

HALTON REGION CONSERVATION AUTHORITY

**CLEAN UP RURAL BEACHES PROGRAM
FOR THE SIXTEEN MILE CREEK WATERSHED**

1995 ANNUAL REPORT

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Prepared for: The Ontario Ministry of Environment and Energy

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Bob Edmondson	Halton Region Conservation Authority
Bob Hart	Halton Region Health Department
Mark Janiec	Ontario Ministry of Agriculture, Food and Rural Affairs
Peter Mar	Ontario Ministry of Environment and Energy
Cecil Patterson	Halton Soil and Crop Improvement Association

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INTRODUCTION

1.1 PROGRAM HISTORY

During the 1980s, the deterioration of water quality in Sixteen Mile Creek and at the Kelso Conservation Area swimming beach became a concern to the Halton Region Conservation Authority (HRCA). An increase in fecal coliform bacterial levels resulted in several beach postings during the summer season in 1988. With further beach postings in 1989, the HRCA applied for and received funding from the Provincial Rural Beaches Program (RBP) to study water quality in the Sixteen Mile Creek watershed.

The HRCA RBP study, conducted in 1990 and 1991, identified sources of bacterial pollution impairing water quality in the watershed and assessed their impact (Albanese, 1990; Gale 1991). An extensive water quality monitoring program, including sediment samples, stream surveys, field assessments and interviews with watershed residents revealed a number of contributors to the bacterial pollution at the beach, including agricultural operations, inadequate private sewage treatment systems and natural sources.

As part of the Provincial Clean Up Rural Beaches (CURB) program, a CURB plan was developed to predict the total seasonal fecal coliform bacterial loads delivered to the Kelso Reservoir beach area from the watershed (Gale, 1991). Wildlife inputs, livestock access and faulty septic systems were found to be the three highest contributors of bacteria to the beach. In an effort to improve water quality within the watershed, the HRCA CURB plan recommended remedial measures aimed at reducing bacterial inputs. A 40 per cent reduction in the load delivered from the watershed to the beach area was established as the goal. The restriction of livestock access to the watercourse, repair of faulty septic systems and the containment of runoff from manure stacks and barnyards were recommended as remedial measures for reducing bacterial pollution at the sources. Based on the size of the watershed and potential impact on the beach area, it was recommended that the remedial measures be systematically implemented throughout the study area. Ongoing water quality monitoring would evaluate the effectiveness of remedial programs. The total cost for these remedial programs was projected to be \$80,000.

During 1995-96, the fourth and final year for the HRCA CURB program, no applications were received and no remedial projects were undertaken. Ongoing water quality monitoring of the watershed continued to provide baseline information.

This report summarizes the activities of the HRCA during the fourth year of the CURB program with emphasis on the results of water quality monitoring and the overall response by the public to CURB program.

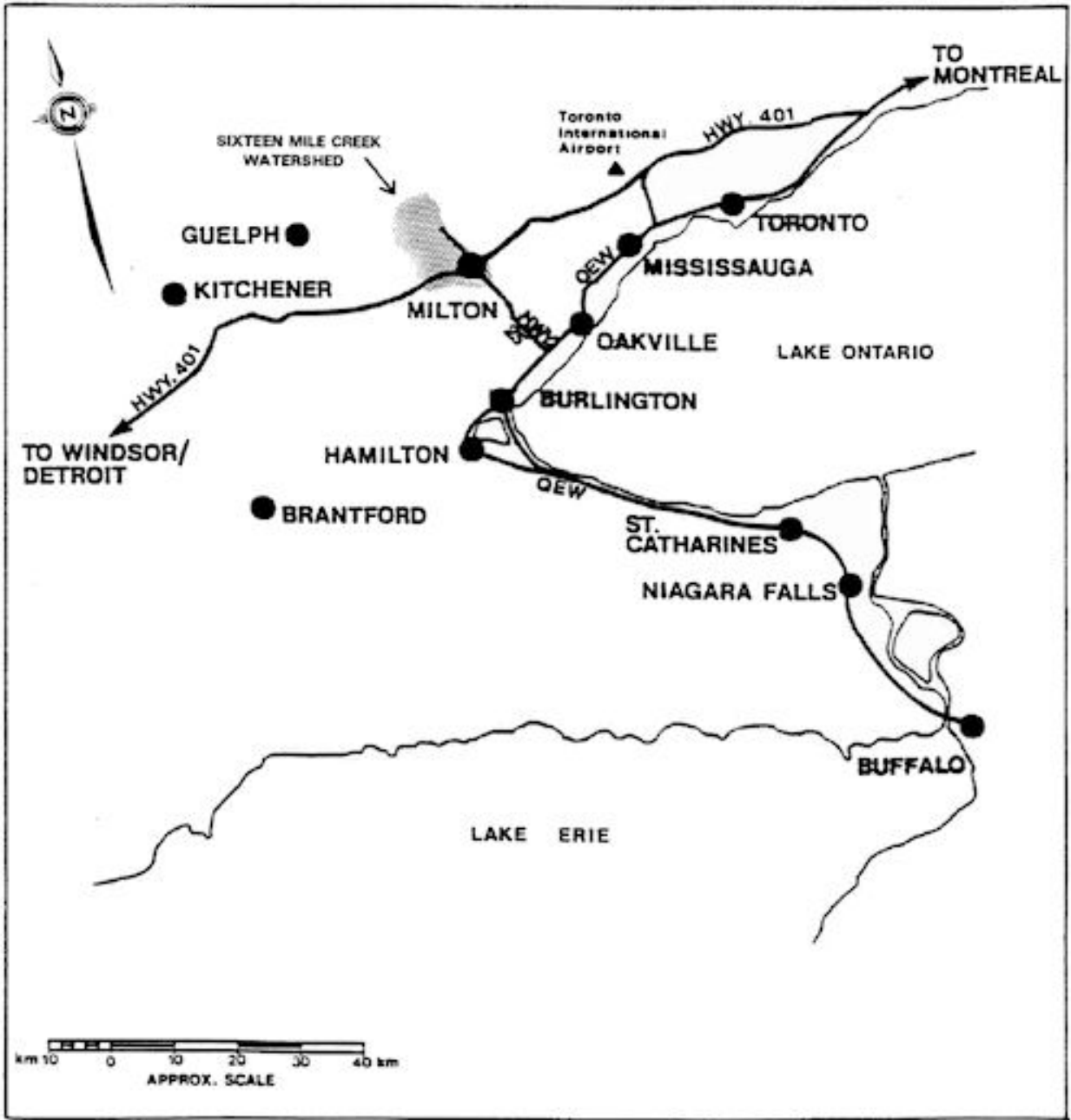


FIGURE 1: Location Of Curb Watershed

WATER QUALITY MONITORING PROGRAM

2.1 OBJECTIVES

The objective of the 1995 HRCA CURB water quality monitoring program was to continue the program to monitor the sources and types of bacterial pollutants that affect the Kelso Reservoir swimming area and to provide base line data to help assess the impact of remedial projects, Particular attention was paid to monitoring the cattle access restriction project that was implemented during the year. The program continued to make use of an extensive water sampling network already established. The water quality analyses consisted of:

- i) bacterial analyses
- ii) nutrient, chemical and physical analyses

2.2 RESULTS

2.2.1 Kelso Reservoir

Kelso Reservoir beach area was again sampled under two different programs during the 1995 swimming season. Water samples for the Halton Region Health Department (HRHD) to monitor *E. coli* concentrations were taken at each of the four sampling stations established at the swimming area (Figure 2) each Tuesday morning from June 27 until August 29, 1995. The geometric mean of the daily *E. coli* counts of all four samples was used by the HRHD) to determine whether the beach should be posted as unsafe for swimming (Figure 3). Bacterial results for the Kelso swimming area from the HRHD samples are shown in Appendix 1. As part of the regular CURB water quality monitoring program, Station B was sampled for all bacterial, nutrient, chemical and physical parameters weekly from June 20 to September 5, 1995 and analyzed at the MOEE laboratory in Rexdale, Ont. Results of all water quality parameters for Station B are shown in Appendices 2 and 3.

The results of both bacterial monitoring programs indicate that the water quality at the Kelso swimming area continues to be acceptable. The seasonal geometric mean of *E. coli* concentrations taken by the CURB program was approximately 12 EC/100ml. of water, well below the PWQO recommended limit of 100 EC/100ml. The seasonal geometric mean of dry events was approximately 10 EC/100 ml, while the seasonal mean of wet events was approximately 25 EC/100 ml. Approximately thirteen per cent of all bacterial samples taken at the swimming area were above PWQO standards. There were no postings or beach closures during the 1995 summer swimming season.

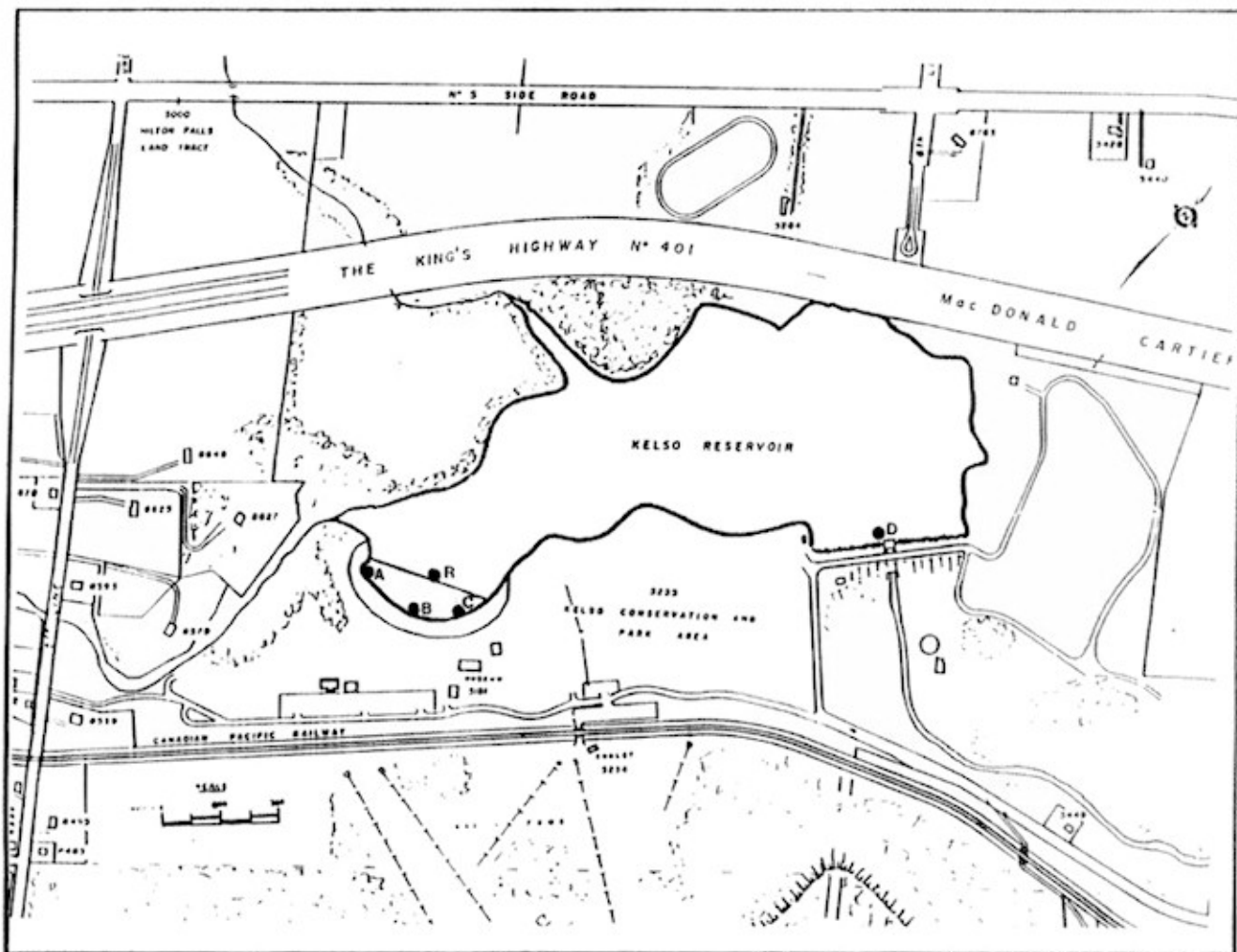
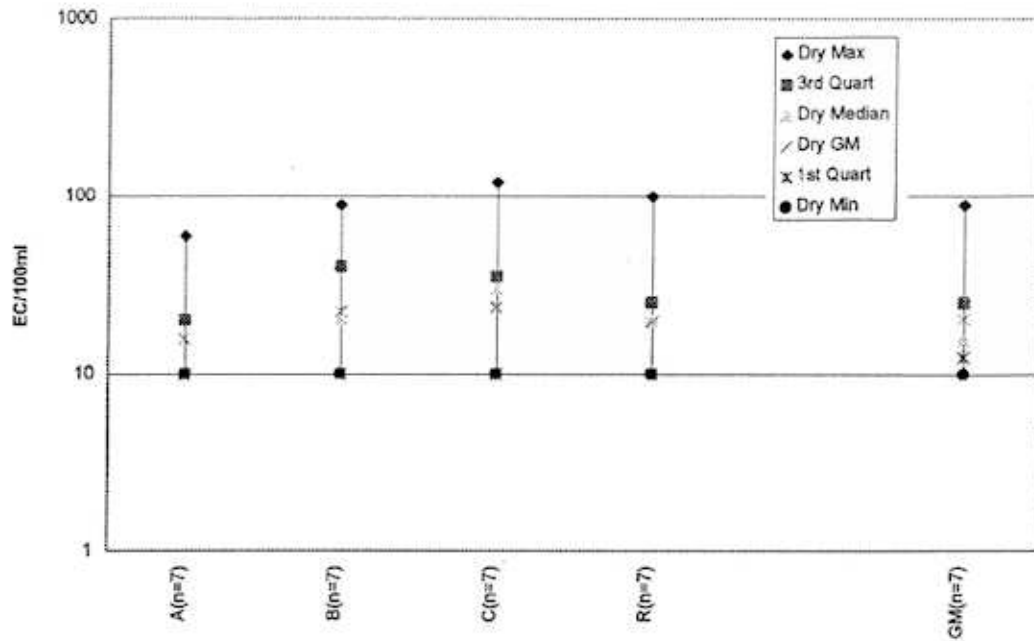


FIGURE 2: Kelso Reservoir With Sampling Stations

Kelso Reservoir Swimming Area
 DRY Weather Sampling
 E. COLI Concentrations



Kelso Reservoir Swimming Area
 WET Weather Sampling
 E. COLI Concentrations

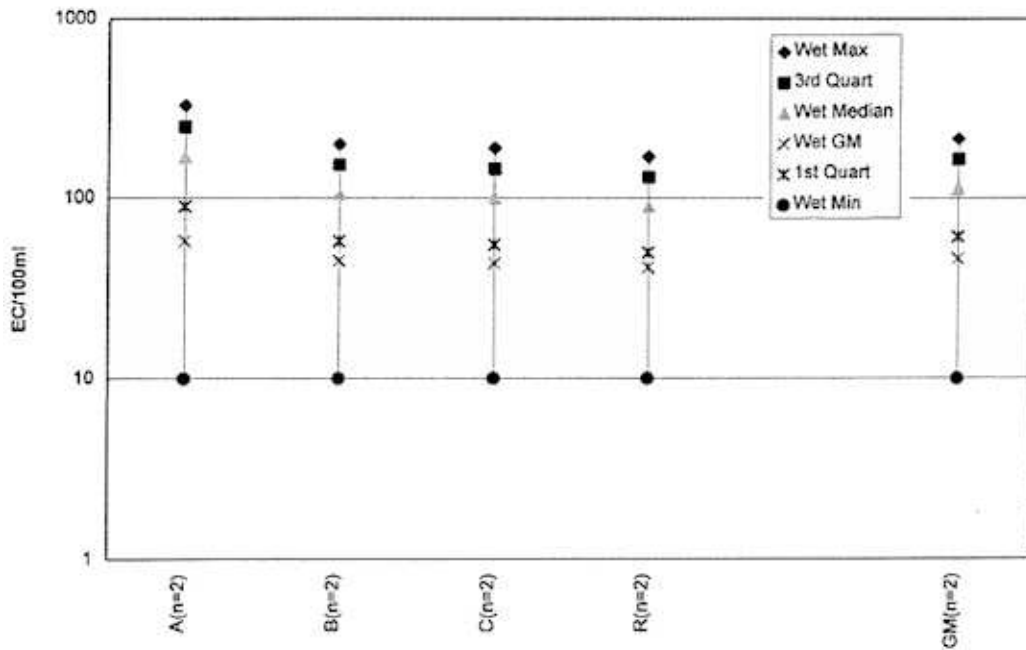


FIGURE 3: Kelso Reservoir Swimming Area 1995 *E. Coli* Concentrations

The results of the nutrient, chemical and physical parameters for Station B are presented in Appendices 2 and 3. These results again indicate that the water quality was acceptable. No seasonal mean for any parameter monitored exceeded PWQO standards. Less than two per cent of all samples exceeded PWQO standards. Excess nutrient concentrations and algae blooms were not problems at the reservoir.

2.2.2 Sixteen Mile Creek Watershed

The Sixteen Mile Creek watershed upstream of the Kelso reservoir was only sampled under the CURB program. Water samples to monitor bacterial, nutrient, physical and chemical parameters were collected weekly from each sampling station (Figure 4) from June 20 until September 12, 1995. Based on the results from previous years, some sampling stations were deleted from the network.

Results for all the parameters tested for each station are presented in Appendices 2 and 3.

The pattern of bacterial concentrations throughout the Sixteen Mile Creek watershed upstream of the Kelso reservoir was similar to concentrations monitored in previous years (Albanese, 1990; Gale, 1991; Gale, 1992; Gale, 1993; Gale, 1994; Gale, 1995) (Figure 5). Sampling stations with seasonal geometric means above the PWQO standard of 100 EC/100ml were found in association with two different sources. Elevated concentrations at Stations K6A and K6, located downstream from a large forest, were thought to be due to a large and very active beaver population. Station K7, on the Campbellville tributary, was downstream of a small pond where up to a dozen domestic geese and ducks are kept. In turn, this tended to attract large numbers of waterfowl. This source, along with an every expanding beaver population and the chronic low-level contamination from private sewage treatment systems in the village of Campbellville, were believed to be a major contributor to the elevated bacterial counts found in the lower reaches of this tributary. Elevated concentrations at Station K20 result from loads being delivered from upstream. Forty-nine per cent of all samples taken had concentrations exceeding PWQO guidelines, while 50 per cent of all watershed stations had bacterial seasonal geometric means above PWQO standards.

Nutrient, chemical and physical concentrations monitored in the watershed showed a similar pattern. Higher concentrations of Total Phosphorus and Total Kjeldahl Nitrogen were found at Station HF (Appendices 2 and 3). Elevated concentrations of Nitrate and Nitrite Nitrogen were found along the Campbellville tributary. Chronic low-level contamination from private sewage treatment systems in the village of Campbellville was believed to be the primary source. Elevated concentrations of Chlorides and the resulting higher Conductivity readings from seasonal use of road salt were also associated with the Campbellville tributary. Approximately 31 per cent of all nutrient, chemical and physical seasonal means were above PWQO standards.

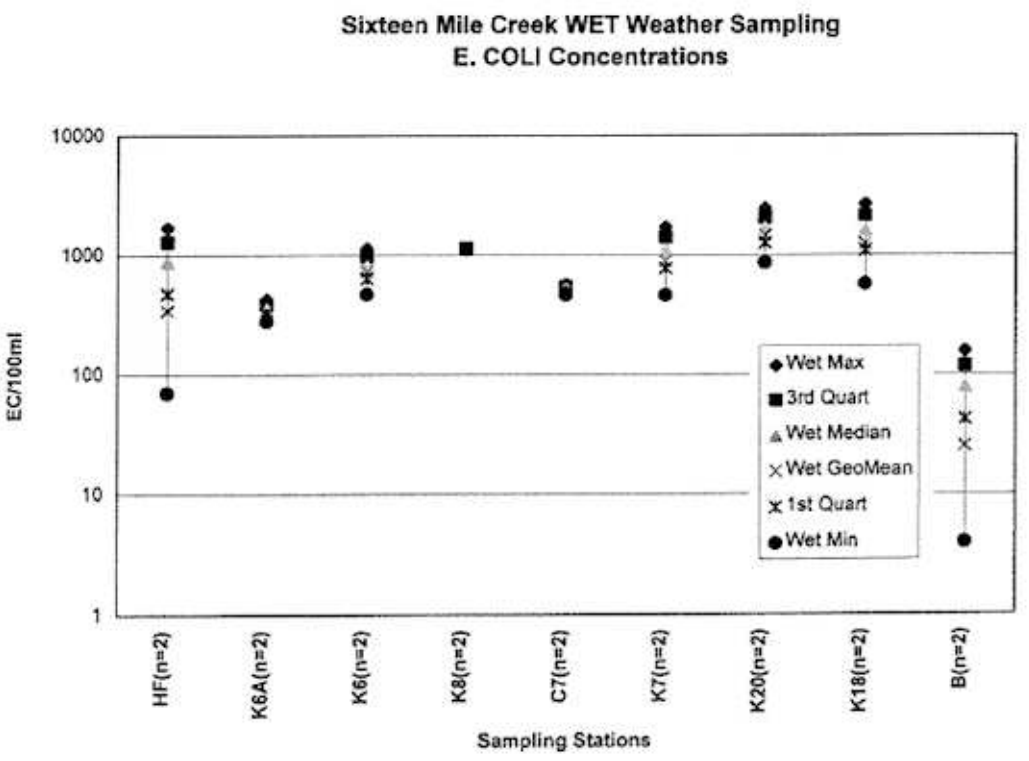
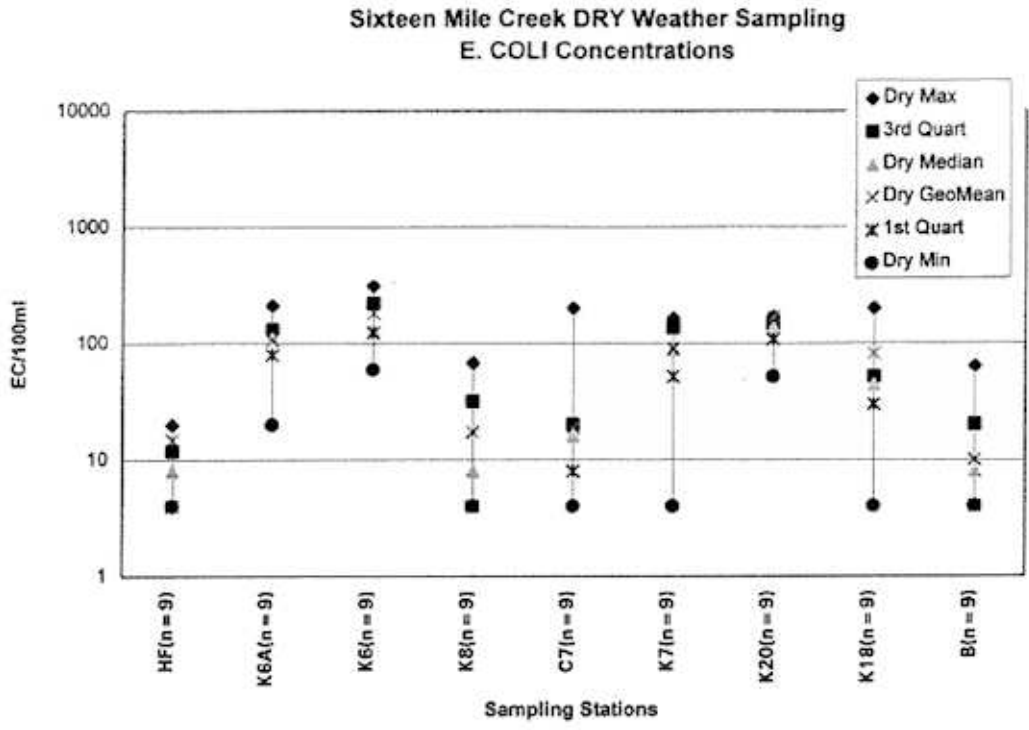


FIGURE 5: Sixteen Mile Creek Watershed *E. Coli* Concentrations

2.2.3 Special Projects

With the implementation of the first remedial project in the watershed in 1993, the special program to monitor the impact of the access restriction project was continued. Sampling station K20, upstream of the farmstead and station K18, located immediately downstream, were used to monitor the impact of the remedial project (Figure 4).

Based on the results of the samples the project continues to have a positive impact on the watercourse. In previous years bacterial concentrations and other water quality parameters were generally worse downstream of the farm. During the 1993, 1994 and 1995 sampling season the water quality was always better downstream of the farm (Appendix 2). This continues to indicate the positive impact of the remedial projects on surface water quality.

During 1995 a complete CURB program was also delivered for the Hamilton Region Conservation Authority in the Spencer Creek watershed upstream of the Christie and Valens reservoirs. A copy of the report for the Hamilton RCA CURB program is available upon request.

