OPERATING SUMMARY

WATER SUPPLY SYSTEMS

1976

Ministry of the Environment

tario

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209
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1976

George A. Kerr Q.C., Minister

Kenneth H. Sharpe, Deputy Minister

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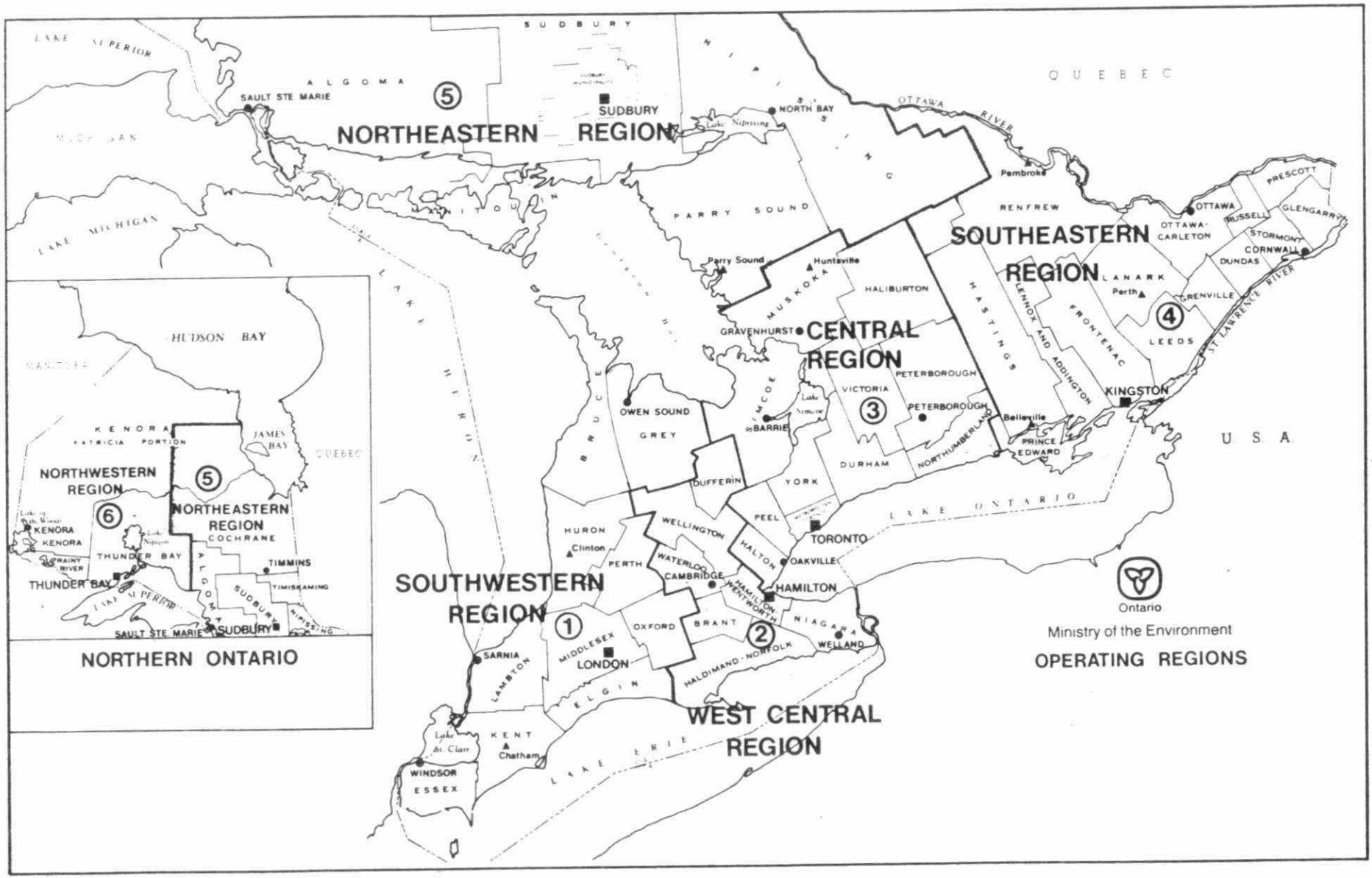
Management Information Group
Municipal & Private Section,
Pollution Control Branch,
Ministry of the Environment,
135 St. Clair Avenue West,
Toronto, Ontario, M4V 1P5.
Canada.

WATER SUPPLY SYSTEMS

operated by the Ministry of the Environment

prepared by: Municipal and Private Section
Pollution Control Branch 416/965-1655


NORTHEASTERN REGION
5
SUDBURY
SAULT STE MARIE
NORTH BAY
ALGOMA
SUDBURY
NIPISSING
PARRY SOUND
MANITOULIN
LAKE SUPERIOR
LAKE MICHIGAN
LAKE HURON
GEORGIAN BAY
QUEBEC
OTTAWA RIVER
Pembroke
RENFREW
SOUTHEASTERN REGION
OTTAWA
OTTAWA-CARLETON
PRESCOTT
RUSSELL
GLENGARRY
STORMONT
CORNWALL
DUNDAS
LANARK
Perth
GRENVILLE
4
LEEDS
ST LAWRENCE RIVER
Parry Sound
Huntsville
MUSKOKA
HALIBURTON
GRAVENHURST
CENTRAL REGION
HASTINGS
LENNOX AND ADDINGTON
FRONTENAC
KINGSTON
PETERBOROUGH
VICTORIA
3
PETERBOROUGH
Belleville
PRINCE EDWARD
NORTHUMBERLAND
DURHAM
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LAKE ONTARIO
U S A
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WELLINGTON
WATERLOO
CAMBRIDGE
HALTON
OAKVILLE
HAMILTON
HAMILTON-WENTWORTH
NIAGARA
WELLAND
SOUTHWESTERN REGION
1
OXFORD
BRANT
2
MIDDLESEX
LONDON
SARNIA
LAMBTON
ELGIN
HALDIMAND-NORFOLK
WEST CENTRAL REGION
KENT
Chatham
Lake St. Clair
WINDSOR
ESSEX
LAKE ERIE
HUDSON BAY
MANITOBA
KENORA
PATRICIA PORTION
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NORTHWESTERN REGION
6
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RAINY RIVER
TIMMINS
TIMISKAMING
ALGOMA
SUDBURY
NIPISSING
SAULT STE MARIE
SUDBURY
NORTHERN ONTARIO
Ontario
Ministry of the Environment
OPERATING REGIONS

foreword

The Ministry of the Environment is concerned with the protection and enhancement of the natural environment. And to meet this objective, one of its goals is to ensure the sound management of wastes and water resources across the province. In this regard, the Ministry inspects and regulates all communal water and wastewater facilities, and monitors the performance of the treatment plants and their effluent qualities with routine and special sampling programs. The administration of these services and programs is carried out on a regional basis.

Normally, the responsibility for the provision of communal water and wastewater services lies with the individual municipalities. However, by special arrangement, more than 281 water and wastewater facilities in the Province of Ontario are administered and operated by the six Regional Utility Operations sections of the Ministry of the Environment. In order to maintain operational control and long term evaluation of these provincially-operated facilities, up-to-date statistics are maintained on process parameters and operating costs for each plant, and an annual "Operating Summary" of these statistics is traditionally produced.

In the near future the scope of this statistical data base will be slightly modified and the data collection will be extended to cover the municipally-operated treatment plants as well, so that all water and wastewater treatment facilities in the Province of Ontario will be included in the "Operating Summaries".

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introduction

This report summarizes data from 75 water supply projects, not all of which include treatment works. Such a case is the Watford, Wyoming and Plympton project, in which the Ministry operates a pipeline conveying water purchased from the Sarnia system.

During 1976 these projects supplied 40.8 billion gallons of water from surface sources at a cost of 5.6 million dollars and from ground sources, 1.8 billion gallons at a cost of 0.3 million dollars.

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OPERATING DATA

PLANT FLOWS

Table I summarizes flow data, including maximum rates where available. Design capacities listed for projects affording physical treatment (that is, microstraining, sedimentation and filtration) do not include reduction in potential output due to in-plant use of water for purposes such as backwashing of filters. Where no treatment, or chemical treatment only (usually chlorination) is provided, the maximum output is limited by pumping capacity.

A total of 42.6 billion gallons of water was produced: 40.8 billion gallons by surface water supplies and 1.8 billion gallons by ground water supplies.

TABLE I

PLANT FLOWS

SURFACE WATER SUPPLIES

PROJECT	DESIGN CAPACITY mgd	TOTAL OUTPUT million gal	AVERAGE DAY million gal	MAXIMUM DAY million gal	MAXIMUM RATE mgd
SURFACE WATER SUPPLIES					
Region I - Southwestern					
Alviston		1.117	0.018	0.034	
Amherstburg		374.0	1.03	1.67	2.5
Belle River		375.0	1.02	2.26	
Blandford-Blenheim Twp.		164.3	0.44	0.62	1.2
Dresden			0.33	0.76	0.70
Elgin Area W.S.S.		1349.0	3.70	6.52	
Goderich		325.6	0.89	1.85	3.7
Harrow		102.6	0.28	0.63	
Kent County W.S.S.		1685.0	4.60	9.50	
Lake Huron W.S.S.		9055.0	24.7	46.5	
Lambton Area W.S.S.		4537.0	12.4	28.1	50.0
Meaford		375.2	0.98	1.82	
Mitchell's Bay		3.44	0.010	0.027	
Southampton		172.3	0.47	0.12	
Union W.S.S.		2024.0	5.53	11.6	14.4
Watford, Wyoming, Plympton W.S.S.		67.8	0.19		
Region II - West Central					
Dunnville		3132	8.56	12.2	
Region III - Central					
Bobcaygeon		16.94	0.046	0.123	
Fenelon Falls		Est.79.42	0.217	0.600	
Hastings		16.52	0.045	0.126	
Percy Twp. - Warkworth		20.83	0.057	0.136	
South Peel - Lakeview		13752	38.0	70.0	76.0
Region IV - Southeastern					
Barry's Bay		9.17	0.076	0.144	
Chalk River		25.39	0.069	0.305	
Eganville		26.19	0.072	0.210	
Renfrew		393.4	1.07	1.56	
Rockland		174.2	0.48	0.72	
Region V - Northeastern					
Assiginack Twp. (Manitowaning)		11.64	0.031	0.221	
Bruce Mines		12.18	0.034	0.083	
Cache Bay		19.49	0.053	0.107	
Caldwell Twp. - (Verner)		36.12	0.098	0.193	
Espanola		214.4	0.58	1.32	
Haileybury		208.8	0.57	1.38	
Latchford		14.6	0.040	0.092	
Michipicoten Twp. (Wawa)		141.9	0.390	1.600	
Moosonee		62.4	0.160	0.350	
Shackleton-Machin Twp.(Fauquier)		17.6	0.048	0.100	
Wanapitei W.S.S.		1406	3.84	4.3	
Region VI - Northwestern					
Ear Falls		46.10	0.126	0.292	
Emo Twp.		18.07	0.049	0.13	
Geraldton		Est.158.6	0.43		
Ignace Twp.		39.65	0.130	0.325	
Machin Twp. (Vermillion Bay)		Est. 6.766	0.022	0.080	
Red Lake Twp.		Est.140.5	0.384	0.543	

GROUND WATER SUPPLIES

PROJECT	DESIGN CAPACITY mgd	TOTAL OUTPUT million gal	AVERAGE DAY million gal	MAXIMUM DAY million gal	MAXIMUM RATE mgd
GROUND WATER SUPPLIES					
Region I - Southwestern					
Hanover		95.93	0.262		
Milverton		N/A			
Mitchell		121.11	0.238	0.560	1.440
Thedford		19.30	0.053	0.120	
Van Astra		61.25	0.167	0.284	
Region II - West Central					
Brantford Twp.		Est.43.55	0.119	0.335	
Woolwich Twp. (St. Jacobs)		32.25	0.088	0.126	
Region III - Central					
Anson, Hindon & Minden		22.26	0.061	0.092	
Bradford		30.49	0.083	0.314	
Cookstown		182.70	0.501	0.945	
Elmvale		48.20	0.132	0.480	
Havelock		36.77	0.100		
Stayner		92.15	0.252	0.662	
Woodville Twp.		7.32	0.022	0.095	
Region IV - Southeastern					
Alfred		24.86	0.068	0.251	
Bourget		N/A			
Chesterville		Est.21.60	0.059	0.121	
Frankford		83.99	0.229	0.463	
L'Original		21.23	0.063	0.397	
Merrickville		25.82	0.071	0.203	
Plantagenent		Est. 6.59	0.018		
Vankleek Hill		Est.36.23	0.099	0.500	
Wellington		Est.21.23	0.058	0.173	
Westport		16.92	0.046	0.106	
Winchester		75.42	0.206	0.268	
Region V - Northeastern					
Black River Twp.-Matheson, Ramore		N/A			
Blezard Valley Area W.S.S.		499.0	1.36	2.6	
Blind River		23.61	0.065	0.156	
Fauquier Twp. (Moonbeam)		20.05	0.055	0.098	
North Himsworth Twp. (Callander)		11.21	0.031		
Warren (Ratter-Dunnet)		16.11	0.044	0.138	

WATER QUALITY

Bacteriological Quality

Tables II and III are summaries of bacteriological sampling carried out during 1976. The indicator organisms used were total coliforms. The results for raw water are tabulated to provide an approximation of geometric means taking the logarithm of coliforms less than 4 as being 0, from 4 to 32 as 1, from 33 to 320 as 2 and coliforms greater than 320 to 3. The geometric mean of n samples is antilog $\frac{(\log x_1 + \log x_2 + \ldots \log xn)}{n}$

Samples of treated water are taken leaving the plant and in the distribution system up to the point of delivery of the water, which in some cases is the ultimate consumer and in others the municipal distribution system.

Chemical Quality

The results of chemical analysis are shown as arithmetic mean values in Tables IV and V for surface waters and ground waters respectively. Where no treatment is provided, or where treatment does not alter the parameter, the figure shown is of all analyses both raw and treated water. In many cases these averages are based on very few samples, and in some cases, the values shown have come from samples taken in investigating consumer complaints. The data tabulated may, therefore, not be entirely representative of the normal finished product.

Physical Characteristics

Turbidity, color and temperature data for surface water supplies and turbidity and color for ground water supplies is contained in Tables VI and VII. Where no facilities exist for the removal of turbidity and colour (coagulation and filtration), that is, where raw water with, perhaps, chemical addition is pumped directly into the distribution system, averages of all samples are shown as treated water. Ground water temperatures are assumed to be constant and equal to ground temperatures, therefore they are not recorded. It would appear from the limited data on turbidity and color that ground waters (Table VII) frequently exceed the desireable criteria of 1.0 F.T.U. turbidity and 5 units apparent color.

TABLE II BACTERIOLOGICAL QUALITY

SURFACE WATER SUPPLIES

PROJECT	AVG CHLORINE RESIDUAL mg/l	NUMBER OF SAMPLES HAVING TOTAL COLIFORMS (per 100 ml) OF: RAW WATER 0	1-3	4-32	33-320	>320	LEAVING PLANT 0	<1	IN DISTRIB^n SYSTEM 0	<1
SURFACE WATER SUPPLIES										
Region I - Southwestern										
Alviston	1.3		1				6		20	3
Amherstburg	0.7	1		1	23	43	69		198	2
Belle River				5	5	5	15		30	
Blandford-Blenheim Twp.	0.7	27	14	2					132	10
Dresden	0.8				2	1	3			
Elgin Area W.S.S.	0.9	53	49	10	4		173	4	168	11
Goderich	0.9	12	7	15	9	3	45		236	12
Harrow	0.9	4	4	10	4	2	24		42	6
Kent County W.S.S.	0.2									
Lake Huron W.S.S.	1.2	147	33	9	3	1	157		521	
Lambton Area W.S.S.	0.6	56	8	3	2		328	2	340	30
Meaford	0.4	23	9	10	4		77	6	225	11
Mitchell's Bay	0.9			3	12	3			52	4
Southampton	0.9	55	14	9	6	8	67	1	209	10
Union W.S.S.	0.5	23	4	16	18	1	63		628	6
Watford, Wyoming, Plympton W.S.S.										
Region II - West Central										
Dunnville		2		19	18	13			146	1
Region III - Central										
Bobcaygeon	0.6	2	5	18	5	4	34		137	
Fenelon Falls	0.6	11	10	15	5	1	33		143	
Hastings	3.8	2	1					1	226	24
Percy Twp. - Warkworth	0.7		2	5	18	5	24		59	5
South Peel - Lakeview	0.5	10	12	45	26	6	99	2	1574	46
Region IV - Southeastern										
Barry's Bay	0.6	23		1			28	1	87	
Chalk River	0.6	5		10	10	6	39	1	150	2
Eganville	0.5	42	3	4	1		52	1	156	1
Renfrew	0.5	9	5	6	6	4	31		62	
Rockland	0.5				3	57	60		99	
Region V - Northeastern										
Assiginack Twp. (Manitowaning)	0.5	9	3	1					48	
Bruce Mines	1.1	9	3	5	2		19		19	
Cache Bay	0.5	21	3	13	1		19	1	30	
Caldwell Twp. (Verner)	0.5	6	3	6	32		45		41	
Espanola	0.5	22	8	19			49		192	
Haileybury	0.9	15		9	27	1	40	2	160	3
Latchford	0.6	30	4	9	1		42		86	1
Michipicoten Twp. (Wawa)	0.5								122	
Moosonee	0.8	8		9	2		32		36	5
Shakleton-Machin Twp. (Fauquier)	0.3	12	3	24	2		45	1	39	
Wanapitei W.S.S.	0.4	6	4	28	12		53			
Region VI - Northwestern										
Ear Falls	0.7	16	7	6		2			56	13
Emo Twp.	0.8	1		1	5	12	3	1	93	3
Geraldton	0.7	2		2	2		4	4	87	
Ignace Twp.		25	16	1	2				35	17
Machin Twp. (Vermillion Bay)	0.7	19	1	8	5		11		55	1
Red Lake Twp.	0.8	20	1	9	1	1	30		73	

TABLE III

BACTERIOLOGICAL QUALITY

GROUND WATER SUPPLIES

PROJECT	AVG CHLORINE RESIDUAL mg/l	NUMBER OF SAMPLES HAVING TOTAL COLIFORMS (per 100 ml) OF: RAW WATER					LEAVING PLANT		IN DISTRIBN SYSTEM	
		0	1-3	4-32	33-320	>320	0	≥1	0	≥1
GROUND WATER SUPPLIES										
Region I - Southwestern										
Hanover		8	1	5	2				65	2
Milverton		20							52	
Mitchel		71	20				41	5	152	10
Thedford		8					7		18	
Van Astra	.2						41		132	9
Region II - West Central										
Brantford Twp.										
Woolwich Twp. (St. Jacobs)	.2	38					19		20	
Region III - Central										
Anson, Hindon & Minden	.2								76	
Bradford	.9	14					5		34	1
Cookstown		6							11	1
Elmvale		40							113	5
Havelock		4								
Stayner		19		1			2		35	
Woodville Twp.	.2									
Region IV - Southeastern										
Alfred	.4	12		12	11	5	66	2	72	
Bourget		5		7	3	2	15		52	1
Chesterville	.9	11		3		1	15		66	
Frankford	.5	1	1				2		6	
L'Original	.6	16	2	1			7		15	
Merrkickville	.2	27					31		50	
Plantagenet										
Vankleek Hill	.5	18	1	1	1		22		22	
Wellington	.8	21		1	1		23		50	
Westport	.4	5	2				11		15	
Winchester	.5	106	1						294	2
Region V- Northeastern										
Black River Twp.-Matheson Ramore		8		1					6	
Blezard Valley Area W.S.S.		65							11	1
Blind River										
Fauquier Twp. (Moondbeam)	.3	20					21		38	
North Himsworth Twp. (Callander)	.5	45					42	1		
Warren (Ratter-Dunnet)		52								

TABLE IV

CHEMICAL CHARACTERISTICS

SURFACE WATER SUPPLIES

NOTE Data shown as RAW/TREATED or as average of all samples (see text)

PROJECT	HARDNESS mg/l $CaCO_3$	ALKALINITY mg/l $CaCO_3$	IRON mg/l Fe	CHLORIDE mg/l Cl^-	pH pH units	FLUORIDE mg/l F^-	AMMONIA mg/l N	KJELDAHL NITROGEN mg/l N	NITRATE +NITRITE mg/l N	TOTAL PHOSPHORUS mg/l P	PHENOL µg/l C_6H_5OH	SULFATE mg/l SO_4^{-2}	ALUMINUM mg/l Al	COPPER mg/l Cu	CALCIUM mg/l Ca	CONDUCTIVITY micromhos per cubic centimeter
SURFACE WATER SUPPLIES																
Region I - Southwestern																
Alviston																
Amherstburg	111/111	85/77	1.7/.03	20/22	8.0/7.4	.1/.9	.08	.57	.62	.09						
Belle River	121/119	94/76	.8/.2	12/13	7.9/7.6		.13/.02		.28/.29							
Blandford-Blenheim Twp.	126/128	96/79	.5/.04	20/22	8.1/7.3	.1/.8	.06	.36	.14/.01	.03						
Dresden	269/276	195/148	1.5/.05	16/20	7.5/8.2											
Elgin Area W.S.S.	130/132	99/156	.7/.03	21/23	8.2/7.6	.1/.7	.03/.01	.35/.17	.19/.17	.04/.01						
Goderich	112/122	93/86	.8/.03	8/11	8.1/7.4	.1/.8	.09	.30/.70	.49	.02/.02						
Harrow	119	78	1.0	26	6.3	.1	.1	.2	.86		1					
Kent County W.S.S.																
Lake Huron W.S.S.	102/101	80/79	.3/.04	7/7	8.1/8.1	.1/ .1	.02/.01	.24/.13	.24/.22	.02/.02						217
Lambton Area W.S.S.	100/101	81/80	.1/.05	6/7	8.3/8.1	.1/.4	.01/.005	.20/.06	.20/.22	.01/.03						
Meaford	91/90	73/73	.08/.03	5/6	8.2/8.1	.1/.1			.18/.16							
Mitchell's Bay	127/128	101/82	1.3/.04	12/14	8.0/7.7	.1/.1										
Southampton	110/113	89/90	.56/.13	7/8	8.0/8.2	.1/.1			.29/.28							215
Union W.S.S.	120/117	88/71	.52/.04	20/22	8.0/7.4		.03	.30	.53/.25	.03						
Watford, Wyoming, Plympton W.S.S.																
Region II - West Central																
Dunnville	135	103	.35	25	8.1	.1										292
Region III - Central																
Bobcaygeon	89/87	72/64	.18/.07	9/12	7.7/7.4											163/189
Fenelong Falls	57/56	44/41	.21/.12	5/7	7.7/7.4											95/118
Hastings																
Percy Twp. - Warkworth	206	189	.23/.09	6/9	8.1/7.7											391/402
South Peel - Lakeview	131/135	97/92	.28/.05	35/34	7.9/7.6	.2/1.0	.1/.1	.4 /.3	.4 /.4		1/1					337/327
Region IV - Southeastern																
Barry's Bay	22	12	.13	7	6.9				.08							60
Chalk River	20	13	.43	4	6.7	.1			.04							51
Eganville	47/46	36/36	.15/.07	6/6	7.3/7.2											112/118
Renfrew	67/76	58/53	.34/.08	6/7	7.5/7.3	.1										149/177
Rockland	38/61	27/29	.50/.13	6/9	6.9/8.4		.1/.08	.4 /.3	.2 /.19							96/147
Region V - Northeastern																
Assiginack Twp. (Manitowaning)	90	72	.05	7	8.2											179
Bruce Mines	78	63	.13	10												155
Cache Bay	19	11	.14	2	6.9											50
Caldwell Twp. (Verner)	59/61	33/44	.38/.03	7/20	7.0/6.7					.04/.02	.02					164/201
Espanola	32/33	20/16	.07/.10	7/9	7.5/7.1	.1/.9										
Haileybury	27/33	17/14	.7 /.1	4/5	7.1/8.0		.1/.1	.4 /.1	.16/.2							64/ 98
Latchford	35/38	19/33	.12/.05	3/4	7.0/8.0	.1				.03/.02						110
Michipicoten Twp. (Wawa)	74	44	.25	3	7.3											163
Moosonee	247/243	184/183	.61/.59	221/226	7.8/7.3	.4/.8										1132/1157
Shackleton-Machin Twp. (Fau.)	70/72	67.89	.51/.05	2/8	7.8/8.1											122/253
Wanapitei W.S.S.	39/48	17/16	.25/.04	3/6	7.3/7.4	.4/1.0	.1/.1	.2 /.2	.21/.21	.02/.03	1/1					
Region VI - Northwestern																
Ear Falls	41	39	.41	1	6.8				.013							80
Emo Twp.	31/28	30/50	.34/.08	2/7	6.6/7.1				.015/.011							72/166
Geraldton	123	125	.20	3	7.5											224
Ignace Twp.	48	50	2.7	1	6.6											99
Mchin Twp. (Vermillion Bay	20	18	.14	2	6.4								2.5			51
Red Lake Twp.	25	26	.12	2	6.4											58

TABLE V

CHEMICAL CHARACTERISTICS

GROUND WATER SUPPLIES

NOTE: Data shown as RAW/TREATED or as average of all samples (see text).

PROJECT	HARDNESS mg/l $CaCO_3$	ALKALINITY mg/l $CaCO_3$	IRON mg/l Fe	CHLORIDE mg/l Cl^-	pH pH units	FLUORIDE mg/l F^-	AMMONIA mg/l N	KJELDAHL NITROGEN mg/l N	NITRATE +NITRITE mg/l N	TOTAL PHOSPHORUS mg/l P	PHENOL µg/l C_6H_5OH	SULFATE mg/l SO_4^{-2}	ALUMINUM mg/l Al	COPPER mg/l Cu	CALCIUM mg/l Ca	CONDUCTIVITY micromhos per cubic centimeter
GROUND WATER SUPPLIES																
Region I - Southwestern																
Hanover																
Milverton																
Mitchell	304/252	199/197	2.4/.04	5.4/4.8	7.8/7.7	1.6/1.5			.10/.20							
Thedford	87	205	.19	30	8.1	2.2		1.0								
Van Astra	316	258	.04	14	7.9	1.1			1.21							
Region II - West Central																
Brantford Twp.																
Woolwich Twp. (St. Jacobs)	1024/813	199/202	.76/.08	4/8	7.3/7.5		.2/.1	.2/.1	.2/.2							1552
Region III - Central																
Anson, Hindon & Minden																
Bradford																
Cookstown																
Elmvale	173/176	179/178	.07/.05	4/3	7.9/8.0											
Havelock	286	240	.04	34	7.4				2.1							347
Stayner												28				588
Woodville Twp.																
Region IV - Southeastern																
Alfred	278/250	386/328	.42/.43	457/324	7.8/7.7		.08/.20	.39/.61	4.0/4.5						69/74	2200
Bourget	95/81	192/204	.53/.21	63/56	7.5/7.8		.12/.08	.48/.50	.16/.14	.066/.30						526
Chesterville	352	303	.51	100	7.8		.09	.44	.037							950
Frankford																
L'Original	233/215	300/278	.36/.18	209/163	7.8/7/8				.12/.22							1200
Merrickville	299/311	287/282	.67/.54	33/68	6.6/7.6	.4			.47/.55							700
Plantagenet	376/312	445/417	1.8/.8	271/178	7.5/7.7		.26/.12	.40/.60	.39/.04	.114/.43					80/34	1400
Vankleek Hill	275/266	267/263	.3/.3	50/40	7.7/7.7				1.2/1.1							640
Wellington	210	294	.4	26	7.0		.29	.28	1.0	.14						570
Westport	336	250	.05/.1	106	7.4											800
Winchester	345/352	314	.13	98	7.6				.29/.08							990
Region V - Northeastern																
Black River Twp. Matheson, Ra.	337	341	.05	9	7.6											600
Blezard Valley Area W.S.S.	128	84	.06	13	8.0		.1	.7								266
Blind River																
Fauquier Twp. (Moondbeam)	326/345	310/319	1.3/3.4	19/20	7.4/7.7											621
North Himsworth Twp. (Callander)																
Warren (Ratter-Dunnet)	308	234	.42/.05	36	7.5											631

TABLE VI

PHYSICAL CHARACTERISTICS

SURFACE WATER SUPPLIES

PROJECT	TURBIDITY					APPARENT COLOUR					TEMPERATURE	
	RAW WATER		TREATED WATER			RAW WATER		TREATED WATER			AVERAGE	MAXIMUM
	AVERAGE FTU	MAXIMUM FTU	AVERAGE FTU	MAXIMUM FTU	% of samples >1.0 FTU	AVERAGE units	MAXIMUM units	AVERAGE units	MAXIMUM units	% of samples > 5 units	°C	°C
SURFACE WATER SUPPLIES												
Region I - Southwestern												
Alviston	11	27	0.3	0.7	0						1.5	9
Amherstburg	18	173	0.2	4.4	3	13	15	5	5	0	11	24
Belle River	12	50	0.2	0.8	30	21	100	7	20	20	11	24
Blandford-Blenheim Twp.	12	95	0.4	3.0	1	11	75	5	5	0	9	22
Dresden			0.3	0.3				5	5	0	13	24
Elgin Area W.S.S.	32	288	0.13	0.7	0	23	100	5	5	0	10	21
Goderich	15	52	0.4	2.5	5	10	30	5	5	0	9	22
Harrow	20	150	0.3	1.6	1	23	200				10	25
Kent County W.S.S.	11	45										
Lake Huron W.S.S.	10	67	1.0	1.9	55	11	30	5	5	0	12	22
Lambton Area W.S.S.	2.4	25	0.2	1.5	1	8	10	5	5	0	9	22
Meaford	1.4	13	0.7	8.4	13	5	5	5	5	0	10	19
Mitchell's Bay	21	190	0.5	1.7	9	19	40	5	5	0	13	23
Southampton	5.3	20	0.7	7.5	21	7	10	5	5	0		
Union W.S.S.	14	70	0.4	1.1	1	9	70	5	5	0	11	23
Waterford, Wyoming, Plympton W.S.S.												
Region II - West Central												
Dunnville	19		19	134							9	23
Region III - Central												
Bobcaygeon	3.0	4.5	1.5	3.9	50	18	20	10	15	25		
Fenelon Falls	2.3	5.5	1.1	1.7	91	12	20	11	15	100		
Hastings												
Percy Twp. - Warkworth	1.4	2.4	.12	1.4	25	16	20	10	15	67		
South Peel - Lakeview	5.5	76.0	0.5	3.7	2	6	70	5	10	1	8	19
Region IV - Southeastern												
Barry's Bay	1.4	2.5	0.6	3.0	9	8	10	5	15	1	10	13
Chalk River	3.8	15.0	3.6	15.0	100	35	60	23	40	100		
Eganville	2.5	4.0	2.2	4.0	67	10	15	7	10	67	7	22
Renfrew	3.1	16.0	0.4	2.4	5	24	40	4	15	1	11	25
Rockland	4.3	30.0	0.14	5.0	2	37	70	5	5	0	10	22
Region V - Northeastern												
Assiginack Twp. (Manitowaning)	.7	.9	.6	.8	0	5	5	5	5	0		
Bruce Mines			2.2	2.3	100			5	5	0		
Cache Bay	1.3	1.8				19	30					
Caldwell Twp. - (verner)	7.1	45.0	0.4	15.0	6	67	120	5	15	1	9	20
Espanola	1.1	3.8	1.1	2.0	54	10	30	9	30	40		
Haileybury	13	46	1.2	7.8	33	47	100	5	15	4	8	19
Latchford	1.1	4.2	0.11	3.7	1	19	60	5	10	0		
Michipicoten Twp. (Wawa)	.6	1.0				5	5					
Moosonee	3.5	6.4	3.7	7.7	100	115	200	9	120	50		
Shackleton-Machin Twp. (Fauquier)	5	25	0.7	5.8	12	82	170	9	30	50	7	22
Wanapitei W.S.S.	4	22	0.3	3.5	1	22	40	5	30	33	9	22
Region VI - Northwestern												
Ear Falls	5.4	7.8	5.4	7.8	100	33	60	27	40	100		
Emo Twp.	5.4	19.0	1.8	2.4	50	35	50	5	5	0	8	22
Geraldton	1.1	1.4	1.1	3.7	17	18	30	12	30	50		
Ignace Twp.	4.0	22.0	1.1	2.1	37	56	70	16	30	14		
Machin Twp. (Vermillion Bay)	1.3	2.7	1.4	1.4	100	7	15	5	5	0		
Red Lake Twp.	0.9	2.0	0.78	1.7	20	25	30	20	30	20		

TABLE VII

PHYSICAL CHARACTERISTICS

GROUND WATER SUPPLIES

PROJECT	TURBIDITY					APPARENT COLOUR				
	RAW WATER		TREATED WATER			RAW WATER		TREATED WATER		
	AVERAGE FTU	MAXIMUM FTU	AVERAGE FTU	MAXIMUM FTU	% of samples >10 FTU	AVERAGE units	MAXIMUM units	AVERAGE units	MAXIMUM units	% of samples >5 units
Region I - Southwestern										
Hanover										
Milverton										
Mitchell										
Thedford	1.0	1.0				5	5			
Van Astra			25	50	100			5	5	0
Region II - West Central										
Brantford Twp.										
Woolwich Twp. (St. Jacobs)										
Region III - Central										
Anson, Hindon & Minden										
Bradford										
Cookstown										
Elmvale										
Havelock	1.8	4.3				7	10			
Stayner										
Woodvile Twp.										
Region IV - Southeastern										
Alfred	1.4	2.5	2.4	9.0	67	12	15	4	15	67
Bourget	3.9	8.8	2.4	4.2	88	23	70	17	30	83
Chesterville	2.3	5.4				10	15			
Frankford										
L'Original	1.8	8.5	0.5	2.3	18	11	40	10	40	45
Merrickville	3.1	10.0	3.1	10.0	75	8	15	8	15	25
Plantagenet	10.5	29.0	6.0	10.0	0	31	50	30	50	100
Vankleek Hill	1.8	4.6	0.6	0.8	0	12	20	10	15	50
Wellington										
Westport										
Winchester	1.4	2.5	1.3	2.5	38	5	5	5	10	13
Region V - Northeastern										
Black River Twp.-Matheson, Blezard Valley Area W.S.S.	0.4	0.8				5	5			
Blind River										
Fauquier Twp. (Moonbeam)	2.7	12.0	0.9	3.8	30	24	40	7	15	35
North Himsworth Twp. (Callander)										
Warren (Ratter-Dunnet)	0.9	2.5	0.8	1.3	33	5	5	5	5	0

PROCESS DATA

The results of raw water algae enumeration are summarized in Table VIII tabulating weighted average monthly values of total algae.

