Annual and Summary Report

For the Period of Jan. 1, 2024 to Dec. 31, 2024

For Arthur and Mount Forest Drinking Water Systems

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Introduction

Purpose

The purpose of this report is to provide information to several stakeholders and to satisfy the regulatory requirements of the Safe Drinking Water Act (SDWA), reporting required under Ontario Regulation 170/03 (Section 11 and Schedule 22). The report is a compilation of information that helps to demonstrate the ongoing provision of safe, consistent supply of high-quality drinking water to customers located within the Township of Wellington North (Arthur and Mount Forest).

Scope

This Annual and Summary report includes information from both Mount Forest and Arthur Drinking Water Systems for the period of January 1st to December 31st, 2024 (unless otherwise noted). The report is a collection of information that was previously found in two separate reports (Annual Report and Summary 22 Report to Council). The information is required to be reported to the following:

-the Drinking Water System Owners (Township of Wellington North Council);
-the public and customers

This report satisfies the requirements of both the Safe Drinking Water Act (SDWA) and Ontario Regulation 170/03:

-Section 11, Annual Reports which includes:

- a brief description of the drinking water systems;
- a list of water treatment chemicals used;
- a summary of the most recent water tests results required under O. Reg.170/03 or an approval, Municipal Drinking Water License (MDWL) or order;
- a summary of adverse test results and other issues reported to the Ministry including corrective action taken;
- a description of major expenses incurred to install, repair or replace required equipment;
- the location where this report is available for inspection/review.

And;

-Schedule 22, Summary Report which includes:

- list the requirements of the Safe Drinking Water Act, the Regulations, Drinking Water Works Permits (DWWP), Municipal Drinking Water License (MDWL), and any orders applicable to the system that were not met at any time during the period covered by the report;
- for each requirement that was not met, the duration of the failure and measures that were taken to correct the failure;
- a summary of the quantities and flow rates of the water supplied during the period covered by the report, including monthly average and maximum daily flows; and
- a comparison of this information to the rated capacity and flow rates approved in the system's approval, DWWP and/or MDWL.

This report satisfies applicable requirements for both the Arthur and Mount Forest Drinking Water Systems.

A copy of this report is available for viewing online at www.wellington-north.com

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Notice

Please note that every reasonable effort is made to ensure the accuracy of this report. This report is published with the best available information at the time of the publication. In the event that errors or omissions occur, the online report will be updated. Please refer to the online version of the report for the most current version.

Systems Overview

The role of the water department is to provide customers and the community with safe, consistent supply of high-quality drinking water while meeting, exceeding, and continually improving on legal, operational, and quality management system requirements.

The Arthur and Mount Forest drinking water systems are Class II Water Distribution and Supply Subsystems, composed of groundwater wells and water distribution systems. From January 1st to December 31st, 2024, certified staff of three Operators, one Lead Hand, one Manager and one Process Compliance Analyst operated and maintained the systems.

The water department received full scope reaccreditation to the Drinking Water Quality Management Standard and continues to hold the accreditation after a successful off-site audit on August 12th,2024 conducted by a third-party accreditation body. This full accreditation satisfies part of the requirements under the Municipal Drinking Water Licensing Program.

Arthur Drinking Water System

Arthur's municipal drinking water system provides water for a permanent population of approximately 2,628, comprised of approximately 1,260 residential connections and 111 Industrial/Commercial/Institutional (ICI) connections. ICI customers are fully metered and residential units are on a flat rate system. Arthur has approximately 21 km of water main.

The Arthur water system is comprised of three drilled wells, two pump houses, two elevated storage tanks and a water distribution system. The township uses 12% sodium hypochlorite for disinfection. Sodium silicate is used for iron sequestering at Well #7 and Waterworx is used at Well #8 for manganese sequestering. Each well is equipped with one well pump, discharge piping, and disinfection equipment. Well #8 is equipped with a back-up diesel generator. The system's supply for fire protection, peak demands and emergencies, is stored within two elevated storage tanks, one with a capacity of 1137 m^3 and one with a capacity of 227m^3.

The well pumps and associated metering pumps are started and stopped based on the water level in elevated tank number one. Once the low water level in the tank has been reached, the pump stations are called upon to supply the distribution system with the excess filling the elevated storage tanks to the normal top water level. This system is a demand/storage system. When the level drops below the lead pump start level, the lead well pump will start. If the level continues to drop, the next duty pump in

sequence will start. All pumps stop at the normal top water level until the water level drops in elevated tank number one and the pumps are required again. Whenever all pumps have stopped; the pump sequence changes. Pumps removed from service are automatically skipped.

From January 1st to December 31st, 2024, a total of 363,729.04 cubic meters of water was treated and pumped to the system. The average daily water demand was 993.69 cubic meters. The highest daily use of water occurred on May 28th, 2024 when 1,745.59 cubic meters of water was pumped.

Mount Forest Drinking Water System

Mount Forest's municipal drinking water system provides water for a permanent population of approximately 5,040, comprised of approximately 2,243 residential connections and 243 ICI connections. ICI customers are fully metered, and residential units are on a flat rate system. Mount Forest distribution system is approximately 37 km of water main.

The Mount Forest water system is comprised of four groundwater wells, four pump houses, a standpipe, and a water distribution system. The township uses 12% sodium hypochlorite for disinfection. Each well is equipped with one well pump, discharge piping, and disinfection equipment. Well #3 is equipped with a back-up diesel generator and a booster pump. The system's supply for fire protection, peak demands and emergencies, is stored within a 2083 m^3 standpipe.

The well pumps and sodium hypochlorite metering pumps are started and stopped based on the standpipe water level. Once the low water level in the tank has been reached, the pump stations are called upon to supply the distribution system with the excess filling the standpipe to the normal top water level. This system is a demand/storage system. When the level drops below the lead pump start level, the lead well pump will start. If the level continues to drop, the first, second and third lag well pumps will be started, respectively. All pumps stop at the normal top water level until the water level drops in the standpipe and the pumps are required again. Whenever all pumps have stopped; the pump sequence changes. Pumps removed from service are automatically skipped.

From January 1st to December 31st, 2024, a total of 524,168.64 cubic meters of water was treated and pumped to the system. The average daily water demand was 1,432.06 cubic meters. The highest daily use of water occurred on October 24th , 2024 when 1,959.94 cubic meters of water was pumped.

Sampling and Testing

The Township of Wellington North's certified operators regularly test the water within the overall system including the raw water at the well source(s), after treatment, and within the distribution system. From January 1st to December 31st, 2024, all regulatory microbiological and chemical quality samples were taken by certified operators and tests performed by accredited, licensed laboratories on water samples collected throughout the drinking water system. These tests include regulatory testing, and those results are included in this report.

Arthur and Mount Forest drinking water systems are defined as large residential systems operated under the regulatory requirements of the Safe Drinking Water Act and the Ontario Water Resources Act (accessed at www.e-laws.gov.on.ca). The Arthur Drinking Water System is operated under Municipal Drinking Water License (MDWL) 113-101 and the Drinking Water Works Permit (DWWP) 113-201. The Mount Forest Drinking Water System is operated under MDWL 113-102 and DWWP 113-202.

The MDWL and the DWWP describe system-specific requirements that are supplementary to provincial regulations and act as a license for water supply and distribution operations. These documents outline specific conditions and requirements regarding operation, maintenance and upgrades that are required by the system and are considered regulatory in nature. These documents are available by request for viewing at 160 Preston Street, Arthur.

Summary Report

a) Incidents of Regulatory Non-Compliance

This section describes all incidents of non-compliance (excluding those defined as "Adverse Water Quality Incidents" (AWQI) reported in Section B of this report). AWQI's are required to be reported to the Ministry of Environment, Conservation & Parks (MECP) with respect to the following Acts and related regulations: Ontario Water Resources Act (OWRA), Safe Drinking Water Act (SDWA), the Environmental Protection Act (EPA), and Municipal Drinking Water Licenses (MDWL) and Drinking Water Works Permits (DWWP).

The most recent assessment of compliance for Arthur and Mount Forest Drinking Water Systems as determined by the MECP during the 2024 Annual Inspections resulted in a final inspection rating of 100% for each facility.

There was no non-compliance for either Arthur or Mount Forest Drinking Water Systems during the MECP inspections in 2024.

b) Adverse Water Quality Incidents

This section describes all "Adverse Water Quality Incidents" (AWQI). This term refers to any unusual test results from treated water that does not meet a provincial water quality standard, or situation where disinfection of the water may be compromised. An adverse water quality incident indicates that on at least one occasion, a water quality standard was not met.