CURB IMPLEMENTATION PROGRAM

3.1 OBJECTIVES

The object of the 1995 HRCA CURB implementation program for the Sixteen Mile Creek watershed was to continue to implement as many projects as possible throughout the subject watershed.

3.2 HRCA CURB COMMITTEE

A local committee was established to review CURB applications within the watershed. Agency representation and voting structure on the committee was within the guidelines set by the MOEE.

The 1995 membership of the local committee was as follows:

Bob Edmondson	Halton Region Conservation Authority
Bob Hart	Halton Region Health Department
Mark Janiec	Ontario Ministry of Agriculture, Food and Rural Affairs
Peter Mar	Ontario Ministry of the Environment and Energy
Cecil Patterson	Halton Soil and Crop Improvement Association

The committee has agreed to meet as applications and circumstances require. Members are regularly consulted by telephone.

3.3 CURB APPLICATIONS

Since the implementation of the CURB program, over 30 inquiries have been received. The majority were requests for additional details on the program or confirmation as to whether the landowner was within the CURB watershed. While many of the landowners had legitimate projects, unfortunately they were located outside the subject watershed. From 1992 until 1994 eight applications were received. During 1995 no applications were submitted.

3.4 CURB PROJECTS

As of March 31, 1996, two remedial projects have been implemented. The first project involved fencing approximately 4400 feet of the watercourse on both sides, and the installation of alternate watering systems. Riparian revegetation was supplied by the HRCA. The landowner has agreed to have his farmstead serve as a demonstration project for other landowners in the watershed. The total cost of the project was approximately \$20,000.00. The other project involved repairs to a failed septic system. The total cost of this project was approximately \$5,000.00. One project was never completed.

Water quality in the Sixteen Mile Creek watershed upstream of Kelso remains relatively good. There have been no beach closures since 1990, although bacterial concentrations at the swimming area have occasionally briefly exceeded provincial guidelines. The GeoMean of bacterial concentrations at the reservoir during the swimming season have generally declined since 1990. The erection of the bird screen in 1990 and the completion of the access restriction project in 1993 have had the most positive impact on water quality.

The major problem for the HRCA CURB program was the small size of the watershed upstream of the beach and, consequently, the very limited number of farms located within the watershed. The program received a lot of inquiries from farmers located outside the CURB watershed where the majority of active farms are located. The inability to deliver the program was a source of frustration both to staff and to the farm community. Eventually certain members of the farm community became opposed to the program since they could not participate in it while a neighbour could. This undermined the program to some degree.

The CURB program, along with others, has increased public awareness of the importance of maintaining and improving water quality. It has helped shape public attitudes as to the importance of water quality to the local community. Hopefully the farm community along with other rural residents will continue to be environmentally sensitive.

INFORMATION AND EDUCATION PROGRAM

4.1 OBJECTIVES

Along with water quality monitoring and the implementation of remedial projects, an integral part of the 1995 HRCA CURB program was public information and education. A major component of water quality improvement must include the changing of public attitudes and habits regarding farm management and septic system maintenance. It was apparent from the results of 1991 HRCA RBP study that most landowners, whether farm operators or rural residents, did not feel that they were contributing to bacterial or nutrient pollution in the watershed (Gale, 1991). Unfortunately, this remains the case. Public awareness of the nature, scope and sources of bacterial and nutrient pollution, along with the implementation of effective remedial measures, is seen to be a vital aspect of improving water quality throughout the watershed. The goal of the public information and education program was to provide details of the CURB program to all watershed residents and to assist all interested parties with surface water quality concerns.

4.2 INFORMATION AND EDUCATION ACTIVITIES

One tool for increasing public awareness was a portable display used at various public venues. The purpose of the display was to introduce the CURB program to the public. In addition, it illustrated some causes and effects of rural pollution and recommended some remedial measures. After several years of use, it was felt that the display was of very limited usefulness to the program.

Newsletters were used to heighten the profile of the program and to increase the awareness of the rural community to water quality problems. The newsletters were used to publicize the activities of the HRCA CURB staff in and around the watershed and to answer questions regarding the program. The public was also encouraged to contact CURB staff to discuss any concerns regarding water quality in the study watershed. Copies of the newsletters were hand delivered to each resident located along the watercourse. In a small watershed this was felt to be the most effective means of communicating the aims of the program. It is hoped that the Conservation Authority will find the resources to continue a semi-annual or seasonal brochure stressing water related and other environmental concerns to watershed residents.

4.3 OTHER EXTENSION ACTIVITIES

During 1995, CURB staff of the Halton RCA continued to deliver a CURB program in the Spencer Creek watershed. The results of the water quality monitoring and CURB implementation program for the Hamilton Region Conservation Authority are available upon request.

In addition to the program to improve surface water quality in the Sixteen Mile Creek watershed, CURB staff provided information, technical expertise and advice to other interested parties within the HRCA jurisdiction.

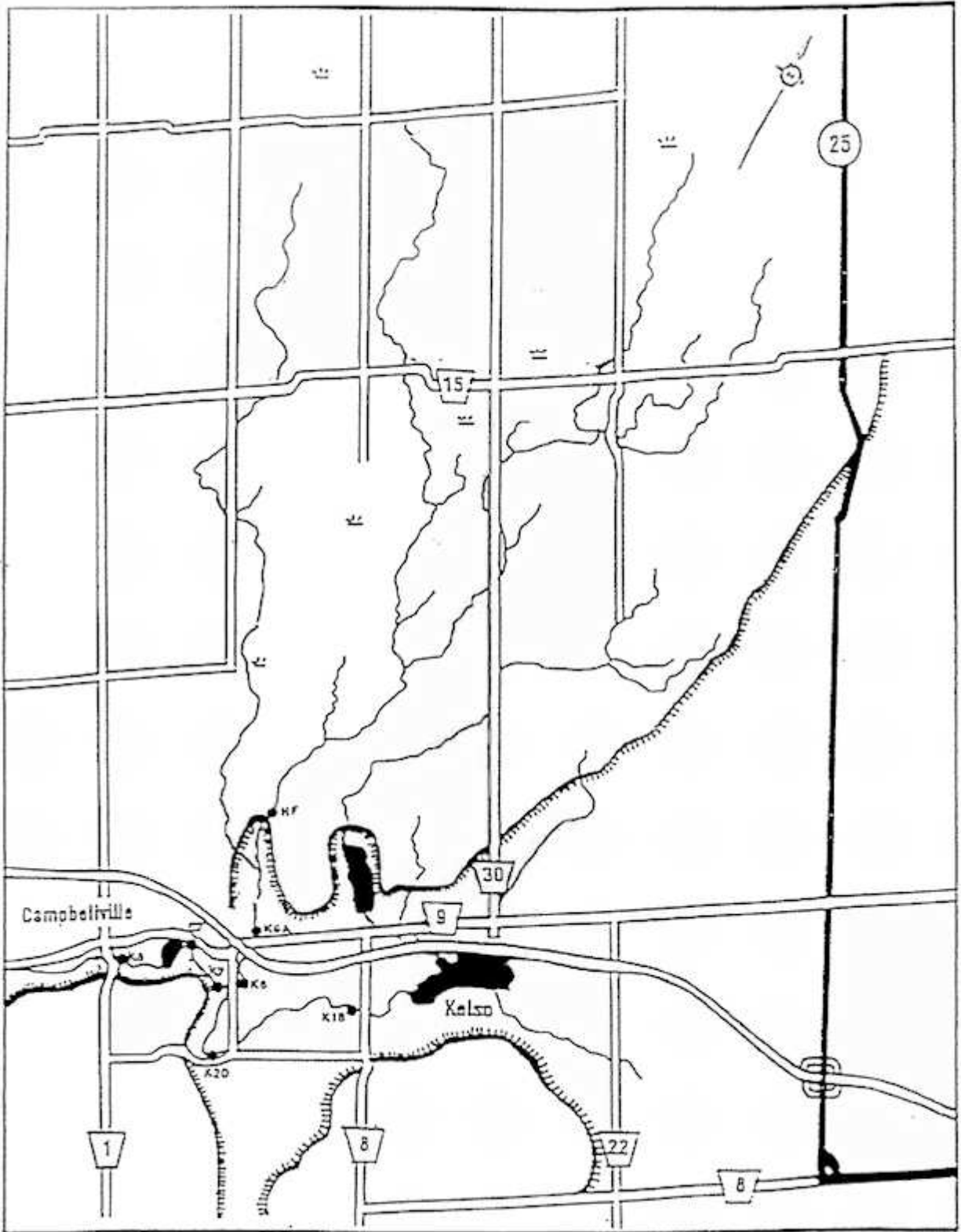
REFERENCES

- Albanese, P. 1990. Summary of the Rural Beaches Program 1990. Halton Region Conservation Authority. Milton, Ontario.
- Gale, D. 1991. Summary of the Rural Beaches Program 1991. Halton Region Conservation Authority. Milton, Ontario.
- Gale, D. 1991. Clean Up Rural Beaches Plan. Halton Region Conservation Authority. Milton, Ontario.
- Gale, D. 1992. Clean Up Rural Beaches Program - 1992 Annual Report. Halton Region Conservation Authority. Milton, Ontario.
- Gale, D. 1993. Clean Up Rural Beaches Program - 1993 Annual Report. Halton Region Conservation Authority. Milton, Ontario.
- Gale, D. 1994. Clean Up Rural Beaches Program - 1994 Annual Report. Halton Region Conservation Authority. Milton, Ontario.

APPENDICES

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Sixteen Mile Creek Watershed With Sampling Stations



APPENDIX 1: Kelso Reservoir 1995 *E. Coli* Concentrations

APPENDIX 1: Sixteen Mile Creek 1995 - KELSO HRHD Data

DATE	E	BACTERIAL DATA				
		A	B	C	R	GM
27-Jun-95	W	10	10	10	10	10
4-Jul-95	D	10	10	10	10	10
11-Jul-95	D	10	20	10	10	12
18-Jul-95	I	90	10	30	90	39
25-Jul-95	D	20	40	40	10	24
1-Aug-95	D	60	90	120	100	90
8-Aug-95	D	10	10	10	30	13
15-Aug-95	W	330	200	190	170	215
22-Aug-95	D	20	40	30	20	26
29-Aug-95	D	10	10	30	20	16
JunGM		10	10	10	10	10
JulyGM		21	17	19	17	18
AugGM		33	37	46	46	40
SeasonGM		24	24	27	27	26
Dry Max		60	90	120	100	90
3rd Quart		20	40	35	25	25
Dry Median		10	20	30	20	16
Dry GM		16	22	24	20	20
1 st Quart		10	10	10	10	13
Dry Min		10	10	10	10	10
Wet Max		330	200	190	170	215
3rd Quart		250	153	145	130	164
Wet Median		170	105	100	90	112
Wet GM		57	45	44	41	46
1 st Quart		90	58	55	50	61
Wet Min		10	10	10	10	10

APPENDIX 2: Sixteen Mile Creek 1995 - STATION B Data

DATE	E	BACTERIAL DATA			NUTRIENT, PHYSICAL, CHEMICAL DATA											
		EC	FS	PA	Cond.	pH	Chloride	S.S.	Turbid.	Phos.	PO4	T.K.N.	NH4	NO3	NO2	DOC
20-Jun-95	D	4	12	1	628	8.47	53.40	2.8	1.97	0.012	0.0010	0.400	0.002	0.262	0.0030	4.2
27-Jun-95	W	4	24	1	632	8.48	55.40	25.2	4.42	0.018	0.0005	0.420	0.006	0.135	0.0050	4.3
4-Jul-95	D	4	4	1	658	8.47	57.70	6.0	3.57	0.012	0.0025	0.380	0.006	0.266	0.0040	3.7
11-Jul-95	D	4	4	1	671	8.40	58.40	2.0	2.93	0.030	0.0030	0.540	0.080	0.250	0.0050	3.7
17-Jul-95	I	32	36	1	669	8.40	60.00	6.0	3.77	0.018	0.0015	0.380	0.028	0.230	0.0050	3.3
25-Jul-95	D	32	12	2	742	8.41	59.80	9.0	7.06	0.012	0.0015	0.360	0.006	0.195	0.0050	3.5
31-Jul-95	D	64	32	4	646	8.36	58.40	6.0	7.19	0.018	0.0005	0.380	0.032	0.104	0.0060	3.2
8-Aug-95	D	16	8	1	640	8.39	60.00	4.0	6.89	0.016	0.0010	0.380	0.036	0.109	0.0060	3.7
15-Aug-95	W	156	492	125	609	8.42	56.60	8.0	8.66	0.034	0.0010	0.380	0.044	0.112	0.0080	3.3
22-Aug-95	D	12	16	1	626	8.43	57.60	6.0	7.25	0.012	0.0005	0.360	0.034	0.029	0.0060	6.7
29-Aug-95	D	4	4	1	644	8.41	67.40	9.0	6.96	0.014	0.0005	0.420	0.026	0.065	0.0050	3.8
5-Sep-95	I	4	4	1	658	8.34	63.20	9.0	6.10	0.014	0.0010	0.390	0.016	0.056	0.0040	3.6
12-Sep-95	D															
Jun GM/Avg		4	17	1	630	8.47	55.50	113	3.32	0.014	0.0013	0.400	0.005	0.221	0.0040	4.1
July GM/Avg		16	12	2	677	8.40	59.40	5.7	4.59	0.020	0.0020	0.427	0.038	0.225	0.0050	3.5
Aug GM/Avg		19	22	3	630	8.40	60.00	6.6	7.39	0.019	0.0007	0.380	0.034	0.084	0.0062	4.1
Sep GM/Avg		4	4	1	658	8.34	63.20	9.0	6.10	0.014	0.0010	0.380	0.016	0.058	0.0040	3.6
Season GM/Avg		12	14	2	652	8.42	58.99	7.7	5.56	0.018	0.0012	0.397	0.026	0.151	0.0052	3.9
Dry Max		64	32	4	742	8.47	67.40	9.0	7.25	0.030	0.0030	0.540	0.080	0.266	0.0060	6.7
3 rd Quart		20	13	1	661	8.44	59.85	6.8	7.09	0.017	0.0018	0.405	0.035	0.253	0.0060	3.9
Dry Median		8	10	1	645	8.41	58.40	6.0	6.93	0.013	0.0010	0.380	0.029	0.152	0.0050	3.7
Dry GM/Avg		10	11	1	654	8.42	58.80	8.0	5.58	0.017	0.0011	0.408	0.028	0.144	0.0051	4.1
1 st Quart		4	4	1	637	8.40	57.68	3.6	3.41	0.012	0.0005	0.375	0.006	0.094	0.0048	3.7
Dry Min		4	4	1	626	8.36	53.40	2.0	1.97	0.012	0.0005	0.360	0.002	0.029	0.0030	3.2
Wet Max		156	492	125	632	8.48	56.60	25.2	8.66	0.034	0.0010	0.420	0.044	0.135	0.0080	4.3
3 rd Quart		118	375	94	626	8.47	56.30	20.9	7.60	0.030	0.0009	0.405	0.035	0.129	0.0073	4.1
Wet Median		80	258	63	621	8.45	56.00	16.8	6.54	0.026	0.0008	0.390	0.025	0.124	0.0065	3.8
Wet GM/Avg		25	109	11	621	8.45	56.00	16.6	6.54	0.026	0.0008	0.390	0.025	0.124	0.0065	3.8
1 st Quart		42	141	32	615	8.44	55.70	12.3	5.48	0.022	0.0006	0.375	0.016	0.118	0.0058	3.8
Wet Min		4	24	1	609	8.42	55.40	8.0	4.42	0.018	0.0005	0.360	0.006	0.112	0.0050	3.3

Sixteen Mile Creek 1995 - STATION K18 Data

DATE	E	BACTERIAL DATA			NUTRIENT, PHYSICAL, CHEMICAL DATA											
		EC	FS	PA	Cond.	pH	Chloride	S.S.	Turbid.	Phos.	PO4	T.K.N.	NH4	NO3	NO2	DOC
20-Jun-95	D	200	208	1	672	8.41	68.20	5.0	1.43	0.020	0.0005	0.400	0.002	0.427	0.0030	3.6
27-Jun-95	W	2650	3350	1	710	8.35	77.90	14.5	2.71	0.030	0.0005	0.460	0.002	0.326	0.0040	3.6
4-Jul-95	D	4	428	1	706	8.47	75.80	2.5	1.19	0.010	0.0005	0.280	0.002	0.413	0.0020	2.9
11-Jul-95	D	48	300	1	738	8.44	83.00	2.5	0.89	0.006	0.0005	0.240	0.002	0.478	0.0020	2.5
17-Jul-95	I	80	310	1	746	8.43	88.20	1.0	0.87	0.014	0.0005	0.320	0.004	0.537	0.0030	2.5
25-Jul-95	D	32	190	1	758	8.36	84.40	2.0	1.23	0.010	0.0010	0.280	0.002	0.454	0.0010	2.5
31-Jul-95	D	104	276	4	784	8.38	102.00	3.0	0.60	0.006	0.0005	0.280	0.002	0.473	0.0020	2.1
8-Aug-95	D	30	330	1	682	8.45	72.00	2.0	1.03	0.010	0.0015	0.280	0.006	0.388	0.0020	3.2
15-Aug-95	W	570	1620	2	525	8.36	37.20	17.0	5.97	0.052	0.0030	0.580	0.002	0.425	0.0050	5.1
22-Aug-95	D	28	290	1	653	8.43	62.60	1.0	0.80	0.014	0.0005	0.360	0.006	0.258	0.0020	6.8
29-Aug-95	D	44	440	1	720	8.41	83.60	2.0	0.63	0.008	0.0005	0.280	0.002	0.419	0.0010	2.9
5-Sep-95	I	40	170	1	746	8.54	88.00	10.0	0.72	0.012	0.0015	0.260	0.004	0.409	0.0010	2.5
12-Sep-95	D	52	180	1	817	8.45	107.00	8.0	1.05	0.006	0.0005	0.300	0.002	0.426	0.0040	2.4
Jun GM/Avg		728	835	1	691	8.41	73.97	7.3	1.78	0.020	0.0005	0.380	0.002	0.389	0.0030	3.4
July GM/Avg		35	291	1	746	8.41	85.20	1.8	1.00	0.010	0.0007	0.280	0.003	0.490	0.0020	2.5
Aug GM/Avg		68	511	1	645	8.41	71.48	5.0	1.81	0.018	0.0012	0.356	0.004	0.393	0.0024	4.0
Sep GM/Avg		46	175	1	782	8.50	97.50	9.0	0.89	0.009	0.0010	0.280	0.003	0.418	0.0025	2.5
Season GM/Avg		71	376	1	712	8.42	79.22	5.4	1.47	0.015	0.0009	0.332	0.003	0.418	0.0025	3.3
Dry Max		200	440	4	817	8.47	107.00	8.0	1.43	0.020	0.0015	0.400	0.006	0.478	0.0040	6.8
3 rd Quart		52	330	1	758	8.45	84.40	3.0	1.19	0.010	0.0005	0.300	0.002	0.454	0.0020	3.2
Dry Median		44	290	1	720	8.43	83.00	2.5	1.03	0.010	0.0005	0.280	0.002	0.426	0.0020	2.9
Dry GM/Avg		82	352	1	726	8.41	82.30	4.4	1.15	0.012	0.0007	0.320	0.003	0.405	0.0023	3.3
1 st Quart		30	208	1	682	8.41	72.00	2.0	0.80	0.006	0.0005	0.280	0.002	0.413	0.0020	2.5
Dry Min		4	180	1	653	8.36	62.60	1.0	0.60	0.006	0.0005	0.240	0.002	0.258	0.0010	2.1
Wet Max		2650	3350	2	710	8.36	77.90	17.0	5.97	0.052	0.0030	0.580	0.002	0.425	0.0050	5.1
3 rd Quart		2130	2918	2	664	8.36	67.73	16.4	5.16	0.047	0.0024	0.550	0.002	0.400	0.0048	4.7
Wet Median		1610	2485	2	618	8.36	57.55	15.8	4.34	0.041	0.0018	0.520	0.002	0.376	0.0045	4.4
Wet GM/Avg		1229	2330	1	618	8.36	57.55	15.8	4.34	0.041	0.0018	0.520	0.002	0.376	0.0045	4.4
1 st Quart		1090	2053	1	571	8.35	47.38	15.1	3.53	0.036	0.0011	0.490	0.002	0.351	0.0043	4.0
Wet Min		570	1620	1	525	8.35	37.20	14.5	2.71	0.030	0.0005	0.460	0.002	0.328	0.0040	3.6

APPENDIX 2: Sixteen Mile Creek 1995 - STATION K20 Data

DATE	E	BACTERIAL DATA			NUTRIENT, PHYSICAL, CHEMICAL DATA											
		EC	FS	PA	Cond.	pH	Chloride	S.S.	Turbid.	Phos.	PO4	T.K.N.	NH4	NO3	NO2	DOC
20-Jun-95	D	136	232	1	675	8.42	70.40	5.0	1.60	0.020	0.0005	0.400	0.002	0.327	0.0030	3.6
27-Jun-95	W	2450	2200	1	713	8.27	79.00	5.5	1.75	0.028	0.0005	0.480	0.002	0.255	0.0050	4.2
4-Jul-95	D	96	1180	1	715	8.42	77.90	2.0	1.29	0.014	0.0005	0.320	0.002	0.343	0.0020	3.2
11-Jul-95	D	52	480	1	743	8.42	85.02	2.5	1.12	0.008	0.0005	0.260	0.002	0.372	0.0030	2.9
17-Jul-95	I	210	540	3	731	8.38	85.60	3.0	1.53	0.018	0.0015	0.380	0.016	0.371	0.0040	2.8
25-Jul-95	D	116	360	1	759	8.37	89.80	2.0	1.32	0.014	0.0015	0.320	0.002	0.353	0.0020	2.8
31-Jul-95	D	140	660	1	820	8.34	113.00	3.0	1.03	0.012	0.0035	0.300	0.016	0.357	0.0030	2.2
8-Aug-95	D	170	570	1	683	8.39	74.40	3.0	1.32	0.012	0.0025	0.320	0.016	0.302	0.0030	3.5
15-Aug-95	W	860	1550	10	519	8.24	36.00	12.0	5.14	0.030	0.0050	0.540	0.002	0.408	0.0070	5.0
22-Aug-95	D	108	590	1	664	8.38	65.60	1.0	0.95	0.010	0.0015	0.340	0.012	0.183	0.0020	6.6
29-Aug-95	D	144	510	1	740	8.37	3100	3.0	0.85	0.010	0.0005	0.280	0.006	0.303	0.0020	3.3
5-Sep-95	I	40	480	1	798	8.55	103.00	2.0	0.66	0.010	0.0010	0.260	0.012	0.370	0.0050	2.8
12-Sep-95	D	144	130	9	897	8.32	134.00	6.0	1.99	0.004	0.0005	0.320	0.034	0.827	0.0080	2.0
Jun GM/Avg		577	714	1	694	8.37	75.77	4.2	1.55	0.021	0.0005	0.400	0.002	0.308	0.0033	3.7
July GM/Avg		111	592	1	754	8.39	86.81	2.5	1.32	0.013	0.0012	0.320	0.007	0.365	0.0030	2.8
Aug GM/Avg		218	718	2	652	8.34	76.00	4.4	1.86	0.015	0.0026	0.356	0.010	0.311	0.0034	4.1
Sep GM/Avg		76	245	3	848	8.44	118.50	4.0	1.33	0.007	0.0008	0.290	0.023	0.499	0.0065	2.4
Season GM/Avg		186	564	2	727	8.37	84.98	3.8	1.58	0.015	0.0015	0.348	0.010	0.352	0.0038	3.5
Dry Max		170	1180	9	897	8.42	134.00	6.0	1.99	0.020	0.0035	0.400	0.034	0.627	0.0080	6.6
3 rd Quart		144	590	1	759	8.42	91.00	3.0	1.32	0.014	0.0015	0.320	0.016	0.357	0.0030	3.5
Dry Median		136	510	1	740	8.38	85.02	3.0	1.29	0.012	0.0005	0.320	0.006	0.343	0.0030	3.2
Dry GM/Avg		168	478	1	744	8.36	89.14	3.4	1.33	0.013	0.0013	0.336	0.010	0.342	0.0034	3.5
1 st Quart		108	360	1	683	8.37	74.40	2.0	1.03	0.010	0.0005	0.300	0.002	0.303	0.0020	2.8
Dry Min		52	130	1	664	8.32	65.60	1.0	0.85	0.004	0.0005	0.260	0.002	0.183	0.0020	2.0
Wet Max		2450	2200	10	713	8.27	79.00	12.0	5.14	0.030	0.0050	0.540	0.002	0.408	0.0070	5.0
3 rd Quart		2053	2038	8	665	8.26	68.25	10.4	4.29	0.030	0.0039	0.525	0.002	0.370	0.0065	4.8
Wet Median		1655	1875	6	616	8.26	57.50	8.8	3.45	0.029	0.0028	0.510	0.002	0.332	0.0060	4.6
Wet GM/Avg		1452	1847	3	616	8.26	57.50	8.8	3.45	0.029	0.0028	0.510	0.002	0.332	0.0060	4.6
1 st Quart		1258	1713	3	568	8.25	46.75	7.1	2.60	0.029	0.0016	0.495	0.002	0.293	0.0055	4.4
Wet Min		860	1550	1	519	8.24	36.00	5.5	1.75	0.028	0.0005	0.480	0.002	0.255	0.0050	4.2

