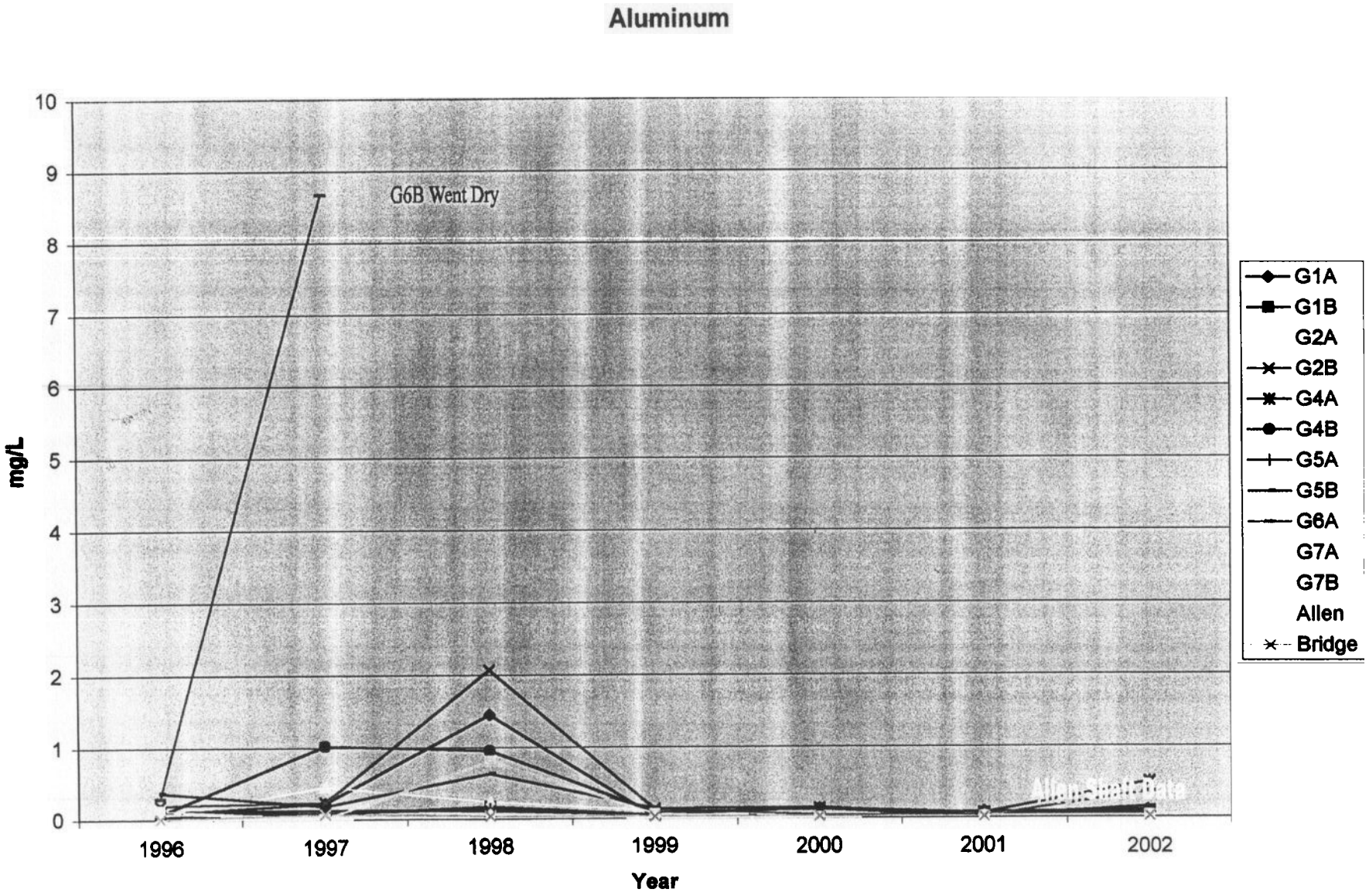
2002 Noise Monitoring Stellarton

Average Monthly Evening Readings

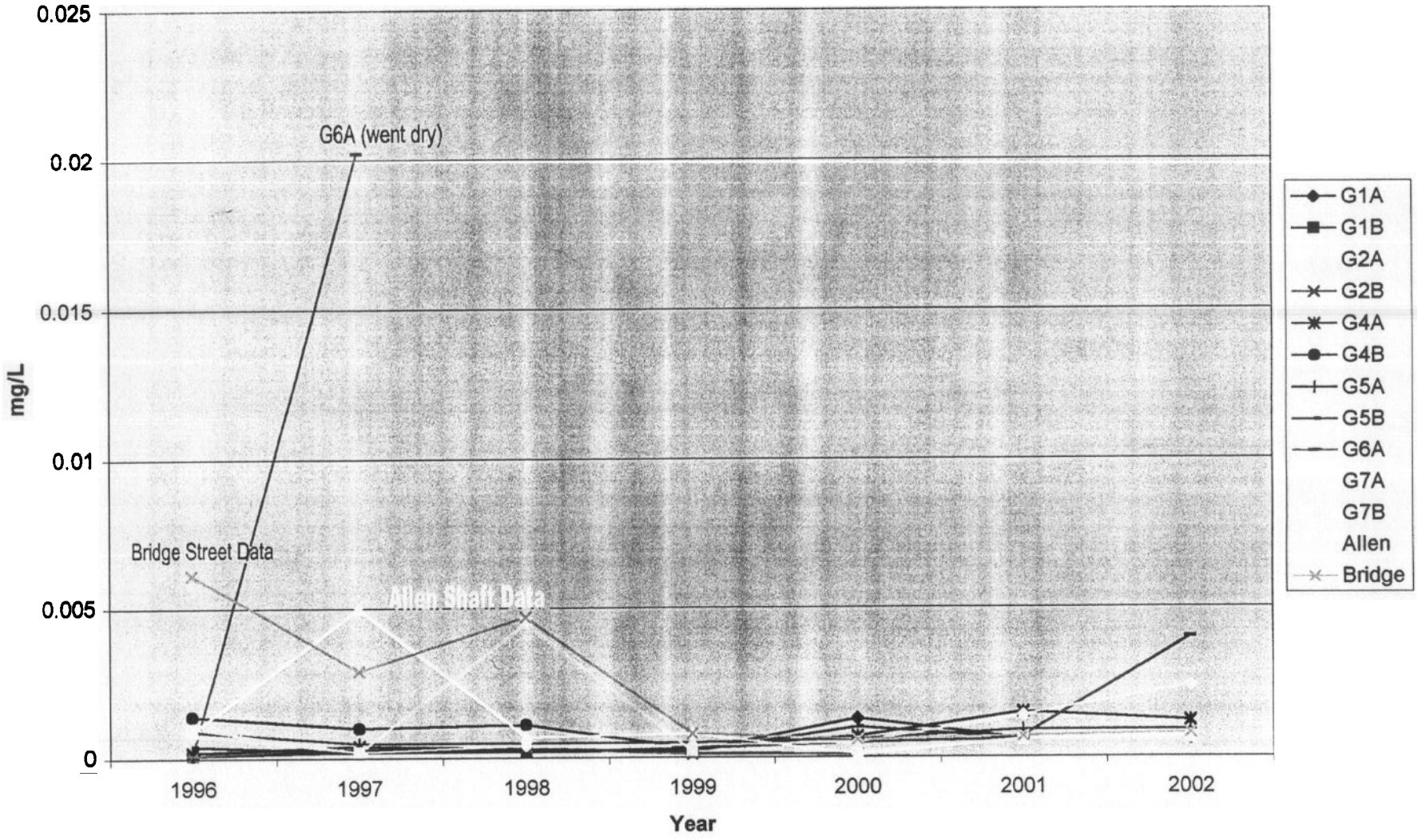


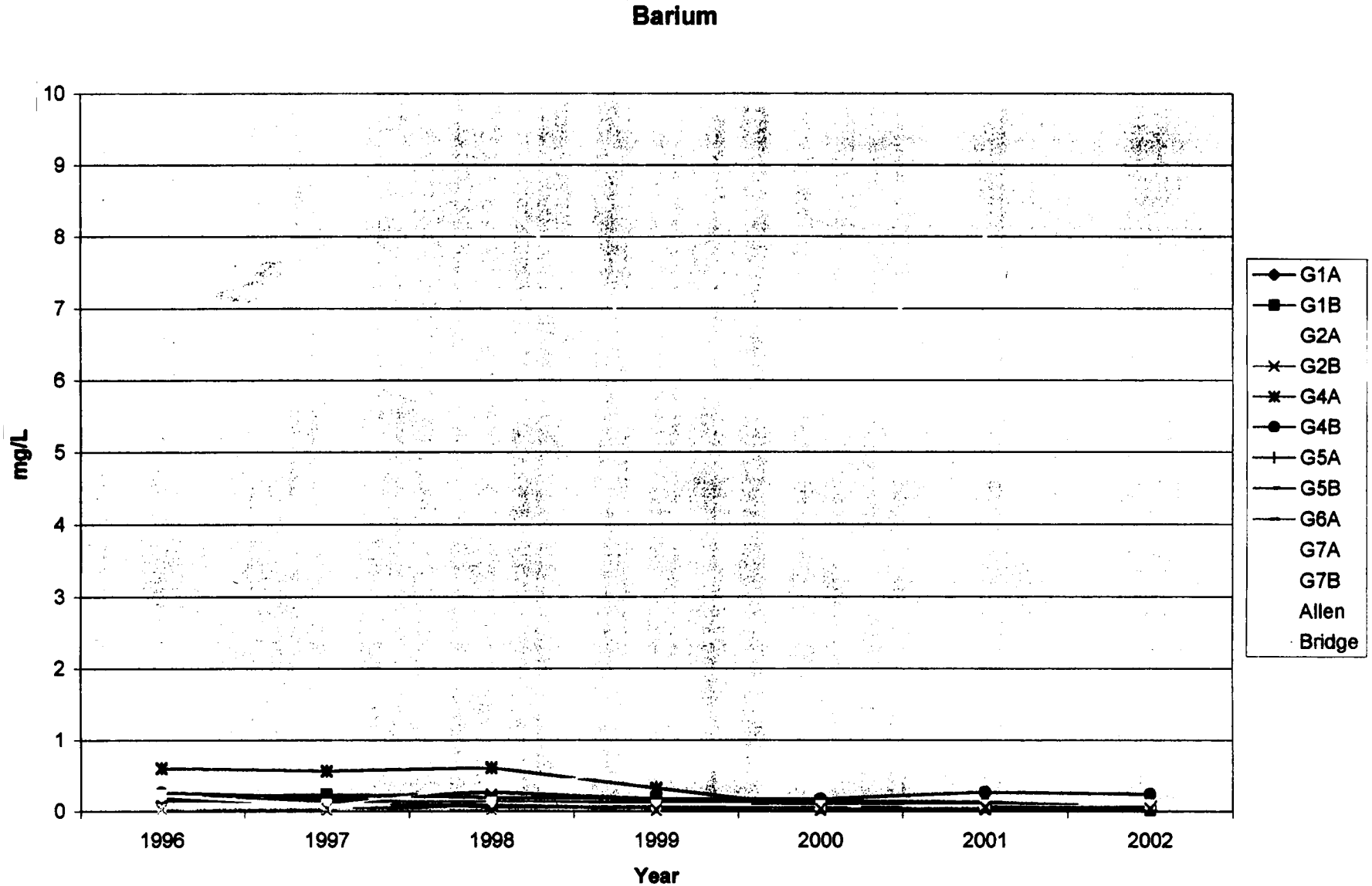
APPENDIX C-3

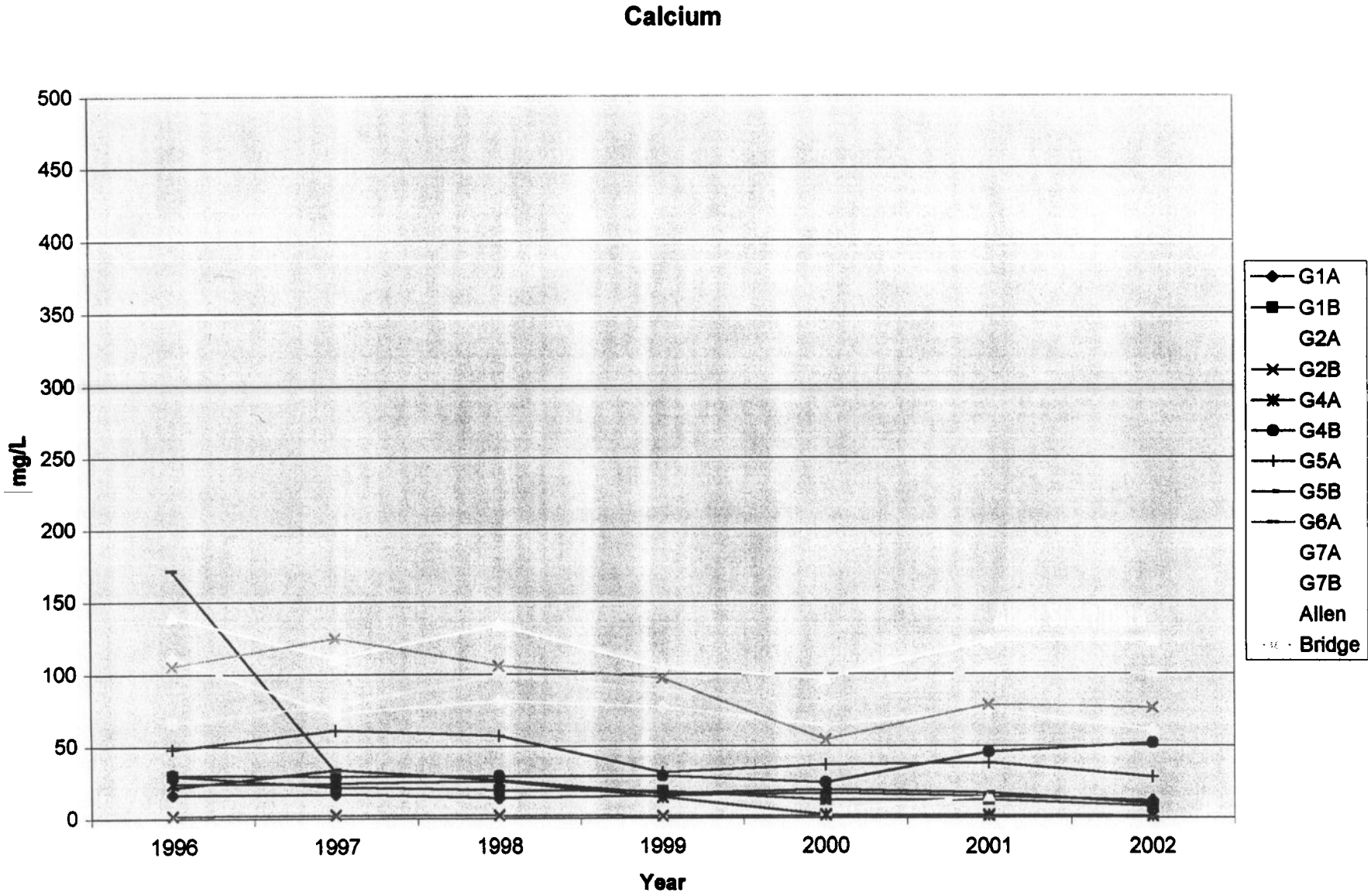
