



# The Corporation of the Municipality of Greenstone

## 2024 Section 11 Annual Report and Schedule 22 Annual Summary Report

- Beardmore Water Treatment Plant
- Caramat Water Treatment Plant
- Geraldton Water Treatment Plant
- Longlac Water Treatment Plant
- Nakina Well Supply



# Definitions and Acronyms

<b>Acronym</b>	<b>Definition</b>	<b>Acronym</b>	<b>Definition</b>
MAC	Maximum Acceptable Concentrate	PTTW	Permit To Take Water
AWQI	Adverse Water Quality Incident	MDWL	Municipal Drinking Water Licence
O. Reg.	Ontario Regulation	BWA	Boil Water Advisory
CT	Concentration of Chlorine x Time of Contact	m <sup>3</sup>	Cubic Meter
NTU	nephelometric turbidity units		

# Municipal Drinking Water System - Annual Reports

- In Ontario, O. Reg. 170/03 of the Safe Drinking Water Act (SDWA), requires an Annual Report be prepared for each drinking water system.
- This Report is intended to inform both the public and Municipal Council about the operation of the drinking water system over the previous calendar year



# Municipal Drinking Water System - Annual Reports

**Section 11** of O. Reg. 170/03 requires the development and distribution to the public of an annual report summarizing water quality monitoring results, adverse water quality incidents, system expenses and chemicals used in the water treatment process.

**Section 11** summarizes the “quality” of the treated water

# Section 11 – Annual Reports

## Chemicals Used in the Water Treatment Process in Beardmore

- Caustic Soda (Sodium Hydroxide)
- Sodium Hypochlorite
- Nalco-2 (Sodium Aluminate)
- Nalco 8170 polymer
- Aluminum Sulphate
- Carus 8500



# Section 11 – Annual Reports

## Beardmore - Major System Expenses

Description	Expense
Curb Stop Bells & Pipe	\$ 5,000
Spare Chemical Feeder	\$ 10,000
Treated Flow Meter Display	\$ 4,000
Chlorine Panel Replacement	\$ 15,000

# Section 11 – Annual Reports

## Beardmore Adverse Water Quality Incidents

1. June 25, 2024 Sampling
  - Sodium Exceedance over 20 mg/l . Result 22 mg/l. Limit for Sodium is 20 mg/l.
2. December 19, 2024 Sampling
  - HAA RAA (Running Annual Average) over 80 Ug/l. RAA Total 83.8 Ug/l. RAA maximum is 80 Ug/l

# Section 11 – Annual Reports

## Chemicals Used in the Water Treatment Process in Caramat

- Sodium Hypochlorite 12%
- Oxygen (generated on site)
- Ozone (generated on site)
- Granular activated carbon (GAC)





# Section 11 – Annual Reports

## Caramat - Major System Expenses

Description	Expense
High Lift Pump Motor Replacement (2)	\$ 25,000.00

# Section 11 – Annual Reports

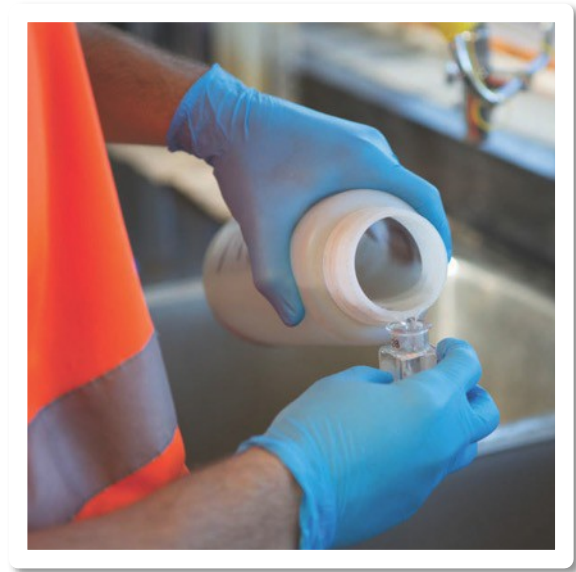
## Caramat Adverse Water Quality Incidents

No Adverse Water Quality Incidents for 2024

# Section 11 – Annual Reports

## Chemicals Used in the Water Treatment Process in Geraldton

- Aluminum Sulphate A-10
- PRAESTOL (TM) DW20 polymer
- Potassium Permanganate
- Chlorine Gas