Sixteen Mile Creek 1995 - STATION K7 Data

DATE	E	BACTERIAL DATA			NUTRIENT, PHYSICAL, CHEMICAL DATA											
		EC	FS	PA	Cond.	pH	Chloride	S.S.	Turbid.	Phos.	PO4	T.K.N.	NH4	NO3	NO2	DOC
20-Jun-95	D	164	196	4	903	8.34	137.00	17.6	2.97	0.022	0.0005	0.420	0.002	0.694	0.0060	2.2
27-Jun-95	W	1720	1820	23	894	8.26	126.00	6.5	2.53	0.024	0.0005	0.480	0.036	0.400	0.0050	2.8
4-Jul-95	D	68	264	24	888	8.36	123.00	13.0	4.20	0.012	0.0005	0.340	0.014	0.629	0.0060	2.3
11-Jul-95	D	52	256	10	913	8.36	129.00	7.5	1.54	0.010	0.0005	0.300	0.022	0.655	0.0050	2.1
17-Jul-95	I	160	340	1	881	8.37	126.00	3.0	1.55	0.014	0.0005	0.360	0.024	0.569	0.0060	2.1
25-Jul-95	D	136	490	5	899	8.31	142.00	47.0	1.47	0.038	0.0005	0.400	0.016	0.525	0.0050	2.2
31-Jul-95	D	88	300	1	882	8.36	132.00	3.0	0.72	0.006	0.0005	0.300	0.016	0.479	0.0060	2.4
8-Aug-95	D	40	330	2	857	8.38	117.00	4.0	0.87	0.006	0.0005	0.360	0.034	0.529	0.0060	2.8
15-Aug-95	W	460	1400	2												
22-Aug-95	D	88	360	1	862	8.28	118.00	7.0	1.42	0.008	0.0005	0.380	0.056	0.446	0.0090	7.1
29-Aug-95	D	184	240	1	906	8.31	138.00	4.0	1.04	0.010	0.0005	0.340	0.036	0.560	0.0050	2.5
5-Sep-95	I	156	200	1	894	8.35	131.00	8.0	0.95	0.006	0.0010	0.340	0.040	0.568	0.0070	2.4
12-Sep-95	D	4	10	1	916	8.27	134.00	14.0	2.03	0.006	0.0005	0.400	0.070	0.648	0.0120	2.1
Jun GM/Avg		531	597	10	899	8.32	128.67	12.4	3.23	0.019	0.0005	0.413	0.017	0.574	0.0057	2.4
July GM/Avg		92	320	4	892	8.35	132.33	19.2	1.52	0.021	0.0005	0.353	0.021	0.583	0.0053	2.1
Aug GM/Avg		128	447	1	875	8.33	125.75	4.5	1.01	0.008	0.0005	0.345	0.038	0.504	0.0065	3.7
Sep GM/Avg		25	45	1	905	8.31	132.50	11.0	1.49	0.006	0.0008	0.370	0.055	0.608	0.0095	2.3
Season GM/Avg		109	289	3	891	8.33	128.25	11.2	1.77	0.014	0.0005	0.368	0.031	0.559	0.0065	2.8
Dry Max		164	490	24	916	8.38	142.00	47.0	4.20	0.038	0.0005	0.420	0.070	0.694	0.0120	7.1
3 rd Quart		136	330	5	906	8.36	137.00	14.0	2.03	0.012	0.0005	0.400	0.036	0.648	0.0060	2.5
Dry Median		88	264	2	899	8.34	132.00	7.5	1.47	0.010	0.0005	0.360	0.022	0.580	0.0060	2.3
Dry GM/Avg		90	250	3	892	8.32	130.11	12.3	1.62	0.014	0.0005	0.376	0.032	0.548	0.0066	2.9
1 st Quart		52	240	1	882	8.31	123.00	4.0	1.04	0.006	0.0005	0.340	0.016	0.525	0.0050	2.2
Dry Min		4	10	1	857	8.27	116.00	3.0	0.72	0.006	0.0005	0.300	0.002	0.446	0.0050	2.1
Wet Max		1720	1820	23	894	8.26	126.00	6.5	2.53	0.024	0.0005	0.480	0.036	0.400	0.0050	2.8
3 rd Quart		1405	1715	18	894	8.26	126.00	6.5	2.53	0.024	0.0005	0.480	0.036	0.400	0.0050	2.8
Wet Median		1090	1610	13	894	8.26	126.00	6.5	2.53	0.024	0.0005	0.480	0.036	0.400	0.0050	2.8
Wet GM/Avg		889	1596	7	894	8.26	126.00	6.5	2.53	0.024	0.0005	0.480	0.036	0.400	0.0050	2.8
1 st Quart		775	1505	7	894	8.26	126.00	6.5	2.53	0.024	0.0005	0.480	0.036	0.400	0.0050	2.8
Wet Min		460	1400	2	894	8.26	126.00	6.5	2.53	0.024	0.0005	0.480	0.036	0.400	0.0050	2.8

APPENDIX 2: Sixteen Mile Creek 1995 - STATION C7 Data

DATE	E	BACTERIAL DATA			NUTRIENT, PHYSICAL, CHEMICAL DATA											
		EC	FS	PA	Cond.	pH	Chloride	S.S.	Turbid.	Phos.	PO4	T.K.N.	NH4	NO3	NO2	DOC
20-Jun-95	D	60	68	1	910	8.31	139.00	5.3	2.42	0.012	0.0005	0.420	0.028	0.755	0.0100	2.4
27-Jun-95	W	464	348	1	916	8.28	129.00	16.0	1.81	0.020	0.0005	0.380	0.026	0.429	0.0110	2.8
4-Jul-95	D	200	104	1	892	8.34	123.00	8.5	3.68	0.010	0.0005	0.360	0.038	0.670	0.0100	2.5
11-Jul-95	D	4	156	1	918	8.33	127.00	5.5	1.60	0.008	0.0005	0.300	0.052	0.702	0.0080	2.3
17-Jul-95	I	110	110	1	884	8.40	126.00	2.0	1.25	0.010	0.0005	0.380	0.058	0.600	0.0100	2.3
25-Jul-95	D	16	96	1	899	8.33	137.00	5.0	1.23	0.012	0.0005	0.380	0.050	0.550	0.0100	2.6
31-Jul-95	D	20	210	1	887	8.33	124.00	6.0	1.05	0.012	0.0005	0.400	0.052	0.520	0.0100	2.8
8-Aug-95	D	8	300	1	863	8.32	110.00	2.0	0.91	0.008	0.0005	0.500	0.108	0.570	0.0100	3.2
15-Aug-95	W	570	1150	32	808	8.33	112.00	9.0	3.68	0.008	0.0015	0.460	0.116	0.821	0.0190	3.5
22-Aug-95	D	12	140	1	867	8.28	117.00	4.0	2.43	0.010	0.0005	0.480	0.118	0.469	0.0110	6.9
29-Aug-95	D	20	180	1	912	8.29	133.00	9.0	1.08	0.008	0.0005	0.420	0.088	0.597	0.0080	2.7
5-Sep-95	I	48	120	1	910	8.41	134.00	5.0	1.18	0.008	0.0010	0.420	0.098	0.599	0.0110	2.4
12-Sep-95	D	4	10	1	916	8.27	134.00	14.0	2.03	0.006	0.0005	0.400	0.070	0.648	0.0120	2.1
Jun GM/Avg		167	154	1	913	8.31	130.33	9.9	2.64	0.014	0.0005	0.387	0.031	0.618	0.0103	2.6
July GM/Avg		31	129	1	896	8.35	130.00	4.2	1.38	0.010	0.0005	0.353	0.053	0.617	0.0093	2.4
Aug GM/Avg		32	305	2	863	8.31	119.20	6.0	1.83	0.009	0.0007	0.452	0.096	0.555	0.0116	3.8
Sep GM/Avg		14	35	1	913	8.34	134.00	9.5	1.61	0.007	0.0008	0.410	0.084	0.624	0.0115	2.3
Season GM/Avg		6	141	1	891	8.32	126.54	7.0	1.87	0.010	0.0006	0.408	0.069	0.595	0.0108	3.0
Dry Max		200	300	1	918	8.34	139.00	14.0	3.68	0.012	0.0005	0.500	0.118	0.755	0.0120	6.9
3 rd Quart		20	180	1	912	8.33	134.00	8.5	2.42	0.012	0.0005	0.420	0.088	0.670	0.0100	2.8
Dry Median		16	140	1	899	8.32	127.00	5.5	1.80	0.010	0.0005	0.400	0.052	0.597	0.0100	2.6
Dry GM/Avg		19	121	1	899	8.30	127.78	7.4	1.62	0.011	0.0005	0.409	0.066	0.582	0.0100	3.1
1 st Quart		8	96	1	887	8.29	123.00	5.0	1.08	0.008	0.0005	0.380	0.050	0.550	0.0100	2.4
Dry Min		4	10	1	863	8.27	110.00	2.0	0.91	0.006	0.0005	0.300	0.028	0.469	0.0080	2.1
Wet Max		570	1150	32	916	8.33	129.00	16.0	3.68	0.020	0.0015	0.460	0.116	0.621	0.0190	3.5
3 rd Quart		544	950	24	889	8.32	124.75	14.3	3.21	0.017	0.0013	0.440	0.094	0.573	0.0170	3.3
Wet Median		517	749	17	862	8.31	120.50	12.5	2.75	0.014	0.0010	0.420	0.071	0.525	0.0150	3.2
Wet GM/Avg		514	633	6	862	8.31	120.50	12.5	2.75	0.014	0.0010	0.420	0.071	0.525	0.0150	3.2
1 st Quart		491	549	9	835	8.29	116.25	10.8	2.28	0.011	0.0008	0.400	0.049	0.477	0.0130	3.0
Wet Min		464	348	1	808	8.28	112.00	9.0	1.81	0.008	0.0005	0.380	0.026	0.429	0.0110	2.8

Sixteen Mile Creek 1995 - STATION K8 Data

DATE	E	BACTERIAL DATA			NUTRIENT, PHYSICAL, CHEMICAL DATA											
		EC	FS	PA	Cond.	pH	Chloride	S.S.	Turbid.	Phos.	PO4	T.K.N.	NH4	NO3	NO2	DOC
20-Jun-95	D	68	140	1	910	8.26	130.00	2.5	1.30	0.012	0.0005	0.360	0.016	0.760	0.0100	2.4
27-Jun-95	W	1140	1840	1	916	8.18	123.00	3.0	1.56	0.016	0.0005	0.440	0.024	0.480	0.0100	2.8
4-Jul-95	D	48	108	1	895	8.32	119.00	16.0	0.79	0.022	0.0005	0.400	0.026	0.727	0.0080	2.6
11-Jul-95	D	32	136	1	906	8.30	119.00	2.0	0.95	0.008	0.0005	0.280	0.020	0.781	0.0090	2.3
17-Jul-95	I	160	260	1	893	8.32	120.00	3.0	1.03	0.016	0.0005	0.420	0.042	0.657	0.0130	2.8
25-Jul-95	D	28	92	1	892	8.23	118.00	3.0	1.29	0.016	0.0010	0.380	0.040	0.689	0.0110	2.7
31-Jul-95	D	4	60	1	917	8.19	130.00	5.0	1.33	0.012	0.0005	0.360	0.050	0.659	0.0110	2.5
8-Aug-95	D	4	80	1	831	8.22	99.40	3.0	1.73	0.008	0.0005	0.520	0.052	0.560	0.0100	4.6
15-Aug-95	W	1120	1500	80	683	8.21	80.60	11.0	11.30	0.016	0.0025	0.480	0.048	0.542	0.0330	6.6
22-Aug-95	D	8	136	1	893	8.22	119.00	4.0	1.49	0.010	0.0005	0.380	0.040	0.564	0.0110	7.1
29-Aug-95	D	4	188	1	898	8.20	126.00	4.0	1.26	0.010	0.0005	0.320	0.034	0.722	0.0080	2.1
5-Sep-95	I	12	210	2	886	8.41	116.00	6.0	1.28	0.008	0.0010	0.320	0.040	0.691	0.0090	2.5
12-Sep-95	D	4	120	1	902	8.29	120.00	6.0	1.50	0.006	0.0005	0.320	0.028	0.758	0.0070	2.0
Jun GM/Avg		278	508	1	913	8.25	124.00	7.2	1.22	0.017	0.0005	0.400	0.022	0.656	0.0093	2.6
July GM/Avg		31	116	1	901	8.28	119.00	2.7	1.09	0.013	0.0007	0.360	0.034	0.709	0.0110	2.6
Aug GM/Avg		19	235	3	826	8.21	111.00	5.4	3.42	0.011	0.0009	0.412	0.045	0.609	0.0146	4.6
Sep GM/Avg		7	159	1	894	8.35	118.00	6.0	1.39	0.007	0.0008	0.320	0.034	0.725	0.0080	2.3
Season GM/Avg		30	190	1	879	8.26	116.92	5.3	2.66	0.012	0.0007	0.383	0.035	0.661	0.0115	3.3
Dry Max		68	188	1	917	8.32	130.00	16.0	1.73	0.022	0.0010	0.520	0.052	0.781	0.0110	7.1
3 rd Quart		32	136	1	906	8.29	126.00	5.0	1.49	0.012	0.0005	0.380	0.040	0.758	0.0110	2.7
Dry Median		8	120	1	898	8.23	119.00	4.0	1.30	0.010	0.0005	0.360	0.034	0.722	0.0100	2.5
Dry GM/Avg		17	154	1	896	8.23	120.49	3.6	1.38	0.011	0.0006	0.373	0.034	0.664	0.0097	3.2
1 st Quart		4	92	1	893	8.22	119.00	3.0	1.26	0.008	0.0005	0.320	0.026	0.659	0.0080	2.3
Dry Min		4	60	1	831	8.19	99.40	2.0	0.79	0.006	0.0005	0.280	0.016	0.560	0.0070	2.0
Wet Max		1140	1840	80	916	8.21	123.00	11.0	11.30	0.016	0.0025	0.480	0.048	0.542	0.0330	6.6
3 rd Quart		1135	1755	60	858	8.20	112.40	9.0	8.87	0.016	0.0020	0.470	0.042	0.527	0.0273	5.7
Wet Median		1130	1670	41	800	8.20	101.80	7.0	6.43	0.016	0.0015	0.460	0.036	0.511	0.0215	4.7
Wet GM/Avg		1130	1661	9	800	8.20	101.80	7.0	6.43	0.016	0.0015	0.460	0.036	0.511	0.0215	4.7
1 st Quart		1125	1585	21	741	8.19	91.20	5.0	4.00	0.016	0.0010	0.450	0.030	0.496	0.0158	3.8
Wet Min		1120	1500	1	683	8.18	80.60	3.0	1.56	0.016	0.0005	0.440	0.024	0.480	0.0100	2.8

APPENDIX 2: Sixteen Mile Creek 1995 - STATION K6 Data

DATE	E	BACTERIAL DATA			NUTRIENT, PHYSICAL, CHEMICAL DATA											
		EC	FS	PA	Cond.	pH	Chloride	S.S.	Turbid.	Phos.	PO4	T.K.N.	NH4	NO3	NO2	DOC
20-Jun-95	D	312	412	1	457	8.23	14.90	4.2	2.22	0.028	0.0025	0.500	0.004	0.035	0.0020	5.5
27-Jun-95	W	472	596	1	459	8.13	14.60	3.0	2.12	0.026	0.0015	0.520	0.018	0.025	0.0010	5.3
4-Jul-95	D	80	410	1	462	8.29	14.00	44.0	13.20	0.024	0.0120	0.480	0.012	0.010	0.0020	4.7
11-Jul-95	D	124	450	1	488	8.26	14.40	3.5	1.30	0.016	0.0005	0.360	0.008	0.009	0.0010	4.6
17-Jul-95	I	370	850	17	467	8.19	14.20	6.0	3.77	0.042	0.0070	0.660	0.068	0.037	0.0030	4.6
25-Jul-95	D	180	740	1	478	8.19	14.00	16.0	3.17	0.028	0.0050	0.460	0.026	0.035	0.0020	4.3
31-Jul-95	D	288	700	1	544	8.19	32.00	4.0	3.50	0.028	0.0065	0.520	0.050	0.100	0.0100	4.7
8-Aug-95	D	130	510	1	462	8.22	13.20	6.0	2.97	0.020	0.0045	0.420	0.038	0.054	0.0060	4.5
15-Aug-95	W	1140	1920	2	418	8.22	12.20	15.0	4.40	0.036	0.0075	0.580	0.002	0.331	0.0190	5.4
22-Aug-95	D	220	210	1	472	8.19	14.60	4.0	2.64	0.020	0.0035	0.460	0.018	0.001	0.0040	7.2
29-Aug-95	D	60	290	1	480	8.19	15.60	3.0	1.21	0.018	0.0015	0.420	0.020	0.054	0.0080	4.8
5-Sep-95	I	192	210	1	718	8.47	78.80	2.0	0.79	0.008	0.0020	0.340	0.042	0.327	0.0070	3.4
12-Sep-95	D	128	130	17	780	8.36	84.40	2.0	1.12	0.006	0.0005	0.340	0.028	0.370	0.0050	2.7
Jun GM/Avg		384	496	1	458	8.24	14.50	17.1	5.85	0.026	0.0053	0.493	0.011	0.023	0.0017	5.2
July GM/Avg		180	574	2	483	8.21	14.20	8.5	2.75	0.029	0.0042	0.493	0.034	0.027	0.0020	4.5
Aug GM/Avg		210	494	1	458	8.20	17.52	8.4	2.94	0.024	0.0047	0.480	0.027	0.108	0.0090	5.3
Sep GM/Avg		157	165	4	739	8.42	81.60	2.0	0.98	0.007	0.0013	0.340	0.035	0.349	0.0060	3.1
Season GM/Avg		208	442	2	511	8.25	25.92	8.7	3.26	0.023	0.0042	0.485	0.026	0.107	0.0052	4.7
Dry Max		312	740	17	760	8.36	84.40	44.0	13.20	0.028	0.0120	0.520	0.056	0.370	0.0100	7.2
3 rd Quart		220	510	1	480	8.26	15.60	6.0	3.17	0.028	0.0050	0.460	0.028	0.054	0.0060	4.8
Dry Median		130	412	1	472	8.22	14.60	4.0	2.64	0.020	0.0035	0.460	0.020	0.035	0.0040	4.7
Dry GM/Avg		181	394	1	509	8.22	24.19	5.1	2.25	0.021	0.0029	0.444	0.024	0.076	0.0041	4.8
1 st Quart		124	290	1	462	8.19	14.00	3.5	1.30	0.016	0.0015	0.420	0.012	0.010	0.0020	4.5
Dry Min		60	130	1	457	8.19	13.20	2.0	1.12	0.006	0.0005	0.340	0.004	0.001	0.0010	2.7
Wet Max		1140	1920	2	459	8.22	14.60	15.0	4.40	0.036	0.0075	0.580	0.018	0.331	0.0190	5.4
3 rd Quart		973	1589	2	449	8.21	14.00	12.0	3.83	0.034	0.0060	0.565	0.014	0.254	0.0145	5.4
Wet Median		806	1258	2	439	8.21	13.40	9.0	3.26	0.031	0.0045	0.550	0.010	0.178	0.0100	5.4
Wet GM/Avg		734	1070	2	439	8.21	13.40	9.0	3.26	0.031	0.0045	0.550	0.010	0.178	0.0100	5.4
1 st Quart		639	927	1	428	8.20	12.80	6.0	2.69	0.029	0.0030	0.535	0.006	0.101	0.0055	5.3
Wet Min		472	596	1	418	8.19	12.20	3.0	2.12	0.026	0.0015	0.520	0.002	0.025	0.0010	5.3

Sixteen Mile Creek 1995 - STATION K6A Data

DATE	E	BACTERIAL DATA			NUTRIENT, PHYSICAL, CHEMICAL DATA											
		EC	FS	PA	Cond.	pH	Chloride	S.S.	Turbid.	Phos.	PO4	T.K.N.	NH4	NO3	NO2	DOC
20-Jun-95	D	212	260	1	457	8.25	14.90	2.6	1.47	0.018	0.0025	0.440	0.002	0.078	0.0020	5.4
27-Jun-95	W	280	564	11	468	8.13	14.60	3.5	1.82	0.022	0.0020	0.460	0.002	0.044	0.0010	5.4
4-Jul-95	D	104	352	1	467	8.30	14.00	2.5	1.10	0.046	0.0005	0.580	0.002	0.033	0.0020	4.3
11-Jul-95	D	76	300	1	473	8.28	14.40	3.0	1.24	0.016	0.0005	0.340	0.002	0.028	0.0030	4.4
17-Jul-95	I	580	1370	4	471	8.18	14.20	2.0	2.48	0.026	0.0035	0.440	0.036	0.057	0.0030	4.3
25-Jul-95	D	110	240	1	480	8.21	14.00	5.0	1.55	0.022	0.0030	0.380	0.010	0.039	0.0010	4.1
31-Jul-95	D	80	1910	1	484	8.12	15.60	8.0	3.28	0.070	0.0045	0.760	0.072	0.002	0.0030	4.6
8-Aug-95	D	132	352	1	467	8.26	13.40	2.0	1.66	0.012	0.0050	0.340	0.016	0.068	0.0020	4.3
15-Aug-95	W	430	1010	2	419	8.27	11.00	5.0	2.06	0.022	0.0100	0.460	0.012	0.136	0.0240	5.4
22-Aug-95	D	120	240	1	484	8.23	14.80	3.0	1.44	0.018	0.0045	0.420	0.016	0.025	0.0030	5.3
29-Aug-95	D	144	210	1	482	8.22	15.40	2.0	1.15	0.014	0.0030	0.400	0.012	0.064	0.0010	4.7
5-Sep-95	I	148	140	1	487	8.49	15.60	3.0	1.02	0.014	0.0025	0.320	0.016	0.038	0.0020	4.4
12-Sep-95	D	20	70	1	495	8.30	16.80	4.0	1.88	0.012	0.0010	0.360	0.004	0.009	0.0010	3.7
Jun GM/Avg		244	383	3	463	8.23	14.50	2.9	1.46	0.029	0.0017	0.493	0.002	0.052	0.0017	5.0
July GM/Avg		132	581	1	475	8.22	14.20	3.3	1.76	0.021	0.0023	0.387	0.016	0.041	0.0023	4.3
Aug GM/Avg		177	366	1	463	8.22	14.04	4.0	1.92	0.027	0.0054	0.476	0.026	0.059	0.0066	4.9
Sep GM/Avg		54	99	1	491	8.40	16.20	3.5	1.45	0.013	0.0018	0.340	0.010	0.024	0.0015	4.1
Season GM/Avg		139	360	1	472	8.25	14.52	3.5	1.70	0.024	0.0033	0.438	0.016	0.048	0.0037	4.6
Dry Max		212	1910	1	495	8.30	16.80	8.0	3.28	0.070	0.0050	0.760	0.072	0.078	0.0030	5.4
3 rd Quart		132	352	1	484	8.28	15.40	4.0	1.66	0.022	0.0045	0.440	0.016	0.064	0.0030	4.7
Dry Median		110	260	1	480	8.25	14.80	3.0	1.47	0.018	0.0030	0.400	0.010	0.033	0.0020	4.4
Dry GM/Avg		107	308	1	477	8.22	14.88	3.7	1.72	0.023	0.0029	0.433	0.015	0.040	0.0019	4.7
1 st Quart		80	240	1	467	8.22	14.00	2.5	1.24	0.014	0.0010	0.360	0.002	0.025	0.0010	4.3
Dry Min		20	70	1	457	8.12	13.40	2.0	1.10	0.012	0.0005	0.340	0.002	0.002	0.0010	3.7
Wet Max		430	1010	1	468	8.27	14.60	5.0	2.06	0.022	0.0100	0.460	0.012	0.136	0.0240	5.4
3 rd Quart		393	899	9	456	8.24	13.70	4.6	2.00	0.022	0.0080	0.460	0.010	0.113	0.0183	5.4
Wet Median		355	787	7	444	8.20	12.80	4.3	1.94	0.022	0.0080	0.460	0.007	0.090	0.0125	5.4
Wet GM/Avg		347	755	5	444	8.20	12.80	4.3	1.94	0.022	0.0060	0.460	0.007	0.090	0.0125	5.4
1 st Quart		318	676	4	431	8.17	11.90	3.9	1.88	0.022	0.0040	0.460	0.005	0.067	0.0068	5.4
Wet Min		280	564	2	419	8.13	11.00	3.5	1.82	0.022	0.0020	0.460	0.002	0.044	0.0010	5.4

