WATER COMMISSION

Kentville

2021 Annual Report on Town of Kentville Municipal Drinking Water

KENTVILLE WATER COMMISSION: JIM RAFUSE, LEROY DILLMAN & DAVID BELL

SUBMITTED TO NOVA SCOTIA DEPARTMENT OF ENVIRONMENT

Contents

PART 1 - STANDARD SUBMISSIONS

Has the Utility submitted following updates for the next year:

Required Submission	Yes	No	N/A
Contingency Plan	X		
Notification Procedure	X		
Annual Sampling Plan (including sampling points location)	X		
QA/QC	X		
Source Water Protection Plan	X		
Lab Information	X		
Operations Manual	X		
Staff List and certification	X		

PART 2 - WATER TREATMENT PLANT MONITORING

WATER TREATMENT

Table 1. Raw water flow - All Sources

Month	PROSPECT AVE Monthly Volume (m^3)	MITCHELL AVE. Monthly Volume (m^3)	TOTAL Monthly Volume (m^3)
January	101,604	3,676	105,280
February	93,906	2,512	96,418
March	107,748	6,269	114,017
April	93,390	17,433	110,823
May	102,041	19,412	121,453
June	112,133	20,956	133,089
July	100,124	18,509	100,142
August	97,293	19,041	116,334
September	85,548	17,560	103,108
October	79,705	17,718	97,423
November	74,467	16,717	91,184
December	78,034	15,590	93,624
Total for the year	**1,125,993**	**175,393**	**1,282,895**

Table 2. Raw water flow - East End Well Pump # 1 (aka Mitchell East No. 1)

Month	Total Monthly Volume (m^3)	Max Pumping Rate (3-day)(m^3/h)
January	15,242	42
February	13,468	44
March	15,083	42
April	14,609	42
May	14,760	66
June	16,952	45
July	14,790	45
August	14,134	45
September	13,437	52
October	14683	46
November	14,057	46
December	14,429	45
Total for the year	**175,644**	-
Maximum month	**16,952**	**66**
Average	**14,637**	**47**
Water withdraw Approval No 2003-037109-A01	Withdrawal limit volume: Annual 644,911.200 m^3 30 day 53,006.400 m^3 Withdrawal limit rate: 81.84 m^3/h	

Comments:

Table 3. Raw water flow - East End Well Pump # 2 (aka Mitchell East No. 2)

Month	Total Monthly Volume (m^3)	Max Pumping Rate (3-day)(m^3/h)
January	19,523	54
February	17,512	55
March	19,253	55
April	17,674	55
May	19030	54
June	22,013	57
July	18,155	55
August	18,236	54
September	16,819	54
October	15,948	57
November	15,831	60
December	16421	55
Total for the year	**216,415**	-
Maximum month	**22,013**	**60**
Average	**18,035**	**55**
Water withdraw Approval No 2003-037109-A01	Withdrawal limit (volume): Annual 477,770.400 m^3 30 day 39,268.800 m^3 Withdrawal limit (rate): 65.46 m^3/h	

Comments:

Table 4. Raw water flow - Bonavista

Month	Total Monthly Volume (m^3)	Max Pumping Rate (3-day)(m^3/h)
January	16,297	53
February	1,782	53
March	5,630	54
April	No Flow	0
May	No Flow	0
June	9,078	50
July	16,060	45
August	12,592	44
September	10,177	44
October	8,225	44
November	6,956	44
December	7,603	44
Total for the year	**94,400**	-
Maximum month	**16,297**	**50**
Average	**7,867**	**44**
Water withdraw Approval No 2003-037109-A01	Withdrawal limit (volume): Annual 239,148.000 m^3 30 day 19,656.000 m^3 Withdrawal limit (rate): 32.7 m^3/h	

Comments: The pumping rates from January to March exceed the approved value, however higher rates were needed to compensate for 2 wells which were not in operation.

Table 5. Raw water flow - West End Well Pump # 1 (aka West End No. 1)

Month	**Total Monthly Volume (m^3)**	**Max Pumping Rate (3-day)(m^3/h)**
January	17,082	53
February	26,770	52
March	32,009	53
April	25,465	52
May	30,301	52
Jun	22.013	57
July	16038	52
August	18,407	50
September	12,579	51
October	10,034	52
November	8,440	52
December	9,353	54
Total for the year	**206,500**	-
Maximum month	**32,009**	**57**
Average	**17,208**	**52**
Water withdraw Approval No 2003-037109-A01	Withdrawal limit (volume): Annual 573,429.600 m^3 30 day 47,131.200 m^3 Withdrawal limit (rate): ~76.4 m^3/h	

Comments:

Table 6. Raw water flow - West End Well Pump # 2 (aka West End No. 2)

Month	Total Monthly Volume (m^3)	Max Pumping Rate (3-day)(m^3/h)
January	30,667	56
February	32,238	55
March	34,420	55
April	32,986	57
May	34,038	56
June	34,340	58
July	35,903	56
August	35,171	56
September	30,017	57
October	28,958	60
November	27,940	57
December	29,337	56
Total for the year	**386,015**	-
Maximum month	**35,903**	**60**
Average	**32,168**	**57**
Water withdraw Approval No 2003-037109-A01	Withdrawal limit (volume): Annual 573,429.600 m^3 30 day 47,131.200 m^3 Withdrawal limit (rate): ~76.4 m^3/h	

Comments: The pumping rates from January to March exceed the approved value, however higher rates were needed to compensate for 2 wells which were not in operation.

Table 7. Raw water flow - Mitchell Ave No. 1D (previously Mitchell Ave. Well Pump #1A)

Month	**Total Monthly Volume (m^3)**	**Max Pumping Rate (3-day)(m^3/h)**
January	1,782	34
February	1,023	32
March	3,621	44
April	9,170	41
May	10,698	40
June	10,343	40
July	9,570	40
August	9,250	39
September	8,498	38
October	8,502	40
November	8,376	38
December	7,610	38
Total for the year	**88,443**	-
Maximum month	**10,698**	**44**
Average	**7,370**	**39**
Water withdraw Approval No 2003-037109-A01	Withdrawal limit (volume): Annual 329,148.000 m^3 30 day 27,053.250 m^3 Withdrawal limit (rate): ~90.0 m^3/h	

Comments:

Table 8. Raw water flow - Mitchell Ave. Well Pump # 2 (previously Mitchell Ave No. 2)

Month	**Total Monthly Volume (m^3)**	**Max Pumping Rate (3-day)(m^3/h)**
January	2,644	45
February	1,473	36
March	3,010	40
April	8,251	41
May	8,958	41
June	10,343	40
July	9,179	40
August	10,062	43
September	9,014	40
October	9,216	42
November	8,342	40
December	7,980	40
Total for the year	**88,472**	-
Maximum month	**10,343**	**45**
Average	**7,372**	**40**
Water withdraw Approval No 2003-037109-A01	Withdrawal limit (volume): Annual 315,360.000 m^3 30 day 25,920.000 m^3 Withdrawal limit (rate): ~47.1 m^3/h	

Comments: The pumping rates from January to March exceed the approved value, however higher rates were needed to compensate for 2 wells which were not in operation.

Table 9. Filtered water turbidity Kentville is not required to filter raw water

Table 10. Well water turbidity is not sampled from the withdrawal wells

Table 11. Chlorine - Prospect Tank (leaving treatment plant or well)

Month	Chlorine (Disinfectant residual) (mg/l)			CT value
	Minimum this month	How many times below Approval limit (0.2 mg/L)	Maximum this month	How many times $CT_{achieved}$ was less than $CT_{required}$
January	0.90	0	0.93	0
February	0.71	0	0.93	0
March	0.89	0	0.93	0
April	0.88	0	0.93	0
May	0.89	0	0.94	0
June	0.89	0	0.94	0
July	0.89	0	0.94	0
August	0.89	0	0.93	0
September	0.89	0	0.94	0
October	0.75	0	0.94	0
November	0.89	0	0.92	0
December	0.77	0	0.93	0
If Approval Limits were exceeded provide date of occurrence and date when Department was notified:				
If CT requirements were not met provide date of occurrence and date when Department was notified:				
NOTE: CT values must be calculated daily, or minimum operational conditions must be monitored daily and records kept by Approval Holder				
MINIMUM OPERATIONAL PARAMETERS TO PROVIDE REQUIRED CT (CT calculations for "worst case scenario" must be provided to Department)				
Peak Hourly Flow			227 m^3	
Temperature at CT control Point			8 °C	
Minimum residual at CT control Point			0.50 mg/l	
pH at CT control Point			7.37 to 8.06	
Water level in the tank during peak hourly flow			90%	

Table 12. Chlorine Disinfection – Kentville Business Park ("Kentville Chrysler" site)

Month	Chlorine (Disinfectant residual) (mg/l)			CT value
	Minimum this month	How many times below Approval limit (0.2 mg/L)	Maximum this month	How many times $CT_{achieved}$ was less than $CT_{required}$
January	0.80	0	0.90	0
February	0.82	0	0.87	0
March	0.81	0	0.93	0
April	0.79	0	0.93	0
May	0.84	0	0.94	0
June	0.88	0	0.94	0
July	0.81	0	0.93	0
August	0.85	0	0.85	0
September	0.88	0	0.93	0
October	0.81	0	0.94	0
November	0.89	0	0.94	0
December	0.89	0	0.93	0
If CT requirements were not met provide date of occurrence and date when Department was notified:				
NOTE: CT values must be calculated daily, or minimum operational conditions must be monitored daily and records kept by Approval Holder				
MINIMUM OPERATIONAL PARAMETERS TO PROVIDE REQUIRED CT (CT calculations for "worst case scenario" must be provided to Department)				
Peak Hourly Flow			227 m^3	
Temperature at CT control Point			8 °C	
Minimum residual at CT control Point			0.70	
pH at CT control Point			7.37 to 8.08	
Water level in the tank during peak hourly flow			90%	

Table 13. Bacteriological quality Prospect Avenue (leaving treatment plant or GUDI well) - not required

Table 14. Bacteriological quality Mitchell Avenue (leaving treatment plant or GUDI well) - not required

Table 15. Fluoride

Month	Minimum this month (mg/l)	Maximum this month (mg/l)
January	0.72	0.80
February	0.60	0.90
March	0.71	0.80
April	0.67	0.77
May	0.63	0.73
June	0.62	0.70
July	0.62	0.69
August	0.60	0.69
September	0.60	0.67
October	0.64	0.68
November	0.67	0.95
December	0.65	0.74
If exceeded Approval limits provide date of occurrence and date when Department was notified:		
Action taken:		

Table 16. Aluminum - Kentville does not use aluminum-based coagulants

Table 17. pH - Prospect Raw Water.

Month	Raw water inlet ("Prospect Raw")		CT Control Point ("Prospect Tank")	
	Minimum this month	Maximum this month	Minimum this month	Maximum this month
January	6.58	6.96	7.47	7.80
February	6.61	6.96	7.43	7.67
March	6.54	6.99	7.40	7.80
April	6.58	6.93	7.48	7.67
May	6.61	7.56	7.40	7.85
June	6.39	7.51	7.44	7.68
July	6.53	6.93	7.38	7.70
August	6.23	6.90	7.40	7.80
September	6.30	6.75	7.36	7.75
October	6.30	6.74	7.40	7.76
November	6.24	6.65	7.43	7.85
December	6.30	6.80	7.48	7.84
Comments:				

Table 18. pH - Mitchell Avenue Raw Water.

Month	Raw water inlet ("Mitchell Raw")		CT Control Point ("Kentville Chrysler")	
	Minimum this month	Maximum this month	Minimum this month	Maximum this month
January	6.50	7.67	7.52	7.86
February	6.53	7.68	7.46	7.78
March	6.63	7.72	7.40	7.83
April	6.38	7.67	7.38	7.78
May	6.35	7.56	7.42	7.93
June	6.39	7.51	7.40	7.80
July	6.35	7.61	7.44	7.86
August	6.19	7.90	7.40	7.80
September	6.06	7.49	7.35	7.80
October	6.05	7.56	7.44	7.99
November	6.19	7.51	7.53	7.91
December	6.06	7.49	7.50	7.87
Comments:				

Table 19. Guidelines for Monitoring Public Drinking Water Supplies (Section 33 of Regulations).
See Part 3 for laboratory results **(required for 2021)**

Parameter	Health based guideline (mg/l)	AO [or OG] (mg/l)	Raw (maximum this year)	Treated (maximum this year)	Date	Location
Alkalinity	-	-	72 mg/l	71 mg/l	NOV 03,2021	D.E Hiltz connector road, Mitchell well
Aluminum	0.1/0.2	2900, 100 OG AO	<5 ug/l	<5 ug/l	Nov 03,2021	Prospect, DE hiltz connector, Mitchell well, Bonavista well, West end Well.
Ammonia	-	-	<0.03 mg/l	<0.03 mg/l	NOV 03,2021	Prospect, DE hiltz connector, Mitchell well, Bonavista well, West end Well.
Antimony	0.006	6	<2 ug/l	<2 ug/l	NOV 03,2021	Prospect, DE hiltz connector, Mitchell well, Bonavista well, West end Well.
Arsenic	0.010	10	<2 ug/l	3 ug/l	NOV 03,2021	D.E Hiltz connector road, Mitchell well
Barium	1	2000	40 ug/l	27 ug/l	NOV 03,2021	D.E Hiltz connector road, Mitchell well
Boron	5	-	14 ug/l	11 ug/l	NOV 03,2021	D.E Hiltz connector road, Mitchell well
Cadmium	0.005	7	<0.09 ug/l	<0.09 ug/l	NOV 03,2021	Prospect, DE hiltz connector, Mitchell well, Bonavista well, West end Well.
Calcium	-	-	35.3 mg/l	26.9 mg/l	NOV 03,2021	Prospect, East end Well #2
Chloride	-	<250	145 mg/l	102 mg/l	NOV 03,2021	DE hiltz connector, Mitchell well