The quantities of chemicals used in the treatment processes including disinfection are presented in Table X for both surface water and ground water projects. Sodium silicate is used as a flocculant aid in the surface water projects as "activated silica". Its use in ground water projects is for sequestering iron.

The data available on filter operation is summarized in Table XI. Since many of these plants are not staffed 24 hours per day, the filters are washed at regular intervals rather than on the basis of head loss.

Since there is a move to require treatment of process wastes rather than discharging these streams to the raw water source, data has been collected on volumes and chemical characteristics of filter wash water and of sludge from clarifiers and settling basins.

TABLE VIII

TOTAL ALGAE - RAW WATER

NOTE:

PROJECT	* AVERAGE A.S.U/ml	TOTAL ALGAE - in Areal Standard Units per milliliter											
		JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEP	OCT	NOV	DEC
Region I - Southwestern													
Amherstburg	861	473	515	1304	1541	1877	1360	109	490	392	483	751	486
Blandford-Blenheim Twp.	635	549	1083	1491	292	164	45	636	441	1176	702	401	522
Goderich	375	142	50	524	825	618	471	252	385	178		266	266
Lake Huron W.S.S.	1169	1031	747	707	1121	1725	2299	1298	484	1007	1141	755	
Lambton W.S.S.	589		428	393	646	986	1085	447	321	229	357	267	652
Union W.S.S.	2894	1692	1636	1791	3113	2534	2839	4897	3859	4592	3211	3230	2772
Region II - West Central													
Dunnville	1481	1212	1059	1171	1475	3225	568	399	1575	2029	1527	1453	1570
Woolwich Twp. (St. Jacobs)	1424	1212	939	1171	1475								
Region III - Central													
South Peel- Lakeview	271	218	65	80	417	877	287	662	126	178	238	209	97

* Averages are weighted.

TABLE IX

MICROSTRAINER PERFORMANCE

PROJECT	TOTAL			BLUE-GREEN			GREEN			FLAGELLATES			DIATOMS		
	ASU/ml		%	ASU/ml		%	ASU/ml		%	ASU/ml		%	ASU/ml		%
	applied	eff	red^{n}	applied	eff	red^{n}	applied	eff	red^{n}	applied	eff	red^{n}	applied	eff	red^{n}
Region I - Southwestern															
Union	2894	1388	52	167	91	46	549	370	33	161	102	37	1954	1118	43

TABLE X

CHEMICALS USED

PROJECT	CHLORINE 10^3 lb	SODIUM HYPOCHLORITE gallons	ALUM LIQUID 10^3 gal	ALUM DRY 10^3 lb	SODIUM SILICATE 10^3 lb	SODIUM BICARBONATE 10^3 lb	POLYMER 10^3 lb	LIME $Ca(OH)_2$ 10^3 lb	SODA ASH 10^3 lb	ACTIVATED CARBON 10^3 lb	SODIUM CHLORITE 10^3 gal	POT. PERMANG. lb	D. E. 10^3 lb	SODIUM CHLORIDE 10^3 lb	FLUORIDE H_2SiF_6 gallons	FLUORIDE Na_2SiF_6 10^3 lb
SURFACE WATER SUPPLIES																
Region I - Southwestern																
Alviston		64	0.1		0.02	0.06										
Amherstburg	15.6		18.4												18.2	
Belle River	7.9		19.9		5.3	2.9										
Blandford-Blenheim Twp.	3.8			50.7	11.8	3.0									19.9	
Dresden	5.2			61.1	32.6	7.9		98.6				610				
Elgin Area W.S.S.	30.2			182.5												15.3
Goderich	7.1		9.2		6.0	1.5										4.4
Harrow	4.0		4.4		5.6	1.9										
Kent County W.S.S.	13.3															
Lake Huron W.S.S.	177.4		0.2				7.5 gal.									
Lambton Area W.S.S.	63.7			305.6											97.9	
Meaford	3.8															
Mitchell's Bay	0.1		0.3				.008			0.03						
Southampton	2.3												33.1			
Union W.S.S.	55.0		87.5		58.8	13.3				2.2						
Waterford, Wyoming, Plympton W.S.S.																
Region II - West Central																
Dunnville	35.4															
Region III - Central																
Bobgaygeon	0.7												10.7			
Fenelon Falls	1.9															
Hastings	1.7															
Percy Twp.-Warkworth		256		1.5												
South Peel - Lakeview	130.9		112.8								45.0				486.2	
Region IV - Southeastern																
Barry's Bay	0.14															
Chalk River	0.6															
Eganville		800		2.0												
Renfrew	8.4			89.7				32.1		3.2						
Rockland	7.0			90.5			1.0	37.5								
Region V - Northeastern																
Assiginack Twp. (Manitowaning)		123														
Bruce Mines	0.36															
Cache Bay		220														
Caldwell Twp. - (Verner)	1.1			26.1	0.27	0.94			11.1							
Espanola	3.5															3.5
Haileybury	6.3			108.2			1.3	13.6	14.0							
Latchford	0.5			10.2			0.021		1.0							
Michipicoten Twp. (Wawa)	1.7															
Moosonee		1600		54.5			0.23		22.6						1.4	
Shackleton-Machin Twp. (Fauquier)		846		16.2			0.18		9.9							
Wanapitei W.S.S.	39.1		46.7				2.8	119.4			5.9					19.9
Region VI - Northwestern																
Ear Falls		1532														
Emo Twp.	1.1		1.2				0.10		10.2							
Geraldton		3405														
Ignace Twp.		1136			18.6											
Machin Twp (Vermillion Bay)		315														
Red Lake Twp.	3.8															

TABLE X Cont'd

CHEMICALS USED

PROJECT	CHLORINE 10^3 lb	SODIUM HYPOCHLORITE gallons	ALUM LIQUID 10^3 gal	ALUM DRY 10^3 lb	SODIUM SILICATE 10^3 lb	SODIUM BICARBONATE 10^3 lb	POLYMER lb	LIME $Ca(OH)_2$ 10^3 lb	SODA ASH 10^3 lb	ACTIVATED CARBON 10^3 lb	SODIUM CHLORITE 10^3 gal	POT. PERMANG. lb	D. E. 10^3 lb	SODIUM CHLORIDE 10^3 lb	FLUORIDE H_2SiF_6 gallons	FLUORIDE Na_2SiF_6 10^3 lb
GROUND WATER SUPPLIES																
Region I - Southwestern																
Hanover																
Milverton																
Mitchell																
Thedford																
Van Astra	0.2															
Region II - West Central																
Brantford Twp.		172														
Woolwich Twp. (St. Jacobs)		192														
Region III - Central																
Anson, Hindon & Minden		144														
Bradford		319														
Cookstown																
Elmvale																
Havelock		191														
Stayner																
Woodville Twp.		32														
Region IV - Southeastern																
Alfred		808														
Bourget																
Chesterville		474			6.4											
Frankford		191														
L'Original		296														
Merrickville		347			1.2											
Plantagenet																
Vankleek Hill		309														
Wellington	0.6															
Westport		73														
Winchester		578														
Region V - Northeastern																
Black River Twp.-Matheson, Ramore																
Blesard Valley Area W.S.S.																
Blind River																
Fauquier Twp. (Moonbeam)		510														
North Himsworht Twp. (Callander)		154														
Warren (Ratter-Dunnet)																

TABLE XI

FILTER OPERATION

PROJECT	TYPE OF FILTER	NUMBER and SIZE OF FILTERS n x sq. ft.	AVERAGE TURBIDITY FORMAZIN UNITS		FILTER RUN hours		FILTER WASH WATER USED % of output
			APPLIED	FILTERED	AVERAGE	MINIMUM	
SURFACE WATER PROJECTS							
Region I - Southwestern							
Alviston	Gravity	2 x 168	11.0	0.3			4
Amherstburg	Gravity, dual media	4 x 416	1.7	0.2	68	12	5
Belle River	Gravity, dual media	3 x 29	12.0	0.2	44	16	3
Blandford Twp. - Blenheim	Gravity, dual media	3 x 79	12.0	0.4	13	9	3
Elgin Area W.S.S.	Gravity, dual media	2 x 1040	32.0	0.13	64	25	3
Goderich	Gravity, dual media	4 x 144	3.6	0.3	41	18	6
Harrow			1.0	0.3	34	4	4
Lake Huron W.S.S.	Gravity, dual media	12 x 1100	10.0	1.0	39	5	2
Lambton			2.3	0.2	45	8	10
Meaford	Gravity, anthracite	2 x 625	1.4	0.7	24	23	3
Mitchell's Bay	Gravity	? x 148	21.0	0.5	2	0.5	7
Southampton	Pressure, D.E.	2 x 206	5.3	0.7			1
Union W.S.S.	Gravity, dual media	4 x 650	1.1	0.4			3
Region III - Central							
Bobcaygeon	Vacuum, D.E.	1 x 180	3.0	1.5	237	24	3
Fenelon Falls	Pressure, sand	2 x 50	2.3	1.1	166	48	1
South Peel (Lakeview)	Gravity, dual media	18 x 1000	5.5	0.5	43	24	2
Warkworth - Percy Twp.	Gravity, sand	1 x 35	1.4	0.1			29
Region IV - Southeastern							
Barry's Bay	Pressure	n = 2	1.4	0.6			
Eganville	Pressure, sand	2 x 38	2.5	2.2	8	3	
Renfrew			3.1	0.4			7
Rockland	Gravity, dual media	2 x 113	4.3	0.1			
Region V - Northeastern							
Caldwell Twp. (Verner			7.1	0.4	25	8	5
Haileybury	Gravity, dual media	3 x 140	3.0	1.2	46		2
Latchford			1.1	0.1	17	3	3
Moosonee	Gravity, sand	2 x 28	3.5	3.7	20	16	15
Shackelton - Machin Twp.	Gravity	1 x 20					
Wanapitae	Reactivators (2)		0.7	0.3	40	12	3
Region VI - Northwestern							
Emo Twp.	Gravity, multi media	1 x 23	5.4	1.8			12
GROUND WATER PROJECTS (IRON REMOVAL PLANTS)							
Region I - Southwestern							
Mitchell	Pressure, anthracite	1 x 200					3
Region II - West Central							
Woolwich Twp. (St. Jacobs)	Pressure	2 x 13					3
Region V - Northeastern							
Fauquier Twp. (Moonbeam)	Pressure, sand	2 x 13	2.7	0.9			

TABLE XII

WASTE STREAMS-CHARACTERISTICS

PROJECT	FILTER WASH WATER					SLUDGE FROM CLARIFIER/SETTLING BASIN				
	TOTAL VOLUME 10^6 gallons	BOD mg/l	S.S. mg/l	TOTAL PHOSPHORUS mg/l P	KJELDAHL NITROGEN mg/l N	TOTAL VOLUME 10^6 gallons	BOD mg/l	S.S. mg/l	TOTAL PHOSPHORUS mg/l P	KJELDAHL NITROGEN mg/l N
Region I - Southwestern										
Amherstburg	16.8	2.4	475	0.64		4.0	5.4	6400	4.2	
Dresden								5200	3.0	
Region II - West Central										
Woolwich Twp. (St. Jacobs)	1.08	1.3	73	0.19	0.4					
Region III - Central										
Bobcaygeon	0.23	116	22000	11.9	15.0		2.6	430	0.07	0.6
South Peel - Lakeview	259.2	15	520	0.7						
Warkworth Twp. (Percy)	2.96	1.1	16	0.07	0.4					
Region IV - Southeastern										
Rockland		5.4	1000	0.08	2.0		6.9	59000	0.14	1.8
Region V - Northeastern										
Haileybury	4.67	2.8	960				9.0	6700		
Latchford		6.0	625				11.0	3200		
Wanapitei	37.6					1.5		9300		

Table XIII

PROJECT STAFF

PROJECT	SUPERINTENDENT	ASS'T SUP'T	CHIEF OPERATOR	SENIOR OPERATOR	OPERATOR	FOREMAN	MECHANIC	ELECTRICIAN	CONTROLS TECH.	LABORATORY TECH.	GROUNDSMAN/JANITOR	LABOURER	CASUAL	PART-TIME	OTHER	TOTAL
SURFACE WATER SUPPLIES																
Region I - Southwestern																
Alviston			1													1
Amherstburg	1				5		1									7
Belle River																
Blandford-Blenheim Twp.			1		2		1						1			5
Combea														.25		.25
Dresden															1	1
Elgin Area W.S.S. (a)	1	1			5	1	2	1	1		2					
Goderich			1		4											
Harrow	1				3											
Kent County W.S.S.															.6	.6
Lake Huron W.S.S. (a)	1	1			7	1	1	1	1		2		3	.5	.25	18.75
Lambton Area W.S.S. (a)	1	1			6	1	3	1			1				2	14.00
Meaford															.25	2.00
Mitchell's Bay																.25
Southampton			.5		1											1.5
Union W.S.S.	1	1			5		2				2					11.00
Watford, Wyoming, Plympton W.S.S.															.25	.25
Region II - West Central																
Dunnville	1				5		2									8.00
Region III - Central																
Bobcaygeon			1										.25			1.25
Fenelon Falls			0.5		0.5									.5		1.5
Hastings															.5	.5
Percy Twp. - Warkworth														1		1
Southpeel - Lakeview (b)	1		1		16	1	4		2		4		1			30
Region IV - Southeastern																
Barry's Bay			.4		.4											.8
Chalk River			.2		.4											.6
Eganville			.33		.33											.66
Marmora (c)																
Renfrew	1				3		1									5
Rockland			.4		1.25											1.65
Region V - Northeastern																
Assiginack Twp. (Manitowaning)																
Bruce Mines	.1				.5											.6
Cache Bay																
Caldwell Twp. - (Verner)	.05				.75								.375			1.175
Espanola	.5				.5								.12			1.12
Haileybury	.59				1.32		.62						.33			2.86
Latchford	.05				.5		.02						.25			.82
Michipicoten Twp. (Wawa)																
Moosonee	.5				.5								.12			1.12
Shackleton-Machin Twp. (Fauq.)	.45												.17			.62
Wanapitei W.S.S.	.8				6		1		1				.5			9.3
Region VI - Northwestern																
Ear Falls			.5													.5
Emo Twp.																
Geraldton			.5		.5											1
Ignace Twp.			.5		.5											1
Machine Twp. (Vermillion Bay)															.4	.4
Red Lake Twp.			.5		.5											1

PROJECT	SUPERINTENDENT	ASS'T SUP'T	CHIEF OPERATOR	SENIOR OPERATOR	OPERATOR	FOREMAN	MECHANIC	ELECTRICIAN	CONTROLS TECH.	LABORATORY TECH.	GROUNDSMAN/JANITOR	LABOURER	CASUAL	PART-TIME	OTHER	TOTAL
GROUND WATER SUPPLIES																
Region I - Southwestern																
Hanover															.25	.25
Milverton															.25	.25
Mitchell															.25	.25
Thedford																
Van Astra			.5		.5											1
Region II - West Central																
Woolwich Twp. (St. Jacobs)			.33		.33								.2			.86
Region III - Central																
Anson, Hindon & Minden															.5	.5
Bradford															.25	.25
Cookstown															.5	.5
Elmvale															.5	.5
Havelock															.5	.5
Stayner															.5	.5
Woodville Twp.															1	1
Region IV - Southeastern																
Alfred																
Bourget																
Chesterville			.4													.4
Frankford			.25		.5											.75
L'Original			.5		1											1.5
Merrickville			.25		.25											.5
Plantagenet					.5											.5
Vankleek Hille			.5													.5
Wellington													.5			.5
Westport			.25										.25			.5
Winchester			.5		.5											1
Region V - Northeastern																
Black River Twp.-Matheson, Ra.	.1															.1
Blezard Valley Area W.S.S.				1	1											2.0
Blind River																
Fauquier Twp. (Moonbeam)	.15												.15			.30
North Himsworth Twp. (Callander)													.4			.4
Warren (Ratter-Dunnet)														.1		.1

(a) One mechanic is maintenance assistant (Mech. 2)
(b) Foreman is Chief of Maintenance
(c) Operated by village

OPERATING EXPENDITURES

The cost of operation of the water supply projects during 1976 are tabulated in Tables XIV and XV for surface water and ground water projects respectively. The cost of head office supervision, including travel, accounting, purchasing and inspection, is not charged against the projects.

An explanation of items included in each of the budget categories follows:

EXPLANATION

SALARIES & WAGES	
Regular & Probationary	includes overtime, call-in, standby, etc.
Unclassified	includes casual, part-time
EMPLOYEE BENEFITS	includes employers share Canada Pension Plan, Superannuation, Unemployment Insurance, Workman's Compensation, etc.
TRANSPORTATION & COMMUNICATION	includes travel, telephone, telemetering, accommodation, etc.
SERVICES	includes easements, insurance, sludge haulage, maintenance and repair, leases.
SUPPLIES & EQUIPMENT	includes new vehicles, chemicals, power, fuel, water, treatment chemicals, small tools, petty cash.
ACQUISITION/CONSTRUCTION OF PHYSICAL ASSETS	includes new sewer or water connections.
TRANSFER PAYMENTS	includes grants in lieu of taxes (provincial).
OTHER TRANSACTIONS	includes municipal taxes.

Unit costs are shown in Tables XIV and XV only for those plants for which the entire cost of operation is charged to the project. Many of the smaller projects are operated by municipal staff whose salaries are not included in the cost shown here.

Note : Brackets indicate credit

TABLE XIV

SURFACE WATER SUPPLIES

OPERATING EXPENDITURES

PROJECT	UNIT COST ¢/1000 gallons	GRAND TOTAL	Regular Staff	Casual (Unclassified) Staff	TOTAL SALARIES AND WAGES	TOTAL EMPLOYEE BENEFITS	TOTAL TRANSPORTATION AND COMMUNICATIONS	Insurance	Repairs and Maintenance
Region I - Southwestern									
Alviston (a)		13224	5452		5452	338	398		11
Amherstburg		186309	102097	2899	104996	11934	2220	2481	1814
Belle River		1732	604		604		118	855	
Blandford - Blenheim Twp.		97609	51831	13891	65722	7278	1229	1477	2
Dresden (b)		14283	1931		1931		30	441	6205
Elgin Area W.S.S.		426646	202044		202044	24924	7072		
Goderich		126061	71303	14493	85796	9048	2013	1254	8
Harrow		108229	52711		52711	6061	5054	178	3803
Kent County W.S.S.		53705	9473		9473		2194	1977	167
Lake Huron W.S.S.		896016	247476		247476	27009	5834		
Lambton Area W.S.S.		549591	210508	6500	208008	28227	5271	10347	3929
Meaford (c)		29360						609	28751
Southampton		31381	13135	760	13895		389	481	596
Union W.S.S.		340915	153223	816	154039	19145	9085	4590	14064
Watford, Wyoming, Plympton W.S.S.		221						69	
Region II - West Central									
Dunnville		238564	121036		121036	20926	4444	2673	2067
Region III - Central									
Bobcaygeon		33427	16312	2344	18656	1811	741	334	4580
Fenelon Falls		37861	24732		24732	3399	1760	336	483
Hastings		16314	4518	2586	9515	190	483	122	2927
Percy Twp - Warkworth		10562	76	6887	6963	270	149	109	286
South Peel - Lakeview		1566818	470799	21383	492182	46531	10281	27847	22583
Region IV - Southeastern									
Barry's Bay		24127	11131	530	11661		705	408	72
Chalk River		15821	8676		8676		903	175	
Eganville		16128	11775		11775		351	163	611
Marmora		6052	1250		1250	419	169	221	146
Renfrew		123587	71014		71014	8190	1627	1207	648
Rockland		64681	29135	(49)	29086	3895	1472	538	602
Region V - Northeastern									
Assiginack Twp. (Manitowaning)		3095					196		161
Bruce Mines		17599	6885		6885	459	632	800	1181
Cache Bay		240						25	
Caldwell Twp. - (Verner)		35261	7198	10743	17941		1153	745	611
Espanola		21603	10869	1052	11921	962	396	136	64
Haileybury		99808	34610	4870	39480	4223	2383	1390	6608
Latchford		25792	12373	2723	15096		864	522	3230
Michipicoten Twp. (Wawa)		373	232		232		97	21	
Moosonee		39885	9464	4663	14127	1060	744	637	(2867)
Shackleton - Machin Twp. (Fauquier)		27821	7904	2887	10791	1005	1679	242	2018
Wanapitei W.S.S.		263158	132020		132020	14767	2333	2673	2228
Region VI - Northwestern									
Ear Falls		12796				441	133	234	506
Emo Twp.		30239	15905	2535	18440	1954	1335	277	660
Geraldton		23255	12693	6440	19133	1610	1222	102	1464
Ignace Twp.		11968						106	334
Machin Twp. (Vermillion Bay)		12708					1043	147	822
Red Lake Twp.		46343	29305		29305	3693	296	442	668

(a) Alviston - Grand total should be $26,044.
(b) Dresden - Grand total should be $29,479.
(c) Fiscal Year (76/77)

TABLE XIV Cont'd

OPERATING EXPENDITURES

PROJECT	Other Services	TOTAL SERVICES	Machinery and Equipment	Chemicals	Utilities	Other Supplies and Equipment	TOTAL SUPPLIES AND EQUIPMENT	TOTAL AQUISITION/ CONSTRUCTION OF PHYSICAL ASSETS	TOTAL TRANSFER PAYMENTS	OTHER TRANSACTIONS
Region I - Southwestern										
Alviston	66	77	2495	1986		2478	6959			
Amherstburg	6394	10689	1946	3519	30901	4790	47156	15		9299
Belle River	132	1010								
Blandford-Belnheim Twp.	(917)	562	5725	8316	5077	3700	22818			
Dresden		6646		4864			4864			812
Elgin Area W.S.S.		12893					179689	24		
Goderich	518	1886	1258	7780	12444	1044	24174			3144
Harrow	(358)	3623	13285	4221	12421	10480	40407			373
Kent County W.S.S.	2243	4387	2864	841	32096	1850	37651			
Lake Huron W.S.S.		55352					536754			23595
Lambton Area W.S.S.	8952	23228	27943	32195	213924	10533	284595			262
Meaford		29360								
Southampton	1554	2631	898	5993	6705	870	14466			
Union W.S.S.	4747	23401	12467	42494	51088	12801	118850			16395
Watford, Wyoming, Plympton W.S.S.		69				142	142			
Region II - West Central										
Dunnville	2806	7546	1344	5857	69794	3333	80328	126		4156
Region III - Central										
Bobcaygeon	2192	7106	192	1470	2214	1064	4940			173
Fenelon Falls	1551	2370	34	318	3919	1166	5437			163
Hastings	75	3124	138	316	2426	122	3002			
Percy Twp. - Warkworth		395	102	674	1424	585	2785			
South Peel - Lakeview	63891	114321	24283	99566	609308	27903	761060			142443
Region IV - Southeastern										
Barry's Bay	181	661	3961	391	3649	3099	11100			
Chalk River	1780	1955	334	246	2388	1319	4287			
Eganville	25	799	449	1162	4	1583	3198			5
Marmora	608	975	960	1984		283	3227	12		
Renfrew	300	2155	2286	12335	19856	6126	40601			
Rockland	1090	2230	4234	9620	11010	3134	27998			
Region V - Northeastern										
Assiginack Twp. (Manitowaning)	232	393	325	108	1811	262	2506			
Bruce Mines	168	2149	1921	177	2988	2118	7204			262
Cach Bay		25		215			215			
Caldwell Twp. (Verner)	259	1615	2493	3824	6799	1350	14466			86
Espanola	(10)	190	44	1363	5410	1317	8134			
Haileybury	628	8626	97	8155	23015	5066	36333			8763
Latchford	1332	5084	64	720	1000	1564	3348			1400
Michipicoten Twp. (Wawa)		21	1			22	23			
Moosonee		(2230)	4576	12420	8054	1134	26184			
Shackleton - Machin Twp. (Fauquier)	2111	4371	742	4047	1723	1289	9975			
Wanapitei W.S.S.	966	5897	4642	28081	68285	7176	108141			
Region VI - Northwestern										
Ear Falls	15	755	709	4612	4060	1360	10742			725
Emo Twp.	112	1049	485	3488	112	3048	7133	328		
Geraldton	1366	1604	2576	617		629	3822			(4136)
Ignace Twp.	173	613	418	4992	5697	248	11355			
Machin Twp. (Vermillion Bay)	7169	8138	528		2181	806	3515			12
Red Lake Twp.	145	1257	2791	1604	5514	901	11792			

TABLE XV
GROUND WATER SUPPLIES

OPERATING EXPENDITURES

PROJECT	UNIT COST ¢/1000 gallons	GRAND TOTAL	Regular Staff	Casual (Unclassified) Staff	TOTAL SALARIES AND WAGES	TOTAL EMPLOYEE BENEFITS	TOTAL TRANSPORTATION AND COMMUNICATIONS	Insurance	Repairs and Maintenance
GROUND WATER SUPPLIES									
Region I - Southwestern								37	
Hanover		2946						92	
Milverton		110							
Mitchell (c)		661							
Mitchell's Bay		19956	9167		9167		1565	136	804
Thedford		4127	870		870		167	117	
Van Astra		10245	19		19	261	1404	700	635
Region II - West Central									
Woolwich Twp. (St. Jacobs)		16462	9265	2505	11770	141	(482)	346	834
Region III - Central									
Anson, Hindon & Minden		2331		(893)	(893)	5		36	271
Bradford		40						40	
Cookstown		119					42	66	
Elmvale		2944						32	525
Havelock		1937					45	78	
Stayner		163						72	
Woodville Twp.		11232				326	98	118	10249
Region IV - Southeastern									
Alfred		5792	881	1155	2036	60	175	105	81
Bourget		1615	421		421		68	10	
Chesterville		8401	6189		6189		1	144	1
Frankford		9819	4240		4240		524	66	207
L'Original		12849	6446		6446		381	171	472
Merrickville		15147	6980	426	7406		100	351	2306
Plantagenet		2209	783	562	1345	44	63	24	
Vankleek Hill		23748	11370		11370	1667	711	191	546
Wellington		8113	14	5920	5934	222	27	105	(61)
Westport		10983	6181	1128	7309		323	100	1145
Winchester		15404	9108		9108		561	(2)	(974)
Region V - Northeastern									
Black River Twp.-Matheson, Ramore		2104						14	493
Blezard Valley Area W.S.S.		77404	39064		39064	4276	1540	1624	2872
Blind River		7079						19	1187
Fauquier Twp. (moonbeam)		9036	2970		2970	274	206	92	174
North Himsworth Twp. (Callander)		10574	(1450)	9029	7579	274	84	198	
Warren (Ratter-Dunnet)		3487	(2079)	4447	2368	131	71	34	

(c) Fiscal Year (76/77)

TABLE XV Cont'd

OPERATING EXPENDITURES

PROJECT	Other Services	TOTAL SERVICES	Machinery and Equipment	Chemicals	Utilities	Other Supplies and Equipment	TOTAL SUPPLIES AND EQUIPMENT	TOTAL AQUISITION/ CONSTRUCTION OF PHYSICAL ASSETS	TOTAL TRANSFER PAYMENTS	OTHER TRANSACTIONS
GROUND WATER SUPPLIES										
Region I - Southwestern										
Hanover		95			2851		2851			
Milverton	10	102	(1)		9		8			
Mitchell										
Mitchell's Bay	560	1500	2689	1020	2201	1814	7724			
Thedford	187	304		112	2376	298	2786			
Van Astra	277	1612	32	24	4536	1628	6220			767
Region II - West Central										
Woolwich Twp (St. Jacobs)	(532)	648	673	1209	127	2323	4332	53		1
Region III - Central										
Anson, Hindon & Minden		307	450	182	2255	25	2912			
Bradford		40								
Cookstown		66				11	11			
Elmvale	2387	2944								
Havelock		78	1	201	1612		1814			
Stayner		72								91
Woodville Twp.		10367			440	1	441			
Region IV - Southeastern										
Alfred	4	190	322		2636	116	3074			257
Bourget	116	1126								
Chesterville		144		2074			2074			
Frankford	907	1180	835	151	2391	116	3493			382
L'Original	53	696	2126	124	1651	1385	5286			40
Merrickville	703	3360	51	583	3203	444	4281			
Plantagenet	(1)	23	735			(1)	734			
Vankleek Hill	4197	4934	411	290	3483	147	4331	189		561
Wellington		44	1	645	1240		1886			
Westport	29	1274	104	(108)	1329	628	1953			130
Winchester	207	(769)	698		5765	39	6537			(33)
Region V - Northeastern										
Black River Twp.-Matheson, Ramore		507	209		1388		1579			
Blezard Valley Area W.S.S.	1270	5766	1036	474	19619	3584	24713			2045
Blind River		1206		1835	4038		5873			
Fauquier Twp (Moonbeam)	90	356	602	1284	3646	5559	5230			
North Himsworth Twp. (Callander)		198	7	428	1663	341	2439			
Warren (Ratter-Dunnet)		34			872	11	883			

APPENDIX - MONTHLY OPERATING DATA

SURFACE WATER - MONTHLY FLOWS

REGION I

SOUTHWESTERN

ALVISTON

PLANT PERFORMANCE

MONTH	FLOWS				RAW WATER		TREATED WATER					
							TURBIDITY		COLOUR		TEMPERATURE	
	TOTAL PLANT OUTPUT million gallons	AVERAGE DAILY FLOW million gallons	MAXIMUM DAY'S FLOW million gallons	MAXIMUM RATE mgd	TURBIDITY (AVERAGE) FTU	COLOUR (AVERAGE) App. units	AVERAGE FTU	MAXIMUM FTU	AVERAGE App. units	MAXIMUM App. units	AVERAGE °C	MAXIMUM °C
JAN												
FEB												
MAR												
APR												
MAY												
JUNE												
JULY												
AUG												
SEPT												
OCT												
NOV	.507	.017	.034		13		.3	.7			3	9
DEC	.600	.019			9		.3	.3			0	2
TOTAL	1.107											
AVG.		.018	MAXIMUM .034	MAXIMUM	11		.3	MAXIMUM .7		MAXIMUM	1.5	MAXIMUM 9

ALVISTON

TREATMENT DATA

MONTH	CHEMICALS USED								FILTER OPERATION		
	ALUM				SODIUM BICARBONATE		SODIUM SILICATE		MINIMUM RUN	AVERAGE RUN	BACKWASH WATER
	AMT. USED Gal.	DOSAGE mg/l	AMT. USED	DOSAGE mg/l	AMT. USED	DOSAGE mg/l	AMT. USED Gallons	DOSAGE mg/l	hours	hours	mil.gallons
JAN											
FEB											
MAR											
APR											
MAY											
JUNE											
JULY											
AUG											
SEPT											
OCT											
NOV	11	14.4			14	2.8	4	11.2			.008
DEC	91	98.7			42	7.0	12	27.8			.040
TOTAL	102				56		16				.048
AVG.		60.3				5.1		20.2			

ALVISTON

CHLORINATION and DISINFECTION

MONTH	RAW WATER					PLANT EFFLUENT		DISTRIBUTION SYSTEM		CHLORINATION			
	NUMBER OF SAMPLES HAVING TOTAL COLIFORM ORGANISMS PER 100 ml OF					NUMBER OF SAMPLES TAKEN	NUMBER HAVING COLIFORM ORGANISMS	NUMBER OF SAMPLES TAKEN	NUMBER HAVING COLIFORM ORGANISMS	TOTAL AMOUNT OF NaOCl Gallons	DOSAGE		RESIDUAL IN PLANT EFFLUENT mg/l
	0	1 - 3	4 - 32	33 - 320	> 320						PRE - mg/l	POST - mg/l	
JAN													
FEB													
MAR													
APR													
MAY													
JUNE													
JULY													
AUG													
SEPT													
OCT													
NOV						3		13	3	32	7.4		1.5
DEC		1				3		7		32	6.3		1.1
TOTAL		1				6		20	3	32			
AVG.										1 pounds per day	5.8		1.3

AMHERSTBURG

PLANT PERFORMANCE

MONTH	FLOWS				RAW WATER		TREATED WATER					
							TURBIDITY		COLOUR		TEMPERATURE	
	TOTAL PLANT OUTPUT million gallons	AVERAGE DAILY FLOW million gallons	MAXIMUM DAY'S FLOW million gallons	MAXIMUM RATE mgd	TURBIDITY (AVERAGE) F TU	COLOUR (AVERAGE) App. units	AVERAGE F TU	MAXIMUM F TU	AVERAGE App. units	MAXIMUM App. units	AVERAGE °C	MAXIMUM °C
JAN	27.42	.88	1.01	2.5	3.9	15	.3	1.0	5	5	0	1
FEB	26.20	.90	1.13	2.5	33.0		.7	4.4			1	2
MAR	28.86	.93	1.08	2.5	40.0		.5	2.0			3	4
APR	28.87	.96	1.25	2.5	25.0		.2	.5			8	12
MAY	29.61	.95	1.17	2.5	19.0	10	.2	.4	5	5	12	17
JUNE	35.02	1.17	1.59	2.5	14.0	15	.1	.2	5	5	19	21
JULY	32.96	1.09	1.29	2.5	12.0		.1	.4			22	23
AUG	41.70	1.34	1.66	2.5	17.6	10	.1	.4	5	5	23	24
SEPT	37.63	1.33	1.67	2.5	16.3		.1	.1			20	23
OCT	28.75	.92	1.02	2.5	16.3	15	.1	.7	5	5	14	17
NOV	27.34	.91	1.03	2.5	13.6	15	.1	.4	5	5	6	9
DEC	29.68	.95	1.09	2.5	3.5		.1	.8			2	3
TOTAL	374.04											
AVG.	31.25	1.03	MAXIMUM 1.67	MAXIMUM 2.5	17.9	13	.2	MAXIMUM 4.4	5	MAXIMUM 5	11	MAXIMUM 24

AMHERSTBURG

TREATMENT DATA

MONTH	CHEMICALS USED								FILTER OPERATION		
	ALUM		SODIUM SILICATE		FLUOSILIC ACID		SODIUM BICARBONATE		MINIMUM RUN	AVERAGE RUN	BACKWASH WATER
	AMT. USED Gallons	DOSAGE mg/l	AMT. USED Gallons	DOSAGE mg/l	AMT. USED Pounds	DOSAGE mg/l	AMT. USED	DOSAGE mg/l	hours	hours	mil. gallons
JAN	1191	26	0		1303	1.0			72	72	1.7
FEB	1458	34	93	4.6	1128	1.0			12	53	1.5
MAR	1978	41	220	9.9	1269	1.0			24	46	1.5
APR	1202	25	139	6.4	1257	1.0			72	72	1.0
MAY	1207	25	0		1282	1.0			72	72	1.1
JUNE	1570	27	0		1547	1.0			72	72	1.3
JULY	1629	30	0		1581	1.0			72	72	1.5
AUG	2028	28	0		2088	1.1			72	72	1.6
SEPT	1975	32	0		1779	1.0			72	72	2.0
OCT	1437	31	0		1581	1.0			72	72	1.0
NOV	1444	32	0		1648	1.0			72	72	1.3
DEC	1274	26	0		1726	1.0			72	72	1.2
TOTAL	18393		452		18189						16.7
AVG	1533	30		7.0	1516	1.0			Min. 12	68	