SURFACE WATER CHEMISTRY

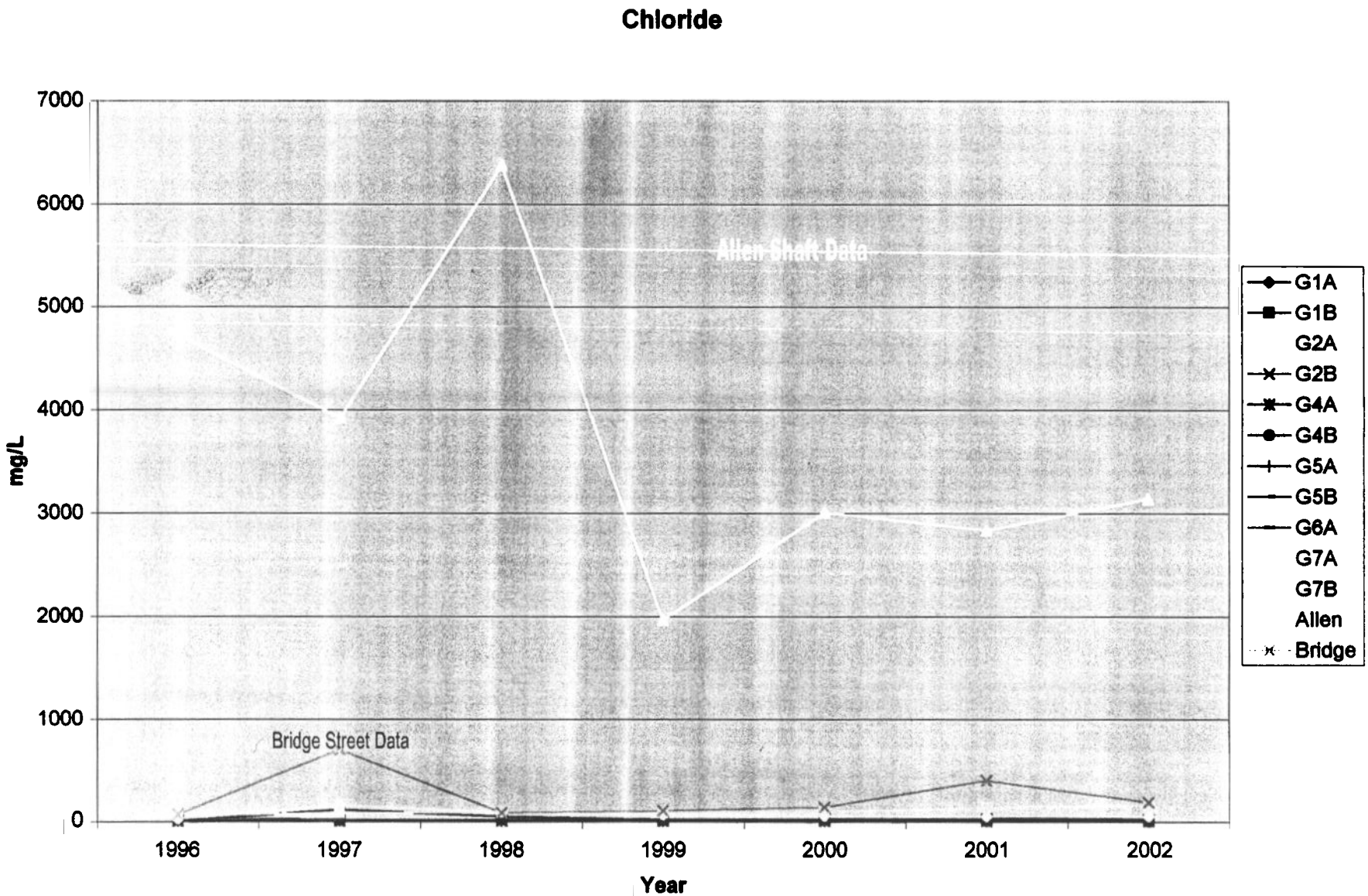

Aluminum
G6B Went Dry
mg/L
10
9
8
7
6
5
4
3
2
1
0
1996
1997
1998
1999
2000
2001
2002
Year
G1A
G1B
G2A
G2B
G4A
G4B
G5A
G5B
G6A
G7A
G7B
Allen
Bridge

