



SHALLOW LAKE DRINKING WATER SYSTEM

PERFORMANCE REPORT

**For the period of
JANUARY 1, 2024 to JULY 31, 2024**

Prepared by: Karla Young, Process & Compliance Technician

Reviewed by: Leo-Paul Frigault, Senior Operations Manager

1. Process Performance & Regulatory Compliance

1.1 Summary of Non-Compliances & AWQIs

From **January 2024** to **July 2024**:

- Number of Non-Compliances = **0**
- Number of Adverse Water Quality Incidents (AWQIs) = **0**

The table below summarizes Shallow Lake DWS' performance in accordance with the regulatory limits set out in:

- Municipal Drinking Water License (MDWL) 083-102, Issue: 4 (expires August 13, 2026)
- Permit To Take Water (PTTW) 5165-9KBQ6V (expires May 31, 2024). The renewal application was submitted to the Client Services & Permissions Branch of the Ministry of the Environment, Conservation and Parks on March 1st, 2024.
- Ontario Regulation 170/03 and 169/03

2024	Non-Compliances	AWQIs
January	0	0
February	0	0
March	0	0
April	0	0
May	0	0
June	0	0
July	0	0
August		
September		
October		
November		
December		

Description of Non-Compliances

The following is a summary of the requirements of the Act, the regulations, the system's approval, drinking water works permit, municipal drinking water license, and any orders applicable to the system that were not met at any time during the time period covered by this report; as well as the duration of the failure and the measures that were taken to correct the failure:

Non-Compliance(s)	Duration	Required Actions & Corrective Actions
n/a	n/a	n/a

Description of AWQIs

The following contains details on 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 the Spills Action Centre:

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Date of Incident	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
n/a	n/a	n/a	n/a	n/a	n/a

1.1.1 Flow

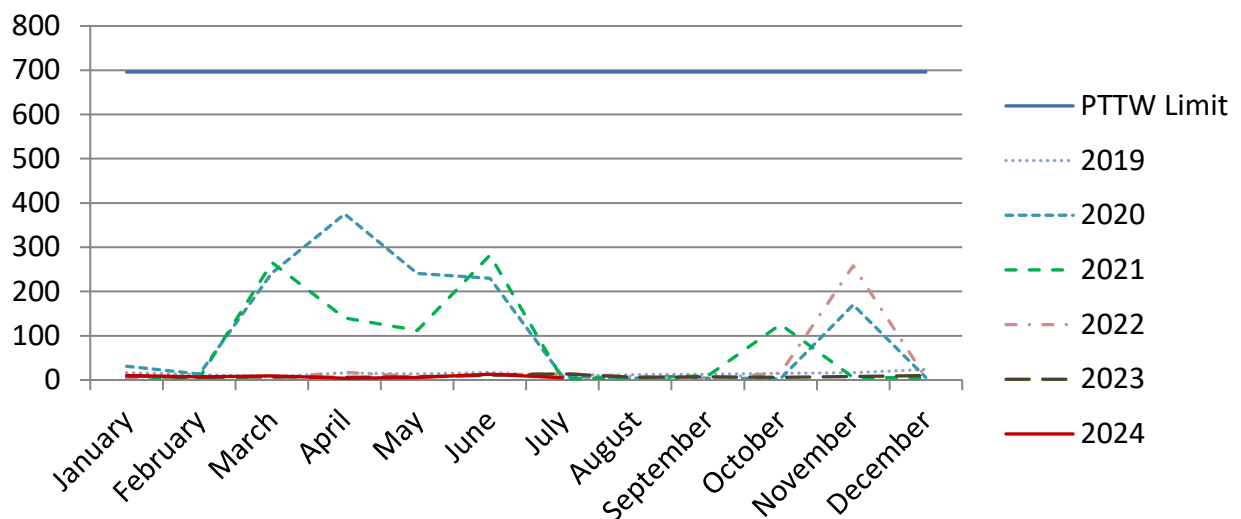
Raw Water: Well 1 (PW2)

During the reporting period, the Well 1 (PW2) raw water taking was **within the limits** of the current PTTW.

2024	Maximum Flowrate (L/s)	Within Limits (8.05 L/s*)	Maximum Daily Flow (m ³ /day)	Within Limits (696 m ³)
January	6.84	Yes	10	Yes
February	6.46	Yes	7	Yes
March	6.59	Yes	9	Yes
April	6.87	Yes	4	Yes
May	6.75	Yes	6	Yes
June	6.53	Yes	13	Yes
July	6.77	Yes	5	Yes
August				
September				
October				
November				
December				

*The PTTW defines the maximum flowrate as 483 L/min which has been converted it to 8.05 L/s for the table above.