APPENDIX 2: Sixteen Mile Creek 1995 - STATION HF Data

DATE	E	BACTERIAL DATA				NUTRIENT, PHYSICAL, CHEMICAL DATA										
		EC	FS	PA	Cond.	pH	Chloride	S.S.	Turbid.	Phos.	PO4	T.K.N.	NH4	NO3	NO2	DOC
20-Jun-95	D	20	616	2	426	8.20	14.60	4.1	2.77	0.032	0.0075	0.560	0.002	0.109	0.0010	7.0
27-Jun-95	W	1700	1080	1	432	8.13	14.20	5.0	8.01	0.045	0.0085	0.600	0.002	0.108	0.0020	7.0
4-Jul-95	D	4	220	1	421	8.25	13.10	2.5	1.84	0.028	0.0040	0.480	0.002	0.133	0.0020	5.8
11-Jul-95	D	16	220	1	431	8.23	13.60	2.5	2.19	0.022	0.0080	0.400	0.002	0.118	0.0020	5.8
17-Jul-95	I	40	240	1	429	8.20	12.80	2.0	3.16	0.034	0.0145	0.440	0.002	0.288	0.0020	5.2
25-Jul-95	D	8	140	1	446	8.21	13.60	3.0	2.00	0.030	0.0145	0.460	0.002	0.184	0.0010	5.4
31-Jul-95	D	4	60	1	451	8.08	14.00	42.0	19.10	0.230	0.0175	1.600	0.010	0.268	0.0020	5.4
8-Aug-95	D	10	140	1	446	8.21	13.60	4.0	1.73	0.022	0.0110	0.400	0.010	0.128	0.0020	5.1
15-Aug-95	W	70	700	2	422	8.15	11.60	6.0	1.80	0.026	0.0075	0.520	0.004	0.001	0.0040	6.6
22-Aug-95	D	4	84	1	458	8.18	15.80	4.0	1.93	0.022	0.0100	0.560	0.002	0.123	0.0020	5.0
29-Aug-95	D	12	120	1	454	8.11	15.60	3.0	1.92	0.028	0.0130	0.560	0.004	0.184	0.0010	6.8
5-Sep-95	I	4	60	1	449	8.41	14.80	3.0	1.58	0.026	0.0125	0.480	0.008	0.224	0.0010	6.6
12-Sep-95	D	4	20	1	461	8.25	13.60	2.0	1.58	0.022	0.0125	0.460	0.002	0.218	0.0020	5.2
Jun GM/Avg		184	816	1	429	8.19	13.97	3.9	4.21	0.035	0.0067	0.547	0.002	0.117	0.0017	6.6
July GM/Avg		10	158	1	436	8.21	13.33	2.5	2.45	0.029	0.0123	0.433	0.002	0.197	0.0017	5.5
Aug GM/Avg		14	177	1	445	8.15	14.12	11.8	5.30	0.066	0.0118	0.728	0.006	0.141	0.0022	5.8
Sep GM/Avg		4	35	1	455	8.33	14.20	2.5	1.58	0.024	0.0125	0.470	0.005	0.221	0.0015	5.9
Season GM/Avg		15	167	1	440	8.20	13.92	6.4	3.82	0.044	0.0108	0.578	0.004	0.160	0.0018	5.9
Dry Max		20	616	2	461	8.25	15.80	42.0	19.10	0.230	0.0175	1.600	0.010	0.268	0.0020	7.0
3 rd Quart		12	220	1	454	8.23	14.60	4.0	2.19	0.030	0.0130	0.560	0.004	0.184	0.0020	5.8
Dry Median		8	140	1	446	8.21	13.60	3.0	1.93	0.028	0.0110	0.480	0.002	0.133	0.0020	5.4
Dry GM/Avg		15	148	1	445	8.18	14.29	7.7	4.58	0.050	0.0114	0.622	0.004	0.160	0.0017	5.9
1 st Quart		4	84	1	431	8.18	13.60	2.5	1.84	0.022	0.1080	0.460	0.002	0.123	0.0010	5.2
Dry Min		4	20	1	421	8.08	13.10	2.0	1.58	0.022	0.0040	0.400	0.002	0.109	0.0010	5.0
Wet Max		1700	1080	2	432	8.15	14.20	6.0	8.01	0.045	0.0085	0.600	0.004	0.108	0.0040	7.0
3 rd Quart		1293	985	2	430	8.15	13.55	5.8	6.46	0.040	0.0083	0.580	0.004	0.081	0.0035	6.9
Wet Median		885	890	2	427	8.14	12.90	5.5	4.91	0.036	0.0080	0.560	0.003	0.055	0.0030	6.8
Wet GM/Avg		345	869	1	427	8.14	12.90	5.5	4.91	0.036	0.0080	0.560	0.003	0.055	0.0030	6.8
1 st Quart		478	795	1	425	8.14	12.25	5.3	3.35	0.031	0.0078	0.540	0.003	0.028	0.0025	6.7
Wet Min		70	700	1	422	8.13	11.60	5.0	1.80	0.026	0.0075	0.520	0.002	0.001	0.0020	6.6

APPENDIX 3: Sixteen Mile Creek 1995 - E. COLI Data

DATE	E	SAMPLING STATIONS									
		HF	K6A	K6	K8	C7	K7	K20	K18	B	
20-Jun-95	D	20	212	312	68	60	164	136	200	4	
27-Jun-95	W	1700	280	472	1140	464	1720	2450	2650	4	
4-Jul-95	D	4	104	80	48	200	68	96	4	4	
11-Jul-95	D	16	78	124	32	4	52	52	48	4	
17-Jul-95	I	40	580	370	160	110	160	210	80	32	
25-Jul-95	D	8	110	180	28	16	136	116	32	32	
31-Jul-95	D	4	80	288	4	20	88	140	104	64	
8-Aug-95	D	10	132	130	4	8	40	170	30	16	
15-Aug-95	W	70	430	1140	1120	570	460	860	570	156	
22-Aug-95	D	4	120	220	8	12	88	108	28	12	
29-Aug-95	D	12	144	60	4	20	164	144	44	4	
5-Sep-95	I	4	148	192	12	48	156	40	40	4	
12-Sep-95	D	4	20	128	4	4	4	144	52		
Jun GM		184	244	384	276	167	531	577	728	4	
July GM		10	132	180	31	31	92	111	35	16	
Aug GM		14	177	210	19	32	128	218	68	19	
Sep GM		4	54	157	7	14	25	76	46	4	
Season GM		15	139	208	30	36	109	166	71	12	
Dry Max		20	212	312	68	200	164	170	200	64	
3 rd Quart		12	132	220	32	20	136	144	52	20	
Dry Median		8	110	130	8	16	88	136	44	8	
Dry GeoMean		15	107	181	17	19	90	168	82	10	
1 st Quart		4	80	124	4	8	52	108	30	4	
Dry Min		4	20	60	4	4	4	52	4	4	
Wet Max		1700	430	1140	1140	570	1720	2450	2650	156	
3 rd Quart		1293	393	973	1135	544	1405	2053	2130	118	
Wet Median		885	355	806	1130	517	1090	1655	1610	80	
Wet GeoMean		345	347	734	1130	514	889	1452	1229	25	
1 st Quart		478	318	639	1125	491	77	1258	1090	42	
Wet Min		70	280	472	1120	464	460	860	570	4	

Sixteen Mile Creek 1995 - FECAL STREPTOCOCCI Data

DATE	E	SAMPLING STATIONS									
		HF	K6A	K6	K8	C7	K7	K20	K18	B	
20-Jun-95	D	616	260	412	140	68	196	232	208	12	
27-Jun-95	W	1080	564	596	1840	348	1820	2200	3350	24	
4-Jul-95	D	220	352	410	108	104	264	1180	428	4	
11-Jul-95	D	220	300	450	136	156	256	480	300	4	
17-Jul-95	I	240	1370	650	260	110	340	540	310	36	
25-Jul-95	D	140	240	740	92	96	490	360	190	12	
31-Jul-95	D	60	1910	700	60	210	300	660	276	32	
8-Aug-95	D	140	352	510	80	300	330	570	330	8	
15-Aug-95	W	700	1010	1920	1500	1150	1400	1550	1620	492	
22-Aug-95	D	84	240	210	136	140	360	590	290	16	
29-Aug-95	D	120	210	290	188	180	240	510	440	4	
5-Sep-95	I	60	140	210	210	120	200	460	170	4	
12-Sep-95	D	20	70	130	120	10	10	130	180		
Jun GM		816	383	496	508	154	597	714	835	17	
July GM		158	581	574	116	129	320	592	291	12	
Aug GM		177	366	494	235	305	447	718	511	22	
Sep GM		35	99	165	159	35	45	245	175	4	
Season GM		167	360	442	190	141	289	564	376	14	
Dry Max		616	1910	740	188	300	490	1180	440	32	
3 rd Quart		220	352	510	136	180	330	590	330	13	
Dry Median		140	260	412	120	140	264	510	290	10	
Dry GeoMean		148	308	394	154	121	250	478	352	11	
1 st Quart		84	240	290	92	96	240	360	208	4	
Dry Min		20	70	130	60	10	10	130	180	4	
Wet Max		1080	1010	1920	1840	1150	1820	2200	3350	492	
3 rd Quart		985	899	1589	1755	950	1715	2038	2918	375	
Wet Median		890	787	1258	1670	749	1610	75	2485	258	
Wet GeoMean		869	755	1070	1661	633	1596	1847	2330	109	
1 st Quart		795	676	927	1585	549	1505	1713	2053	141	
Wet Min		700	564	596	1500	348	1400	1550	1620	24	

APPENDIX 3: Sixteen Mile Creek 1995 - PSEUDOMONAS AERUGINOSA Data

DATE	E	SAMPLING STATIONS									
		HF	K6A	K6	K8	C7	K7	K20	K18	B	
20-Jun-95	D	2	1	1	1	1	4	1	1	1	1
27-Jun-95	W	1	11	1	1	1	23	1	1	1	1
4-Jul-95	D	1	1	1	1	1	24	1	1	1	1
11-Jul-95	D	1	1	1	1	1	10	1	1	1	1
17-Jul-95	I	1	4	17	1	1	1	3	1	1	1
25-Jul-95	D	1	1	1	1	1	5	1	1	1	2
31-Jul-95	D	1	1	1	1	1	1	1	4	1	4
8-Aug-95	D	1	1	1	1	1	2	1	1	1	1
15-Aug-95	W	2	2	2	80	32	2	10	2	125	1
22-Aug-95	D	1	1	1	1	1	1	1	1	1	1
29-Aug-95	D	1	1	1	1	1	1	1	1	1	1
5-Sep-95	I	1	1	1	2	1	1	1	1	1	1
12-Sep-95	D	1	1	17	1	1	1	1	9	1	1
Jun GM		1	3	1	1	1	10	1	1	1	1
July GM		1	1	2	1	1	4	1	1	1	2
Aug GM		1	1	1	3	2	1	2	1	1	3
Sep GM		1	1	4	1	1	1	3	1	1	1
Season GM		1	1	2	1	1	3	2	1	2	2
Dry Max		2	1	17	1	1	24	9	4	4	4
3 rd Quart		1	1	1	1	1	5	1	1	1	1
Dry Median		1	1	1	1	1	2	1	1	1	1
Dry GeoMean		1	1	1	1	1	3	1	1	1	1
1 st Quart		1	1	1	1	1	1	1	1	1	1
Dry Min		1	1	1	1	1	1	1	1	1	1
Wet Max		2	11	2	80	32	23	10	2	125	1
3 rd Quart		2	9	2	60	24	18	8	2	94	1
Wet Median		2	7	2	41	17	13	6	2	63	1
Wet GeoMean		1	5	1	9	6	7	3	1	11	1
1 st Quart		1	4	1	21	9	7	3	1	32	1
Wet Min		1	2	1	1	1	2	1	1	1	1

APPENDIX 3: Sixteen Mile Creek 1995 - CONDUCTIVITY Data

DATE	E	SAMPLING STATIONS									
		HF	K6A	K6	K8	C7	K7	K20	K18	B	
20-Jun-95	D	426	457	457	910	910	903	675	672	628	
27-Jun-95	W	432	468	459	916	916	894	713	710	632	
4-Jul-95	D	421	467	462	895	892	888	715	706	658	
11-Jul-95	D	431	473	468	906	915	913	743	738	671	
17-Jul-95	I	429	471	467	893	884	881	731	746	669	
25-Jul-95	D	446	480	476	892	899	899	759	758	742	
31-Jul-95	D	451	484	544	917	887	882	820	784	646	
8-Aug-95	D	446	467	462	831	863	857	883	682	640	
15-Aug-95	W	422	419	418	683	808		519	525	609	
22-Aug-95	D	458	484	472	893	867	862	664	853	626	
29-Aug-95	D	454	482	480	898	912	906	740	720	644	
5-Sep-95	I	449	487	718	886	910	894	798	746	658	
12-Sep-95	D	461	495	760	902	916	916	897	817		
Jun GM		429	463	458	913	913	899	694	691	630	
July GM		436	475	483	901	896	892	754	746	677	
Aug GM		445	463	458	826	863	875	652	645	630	
Sep GM		455	491	739	894	913	905	848	782	658	
Season GM		440	472	511	879	891	891	727	712	652	
Dry Max		461	495	760	917	918	916	897	817	742	
3 rd Quart		454	484	480	906	912	906	759	758	661	
Dry Median		446	480	472	898	899	899	740	720	645	
Dry GeoMean		445	477	509	896	899	892	744	726	654	
1 st Quart		431	467	462	893	887	882	683	682	637	
Dry Min		421	457	457	831	863	857	664	653	626	
Wet Max		432	468	459	916	916	894	713	710	632	
3 rd Quart		430	456	449	858	889	894	665	664	626	
Wet Median		427	444	439	800	862	894	616	618	621	
Wet GeoMean		427	444	439	800	862	894	616	618	621	
1 st Quart		425	431	428	741	835	894	568	571	615	
Wet Min		422	419	418	683	808	894	519	525	609	

Sixteen Mile Creek 1995 - pH Data

DATE	E	SAMPLING STATIONS									
		HF	K6A	K6	K8	C7	K7	K20	K18	B	
20-Jun-95	D	8.20	8.25	8.23	8.26	8.31	8.34	8.42	8.41	8.47	
27-Jun-95	W	8.13	8.13	8.19	8.18	8.28	8.26	8.27	8.35	8.48	
4-Jul-95	D	8.25	8.30	8.29	8.32	8.34	8.36	8.42	8.47	8.47	
11-Jul-95	D	8.23	8.28	8.26	8.30	8.33	8.36	8.42	8.44	8.40	
17-Jul-95	I	8.20	8.18	8.19	8.32	8.40	8.37	8.38	8.43	8.40	
25-Jul-95	D	8.21	8.21	8.19	8.23	8.33	8.31	8.37	8.36	8.41	
31-Jul-95	D	8.08	8.12	8.19	8.19	8.33	8.36	8.34	8.38	8.36	
8-Aug-95	D	8.21	8.26	8.22	8.22	8.32	8.38	8.39	8.45	8.39	
15-Aug-95	W	8.15	8.27	8.22	8.21	8.33		8.24	8.36	8.42	
22-Aug-95	D	8.18	8.23	8.19	8.22	8.28	8.28	8.38	8.43	8.43	
29-Aug-95	D	8.11	8.22	8.19	8.20	8.29	8.31	8.37	8.41	8.41	
5-Sep-95	I	8.41	8.49	8.47	8.41	8.41	8.35	8.55	8.54	8.34	
12-Sep-95	D	8.25	8.30	8.36	8.29	8.27	8.27	8.32	8.45		
Jun GM		8.17	8.19	8.21	8.22	8.30	8.30	8.35	8.41	8.47	
July GM		8.19	8.22	8.22	8.27	8.35	8.35	8.39	8.41	8.40	
Aug GM		8.16	8.25	8.21	8.21	8.31	8.32	8.35	8.41	8.40	
Sep GM		8.33	8.40	8.42	8.35	8.34	8.31	8.44	8.50	8.34	
Season GM		8.20	8.25	8.25	8.26	8.32	8.33	8.37	8.42	8.42	
Dry Max		8.25	8.30	8.36	8.32	8.34	8.38	8.42	8.54	8.48	
3 rd Quart		8.23	8.28	8.26	8.29	8.33	8.36	8.42	8.44	8.44	
Dry Median		8.21	8.25	8.22	8.23	8.32	8.34	8.38	8.43	8.42	
Dry GeoMean		8.18	8.22	8.22	8.23	8.30	8.32	8.38	8.42	8.42	
1 st Quart		8.18	8.22	8.19	8.22	8.29	8.31	8.37	8.41	8.40	
Dry Min		8.08	8.12	8.19	8.19	8.27	8.27	8.32	8.35	8.34	
Wet Max		8.15	8.27	8.22	8.21	8.33	8.26	8.27	8.45	8.39	
3 rd Quart		8.15	8.24	8.21	8.20	8.32	8.26	8.26	8.45	8.39	
Wet Median		8.14	8.20	8.21	8.20	8.31	8.26	8.26	8.45	8.39	
Wet GeoMean		8.14	8.20	8.21	8.20	8.31	8.26	8.26	8.45	8.39	
1 st Quart		8.14	8.17	8.20	8.19	8.29	8.26	8.25	8.45	8.39	
Wet Min		8.13	8.13	8.19	8.18	8.28	8.26	8.24	8.45	8.39	

APPENDIX 3: Sixteen Mile Creek 1995 - CHLORIDE Data

DATE	E	SAMPLING STATIONS									
		HF	K6A	K6	K8	C7	K7	K20	K18	B	
20-Jun-95	D	14.60	14.90	14.90	130.00	13900	137.00	70.40	68.20	53.40	
27-Jun-95	W	14.20	14.60	14.60	123.00	129.00	126.00	79.00	77.90	55.40	
4-Jul-95	D	13.10	14.00	14.00	119.00	123.00	123.00	77.90	75.80	57.70	
11-Jul-95	D	13.60	14.40	14.40	119.00	127.00	129.00	85.02	83.00	58.40	
17-Jul-95	I	12.80	14.20	14.20	120.00	126.00	126.00	85.60	88.20	60.00	
25-Jul-95	D	13.60	14.00	14.00	118.00	137.00	142.00	89.80	84.40	59.80	
31-Jul-95	D	14.00	15.60	32.00	130.00	124.00	132.00	113.00	102.00	58.40	
8-Aug-95	D	13.60	13.40	13.20	99.40	110.00	117.00	74.40	72.00	60.00	
15-Aug-95	W	11.60	11.00	12.20	80.60	112.00		36.00	37.20	56.60	
22-Aug-95	D	15.80	14.80	14.60	119.00	117.00	116.00	65.60	62.60	57.60	
29-Aug-95	D	15.60	15.40	15.60	126.00	133.00	138.00	91.00	83.60	67.40	
5-Sep-95	I	14.80	15.60	78.80	116.00	134.00	131.00	103.00	88.00	63.20	
12-Sep-95	D	13.60	16.80	84.40	120.00	134.00	134.00	134.00	107.00		
Jun GM		14.40	14.75	14.75	126.50	134.00	131.50	74.70	73.97	55.50	
July GM		13.42	14.44	17.72	121.20	127.40	130.40	90.26	85.20	59.40	
Aug GM		14.15	13.65	13.90	106.25	118.00	123.67	66.75	71.48	60.00	
Sep GM		14.20	16.20	81.60	118.00	134.00	132.50	118.50	97.50	63.20	
Season GM		13.92	14.52	25.92	116.92	126.54	129.25	84.98	79.22	58.99	
Dry Max		15.80	16.80	84.40	130.00	139.00	142.00	134.00	107.00	67.40	
3 rd Quart		14.60	15.40	15.60	126.00	134.00	137.00	91.00	88.00	60.80	
Dry Median		13.60	14.80	14.60	119.00	127.00	132.00	85.02	83.00	58.00	
Dry GeoMean		14.29	14.88	24.19	120.49	127.78	130.11	89.14	77.30	59.00	
1 st Quart		13.60	14.00	14.00	119.00	123.00	123.00	74.40	68.20	56.30	
Dry Min		13.10	13.40	13.20	99.40	110.00	116.00	65.60	37.20	53.40	
Wet Max		14.20	14.60	14.60	123.00	129.00	126.00	79.00	72.00	60.00	
3 rd Quart		13.55	13.70	14.00	112.40	124.75	126.00	68.25	72.00	60.00	
Wet Median		12.90	12.80	13.40	101.80	120.50	126.00	57.50	72.00	60.00	
Wet GeoMean		12.90	12.80	13.40	101.80	120.50	126.00	57.50	72.00	60.00	
1 st Quart		12.25	11.90	12.80	91.20	116.25	126.00	46.75	72.00	60.00	
Wet Min		11.60	11.00	12.20	80.60	112.00	126.00	36.00	72.00	60.00	

Sixteen Mile Creek 1995 - SUSPENDED SOLIDS Data

DATE	E	SAMPLING STATIONS									
		HF	K6A	K6	K8	C7	K7	K20	K18	B	
20-Jun-95	D	4.1	2.6	4.2	2.5	5.3	17.6	5.0	5.0	2.6	
27-Jun-95	W	5.0	3.5	3.0	3.0	16.0	6.5	5.5	14.5	25.2	
4-Jul-95	D	2.5	2.5	44.0	16.0	8.5	13.0	2.0	2.5	6.0	
11-Jul-95	D	2.5	3.0	3.5	2.0	5.5	7.5	2.5	2.5	2.0	
17-Jul-95	I	2.0	2.0	6.0	3.0	2.0	3.0	3.0	1.0	6.0	
25-Jul-95	D	3.0	5.0	16.0	3.0	5.0	47.0	2.0	2.0	9.0	
31-Jul-95	D	42.0	8.0	4.0	5.0	6.0	3.0	3.0	3.0	6.0	
8-Aug-95	D	4.0	2.0	6.0	3.0	2.0	4.0	3.0	2.0	4.0	
15-Aug-95	W	6.0	5.0	15.0	11.0	9.0		12.0	17.0	8.0	
22-Aug-95	D	4.0	3.0	4.0	4.0	4.0	7.0	1.0	1.0	6.0	
29-Aug-95	D	3.0	2.0	3.0	4.0	9.0	4.0	3.0	2.0	9.0	
5-Sep-95	I	3.0	3.0	2.0	6.0	5.0	8.0	2.0	10.0	9.0	
12-Sep-95	D	2.0	4.0	2.0	6.0	14.0	14.0	6.0	8.0		
Jun GM		4.6	3.1	3.6	2.7	10.7	12.4	4.2	7.3	11.3	
July GM		10.4	4.1	14.7	5.8	5.4	19.2	2.5	1.8	5.7	
Aug GM		4.3	3.0	7.0	5.5	6.0	4.5	4.4	5.0	6.6	
Sep GM		2.5	3.5	2.0	6.0	9.5	11.0	4.0	9.0	9.0	
Season GM		6.4	3.5	8.7	5.3	7.0	11.2	3.8	5.4	7.7	
Dry Max		42.0	8.0	44.0	16.0	14.0	17.6	12.0	17.0	25.2	
3 rd Quart		4.0	4.0	6.0	5.0	8.5	9.5	5.5	10.0	9.0	
Dry Median		3.0	3.0	4.0	4.0	5.5	7.3	3.0	5.0	7.0	
Dry GeoMean		7.7	3.7	5.1	3.6	7.4	8.5	4.4	6.8	8.5	
1 st Quart		2.5	2.5	3.5	3.0	5.0	5.9	2.5	2.0	5.1	
Dry Min		2.0	2.0	2.0	2.0	2.0	3.0	1.0	1.0	2.0	
Wet Max		6.0	5.0	15.0	11.0	16.0	4.0	3.0	2.0	4.0	
3 rd Quart		5.8	4.6	12.0	9.0	14.3	4.0	3.0	2.0	4.0	
Wet Median		5.5	4.3	9.0	7.0	12.5	4.0	3.0	2.0	4.0	
Wet GeoMean		5.5	4.3	9.0	7.0	12.5	4.0	3.0	2.0	4.0	
1 st Quart		5.3	3.9	6.0	5.0	10.8	4.0	3.0	2.0	4.0	
Wet Min		5.0	3.5	3.0	3.0	9.0	4.0	3.0	2.0	4.0	