Arsenic

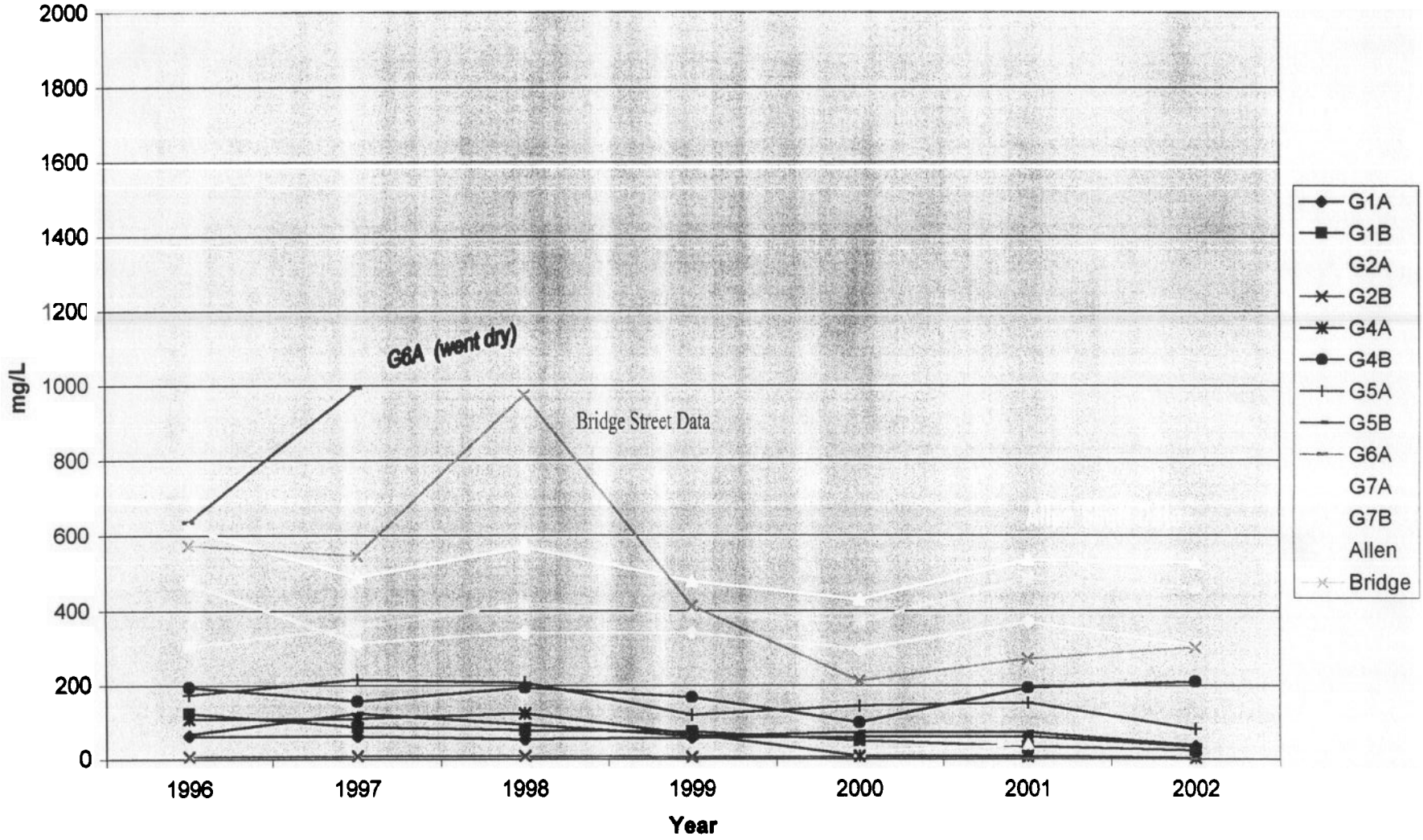

0.025
0.02
0.015
0.01
0.005
0
mg/L
G6A (went dry)
Bridge Street Data
Allen Shaft Data
1996
1997
1998
1999
2000
2001
2002
Year
G1A
G1B
G2A
G2B
G4A
G4B
G5A
G5B
G6A
G7A
G7B
Allen
Bridge


Barium
10
9
8
7
6
5
4
3
2
1
0
mg/L
1996
1997
1998
1999
2000
2001
2002
Year
G1A
G1B
G2A
G2B
G4A
G4B
G5A
G5B
G6A
G7A
G7B
Allen
Bridge

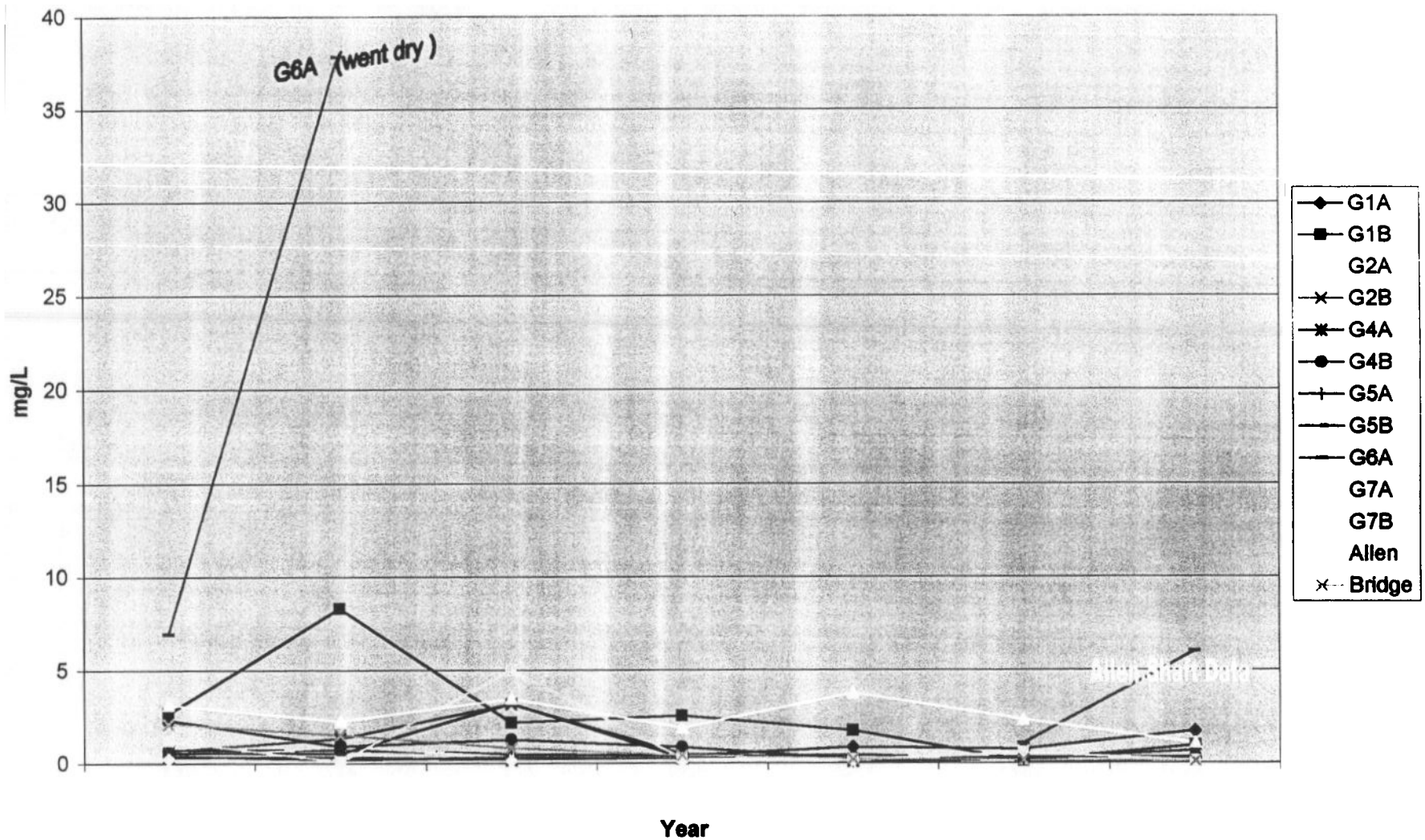

Calcium
500
450
400
350
300
250
200
150
100
50
0
mg/L
1996
1997
1998
1999
2000
2001
2002
Year
G1A
G1B
G2A
G2B
G4A
G4B
G5A
G5B
G6A
G7A
G7B
Allen
Bridge

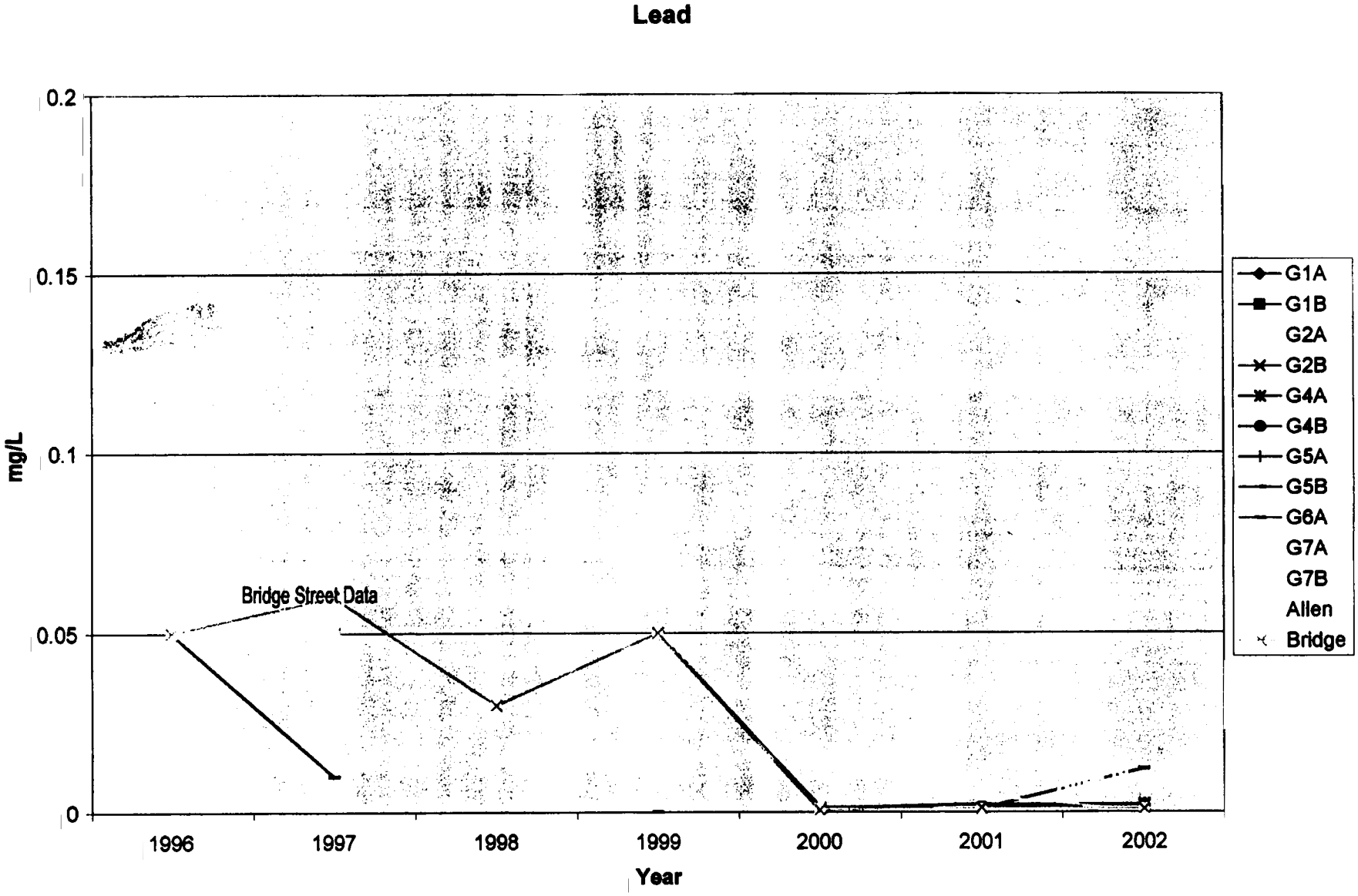

Chloride
7000
6000
5000
4000
3000
2000
1000
0
mg/L
Allen Shaft Data
Bridge Street Data
1996
1997
1998
1999
2000
2001
2002
Year
G1A
G1B
G2A
G2B
G4A
G4B
G5A
G5B
G6A
G7A
G7B
Allen
Bridge

