



**SAULT STE. MARIE
DRINKING WATER SYSTEM
WATERWORKS # 260006685**

**ANNUAL & SUMMARY
REPORTS 2025**

Introduction

This Annual and Summary report has been prepared in accordance with both section 11 and schedule 22 of Ontario Regulation 170/03. The requirements of the regulation for each report have been consolidated into a single document. This report is intended to brief the Owner and consumers of the Sault Ste. Marie drinking water system (DWS) on the performance of the system over the past calendar year from January 1 to December 31, 2025.

This report encompasses all elements as required by O. Reg. 170/03. Each section explains what is required for the category large municipal residential DWS (as it pertains to the Sault Ste. Marie DWS) and how limits were met, or if shortfalls were revealed. The last section contains a list of tables and definitions of terms identified in this report.

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System Description

PUC Services Inc. operates, maintains, and manages the Sault Ste. Marie drinking water system on behalf of the City's Public Utilities Commission. The PUC Services Inc. business office is located at 500 Second Line East. Regular business hours are 09:00 to 16:30, Monday to Friday. The telephone number is (705) 759-6500.

PUC certified operators monitor and control all aspects of water production and quality, using a computerized control system.

Water for Sault Ste. Marie is obtained from two principal sources: surface water from Lake Superior and ground water from six deep wells. Raw water from the intake at Gros Cap is pumped to the water treatment plant, where it passes through a process of filtration and disinfection. Water from the deep wells is also disinfected prior to being pumped to the distribution system. pH stabilization and blended phosphate are added for corrosion control to mitigate lead.

On a typical day our customers use approximately 30,000,000 litres of water. Three water storage reservoirs that hold up to 52,000,000 litres of water (or 1-2 day-average consumption).

Chemicals

Chemicals utilized in the Sault Ste. Marie drinking water treatment facilities during 2025 include:

- SSM WTP:
 - Aluminum sulfate for coagulation
 - Chlorine gas for disinfection
 - Blended phosphates for corrosion control
 - Soda ash for pH stabilization
- Goulais Pump Station:
 - Chlorine gas for disinfection
 - Blended phosphates for corrosion control
- Steelton Pump Station:
 - Chlorine gas for disinfection
 - Blended phosphates for corrosion control
- Shannon Pump Station:
 - Chlorine gas for disinfection
 - Blended phosphates for corrosion control
 - Carbon dioxide gas for pH stabilization
- Lorna Pump Station:
 - Chlorine gas for disinfection
 - Blended phosphates for corrosion control
 - Carbon dioxide gas for pH stabilization

2025 Expenditures

During the year 2025, expenses were incurred to maintain and replace various treatment and distribution assets:

Gros Cap Pump Station

- Electrical Upgrades Project (Phase 2) – Switchgear/automatic transfer switch installation

SSM Water Treatment Plant:

- Raw water flow control valve & pressure reducing valve seal kits
- UV system critical spare parts
- Crane E-stops
- Low lift VFD
- Chlorine tonner vacuum & automatic closure system
- Portable gantry crane
- Portable pH meters (x2)
- LED light purchase (all WTO sites)
- Exterior building wall repairs
- Fire alarm system installation
- Automation study/report

Goulais Well

- Dehumidifier

Shannon Well

- Well rehabilitation (pump rebuild & motor inspection)

Steelton Well

- Well motor VFD

Lorna Well

- Chlorine cylinder regulators
- Chlorine analyzer
- Well pump pressure reducing valves (x2)
- Chemical feed pump system parts

Penno Booster Station

- Sump pump

Distribution System:

- Repairs for 59 watermain repairs
- CIPP Lining – Willow Ave, Chapple Ave, Strand Ave, Anita Blvd
- SIPP Lining – Lawson Ave, Wiber St, Jean Ave, Manitou Dr
- Reconstruction for Peoples Road – Churchill Ave to Penno Rd
- Two Subdivisions – 551 Korah Road and Eastside Phase 3 & 4

Drinking Water System Changes

Form 1 – Record of watermains authorized as a future alteration

- Korah Road Subdivision
- Eastside Subdivision (Phase 3 & 4)
- Peoples Road Reconstruction
- CIPP – Willow, Chapple, Strand and Anita
- SIPP – Lawson, Wiber, Jean & Manitou

Form 2 – Record of minor modification or replacements

- Replacement 150mm gate valve (B12-3) Madeleine St
- Replacement 150mm gate valve (B11-10) Welcome Ave
- Replacement 150mm gate valve (E03-129) East Balfour St

Form 3 – Record of addition, modification or replacement of equipment discharging a contaminant of concern to the atmosphere

- N/A

Water Quality

Microbiological Sampling and Testing

Sampling is conducted weekly for the DWS at the frequencies and locations identified by schedule 10 of O. Reg. 170/03 for large municipal residential systems.

Table 1: Microbiological sampling requirements

Location	Sample Analysis	# samples	Frequency
Raw	EC, TC	each source	Weekly
Treated	EC, TC, HPC	each source	Weekly
Distribution	EC, TC, HPC (25%)	83 samples	monthly

The raw and treated samples in Sault Ste. Marie are collected from each of the wells in production (Goulais 1 & 2, Steelton, and Shannon) and the WTP surface water source. Lorna wells are not used for regular production but are sampled and available in the event of increased water demand. Distribution samples are collected from 14 locations throughout the system. In total 1,164 microbiological samples were collected in the DWS.

