



MUNICIPALITY OF

**Huron
East**

**SEAFORTH DRINKING WATER
SYSTEM**

WDS # 220001511

**2025 ANNUAL SUMMARY REPORT
OF OPERATIONS**

Managed, Operated and Maintained by:

Jacobs

Table of Contents

1.0 INTRODUCTION AND BACKGROUND	3
2.0 DESCRIPTION OF WATER SYSTEM	3
3.0 SUMMARY OF WATER QUALITY MONITORING	4
3.1 Water Treatment Equipment Operation and Monitoring	4
3.2 Microbiological Sampling	6
3.3 Chemical Sampling and Testing	8
3.3.1 Schedule 13 Sampling (Nitrate, Nitrite, THM, HAA)	8
3.3.2 Schedule 15.1 Sampling (Lead)	9
3.3.3 Schedule 23 and 24 Sampling (Organic and Inorganic)	9
4.0 WATER AND CHEMICAL USE	11
4.1 Chemical Usage	11
4.2 Summary of Flow Rates, Annual Volumes and Capacities	12
5.0 IMPROVEMENTS, ROUTINE AND PREVENTATIVE MAINTENANCE	14
6.0 MECP INSPECTIONS AND REGULATORY ISSUES	15
7.0 WELL LEVELS (PTTW)	15

1.0 INTRODUCTION AND BACKGROUND

The purpose of the 2025 Annual Report is to document the operation and maintenance data for the Seaforth Drinking Water System for review by the Ministry of the Environment, Conservation and Parks (MECP) in accordance with O. Reg 170/03. This report covers the period from January 1, 2025, to December 31, 2025. A copy of this report is to be made available on the Municipalities website and/or provided to interested parties upon request.

2.0 DESCRIPTION OF WATER SYSTEM

A summary of the Seaforth Drinking Water System is outlined below:

Drinking Water System Number:	220001511
Drinking Water System Name:	Seaforth Drinking Water System
Drinking Water System Owner:	Municipality of Huron East
Drinking Water System Category:	Large Municipal Residential
Disinfection:	Sodium Hypochlorite (12%)
Reservoir Size:	670 m ³
Tower Size:	1930 m ³
Population:	3000
Permit To Take Water:	7587-B8GSWB
Daily Maximum Water Supply Capacity:	3139.0 m ³ /day
2025 Average Daily Demand:	1017.99 m ³ /day
2025 Peak Day Demand:	2021 m ³

The three well sites are detailed as follows:

TW #1

- Water Source Groundwater, Non-GUDI
- Depth 85 m
- Depth of Casing 21 m
- Annular Space Cement Grouting
- Pitless Adapter Depth 2.55 m
- Pump Detail One Submersible at 6 L/s

PW #1

- Water Source Groundwater, Non-GUDI
- Depth 105 m
- Depth of Casing 21.3 m
- Annular Space Cement Grouting
- Pitless Adapter Depth 2.25 m
- Pump Detail One VFD Submersible at 35 L/s

PW #2

- Water Source Groundwater, Non-GUDI
- Depth 105 m
- Depth of Casing 21 m
- Annular Space Cement Grouting
- Pitless Adapter Depth 2.05 m
- Pump Detail One VFD Submersible at 40 L/s

The Seaforth Municipal Water System was first commissioned in 1947. A new composite elevated water storage tank was constructed in 1998 to replace the original tank which had been located behind the Municipal offices. In 2009, a new supply, treatment, and storage facility was constructed at 40 Welsh Street, in the northwest corner of the community. This facility replaced earlier supplies at the two locations and is now the sole source of supply for the Seaforth system. The ground level reservoir at the new pumphouse supplements the storage in the elevated tank and replaces fire storage in an older ground level reservoir which was located behind the municipal offices.

The new Welsh Street pumphouse in Seaforth contains the treatment, high-lift pumping, monitoring, and control equipment for the new well supply. Flow into the treatment system is monitored on each production well discharge line by magnetic flow meter.

The disinfection system consists of a duty pump and standby pump to feed sodium hypochlorite solution to the raw water. The feed rate is flow paced based up totalized raw water discharge from the three wells. The iron sequestration system consists of three individual metering pumps to feed sodium silicate solution to the raw water. The feed rate is flow paced based on the raw water discharge from each of the wells, with each well having its own pump. This allows the flow from different wells to be dosed at different rates to reflect the variations in iron levels among the wells.

Treated water enters the reservoir through an inlet diffuser consisting of a horizontal header with orifices to distribute the flow evenly across the width of the reservoir cell. The 670 m³ two-celled reservoir is located adjacent to and beneath the well house to augment existing storage in the elevated tank and to provide chlorine contact time prior to discharge of the treated water to the distribution system.

Three vertical turbine high lift pumps, controlled by variable frequency drives, pump treated water from the reservoir to the distribution system. Flow into the distribution system is monitored by a magnetic meter on the discharge header.