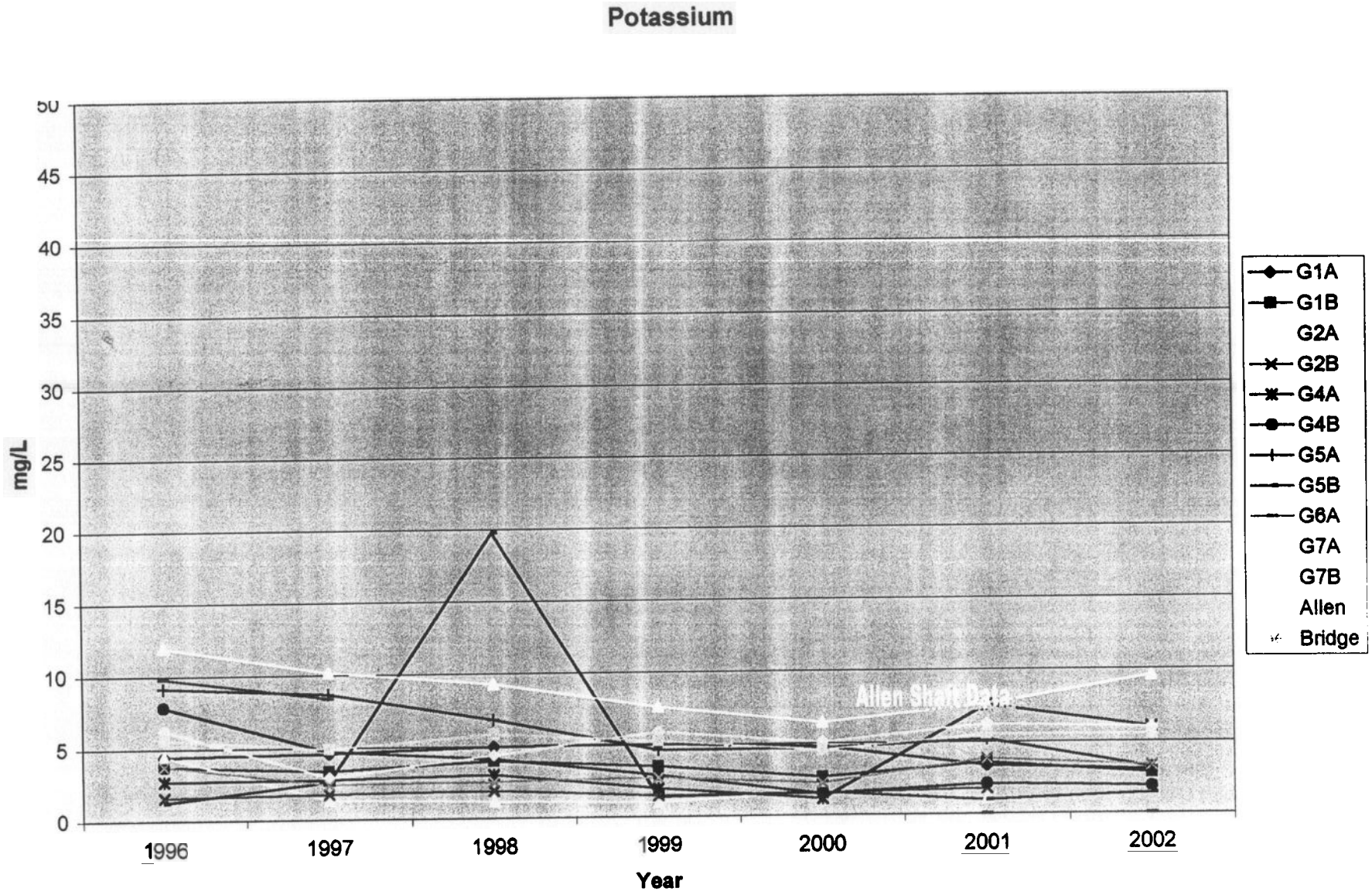
Hardness


2000
1800
1600
1400
1200
1000
800
600
400
200
0
mg/L
G6A (went dry)
Bridge Street Data
1996
1997
1998
1999
2000
2001
2002
Year
G1A
G1B
G2A
G2B
G4A
G4B
G5A
G5B
G6A
G7A
G7B
Allen
Bridge