Table 2: Microbiological Sample Results

Site	Type	# samples	EC (range)	TC (range)	# HPC	HPC (range)
WTP	Raw	53	0 - 1	0 - 14	-	-
	Treated	53	0	0	53	0 - 22
Goulais #1	Raw	53	0	0	-	-
	Treated	53	0	0	53	0-3
Goulais #2	Raw	53	0	0	-	-
	Treated	53	0	0	53	0-7
Steelton	Raw	49	0	0	-	-
	Treated	49	0	0	49	0-60
Shannon	Raw	43	0	0	-	-
	Treated	43	0	0	43	0-3
Lorna #1 *	Raw	2	0	0	-	-
	Treated	-	-	-	-	-
Lorna #2 *	Raw	1	0	0	-	-
	Treated	-	-	-	-	-
Various Locations	Distribution	1,105	0	0-1	395	0 - 210

Lorna Wells are flushed and sampled to be available for production if required but not operated to the system in 2025.

Shannon Well offline – Oct-Nov for well maintenance

Operational Checks and Testing

Operational testing is completed as per schedule 7 of O. Reg. 170/03 for large municipal residential systems. These checks and testing are completed on site at the water treatment facility by licensed operators. Continuous monitoring analyzers are utilized for measurement of filter turbidity and chlorine residuals. Data summaries for turbidity and chlorine are summarized in tables 2 and 3.

Table 3: Monthly Filter Turbidity Results (SSM WTP)

Month	Filter #1		Filter #2		Filter #3		Filter #4		Monthly Compliance
	Average NTU	Range NTU	%						
Jan	0.02	0.02-0.08	0.04	0.03-0.09	0.02	0.02-0.05	0.02	0.02-0.06	100
Feb	0.02	0.01-0.06	0.04	0.03-0.17	0.02	0.01-0.05	0.02	0.01-0.06	100
Mar	0.02	0.01-0.06	0.04	0.03-0.10	0.02	0.01-0.05	0.02	0.01-0.11	100
Apr	0.02	0.01-0.07	0.03	0.03-0.19	0.02	0.01-0.05	0.02	0.01-0.28	100
May	0.02	0.02-0.28	0.04	0.03-0.25	0.02	0.02-0.26	0.02	0.02-0.29	100
Jun	0.02	0.02-0.92	0.04	0.03-0.27	0.02	0.02-0.23	0.03	0.02-1.00*	99.98
Jul	0.02	0.02-0.07	0.04	0.03-0.09	0.02	0.02-0.09	0.03	0.02-0.08	100
Aug	0.02	0.02-0.07	0.05	0.03-0.11	0.02	0.02-0.06	0.02	0.02-0.10	100
Sep	0.02	0.02-0.05	0.04	0.03-0.07	0.02	0.02-0.04	0.02	0.02-0.05	100
Oct	0.02	0.02-0.04	0.03	0.02-0.05	0.02	0.02-0.03	0.02	0.01-0.04	100
Nov	0.02	0.02-0.05	0.03	0.03-0.07	0.02	0.02-0.08	0.02	0.02-0.05	100
Dec	0.02	0.02-0.24	0.03	0.03-0.08	0.02	0.02-0.18	0.02	0.02-0.08	100

Filter turbidity is monitored on SCADA in real time. Filter efficiency is calculated by tracking the readings in five-minute intervals above and below 0.30 NTU during filter run time. **Sault Ste. Marie maintained filter compliance each month above 95%**, the required limit for dual media filtration to achieve necessary filtration credits for primary disinfection.

*filtrate valve closed automatically before adverse

Table 4: Chlorine Residuals (Production Sites)

Production Site	WTP		Goulais Well		Steelton Well		Shannon Well	
Month	Average (mg/L)	Range (mg/L)						
Jan	1.23	1.13-1.31	1.25	1.00-1.46	1.02	0.82-1.15	0.92	0.63-0.99
Feb	1.24	0.96-1.45	1.23	0.93-1.44	1.04	0.80-1.10	0.89	0.50-1.20
Mar	1.24	1.01-1.35	1.17	0.98-1.36	1.01	0.78-1.43	0.88	0.59-1.04
Apr	1.23	1.09-1.37	1.24	0.95-1.42	0.97	0.75-1.20	0.90	0.61-1.04
May	1.22	1.14-1.35	1.20	0.86-1.41	0.97	0.68-1.25	0.85	0.50-0.94
Jun	1.25	1.11-1.42	1.26	0.91-1.36	1.13	0.78-1.37	0.86	0.50-0.86
Jul	1.24	0.89-1.38	1.26	0.87-1.49	1.22	0.61-1.41	0.85	0.57-0.98
Aug	1.23	1.10-1.36	1.26	0.94-1.47	1.10	0.75-1.36	0.88	0.58-1.10
Sep	1.24	1.10-1.37	1.29	0.85-1.53	0.99	0.88-1.05	0.83	0.56-1.23
Oct	1.23	1.10-1.41	1.30	1.03-1.62	1.02	0.85-1.36	0.82	0.52-1.02
Nov	1.25	1.14-1.35	1.28	1.00-1.48	1.04	0.88-1.20	0.98	0.69-1.11
Dec	1.25	1.14-1.41	1.33	1.07-1.50	1.03	0.81-1.18	0.95	0.45-1.07

Chlorine residuals are continuously monitored and tracked in real time in SCADA. **Minimum residuals were always maintained consistent with primary disinfection requirements.**

Chemical Sampling and Testing

Schedule 13 of O. Reg. 170/03 outlines chemical sampling requirements for Large Municipal Residential systems. Sample collection for schedule 23 (inorganics) and 24 (organics) is required every 12 months and quarterly sampling for nitrites/nitrates, THM's and HAA's. Sodium and fluoride are required to be sampled every 60 months. Lorna wells were not sampled as they were not operated for production of water to distribution system in year 2025.