Shallow Lake Drinking Water System
 Well 1 - Maximum Daily Flows



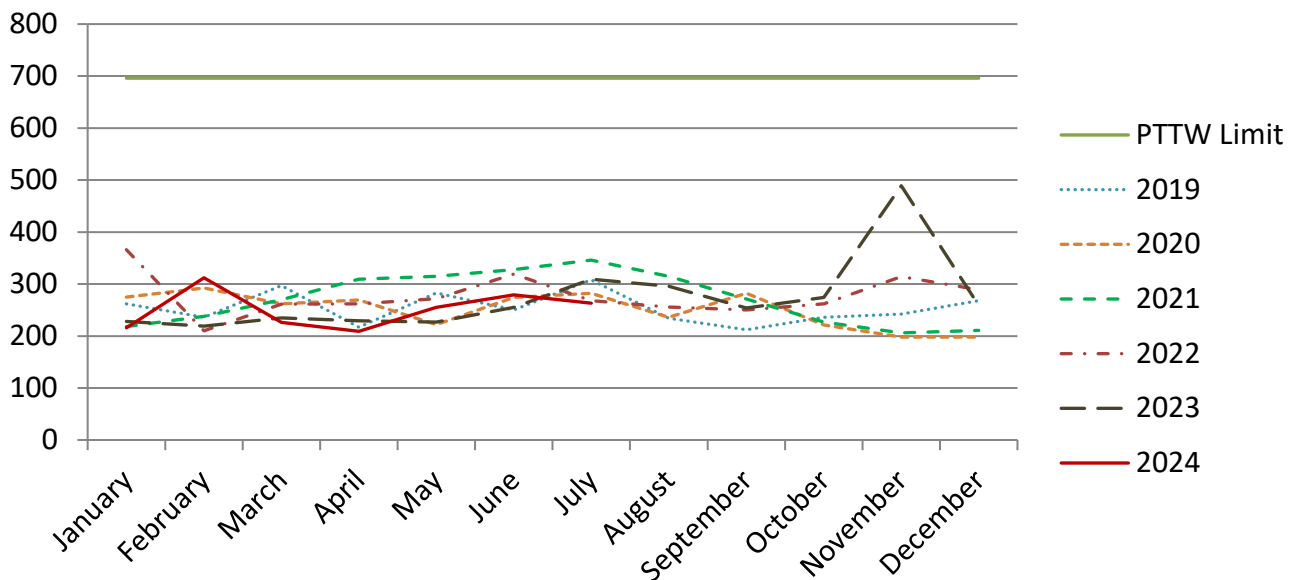
Raw Water: Well 2 (PW3)

During the reporting period, the Well 2 (PW3) raw water taking was **within the limits** of the current PTTW.

2024	Maximum Flowrate (L/s)	Within Limits (8.05 L/s*)	Maximum Daily Flow (m ³ /day)	Within Limits (696 m ³)
January	6.60	Yes	216	Yes
February	6.46	Yes	312	Yes
March	6.45	Yes	226	Yes
April	6.98	Yes	209	Yes
May	6.88	Yes	255	Yes
June	6.77	Yes	279	Yes
July	6.70	Yes	263	Yes
August				
September				
October				
November				
December				

*The PTTW defines the maximum flowrate as 483 L/min which has been converted it to 8.05 L/s for the table above.