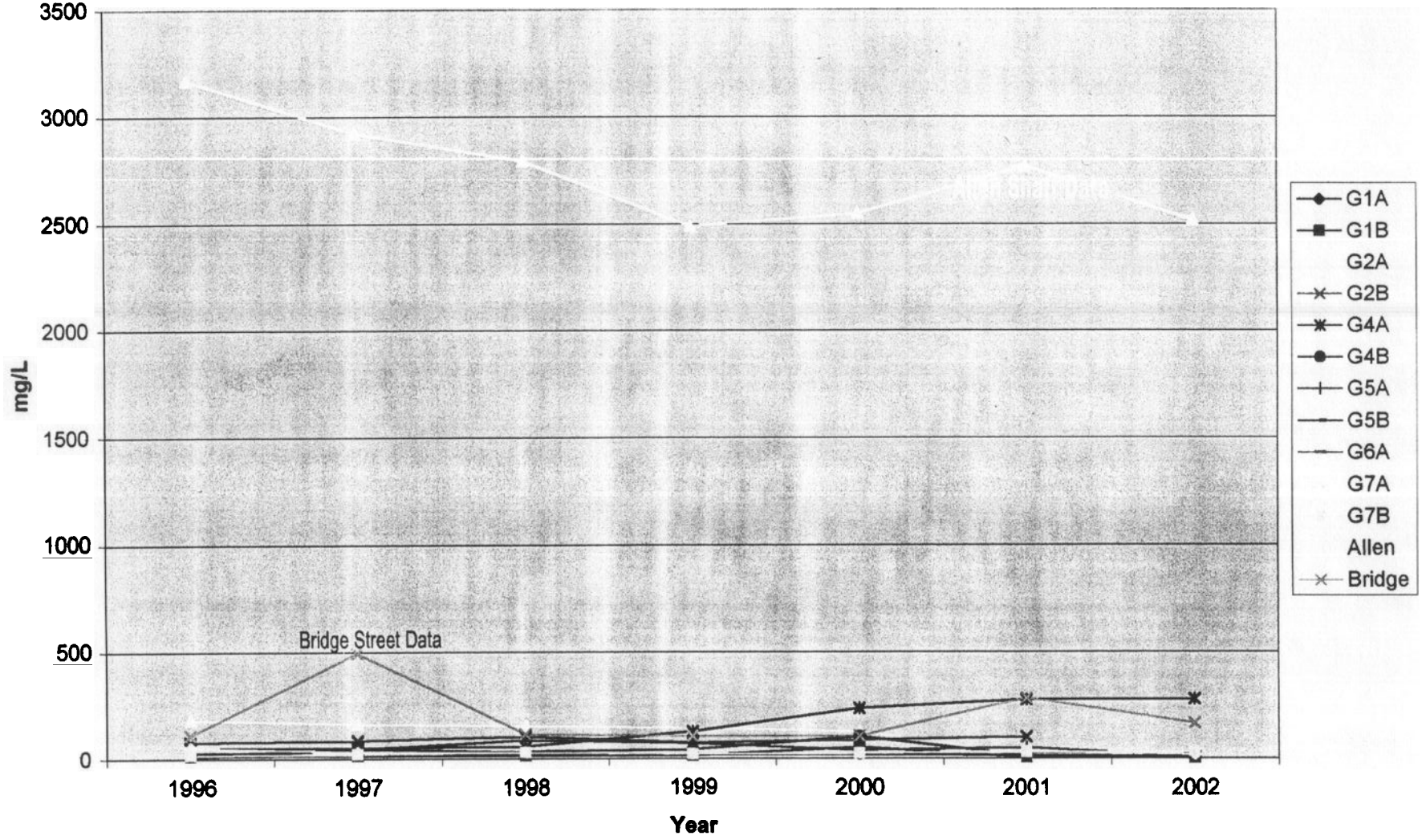
Iron

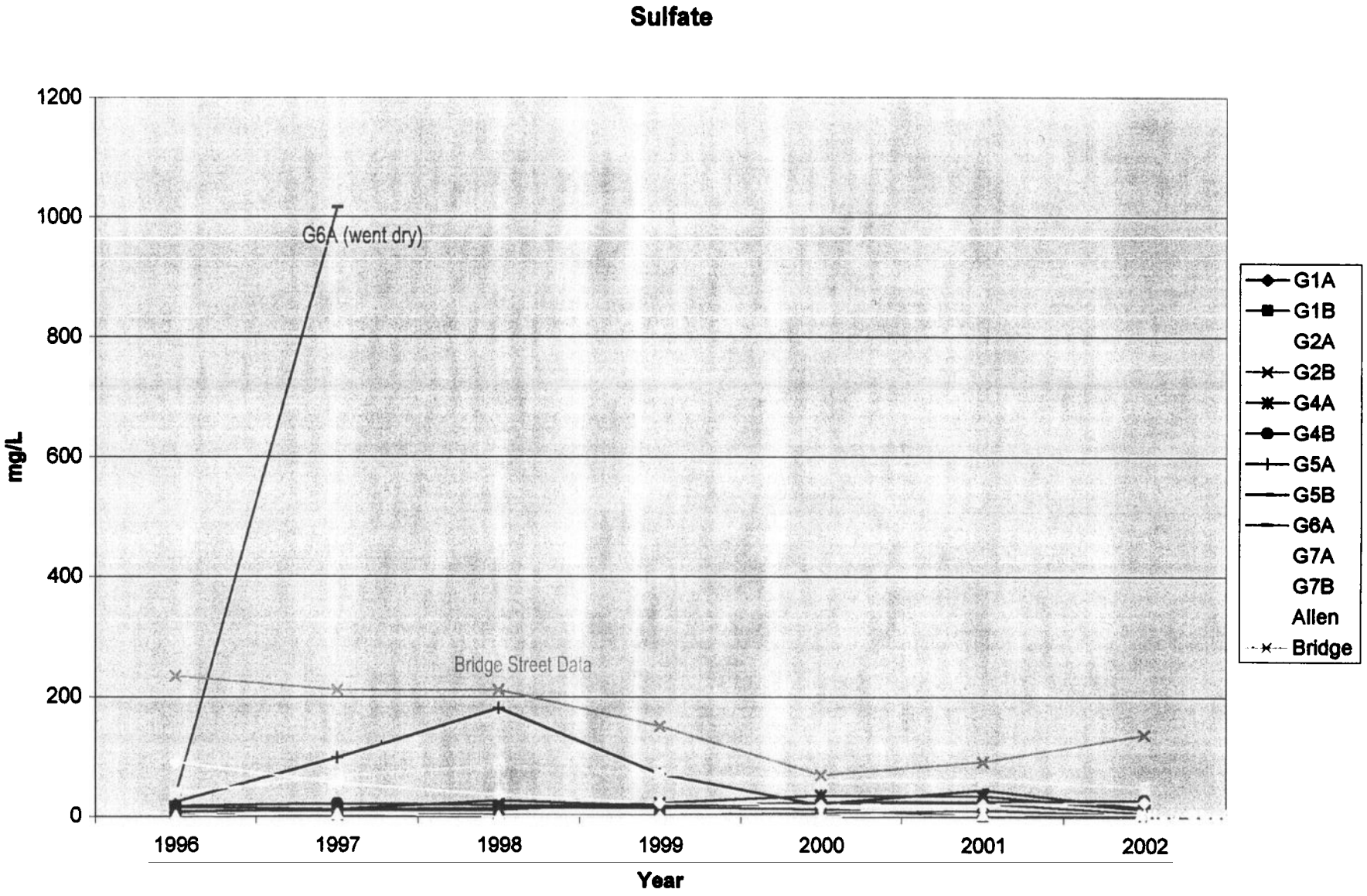

40
35
30
25
20
15
10
5
0
mg/L
G6A (went dry)
G1A
G1B
G2A
G2B
G4A
G4B
G5A
G5B
G6A
G7A
G7B
Allen
Bridge
Year


Lead
0.2
0.15
0.1
0.05
0
mg/L
Bridge Street Data
1996
1997
1998
1999
2000
2001
2002
Year
G1A
G1B
G2A
G2B
G4A
G4B
G5A
G5B
G6A
G7A
G7B
Allen
Bridge


Potassium
mg/L
50
45
40
35
30
25
20
15
10
5
0
1996
1997
1998
1999
2000
2001
2002
Year
Allen Shaft Data
G1A
G1B
G2A
G2B
G4A
G4B
G5A
G5B
G6A
G7A
G7B
Allen
Bridge

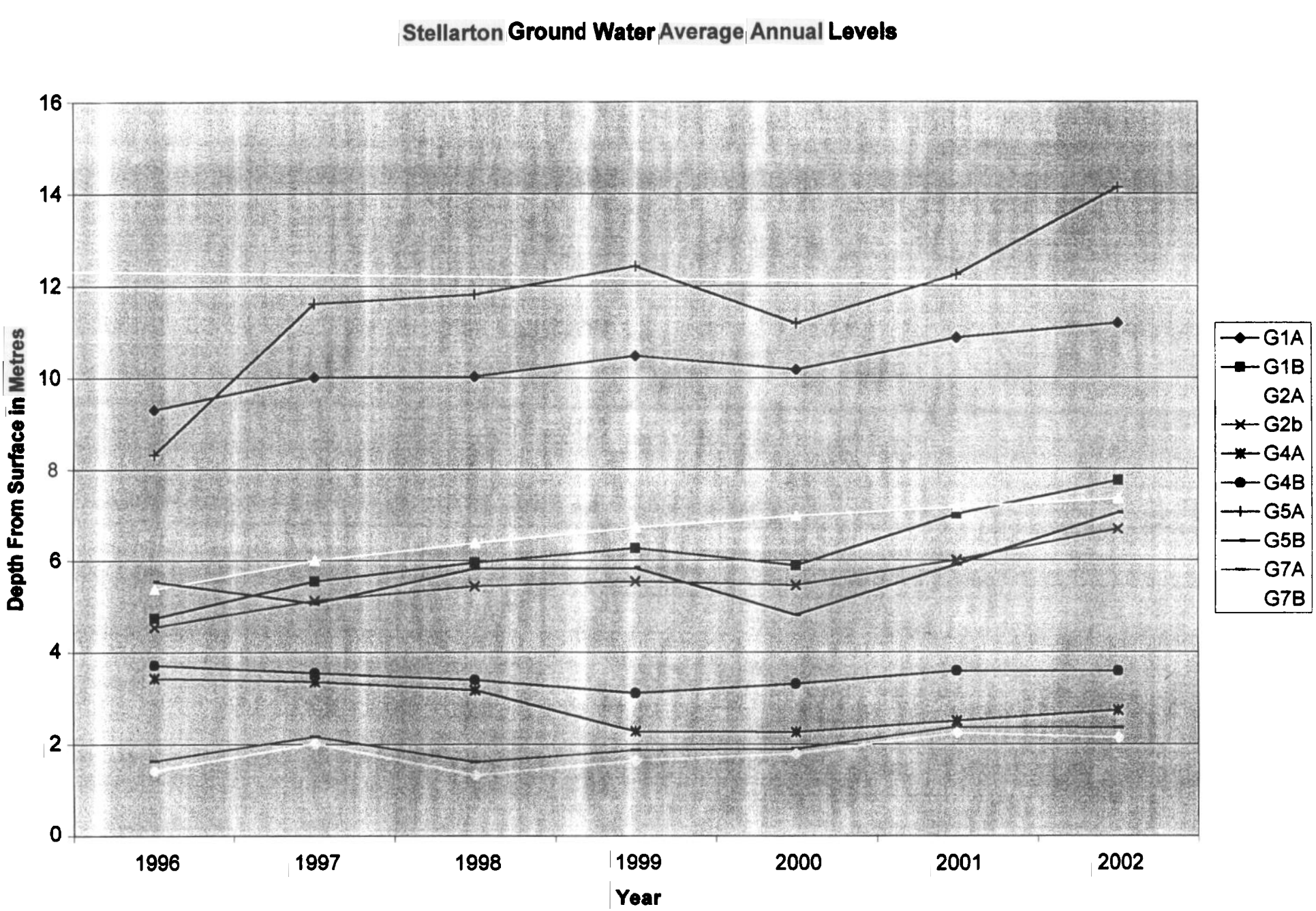
Sodium


3500
3000
2500
2000
1500
1000
500
0
mg/L
Bridge Street Data
1996
1997
1998
1999
2000
2001
2002
Year
G1A
G1B
G2A
G2B
G4A
G4B
G5A
G5B
G6A
G7A
G7B
Allen
Bridge

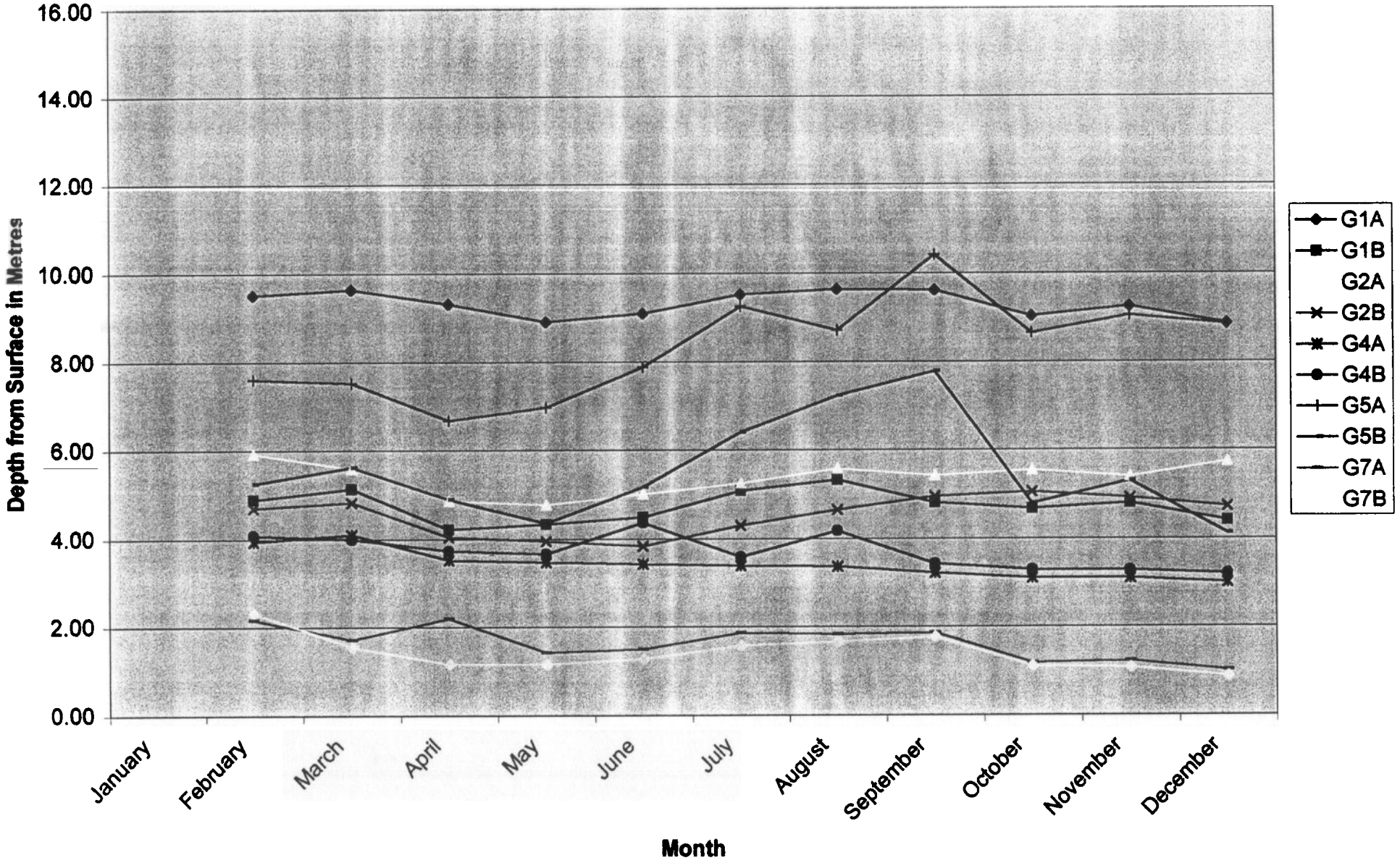

Sulfate
1200
1000
800
600
400
200
0
mg/L
G6A (went dry)
Bridge Street Data
1996
1997
1998
1999
2000
2001
2002
Year
G1A
G1B
G2A
G2B
G4A
G4B
G5A
G5B
G6A
G7A
G7B
Allen
Bridge