A sample taken from Arthur DWS Distribution at 488 Eliza Street on Monday July 22nd , 2024 had an adverse result of 1 cfu/100mL Total Coliforms. Corrective action was taken and resampling results indicated zero Total Coliforms in all resamples, therefore indicating that the issue was resolved.

c) Summaries of Flow Rates and Water Supply Capacities

The Safe Drinking Water Act (SDWA) and the Ontario Water Resources Act (OWRA) each require that operating authority's record and report water takings as governed by the Permits to Take Water (PTTW). The following tables list the quantities and flow rates of the water supplied during this reporting period, including monthly average and maximum daily flows, daily instantaneous peak flow rates and a comparison to the rated capacity and flow rates specified in the system approval:

Table 1: Arthur Well #7b Flows

Approved Volume (m3/day): 1961

Approved Flow Rate (L/sec): 22.7

	Avg Daily Volume (m^3)	% of Approved Volume	Max Daily Volume (m^3)	% of Approved Volume	Peak Flow Rate (L/sec)	% of Approved Flow Rate
January	308.76	15.7	615.12	31.4	20.60	90.7
February	336.17	17.1	824.24	42.0	20.21	89.0
March	310.36	15.8	441.34	22.5	20.83	91.8
April	336.74	17.2	642.32	32.8	20.46	90.1
May	297.30	15.2	896.77	45.7	20.36	89.7
June	278.31	14.2	519.81	26.5	21.19	93.3
July	360.04	18.4	903.48	46.1	21.92	96.6
August	326.20	16.6	816.01	41.6	22.16	97.6
September	385.47	19.7	679.28	34.6	22.00	96.9
October	294.42	15.0	640.88	32.7	21.94	96.7
November	327.38	16.7	670.65	34.2	21.63	95.3
December	319.27	16.3	664.58	33.9	21.88	96.4

Table 2: Arthur Well #8a Flows

Approved Volume (m3/day): 2255

Approved Flow Rate (L/sec): 26.1

	Avg Daily Volume (m^3)	% of Approved Volume	Max Daily Volume (m^3)	% of Approved Volume	Peak Flow Rate (L/sec)	% of Approved Flow Rate
January	293.21	13.0	491.04	21.8	24.21	92.8
February	281.98	12.5	585.01	25.9	24.28	93.0
March	283.22	12.6	532.92	23.6	24.42	93.6
April	309.41	13.7	663.77	29.4	24.64	94.4
May	371.77	16.5	711.20	31.5	24.36	93.3
June	393.76	17.5	714.67	31.7	25.06	96.0
July	376.32	16.7	751.25	33.3	25.39	97.3
August	380.81	16.9	666.01	29.5	24.88	95.3
September	388.58	17.2	570.01	25.3	25.06	96.0
October	321.73	14.3	716.65	31.8	24.79	95.0
November	353.78	15.7	592.67	26.3	24.92	95.5
December	308.08	13.7	568.85	25.2	24.81	95.1

Table 3: Arthur Well #8b Flows

Approved Volume (m3/day): 2255

Approved Flow Rate (L/sec): 26.1

	Avg Daily Volume (m^3)	% of Approved Volume	Max Daily Volume (m^3)	% of Approved Volume	Peak Flow Rate (L/sec)	% of Approved Flow Rate
January	296.32	13.1	725.73	32.2	23.85	91.4
February	296.31	13.1	549.37	24.4	23.64	90.6
March	292.41	13.0	491.01	21.8	23.99	91.9
April	262.68	11.6	514.82	22.8	23.86	91.4
May	296.46	13.1	438.98	19.5	24.01	92.0
June	353.79	15.7	629.65	27.9	24.56	94.1
July	364.06	16.1	644.25	28.6	25.02	95.9
August	405.60	18.0	666.98	29.6	24.50	93.9
September	408.26	18.1	609.46	27.0	24.84	95.2
October	396.77	17.6	791.72	35.1	24.52	93.9
November	296.06	13.1	577.95	25.6	24.56	94.1
December	312.50	13.9	537.99	23.9	24.60	94.3

There was 363,729.04 m^3 of water processed in Arthur for 2024 (Jan. 01 to Dec. 31). This represents 4.06 % decrease compared to the same time period in 2023 and 0.7 % increase from 2022.

Table 4: Mount Forest Well #3 Flows

Approved Volume (m3/day): 1637

Approved Flow Rate (L/sec):22.7

	Avg Daily Volume (m^3)	% of Approved Volume	Max Daily Volume (m^3)	% of Approved Volume	Peak Flow Rate (L/sec)	% of Approved Flow Rate
January	242.04	14.8	447.17	27.3	16.49	72.6
February	290.37	17.7	558.53	34.1	16.73	73.7
March	329.76	20.1	477.25	29.2	17.64	77.7
April	307.12	18.8	452.81	27.7	17.13	75.5
May	241.95	14.8	650.87	39.8	17.29	76.2
June	237.21	14.5	444.16	27.1	16.99	74.8
July	260.21	15.9	460.03	28.1	17.13	75.5
August	278.76	17.0	439.07	26.8	17.33	76.3
September	246.12	15.0	453.82	27.7	17.84	78.6
October	285.17	17.4	447.52	27.3	17.12	75.4
November	269.81	16.5	508.94	31.1	17.30	76.2
December	253.93	15.5	433.49	26.5	17.07	75.2

Table 5: Mount Forest Well #4 Flows

Approved Volume (m3/day): 1964

Approved Flow Rate (L/sec): 22.7

	Avg Daily Volume (m^3)	% of Approved Volume	Max Daily Volume (m^3)	% of Approved Volume	Peak Flow Rate (L/sec)	% of Approved Flow Rate
January	393.07	20.0	624.80	31.8	19.16	84.4
February	393.93	20.1	656.57	33.4	19.25	84.8
March	37.18	1.89	488.93	24.9	18.76	82.6
April	118.79	6.05	724.16	36.9	19.05	83.9
May	332.18	16.9	626.41	31.9	19.47	85.8
June	311.16	15.8	756.52	38.5	19.38	85.4
July	283.82	14.5	733.49	37.3	18.98	83.6
August	351.36	17.9	602.34	30.7	18.86	83.1
September	342.57	17.4	686.27	34.9	18.45	81.3
October	326.13	16.6	694.84	35.4	18.49	81.5
November	333.24	17.0	646.97	32.9	18.48	81.4
December	364.60	18.6	605.51	30.8	18.54	81.7

Table 6: Mount Forest Well #5 Flows

Approved Volume (m3/day): 3928

Approved Flow Rate (L/sec): 45.5

	Avg Daily Volume (m^3)	% of Approved Volume	Max Daily Volume (m^3)	% of Approved Volume	Peak Flow Rate (L/sec)	% of Approved Flow Rate
January	435.27	11.1	614.10	15.6	45.24	99.4
February	379.94	9.7	692.16	17.6	38.18	83.9
March	508.68	13.0	750.24	19.1	40.35	88.7
April	509.79	13.0	776.71	19.8	38.08	83.7
May	456.35	11.6	847.90	21.6	38.97	85.6
June	527.59	13.4	1162.67	29.6	38.14	83.8
July	476.15	12.1	1062.77	27.1	37.77	83.0
August	519.74	13.2	1075.99	27.4	39.82	87.5
September	515.85	13.1	978.96	24.9	38.10	83.7
October	383.99	9.8	812.01	20.7	39.51	86.8
November	371.58	9.5	572.79	14.6	42.29	92.9
December	397.61	10.1	683.76	17.4	41.10	90.3

Table 7: Mount Forest Well #6 Flows

Approved Volume (m3/day): 3928

Approved Flow Rate (L/sec): 45.5

	Avg Daily Volume (m^3)	% of Approved Volume	Max Daily Volume (m^3)	% of Approved Volume	Peak Flow Rate (L/sec)	% of Approved Flow Rate
January	366.03	9.3	840.91	21.4	36.86	81.0
February	344.36	8.8	664.98	16.9	39.12	86.0
March	443.93	11.3	634.72	16.2	39.40	86.6
April	384.00	9.8	646.71	16.5	40.37	88.7
May	366.46	9.3	620.20	15.8	36.90	81.1
June	475.13	12.1	909.01	23.1	41.30	90.8
July	598.97	15.2	1151.82	29.3	40.23	88.4
August	370.86	9.4	813.66	20.7	40.27	88.5
September	409.13	10.4	754.37	19.2	39.71	87.3
October	407.79	10.4	584.30	14.9	40.45	88.9
November	381.82	9.7	857.26	21.8	39.70	87.3
December	323.23	8.2	630.60	16.1	40.78	89.6

There was 524,168.64 m^3 of water processed in Mount Forest for 2024 (Jan. 01 to Dec. 31). This represents 4.25 % decrease compared to the same time period in 2023 and 3.23 % increase from 2022.

d) Raw and Treated Water Quality

This section describes the water quality monitoring, both regulatory and operational, that has been completed in 2024.

Water Quality Review

Under the SDWA, municipalities are required to monitor both the raw and treated quality of the source water supplied. This monitoring is performed for both regulatory compliance and due diligence and is expected to identify any changes within the treated water as well as in raw source waters.

Table 8: O. Regulation 170/03 Schedule 7-2, Distribution Manual Free Chlorine Residual Summary

Parameter	ODWQS	Total Analyzed	Total Outside ODWQS Criteria	Range	Units
Arthur Free Chlorine Residual	0.05 - 4.0	366	0	0.62 to 1.69	mg/L
Mount Forest Free Chlorine Residual	0.05 - 4.0	366	0	0.57 to 1.81	mg/L

Table 9: O. Regulation 170/03 Schedule 7-3, Raw Turbidity Sampling Summary

Regulation 170/03, Schedule 7-3 requires a minimum of one raw turbidity sample taken monthly from each well that is supplying water to the drinking water system. We typically sample raw turbidity more than once per month but are not required to.