# Section 11 – Annual Reports

## Geraldton - Major System Expenses

Polymer and KMN04 Feeder Replacement	\$ 20,000.00
Turbidity Meter Replacement (X2)	\$ 25,000.00
Filter Media	\$ 10,000.00
Water Tower Painting & Upgrades	\$1,342,176
Water Tower Painting Management Fee	\$ 15,400.00
3 <sup>rd</sup> Party inspection – tower	\$ 33,176.30
Distribution Repairs	\$ 54,260.00

# Section 11 – Annual Reports

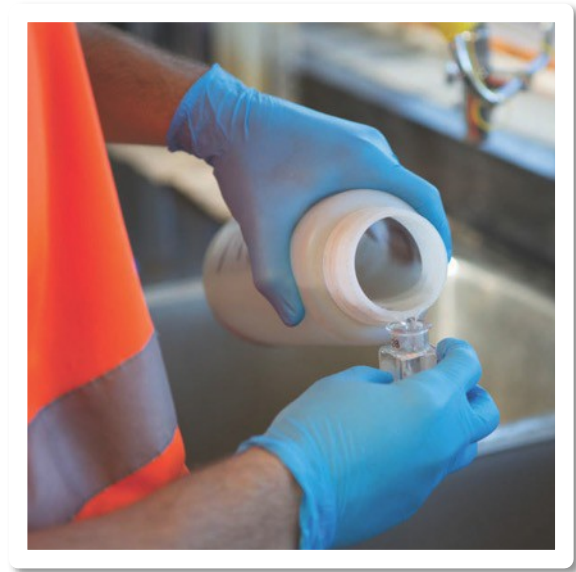
## Geraldton Adverse Water Quality Incidents

1. March 6, 2024 – Low treated water - Chlorine
2. April 23, 2024 – Low Pressure due to water main break
3. July 7, 2024 – system wide due to water plant shutdown and tower off line
4. September 18, 2024 – TC Exceedance in Distribution sample
5. October 25, 2024 – Low Pressure due to water main break

# Section 11 – Annual Reports

## Chemicals Used in the Water Treatment Process in Longlac

- Aluminum Sulphate
- Chlorine Gas
- Carus 8500
- Nalclear 8181 Polymer



# Section 11 – Annual Reports

## Longlac - Major System Expenses

Water Tower Painting & Upgrades	\$1,342,552.72
Water Tower Painting Management Fee	\$ 13,400.00
3 <sup>rd</sup> Party inspection – tower	\$ 33,176.30
Distribution Repairs	\$ 52,923.49

# Section 11 – Annual Reports

## Longlac Adverse Water Quality Incidents

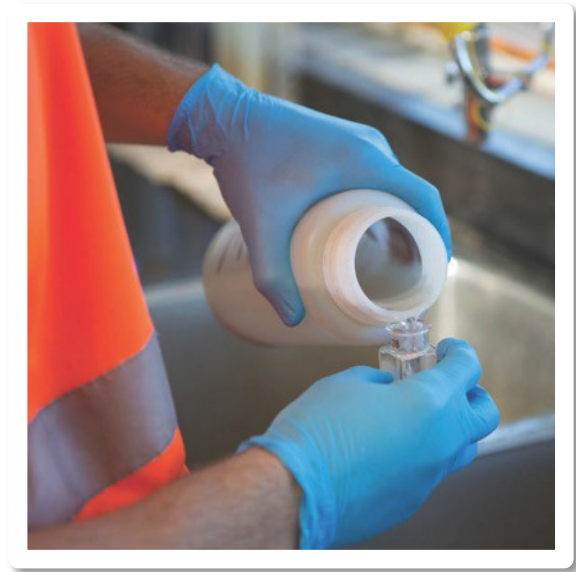
1. March 3, 2024 – Loss of Pressure - Water break
2. March 23, 2024 – TC Exceedance in Distribution sample
3. September 5, 2024 – TC Exceedance in Distribution sample
4. December 2, 2024 – Loss of Pressure – Water break



# Section 11 – Annual Reports

## Chemicals Used in the Water Treatment Process in Nakina

- Sodium Hypochlorite



# Section 11 – Annual Reports

## Nakina - Major System Expenses

Description	Expense
Well Inspection non-intrusive	\$ 50,000.00
Chemical Dosing Pump/Panel	\$ 40, 000.00

# Section 11 – Annual Reports

## Nakina Adverse Water Quality Incidents

1. December 23, 2024 – Sodium Exceedance in sample

# Municipal Drinking Water System - Annual Reports

**Schedule 22** of O. Reg. 170/03 requires the development and distribution to Council of an annual report summarizing incidents of regulatory non-compliance and associated corrective actions, in addition to providing flow monitoring results for the purpose of enabling the Owner to assess the capability of the system to meet existing and planned demand.