**Shallow Lake Drinking Water System
 Well 2 - Maximum Daily Flows**

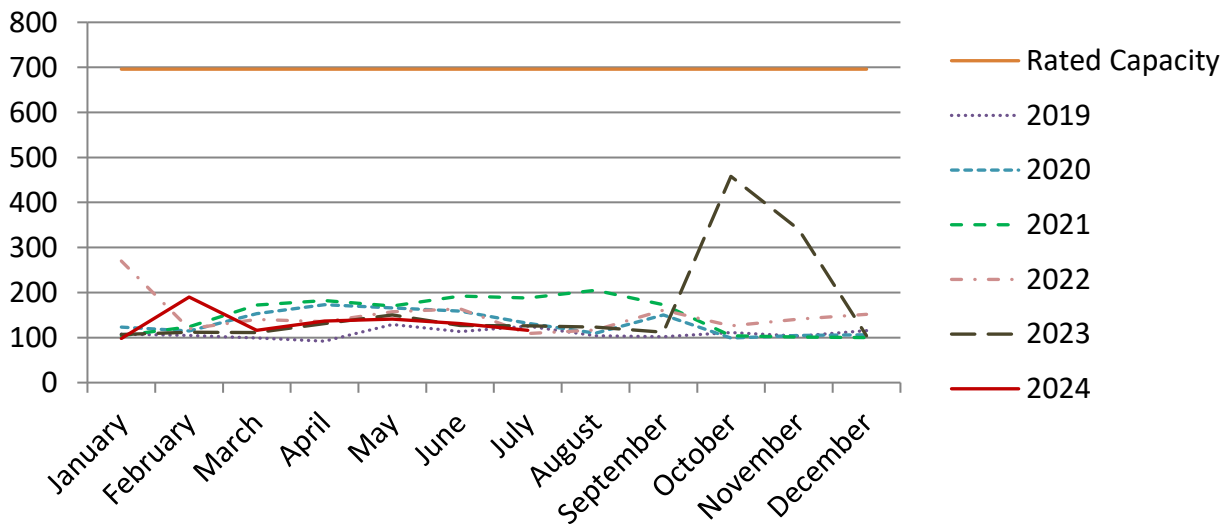


Treated Water

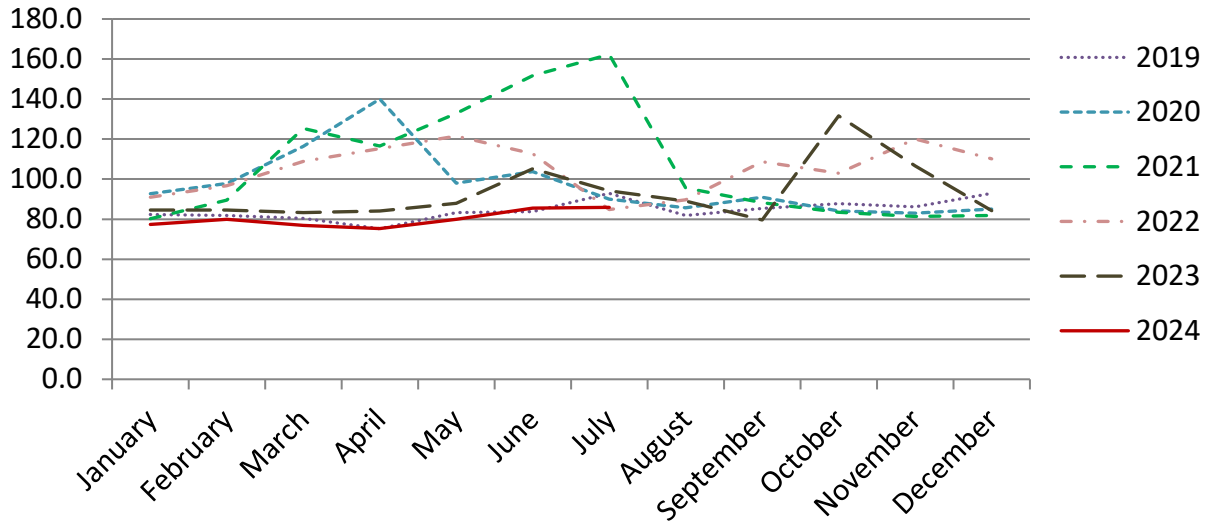
During the reporting period, the Shallow Lake DWS operated **within the rated capacity** set out in current MDWL.

2024	Average Flow (m ³ /d)	% of Rated Capacity	Maximum Flow (m ³ /d)	% of Rated Capacity	Within Limits (696 m ³ /d)
January	77	11.1%	98	14.1%	Yes
February	80	11.5%	190	27.3%	Yes
March	77	11.1%	116	16.7%	Yes
April	75	10.8%	137	19.7%	Yes
May	80	11.5%	141	20.3%	Yes
June	85.5	12.3%	131	18.8%	Yes
July	85.9	12.3%	116	16.7%	Yes
August					
September					
October					
November					
December					

**Shallow Lake Drinking Water System
 Treated Water- Maximum Daily Flows**



Shallow Lake Drinking Water System Treated Water- Average Daily Flows



1.1.1 Water Quality

Microbiological Testing

Raw Water*: Well 1 (PW2)