AMHERSTBURG

CHLORINATION and DISINFECTION

MONTH	RAW WATER					PLANT EFFLUENT		DISTRIBUTION SYSTEM		CHLORINATION			
	NUMBER OF SAMPLES HAVING TOTAL COLIFORM ORGANISMS PER 100 ml OF					NUMBER OF SAMPLES TAKEN	NUMBER HAVING COLIFORM ORGANISMS	NUMBER OF SAMPLES TAKEN	NUMBER HAVING COLIFORM ORGANISMS	TOTAL AMOUNT OF CHLORINE USED pounds	DOSAGE		RESIDUAL IN PLANT EFFLUENT mg/l
	0	1 - 3	4 - 32	33 - 320	> 320						PRE - mg/l	POST - mg/l	
JAN	0	0	0	3	3	6	0	16	0	780	2.3	.4	.6
FEB	0	0	0	2	2	4	0	12	0	965	3.0	.4	.6
MAR	0	0	0	2	6	8	0	21	0	1355	4.6	.4	.6
APR	0	0	0	2	2	4	0	12	0	1040	3.0	.4	.6
MAY	1	0	0	2	3	6	0	16	0	1090	3.0	.4	.6
JUNE	0	0	0	3	4	7	0	20	0	1770	4.5	.4	.6
JULY	0	0	1	2	3	7	0	19	0	1770	4.6	.4	.6
AUG	0	0	0	1	3	4	0	12	0	1880	4.0	.4	.8
SEPT	0	0	0	2	3	5	0	15	0	1570	3.6	.4	.8
OCT	0	0	0	1	5	6	0	16	0	1315	3.9	.4	.8
NOV	0	0	0	1	5	6	0	16	1	1035	3.2	.4	.8
DEC	0	0	0	2	4	6	0	23	1	1065	3.1	.4	.8
TOTAL	1	0	1	23	43	69	0	198	2	15635			
AVG.										43 pounds per day	3.6	.4	.7

AMHERSTBURG

WATER QUALITY

PROPERTY	RAW WATER				TREATED WATER				DESIRABLE STANDARDS
	NUMBER OF SAMPLES	AVERAGE	MAXIMUM	MINIMUM	NUMBER OF SAMPLES	AVERAGE	MAXIMUM	MINIMUM	
HARDNESS in mg/l as $CaCO_3$	23	111	132	100	23	111	134	102	80 - 100
ALKALINITY in mg/l as $CaCO_3$	23	85	99	71	23	77	97	67	30 - 100
IRON in mg/l Fe	23	1.67	10.00	.24	23	.03	.09	0.01	Less than 0.3
CHLORIDE in mg/l Cl^-	23	19.5	33.0	11.5	23	22.1	33.5	17.5	Less than 250
pH in pH units	23	8.0	8.3	7.7	23	7.4	7.7	7.2	7.0 - 8.5
FLUORIDE in mg/l F^-	20	0.1	0.1	0.1	21	.9	1.3	0.7	Less than 1.2
AMMONIA in mg/l as N	7	.08	.32	.03					Less than 0.5
TOTAL KJELDAHL NITROGEN in mg/l as N	7	.57	1.33	.28					Less than 1.
NITRITE in mg/l as N	8	.616	1.63	.005					
NITRATE in mg/l as N									Less than 10
TOTAL PHOSPHORUS in mg/l as P	6	.09	.31	.01					
SOLUBLE PHOSPHORUS in mg/l as P									
PHENOLS in μg/l as C_6H_5OH									Less than 1

BELLE RIVER

PLANT PERFORMANCE

MONTH	FLOWS				RAW WATER		TREATED WATER					
							TURBIDITY		COLOUR		TEMPERATURE	
	TOTAL PLANT OUTPUT million gallons	AVERAGE DAILY FLOW million gallons	MAXIMUM DAY'S FLOW million gallons	MAXIMUM RATE mgd	TURBIDITY (AVERAGE) FTU	COLOUR (AVERAGE) App. units	AVERAGE FTU	MAXIMUM FTU	AVERAGE App. units	MAXIMUM App. units	AVERAGE °C	MAXIMUM °C
JAN	26.87	.87	.99		2.8	5	.2	2.2	8	10	3	3
FEB	24.31	.84	1.06		25.9	53	.2	5.3	10	20	4	6
MAR	26.27	.85	1.12				.1	.1			4	9
APR	26.61	.89	1.10				.1	.1			10	13
MAY	31.47	1.01	1.29				.4	.6			12	16
JUNE	40.66	1.36	2.08				.1	.1	5	5	18	20
JULY	34.86	1.12	1.39		7.3	5	.4	.7	5	5	22	23
AUG	41.50	1.34	1.87				.1	.1			22	24
SEPT	39.99	1.33	2.26				.1	.1			19	22
OCT	27.78	.90	1.14				.1	.1			12	17
NOV	25.78	.86	.94				.1	.1			2	4
DEC	28.92	.93	1.11				.1	.1			0	0
TOTAL	375.02											
AVG.	31.25	1.02	MAXIMUM 2.26	MAXIMUM	12.0	21	.2	MAXIMUM .8	7	MAXIMUM 10	11	MAXIMUM 24

BELLE RIVER

TREATMENT DATA

MONTH	CHEMICALS USED								FILTER OPERATION		
	ALUM		SODA ASH		SODIUM BICARBONATE		SODIUM SILICATE		MINIMUM RUN	AVERAGE RUN	BACKWASH WATER
	AMT. USED 10^3 Gal.	DOSAGE mg/l	AMT. USED	DOSAGE mg/l	AMT. USED Pounds	DOSAGE mg/l	AMT. USED lbs.	DOSAGE mg/l	hours	hours	mil. gallons
JAN	1.7	40.4			109	.4	451	1.6		44	.96
FEB	1.3	33.8			102	.4	422	1.7		48	.79
MAR	2.2	52.6			96	.4	420	1.5		48	1.13
APR	2.7	65.5			105	.4	436	1.6		46	.96
MAY	1.6	32.5			108	.3	462	1.4		48	.85
JUNE	2.0	31.7			105	.3	450	1.1		30	1.04
JULY	1.5	27.7			109	.3	465	1.3		47	.80
AUG	1.8	28.0			419	1.0	465	1.1		47	1.31
SEPT	1.8	29			405	1.0	450	1.1		38	1.01
OCT	1.4	31.8			452	1.6	407	1.4		47	1.00
NOV	1.0	24.4			450	1.7	405	1.5		45	.91
DEC	0.9	19.0			465	1.6	419	1.4		43	.82
TOTAL	19.9				2925		5252				11.58
AVG	1.7	34.8			244	.8	438	1.4		44	.97

BELLE RIVER

CHLORINATION and DISINFECTION

MONTH	RAW WATER					PLANT EFFLUENT		DISTRIBUTION SYSTEM		CHLORINATION			
	NUMBER OF SAMPLES HAVING TOTAL COLIFORM ORGANISMS PER 100 ml OF					NUMBER OF SAMPLES TAKEN	NUMBER HAVING COLIFORM ORGANISMS	NUMBER OF SAMPLES TAKEN	NUMBER HAVING COLIFORM ORGANISMS	TOTAL AMOUNT OF CHLORINE USED pounds	DOSAGE		RESIDUAL IN PLANT EFFLUENT mg/l
	0	1 - 3	4 - 32	33 - 320	> 320						PRE - mg/l	POST - mg/l	
JAN			2		1	3	0	6	0	322		1.2	
FEB				1	1	2	0	4	0	389		1.6	
MAR				1	1	2	0	4	0	574		2.2	
APR				1		1	0	2	0	546		2.1	
MAY				1	1	2	0	4	0	696		2.2	
JUNE				1		1	0	2	0	949		2.3	
JULY			2		1	3	0	6	0	887		2.5	
AUG			1			1	0	2	0	1215		2.9	
SEPT										864		2.2	
OCT										526		1.9	
NOV										442		1.7	
DEC										519		1.8	
TOTAL			5	5	5	15	0	30	0	7929			
AVG.										22 pounds per day		2.1	

BELLE RIVER

WATER QUALITY

PROPERTY	RAW WATER				TREATED WATER				DESIRABLE STANDARDS
	NUMBER OF SAMPLES	AVERAGE	MAXIMUM	MINIMUM	NUMBER OF SAMPLES	AVERAGE	MAXIMUM	MINIMUM	
HARDNESS in mg/l as $CaCO_3$	4	121	130	102	10	119	136	110	80 - 100
ALKALINITY in mg/l as $CaCO_3$	4	94	98	90	10	76	88	52	30 - 100
IRON in mg/l Fe	4	.77	2.48	.07	10	.19	.92	.01	Less than 0.3
CHLORIDE in mg/l Cl^-	4	12	15	10	10	13	17	11	Less than 250
pH in pH units	370	7.9	8.3	8.0	376	7.6	8.2	7.1	7.0 - 8.5
FLUORIDE in mg/l F^-									Less than 1.2
AMMONIA in mg/l as N	1	.13	.13	.13	3	.02	.04	.01	Less than 0.5
TOTAL KJELDAHL NITROGEN in mg/l as N									Less than 1.
NITRITE in mg/l as N	3	.28	.60	.03	7	.29	.68	.01	
NITRATE in mg/l as N									Less than 10
TOTAL PHOSPHORUS in mg/l as P									
SOLUBLE PHOSPHORUS in mg/l as P									
PHENOLS in μg/l as C_6H_5OH									Less than 1

BLANDFORD - BLENHEIM TWP.

PLANT PERFORMANCE

MONTH	FLOWS				RAW WATER		TREATED WATER					
							TURBIDITY		COLOUR		TEMPERATURE	
	TOTAL PLANT OUTPUT million gallons	AVERAGE DAILY FLOW million gallons	MAXIMUM DAY'S FLOW million gallons	MAXIMUM RATE mgd	TURBIDITY (AVERAGE) FTU	COLOUR (AVERAGE) App. units	AVERAGE F TU	MAXIMUM F TU	AVERAGE App. units	MAXIMUM App. units	AVERAGE °C	MAXIMUM °C
JAN	12.83	.41	.60	1.15	9	5	1.3	3.0	5	5	1	2
FEB	12.17	.42	.50	.83	25	17	.9	1.3	5	5	1	2
MAR	13.08	.42	.51	1.01	40	47	.5	.7	5	5	2	5
APR	12.27	.41	.48	.88	14	7	.2	.6	5	5	6	8
MAY	13.57	.44	.53	.91	7	6	.2	1.1	5	5	9	13
JUNE	15.07	.50	.62	.96	6	5	.2	.8	5	5	13	16
JULY	14.78	.48	.57	.94	5	5	.3	.9	5	5	15	21
AUG	14.65	.47			4	5	.3	.9	5	5	18	22
SEPT	13.76	.45	.55	.96	5	5	.2	1.5	5	5	18	19
OCT	13.75	.44	.55	1.00	12	20	.3	.7	5	5	13	18
NOV	13.93	.4	.53	.93	9	7	.3	.8	5	5	6	9
DEC	14.47	.46	.54	.93	7	6	.3	.3	5	5	2	3
TOTAL	164.33											
AVG.	13.69	.44	MAXIMUM .62	MAXIMUM 1.15	12	11	.4	MAXIMUM 3.0	5	MAXIMUM 5	9	MAXIMUM 22

BLANDFORD - BLENHEIM

TREATMENT DATA

MONTH	CHEMICALS USED							FILTRATION		
	ALUM		SODIUM SILICATE		FLUOSILICIC ACID		SODIUM BICARBONATE	FILTER OPERATION		
	AMOUNT USED 10^3 lbs.	DOSAGE mg/l	AMOUNT USED pounds	DOSAGE mg/l	AMOUNT USED pounds	DOSAGE mg/l	AMOUNT pounds	BACKWASH WATER mil gal	AVERAGE RUN hours	MINIMUM RUN hours
JAN	4.2	31	953	7	164	1.3	239	.47	12	9
FEB	4.9	40	895	7	153	1.3	224	.55	12	10
MAR	7.0	54	973	7	157	1.2	244	.50	12	10
APR	4.6	37	777	6	155	1.3	194	.40	11	10
MAY	3.6	26	1020	8	177	1.3	256	.41	13	10
JUNE	3.1	20	1113	7	174	1.2	277	.42	14	12
JULY	3.1	20	1156	8	185	1.3	290	.56	14	11
AUG	4.7	32	1153	8	184	1.3	289	.54	14	10
SEPT	4.5	30	1093	8	168	1.2	274	.42	14	10
OCT	4.4	30	1080	8	162	1.2	271	.36	14	10
NOV	3.5	23	825	6	170	1.2	207	.40	14	11
DEC	3.1	22	780	5	145	1.0	196	.40	14	11
TOTAL	50.7		11818		1994		2961	5.43		
AVG	4.2	30	985	7	166	1.2	247	.45	13	9

BLANDFORD - BLENHEIM

CHLORINATION and DISINFECTION

MONTH	RAW WATER					PLANT EFFLUENT		DISTRIBUTION SYSTEM		CHLORINATION			
	NUMBER OF SAMPLES HAVING TOTAL COLIFORM ORGANISMS PER 100 ml OF					NUMBER OF SAMPLES TAKEN	NUMBER HAVING COLIFORM ORGANISMS	NUMBER OF SAMPLES TAKEN	NUMBER HAVING COLIFORM ORGANISMS	TOTAL AMOUNT OF CHLORINE USED pounds	DOSAGE		RESIDUAL IN PLANT EFFLUENT mg/l
	0	1 - 3	4 - 32	33 - 320	> 320						PRE - mg/l	POST - mg/l	
JAN	3	1	0	0	0			12	1	205	1.6		.7
FEB	2	0	1	0	0			9	0	200	1.6		1.2
MAR	3	1	1	0	0			19	0	261	1.9		.6
APR	4	0	0	0	0			12	0	233	1.8		.7
MAY	5	0	0	0	0			15	0	272	1.9		.6
JUNE	4	0	0	0	0			12	0	359	2.4		.6
JULY	4	0	0	0	0			12	0	454	3.1		.5
AUG	1	0	0	0	0			3	0	469	2.8		.6
SEPT	1	0	0	0	0			3	0	442	3.2		.6
OCT	0	4	0	0	0			12	3	351	2.4		.6
NOV	0	5	0	0	0			14	5	314	2.3		.8
DEC	0	3	0	0	0			9	1	270	1.8		.8
TOTAL	27	14	2	0	0			132	10	3830			
AVG.										11 pounds per day	2.2		.7

BLANDFORD - BLENHEIM

WATER QUALITY

PROPERTY	RAW WATER				TREATED WATER				DESIRABLE STANDARDS
	NUMBER OF SAMPLES	AVERAGE	MAXIMUM	MINIMUM	NUMBER OF SAMPLES	AVERAGE	MAXIMUM	MINIMUM	
HARDNESS in mg/l as $CaCO_3$	49	126	136	118	49	128	136	120	80 - 100
ALKALINITY in mg/l as $CaCO_3$	49	96	104	91	49	79	88	63	30 - 100
IRON in mg/l Fe	49	.53	2.64	.08	49	.04	.11	.01	Less than 0.3
CHLORIDE in mg/l Cl^-	50	20	22	18	49	22	24	19	Less than 250
pH in pH units	49	8.1	8.3	7.4	49	7.3	8.3	6.9	7.0 - 8.5
FLUORIDE in mg/l F^-	46	.1	.2	.1	49	.8	1.2	.2	Less than 1.2
AMMONIA in mg/l as N	26	.06	.17	.005					Less than 0.5
TOTAL KJELDAHL NITROGEN in mg/l as N	26	.36	.51	.24					Less than 1.
NITRITE in mg/l as N	26	.14	.29	.01					
NITRATE in mg/l as N									Less than 10
TOTAL PHOSPHORUS in mg/l as P	26	.03	.04	.01					
SOLUBLE PHOSPHORUS in mg/l as P									
PHENOLS in μg/l as C_6H_5OH									Less than 1

DRESDEN

PLANT PERFORMANCE

MONTH	FLOWS				RAW WATER		TREATED WATER					
							TURBIDITY		COLOUR		TEMPERATURE	
	TOTAL PLANT OUTPUT million gallons	AVERAGE DAILY FLOW million gallons	MAXIMUM DAY'S FLOW million gallons	MAXIMUM RATE mgd	TURBIDITY (AVERAGE) FTU	COLOUR (AVERAGE) App. units	AVERAGE FTU	MAXIMUM FTU	AVERAGE App. units	MAXIMUM App. units	AVERAGE °C	MAXIMUM °C
JAN	6.74	.22	.27	.46							-1	-1
FEB	N/A											
MAR	N/A											
APR	7.37	.25	.39	.55							9	19
MAY	8.98	.29	.39	.57							13	19
JUNE	12.30	.41	.60	.62							22	24
JULY	12.74	.41	.66	.76							22	24
AUG	12.41	.40	.60	.70							21	23
SEPT	14.93	.50	.60	.68							17	20
OCT	8.20	.26	.37	.48			.32	.32	5	5	9	16
NOV	8.19	.27	.36	.47							1	4
DEC	N/A											
TOTAL		.33										
AVG.			MAXIMUM .66	MAXIMUM .76			.32	MAXIMUM .32	5	MAXIMUM 5	13	MAXIMUM 24

DRESDEN

TREATMENT DATA

MONTH	CHEMICALS USED										
	ALUM		LIME		POT PERMANG.		SODIUM BICARBONATE		SODIUM SILICATE		
	AMT. USED 10^3	DOSAGE mg/l	AMT. USED 10^3	DOSAGE mg/l	AMT. USED lbs.	DOSAGE mg/l	AMT. USED lbs.	DOSAGE mg/l	AMT. USED 10^3	DOSAGE mg/l	
JAN	3.2	47.4	5.5	81.6	45	.7	500	7.4	2.0	29.7	
FEB											
MAR											
APR	7.0	95.0	7.8	105.9	55	.7	800	10.9	3.3	44.8	
MAY	6.8	75.7	9.5	105.7	65	.7	800	8.9	3.3	36.7	
JUNE	6.8	55.3	14.9	121.1	80	.7	1000	8.1	4.1	33.3	
JULY	10.5	82.4	14.5	113.9	70	.5	1200	9.4	5.1	40.0	
AUG	8.2	66.1	15.8	127.4	100	.8	1100	8.9	4.7	37.9	
SEPT	10.6	71.0	15.2	101.8	85	.6	1200	8.0	4.9	32.8	
OCT	4.6	56.0	8.3	101.1	55	.7	600	7.3	2.5	30.5	
NOV	3.4	41.5	7.1	86.7	55	.7	650	7.9	2.7	33.0	
DEC											
TOTAL	61.1		98.6		610		7850		32.6		
AVG	6.8	66.5	11.0	107.3	68	.7	872	8.5	3.6	35.5	

DRESDEN

CHLORINATION and DISINFECTION

MONTH	RAW WATER: NUMBER OF SAMPLES HAVING TOTAL COLIFORM ORGANISMS PER 100 ml OF					PLANT EFFLUENT		DISTRIBUTION SYSTEM		CHLORINATION			
	0	1 - 3	4 - 32	33 - 320	> 320	NUMBER OF SAMPLES TAKEN	NUMBER HAVING COLIFORM ORGANISMS	NUMBER OF SAMPLES TAKEN	NUMBER HAVING COLIFORM ORGANISMS	TOTAL AMOUNT OF CHLORINE USED pounds	DOSAGE PRE - mg/l	DOSAGE POST - mg/l	RESIDUAL IN PLANT EFFLUENT mg/l
JAN				2	1	3	0	0	0	251	.3	.2	.7
FEB										392			
MAR										434			
APR										313	.5	.3	.7
MAY										376	.5	.3	.7
JUNE										550	.5	.2	.8
JULY										679	.4	.2	.7
AUG										619	.2	.2	.8
SEPT										575	.5	.3	.8
OCT										284	.5	.3	.9
NOV										207	.5	.5	1.0
DEC										434			
TOTAL				2	1					Est. 5124			
AVG.						3	0	0	0	14 pounds per day	.4	.3	.8

DRESDEN

WATER QUALITY

PROPERTY	RAW WATER				TREATED WATER				DESIRABLE STANDARDS
	NUMBER OF SAMPLES	AVERAGE	MAXIMUM	MINIMUM	NUMBER OF SAMPLES	AVERAGE	MAXIMUM	MINIMUM	
HARDNESS in mg/l as $CaCO_3$	6	269	372	154	7	276	350	184	80 – 100
ALKALINITY in mg/l as $CaCO_3$	6	195	252	100	7	148	208	83	30 – 100
IRON in mg/l Fe	6	1.46	1.80	.39	7	.05	.10	.01	Less than 0.3
CHLORIDE in mg/l Cl^-	6	16	22	13	7	20	25	17	Less than 250
pH in pH units	16	7.5	8.3	7.6	16	8.2	8.6	8.0	7.0 – 8.5
FLUORIDE in mg/l F^-									Less than 1.2
AMMONIA in mg/l as N									Less than 0.5
TOTAL KJELDAHL NITROGEN in mg/l as N									Less than 1.
NITRITE in mg/l as N									
NITRATE in mg/l as N									Less than 10
TOTAL PHOSPHORUS in mg/l as P									
SOLUBLE PHOSPHORUS in mg/l as P									
PHENOLS in μg/l as C_6H_5OH									Less than 1

ELGIN AREA

PLANT PERFORMANCE

MONTH	FLOWS				RAW WATER		TREATED WATER					
							TURBIDITY		COLOUR		TEMPERATURE	
	TOTAL PLANT OUTPUT million gallons	AVERAGE DAILY FLOW million gallons	MAXIMUM DAY'S FLOW million gallons	MAXIMUM RATE mgd	TURBIDITY (AVERAGE) FTU	COLOUR (AVERAGE) App. units	AVERAGE FTU	MAXIMUM FTU	AVERAGE App. units	MAXIMUM App. units	AVERAGE °C	MAXIMUM °C
JAN	108.3	3.49	4.45		29	100	.11	.20	5	5	2	3
FEB	95.4	3.29	3.99		18	5	.15	.29	5	5	2	2
MAR	108.4	3.50	6.52		105	50	.15	1.00	5	5	3	7
APR	115.0	3.83	4.45		31	50	.11	.30	5	5	7	10
MAY	111.4	3.59	4.26		28	20	.10	.20	5	5	11	15
JUNE	141.7	4.72	5.78		21	5	.11	.20	5	5	15	17
JULY	114.0	3.85	4.68		18	10	.15	.30	5	5	15	20
AUG	121.8	3.93	4.99		10	5	.15	.20	5	5	18	21
SEPT	117.5	3.92	5.06		19	5	.14	.60	5	5	18	21
OCT	102.2	3.30	4.13		35	10	.12	.40	5	5	14	17
NOV	103.7	3.46	4.38		35	5	.11	.20	5	5	7	10
DEC	109.2	3.52			34	10	.15	7.70	5	5	3	5
TOTAL	1348.6											
AVG.	112.4	3.70	MAXIMUM 6.52	MAXIMUM	32	23	.13	MAXIMUM 7.70	5	MAXIMUM 5	10	MAXIMUM 21

TREATMENT DATA

MONTH	ELGIN AREA WATER					
	ST. THOMAS Mil Gal.	FORD Mil Gal.	PORT BURWELL Mil Gal.	MALAHIDE Mil Gal.	YARMOUTH Mil Gal.	PLANT SERVICE Mil Gal.
JAN	86.94	20.75	.61			5.85
FEB	79.01	15.92	.50			5.96
MAR	88.10	19.78	.51			6.87
APR	90.75	23.68	.57			7.63
MAY	84.71	26.06	.63			8.61
JUNE	108.06	31.99	.93	.71	.05	8.86
JULY	95.03	17.58	1.04	.35		9.29
AUG	92.39	28.36	.83	.26		15.79
SEPT	95.16	20.82	.68	.79	.04	12.08
OCT	91.76	9.96	.57	0	0	5.18
NOV	88.76	14.83	.54	0	0	4.51
DEC	94.65	13.44	.68	.40	.03	
TOTAL	1094.88	243.17	8.09	2.51	.12	90.63
AVG	91.94	20.26	.67	.50	.04	7.55

TREATMENT DATA

MONTH	FILTER OPERATION					CHEMICALS USED		
	(HOURS) Min. Run	(HOURS) Av. Run	Avg. Head Loss Ft.	Back Wash Water Mg.	(NUMBER OF BACKWASHES) Back Wash Times	ALUM lbs. 10^3	ALUM Dose mg/l	SOD. SIL. FLUORIDE lbs.10^3
JAN	48	63	4	3.8	17	14.4	13	1.5
FEB	25	59	5	3.3	17	11.2	10	1.3
MAR	55	67	4	3.0	15	30.3	25	1.4
APR	52	66	3	3.1	16	17.4	14	1.2
MAY	56	66	3	3.7	18	18.5	15	1.5
JUNE	51	63	4	4.4	22	17.6	11	2.0
JULY	56	66	4	3.2	16	10.9	9	1.6
AUG	26	59	4	4.5	23	9.3	6	2.0
SEPT	46	63	4	3.8	19	11.6	9	1.8
OCT	50	63	4	3.0	15	13.7	12	1.0
NOV	52	64	4	2.8	15	14.1	13	0
DEC		63	4	2.8	15	13.5	12	0
TOTAL				41.4	208	182.5		15.3
AVG	Min. 25	64	4	3.5		15.2	12	1.3

ELGIN AREA

CHLORINATION and DISINFECTION

MONTH	RAW WATER					PLANT EFFLUENT		DISTRIBUTION SYSTEM		CHLORINATION			
	NUMBER OF SAMPLES HAVING TOTAL COLIFORM ORGANISMS PER 100 ml OF					NUMBER OF SAMPLES TAKEN	NUMBER HAVING COLIFORM ORGANISMS	NUMBER OF SAMPLES TAKEN	NUMBER HAVING COLIFORM ORGANISMS	TOTAL AMOUNT OF CHLORINE USED 10^3 pounds	DOSAGE		RESIDUAL IN PLANT EFFLUENT mg/l
	0	1 - 3	4 - 32	33 - 320	> 320						PRE - mg/l	POST - mg/l	
JAN	4	3	1	0	0	16	0	12	0	2.0	1.2	.7	.9
FEB	6	1	0	1	0	16	0	13	0	1.9	1.1	.7	.9
MAR	1	1	3	3	0	18	0	15	0	2.2	1.3	.6	.9
APR	6	2	1	0	0	16	0	18	0	2.1	1.2	.6	.9
MAY	7	3	0	0	0	18	0	15	1	2.4	1.4	.7	1.0
JUNE	9	7	0	0	0	17	0	23	0	3.2	1.3	.8	1.0
JULY	7	1	1	0	0	16	0	12	0	3.0	1.6	.8	.9
AUG	3	4	1	0	0	9	0	5	0	3.6	1.6	1.0	.9
SEPT	5	4	0	0	0	6	0	6	0	3.2	1.5	1.0	1.0
OCT	5	6	3	0	0	15	4	19	1	2.6	1.5	.8	1.0
NOV	0	9	0	0	0	10	0	15	5	2.2	1.3	.8	.9
DEC	0	8	0	0	0	16	0	15	4	2.0	1.2	.6	.9
TOTAL	53	49	10	4	0	173	4	168	11	30.2			
AVG.										.1 pounds per day	1.4	.8	.9

ELGIN AREA

WATER QUALITY

PROPERTY	RAW WATER				TREATED WATER				DESIRABLE STANDARDS
	NUMBER OF SAMPLES	AVERAGE	MAXIMUM	MINIMUM	NUMBER OF SAMPLES	AVERAGE	MAXIMUM	MINIMUM	
HARDNESS in mg/l as $CaCO_3$	12	130	134	122	12	132	138	128	80 – 100
ALKALINITY in mg/l as $CaCO_3$	12	99	110	86	12	156	91	87	30 – 100
IRON in mg/l Fe	12	0.7	5.3	.1	12	.03	.08	.01	Less than 0.3
CHLORIDE in mg/l Cl^-	12	21	30	20	12	23	32	21	Less than 250
pH in pH units	12	8.2	8.4	7.8	12	7.6	7.9	7.3	7.0 – 8.5
FLUORIDE in mg/l F^-	12	0.1	0.1	0.1	12	.7	1.0	.01	Less than 1.2
AMMONIA in mg/l as N	12	0.03	.09	.01	12	.01	.01	.01	Less than 0.5
TOTAL KJELDAHL NITROGEN in mg/l as N	12	0.35	.66	.25	12	.17	.23	.13	Less than 1.
NITRITE in mg/l as N	12	0.19	.38	.01	12	.17	.46	.01	
NITRATE in mg/l as N									Less than 10
TOTAL PHOSPHORUS in mg/l as P	12	0.04	.17	.01	12	.010	.040	.001	
SOLUBLE PHOSPHORUS in mg/l as P									
PHENOLS in μg/l as C_6H_5OH									Less than 1

GODERICH

PLANT PERFORMANCE

MONTH	FLOWS				RAW WATER		TREATED WATER					
							TURBIDITY		COLOUR		TEMPERATURE	
	TOTAL PLANT OUTPUT million gallons	AVERAGE DAILY FLOW million gallons	MAXIMUM DAY'S FLOW million gallons	MAXIMUM RATE mgd	TURBIDITY (AVERAGE) FTU	COLOUR (AVERAGE) App. units	AVERAGE FTU	MAXIMUM FTU	AVERAGE App. units	MAXIMUM App. units	AVERAGE °C	MAXIMUM °C
JAN	25.72	.83	.89	1.5	14	10	.4	.8	5	5	1	1
FEB	23.86	.82	.92	1.5	3	15	1.3	2.5	5	5	1	1
MAR	24.60	.79	.87	1.6	20	30	.8	2.0	5	5	2	5
APR	24.37	.81	.94	2.0	18	8	.3	.8	5	5	7	9
MAY	25.62	.83	1.02	1.5	18		.3	.5			10	11
JUNE	38.33	1.28	1.85	3.7	4	5	.2	.3	5	5	15	20
JULY	29.22	.94	1.20	2.3	11	10	.2	.5	5	5	18	20
AUG	31.22	1.01	1.32	2.3	8	5	.2	.3	5	5	20	22
SEPT	26.81	.89	1.10	1.5	17	5	.2	.3	5	5	18	20
OCT	25.74	.83	.94	1.6	21	5	.3	.4	5	5	12	16
NOV	25.13	.83	1.01	2.2	27	10	.2	.3	5	5	5	8
DEC	24.98	.81	.89	1.5	13	5	.2	.4	5	5	1	1
TOTAL	325.60											
AVG.	27.13	.89	MAXIMUM 1.85	MAXIMUM 3.7	15	10	.4	MAXIMUM 2.5	5	MAXIMUM 5	9	MAXIMUM 22

TREATMENT DATA

MONTH	FILTER OPERATION					CHEMICALS USED								
	AVG APPLIED TURBIDITY	FILTER RATE		AVG. FILTER RUN	BACKWASH WATER	ALUM		SOD SILICATE		SOD BICARBONATE		SODIUM SILICOFLUORIDE		
		MAX	AVG.			AMT USED	DOSE	AMT USED	DOSE	AMT USED	DOSE	AMT USED	FLUORIDE LEVEL	
	FTU	gpm/ft²	gpm/ft²	hours	mil gal.	gallons	mg/l	gallons	mg/l	pounds	mg/l	pounds	MAX mg/l	MIN mg/l
JAN	5.2	1.3	1.2	43	1.24	941	24	24	1.3	84	.3	348	1.1	.9
FEB	3.8	1.3	1.2	43	1.35	607	17	30	1.7	105	.4	338	1.1	1.0
MAR	7.5	1.4	1.2	43	1.55	863	23	72	4.1	252	1.0	355	1.1	1.0
APR	5.7	2.5	1.2	43	1.50	818	22	72	4.1	252	1.0	361	1.0	1.0
MAY	4.6	1.8	1.2	42	1.50	832	21	63	3.4	220	.9	388	1.2	1.0
JUNE	1.1	4.5	1.7	34	1.90	946	16	33	1.2	116	.3	544	1.1	.9
JULY	1.3	2.8	1.4	40	1.45	697	16	0		0		397	1.2	.9
AUG	1.0	2.8	1.5	41	1.70	680	14	0		0		356	1.1	.9
SEPT	1.6	1.8	1.3	43	1.50	617	15	0		0		318	1.1	.9
OCT	3.2	1.8	1.3	39	1.55	634	16	12	0.6	42	.2	315	1.1	.9
NOV	4.3	1.8	1.2	42	1.50	789	20	63	3.5	221	.9	302	1.1	.9
DEC	4.4	1.8	1.2	43	1.55	741	19	66	3.7	231	.9	343	1.1	.9
TOTAL					18.29	9165		435		1523		4365		
AVG.	3.6	Max. 4.5	1.3	41	1.52	764	19	48	2.6	169	.7	364	1.1	.9

GODERICH

CHLORINATION and DISINFECTION

MONTH	RAW WATER					PLANT EFFLUENT		DISTRIBUTION SYSTEM		CHLORINATION			
	NUMBER OF SAMPLES HAVING TOTAL COLIFORM ORGANISMS PER 100 ml OF					NUMBER OF SAMPLES TAKEN	NUMBER HAVING COLIFORM ORGANISMS	NUMBER OF SAMPLES TAKEN	NUMBER HAVING COLIFORM ORGANISMS	TOTAL AMOUNT OF CHLORINE USED pounds	DOSAGE		RESIDUAL IN PLANT EFFLUENT mg/l
	0	1 - 3	4 - 32	33 - 320	> 320						PRE - mg/l	POST - mg/l	
JAN	1	2	1	0	0	4	0	21	0	521	2.0		1.0
FEB	0	0	1	1	1	3	0	15	0	711	3.0		.9
MAR	0	0	1	4	0	5	0	27	0	685	2.8		.9
APR	1	0	1	1	1	4	0	20	0	578	2.4		.9
MAY	2	1	1	0	0	4	0	20	0	627	2.4		.9
JUNE	4	0	0	0	0	4	0	21	0	688	1.8		.9
JULY	3	0	0	0	1	4	0	20	1	591	2.0		.9
AUG	1	0	2	0	0	3	0	14	0	599	1.9		1.0
SEPT	0	0	2	0	0	2	0	10	0	546	2.0		1.0
OCT	0	2	2	0	0	4	0	20	5	536	2.1		1.0
NOV	0	0	3	2	0	5	0	25	3	479	1.9		1.0
DEC	0	2	1	1	0	3	0	23	3	533	2.1		1.0
TOTAL	12	7	15	9	3	45	0	236	12	7094			
AVG.										19 pounds per day	2.2		.9