Parameter	Health based guideline (mg/l)	AO [or OG] (mg/l)	Raw (maximum this year)	Treated (maximum this year)	Date	Location
Chromium	0.05	50	<1 ug/l	<1 ug/l	NOV 03,2021	Prospect, DE hiltz connector, Mitchell well, Bonavista well, West end Well.
Colour	-	<15	<5 TCU	<5 TCU	NOV 03,2021	Prospect, DE hiltz connector, Mitchell well, Bonavista well, West end Well.
Conductivity	Umho/cm	-	625 umho/cm	589 umho/cm	NOV 03,2021	DE hiltz connector, Mitchell well
Copper	-	<1.0	22 ug/l	7 ug/l	NOV 03,2021	Prospect, East end Well #2
Fluoride	1.5	-	0.12 mg/l	0.72 mg/l	NOV 03,2021	prospect, West end well #2
Hardness	-	-	127 mg/l	83.6 mg/l	NOV 03,2021	prospect, mitchell well #2
Iron	-	<0.3	96 ug/l	<50 ug/l	NOV 03,2021	Prospect, DE hiltz connector, East end Well #2
Lead	0.010	-	8.7 ug/l	<0.5 ug/l	NOV 03,2021	Prospect, DE hiltz connector, East end Well #2
Magnesium	-	-	5.3 mg/l	4 mg/l	NOV 03,2021	Prospect, DE hiltz connector, East end Well #2
Manganese	-	<0.05	<0.2 ug/l	<0.2 ug/l	NOV 03,2021	Prospect, DE hiltz connector, Mitchell well, Bonavista well, West end Well.
Nitrate - nitrogen	10	-	1.02 mg/l	1.12 mg/l	NOV 03,2021	DE hiltz connector, East end Well #2
pH	-	6.5-8.5	7.97	7.95	NOV 03,2021	DE hiltz connector, mitchell well #2

Parameter	Health based guideline (mg/l)	AO [or OG] (mg/l)	Raw (maximum this year)	Treated (maximum this year)	Date	Location
Potassium	-	-	2.8 mg/l	2.4 mg/l	NOV 03,2021	DE hiltz connector, Mitchell well, East end well #2
Selenium	0.05	-	<0.1 ug/l	<0.1 ug/l	NOV 03,2021	Prospect, DE hiltz connector, Mitchell well, Bonavista well, West end Well.
Sodium	-	<200	74.4 mg/l	70.4 mg/l	NOV 03,2021	DE hiltz connector, mitchell well #1
Sulphate	-	<500	19mg/l	17 mg/l	NOV 03,2021	DE hiltz connector, mitchell well #1
Total Dissolved Solids	-	<500	N/A			
Total Organic Carbon	-	-	<1 mg/l	<1 mg/l	NOV 03,2021	
Turbidity	See Approval	-	1.1 ntu	0.5 ntu	NOV 03,2021	DE hiltz connector, East end well #2
Uranium	0.02	-	1.2 ug/l	0.4 ug/l	NOV 03,2021	DE hiltz connector, mitchell well #2
Zinc	-	<5.0	68 ug/l	14 ug/l	NOV 03,2021	DE hiltz connector, East end well #2
Has any of the parameter exceeded Guidelines No.						
If Yes provide date of occurrence and date when Department was notified:						
Action taken:						
Certified Lab: AGAT Laboratories						

Table 20. Prospect Avenue Raw Water turbidity from distribution points

Month	Minimum NTU	Maximum NTU
January	0.10	0.15
February	0.12	0.21
March	0.9	0.21

April	0.12	0.21
May	0.12	0.20
June	0.07	0.20
July	0.10	0.20
August	0.12	0.20
September	0.12	0.21
October	0.14	0.20
November	0.08	0.22
December	0.14	0.21

Table 21. Mitchell Avenue Raw Water turbidity

	Minimum NTU	Maximum NTU
January	0.15	0.28
February	0.19	0.29
March	0.16	0.27
April	0.19	0.28
May	0.12	0.26
June	0.11	0.26
July	0.09	0.26
August	0.14	0.26
September	0.19	0.26
October	0.13	0.28
November	0.16	0.27
December	0.17	0.27

WASTE TREATMENT

Waste water discharge – This does not apply to the Kentville Water Utility

PART 3 - WATER DISTRIBUTION SYSTEM MONITORING

Table 22 A. Distribution System Bacteriology and Disinfection Residual

Site : A	4 Locations: Public Works 875 West Main Street, Research Station, Belcher St. Booster Stn, Camp Aldershot,										
Month	*E.coli*				Total Coliforms				Free chlorine residual		
	Present	Absent	Total number of samples	% Absent	Present	Absent	Total number of samples	% Absent	Min mg/l	Max mg/l	No. below Approval Limits
January	0	16	4 samples X 4 weeks	100	0	16	4 X 4	100	0.76	0.85	0
February	0	16	4 X 4	100	0	16	4 X 4	100	0.71	0.86	0
March	0	20	5 X 4	100	0	20	5 X 4	100	0.76	0.86	0
April	0	16	4 X 4	100	0	16	4 X 4	100	0.77	0.86	0
May	0	16	4 X 4	100	0	16	4 X 4	100	0.80	0.88	0
June	0	20	5 X 4	100	0	20	5 X 4	100	0.82	0.86	0
July	0	20	5 X 4	100	0	20	5 X 4	100	0.76	0.86	0
August	0	20	5 X 4	100	0	20	5 X 4	100	0.69	0.84	0
September	0	16	4 X 4	100	0	16	4 X 4	100	0.68	0.86	0
October	0	16	4 X 4	100	0	16	4 X 4	100	0.72	0.86	0
November	0	20	5 X 4	100	0	20	5 X 4	100	0.76	0.86	0
December	0	16	4 X 4	1004	0	16	4X 4	100	0.66	0.86	0
If Approval limits exceeded, provide date of occurrence and date when epartment was notified: it has been stored in 200L drums for less than 1 month											

Table 22 B. Distribution System Bacteriology and Disinfection Residual

Site : B	**2 Locations: Kentville Chrysler, Scott Slipp Nissan both in the Kentville Business Park,**										
Month	***E.coli***				**Total Coliforms**				**Free chlorine residual**		
	Present	**Absent**	**Total number of samples**	**% Absent**	**Present**	**Absent**	**Total number of samples**	**% Absent**	**Min mg/l**	**Max mg/l**	**No. below 0.2 mg/l**
January	0	8	2 samples X 4 weeks	100	0	8	2 X 4	100	0.80	0.90	0
February	0	8	2 X 4	100	0	8	2 X 4	100	0.78	0.86	0
March	0	10	2 X 5	100	0	10	2 X 5	100	0.80	0.90	0
April	0	8	2 X 4	100	0	8	2 X 4	100	0.87	0.93	0
May	0	8	2 X 4	100	0	8	2 X 4	100	0.87	0.93	0
June	0	10	2 X 5	100	0	10	2 X 5	100	0.86	0.92	0
July	0	8	2 X 4	100	0	8	2 X 4	100	0.84	0.92	0
August	0	10	2 X 5	100	0	10	2 X 5	100	0.88	0.93	0
September	0	8	2 X 4	100	0	8	2 X 4	100	0.82	0.91	0
October	0	8	2 X 4	100	0	8	2 X 4	100	0.83	0.92	0
November	0	10	2 X 5	100	0	10	2 X 5	100	0.86	0.91	0
December	0	8	2 X 4	100	00	8	2 X 4	100	0.85	0.92	0
Was Ecoli or Total Coliform present in any sample this year?											
If Yes provide date of occurrence and date when Department was notifie: Action Taken:											

Table 22 C.

Site : C	**2 Locations: Prospect Reservoir and Black Rock Mechanical Resevoir (Kentville Business Park)**										
Month	***E.coli***				**Total Coliforms**				**Free chlorine residual**		
	Present	**Absent**	**Total number of samples**	**% Absent**	**Present**	**Absent**	**Total number of samples**	**% Absent**	**Min mg/l**	**Max mg/l**	**No. below 0.2 mg/l**
January	0	8	2 samples X 4weeks	100	0	8	2 X 4	100	0.80	0.91	0
February	0	8	2 X 4	100	0	8	2 X 4	100	0.80	0.93	0
March	0	10	2 X 5	100	0	10	2 X 5	100	0.84	0.93	0
April	0	8	2 X 4	100	0	8	2 X 4	100	0.89	0.94	0
May	0	8	2 X 4	100	0	8	2 X 4	100	0.90	0.94	0
June	0	10	2 X 5	100	0	10	2 X 5	100	0.88	0.94	0
July	0	8	2 X 4	100	0	8	2 X 4	100	0.91	0.94	0
August	0	10	2 X 5	100	0	10	2 X 5	100	0.90	0.93	0
September	0	8	2 X 4	100	0	8	2 X 4	100	0.90	0.94	0
October	0	8	2 X 4	100	0	8	2 X 4	100	0.90	0.94	0
November	0	10	2X 5	100	0	10	2 X 5	100	0.90	0.94	0
December	0	8	2 X 4	100	0	8	2 X 4	100	0.86	0.94	0
Was E.Coli or Total Coliform present in any sample this year No											
If Yes provide date of occurrence and date when Department was notified:											
Action taken:											

Table 23. Distribution System THM's – Kentville is only required to test for THM's once a year.

Month	Site A Location: Belcher Street Tank	Site B Location: Coldbrook Village Park	Site C Location:
	THM total mg/l	THM total mg/l	THM total mg/l
January			
February			
March			
April			
May			
June			
July			
August			
September 28, 2021	4	16	
October			
November			
December 20, 2021	1	15	
Annual Average			
Limits			
Comments:	*Quarterly to annual sampling was approved in 2018.*		

Table 24. Distribution System HAA5

Month	Site A Location: Kentville Chrysler	Site B Location: Belcher Street Tank	Site C Location:
	HAA5 total ug/l	HAA5 total ug/l	HAA5 total ug/l
January			
February			
March			
April			
May			
June			
July			
August			
September 28, 2021	<4.0	<4.0	
October			
November			
December 20, 2021	<4.0	<4.0	
Annual Average			
Limits			
Comments:	*Will request to move from quarterly to annual sampling of HAA5s in 2019.*		

Table 25. Distribution System Turbidity

Month	Site A - Public Works Location: 875 West Main Street		Site B – Kentville Chrysler Location: 800 Park Street		Site C – Chester Avenue Location: 6060 Hwy 12/Chester Avenue	
	min NTU	max NTU	min NTU	max NTU	min NTU	max NTU
January	0.10	0.19	0.08	0.20	0.09	0.17
February	0.09	0.19	0.09	0.20	0.09	0.19
March	0.10	0.18	0.08	0.22	0.10	0.19
April	0.10	0.22	0.10	0.19	0.06	0.19
May	0.12	0.20	0.10	0.40	0.11	0.19
June	0.12	0.19	0.11	0.19	0.07	0.19
July	0.09	0.20	0.07	0.19	0.08	0.18
August	0.12	0.19	0.09	0.19	0.11	0.18
September	0.12	0.19	0.08	0.20	0.11	0.19
October	0.14	0.21	0.08	0.19	0.10	0.19
November	0.10	0.21	0.11	0.21	0.10	0.20
December	0.13	0.21	0.13	0.19	0.12	0.19
If Approval limits were exceeded provide date of occurrence and date when Department was notified:						
Action taken:						

Month	Site D – Research Station Location: 32 Main Street		Site E – Town Hall Location: 354 Main Street		Site F – Belcher Street Booster Stn. Location: 259 Belcher Street	
	min NTU	max NTU	min NTU	max NTU	min NTU	max NTU
January	0.08	0.21	0.12	0.20	0.10	0.19
February	0.06	0.20	0.11	0.19	0.10	0.18
March	0.09	0.20	0.09	0.20	0.09	0.18
April	0.12	0.20	0.13	0.19	0.08	0.19
May	0.09	0.21	0.07	0.20	0.08	0.20
June	0.08	0.19	0.10	0.20	0.09	0.31
July	0.09	0.21	0.10	0.19	0.12	0.20
August	0.12	0.19	0.13	0.19	0.11	0.19
September	0.10	0.19	0.10	0.21	0.11	0.19
October	0.12	0.20	0.10	0.19	0.12	0.21
November	0.11	0.19	0.12	0.19	0.12	0.18
December	0.10	0.21	0.11	0.20	0.10	0.19
If Approval limits were exceeded provide date of occurrence and date when Department was notified:						
Action taken:						

Month	Site G – Medical Center Location: 81 Exhibition Street		Site H – Camp Aldershot Location: Lanzy Road		Site I – Scott Drive Sampling Station Location: Scott Drive	
	min NTU	max NTU	min NTU	max NTU	min NTU	Max NTU
January	0.10	0.19	0.08	0.20	0.12	0.21
February	0.09	0.20	0.08	0.19	0.12	0.20
March	0.09	0.21	0.08	0.19	0.10	0.19
April	0.11	0.19	0.10	0.20	0.11	0.21
May	0.07	0.20	0.09	0.21	0.10	0.20
June	0.08	0.21	0.07	0.19	0.11	0.20
July	0.12	0.20	0.06	0.19	0.10	0.20
August	0.09	0.20	0.10	0.20	0.07	0.20
September	0.11	0.20	0.10	0.20	0.12	0.21
October	0.14	0.19	0.11	0.23	0.12	0.23
November	0.14	0.19	0.11	0.21	0.11	0.20
December	0.14	0.20	0.12	0.21	0.12	0.22
If Approval limits were exceeded provide date of occurrence and date when Department was notified:						
Action taken:						

Month	Site J – Elizabeth Drive Sampling Station Location: Balsor Subdivision		Site K – Morris Crescent Sampling Station Location: Eaglecrest Subdivision			
	min NTU	max NTU	min NTU	max NTU	min NTU	Max NTU
January	0.09	0.20	0.10	0.20		
February	0.09	0.18	0.05	0.19		
March	0.06	0.20	0.09	0.21		
April	0.11	0.22	0.10	0.19		
May	0.11	0.22	0.10	0.19		
June	0.06	0.20	0.08	0.23		
July	0.05	0.19	0.06	0.19		
August	0.07	0.20	0.10	0.18		
September	0.10	0.20	0.11	0.19		
October	0.11	0.21	0.10	0.20		
November	0.09	0.19	0.12	0.19		
December	0.10	0.20	0.11	0.21		
If Approval limits were exceeded provide date of occurrence and date when Department was notified:						
Action taken:						

Table 26. Distribution System Lead, Copper, Date Sampled

Parameter	Unit	Mac	RDL
Lead	ug/L	5	0.5
Copper	ug/L	2000	2

Sample Address	Date Sampled	Total Lead	Total Copper
21 Oakdene Ave	2021-10-13	<0.5	18
29 Mitchell Ave	2021-10-14	<0.5	54
52 Grant Street	2021-10-13	<0.5	28
25 Caldwell Ave	2021-10-13	<0.5	51
18 Academy Street	2021-10-13	<0.5	87
11 Oakdene Terrace	2021-10-15	<0.5	26
40 Anderson Blvd	2021-10-13	<0.5	31
330 Cornwallis St.	2021-10-13	0.7	55
56 *Parkview Road*	*2021-10-13*	<0.5	141
259 Belcher Street	*2021-10-14*	<0.5	2
19 Condon Avenue	2021-10-15	1.5	51
45 Highland Avenue	2021-10-13	<0.5	66
875 West Main	2021-10-14	0.8	38
20 Grant Street	2021-10-14	0.6	34
6049 Hwy 12	2021-10-14	<0.5	16
90 Exhibition Street	2021-10-14	<0.5	8
32 Main Street	2021-10-14	<0.5	16
11 Kings Ride	2021-10-14	0.6	34
26 Coldbrook VPD	2021-10-14	<0.5	10
933 Park Street	2021-10-14	<0.5	19