2024	# of Samples	E.Coli (cfu/100mL)			Total Coliforms (cfu/100mL)		
		Minimum	Maximum	Within Limits?	Minimum	Maximum	Within Limits?
January	5	0	<20	n/a	60	360	n/a
February	4	0	<20	n/a	80	280	n/a
March	4	0	<20	n/a	10	102	n/a
April	5	0	<20	n/a	<20	<440	n/a
May	4	5	NDOGT**	n/a	45	NDOGT**	n/a
June	4	20	<20	n/a	20	260	n/a
July	5	0	<20	n/a	36	640	n/a
August							
September							
October							
November							
December							

*Raw water bacteriological samples do not have regulatory limits. **NDOGT-No Data: Overgrown with Target Bacteria.

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Raw Water*: Well 2 (PW3)

2024	# of Samples	E.Coli (cfu/100mL)			Total Coliforms (cfu/100mL)		
		Minimum	Maximum	Within Limits?	Minimum	Maximum	Within Limits?
January	5	<2	<20	n/a	70	180	n/a
February	4	1	8	n/a	72	90	n/a
March	4	0	60	n/a	11	220	n/a
April	5	0	<20	n/a	8	220	n/a
May	4	0	<20	n/a	20	120	n/a
June	4	<3	<20	n/a	39	220	n/a
July	5	<2	<20	n/a	16	100	n/a
August							
September							
October							
November							
December							

*Raw water bacteriological samples do not have regulatory limits.

Treated Water

2024	# of Samples	E. Coli (0 cfu/100mL)			Total Coliforms (0 cfu/100mL)			HPC** (cfu/1mL)		
		Min	Max	Within Limits?	Min	Max	Within Limits?	Min	Max	Within Limits?
January	5	0	0	Yes	0	0	Yes	0	1	n/a
February	4	0	0	Yes	0	0	Yes	0	0	n/a
March	4	0	0	Yes	0	0	Yes	0	1	n/a
April	5	0	0	Yes	0	0	Yes	0	1	n/a
May	4	0	0	Yes	0	0	Yes	0	0	n/a
June	4	0	0	Yes	0	0	Yes	0	0	n/a
July	5	0	0	Yes	0	0	Yes	0	2	n/a
August										
September										
October										
November										
December										

**There is no regulatory limit for Heterotrophic Plate Count (HPC); it is used as an indicator test.

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Distribution Water

2024	# of Samples	E. Coli (0 cfu/100mL)			Total Coliforms (0 cfu/100mL)		
		Min	Max	Within Limits?	Min	Max	Within Limits?
January	10	0	0	Yes	0	0	Yes
February	8	0	0	Yes	0	0	Yes
March	8	0	0	Yes	0	0	Yes
April	10	0	0	Yes	0	0	Yes
May	8	0	0	Yes	0	0	Yes
June	8	0	0	Yes	0	0	Yes
July	10	0	0	Yes	0	0	Yes
August							
September							
October							
November							
December							

	HPC** (cfu/1mL)			
	# of Samples	Min.	Max.	Within Limits?
January	5	0	11	n/a
February	4	0	7	n/a
March	4	0	2	n/a
April	5	0	6	n/a
May	4	0	15	n/a
June	4	0	4	n/a
July	5	0	18	n/a
August				
September				
October				
November				
December				

**There is no regulatory limit for Heterotrophic Plate Count (HPC); it is used as an indicator test. At least 25% of distribution samples must be tested for Heterotrophic Plate Count (HPC).

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Operational Testing

Filter Effluent: Turbidity

2024	Filter #1 Turbidity (NTU)		Filter #2 Turbidity (NTU)	
	Minimum	Maximum	Minimum	Maximum
January	0.03	0.51	0.03	0.19
February	0.03	0.38	0.03	0.17
March	0.03	0.36	0.02	0.12
April	0.03	0.40	0.03	0.13
May	0.03	0.55	0.03	0.24
June	0.03	0.59	0.03	0.38
July	0.03	0.44	0.03	0.16
August				
September				
October				
November				
December				