WATER QUALITY

PROPERTY	RAW WATER				TREATED WATER				DESIRABLE STANDARDS
	NUMBER OF SAMPLES	AVERAGE	MAXIMUM	MINIMUM	NUMBER OF SAMPLES	AVERAGE	MAXIMUM	MINIMUM	
HARDNESS in mg/l as $CaCO_3$	13	112	168	98	26	122	236	100	80 – 100
ALKALINITY in mg/l as $CaCO_3$	13	93	138	81	26	86	178	68	30 – 100
IRON in mg/l Fe	12	.84	1.52	.10	26	.03	.14	.01	Less than 0.3
CHLORIDE in mg/l Cl^-	15	7.9	17.5	5.0	26	11	28	7	Less than 250
pH in pH units	13	8.1	8.3	7.9	26	7.4	8.1	7.2	7.0 – 8.5
FLUORIDE in mg/l F^-	11	0.1	0.1	0.1	22	.8	1.1	.1	Less than 1.2
AMMONIA in mg/l as N	9	.09	.10	.01					Less than 0.5
TOTAL KJELDAHL NITROGEN in mg/l as N	9	.30	.43	.20	23	.7	3.4	.1	Less than 1.
NITRITE + Nitrate in mg/l as N	14	.49	1.40	.10					
NITRATE in mg/l as N									Less than 10
TOTAL PHOSPHORUS in mg/l as P	9	.03	.05	.02					
SOLUBLE PHOSPHORUS in mg/l as P									
PHENOLS in µg/l as C_6H_5OH									Less than 1

HARROW

PLANT PERFORMANCE

MONTH	FLOWS				RAW WATER		TREATED WATER					
							TURBIDITY		COLOUR		TEMPERATURE	
	TOTAL PLANT OUTPUT million gallons	AVERAGE DAILY FLOW million gallons	MAXIMUM DAY'S FLOW million gallons	MAXIMUM RATE mgd	TURBIDITY (AVERAGE) FTU	COLOUR (AVERAGE) App. units	AVERAGE FTU	MAXIMUM FTU	AVERAGE App. units	MAXIMUM App. units	AVERAGE °C	MAXIMUM °C
JAN	7.77	.25	.40		6.5	13	1.0	1.2				
FEB	7.08	.24	.39		18.1	18	.9	1.1			-1	1
MAR	7.02	.23	.42		22.0	15	1.0	1.6			4	5
APR	7.00	.23	.29		62.1	80	.2	.3			8	11
MAY	7.59	.24	.32		12.0	8	.1	.9			12	16
JUNE	9.82	.33	.53		18.0		.2	.5			19	22
JULY	9.96	.32	.52		11.1	18	.1	.2			23	25
AUG	14.53	.47	.63		4.2	5	.1	.1			23	24
SEPT	9.78	.33	.61		6.5	5	.1	.9			20	24
OCT	7.64	.25	.42				.1	.2			12	17
NOV	6.70	.22	.27		31.5	10	.1	.8			3	5
DEC	7.74	.25			61.0	5	.1	.1			0	2
TOTAL	102.63											
AVG.		.28	MAXIMUM .63	MAXIMUM	19.7	23	.3	MAXIMUM 1.6		MAXIMUM	10	MAXIMUM 25

TREATMENT DATA

MONTH	CHEMICALS USED								FILTER OPERATION		
	ALUM		Sodium Bicarbonate		Sodium Silicate				MINIMUM	AVERAGE	BACKWASH
	AMT. USED 10^3 gal.	DOSAGE mg/l	AMT. USED lbs.	DOSAGE mg/l	AMT. USED lbs.	DOSAGE mg/l	AMT. USED	DOSAGE mg/l	RUN hours	RUN hours	WATER mil.gallons
JAN	.40	33.7	171	2.2	667	8.6			11	18	
FEB	.30	27.4	138	1.9	542	7.6			4	23	
MAR	.43	39.7	200	2.8	778	11.1			4	19	.421
APR	.36	33.8	175	2.5	681	9.7				9	.301
MAY	.38	32.1	150	2.0	584	7.7			24	39	.501
JUNE	.40	26.4	175	1.8	681	6.9			33	44	.541
JULY	.43	28.0	200	2.0	778	7.8			39	48	.472
AUG	.55	24.7	200	1.4	778	5.4			32	48	.462
SEPT	.35	23.5	150	1.5	584	6.0			38	44	.163
OCT	.30	25.4	125	1.6	486	6.4			19	35	.244
NOV	.25	24.6	75	1.1	292	4.4			38	40	.097
DEC	.29	24.0	125	1.6	486	6.3			18	42	.490
TOTAL	4.44		1884		7337						3.692
AVG		28.1		1.8		7.2			Min. 4	34	

HARROW

CHLORINATION and DISINFECTION

MONTH	RAW WATER					PLANT EFFLUENT		DISTRIBUTION SYSTEM		CHLORINATION			
	NUMBER OF SAMPLES HAVING TOTAL COLIFORM ORGANISMS PER 100 ml OF					NUMBER OF SAMPLES TAKEN	NUMBER HAVING COLIFORM ORGANISMS	NUMBER OF SAMPLES TAKEN	NUMBER HAVING COLIFORM ORGANISMS	TOTAL AMOUNT OF CHLORINE USED pounds	DOSAGE		RESIDUAL IN PLANT EFFLUENT mg/l
	0	1 - 3	4 - 32	33 - 320	> 320						PRE - mg/l	POST - mg/l	
JAN		1	2			3	0	6	0	46		.6	.8
FEB	1	1	2			4	0	8	0	45		.6	.6
MAR					1	1	0	2	0	54		.8	.6
APR			1		1	2	0	4	0	251		3.6	.6
MAY			3			3	0	6	0	379		5.0	.8
JUNE	1			1		2	0	4	0	537		5.5	.9
JULY	1		1	1		3	0	6	0	694		7.0	1.0
AUG										745		5.1	1.0
SEPT										489		5.0	1.0
OCT	1	1				2	0	2	2	330		4.3	1.0
NOV			1	2		3	0	3	3	238		3.6	1.0
DEC		1				1	0	1	1	217		2.8	1.0
TOTAL	4	4	10	4	2	24	0	42	6	4025			
AVG.										11 pounds per day		3.9	.9

WATER QUALITY

PROPERTY	RAW WATER				TREATED WATER				DESIRABLE STANDARDS
	NUMBER OF SAMPLES	AVERAGE	MAXIMUM	MINIMUM	NUMBER OF SAMPLES	AVERAGE	MAXIMUM	MINIMUM	
HARDNESS in mg/l as $CaCO_3$	26	119	140	108					80 - 100
ALKALINITY in mg/l as $CaCO_3$	26	78	96	72					30 - 100
IRON in mg/l Fe	26	1.02	11.30	.01					Less than 0.3
CHLORIDE in mg/l Cl^-	26	26	35	19					Less than 250
pH in pH units	26	6.3	8.4	7.2					7.0 - 8.5
FLUORIDE in mg/l F^-	9	.1	.1	.1					Less than 1.2
AMMONIA in mg/l as N	.1	.1	.1	.1					Less than 0.5
TOTAL KJELDAHL NITROGEN in mg/l as N	1	.2	.2	.2					Less than 1.
NITRITE in mg/l as N	3	.86	.93	.20					
Conductivity	1	240	240	240					Less than 10
TOTAL PHOSPHORUS in mg/l as P									
SOLUBLE PHOSPHORUS in mg/l as P									
PHENOLS in µg/l as C_6H_5OH	1	1.0	1.0	1.0					Less than 1

KENT COUNTY

PLANT PERFORMANCE

MONTH	FLOWS				RAW WATER		TREATED WATER					
							TURBIDITY		COLOUR		TEMPERATURE	
	TOTAL PLANT OUTPUT million gallons	AVERAGE DAILY FLOW million gallons	MAXIMUM DAY'S FLOW million gallons	MAXIMUM RATE mgd	TURBIDITY (AVERAGE) FTU	COLOUR (AVERAGE) App. units	AVERAGE JTU	MAXIMUM JTU	AVERAGE App. units	MAXIMUM App. units	AVERAGE °	MAXIMUM °
JAN	125.5	4.05	4.90		8.0							
FEB	123.2	4.25	N/A		14.9							
MAR	126.2	4.07	4.80		29.0							
APR	119.8	3.99	4.50		9.5							
MAY	129.4	4.17	5.10		6.1							
JUNE	148.9	4.96	6.30		3.9							
JULY	132.9	4.30	5.40		N/A							
AUG	151.5	4.90	8.80		N/A							
SEPT	235.6	7.90	9.50		N/A							
OCT	142.9	4.60	5.40		20.0							
NOV	132.9	4.40	5.70		8.0							
DEC	116.1	3.70	4.40		6.0							
TOTAL	1684.9											
AVG.		4.60	MAXIMUM 9.50	MAXIMUM	10.5			MAXIMUM		MAXIMUM		MAXIMUM

KENT COUNTY

CHLORINATION and DISINFECTION

MONTH	RAW WATER					PLANT EFFLUENT		DISTRIBUTION SYSTEM		CHLORINATION			
	NUMBER OF SAMPLES HAVING TOTAL COLIFORM ORGANISMS PER 100 ml OF					NUMBER OF SAMPLES TAKEN	NUMBER HAVING COLIFORM ORGANISMS	NUMBER OF SAMPLES TAKEN	NUMBER HAVING COLIFORM ORGANISMS	TOTAL AMOUNT OF CHLORINE USED pounds	DOSAGE		RESIDUAL IN PLANT EFFLUENT mg/l
	0	1 - 3	4 - 32	33 - 320	> 320						PRE - mg/l	POST - mg/l	
JAN										1032		.8	.2
FEB										881		.7	.2
MAR										1063		.8	.2
APR										1055		.9	.2
MAY										1116		.9	.2
JUNE										1291		1.0	.1
JULY										1290		.9	.1
AUG										1243		.8	.1
SEPT										1350		.6	.1
OCT										1199		.8	.1
NOV										665		.5	.1
DEC										1087		.9	.2
TOTAL										13272			
AVG.										36 pounds per day		.8	.2

LAKE HURON

PLANT PERFORMANCE

MONTH	FLOWS				RAW WATER		TREATED WATER					
							TURBIDITY		COLOUR		TEMPERATURE	
	TOTAL RAW WATER million gallons	AVERAGE DAILY FLOW million gallons	MAXIMUM DAY'S FLOW million gallons	PLANT OUTPUT mgd	TURBIDITY (AVERAGE) FTU	COLOUR (AVERAGE) App. units	AVERAGE FTU	MAXIMUM FTU	AVERAGE App. units	MAXIMUM App. units	AVERAGE °C	MAXIMUM °C
JAN	746.6	24.1	26.8	702.4	8	10	1.1	1.4	5	5	6	8
FEB	705.0	24.3	27.0	667.2	6	5	.8	1.9	5	5	7	8
MAR	739.7	25.4	34.1	673.7	21		.8	1.3			10	14
APR	771.5	25.7	28.6	703.4	8		.8	1.2			9	11
MAY	844.7	27.2	30.8	756.5	13	30	1.1	1.7	5	5	11	13
JUNE	1039.9	34.7	46.5	946.2	3		.9	1.3			13	18
JULY	855.8	27.6	33.4	764.7	6	5	1.0	1.4	5	5	18	20
AUG	895.0	28.8	35.2	830.5	4	5	.8	1.2	5	5	21	22
SEPT	889.0	29.6	37.7	810.4	18		1.1	1.5			19	21
OCT	832.6	26.9	30.3	763.1	16		1.1	1.4			14	17
NOV	784.4	26.2	32.9	736.2	8		1.1	1.4			9	11
DEC	752.0	24.2	26.8	700.9	8		.8	1.3			2	3
TOTAL	9856.2			9055.2								
AVG.	821.4	26.9	MAXIMUM 46.5	MAXIMUM 752.3	10	11	1.0	MAXIMUM 1.9	5	MAXIMUM 5	12	MAXIMUM 22

FLOWS

MONTH	CITY OF LONDON			TOWNSHIP OF BOSANQUET	VILLAGE OF GRAND BEND	TOWN OF PARKHILL	TOWNSHIP OF LONDON (ILDERTON)	VILLAGE OF AILSA CRAIG *	TOWNSHIPS OF STEPHEN AND McGILLIVRAY
	TOTAL mil gal	AVERAGE DAY mil gal/day	MAXIMUM DAY mil gal/day	TOTAL mil. gal.	TOTAL mil. gal.	TOTAL mil. gal.	TOTAL mil. gal.	TOTAL mil. gal.	TOTAL mil gal.
JAN	694.3	22.4	24.4	0.518	2.62	3.25	0.78	0.92	
FEB	656.4	22.6	23.9	0.155	2.50	3.64	0.80	0.82	2.89
MAR	664.1	21.4	29.9	0.423	2.50	2.98	0.83	0.82	2.00
APR	695.6	23.2	24.9	0.741	2.51	2.98	0.69	0.88	
MAY	741.3	24.7	26.6	1.717	3.58	2.76	0.61	1.07	
JUNE	924.7	30.8	40.7	2.028	6.65	4.44	1.32	1.06	5.94
JULY	751.4	24.2	26.2	2.624	6.07	3.10	0.67	0.94	
AUG	810.1	27.0	32.4	2.951	7.98	3.83	1.01	1.05	3.65
SEPT	791.8	26.4	33.6	1.498	4.62	3.43	1.30	0.99	6.79
OCT	754.0	24.3	29.0	1.233	2.43	3.22	1.16	0.98	
NOV	723.7	24.1	30.1	0.484	2.22	3.02	0.98	0.95	4.87
DEC	690.7	22.2	23.4	0.252	2.35	3.05	0.86	0.92	2.78
TOTAL	8898.1			14.614	46.03	39.70	11.01	11.40	28.92
AVG.	741.5	24.3	Max. 40.7	1.218	3.84	3.31	0.92	0.95	2.41

TREATMENT DATA

MONTH	CHEMICALS USED				FILTER OPERATION			ALGAE
	ALUM		POLYMER		AVERAGE	AVERAGE HEAD	BACKWASH	TOTAL ALGAE
	AMT. USED Gallons	DOSAGE mg/l	AMT. USED Gallons	DOSAGE mg/l	FILTER RUN hours	LOSS AT BACKWASH feet	WATER USED million gallons	RAW WATER SAU/ml
JAN	0		748	.9	54	6	39.1	1031
FEB	185	0.1	645	.9	54	4	33.1	747
MAR	0		1047	1.4	25	7	60.9	707
APR	0		605	.7	23	7	62.8	1121
MAY	0		830	1.0	17	8	81.8	1725
JUNE	0		360	.3	14	7	76.6	2299
JULY	0		593	.6	41	7	74.1	1298
AUG	0		465	.5	58	4	46.4	484
SEPT	0		659	.7	38	7	64.9	1007
OCT	0		710	.8	38	6	58.8	1141
NOV	0		523	.6	58	5	39.4	986
DEC	0		314	.4	49	6	42.6	783
TOTAL	185	0.1	7499				680.5	
AVG			625	.7	39	6	56.7	1111

LAKE HURON

CHLORINATION and DISINFECTION

MONTH	RAW WATER					PLANT EFFLUENT		DISTRIBUTION SYSTEM		CHLORINATION			
	NUMBER OF SAMPLES HAVING TOTAL COLIFORM ORGANISMS PER 100 ml OF					NUMBER OF SAMPLES TAKEN	NUMBER HAVING COLIFORM ORGANISMS	NUMBER OF SAMPLES TAKEN	NUMBER HAVING COLIFORM ORGANISMS	TOTAL AMOUNT OF CHLORINE USED 10^3 pounds	DOSAGE		RESIDUAL IN PLANT EFFLUENT mg/l
	0	1 - 3	4 - 32	33 - 320	> 320						PRE - mg/l	POST - mg/l	
JAN	22	0	0	0	0	17	0	69	0	11.8	1.5		1.0
FEB	17	2	1	0	0	16	0	81	0	11.5	1.5		1.0
MAR	18	1	1	0	0	17	0	45	0	11.3	1.5		1.0
APR	19	2	1	0	1	18	0	36	0	12.2	1.5		1.0
MAY	18	1	0	0	0	17	0	53	0	15.0	1.7		1.1
JUNE	21	2	0	0	0	18	0	52	0	20.4	1.9		1.2
JULY	17	0	4	0	0	17	0	40	0	19.4	1.9		1.3
AUG	4	0	0	1	0	4	0	17	0	15.6	1.8		1.3
SEPT	6	0	0	1	0	5	0	11	0	17.8	1.9		1.3
OCT	3	10	2	1	0	13	0	39	0	16.5	1.8		1.3
NOV	0	6	0	0	0	4	0	40	0	13.9	1.7		1.2
DEC	2	9	0	0	0	11	0	38	0	12.0	1.6		1.1
TOTAL	147	33	9	3	1	157	0	521	0	177.4			
AVG.										485 pounds per day	1.7		1.2

WATER QUALITY

PROPERTY	RAW WATER				TREATED WATER				DESIRABLE STANDARDS
	NUMBER OF SAMPLES	AVERAGE	MAXIMUM	MINIMUM	NUMBER OF SAMPLES	AVERAGE	MAXIMUM	MINIMUM	
HARDNESS in mg/l as $CaCO_3$	6	102	108	98	6	101	102	98	80 – 100
ALKALINITY in mg/l as $CaCO_3$	6	80	87	76	6	79	84	75	30 – 100
IRON in mg/l Fe	6	.30	1.10	.02	6	.04	.06	.01	Less than 0.3
CHLORIDE in mg/l Cl^-	8	7	8	3	6	7	9	4	Less than 250
pH in pH units	6	8.1	8.2	7.8	6	8.1	8.5	7.9	7.0 – 8.5
FLUORIDE in mg/l F^-	5	0.1	0.1	0.1	5	0.1	0.1	0.1	Less than 1.2
AMMONIA in mg/l as N	7	.02	.04	.01	5	.01	.02	.01	Less than 0.5
TOTAL KJELDAHL NITROGEN in mg/l as N	7	.24	.65	.11	5	.13	.18	.09	Less than 1.
NITRITE + Nitrate in mg/l as N	7	.24	.33	.13	5	.22	.30	.13	
NITRATE in mg/l as N									Less than 10
TOTAL PHOSPHORUS in mg/l as P	3	.02	.02	.02	1	.02	.02	.02	
SOLUBLE PHOSPHORUS in mg/l as P									
PHENOLS in µg/l as C_6H_5OH									Less than 1

LAMBTON

PLANT PERFORMANCE

MONTH	FLOWS				RAW WATER		TREATED WATER					
							TURBIDITY		COLOUR		TEMPERATURE	
	TOTAL PLANT OUTPUT million gallons	AVERAGE DAILY FLOW million gallons	MAXIMUM DAY'S FLOW million gallons	MAXIMUM RATE mgd	TURBIDITY (AVERAGE) FTU	COLOUR (AVERAGE) App. units	AVERAGE FTU	MAXIMUM FTU	AVERAGE App.units	MAXIMUM App. units	AVERAGE °C	MAXIMUM °C
JAN	303.7	9.8	12.1	15.7	3.0	10	.2	1.3	5	5	1	3
FEB	275.9	9.5	10.2	17.1	2.5	5	.2	.5	5	5	1	2
MAR	307.0	9.9	10.6	15.5	1.6		.2	.4			3	4
APR	314.0	10.5	14.5	20.0	2.9		.2	.7			4	9
MAY	358.1	11.6	17.2	26.4	2.0		.2	.4			7	11
JUNE	571.6	19.1	28.1	50.0	1.2		.3	1.5			12	14
JULY	460.7	14.9	24.2	35.5	2.1		.3	.9			18	20
AUG	553.0	17.8	23.2	36.0	1.8		.2	.4			20	22
SEPT	448.1	14.9	27.9	47.0	1.6		.3	.6			19	20
OCT	332.5	10.7	11.9	20.0	4.2		.2	.3			13	16
NOV	301.3	10.0	11.4	16.0	2.0		.2	.7			6	8
DEC	311.3	10.0	10.6	15.0	3.3		.2	.4			1	3
TOTAL	4537.2											
AVG.	378.1	12.4	MAXIMUM 28.1	MAXIMUM 50.0	2.4	8	.2	MAXIMUM 1.5	5	MAXIMUM 5	9	MAXIMUM 22

TREATMENT DATA

MONTH	CHEMICALS USED								FILTER OPERATION		
	ALUM		HYDORFLUOSILICIC A.						MINIMUM RUN	AVERAGE RUN	BACKWASH WATER
	AMT. USED 10^3 lb.	DOSAGE mg/l	AMT. USED 10^3 lb.	DOSAGE mg/l	AMT. USED	DOSAGE mg/l	AMT. USED	DOSAGE mg/l	hours	hours	mil. gallons
JAN	12.4	4.1								58	23.3
FEB	10.4	3.8								63	20.4
MAR	10.3	3.4								52	25.5
APR	12.1	3.9								46	29.1
MAY	12.7	3.6								36	41.2
JUNE	25.8	4.5	14.0	2.4						21	100.0
JULY	22.6	4.9	15.0	3.2						47	42.7
AUG	25.3	4.6	20.0	3.5						42	47.2
SEPT	55.7	12.4	12.0	2.7						46	38.5
OCT	43.0	12.9	12.0	3.7						45	29.8
NOV	35.2	11.7	14.0	4.6						43	27.7
DEC	40.1	12.9	10.9	3.5						35	24.5
TOTAL	305.6		97.9								249.9
AVG		6.7		2.2						45	37.5

LAMBTON

WATER QUALITY

PROPERTY	RAW WATER				TREATED WATER				DESIRABLE STANDARDS
	NUMBER OF SAMPLES	AVERAGE	MAXIMUM	MINIMUM	NUMBER OF SAMPLES	AVERAGE	MAXIMUM	MINIMUM	
HARDNESS in mg/l as $CaCO_3$	19	100	110	94	37	101	112	96	80 – 100
ALKALINITY in mg/l as $CaCO_3$	19	81	96	79	37	80	84	74	30 – 100
IRON in mg/l Fe	19	.10	.31	.01	37	.05	.14	.01	Less than 0.3
CHLORIDE in mg/l Cl^-	20	6.1	8.0	5.5	37	7.3	9.0	6.5	Less than 250
pH in pH units	19	8.3	8.7	7.8	37	8.1	8.2	7.1	7.0 – 8.5
FLUORIDE in mg/l F^-	13	0.1	0.4	0.1	18	.4	1.0	.1	Less than 1.2
AMMONIA in mg/l as N	8	.011	.030	.005	3	.005	.005	.005	Less than 0.5
TOTAL KJELDAHL NITROGEN in mg/l as N	8	.20	.26	.15	3	.06	.06	.06	Less than 1.
NITRITE + Nitrate in mg/l as N	8	.20	.29	.12	3	.22	.24	.21	
NITRATE in mg/l as N									Less than 10
TOTAL PHOSPHORUS in mg/l as P	8	.01	.02	.01	3	.03	.04	.01	
SOLUBLE PHOSPHORUS in mg/l as P									
PHENOLS in μg/l as C_6H_5OH									Less than 1

LAMBTON

CHLORINATION and DISINFECTION

MONTH	RAW WATER					PLANT EFFLUENT		DISTRIBUTION SYSTEM		CHLORINATION			
	NUMBER OF SAMPLES HAVING TOTAL COLIFORM ORGANISMS PER 100 ml OF					NUMBER OF SAMPLES TAKEN	NUMBER HAVING COLIFORM ORGANISMS	NUMBER OF SAMPLES TAKEN	NUMBER HAVING COLIFORM ORGANISMS	TOTAL AMOUNT OF CHLORINE USED 10^3 pounds	DOSAGE		RESIDUAL IN PLANT EFFLUENT mg/l
	0	1 - 3	4 - 32	33 - 320	> 320						PRE - mg/l	POST - mg/l	
JAN	7					33		33	1	3.7		1.2	.6
FEB	6			1		30		23	1	3.0		1.1	.5
MAR	4					35		24		3.1		1.0	.5
APR	8					40		24		3.3		1.0	.4
MAY	6					23		47	1	4.3		1.2	.5
JUNE	5					33		37	4	7.8		1.4	.5
JULY	4	2		1		33		32	2	6.9		1.5	.5
AUG	2		2			20		24	3	9.9		1.8	.6
SEPT	4							45	2	8.0		1.8	.7
OCT	4	1				17	1	27	2	5.1		1.5	.7
NOV	2	4	1			31		18	4	4.4		1.5	.6
DEC	4	1				33	1	6		4.2		1.4	.7
TOTAL	56	8	3	2		328	2	340	30	63.7			
AVG.										174 pounds per day		1.4	.6

PLANT PERFORMANCE

MONTH	FLOWS				RAW WATER		TREATED WATER					
							TURBIDITY		COLOUR		TEMPERATURE	
	TOTAL PLANT OUTPUT million gallons	AVERAGE DAILY FLOW million gallons	MAXIMUM DAY'S FLOW million gallons	BACKWASH WATER million gallons	TURBIDITY (AVERAGE) FTU	COLOUR (AVERAGE) App. units	AVERAGE FTU	MAXIMUM FTU	AVERAGE App. units	MAXIMUM App. units	AVERAGE °C	MAXIMUM °C
JAN	26.07	.84	1.01	.80	1.2		.6	1.2			1	2
FEB	24.79	.86	.96	.70	1.6		.8	6.4			.6	
MAR	27.11	.87	1.01	.69	3.3		1.6	8.4			1	2
APR	26.29	.88	1.03	1.12	1.3		.6	2.0			1	2
MAY	27.39	.88	1.15	.85	1.2		.6	1.4			6	4
JUNE	35.23	1.17	1.82	.85	1.2	5	.6	2.2	5	5	9	14
JULY	32.76	1.06	1.40	.83	1.1	5	.5	1.4	5	5	15	17
AUG	39.87	1.29	1.39	1.00	1.5	5	.7	4.2	5	5	17	19
SEPT	29.60	.99	1.15	.84	1.3	5	.6	1.8	5	5	17	18
OCT	29.89	.96	1.12	.80	1.6	5	.8	3.2	5	5	11	14
NOV	29.01	.96	1.19	.89	1.5	5	.6	1.8	5	5	7	8
DEC	29.19	.94	1.21	.46	1.4	5	.7	3.0	5	5	2	5
TOTAL	357.20			9.84								
			MAXIMUM	MAXIMUM				MAXIMUM		MAXIMUM		MAXIMUM
AVG.	29.77	.98	1.82	1.12	1.4	5	.7	8.4	5	5	9.5	19

MEAFORD

CHLORINATION and DISINFECTION

MONTH	RAW WATER					PLANT EFFLUENT		DISTRIBUTION SYSTEM		CHLORINATION			
	NUMBER OF SAMPLES HAVING TOTAL COLIFORM ORGANISMS PER 100 ml OF					NUMBER OF SAMPLES TAKEN	NUMBER HAVING COLIFORM ORGANISMS	NUMBER OF SAMPLES TAKEN	NUMBER HAVING COLIFORM ORGANISMS	TOTAL AMOUNT OF CHLORINE USED pounds	DOSAGE		RESIDUAL IN PLANT EFFLUENT mg/l
	0	1 - 3	4 - 32	33 - 320	> 320						PRE - mg/l	POST - mg/l	
JAN	1	1	1	0	0	3	0	12	0	278		1.1	.4
FEB	4	0	0	0	0	4	0	16	0	267		1.1	.4
MAR	2	3	0	0	0	5	0	20	0	257		1.0	.4
APR	2	1	0	0	0	4	0	13	0	257		1.0	.4
MAY	2	0	0	0	0	6	0	16	0	285		1.0	.4
JUNE	5	0	0	0	0	10	0	25	0	341		1.0	.4
JULY	3	1	0	0	0	8	0	20	0	368		1.1	.4
AUG	1	0	2	1	0	8	0	20	0	402		1.0	.4
SEPT	2	0	1	0	0	8	0	20	0	348		1.2	.4
OCT	0	2	0	2	0	11	4	38	8	368		1.2	.4
NOV	0	1	4	0	0	4	1	10	2	305		1.1	.4
DEC	0	0	2	1	0	6	1	15	1	304		1.0	.4
TOTAL	23	9	10	4	0	77	6	225	11	3780			
AVG.										10 pounds per day		1.1	.4

WATER QUALITY

PROPERTY	RAW WATER				TREATED WATER				DESIRABLE STANDARDS
	NUMBER OF SAMPLES	AVERAGE	MAXIMUM	MINIMUM	NUMBER OF SAMPLES	AVERAGE	MAXIMUM	MINIMUM	
HARDNESS in mg/l as $CaCO_3$	12	91	98	86	12	90	98	86	80 – 100
ALKALINITY in mg/l as $CaCO_3$	12	73	75	70	12	73	78	69	30 – 100
IRON in mg/l Fe	12	.08	.26	.03	12	.03	.06	.01	Less than 0.3
CHLORIDE in mg/l Cl^-	12	4.8	5.5	4.5	12	5.6	6.0	5.0	Less than 250
pH in pH units	12	8.2	8.7	7.9	12	8.1	8.2	7.9	7.0 – 8.5
FLUORIDE in mg/l F^-	5	0.1	0.1	0.1	5	0.1	0.1	0.1	Less than 1.2
AMMONIA in mg/l as N									Less than 0.5
TOTAL KJELDAHL NITROGEN in mg/l as N									Less than 1.
NITRITE in mg/l as N	5	.18	.23	.07	7	.16	.25	0.10	
NITRATE in mg/l as N									Less than 10
TOTAL PHOSPHORUS in mg/l as P									
SOLUBLE PHOSPHORUS in mg/l as P									
PHENOLS in μg/l as C_6H_5OH									Less than 1

MITCHELL'S BAY

PLANT PERFORMANCE

MONTH	FLOWS				RAW WATER		TREATED WATER					
							TURBIDITY		COLOUR		TEMPERATURE	
	TOTAL PLANT OUTPUT million gallons	AVERAGE DAILY FLOW million gallons	MAXIMUM DAY'S FLOW million gallons	MAXIMUM RATE mgd	TURBIDITY (AVERAGE) F TU	COLOUR (AVERAGE) App. units	AVERAGE F TU	MAXIMUM F TU	AVERAGE App. units	MAXIMUM App. units	AVERAGE °C	MAXIMUM °C
JAN												
FEB	.181	.006	.012		30.0		.5	.5			6	8
MAR	.140	.004	.007		76.0		1.7	1.7			6	6
APR	.131	.004	.007		11.0		.5	.5			9	10
MAY	.235	.007	.013		24.0		.3	.3			12	13
JUNE	.465	.015	.027		11.0	15	.6	.9	5	5	18	22
JULY	.552	.018	.027		33.0	20	.5	.6	5	5	21	23
AUG	.568	.018	.024		17.0	10	.4	.5	5	5	21	23
SEPT	.390	.013	.023		34.0	40	.3	.3	5	5	18	21
OCT	.286	.009	.016		12.0	10	.4	.5	5	5	15	18
NOV	.181	.006	.017		19.0	18	.5	.9	5	5	8	12
DEC	.315	.010	.020		13.0	30	.5	.6	5	5	6	8
TOTAL	3.444											
AVG.		.010	MAXIMUM .027	MAXIMUM	21.0	19	.5	MAXIMUM 1.7	5	MAXIMUM 5	13	MAXIMUM 23

Started February 1.