Table 5: Schedule 23 - Inorganics (µg/L)

Parameter	WTP	Goulais #1	Goulais #2	Steelton	Shannon	MAC
Antimony	<0.60	<0.60	<0.60	<0.60	<0.60	6
Arsenic	<1.0	<1.0	<1.0	<1.0	2.3	25
Barium	<10	40	40	43	66	1,000
Boron	<50	<50	<50	<50	180	5,000
Cadmium	<0.10	<0.10	<0.10	<0.10	<0.10	5
Chromium	<1.0	1.8	1.8	1.5	<1.0	50
Mercury	<0.100	<0.100	<0.100	<0.100	<0.100	1
Selenium	<1.0	<1.0	<1.0	<1.0	<1.0	10
Uranium	<2.0	<2.0	<2.0	<2.0	8.6	20

All results for inorganic parameters are within the maximum acceptable concentrations (MAC) of the Ontario Drinking Water Quality Standards as defined in O. Reg. 169/03

Table 6: Fluoride and Sodium Results (mg/L)

Parameter	WTP	Goulais #1	Goulais #2	Steelton	Shannon	MAC
Fluoride	<0.05	0.035	<0.020	<0.05	0.199	1.5
*Sodium	3.2	11.5	12.3	10.2	34.4	20

**Sodium has an aesthetic objective (AO) of 200 mg/L but has a limit of 20 mg/L for medical reasons and would require notifications if exceeded.*

Table 7: Nitrate/Nitrite Results (mg/L)

Q	Nitrite Nitrate	WTP	Goulais #1	Goulais #2	Steelton	Shannon	MAC (mg/L)
Q1	NO ₂	<0.010	<0.010	<0.010	<0.010	<0.010	1.0
	NO ₃	0.362	0.908	0.962	0.966	<0.020	10
Q2	NO ₂	<0.010	<0.010	<0.010	<0.010	<0.010	1.0
	NO ₃	0.369	0.976	0.984	1.07	<0.020	10
Q3	NO ₂	<0.05	<0.05	<0.05	<0.010	<0.05	1.0
	NO ₃	0.3	0.83	0.98	0.834	<0.05	10
Q4	NO ₂	<0.010	<0.010	<0.010	<0.05	<0.05	1.0
	NO ₃	0.345	0.972	0.967	0.90	<0.05	10

All quarterly results are well below ODWS MAC.

Table 8: Disinfection Byproducts THM/HAA Results (µg/L)

THM	Q1	Q2	Q3	Q4	MAC
Q Average	5.3	4.8	10.4	6	100
RAA	Running Annual Average (µg/L)			6.63	100
HAA	Q1	Q2	Q3	Q4	MAC
Q Average	<5.00	8.4	16.5	<5.00	80
RAA	Running Annual Average (µg/L)			8.1	80

All quarterly results for THMs and HAAs are well below ODWS MAC.

Table 9: Schedule 24 Organics – WTP

Parameter	Date	Result	Unit	MAC
Alachlor	18-Mar-25	<0.050	µg/L	5
Atrazine + N-dealkylated metabolites	18-Mar-25	<0.14	µg/L	5
Azinphos-methyl	18-Mar-25	<0.10	µg/L	20
Benzene	18-Mar-25	<0.50	µg/L	5
Benzo(a)pyrene	18-Mar-25	<0.0050	µg/L	0.01
Bromoxynil	18-Mar-25	<0.500	µg/L	5
Carbaryl	18-Mar-25	<0.050	µg/L	90
Carbofuran	18-Mar-25	<0.025	µg/L	90
Carbon Tetrachloride	18-Mar-25	0.2	µg/L	5
Chlorpyrifos	18-Mar-25	<0.10	µg/L	90
Diazinon	18-Mar-25	<0.025	µg/L	20
Dicamba	18-Mar-25	<1.00	µg/L	120
1,2-Dichlorobenzene	18-Mar-25	<0.50	µg/L	200
1,4-Dichlorobenzene	18-Mar-25	<0.50	µg/L	5
1,2-Dichloroethane	18-Mar-25	<0.50	µg/L	5
1,1-Dichloroethylene (vinylidene chloride)	18-Mar-25	<0.50	µg/L	14
Dichloromethane	18-Mar-25	<1.0	µg/L	50
2,4 Dichlorophenol	18-Mar-25	<0.20	µg/L	900
2,4-Dichlorophenoxy acetic acid	18-Mar-25	<0.500	µg/L	100
Diclofop-methyl	18-Mar-25	<0.10	µg/L	9
Dimethoate	18-Mar-25	<0.050	µg/L	20
Diquat	18-Mar-25	<1.0	µg/L	70

Parameter	Date	Result	Unit	MAC
Diuron	18-Mar-25	<0.050	µg/L	150
Glyphosate	18-Mar-25	<1.0	µg/L	280
Malathion	18-Mar-25	<0.025	µg/L	190
2-Methyl-4-Chlorophenoxyacetic Acid (MCPA)	18-Mar-25	<0.000500	µg/L	100
Metolachlor	18-Mar-25	<0.025	µg/L	50
Metribuzin	18-Mar-25	<0.10	µg/L	80
Monochlorobenzene	18-Mar-25	<0.50	µg/L	80
Paraquat	18-Mar-25	<1.0	µg/L	10
Pentachlorophenol	18-Mar-25	<0.50	µg/L	60
Phorate	18-Mar-25	<0.25	µg/L	2
Picloram	18-Mar-25	<1.00	µg/L	190
Polychlorinated Biphenyl (PCB)	18-Mar-25	<0.030	µg/L	3
Prometryne	18-Mar-25	<0.025	µg/L	1
Simazine	18-Mar-25	<0.10	µg/L	10
Terbufos	18-Mar-25	<0.50	µg/L	1
Tetrachloroethylene	18-Mar-25	<0.50	µg/L	30
2,3,4,6-Tetrachlorophenol	18-Mar-25	<0.50	µg/L	100
Triallate	18-Mar-25	<0.10	µg/L	230
Trichloroethylene	18-Mar-25	<0.50	µg/L	5
2,4,6-Trichlorophenol	18-Mar-25	<0.20	µg/L	5
Trifluralin	18-Mar-25	<0.10	µg/L	45
Vinyl Chloride	18-Mar-25	<0.20	µg/L	2