95% Pass Rate

Table 27. Calcium, Manganese, Alkalinity, Conductivity

	Mitchell Avenue	Mitchell Avenue Raw	Prospect Avenue Reservoir Treated	Prospect Reservoir Raw	Chester Avenue Reservoir	Belcher Street Reservoir	Kentville Chrysler	Donald Hiltz Drive
May								
Total Iron	<50	<50	<50	<50	<50	<50	<50	<50
pH	7.59	7.74	7.69	6.94	7.68	7.71	7.56	7.54
Hardness	98.8	133	85.2	82.0	85.2	89.4	85.3	85.8
Langelier Index @ 20°C	-0.66	-0.36	-0.65	-1.66	-0.66	-0.61	-0.77	-0.79
Langelier Index @ 4°C	-0.98	-0.68	-0.97	-1.98	-0.98	-0.93	-1.09	-1.11
Saturation pH @ 20°C	8.25	8.10	8.34	8.60	8.34	8.32	8.33	8.33
Saturation pH @ 4°C	8.57	8.42	8.66	8.92	8.66	8.64	8.65	8.65
September								
Calcium	28.6	46.6	29.2	31.0	29.5	28.7	28.4	26.4
Manganese	<2	<2	<2	<2	<2	<2	<2	<2
Alkalinity as CaC03	71	69	68	50	68	69	71	70
Electrical Conductivity	541	372	439	355	453	452	518	502
December								
Calcium	30100	45100	28100	26900	29500	28800	26400	27100
Manganese	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Alkalinity as CaC03	72	72	68	39	69	70	71	71
Electrical Conductivity	570	366	481	467	480	480	556	557

Table 28. Storage tank chlorine residual

Month	Storage Tank Location Prospect Avenue ("Prospect Tank")			Storage Tank Location Kentville Business Park ("Kentville Chrysler")			
	Min mg/l	Max mg/l	Number of times residual was less than 0.2 mg/l	Min mg/l	Max mg/l	Number of times residual was less than 0.2 mg/l	
January	0.90	0.93	0	0.80	0.90	0	
February	0.89	0.93	0	0.82	0.87	0	
March	0.89	0.93	0	0.81	0.93	0	
April	0.88	0.93	0	0.79	0.93	0	
May	0.89	0.94	0	0.84	0.94	0	
June	0.89	0.94	0	0.88	0.94	0	
July	0.89	0.94	0	0.81	0.93	0	
August	0.89	0.93	0	0.85	0.93	0	
September	0.89	0.94	0	0.88	0.93	0	
October	0.75	0.94	0	0.81	0.94	0	
November	0.89	0.92	0	0.89	0.94	0	
December	0.77	0.93	0	0.89	0.93	0	
Action taken:							
Certified Lab:							

SOURCE WATER PROTECTION PLAN ANNUAL UPDATE CHECKLIST

Yearly review of the source water protection (SWP) plan is required. The review should consider questions including, but not limited, those listed below. Every five years, or whenever significant changes to the municipal water system or risks to its source occur, the municipal unit should consider revising the plan. Otherwise, updates may be added to the original source water protection plans in an appropriately identified appendix.

QUESTIONS TO CONSIDER IN ANNUAL UPDATE
How many source water committee meetings have been held in the past year? Have there been any changes to committee membership? **The Sourcewater Protection Advisory Group met times in 2021 (March, September, November and December). There has been changes to the committee membership.**
Have there been any changes made to the committee terms of reference? **There have been no changes made to the terms of reference for the Sourcewater Protection Advisory Group.**
Have changes to the system infrastructure been made (e.g. wells constructed or decommissioned)? **There have been no changes made to the system infrastructure.**
Have any new risks to the watershed or aquifer area been identified? For example: have new land uses which could impact the source water commenced (or existing uses changed or ceased) within the watershed or aquifer area? have recreational uses of concern continued, declined or increased with the past year within the watershed or aquifer area? **There have been no new risks identified for the protected aquifer area.**
If new risks have been identified, what risk reduction strategies will be employed? **n/a**
Have any accidents/emergencies not considered in the contingency plan occurred within the watershed or aquifer area within the past year? **There have been no accidents or emergencies in the aquifer area in 2021**
Has source water monitoring (differs from regulatory compliance monitoring) been undertaken? Please describe the results. **There has been no sourcewater monitoring in 2021.**
Has your contingency plan been reviewed and contact information updated? **The sourcewater protection plan contingency plan and contact information have been updated in 2018.**

DESCRIPTION OF ANY EMERGENCY AND UPSET CONDITIONS AND CORRECTIVE ACTION

No emergencies and no corrective action required.

RECORD OF ANY VIOLATIONS OF APPROVAL AND CORRECTIVE ACTIONS TAKEN:

There have been no violations of approvals for operation or for withdrawal.

SUMMARY OF COMPLAINTS RECEIVED AND CORRECTIVE ACTIONS:

There have not been complaints and no corrective action was required.

AUTHORIZATION

I certify that information provided in this report is a complete and accurate representation of Water System operation.

Offences under the Environment Act:

158 A person who

(a) knowingly provides false or misleading information pursuant to a requirement under this Act to provide information;
(b) provides false or misleading information pursuant to a requirement under this Act to provide information;
(c) does not provide information as required pursuant to this Act;
(d) hinders or obstructs an inspector or administrator who is exercising powers or carrying out duties, or attempting to do so, pursuant to this Act;
(e) knowingly contravenes a term or condition of an approval, an environmental assessment approval, a temporary approval, a certificate of variance or a certificate of qualification;

Name of the person in overall direct responsible charge:
David Bell, Engineer of Public Works Signature D.G. Bell

APPENDIX A: Health-related Guidelines for Canadian Drinking Water Quality (Section 35 of Regulations). *Next sample event, 2023.*

Parameter	Units	Maximum Acceptable Concentration	September 27, 2018								
			Prospect Tank	Donald Hiltz Connector	Mitchell #1 D	Mitchell #2 C	Bona-vista	West End #1	West End #2	Mitchell East #1	Mitchell East #2
Bacteria: 1) Total Coliforms 2) *E.coli*	cfu	None per 100 mL	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
Aldicarb	µg/L		<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15
Bendiocarb	µg/L		<2	<2	<2	<2	<2	<2	<2	<2	<2
Carbofuran	µg/L	90	<5	<5	<5	<5	<5	<5	<5	<5	<5
Carbaryl	µg/L	90	<5	<5	<5	<5	<5	<5	<5	<5	<5
Diuron	µg/L	150	<10	<10	<10	<10	<10	<10	<10	<10	<10
Diquat	µg/L	70	<1	<1	<1	<1	<1	<1	<1	<1	<1
Paraquat	ug/L	10	<1	<1	<1	<1	<1	<1	<1	<1	<1
Total Haloacetic Acids*	ug/L	80									
Chloroacetic Acid	ug/L	5	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7
Bromoacetic Acid	ug/L	120	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Dichloroacetic Acid	ug/L	0.9, 0.0003 AO	1.3	1.7	1.4	1.46	1.3	1.4	1.4	1.3	1.4
Dibromoacetic Acid	ug/L	100	<0.1	0.7	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Trichloroacetic Acid	ug/L	9	0.2	0.3	0.2	0.22	0.2	0.2	0.3	0.3	0.2
Bromochloroacetic Acid	%		<0.2	0.4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
2-Bromobutanoic acid	µg/L		109	110	121	117	106	119	127	104	109
Bromoxynil	µg/L	5	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Dicamba	µg/L	120	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,4-Dichlorophenol	µg/L	0.9, 0.0003 AO	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
2,4-D	µg/L	100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Diclofop-methyl	µg/L	9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dinoseb	µg/L		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MCPA	µg/L		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Pentachlorophenol	µg/L	0.06, 0.03 AO	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Picloram	µg/L	190	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,3,4,6-Tetrachlorophenol	µg/L	100, 1 AO	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,4,6-Trichlorophenol	µg/L	5, 2 AO	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Glyphosate	mg/L	280	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015
Aldrin	ug/L		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Dieldrin	ug/L		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Aldrin + Dieldrin	ug/L		<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07
Methoxychlor	µg/L		<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Phorate	µg/L	2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dimethoate	µg/L	20	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
Terbufos	µg/L	1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chlorpyrifos	µg/L	90	<1	<1	<1	<1	<1	<1	<1	<1	<1

Diazinon	µg/L	20	<1	<1	<1	<1	<1	<1	<1	<1	<1
Malathion	µg/L	190	<5	<5	<5	<5	<5	<5	<5	<5	<5
Parathion	µg/L		<1	<1	<1	<1	<1	<1	<1	<1	<1
Azinphos-methyl	µg/L	20	<2	<2	<2	<2	<2	<2	<2	<2	<2
Benzo(a)pyrene	ug/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Trifluralin	µg/L	45	<1	<1	<1	<1	<1	<1	<1	<1	<1
Simazine	µg/L	10	<1	<1	<1	<1	<1	<1	<1	<1	<1
Atrazine	µg/L	5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Atrazine + N-dealkylated metabolites **	µg/L	5									
Metribuzin	µg/L	80	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
Cyanazine	µg/L		<1	<1	<1	<1	<1	<1	<1	<1	<1
Metolachlor	µg/L	50	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11
Benzene	ug/L	5	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bromodichloromethane	ug/L		<0.2	1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bromoform	ug/L		<0.1	1.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Carbon Tetrachloride	ug/L	2	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform	ug/L		<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroethane	ug/L		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Dibromochloromethane	ug/L		<0.1	2.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1,2-Dichloroethane	ug/L	5	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
1,2-Dichlorobenzene	ug/L	200, 3 AO	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1,4-Dichlorobenzene	ug/L	5, 1 AO	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1,1-Dichloroethylene	ug/L	14	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Ethylbenzene	ug/L	2.4 AO	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorobenzene	ug/L	80, 30 AO	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Tetrachloroethylene	ug/L	30	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	ug/L		<0.2	0.21	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Trichloroethylene	ug/L	5	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Vinyl Chloride	ug/L	2	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Xylenes (Total)	ug/L	300 AO	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methylene Chloride (Dichloromethane)	ug/L	50	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Methyl-t-Butyl-Ether (MTBE)	ug/L	15 AO	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene-d8	%		115	85	94	95	97	96	78	76	94
4-Bromofluorobenzene	%		74	76	88	96	93	91	91	97	87
Total Aluminum	ug/L	100 OG AO	<10	<10	<10	<10	<10	<10	<10	<10	<10
Total Antimony	ug/L	6	<2	<2	<2	<2	<2	<2	<2	<2	<2
Total Arsenic	ug/L	10	<2	<2	<2	3	<2	<2	<2	<2	<2
Total Barium	ug/L	1000	31	36	46	14	12	32	32	36	23
Total Boron	ug/L	5000	12	14	14	8	7	9	11	14	8
Total Cadmium	ug/L	5	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total Chromium	ug/L	50	<2	<2	<2	<2	<2	<2	<2	<2	<2
Total Copper	ug/L	1000 AO	2	22	3	<2	3	5	3	3	3

Total Iron	ug/L	300 AO	<50	<50	63	<50	<50	<50	<50	<50	<50
Total Lead	ug/L	10	<0.5	5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Total Manganese	ug/L	50 AO	<2	<2	<2	<2	<2	<2	<2	<2	<2
Total Selenium	ug/L	10	<2	<2	<2	<2	<2	<2	<2	<2	<2
Total Uranium	ug/L	20	0.4	<0.1	<0.1	1.0	1.0	<0.1	<0.1	<0.1	0.1
Total Zinc	ug/L	5000 AO	14	<5	6	<5	<5	<5	<5	5	<5
Total Sodium	mg/L	200 AO	53.1	82.8	93.9	5.4	3.9	34.1	38.5	60.1	28.5
Mercury	ug/L	1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
pH		6.5-8.5 AO	7.98	8.02	6.78	8.04	8.04	7.55	7.54	6.99	7.57
Turbidity	NTU	0.1	1	0.7	1.3	0.9	0.5	0.5	1.7	0.4	0.8
True Color	TCU	15 AO	5	5	5	<5	<5	11	<5	5	<5
Chloride	mg/L	250 AO	68	96	152	45	22	57	63	89	58
Fluoride	mg/L	1.5	0.57	0.48	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12
Nitrate as N	mg/L	10	0.89	0.94	1.08	0.29	0.84	0.85	0.94	0.92	0.92
Sulphate	mg/L	500 AO	9	13	18	9	4	8	9	11	8
Sulphide	mg/L	0.05 AO	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Free Cyanide	mg/L	0.2	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Total Dissolved Solids	mg/L	500 AO	280	220	380	220	160	200	240	280	240
Bromate	mg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Chlorate	mg/L	1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Chlorite	mg/L	1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Chloramines - Total	mg/L	3.0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Radionuclides - Gross Alpha	Bq/L	0.5	<0.12	<0.16	<0.16	<0.10	0.12	<0.10	<0.10	<0.12	<0.10
Radionuclides - Gross Beta	Bq/L	1.0	0.17	0.10	0.17	0.07	0.08	0.06	<0.06	0.08	<0.06
Nitriloacetic Acid (NTA)	mg/L	0.4	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Microcystin - LR	ug/L	1.5	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
N-Nitrosodimethylamine (NDMA)	ug/L	0.04	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008

***** Total Haloacetic Acids were sampled at Kentville Chrysler and Belcher Street and both samples had <4.0 ug/L

****** Atrazine + N-dealkylated metabolites is a parameter that is not part of the pesticide suite analysis package and was not sampled.