Parameter	ODWQS	Total Analyzed	Total Outside ODWQS Criteria	Range	Units
Arthur Raw Well # 7b	1	53	0	0.11 to 0.49	NTU's
Arthur Raw Well # 8a/b	1	53	0	0.09 to 0.41	NTU's
Mount Forest Raw Well # 3	1	53	0	0.07 to 0.35	NTU's
Mount Forest Raw Well # 4	1	46	0	0.07 to 0.58	NTU's
Mount Forest Raw Well # 5	1	52	0	0.06 to 0.38	NTU's
Mount Forest Raw Well # 6	1	52	0	0.08 to 0.59	NTU's

Note: From March 4th to April 22nd, 2024 Well # 4 was offline due to maintenance.

Table 10: O. Regulation 170/03 Schedule 10-4- Raw Bacteriological Sampling Summary

Parameter	ODWQS	Total Analyzed	Total Outside ODWQS Criteria	Range	Units
Arthur Raw - T.coli	n/a	159	n/a	0	cfu/100mL
Arthur Raw - E.coli	n/a	159	n/a	0	cfu/100mL
Mount Forest Raw - T.coli	n/a	206	n/a	0	cfu/100mL
Mount Forest Raw - E.coli	n/a	206	n/a	0	cfu/100mL

Table 11: O. Regulation 170/03 Schedule 10-3, Treated Bacteriological Sampling Summary

Parameter	ODWQS	Total Analyzed	Total Outside ODWQS Criteria	Range	Units
Arthur Treated - T.coli	0	106	0	0	cfu/100mL
Arthur Treated - E.coli	0	106	0	0	cfu/100mL
Arthur Treated - HPC	n/a	106	n/a	<10-10	cfu/mL
Mount Forest Treated - T.coli	0	206	0	0	cfu/100mL
Mount Forest Treated - E.coli	0	206	0	0	cfu/100mL
Mount Forest Treated - HPC	n/a	206	n/a	<10-70	cfu/mL

Table 12: O. Regulation 170/03 Schedule 10-2, Distribution Samples Summary

Parameter	ODWQS	Total Analyzed	Total Outside ODWQS Criteria	Range	Units
Arthur Distribution - T.coli	0	159	1	0 -1	cfu/100mL
Arthur Distribution - E.coli	0	159	0	0	cfu/100mL
Arthur Distribution - HPC	n/a	159	n/a	<10 – 1730	cfu/mL
Mount Forest Distribution - T.coli	0	212	0	0	cfu/100mL
Mount Forest Distribution - E.coli	0	212	0	0	cfu/100mL
Mount Forest Distribution - HPC	n/a	212	n/a	<10 – 60	cfu/mL

* Note: On April 8, 2024, a distribution sample taken at 488 Eliza St resulted in an HPC of NDLA (No Data: Laboratory Accident/Error), so no result could be provided. The following week on April 15, 2024, the same sample location result was 10 cfu/mL HPC.

* Note: On November 12, 2024, a distribution sample at 103 Smith St resulted in an HPC of NDOGHPC (No Data: Overgrown with HPC). The following week on November 18, 2024, the same sample location result was <10 cfu/mL HPC.

Treated Water Quality- O. Regulation 170/03 Schedule 13-6, 13-6.1 and 13-7, "Three Month" Sampling Results Summary

In 2024, all operational Treated sources were sampled and analyzed for Schedule 13-6, 13-6.1 and 13-7 parameters as per O.Reg. 170-03.

Regulation 170/03, Schedule 13-6 requires a minimum of one distribution sample taken from the Distribution System where THM's (trihalomethanes) are most likely to develop (locations with high retention times). The Maximum Allowable Concentration (MAC) for THM's is 100 ug/L. However, for this parameter the MAC uses a running annual average of quarterly samples.

The results of the running average value for THM's for all related Distribution System samples in 2024 are below the ½ MAC (half of the maximum allowable concentration). Mount Forest had an annual running average of 23 ug/L of Total THM's and Arthur had an annual running average of 18 ug/L of Total THM's.

Regulation 170/03, Schedule 13-6.1 requires a minimum of one distribution sample taken from the Distribution System where HAA's (haloacetic acids) are most likely to develop. On January 1, 2020, the Maximum Allowable Concentration (MAC) for HAA's of 80 ug/L came into effect. For this parameter, the MAC uses a running annual average of quarterly samples.

The results of HAA's for all related Distribution System samples in 2024 are below the ½ MAC (half of the maximum allowable concentration). Mount Forest had an annual running average of <5.3 ug/L of HAA's and Arthur had an annual running average of <5.3 ug/L of HAA's.

All operational Treated Sources were sampled and analyzed for Nitrates and Nitrites as per Regulation 170/03, Schedule 13-7. There was no instance of any adverse results in 2024.

Table 13: O. Regulation 170/03 Schedule 13-7, Nitrite and Nitrate Sampling Results Summary

Arthur	Date	ODWQS MAC	Well #7b	Well #8a/b
Nitrite (mg/L)	Feb 2024	1	0.003<MDL	0.003<MDL
	May 2024	1	0.003<MDL	0.003<MDL
	Aug 2024	1	0.003<MDL	0.003<MDL
	Nov 2024	1	0.003<MDL	0.003<MDL
Nitrate (mg/L)	Feb 2024	10	0.006<MDL	0.006<MDL
	May 2024	10	0.006	0.006<MDL
	Aug 2024	10	0.006	0.006<MDL
	Nov 2024	10	0.006<MDL	0.006<MDL

*MDL- method detection limit

Mount Forest	Date	ODWQS MAC	Well #3	Well #4	Well #5	Well #6
Nitrite (mg/L)	Feb 2024	1	0.003<MDL	0.003<MDL	0.003<MDL	0.003<MDL
	May 2024	1	0.003<MDL	0.003<MDL	0.003<MDL	0.003<MDL
	Aug 2024	1	0.003<MDL	0.003<MDL	0.003<MDL	0.003<MDL
	Nov 2024	1	0.003<MDL	0.003<MDL	0.003<MDL	0.003<MDL
Nitrate (mg/L)	Feb 2024	10	0.093	0.006<MDL	2.24	0.006<MDL
	May 2024	10	0.102	0.006<MDL	2.29	0.006<MDL
	Aug 2024	10	0.114	0.006<MDL	2.43	0.006<MDL
	Nov 2024	10	0.084	0.006<MDL	2.36	0.006<MDL

*MDL- method detection limit

Treated Water Quality Statistics- O. Regulation 170/03 Schedule 23 Results Summary

If sampling for a particular schedule's parameters (e.g., Schedule 23 or 24) did not occur within the calendar year of the report, then the most recent values are required to be included in the report for reference.

Table 14: O. Regulation 170/03 Schedule 23 Results Arthur Well #7b

Parameter	Sample Date	Result Value	MAC	Unit of Measure	Exceedance
Antimony	Aug. 19/24	0.6<MDL	**6**	ug/L	No
Arsenic	Aug. 19/24	3.2	**10**	ug/L	No
Barium	Aug. 19/24	53.5	**1000**	ug/L	No
Boron	Aug. 19/24	81	**5000**	ug/L	No
Cadmium	Aug. 19/24	0.003	**5**	ug/L	No
Chromium	Aug. 19/24	0.08<MDL	**50**	ug/L	No
Mercury	Aug. 26/24	0.01	**1**	ug/L	No
Selenium	Aug. 19/24	0.04<MDL	**50**	ug/L	No
Uranium	Aug. 19/24	0.226	**20**	ug/L	No

Table 15: O. Regulation 170/03 Schedule 23 Results Arthur Well #8

Parameter	Sample Date	Result Value	MAC	Unit of Measure	Exceedance
Antimony	Aug. 19/24	0.6<MDL	**6**	ug/L	No
Arsenic	Aug. 19/24	0.2<MDL	**10**	ug/L	No
Barium	Aug. 19/24	66.8	**1000**	ug/L	No
Boron	Aug. 19/24	56	**5000**	ug/L	No
Cadmium	Aug. 19/24	0.003<MDL	**5**	ug/L	No
Chromium	Aug. 19/24	0.08<MDL	**50**	ug/L	No
Mercury	Aug. 19/24	0.01<MDL	**1**	ug/L	No
Selenium	Aug. 19/24	0.04<MDL	**50**	ug/L	No
Uranium	Aug. 19/24	0.424	**20**	ug/L	No