All results are below the ODWS MAC and half MAC as per O. Reg. 169/03.

Table 10: Schedule 24 Organics – Goulais Wells sampled – Jun 10-25

Parameter	Goulais 1	Goulais 2	Unit	MAC
Alachlor	<0.050	<0.050	µg/L	5
Atrazine + N-dealkylated metabolites	<0.14	<0.14	µg/L	5
Azinphos-methyl	<0.10	<0.10	µg/L	20
Benzene	<0.50	<0.50	µg/L	5
Benzo(a)pyrene	<0.0050	<0.0050	µg/L	0.01
Bromoxynil	<0.050	<0.050	µg/L	5
Carbaryl	<0.050	<0.050	µg/L	90
Carbofuran	<0.025	<0.025	µg/L	90
Carbon Tetrachloride	<0.20	<0.20	µg/L	5
Chlorpyrifos	<0.10	<0.10	µg/L	90
Diazinon	<0.025	<0.025	µg/L	20
Dicamba	<0.10	<0.10	µg/L	120
1,2-Dichlorobenzene	<0.50	<0.50	µg/L	200
1,4-Dichlorobenzene	<0.50	<0.50	µg/L	5
1,2-Dichloroethane	<0.50	<0.50	µg/L	5
1,1-Dichloroethylene (vinylidene chloride)	<0.50	<0.50	µg/L	14
Dichloromethane	<1.0	<1.0	µg/L	50
2,4 Dichlorophenol	<0.20	<0.20	µg/L	900
2,4-Dichlorophenoxy acetic acid	<0.050	<0.050	µg/L	100
Diclofop-methyl	<0.10	<0.10	µg/L	9
Dimethoate	<20.0	<20.0	µg/L	20
Diquat	<0.050	<0.050	µg/L	70

Parameter	Goulais 1	Goulais 2	Unit	MAC
Diuron	<0.050	<0.050	µg/L	150
Glyphosate	<1.0	<1.0	µg/L	280
Malathion	<0.025	<0.025	µg/L	190
2-Methyl-4-Chlorophenoxyacetic Acid (MCPA)	<0.000050	<0.000050	µg/L	100
Metolachlor	<0.025	<0.025	µg/L	50
Metribuzin	<0.10	<0.10	µg/L	80
Monochlorobenzene	<0.50	<0.50	µg/L	80
Paraquat	<1.0	<1.0	µg/L	10
Pentachlorophenol	<0.50	<0.50	µg/L	60
Phorate	<0.25	<0.25	µg/L	2
Picloram	<0.10	<0.10	µg/L	190
Polychlorinated Biphenyl (PCB)	<0.030	<0.030	µg/L	3
Prometryne	<0.025	<0.025	µg/L	1
Simazine	<0.10	<0.10	µg/L	10
Terbufos	<0.50	<0.50	µg/L	1
Tetrachloroethylene	<0.50	<0.50	µg/L	30
2,3,4,6-Tetrachlorophenol	<0.50	<0.50	µg/L	100
Triallate	<0.10	<0.10	µg/L	230
Trichloroethylene	<0.50	<0.50	µg/L	5
2,4,6-Trichlorophenol	<0.20	<0.20	µg/L	5
Trifluralin	<0.10	<0.10	µg/L	45
Vinyl Chloride	<0.20	<0.20	µg/L	2

All results are below the ODWS MAC and half MAC as per O. Reg. 169/03.

Table 11: Schedule 24 Organics – Shannon & Steelton Wells Aug 18/25

Parameter	Steelton	Shannon	Unit	MAC
Alachlor	<0.050	<0.050	µg/L	5
Atrazine + N-dealkylated metabolites	<0.14	<0.14	µg/L	5
Azinphos-methyl	<0.10	<0.10	µg/L	20
Benzene	<0.50	<0.50	µg/L	5
Benzo(a)pyrene	<0.0050	<0.0050	µg/L	0.01
Bromoxynil	<0.050	<0.050	µg/L	5
Carbaryl	<0.050	<0.050	µg/L	90
Carbofuran	<0.0250	<0.025	µg/L	90
Carbon Tetrachloride	<0.20	<0.20	µg/L	5
Chlorpyrifos	<0.10	<0.10	µg/L	90
Diazinon	<0.025	<0.025	µg/L	20
Dicamba	<0.10	<0.10	µg/L	120
1,2-Dichlorobenzene	<0.50	<0.50	µg/L	200
1,4-Dichlorobenzene	<0.50	<0.50	µg/L	5
1,2-Dichloroethane	<0.50	<0.50	µg/L	5
1,1-Dichloroethylene (vinylidene chloride)	<0.50	<0.50	µg/L	14
Dichloromethane	<1.0	<1.0	µg/L	50
2,4 Dichlorophenol	<0.20	<0.20	µg/L	900
2,4-Dichlorophenoxy acetic acid	<0.050	<0.050	µg/L	100
Diclofop-methyl	<0.10	<0.10	µg/L	9
Dimethoate	<20.0	<20.0	µg/L	20
Diquat	<1.0	<1.0	µg/L	70