APPENDIX C-4

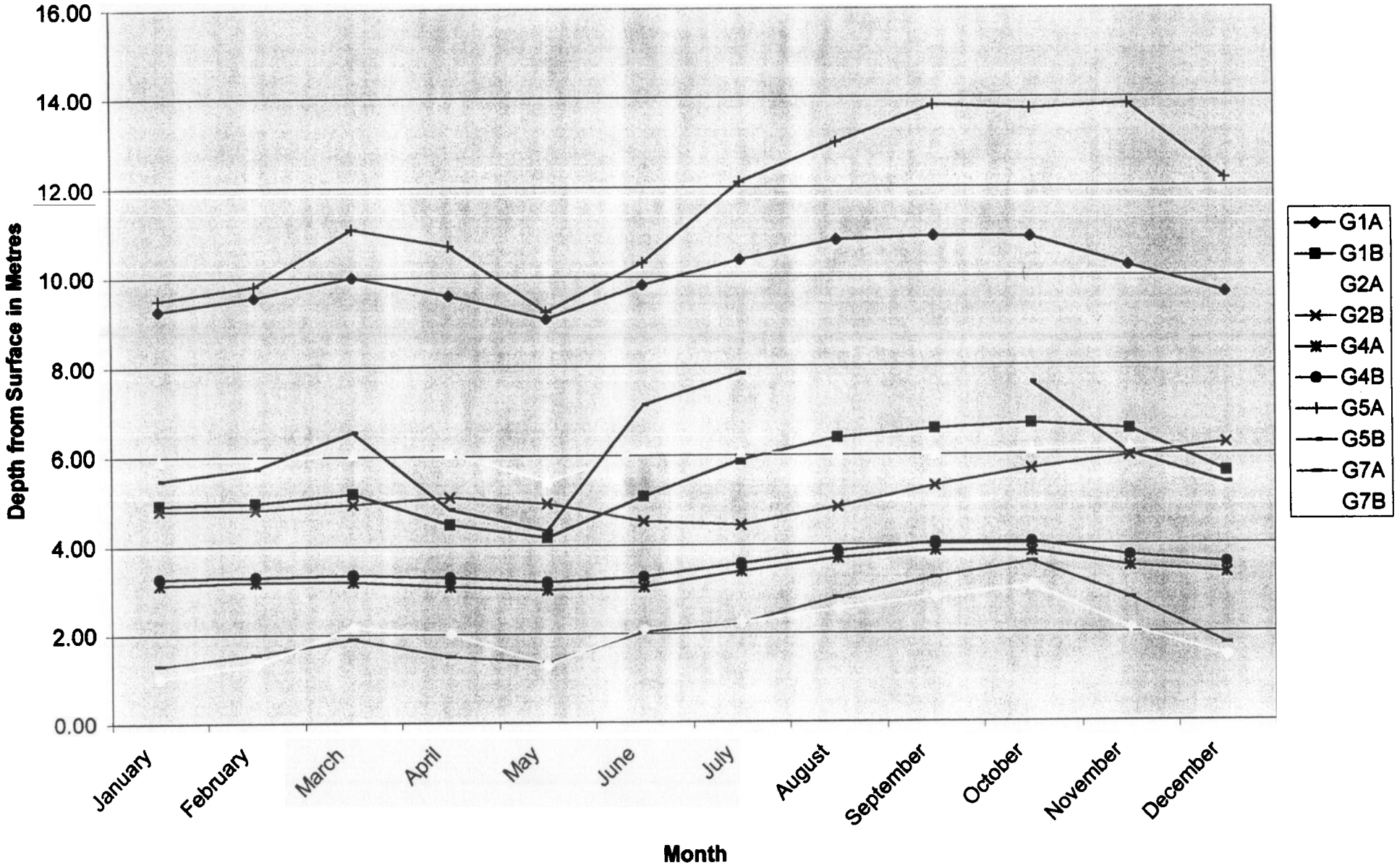
GROUNDWATER LEVELS


Stellarton Ground Water Average Annual Levels
Depth From Surface in Metres
16
14
12
10
8
6
4
2
0
1996
1997
1998
1999
2000
2001
2002
Year
G1A
G1B
G2A
G2b
G4A
G4B
G5A
G5B
G7A
G7B