APPENDIX 3: Sixteen Mile Creek 1995 TURBIDITY Data

DATE	E	SAMPLING STATIONS								
		HF	K6A	K6	K8	C7	K7	K20	K18	B
20-Jun-95	D	2.77	1.47	2.22	1.30	2.42	2.97	1.60	1.43	1.97
27-Jun-95	W	8.01	1.82	2.12	1.56	1.81	2.53	1.75	2.71	4.42
4-Jul-95	D	1.84	1.10	13.20	0.79	3.68	4.20	1.29	1.19	3.57
11-Jul-95	D	2.19	1.24	1.30	0.95	1.60	1.54	1.12	0.89	2.93
17-Jul-95	I	3.16	2.48	3.77	1.03	1.25	1.55	1.53	0.87	3.77
25-Jul-95	D	2.00	1.55	3.17	1.29	1.23	1.47	1.32	1.23	7.06
31-Jul-95	D	19.10	3.28	3.50	1.33	1.05	0.72	1.03	0.60	7.19
8-Aug-95	D	1.73	1.66	2.97	1.73	0.91	0.87	1.32	1.03	6.89
15-Aug-95	W	1.80	2.06	4.40	11.30	3.68		5.14	5.97	8.66
22-Aug-95	D	1.93	1.44	2.64	1.49	2.43	1.42	0.95	0.80	7.25
29-Aug-95	D	1.92	1.15	1.21	1.26	1.08	1.04	0.85	0.63	6.96
5-Sep-95	I	1.58	1.02	0.79	1.28	1.18	0.95	0.66	0.72	6.10
12-Sep-95	D	1.58	1.88	1.12	1.50	2.03	2.03	1.99	1.05	
Jun GM		5.39	1.65	2.17	1.43	2.12	2.75	1.68	1.78	3.32
July GM		5.66	1.93	4.99	1.08	1.76	1.90	1.26	1.00	4.59
Aug GM		1.85	1.58	2.81	3.95	2.03	1.11	2.07	1.81	7.39
Sep GM		1.58	1.45	0.96	1.39	1.61	1.49	1.33	0.89	6.10
Season GM		3.82	1.70	3.26	2.06	1.87	1.77	1.58	1.47	5.56
Dry Max		19.10	3.28	13.20	1.73	3.68	4.20	1.99	5.97	8.66
3 rd Quart		2.19	1.66	3.17	1.49	2.42	2.03	1.32	1.43	7.03
Dry Median		1.93	1.47	2.64	1.30	1.60	1.47	1.29	0.89	5.26
Dry GeoMean		4.58	1.72	2.25	2.25	1.62	1.62	1.33	1.67	5.26
1 st Quart		1.84	1.24	1.30	1.26	1.08	1.04	1.03	0.80	3.56
Dry Min		1.58	1.10	1.12	0.79	0.91	0.72	0.85	0.63	1.97
Wet Max		8.01	2.06	4.40	11.30	3.68	2.53	5.14	1.03	6.89
3 rd Quart		6.46	2.00	3.83	8.87	3.21	2.53	4.29	1.03	6.89
Wet Median		4.91	1.94	3.26	6.43	2.75	2.53	3.45	1.03	6.89
Wet GeoMean		4.91	1.94	3.26	6.43	2.75	2.53	3.45	1.03	6.89
1 st Quart		3.35	1.88	2.69	4.00	2.28	2.53	2.60	1.03	6.89
Wet Min		1.80	1.82	2.12	1.56	1.81	2.53	1.75	1.03	6.89

Sixteen Mile Creek 1995 - TOTAL PHOSPHORUS Data

DATE	E	SAMPLING STATIONS								
		HF	K6A	K6	K8	C7	K7	K20	K18	B
20-Jun-95	D	0.032	0.018	0.028	0.012	0.012	0.022	0.020	0.020	0.012
27-Jun-95	W	0.045	0.022	0.026	0.016	0.020	0.024	0.028	0.030	0.018
4-Jul-95	D	0.028	0.046	0.024	0.022	0.010	0.012	0.014	0.010	0.012
11-Jul-95	D	0.022	0.016	0.016	0.008	0.008	0.010	0.008	0.006	0.030
17-Jul-95	I	0.034	0.026	0.042	0.016	0.010	0.014	0.018	0.014	0.018
25-Jul-95	D	0.030	0.022	0.028	0.016	0.012	0.038	0.014	0.010	0.012
31-Jul-95	D	0.230	0.070	0.028	0.012	0.012	0.006	0.012	0.006	0.018
8-Aug-95	D	0.022	0.012	0.020	0.008	0.008	0.006	0.012	0.010	0.016
15-Aug-95	W	0.026	0.022	0.036	0.016	0.008		0.030	0.052	0.034
22-Aug-95	D	0.022	0.018	0.020	0.010	0.010	0.008	0.010	0.014	0.012
29-Aug-95	D	0.028	0.014	0.016	0.010	0.008	0.010	0.010	0.008	0.014
5-Sep-95	I	0.026	0.014	0.008	0.008	0.008	0.006	0.010	0.012	0.014
12-Sep-95	D	0.022	0.012	0.006	0.006	0.006	0.006	0.004	0.006	
Jun GM		0.039	0.020	0.027	0.014	0.016	0.023	0.024	0.020	0.014
July GM		0.069	0.036	0.028	0.015	0.010	0.016	0.013	0.010	0.020
Aug GM		0.025	0.017	0.023	0.011	0.009	0.008	0.016	0.018	0.019
Sep GM		0.024	0.013	0.007	0.007	0.007	0.006	0.007	0.009	0.014
Season GM		0.044	0.024	0.023	0.012	0.010	0.014	0.015	0.015	0.018
Dry Max		0.230	0.070	0.028	0.022	0.012	0.038	0.020	0.052	0.034
3 rd Quart		0.030	0.022	0.028	0.012	0.012	0.012	0.014	0.020	0.021
Dry Median		0.028	0.018	0.020	0.010	0.010	0.010	0.012	0.014	0.016
Dry GeoMean		0.050	0.023	0.021	0.011	0.011	0.014	0.013	0.018	0.019
1 st Quart		0.022	0.014	0.016	0.008	0.008	0.006	0.010	0.008	0.014
Dry Min		0.022	0.012	0.006	0.006	0.006	0.006	0.004	0.006	0.012
Wet Max		0.045	0.022	0.036	0.016	0.020	0.024	0.030	0.010	0.016
3 rd Quart		0.040	0.022	0.034	0.016	0.017	0.024	0.030	0.010	0.016
Wet Median		0.036	0.022	0.031	0.016	0.014	0.024	0.029	0.010	0.016
Wet GeoMean		0.036	0.022	0.031	0.016	0.014	0.024	0.029	0.010	0.016
1 st Quart		0.031	0.022	0.029	0.016	0.011	0.024	0.029	0.010	0.016
Wet Min		0.026	0.022	0.026	0.016	0.008	0.024	0.028	0.010	0.016

APPENDIX 3: Sixteen Mile Creek 1995 - PHOSPHATE Data

DATE	E	SAMPLING STATIONS								
		HF	K6A	K6	K8	C7	K7	K20	K18	B
20-Jun-95	D	0.0075	0.0025	0.0025	0.0005	0.0005	0.0005	0.0005	0.0005	0.0010
27-Jun-95	W	0.0085	0.0020	0.0015	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
4-Jul-95	D	0.0040	0.0005	0.0120	0.0005	0.0005	0.0005	0.0005	0.0005	0.0025
11-Jul-95	D	0.0080	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0030
17-Jul-95	I	0.0145	0.0035	0.0070	0.0005	0.0005	0.0005	0.0015	0.0005	0.0015
25-Jul-95	D	0.0145	0.0030	0.0050	0.0010	0.0005	0.0005	0.0015	0.0010	0.0015
31-Jul-95	D	0.0175	0.0045	0.0065	0.0005	0.0005	0.0005	0.0035	0.0005	0.0005
8-Aug-95	D	0.0110	0.0050	0.0045	0.0005	0.0005	0.0005	0.0025	0.0015	0.0010
15-Aug-95	W	0.0075	0.0100	0.0075	0.0025	0.0015		0.0050	0.0030	0.0010
22-Aug-95	D	0.0100	0.0045	0.0035	0.0005	0.0005	0.0005	0.0015	0.0005	0.0005
29-Aug-95	D	0.0130	0.0030	0.0015	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
5-Sep-95	I	0.0125	0.0025	0.0020	0.0010	0.0010	0.0010	0.0010	0.0015	0.0010
12-Sep-95	D	0.0125	0.0010	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	
Jun GM		0.0080	0.0023	0.0020	0.0005	0.0005	0.0005	0.0005	0.0005	0.0013
July GM		0.0117	0.0024	0.0062	0.0006	0.0005	0.0005	0.0015	0.0007	0.0020
Aug GM		0.0104	0.0056	0.0043	0.0010	0.0008	0.0005	0.0024	0.0012	0.0007
Sep GM		0.0125	0.0018	0.0013	0.0008	0.0008	0.0008	0.0008	0.0010	0.0010
Season GM		0.0108	0.0108	0.0042	0.0007	0.0006	0.0005	0.0015	0.0009	0.0012
Dry Max		0.0175	0.0050	0.0120	0.0010	0.0005	0.0005	0.0035	0.0030	0.0030
3 rd Quart		0.0130	0.0045	0.0050	0.0005	0.0005	0.0005	0.0015	0.0005	0.0011
Dry Median		0.0110	0.0030	0.0035	0.0005	0.0005	0.0005	0.0005	0.0005	0.0010
Dry GeoMean		0.0114	0.0029	0.0029	0.0006	0.0005	0.0005	0.0013	0.0009	0.0011
1 st Quart		0.0080	0.0010	0.0015	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
Dry Min		0.0040	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
Wet Max		0.0085	0.0100	0.0075	0.0025	0.0015	0.0005	0.0050	0.0015	0.0010
3 rd Quart		0.0083	0.0080	0.0060	0.0020	0.0013	0.0005	0.0039	0.0015	0.0010
Wet Median		0.0080	0.0060	0.0045	0.0015	0.0010	0.0005	0.0028	0.0015	0.0010
Wet GeoMean		0.0080	0.0060	0.0045	0.0015	0.0010	0.0005	0.0028	0.0015	0.0010
1 st Quart		0.0078	0.0040	0.0030	0.0010	0.0008	0.0005	0.0016	0.0015	0.0010
Wet Min		0.0075	0.0020	0.0015	0.0005	0.0005	0.0005	0.0005	0.0015	0.0010

Sixteen Mile Creek 1995 - TOTAL KJELDAHL NITROGEN Data

DATE	E	SAMPLING STATIONS								
		HF	K6A	K6	K8	C7	K7	K20	K18	B
20-Jun-95	D	0.560	0.440	0.500	0.360	0.420	0.420	0.400	0.400	0.400
27-Jun-95	W	0.600	0.460	0.520	0.440	0.380	0.480	0.480	0.460	0.420
4-Jul-95	D	0.480	0.580	0.460	0.400	0.360	0.340	0.320	0.280	0.380
11-Jul-95	D	0.400	0.340	0.360	0.280	0.300	0.300	0.260	0.240	0.540
17-Jul-95	I	0.440	0.440	0.660	0.420	0.380	0.360	0.380	0.320	0.380
25-Jul-95	D	0.460	0.380	0.460	0.380	0.380	0.400	0.320	0.280	0.360
31-Jul-95	D	1.600	0.760	0.520	0.360	0.400	0.300	0.300	0.280	0.380
8-Aug-95	D	0.400	0.340	0.420	0.520	0.500	0.360	0.320	0.280	0.380
15-Aug-95	W	0.520	0.460	0.580	0.480	0.460		0.540	0.580	0.360
22-Aug-95	D	0.560	0.420	0.460	0.380	0.480	0.380	0.340	0.360	0.360
29-Aug-95	D	0.560	0.400	0.420	0.320	0.420	0.340	0.280	0.280	0.420
5-Sep-95	I	0.480	0.320	0.340	0.320	0.420	0.340	0.260	0.260	0.380
12-Sep-95	D	0.460	0.360	0.340	0.320	0.400	0.400	0.320	0.300	
Jun GM		0.580	0.450	0.510	0.400	0.400	0.450	0.440	0.380	0.400
July GM		0.676	0.500	0.492	0.368	0.364	0.340	0.316	0.280	0.427
Aug GM		0.510	0.405	0.470	0.425	0.465	0.360	0.370	0.358	0.380
Sep GM		0.470	0.340	0.340	0.320	0.410	0.370	0.290	0.280	0.380
Season GM		0.578	0.438	0.465	0.383	0.408	0.368	0.348	0.332	0.397
Dry Max		1.600	0.760	0.520	0.520	0.500	0.420	0.400	0.580	0.540
3 rd Quart		0.660	0.440	0.460	0.380	0.420	0.400	0.320	0.400	0.420
Dry Median		0.480	0.400	0.460	0.360	0.400	0.360	0.320	0.320	0.390
Dry GeoMean		0.622	0.433	0.444	0.373	0.409	0.376	0.336	0.356	0.408
1 st Quart		0.460	0.360	0.420	0.320	0.380	0.340	0.300	0.280	0.375
Dry Min		0.400	0.340	0.340	0.280	0.300	0.300	0.260	0.240	0.360
Wet Max		0.600	0.460	0.580	0.480	0.460	0.480	0.540	0.280	0.380
3 rd Quart		0.580	0.460	0.565	0.470	0.440	0.480	0.525	0.280	0.380
Wet Median		0.560	0.460	0.550	0.460	0.420	0.480	0.510	0.280	0.380
Wet GeoMean		0.560	0.460	0.550	0.460	0.420	0.480	0.510	0.280	0.380
1 st Quart		0.540	0.460	0.535	0.450	0.400	0.480	0.495	0.280	0.380
Wet Min		0.520	0.460	0.520	0.440	0.380	0.480	0.480	0.280	0.380

APPENDIX 3: Sixteen Mile Creek 1935 - AMMONIA + AMMONIUM Data

DATE	E	SAMPLING STATIONS								
		HF	K6A	K6	K8	C7	K7	K20	K18	B
20-Jun-95	D	0.002	0.002	0.004	0.016	0.028	0.002	0.002	0.002	0.002
27-Jun-95	W	0.002	0.002	0.018	0.024	0.026	0.036	0.002	0.002	0.006
4-Jul-95	D	0.002	0.002	0.012	0.026	0.038	0.014	0.002	0.002	0.006
11-Jul-95	D	0.002	0.002	0.008	0.020	0.052	0.022	0.002	0.002	0.080
17-Jul-95	I	0.002	0.036	0.068	0.042	0.058	0.024	0.016	0.004	0.028
25-Jul-95	D	0.002	0.010	0.026	0.040	0.050	0.016	0.002	0.002	0.006
31-Jul-95	D	0.010	0.072	0.056	0.050	0.052	0.016	0.016	0.002	0.032
8-Aug-95	D	0.010	0.016	0.038	0.052	0.108	0.034	0.016	0.006	0.036
15-Aug-95	W	0.004	0.012	0.002	0.048	0.116		0.002	0.002	0.044
22-Aug-95	D	0.002	0.016	0.018	0.040	0.118	0.056	0.012	0.006	0.034
29-Aug-95	D	0.004	0.012	0.020	0.034	0.088	0.036	0.006	0.002	0.026
5-Sep-95	I	0.008	0.016	0.042	0.040	0.098	0.040	0.012	0.004	0.016
12-Sep-95	D	0.002	0.004	0.028	0.028	0.070	0.070	0.034	0.002	
Jun GM		0.002	0.002	0.011	0.020	0.027	0.019	0.002	0.002	0.005
July GM		0.004	0.024	0.034	0.036	0.050	0.018	0.008	0.003	0.038
Aug GM		0.005	0.014	0.020	0.044	0.108	0.042	0.009	0.004	0.034
Sep GM		0.005	0.010	0.035	0.034	0.084	0.055	0.023	0.003	0.016
Season GM		0.004	0.016	0.026	0.035	0.069	0.031	0.010	0.003	0.026
Dry Max		0.010	0.072	0.056	0.052	0.118	0.070	0.034	0.006	0.080
3 rd Quart		0.004	0.016	0.028	0.040	0.088	0.036	0.016	0.004	0.037
Dry Median		0.002	0.010	0.020	0.034	0.052	0.022	0.006	0.002	0.027
Dry GeoMean		0.004	0.015	0.024	0.034	0.066	0.032	0.010	0.003	0.030
1 st Quart		0.002	0.002	0.012	0.026	0.050	0.016	0.002	0.002	0.014
Dry Min		0.002	0.002	0.004	0.016	0.028	0.002	0.002	0.002	0.002
Wet Max		0.004	0.012	0.018	0.048	0.116	0.036	0.002	0.006	0.036
3 rd Quart		0.004	0.010	0.014	0.042	0.094	0.036	0.002	0.006	0.036
Wet Median		0.003	0.007	0.010	0.036	0.071	0.036	0.002	0.006	0.036
Wet GeoMean		0.003	0.007	0.010	0.036	0.071	0.036	0.002	0.006	0.036
1 st Quart		0.003	0.005	0.006	0.030	0.049	0.036	0.002	0.006	0.036
Wet Min		0.002	0.002	0.002	0.024	0.026	0.036	0.002	0.006	0.036

Sixteen Mile Creek 1995 - NITRATE Data

DATE	E	SAMPLING STATIONS								
		HF	K6A	K6	K8	C7	K7	K20	K18	B
20-Jun-95	D	0.109	0.078	0.035	0.760	0.755	0.694	0.327	0.427	0.262
27-Jun-95	W	0.108	0.044	0.025	0.480	0.429	0.400	0.255	0.326	0.135
4-Jul-95	D	0.133	0.033	0.010	0.727	0.670	0.629	0.343	0.413	0.266
11-Jul-95	D	0.118	0.028	0.009	0.781	0.702	0.655	0.372	0.478	0.250
17-Jul-95	I	0.288	0.057	0.037	0.657	0.600	0.569	0.371	0.537	0.230
25-Jul-95	D	0.184	0.039	0.035	0.689	0.550	0.525	0.353	0.454	0.195
31-Jul-95	D	0.268	0.002	0.100	0.659	0.520	0.479	0.357	0.473	0.104
8-Aug-95	D	0.128	0.068	0.054	0.560	0.570	0.529	0.302	0.333	0.109
15-Aug-95	W	0.001	0.136	0.331	0.542	0.621		0.408	0.425	0.112
22-Aug-95	D	0.123	0.025	0.001	0.564	0.469	0.446	0.183	0.258	0.029
29-Aug-95	D	0.184	0.064	0.054	0.722	0.597	0.560	0.303	0.419	0.065
5-Sep-95	I	0.224	0.038	0.327	0.691	0.599	0.566	0.370	0.409	0.056
12-Sep-95	D	0.218	0.009	0.370	0.758	0.648	0.648	0.627	0.426	
Jun GM		0.109	0.061	0.030	0.620	0.592	0.547	0.291	0.389	0.221
July GM		0.198	0.032	0.038	0.703	0.608	0.571	0.359	0.490	0.225
Aug GM		0.109	0.073	0.110	0.597	0.564	0.512	0.299	0.393	0.084
Sep GM		0.221	0.024	0.349	0.725	0.624	0.608	0.499	0.418	0.056
Season GM		0.160	0.048	0.107	0.661	0.595	0.559	0.352	0.418	0.151
Dry Max		0.268	0.078	0.370	0.781	0.755	0.694	0.627	0.537	0.262
3 rd Quart		0.184	0.064	0.054	0.758	0.670	0.648	0.357	0.427	0.235
Dry Median		0.133	0.033	0.035	0.722	0.597	0.560	0.343	0.425	0.124
Dry GeoMean		0.160	0.040	0.076	0.664	0.582	0.548	0.342	0.412	0.142
1 st Quart		0.123	0.025	0.010	0.659	0.550	0.525	0.303	0.409	0.063
Dry Min		0.109	0.002	0.001	0.560	0.469	0.446	0.183	0.258	0.029
Wet Max		0.108	0.136	0.331	0.542	0.621	0.400	0.408	0.388	0.109
3 rd Quart		0.081	0.113	0.254	0.527	0.573	0.400	0.370	0.388	0.109
Wet Median		0.055	0.090	0.178	0.511	0.525	0.400	0.332	0.388	0.109
Wet GeoMean		0.055	0.090	0.178	0.511	0.525	0.400	0.332	0.388	0.109
1 st Quart		0.028	0.067	0.101	0.496	0.477	0.400	0.293	0.388	0.103
Wet Min		0.001	0.044	0.025	0.480	0.429	0.400	0.255	0.388	0.109

APPENDIX 3: Sixteen Mile Creek 1995 - NITRITE Data

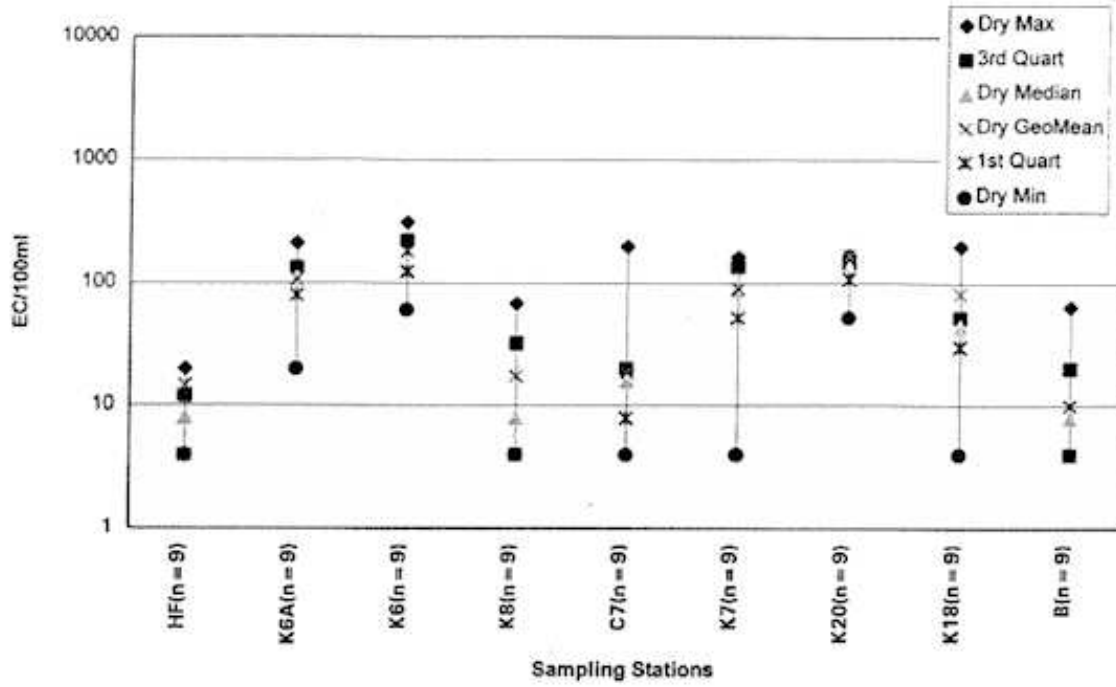
DATE	E	SAMPLING STATIONS								
		HF	K6A	K6	K8	C7	K7	K20	K18	B
20-Jun-95	D	0.0010	0.0020	0.0020	0.0100	0.0100	0.0060	0.0030	0.0030	0.0030
27-Jun-95	W	0.0020	0.0010	0.0010	0.0100	0.0110	0.0050	0.0050	0.0040	0.0050
4-Jul-95	D	0.0020	0.0020	0.0020	0.0080	0.0100	0.0060	0.0020	0.0020	0.0040
11-Jul-95	D	0.0020	0.0030	0.0010	0.0090	0.0080	0.0050	0.0030	0.0020	0.0050
17-Jul-95	I	0.0020	0.0030	0.0030	0.0130	0.0100	0.0060	0.0040	0.0030	0.0050
25-Jul-95	D	0.0010	0.0010	0.0020	0.0110	0.0100	0.0050	0.0020	0.0010	0.0050
31-Jul-95	D	0.0020	0.0030	0.0100	0.0110	0.0100	0.0060	0.0030	0.0020	0.0060
8-Aug-95	D	0.0020	0.0020	0.0060	0.0100	0.0100	0.0060	0.0030	0.0020	0.0060
15-Aug-95	W	0.0040	0.0240	0.0190	0.0330	0.0190		0.0070	0.0050	0.0080
22-Aug-95	D	0.0020	0.0030	0.0040	0.0110	0.0110	0.0090	0.0020	0.0020	0.0060
29-Aug-95	D	0.0010	0.0010	0.0060	0.0080	0.0080	0.0050	0.0020	0.0010	0.0050
5-Sep-95	I	0.0010	0.0020	0.0070	0.0090	0.0110	0.0070	0.0050	0.0010	0.0040
12-Sep-95	D	0.0020	0.0010	0.0050	0.0070	0.0120	0.0120	0.0080	0.0040	
Jun GM		0.0015	0.0015	0.0015	0.0100	0.0105	0.0055	0.0040	0.0030	0.0040
July GM		0.0018	0.0024	0.0036	0.0104	0.0096	0.0056	0.0028	0.0020	0.0050
Aug GM		0.0023	0.0075	0.0088	0.0155	0.0120	0.0067	0.0035	0.0024	0.0062
Sep GM		0.0015	0.0015	0.0060	0.0080	0.0115	0.0095	0.0065	0.0025	0.0040
Season GM		0.0018	0.0037	0.0052	0.0115	0.0108	0.0065	0.0038	0.0025	0.0052
Dry Max		0.0020	0.0030	0.0100	0.0110	0.0120	0.0120	0.0080	0.0050	0.0080
3 rd Quart		0.0020	0.0030	0.0060	0.0110	0.0100	0.0060	0.0030	0.0040	0.0053
Dry Median		0.0020	0.0020	0.0040	0.0100	0.0100	0.0060	0.0030	0.0030	0.0050
Dry GeoMean		0.0017	0.0019	0.0041	0.0097	0.0100	0.0066	0.0034	0.0028	0.0051
1 st Quart		0.0010	0.0010	0.0020	0.0080	0.0100	0.0050	0.0020	0.0020	0.0048
Dry Min		0.0010	0.0010	0.0010	0.0070	0.0080	0.0050	0.0020	0.0010	0.0030
Wet Max		0.0040	0.0240	0.0190	0.0330	0.0190	0.0050	0.0070	0.0020	0.0060
3 rd Quart		0.0035	0.0183	0.0145	0.0273	0.0170	0.0050	0.0065	0.0020	0.0060
Wet Median		0.0030	0.0125	0.0100	0.0215	0.0150	0.0050	0.0060	0.0020	0.0060
Wet GeoMean		0.0030	0.0125	0.0100	0.0215	0.0150	0.0050	0.0060	0.0020	0.0060
1 st Quart		0.0025	0.0068	0.0055	0.0158	0.0130	0.0050	0.0055	0.0020	0.0060
Wet Min		0.0020	0.0010	0.0010	0.0100	0.0110	0.0050	0.0050	0.0020	0.0060