A standby diesel generator is in a locked compound adjacent to the pumphouse and starts automatically in the event of a power supply failure.

3.0 SUMMARY OF WATER QUALITY MONITORING

3.1 Water Treatment Equipment Operation and Monitoring

One (1) raw water sample is collected weekly from each well and analyzed inhouse for Turbidity and measured in Nephelometric Turbidity Units (NTU) in accordance with the Permit to Take Water (PTTW) and O. Reg 170/03. For the reporting year. A summary of the results can be found in table 1 below.

Table 1 – Raw Water Turbidity Averages

Month	Raw Water (TW#1)			Raw Water (PW#1)			Raw Water (PW#2)		
	# Samples	Average (NTU)	Max (NTU)	# Samples	Average (NTU)	Max (NTU)	# Samples	Average (NTU)	Max (NTU)
Jan	4	0.43	0.45	4	0.49	0.85	4	0.43	0.53
Feb	4	0.43	0.54	4	0.38	0.46	4	0.44	0.61
Mar	4	0.38	0.45	4	0.34	0.37	4	0.38	0.48
Apr	5	0.27	0.31	5	0.36	0.49	5	0.44	0.58
May	4	0.42	0.51	4	0.42	0.51	4	0.41	0.47
Jun	4	0.22	0.35	4	0.39	0.78	4	0.32	0.58
Jul	5	0.24	0.27	5	0.28	0.33	5	0.31	0.39
Aug	4	0.32	0.35	4	0.32	0.37	4	0.23	0.32
Sept	5	0.33	0.46	5	0.37	0.67	5	0.35	0.63
Oct	4	0.53	0.68	4	0.39	0.44	4	0.39	0.55
Nov	4	0.41	0.45	5	0.40	0.93	4	0.34	0.53
Dec	5	0.34	0.39	5	0.30	0.47	5	0.22	0.31
Yearly	52	0.36	0.68	53	0.37	0.93	52	0.36	0.63

Treated and distribution water chlorine residuals are measured using continuous online analyzers which records data at 5-minute intervals as per the requirements of O. Reg 170/03. The regulations designate that a value of 8760 be used for number of samples when utilizing continuous monitors. A summary of the results can be found in table 2 below and were all within normal operating ranges. An additional 208 grab samples were collected in conjunction with the weekly Bacteriological Sampling and tested for free chlorine within the distribution network and analyzed using a handheld colorimeter.

Table 2 – Well Treated and Distribution Chlorine Residual Averages

Month	Treated Online	Distribution Online	Distribution Network Grab
Jan	1.54	1.13	1.12
Feb	1.58	1.17	1.24
Mar	1.65	1.11	1.22
Apr	1.63	1.16	1.22
May	1.72	1.18	1.24
Jun	1.59	1.09	1.20
Jul	1.60	1.09	1.17
Aug	1.54	1.03	1.10
Sept	1.56	0.96	1.12
Oct	1.58	0.95	1.11
Nov	1.53	1.01	1.14
Dec	1.57	1.18	1.19
# of Samples	8760	8760	208
Annual Average	1.59	1.09	1.17
Annual Min	0	0	0.54
Annual Max	2.10	1.57	1.72

*Annual Minimum and Maximum values represent all 5-minute data for the year, and captures data while cleaning sensors, flushing units, performing calibrations and power outages.

3.2 Microbiological Sampling and Testing

One (1) raw water sample is collected from each well weekly and send out for analysis of Total Coliforms and E. Coli in accordance with Schedule 10 of O. Reg 170/03. A total of 156 samples were collected in the reporting year for the Seaforth WDS. All results indicate both wells are in good health. A summary of the results can be found in table 3, 4 and 5 below.

Table 3 – TW #1 Microbiological Results

Month	Total Coliforms			E. Coli		
	# Samples	# Samples "0"	# Samples ≥ 1	# Samples	# Samples "0"	# Samples ≥ 1
Jan	4	4	0	4	4	0
Feb	4	4	0	4	4	0
Mar	4	4	0	4	4	0
Apr	5	5	0	5	5	0
May	4	4	0	4	4	0
Jun	4	4	0	4	4	0
Jul	5	5	0	5	5	0
Aug	4	4	0	4	4	0
Sept	5	5	0	5	5	0
Oct	4	4	0	4	4	0
Nov	4	4	0	4	4	0
Dec	5	5	0	5	5	0
TOTAL	52	52	0	52	52	0

Table 4 – PW #1 Microbiological Results

Month	Total Coliforms			E. Coli		
	# Samples	# Samples "0"	# Samples ≥ 1	# Samples	# Samples "0"	# Samples ≥ 1
Jan	4	4	0	4	4	0
Feb	4	4	0	4	4	0
Mar	4	4	0	4	4	0
Apr	5	5	0	5	5	0
May	4	4	0	4	4	0
Jun	4	4	0	4	4	0
Jul	5	5	0	5	5	0
Aug	4	4	0	4	4	0
Sept	5	5	0	5	5	0
Oct	4	4	0	4	4	0
Nov	4	4	0	4	4	0
Dec	5	5	0	5	5	0
TOTAL	52	52	0	52	52	0