MITCHELL'S BAY

TREATMENT DATA

MONTH	CHEMICALS USED								FILTER OPERATION		
	ALUM		ACTIVATED CARBON		SODA ASH		POLYMER		MINIMUM RUN	AVERAGE RUN	BACKWASH WATER
	AMT. USED Gal.	DOSAGE mg/l	AMT. USED lbs.	DOSAGE mg/l	AMT. USED lbs.	DOSAGE mg/l	AMT. USED lbs.	DOSAGE mg/l	hours	hours	mil. gallons
JAN											
FEB										1.5	.012
MAR										.9	.018
APR										1.3	.009
MAY	45	124.7	6	2.6						2.0	.012
JUNE	38	53.1	6	1.3						3.3	.018
JULY	56	65.9	6	1.1			1.4	.3		3.8	.030
AUG	57	65.3	6	1.1						4.9	.036
SEPT	30	50.0	6	1.5			3.0	.8		3.1	.036
OCT	25	56.6					1.6	.7		2.2	.027
NOV	25	89.5					1.3	.7		2.0	.021
DEC	18	37.1					1.0	.3		1.6	.024
TOTAL	294		30				8.3				.243
AVG.	37	63.9	6	1.4			1.7	.5		2.0	

MITCHELL'S BAY

CHLORINATION and DISINFECTION

MONTH	RAW WATER: NUMBER OF SAMPLES HAVING TOTAL COLIFORM ORGANISMS PER 100 ml OF					PLANT EFFLUENT		DISTRIBUTION SYSTEM		CHLORINATION			
	0	1 - 3	4 - 32	33 - 320	> 320	NUMBER OF SAMPLES TAKEN	NUMBER HAVING COLIFORM ORGANISMS	NUMBER OF SAMPLES TAKEN	NUMBER HAVING COLIFORM ORGANISMS	TOTAL AMOUNT OF CHLORINE USED pounds	DOSAGE PRE - mg/l	DOSAGE POST - mg/l	RESIDUAL IN PLANT EFFLUENT mg/l
JAN													
FEB										11		6.1	.9
MAR				1				5	0	11		7.9	1.0
APR			1	3				12	0	11		8.4	1.0
MAY					1			3	0	11		4.7	.9
JUNE			1	1				6	0	11		2.4	.9
JULY				2				6	0	11		2.0	.9
AUG				1	1			6	0	11		1.9	.9
SEPT					1			3	0	11		2.8	.8
OCT				2				5	1	11		3.8	.8
NOV				2				4	2	11		6.1	.9
DEC			1					2	1	11		3.5	1.0
TOTAL			3	12	3			52	4	121			
AVG.										.04 pounds per day		3.5	.9

MITCHELL'S BAY

WATER QUALITY

PROPERTY	RAW WATER				TREATED WATER				DESIRABLE STANDARDS
	NUMBER OF SAMPLES	AVERAGE	MAXIMUM	MINIMUM	NUMBER OF SAMPLES	AVERAGE	MAXIMUM	MINIMUM	
HARDNESS in mg/l as $CaCO_3$	10	127	162	110	10	128	160	112	80 – 100
ALKALINITY in mg/l as $CaCO_3$	10	101	117	82	10	82	101	68	30 – 100
IRON in mg/l Fe	9	1.30	3.50	.06	10	.04	.10	.01	Less than 0.3
CHLORIDE in mg/l Cl^-	10	12.3	14.5	10.0	10	14.2	18.0	12.0	Less than 250
pH in pH units	10	8.0	8.2	7.7	10	7.7	7.9	7.5	7.0 – 8.5
FLUORIDE in mg/l F^-	10	.1	.2	.1	10	.1	.1	.1	Less than 1.2
AMMONIA in mg/l as N									Less than 0.5
TOTAL KJELDAHL NITROGEN in mg/l as N									Less than 1.
NITRITE in mg/l as N									
NITRATE in mg/l as N									Less than 10
TOTAL PHOSPHORUS in mg/l as P									
SOLUBLE PHOSPHORUS in mg/l as P									
PHENOLS in μg/l as C_6H_5OH									Less than 1

SOUTHAMPTON

PLANT PERFORMANCE

MONTH	FLOWS			RAW WATER		TREATED WATER		FILTER OPERATION		
	TOTAL PLANT OUTPUT 10^6 gallons	AVERAGE DAILY FLOW 10^6 gallons	MAXIMUM DAY'S FLOW 10^6 gallons	TURBIDITY (AVERAGE) FTU	COLOUR (AVERAGE) App. Units	TURBIDITY (AVERAGE) FTU	COLOUR (AVERAGE) App. Units	BACKWASH WATER 10^3 gallons	DIATOMACEOUS EARTH USED 10^3 pounds	DIATOMACEOUS EARTH DOSAGE mg/l
JAN	12.52	.40	.83	5.0	10	.3	5	310	5.8	46
FEB	10.80	.37	.43	4.2		.5		20	.6	5
MAR	11.12	.36	.51			1.4		530	7.6	68
APR	10.14	.34	.39	20.0		.3		320	6.6	65
MAY	15.16	.49	1.12	5.0	5	.8	5	140	5.2	34
JUNE	19.85	.66	1.09	2.5	10	.2	15	0	2.5	13
JULY	21.15	.68	1.00	2.3	5	.7	5	70	1.5	7
AUG	21.88	.71	1.02	2.2	5	.5	5	0	0	0
SEPT	13.96	.46	.70	3.1	5	.6	5	0	0	0
OCT	11.66	.37	.51	3.2	5	.1	5	0	0	0
NOV	12.22	.40	.97	3.7	10	.9	5	40	.9	8
DEC	11.83	.38	.58	6.7		2.5		60	2.4	20
TOTAL	172.29							1490	33.1	
AVG.	14.36	.47	Max. 1.12	5.3	7	.7	5	186		19

SOUTHAMPTON

CHLORINATION and DISINFECTION

MONTH	RAW WATER					PLANT EFFLUENT		DISTRIBUTION SYSTEM		CHLORINATION			
	NUMBER OF SAMPLES HAVING TOTAL COLIFORM ORGANISMS PER 100 ml OF					NUMBER OF SAMPLES TAKEN	NUMBER HAVING COLIFORM ORGANISMS	NUMBER OF SAMPLES TAKEN	NUMBER HAVING COLIFORM ORGANISMS	TOTAL AMOUNT OF CHLORINE USED pounds	DOSAGE		RESIDUAL IN PLANT EFFLUENT mg/l
	0	1 - 3	4 - 32	33 - 320	> 320						PRE - mg/l	POST - mg/l	
JAN	10	0	0	0	0	6	0	24	0	138	1.1		.7
FEB	8	1	2	0	0	5	0	27	0	123	1.1		.8
MAR	4	0	1	4	7	10	0	35	0	166	1.5		.9
APR	4	0	6	1	0	7	0	26	0	139	1.4		.9
MAY	7	0	0	1	1	6	0	23	0	210	1.4		.9
JUNE	4	1	0	0	0	5	0	10	0	266	1.3		.9
JULY	10	0	0	0	0	8	0	18	0	302	1.4		.9
AUG	3	0	0	0	0	3	0	12	0	286	1.3		.9
SEPT	4	0	0	0	0	4	0	8	0	205	1.5		.9
OCT	1	3	0	0	0	4	1	8	3	163	1.4		.9
NOV	0	5	0	0	0	5	0	11	5	130	1.1		.8
DEC	0	4	0	0	0	4	0	7	2	145	1.2		.9
TOTAL	55	14	9	6	8	67	1	209	10	2273			
AVG.										6 pounds per day	1.3		.9

SOUTHAMPTON

WATER QUALITY

PROPERTY	RAW WATER				TREATED WATER				DESIRABLE STANDARDS
	NUMBER OF SAMPLES	AVERAGE	MAXIMUM	MINIMUM	NUMBER OF SAMPLES	AVERAGE	MAXIMUM	MINIMUM	
HARDNESS in mg/l as $CaCO_3$	14	110	140	98	14	113	156	100	80 - 100
ALKALINITY in mg/l as $CaCO_3$	14	89	118	79	14	90	129	78	30 - 100
IRON in mg/l Fe	14	.56	1.32	.31	14	.13	.79	.05	Less than 0.3
CHLORIDE in mg/l Cl^-	14	7.2	12.0	6.0	14	7.8	13.0	6.5	Less than 250
pH in pH units	14	8.0	8.1	7.8	14	8.0	8.2	7.8	7.0 - 8.5
FLUORIDE in mg/l F^-	7	0.1	0.1	0.1	8	0.1	0.1	0.1	Less than 1.2
AMMONIA in mg/l as N									Less than 0.5
TOTAL KJELDAHL NITROGEN in mg/l as N									Less than 1.
NITRITE in mg/l as N	11	.29	.70	.15	12	28	.70	.15	
NITRATE in mg/l as N									Less than 10
TOTAL PHOSPHORUS in mg/l as P									
SOLUBLE PHOSPHORUS in mg/l as P									
PHENOLS in μg/l as C_6H_5OH									Less than 1

UNION WTP

PLANT PERFORMANCE

MONTH	FLOWS				RAW WATER		TREATED WATER					
							TURBIDITY		COLOUR		TEMPERATURE	
	TOTAL PLANT OUTPUT million gallons	AVERAGE DAILY FLOW million gallons	MAXIMUM DAY'S FLOW million gallons	MAXIMUM RATE mgd	TURBIDITY (AVERAGE) FTU	COLOUR (AVERAGE) App. units	AVERAGE FTU	MAXIMUM FTU	AVERAGE App. units	MAXIMUM App. units	AVERAGE °C	MAXIMUM °C
JAN	123.79	3.99	5.08	7.34	6	7	.8	1.2	5	5	1	1
FEB	122.28	4.22	5.21	7.92	6	5	.8	.8	5	5	1	2
MAR	137.29	4.43	5.53	8.50	32	5	.8	.9	5	5	3	5
APR	148.71	4.96	5.81	10.22	16	15	.5	.8	5	5	7	11
MAY	168.46	5.43	7.56	11.23	15	32	.2	.8	5	5	14	14
JUNE	223.05	7.43	11.15	14.40	12	5	.2	.5	5	5	19	22
JULY	197.98	6.39	8.49	12.52	14	5	.3	1.0	5	5	22	23
AUG	260.82	8.41	11.65	14.40			.2	.7	5	5	23	23
SEPT	216.64	7.22	10.98	14.11			.2	.5	5	5	20	23
OCT	157.48	5.08	6.74	11.16	18		.3	.9	5	5	13	16
NOV	146.18	4.87	6.02	11.66	19		.3	.9	5	5	3	6
DEC	122.06	3.94	5.60	8.93	6	5	.5	.9	5	5	1	1
TOTAL	2024.74											
AVG.	168.72	5.53	MAXIMUM 11.65	MAXIMUM 14.40	14	9	.4	MAXIMUM 1.2	5	MAXIMUM 5	11	MAXIMUM 23

UNION

TREATMENT DATA

MONTH	CHEMICALS USED								FILTER OPERATION		
	ALUM		ACTIVATED CARBON		SODIUM SILICATE		SODIUM BICARBONATE		MINIMUM RUN	AVERAGE RUN	BACKWASH WATER
	AMT. USED 10^3 Gall.	DOSAGE mg/l	AMT. USED Pounds	DOSAGE mg/l	AMT. USED Pounds	DOSAGE mg/l	AMT. USED Pounds	DOSAGE mg/l	hours	hours	mil. gallons
JAN	4.9	26	0		2790	2.3	630	.5		1127	2.58
FEB	4.3	23	0		3534	2.9	798	.7		1868	3.28
MAR	6.4	30	0		3720	2.7	840	.6		1665	3.08
APR	6.1	27	0		4464	3.0	1008	.7		1634	2.91
MAY	7.5	29	0		4464	2.7	1008	.6		1873	3.19
JUNE	9.6	28	416	.2	5394	2.4	1218	.6		2296	5.21
JULY	9.2	30	608	.3	6324	3.2	1428	.7		2231	5.49
AUG	11.1	27	516	.2	6696	2.6	1512	.6		2554	6.05
SEPT	9.7	29	252	.1	5872	2.7	1344	.6		2239	5.77
OCT	7.1	29	220	.2	5294	3.3	1218	.7		1807	4.60
NOV	6.4	28	156	.1	5208	3.5	1176	.8		1684	3.58
DEC	5.2	26	0	0	5022	4.0	1134	.9		1955	5.37
TOTAL	87.5		2168		58782		13314			22933	51.11
AVG.		28		.2		2.9		.7			

UNION

CHLORINATION and DISINFECTION

MONTH	RAW WATER					PLANT EFFLUENT		DISTRIBUTION SYSTEM		CHLORINATION			
	NUMBER OF SAMPLES HAVING TOTAL COLIFORM ORGANISMS PER 100 ml OF					NUMBER OF SAMPLES TAKEN	NUMBER HAVING COLIFORM ORGANISMS	NUMBER OF SAMPLES TAKEN	NUMBER HAVING COLIFORM ORGANISMS	TOTAL AMOUNT OF CHLORINE USED pounds 10^3	DOSAGE		RESIDUAL IN PLANT EFFLUENT mg/l
	0	1 - 3	4 - 32	33 - 320	> 320						PRE - mg/l	POST - mg/l	
JAN	3	0	1	2	0	6	0	59	0	1.9	1.1	.4	.5
FEB	0	1	2	4	0	7	0	62	0	1.9	1.2	.4	.5
MAR	2	0	3	1	0	6	0	58	1	2.5	1.3	.4	.5
APR	1	0	1	4	0	6	0	58	0	3.0	1.5	.5	.5
MAY	4	0	1	3	0	8	0	75	1	4.1	1.8	.6	.5
JUNE	4	0	1	1	0	6	0	58	0	6.8	2.3	.7	.5
JULY	2	0	2	1	0	5	0	46	0	7.8	3.0	1.0	.5
AUG	2	0	1	1	1	5	0	67	0	8.7	2.8	.9	.5
SEPT	1	0	3	0	0	4	0	55	0	7.2	2.5	.8	.5
OCT	3	1	1	0	0	5	0	45	2	4.4	2.2	.8	.5
NOV	0	1	0	1	0	3	0	29	1	2.7	1.5	.5	.5
DEC	1	1	0	0	0	2	0	16	1	4.0	1.1	.4	.5
TOTAL	23	4	16	18	1	63	0	628	6	55.0			
AVG.										0.2 pounds per day	1.9	.6	.5

WATER QUALITY

PROPERTY	RAW WATER				TREATED WATER				DESIRABLE STANDARDS
	NUMBER OF SAMPLES	AVERAGE	MAXIMUM	MINIMUM	NUMBER OF SAMPLES	AVERAGE	MAXIMUM	MINIMUM	
HARDNESS in mg/l as $CaCO_3$	14	120	128	112	24	117	130	108	80 – 100
ALKALINITY in mg/l as $CaCO_3$	14	88	93	73	24	71	82	67	30 – 100
IRON in mg/l Fe	14	.52	2.36	.01	24	.04	.12	.01	Less than 0.3
CHLORIDE in mg/l Cl^-	16	20	29	17	24	22	31	19	Less than 250
pH in pH units	14	8.0	8.2	7.5	24	7.4	7.6	7.2	7.0 – 8.5
FLUORIDE in mg/l F^-									Less than 1.2
AMMONIA in mg/l as N	13	.032	.065	.005					Less than 0.5
TOTAL KJELDAHL NITROGEN in mg/l as N	13	.30	.62	.17					Less than 1.
NITRITE in mg/l as N	13	.53	1.52	.08	14	.25	.41	.08	
NITRATE in mg/l as N									Less than 10
TOTAL PHOSPHORUS in mg/l as P	13	.03	.08	.01					
SOLUBLE PHOSPHORUS in mg/l as P									
PHENOLS in μg/l as C_6H_5OH									Less than 1

FLOWS

PROJECT Watford, Wyoming Plympton WSS

MONTH	TOTAL FLOW Mil. Gal.	AVG DAY M.G.D.	MAX DAY M.G.D.	PEAK RATE M.G.D.
JAN	5.081	0.164		
FEB	4.657	0.161		
MAR	4.933	0.159		
APR	5.329	0.178		
MAY	5.772	0.186		
JUN	8.103	0.270		
JUL	5.890	0.190		
AUG	6.007	0.194		
SEP	6.122	0.204		
OCT	5.519	0.178		
NOV	5.235	0.175		
DEC	5.158	0.166		
TOTAL	67.806	/////	/////	/////
AVG.	/////	0.185	/////	/////
MAX.	/////	/////		

REGION 2

WEST CENTRAL

PLANT PERFORMANCE

MONTH	FLOWS			RAW WATER			TREATED WATER					
							TURBIDITY				TEMPERATURE	
	TOTAL PLANT OUTPUT million gallons	AVERAGE DAILY FLOW million gallons	MAXIMUM DAY'S FLOW million gallons	TOTAL ALGAE ASU/ml	TURBIDITY (AVERAGE) FTU	FILTER-ABILITY INDEX units	AVERAGE FTU	MAXIMUM FTU	FILTER-ABILITY INDEX units	TOTAL ALGAE ASU/ml	AVERAGE ° C	MAXIMUM ° C
JAN	275.46	8.89	10.14	1212		.20	21.0	34.0	.10		1	3
FEB	260.21	8.97		939		.10	19.0	59.0	.06		0	1
MAR	293.09	9.45	11.03	1171		.21	41.0	134.0	.11		2	4
APR	222.06	7.40	11.75	1475		.16	21.0	41.0	.07		6	8
MAY	257.74	8.31	12.17	3225		.14	20.0	71.0	.06		9	11
JUNE	157.06	5.23	5.76	568		.10	8.0	28.0	.05		14	19
JULY	155.05	5.00	5.66			.20	10.0	28.0	.04		19	21
AUG	210.95	6.80	10.91	1575		.08	7.0	13.0	.04		21	23
SEPT	318.48	10.62	11.13			.15	14.0	34.0	.06		19	21
OCT	347.51	11.21	11.77	1527		.22	18.0	49.0	.04		13	17
NOV	333.60	11.11	11.54	1517		.25	24.0	34.0	.08		6	9
DEC	301.60	10.05	11.24	1495		.40	28.0	46.0	.15		1	3
TOTAL	3132.50											
AVG		8.56	12.17	1470		.18	19.0	Max. 134.0	.07		9	23

TREATMENT DATA

MONTH	ALGAE									
	TOTAL		BLUE-GREENS		GREENS		FLAGELLATES		DIATOMS	
	RAW ASU/ml	TREATED ASU/ml	RAW ASU/ml	TREATED ASU/ml	RAW ASU/ml	TREATED ASU/ml	RAW ASU/ml	TREATED ASU/ml	RAW ASU/ml	TREATED ASU/ml
JAN	1212		47		492		23		490	
FEB	939		40		113		8		802	
MAR	1171		88		122		30		931	
APR	1475		37		42		137		1259	
MAY	3225				119		138		2968	
JUNE	568		51		225		8		284	
JULY										
AUG	1575		88		310		290		888	
SEPT										
OCT	1527		94		378		58		1027	
NOV	1517		104		339				1014	
DEC	1495		65		185		14		1329	
TOTAL										
AVG	1470		68		233		78		1099	

DUNNVILLE

CHLORINATION and DISINFECTION

MONTH	RAW WATER					PLANT EFFLUENT		DISTRIBUTION SYSTEM		CHLORINATION			
	NUMBER OF SAMPLES HAVING TOTAL COLIFORM ORGANISMS PER 100 ml OF					NUMBER OF SAMPLES TAKEN	NUMBER HAVING COLIFORM ORGANISMS	NUMBER OF SAMPLES TAKEN	NUMBER HAVING COLIFORM ORGANISMS	TOTAL AMOUNT OF CHLORINE USED pounds	DOSAGE		RESIDUAL IN PLANT EFFLUENT mg/l
	0	1 - 3	4 - 32	33 - 320	> 320						PRE - mg/l	POST - mg/l	
JAN	0	0	2	0	2	0	0	12	0	2750		1.0	
FEB	0	0	2	0	2	0	0	12	0	2714		1.0	
MAR	0	0	0	3	1	0	0	12	0	3306		1.1	
APR	1	0	1	2	0	0	0	12	0	3496		1.1	
MAY	0	0	0	2	3	0	0	15	0	3133		1.2	
JUNE	0	0	1	0	3	0	0	12	0	1815		1.1	
JULY	0	0	1	3	0	0	0	12	0	1784		1.1	
AUG	0	0	5	2	1	0	0	15	0	2492		1.2	
SEPT	0	0	1	2	1	0	0	11	1	3361		1.0	
OCT	1	0	0	3	0	0	0	12	0	3915		1.1	
NOV	0	0	4	0	0	0	0	12	0	3386		1.0	
DEC	0	0	2	1	0	0	0	9	0	3240		1.0	
TOTAL	2	0	19	18	13	0	0	146	1	35392			
AVG.										97 pounds per day		1.1	

DUNNVILLE

WATER QUALITY

PROPERTY	RAW WATER				TREATED WATER				DESIRABLE STANDARDS
	NUMBER * OF SAMPLES	AVERAGE	MAXIMUM	MINIMUM	NUMBER * OF SAMPLES	AVERAGE	MAXIMUM	MINIMUM	
HARDNESS in mg/l as $CaCO_3$	6	135	138	133	6	135	138	133	80 - 100
ALKALINITY in mg/l as $CaCO_3$	6	103	110	99	6	103	110	99	30 - 100
IRON in mg/l Fe	6	.35	.86	.10	6	.35	.86	.10	Less than 0.3
CHLORIDE in mg/l Cl^-	6	25	27	22	6	25	27	22	Less than 250
pH in pH units	6	8.1	8.2	7.8	6	8.1	8.2	7.8	7.0 - 8.5
FLUORIDE in mg/l F^-	6	0.1	0.1	0.1	6	0.1	0.1	0.1	Less than 1.2
AMMONIA in mg/l as N									Less than 0.5
TOTAL KJELDAHL NITROGEN in mg/l as N									Less than 1.
NITRITE in mg/l as N									
NITRATE in mg/l as N									Less than 10
TOTAL PHOSPHORUS in mg/l as P									
SOLUBLE PHOSPHORUS in mg/l as P									
PHENOLS in µg/l as C_6H_5OH									Less than 1

* Both raw and treated water represented by same samples.

REGION 3

CENTRAL

BOBCAYGEON

PLANT PERFORMANCE

MONTH	FLOWS			RAW WATER		TREATED WATER		FILTER OPERATION			
	TOTAL PLANT OUTPUT 10^6 gallons	AVERAGE DAILY FLOW 10^6 gallons	MAXIMUM DAY'S FLOW 10^6 gallons	TURBIDITY (AVERAGE) FTU	COLOUR (AVERAGE) App. Units	TURBIDITY (AVERAGE) FTU	COLOUR (AVERAGE) App. Units	BACKWASH WATER 10^3 gallons	DIATOMACEOUS EARTH USED pounds	DIATOMACEOUS EARTH DOSAGE mg/l	AVG. RUN hours
JAN	1.11	.036	.046					20	400	36.4	224
FEB	1.30	.045	.049					20	457	35.2	154
MAR	1.03	.033	.037	4.5	15	3.9	10	24	553	55.3	124
APR	1.03	.034	.042					10	520	52.0	480
MAY	1.23	.040	.054	4.2	20	1.0	10	15	367	30.6	248
JUNE	1.62	.054	.102					10	700	43.8	456
JULY	2.16	.070	.123	2.0	20	0.4	15	20	1510	68.8	174
AUG	2.30	.074	.105					25	1740	75.7	139
SEPT	1.68	.056	.070					35	1605	94.4	123
OCT	1.82	.059	.073					32	1835	101.9	93
NOV	0.84	.028	.047	1.2	15	0.5	5	10	700	87.5	264
DEC	0.82	.029	.045					8	317	39.6	360
TOTAL	16.94							229	10704		
AVG		.046	.123	3.0	18	1.5	10	19	892	63.3	237

CHLORINATION and DISINFECTION

MONTH	RAW WATER					PLANT EFFLUENT		DISTRIBUTION SYSTEM		CHLORINATION			
	NUMBER OF SAMPLES HAVING TOTAL COLIFORM ORGANISMS PER 100 ml OF					NUMBER OF SAMPLES TAKEN	NUMBER HAVING COLIFORM ORGANISMS	NUMBER OF SAMPLES TAKEN	NUMBER HAVING COLIFORM ORGANISMS	TOTAL AMOUNT OF CHLORINE USED pounds	DOSAGE		RESIDUAL IN PLANT EFFLUENT mg/l
	0	1 - 3	4 - 32	33 - 320	> 320						PRE - mg/l	POST - mg/l	
JAN	1		3			4		16		27		2.4	.5
FEB			2			2		8		34		2.6	.6
MAR				3	2	5		20		38		3.8	.6
APR		1	1			2		8		43		4.3	.6
MAY			3			3		12		50		4.2	.5
JUNE			2			2		8		84		5.3	.5
JULY			1		2	3		13		111		5.0	.6
AUG			2	2		4		16		107		4.7	.6
SEPT		1	2			3		12		78		4.6	.6
OCT										74		4.1	.7
NOV	1	1	1			3		12		31		3.9	.5
DEC		2	1			3		12		27		3.4	.5
TOTAL	2	5	18	5	4	34		137		704			
AVG.										1.9 pounds per day		4.2	.6

WATER QUALITY

PROPERTY	RAW WATER				TREATED WATER				DESIRABLE STANDARDS
	NUMBER OF SAMPLES	AVERAGE	MAXIMUM	MINIMUM	NUMBER OF SAMPLES	AVERAGE	MAXIMUM	MINIMUM	
HARDNESS in mg/l as $CaCO_3$	4	89	96	74	4	87	92	76	80 – 100
ALKALINITY in mg/l as $CaCO_3$	4	72	77	65	4	64	70	62	30 – 100
IRON in mg/l Fe	4	.18	.30	.08	4	.07	.10	.03	Less than 0.3
CHLORIDE in mg/l Cl^-	4	9	16	4	4	12	21	6	Less than 250
pH in pH units	4	7.7	8.4	7.2	4	7.4	7.5	7.3	7.0 – 8.5
FLUORIDE in mg/l F^-									Less than 1.2
AMMONIA in mg/l as N									Less than 0.5
TOTAL KJELDAHL NITROGEN in mg/l as N									Less than 1.
NITRITE in mg/l as N									
NITRATE in mg/l as N									Less than 10
TOTAL PHOSPHORUS in mg/l as P									
SOLUBLE PHOSPHORUS in mg/l as P									
PHENOLS in μg/l as C_6H_5OH									Less than 1

FENELON FALLS

PLANT PERFORMANCE

MONTH	FLOWS				RAW WATER		TREATED WATER					
							TURBIDITY		COLOUR		TEMPERATURE	
	TOTAL PLANT OUTPUT million gallons	AVERAGE DAILY FLOW million gallons	MAXIMUM DAY'S FLOW million gallons	MAXIMUM RATE mgd	TURBIDITY (AVERAGE) FTU	COLOUR (AVERAGE) App. units	AVERAGE FTU	MAXIMUM FTU	AVERAGE App. units	MAXIMUM App. units	AVERAGE °C	MAXIMUM °C
JAN	N/A											
FEB	Est. 8.100	.279			.8	15	.9	.9	15	15		
MAR	N/A				1.7	20	1.7	1.7	15	15		
APR	N/A											
MAY	Est. 7.2	.232	.528									
JUNE	5.345	.178	.475									
JULY	7.226	.233	.415									
AUG	7.518	.243	.600		1.8	15	.3	.3	10	10		
SEPT	5.663	.189	.229									
OCT	6.294	.203	.259		2.3	7	1.3	1.3	7	10		
NOV	6.243	.208	.240		2.8		1.1	1.2				
DEC	5.919	.191	.233		4.6	5	1.5	1.5	10	10		
TOTAL												
AVG.		.217	MAXIMUM .600	MAXIMUM	2.3	12	1.1	MAXIMUM 1.7	11	MAXIMUM 15		MAXIMUM

FENELON FALLS

TREATMENT DATA

MONTH	CHEMICALS USED								FILTER OPERATION		
	AMT. USED	DOSAGE mg/l	AMT. USED	DOSAGE mg/l	AMT. USED	DOSAGE mg/l	AMT. USED	DOSAGE mg/l	MINIMUM RUN hours	AVERAGE RUN hours	BACKWASH WATER mil. gallons
JAN											
FEB										48	.058
MAR										48	.064
APR											
MAY											
JUNE											
JULY											
AUG											
SEPT										172	.060
OCT										156	.070
NOV										292	.045
DEC										281	.030
TOTAL											
AVG										166	.055

FENELON FALLS

CHLORINATION and DISINFECTION

MONTH	RAW WATER					PLANT EFFLUENT		DISTRIBUTION SYSTEM		CHLORINATION			
	NUMBER OF SAMPLES HAVING TOTAL COLIFORM ORGANISMS PER 100 ml OF					NUMBER OF SAMPLES TAKEN	NUMBER HAVING COLIFORM ORGANISMS	NUMBER OF SAMPLES TAKEN	NUMBER HAVING COLIFORM ORGANISMS	TOTAL AMOUNT OF CHLORINE USED pounds	DOSAGE		RESIDUAL IN PLANT EFFLUENT mg/l
	0	1 - 3	4 - 32	33 - 320	> 320						PRE - mg/l	POST - mg/l	
JAN								4		155			
FEB		1	1			2		16		64	.8		
MAR	1					2		5		188			
APR			1			1		6		172			
MAY		1				1		9		198	2.8		
JUNE				1		1		10		189	2.6		.7
JULY	2			2	1	6		27		202	2.8		.6
AUG	1		2			3		10		226	3.0		.7
SEPT	3		3	2		4		12		147	2.6		.8
OCT	2	4	2			4		16		133	2.1		.6
NOV	2	1	6			6		18		133	2.1		.6
DEC		3				3		10		125	2.1		.5
TOTAL	11	10	15	5	1	33		143		1932			
AVG.										5 pounds per day	2.4		.6

FENELON FALLS

WATER QUALITY

PROPERTY	RAW WATER				TREATED WATER				DESIRABLE STANDARDS
	NUMBER OF SAMPLES	AVERAGE	MAXIMUM	MINIMUM	NUMBER OF SAMPLES	AVERAGE	MAXIMUM	MINIMUM	
HARDNESS in mg/l as $CaCO_3$	4	57	61	50	4	56	61	52	80 - 100
ALKALINITY in mg/l as $CaCO_3$	4	44	48	41	4	41	49	35	30 - 100
IRON in mg/l Fe	4	.21	.35	.09	4	.12	.20	.08	Less than 0.3
CHLORIDE in mg/l Cl^-	4	5	6	4	4	7	7	6	Less than 250
pH in pH units	4	7.7	8.1	7.5	4	7.4	7.5	7.2	7.0 - 8.5
FLUORIDE in mg/l F^-									Less than 1.2
AMMONIA in mg/l as N									Less than 0.5
TOTAL KJELDAHL NITROGEN in mg/l as N									Less than 1.
NITRITE in mg/l as N									
NITRATE in mg/l as N									Less than 10
TOTAL PHOSPHORUS in mg/l as P									
SOLUBLE PHOSPHORUS in mg/l as P									
PHENOLS in μg/l as C_6H_5OH									Less than 1

FLOWS

PROJECT Hastings

MONTH	TOTAL FLOW Mil. Gal.	AVG DAY M.G.D.	MAX DAY M.G.D.	PEAK RATE M.G.D.
JAN	1.30	0.042	0.050	
FEB	1.50	0.052	0.126	
MAR	1.34	0.043	0.048	
APR	1.26	0.042	0.119	
MAY	1.12	0.036	0.049	
JUN	1.95	0.065	0.114	
JUL	2.11	0.068	0.114	
AUG	1.62	0.052	0.093	
SEP	1.28	0.043	0.102	
OCT	1.36	0.045	0.078	
NOV	0.82	0.027	0.054	
DEC	0.85	0.028	0.032	
TOTAL	16.52	/////	/////	/////
AVG.	/////	0.045	/////	/////
MAX.	/////	/////	0.126	

PROJECT Percy Twp (Warkworth)

MONTH	TOTAL FLOW Mil. Gal.	AVG DAY M.G.D.	MAX DAY M.G.D.	PEAK RATE M.G.D.
JAN	1.73	0.056	0.136	
FEB	1.42	0.049	0.080	
MAR	1.53	0.049	0.076	
APR	1.61	0.054	0.093	
MAY	1.75	0.057	0.076	
JUN	2.16	0.072	0.123	
JUL	2.04	0.066	0.111	
AUG	2.04	0.066	0.103	
SEP	1.73	0.058	0.075	
OCT	1.67	0.054	0.079	
NOV	1.47	0.049	N/A	
DEC	1.61	0.052	N/A	
TOTAL	20.83	/////	/////	/////
AVG.	/////	0.057	/////	/////
MAX.	/////	/////	0.136	

PLANT PERFORMANCE

MONTH	FLOWS				RAW WATER		TREATED WATER					
							TURBIDITY		COLOUR		TEMPERATURE	
	TOTAL PLANT OUTPUT million gallons	AVERAGE DAILY FLOW million gallons	MAXIMUM DAY'S FLOW million gallons	MAXIMUM RATE mgd	TURBIDITY (AVERAGE) FTU	COLOUR (AVERAGE) App. units	AVERAGE FTU	MAXIMUM FTU	AVERAGE App. units	MAXIMUM App. units	AVERAGE °C	MAXIMUM °C
JAN	1022	33	39	44	3.7	6	.5	2.3	5	10	3	5
FEB	972	34	38	42	7.2	6	.4	0.8	5	5	3	5
MAR	1021	33	36	39	15.2	8	.7	3.7	5	10	4	6
APR	1016	34	41	44	16.0	7	.7	2.1	5	5	6	8
MAY	1134	37	48	52	3.7	6	.6	1.5	5	5	8	11
JUNE	1393	46	67	76	2.4	6	.5	.7	5	10	11	15
JULY	1196	39	57	61	3.8	6	.4	.7	5	5	9	16
AUG	1362	44	70	66	2.7	6	.3	.7	5	5	15	19
SEPT	1215	41	53	60	2.7	6	.4	.6	5	5	9	14
OCT	1164	38	44	48	2.6	8	.5	.7	5	5	9	13
NOV	1104	37	40	41	1.7	6	.5	1.8	5	5	6	8
DEC	1153	37	43	59	3.7	6	.3	.6	5	5	4	6
TOTAL	13752											
AVG.	1146	38	MAXIMUM 70	MAXIMUM 76	5.5	6	.5	MAXIMUM 3.7	5	MAXIMUM 10	8	MAXIMUM 19

TREATMENT DATA

MONTH	FILTER		CHEMICALS USED							
	AVERAGE RUN hours	BACKWASH WATER mil gal	ALUM		SODIUM CHLORITE		HYDROFLUOSILICIC ACID			
			AMT USED 10^3 gallons	DOSAGE mg/l	AMT USED 10^3 pounds	DOSAGE mg/l	AMT USED 10^3 pounds	RESIDUAL mg/l		
								AVERAGE	MAXIMUM	MINIMUM
JAN	46	18.977	5.0	3.2	2.6	.25	38.0	1.02	1.04	.93
FEB	47	18.091	13.5	9.0	2.4	.25	37.0	1.02	1.10	.95
MAR	46	20.879	23.6	15.2	2.3	.22	40.0	1.02	1.20	.91
APR	46	16.892	12.0	7.6	2.3	.22	38.0	1.00	1.10	.91
MAY	43	19.961	10.4	6.0	3.1	.27	40.9	.98	1.12	.85
JUNE	40	27.537	9.0	4.2	4.5	.32	45.6	1.03	1.24	.75
JULY	44	21.905	7.3	3.9	5.1	.43	37.6	1.01	1.24	.83
AUG	41	27.467	8.7	4.7	6.5	.48	43.9	1.03	1.27	.82
SEPT	39	24.443	5.6	2.7	4.6	.38	42.9	1.04	1.24	.87
OCT	42	21.032	5.5	3.1	4.6	.40	42.9	1.05	1.15	.84
NOV	38	21.418	3.8	2.2	4.8	.43	40.5	1.07	1.31	.99
DEC	41	20.551	8.4	5.2	2.2	.41	38.9	1.04	1.22	.87
TOTAL		259.153	112.8		45.0		486.2			
AVG.	42	21.596	9.4	5.6	3.8	.34	40.5	1.03	1.31	.75

SOUTH PEEL - LAKEVIEW

CHLORINATION and DISINFECTION

MONTH	RAW WATER					PLANT EFFLUENT		DISTRIBUTION SYSTEM		CHLORINATION			
	NUMBER OF SAMPLES HAVING TOTAL COLIFORM ORGANISMS PER 100 ml OF					NUMBER OF SAMPLES TAKEN	NUMBER HAVING COLIFORM ORGANISMS	NUMBER OF SAMPLES TAKEN	NUMBER HAVING COLIFORM ORGANISMS	TOTAL AMOUNT OF CHLORINE USED 10^3 pounds	DOSAGE		RESIDUAL IN PLANT EFFLUENT mg/l
	0	1 - 3	4 - 32	33 - 320	> 320						PRE - mg/l	POST - mg/l	
JAN	1		3	2	2	8		152	1	8.2	.6	.2	.5
FEB	2		3	2	1	8		115		7.7	.6	.2	.6
MAR	1	1	3	3		8		127	2	7.3	.5	.2	.6
APR	2		4		2	8		128	5	6.7	.5	.2	.6
MAY	2	2	3	2		9		148	9	8.5	.5	.2	.6
JUNE		2	2	3		7		124	7	14.2	.8	.2	.5
JULY	2	1	1	3	1	8		122	1	14.6	.9	.4	.5
AUG			7	2		9		146	7	20.7	1.2	.4	.5
SEPT		2	4	3		9		114	4	13.2	.8	.3	.5
OCT		1	6	1		8		143	4	12.2	.8	.3	.5
NOV		1	6	2		9	1	136	2	9.6	.6	.3	.5
DEC		2	3	2		8	1	119	4	8.0	.5	.5	.4
TOTAL	10	12	45	25	6	99	2	1574	46	130.9			
AVG.										3.6 pounds per day	.7	.3	.5