Parameter	Steelton	Shannon	Unit	MAC
Diuron	<0.050	<0.050	µg/L	150
Glyphosate	<1.0	<1.0	µg/L	280
Malathion	<0.025	<0.025	µg/L	190
2-Methyl-4-Chlorophenoxyacetic Acid (MCPA)	<0.000050	<0.000050	µg/L	100
Metolachlor	<0.025	<0.025	µg/L	50
Metribuzin	<0.10	<0.10	µg/L	80
Monochlorobenzene	<0.50	<0.50	µg/L	80
Paraquat	<1.0	<1.0	µg/L	10
Pentachlorophenol	<0.50	<0.50	µg/L	60
Phorate	<0.25	<0.25	µg/L	2
Picloram	<0.10	<0.10	µg/L	190
Polychlorinated Biphenyl (PCB)	<0.030	<0.030	µg/L	3
Prometryne	<0.025	<0.025	µg/L	1
Simazine	<0.10	<0.10	µg/L	10
Terbufos	<0.50	<0.50	µg/L	1
Tetrachloroethylene	<0.50	<0.50	µg/L	30
2,3,4,6-Tetrachlorophenol	<0.50	<0.50	µg/L	100
Triallate	<0.10	<0.10	µg/L	230
Trichloroethylene	<0.50	<0.50	µg/L	5
2,4,6-Trichlorophenol	<0.20	<0.20	µg/L	5
Trifluralin	<0.10	<0.10	µg/L	45
Vinyl Chloride	<0.20	<0.20	µg/L	2

All results are below the ODWS MAC and half MAC as per O. Reg. 169/03.

Lead Sampling:

The Ontario Drinking Water Standard for lead is 10 µg/L. This applies to water at the point of consumption since lead is only present because of corrosion of lead solder, brass containing lead fittings or lead pipes which are found close to or in domestic plumbing and the service connection to buildings.

In July 2017, the required number of lead samples was reduced to 22 residential/non-residential plumbing and 8 distribution points as per Municipal Drinking Water License #216-101, Schedule C, 5.0, Table 1.

Table 12: Community Lead Sampling Results

Location Type	Number of Sample Locations	Range of Lead Results (ug/L)	Number of Location Exceedances
Plumbing – Residential and Non-Residential	23	0 – 10.5	2
Distribution	9	0 – 3.3	0

In 2025, 2 of 23 plumbing locations or 8% of the tested homes exceeded the ODWS. Tests were done in homes with record of lead or suspected lead pipe – this is a small subset of homes in Sault Ste. Marie.

As part of PUC’s lead service line replacement program, two additional addresses were sampled with zero exceedances. One service line was replaced in 2025 which was on the municipal side.

Providing clean, safe, and reliable drinking water is a responsibility that PUC takes very seriously. Unfortunately, the challenge of reducing the occurrence of lead in drinking water is something communities across North America are faced with. In Sault Ste. Marie, PUC employs a robust community water sampling program that monitors lead levels in drinking water.

For the program to function efficiently, PUC partnered with the SSM Innovation Centre and Algoma Public Health to develop a system that would focus lead testing on homes with suspected lead service pipes and that may have occupants that would be especially sensitive to lead exposure (ex. infants or expecting mothers). While it is beyond PUC’s authority to replace lead services on a homeowner’s property, if a home is found to have a lead service the PUC offers programs to consumers that will protect them from lead exposure.

The preferred option provided to homeowners is an interest-free loan to help them replace their lead service lines. When an owner replaces their lead service line, PUC will replace the public portion of the service at no charge to the owner. PUC will offer service pipelining when pandemic restrictions are eased and as an affordable alternative to replacement. Another option the PUC provides to consumers is to issue tap-mounted water filters (certified for lead reduction) at no charge to the homeowner until the service can be replaced or changes to water treatment processes can be shown to satisfactorily reduce lead concentrations.

In accordance with drinking water regulations PUC implemented a Corrosion Control Plan (as part of the Water Quality Improvement Project) that is designed to reduce lead uptake in drinking water. PUC continues to evaluate the long-term changes to the distribution system and water quality after implementing the corrosion control plan.

Compliance

Adverse Water Quality Incidents

During 2025, the Sault Ste. Marie DWS reported two incidents of adverse water quality.

Table 13: Adverse Water Quality Incidents

Date	Incident Reported
2025-08-29	Low chlorine residual
2025-09-12	Total coliform Sub 17

Received water quality complaints (colour & odour) from 48 Welcome Avenue (August 29, 2025 @ 11:15 am) and 92 Madeleine Street (August 29, 2025 @ 11:28 am). Attended both addresses to test free chlorine residual. Free chlorine residual was 0.01 mg/L at 48 Welcome Avenue and 0.03 mg/L at 92 Madeleine Street. No other complaints were received. Immediate response taken to flush system and resolve condition. Free chlorine residual taken at hydrant was 0.45 mg/L after flushing. Additional flushing conducted August 31, 2025, from same hydrant. Residuals were 0.49 mg/L and 0.33 mg/L. Both homeworkers contacted September 2, 2025, as follow up, residual 0.38 mg/L

Test result of 1 Total Coliform at Sub 17 - 1236 Wellington St. E. 2 sets of samples collected (greater than 24 hours and less than 48 hours apart) at AWQI sample location (Sub 17) and at sample locations upstream and downstream of Sub 17. All samples' results returned as 0 detect for EC/TC as per COC attached.