Sixteen Mile Creek 1995 DISSOLVED ORGANIC CARBON Data

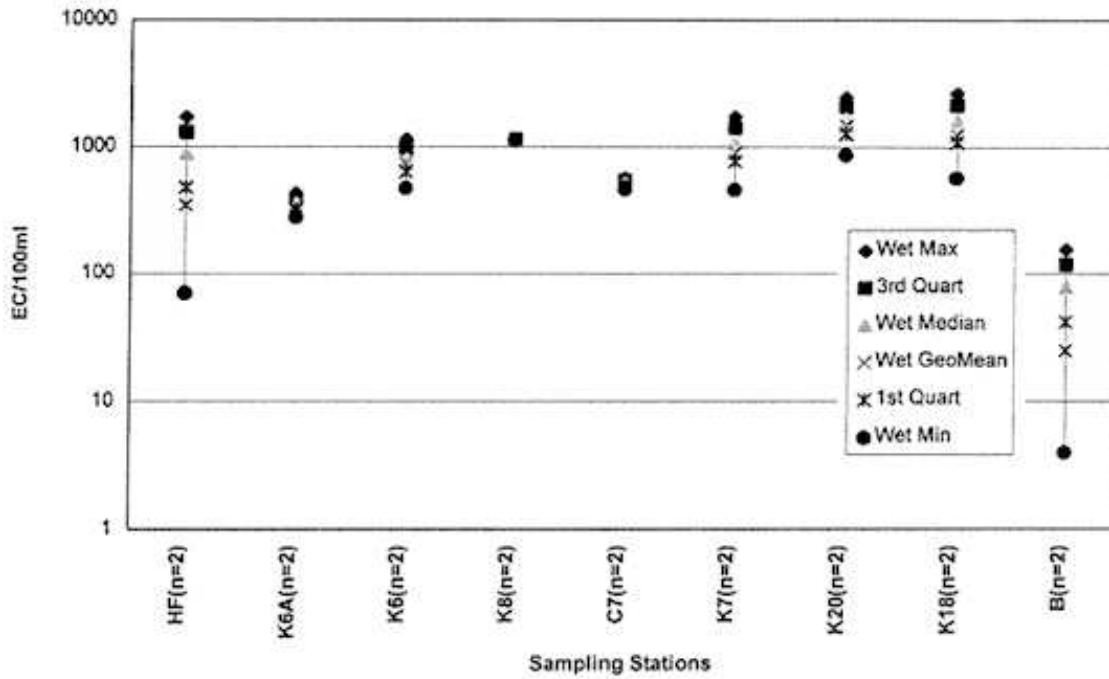
DATE	E	SAMPLING STATIONS								
		HF	K6A	K6	K8	C7	K7	K20	K18	B
20-Jun-95	D	7.0	5.4	5.5	2.4	2.4	2.2	3.6	3.6	4.2
27-Jun-95	W	7.0	5.4	5.3	2.8	2.8	2.8	4.2	3.6	4.3
4-Jul-95	D	5.8	4.3	4.7	2.6	2.5	2.3	3.2	2.9	3.7
11-Jul-95	D	5.8	4.4	4.6	2.3	2.3	2.1	2.9	2.5	3.7
17-Jul-95	I	5.2	4.3	4.6	2.8	2.3	2.1	2.8	2.5	3.3
25-Jul-95	D	5.4	4.1	4.3	2.7	2.8	2.2	2.8	2.5	3.5
31-Jul-95	D	5.4	4.6	4.7	2.5	2.8	2.4	2.2	2.1	3.2
8-Aug-95	D	5.1	4.3	4.5	4.6	3.2	2.8	3.5	3.2	3.7
15-Aug-95	W	6.6	5.4	5.4	6.6	3.5		5.0	5.1	3.3
22-Aug-95	D	5.0	5.3	7.2	7.1	6.9	7.1	6.6	6.8	6.7
29-Aug-95	D	6.8	4.7	4.8	2.1	2.7	2.5	3.3	2.9	3.8
5-Sep-95	I	6.8	4.4	3.4	2.5	2.4	2.4	2.8	2.5	3.6
12-Sep-95	D	5.2	3.7	2.7	2.0	2.1	2.1	2.0	2.4	
Jun GM		7.0	5.4	5.4	2.6	2.6	2.5	3.9	3.4	4.1
July GM		5.5	4.3	4.6	2.6	2.5	2.2	2.8	2.5	3.5
Aug GM		5.9	4.9	5.5	5.1	4.1	4.1	4.6	4.0	4.1
Sep GM		5.9	4.1	3.1	2.3	2.3	2.3	2.4	2.5	3.6
Season GM		5.9	4.6	4.7	3.3	3.0	2.8	3.5	3.3	3.9
Dry Max		7.0	5.4	7.2	7.1	8.9	7.1	5.8	6.8	6.7
3 rd Quart		5.8	4.7	4.8	2.7	2.8	2.5	3.5	3.6	4.2
Dry Median		5.4	4.4	4.7	2.5	2.6	2.3	3.2	2.9	3.8
Dry GeoMean		5.9	4.7	4.8	3.2	3.1	2.9	3.5	3.5	4.1
1 st Quart		5.2	4.3	4.5	2.3	2.4	2.2	2.8	2.5	3.5
Dry Min		5.0	3.7	2.7	2.0	2.1	2.1	2.0	2.4	3.3
Wet Max		7.0	5.4	5.4	6.6	3.5	2.8	5.0	3.2	3.7
3 rd Quart		6.9	5.4	5.4	5.7	3.3	2.8	4.8	3.2	3.7
Wet Median		6.8	5.4	5.4	4.7	3.2	2.8	4.6	3.2	3.7
Wet GeoMean		6.8	5.4	6.4	4.7	3.2	2.8	4.6	3.2	3.7
1 st Quart		6.7	5.4	5.3	3.8	3.0	2.8	4.4	3.2	3.7
Wet Min		6.6	5.4	5.3	2.8	2.8	2.8	4.2	3.2	3.7

APPENDIX 4

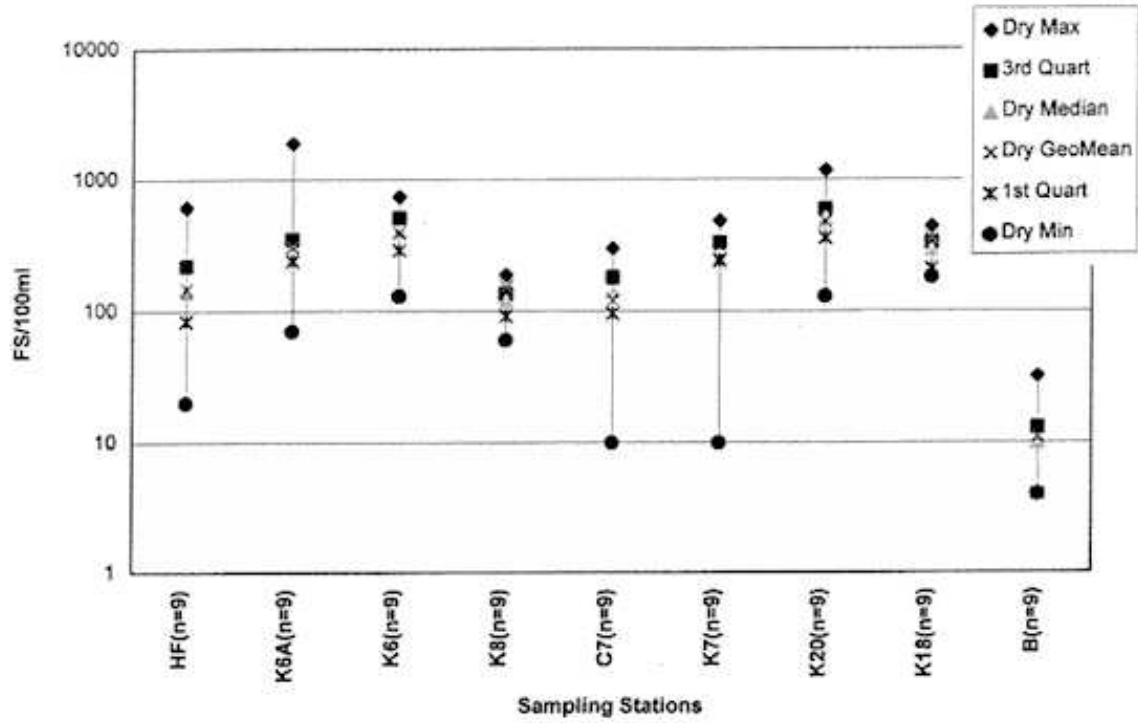
Sixteen Mile Creek DRY Weather Sampling E. COLI Concentrations



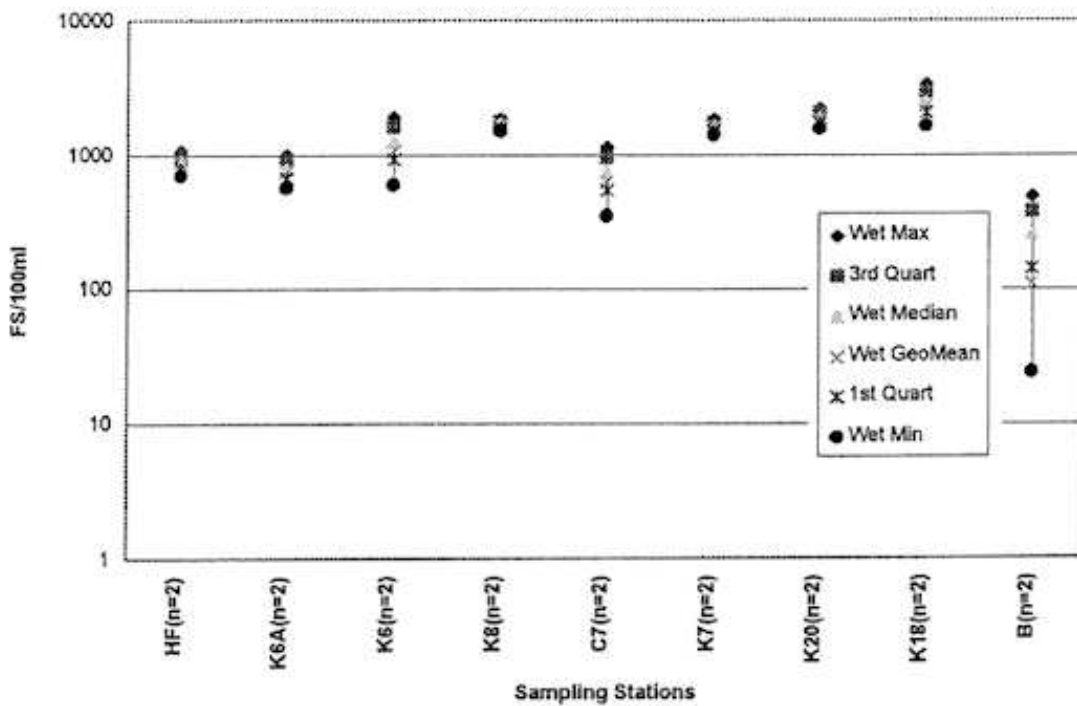
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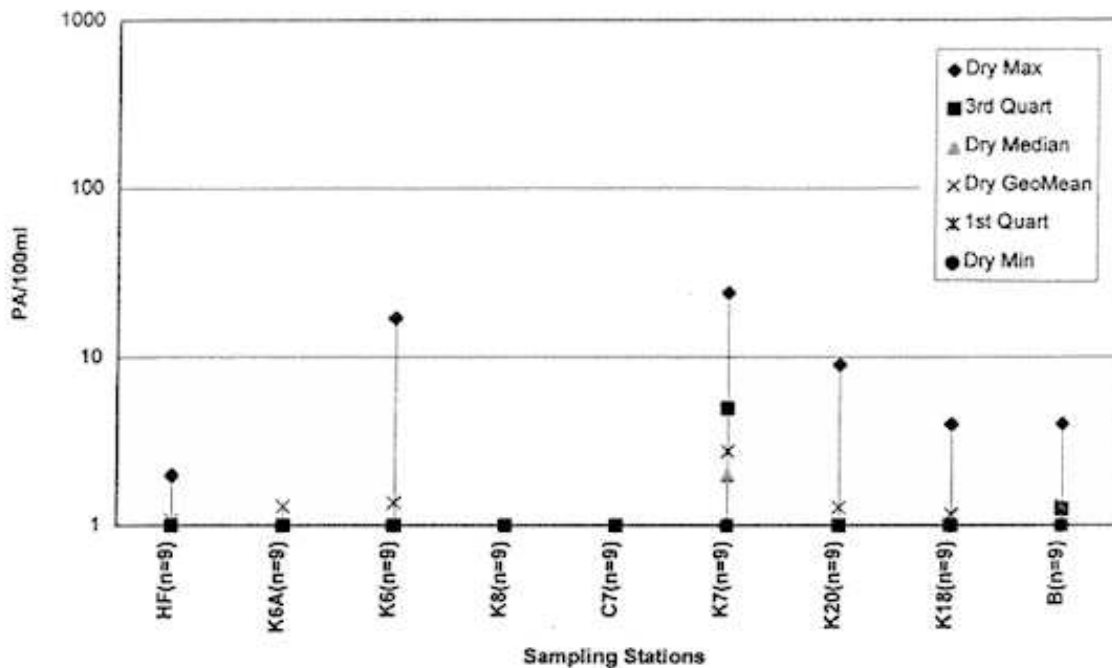
**Sixteen Mile Creek DRY Weather Sampling
FECAL STREPTOCOCCI Concentrations**



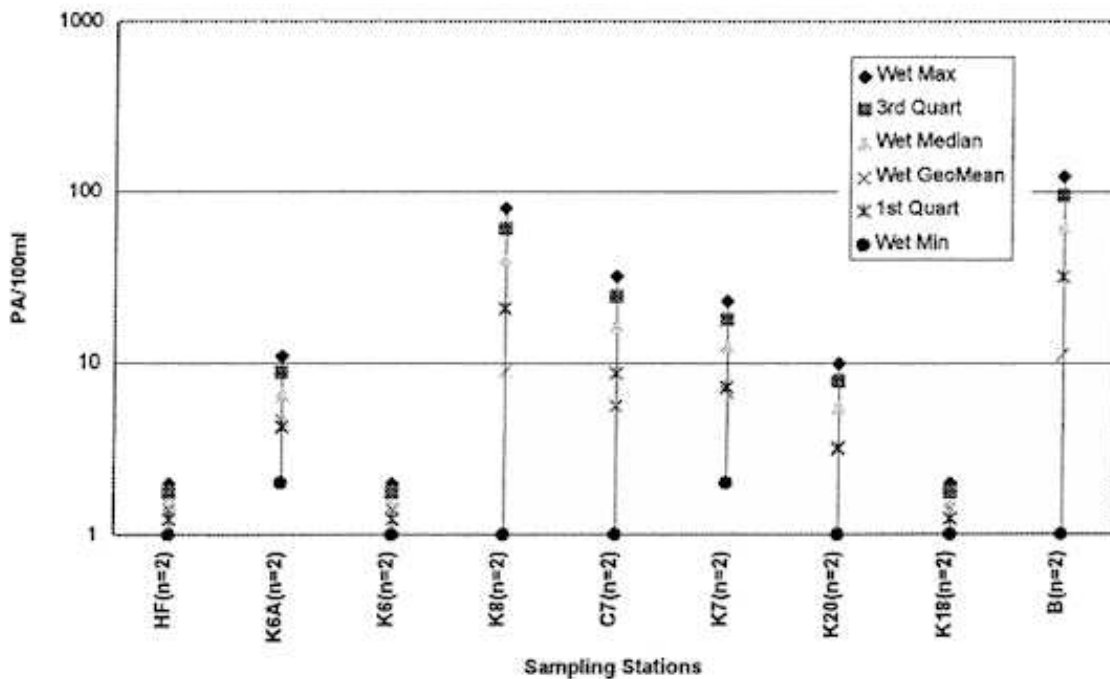
**Sixteen Mile Creek WET Weather Sampling
FECAL STREPTOCOCCI Concentrations**



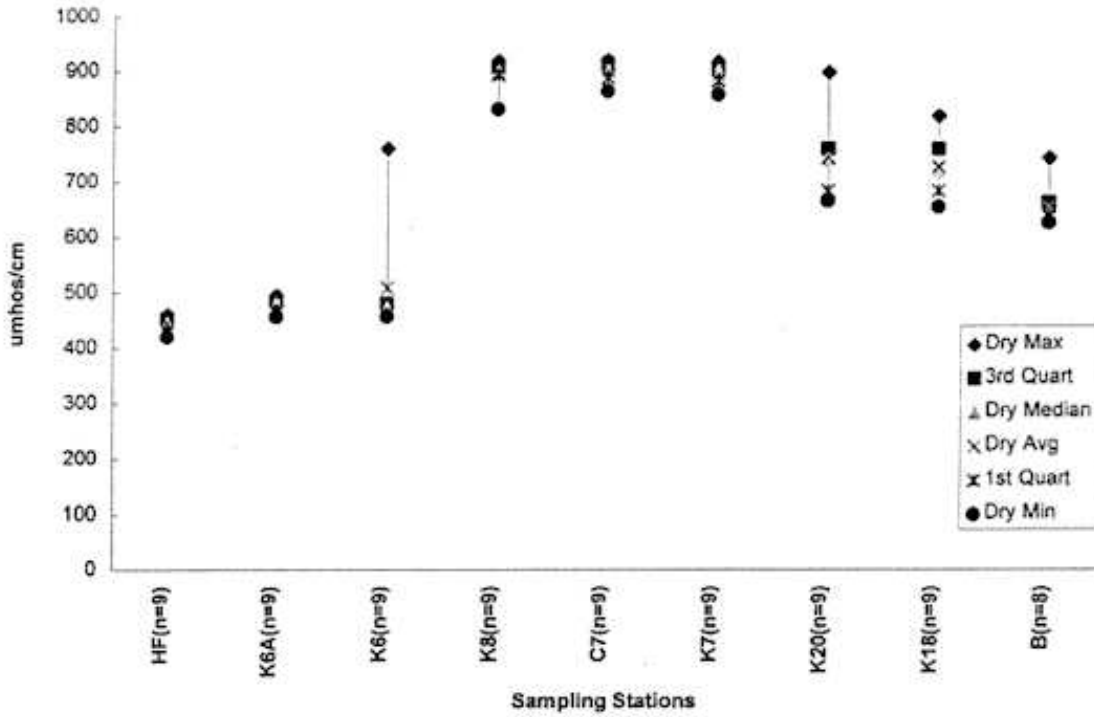
**Sixteen Mile Creek DRY Weather Sampling
PSEUDOMONAS AERUGINOSA Concentrations**



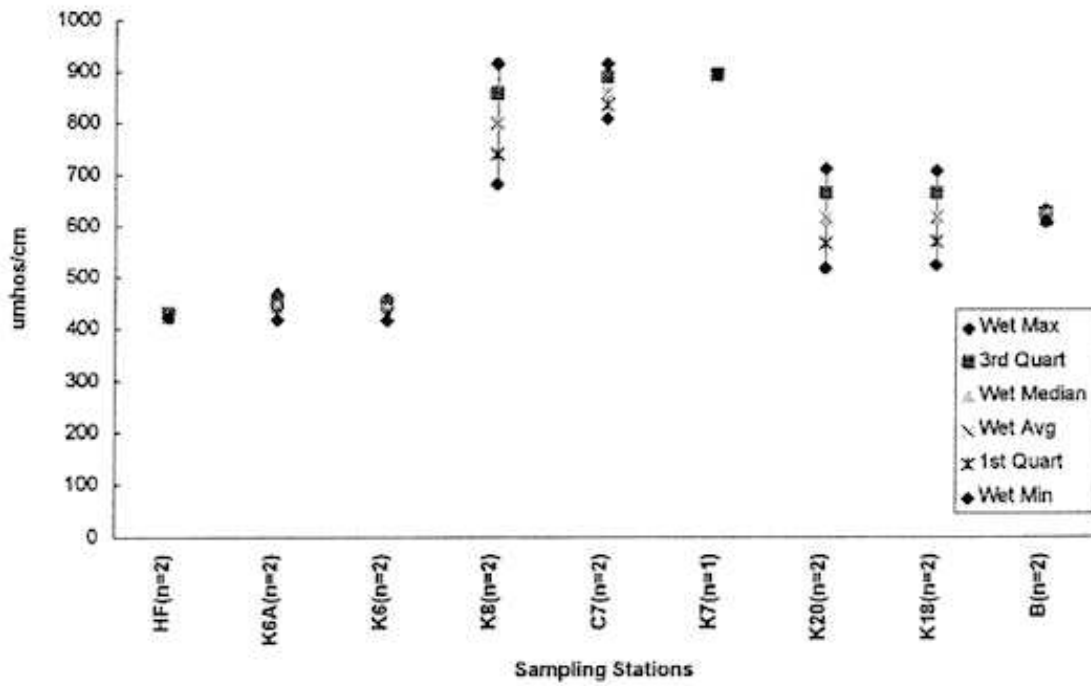
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PSEUDOMONAS AERUGINOSA Concentrations**



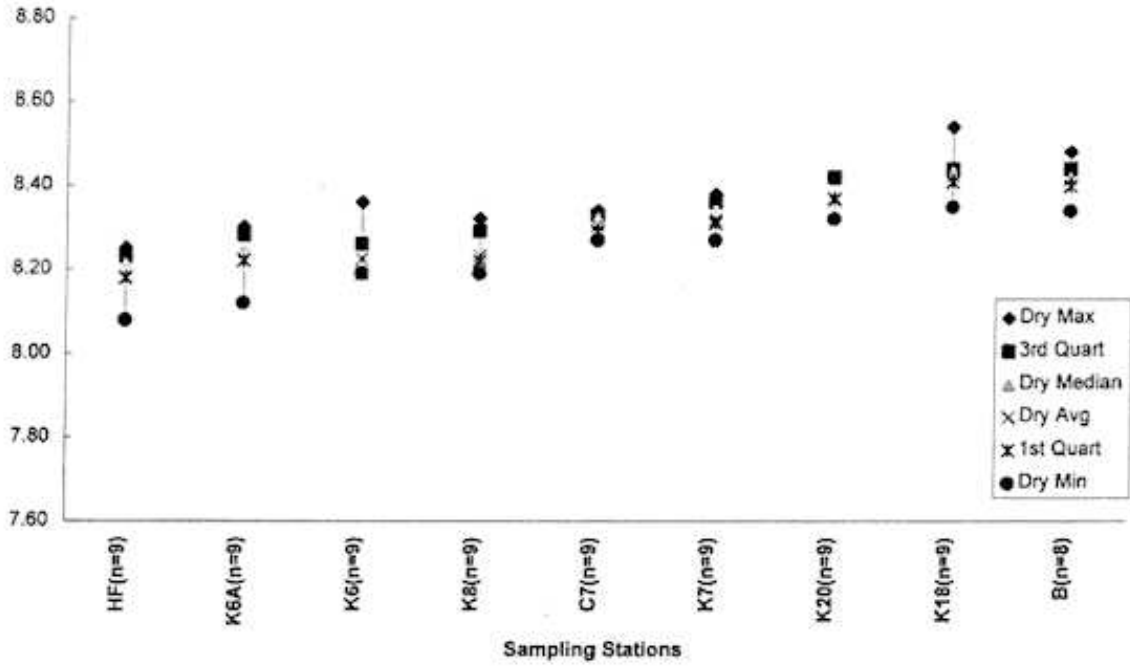
Sixteen Mile Creek DRY Weather Sampling
CONDUCTIVITY Readings