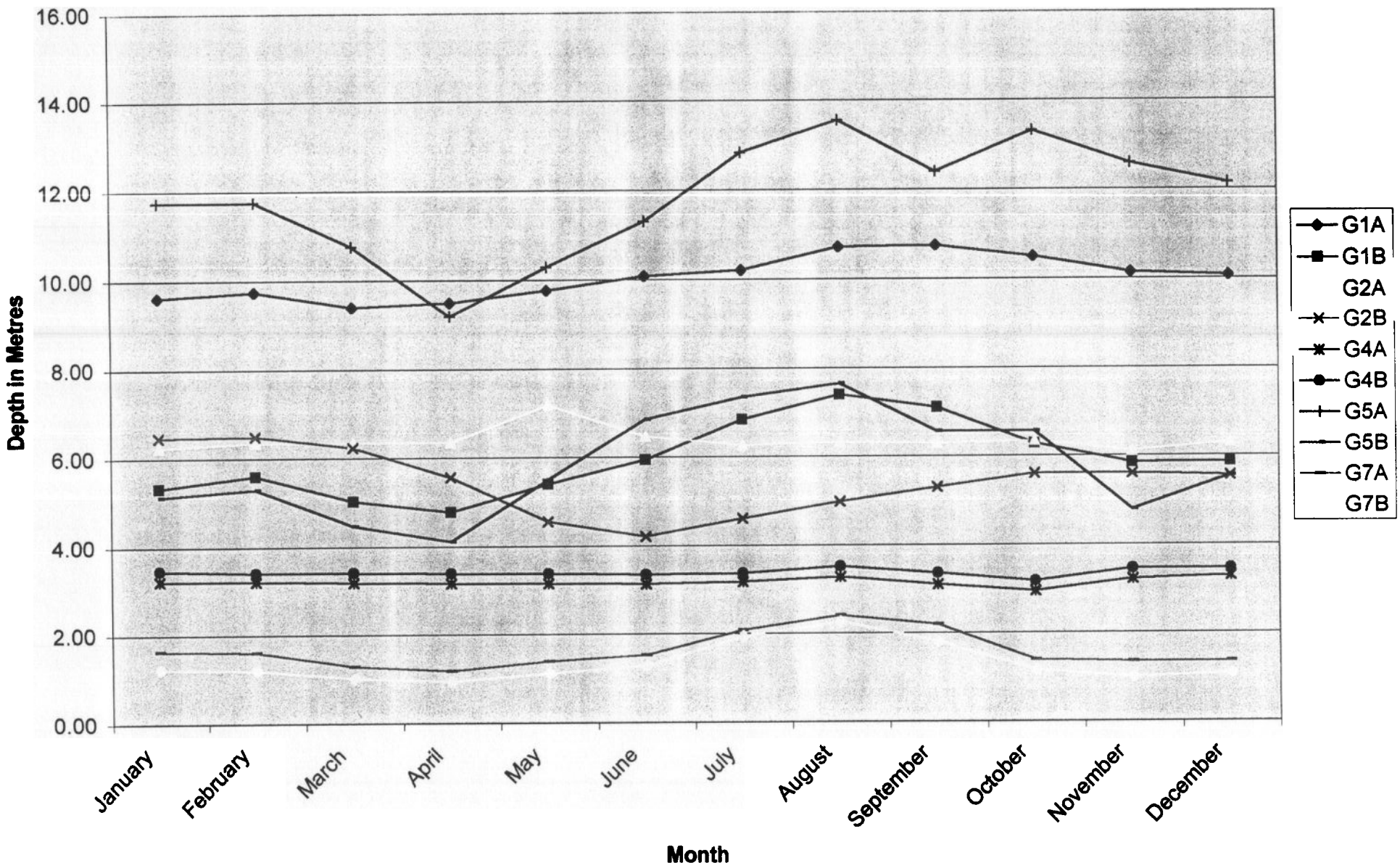
Ground Water Levels 1996



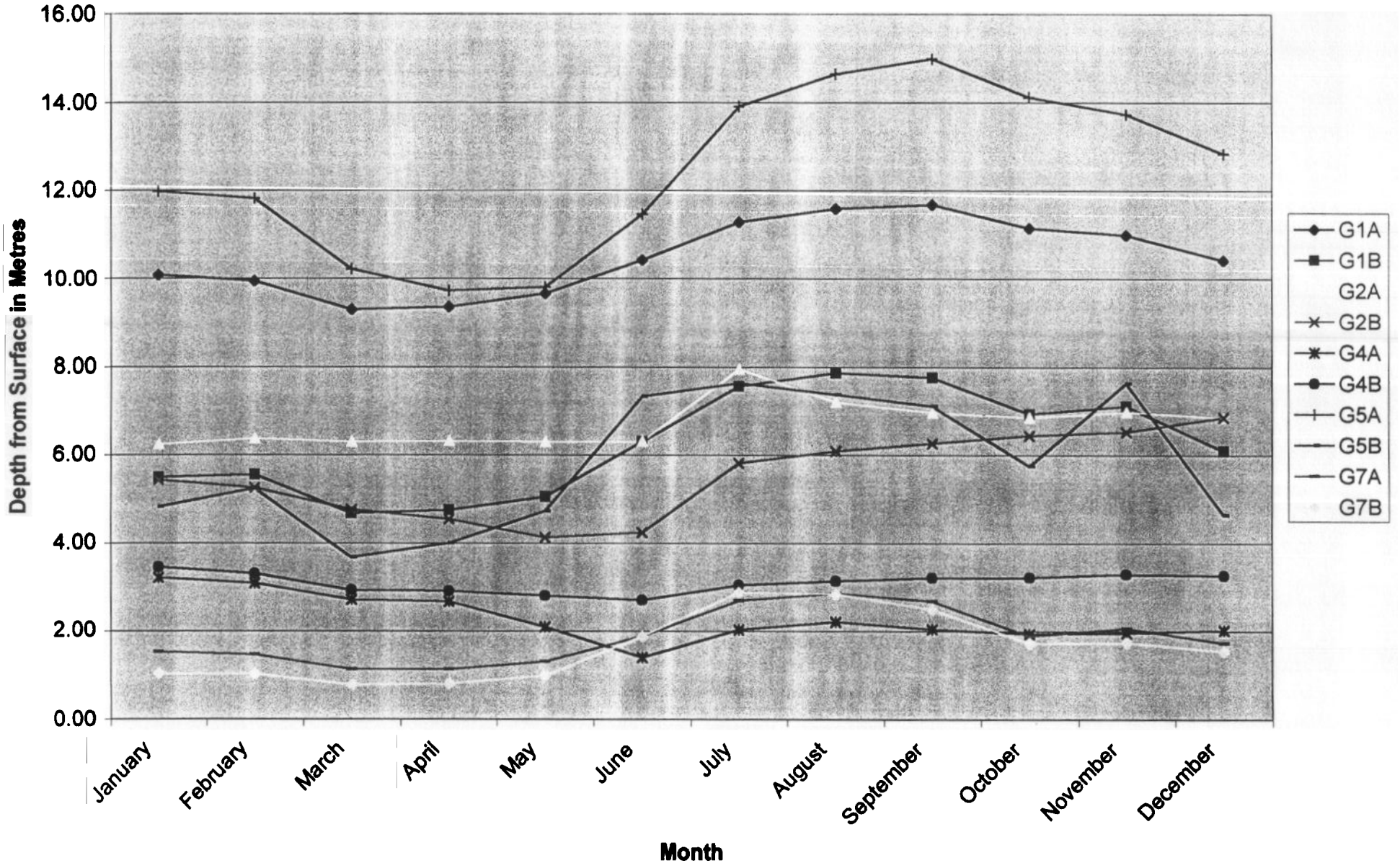
Ground Water Levels 1997



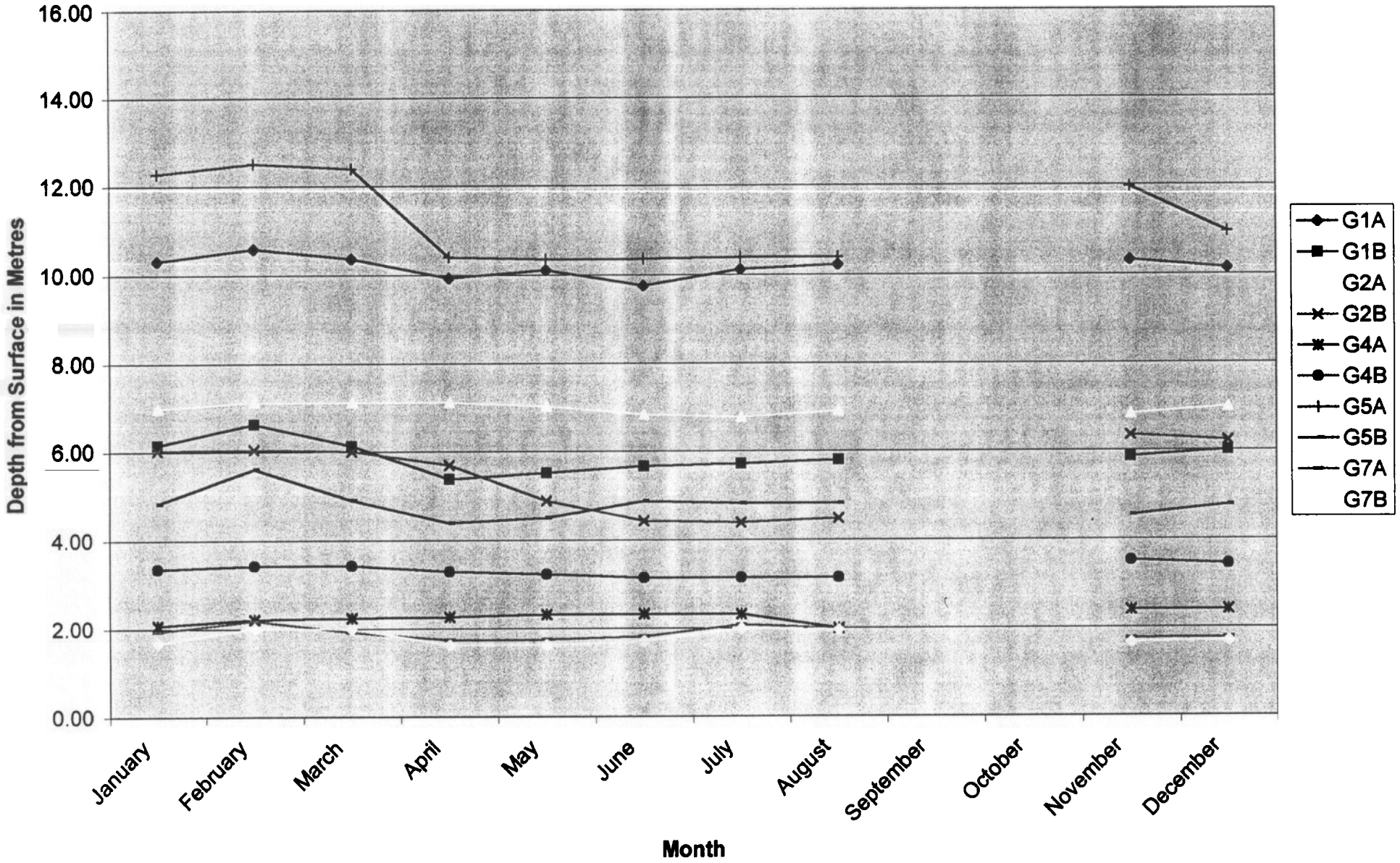
Ground Water Levels 1998



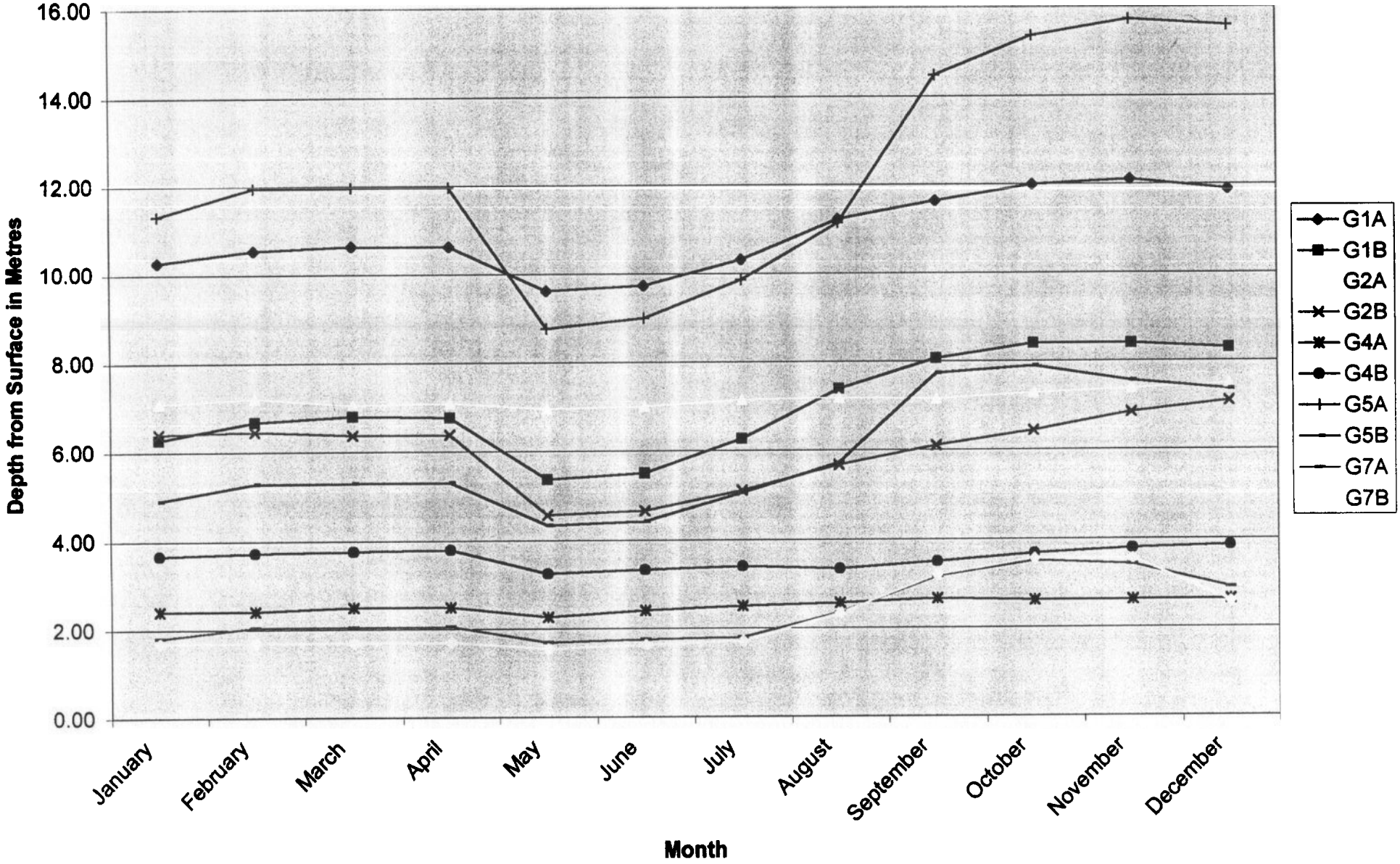
Ground Water Levels 1999



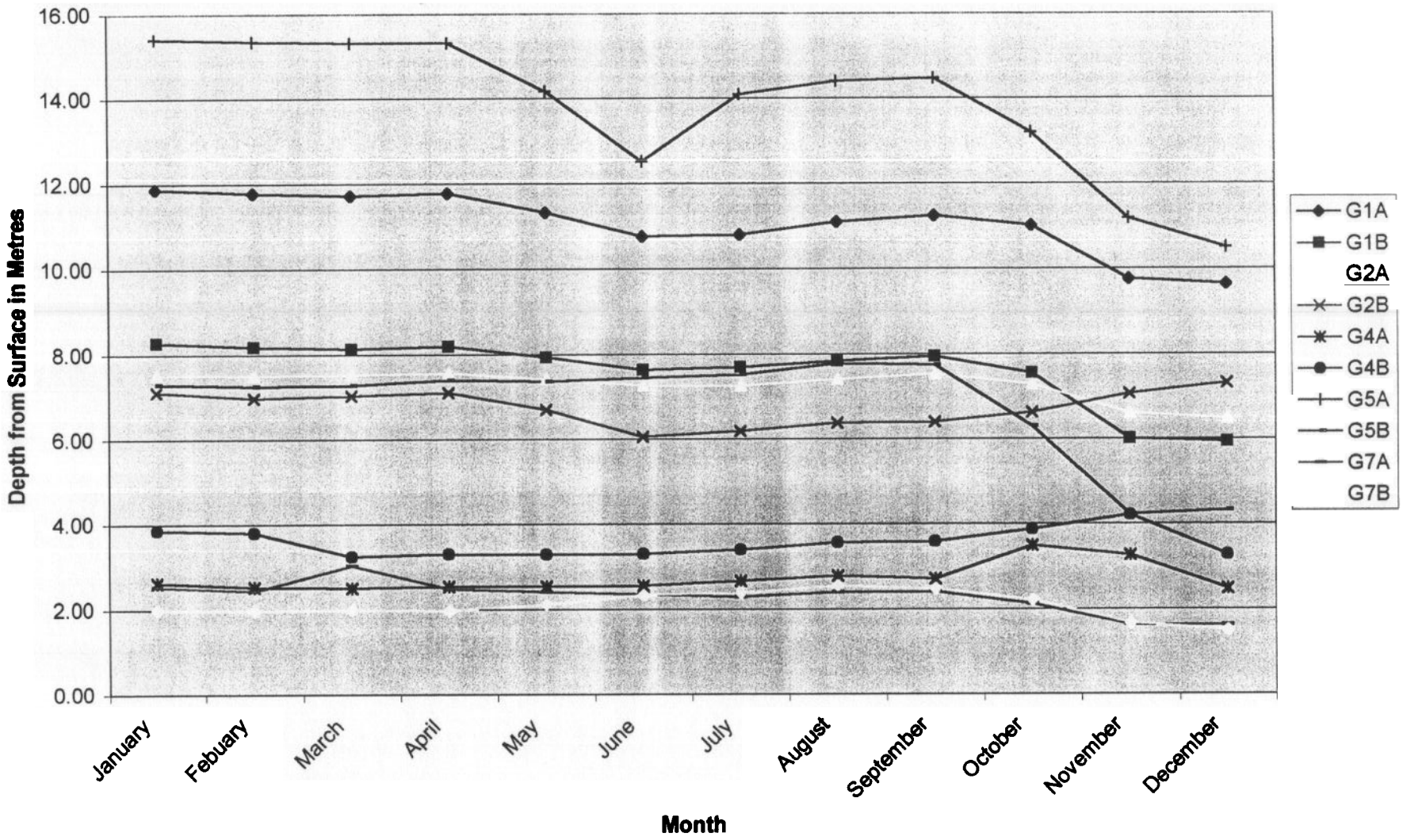
Ground Water Levels 2000



Ground Water Levels 2001



Ground Water Levels 2002



APPENDIX C-5

BASELINE SURFACE WATER CHEMISTRY (DECEMBER 2003)

E.Coli	cfu/100ml	ns	ns	ns	ns	ns
Total Coliform	cfu/100ml	ns	ns	ns	ns	ns
Sodium	mg/L	22.0	37.9	39.2	56.8	54.2
Potassium	mg/L	1.3	1.4	1.7	2.4	2.3
Calcium	mg/L	40.6	28.7	29.2	46.4	44.3
Magnesium	mg/L	17.5	10.1	10.2	17.2	16.5
Alkalinity (as CaCO3)	mg/L	16	45	42	120	120
Sulfate	mg/L	130	76	76	93	95
Chloride	mg/L	43	59	58	86	83
Reactive Silica (as SiO2)	mg/L	11	8.6	8.5	8.7	8.9
Ortho Phosphate (as P)	mg/L	nd	nd	0.04	nd	nd
Phosphorus	mg/L	nd	nd	0.1	nd	nd
Nitrite	mg/L	nd	nd	nd	nd	nd
Nitrate + Nitrite (as N)	mg/L	nd	0.12	0.12	0.47	0.50
Nitrate (as N)	mg/L	nd	0.12	0.12	0.47	0.50
Ammonia (as N)	mg/L	nd	nd	nd	0.10	0.09
Color	TCU	[illegible]	[illegible]	[illegible]	14	[illegible]
Total Organic Carbon	mg/L	3.7	2.8	10.5	1.8	1.7
Turbidity	NTU	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Conductance (RCAp)	uS/cm	579	516	522	795	790
pH	Units	7.0	7.4	7.5	7.7	7.9
Hardness (as CaCO3)	mg/L	173	113	115	187	179
Bicarbonate (as CaCO3)	mg/L	16	45	42	119	119
Carbonate (as CaCO3)	mg/L	nd	nd	nd	nd	nd
TDS (Calculated)	mg/L	275	249	249	385	379
Cation Sum	meq/L	4.46	3.95	4.05	6.27	5.99
Anion Sum	meq/L	4.24	4.15	4.06	6.79	6.75
Ion Balance	%	2.53	2.49	0.20	4.00	5.79
Langlier Index @ 4C		-2.05	-1.35	-1.28	-0.43	-0.25
Langlier Index @ 20C		-1.65	-0.95	-0.88	-0.03	0.15
Saturation pH @ 4C	Units	9.05	8.75	8.78	8.13	8.15
Saturation pH @ 20C	Units	8.65	8.35	8.38	7.73	7.75
Total Suspended Solids	mg/L	ns	ns	ns	ns	ns
Flouride	mg/L	ns	ns	ns	ns	ns

Notes:	---	No Guideline	FWAL	Fresh Water Aquatic Life Guidelines
	ns	Not Sampled	CDWQ	Canadian Drinking Quality Guidelines
	nd	Not Detected	IMAC	Interim Maximum Acceptable Concentration
	DL	Detection Limit	MAC	Maximum Acceptable Concentration
	SW-4^{dup}	Lab Duplicate	AO	Aesthetic Objective