WATER QUALITY

PROPERTY	RAW WATER				TREATED WATER				DESIRABLE STANDARDS
	NUMBER OF SAMPLES	AVERAGE	MAXIMUM	MINIMUM	NUMBER OF SAMPLES	AVERAGE	MAXIMUM	MINIMUM	
HARDNESS in mg/l as $CaCO_3$	464	131	188	120	96	135	154	134	80 – 100
ALKALINITY in mg/l as $CaCO_3$	96	97	108	90	95	92	100	83	30 – 100
IRON in mg/l Fe	97	.28	3.7	.05	95	.05	.10	.05	Less than 0.3
CHLORIDE in mg/l Cl^-	93	35	45	7	90	34	47	30	Less than 250
pH in pH units	464	7.9	8.5	6.4	462	7.6	8.3	7.1	7.0 – 8.5
FLUORIDE in mg/l F^-	86	.2	1.3	.1	452	1.0	1.3	.8	Less than 1.2
AMMONIA in mg/l as N	96	.1	.4	.1	95	.1	.6	.1	Less than 0.5
TOTAL KJELDAHL NITROGEN in mg/l as N	97	.4	3.4	.1	96	.3	3.0	.1	Less than 1.
NITRITE in mg/l as N	96	.03	.8	.01	95	.01	.1	.01	
NITRATE in mg/l as N	95	.4	.9	.02	94	.4	1.0	.2	Less than 10
TOTAL PHOSPHORUS in mg/l as P									
SOLUBLE PHOSPHORUS in mg/l as P									
PHENOLS in µg/l as C_6H_5OH	97	1	6	1	96	1	1	1	Less than 1

REGION 4

SOUTHEASTERN

FLOWS

PROJECT Barry's Bay

MONTH	TOTAL FLOW Mil. Gal.	AVG DAY M.G.D.	MAX DAY M.G.D.	PEAK RATE M.G.D.
JAN				
FEB				
MAR				
APR				
MAY				
JUN				
JUL	1.591	0.051	0.140	
AUG	1.796	0.095	0.136	
SEP	1.416	0.078	0.126	
OCT	1.404	0.082	0.096	
NOV	1.590	0.084	0.144	
DEC	1.374	0.008	0.084	
TOTAL	9.171	/////	/////	/////
AVG.	/////	0.076	/////	/////
MAX.	/////	/////	0.144	

Started July 1

PROJECT Chalk River

MONTH	TOTAL FLOW Mil. Gal.	AVG DAY M.G.D.	MAX DAY M.G.D.	PEAK RATE M.G.D.
JAN	1.397	0.045	0.061	
FEB	1.562	0.054	0.061	
MAR	1.589	0.052	0.064	
APR	1.744	0.058	0.099	
MAY	2.276	0.073	0.188	
JUN	4.289	0.143	0.305	
JUL	3.049	0.098	0.234	
AUG	3.220	0.104	0.184	
SEP	1.842	0.061	0.093	
OCT	1.655	0.053	0.081	
NOV	1.355	0.045	0.063	
DEC	1.413	0.046	0.054	
TOTAL	25.391	/////	/////	/////
AVG.	/////	0.069	/////	/////
MAX.	/////	/////	0.305	

PLANT PERFORMANCE

MONTH	FLOWS			ALUM		CHLORINATION			TEMPERATURE	
	TOTAL PLANT OUTPUT million gallons	AVERAGE DAILY FLOW million gallons	MAXIMUM DAY'S FLOW million gallons	AMOUNT USED pounds	DOSAGE mg/l	SODIUM HYPOCHLORITE USED gallons	DOSAGE mg/l	RESIDUAL IN PLANT EFFLUENT mg/l	AVERAGE °C	MAXIMUM °C
JAN	2.51	.081	.210	120	4.8	75	3.0	.5	-2	-2
FEB	2.07	.071	.087	92	4.5	58	2.8	.5	-2	-2
MAR	2.23	.072	.094	91	4.1	66	3.0	.5	-2	-2
APR	2.39	.080	.097	121	5.1	71	3.0	.5	3	5
MAY	2.24	.072	.091	213	9.5	67	3.0	.5	9	14
JUNE	2.56	.085	.141	218	8.5	102	4.0	.5	19	20
JULY	2.15	.069	.127	195	9.1	77	3.6	.5	21	22
AUG	2.11	.068	.107	217	10.3	90	4.3	.5	20	22
SEPT	1.94	.065	.077	206	10.6	57	2.9	.6	16	19
OCT	2.03	.066	.077	184	9.1	57	2.8	.5	6	13
NOV	1.90	.063	.071	174	9.2	45	2.4	.5	1	3
DEC	2.06	.066	.079	183	8.9	55	2.7	.5	-3	-3
TOTAL	26.19			2014		820				
AVG.	2.18	.072	.210	lbs./day 6	7.7	lbs./day 2	3.1	.5	7	22

EGANVILLE WTP

CHLORINATION and DISINFECTION

MONTH	RAW WATER					PLANT EFFLUENT		DISTRIBUTION SYSTEM		CHLORINATION			
	NUMBER OF SAMPLES HAVING TOTAL COLIFORM ORGANISMS PER 100 ml OF					NUMBER OF SAMPLES TAKEN	NUMBER HAVING COLIFORM ORGANISMS	NUMBER OF SAMPLES TAKEN	NUMBER HAVING COLIFORM ORGANISMS	TOTAL AMOUNT OF CHLORINE USED pounds	DOSAGE		RESIDUAL IN PLANT EFFLUENT mg/l
	0	1 - 3	4 - 32	33 - 320	> 320						PRE - mg/l	POST - mg/l	
JAN	3		1			4	0	12	0				
FEB	3		1			4	0	12	0				
MAR	5					5	0	15	0				
APR	3	1				4	0	12	0				
MAY	3		1			4	0	12	0				
JUNE	3			1		5	0	15	0				
JULY	4					4	0	12	0				
AUG	3	1				5	0	15	0				
SEPT	4					4	1	12	1				
OCT	3		1			4	0	12	1				
NOV	4	1				5	0	15	0				
DEC	4					4	0	12	0				
TOTAL	42	3	4	1		52	1	156	1				
AVG.										pounds per day			

EGANVILLE

WATER QUALITY

PROPERTY	RAW WATER				TREATED WATER				DESIRABLE STANDARDS
	NUMBER OF SAMPLES	AVERAGE	MAXIMUM	MINIMUM	NUMBER OF SAMPLES	AVERAGE	MAXIMUM	MINIMUM	
HARDNESS in mg/l as $CaCO_3$	6	47	50	44	6	46	50	42	80 - 100
ALKALINITY in mg/l as $CaCO_3$	6	36	44	30	6	36	42	28	30 - 100
IRON in mg/l Fe	6	.15	.40	.05	6	.07	.10	.05	Less than 0.3
CHLORIDE in mg/l Cl^-	6	6	10	3	6	6	9	4	Less than 250
pH in pH units	6	7.3	7.6	6.8	6	7.2	7.6	6.7	7.0 - 8.5
Color	3	10	15	5	3	7	10	5	Less than 1.2
Turbidity	3	2.5	4.0	.6	3	2.2	4.0	5	Less than 0.5
Conductivity	6	112	121	100	6	118	125	110	Less than 1.
NITRITE in mg/l as N									
NITRATE in mg/l as N									Less than 10
TOTAL PHOSPHORUS in mg/l as P									
SOLUBLE PHOSPHORUS in mg/l as P									
PHENOLS in μg/l as C_6H_5OH									Less than 1

PLANT PERFORMANCE

MONTH	FLOWS				RAW WATER		TREATED WATER					
							TURBIDITY		COLOUR		TEMPERATURE	
	TOTAL PLANT OUTPUT million gallons	AVERAGE DAILY FLOW million gallons	MAXIMUM DAY'S FLOW million gallons	MAXIMUM RATE mgd	TURBIDITY (AVERAGE) FTU	COLOUR (AVERAGE) App. units	AVERAGE FTU	MAXIMUM FTU	AVERAGE App. units	MAXIMUM App. units	AVERAGE °C	MAXIMUM °C
JAN	34.20	1.10	1.31		2.3	15	.11	1.10	10	15	3	4
FEB	33.02	1.14	1.39		2.0	15	.58	.90	5	5	2	4
MAR	35.24	1.14	1.22		4.2	28	.71	2.40	5	10	2	2
APR	31.22	1.04	1.18		5.3	26	.58	1.70	4	15	7	13
MAY	30.86	1.00	1.14		7.4	30	.65	1.60	5	10	12	19
JUNE	34.85	1.16	1.56		3.8	35	.60	.60	5	5	23	25
JULY	39.15	1.26	1.54		2.8	25	.50	.80	4	5	24	25
AUG	33.96	1.10	1.43		1.8	21	.30	1.20	5	5	22	23
SEPT	28.70	.96	1.14		2.2	21	.30	1.50	2	5	18	22
OCT	30.04	.97	1.09		2.3	24	.40	.80	2	10	9	14
NOV	29.48	.98	1.19		1.6	24	.30	.60	2	5	3	4
DEC	32.67	1.05	1.21		1.5	20	.20	.40	2	5	1	2
TOTAL	393.39											
AVG.	32.78	1.07	MAXIMUM 1.56	MAXIMUM	3.1	24	.39	MAXIMUM 2.40	4	MAXIMUM 15	11	MAXIMUM 25

RENFREW

TREATMENT DATA

MONTH	CHEMICALS USED								FILTER OPERATION		
	ACTIVATED CARBON		LIME		ALUM				MINIMUM RUN	AVERAGE RUN	BACKWASH WATER
	AMT. USED lbs.	DOSAGE mg/l	AMT. USED 10^3 lbs	DOSAGE mg/l	AMT. USED 10^3 lbs.	DOSAGE mg/l	AMT. USED	DOSAGE mg/l	hours	hours	mil. gallons
JAN											1.13
FEB	500	1.3	3.8	9.7							1.08
MAR	350	.9	4.2	10.4							1.30
APR	350	.9	3.9	10.1							1.34
MAY	250	.6									1.21
JUNE	250	.6	3.3	8.1							1.26
JULY	300	.9	3.2	9.5							1.12
AUG	300	.8	3.2	8.0							1.03
SEPT	250	.7	2.7	7.9							1.07
OCT	200	.6	2.9	8.3	29.6	98.7					.84
NOV	250	.7	2.3	6.7	29.3	99.3					.94
DEC	250	.8	2.6	7.8	30.8	94.5					.81
TOTAL	3250		32.1		89.7						13.13
AVG.	295	.9	3.2	10.9	29.9	97.3					1.09

CHLORINATION and DISINFECTION

MONTH	RAW WATER					PLANT EFFLUENT		DISTRIBUTION SYSTEM		CHLORINATION			
	NUMBER OF SAMPLES HAVING TOTAL COLIFORM ORGANISMS PER 100 ml OF					NUMBER OF SAMPLES TAKEN	NUMBER HAVING COLIFORM ORGANISMS	NUMBER OF SAMPLES TAKEN	NUMBER HAVING COLIFORM ORGANISMS	TOTAL AMOUNT OF CHLORINE USED pounds	DOSAGE		RESIDUAL IN PLANT EFFLUENT mg/l
	0	1 - 3	4 - 32	33 - 320	> 320						PRE - mg/l	POST - mg/l	
JAN	2					2	0	4	0	589	1.5	1.7	.5
FEB	2			1		3	0	6	0	573	1.5	1.7	.5
MAR			1	1	1	3	0	6	0	657	1.7	1.9	.5
APR			2		1	3	0	6	0	589	1.7	1.9	.5
MAY	2	1	1			4	0	8	0	614	1.8	2.0	.5
JUNE	1			1		2	0	4	0	811	2.0	2.3	.5
JULY			1	1	1	3	0	6	0	966	2.9	2.5	.5
AUG		1		1		2	0	4	0	847	2.1	2.5	.5
SEPT	1		1		1	3	0	6	0	694	2.0	2.4	.5
OCT	1	1		1		3	0	6	0	695	2.0	2.3	.5
NOV										639	1.8	2.1	.5
DEC		2				3	0	6	0	709	2.2	2.2	.5
TOTAL	9	5	6	6	4	31		62		8383			
AVG.										23 pounds per day	1.9	2.1	.5

RENFREW

WATER QUALITY

PROPERTY	RAW WATER				TREATED WATER				DESIRABLE STANDARDS
	NUMBER OF SAMPLES	AVERAGE	MAXIMUM	MINIMUM	NUMBER OF SAMPLES	AVERAGE	MAXIMUM	MINIMUM	
HARDNESS in mg/l as $CaCO_3$	23	67	114	50	24	76	112	62	80 – 100
ALKALINITY in mg/l as $CaCO_3$	23	58	108	44	24	53	86	32	30 – 100
IRON in mg/l Fe	23	.34	1.70	.10	24	.08	.25	.05	Less than 0.3
CHLORIDE in mg/l Cl^-	23	6	11	3	24	7	13	3	Less than 250
pH in pH units	23	7.5	7.9	6.4	24	7.3	7.9	6.6	7.0 – 8.5
FLUORIDE in mg/l F^-					1	.1	.1	.1	Less than 1.2
CONDUCTIVITY in umhos/cm	23	149	205	120	25	177	245	145	Less than 0.5
TOTAL KJELDAHL NITROGEN in mg/l as N									Less than 1.
NITRITE in mg/l as N									
NITRATE in mg/l as N									Less than 10
TOTAL PHOSPHORUS in mg/l as P									
SOLUBLE PHOSPHORUS in mg/l as P									
PHENOLS in μg/l as C_6H_5OH									Less than 1

PLANT PERFORMANCE

MONTH	FLOWS				RAW WATER		TREATED WATER					
							TURBIDITY		COLOUR		TEMPERATURE	
	TOTAL PLANT OUTPUT million gallons	AVERAGE DAILY FLOW million gallons	MAXIMUM DAY'S FLOW million gallons	MAXIMUM RATE mgd	TURBIDITY (AVERAGE) FTU	COLOUR (AVERAGE) App. units	AVERAGE FTU	MAXIMUM FTU	AVERAGE App. units	MAXIMUM App. units	AVERAGE °C	MAXIMUM °C
JAN	15.37	.49	.58		1.4	31	.13	1.20	5	5	2	2
FEB	15.42	.53	.57		1.9	36	.13	.22	5	5	2	2
MAR	15.06	.48	.52		5.4	37	.13	.25	5	5	2	2
APR	12.66	.42	.47		14.0	56	.12	.80	5	5	6	11
MAY	13.37	.43	.52		4.4	40	.11	.12	5	5	11	13
JUNE	15.39	.51	.59		4.3	40	.10	2.00	5	5	18	21
JULY	16.91	.59	.72		4.0	40	.10	.10	5	5	21	22
AUG	18.40	.67	.76		3.6	39	.10	1.00	5	5	20	21
SEPT	14.73	.49	.60		2.8	36	.26	5.00	5	5	17	19
OCT	12.61	.41	.45		3.0	32	.14	2.30	5	5	10	14
NOV	11.66	.39	.40		2.5	30	.15	.40	5	5	4	6
DEC	12.57	.42	.49		4.0	30	.21	2.70	5	5	2	2
TOTAL	174.15											
AVG.	14.51	.48	MAXIMUM .72	MAXIMUM	4.3	37	.14	MAXIMUM 5.00	5	MAXIMUM 5	10	MAXIMUM 22

ROCKLAND

TREATMENT DATA

MONTH	CHEMICALS USED								FILTER OPERATION		
	POLYMER		LIME		ALUM				MINIMUM	AVERAGE	BACKWASH
	AMT. USED lbs.	DOSAGE mg/l	AMT. USED 10^3 lbs.	DOSAGE mg/l	AMT. USED 10^3 lbs.	DOSAGE mg/l	AMT. USED	DOSAGE mg/l	RUN hours	RUN hours	WATER mil. gallons
JAN	95	.6	4.2	25.6	6.7	40.8					
FEB	90	.6	3.5	21.3	6.6	40.1					
MAR	97	.6	3.4	22.3	6.7	42.7					
APR	70	.6	3.5	25.8	7.2	52.9					
MAY	70	.5	3.3	22.6	7.5	51.9					
JUNE	85	.5	1.9	11.5	8.1	48.7					
JULY	100	.6	2.6	14.4	8.8	49.5					
AUG	100	.5	3.8	19.5	9.6	49.2					
SEPT	75	.4	3.7	22.6	8.6	52.7					
OCT	75	.6	3.9	29.6	8.0	61.0					
NOV	50	.4	2.1	17.1	6.3	49.9					
DEC	85	.7	1.6	11.5	6.4	47.2					
TOTAL	992		37.5		90.5						
AVG	83	.6	3.1	20.3	7.5	48.8					

CHLORINATION and DISINFECTION

MONTH	RAW WATER: NUMBER OF SAMPLES HAVING TOTAL COLIFORM ORGANISMS PER 100 ml OF					PLANT EFFLUENT		DISTRIBUTION SYSTEM		CHLORINATION			
	0	1 - 3	4 - 32	33 - 320	> 320	NUMBER OF SAMPLES TAKEN	NUMBER HAVING COLIFORM ORGANISMS	NUMBER OF SAMPLES TAKEN	NUMBER HAVING COLIFORM ORGANISMS	TOTAL AMOUNT OF CHLORINE USED pounds	DOSAGE PRE - mg/l	DOSAGE POST - mg/l	RESIDUAL IN PLANT EFFLUENT mg/l
JAN					4	4	0	8	0	620	2.7	1.1	.5
FEB					4	4	0	8	0	582	2.5	1.1	.4
MAR					12	13	0	6	0	567	2.5	1.1	.6
APR					5	5	0	8	0	516	2.7	1.1	.6
MAY					4	4	0	8	0	487	2.6	.8	.5
JUNE				1	4	5	0	10	0	476	2.2	.7	.5
JULY					4	4	0	8	0	508	2.1	.7	.4
AUG				1	3	4	0	7	0	773	3.2	.7	.4
SEPT					5	5	0	10	0	874	4.6	.7	.5
OCT					4	3	0	9		735	4.7	.8	.5
NOV					5	5	0	10	0	458	2.7	.9	.5
DEC				1	3	4	0	7	0	440	2.4	.9	.5
TOTAL				3	57	60	0	99	0	7043			
AVG.										19 pounds per day	2.9	.9	.5

WATER QUALITY

PROPERTY	RAW WATER				TREATED WATER				DESIRABLE STANDARDS
	NUMBER OF SAMPLES	AVERAGE	MAXIMUM	MINIMUM	NUMBER OF SAMPLES	AVERAGE	MAXIMUM	MINIMUM	
HARDNESS in mg/l as $CaCO_3$	8	38	50	28	8	61	80	42	80 – 100
ALKALINITY in mg/l as $CaCO_3$	8	27	40	9	8	29	38	14	30 – 100
IRON in mg/l Fe	8	.50	1.30	.05	8	.13	.20	.05	Less than 0.3
CHLORIDE in mg/l Cl^-	6	6	8	4	7	9	14	6	Less than 250
pH in pH units	8	6.9	7.5	6.3	8	8.4	8.3	6.2	7.0 – 8.5
FLUORIDE in mg/l F^-									Less than 1.2
AMMONIA in mg/l as N	4	.1	.2	.1	4	.08	.10	.01	Less than 0.5
TOTAL KJELDAHL NITROGEN in mg/l as N	4	.4	.7	.1	4	.25	.37	.13	Less than 1.
NITRITE in mg/l as N	6	.2	.3	.1	6	.19	.22	.12	
NITRATE in mg/l as N									Less than 10
TOTAL PHOSPHORUS in mg/l as P									
SOLUBLE PHOSPHORUS in mg/l as P									
PHENOLS in μg/l as C_6H_5OH									Less than 1

REGION 5

NORTHEASTERN

FLOWS

PROJECT _____

MONTH	TOTAL FLOW Mil. Gal.	AVG DAY M.G.D.	MAX DAY M.G.D.	PEAK RATE M.G.D.
JAN				
FEB				
MAR				
APR				
MAY				
JUN				
JUL				
AUG				
SEP				
OCT				
NOV				
DEC				
TOTAL		/////	/////	/////
AVG.	/////		/////	/////
MAX.	/////	/////		

PROJECT Manitowaning

MONTH	TOTAL FLOW Mil. Gal.	AVG DAY M.G.D.	MAX DAY M.G.D.	PEAK RATE M.G.D
JAN	2.950	0.140	0.221	
FEB	0.370	0.013	0.017	
MAR	0.045	0.014	0.031	
APR	0.069	0.023	0.034	
MAY	0.091	0.029	0.036	
JUN	0.099	0.032	0.045	
JUL	1.090	0.035	0.057	
AUG	1.090	0.035	0.091	
SEP	0.700	0.023	0.038	
OCT	0.690	0.022	0.036	
NOV	0.780	0.026	0.032	
DEC	0.930	0.030	0.035	
TOTAL	11.640	/////	/////	/////
AVG.	/////	0.031	/////	/////
MAX.	/////	/////	0.221	

FLOWS

PROJECT Bruce Mines

MONTH	TOTAL FLOW Mil. Gal.	AVG DAY M.G.D.	MAX DAY M.G.D.	PEAK RATE M.G.D.
JAN	0.75	0.024	0.036	
FEB	0.70	0.024	0.032	
MAR	0.77	0.025	0.033	
APR	0.63	0.021	0.025	
MAY	0.72	0.023	0.033	
JUN	0.88	0.029	0.041	
JUL	1.24	0.040	0.058	
AUG	1.61	0.052	0.083	
SEP	1.35	0.045	0.074	
OCT	1.27	0.041	0.051	
NOV	1.01	0.033	0.040	
DEC	1.25	0.040	0.050	
TOTAL	12.18	/////	/////	/////
AVG.	/////	0.034	/////	/////
MAX.	/////	/////	0.083	

PROJECT Cache Bay

MONTH	TOTAL FLOW Mil. Gal.	AVG DAY M.G.D.	MAX DAY M.G.D.	PEAK RATE M.G.D.
JAN	1.03	0.033	0.066	
FEB	1.13	0.039	0.048	
MAR	1.30	0.042	0.074	
APR	1.19	0.040	0.049	
MAY	1.43	0.046	N/A	
JUN	1.88	0.063	0.085	
JUL	1.92	0.062	0.090	
AUG	2.38	0.080	0.107	
SEP	1.92	0.064	0.072	
OCT	1.95	0.063	0.071	
NOV	1.60	0.053	N/A	
DEC	1.70	0.055	0.070	
TOTAL	19.49	/////	/////	/////
AVG.	/////	0.053	/////	/////
MAX.	/////	/////	0.107	

CALDWELL - VERNER

PLANT PERFORMANCE

MONTH	FLOWS				RAW WATER		TREATED WATER					
							TURBIDITY		COLOUR		TEMPERATURE	
	TOTAL PLANT OUTPUT million gallons	AVERAGE DAILY FLOW million gallons	MAXIMUM DAY'S FLOW million gallons	MAXIMUM RATE mgd	TURBIDITY (AVERAGE) FTU	COLOUR (AVERAGE) App. units	AVERAGE FTU	MAXIMUM FTU	AVERAGE App. units	MAXIMUM App. units	AVERAGE °C	MAXIMUM °C
JAN	3.18	.103	.146		6.0	42	1.1	15.0	5	5	1	1
FEB	3.46	.119	.176		6.9	71	0.6	5.1	5	5	1	1
MAR	4.46	.150	.193		7.4	75	0.6	4.0	5	5	.6	.6
APR	3.52	.117	.153		12.9	71	0.4	1.6	5	5	4	10
MAY	2.60	.084	.153		10.5	70	0.3	0.6	5	5	12	19
JUNE	3.21	.107	.154		8.5	70	0.3	1.0	5	15	20	20
JULY	3.02	.097	.165		5.4	70	0.3	0.5	5	5	20	21
AUG	2.67	.073	.173		5.7	56	0.3	0.6	5	10	19	19
SEPT	2.84	.095	.120		5.3	67	0.3	1.1	5	15	16	19
OCT	2.39	.077			5.5	69	0.4	1.0	5	5	7	11
NOV	2.33	.078	.092		5.2	64	0.3	0.8	5	5	2	4
DEC	2.44	.079	.105		6.4	75	0.3	0.6	5	5	1	2
TOTAL	36.12											
AVG.	3.01	.098	MAXIMUM .193	MAXIMUM	7.1	67	0.4	MAXIMUM 15.0	5	MAXIMUM 15	9	MAXIMUM 20

CALDWELL - VERNER

TREATMENT DATA

MONTH	CHEMICALS USED								FILTER OPERATION		
	ALUM		SODA ASH		SODIUM BICARBONATE		SODIUM SILICATE		MINIMUM RUN	AVERAGE RUN	BACKWASH WATER
	AMT. USED 10^3 lbs.	DOSAGE mg/l	AMT. USED 10^3 lbs.	DOSAGE mg/l	AMT. USED lbs.	DOSAGE mg/l	AMT. USED gal.	DOSAGE mg/l	hours	hours	mil. gallons
JAN	2.1	60.2	1.3	36.9	135	3.9	39	15.5			.341
FEB	2.0	55.0	1.2	34.3	141	3.9	40	15.4			.127
MAR	3.3	68.9	1.7	35.6	136	2.8	39	11.3			.329
APR	2.1	55.9	.8	21.1	124	3.4	36	13.5			.150
MAY	1.8	56.5	.6	20.5	98	3.2	28	12.5		23	.130
JUNE	2.1	62.7	.9	26.1	101	3.0	29	12.2		29	.112
JULY	2.2	59.8	.8	22.4	64	1.7	18	6.7		28	.094
AUG	2.6	82.3	.8	24.6	52	1.6	15	6.5		30	.091
SEPT	2.1	56.7	.7	18.0	63	1.7	18	6.7		24	.091
OCT	2.1	61.7	.8	24.4	23	3.8	6	13.8		21	.094
NOV	1.8	57.1	.8	26.8	0		0			24	.078
DEC	1.9	58.4	.7	21.3	0		0			23	.078
TOTAL	26.1		11.1		937		268				1.715
AVG	2.2	61.4	.9	26.0	94	2.9	27	11.4		25	.143

CHLORINATION and DISINFECTION

MONTH	RAW WATER					PLANT EFFLUENT		DISTRIBUTION SYSTEM		CHLORINATION			
	NUMBER OF SAMPLES HAVING TOTAL COLIFORM ORGANISMS PER 100 ml OF					NUMBER OF SAMPLES TAKEN	NUMBER HAVING COLIFORM ORGANISMS	NUMBER OF SAMPLES TAKEN	NUMBER HAVING COLIFORM ORGANISMS	TOTAL AMOUNT OF CHLORINE USED pounds	DOSAGE		RESIDUAL IN PLANT EFFLUENT mg/l
	0	1 - 3	4 - 32	33 - 320	> 320						PRE - mg/l	POST - mg/l	
JAN				4		4		2		53		1.6	.5
FEB		2		3		4		3		52		1.5	.5
MAR		1		4		5		3		65		1.4	.6
APR	1			3		4		4		59		1.7	.4
MAY			1	3		3		4		73		2.8	.4
JUNE	1			4		5		5		112		3.5	.4
JULY	1			3		4		4		146		4.9	.6
AUG			4	1		5		5		142		5.2	.5
SEPT	2			1		3		3		140		5.0	.6
OCT	1			3		4		4		117		4.9	.6
NOV			1	3		4		4		80		3.5	.6
DEC										80		3.3	.5
TOTAL	6	3	6	32		45		41		1119			
AVG.										3 pounds per day		3.1	.5

CALDWELL - VERNER

WATER QUALITY

PROPERTY	RAW WATER				TREATED WATER				DESIRABLE STANDARDS
	NUMBER OF SAMPLES	AVERAGE	MAXIMUM	MINIMUM	NUMBER OF SAMPLES	AVERAGE	MAXIMUM	MINIMUM	
HARDNESS in mg/l as $CaCO_3$	388	59	120	22	388	61	263	22	80 – 100
ALKALINITY in mg/l as $CaCO_3$	292	33	86	4	336	44	166	18	30 – 100
IRON in mg/l Fe	388	.38	1.5	.05	201	.03	.23	.01	Less than 0.3
CHLORIDE in mg/l Cl^-	20	7	16	3	20	20	17	4	Less than 250
pH in pH units	388	7.0	7.9	6.3	388	6.7	8.3	5.3	7.0 – 8.5
FLUORIDE in mg/l F^-									Less than 1.2
AMMONIA in mg/l as N									Less than 0.5
TOTAL KJELDAHL NITROGEN in mg/l as N									Less than 1.
NITRITE in mg/l as N									
NITRATE in mg/l as N									Less than 10
TOTAL PHOSPHORUS in mg/l as P	7	.04	.08	.02	5	.02	.02	.01	
SOLUBLE PHOSPHORUS in mg/l as P					1	.02	.02	.02	
PHENOLS in μg/l as C_6H_5OH									Less than 1

ESPANOLA

PLANT PERFORMANCE

MONTH	FLOWS				RAW WATER		TREATED WATER					
							TURBIDITY		COLOUR		TEMPERATURE	
	TOTAL PLANT OUTPUT million gallons	AVERAGE DAILY FLOW million gallons	MAXIMUM DAY'S FLOW million gallons	MAXIMUM RATE mgd	TURBIDITY (AVERAGE) FTU	COLOUR (AVERAGE) App. units	AVERAGE FTU	MAXIMUM FTU	AVERAGE App. units	MAXIMUM App. units	AVERAGE °C	MAXIMUM °C
JAN	13.4	.43	.50				1.0	1.0	5	5		
FEB	12.6	.44	.48				1.0	1.3	5	10		
MAR	13.6	.44	.62				1.7	1.8	5	5		
APR	14.5	.48	.63				1.3	1.3	10	10		
MAY	19.1	.61	1.00				1.4	2.0	5	5		
JUNE	28.4	.95	1.32				1.3	1.5	17	30		
JULY	21.8	.70	1.00				1.0	1.2	12	15		
AUG	25.0	.81	1.11				1.0	1.0	10	15		
SEPT	16.4	.54	.76				.8	.9	8	10		
OCT	16.2	.52	.60				.9	.9	8	10		
NOV	16.4	.54	.62				1.0	1.2	13	15		
DEC	17.0	.54	.60				.8	.9	8	10		
TOTAL	214.4											
AVG.	17.9	.58	MAXIMUM 1.32	MAXIMUM			1.1	MAXIMUM 2.0	9	MAXIMUM 30		MAXIMUM

ESPANOLA

TREATMENT DATA

MONTH	CHEMICALS USED								FILTER OPERATION		
	Na_2SiF_6								MINIMUM	AVERAGE	BACKWASH
	AMT. USED	DOSAGE	AMT. USED	DOSAGE	AMT. USED	DOSAGE	AMT. USED	DOSAGE	RUN	RUN	WATER
	Pounds	mg/l		mg/l		mg/l		mg/l	hours	hours	mil. gallons
JAN	244	1.1									
FEB	236	1.1									
MAR	249	1.1									
APR	252	1.0									
MAY	279	.9									
JUNE	403	.8									
JULY	334	.9									
AUG	358	.8									
SEPT	274	1.0									
OCT	251	.9									
NOV	301	1.1									
DEC	314	1.1									
TOTAL	3495										
AVG	291	1.0									

ESPANOLA

CHLORINATION and DISINFECTION

MONTH	RAW WATER					PLANT EFFLUENT		DISTRIBUTION SYSTEM		CHLORINATION			
	NUMBER OF SAMPLES HAVING TOTAL COLIFORM ORGANISMS PER 100 ml OF					NUMBER OF SAMPLES TAKEN	NUMBER HAVING COLIFORM ORGANISMS	NUMBER OF SAMPLES TAKEN	NUMBER HAVING COLIFORM ORGANISMS	TOTAL AMOUNT OF CHLORINE USED pounds	DOSAGE		RESIDUAL IN PLANT EFFLUENT mg/l
	0	1 - 3	4 - 32	33 - 320	> 320						PRE - mg/l	POST - mg/l	
JAN	1		1			2		8		248		1.9	.5
FEB	4					4		16		231		1.8	.5
MAR	5					5		20		244		1.8	.5
APR	1	2	1			4		16		247		1.7	.5
MAY	3	1	1			5		20		275		1.4	.5
JUNE	1		3			4		16		388		1.4	.5
JULY		1	3			4		16		327		1.5	.5
AUG			4			4		16		364		1.4	.5
SEPT		1	3			4		16		296		1.8	.5
OCT	2		2			4		16		294		1.8	.5
NOV	2	2	1			5		16		300		1.8	.5
DEC	3	1				4		16		298		1.1	.5
TOTAL	22	8	19							3512			
AVG.						49		192		10 pounds per day		1.6	.5

WATER QUALITY

PROPERTY	RAW WATER				TREATED WATER				DESIRABLE STANDARDS
	NUMBER OF SAMPLES	AVERAGE	MAXIMUM	MINIMUM	NUMBER OF SAMPLES	AVERAGE	MAXIMUM	MINIMUM	
HARDNESS in mg/l as $CaCO_3$	23	32	60	26	23	33	60	28	80 – 100
ALKALINITY in mg/l as $CaCO_3$	23	20	24	14	23	16	19	13	30 – 100
IRON in mg/l Fe	23	.07	.23	.05	23	.10	16	.05	Less than 0.3
CHLORIDE in mg/l Cl^-	23	7	13	4	23	9	13	7	Less than 250
pH in pH units	23	7.5	8.5	6.7	23	7.1	8.2	6.7	7.0 – 8.5
FLUORIDE in mg/l F^-	21	.1	.3	.1	21	.9	1.0	.5	Less than 1.2
AMMONIA in mg/l as N									Less than 0.5
TOTAL KJELDAHL NITROGEN in mg/l as N									Less than 1.
NITRITE in mg/l as N									
NITRATE in mg/l as N									Less than 10
TOTAL PHOSPHORUS in mg/l as P									
SOLUBLE PHOSPHORUS in mg/l as P									
PHENOLS in µg/l as C_6H_5OH									Less than 1