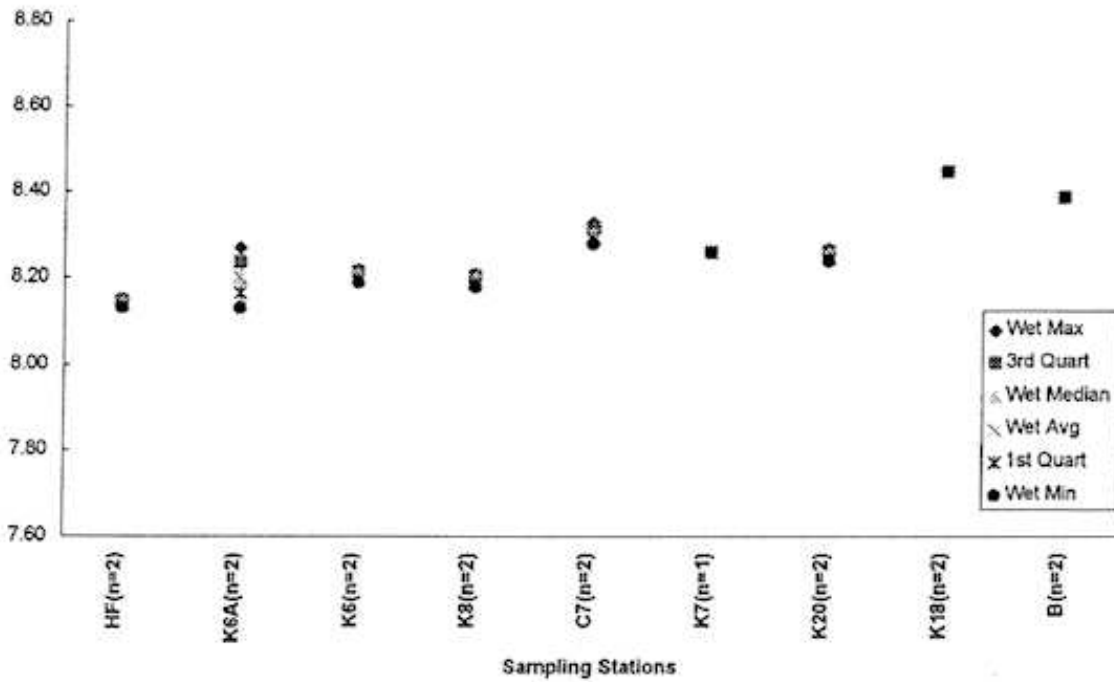
Sixteen Mile Creek WET Weather Sampling
CONDUCTIVITY Readings



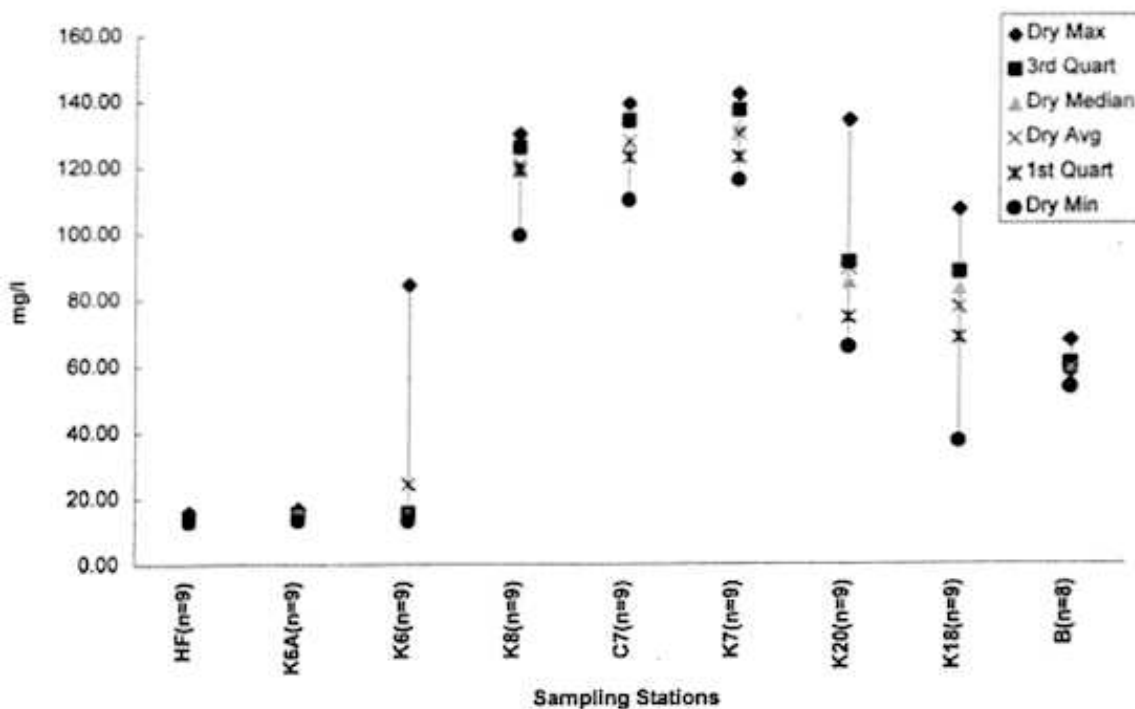
Sixteen Mile Creek DRY Weather Sampling pH Readings



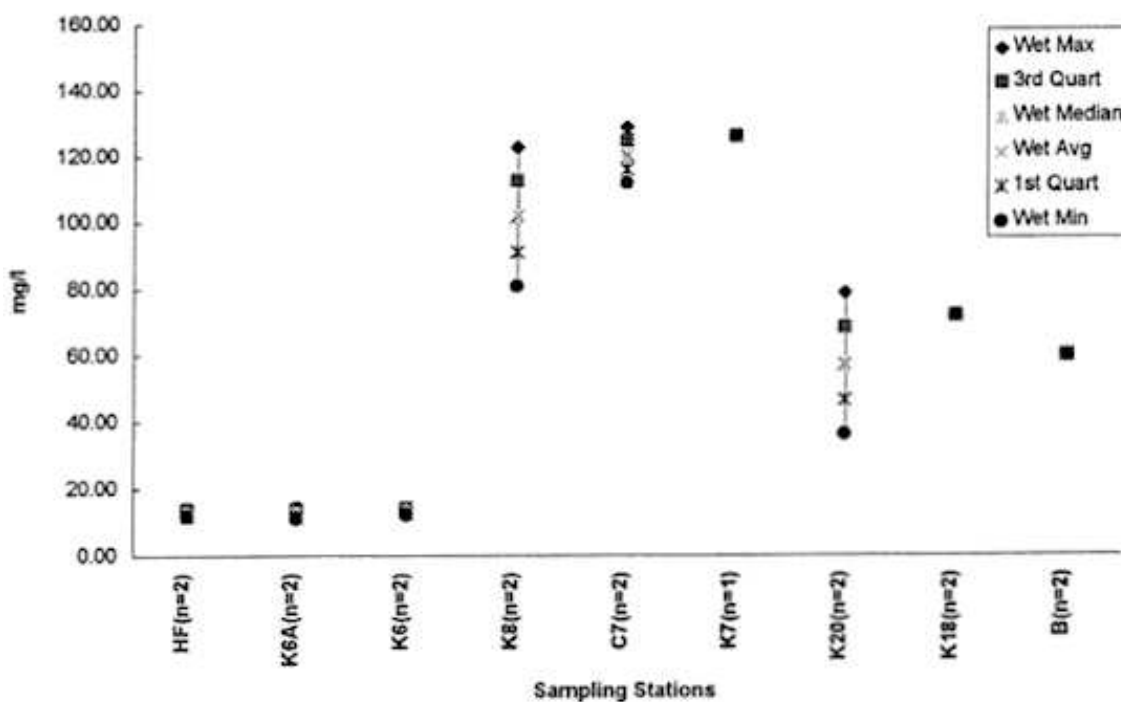
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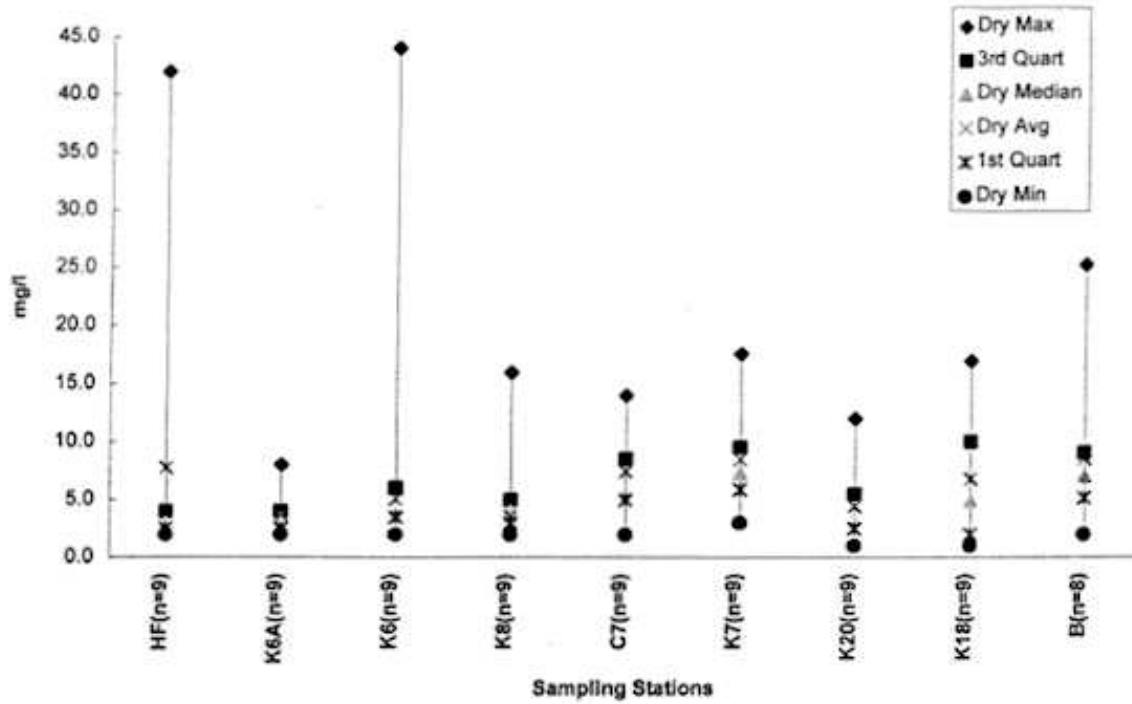
Sixteen Mile Creek DRY Weather Sampling CHLORIDE Readings



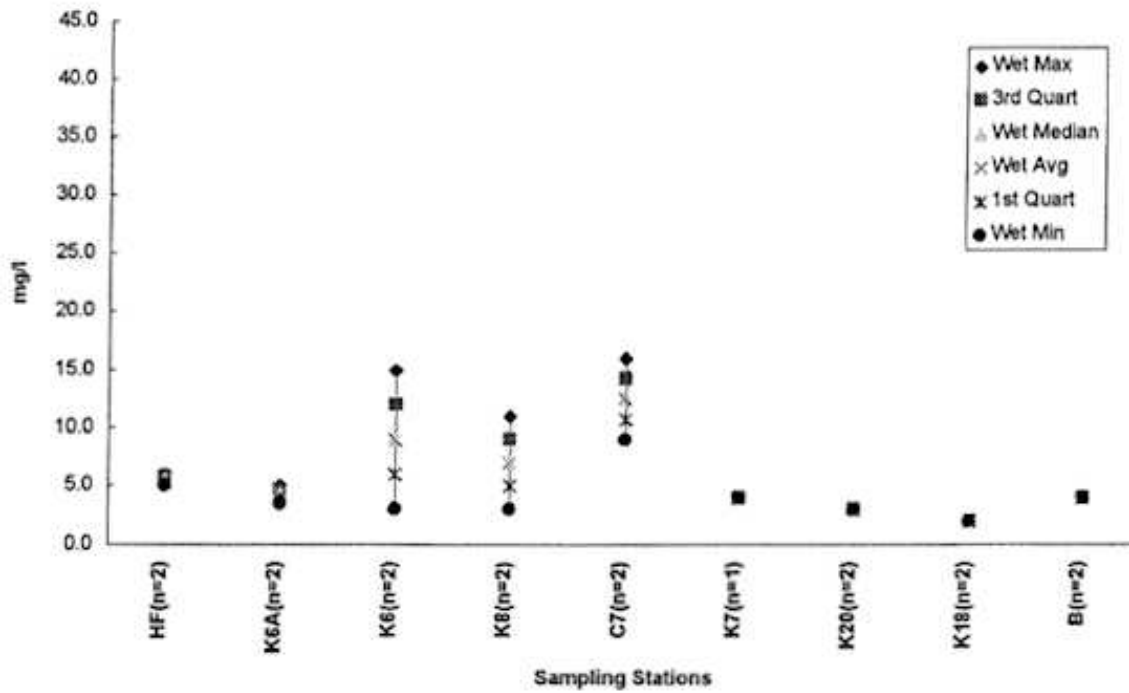
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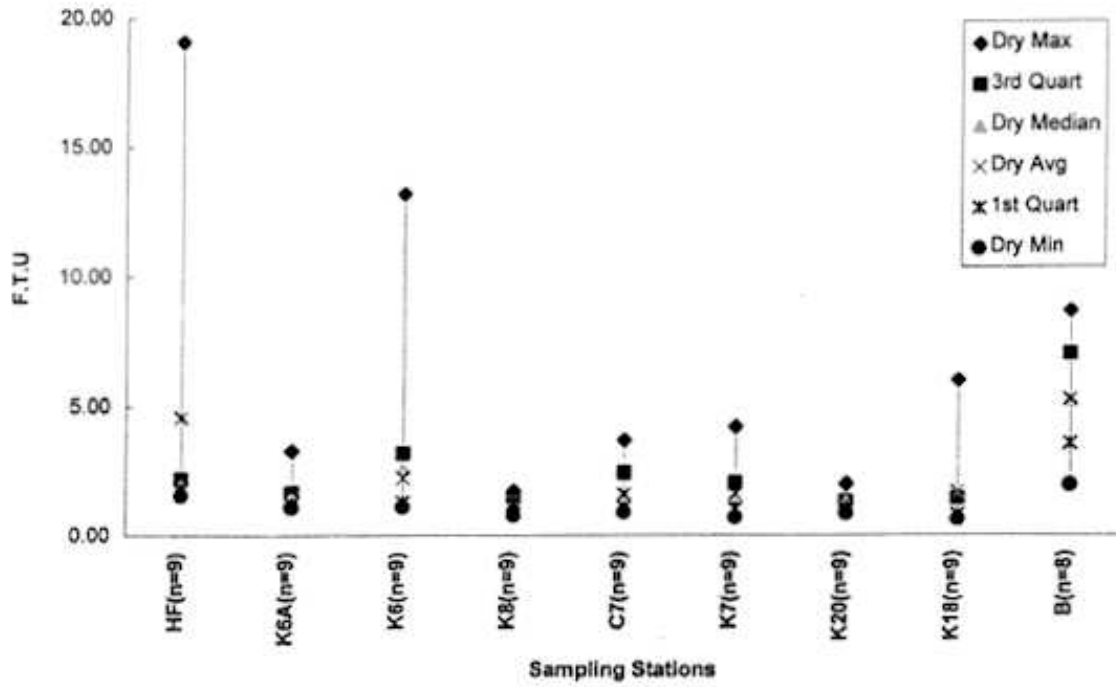
**Sixteen Mile Creek DRY Weather Sampling
SUSPENDED SOLIDS Readings**



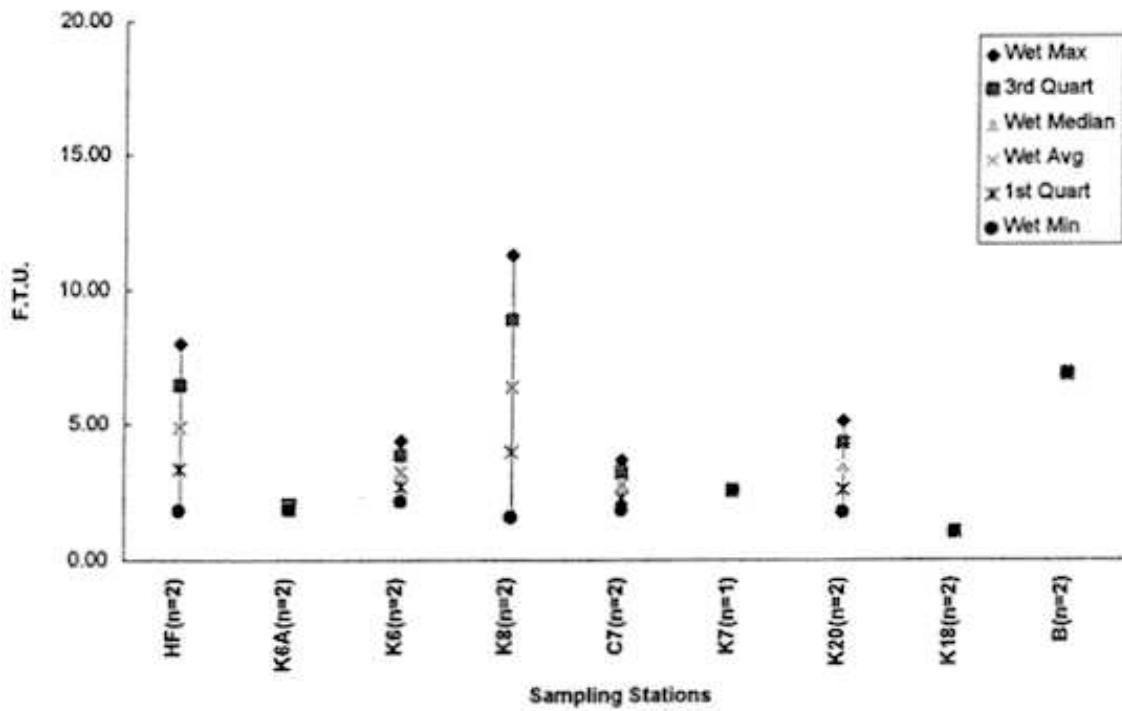
**Sixteen Mile Creek WET Weather Sampling
SUSPENDED SOLIDS Readings**



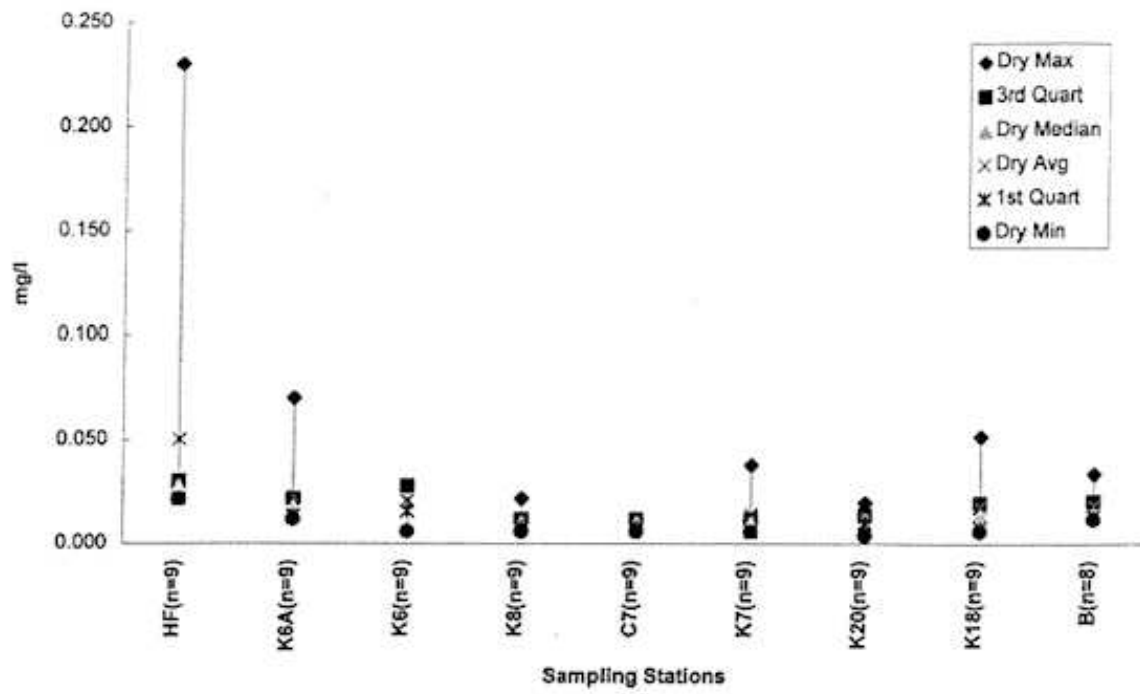
**Sixteen Mile Creek DRY Weather Sampling
TURBIDITY Readings**



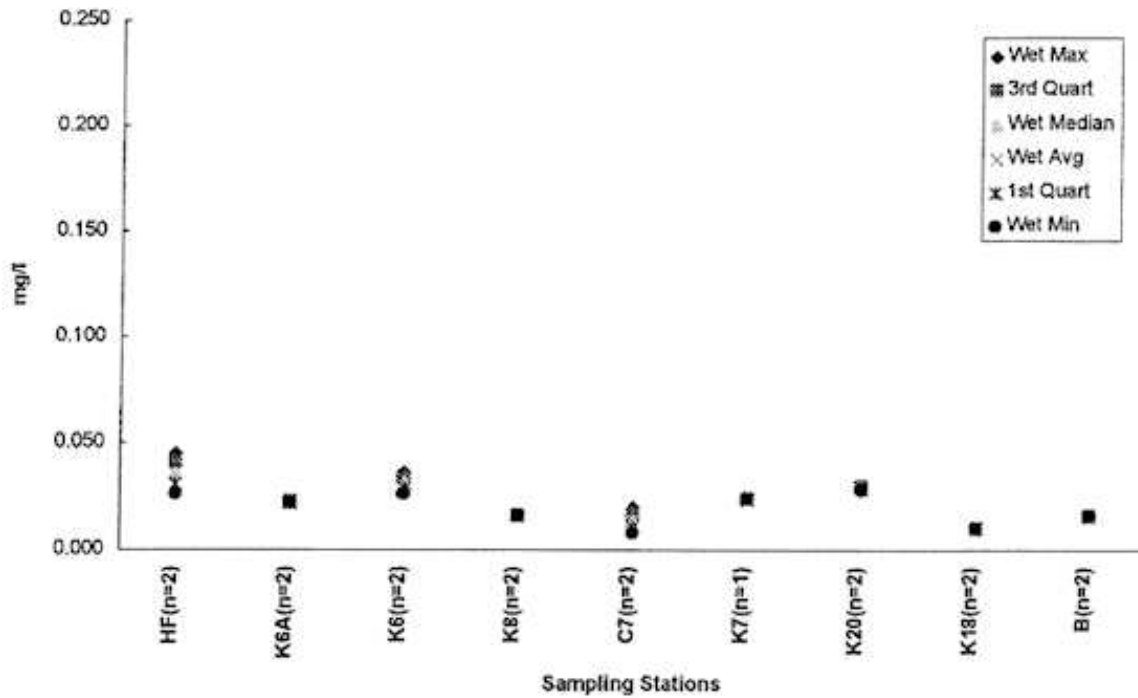
**Sixteen Mile Creek WET Weather Sampling
TURBIDITY Readings**



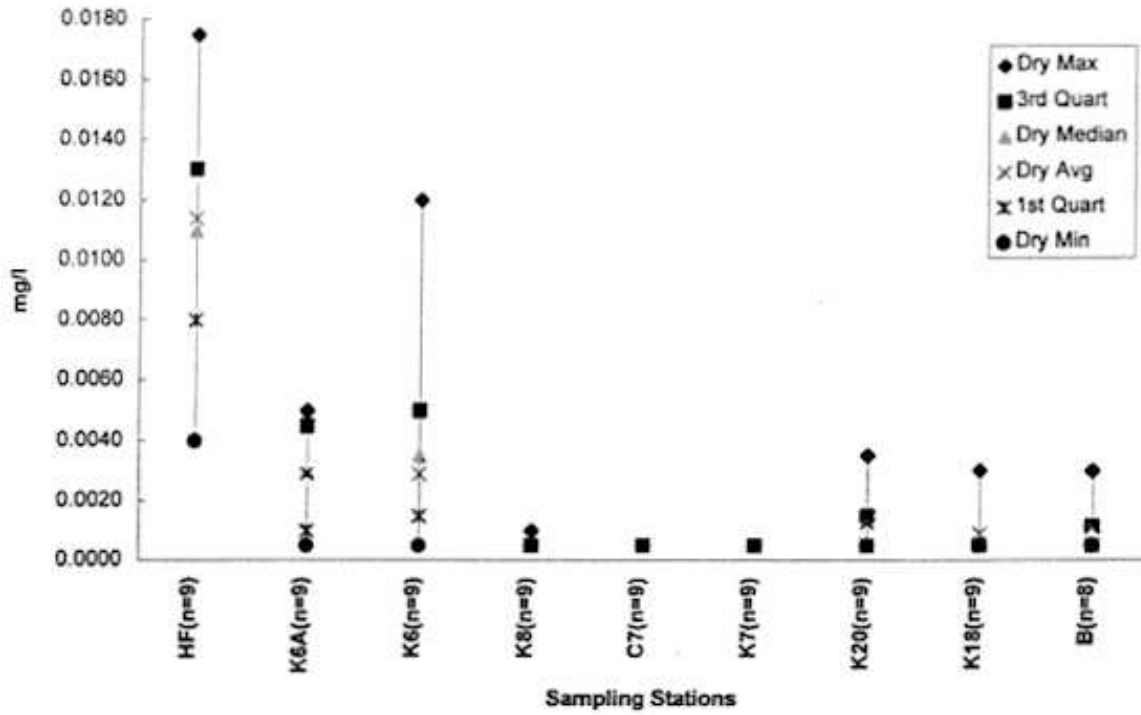
Sixteen Mile Creek DRY Weather Sampling
TOTAL PHOSPHORUS Readings