Table 16: O. Regulation 170/03 Schedule 23 Results Mount Forest Well #3

Parameter	Sample Date	Result Value	MAC	Unit of Measure	Exceedance
Antimony	Jan. 24/22	0.6<MDL	**6**	ug/L	No
Arsenic	Jan. 24/22	1.6	**10**	ug/L	No
Barium	Jan. 24/22	139	**1000**	ug/L	No
Boron	Jan. 24/22	41	**5000**	ug/L	No
Cadmium	Jan. 24/22	0.004	**5**	ug/L	No
Chromium	Jan. 24/22	0.18	**50**	ug/L	No
Mercury	Jan. 24/22	0.01<MDL	**1**	ug/L	No
Selenium	Jan. 24/22	0.05	**50**	ug/L	No
Uranium	Jan. 24/22	0.32	**20**	ug/L	No

Table 17: O. Regulation 170/03 Schedule 23 Results Mount Forest Well #4

Parameter	Sample Date	Result Value	MAC	Unit of Measure	Exceedance
Antimony	Jan. 24/22	0.6<MDL	**6**	ug/L	No
Arsenic	Jan. 24/22	1.0	**10**	ug/L	No
Barium	Jan. 24/22	221	**1000**	ug/L	No
Boron	Jan. 24/22	40	**5000**	ug/L	No
Cadmium	Jan. 24/22	0.009	**5**	ug/L	No
Chromium	Jan. 24/22	0.24	**50**	ug/L	No
Mercury	Jan. 24/22	0.01<MDL	**1**	ug/L	No
Selenium	Jan. 24/22	0.04<MDL	**50**	ug/L	No
Uranium	Jan. 24/22	0.166	**20**	ug/L	No

Table 18: O. Regulation 170/03 Schedule 23 Results Mount Forest Well #5

Parameter	Sample Date	Result Value	MAC	Unit of Measure	Exceedance
Antimony	Jan. 24/22	0.6<MDL	**6**	ug/L	No
Arsenic	Jan. 24/22	0.2 <MDL	**10**	ug/L	No
Barium	Jan. 24/22	169	**1000**	ug/L	No
Boron	Jan. 24/22	37	**5000**	ug/L	No
Cadmium	Jan. 24/22	0.1	**5**	ug/L	No
Chromium	Jan. 24/22	0.26	**50**	ug/L	No
Mercury	Jan. 24/22	0.01 <MDL	**1**	ug/L	No
Selenium	Jan. 24/22	0.61	**50**	ug/L	No
Uranium	Jan. 24/22	0.727	**20**	ug/L	No

Table 19: O. Regulation 170/03 Schedule 23 Results Mount Forest Well #6

Parameter	Sample Date	Result Value	MAC	Unit of Measure	Exceedance
Antimony	Jan. 24/22	0.6<MDL	**6**	ug/L	No
Arsenic	Jan. 24/22	1.6	**10**	ug/L	No
Barium	Jan. 24/22	174	**1000**	ug/L	No
Boron	Jan. 24/22	32	**5000**	ug/L	No
Cadmium	Jan. 24/22	0.003<MDL	**5**	ug/L	No
Chromium	Jan. 24/22	0.12	**50**	ug/L	No
Mercury	Jan. 24/22	0.01<MDL	**1**	ug/L	No
Selenium	Jan. 24/22	0.04<MDL	**50**	ug/L	No
Uranium	Jan. 24/22	0.226	**20**	ug/L	No

Treated Water Quality Statistics- O. Regulation 170/03 Schedule 24 Results Summary

If sampling for a particular schedule's parameters (e.g., Schedule 23 or 24) did not occur within the calendar year of the report, then the most recent values are required to be included in the report for reference.

Table 20: O. Regulation 170/03 Schedule 24 Results for Arthur Well #7b

Parameter	Sample Date	Result Value	MAC	Unit of Measure	Exceedance (Yes/No)
Alachlor	Aug. 19/24	0.02<MDL	**5**	ug/L	No
Atrazine + N-dealkylated metabolites	Aug. 19/24	0.01<MDL	**5**	ug/L	No
Azinphos-methyl	Aug. 19/24	0.05<MDL	**20**	ug/L	No
Benzene	Aug. 19/24	0.32<MDL	**1**	ug/L	No
Benzo(a)pyrene	Aug. 19/24	0.004<MDL	**0.01**	ug/L	No
Bromoxynil	Aug. 19/24	0.33<MDL	**5**	ug/L	No
Carbaryl	Aug. 19/24	0.05<MDL	**90**	ug/L	No
Carbofuran	Aug. 19/24	0.01<MDL	**90**	ug/L	No
Carbon Tetrachloride	Aug. 19/24	0.17<MDL	**2**	ug/L	No
Chlorpyrifos	Aug. 19/24	0.02<MDL	**90**	ug/L	No
Diazinon	Aug. 19/24	0.02<MDL	**20**	ug/L	No
Dicamba	Aug. 19/24	0.2<MDL	**120**	ug/L	No
1,2-Dichlorobenzene	Aug. 19/24	0.41<MDL	**200**	ug/L	No
1,4-Dichlorobenzene	Aug. 19/24	0.36<MDL	**5**	ug/L	No
1,2-Dichloroethane	Aug. 19/24	0.35<MDL	**5**	ug/L	No
1,1-Dichloroethylene (vinylidene chloride)	Aug. 19/24	0.33<MDL	**14**	ug/L	No
Dichloromethane	Aug. 19/24	0.35<MDL	**50**	ug/L	No
2-4 Dichlorophenol	Aug. 19/24	0.15<MDL	**900**	ug/L	No
2,4-Dichlorophenoxy acetic acid (2,4 -D)	Aug. 19/24	0.19<MDL	**100**	ug/L	No
Diclofop-methyl	Aug. 19/24	0.40<MDL	**9**	ug/L	No
Dimethoate	Aug. 19/24	0.06<MDL	**20**	ug/L	No
Diquat	Aug. 19/24	1.0<MDL	**70**	ug/L	No
Diuron	Aug. 19/24	0.03<MDL	**150**	ug/L	No
Glyphosate	Aug. 19/24	1.0<MDL	**280**	ug/L	No
Malathion	Aug. 19/24	0.02<MDL	**190**	ug/L	No
MCPA	Aug. 19/24	0.00012<MDL	**0.1**	mg/L	No
Metolachlor	Aug. 19/24	0.01<MDL	**50**	ug/L	No
Metribuzin	Aug. 19/24	0.02<MDL	**80**	ug/L	No
Monochlorobenzene	Aug. 19/24	0.3<MDL	**80**	ug/L	No
Paraquat	Aug. 19/24	1.0<MDL	**10**	ug/L	No
Pentachlorophenol	Aug. 19/24	0.15<MDL	**60**	ug/L	No
Phorate	Aug. 19/24	0.01<MDL	**2**	ug/L	No
Picloram	Aug. 19/24	1.0<MDL	**190**	ug/L	No
Polychlorinated Biphenyls (PCB)	Aug. 19/24	0.04<MDL	**3**	ug/L	No
Prometryne	Aug. 19/24	0.03<MDL	**1**	ug/L	No
Simazine	Aug. 19/24	0.01<MDL	**10**	ug/L	No

Parameter	Sample Date	Result Value	MAC	Unit of Measure	Exceedance (Yes/No)
Terbufos	Aug. 19/24	0.01<MDL	**1**	ug/L	No
Tetrachloroethylene	Aug. 19/24	0.35<MDL	**10**	ug/L	No
2,3,4,6-Tetrachlorophenol	Aug. 19/24	0.20<MDL	**100**	ug/L	No
Triallate	Aug. 19/24	0.01<MDL	**230**	ug/L	No
Trichloroethylene	Aug. 19/24	0.44<MDL	**5**	ug/L	No
2,4,6 - Trichlorophenol	Aug. 19/24	0.25<MDL	**5**	ug/L	No
Trifuralin	Aug. 19/24	0.02<MDL	**45**	ug/L	No
Vinyl Chloride	Aug. 19/24	0.17<MDL	**1**	ug/L	No