Filter Effluent: Efficiency

2024	Filter #1		Filter #2	
	Efficiency (% ≤ 0.3 NTU)	Within Limits? ($\geq 95\%$)	Efficiency (% ≤ 0.3 NTU)	Within Limits? ($\geq 95\%$)
January	99.957%	Yes	100%	Yes
February	99.978%	Yes	100%	Yes
March	99.982%	Yes	100%	Yes
April	99.972%	Yes	100%	Yes
May	99.959%	Yes	100%	Yes
June	99.896%	Yes	99.995	Yes
July	99.953%	Yes	100%	Yes
August				
September				
October				
November				
December				

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Distribution Water: Free Chlorine Residual

2024	Minimum (mg/L)	Maximum (mg/L)	Within Limits? (>0.05 mg/L)
January	0.77	1.60	Yes
February	0.73	1.63	Yes
March	0.65	1.51	Yes
April	0.73	1.32	Yes
May	0.72	1.32	Yes
June	0.70	1.37	Yes
July	0.47	1.33	Yes
August			
September			
October			
November			
December			

Chemical Testing

Treated Water: Nitrites (Quarterly)

2024	Concentration (mg/L)	Within Limits? (1 mg/L)
January	<0.003	Yes
February	-	-
March	-	-
April	<0.003	Yes
May	-	-
June	-	-
July	<0.003	Yes
August	-	-
September	-	-
October		
November	-	-
December	-	-

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Treated Water: Nitrates (Quarterly)

2024	Concentration (mg/L)	Within Limits? (10 mg/L)
January	0.569	Yes
February	-	-
March	-	-
April	0.435	Yes
May	-	-
June	-	-
July	0.194	Yes
August	-	-
September	-	-
October	-	-
November	-	-
December	-	-

Distribution Water: Trihalomethanes (THMs) (Quarterly)

2024	Concentration (ug/L)	Running Annual Average (ug/L)	Within Limits? (100 ug/L)
January	62	51.8	Yes
February	-	-	-
March	-	-	-
April	41	55.5	Yes
May	-	-	-
June	-	-	-
July	56	54.5	Yes
August	-	-	-
September	-	-	-
October	-	-	-
November	-	-	-
December	-	-	-

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Distribution Water: Haloacetic Acids (HAAs) (Quarterly)

2024	Concentration (ug/L)	Running Annual Average (ug/L)	Within Limits? (80 ug/L)
January	29.7	27.5	Yes
February	-	-	-
March	-	-	-
April	23.4	28.2	Yes
May	-	-	-
June	-	-	-
July	31.1	29.6	Yes
August	-	-	-
September	-	-	-
October	-	-	-
November	-	-	-
December	-	-	-

Distribution Water: Lead, pH and Alkalinity (Semi-Annual)

Semi-Annual sampling is required to happen twice a year; once in the period from December 15th to April 15th and once in the period June 15th to October 15th for lead, pH and Alkalinity.

	# of Samples	Lead (ug/l)			pH			Alkalinity (mg/L)		
		Min	Max	Within Limits? (10 ug/L)	Min	Max	Within Limits?	Min	Max	Within Limits? (30-500 mg/L)
January	-	-	-	-	-	-	-	-	-	-
February	2	-	-	-	7.60	7.61	Yes	231	236	Yes
March	-	-	-	-	-	-	-	-	-	-
April	-	-	-	-	-	-	-	-	-	-
May	-	-	-	-	-	-	-	-	-	-
June	-	-	-	-	-	-	-	-	-	-
July	-	-	-	-	-	-	-	-	-	-
August	-	-	-	-	-	-	-	-	-	-
September	-	-	-	-	-	-	-	-	-	-
October	-	-	-	-	-	-	-	-	-	-
November	-	-	-	-	-	-	-	-	-	-
December	-	-	-	-	-	-	-	-	-	-

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Treated Water: Schedule 23 & Schedule 24 (Annual)

Treated water Inorganic and Organic chemicals were last tested on **January 31, 2024**, the sample results were **within the regulatory limits** set out in O.Reg 169/03. The next set of Schedule 23 and Schedule 24 samples are scheduled to be taken in **January 2025**.

Treated Water: Sodium (60 Months)

No samples were for Sodium and Fluoride were required to be taken during the reporting period.

Treated water Sodium was last sampled on **April 12, 2021** and was within regulatory limits. The next set of Sodium samples are scheduled for **April 2026**.

Treated Water: Fluoride (60 Months)

Treated water Fluoride was last sampled on **April 12, 2021** and was within regulatory limits. The next set of Sodium samples are scheduled for **April 2026**.