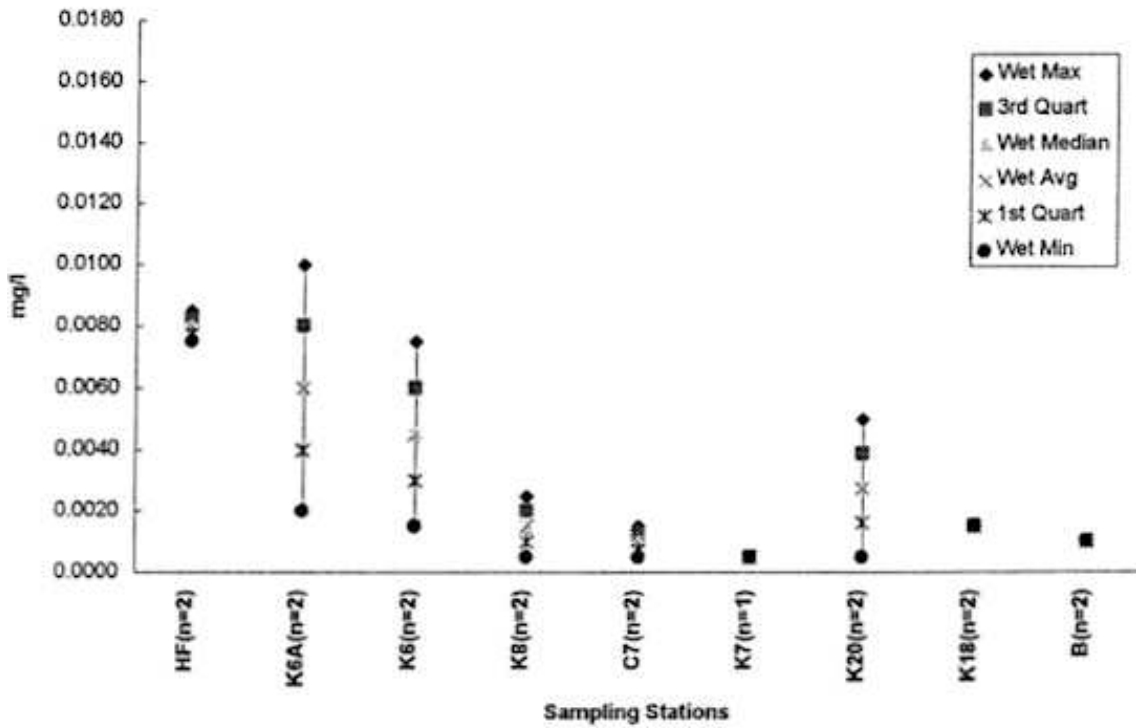
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TOTAL PHOSPHORUS Readings



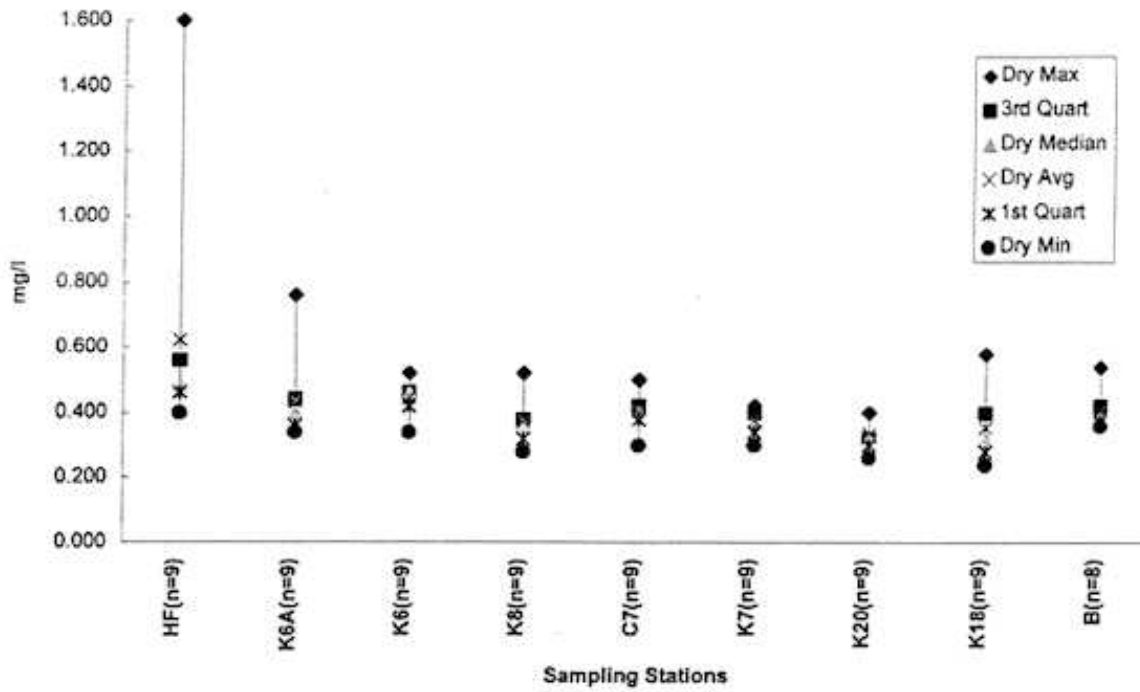
**Sixteen Mile Creek DRY Weather Sampling
PHOSPHATE Readings**



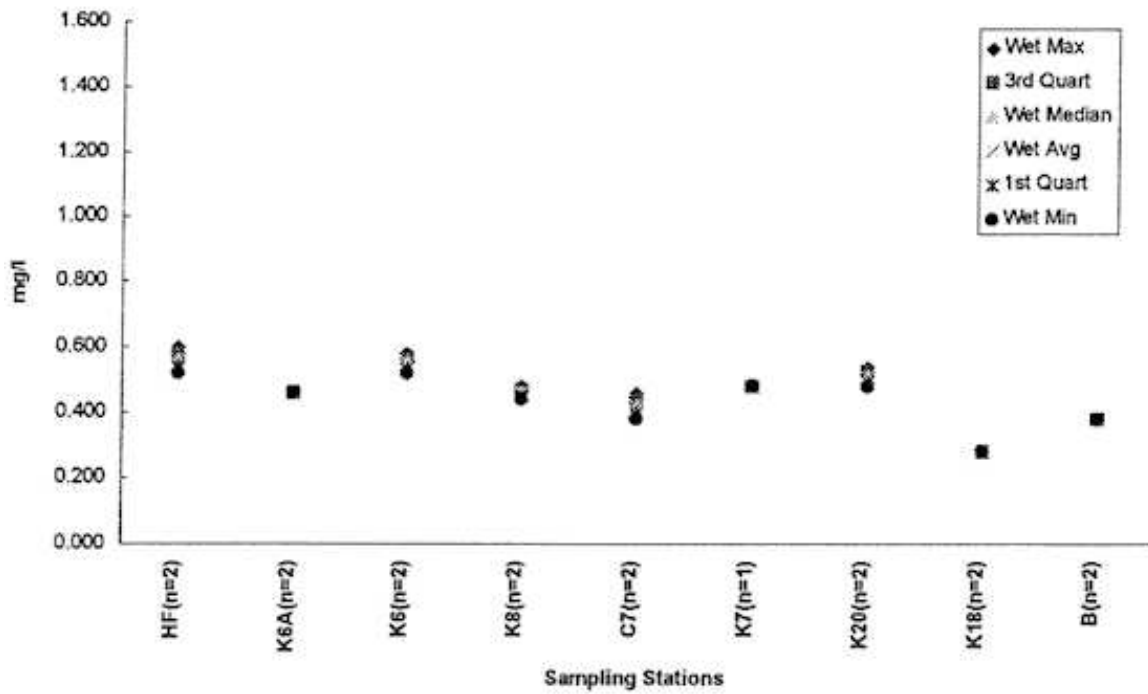
**Sixteen Mile Creek WET Weather Sampling
PHOSPHATE Readings**



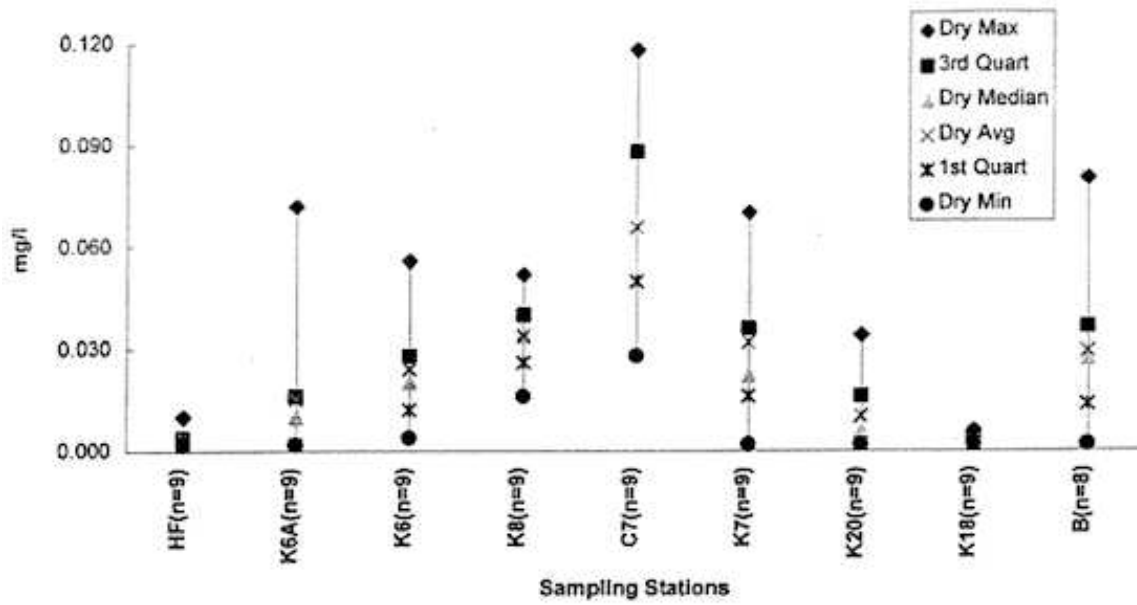
Sixteen Mile Creek DRY Weather Sampling
TOTAL KJELDAHL NITROGEN Readings



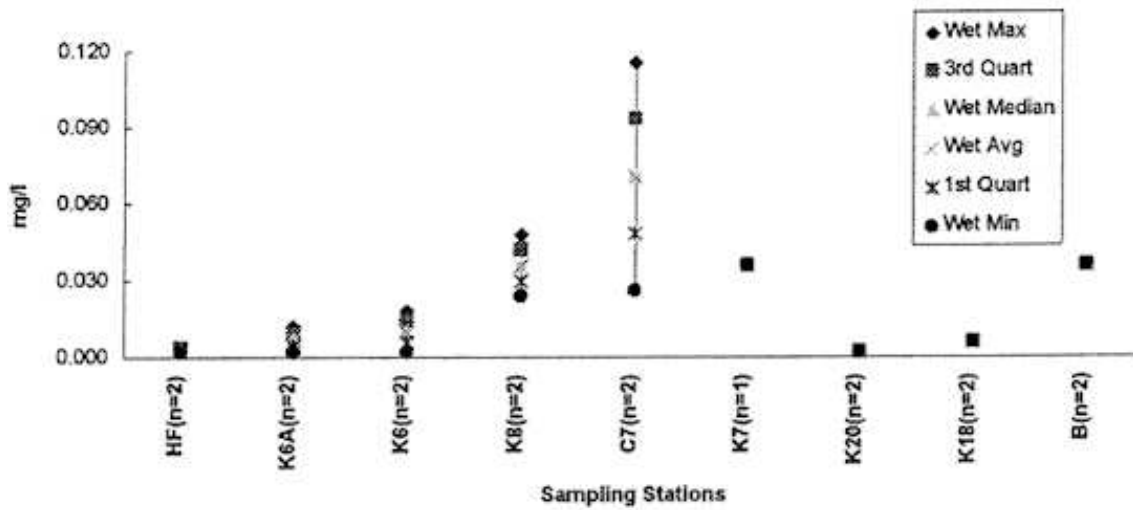
Sixteen Mile Creek WET Weather Sampling
TOTAL KJELDAHL NITROGEN Readings



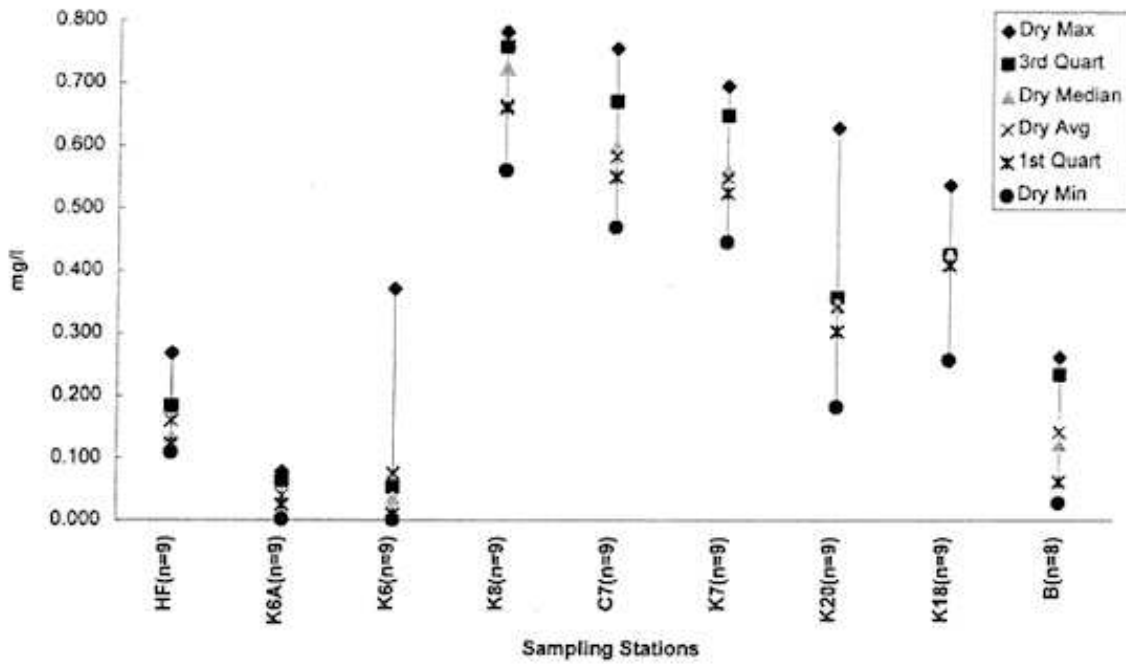
Sixteen Mile Creek DRY Weather Sampling
AMMONIA + AMMONIUM Readings



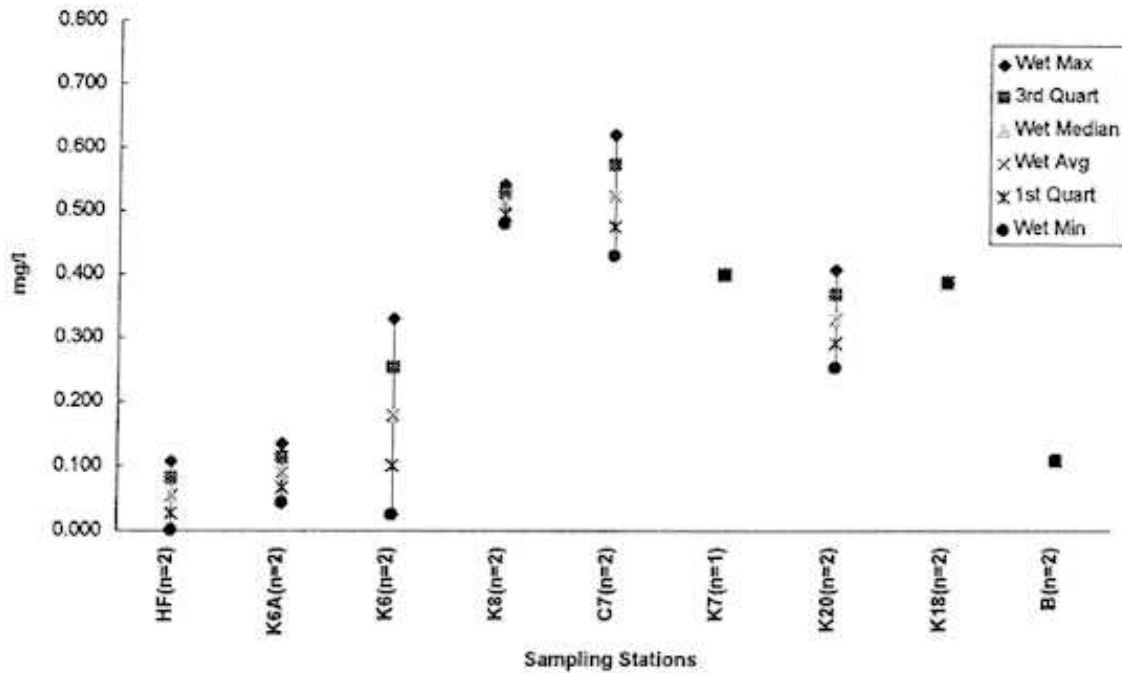
Sixteen Mile Creek WET Weather Sampling
AMMONIA + AMMONIUM Readings



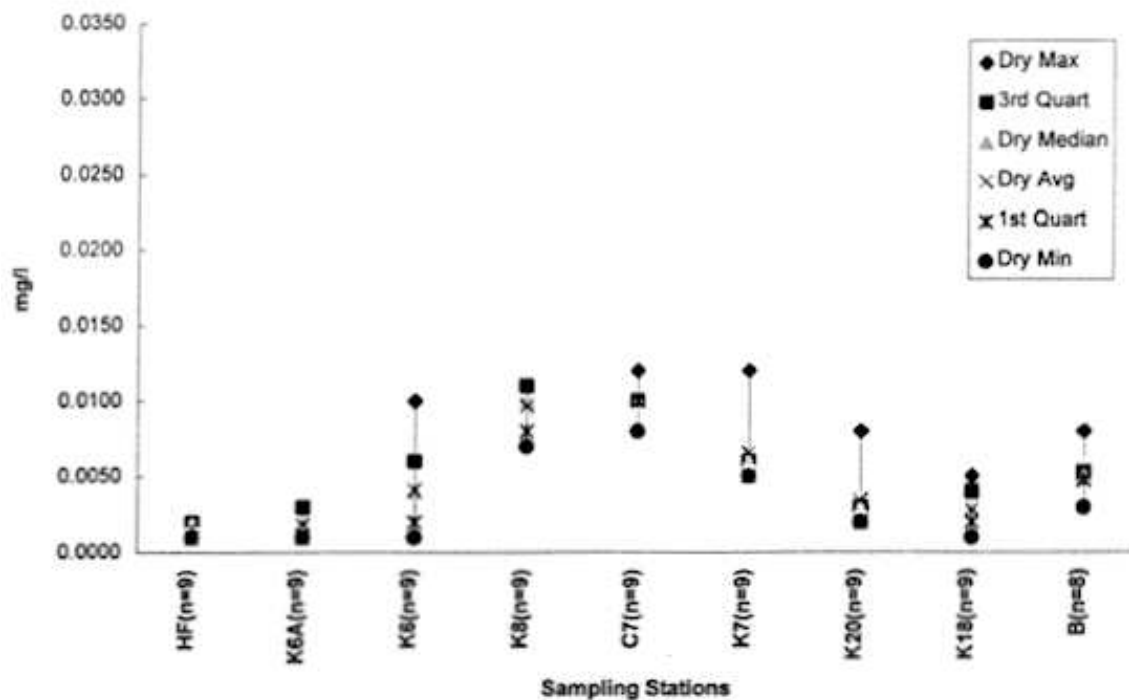
Sixteen Mile Creek DRY Weather Sampling
NITRATES Readings



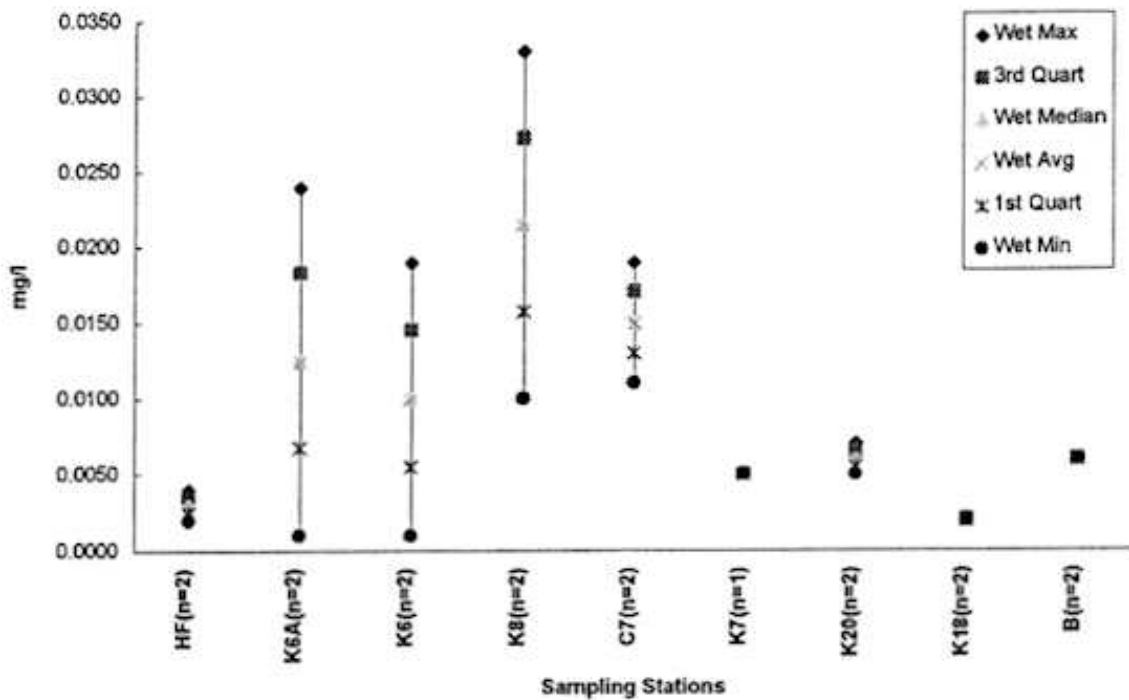
Sixteen Mile Creek WET Weather Sampling
NITRATE Readings



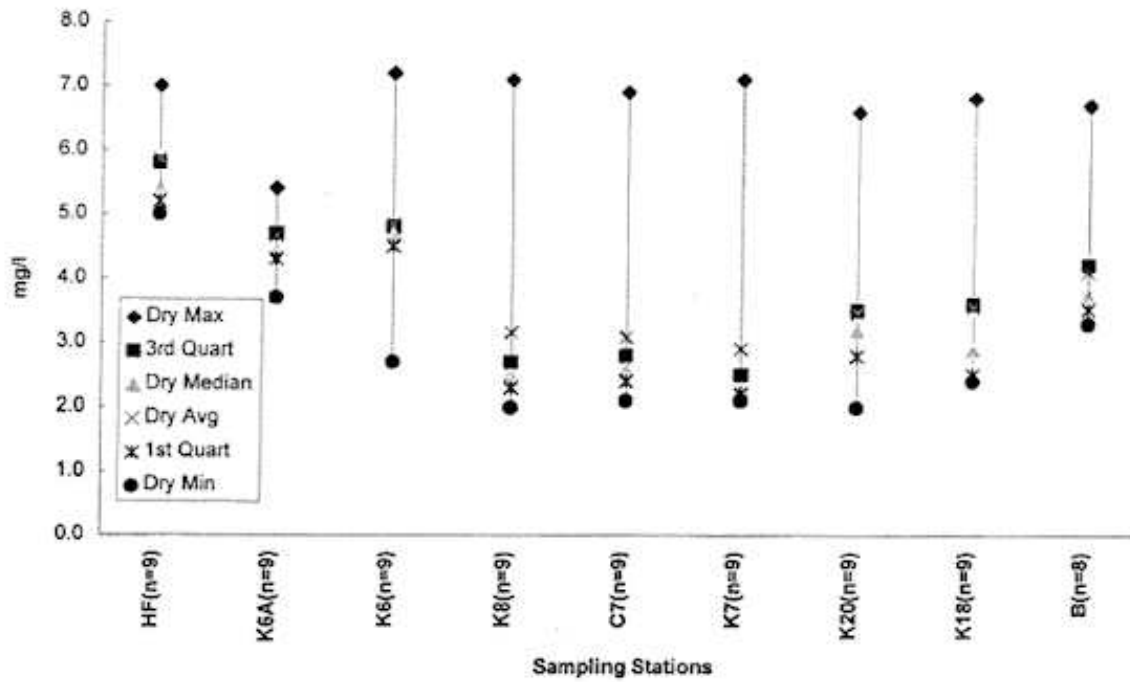
Sixteen Mile Creek DRY Weather Sampling NITRITE Readings



Sixteen Mile Creek WET Weather Sampling NITRITE Readings



**Sixteen Mile Creek DRY Weather Sampling
DISOLVED ORGANIC CARBON Readings**



**Sixteen Mile Creek WET Weather Sampling
DISOLVED ORGANIC CARBON Readings**