HAILEYBURY

PLANT PERFORMANCE

MONTH	FLOWS				RAW WATER		TREATED WATER					
							TURBIDITY		COLOUR		TEMPERATURE	
	TOTAL PLANT OUTPUT million gallons	AVERAGE DAILY FLOW million gallons	MAXIMUM DAY'S FLOW million gallons	MAXIMUM RATE mgd	TURBIDITY (AVERAGE) FTU	COLOUR (AVERAGE) App. units	AVERAGE FTU	MAXIMUM FTU	AVERAGE App. units	MAXIMUM App. units	AVERAGE °C	MAXIMUM °C
JAN	17.4	.56	.64		8	41	1.1	4.4	5	10	1.0	1.7
FEB	18.1	.62	.74		7	36	1.2	7.8	6	15	1.0	1.7
MAR	22.7	.72	1.38		5	37	1.3	4.3	5	15	1.7	1.7
APR	15.9	.53	.69		16	42	1.1	5.1	5	15	2.2	2.8
MAY	16.2	.52	.69		41	44	1.1	6.2	5	10	5.0	7.8
JUNE	20.8	.69	1.00		14	47	2.9	3.0	5	10	13.3	16.1
JULY	18.6	.60	.85		11	50	.8	2.8	6	15	16.1	17.8
AUG	18.0	.58	.78		11	55	.7	2.6	5	5	17.8	18.9
SEPT	15.5	.52	.62		12	58	.9	2.4	5	10	15.6	17.8
OCT	16.5	.53	.80		12	53	.8	1.3	5	10	10.6	14.4
NOV	14.1	.47	.51		13	52	1.1	3.6	5	15	5.0	6.7
DEC	15.0	.48	.53		11	52	1.3	2.0	5	5	3.5	3.3
TOTAL	208.8											
AVG.	17.4	.57	MAXIMUM 1.38	MAXIMUM	13	47	1.2	MAXIMUM 7.8	5	MAXIMUM 15	7.7	MAXIMUM 18.9

TREATMENT DATA

MONTH	CHEMICALS USED								FILTER OPERATION		
	ALUM		LIME		SODA ASH		POLYMER A - 22		MINIMUM RUN	AVERAGE RUN	BACKWASH WATER
	AMT. USED 10^3 lbs.	DOSAGE mg/l	AMT. USED 10^3 lbs.	DOSAGE mg/l	AMT. USED 10^3 lbs.	DOSAGE mg/l	AMT. USED lbs.	DOSAGE mg/l	hours	hours	mil. gallons
JAN	8.1	46.8	1.0	5.6	1.4	8.3	126	.7		60	.38
FEB	8.8	48.8	1.0	5.7	1.5	8.4	132	.7		76	.32
MAR	11.2	49.3	1.3	5.8	1.9	8.4	159	.7		52	.47
APR	8.1	46.6	1.2	6.7	1.4	7.9	90	.5		30	.45
MAY	8.4	46.5	1.2	6.7			90	.5		37	.38
JUNE	11.0	46.7	1.3	5.7	1.2	5.2	118	.5		45	.39
JULY	10.0	47.0	1.2	5.8	1.2	5.8	106	.5		46	.34
AUG	9.4	46.6	1.6	8.2	1.2	6.0	100	.5		48	.33
SEPT	8.2	52.6	1.4	8.7	1.0	6.7	87	.6		43	.32
OCT	8.9	46.3	.9	4.6	1.1	5.9	95	.5		44	.36
NOV	7.6	47.0	.8	5.1	1.0	6.0	85	.5		36	.41
DEC	8.5	46.9	.7	4.1	1.1	5.9	127	.7		35	.42
TOTAL	108.2		13.6		14.0		1315				4.57
AVG	9.0	47.6	1.1	6.1	1.3	6.8	110	.6		46	.38

HAILEYBURY

CHLORINATION and DISINFECTION

MONTH	RAW WATER					PLANT EFFLUENT		DISTRIBUTION SYSTEM		CHLORINATION			
	NUMBER OF SAMPLES HAVING TOTAL COLIFORM ORGANISMS PER 100 ml OF					NUMBER OF SAMPLES TAKEN	NUMBER HAVING COLIFORM ORGANISMS	NUMBER OF SAMPLES TAKEN	NUMBER HAVING COLIFORM ORGANISMS	TOTAL AMOUNT OF CHLORINE USED pounds	DOSAGE		RESIDUAL IN PLANT EFFLUENT mg/l
	0	1 - 3	4 - 32	33 - 320	> 320						PRE - mg/l	POST - mg/l	
JAN	4			2		2		21		502		2.9	.9
FEB	3		1					16		575		3.2	.9
MAR	5					5		15		570		2.5	.8
APR			1	3		3		13		386		2.4	.9
MAY				4		4		12		422		2.3	.9
JUNE			2	1		2		7		544		2.3	.8
JULY				4		4		12		625		2.9	.9
AUG			1	3		4		12	1	699		3.9	1.0
SEPT				4	1	5	1	16	1	562		3.6	.9
OCT				4		2	1	14		516		2.7	.8
NOV	1		2	2		5		14	1	460		2.8	.9
DEC	2		2			4		8		460		2.2	.9
TOTAL	15		9	27	1	40	2	160	3	6321			
AVG.										17 pounds per day		2.8	.9

WATER QUALITY

PROPERTY	RAW WATER				TREATED WATER				DESIRABLE STANDARDS
	NUMBER OF SAMPLES	AVERAGE	MAXIMUM	MINIMUM	NUMBER OF SAMPLES	AVERAGE	MAXIMUM	MINIMUM	
HARDNESS in mg/l as $CaCO_3$	25	27	44	15	25	33	58	15	80 – 100
ALKALINITY in mg/l as $CaCO_3$	24	17	30	2	25	14	28	2	30 – 100
IRON in mg/l Fe	25	.74	1.8	.5	25	.10	.22	.05	Less than 0.3
CHLORIDE in mg/l Cl^-	23	4	7	2	24	5	9	3	Less than 250
pH in pH units	391	7.1	7.9	6.0	391	8.0	9.0	5.3	7.0 – 8.5
FLUORIDE in mg/l F^-									Less than 1.2
AMMONIA in mg/l as N	1	.1	.1	.1	1	.1	.1	.1	Less than 0.5
TOTAL KJELDAHL NITROGEN in mg/l as N	1	.4	.4	.4	1	.1	.1	.1	Less than 1.
NITRITE in mg/l as N	2	.16	.30	.01	2	.2	.3	.01	
NITRATE in mg/l as N									Less than 10
TOTAL PHOSPHORUS in mg/l as P									
SOLUBLE PHOSPHORUS in mg/l as P									
PHENOLS in μg/l as C_6H_5OH									Less than 1

PLANT PERFORMANCE

MONTH	FLOWS				RAW WATER		TREATED WATER					
							TURBIDITY		COLOUR		TEMPERATURE	
	TOTAL PLANT OUTPUT million gallons	AVERAGE DAILY FLOW million gallons	MAXIMUM DAY'S FLOW million gallons	MAXIMUM RATE mgd	TURBIDITY (AVERAGE) F TU	COLOUR (AVERAGE) App. units	AVERAGE F TU	MAXIMUM F TU	AVERAGE App. units	MAXIMUM App. units	AVERAGE °C	MAXIMUM °C
JAN	.865	.028	.060		.65	20	.8	1.0	5	5		
FEB	2.086	.072	.085		.57	20	.8	1.9	5	10		
MAR	2.590	.084	.092		.66	20	.26	3.7	5	5		
APR	1.334	.044	.072		1.6	29	.34	1.0	5	5		
MAY	.994	.032	.042		1.3	32	.15	.45	5	5		
JUNE	.945	.031	.043		1.4	22	.12	.25	5	5		
JULY	.962	.031	.038		1.4	21	.11	.18	5	15		
AUG	1.031	.033	.038		1.2	20	.22	.23	5	5		
SEPT	.919	.030	.040		1.2	19	.16	.16	5	5		
OCT	.917	.030	.033		1.1	21	.14	.25	5	5		
NOV	.865	.029	.034		.89	21	.26	.44	5	5		
DEC	1.124	.036	.046		.70	20	.25	.55	5	5		
TOTAL	14.632											
AVG.		.040	MAXIMUM .092	MAXIMUM	1.06	19	.11	MAXIMUM 3.7	5	MAXIMUM 15		MAXIMUM

TREATMENT DATA

MONTH	CHEMICALS USED								FILTER OPERATION		
	ALUM		ACTIVATED SILICA		SODA ASH		A - 22		MINIMUM RUN hours	AVERAGE RUN hours	BACKWASH WATER mil.gallons
	AMT. USED lbs.	DOSAGE mg/l	AMT. USED Gallons	DOSAGE mg/l	AMT. USED lbs.	DOSAGE mg/l	AMT. USED lbs.	DOSAGE mg/l			
JAN	544	60.4	43	.4	53	5.9				6.0	.032
FEB	1176	56	92	.4	115	5.4				21.0	.042
MAR	1597	61	185	.6	168	6.4				58.0	.116
APR	961	51	94	.4	94	4.9				21.1	.048
MAY	785	52	61	.5	77	5.1				12.9	.026
JUNE	753	50	59	.4	74	4.9				13.0	.026
JULY	759	51			75	5.0	3.68	.2		12.8	.022
AUG	776	52			76	5.1	3.76	.3		13.5	.044
SEPT	687	49			67	4.8	3.30	.3		12.4	.036
OCT	682	49			69	4.9	3.29	.3		11.6	.028
NOV	654	51			64	4.9	3.17	.3		11.3	.038
DEC	810	51			79	4.9	3.93	.3		13.8	.046
TOTAL	10184		534		1011		21.13				.504
AVG.		52.8		.5		5.2		.3		17.3	

LATCHFORD

CHLORINATION and DISINFECTION

MONTH	RAW WATER					PLANT EFFLUENT		DISTRIBUTION SYSTEM		CHLORINATION			
	NUMBER OF SAMPLES HAVING TOTAL COLIFORM ORGANISMS PER 100 ml OF					NUMBER OF SAMPLES TAKEN	NUMBER HAVING COLIFORM ORGANISMS	NUMBER OF SAMPLES TAKEN	NUMBER HAVING COLIFORM ORGANISMS	TOTAL AMOUNT OF CHLORINE USED pounds	DOSAGE		RESIDUAL IN PLANT EFFLUENT mg/l
	0	1 - 3	4 - 32	33 - 320	> 320						PRE - mg/l	POST - mg/l	
JAN	1	1				2		4		29		3.3	
FEB	1		3			4		9		55		2.6	
MAR	5		1			6		7		55		2.1	
APR	1	1	1	1		2		7		45		2.3	
MAY	3					3		6		50		3.3	
JUNE	1	1				2		3		36		3.8	
JULY	3		1			4		9		46		4.7	
AUG	3		1			4		10	1	53		5.1	
SEPT	3					3		7		49		5.3	
OCT	4					4		9		39		4.2	
NOV	2	2	1			5		9		35		4.0	
DEC	3					3		6		35		3.1	
TOTAL	30	4	9	1		42		86	1	527			
AVG.										1.4 pounds per day		3.7	

WATER QUALITY

PROPERTY	RAW WATER				TREATED WATER				DESIRABLE STANDARDS
	NUMBER OF SAMPLES	AVERAGE	MAXIMUM	MINIMUM	NUMBER OF SAMPLES	AVERAGE	MAXIMUM	MINIMUM	
HARDNESS in mg/l as $CaCO_3$	23	35	43	31	24	38	64	30	80 – 100
ALKALINITY in mg/l as $CaCO_3$	22	19	36	11	47	33	61	3	30 – 100
IRON in mg/l Fe	22	.12	.50	.05	23	.05	.07	.05	Less than 0.3
CHLORIDE in mg/l Cl^-	23	3	11	1	23	4	6	3	Less than 250
pH in pH units	390	7.0	8.1	6.0	390	8.0	8.9	5.9	7.0 – 8.5
FLUORIDE in mg/l F^-	3	.1	.1	.1					Less than 1.2
AMMONIA in mg/l as N									Less than 0.5
TOTAL KJELDAHL NITROGEN in mg/l as N									Less than 1.
NITRITE in mg/l as N									
NITRATE in mg/l as N									Less than 10
TOTAL PHOSPHORUS in mg/l as P	23	.03	.04	.02	24	.02	.02	.02	
SOLUBLE PHOSPHORUS in mg/l as P									
PHENOLS in µg/l as C_6H_5OH									Less than 1

FLOWS

PROJECT _____

MONTH	TOTAL FLOW Mil. Gal.	AVG DAY M.G.D.	MAX DAY M.G.D.	PEAK RATE M.G.D.
JAN				
FEB				
MAR				
APR				
MAY				
JUN				
JUL				
AUG				
SEP				
OCT				
NOV				
DEC				
TOTAL		/////	/////	/////
AVG.	/////		/////	/////
MAX.	/////	/////		

PROJECT Michipicoten Twp.

MONTH	TOTAL FLOW Mil. Gal.	AVG DAY M.G.D.	MAX DAY M.G.D.	PEAK RATE M.G.D.
JAN	N/A			
FEB	28.62	0.99	1.60	
MAR	24.27	0.78	0.96	
APR	13.57	0.75	0.88	
MAY	5.22	0.28	0.51	
JUN	7.01	0.37	N/A	
JUL	11.92	0.38	0.84	
AUG	14.03	0.45	0.76	
SEP	7.34	0.24	0.34	
OCT	8.03	0.26	0.50	
NOV	8.48	0.29	0.39	
DEC	13.43	0.43	0.62	
TOTAL	141.92	/////	/////	/////
AVG.	/////	0.39	/////	/////
MAX.	/////	/////	1.60	

PLANT PERFORMANCE

MONTH	FLOWS				RAW WATER		TREATED WATER					
							TURBIDITY		COLOUR		TEMPERATURE	
	TOTAL PLANT OUTPUT million gallons	AVERAGE DAILY FLOW million gallons	MAXIMUM DAY'S FLOW million gallons	MAXIMUM RATE mgd	TURBIDITY (AVERAGE) F TU	COLOUR (AVERAGE) App. units	AVERAGE F TU	MAXIMUM F TU	AVERAGE App. units	MAXIMUM App. units	AVERAGE °C	MAXIMUM °C
JAN	5.81	.18	.22		3.6	51	5.0	7.7	13	70		
FEB	5.64	.19	.24		2.7	35	2.7	2.7	12	60		
MAR	8.64	.27	.35		5.2	31	4.7	5.0	12	50		
APR	8.50	.28	.35		3.2	36	3.4	3.4	12	50		
MAY	5.90	.19	.22		4.1	95	2.0	2.3	25	70		
JUNE	3.81	.12	.16		2.2	152	4.2	4.2	11	120		
JULY	3.92	.12	.16			167			5	5		
AUG	3.82	.12	.15			181			5	5		
SEPT	3.26	.10	.12			185			5	5		
OCT	3.59	.11	.13			180			5	5		
NOV	4.22	.14	.26			166			7	7		
DEC	5.3	.14	.23			101			1	1		
TOTAL	62.41											
AVG.		.16	MAXIMUM .35	MAXIMUM	3.5	115	3.7	MAXIMUM 7.7	9	MAXIMUM 120		MAXIMUM

MOOSONEE

TREATMENT DATA

MONTH	CHEMICALS USED								FILTER OPERATION		
	ALUM		SODA ASH		FLUOSILICIC ACID		POLYMER LT 20		MINIMUM RUN	AVERAGE RUN	BACKWASH WATER
	AMT. USED 10^3 lbs.	DOSAGE mg/l	AMT. USED 10^3 lbs.	DOSAGE mg/l	AMT. USED gal.	DOSAGE mg/l	AMT. USED lbs.	DOSAGE mg/l	hours	hours	mil. gallons
JAN	3.4	58.6	1.6	26.7	44	2.6	15.5	.3		16	.050
FEB	2.9	51.8	1.4	25.9	38	2.4	14.5	.3		16	.046
MAR	3.1	36.0	1.6	18.0	47	1.9	12.5	.1		16	.050
APR	0.6	7.0	0.2	2.9	32	1.9	5.0	.06		16	.048
MAY	4.5	76.3	1.6	27.1	38	2.2	18.5	.3		16	.050
JUNE	5.5	144.7	1.5	39.5	0		15.0	.4		16	.048
JULY	6.2	159.0	2.2	56.4	18	1.6	17.5	.4		21	.050
AUG	6.1	160.5	3.1	81.6	33	3.1	44.2	1.2		24	.050
SEPT	4.4	125.7	2.3	65.7	38	3.8	15.0	.4		24	.048
OCT	5.8	156.8	2.9	78.4	42	4.0	23.0	.6		24	.050
NOV	5.9	140.5	2.6	63.1	42	3.5	26.0	.6		24	.048
DEC	6.1	117.3	1.6	30.8	43	2.9	20.0	.4		24	.049
TOTAL	54.5		22.6		415		226.7				.587
AVG		102.9		43.0		2.5		.42		20	.049

CHLORINATION and DISINFECTION

MONTH	RAW WATER					PLANT EFFLUENT		DISTRIBUTION SYSTEM		CHLORINATION			
	NUMBER OF SAMPLES HAVING TOTAL COLIFORM ORGANISMS PER 100 ml OF					NUMBER OF SAMPLES TAKEN	NUMBER HAVING COLIFORM ORGANISMS	NUMBER OF SAMPLES TAKEN	NUMBER HAVING COLIFORM ORGANISMS	TOTAL AMOUNT OF NaOCl Gallons	DOSAGE		RESIDUAL IN PLANT EFFLUENT mg/l
	0	1 - 3	4 - 32	33 - 320	> 320						PRE - mg/l	POST - mg/l	
JAN			2			1	1	5		124		2.5	
FEB	2					2		4		116		2.4	
MAR	2		1			3	1	4		124		1.7	
APR										136		1.9	
MAY				2		4		7	2	158		3.2	
JUNE	2					2		6		124		3.9	
JULY			3			5		3	2	128		3.9	
AUG	1		1			3		4		140		4.4	
SEPT			2			4		2		135		5.1	
OCT						1				140		4.7	
NOV						4				135		3.9	
DEC	1					3		1	1	140		3.1	
TOTAL	8		9	2		32		36	5	1600			
AVG.										4 pounds per day		3.4	

WATER QUALITY

PROPERTY	RAW WATER				TREATED WATER				DESIRABLE STANDARDS
	NUMBER OF SAMPLES	AVERAGE	MAXIMUM	MINIMUM	NUMBER OF SAMPLES	AVERAGE	MAXIMUM	MINIMUM	
HARDNESS in mg/l as $CaCO_3$	9	247	376	34	9	243	376	34	80 – 100
ALKALINITY in mg/l as $CaCO_3$	9	184	332	31	9	183	340	3	30 – 100
IRON in mg/l Fe	9	.61	1.2	.05	9	.59	1.30	.05	Less than 0.3
CHLORIDE in mg/l Cl^-	9	221	368	14	9	226	374	15	Less than 250
pH in pH units	9	7.8	8.6	7.2	9	7.3	8.3	5.2	7.0 – 8.5
FLUORIDE in mg/l F^-	9	.4	.9	.1	9	.8	1.3	.1	Less than 1.2
AMMONIA in mg/l as N									Less than 0.5
TOTAL KJELDAHL NITROGEN in mg/l as N									Less than 1.
NITRITE in mg/l as N									
NITRATE in mg/l as N									Less than 10
TOTAL PHOSPHORUS in mg/l as P									
SOLUBLE PHOSPHORUS in mg/l as P									
PHENOLS in µg/l as C_6H_5OH									Less than 1

PLANT PERFORMANCE

MONTH	FLOWS				RAW WATER		TREATED WATER					
							TURBIDITY		COLOUR		TEMPERATURE	
	TOTAL PLANT OUTPUT million gallons	AVERAGE DAILY FLOW million gallons	MAXIMUM DAY'S FLOW million gallons	MAXIMUM RATE mgd	TURBIDITY (AVERAGE) F TU	COLOUR (AVERAGE) App. units	AVERAGE F TU	MAXIMUM FTU	AVERAGE App. units	MAXIMUM App. units	AVERAGE ° C	MAXIMUM ° C
JAN	1.56	.050	.062		2	58	1.3	1.5	4	8	0	0
FEB	1.98	.068	.079		2	60	0.4	1.5	5	10	0	0
MAR	2.47	.079	.100		2	55	0.5	3.7	5	10	0	0
APR	2.24	.075	.090		10	100	1.4	3.0	9	30	0	3
MAY	1.38	.044	.061		6	96	1.1	5.8	6	10	6	13
JUNE	1.31	.044	.070		8	97	0.3	0.6	5	10	18	20
JULY	1.20	.039	.064		8	100	1.6	1.0	7	15	19	22
AUG	1.21	.039	.063		7	125	0.5	0.9	6	15	19	21
SEPT	1.14	.038	.070		4	74	0.4	0.8	5	10	15	17
OCT	0.96	.031	.054		3	106	0.5	1.0	8	10	6	10
NOV	0.91	.030	.048		5	74	0.5	1.0	6	10	1	2
DEC	1.24	.040	.093		2	44	0.4	0.5	4	5	0	0
TOTAL	17.60											
AVG.	1.47	.048	MAXIMUM .100	MAXIMUM	5	82	0.7	MAXIMUM 5.8	9	MAXIMUM 30	7	MAXIMUM 22

TREATMENT DATA

MONTH	CHEMICALS USED								FILTER OPERATION		
	ALUM		SODA ASH		POLYMER				MINIMUM	AVERAGE	BACKWASH
	AMT. USED 10^3 lbs.	DOSAGE mg/l	AMT. USED lbs.	DOSAGE mg/l	AMT. USED lbs.	DOSAGE mg/l	AMT. USED	DOSAGE mg/l	RUN hours	RUN hours	WATER mil.gallons
JAN	1.4	89	905	58	16	1.0					
FEB	1.8	91	1125	67	22	1.1					
MAR	2.2	89	1490	60	28	1.1					
APR	2.6	116	1440	64	30	1.3					
MAY	1.4	101	845	61	20	1.4					
JUNE	1.0	76	595	45	9	0.7					
JULY	1.2	100	715	60	12	1.0					
AUG	1.2	99	665	55	9	0.7					
SEPT	0.6	53	410	36	5	0.4					
OCT	0.8	83	475	50	8	0.8					
NOV	1.0	110	615	68	11	1.2					
DEC	1.0	81	610	49	10	0.8					
TOTAL	16.2		9890		180						
AVG	1.4	92	824	56	15	1.0					

SHACKLETON - MACHIN

CHLORINATION and DISINFECTION

MONTH	RAW WATER					PLANT EFFLUENT		DISTRIBUTION SYSTEM		CHLORINATION			
	NUMBER OF SAMPLES HAVING TOTAL COLIFORM ORGANISMS PER 100 ml OF					NUMBER OF SAMPLES TAKEN	NUMBER HAVING COLIFORM ORGANISMS	NUMBER OF SAMPLES TAKEN	NUMBER HAVING COLIFORM ORGANISMS	TOTAL AMOUNT OF NaOCl Gallons	DOSAGE		RESIDUAL IN PLANT EFFLUENT mg/l
	0	1 - 3	4 - 32	33 - 320	> 320						PRE - mg/l	POST - mg/l	
JAN	2		2			5		2		79		6.0	.4
FEB	1		3			6		2		71		4.3	.4
MAR	1	1	2			5		3		70		3.4	.3
APR										88		4.7	.4
MAY			3	1		4		4		68		5.9	.4
JUNE			4			4		4		89		8.1	.2
JULY			2	1		3		4		100		10.0	.3
AUG		1	3			4		4		105		10.4	.2
SEPT		1	2			3		4		56		5.9	.3
OCT			3			3	1	4		49		6.0	.3
NOV	4					4		4		43		5.7	.4
DEC	4					4		4		28		2.7	.2
TOTAL	12	3	24	2		45	1	39		846			
AVG.										2.3 pounds per day		4.8	.3

WATER QUALITY

PROPERTY	RAW WATER				TREATED WATER				DESIRABLE STANDARDS
	NUMBER OF SAMPLES	AVERAGE	MAXIMUM	MINIMUM	NUMBER OF SAMPLES	AVERAGE	MAXIMUM	MINIMUM	
HARDNESS in mg/l as $CaCO_3$	101	70	100	34	101	72	95	36	80 - 100
ALKALINITY in mg/l as $CaCO_3$	289	67	108	26	289	89	136	51	30 - 100
IRON in mg/l Fe	21	.51	3.2	.10	21	.05	.2	.05	Less than 0.3
CHLORIDE in mg/l Cl^-	20	2	3	1	20	8	16	3	Less than 250
pH in pH units	387	7.8	8.0	6.7	387	8.1	9.1	7.1	7.0 - 8.5
FLUORIDE in mg/l F^-									Less than 1.2
AMMONIA in mg/l as N									Less than 0.5
TOTAL KJELDAHL NITROGEN in mg/l as N									Less than 1.
NITRITE in mg/l as N									
NITRATE in mg/l as N									Less than 10
TOTAL PHOSPHORUS in mg/l as P									
SOLUBLE PHOSPHORUS in mg/l as P									
PHENOLS in μg/l as C_6H_5OH									Less than 1

PLANT PERFORMANCE

MONTH	FLOWS				RAW WATER		TREATED WATER					
							TURBIDITY		COLOUR		TEMPERATURE	
	TOTAL PLANT OUTPUT million gallons	AVERAGE DAILY FLOW million gallons	MAXIMUM DAY'S FLOW million gallons	MAXIMUM RATE mgd	TURBIDITY (AVERAGE) FTU	COLOUR (AVERAGE) App. units	AVERAGE FTU	MAXIMUM FTU	AVERAGE App. units	MAXIMUM App. units	AVERAGE °C	MAXIMUM °C
JAN	122.5	3.95	4.1	4.7	1.7	24	.24	.31	5	5	1.2	2.2
FEB	113.2	3.91	4.1	5.0	1.7	18	.25	.59	5	15	1.1	1.1
MAR	161.6	3.92	4.1	5.2	2.4	18	.34	3.50	5	5	1.3	2.2
APR	117.9	3.93	4.2	5.0	7.4	29	.28	.60	5	5	4.8	9.5
MAY	119.3	3.85	4.1	4.9	4.8	18	.27	.42	5	5	8.2	12.2
JUNE	117.6	3.92	4.3	5.2	4.5	25	.26	.73	5	10	17.8	21.1
JULY	119.4	3.85	4.2	5.0	6.8	29	.17	.30	5	5	20.8	21.7
AUG	120.8	3.90	4.2	5.0	5.9	26	.26	.34	5	5	21.3	22.3
SEPT	109.5	3.65	4.0	5.2	4.6	26	.39	3.50	5	30	16.9	18.9
OCT	114.9	3.71	3.9	4.9	3.7	23	.32	2.80	5	5	9.3	12.8
NOV	112.3	3.74	4.0	4.8	2.3	16	.25	.33	5	5	3.5	5.6
DEC	116.6	3.76	3.8	4.8	1.5	14	.23	.19	5	5	1.2	1.7
TOTAL	1405.6											
AVG.	117.1	3.84	MAXIMUM 4.3	MAXIMUM 5.2	3.9	22	.27	MAXIMUM 3.50	5	MAXIMUM 30	9	MAXIMUM 21.7

TREATMENT DATA

MONTH	CHEMICALS USED											
	ALUM		LIME		SODA ASH		SODIUM SILICOFLUORIDE		SODIUM CHLORITE		POLYELECTROLYTE	
	AMT. USED 10^3 gallons	DOSE mg/l	AMT USED 10^3 pounds	DOSE mg/l	AMT. USED pounds	DOSE mg/l	AMT USED 10^3 pounds	DOSE mg/l	AMT. USED pounds	DOSE mg/l	AMT. USED pounds	DOSE mg/l
JAN	3.6	19.2	9.3	7.6			1.6	1.3	713	.58	256	.21
FEB	3.1	18.0	9.0	8.0			1.5	1.3	563	.50	241	.21
MAR	3.2	16.9	9.4	7.7			1.8	1.5	465	.38	233	.19
APR	4.2	22.7	12.4	10.2			1.6	1.4	450	.37	114	.09
MAY	3.0	15.9	9.9	8.0			1.7	1.4	465	.37	104	.08
JUNE	11.6	61.0	11.6	9.4			1.6	1.3	450	.36	69	.06
JULY	3.4	17.8	12.5	9.9			1.7	1.3	465	.37	126	.10
AUG	2.8	15.0	8.7	7.2			1.7	1.4	465	.38	180	.15
SEPT	3.0	17.8	10.0	9.1			1.7	1.5	450	.41	602	.55
OCT	2.8	15.8	8.8	7.6			1.7	1.5	465	.40	297	.26
NOV	2.9	16.8	8.1	7.3			1.7	1.5	450	.41	197	.18
DEC	3.1	16.5	9.7	7.9			1.6	1.4	465	.38	362	.30
TOTAL	46.7		119.4				19.9		5866		2781	
AVG.	3.9	21.1	10.0	8.3			1.7	1.4	489	.41	232	.20

CHLORINATION and DISINFECTION

MONTH	RAW WATER: NUMBER OF SAMPLES HAVING TOTAL COLIFORM ORGANISMS PER 100 ml OF					PLANT EFFLUENT		FILTER OPERATION.		CHLORINATION			
	0	1 - 3	4 - 32	33 - 320	> 320	NUMBER OF SAMPLES TAKEN	NUMBER HAVING COLIFORM ORGANISMS	AVERAGE RUN HOURS	BACKWASH WATER M G	TOTAL AMOUNT OF CHLORINE USED 10^3 pounds	DOSAGE PRE - mg/l	DOSAGE POST - mg/l	RESIDUAL IN PLANT EFFLUENT mg/l
JAN	1	1	2			4		36	3.40	2.7	1.6	.6	.5
FEB	2		2			4		38	3.07	2.7	1.7	.6	.5
MAR		1	4			5		41	2.98	2.5	2.0	.5	.4
APR	1	1	1	1		4		31	3.90	1.9	1.2	.4	.4
MAY	1		2			3		47	2.65	3.4	2.3	.5	.4
JUNE			5			5		44	2.74	3.9	2.4	.8	.4
JULY			1	3		4		57	2.16	4.8	2.8	1.0	.4
AUG			1	3		4		44	3.26	4.4	2.6	.9	.3
SEPT			3	2		5		42	2.82	4.2	3.6	1.0	.4
OCT		1	1	2		4		35	3.49	3.4	2.4	.8	.4
NOV			5			5		34	3.49	2.4	1.6	.5	.4
DEC	1		1	1		6		34	3.65	2.8	1.9	.4	.4
TOTAL	6	4	28	12		53			37.62	39.1			
AVG.								40	3.14	107 pounds per day	2.2	.7	.4

WATER QUALITY

PROPERTY	RAW WATER				TREATED WATER				DESIRABLE STANDARDS
	NUMBER OF SAMPLES	AVERAGE	MAXIMUM	MINIMUM	NUMBER OF SAMPLES	AVERAGE	MAXIMUM	MINIMUM	
HARDNESS in mg/l as $CaCO_3$	375	39	79	18	375	48	69	17	80 – 100
ALKALINITY in mg/l as $CaCO_3$	375	17	21	9	376	16	23	2	30 – 100
IRON in mg/l Fe	374	.25	.60	.02	373	.04	.11	.01	Less than 0.3
CHLORIDE in mg/l Cl^-	7	3	8	2	8	6	8	4	Less than 250
pH in pH units	375	7.3	7.9	6.6	376	7.4	8.7	6.0	7.0 – 8.5
FLUORIDE in mg/l F^-	3	.4	.9	.1	373	1.0	1.2	.3	Less than 1.2
AMMONIA in mg/l as N	3	.1	.1	.1	4	.1	.1	.1	Less than 0.5
TOTAL KJELDAHL NITROGEN in mg/l as N	4	.2	.3	.3	5	.2	.4	.1	Less than 1.
NITRITE in mg/l as N	4	.01	.01	.01	4	.01	.01	.01	
NITRATE in mg/l as N	4	.2	.2	.1	4	.2	.2	.1	Less than 10
TOTAL PHOSPHORUS in mg/l as P	4	.02	.02	.1	4	.03	.04	.02	
SOLUBLE PHOSPHORUS in mg/l as P									
PHENOLS in μg/l as C_6H_5OH	8	1	4	1	8	1	1	1	Less than 1

REGION 6

NORTHWESTERN

FLOWS

PROJECT Ear Falls

MONTH	TOTAL FLOW Mil. Gal.	AVG DAY M.G.D.	MAX DAY M.G.D.	PEAK RATE M.G.D.
JAN	3.874	0.125	0.162	
FEB	3.020	0.104	0.196	
MAR	4.088	0.132	0.153	
APR	3.441	0.115		
MAY	4.670	0.151	0.244	
JUN	4.805	0.160	0.292	
JUL	5.109	0.165	0.227	
AUG	5.036	0.162	0.273	
SEP	3.127	0.104	0.143	
OCT	3.303	0.107	0.175	
NOV	2.752	0.092	0.157	
DEC	2.870	0.093	0.125	
TOTAL	46.095	/////	/////	/////
AVG.	/////	0.126	/////	/////
MAX.	/////	/////	0.292	

PROJECT _____

MONTH	TOTAL FLOW Mil. Gal.	AVG DAY M.G.D.	MAX DAY M.G.D.	PEAK RATE M.G.D.
JAN				
FEB				
MAR				
APR				
MAY				
JUN				
JUL				
AUG				
SEP				
OCT				
NOV				
DEC				
TOTAL		/////	/////	/////
AVG.	/////		/////	/////
MAX.	/////	/////		

PLANT PERFORMANCE

MONTH	FLOWS				RAW WATER		TREATED WATER					
							TURBIDITY		COLOUR		TEMPERATURE	
	TOTAL PLANT OUTPUT million gallons	AVERAGE DAILY FLOW million gallons	MAXIMUM DAY'S FLOW million gallons	MAXIMUM RATE mgd	TURBIDITY (AVERAGE) F TU	COLOUR (AVERAGE) App. units	AVERAGE F TU	MAXIMUM F TU	AVERAGE App. units	MAXIMUM App. units	AVERAGE °C	MAXIMUM °C
JAN	1.36	.044	.08		2.1	15	2.0	2.5	5	5	0	0
FEB	1.33	.048	.07		2.1	30	2.4	3.1	5	5	0	0
MAR	1.32	.042	.08		2.5	20	2.0	2.8	5	5	1	1
APR	1.42	.047	.09		19.6		2.4	4.0			4	7
MAY	2.30	.074	.13		4.7	50	1.8	3.0	5	5	12	19
JUNE	1.80	.060	.13		4.5		.9	1.2			20	21
JULY	1.40	.045	.06		4.8	50	.9	1.2	5	5	21	22
AUG	1.47	.047	.08		4.5		1.0	1.5			20	21
SEPT	1.32	.044	.06		5.0	40	1.1	1.7	5	5	7	13
OCT	1.30	.042	.08		5.0	40	1.0	1.3	5	5	7	13
NOV	1.45	.048	.10		5.3		2.5	3.5			5	7
DEC	1.60	.052	.06		4.7		3.0	3.5			1	1
TOTAL	18.07											
AVG.	1.51	.049	MAXIMUM .13	MAXIMUM	5.4	35	1.8	MAXIMUM 2.4	5	MAXIMUM 5	8	MAXIMUM 22