**Schedule 22 summarizes the “quantity” of the raw and treated water**

# Schedule 22 Summary Report

## Daily Flow Rates

### Raw Water

- Average Daily Volume vs. Permit to Take Water
- Maximum Daily Volume vs. PTTW

### Treated Water

- Average Daily Volume vs. Municipal Drinking Water Licence
- Maximum Daily Volume vs. MDWL



# Raw and Treated Water Flow Rates

## Beardmore

Month	Average Daily Raw Flow Rate (m <sup>3</sup> /d)	Maximum Daily Raw Flow Rate (m <sup>3</sup> /d)	Average Daily Treated Flow Rate (m <sup>3</sup> /d)	Maximum Daily Treated Flow Rate (m <sup>3</sup> /d)	Total Monthly Treated Flow Rate (m <sup>3</sup> /month)
January	73.72	99.92	66.28	84.16	2,054.77
February	76.24	124.69	70.96	99.94	2,057.91
March	86.70	175.12	82.69	172.85	2,563.24
April	76.84	109.32	67.11	98.27	2,013.32
May	76.37	146.96	63.93	119.55	1,981.92
June	86.13	168.60	74.03	150.97	2,221.02
July	67.16	117.36	54.81	64.80	1,699.12
August	69.71	135.16	57.86	108.00	1,793.65
September	68.35	116.14	56.33	100.08	1,689.93
October	61.82	134.78	50.02	101.71	1,550.61
November	57.18	89.24	44.92	51.20	1,347.63
December	61.19	119.50	48.46	62.97	1,502.17
		2024 Total Treated Flows (m <sup>3</sup> )		22,475.28	

# Schedule 22 Summary Report

## Beardmore Regulatory Non-Compliance and Corrective Actions

Item	Non Compliance	Status
	<p>The MECP conducted an inspection on the Beardmore WTP on November 26, 2024. There were 3 non-compliances received with 2 being the result of log book deficiencies and 3<sup>rd</sup> was for operating conditions and alarm set points for the treatment plant, which resulted in an inspection rate of 91.46% . Correction actions have been completed to address the non-compliances.</p>	

# Raw and Treated Water Flow Rates

## Caramat

Month	Average Daily Raw Flow Rate (m <sup>3</sup> /d)	Maximum Daily Raw Flow Rate (m <sup>3</sup> /d)	Average Daily Treated Flow Rate (m <sup>3</sup> /d)	Maximum Daily Treated Flow Rate (m <sup>3</sup> /d)	Total Monthly Treated Flow Rate (m <sup>3</sup> /month)
January	13.81	21.50	12.31	15.60	381.70
February	11.93	16.10	11.47	14.10	332.50
March	13.56	20.50	12.20	14.20	378.30
April	12.66	15.50	12.41	15.00	372.30
May	10.65	13.30	11.40	13.60	353.30
June	11.77	15.30	13.00	15.90	390.00
July	12.67	19.30	13.84	22.30	429.10
August	17.89	21.10	19.20	27.30	595.30
September	14.47	20.50	15.64	20.00	469.30
October	10.47	15.20	11.68	15.70	362.10
November	8.36	17.20	9.14	12.10	274.20
December	8.78	13.80	9.18	11.10	284.50
<b>2024 Total Treated Flows (m<sup>3</sup>)</b>				<b>4,622.60</b>	



# Schedule 22 Summary Report

## Caramat Regulatory Non-Compliance and Corrective Actions

Item	Non Compliance	Status
	The Ministry of the Environment did not complete an inspection of the Caramat Drinking-Water System in 2024/	