PART 3 - WATER SAMPLE RESULTS

WATER
COMMISSION
Kentville

AGAT Laboratories

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CLIENT NAME: TOWN OF KENTVILLE
354 MAIN ST.
KENTVILLE, NS B4N1K6
(902) 679-2521
ATTENTION TO: Dave Bell
PROJECT: Quarterly
AGAT WORK ORDER: 21X847367
TRACE ORGANICS REVIEWED BY: Amy Hunter, Trace Organics Supervisor, B.Sc.
WATER ANALYSIS REVIEWED BY: Ashley Dussault, Report Writer
DATE REPORTED: Jan 10, 2022
PAGES (INCLUDING COVER): 10
VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (902) 468-8718

Notes

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Certificate of Analysis

AGAT WORK ORDER: 21X847367

PROJECT: Quarterly

CLIENT NAME: TOWN OF KENTVILLE

ATTENTION TO: Dave Bell

SAMPLING SITE:

SAMPLED BY:

Haloacetic Acids (water)

DATE RECEIVED: 2021-12-20

DATE REPORTED: 2022-01-10

			SAMPLE DESCRIPTION:	**Belcher Tank**	**Kentville Chrysler**
			SAMPLE TYPE:	**Water**	**Water**
			DATE SAMPLED:	**2021-12-20 09:35**	**2021-12-20 11:40**
Parameter	**Unit**	**G / S**	**RDL**	**3371391**	**3371410**
Chloroacetic Acid	ug/L		0.5	<0.5	<0.5
Bromoacetic Acid	ug/L		0.5	<0.5	<0.5
Dichloroacetic Acid	ug/L		0.5	0.7	0.9
Trichloroacetic Acid	ug/L		0.5	<0.5	<0.5
Bromochloroacetic Acid	ug/L		0.5	<0.5	<0.5
Dibromoacetic Acid	ug/L		0.5	0.9	1.1
Total Haloacetic Acids	ug/L		4.0	<4.0	<4.0
HAA5	ug/L		4.0	<4.0	<4.0
Surrogate	**Unit**	**Acceptable Limits**			
2-Bromobutanoic acid	%	70-130		118	109

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

3371391-3371410 HAA5 is a calculated parameter. The calculated parameter is non-accredited. The component parameters of the calculation are accredited.

Analysis performed at AGAT Halifax (unless marked by *)

Certified By:

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Certificate of Analysis

AGAT WORK ORDER: 21X847367

PROJECT: Quarterly

CLIENT NAME: TOWN OF KENTVILLE

ATTENTION TO: Dave Bell

SAMPLING SITE:

SAMPLED BY:

Trihalomethanes in Water

DATE RECEIVED: 2021-12-20

DATE REPORTED: 2022-01-10

		SAMPLE DESCRIPTION:		**Belcher Tank**	**Colbrook Village Park**
		SAMPLE TYPE:		**Water**	**Water**
		DATE SAMPLED:		**2021-12-20 09:35**	**2021-12-20 11:10**
Parameter	**Unit**	**G / S**	**RDL**	**3371391**	**3371403**
Chloroform	ug/L		1	<1	1
Bromodichloromethane	ug/L		1	<1	4
Dibromochloromethane	ug/L		1	1	6
Bromoform	ug/L		1	<1	4
Total Trihalomethanes	ug/L		1	1	15
Surrogate	**Unit**	**Acceptable Limits**			
Toluene-d8	%	60-140		90	90
4-Bromofluorobenzene	%	60-140		101	101

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

Analysis performed at AGAT Halifax (unless marked by *)

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Certificate of Analysis

AGAT WORK ORDER: 21X847367

PROJECT: Quarterly

CLIENT NAME: TOWN OF KENTVILLE

ATTENTION TO: Dave Bell

SAMPLING SITE:

SAMPLED BY:

AGAT Halifax - Total Copper + Lead

DATE RECEIVED: 2021-12-20

DATE REPORTED: 2022-01-10

				SAMPLE DESCRIPTION:	West End #1	East End #2
				SAMPLE TYPE:	Water	Water
				DATE SAMPLED:	2021-12-20 10:40	2021-12-20 10:50
Parameter	**Unit**	**G / S**	**RDL**		**3371411**	**3371412**
Total Copper	µg/L		0.8		1.4	1.8
Total Lead	µg/L		0.1		0.4	0.8

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

3371411-3371412 < - Values refer to Report Detection Limit.

Analysis performed at AGAT Calgary (unless marked by *)

Certified By:

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Certificate of Analysis

AGAT WORK ORDER: 21X847367

PROJECT: Quarterly

CLIENT NAME: TOWN OF KENTVILLE

ATTENTION TO: Dave Bell

SAMPLING SITE:

SAMPLED BY:

Alkalinity, Conductivity

DATE RECEIVED: 2021-12-20

DATE REPORTED: 2022-01-10

SAMPLE DESCRIPTION:				Prospect Raw	Prospect Treated	Chester Tank	Belcher Tank	Mitchell Raw	Mitchell Treated	Kentville Chrysler	Donald Hiltz Dr
SAMPLE TYPE:				Water	Water	Water	Water	Water	Water	Water	Water
DATE SAMPLED:				2021-12-20 08:35	2021-12-20 08:30	2021-12-20 09:05	2021-12-20 09:35	2021-12-20 10:30	2021-12-20 10:25	2021-12-20 11:40	2021-12-20 12:00
Parameter	Unit	G / S	RDL	3371371	3371385	3371386	3371391	3371400	3371401	3371410	3371413
Alkalinity as CaCO3	mg/L		5	39	68	69	70	72	72	71	71
Electrical Conductivity	umho/cm		1	467	481	480	480	366	570	556	557

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

Analysis performed at AGAT Halifax (unless marked by *)

Certified By: Ashley Dussault

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Certificate of Analysis

AGAT WORK ORDER: 21X847367

PROJECT: Quarterly

CLIENT NAME: TOWN OF KENTVILLE

ATTENTION TO: Dave Bell

SAMPLING SITE:

SAMPLED BY:

Metals - Total Manganese and Calcuim in Water (ug/L) (Halifax)

DATE RECEIVED: 2021-12-20

DATE REPORTED: 2022-01-10

SAMPLE DESCRIPTION:				Prospect Raw	Prospect Treated	Chester Tank	Belcher Tank	Mitchell Raw	Mitchell Treated	Kentville Chrysler	Donald Hiltz Dr
SAMPLE TYPE:				Water	Water	Water	Water	Water	Water	Water	Water
DATE SAMPLED:				2021-12-20 08:35	2021-12-20 08:30	2021-12-20 09:05	2021-12-20 09:35	2021-12-20 10:30	2021-12-20 10:25	2021-12-20 11:40	2021-12-20 12:00
Parameter	Unit	G / S	RDL	3371371	3371385	3371386	3371391	3371400	3371401	3371410	3371413
Total Manganese	µg/L		2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Total Calcium	µg/L		316	26900	28100	29500	28800	45100	30100	26400	27100

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: Ashley Dussault

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Quality Assurance

CLIENT NAME: TOWN OF KENTVILLE

AGAT WORK ORDER: 21X847367

PROJECT: Quarterly

ATTENTION TO: Dave Bell

SAMPLING SITE:

SAMPLED BY:

Trace Organics Analysis

RPT Date: Jan 10, 2022			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Haloacetic Acids (water)															
Chloroacetic Acid	1	3371391	< 0.5	< 0.5	NA	< 0.5	107%	70%	130%	81%	60%	130%	75%	60%	130%
Bromoacetic Acid	1	3371391	< 0.5	< 0.5	NA	< 0.5	94%	70%	130%	80%	60%	130%	84%	60%	130%
Dichloroacetic Acid	1	3371391	0.7	0.8	NA	< 0.5	92%	70%	130%	102%	60%	130%	99%	60%	130%
Trichloroacetic Acid	1	3371391	< 0.5	< 0.5	NA	< 0.5	85%	70%	130%	73%	60%	130%	85%	60%	130%
Bromochloroacetic Acid	1	3371391	< 0.5	< 0.5	NA	< 0.5	82%	70%	130%	115%	60%	130%	120%	60%	130%
Dibromoacetic Acid	1	3371391	0.9	0.8	NA	< 0.5	85%	70%	130%	117%	60%	130%	124%	60%	130%

Comments: If Matrix spike value is NA, the spiked analyte concentration was lower than that of the matrix contribution.
If RPD value is NA, the results of the duplicates are less than 5x the RDL and the RPD will not be calculated.

Trihalomethanes in Water															
Chloroform	1	3371091	23	23	0.0%	< 1	110%	50%	140%	118%	60%	130%	109%	50%	140%
Bromodichloromethane	1	3371091	23	23	0.0%	< 1	119%	50%	140%	124%	60%	130%	112%	50%	140%
Dibromochloromethane	1	3371091	15	15	0.0%	< 1	109%	50%	140%	112%	60%	130%	101%	50%	140%
Bromoform	1	3371091	< 1	< 1	NA	< 1	104%	50%	140%	110%	60%	130%	98%	50%	140%

Comments: If Matrix spike value is NA, the spiked analyte concentration was lower than that of the matrix contribution. Matrix spike performed on a different sample than the duplicate.
If RPD value is NA, the results of the duplicates are less than 5x the RDL and the RPD will not be calculated.

Certified By:

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Quality Assurance

CLIENT NAME: TOWN OF KENTVILLE

AGAT WORK ORDER: 21X847367

PROJECT: Quarterly

ATTENTION TO: Dave Bell

SAMPLING SITE:

SAMPLED BY:

Water Analysis

RPT Date: Jan 10, 2022			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Alkalinity, Conductivity															
Alkalinity as CaCO3	3371371	3371371	39	37	6.1%	< 5	92%	80%	120%	NA			NA		
Electrical Conductivity	3371371	3371371	467	470	0.7%	< 1	109%	90%	110%	NA			NA		
Comments: If RPD value is NA, the results of the duplicates are less than 5x the RDL and the RPD will not be calculated.															
Metals - Total Manganese and Calcuim in Water (ug/L) (Halifax)															
Total Manganese	3357530		3.7	4.4	NA	< 2.0	99%	70%	130%	105%	80%	120%	104%	70%	130%
Total Calcium	3371413	3371413	27100	27400	1.1%	< 100	95%	70%	130%	101%	80%	120%	97%	70%	130%
Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.															
AGAT Halifax - Total Copper + Lead															
Total Copper	3281693		0.0565	0.0563	0.4%	< 0.8	105%	70%	130%	102%	80%	120%	104%	70%	130%
Total Lead	3281693		0.0003	0.0003	NA	< 0.1	89%	70%	130%	89%	80%	120%	88%	70%	130%

Comments: Matrix spike NA: Spike level < native concentration. Matrix spike acceptance limits do not apply and are not calculated.
Duplicate NA: results are less than 5X the RDL and RDP will not be calculated.

Certified By: Ashley Dussault

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Method Summary

CLIENT NAME: TOWN OF KENTVILLE

AGAT WORK ORDER: 21X847367

PROJECT: Quarterly

ATTENTION TO: Dave Bell

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Chloroacetic Acid	ORG-120-5110	EPA 552.3	GC/ECD
Bromoacetic Acid	ORG-120-5110	EPA 552.3	GC/ECD
Dichloroacetic Acid	ORG-120-5110	EPA 552.3	GC/ECD
Trichloroacetic Acid	ORG-120-5110	EPA 552.3	GC/ECD
Bromochloroacetic Acid	ORG-120-5110	EPA 552.3	GC/ECD
Dibromoacetic Acid	ORG-120-5110	EPA 552.3	GC/ECD
2-Bromobutanoic acid	ORG-120-5110	EPA 552.3	GC/ECD
Total Haloacetic Acids	ORG-120-5110	EPA 552.3	GC/ECD
HAA5	ORG-120-5110	EPA 552.3	GC/ECD
Chloroform	VOL-120-5001	EPA SW-846 5030B/8260B	GC/MS
Bromodichloromethane	VOL-120-5001	EPA SW846 5230B/8260	GC/MS
Dibromochloromethane	VOL-120-5001	EPA SW846 5230B/8260	GC/MS
Bromoform	VOL-120-5001	EPA SW846 5230B/8260	GC/MS
Total Trihalomethanes	VOL-120-5001	EPA SW846 5230/8260	GC/MS
Toluene-d8	VOL-120-5001	EPA SW846 5030B/8260B	GC/MS
4-Bromofluorobenzene	VOL-120-5001	EPA SW846 5030B/8260B	GC/MS
Water Analysis			
Total Copper	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Total Lead	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Alkalinity as CaCO3	INOR-121-6001	SM 2320 B	
Electrical Conductivity	INOR-121-6001	SM 2510 B	PC TITRATE
Total Manganese	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Calcium	MET-93-6105	modified from EPA 6010D	ICP/OES

AGAT Laboratories

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Chain of Custody Record

Laboratory Use Only
Arrival Condition: ☐ Good ☐ Poor (see notes)
Arrival Temperature: 12.1, 8.8, 9.6
Hold Time:
AGAT Job Number: 21x847367
Notes:

Report Information
Company: Town of Kentville
Contact: David BVell
Address: 354 Main Street
Kentville, NS B4N 1K6
Phone: 902-679-2521 Fax:
Client Project #: Quarterly
AGAT Quotation:
Please Note: If quotation number is not provided client will be billed full price for analysis.

