



4th Quarter 2023 Drinking Water Quality Management System Report to Members of Council

This report is to summarize the activities of the Drinking Water Distribution System operated by the Roads and Public Works Department for the period of September 30, 2023 through to December 31, 2023.

Operational Plan Revisions

The Operational Plan was revised this quarter for the following elements:

- Minor administrative changes throughout the document
- Element 10 – Competencies: Included licensing requirement for Lead Hand/ORO
- Appendix B – Risk Assessment Updated procedure to include chlorine residual levels as a Critical Control Limit/Point for secondary disinfection in accordance with MECP Disinfection Procedures (2020)
- Appendix G – Review of Infrastructure - Administrative changes

Internal Audits

During Q4, an internal audit was completed. No instances of non-conformance were reported. During the audit there were nine (9) Opportunities for Improvement (OFI) reported. It should be noted that four of the OFIs have been addressed as of the latest revision of the Operational Plan (December 2023).

#	Process / Element	OFI Description
1	Element 6 Drinking Water System	The description of the system currently describes Well 6 as a Non-GUDI well. Corrective Action: It is recommended to revise this description to state that all Wells in the system are Non-GUDI.
2	Element 8 Risk Assessment Outcomes	OFI from 2023 External Audit suggests to include CCP for secondary disinfection levels in accordance with MECP Disinfection procedure. Corrective Action: QMS Update has been approved and is in queue.
3	Element 10 Competencies	OFI from 2023 External Audit suggests to include Class II as a licensing requirement for ORO/Lead Hand role as this license is required to hold ORO designation. Corrective Action: QMS Update has been approved and is in queue.
4	Element 14 Review and Provision of Infrastructure	OFI from 2023 External Audit suggests to update the procedure to clarify that risk assessment outcomes are considered during the review and provision of infrastructure. Corrective Action: QMS Update has been approved and is in queue.
5	Element 19 Internal Audits	OFI from 2023 External Audit identified that the Audit Checklist used should be updated to reflect current wording of DWQMS. Corrective Action: QMS Update has been approved and is in the queue for update.
6	Element 21 Continual Improvement	Continual improvement as described in the Standard are implemented in practice, it is recommended that a procedure be developed to describe each action. It was identified during the 2023 External Audit to describe a procedure on how Continual Improvement is tracked and measured. Corrective Action: An update to the QMS OP should be completed to develop and implement a procedure as recommended.
7	General	Continue to undertake regular form reviews to migrate all forms to a standard template that includes data such as date issued/last revised and revision number. Corrective Action: complete form review during monthly water meetings or as required.
8	Element 5 Documents and Records Control	In December of 2023 the OA transitioned the electronic filing system to Microsoft SharePoint. The OP E.5 has references to electronic file locations which will need to be updated to reflect the current location.

#	Process / Element	OFI Description
		Corrective Action: Review OP E.5 and update the procedure to reflect the current electronic filing locations.
9	Process Audit Watermain Break Procedure	During the process audit of the Watermain Break procedure, it was observed that relevant equipment was not stored within the service vehicles that would be required. Corrective Action: That waterworks staff complete a review of standard equipment that should be stocked in service vehicles.

External Audits

The Municipality's DWQMS Certification Surveillance System Audit of the Municipality's QMS-Operational Plan (OAP-178) was completed on February 28, 2023 and a report was provided to Staff indicating that the Municipality is in 100% conformance.

Status of License

The certificate of full-scope accreditation for our QMS – Operational Plan (OAP-178) currently posted with our sub-system licenses was issued on May 28, 2021.

The Municipality Municipal Drinking Water License (MDWL) was renewed on November 26, 2021 and will expire on November 25, 2026. The Municipality's Drinking Water Works Permit (DWWP) expires on August 31, 2027.

Ministry of The Environment, Conservation and Parks – Drinking Water System Inspection

On August 24, 2023, the MECP completed a Focused inspection of the Mississippi Mills Drinking Water System. This inspection consisted of an on-site inspection and documentation review. The inspection period was from August 8, 2022 to August 20, 2023. Zack Moshonas from the Municipality and several OCWA staff members accompanied the MECP Inspector.