# Raw and Treated Water Flow Rates

## Geraldton

Month	Average Daily Raw Flow Rate (m <sup>3</sup> /d)	Maximum Daily Raw Flow Rate (m <sup>3</sup> /d)	Average Daily Treated Flow Rate (m <sup>3</sup> /d)	Maximum Daily Treated Flow Rate (m <sup>3</sup> /d)	Total Monthly Treated Flow Rate (m <sup>3</sup> /month)
January	1612.81	1824.00	1389.87	1521.00	43086.00
February	1726.14	1912.00	1478.93	1714.00	42889.00
March	1931.16	3541.00	1667.87	3115.00	51704.00
April	1771.90	2824.00	1500.13	2379.00	45004.00
May	1416.61	2377.00	1169.74	1883.00	36262.00
June	1118.60	1679.00	900.23	1503.00	27007.00
July	1374.35	2585.00	1119.74	2105.00	34712.00
August	1422.52	2720.00	1179.29	2458.00	36558.00
September	1435.40	2936.00	1177.50	2507.00	35325.00
October	1637.26	1940.00	1389.90	1698.00	43087.00
November	1495.37	2678.00	1264.60	2221.00	37938.00
December	1642.16	3284.00	1371.55	2626.00	42518.00
		2024 Total Treated Flows (m <sup>3</sup> )		476,090.00	

# Schedule 22 Summary Report

## Geraldton Regulatory Non-Compliance and Corrective Actions

Item	Non Compliance	Status
	<p>The Ministry of Environment conducted an inspection of the Geraldton Drinking Water System on May 28, 2024. There were no non-compliances identified in the report. Inspection Rating was 100 %</p>	

# Raw and Treated Water Flow Rates

## Longlac

Month	Average Daily Raw Flow Rate (m <sup>3</sup> /d)	Maximum Daily Raw Flow Rate (m <sup>3</sup> /d)	Average Daily Treated Flow Rate (m <sup>3</sup> /d)	Maximum Daily Treated Flow Rate (m <sup>3</sup> /d)	Total Monthly Treated Flow Rate (m <sup>3</sup> /month)
January	1012.26	1,346.00	886.13	1,030.00	27,242.00
February	985.48	1,119.00	872.62	1,117.00	25,306.00
March	941.03	1,055.00	824.35	945.00	25,555.00
April	929.17	1,021.00	829.20	971.00	24,876.00
May	956.42	1,316.00	857.42	1,160.00	26,580.00
June	1,016.30	1,364.00	911.90	1,333.00	27,357.00
July	964.71	1,162.00	843.35	979.00	26,144.00
August	1,034.00	1,368.00	902.68	1,247.00	27,983.00
September	1,124.30	1,660.00	988.57	1,434.00	29,657.00
October	971.90	1,169.00	857.29	1,029.00	26,576.00
November	891.53	1,175.00	795.50	1,025.00	23,865.00
December	985.13	1,406.00	869.26	1,228.00	26,947.00
<b>2024 Total Treated Flows (m<sup>3</sup>)</b>				<b>318,316.00</b>	

# Schedule 22 Summary Report

## Longlac Regulatory Non-Compliance and Corrective Actions

Item	Non Compliance	Status
	<p>The Ministry of Environment conducted an inspection of the Longlac Drinking-Water System on September 25, 2024. There were no non-compliances identified in this inspection. Inspection rating of 100 %</p>	

# Raw and Treated Water Flow Rates

## Nakina

Month	Average Daily Raw Flow Rate (m <sup>3</sup> /d)	Maximum Daily Raw Flow Rate (m <sup>3</sup> /d)	Average Daily Treated Flow Rate (m <sup>3</sup> /d)	Maximum Daily Treated Flow Rate (m <sup>3</sup> /d)	Total Monthly Treated Flow Rate (m <sup>3</sup> /month)
January	190.42	323.00	189.06	211.00	5,861.00
February	186.55	261.00	192.21	218.00	5,574.00
March	189.42	256.00	194.77	213.00	6,038.00
April	180.77	255.00	184.57	204.00	5,537.00
May	159.68	254.00	169.97	197.00	5,269.00
June	186.63	262.00	181.97	213.00	5,459.00
July	181.45	256.00	182.29	240.00	5,651.00
August	159.03	262.00	163.45	199.00	5,067.00
September	138.20	254.00	146.00	174.00	4,380.00
October	149.03	244.00	150.16	176.00	4,655.00
November	144.13	247.00	151.83	175.00	4,555.00
December	165.74	250.00	166.16	206.00	5,151.00
		<b>2024 Total Treated Flows (m<sup>3</sup>)</b>		<b>63,197.00</b>	

# Schedule 22 Summary Report

## Nakina Regulatory Non-Compliance and Corrective Actions

Item	Non Compliance	Status
	<p>The Ministry of Environment did not conduct an inspection of the Nakina Drinking Water System in 2024.</p>	

# Thank you

If you have any questions or concerns please reach out to us anytime.

OCWA Contact

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