Report Information (Please print):
1. Name: David Bell
Email: dbell@kentville.ca
2. Name:
Email: cmacdonald@kentville.ca

Report Format
☐ Single Sample per page
☐ Multiple Samples per page
☐ Excel Format Included
☐ Export

Turnaround Time Required (TAT) 21DEC20 2:14PM
Regular TAT ☑ 5 to 7 working days
Rush TAT ☐ Same day ☐ 1 day ☐ 2 days ☐ 3 days
Date Required:

Invoice To Same Yes ☐ / No ☐
Company:
Contact:
Address: cbrown@kentville.ca
Phone: Fax:
PO/Credit Card#:

Regulatory Requirements (Check):
☐ List Guidelines on Report ☐ Do not list Guidelines on Report
☐ PIRI
☐ Tier 1 ☐ Res ☐ Pot ☐ Coarse
☐ Tier 2 ☐ Com ☐ N/Pot ☐ Fine
☐ Gas ☐ Fuel ☐ Lube
☐ CCME ☐ CDWQ
☐ Industrial ☐ NSEQS-Cont Sites
☐ Commercial ☐ HRM 101
☐ Res/Park ☐ Storm Water
☐ Agricultural ☐ Waste Water
☐ FWAL
☐ Sediment ☐ Other

Drinking Water Sample: ☐ Yes ☐ No **Salt Water Sample** ☐ Yes ☐ No
Reg. No.:

Sample Identification	Date/Time Sampled	Sample Matrix	# Containers	Comments – Site/Sample Info. Sample Containment	Field Filtered/Preserved	Standard Water Analysis	Metals: ☐ Total ☐ Diss ☐ Available	Mercury	☐ BOD ☐ CBOD	pH	☐ TSS ☐ TDS ☐ VSS	TKN	Total Phosphorus	Phenols	Tier 1: TPH/BTEX (PIRI) ☐ low level	Tier 2: TPH/BTEX Fractionation	CCME-CWS TPH/BTEX	VOC	THM	HAA	PAH	PCB	TC + EC ☐ P/A ☐ MPN ☐ MF	☐ HPC ☐ Pseudomonas	Fecal Coliform ☐ MPN ☐ MF	Other: Alkalinity, Calcium, Man. Cond	Other: Lead	Hazardous (Y/N)
Prospect Raw	2021/12/20 8:35	Water	2																						☑		
Prospect Treated	2021/12/20 8:30	Water	2																						☑		
Chester Tank	2021/12/20 9:05	Water	2																						☑		
Belcher Tank	2021/12/20 9:35	Water	2,3,3																☑	☑					☑		
Mitchell Raw	2021/12/20 10:30	Water	2																						☑		
Mitchel Treated	2021/12/20 10:25	Water	2																						☑		
Colbrook Village Park	2021/12/20 11:10	Water	3																☑								
Quality Concrete	2021/12/20 11:25	Water	2																						☑		
Kentville Chrysler	2021/12/20 11:40	Water	2,3																	☑					☑		
West End #1	2021/12/20 10:40	Water	1																							☑	
East End #2	2021/12/20 10:50	Water	1																							☑	

Samples Relinquished By (Print Name):	Date/Time	Samples Received By (Print Name):	Date/Time
Samples Relinquished By (Sign):	Date/Time	Samples Received By (Sign):	Date/Time

Pink Copy - Client
Yellow Copy - AGAT
White Copy- AGAT

Page 1 of 1
N°:

Document ID: DW-133-1702-rev4

Date revised: Apr 19, 2021

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CLIENT NAME: TOWN OF KENTVILLE
354 MAIN ST.
KENTVILLE, NS B4N1K6
(902) 679-2521
ATTENTION TO: Dave Bell
PROJECT:
AGAT WORK ORDER: 21X825157
WATER ANALYSIS REVIEWED BY: Ashley Dussault, Report Writer
DATE REPORTED: Nov 22, 2021
PAGES (INCLUDING COVER): 13
VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (902) 468-8718

Notes

Disclaimer:

- *All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.*
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Certificate of Analysis

AGAT WORK ORDER: 21X825157

PROJECT:

CLIENT NAME: TOWN OF KENTVILLE

ATTENTION TO: Dave Bell

SAMPLING SITE:

SAMPLED BY:

Standard Water Analysis + Total Metals

DATE RECEIVED: 2021-11-03

DATE REPORTED: 2021-11-22

				1- Prospect	2- D.E. Hiltz		3- Mitchell Well		4- Mitchell Well	5-Bonavista	6-West End Well
SAMPLE DESCRIPTION:				Reservoir	Connector Road		# 1		# 2	Well	# 1
SAMPLE TYPE:				Water	Water		Water		Water	Water	Water
DATE SAMPLED:				2021-11-03 08:10	2021-11-03 09:55		2021-11-03 10:20		2021-11-03 10:10	2021-11-03 10:55	2021-11-03 10:10
Parameter	Unit	G / S	RDL	3163986	3164045	RDL	3164046	RDL	3164047	3164048	3164049
pH		7.0-10.5		7.90	7.95		7.15		7.97	7.93	7.68
Reactive Silica as SiO2	mg/L		0.5	11.9	10.8	0.5	9.9	0.5	11.6	10.8	11.5
Chloride	mg/L	250 AO	1	76	102	2	145	1	46	31	77
Fluoride	mg/L	1.5	0.12	0.72	0.61	0.12	<0.12	0.12	<0.12	<0.12	<0.12
Sulphate	mg/L	500 AO	2	12	17	2	19	2	12	6	11
Alkalinity	mg/L		5	67	72	5	28	5	71	62	47
True Color	TCU	15 AO	5.00	<5.00	<5.00	5.00	<5.00	5.00	<5.00	<5.00	<5.00
Turbidity	NTU	1.0	0.5	<0.5	0.5	0.5	<0.5	0.5	<0.5	1.0	<0.5
Electrical Conductivity	umho/cm		1	478	589	1	625	1	361	269	428
Nitrate + Nitrite as N	mg/L		0.05	1.02	1.12	0.05	1.09	0.05	1.17	0.38	0.96
Nitrate as N	mg/L	10	0.05	1.02	1.12	0.05	1.09	0.05	1.17	0.38	0.96
Nitrite as N	mg/L	1.0	0.05	<0.05	<0.05	0.05	<0.05	0.05	<0.05	<0.05	<0.05
Ammonia as N	mg/L		0.03	<0.03	<0.03	0.03	<0.03	0.03	<0.03	<0.03	<0.03
Ortho-Phosphate as P	mg/L		0.01	0.04	0.03	0.01	0.05	0.01	<0.01	<0.01	0.04
Total Sodium	mg/L	200 AO	0.1	49.1	70.4	0.1	74.4	0.1	7.3	4.7	36.9
Total Potassium	mg/L		0.1	1.9	2.4	0.1	2.8	0.1	2.0	2.0	1.8
Total Calcium	mg/L		0.1	26.9	24.2	0.1	21.6	0.1	42.0	31.3	27.0
Total Magnesium	mg/L		0.1	4.0	4.0	0.1	3.5	0.1	5.3	3.6	3.9
Bicarb. Alkalinity (as CaCO3)	mg/L		5	67	72	5	28	5	71	62	47
Carb. Alkalinity (as CaCO3)	mg/L		10	<10	<10	10	<10	10	<10	<10	<10
Hydroxide	mg/L		5	<5	<5	5	<5	5	<5	<5	<5
Calculated TDS	mg/L	500 AO	1	215	268	1	288	1	162	117	190
Hardness	mg/L			83.6	76.9		68.3		127	93.0	83.5
Langelier Index (@20C)	NA			-0.46	-0.44		-1.70		-0.16	-0.38	-0.83
Langelier Index (@ 4C)	NA			-0.78	-0.76		-2.02		-0.48	-0.70	-1.15
Saturation pH (@ 20C)	NA			8.36	8.39		8.85		8.13	8.31	8.51
Saturation pH (@ 4C)	NA			8.68	8.71		9.17		8.45	8.63	8.83
Anion Sum	me/L			3.81	4.75		5.12		3.05	2.27	3.41

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Certificate of Analysis

AGAT WORK ORDER: 21X825157

PROJECT:

CLIENT NAME: TOWN OF KENTVILLE

ATTENTION TO: Dave Bell

SAMPLING SITE:

SAMPLED BY:

Standard Water Analysis + Total Metals

DATE RECEIVED: 2021-11-03

DATE REPORTED: 2021-11-22

SAMPLE DESCRIPTION:				1- Prospect Reservoir	2- D.E. Hiltz Connector Road		3- Mitchell Well # 1		4- Mitchell Well # 2	5-Bonavista Well	6-West End Well # 1
SAMPLE TYPE:				Water	Water		Water		Water	Water	Water
DATE SAMPLED:				2021-11-03 08:10	2021-11-03 09:55		2021-11-03 10:20		2021-11-03 10:10	2021-11-03 10:55	2021-11-03 10:10
Parameter	**Unit**	**G / S**	**RDL**	**3163986**	**3164045**	**RDL**	**3164046**	**RDL**	**3164047**	**3164048**	**3164049**
Cation sum	me/L			3.86	4.66		4.68		2.90	2.12	3.32
% Difference/ Ion Balance	%			0.7	1.0		4.6		2.5	3.4	1.3
Total Aluminum	ug/L	2900, 100	5	<5	<5	5	<5	5	<5	<5	<5
Total Antimony	ug/L	6	2	<2	<2	2	<2	2	<2	<2	<2
Total Arsenic	ug/L	10	2	<2	<2	2	<2	2	3	<2	<2
Total Barium	ug/L	2000	5	23	27	5	40	5	15	12	29
Total Beryllium	ug/L		2	<2	<2	2	<2	2	<2	<2	<2
Total Bismuth	ug/L		2	<2	<2	2	<2	2	<2	<2	<2
Total Boron	ug/L	5000	5	9	11	5	14	5	7	<5	9
Total Cadmium	ug/L	7	0.09	<0.09	<0.09	0.09	<0.09	0.09	<0.09	<0.09	<0.09
Total Chromium	ug/L	50	1	<1	<1	1	<1	1	<1	<1	<1
Total Cobalt	ug/L		1	<1	<1	1	<1	1	<1	<1	<1
Total Copper	ug/L	2000, 1000	1	7	4	1	1	1	<1	1	8
Total Iron	ug/L	300 AO	50	<50	<50	50	53	50	<50	<50	76
Total Lead	ug/L	5	0.5	<0.5	<0.5	0.5	<0.5	0.5	<0.5	<0.5	3.6
Total Manganese	ug/L	120, 20 AO	2	<2	<2	2	<2	2	<2	<2	<2
Total Molybdenum	ug/L		2	<2	<2	2	<2	2	<2	<2	<2
Total Nickel	ug/L		2	<2	<2	2	<2	2	2	<2	<2
Total Phosphorous	mg/L		0.02	0.05	0.06	0.02	0.09	0.02	0.03	0.03	0.07
Total Selenium	ug/L	50	1	<1	<1	1	<1	1	<1	<1	<1
Total Silver	ug/L		0.1	<0.1	<0.1	0.1	<0.1	0.1	<0.1	<0.1	<0.1
Total Strontium	ug/L	7000	5	120	182	5	93	5	313	253	67
Total Thallium	ug/L		0.1	<0.1	<0.1	0.1	<0.1	0.1	<0.1	<0.1	<0.1
Total Tin	ug/L		2	<2	<2	2	<2	2	<2	<2	<2
Total Titanium	ug/L		2	<2	<2	2	<2	2	<2	<2	<2
Total Uranium	ug/L	20	0.2	<0.2	0.4	0.2	<0.2	0.2	1.2	1.1	<0.2
Total Vanadium	ug/L		2	<2	<2	2	<2	2	<2	<2	<2
Total Zinc	ug/L	5000 AO	5	<5	14	5	<5	5	<5	<5	10

Certified By: Ashley Dussault

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Certificate of Analysis

AGAT WORK ORDER: 21X825157

PROJECT:

CLIENT NAME: TOWN OF KENTVILLE

ATTENTION TO: Dave Bell

SAMPLING SITE:

SAMPLED BY:

Standard Water Analysis + Total Metals

DATE RECEIVED: 2021-11-03

DATE REPORTED: 2021-11-22

				7-West End Well		8- East End Well		9- East End Well
	SAMPLE DESCRIPTION:			# 2		#1		# 2
	SAMPLE TYPE:			Water		Water		Water
	DATE SAMPLED:			2021-11-03 10:35		2021-11-03 11:20		2021-11-03 11:05
Parameter	Unit	G / S	RDL	3164050	RDL	3164051	RDL	3164052
pH		7.0-10.5		7.66		7.32		7.69
Reactive Silica as SiO2	mg/L		0.5	12.5	0.5	10.6	0.5	11.6
Chloride	mg/L	250 AO	1	59	2	133	1	79
Fluoride	mg/L	1.5	0.12	0.12	0.12	<0.12	0.12	<0.12
Sulphate	mg/L	500 AO	2	11	2	16	2	13
Alkalinity	mg/L		5	40	5	32	5	55
True Color	TCU	15 AO	5.00	<5.00	5.00	<5.00	5.00	<5.00
Turbidity	NTU	1.0	0.5	0.8	0.5	0.9	0.5	**1.1**
Electrical Conductivity	umho/cm		1	342	1	592	1	448
Nitrate + Nitrite as N	mg/L		0.05	1.06	0.05	1.14	0.05	1.20
Nitrate as N	mg/L	10	0.05	1.06	0.05	1.14	0.05	1.20
Nitrite as N	mg/L	1.0	0.05	<0.05	0.05	<0.05	0.05	<0.05
Ammonia as N	mg/L		0.03	<0.03	0.03	<0.03	0.03	<0.03
Ortho-Phosphate as P	mg/L		0.01	0.05	0.01	0.06	0.01	0.04
Total Sodium	mg/L	200 AO	0.1	30.0	0.1	60.9	0.1	28.8
Total Potassium	mg/L		0.1	1.9	0.1	2.8	0.1	2.1
Total Calcium	mg/L		0.1	19.8	0.1	28.3	0.1	35.3
Total Magnesium	mg/L		0.1	4.0	0.1	4.6	0.1	5.3
Bicarb. Alkalinity (as CaCO3)	mg/L		5	40	5	32	5	55
Carb. Alkalinity (as CaCO3)	mg/L		10	<10	10	<10	10	<10
Hydroxide	mg/L		5	<5	5	<5	5	<5
Calculated TDS	mg/L	500 AO	1	154	1	270	1	202
Hardness	mg/L			65.9		89.6		110
Langelier Index (@20C)	NA			-1.05		-1.35		-0.64
Langelier Index (@ 4C)	NA			-1.37		-1.67		-0.96
Saturation pH (@ 20C)	NA			8.71		8.67		8.33
Saturation pH (@ 4C)	NA			9.03		8.99		8.65
Anion Sum	me/L			2.77		4.81		3.68

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AGAT WORK ORDER: 21X825157

PROJECT:

CLIENT NAME: TOWN OF KENTVILLE

ATTENTION TO: Dave Bell

SAMPLING SITE:

SAMPLED BY:

Standard Water Analysis + Total Metals

DATE RECEIVED: 2021-11-03

DATE REPORTED: 2021-11-22

				7-West End Well		8- East End Well		9- East End Well
	SAMPLE DESCRIPTION:			# 2		#1		# 2
	SAMPLE TYPE:			Water		Water		Water
	DATE SAMPLED:			2021-11-03 10:35		2021-11-03 11:20		2021-11-03 11:05
Parameter	Unit	G / S	RDL	3164050	RDL	3164051	RDL	3164052
Cation sum	me/L			2.67		4.51		3.51
% Difference/ Ion Balance	%			1.8		3.2		2.4
Total Aluminum	ug/L	2900, 100	5	<5	5	<5	5	<5
Total Antimony	ug/L	6	2	<2	2	<2	2	<2
Total Arsenic	ug/L	10	2	<2	2	<2	2	<2
Total Barium	ug/L	2000	5	27	5	39	5	23
Total Beryllium	ug/L		2	<2	2	<2	2	<2
Total Bismuth	ug/L		2	<2	2	<2	2	<2
Total Boron	ug/L	5000	5	8	5	13	5	7
Total Cadmium	ug/L	7	0.09	<0.09	0.09	<0.09	0.09	<0.09
Total Chromium	ug/L	50	1	<1	1	<1	1	<1
Total Cobalt	ug/L		1	<1	1	<1	1	<1
Total Copper	ug/L	2000, 1000	1	2	1	4	1	22
Total Iron	ug/L	300 AO	50	<50	50	<50	50	96
Total Lead	ug/L	5	0.5	<0.5	0.5	<0.5	0.5	**8.7**
Total Manganese	ug/L	120, 20 AO	2	<2	2	<2	2	<2
Total Molybdenum	ug/L		2	<2	2	<2	2	<2
Total Nickel	ug/L		2	<2	2	<2	2	2
Total Phosphorous	mg/L		0.02	0.07	0.02	0.09	0.02	0.08
Total Selenium	ug/L	50	1	<1	1	<1	1	<1
Total Silver	ug/L		0.1	<0.1	0.1	<0.1	0.1	<0.1
Total Strontium	ug/L	7000	5	79	5	119	5	169
Total Thallium	ug/L		0.1	<0.1	0.1	<0.1	0.1	<0.1
Total Tin	ug/L		2	<2	2	<2	2	<2
Total Titanium	ug/L		2	<2	2	<2	2	<2
Total Uranium	ug/L	20	0.2	<0.2	0.2	<0.2	0.2	<0.2
Total Vanadium	ug/L		2	<2	2	<2	2	<2
Total Zinc	ug/L	5000 AO	5	<5	5	12	5	68

Certified By:

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Certificate of Analysis

AGAT WORK ORDER: 21X825157

PROJECT:

CLIENT NAME: TOWN OF KENTVILLE

ATTENTION TO: Dave Bell

SAMPLING SITE:

SAMPLED BY:

Standard Water Analysis + Total Metals

DATE RECEIVED: 2021-11-03

DATE REPORTED: 2021-11-22

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Canadian Drinking Water Quality - updated 2021-03
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3163986-3164052 % Difference / Ion Balance, Hardness, Langelier Index, Nitrate + Nitrite, Hydroxide and Saturation pH are calculated parameters. The calculated parameters are non-accredited. The component parameters of the calculations are accredited.