Table 5 – PW #2 Microbiological Results

Month	Total Coliforms			E. Coli		
	# Samples	# Samples "0"	# Samples ≥ 1	# Samples	# Samples "0"	# Samples ≥ 1
Jan	4	4	0	4	4	0
Feb	4	4	0	4	4	0
Mar	4	4	0	4	4	0
Apr	5	5	0	5	5	0
May	4	4	0	4	4	0
Jun	4	4	0	4	4	0
Jul	5	5	0	5	5	0
Aug	4	4	0	4	4	0
Sept	5	5	0	5	5	0
Oct	4	4	0	4	4	0
Nov	4	4	0	4	4	0
Dec	5	5	0	5	5	0
TOTAL	52	52	0	52	52	0

One (1) treated water sample is collected weekly and sent out for analysis of Total Coliforms, E. Coli and HPC (Heterotrophic Plate Count) in accordance with Schedule 10 of O. Reg 170/03. A total of 52 samples were collected in the reporting year for the Seaforth WDS. A summary of the results can be found in table 6 below.

Table 6 – Treated Water Microbiological Results

Month	Total Coliforms			E. Coli			HPC	
	# Samples	# Samples "0"	# Samples ≥ 1	# Samples	# Samples "0"	# Samples ≥ 1	# Samples	# Samples > 10
Jan	4	4	0	4	4	0	4	0
Feb	4	4	0	4	4	0	4	0
Mar	4	4	0	4	4	0	4	0
Apr	5	5	0	5	5	0	5	0
May	4	4	0	4	4	0	4	0
Jun	4	4	0	4	4	0	4	0
Jul	5	5	0	5	5	0	5	0
Aug	4	4	0	4	4	0	4	0
Sept	5	5	0	5	5	0	5	0
Oct	4	4	0	4	4	0	4	0
Nov	4	4	0	4	4	0	4	0
Dec	5	5	0	5	5	0	5	0
TOTAL	52	52	0	52	52	0	52	0

Currently four (4) distribution samples are collected weekly and sent out for analysis of Total Coliforms, E. Coli and HPC (Heterotrophic Plate Count) in accordance with Schedule 10 of O. Reg 170/03. A total of 208 samples were collected in the reporting year, while 104 samples were tested for HPC. A summary of the results can be found in table 7 below.

Table 7 – Distribution System Microbiological Results

Month	Total Coliforms			E. Coli			HPC	
	# Samples	# Samples "0"	# Samples ≥ 1	# Samples	# Samples "0"	# Samples ≥ 1	# Samples	# Samples > 10
Jan	16	16	0	16	16	0	8	0
Feb	16	16	0	16	16	0	8	1
Mar	16	16	0	16	16	0	8	0
Apr	20	20	0	20	20	0	10	0
May	16	16	0	16	16	0	8	0
Jun	16	16	0	16	16	0	8	0
Jul	20	20	0	20	20	0	10	0
Aug	16	16	0	16	16	0	8	0
Sept	20	20	0	20	20	0	10	0
Oct	16	16	0	16	16	0	8	1
Nov	16	16	0	16	16	0	8	0
Dec	20	20	0	20	20	0	10	0
TOTAL	208	208	0	208	208	0	104	2

3.3 Chemical Sampling and Testing

3.3.1 – Schedule 13 Sampling

One (1) treated water sample is taken quarterly in accordance with Schedule 13 and analyzed for Nitrates and Nitrites. Two (2) distribution samples are also collected quarterly in accordance with Schedule 13 and analyzed for THMs (Trihalomethanes) and HAAs (Haloacetic Acids). The samples collected during the 2025 calendar year were collected Jan, Apr, Jul and Oct. The results were all within regulatory compliance and can be found in table 8 below.

Table 8 – Nitrate, Nitrite, THM and HAA Results

Month	Treated Water		Distribution	
	Nitrate (mg/L)	Nitrite (mg/L)	THMs (ug/L)	HAAs (ug/L)
Jan	0.025	0.003 <MDL	18	5.3 <MDL
Apr	0.028	0.003 <MDL	18	5.3 <MDL
Jul	0.032	0.003 <MDL	23	5.3 <MDL
Oct	0.030	0.003 <MDL	23	5.3 <MDL
Average	0.029	0.003	20.50	5.30
MAC	10	1	100	80

One (1) treated water sample is collected sent out Sodium / Fluoride analysis every 60 months in accordance with Schedule 13, S.8 / 9. The most recent samples were collected April 9th, 2024, and can be found in table 9 below. AWQI-164809 and AWQI-164822 were generated with the MECF for an adverse, MAC (Maximum Allowable Concentration) exceedance for both naturally occurring Sodium and Fluoride. A resample was collected April 16th, 2024, and came back with an exceedance for Sodium but not Fluoride. The next samples will be collected in April 2029.