Table 21: O. Regulation 170/03 Schedule 24 Results for Arthur Well #8

Parameter	Sample Date	Result Value	MAC	Unit of Measure	Exceedance (Yes/No)
Alachlor	Aug. 19/24	0.02<MDL	**5**	ug/L	No
Atrazine + N-dealkylated metabolites	Aug. 19/24	0.01<MDL	**5**	ug/L	No
Azinphos-methyl	Aug. 19/24	0.05<MDL	**20**	ug/L	No
Benzene	Aug. 19/24	0.32<MDL	**1**	ug/L	No
Benzo(a)pyrene	Aug. 19/24	0.004<MDL	**0.01**	ug/L	No
Bromoxynil	Aug. 19/24	0.33<MDL	**5**	ug/L	No
Carbaryl	Aug. 19/24	0.05<MDL	**90**	ug/L	No
Carbofuran	Aug. 19/24	0.01<MDL	**90**	ug/L	No
Carbon Tetrachloride	Aug. 19/24	0.17<MDL	**2**	ug/L	No
Chlorpyrifos	Aug. 19/24	0.02<MDL	**90**	ug/L	No
Diazinon	Aug. 19/24	0.02<MDL	**20**	ug/L	No
Dicamba	Aug. 19/24	0.2<MDL	**120**	ug/L	No
1,2-Dichlorobenzene	Aug. 19/24	0.41<MDL	**200**	ug/L	No
1,4-Dichlorobenzene	Aug. 19/24	0.36<MDL	**5**	ug/L	No
1,2-Dichloroethane	Aug. 19/24	0.35<MDL	**5**	ug/L	No
1,1-Dichloroethylene (vinylidene chloride)	Aug. 19/24	0.33<MDL	**14**	ug/L	No
Dichloromethane	Aug. 19/24	0.35<MDL	**50**	ug/L	No
2-4 Dichlorophenol	Aug. 19/24	0.15<MDL	**900**	ug/L	No
2,4-Dichlorophenoxy acetic acid (2,4 -D)	Aug. 19/24	0.19<MDL	**100**	ug/L	No
Diclofop-methyl	Aug. 19/24	0.40<MDL	**9**	ug/L	No
Dimethoate	Aug. 19/24	0.06<MDL	**20**	ug/L	No
Diquat	Aug. 19/24	1.0<MDL	**70**	ug/L	No
Diuron	Aug. 19/24	0.03<MDL	**150**	ug/L	No
Glyphosate	Aug. 19/24	1.0<MDL	**280**	ug/L	No
Malathion	Aug. 19/24	0.02<MDL	**190**	ug/L	No
MCPA	Aug. 19/24	0.00012<MDL	**0.1**	mg/L	No
Metolachlor	Aug. 19/24	0.01<MDL	**50**	ug/L	No
Metribuzin	Aug. 19/24	0.02<MDL	**80**	ug/L	No
Monochlorobenzene	Aug. 19/24	0.3<MDL	**80**	ug/L	No
Paraquat	Aug. 19/24	1.0<MDL	**10**	ug/L	No

Parameter	Sample Date	Result Value	MAC	Unit of Measure	Exceedance (Yes/No)
Pentachlorophenol	Aug. 19/24	0.15<MDL	**60**	ug/L	No
Phorate	Aug. 19/24	0.01<MDL	**2**	ug/L	No
Picloram	Aug. 19/24	1.0<MDL	**190**	ug/L	No
Polychlorinated Biphenyls (PCB)	Aug. 19/24	0.04<MDL	**3**	ug/L	No
Prometryne	Aug. 19/24	0.03<MDL	**1**	ug/L	No
Simazine	Aug. 19/24	0.01<MDL	**10**	ug/L	No
Terbufos	Aug. 19/24	0.01<MDL	**1**	ug/L	No
Tetrachloroethylene	Aug. 19/24	0.35<MDL	**10**	ug/L	No
2,3,4,6-Tetrachlorophenol	Aug. 19/24	0.20<MDL	**100**	ug/L	No
Triallate	Aug. 19/24	0.01<MDL	**230**	ug/L	No
Trichloroethylene	Aug. 19/24	0.44<MDL	**5**	ug/L	No
2,4,6 - Trichlorophenol	Aug. 19/24	0.25<MDL	**5**	ug/L	No
Trifuralin	Aug. 19/24	0.02<MDL	**45**	ug/L	No
Vinyl Chloride	Aug. 19/24	0.17<MDL	**1**	ug/L	No

Table 22: O. Regulation 170/03 Schedule 24 Results for Mount Forest Well #3

Parameter	Sample Date	Result Value	MAC	Unit of Measure	Exceedance (Yes/No)
Alachlor	Jan 24/22	0.02<MDL	**5**	ug/L	No
Atrazine + N-dealkylated metabolites	Jan 24/22	0.01<MDL	**5**	ug/L	No
Azinphos-methyl	Jan 24/22	0.05<MDL	**20**	ug/L	No
Benzene	Jan 24/22	0.32<MDL	**1**	ug/L	No
Benzo(a)pyrene	Jan 24/22	0.004<MDL	**0.01**	ug/L	No
Bromoxynil	Jan 24/22	0.33<MDL	**5**	ug/L	No
Carbaryl	Jan 24/22	0.05<MDL	**90**	ug/L	No
Carbofuran	Jan 24/22	0.01<MDL	**90**	ug/L	No
Carbon Tetrachloride	Jan 24/22	0.17<MDL	**2**	ug/L	No
Chlorpyrifos	Jan 24/22	0.02<MDL	**90**	ug/L	No
Diazinon	Jan 24/22	0.02<MDL	**20**	ug/L	No
Dicamba	Jan 24/22	0.02<MDL	**120**	ug/L	No
1,2-Dichlorobenzene	Jan 24/22	0.41<MDL	**200**	ug/L	No
1,4-Dichlorobenzene	Jan 24/22	0.36<MDL	**5**	ug/L	No
1,2-Dichloroethane	Jan 24/22	0.35<MDL	**5**	ug/L	No
1,1-Dichloroethylene (vinylidene chloride)	Jan 24/22	0.33<MDL	**14**	ug/L	No
Dichloromethane	Jan 24/22	0.35<MDL	**50**	ug/L	No
2-4 Dichlorophenol	Jan 24/22	0.15<MDL	**900**	ug/L	No
2,4-Dichlorophenoxy acetic acid (2,4 -D)	Jan 24/22	0.19<MDL	**100**	ug/L	No
Diclofop-methyl	Jan 24/22	0.40<MDL	**9**	ug/L	No
Dimethoate	Jan 24/22	0.06<MDL	**20**	ug/L	No
Diquat	Jan 24/22	1.0<MDL	**70**	ug/L	No
Diuron	Jan 24/22	0.03<MDL	**150**	ug/L	No
Glyphosate	Jan 24/22	1.0<MDL	**280**	ug/L	No
Malathion	Jan 24/22	0.02<MDL	**190**	ug/L	No

Parameter	Sample Date	Result Value	MAC	Unit of Measure	Exceedance (Yes/No)
MCPA	Jan 24/22	0.00012<MDL	**0.1**	mg/L	No
Metolachlor	Jan 24/22	0.01<MDL	**50**	ug/L	No
Metribuzin	Jan 24/22	0.02<MDL	**80**	ug/L	No
Monochlorobenzene	Jan 24/22	0.3<MDL	**80**	ug/L	No
Paraquat	Jan 24/22	1.0<MDL	**10**	ug/L	No
Pentachlorophenol	Jan 24/22	0.15<MDL	**60**	ug/L	No
Phorate	Jan 24/22	0.01<MDL	**2**	ug/L	No
Picloram	Jan 24/22	1.0<MDL	**190**	ug/L	No
Polychlorinated Biphenyls (PCB)	Jan 24/22	0.04<MDL	**3**	ug/L	No
Prometryne	Jan 24/22	0.03<MDL	**1**	ug/L	No
Simazine	Jan 24/22	0.01<MDL	**10**	ug/L	No
Terbufos	Jan 24/22	0.01<MDL	**1**	ug/L	No
Tetrachloroethylene	Jan 24/22	0.35<MDL	**10**	ug/L	No
2,3,4,6-Tetrachlorophenol	Jan 24/22	0.20<MDL	**100**	ug/L	No
Triallate	Jan 24/22	0.01<MDL	**230**	ug/L	No
Trichloroethylene	Jan 24/22	0.44<MDL	**5**	ug/L	No
2,4,6 - Trichlorophenol	Jan 24/22	0.25<MDL	**5**	ug/L	No
Trifuralin	Jan 24/22	0.02<MDL	**45**	ug/L	No
Vinyl Chloride	Jan 24/22	0.17<MDL	**1**	ug/L	No

Table 23: O. Regulation 170/03 Schedule 24 Results for Mount Forest Well #4

Parameter	Sample Date	Result Value	MAC	Unit of Measure	Exceedance (Yes/No)
Alachlor	Jan 24/22	0.02<MDL	**5**	ug/L	No
Atrazine + N-dealkylated metabolites	Jan 24/22	0.01<MDL	**5**	ug/L	No
Azinphos-methyl	Jan 24/22	0.05<MDL	**20**	ug/L	No
Benzene	Jan 24/22	0.32<MDL	**1**	ug/L	No
Benzo(a)pyrene	Jan 24/22	0.004<MDL	**0.01**	ug/L	No
Bromoxynil	Jan 24/22	0.33<MDL	**5**	ug/L	No
Carbaryl	Jan 24/22	0.05<MDL	**90**	ug/L	No
Carbofuran	Jan 24/22	0.01<MDL	**90**	ug/L	No
Carbon Tetrachloride	Jan 24/22	0.17<MDL	**2**	ug/L	No
Chlorpyrifos	Jan 24/22	0.02<MDL	**90**	ug/L	No
Diazinon	Jan 24/22	0.02<MDL	**20**	ug/L	No
Dicamba	Jan 24/22	0.02<MDL	**120**	ug/L	No
1,2-Dichlorobenzene	Jan 24/22	0.41<MDL	**200**	ug/L	No
1,4-Dichlorobenzene	Jan 24/22	0.36<MDL	**5**	ug/L	No
1,2-Dichloroethane	Jan 24/22	0.35<MDL	**5**	ug/L	No
1,1-Dichloroethylene (vinylidene chloride)	Jan 24/22	0.33<MDL	**14**	ug/L	No
Dichloromethane	Jan 24/22	0.35<MDL	**50**	ug/L	No
2-4 Dichlorophenol	Jan 24/22	0.15<MDL	**900**	ug/L	No
2,4-Dichlorophenoxy acetic acid (2,4 -D)	Jan 24/22	0.19<MDL	**100**	ug/L	No