Analysis performed at AGAT Halifax (unless marked by *)

Certified By: Ashley Dussault

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Certificate of Analysis

AGAT WORK ORDER: 21X825157

PROJECT:

CLIENT NAME: TOWN OF KENTVILLE

ATTENTION TO: Dave Bell

SAMPLING SITE:

SAMPLED BY:

Water Analysis - TOC

DATE RECEIVED: 2021-11-03

DATE REPORTED: 2021-11-22

				1- Prospect	2- D.E. Hiltz	3- Mitchell Well	4- Mitchell Well	5-Bonavista	6-West End Well	7-West End Well	8- East End Well
		SAMPLE DESCRIPTION:		Reservoir	Connector Road	# 1	# 2	Well	# 1	# 2	#1
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		2021-11-03 08:10	2021-11-03 09:55	2021-11-03 10:20	2021-11-03 10:10	2021-11-03 10:55	2021-11-03 10:10	2021-11-03 10:35	2021-11-03 11:20
Parameter	**Unit**	**G / S**	**RDL**	**3163986**	**3164045**	**3164046**	**3164047**	**3164048**	**3164049**	**3164050**	**3164051**
Total Organic Carbon	mg/L		1	<1	<1	<1	<1	<1	<1	<1	<1
Reporting- W				11/18/2021							

				9- East End Well
		SAMPLE DESCRIPTION:		# 2
		SAMPLE TYPE:		Water
		DATE SAMPLED:		2021-11-03 11:05
Parameter	**Unit**	**G / S**	**RDL**	**3164052**
Total Organic Carbon	mg/L		1	<1

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

Analysis performed at AGAT Calgary (unless marked by *)

Certified By: Ashley Dussault

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Exceedance Summary

AGAT WORK ORDER: 21X825157

PROJECT:

CLIENT NAME: TOWN OF KENTVILLE

ATTENTION TO: Dave Bell

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
3164052	9- East End Well # 2	NS-CDWQ incl [AO]	Standard Water Analysis + Total Metals	Total Lead	ug/L	5	8.7
3164052	9- East End Well # 2	NS-CDWQ incl [AO]	Standard Water Analysis + Total Metals	Turbidity	NTU	1.0	1.1

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Quality Assurance

CLIENT NAME: TOWN OF KENTVILLE

AGAT WORK ORDER: 21X825157

PROJECT:

ATTENTION TO: Dave Bell

SAMPLING SITE:

SAMPLED BY:

Water Analysis

RPT Date: Nov 22, 2021			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Standard Water Analysis + Total Metals															
pH	3163986	3163986	7.90	7.92	0.3%	<	102%	80%	120%	NA			NA		
Reactive Silica as SiO2	3156658		10.4	10.0	3.5%	< 0.5	105%	80%	120%	99%	80%	120%	99%	80%	120%
Chloride	3163986	3163986	76	79	4.2%	< 1	91%	80%	120%	NA	80%	120%	NA	70%	130%
Fluoride	3163986	3163986	0.72	0.77	6.5%	< 0.12	107%	80%	120%	NA	80%	120%	89%	70%	130%
Sulphate	3163986	3163986	12	11	4.7%	< 2	109%	80%	120%	NA	80%	120%	84%	70%	130%
Alkalinity	3163986	3163986	67	68	0.4%	< 5	87%	80%	120%	NA			NA		
True Color	3156658		<5.00	<5.00	NA	< 5	99%	80%	120%	95%	80%	120%	NA		
Turbidity	3199591		1.3	1.5	NA	< 0.5	94%	80%	120%	NA			NA		
Electrical Conductivity	3163986	3163986	478	478	0.0%	< 1	107%	90%	110%	NA			NA		
Nitrate as N	3163986	3163986	1.02	1.07	4.8%	< 0.05	92%	80%	120%	NA	80%	120%	90%	70%	130%
Nitrite as N	3163986	3163986	<0.05	<0.05	NA	< 0.05	100%	80%	120%	NA	80%	120%	103%	70%	130%
Ammonia as N	3162991		<0.03	<0.03	NA	< 0.03	102%	80%	120%	88%	80%	120%	83%	70%	130%
Ortho-Phosphate as P	3156658		<0.01	<0.01	NA	< 0.01	111%	80%	120%	110%	80%	120%	105%	80%	120%
Total Sodium	3163986	3163986	49.1	50.2	2.3%	< 0.1	102%	80%	120%	111%	80%	120%	NA	70%	130%
Total Potassium	3163986	3163986	1.9	2.0	4.9%	< 0.1	94%	80%	120%	101%	80%	120%	NA	70%	130%
Total Calcium	3163986	3163986	26.9	27.6	2.8%	< 0.1	90%	80%	120%	102%	80%	120%	NA	70%	130%
Total Magnesium	3163986	3163986	4.0	4.1	2.3%	< 0.1	96%	80%	120%	99%	80%	120%	NA	70%	130%
Bicarb. Alkalinity (as CaCO3)	3163986	3163986	67	68	0.4%	< 5	NA	80%	120%	NA			NA		
Carb. Alkalinity (as CaCO3)	3163986	3163986	<10	<10	NA	< 10	NA	80%	120%	NA			NA		
Hydroxide	3163986	3163986	<5	<5	NA	< 5	NA	80%	120%	NA			NA		
Total Aluminum	3163986	3163986	<5	<5	NA	< 5	87%	80%	120%	95%	80%	120%	102%	70%	130%
Total Antimony	3163986	3163986	<2	<2	NA	< 2	80%	80%	120%	109%	80%	120%	NA	70%	130%
Total Arsenic	3163986	3163986	<2	<2	NA	< 2	94%	80%	120%	99%	80%	120%	94%	70%	130%
Total Barium	3163986	3163986	23	25	NA	< 5	81%	80%	120%	86%	80%	120%	NA	70%	130%
Total Beryllium	3163986	3163986	<2	<2	NA	< 2	93%	80%	120%	101%	80%	120%	98%	70%	130%
Total Bismuth	3163986	3163986	<2	<2	NA	< 2	80%	80%	120%	100%	80%	120%	93%	70%	130%
Total Boron	3163986	3163986	9	8	NA	< 5	90%	80%	120%	97%	80%	120%	100%	70%	130%
Total Cadmium	3163986	3163986	<0.09	<0.09	NA	< 0.09	97%	80%	120%	99%	80%	120%	98%	70%	130%
Total Chromium	3163986	3163986	<1	<1	NA	< 1	86%	80%	120%	95%	80%	120%	101%	70%	130%
Total Cobalt	3163986	3163986	<1	<1	NA	< 1	90%	80%	120%	98%	80%	120%	99%	70%	130%
Total Copper	3163986	3163986	7	7	4.8%	< 1	94%	80%	120%	105%	80%	120%	104%	70%	130%
Total Iron	3163986	3163986	<50	<50	NA	< 50	85%	80%	120%	96%	80%	120%	104%	70%	130%
Total Lead	3163986	3163986	<0.5	<0.5	NA	< 0.5	104%	80%	120%	109%	80%	120%	97%	70%	130%
Total Manganese	3163986	3163986	<2	<2	NA	< 2	89%	80%	120%	98%	80%	120%	97%	70%	130%
Total Molybdenum	3163986	3163986	<2	<2	NA	< 2	97%	80%	120%	116%	80%	120%	130%	70%	130%
Total Nickel	3163986	3163986	<2	<2	NA	< 2	92%	80%	120%	101%	80%	120%	102%	70%	130%
Total Phosphorous	3163986	3163986	0.05	0.05	NA	< 0.02	80%	80%	120%	82%	80%	120%	112%	70%	130%
Total Selenium	3163986	3163986	<1	<1	NA	< 1	89%	80%	120%	105%	80%	120%	92%	70%	130%
Total Silver	3163986	3163986	<0.1	<0.1	NA	< 0.1	94%	80%	120%	99%	80%	120%	96%	70%	130%

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Quality Assurance

CLIENT NAME: TOWN OF KENTVILLE

AGAT WORK ORDER: 21X825157

PROJECT:

ATTENTION TO: Dave Bell

SAMPLING SITE:

SAMPLED BY:

Water Analysis (Continued)

RPT Date: Nov 22, 2021			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Total Strontium	3163986	3163986	120	126	5.0%	< 5	86%	80%	120%	90%	80%	120%	NA	70%	130%
Total Thallium	3163986	3163986	<0.1	<0.1	NA	< 0.1	102%	80%	120%	107%	80%	120%	94%	70%	130%
Total Tin	3163986	3163986	<2	<2	NA	< 2	90%	80%	120%	98%	80%	120%	97%	70%	130%
Total Titanium	3163986	3163986	<2	<2	NA	< 2	92%	80%	120%	100%	80%	120%	98%	70%	130%
Total Uranium	3163986	3163986	<0.2	<0.2	NA	< 0.2	98%	80%	120%	103%	80%	120%	100%	70%	130%
Total Vanadium	3163986	3163986	<2	<2	NA	< 2	89%	80%	120%	97%	80%	120%	106%	70%	130%
Total Zinc	3163986	3163986	<5	<5	NA	< 5	89%	80%	120%	94%	80%	120%	95%	70%	130%

Comments: If RPD value is NA, the results of the duplicates are less than 5x the RDL and the RPD will not be calculated.

Water Analysis - TOC

Total Organic Carbon	3201369		2	2	NA	< 1	92%	80%	120%	98%	80%	120%	102%	80%	120%

Comments: Matrix spike NA: Spike level < native concentration. Matrix spike acceptance limits do not apply and are not calculated.
Duplicate NA: results are less than 5X the RDL and RDP will not be calculated.

Certified By: Ashley Dussault

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Method Summary

CLIENT NAME: TOWN OF KENTVILLE

AGAT WORK ORDER: 21X825157

PROJECT:

ATTENTION TO: Dave Bell

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Water Analysis			
pH	INOR-121-6001	SM 4500 H+B	PC TITRATE
Reactive Silica as SiO2	INOR-121-6027	SM 4500-SiO2 F	COLORIMETER
Chloride	INORG-121-6005	SM 4110 B	ION CHROMATOGRAPH
Fluoride	INORG-121-6005	SM 4110 B	ION CHROMATOGRAPH
Sulphate	INORG-121-6005	SM 4110 B	ION CHROMATOGRAPH
Alkalinity	INOR-121-6001	SM 2320 B	
True Color	INOR-121-6008	SM 2120 B	LACHAT FIA
Turbidity	INOR-121-6022	SM 2130 B	NEPHELOMETER
Electrical Conductivity	INOR-121-6001	SM 2510 B	PC TITRATE
Nitrate + Nitrite as N	INORG-121-6005	SM 4110 B	CALCULATION
Nitrate as N	INORG-121-6005	SM 4110 B	ION CHROMATOGRAPH
Nitrite as N	INORG-121-6005	SM 4110 B	ION CHROMATOGRAPH
Ammonia as N	INOR-121-6047	SM 4500-NH3 H	COLORIMETER
Ortho-Phosphate as P	INOR-121-6012	SM 4500-P G	COLORIMETER
Total Sodium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Potassium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Calcium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Magnesium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Bicarb. Alkalinity (as CaCO3)	INORG-121-6001	SM 2320 B	PC TITRATE
Carb. Alkalinity (as CaCO3)	INORG-121-6001	SM 2320 B	PC TITRATE
Hydroxide	INORG-121-6001	SM 2320 B	PC-TITRATE
Calculated TDS	CALCULATION	SM 1030E	CALCULATION
Hardness	CALCULATION	SM 2340B	CALCULATION
Langelier Index (@20C)	CALCULATION	CALCULATION	CALCULATION
Langelier Index (@ 4C)	CALCULATION	CALCULATION	CALCULATION
Saturation pH (@ 20C)	CALCULATION	CALCULATION	CALCULATION
Saturation pH (@ 4C)	CALCULATION	CALCULATION	CALCULATION
Anion Sum	CALCULATION	SM 1030E	CALCULATION
Cation sum	CALCULATION	SM 1030E	CALCULATION
% Difference/ Ion Balance	CALCULATION	SM 1030E	CALCULATION
Total Aluminum	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Antimony	MET121-6104 & MET-121-6105	SM 3125	ICP-MS
Total Arsenic	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Barium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Beryllium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Bismuth	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Boron	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Cadmium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Chromium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS

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Method Summary

CLIENT NAME: TOWN OF KENTVILLE

AGAT WORK ORDER: 21X825157

PROJECT:

ATTENTION TO: Dave Bell

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Total Cobalt	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Copper	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Iron	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Lead	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Manganese	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Molybdenum	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Nickel	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Phosphorous	MET-121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Selenium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Silver	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Strontium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Thallium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Tin	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Titanium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Uranium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Vanadium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Zinc	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Organic Carbon	INST 0170	SM 5310 B	COMBUSTION
Reporting- W			N/A

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Chain of Custody Record

Laboratory Use Only
Arrival Condition: ☐ Good ☐ Poor (see notes)
Arrival Temperature: 8.4, 8.8, 9.4
Hold Time:
AGAT Job Number: 21X825157
21NOV 3 1:23PM
Notes:

Report Information
Company: Town of Kentville
Contact: David Bell
Address: 354 Main Street
Kentville, NS B4N 1K6
Phone: 902-679-2521 Fax: 902-679-2375
Client Project #:
AGAT Quotation:
Please Note: If quotation number is not provided client will be billed full price for analysis.