1.2 Reporting

A summary of the reports submitted by OCWA to/on behalf of the Township are summarized in the table below:

Report	Submission Frequency	Submit To	Submission Date
Annual Report (Section 11)	Annually	Owner	February 26, 2024
Summary Report (Schedule 22)	Annually	Owner	February 26, 2024

1.2.1 Annual Report (Section 11)

As required by Section 11 of O. Reg 170/03, OCWA prepares a report for the Township that covers the period from January 1 to December 31 by no later than February 28 of the following year. The annual report must:

- a) contain a brief description of the drinking water system, including a list of water treatment chemicals used by the system during the period covered by the report;
- b) summarize any reports made to the Ministry under subsection 18 (1) of the Act or section 16-4 of Schedule 16 during the period covered by the report;
- c) summarize the results of tests required under this Regulation, or under an approval, municipal drinking water licence or order, including an OWRA order, during the period covered by the report and, if tests required under this Regulation in respect of a parameter were not required during that period, summarize the most recent results of tests of that parameter;
- d) describe any corrective actions taken under Schedule 17 or 18 during the period covered by the report;
- e) describe any major expenses incurred during the period covered by the report to install, repair or replace required equipment;
- f) in the case of a large municipal residential system or a small municipal residential system, include a statement of where a report prepared under Schedule 22 will be available for inspection under subsection 12 (4); and
- g) in the case of a large municipal residential system, small municipal residential system or non-municipal year-round residential system, specify the number of points sampled during the periods described in subsection 15.1-4 (2) or subsection 15.1-5 (5) of Schedule 15.1 to the

Regulation, the number of samples taken, and the number of points where a sample exceeded the prescribed standard for lead during those periods. O. Reg. 170/03, s. 11 (6); O. Reg. 418/09, s. 8; O. Reg. 458/16, s. 6 (1).

“The owner of a drinking water system shall ensure that a copy of an annual report for the system is given, without charge, to every person who requests a copy. If a drinking water system is connected to and receives all of its drinking water from another drinking water system, the owner of the system that obtains the water shall ensure that a copy of an annual report for the system from which the water is obtained is given, without charge, to every person who requests a copy. Every time that an annual report is prepared for a drinking water system, the owner of the system shall ensure that effective steps are 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. If the DWS serves more than 10,000 people, the owner of the system shall ensure that a copy of every report prepared under this section is available to the public at no charge on a website on the Internet.”

1.2.2 Summary Report (Schedule 22)

As required by Schedule 22 of O. Reg 170/03 OCWA prepares a report on behalf of the Township by no later than March 31 each year for the preceding year. This report is to be given to members of council. “The report must,

- a) list the requirements of the Act, the regulations, the system’s approval, drinking water works permit, municipal drinking water license, and any orders applicable to the system that were not met at any time during the period covered by the report; and
- b) for each requirement referred to that was not met, specify the duration of the failure and the measures that were taken to correct the failure.

The report must also include the following information for the purpose of enabling the owner of the system to assess the capability of the system to meet existing and planned uses of the system:

1. 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.
2. A comparison of the summary referred to in paragraph 1 to the rated capacity and flow rates approved in the system’s approval, drinking water works permit or municipal drinking water licence, or if the system is receiving all of its water from another system under an agreement pursuant to subsection 5 (4), to the flow rates specified in the written agreement.”

1.3 Third Party Inspections & Results

The most recent MECP inspection was performed on **June 18, 2024**. The inspection report was received on July 19, 2024 with an inspection rating of **100%**.

1.4 Drinking Water Quality Management Standard (DWQMS)

The Shallow Lake DWS, East Linton DWS, Pottawatomi DWS and Oxenden DS are part of a Multi-Facility Operational Plan under DWQMS. The following sections (Risk Assessment, Review & Provision of Infrastructure, Internal Audits, External Audits and Management Review) will apply to all of the above mentioned facilities.

1.4.1 Risk Assessment

As required by the DWQMS, potential hazardous events and associated risks are ranked and control measures/critical control points are identified during the risk assessment process. A risk assessment is conducted at least once every 36 months and the currency of the risk assessment is verified at least once a calendar year. The risk assessment verification is included as part of the 36 month risk assessment process.

The last risk assessment was performed on **March 10, 2022**; the next risk assessment is scheduled for March 2025. The last risk assessment verification was performed on **November 8, 2023**; the next risk assessment verification is scheduled for November 2024.