Table 9 – Sodium and Fluoride Results

Parameter	Treated Well 1	MAC
Sodium	48*	20
	47.8*	
Fluoride	1.69*	1.5
	1.48	

*MAC - Maximum Allowable Concentration

3.3.2 – Schedule 15.1 Sampling (Lead)

Two (2) distribution water samples are collected per sample seasons and sent out for Lead analysis in accordance with Schedule 15.1 of O. Reg 170/03. Samples were collected April 9th and October 23rd during the reporting year. All results were under the Maximum Allowable Concentration (MAC) for Lead in the distribution system. A summary of results can be found in table 10 below.

Table 10 – Lead and Alkalinity Results

Season	Alkalinity (mg/L)	pH	Lead (ug/L)
Dec - Apr	232	7.77	1.31
	235	7.41	0.11
Jun - Oct	241	7.28	0.06
	241	7.4	0.06
MAC			10

*MAC - Maximum Allowable Concentration

3.3.3 – Schedule 23 and 24 (Inorganic and Organic) Parameters

One (1) treated water sample is taken from each well every 36 months in accordance with Schedule 13 and sent out for Schedule 23 and 24 parameter analysis. The most recent samples were collected April 9, 2024. The results were all within regulatory compliance and can be found in tables 11 and 12 below.

Table 11 – Schedule 23 Inorganic Sample Results (Apr 9, 2024)

Parameter	Treated Water	MAC
Antimony	0.6 <MDL	6
Arsenic	0.5	10
Barium	31.4	1000
Boron	133	5000
Cadmium	0.04	5
Chromium	0.34	50

Mercury	0.01 <MDL	1
Selenium	0.13	50
Uranium	8.22	20

***MDL - Minimum Detection Limit**

***MAC - Maximum Allowable Concentration**

Table 12 – Schedule 24 Organic Sample Results (Apr 9, 2024)

Parameter	Treated Water	MAC
Benzene	0.32 <MDL	1
Carbon Tetrachloride	0.17 <MDL	2
1,2-Dichlorobenzene	0.41 <MDL	200
1,4-Dichlorobenzene	0.36 <MDL	5
1,1-Dichloroethylene	0.33 <MDL	14
1,2-Dichloroethane	0.35 <MDL	5
Dichloromethane	0.35 <MDL	50
Monochlorobenzene	0.3 <MDL	80
Tetrachloroethylene	0.35 <MDL	10
Trichloroethylene	0.44 <MDL	5
Vinyl Chloride	0.17 <MDL	1
Diquat	1 <MDL	70
Paraquat	1 <MDL	10
Glyphosate	1 <MDL	280
Polychlorinated Byphenyls	0.04 <MDL	3
Benzo(a)pyrene	0.004 <MDL	0.01
Alachlor	0.02 <MDL	5
Atrazine+N-dealkylated metabolites	0.01 <MDL	5
Atrazine	0.01 <MDL	-
Desethyl Atrazine	0.01 <MDL	-
Azinphos-methyl	0.05 <MDL	20
Carbaryl	0.05 <MDL	90
Carbofuran	0.01 <MDL	90
Chlorpyrifos	0.02 <MDL	90
Diazinon	0.02 <MDL	20
Dimethoate	0.06 <MDL	20
Diuron	0.03 <MDL	150
Malathion	0.02 <MDL	190
Metolachlor	0.01 <MDL	50
Metribuzin	0.02 <MDL	80
Phorate	0.01 <MDL	2
Prometryne	0.03 <MDL	1
Simazine	0.01 <MDL	10

Terbufos	0.01 <MDL	1
Triallate	0.01 <MDL	230
Trifluralin	0.02 <MDL	45
2,4-Dichlorophenoxyacetic acid	0.19 <MDL	100
Bromoxynil	0.33 <MDL	5
Dicamba	0.2 <MDL	120
Diclofop-methyl	0.4 <MDL	9
MCPA (mg/L)	0.00012 <MDL	0.1
Picloram	1 <MDL	190
2,4-Dichlorophenol	0.15 <MDL	900
2,4,6-Trichlorophenol	0.25 <MDL	5
2,3,4,6-Tetrachlorophenol	0.20 <MDL	100
Pentachlorophenol	0.15 <MDL	60

*MDL - Minimum Detection Limit

*MAC - Maximum Allowable Concentration

4.0 WATER AND CHEMICAL USE

4.1 Chemical Usage

As per the Municipal Drinking Water License, all chemicals and materials used in the operation of a drinking water system shall meet all applicable standards set by both the American Water Works Association (AWWA) and the American National Standards Institute (ANSI) safety criteria stands NSF/60, NSF/61, and NSF/372.