The final inspection report and risk rating was provided to the Municipality on November 9, 2023, outlining a 100% risk rating. One item of non-conformance was identified that pertained to a form being submitted to the MECP outside the required time period by OCWA. As this non-conformance was strictly administrative, it had no risk to the safety or quality of the Drinking Water therefore no affecting the risk rating. OCWA prepared an action plan that adjusted operations to flag any outstanding notices that require submission to the MECP – this action plan was satisfactory to the MECP. [Drinking Water Quality](#)

Customer Service Inquiries

During the fourth quarter of 2023, seventeen inquiries received relating to water supply and/or qualities are summarized as follows:

Concern	Quantity	Results
– Water shut-off request	5	Shut off request for work on internal plumbing.
– Low Water Pressure	3	Found to be internal plumbing issues.
– Water Quality	6	3 – discolored water from watermain flushing 1 – deemed to be issue with internal filter system 1 – smell of chlorine 1 – question re: water softener
– Curb-stop Repair	3	Staff repaired curb-stops.

Adverse Water Quality Incidents

There were no reportable adverse quality incidents in the fourth quarter of 2023 (per Ontario Regulation 170/03).

Management Review

The annual Management Review was completed this quarter. The next Management Review is planned for the fourth quarter of 2024. Minutes from the Management Review meeting are attached. As OCWA is the Operating Authority for the treatment system, they also maintain a separate Quality Management System for accreditation. As such, OCWA also has completed their annual Management Review meeting – the minutes are attached.

Operational Activities

The following activities have been initiated or completed during the fourth quarter:

- Leak detection activities
- Watermain repairs
- Meter reading
- Meter changes
- Flushing

Water Production Statistics

- Refer to attached Graph / Table.

Upcoming Events / Activities

January	February	March
Flushing	Flushing	Flushing
Inspections	Inspections	Inspections
Meter changes	Meter changes	Meter changes
Locates	Locates	Locates
Leak detection	Meter readings	

Cc: All waterworks staff
Cory Smith, Director of Roads and Public Works

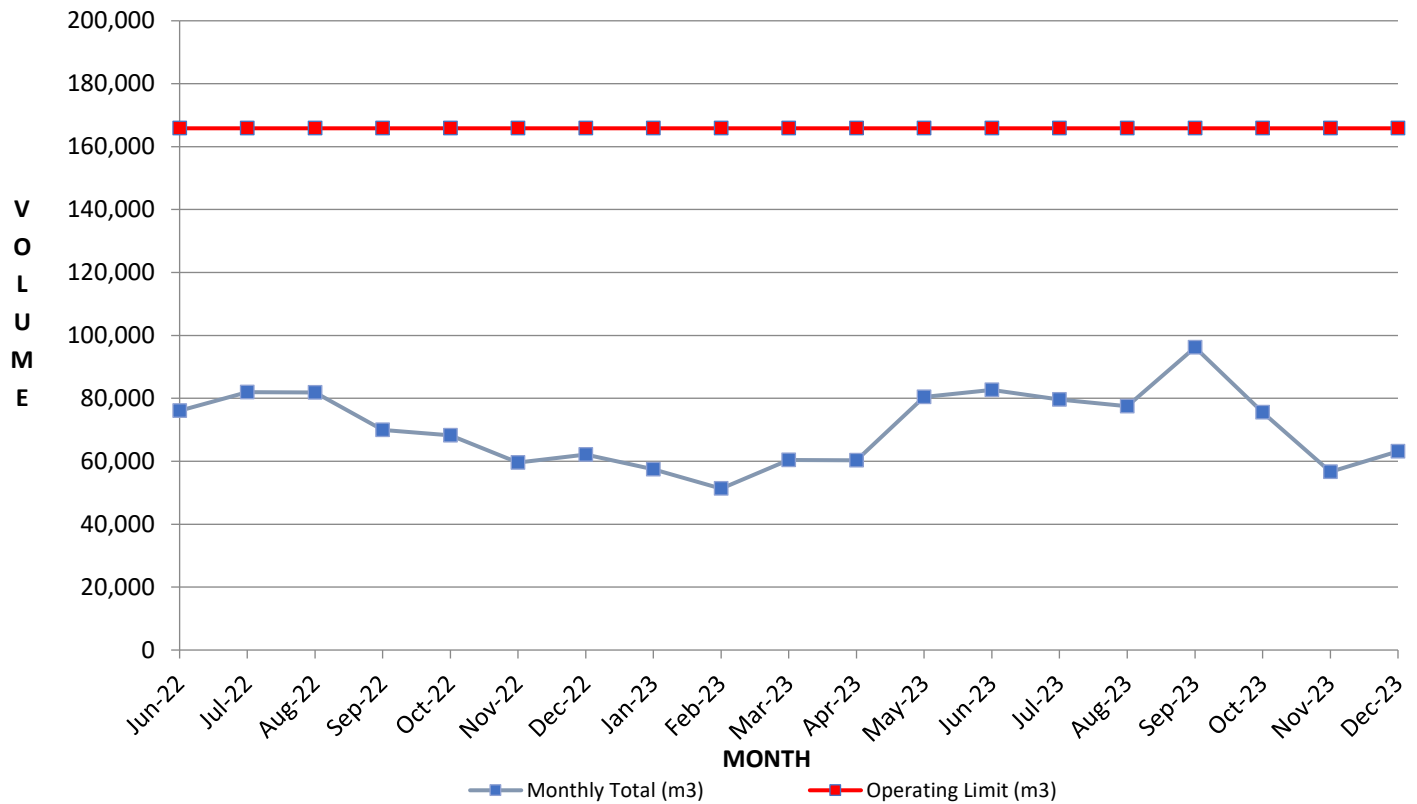
Enclosed:

- 2023 Management Review Meeting Minutes (Mississippi Mills and OCWA)
- 2023 *Ministry of the Environment, Conservation and Parks* Focused Inspection Report



Mississippi
Mills

Treated Water Flows - 18 Month Trend (m³/month)



Mississippi
Mills

WATER TREATMENT PRODUCTION (2023 TOTAL)

Month/Year	Well 3 Monthly Total (m³)	Well 5 Monthly Total (m³)	Well 6 Monthly Total (m³)	Well 7 Monthly Total (m³)	Well 8 Monthly Total (m³)	Monthly Total (m³)	Monthly Operating Limit (m³)
Jan-23	3496.6	2506.03	4153.8	23963.91	23349.53	57469.87	165,827.80
Feb-23	3049.89	2274.52	3347.02	21603.42	21027.02	51301.87	165,827.80
Mar-23	4540.57	2956.48	2224.21	25713.7	24973.88	60408.84	165,827.80
Apr-23	4012.66	2968.4	4961.4	24612.57	23795.14	60350.17	165,827.80
May-23	6304.91	3800.44	6641.7	32151.67	31529.96	80428.68	165,827.80
Jun-23	6640.42	4141.13	7562.72	32494.16	31819.24	82657.67	165,827.80
Jul-23	6506.21	4049.98	6739.2	31476.07	30843.47	79614.93	165,827.80
Aug-23	6595.37	3261.26	6993	30868.11	29810.08	77527.82	165,827.80
Sep-23	8952.39	5430.74	9514.78	36790.43	35511.38	96199.72	165,827.80
Oct-23	6906.8	4349.8	7329.2	31003	25966.6	75555.4	165,827.80
Nov-23	4256.3	2690.5	4100.9	25147.7	20427.4	56622.8	165,827.80
Dec-23	4273.4	2663.2	4431.8	25585.6	26241.8	63195.8	165,827.80

**Mississippi Mills
Management Review
2023 Meeting
Minutes**



Mississippi
Mills

ROADS AND PUBLIC WORKS DEPARTMENT

MEETING MINUTES

Subject: Drinking Water Distribution Quality Management System
2023 Management Review Meeting

Date / Location: December 18, 2022 – 2:30 p.m. – Ramsay Room

**Minutes
Prepared by:** Zack Moshonas – February 2, 2023

Attendees:

Ken Kelly,	Chief Administrative Officer
Cory Smith,	Director of Roads and Public Works
Geoff Timmins,	Lead Hand, Water Distribution Wastewater Collection
John Gleeson	Operations Manager
Zack Moshonas,	Environmental Compliance Coordinator

1. Introduction, Agenda Review

A brief introduction was made by Zack as to the purpose of the meeting. Zack provided an overview of the agenda. No additional agenda items were requested.