1.4.2 Review & Provision of Infrastructure

On an annual basis, Operators submit a list of capital works requirements to the Senior Operations Manager. The Senior Operations Manager conducts a review of the drinking water system's infrastructure to assess its adequacy for the operation and maintenance of the system.

The output of the review is a Summary of Capital Works Recommendations that is submitted to the owner for review and comment (typically in the fall). Together with the owner, timelines and responsibilities for implementation of priority items are determined and documented. The Senior Operations Manager ensures that results of the review are included as input to the Management Review process.

1.4.3 Internal Audits

As required by DWQMS, internal audits are to be conducted once every calendar year. The last internal audit was completed on **July 30, 2024**. The next internal audit is scheduled for **July 2025**. The purpose of the internal audit is to ensure that the requirements of DWQMS continue to be met, and that concrete/measurable steps are taken to continually improve.

1.4.4 External Audits

Annually, an external audit is performed by a third-party (SAI Global) so that the Operating Authority may maintain their accreditation of the facility. The external audits run on a 3 year cycle as follows:

- Full scope (re)accreditation
- S1: Surveillance Audit
- S2: Surveillance Audit

The Shallow Lake DWS, East Linton DWS, Pottawatomi DWS and Oxenden DS underwent a **Surveillance Audit on July 8, 2024**.

1.4.5 Management Review

The Management Review is to be conducted at least once every calendar year. The most current Management Review was completed on **November 8, 2023**; the next Management Review is scheduled for **November 2024**. During the management review, participants are required to review:

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- a. incidents of regulatory non-compliance,
- b. incidents of adverse drinking-water tests,
- c. deviations from critical control point limits and response actions,
- d. the efficacy of the risk assessment process,
- e. internal and third-party audit results,
- f. results of emergency response testing,
- g. operational performance,
- h. raw water supply and drinking water quality trends,
- i. follow-up on action items from previous management reviews,
- j. the status of management action items identified between reviews,
- k. changes that could affect the Quality Management System,
- l. consumer feedback,
- m. the resources needed to maintain the Quality Management System,
- n. the results of the infrastructure review,
- o. Operational Plan currency, content and updates, and
- p. staff suggestions.

The minutes from the Management Review will be sent to the Township following the completion of the review.

2. Operations & Maintenance

2.1 Major & Unscheduled Maintenance

January

5: Installed new POE treated water tap

February

1: Inspected leaking boiler heat with Riddell

March

19: Annual backflow prevention testing

27: Installed pest lights on interior of building

April

03: Third party flow meter verification

30: Hydrant maintenance at Joynt and Princess St.

May

07: Hydrant maintenance at Joynt and Princess St.

21: Third party instrument calibrations

June

18: MECP Inspection

20: Replaced tubing on turbidity analyzers

July

No major or unscheduled maintenance during this time period. All scheduled maintenance completed.

2.2 Call-Ins

January

14: Colorimeter alarm

February

There were no call-ins during this month.

March

There were no call-ins during this month.

April

21: Highlift pump fail alarm

May

21: Power outage

26: Power outage

27: Power outage

June

03: Power outage

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03: Emergency locate

23: Power outage

July

19: Fire/Security alarm communication failure

23: General alarm

2.3 Community Complaints

January

There were no complaints or public inquiries reported to OCWA staff during this month.

February

There were no complaints or public inquiries reported to OCWA staff during this month.

March

There were no complaints or public inquiries reported to OCWA staff during this month.

April

There were no complaints or public inquiries reported to OCWA staff during this month.

May

There were no complaints or public inquiries reported to OCWA staff during this month.

June

There were no complaints or public inquiries reported to OCWA staff during this month.

July

There were no complaints or public inquiries reported to OCWA staff during this month.

3.0 Health & Safety

3.1 Incidents

- Number of Health & Safety Incidents Reported = 0

2024	Health & Safety Incidents	
	# Reported	Details
January	0	n/a
February	0	n/a
March	0	n/a
April	0	n/a
May	0	n/a
June	0	n/a
July	0	n/a
August		
September		
October		
November		
December		

3.2 Training

The following safety topics/training were provided to staff:

2024	Topics
January	• Winter Slips, Trips & Falls
February	• Hazard Identification
March	• Lock Out Tag Out
April	• Why Proper Rest is Important for Preventing Fatigue at Work
May	• Roles and Responsibilities Refresher
June	• Tick Awareness
July	• Propane Safety
August	•
September	•
October	•
November	•
December	•