Annual Drinking Water System Inspection

The 2024 annual DWS inspection took place on February 10, 2025, but the report was not received until April 2025, after the 2024 Annual & Summary Report was completed. There was one (1) non-compliance, zero (0) best practice recommendations identified.

The 2025 annual DWS inspection took place on January 30, 2026. **The inspection report was not received prior to issuing this Annual Report.**

Ministry of Environment, Conservation, and Parks - Risk Assessment Process

Maximum Risk Rating: 528

Table 14: MECP Risk Assessment Rating (2024)

Inspection Module	Non-Compliance Rating
Capacity Assessment	0/30
Certification & Training	0/42
Distribution System	0/14
Logbooks	0/14
Operations Manuals	0/14
Reporting & Corrective Actions	0/70
Source	0/14
Treatment Processes	0/218
Water Quality Monitoring	8/112
TOTAL	8/528

Inspection Risk Rating 1.52%

The DWS received a final inspection rating of 98.48%

Flows

Municipal Drinking Water Works Permit: 216-201 specifies maximum rated flows for the raw water supplies listed in Table 12.

Table 15: Permit to Take Water

Facility	Permit to Take Water
Gros Cap Pump Station	75,000 m ³ /d
Goulais Wells	10,013 m ³ /d
Steelton Well	8,208 m ³ /d
Shannon Well	7,000 m ³ /d
Lorna Wells	14,558.4 m ³ /d

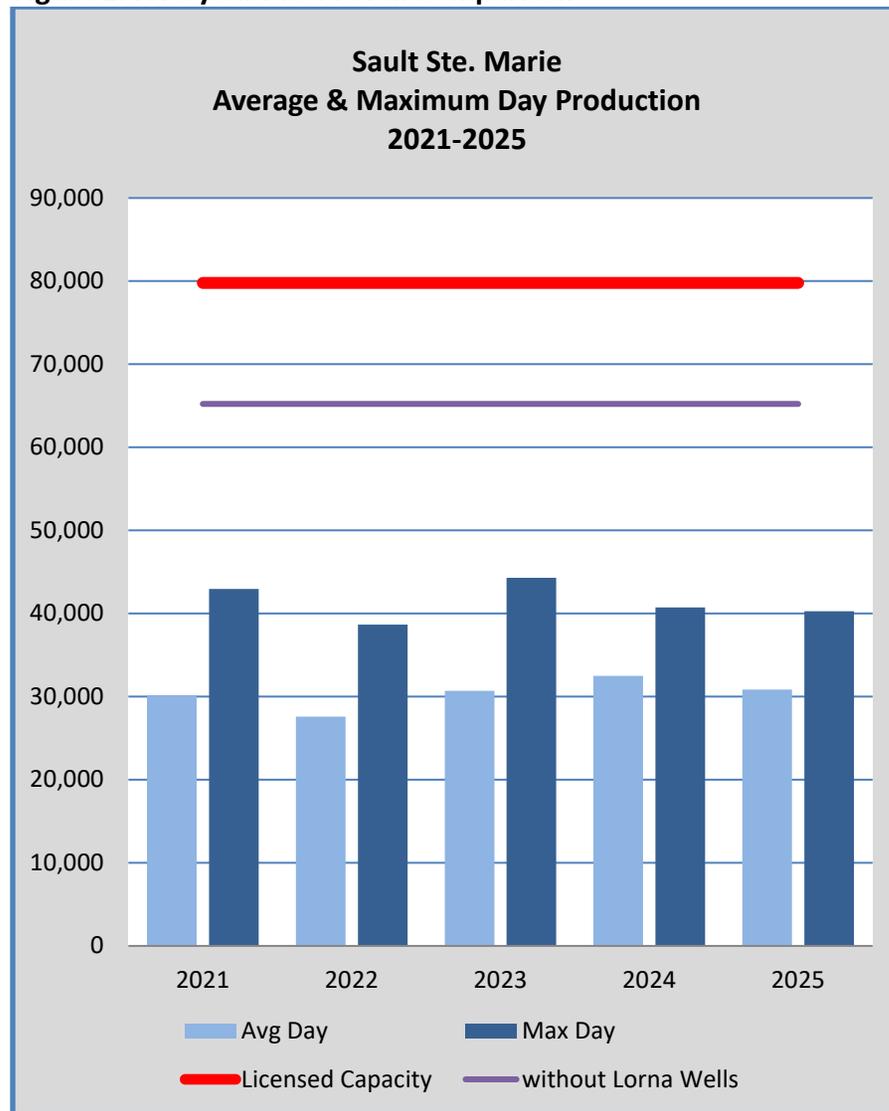
1m³ = 1,000 L

Water treatment capacity is less than the available raw water supply. The water treatment plant is currently rated at 40,000 m³/d based on regulatory requirements for primary disinfection. The maximum capacity for the Sault Ste. Marie DWS is 79,779 m³/d. Lorna wells remain available for emergency demand if needed.

The Sault Ste. Marie Water Treatment Plant and production wells treated a total of 11,633,106 m³ of water during the year 2025.

The average daily treated flow was 32,480 m³, and the maximum daily flow was 40,280 m³ on August 7, 2025.