Sodium Hypochlorite 12% (NaOCl) is used to disinfect the raw water and provide residual. A total of Sodium Hypochlorite used can be found below is table 13. Sodium Silicate is also used in the Seaforth WDS to provide Iron Sequestering and corrosion control. A summary of chemical use can also be found in table 13.

Table 13 – Chemical Use and Average Dosage

Month	Sodium Hypochlorite		Sodium Silicate	
	Chlorine Used	Average Dose	Silicate Used	Average Dose
	L	mg/L	L	mg/L
Jan	635	2.35	122	0.63
Feb	551	2.10	65	0.34
Mar	717	2.42	72	0.34
Apr	668	2.25	85	0.40
May	800	2.35	222	0.90
Jun	750	2.33	185	0.80
Jul	750	2.03	40	0.15
Aug	815	2.23	142	0.54
Sept	680	2.40	45	0.22
Oct	735	2.29	111	0.48
Nov	577	2.15	44	0.23
Dec	640	2.42	93	0.49
Yearly	8318	2.27	1226	0.46

4.2 Summary of Flow Rates, Annual Volumes and Capacities

A summary of water supplied to the Seaforth Water Distribution System in 2025 can be found in tables 14, 15, 16 and 17 below. All volumes recorded are taken from the SCADA system and the daily operations printouts.

Table 14 – TW #1 Flow Rates and Capacities

Month	TW #1 (Rating 518.4 m3/day)				
	Total Flow	Daily Average	% Capacity	Daily Max	% Capacity
Jan			0.00		0.00
Feb	911	32.54	6.28	135	26.04
Mar	3231	104.23	20.11	140	27.01
Apr	3322	110.73	21.36	169	32.60
May	3559	114.81	22.15	258	49.77
Jun	3250	108.33	20.90	249	48.03
Jul	3923	126.55	24.41	250	48.23
Aug	2692	86.81	16.75	176	33.95
Sept	2334	77.80	15.01	154	29.71
Oct	2083	67.19	12.96	159	30.67
Nov	1873	62.43	12.04	108	20.83
Dec	2075	66.94	12.91	89	17.17
Yearly Total	29253	-	-	-	-
Yearly Avg	-	87.12	15.41	-	-
Yearly Max	-	126.55	24.41	258	49.77

Table 15 – PW #1 Flow Rates and Capacities

Month	PW #1 (Rating 3,110.4 m3/day)				
	Total Flow	Daily Average	% Capacity	Daily Max	% Capacity
Jan			0.00		0.00
Feb	11902	425.07	13.67	561	18.04
Mar	11510	371.29	11.94	570	18.33
Apr	11413	380.43	12.23	772	24.82
May	13674	441.10	14.18	830	26.68
Jun	14372	479.07	15.40	826	26.56
Jul	13496	435.35	14.00	901	28.97
Aug	15130	488.06	15.69	932	29.96
Sept	11703	390.10	12.54	709	22.79
Oct	14442	465.87	14.98	951	30.57
Nov	12106	403.53	12.97	718	23.08
Dec	11408	368.00	11.83	511	16.43
Yearly Total	141156	-	-	-	-
Yearly Avg	-	422.53	12.45	-	-
Yearly Max	-	488.06	15.69	951	30.57

Table 16– PW #2 Flow Rates and Capacities

Month	PW #2 (Rating 3,139 m3/day)				
	Total Flow	Daily Average	% Capacity	Daily Max	% Capacity
Jan			0.00		0.00
Feb	13491	481.82	15.35	576	18.35
Mar	14932	481.68	15.35	575	18.32
Apr	14840	494.67	15.76	796	25.36
May	16892	544.90	17.36	952	30.33
Jun	15417	531.62	16.94	998	31.79
Jul	19536	630.19	20.08	1006	32.05
Aug	18634	601.10	19.15	1076	34.28
Sept	14341	478.03	15.23	846	26.95
Oct	15612	503.61	16.04	785	25.01
Nov	13202	440.07	14.02	1006	32.05
Dec	12966	418.26	13.32	615	19.59
Yearly Total	169863	-	-	-	-
Yearly Avg	-	509.63	14.88	-	-
Yearly Max	-	630.19	20.08	1076	34.28

Table 17– Total Combined Flow Rates and Capacities

Month	TOTAL WELL TAKING (Rating 3,139.0 m3/day)				
	Total Flow	Daily Average	% Capacity	Daily Max	% Capacity
Jan			0.00		0.00
Feb	26274	938.36	29.89	1065	33.93
Mar	29653	956.55	30.47	1075	34.25
Apr	29675	989.17	31.51	1714	54.60
May	34107	1100.23	35.05	1899	60.50
Jun	32218	1110.97	35.39	2000	63.71
Jul	37024	1194.32	38.05	1987	63.30
Aug	36535	1178.55	37.55	2021	64.38
Sept	28379	945.97	30.14	1413	45.01
Oct	32137	1036.68	33.03	1841	58.65
Nov	26781	892.70	28.44	1312	41.80
Dec	26486	854.39	27.22	1081	34.44
Yearly Total	339269	-	-	-	-
Yearly Avg	-	1017.99	29.73	-	-
Yearly Max	-	1194.32	38.05	2021	64.38