ANALYTE	SW-1[1] Dec 1, 2003	SW-2[1] Dec 1, 2003	SW-3[1] Dec 1, 2003	SW-4[1] Dec 1, 2003	SW-4[1dup] Dec 1, 2003	SW-1[2] Dec 1, 2003	SW-2[2] Dec 1, 2003	SW-3[2] Dec 1, 2003	SW-4[2] Dec 1, 2003	SW-4[2dup] Dec 1, 2003	CCME FWAL (mg/L)	DL (mg/L)
Aluminum	0.071	0.082	0.080	0.013	0.012	0.240	0.150	0.830	0.058	0.060	0.100	0.005
Antimony	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	—	0.002
Arsenic	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.005	0.002
Barium	0.028	0.057	0.064	0.081	0.079	0.028	0.055	0.079	0.078	0.073	—	0.005
Beryllium	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	—	0.002
Bismuth	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	—	0.002
Boron	0.022	0.018	0.017	0.026	0.025	0.023	0.020	0.019	0.027	0.026	—	0.005
Cadmium	0.00004	nd	nd	0.00002	0.00003	0.00005	0.00007	0.00010	0.00004	0.00003	0.000017	0.000017
Chromium	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.0089	0.002
Cobalt	nd	0.0005	0.001	0.0005	0.0005	0.0004	0.0006	0.0028	0.0005	0.0005	—	0.0004
Copper	nd	0.002	nd	0.002	nd	0.002	0.003	0.005	0.002	0.002	0.004	0.002
Iron	0.230	0.200	0.250	0.190	0.200	0.530	0.300	2.0	0.670	0.630	0.300	0.05
Lead	nd	nd	nd	nd	nd	0.001	0.0005	0.0068	0.0007	0.0005	0.007	0.0005
Manganese	0.006	0.044	0.160	0.220	0.210	0.025	0.046	0.230	0.220	0.210	—	0.002
Molybdenum	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.073	0.002
Nickel	0.002	0.002	0.002	0.002	nd	0.004	0.002	0.006	nd	nd	0.025 – 0.150	0.002
Selenium	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.001	0.001
Silver	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.0001	0.0001
Strontium	0.150	0.100	0.100	0.190	0.190	0.150	0.100	0.100	0.190	0.180	—	0.005
Thallium	nd	nd	nd	nd	nd	nd	0.0001	nd	nd	nd	0.008	0.0001
Tin	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	—	0.002
Titanium	0.007	0.005	0.005	0.002	0.002	0.005	0.002	0.012	0.004	0.003	—	0.002
Uranium	nd	nd	nd	0.0001	0.0001	nd	0.0001	0.0001	0.0001	0.0001	—	0.0001
Vanadium	nd	nd	nd	nd	nd	nd	nd	0.002	nd	nd	—	0.002
Zinc	0.023	0.011	0.007	0.012	0.011	0.030	0.013	0.037	0.016	0.013	0.030	0.005

Notes:
— No Guideline
nd Not Detected
ns Not Sampled
DL Detection Limit
CCME Canadian Council Ministers of the Environment
FWAL Fresh Water Aquatic Life Guidelines
SW-1[1] Lab Filtered Sample
SW-1[2] Non Filtered Sample
SW-4[1dup] Lab Duplicate (Lab Filtered)
SW-4[2dup] Lab Duplicate (Non Filtered)