Figure 1: Five-year Production Comparison



Capacity available production without Lorna wells – 65,221 m³/d

Table 16: WTP Raw and Treated Water Production 2025

2025	Raw Water Production				Treated Water Production				
Month	Raw Water (m ³)	Minimum Day (m ³ /d)	Maximum Day (m ³ /d)	Average Day (m ³ /d)	Treated Water (m ³)	Minimum Day (m ³ /d)	Maximum Day (m ³ /d)	Average Day (m ³ /d)	% Max. Flow Day of rated Capacity
January	495,489	13,392	16,235	15,984	471,824	12,440	18,226	15,195	45.6
February	461,139	8,105	18,334	16,469	451,859	7,989	20,716	16,214	51.8
March	552,249	17,096	17,909	17,814	538,093	14,703	21,174	17,352	52.9
April	497,557	15,342	17,928	16,585	481,548	11,331	19,054	16,129	47.6
May	552,166	14,298	18,328	17,812	536,790	13,486	20,354	17,317	50.9
June	611,473	17,922	26,533	20,382	591,692	14,086	25,971	19,707	64.9
July	654,701	18,357	23,884	21,119	638,120	16,291	25,248	20,584	63.1
August	595,628	17,962	24,108	19,216	579,668	15,295	25,839	18,705	64.6
September	508,945	15,519	19,139	16,965	493,798	12,729	20,220	16,484	50.6
October	556,546	16,367	19,762	17,953	552,948	14,546	20,661	17,837	51.7
November	530,747	15,970	18,643	17,692	532,623	15,320	21,824	17,770	54.6
December	520,541	15,786	18,008	16,792	518,867	13,096	19,550	16,738	48.9

Figure 2: Sault Ste. Marie WTP Production 2025

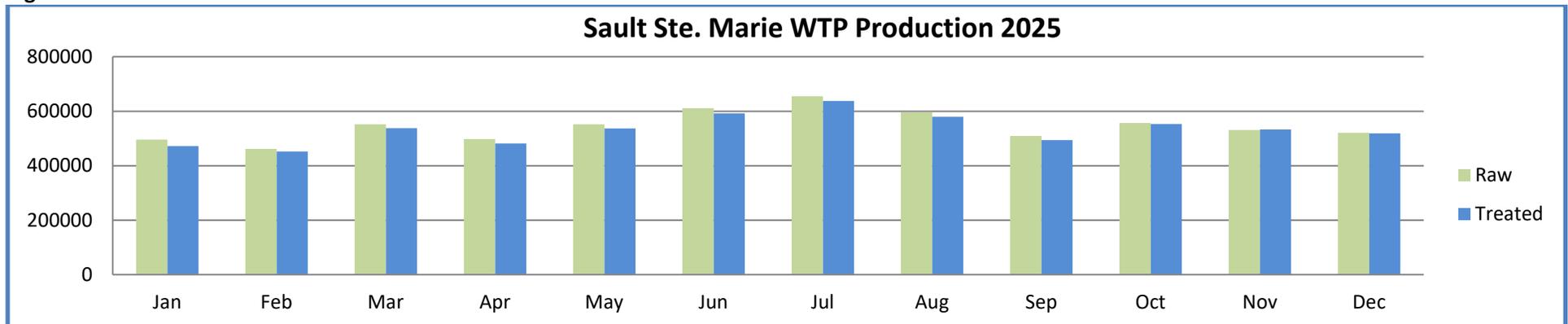


Table 17: Goulais Wells Production 2025

2025	Goulais Well #1 Production					Goulais Well #2 Production				
Month	Total Volume (m ³)	Minimum Day (m ³ /d)	Maximum Day (m ³ /d)	Average Day (m ³ /d)	% Max Flow Day of PTTW	Total Volume (m ³)	Minimum Day (m ³ /d)	Maximum Day (m ³ /d)	Average Day (m ³ /d)	% Max Flow Day Of PTTW
January	142,193	255	5,775	4,584	57.7	40,058	0	3,043	1,292	89.3
February	123,497	0	6,104	4,410	61.0	38,852	0	3,039	1,388	89.2
March	121,277	0	5,735	3,912	57.3	24,573	0	3,053	819	89.6
April	153,071	3,082	6,018	5,098	60.1	8,849	0	1,740	292	51.1
May	147,090	1,050	5,827	4,742	58.2	33,649	0	3,033	1,085	89.0
June	153,110	4,722	6,016	5,104	60.1	66,518	0	3,045	2,217	89.4
July	156,550	2,216	6,008	5,050	60.0	72,280	0	3,035	2,332	89.1
August	153,265	1,884	6,009	4,941	60.0	46,532	0	3,044	1,501	89.3
September	126,024	0	6,000	4,201	59.9	46,160	0	3,039	1,539	89.2
October	156,510	0	6,011	5,045	60.0	18,746	0	3,034	605	89.1
November	139,017	0	6,007	4,630	60.0	24,935	0	3,137	831	92.1
December	142,913	1,839	5,149	4,610	51.4	12,168	0	2,515	393	73.8