5.0 IMPROVEMENTS TO SYSTEM AND ROUTINE / PREVENTATIVE MAINTENANCE

A Computerize Maintenance Management System (CMMS) is utilized to predict and track regular maintenance tasks associated with the Water Treatment and Distribution System in conjunction with the Municipalities Maintenance Management System. It is noted that Jacobs is the Operating

Authority and deals directly with the Water Treatment and Point of Entry Systems, while the Municipality operates and maintains the distribution system.

The Operating Authority and the Municipality work together to complete all distribution hydrant flushing twice a year, spring and fall. It is noted that flow is maintained at each distribution flushing point until a free chlorine residual of 1.00 mg/L and attempt to achieve a turbidity of less than 1 NTU to ensure the overall health of the distribution system is maintained.

6.0 MINISTRY INSPECTION AND REGULATORY ISSUES

The MECP was onsite to complete its annual regulatory inspection December 10th, 2025. A final report was issued by the MECP inspector February 4th, 2026. A final inspection rating of 97.98% was given. It was noted that one (1) non-compliance was identified by the inspector for the inspection period.

NC-1

Condition 4.2 of the PTTW requires weekly measurements of production well levels and monthly measurements of test well levels. Historically monthly measurements of TW1 (Test Well 1) have been taken but TW1, despite its name, is actually a production well as it contributes approx.. 10% of the daily flow to the distribution system. Weekly measurements of TW1 have started since the inspection and no further action is required.

7.0 WELL LEVELS

As per the Permit to Take Water (PTTW), water levels shall be measured in observation well TW #2 on monthly basis. This helps track the aquifers capacity to continue to be a production well and ensures the overall integrity of the water source. For the Seaforth WDS, measurements are taken and recorded as depth from the top of the well using a sounding probe. Static levels should be collected when the well has been off for a length of time. Dynamic levels are taken while the well is operation between the middle of end of a run cycle. A summary of collected data can be found in table 18 below.

Table 18 – Static Well Depths

Month	TW #2	
	Static	Dynamic
Jan	40'	-
Feb	40'	-
Mar	36'	-
Apr	38'	-
May	37'	-
Jun	39'	-
Jul	38'	-
Aug	41'	-
Sept	40'	-
Oct	39'	-
Nov	40'	-
Dec	39'	-

ANNUAL REPORT

Drinking-Water System Number:	220001511
Drinking-Water System Name:	Seaforth Well Supply System
Drinking-Water System Owner:	The Corporation of the Municipality of Huron East
Drinking-Water System Category:	Large Municipal Residential
Period being reported:	Jan 1st – Dec 31st, 2025

<p><u>Complete if your Category is Large Municipal Residential or Small Municipal Residential</u></p> <p>Does your Drinking-Water System serve more than 10,000 people? Yes [] No [x]</p> <p>Is your annual report available to the public at no charge on a web site on the Internet? Yes [x] No []</p> <p>Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>Municipality of Huron East Town Office 72 Main St. S Box 610 Seaforth, ON N0K 1W0</p> </div>	<p><u>Complete for all other Categories.</u></p> <p>Number of Designated Facilities served:</p> <div style="border: 1px solid black; padding: 2px; width: 100px; margin: 5px auto;">n/a</div> <p>Did you provide a copy of your annual report to all Designated Facilities you serve? Yes [] No []</p> <p>Number of Interested Authorities you report to:</p> <div style="border: 1px solid black; padding: 2px; width: 100px; margin: 5px auto;">n/a</div> <p>Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility? Yes [] No []</p>
---	---

Note: For the following tables below, additional rows or columns may be added or an appendix may be attached to the report

List all Drinking-Water Systems (if any), which receive all of their drinking water from your system:

Drinking Water System Name	Drinking Water System Number
N/A	N/A

Did you provide a copy of your annual report to all Drinking-Water System owners that are connected to you and to whom you provide all of its drinking water?

Yes [] No []

Indicate how you notified system users that your annual report is available and is free of charge.

- Public access/notice via the web
- Public access/notice via Government Office
- Public access/notice via a newspaper
- Public access/notice via Public Request
- Public access/notice via a Public Library
- Public access/notice via other method

Describe your Drinking-Water System

Water Distribution System Class 2.