Parameter	Sample Date	Result Value	MAC	Unit of Measure	Exceedance (Yes/No)
Diclofop-methyl	Jan 24/22	0.40<MDL	**9**	ug/L	No
Dimethoate	Jan 24/22	0.06<MDL	**20**	ug/L	No
Diquat	Jan 24/22	1.0<MDL	**70**	ug/L	No
Diuron	Jan 24/22	0.03<MDL	**150**	ug/L	No
Glyphosate	Jan 24/22	1.0<MDL	**280**	ug/L	No
Malathion	Jan 24/22	0.02<MDL	**190**	ug/L	No
MCPA	Jan 24/22	0.00012<MDL	**0.1**	mg/L	No
Metolachlor	Jan 24/22	0.01<MDL	**50**	ug/L	No
Metribuzin	Jan 24/22	0.02<MDL	**80**	ug/L	No
Monochlorobenzene	Jan 24/22	0.3<MDL	**80**	ug/L	No
Paraquat	Jan 24/22	1.0<MDL	**10**	ug/L	No
Pentachlorophenol	Jan 24/22	0.15<MDL	**60**	ug/L	No
Phorate	Jan 24/22	0.01<MDL	**2**	ug/L	No
Picloram	Jan 24/22	1.0<MDL	**190**	ug/L	No
Polychlorinated Biphenyls (PCB)	Jan 24/22	0.04<MDL	**3**	ug/L	No
Prometryne	Jan 24/22	0.03<MDL	**1**	ug/L	No
Simazine	Jan 24/22	0.01<MDL	**10**	ug/L	No
Terbufos	Jan 24/22	0.01<MDL	**1**	ug/L	No
Tetrachloroethylene	Jan 24/22	0.35<MDL	**10**	ug/L	No
2,3,4,6-Tetrachlorophenol	Jan 24/22	0.20<MDL	**100**	ug/L	No
Triallate	Jan 24/22	0.01<MDL	**230**	ug/L	No
Trichloroethylene	Jan 24/22	0.44<MDL	**5**	ug/L	No
2,4,6 - Trichlorophenol	Jan 24/22	0.25<MDL	**5**	ug/L	No
Trifuralin	Jan 24/22	0.02<MDL	**45**	ug/L	No
Vinyl Chloride	Jan 24/22	0.17<MDL	**1**	ug/L	No

Table 24: O. Regulation 170/03 Schedule 24 Results for Mount Forest Well #5

Parameter	Sample Date	Result Value	MAC	Unit of Measure	Exceedance (Yes/No)
Alachlor	Jan 24/22	0.02<MDL	**5**	ug/L	No
Atrazine + N-dealkylated metabolites	Jan 24/22	0.01<MDL	**5**	ug/L	No
Azinphos-methyl	Jan 24/22	0.05<MDL	**20**	ug/L	No
Benzene	Jan 24/22	0.32<MDL	**1**	ug/L	No
Benzo(a)pyrene	Jan 24/22	0.004<MDL	**0.01**	ug/L	No
Bromoxynil	Jan 24/22	0.33<MDL	**5**	ug/L	No
Carbaryl	Jan 24/22	0.05<MDL	**90**	ug/L	No
Carbofuran	Jan 24/22	0.01<MDL	**90**	ug/L	No
Carbon Tetrachloride	Jan 24/22	0.17<MDL	**2**	ug/L	No
Chlorpyrifos	Jan 24/22	0.02<MDL	**90**	ug/L	No
Diazinon	Jan 24/22	0.02<MDL	**20**	ug/L	No
Dicamba	Jan 24/22	0.02<MDL	**120**	ug/L	No
1,2-Dichlorobenzene	Jan 24/22	0.41<MDL	**200**	ug/L	No
1,4-Dichlorobenzene	Jan 24/22	0.36<MDL	**5**	ug/L	No

Parameter	Sample Date	Result Value	MAC	Unit of Measure	Exceedance (Yes/No)
1,2-Dichloroethane	Jan 24/22	0.35<MDL	**5**	ug/L	No
1,1-Dichloroethylene (vinylidene chloride)	Jan 24/22	0.33<MDL	**14**	ug/L	No
Dichloromethane	Jan 24/22	0.35<MDL	**50**	ug/L	No
2-4 Dichlorophenol	Jan 24/22	0.15<MDL	**900**	ug/L	No
2,4-Dichlorophenoxy acetic acid (2,4 -D)	Jan 24/22	0.19<MDL	**100**	ug/L	No
Diclofop-methyl	Jan 24/22	0.40<MDL	**9**	ug/L	No
Dimethoate	Jan 24/22	0.06<MDL	**20**	ug/L	No
Diquat	Jan 24/22	1.0<MDL	**70**	ug/L	No
Diuron	Jan 24/22	0.03<MDL	**150**	ug/L	No
Glyphosate	Jan 24/22	1.0<MDL	**280**	ug/L	No
Malathion	Jan 24/22	0.02<MDL	**190**	ug/L	No
MCPA	Jan 24/22	0.00012<MDL	**0.1**	mg/L	No
Metolachlor	Jan 24/22	0.01<MDL	**50**	ug/L	No
Metribuzin	Jan 24/22	0.02<MDL	**80**	ug/L	No
Monochlorobenzene	Jan 24/22	0.3<MDL	**80**	ug/L	No
Paraquat	Jan 24/22	1.0<MDL	**10**	ug/L	No
Pentachlorophenol	Jan 24/22	0.15<MDL	**60**	ug/L	No
Phorate	Jan 24/22	0.01<MDL	**2**	ug/L	No
Picloram	Jan 24/22	1.0<MDL	**190**	ug/L	No
Polychlorinated Biphenyls (PCB)	Jan 24/22	0.04<MDL	**3**	ug/L	No
Prometryne	Jan 24/22	0.03<MDL	**1**	ug/L	No
Simazine	Jan 24/22	0.01<MDL	**10**	ug/L	No
Terbufos	Jan 24/22	0.01<MDL	**1**	ug/L	No
Tetrachloroethylene	Jan 24/22	0.63	**10**	ug/L	No
2,3,4,6-Tetrachlorophenol	Jan 24/22	0.20<MDL	**100**	ug/L	No
Triallate	Jan 24/22	0.01<MDL	**230**	ug/L	No
Trichloroethylene	Jan 24/22	0.44<MDL	**5**	ug/L	No
2,4,6 - Trichlorophenol	Jan 24/22	0.25<MDL	**5**	ug/L	No
Trifuralin	Jan 24/22	0.02<MDL	**45**	ug/L	No
Vinyl Chloride	Jan 24/22	0.17<MDL	**1**	ug/L	No

Table 25: O. Regulation 170/03 Schedule 24 Results for Mount Forest Well #6

Parameter	Sample Date	Result Value	MAC	Unit of Measure	Exceedance (Yes/No)
Alachlor	Jan 24/22	0.02<MDL	**5**	ug/L	No
Atrazine + N-dealkylated metabolites	Jan 24/22	0.01<MDL	**5**	ug/L	No
Azinphos-methyl	Jan 24/22	0.05<MDL	**20**	ug/L	No
Benzene	Jan 24/22	0.32<MDL	**1**	ug/L	No
Benzo(a)pyrene	Jan 24/22	0.004<MDL	**0.01**	ug/L	No
Bromoxynil	Jan 24/22	0.33<MDL	**5**	ug/L	No
Carbaryl	Jan 24/22	0.05<MDL	**90**	ug/L	No
Carbofuran	Jan 24/22	0.01<MDL	**90**	ug/L	No
Carbon Tetrachloride	Jan 24/22	0.17<MDL	**2**	ug/L	No