Figure 3: Goulais Wells Production 2025

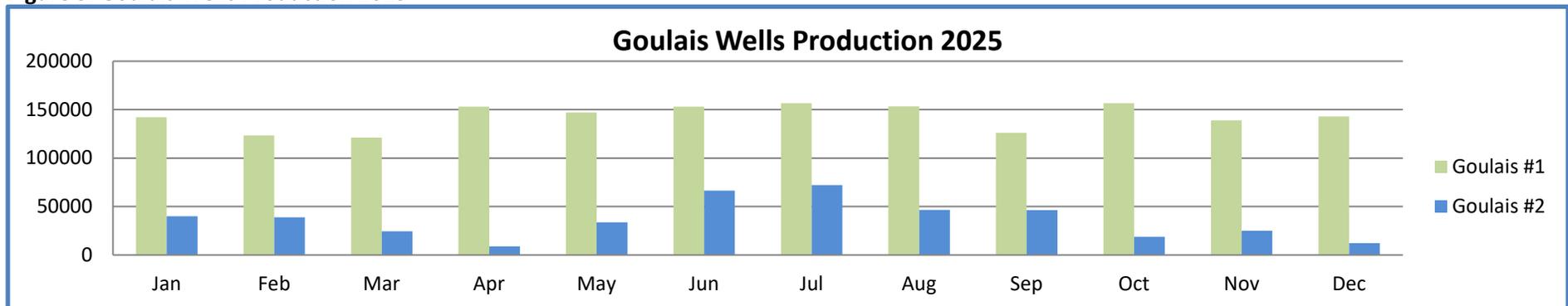
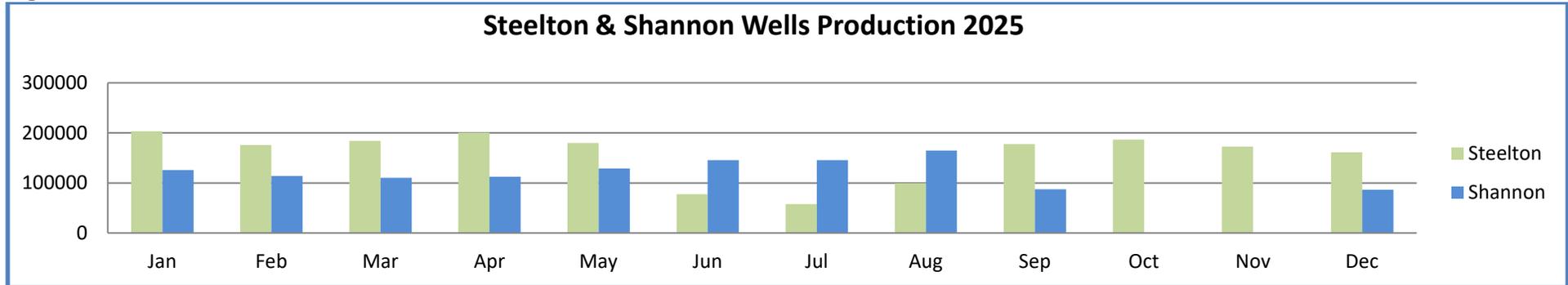


Table 18: Steelton & Shannon Wells Production 2025

2025	Steelton Well Production					Shannon Well Production				
Month	Total Volume (m ³)	Minimum Day (m ³ /d)	Maximum Day (m ³ /d)	Average Day (m ³ /d)	% Max Flow Day of PTTW	Total Volume (m ³)	Minimum Day (m ³ /d)	Maximum Day (m ³ /d)	Average Day (m ³ /d)	% Max Flow Day of PTTW
January	203,305	5,678	7,799	6,558	95.0	125,659	3,968	4,500	4,055	64.3
February	175,804	4,000	7,230	6,278	88.1	113,798	0	6,550	4,064	93.6
March	184,239	4,555	7,001	5,943	85.3	110,049	1,753	5,000	3,534	71.4
April	200,839	5,995	7,002	6,694	85.3	112,174	3,000	4,034	3,739	57.6
May	180,129	4,675	7,134	5,778	86.9	128,912	2,680	5,175	4,158	73.9
June	77,370	0	6,179	2,579	75.3	145,516	2,828	6,277	4,852	89.7
July	57,936	0	6,001	1,869	73.1	145,498	3,000	6,022	4,693	86.0
August	99,361	0	5,629	3,205	68.6	164,971	4,298	7,000	5,322	100.0
September	177,635	4,000	7,003	5,921	85.3	87,462	0	5,000	2,915	71.4
October	186,722	4,999	6,998	6,023	85.3	0	0	0	0	0.0
November	172,564	4,997	6,272	5,752	76.4	0	0	0	0	0.0
December	160,939	3,934	6,000	5,174	73.1	86,557	0	4,000	2,792	57.1

Figure 4: Steelton & Shannon Wells Production 2025





Report Availability

Annual Report

Section 11 of O. Reg. 170/03 defines that this annual report must be given, without charge, to every person who requests a copy. Effective steps must also be taken to advise users of water from the system that copies of the report are available, without charge, and of how a copy may be obtained. This annual report shall be made available for inspection by the public at the PUC Services office.

PUC Services Inc.
500 Second Line East
Sault Ste. Marie, ON
P6A 6P2

Summary Report

This summary report for the Sault Ste. Marie drinking water system for the period of January 1st to December 31st, 2025, has been prepared in accordance to schedule 22 of O. Reg. 170/03.

In accordance with schedule 22 of O. Reg. 170/03, this summary report has been provided to the Public Utilities Commission of the City of Sault Ste. Marie.

Tables, Definition of Terms

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Appendix B: Definition of Terms

Acronym	Definition
DWS	Drinking water system
EC	E. Coli
HAA	Haloacetic acids
HPC	Heterotrophic plate count
MAC	Maximum Acceptable Concentration
MECP	Ministry of the Environment, Conservation and Parks
m ³	Cubic metres (1,000 L)
m ³ /d	Cubic metres per day
mg/L	Milligram per litre (part per million)
ML	Megalitre (1,000 m ³)
NTU	Nephelometric turbidity unit
ODWS	Ontario Drinking Water Standards
O. Reg. 170/03	Ontario Regulation 170/03
PTTW	Permit to take water
SCADA	Supervisory control and data acquisition
SSM	Sault Ste. Marie
TC	Total coliforms
THM	Trihalomethane
µg/L	Microgram per litre (part per billion)
WTP	Water treatment plant