As of mid-April 2009, the town of Seaforth draws its water supply from three groundwater wells. All wells are located at 40 Welsh St. The Welsh Street facility consists of an above ground pump house with three groundwater wells each located north of the pump house. TW1 (Test Well #1; but is considered to be a production well) is a 150mm diameter, 85m deep groundwater well located at 48m northwest of the new pump house. It is equipped with a submersible turbine pump at 6.4L/s. PW 1 (Production Well #1) is a 300mm diameter, 105m deep drilled groundwater well located 43m northwest of the pump house. It is equipped with a variable speed submersible turbine pump rated at 35/Ls. PW 2 (Production Well #2) has the same dimensions as PW1 and is located 18m northwest of the pump house. It contains a variable speed submersible turbine pump rated at 40/Ls. Three vertical turbine high lift pumps (one rated at 26L/s and two rated at 44L/s at 48m TDH) convey the water to the distribution system. There is a 670 m³ underground reservoir located on site that provides contact time for the treated water. It also serves as backup emergency storage and fire protection if the water tower is offline. This facility is equipped with a 175-kW generator and automatic transfer switch to provide backup power.

Treatment for the Welsh St. wells consist of a chlorination system that includes two sodium hypochlorite metering pumps (one main and one backup) and one 200 L day tank for sodium hypochlorite. Sodium Silicate is also added to the system (three pumps available, 1 dedicated to each well) as well as a 100L day tank. A continuous online chlorine analyzer equipped with alarms monitor the chlorine residual in the treated water just prior to the point of entry into the distribution system.

Water in excess of demand in the distribution system is pumped to the elevated storage tank (water tower). When a predetermined level in the tower is reached, the distribution pump(s) shut down. The 1930 m³ elevated storage tank was constructed in 1998 and is located at 85 Daly Street. The elevated tank water level cycles based on demand and provides emergency storage, fire protection and peak demand storage for the Seaforth water supply system.

The distribution system supplies water to the entire Town of Seaforth and the Village of Egmondville.



List all water treatment chemicals used over this reporting period

12% Sodium Hypochlorite Solution
Sodium Silicate

Were any significant expenses incurred to?

- Install required equipment
- Repair required equipment
- Replace required equipment

Provide details on the notices submitted in accordance with subsection 18(1) of the Safe Drinking-Water Act or section 16-4 of Schedule 16 of O.Reg.170/03 and reported to Spills Action Centre

Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date

Microbiological testing done under the Schedule 10, 11 or 12 of Regulation 170/03, during this reporting period.

	Number of Samples	Range of E.Coli Or Fecal Results (min #)-(max #)	Range of Total Coliform Results (min #)-(max #)	Number of HPC Samples	Range of HPC Results (min #)-(max #)
Raw (TW1)	52	0	0	N/A	N/A
Raw (PW1)	52	0	0	N/A	N/A
Raw (PW2)	52	0	0	N/A	N/A
Treated Water	52	0	0	54	<10 - 10
Distribution	208	0	0	104	<10 - 30

Operational testing done under Schedule 7, 8 or 9 of Regulation 170/03 during the period covered by this Annual Report.

	Number of Grab Samples	Range of Results (min #)-(max #)	Unit of Measure
Turbidity TW1	52	0.13 – 0.68	NTU
Turbidity PW1	53	0.15 – 0.93	NTU
Turbidity PW2	52	0.14 – 0.63	NTU
Treated Chlorine	8760	0.00 – 2.10	mg/l
Distribution Chlorine	8760	0.00 – 1.57	mg/l

NOTE: For continuous monitors use 8760 as the number of samples.

Summary of Inorganic parameters tested during this reporting period or the most recent sample results

(<MDL: Below Minimum Detection Limit)				
Note: Sodium + Fluoride sampling required every 60 months. Inorganic sampling required every 36 months.				
Parameter	Sample Date	Result Value Well #1	Unit of Measure	Exceedance
Antimony	Apr 9/24	<0.6MDL	ug/L	No
Arsenic	Apr 9/24	0.5	ug/L	No
Barium	Apr 9/24	31.4	ug/L	No
Boron	Apr 9/24	133	ug/L	No
Cadmium	Apr 9/24	0.04	ug/L	No
Chromium	Apr 9/24	0.34	ug/L	No
Mercury	Apr 9/24	<0.01MDL	ug/L	No
Selenium	Apr 9/24	0.13	ug/L	No
Uranium	Apr 9/24	8.22	ug/L	No
Sodium	Apr /24	48.0, 47.8	mg/L	YES
Fluoride	Apr /24	1.69, 1.48	mg/L	No
Haloacetic Acids (HAA) (Running Annual Ave)	Q1 – Q4 2025 (Distribution)	5.30		Ug/L
Trihalomethanes (THM's) (Running Annual Ave)	Q1 – Q4 2025 (Distribution)	20.50		Ug/L
Nitrite & Nitrate sampling required Quarterly				
Nitrite	Jan 2025	<0.003 MDL	ug/L	No
Nitrate	Jan 2025	0.025	ug/L	No
Nitrite	Apr 2025	<0.003 MDL	ug/L	No
Nitrate	Apr 2025	0.028	ug/L	No
Nitrite	July 2025	<0.003 MDL	ug/L	No
Nitrate	July 2025	0.032	ug/L	No
Nitrite	Oct 2025	<0.003 MDL	ug/L	No
Nitrate	Oct 2025	0.030	ug/L	No