Parameter	Sample Date	Result Value	MAC	Unit of Measure	Exceedance (Yes/No)
Chlorpyrifos	Jan 24/22	0.02<MDL	**90**	ug/L	No
Diazinon	Jan 24/22	0.02<MDL	**20**	ug/L	No
Dicamba	Jan 24/22	0.02<MDL	**120**	ug/L	No
1,2-Dichlorobenzene	Jan 24/22	0.41<MDL	**200**	ug/L	No
1,4-Dichlorobenzene	Jan 24/22	0.36<MDL	**5**	ug/L	No
1,2-Dichloroethane	Jan 24/22	0.35<MDL	**5**	ug/L	No
1,1-Dichloroethylene (vinylidene chloride)	Jan 24/22	0.33<MDL	**14**	ug/L	No
Dichloromethane	Jan 24/22	0.35<MDL	**50**	ug/L	No
2-4 Dichlorophenol	Jan 24/22	0.15<MDL	**900**	ug/L	No
2,4-Dichlorophenoxy acetic acid (2,4 -D)	Jan 24/22	0.19<MDL	**100**	ug/L	No
Diclofop-methyl	Jan 24/22	0.40<MDL	**9**	ug/L	No
Dimethoate	Jan 24/22	0.06<MDL	**20**	ug/L	No
Diquat	Jan 24/22	1.0<MDL	**70**	ug/L	No
Diuron	Jan 24/22	0.03<MDL	**150**	ug/L	No
Glyphosate	Jan 24/22	1.0<MDL	**280**	ug/L	No
Malathion	Jan 24/22	0.02<MDL	**190**	ug/L	No
MCPA	Jan 24/22	0.00012<MDL	**0.1**	mg/L	No
Metolachlor	Jan 24/22	0.01<MDL	**50**	ug/L	No
Metribuzin	Jan 24/22	0.02<MDL	**80**	ug/L	No
Monochlorobenzene	Jan 24/22	0.3<MDL	**80**	ug/L	No
Paraquat	Jan 24/22	1.0<MDL	**10**	ug/L	No
Pentachlorophenol	Jan 24/22	0.15<MDL	**60**	ug/L	No
Phorate	Jan 24/22	0.01<MDL	**2**	ug/L	No
Picloram	Jan 24/22	1.0<MDL	**190**	ug/L	No
Polychlorinated Biphenyls (PCB)	Jan 24/22	0.04<MDL	**3**	ug/L	No
Prometryne	Jan 24/22	0.03<MDL	**1**	ug/L	No
Simazine	Jan 24/22	0.01<MDL	**10**	ug/L	No
Terbufos	Jan 24/22	0.01<MDL	**1**	ug/L	No
Tetrachloroethylene	Jan 24/22	0.63	**10**	ug/L	No
2,3,4,6-Tetrachlorophenol	Jan 24/22	0.20<MDL	**100**	ug/L	No
Triallate	Jan 24/22	0.01<MDL	**230**	ug/L	No
Trichloroethylene	Jan 24/22	0.44<MDL	**5**	ug/L	No
2,4,6 - Trichlorophenol	Jan 24/22	0.25<MDL	**5**	ug/L	No
Trifuralin	Jan 24/22	0.02<MDL	**45**	ug/L	No
Vinyl Chloride	Jan 24/22	0.17<MDL	**1**	ug/L	No

Treated Water Quality Statistics- O. Regulations 170/03 Schedule 13-8 and 13-9, "60 Months" Sampling Results Summary

If sampling for a particular schedule's parameters (e.g., Schedule 23 or 24) did not occur within the calendar year of the report, then the most recent values are required to be included in the report for reference.

Fluoride and Sodium are sampled on the "60 Months" sampling schedule. Results for most recent tests can be found in Table 26.

Table 26: O. Regulation 170/03 Schedule 13-8 and 13-9, Fluoride and Sodium Results

Parameter/Location	Sample Date	Result Value	Unit of Measure	Exceedance
Sodium- Arthur Well #7b	Sep. 11/23	36.6	mg/L	Yes[1]
Sodium- Arthur Well #8	Sep. 11/23	21.5	mg/L	Yes[1]
Sodium- Mount Forest Well #3	Sep. 11/23	21.9	mg/L	Yes[1]
Sodium- Mount Forest Well #4	Sep. 11/23	12.3	mg/L	No
Sodium- Mount Forest Well #5	Sep. 11/23	68.8	mg/L	Yes[1]
Sodium- Mount Forest Well #6	Sep. 11/23	10.4	mg/L	No
Fluoride- Arthur Well #7b	Sep. 11/23	1.32	mg/L	No
Fluoride-Arthur Well #8	Sep. 11/23	0.35	mg/L	No
Fluoride-Mount Forest Well #3	Sep. 11/23	0.98	mg/L	No
Fluoride-Mount Forest Well #4	Sep. 11/23	0.59	mg/L	No
Fluoride-Mount Forest Well #5	Sep. 11/23	0.17	mg/L	No
Fluoride-Mount Forest Well #6	Sep. 11/23	0.78	mg/L	No

1 The aesthetic objective for sodium in drinking water is 200 mg/L. The local Medical Officer of Health should be notified when the sodium concentration exceeds 20 mg/L so that this information may be communicated to local physicians for their use with patients on sodium restricted diets.

Treated Water Quality Statistics- O. Regulations 170/03 Schedule 15.1 Sampling Results Summary

If sampling for a particular schedule's parameters (e.g., Schedule 23 or 24) did not occur within the calendar year of the report, then the most recent values are required to be included in the report for reference.

The Mount Forest and Arthur Drinking Water Systems are under reduced sampling under Schedule 15.1 which means we are not required to sample plumbing but are still required to sample in the distribution system. Results for most recent tests can be found in Table 27.

Table 27: O. Regulation 170/03 Schedule 15.1, Lead, Alkalinity and pH Results

Parameter/Location	Sample Date	Result Value	MAC	Unit of Measure	Exceedance
Lead – Hydrant # 125 James St.	Jan 22/24	0.05	10	ug/L	No
Lead – Hydrant # 32 Queen St. West	Jan 22/24	0.03	10	ug/L	No
Lead – Hydrant # 24 Elgin St. South	Jan 22/24	0.07	10	ug/L	No
Lead – Hydrant # 95 Francis St.	Jan 22/24	0.01	10	ug/L	No
Lead – Tucker/Eliza St. Blow Off	Jan 22/24	0.05	10	ug/L	No
Alkalinity – Hydrant # 125 James St.	Jan 22/24	233	30-500	mg/L	No
Alkalinity – Hydrant # 32 Queen St. West	Jan 22/24	222	30-500	mg/L	No
Alkalinity – Hydrant # 24 Elgin St. South	Jan 22/24	237	30-500	mg/L	No
Alkalinity – Hydrant # 95 Francis St.	Jan 22/24	193	30-500	mg/L	No
Alkalinity – Tucker/Eliza St. Blow Off	Jan 22/24	191	30-500	mg/L	No
Field pH – Hydrant # 125 James St.	Jan 22/24	7.48	-	-	No
Field pH – Hydrant # 32 Queen St West	Jan 22/24	7.2	-	-	No
Field pH – Hydrant # 24 Elgin St. South	Jan 22/24	7.46	-	-	No
Field pH – Hydrant # 95 Francis St.	Jan 22/24	7.4	-	-	No
Field pH – Tucker/Eliza St. Blow Off	Jan 22/24	7.6	-	-	No
Lead – Hydrant # 125 James St.	Jul 22/24	0.05	10	ug/L	No
Lead – Hydrant # 32 Queen St. West	Jul 22/24	0.08	10	ug/L	No
Lead – Hydrant # 24 Elgin St. South	Jul 22/24	0.06	10	ug/L	No
Lead – Hydrant # 95 Francis St	Jul 22/24	0.01	10	ug/L	No
Lead – Tucker/Eliza St. Blow Off	Jul 22/24	0.08	10	ug/L	No
Alkalinity – Hydrant # 125 James St.	Jul 22/24	293	30-500	mg/L	No
Alkalinity – Hydrant # 32 Queen St. West	Jul 22/24	261	30-500	mg/L	No
Alkalinity – Hydrant # 24 Elgin St. South	Jul 22/24	362	30-500	mg/L	No
Alkalinity – Hydrant # 95 Francis St.	Jul 22/24	215	30-500	mg/L	No
Alkalinity – Tucker/Eliza St. Blow Off	Jul 22/24	215	30-500	mg/L	No
Field pH – Hydrant # 125 James St.	Jul 22/24	7.47	-	-	No
Field pH – Hydrant # 32 Queen St. West	Jul 22/24	7.06	-	-	No
Field pH – Hydrant # 32 24 Elgin St. South	Jul 22/24	7.01	-	-	No
Field pH – Hydrant # 95 Francis St.	Jul 22/24	7.7	-	-	No
Field pH – Tucker/Eliza St. Blow Off	Jul 22/24	7.6	-	-	No

e) Significant Expenses Incurred

The table below outlines a brief description and breakdown for significant monetary expenses occurred in 2024.

Location	Maintenance Item	Cost
Mount Forest	Well 4 Maintenance/Inspection	$40,627.22
Mount Forest	Fergus Street, Wellington to Birmingham (Water Portion)	$178,270.65
Mount Forest	Leak Detection	$4,068.00
Arthur	Arthur Water Supply/Storage EA (ongoing)	$48,105.64
Arthur	Smith Street Construction	$28,735.00
Arthur	Wells Street East Monitoring Well Development	$10,001.21
Arthur/Mount Forest	Watermain Valve and Fire Hydrant Replacement	$64,589.34
Mount Forest	Wellhouse Fencing Upgrade	$42,650
Arthur	Spheroid Water Tower Interior Cleaning and Inspection	$4,553.75

f) Source Water Protection

For reporting purposes, the Township of Wellington North is subject to two Source Protection Plans (based on watershed or Conservation Authority boundaries): Grand River Plan and the Saugeen Valley, Grey Sauble, Northern Bruce Peninsula Plan (Saugeen Valley). Although the Ausable Bayfield Maitland Valley (ABMV – Maitland Valley) Plan also encompasses part of the municipality, there are no reporting requirements associated with that Plan for the Township. In 2024, all Source Protection Plans were in effect.