Report Information (Please print):
1. Name: Dave Bell
Email: dbell@kentville.ca
2. Name:
Email:

Report Format
☐ Single Sample per page
☑ Multiple Samples per page
☐ Excel Format included
☐ Export

Turnaround Time Required (TAT)
Regular TAT ☑ 5 to 7 working days
Rush TAT ☐ Same day ☐ 1 day ☐ 2 days ☐ 3 days
Date Required:

Invoice To Same Yes ☐ / No ☐
Company:
Contact:
Address:
Phone: Fax:
PO/Credit Card#:

Regulatory Requirements (Check):
☐ List Guidelines on Report ☐ Do not list Guidelines on Report
☐ PIRI
☐ Tier 1 ☐ Res ☐ Pot ☐ Coarse
☐ Tier 2 ☐ Com ☐ N/Pot ☐ Fine
☐ Gas ☐ Fuel ☐ Lube
☐ CCME ☑ CDWQ
☐ Industrial ☐ NSEQS-Cont Sites
☐ Commercial ☐ HRM 101
☐ Res/Park ☐ Storm Water
☐ Agricultural ☐ Waste Water
☐ FWAL
☐ Sediment ☐ Other

Drinking Water Sample: ☐ Yes ☐ No **Salt Water Sample** ☐ Yes ☐ No
Reg. No.:

Sample Identification	Date/Time Sampled	Sample Matrix	# Containers	Comments – Site/Sample Info. Sample Containment	Field Filtered/Preserved	Standard Water Analysis	Metals: ☑ Total ☐ Diss ☐ Available	Mercury	☐ BOD ☐ CBOD	pH	☐ TSS ☐ TDS ☐ VSS	TKN	Total Phosphorus	Phenols	Tier 1: TPH/BTEX (PIRI) ☐ low level	Tier 2: TPH/BTEX Fractionation	CCME-CWS TPH/BTEX	VOC	THM	HAA	PAH	PCB	TC+ EC ☐ P/A ☐ MPN ☐ MF	☐ HPC ☐ Pseudomonas	Fecal Coliform ☐ MPN ☐ MF	Other:	Other:	Hazardous (Y/N)
1 - Prospect Reservoir	Nov 3/21 8:10Am					☑	☑																				
2 - D.E. Hiltz Connector Road	Nov 3/21 9:55Am					☑	☑																				
3 - Mitchell Well #1	Nov 3/21 10:20Am					☑	☑																				
4 - Mitchell Well #2	Nov 3/21 10:10Am					☑	☑																				
5 - Bonavista Well	Nov 3/21 10:55Am					☑	☑																				
6 - West End Well #1	Nov 3/21 10:[illegible]Am					☑	☑																				
7 - West End Well #2	Nov 3/21 10:35Am					☑	☑																				
8 - East End Well #1	Nov 3/21 11:20Am					☑	☑																				
9 - East End Well #2	Nov 3/21 11:05Am					☑	☑																				

Samples Relinquished By (Print Name)	Date/Time	Samples Received By (Print Name)	Date/Time
Jim Refuse	Nov 3/21		
Samples Relinquished By (Sign)	**Date/Time**	**Samples Received By (Sign)**	**Date/Time**
Jim Refuse	Nov 3/21		

Pink Copy - Client
Yellow Copy - AGAT
White Copy- AGAT

Page [ ] of [ ]
Nº:

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CLIENT NAME: TOWN OF KENTVILLE
354 MAIN ST.
KENTVILLE, NS B4N1K6
(902) 679-2521
ATTENTION TO: Dave Bell
PROJECT:
AGAT WORK ORDER: 21X743716
TRACE ORGANICS REVIEWED BY: Amy Hunter, Trace Organics Supervisor, B.Sc.
WATER ANALYSIS REVIEWED BY: Marta Manka, Data Reporter
DATE REPORTED: May 17, 2021
PAGES (INCLUDING COVER): 9
VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (902) 468-8718

Notes

Disclaimer:

- *All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.*
- *All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.*
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- *This Certificate shall not be reproduced except in full, without the written approval of the laboratory.*
- *The test results reported herewith relate only to the samples as received by the laboratory.*
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- *All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.*

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Certificate of Analysis

AGAT WORK ORDER: 21X743716

PROJECT:

CLIENT NAME: TOWN OF KENTVILLE

ATTENTION TO: Dave Bell

SAMPLING SITE:

SAMPLED BY:

Haloacetic Acids (water)

DATE RECEIVED: 2021-05-07

DATE REPORTED: 2021-05-17

				Belcher Street	Kenville
		SAMPLE DESCRIPTION:		Reservoir	Chrysler
		SAMPLE TYPE:		Water	Water
		DATE SAMPLED:			
Parameter	**Unit**	**G / S**	**RDL**	**2437351**	**2437352**
Chloroacetic Acid	ug/L		0.5	<0.5	<0.5
Bromoacetic Acid	ug/L		0.5	<0.5	<0.5
Dichloroacetic Acid	ug/L		0.5	0.7	0.9
Trichloroacetic Acid	ug/L		0.5	<0.5	<0.5
Bromochloroacetic Acid	ug/L		0.5	0.6	0.6
Dibromoacetic Acid	ug/L		0.5	0.9	1.1
Total Haloacetic Acids	ug/L	80	4.0	<4.0	<4.0
HAA5	ug/L	80	4.0	<4.0	<4.0
Surrogate	**Unit**	**Acceptable Limits**			
2-Bromobutanoic acid	%	70-130		92	92

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Canadian Drinking Water Quality - updated 2021-03
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

2437351-2437352 HAA5 is a calculated parameter. The calculated parameter is non-accredited. The component parameters of the calculation are accredited.

Analysis perfomed at AGAT Halifax (unless marked by *)

Certified By:

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Certificate of Analysis

AGAT WORK ORDER: 21X743716

PROJECT:

CLIENT NAME: TOWN OF KENTVILLE

ATTENTION TO: Dave Bell

SAMPLING SITE:

SAMPLED BY:

Trihalomethanes in Water

DATE RECEIVED: 2021-05-07

DATE REPORTED: 2021-05-17

				SAMPLE DESCRIPTION:	Belcher Street Reservoir	Coldbrook Village Park Drive
				SAMPLE TYPE:	Water	Water
				DATE SAMPLED:		
Parameter	**Unit**	**G / S**	**RDL**		**2437351**	**2437430**
Chloroform	ug/L		1		<1	<1
Bromodichloromethane	ug/L		1		<1	<1
Dibromochloromethane	ug/L		1		<1	2
Bromoform	ug/L		1		<1	<1
Total Trihalomethanes	ug/L	100	1		<1	2
Surrogate	**Unit**	**Acceptable Limits**				
Toluene-d8	%	60-140			102	103
4-Bromofluorobenzene	%	60-140			79	80

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Canadian Drinking Water Quality - updated 2021-03
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

Analysis perfomed at AGAT Halifax (unless marked by *)

Certified By:

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Certificate of Analysis

AGAT WORK ORDER: 21X743716

PROJECT:

CLIENT NAME: TOWN OF KENTVILLE

ATTENTION TO: Dave Bell

SAMPLING SITE:

SAMPLED BY:

Corrosion / Langelier Index

DATE RECEIVED: 2021-05-07

DATE REPORTED: 2021-05-17

SAMPLE DESCRIPTION:				Mitchell Avenue - Treated Water	Mitchell Avenue - Raw Water	Prospect Reservoir - Treated Water	Prospect Reservoir - Raw Water	Chester Avenue Reservoir Water	Belcher Street Reservoir Water	Kenville Chrysler Water	Donald Hiltz Drive Water
SAMPLE TYPE:											
DATE SAMPLED:											
Parameter	**Unit**	**G / S**	**RDL**	**2437344**	**2437347**	**2437348**	**2437349**	**2437350**	**2437351**	**2437352**	**2437353**
Total Iron	ug/L	300 AO	50	<50	<50	<50	<50	<50	<50	<50	<50
pH		7.0-10.5		7.59	7.74	7.69	**6.94**	7.68	7.71	7.56	7.54
Hardness	mg/L			98.8	133	85.2	82.0	85.2	89.4	85.3	85.8
Langelier Index (@20C)	NA			-0.66	-0.36	-0.65	-1.66	-0.66	-0.61	-0.77	-0.79
Langelier Index (@ 4C)	NA			-0.98	-0.68	-0.97	-1.98	-0.98	-0.93	-1.09	-1.11
Saturation pH (@ 20C)	NA			8.25	8.10	8.34	8.60	8.34	8.32	8.33	8.33
Saturation pH (@ 4C)	NA			8.57	8.42	8.66	8.92	8.66	8.64	8.65	8.65

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Canadian Drinking Water Quality - updated 2021-03
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

2437344-2437353 Hardness, Langelier Index, and Saturation pH are calculated parameters. The calculated parameters are non-accredited. The component parameters of the calculations are accredited.

Analysis perfomed at AGAT Halifax (unless marked by *)

Certified By: Marta Manka

AGAT Laboratories

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Exceedance Summary

AGAT WORK ORDER: 21X743716

PROJECT:

CLIENT NAME: TOWN OF KENTVILLE

ATTENTION TO: Dave Bell

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
2437349	Prospect Reservoir - Raw	NS-CDWQ incl [AO]	Corrosion / Langelier Index	pH		7.0-10.5 OG	6.94

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Quality Assurance

CLIENT NAME: TOWN OF KENTVILLE

AGAT WORK ORDER: 21X743716

PROJECT:

ATTENTION TO: Dave Bell

SAMPLING SITE:

SAMPLED BY:

Trace Organics Analysis

RPT Date: May 17, 2021			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Trihalomethanes in Water															
Chloroform	1	2432630	< 1	< 1	NA	< 1	70%	50%	140%	71%	60%	130%	70%	50%	140%
Bromodichloromethane	1	2432630	< 1	< 1	NA	< 1	62%	50%	140%	63%	60%	130%	68%	50%	140%
Dibromochloromethane	1	2432630	< 1	< 1	NA	< 1	63%	50%	140%	68%	60%	130%	72%	50%	140%
Bromoform	1	2432630	< 1	< 1	NA	< 1	57%	50%	140%	61%	60%	130%	65%	50%	140%

Comments: If Matrix spike value is NA, the spiked analyte concentration was lower than that of the matrix contribution. Matrix spike performed on a different sample than the duplicate.
If RPD value is NA, the results of the duplicates are less than 5x the RDL and the RPD will not be calculated.

Haloacetic Acids (water)															
Chloroacetic Acid	1	2435629	< 0.5	< 0.5	NA	< 0.5	102%	70%	130%	68%	60%	130%	71%	60%	130%
Bromoacetic Acid	1	2435629	< 0.5	< 0.5	NA	< 0.5	102%	70%	130%	82%	60%	130%	88%	60%	130%
Dichloroacetic Acid	1	2435629	0.8	0.5	NA	< 0.5	94%	70%	130%	109%	60%	130%	106%	60%	130%
Trichloroacetic Acid	1	2435629	< 0.5	< 0.5	NA	< 0.5	91%	70%	130%	102%	60%	130%	95%	60%	130%
Bromochloroacetic Acid	1	2435629	0.7	0.7	NA	< 0.5	84%	70%	130%	116%	60%	130%	111%	60%	130%
Dibromoacetic Acid	1	2435629	0.8	0.7	NA	< 0.5	88%	70%	130%	116%	60%	130%	112%	60%	130%

Comments: If Matrix spike value is NA, the spiked analyte concentration was lower than that of the matrix contribution.
If RPD value is NA, the results of the duplicates are less than 5x the RDL and the RPD will not be calculated.

Certified By:

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Quality Assurance

CLIENT NAME: TOWN OF KENTVILLE

AGAT WORK ORDER: 21X743716

PROJECT:

ATTENTION TO: Dave Bell

SAMPLING SITE:

SAMPLED BY:

Water Analysis

RPT Date: May 17, 2021			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Corrosion / Langelier Index															
Total Iron	2444842		64	64	NA	< 50	97%	80%	120%	95%	80%	120%	112%	70%	130%
pH	2449388		7.75	7.86	1.4%	<	100%	80%	120%	NA	80%	120%	NA	80%	120%

Comments: If RPD value is NA, the results of the duplicates are less than 5x the RDL and the RPD will not be calculated.