TREATMENT DATA

MONTH	CHEMICALS USED								FILTER OPERATION		
	ALUM		POLYMER		SODA ASH				NO. OF B/WASHES	AVERAGE RUN hours	BACKWASH WATER mil.gallons
	AMT. USED Gallons	DOSAGE mg/l	AMT. USED Pounds	DOSAGE mg/l	AMT. USED Pounds	DOSAGE mg/l	AMT. USED	DOSAGE mg/l			
JAN	152	72.6	10	.6	1300	83.4			122		.220
FEB	130	63.5	7	.5	900	67.6			87		.156
MAR	42	20.7	7	.5	700	53.2			78		.140
APR	110	50.2	11	.6	800	44.3			113		.203
MAY	140	39.6	16	.6	1200	41.7			151		.275
JUNE	81	29.3	8	.4	1100	48.2			98		.176
JULY	72	33.4	6	.3	600	33.2			88		.160
AUG	120	41.4	8	.4	700	37.1			98		.178
SEPT	110	42.9	7	.5	600	36.1			93		.167
OCT	90	44.9	4	.2	800	47.1			86		.155
NOV	100	38.2	8	.5	800	47.1			91		.165
DEC	100	34.9	9	.6	700	37.5			86		.155
TOTAL	1247		101		10200				1191		2.150
AVG	104	44.9	8	.6	850	56.4			99		.179

CHLORINATION and DISINFECTION

MONTH	RAW WATER					PLANT EFFLUENT		DISTRIBUTION SYSTEM		CHLORINATION			
	NUMBER OF SAMPLES HAVING TOTAL COLIFORM ORGANISMS PER 100 ml OF					NUMBER OF SAMPLES TAKEN	NUMBER HAVING COLIFORM ORGANISMS	NUMBER OF SAMPLES TAKEN	NUMBER HAVING COLIFORM ORGANISMS	TOTAL AMOUNT OF CHLORINE USED pounds	DOSAGE		RESIDUAL IN PLANT EFFLUENT mg/l
	0	1 - 3	4 - 32	33 - 320	> 320						PRE - mg/l	POST - mg/l	
JAN	0	0	0	1	0	0	0	5	0	93	4.7	6.0	.9
FEB	1	0	0	2	0	3	0	12	0	83	4.9	6.2	.9
MAR	0	0	0	2	3	0	0	22	0	74	5.6	5.6	.8
APR	0	0	0	0	0	0	0	0	0	89	4.9	6.2	.8
MAY	1	0	1	0	2	0	0	22	0	107	3.7	4.7	.7
JUNE	0	0	0	0	0	0	0	0	0	87	3.8	4.8	.6
JULY	0	0	0	0	1	0	0	5	0	109	6.0	7.8	.7
AUG	0	0	0	0	0	0	0	0	0	119	6.3	9.1	.9
SEPT	0	0	0	0	1	0	0	9	0	94	5.6	7.2	.7
OCT										99	5.8	7.6	.7
NOV	0	0	0	0	3	0	0	13	3	103	6.1	7.1	.7
DEC	0	0	0	0	2	0	1	5	0	92	4.9	5.8	.6
TOTAL	1	0	1	5	12	3	1	93	3	1149			
AVG.										3 pounds per day	5.2	6.4	.8

WATER QUALITY

PROPERTY	RAW WATER				TREATED WATER				DESIRABLE STANDARDS
	NUMBER OF SAMPLES	AVERAGE	MAXIMUM	MINIMUM	NUMBER OF SAMPLES	AVERAGE	MAXIMUM	MINIMUM	
HARDNESS in mg/l as $CaCO_3$	6	31	38	24	7	28	31	26	80 – 100
ALKALINITY in mg/l as $CaCO_3$	6	30	51	23	7	50	63	40	30 – 100
IRON in mg/l Fe	6	.34	.50	.15	7	.08	.10	.05	Less than 0.3
CHLORIDE in mg/l Cl^-	6	2	5	1	7	7	10	5	Less than 250
pH in pH units	6	6.6	7.0	6.2	7	7.1	7.3	6.7	7.0 – 8.5
Conductivity	6	72	91	58	7	166	190	142	Less than 1.2
AMMONIA in mg/l as N									Less than 0.5
TOTAL KJELDAHL NITROGEN in mg/l as N									Less than 1.
NITRITE in mg/l as N	1	.015	.015	.015	1	.011	.011	.011	
NITRATE in mg/l as N									Less than 10
TOTAL PHOSPHORUS in mg/l as P									
SOLUBLE PHOSPHORUS in mg/l as P									
PHENOLS in μg/l as C_6H_5OH									Less than 1

FLOWS

PROJECT Geraldton

MONTH	TOTAL FLOW Mil. Gal.	AVG DAY M.G.D.	MAX DAY M.G.D.	PEAK RATE M.G.D.
JAN	No meter			
FEB	"			
MAR	"			
APR	"			
MAY	"			
JUN	"			
JUL	"			
AUG	"			
SEP	"			
OCT	"			
NOV	"			
DEC	"			
TOTAL	158.62	/////	/////	/////
AVG.	/////	0.43	/////	/////
MAX.	/////	/////		

PROJECT Ignace

MONTH	TOTAL FLOW Mil. Gal.	AVG DAY M.G.D.	MAX DAY M.G.D.	PEAK RATE M.G.D
JAN				
FEB				
MAR	4.237	0.137	0.184	
APR	3.426	0.114	0.153	
MAY	4.732	0.153	0.277	
JUN	3.473	0.116	0.325	
JUL	2.406	0.078	0.217	
AUG	5.043	0.163	0.243	
SEP	3.935	0.131	0.193	
OCT	3.849	0.124	0.204	
NOV	3.949	0.132	0.173	
DEC	4.600	0.148	0.184	
TOTAL	39.650	/////	/////	/////
AVG.	/////	0.130	/////	/////
MAX.	/////	/////	0.325	

Started March 1.

FLOWS

PROJECT Machin Twp. (Vermillion Bay)

MONTH	TOTAL FLOW Mil. Gal.	AVG DAY M.G.D.	MAX DAY M.G.D.	PEAK RATE M.G.D.
JAN	0.032	0.001	0.012	
FEB	0.037	0.001	0.015	
MAR	0.008		0.018	
APR	0.010		0.005	
MAY	N/A			
JUN	N/A			
JUL	0.499	0.016	0.076	
AUG	0.766	0.025	0.080	
SEP	1.473	0.049	0.060	
OCT	2.064	0.067	0.060	
NOV	0.897	0.030		
DEC	0.980	0.032	0.038	
TOTAL		/////	/////	/////
AVG.	/////	0.022	/////	/////
MAX.	/////	/////	0.080	

PROJECT Red Lake

MONTH	TOTAL FLOW Mil. Gal.	AVG DAY M.G.D.	MAX DAY M.G.D.	PEAK RATE M.G.D.
JAN	14.590	0.471	0.496	
FEB	13.325	0.460	0.495	
MAR	14.170	0.457	0.484	
APR	12.023	0.401	0.543	
MAY	10.735	0.346	0.392	
JUN	10.142	0.338	0.406	
JUL	10.982	0.354	0.453	
AUG	10.516	0.339	0.400	
SEP	9.249	0.308	0.345	
OCT	10.205	0.329	N/A	
NOV	12.880	0.429	0.481	
DEC	N/A			
TOTAL		/////	/////	/////
AVG.	/////	0.384	/////	/////
MAX.	/////	/////	0.543	

GROUND WATER -

MONTHLY FLOWS

REGION I

SOUTHWESTERN

FLOWS

PROJECT Hanover

MONTH	TOTAL FLOW Mil. Gal.	AVG DAY M.G.D.	MAX DAY M.G.D.	PEAK RATE M.G.D.
JAN	7.500	0.242		
FEB	5.830	0.201		
MAR	8.330	0.269		
APR	6.360	0.212		
MAY	7.320	0.236		
JUN	9.560	0.319		
JUL	8.470	0.273		
AUG	11.150	0.360		
SEP	8.300	0.277		
OCT	6.460	0.208		
NOV	7.520	0.251		
DEC	9.130	0.295		
TOTAL	95.930	/////	/////	/////
AVG.	/////	0.262	/////	/////
MAX.	/////	/////		

PROJECT Milverton

MONTH	TOTAL FLOW Mil. Gal.	AVG DAY M.G.D.	MAX DAY M.G.D.	PEAK RATE M.G.D.
JAN	N/A			
FEB	N/A			
MAR	N/A			
APR	N/A			
MAY	N/A			
JUN	N/A			
JUL	N/A			
AUG	N/A			
SEP	N/A			
OCT	N/A			
NOV	N/A			
DEC	N/A			
TOTAL	N/a	/////	/////	/////
AVG.	/////		/////	/////
MAX.	/////	/////		

FLOWS

PROJECT Mitchell

MONTH	TOTAL FLOW Mil. Gal.	AVG DAY M.G.D.	MAX DAY M.G.D.	PEAK RATE M.G.D.
JAN	13.902	0.448	0.540	0.662
FEB	13.976	0.499	0.560	0.835
MAR	6.384		0.536	0.864
APR	o/s			
MAY	9.869		0.523	1.132
JUN	12.955	0.432	0.534	1.152
JUL	10.946		0.529	0.835
AUG	7.978		0.474	1.152
SEP	12.013	0.400	0.530	0.835
OCT	13.712	0.442	0.527	1.036
NOV	9.929	0.331	0.467	1.440
DEC	9.450	0.305	0.392	
TOTAL	121.114	/////	/////	/////
AVG.	/////	0.238	/////	/////
MAX.	/////	/////	0.560	1.440

FLOWS

PROJECT Thedford

MONTH	TOTAL FLOW Mil. Gal.	AVG DAY M.G.D.	MAX DAY M.G.D.	PEAK RATE M.G.D.
JAN	1.712	0.055	0.100	
FEB	1.644	0.057	0.097	
MAR	1.597	0.052	0.096	
APR	1.546	0.052	0.083	
MAY	1.631	0.053	0.106	
JUN	2.060	0.069	0.120	
JUL	1.751	0.056	0.088	
AUG	1.131	0.037	0.097	
SEP	1.732	0.056	0.101	
OCT	1.546	0.050	0.101	
NOV	1.434	0.047	0.073	
DEC	1.517	0.048	0.073	
TOTAL	19.301	/////	/////	/////
AVG.	/////	0.053	/////	/////
MAX.	/////	/////	0.120	

PROJECT Vanastra

MONTH	TOTAL FLOW Mil. Gal.	AVG DAY M.G.D.	MAX DAY M.G.D.	PEAK RATE M.G.D.
JAN	4.255	0.137	0.235	
FEB	3.859	0.133	0.268	
MAR	4.457	0.144	0.210	
APR	4.838	0.161	0.210	
MAY	4.759	0.154	0.198	
JUN	5.814	0.194	0.243	
JUL	6.165	0.199	0.246	
AUG	6.102	0.197	0.246	
SEP	5.547	0.185	0.284	
OCT	5.515	0.178	0.213	
NOV	5.224	0.174	0.221	
DEC	4.717	0.152	0.175	
TOTAL	61.252	/////	/////	/////
AVG.	/////	0.167	/////	/////
MAX.	/////	/////	0.284	

REGION 2

WEST CENTRAL

FLOWS

PROJECT Brantford Twp.

MONTH	TOTAL FLOW Mil. Gal.	AVG DAY M.G.D.	MAX DAY M.G.D.	PEAK RATE M.G.D.
JAN	3.557	0.115	0.149	
FEB	3.131	0.108	0.133	
MAR	3.160	0.102	0.120	
APR	3.039	0.101	0.186	
MAY	3.193	0.103	0.123	
JUN	N/A	Est. 0.119	N/A	
JUL	N/A	Est. 0.119	N/A	
AUG	4.104	0.132	0.185	
SEP	4.107	0.137	0.208	
OCT	3.392	0.113	0.144	
NOV	4.576	0.147	0.335	
DEC	3.947			
TOTAL		/////	/////	/////
AVG.	/////	0.119	/////	/////
MAX.	/////	/////	0.335	

PROJECT Woolwich Twp (St. Jacobs)

MONTH	TOTAL FLOW Mil. Gal.	AVG DAY M.G.D.	MAX DAY M.G.D.	PEAK RATE M.G.D.
JAN	2.548	0.082	0.093	
FEB	2.233	0.077	N/A	
MAR	2.594	0.084	0.113	
APR	2.736	0.091	0.126	
MAY	2.739	0.088	0.076	
JUN	3.269	0.109	N/A	
JUL	2.377	0.077	0.077	
AUG	2.512	0.081	0.071	
SEP	2.643	0.088	0.065	
OCT	2.848	0.092	0.092	
NOV	2.859	0.095	0.092	
DEC	2.890	0.093	0.098	
TOTAL	32.248	/////	/////	/////
AVG.	/////	0.088	/////	/////
MAX.	/////	/////	0.126	

REGION 3

CENTRAL

FLOWS

PROJECT Anson, Hindon & Minden

MONTH	TOTAL FLOW Mil. Gal.	AVG DAY M.G.D.	MAX DAY M.G.D.	PEAK RATE M.G.D.
JAN	1.84	0.059	0.081	
FEB	1.80	0.062	0.069	
MAR	1.88	0.061	0.069	
APR	1.70	0.056	0.065	
MAY	1.73	0.056	0.069	
JUN	2.10	0.070	0.092	
JUL	2.04	0.066	0.087	
AUG	2.00	0.061	0.076	
SEP	1.67	0.056	0.072	
OCT	1.85	0.060	0.077	
NOV	1.81	0.064	0.079	
DEC	1.84	0.059	0.069	
TOTAL	22.26	/////	/////	/////
AVG.	/////	0.061	/////	/////
MAX.	/////	/////	0.092	

PROJECT Bradford

MONTH	TOTAL FLOW Mil. Gal.	AVG DAY M.G.D.	MAX DAY M.G.D.	PEAK RATE M.G.D.
JAN	1.54	0.050	0.089	
FEB	1.60	0.055	0.150	
MAR	1.01	0.033	0.079	
APR	1.85	0.062	0.141	
MAY	2.40	0.077	0.387	
JUN	5.17	0.173	0.314	
JUL	2.27	0.073	0.223	
AUG	3.84	0.124	0.300	
SEP	3.31	0.110	0.227	
OCT	2.76	0.089	0.166	
NOV	2.38	0.080	0.173	
DEC	2.32	0.075	0.156	
TOTAL	30.49	/////	/////	/////
AVG.	/////	0.083	/////	/////
MAX.	/////	/////	0.314	

FLOWS

PROJECT Cookstown

MONTH	TOTAL FLOW Mil. Gal.	AVG DAY M.G.D.	MAX DAY M.G.D.	PEAK RATE M.G.D.
JAN	13.0	0.421	0.505	
FEB	12.4	0.431	0.577	
MAR	13.1	0.424	0.582	
APR	14.1	0.472	0.570	
MAY	Est. 16.2	0.525		
JUN	Est. 15.7	0.525		
JUL	18.1	0.584	0.725	
AUG	18.3	0.592	0.721	
SEP	15.9	0.531	0.612	
OCT	15.7	0.507	0.773	
NOV	14.6	0.489	0.625	
DEC	15.6	0.506	0.945	
TOTAL	182.7	/////	/////	/////
AVG.	/////	0.501	/////	/////
MAX.	/////	/////	0.945	

PROJECT Elmvale

MONTH	TOTAL FLOW Mil. Gal.	AVG DAY M.G.D.	MAX DAY M.G.D.	PEAK RATE M.G.D
JAN	3.80	0.123	0.210	
FEB	3.80	0.131	0.197	
MAR	4.05	0.131	0.199	
APR	3.70	0.124	0.200	
MAY	4.25	0.137	0.248	
JUN	5.92	0.197	0.479	
JUL	4.57	0.148	0.322	
AUG	4.43	0.143	0.230	
SEP	3.48	0.116	0.191	
OCT	3.42	0.111	0.172	
NOV	3.28	0.109	0.157	
DEC	3.45	0.111	0.158	
TOTAL	48.20	/////	/////	/////
AVG.	/////	0.132	/////	/////
MAX.	/////	/////	0.480	

FLOWS

PROJECT Havelock

MONTH	TOTAL FLOW Mil. Gal.	AVG DAY M.G.D.	MAX DAY M.G.D.	PEAK RATE M.G.D.
JAN	3.23	0.104		
FEB	2.88	0.100		
MAR	3.06	0.099		
APR	3.07	0.102		
MAY	2.78	0.096		
JUN	3.20	0.106		
JUL	3.18	0.103		
AUG	3.01	0.097		
SEP	2.92	0.098		
OCT	3.05	0.099		
NOV	3.17	0.106		
DEC	3.18	0.103		
TOTAL	36.77	/////	/////	/////
AVG.	/////	0.100	/////	/////
MAX.	/////	/////		

PROJECT Stayner

MONTH	TOTAL FLOW Mil. Gal.	AVG DAY M.G.D.	MAX DAY M.G.D.	PEAK RATE M.G.D.
JAN	6.78	0.219	0.387	
FEB	6.13	0.211	0.370	
MAR	6.90	0.222	0.335	
APR	7.28	0.243	0.330	
MAY	6.96	0.225	0.391	
JUN	12.09	0.403	0.566	
JUL	9.33	0.301	0.662	
AUG	10.11	0.326	0.580	
SEP	7.93	0.264	0.430	
OCT	7.00	0.223	0.302	
NOV	6.03	0.198	0.315	
DEC	5.80	0.186	0.333	
TOTAL	92.16	/////	/////	/////
AVG.	/////	0.252	/////	/////
MAX	/////	/////	0.662	

FLOWS

PROJECT Woodville Twp.

MONTH	TOTAL FLOW Mil. Gal.	AVG DAY M.G.D.	MAX DAY M.G.D.	PEAK RATE M.G.D.
JAN	0.555	0.018	0.073	
FEB	0.543	0.045	0.085	
MAR	0.540	0.017	0.091	
APR	0.542	0.018	0.087	
MAY	0.612	0.020	0.075	
JUN	0.636	0.021	0.068	
JUL	0.568	0.018	0.080	
AUG	0.608	0.020	0.095	
SEP	0.592	0.020	0.090	
OCT	0.695	0.022	0.062	
NOV	0.720	0.023	0.062	
DEC	0.713	0.023	0.058	
TOTAL	7.324	/////	/////	/////
AVG.	/////	0.022	/////	/////
MAX.	//////	/////	0.095	

PROJECT _____

MONTH	TOTAL FLOW Mil. Gal.	AVG DAY M.G.D.	MAX DAY M.G.D.	PEAK RATE M.G.D.
JAN				
FEB				
MAR				
APR				
MAY				
JUN				
JUL				
AUG				
SEP				
OCT				
NOV				
DEC				
TOTAL		/////	/////	/////
AVG.	/////		/////	/////
MAX.	//////	/////		

REGION 4

SOUTHEASTERN

FLOWS

PROJECT Alfred

MONTH	TOTAL FLOW Mil. Gal.	AVG DAY M.G.D.	MAX DAY M.G.D.	PEAK RATE M.G.D.
JAN	1.133	0.037	0.070	
FEB	0.757	0.026	0.052	
MAR	2.510	0.081	0.115	
APR	2.516	0.084	0.091	
MAY	1.266	0.041	0.097	
JUN	2.656	0.089	0.186	
JUL	2.407	0.078	0.170	
AUG	2.717	0.088	0.214	
SEP	2.312	0.077	0.118	
OCT	2.179	0.073	0.251	
NOV	1.846	0.061	0.212	
DEC	2.561	0.083	0.169	
TOTAL	24.860	/////	/////	/////
AVG.	/////	0.068	/////	/////
MAX.	/////	/////	0.251	

PROJECT Bourget

MONTH	TOTAL FLOW Mil. Gal.	AVG DAY M.G.D.	MAX DAY M.G.D.	PEAK RATE M.G.D.
JAN	N/A			
FEB	N/A			
MAR	N/A			
APR	N/A			
MAY	N/A			
JUN	N/A			
JUL	N/A			
AUG	N/A			
SEP	N/A			
OCT	N/A			
NOV	N/A			
DEC	N/A			
TOTAL		/////	/////	/////
AVG.	/////		/////	/////
MAX.	/////	/////		

FLOWS

PROJECT Chesterville

MONTH	TOTAL FLOW Mil. Gal.	AVG DAY M.G.D.	MAX DAY M.G.D.	PEAK RATE M.G.D.
JAN	2.619	0.084	0.100	
FEB	1.212	0.087	0.101	
MAR	o/s			
APR	o/s			
MAY	1.548	0.050	0.098	
JUN	o/s			
JUL	1.620	0.052	0.121	
AUG	1.816	0.059	0.120	
SEP	1.623	0.054	0.100	
OCT	2.300	0.074	0.092	
NOV	1.591	0.053	0.090	
DEC	N/A			
TOTAL		/////	/////	/////
AVG.	/////	0.059	/////	/////
MAX.	/////	/////	0.121	

PROJECT Frankford

MONTH	TOTAL FLOW Mil. Gal.	AVG DAY M.G.D.	MAX DAY M.G.D.	PEAK RATE M.G.D.
JAN	7.882	0.254	0.320	
FEB	7.562	0.261	0.348	
MAR	7.887	0.254	0.299	
APR	7.283	0.243	0.305	
MAY	7.754	0.250	0.358	
JUN	8.476	0.283	0.403	
JUL	7.852	0.253	0.359	
AUG	7.200	0.232	0.342	
SEP	6.094	0.203	0.339	
OCT	4.370	0.182	0.463	
NOV	3.628	0.213	0.367	
DEC	8.001	0.258	0.316	
TOTAL	83.989	/////	/////	/////
AVG.	/////	0.229	/////	/////
MAX.	/////	/////	0.463	

FLOWS

PROJECT L'Original

MONTH	TOTAL FLOW Mil. Gal.	AVG DAY M.G.D.	MAX DAY M.G.D.	PEAK RATE M.G.D.
JAN	1.433	0.046	0.094	
FEB	1.705	0.074	0.172	
MAR	1.844	0.059	0.174	
APR	1.918	0.101	0.245	
MAY	o/s			
JUN	2.018	0.106	0.397	
JUL	2.027	0.065	0.086	
AUG	2.202	0.071	0.085	
SEP	1.796	0.060	0.106	
OCT	2.721	0.088	0.118	
NOV	1.774	0.059	0.061	
DEC	1.792	0.058	0.065	
TOTAL	21.230	/////	/////	/////
AVG.	/////	0.063	/////	/////
MAX	/////	/////	0.397	

PROJECT Merrickville

MONTH	TOTAL FLOW Mil. Gal.	AVG DAY M.G.D.	MAX DAY M.G.D.	PEAK RATE M.G.D.
JAN	3.434	0.111	0.135	
FEB	2.683	0.093	0.143	
MAR	3.355	0.108	0.203	
APR	3.090	0.103	0.135	
MAY	1.197	0.039	0.059	
JUN	1.687	0.056	0.112	
JUL	1.806	0.058	0.060	
AUG	1.686	0.054	0.080	
SEP	1.693	0.056	0.069	
OCT	1.746	0.056	0.079	
NOV	1.694	0.056	0.067	
DEC	1.746	0.056	0.075	
TOTAL	25.817	/////	/////	/////
AVG.	/////	0.071	/////	/////
MAX.	/////	/////	0.203	

FLOWS

PROJECT Plantagenet

MONTH	TOTAL FLOW Mil. Gal.	AVG DAY M.G.D.	MAX DAY M.G.D.	PEAK RATE M.G.D.
JAN	0.623	0.020		
FEB	1.246	0.043		
MAR	0.119	0.004		
APR	0.063	0.002		
MAY	0.101	0.003		
JUN	0.240	0.008		
JUL	0.483	0.016		
AUG	1.920	0.062		
SEP	0.606	0.020		
OCT	0.064	0.002		
NOV	N/A			
DEC	N/A			
TOTAL		/////	/////	/////
AVG.	/////	0.018	/////	/////
MAX.	/////	/////		

PROJECT Vankleek Hill

MONTH	TOTAL FLOW Mil. Gal.	AVG DAY M.G.D.	MAX DAY M.G.D.	PEAK RATE M.G.D.
JAN				
FEB				
MAR	2.370	0.139	0.233	
APR	3.203	0.160	0.328	
MAY	3.407	0.170	0.387	
JUN	3.392	0.117	0.406	
JUL	5.447	0.176	0.203	
AUG	2.880	0.093	0.077	
SEP	1.962	0.065	0.141	
OCT	2.003	0.065	0.500	
NOV	3.097	0.103	0.358	
DEC	2.701	0.208	0.256	
TOTAL		/////	/////	/////
AVG.	/////	0.099	/////	/////
MAX.	/////	/////	0.500	

FLOWS

PROJECT Wellington

MONTH	TOTAL FLOW Mil. Gal.	AVG DAY M.G.D.	MAX DAY M.G.D.	PEAK RATE M.G.D.
JAN	1.842	0.059	0.098	
FEB	1.738	0.060	0.079	
MAR	1.747	0.056	0.078	
APR	1.728	0.058	0.120	
MAY	1.734	0.056	0.104	
JUN	2.173	0.072	0.119	
JUL	1.651	0.053	0.173	
AUG	1.544	0.050	0.101	
SEP	1.626	0.054	0.101	
OCT	N/A			
NOV	N/A			
DEC	N/A			
TOTAL		/////	/////	/////
AVG.	/////	0.058	/////	/////
MAX.	/////	/////	0.173	

PROJECT Westport

MONTH	TOTAL FLOW Mil. Gal.	AVG DAY M.G.D.	MAX DAY M.G.D.	PEAK RATE M.G.D.
JAN	1.579	0.051	0.080	
FEB	1.588	0.055	0.106	
MAR	1.613	0.052	0.063	
APR	1.459	0.049	0.071	
MAY	1.539	0.050	0.058	
JUN	1.831	0.061	0.083	
JUL	1.787	0.058	0.080	
AUG	1.621	0.052	0.078	
SEP	1.095	0.035	0.048	
OCT	0.964	0.031	0.042	
NOV	0.888	0.030	0.038	
DEC	0.952	0.031	0.037	
TOTAL	16.916	/////	/////	/////
AVG.	/////	0.046	/////	/////
MAX.	/////	/////	0.106	

FLOWS

PROJECT Winchester

MONTH	TOTAL FLOW Mil. Gal.	AVG DAY M.G.D.	MAX DAY M.G.D.	PEAK RATE M.G.D.
JAN	6.949	0.224	0.268	
FEB	6.262	0.223	0.263	
MAR	6.889	0.222	0.260	
APR	6.073	0.202	0.245	
MAY	5.732	0.184	0.237	
JUN	6.673	0.222	0.238	
JUL	5.693	0.184	0.221	
AUG	5.965	0.192	0.228	
SEP	6.399	0.213	0.233	
OCT	6.440	0.208	0.236	
NOV	5.999	0.200	0.234	
DEC	6.343	0.205	0.240	
TOTAL	75.418	/////	/////	/////
AVG.	/////	0.206	/////	/////
MAX.	//////	/////	0.268	

PROJECT _____

MONTH	TOTAL FLOW Mil. Gal.	AVG DAY M.G.D.	MAX DAY M.G.D.	PEAK RATE M.G.D.
JAN				
FEB				
MAR				
APR				
MAY				
JUN				
JUL				
AUG				
SEP				
OCT				
NOV				
DEC				
TOTAL		/////	/////	/////
AVG.	/////		/////	/////
MAX.	//////	/////		

REGION 5

NORTHEASTERN

FLOWS

PROJECT Black River - Matheson

MONTH	TOTAL FLOW Mil Gal	AVG DAY M.G.D.	MAX DAY M.G.D.	PEAK RATE M.G.D.
JAN	N/A			
FEB	N/A			
MAR	N/A			
APR	N/A			
MAY	N/A			
JUN	N/A			
JUL	N/A			
AUG	N/A			
SEP	N/A			
OCT	N/A			
NOV	N/A			
DEC	N/A			
TOTAL	N/A	/////	/////	/////
AVG.	/////		/////	/////
MAX	/////	/////		

PROJECT _____

MONTH	TOTAL FLOW Mil. Gal.	AVG DAY M.G.D.	MAX DAY M.G.D.	PEAK RATE M.G.D.
JAN				
FEB				
MAR				
APR				
MAY				
JUN				
JUL				
AUG				
SEP				
OCT				
NOV				
DEC				
TOTAL		/////	/////	/////
AVG.	/////		/////	/////
MAX	/////	/////		

TREATMENT DATA

MONTH	COMBINED		WELL "A"		WELL "B"		WELL "C"	
	TOTAL FLOW million gallons	AVERAGE DAY mil. gal.	TOTAL FLOW million gallons	CHLORINE USED pounds	TOTAL FLOW million gallons	CHLORINE USED pounds	TOTAL FLOW million gallons	CHLORINE USED pounds
JAN	33.287	1.07	1.38	9	5.35	16	9.45	43
FEB	31.898	1.10	2.50	19	3.40	8	9.50	29
MAR	34.714	1.12	2.90	19	3.98	16	8.21	32
APR	35.143	1.17	4.15	26	4.98	0	5.94	24
MAY	39.928	1.28	4.47	31	5.37	0	6.12	26
JUNE	53.100	1.77	6.05	39	7.82	17	9.45	50
JULY	51.862	1.67	6.67	43	8.08	29	9.48	30
AUG	51.228	1.65	5.87	43	8.48	37	8.52	38
SEPT	43.580	1.45	4.97	36	6.95	25	7.30	33
OCT	43.341	1.39	5.53	32	6.41	13	6.81	31
NOV	39.523	1.31	5.10	29	5.90	24	5.86	22
DEC	41.412	1.33	4.90	22	6.34	23	6.12	20
TOTAL	499.016		54.49	348	73.06	208	92.76	378
AVG.	41.58	1.36		9.5 lb./day		5.7 lb./day		1.0 lb./day

TREATMENT DATA

MONTH	WELL "D"		WELL "E"		WELL "F"		BACTERIOLOGICAL SAMPLING			
							RAW		DISTRIBUTION SYSTEM	
	TOTAL FLOW million gallons	CHLORINE USED pounds	TOTAL FLOW million gallons	CHLORINE USED pounds	TOTAL FLOW million gallons	CHLORINE USED pounds	No. OF SAMPLES TAKEN	No. WITH COLI PRESENT	No. OF SAMPLES TAKEN	No. WITH COLI PRESENT
JAN	3.94	8	9.20	37	3.95	6	6		1	
FEB	8.47	28	2.70	9	5.30	9	6		1	
MAR	8.31	33	5.79	21	5.50	12	6		1	
APR	4.46	20	7.32	25	8.27	22	6		2	1
MAY	4.46	23	7.97	31	11.53	29				
JUNE	6.28	32	12.67	42	10.82	32	6		1	
JULY	6.40	20	10.73	34	10.49	35	6		1	
AUG	5.94	23	12.14	46	10.25	35	6		1	
SEPT	5.93	25	9.18	35	9.23	30	6		1	
OCT	5.79	24	9.39	35	9.37	34	6		1	
NOV	5.47	22	8.77	32	8.39	24	6		1	
DEC	5.89	24	9.33	45	8.80	33	5		1	
TOTAL	71.34	282	105.19	392	101.90	301	65		12	1
AVG		7.7 lb./day		1.1 lb./day		8.2 lb./day				

FLOWS

PROJECT Blind River

MONTH	TOTAL FLOW Mil. Gal.	AVG DAY M.G.D.	MAX DAY M.G.D.	PEAK RATE M.G.D.
JAN	2.76	0.089	0.100	
FEB	2.82	0.097	0.153	
MAR	2.23	0.072	0.087	
APR	1.86	0.062	0.116	
MAY	1.68	0.054	0.068	
JUN	1.27	0.042	0.054	
JUL	1.39	0.045	0.068	
AUG	2.60	0.084	0.156	
SEP	2.01	0.067	0.082	
OCT	1.90	0.061	0.130	
NOV	1.71	0.057	0.091	
DEC	1.38	0.044	0.051	
TOTAL	23.61	/////	/////	/////
AVG.	/////	0.065	/////	/////
MAX.	/////	/////	0.156	

PROJECT Fauquier Twp.

MONTH	TOTAL FLOW Mil. Gal.	AVG DAY M.G.D.	MAX DAY M.G.D.	PEAK RATE M.G.D.
JAN	1.66	0.053	0.070	
FEB	1.55	0.053	0.064	
MAR	1.64	0.053	0.079	
APR	1.76	0.059	0.077	
MAY	2.04	0.069	0.098	
JUN	1.88	0.062	0.077	
JUL	1.65	0.053	0.080	
AUG	1.64	0.053	0.076	
SEP	1.58	0.052	0.078	
OCT	1.60	0.051	0.071	
NOV	1.55	0.052	0.063	
DEC	1.50	0.048	0.058	
TOTAL	20.05	/////	/////	/////
AVG.	/////	0.055	/////	/////
MAX.	/////	/////	0.098	

FLOWS

PROJECT North Himsworth (Callander)

MONTH	TOTAL FLOW Mil. Gal.	AVG DAY M.G.D.	MAX DAY M.G.D.	PEAK RATE M.G.D.
JAN	0.82	0.027	0.031	
FEB	0.82	0.028	0.032	
MAR	0.86	0.028	0.030	
APR	0.78	0.026	0.033	
MAY	0.75	0.025	0.034	
JUN	0.79	0.026	0.028	
JUL	1.24	0.040	.038/.026	
AUG	1.10	0.035	.032/.020	
SEP	1.03	0.034	.030/.016	
OCT	1.01	0.033	0.049	
NOV	0.93	0.031	0.049	
DEC	1.03	0.033	0.038	
TOTAL	11.21	/////	/////	/////
AVG.	/////	0.031	/////	/////
MAX.	//////	/////	.038/.026	

PROJECT Warren (Ratter & Dunnett)

MONTH	TOTAL FLOW Mil. Gal.	AVG DAY M.G.D.	MAX DAY M.G.D.	PEAK RATE M.G.D
JAN	1.21	0.039	0.060	
FEB	1.40	0.048	0.138	
MAR	1.19	0.038	0.049	
APR	1.11	0.037	0.048	
MAY	1.23	0.039	0.052	
JUN	1.66	0.055	0.082	
JUL	1.63	0.052	0.073	
AUG	1.60	0.052	0.078	
SEP	1.25	0.042	0.069	
OCT	1.27	0.041	0.053	
NOV	1.27	0.042	0.061	
DEC	1.26	0.040	0.058	
TOTAL	16.11	/////	/////	/////
AVG.	/////	0.044	/////	/////
MAX.	//////	/////	0.138	