Under Section 81 of the Clean Water Act and Section 65 of O. Reg. 287/07, an annual report must be prepared by a Risk Management Official and submitted to the appropriate Source Protection Authority (Conservation Authority) by February 1st of each year. Under Section 45 of the *Clean Water Act*, a public body, including a municipality, must comply with monitoring and reporting policies designated by a Source Protection Plan. The Township of Wellington North Risk Management Official and Municipal Annual Reports were prepared and submitted to the appropriate authorities by February 1, 2025.

Summary of Key Aspects

The Wellington County municipalities continue to implement source protection under the Wellington Source Water Protection partnership, www.wellingtonwater.ca In 2024, progress continued in the implementation of source protection in the municipality. A summary of key aspects of the Risk Management Official Report and Municipal Report are provided below.

In 2024, there were 45 development applications reviewed and staff comments provided on applications within municipal wellhead protection areas. There were 7 notices issued per Section 59 of the Clean Water Act within the municipality. There were 495 development applications (notices and

comments) reviewed County wide in 2024. This included 85 Section 59 notices issued and staff comments on an additional 410 development applications, County wide. This includes 144 comment memos including 63 requests for drinking water threat disclosure reports and / or management plans. This represents a Township and County wide increase in the total number of development applications reviewed from the five-year average of 38 in the Township and 416 development applications in the County. The review of development applications within wellhead protection areas is a key component of implementing the Clean Water Act as this ensures the municipality is in compliance with requirements relating to future activities that may pose a risk to municipal drinking water. In addition to the notices and comments provided, other applications were screened out by building or planning staff following Risk Management Official Written Direction provided by Wellington Source Water Protection.

Analysis continued on the threat verification data collected in previous years on residential, agricultural, industrial, commercial and institutional activities identified as potential significant drinking water threats in the approved Assessment Reports. Staff complete a variety of tasks to remove or confirm and then mitigate activities identified as potential significant drinking water threats in the approved Assessment Reports. These threat activities are existing and the analysis can involve desk top interpretation of air photos or GIS data, phone calls, review of municipal records, windshield surveys, site inspections by Risk Management staff and if confirmed, then mitigation through septic inspection, prohibition and / or negotiation of risk management plans. As a result of this analysis, staff currently estimate approximately 18% of threat activities (20 properties) in the municipality still require action to either remove or confirm / mitigate the threat activities while 82% have been either removed or confirmed and mitigated. Note that the percentages are weighted equally between Source Protection Authorities to provide an overall municipal percentage. The majority of the remaining threat activities are winter maintenance or fuel handling / storage activities and are located within the Mount Forest wellhead protection areas.

To determine compliance with Clean Water Act requirements, 63 inspections were conducted in the Township with all being for compliance purposes (prohibition) with no contraventions found. County wide, 309 inspections were conducted in the reporting year with 94% of inspections (290) being prohibition compliance inspections, 1% (3) being RMP compliance inspections and 5% (16) of inspections conducted for threat activity verification or risk management plan negotiation purposes. Overall, the inspections were generally related to manure application and storage prohibitions, to verify compliance for winter maintenance activities or related to chemical / fuel handling and storage.

No Risk Management Plans were agreed to in 2024 with 17 Risk Management Plans agreed to cumulatively within the Township. There are 94 Risk Management Plans in place County wide. As reported to Council in 2024, this leaves 1 Risk Management Plan still to be signed in the Township for fuel handling / storage and it is under negotiation with the corporate office of the petroleum company. There was a Source Protection Plan deadline to have this plan in place by December 31st , 2022 and this has not occurred due to the complexities of negotiating with the corporate office and delays related to the pandemic. This information was presented to the Source Protection Committee and the Province in 2024 and no concerns were raised by either of these bodies. Staff can impose the Risk Management

Plans via an order, however, to date, staff have not chosen this route so not to disrupt the negotiations. It is staff's intention to negotiate a mutually agreed to Risk Management Plan and only utilize the order powers if negotiations fail. If an order is deemed necessary, staff are required to provide 120 days notice to the ordered parties prior to issuance of the order and the order is appealable. The remaining 19 winter maintenance properties requiring Risk Management Plans have a current deadline of 2027, however, negotiations related to these Risk Management Plans were on hold in 2024 due to an update required in the Saugeen Valley Assessment Report mapping that requires Provincial approval. Staff will restart negotiations in 2025 for these properties once Provincial approval has been granted.

The following is a summary of the Education and Outreach results, County wide, for 2024. In total, 56 education and outreach daily events were completed this reporting year. Sixteen of the events were internal training sessions for municipal staff on general source protection topics and more detailed training on how it relates to municipal planning, building, sewage, spills, roads and risk management operations. There were over 100 attendees cumulatively at the training. Six of the events were external training sessions including training other Risk Management Officials / Inspectors in the Province and industry groups such as property managers. Eleven events supported a variety of community events including Erin septic social, Arthur Environmental Assessment and municipal open houses, Aberfoyle Fall Fair and large community events such as Party in the Park, Mount Forest Fireworks Festival, Centre Wellington Home Show and Puslinch Showcase. Staff also presented at four professional conferences in this reporting year.

There were thirteen school events including classroom visits, participation in Palmerston Agricultural Awareness Day and Grand River Agricultural Society's Pizza Perfect. School programming included elementary, Grade 8 and college students. Wellington Source Water Protection / County of Wellington is a sponsor for the Waterloo-Wellington Children's Groundwater Festival. For the second year in a row, the Festival was held in Wellington County, this year at Guelph / Eramosa's Marden Park and 74 staff from our municipalities participated to ensure the Festival was a success. The Festival ran for 5 days plus a sixth day as a virtual Festival. Links to the virtual Festival content are available here https://www.youtube.com/@watereducation4640 . The Children's Groundwater Festival is an excellent way to reach Grade 2 to 5 and high school children (and their parents) and deliver water protection messages including source protection. Registration for both virtual and in-person Festival was over 6,000 students and teachers with many County and Township schools participating. Staff continue to participate on the organizing committee and various sub-committees including serving as co-chairs.

In addition to events, development reviews and inspections continued and included educational material being provided directly to the proponents generally regarding the threats present, the process (development review, RMP negotiations, prohibition etc.), property specific mapping, and general Source Water information. Where necessary, stickers and metal tags were provided to proponents listing the Spills Action Centre number and that their location is located within a vulnerable area for municipal wells. Updates were made to the Wellington Source Water Protection website www.wellingtonwater.ca , and staff continue to update and maintain ten fact sheets on specific topics and other print media (i.e. post cards to direct applicants to mapping). Throughout the year, social

media posts on a variety of topics were either posted or re-shared by our municipalities' corporate channels. Often the content of these posts was from the Conservation Ontario social media calendar or in partnership with the local Conservation Authorities. Four newspaper ads were also run during the year.

In 2024, both Source Protection Plans in the Township were undergoing amendment. Staff reviewed, provided comments and in some cases assisted Conservation Authority staff in authoring portions of the various amendments. Specifically, staff were heavily involved in authoring policy amendments for the Grand River Source Protection Plan. This is a provincial requirement under Section 36 of the Clean Water Act and involved review of all Grand River Source Protection Plan policies applicable within the County and, where necessary, amendments. The work is required to bring the Wellington County Chapter of the Grand River Source Protection Plan in compliance with the Provincial 2021 Director's Technical Rules. Staff also provided support related to mapping amendments required to the Saugeen Valley Assessment Report and to a County's Official Plan amendment that updated the wellhead protection area mapping.

In 2024, there are a number of water supply and / or water supply master plan projects related to water systems within or adjacent to the County. In the Township, staff provided support to the Class Environmental Assessment for the new Arthur supply well including authoring the source protection considerations for that study. With provincial funding, an initial phase of a joint groundwater modelling project began in 2024 in partnership with the Town of Minto and Township of Mapleton. Staff worked with the Township hydrogeologist on the initial data organization required to support future groundwater modelling for new well supplies and to update existing wellhead protection areas. In 2024, Source Protection, Water Services staff and the Township hydrogeologist supported the Ontario Geological Survey in drilling a monitoring well near the new Arthur well. Staff also continued to provide support for the implementation of the municipal Consolidated Linear Environmental Compliance Approval for both wastewater and stormwater. There are annual assessments required for both approvals that assess source water protection implications and requirements for wastewater and / or stormwater projects within wellhead protection areas. These assessments are required every 12 months and Source Protection staff completed both assessments in 2024 as required.

The septic inspection program occurs on a five-year cycle. If a septic system is present within well head protection area with a vulnerability score of 10 or within an issues contributing area for nitrates, a septic inspection is required every 5 years. The most recent round of septic inspections was completed in the Township in 2023. No septic inspections were required in 2024.

For further information, please contact Kyle Davis, Risk Management Official, 519-846-9691 ext 362 or kdavis@centrewellington.ca

Note: The Source Water Protection information in this report was provided by Kyle Davis, Risk Management Official.