Summary of lead testing under Schedule 15.1 during this reporting period

(Applicable to the following drinking water systems; large municipal residential systems, small municipal residential systems, and non-municipal year-round residential systems)

Sampling Period	Number of Samples	Range of Lead Results (min#) – (max #)	Unit of Measure	Number of Exceedances
Dec/24 – Apr/25	2	0.11 – 1.31	ug/L	No
Jun/25 – Oct/25	2	0.06	ug/L	No
Lead Sampling Conducted by Municipality				

Summary of Organic parameters sampled during this reporting period or the most recent sample results

(<MDL: Below Minimum Detection Limit) Note: Sampling required every 36 months.				
Parameter	Sample Date	Result Value Well #1	Unit of Measure	Exceedance
Alachlor	Apr 9/24	<MDL	ug/L	No
Atrazine + N-dealkylated metabolites	Apr 9/24	<MDL	ug/L	No
Atrazine	Apr 9/24	<MDL	ug/L	No
Azinphos-methyl	Apr 9/24	<MDL	ug/L	No
Benzene	Apr 9/24	<MDL	ug/L	No
Benzo(a)pyrene	Apr 9/24	<MDL	ug/L	No
Bromoxynil	Apr 9/24	<MDL	ug/L	No
Carbaryl	Apr 9/24	<MDL	ug/L	No
Carbofuran	Apr 9/24	<MDL	ug/L	No
Carbon Tetrachloride	Apr 9/24	<MDL	ug/L	No
Chlorpyrifos	Apr 9/24	<MDL	ug/L	No
Desethyl atrazine	Apr 9/24	<MDL	ug/L	No
Diazinon	Apr 9/24	<MDL	ug/L	No
Dicamba	Apr 9/24	<MDL	ug/L	No
1,2-Dichlorobenzene	Apr 9/24	<MDL	ug/L	No
1,4-Dichlorobenzene	Apr 9/24	<MDL	ug/L	No
1,2-Dichloroethane	Apr 9/24	<MDL	ug/L	No
1,1-Dichloroethylene (vinylidene)	Apr 9/24	<MDL	ug/L	No
Dichloromethane	Apr 9/24	<MDL	ug/L	No
2,4 Dichlorophenol	Apr 9/24	<MDL	ug/L	No
2,4-Dichlorophenoxy acetic acid (2,4-	Apr 9/24	<MDL	ug/L	No
Diclofop-methyl	Apr 9/24	<MDL	ug/L	No
Dimethoate	Apr 9/24	<MDL	ug/L	No

Diquat	Apr 9/24	<MDL	ug/L	No
Diuron	Apr 9/24	<MDL	ug/L	No
Glyphosate	Apr 9/24	<MDL	ug/L	No
Malathion	Apr 9/24	<MDL	ug/L	No
MCPA	Apr 9/24	<MDL	ug/L	No
Metolachlor	Apr 9/24	<MDL	ug/L	No
Metribuzin	Apr 9/24	<MDL	ug/L	No
Monochlorobenzene	Apr 9/24	<MDL	ug/L	No
Paraquat	Apr 9/24	<MDL	ug/L	No
Pentachlorophenol	Apr 9/24	<MDL	ug/L	No
Phorate	Apr 9/24	<MDL	ug/L	No
Picloram	Apr 9/24	<MDL	ug/L	No
Polychlorinated Biphenyls(PCB's)	Apr 9/24	<MDL	ug/L	No
Prometryne	Apr 9/24	<MDL	ug/L	No
Simazine	Apr 9/24	<MDL	ug/L	No
Terbufos	Apr 9/24	<MDL	ug/L	No
Tetrachloroethylene	Apr 9/24	<MDL	ug/L	No
2,3,4,6-Tetrachlorophenol	Apr 9/24	<MDL	ug/L	No
Triallate	Apr 9/24	<MDL	ug/L	No
Trichloroethylene	Apr 9/24	<MDL	ug/L	No
2,4,6-Trichlorophenol	Apr 9/24	<MDL	ug/L	No
Trifluralin	Apr 9/24	<MDL	ug/L	No
Vinyl Chloride	Apr 9/24	<MDL	ug/L	No

List any Inorganic or Organic parameter(s) that exceeded half the standard prescribed in Schedule 2 of Ontario Drinking Water Quality Standards.

Parameter	Result Value	Unit of Measure	Date of Sample	ODWQS limit
Sodium	48.0, 47.8	mg/L	April 2024	20
Fluoride	1.69, 1.48	mg/L	April 2024	1.5