Certified By: Marta Manka

AGAT Laboratories

11 Morris Drive, Unit 122
Dartmouth, Nova Scotia
CANADA B3B 1M2
TEL (902)468-8718
FAX (902)468-8924
http://www.agatlabs.com

Method Summary

CLIENT NAME: TOWN OF KENTVILLE

AGAT WORK ORDER: 21X743716

PROJECT:

ATTENTION TO: Dave Bell

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Chloroacetic Acid	ORG-120-5110	EPA 552.3	GC/ECD
Bromoacetic Acid	ORG-120-5110	EPA 552.3	GC/ECD
Dichloroacetic Acid	ORG-120-5110	EPA 552.3	GC/ECD
Trichloroacetic Acid	ORG-120-5110	EPA 552.3	GC/ECD
Bromochloroacetic Acid	ORG-120-5110	EPA 552.3	GC/ECD
Dibromoacetic Acid	ORG-120-5110	EPA 552.3	GC/ECD
2-Bromobutanoic acid	ORG-120-5110	EPA 552.3	GC/ECD
Total Haloacetic Acids	ORG-120-5110	EPA 552.3	GC/ECD
HAA5	ORG-120-5110	EPA 552.3	GC/ECD
Chloroform	VOL-120-5001	EPA SW-846 5030B/8260B	GC/MS
Bromodichloromethane	VOL-120-5001	EPA SW846 5230B/8260	GC/MS
Dibromochloromethane	VOL-120-5001	EPA SW846 5230B/8260	GC/MS
Bromoform	VOL-120-5001	EPA SW846 5230B/8260	GC/MS
Total Trihalomethanes	VOL-120-5001	EPA SW846 5230/8260	GC/MS
Toluene-d8	VOL-120-5001	EPA SW846 5030B/8260B	GC/MS
4-Bromofluorobenzene	VOL-120-5001	EPA SW846 5030B/8260B	GC/MS
Water Analysis			
Total Iron	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
pH	INOR-121-6001	SM 4500 H+B	PC TITRATE
Hardness			
Langelier Index (@20C)			CALCULATION
Langelier Index (@ 4C)			CALCULATION
Saturation pH (@ 20C)			CALCULATION
Saturation pH (@ 4C)			CALCULATION

AGAT Laboratories

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Fax: 902-468-8924
www.agatlabs.com

Laboratory use Only
Arrival Condition: ☐ Good ☐ Poor (complete 'notes')
Arrival Temperature: 17.9, 2.7, 8 AGAT Job Number: 21X743716
Notes: Cooler, ice packs

Drinking Water Sample (y/n): _____ Reg. No. _____
Waterworks Number: _____

Report To:
Company: Town of Kentville
Contact: Dave Bell
Address: 354 Main Street
Kentville NS B4N 1K6
Phone: 902-679-2521 FAX: _____
PO#: _____
AGAT Quotation: _____
Client Project #: _____

Invoice to: Same (Y/N) - Circle
Company: _____
Contact: _____
Address: _____
Phone: _____ Fax: _____
PO#/Credit Card #: _____

Report Information
1. Name: Dave Bell
Email: dbell@kentville.ca
2. Name: _____
Email: _____

Regulatory Requirements (Check):
☐ List Guidelines on Report ☐ Do Not List Guidelines on Report
☐ PIRI
Site Info (check all that apply):
☐ Tier 1 ☐ Res. ☐ Pot. ☐ Coarse
☐ Tier 2 ☐ Com ☐ N/Pot. ☐ Fine
☐ Gas ☐ Fuel ☐ Lube
☐ CCME ☐ CDWQ
☐ Ind ☐ NSDFOSP
☐ Com ☐ HRM 101
☐ Res/P Storm Water
☐ Ag ☐ HRM 101
☐ FWAL Waste Water
☐ Sediment
☐ Other _____

Report Format
☐ Single PDF sample per page
☐ Multiple PDF samples per page
☐ Excel Format Included

Turnaround Time (TAT) Business Days
'21 MAY 7 11:14AM
Regular TAT:
☐ 5 - 7 days
Rush TAT:
☐ 1 day ☐ 2 days
☐ 3 - 4 days
Date Required: _____
Time Required: _____

SAMPLE IDENTIFICATION	DATE / TIME SAMPLED	SAMPLE MATRIX	# OF CONTAINERS	COMMENTS - Site/Sample Info, Sample Containment	Field Filtered/ Preserved	Corrosion Index (alk, cond, Ca, Mn)	HAA	THM	Other	Hazardous (Y/N)	Lab Sample #
Mitchell Avenue - Treated		water	2			X					
Mitchell Avenue - Raw		water	2			X					
Prospect Reservoir – Treated		water	2			X					
Prospect Reservoir – Raw		water	2			X					
Chester Avenue Reservoir		water	2			X					
Belcher Street Reservoir		water	8			X	X	X			
Kentville Chrysler		water	5			X	X				
Donald Hiltz Drive		water	12			X					
Coldbrook Village Park Drive		water	3					X			

Sample Relinquished By (print name & sign)	Date/Time	Samples Received By (print name and sign)	Date/Time	Special Instructions
Sample Relinquished By (print name & sign)	Date/Time	Samples Received By (print name and sign)	Date/Time	
				Page of

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CLIENT NAME: TOWN OF KENTVILLE
354 MAIN ST.
KENTVILLE, NS B4N1K6
(902) 679-2521
ATTENTION TO: Dave Bell
PROJECT:
AGAT WORK ORDER: 21X817810
WATER ANALYSIS REVIEWED BY: Ashley Dussault, Report Writer
DATE REPORTED: Oct 22, 2021
PAGES (INCLUDING COVER): 6
VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (902) 468-8718

Notes

Disclaimer:

- *All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.*
- *All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.*
- *AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.*
- *This Certificate shall not be reproduced except in full, without the written approval of the laboratory.*
- *The test results reported herewith relate only to the samples as received by the laboratory.*
- *Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.*
- *All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.*

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Certificate of Analysis

AGAT WORK ORDER: 21X817810

PROJECT:

CLIENT NAME: TOWN OF KENTVILLE

ATTENTION TO: Dave Bell

SAMPLING SITE:

SAMPLED BY:

Health Canada Lead Sampling - Drinking Water + Copper

DATE RECEIVED: 2021-10-19

DATE REPORTED: 2021-10-22

				01 (21 Oakdene Ave)	02 (29 Mitchell Ave)	03 (52 Grant Street)	04 (25 Caldwell Ave)	05 (18 Academy St)	06 (11 Oakdene Terr)	07 (40 Anderson Blvd)	08 (330 Cornwallis St)
SAMPLE DESCRIPTION:											
SAMPLE TYPE:				Water	Water	Water	Water	Water	Water	Water	Water
DATE SAMPLED:				2021-10-13 05:30	2021-10-14 07:00	2021-10-13 07:00	2021-10-13 07:30	2021-10-13 07:00	2021-10-15 09:00	2021-10-13 07:20	2021-10-13 07:30
Parameter	**Unit**	**G / S**	**RDL**	**3104966**	**3104981**	**3104982**	**3104983**	**3104984**	**3104985**	**3104986**	**3104987**
Total Lead - Health Canada	ug/L	5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.7
Total Copper	ug/L	2000, 1000	2	18	54	28	51	87	26	31	55

				09 (16 Parkview Road)	10 (259 Belcher Street)	11 (19 Condon Ave)	12 (45 Highland Ave)	13 (875 West Main St)	14 (20 Grant Street)	15 (6049 Highway 12)	16 (90 Exhibition St)
SAMPLE DESCRIPTION:											
SAMPLE TYPE:				Water	Water	Water	Water	Water	Water	Water	Water
DATE SAMPLED:				2021-10-13 06:50	2021-10-14 10:00	2021-10-15 07:20	2021-10-13 07:05	2021-10-14 11:30	2021-10-14 10:45	2021-10-14 09:20	2021-10-14 10:30
Parameter	**Unit**	**G / S**	**RDL**	**3104988**	**3104989**	**3104990**	**3104991**	**3104992**	**3104993**	**3104994**	**3104995**
Total Lead - Health Canada	ug/L	5	0.5	<0.5	<0.5	1.5	<0.5	0.8	0.6	<0.5	<0.5
Total Copper	ug/L	2000, 1000	2	141	2	51	66	38	34	16	8

				17 (32 Main St)	18 (11 Kings Ride)	19 (26 Colbrook VPD)	20 (933 Park Street)
SAMPLE DESCRIPTION:							
SAMPLE TYPE:				Water	Water	Water	Water
DATE SAMPLED:				2021-10-14 09:50	2021-10-14 10:20	2021-10-14 11:20	2021-10-14 11:05
Parameter	**Unit**	**G / S**	**RDL**	**3104996**	**3104997**	**3104998**	**3104999**
Total Lead - Health Canada	ug/L	5	0.5	<0.5	0.6	<0.5	<0.5
Total Copper	ug/L	2000, 1000	2	16	34	10	19

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Canadian Drinking Water Quality - updated 2021-03
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

Analysis performed at AGAT Halifax (unless marked by *)

Certified By: Ashley Dussault

AGAT Laboratories

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Quality Assurance

CLIENT NAME: TOWN OF KENTVILLE

AGAT WORK ORDER: 21X817810

PROJECT:

ATTENTION TO: Dave Bell

SAMPLING SITE:

SAMPLED BY:

Water Analysis

RPT Date: Oct 22, 2021			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Health Canada Lead Sampling - Drinking Water + Copper															
Total Lead - Health Canada	3104999	3104999	<0.5	<0.5	NA	< 0.5	93%	80%	120%	103%	80%	120%	96%	70%	130%
Total Copper	3104999	3104999	19	20	2.3%	< 2	92%	80%	120%	101%	80%	120%	102%	70%	130%

Comments: If RPD value is NA, the results of the duplicates are less than 5x the RDL and the RPD will not be calculated.

Certified By:

AGAT Laboratories

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FAX (902)468-8924
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Method Summary

CLIENT NAME: TOWN OF KENTVILLE

AGAT WORK ORDER: 21X817810

PROJECT:

ATTENTION TO: Dave Bell

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Water Analysis			
Total Lead - Health Canada	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Copper	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS

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Chain of Custody Record

Laboratory Use Only
Arrival Condition: ☐ Good ☐ Poor (see notes)
Arrival Temperature: 6.2, 9.1, 9.5
Hold Time:
AGAT Job Number: 21X817810
Notes: no TAT

Report Information
Company: Town Of Kentville
Contact: David Bell
Address: 354 Main Street
Kentville, NS B4N 1K6
Phone: 902-679-2521 Fax: 902-679-2375
Client Project #:
AGAT Quotation:
Please Note: If quotation number is not provided client will be billed full price for analysis.

Report Information (Please print):
1. Name: David Bell
Email: dbell@kentville.ca
2. Name:
Email:

Report Format
☐ Single Sample per page
☐ Multiple Samples per page
☐ Excel Format Included
☐ Export

Turnaround Time Required (TAT)
Regular TAT ☐ 5 to 7 working days
Rush TAT ☐ Same day ☐ 1 day ☐ 2 days ☐ 3 days
Date Required:
'21 OCT 19 1:57PM

Regulatory Requirements (Check):
☐ List Guidelines on Report ☐ Do not list Guidelines on Report
☐ PIRI
☐ Tier 1 ☐ Res ☐ Pot ☐ Coarse
☐ Tier 2 ☐ Com ☐ N/Pot ☐ Fine
☐ Gas ☐ Fuel ☐ Lube
☐ CCME ☐ CDWQ
☐ Industrial ☐ NSEQS-Cont Sites
☐ Commercial ☐ HRM 101
☐ Res/Park ☐ Storm Water
☐ Agricultural ☐ Waste Water
☐ FWAL
☐ Sediment ☐ Other

Drinking Water Sample: ☐ Yes ☐ No Salt Water Sample ☐ Yes ☐ No
Reg. No.:

Invoice To Same Yes ☐ / No ☐
Company:
Contact:
Address:
Phone: Fax:
PO/Credit Card#:

Sample Identification	Date/Time Sampled	Sample Matrix	# Containers	Comments – Site/Sample Info. Sample Containment
See Page 2 for samples				

Field Filtered/Preserved	Standard Water Analysis	Metals: ☐ Total ☐ Diss ☐ Available	Mercury	☐ BOD ☐ CBOD	pH	☐ TSS ☐ TDS ☐ VSS	TKN	Total Phosphorus	Phenols	Tier 1: TPH/BTEX (PIRI) ☐ low level	Tier 2: TPH/BTEX Fractionation	CCME-CWS TPH/BTEX	VOC	THM	HAA	PAH	PCB	TC + EC ☐ P/A ☐ MPN ☐ MF	☐ HPC ☐ Pseudomonas	Fecal Coliform ☐ MPN ☐ MF	Other: Stagnated Lead & Copper	Other:	Hazardous (Y/N)

Samples Relinquished By (Print Name):	Date/Time	Samples Received By (Print Name):	Date/Time
Dave Bell			
Samples Relinquished By (Sign):	Date/Time	Samples Received By (Sign):	Date/Time
DG. Bell			

Pink Copy - Client
Yellow Copy - AGAT
White Copy- AGAT

Page 1 of 2
N°:

Document ID: DIV-133-1502.004
Date revised: Apr 19, 2021

AGAT Laboratories
Unit 122 • 11 Morris Drive
Dartmouth, NS B3B 1M2
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Chain of Custody Record

P: 902.468.8718 • F: 902.468.8924

Report to:

Company: Town of Kentville Same as COC#:

	SAMPLE IDENTIFICATION	DATE/TIME SAMPLED	~~SAMPLE MATRIX~~ Time	COMMENTS	# OF CONTAINERS			Field Filtered/Preserved	Standard Water Analysis	Metals: ☐ Total ☐ Diss ☐ Available	Mercury	☐ BOD ☐ CBOD	pH	☐ TSS ☐ TDS ☐ VSS	TKN	Total Phosphorus	Phenols	Tier 1: TPH/BTEX (PIRI) ☐ low level	Tier 2: TPH/BTEX Fractionation	CCME-CWS TPH/BTEX	VOC	THM	HAA	PAH	PCB	TC + EC ☐ P/A ☐ MPN ☐ MF	☐ HPC ☐ Pseudomonas	Fecal Coliform ☐ MPN ☐ MF	Other: Stagnated Lead & Copper	Other:	Hazardous (Y/N)
					VIALS / JARS	BAGS	BOTTLES																								
1	01	2021/10/13	05:30	21 Oakdene Ave.			1																					☑		
2	02	2021/10/14	07:00	29 Mitchell Ave.			1																					☑		
3	03	2021/10/13	07:00	52 Grant Street			1																					☑		
4	04	2021/10/13	07:30	25 Caldwell Ave.			1																					☑		
5	05	2021/10/13	07:00	18 Academy St.			1																					☑		
6	06	2021/10/15	09:00	11 Oakdene Terr.			1																					☑		
7	07	2021/10/13	07:20	40 Anderson Blvd			1																					☑		
8	08	2021/10/13	07:30	330 Cornwallis St.			1																					☑		
9	09	2021/10/13	06:50	16 Parkview Road			1																					☑		
10	10	2021/10/14	10:00	259 Belcher Street			1																					☑		
11	11	2021/10/15	07:20	19 Condon Ave.			1																					☑		
12	12	2021/10/13	07:05	45 Highland Ave.			1																					☑		
13	13	2021/10/14	11:30	875 West Main St.			1																					☑		
14	14	2021/10/14	10:45	20 Grant Street			1																					☑		
15	15	2021/10/14	09:20	6049 Highway 12			1																					☑		
16	16	2021/10/14	10:30	90 Exhibition St.			1																					☑		
17	17	2021/10/14	09:50	32 Main Street			1																					☑		
18	18	2021/10/14	10:20	11 Kings Ride			1																					☑		
19	19	2021/10/14	11:20	26 Coldbrook VPD			1																					☑		
20	20	2021/10/14	11:05	933 Park Street			1																					☑		
21																														
22																														
23																														
24																														
25																														

Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time
Dave Bell D Bell			
Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time
Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time

Pink Copy - Client
Yellow Copy - AGAT
White Copy- AGAT

Page 2 of 2

N°:

Document ID: DIV 133 1502 004

Date revised: Apr 19, 2021