2. Review Incidents of Regulatory Non-Compliance

Zack discussed the 2023 Drinking Water System Inspection performed by the Ministry of Environment, Conservation, and Parks in August of 2023. Zack explained that this was a focused inspection that found no areas where Mississippi Mills was required to take corrective action re: the distribution system. Zack explained that this was reflected in the 100% inspection risk rating provided by the MECP. One non-conformance was identified relating to an administrative item. OCWA decommissioned an online raw-water turbidimeter – after decommissioning this instrument a Directors Notification Form was to be submitted to the MECP within 30 days. This form was submitted outside the



30 day requirement and as a result, a non-conformance was issued.

Zack explained that the results of the inspection, as per normal protocol will be communicated to Council on the Q4 report which will be submitted early 2024.

3. Review Incidents of Adverse Drinking Water Tests

During 2023 there were no incidents of adverse drinking water tests during routine operations.

As noted earlier in 2023, OCWA during their required sampling for sodium reported a high sodium level. This was reported to the Health Unit and the Municipality followed the recommendations of the Health Unit for public notifications.

4. Review Deviations from Critical Control Limits

As the Mississippi Mills Drinking Water Distribution System's Operational Plan Risk Assessment procedure did not identify any Critical Control Points (CCP), none were deviated from in 2023. However, it was noted during an External Audit in 2023 that a CCP should be created to establish minimum secondary disinfection levels in the distribution system. This update to the OP procedure has been approved and will be in effect for 2024. This change follows industry best practices for an Operating Authority for a distribution system.

Geoff asked to review the new CCP. Zack provided the updated procedure to Geoff prior to the update being made in the OP. No further changes were recommended.

5. Review the Efficiency of the Risk Assessment Process

Zack discussed the protocol for the QMS representatives to review the Risk Assessment procedure annually. This was completed by Zack and Cory on December 13, 2023. The procedure was reviewed and no changes were made. It was discussed how the new threat introduced by the MECP – “cybersecurity threats” – should be closely reviewed annually. While the risk to the distribution system is not high (re: cyber security threat), the likelihood increases every year, and as more systems are migrated to cloud based systems.

6. Overview of Internal and External Audit Results

Zack stated that in March of 2022 an external – third party – audit was completed by SAI Global. This audit found no instances of nonconformance to the Quality



Management System and found no instances of Opportunities for Improvement (OFI).

The results of the Internal Audit were discussed. At the time of the meeting the report was in draft form. The internal audit found 9 OFIs. As of January 15, 2024; four of the OFI's have been addressed through QMS OP updates.

7. Review Results of Emergency Testing

The desktop emergency exercise was completed on September 27, 2023. Such testing must be completed at least once every 36 months. Zack shared his thoughts on the testing noting that the testing went well and he felt that staff had a good understanding of their roles and responsibilities for who should coordinate what.

Cory also noted that he felt the exercise went well. He explained that the scenario was also used the Municipal Emergency Control Group's training exercise as well.

8. Overview of Operational Performance

Zack noted that the system operation is good. Simon as a new operator seems eager to learn new things, Geoff agreed. Geoff noted three watermain breaks so far in 2023 (as of date of meeting). All watermain breaks were classified as a category I break which means that there was little to no potential for contamination as a result of the break. There was an incident at the Waste Water Treatment Plant where a faulty sensor resulted in excessive water usage at the Plant. After the high usage at the plant was identified, the cause was found quickly and rectified immediately.

Geoff noted that there was an influx of complaints regarding high water bills in the summer. Most complaints were noted to be high usage due to fillings pools or watering lawns. Almost no issues were found with the meters resulting from these complaints.

9. Overview of Drinking Water Supply and Trends

As the Operating Authority for the Distribution system, operators do not review supply trends. It was noted however that the supply is very consistent and clean.

10. Previous Management Review Action Items

Zack noted that items from the last meeting included distributing meeting minutes, preparing the Q4 council report, and assisting with the development of the Annual Report (completed by OCWA) as needed. All these items were completed in 2023.



11. Review of Changes in the System and/or Organization that could affect the QMS

Cory discussed recent operational changes such as the implementation of electronic log books for the distribution and collection systems and the new Consolidated Linear Infrastructure (CLI) environmental approvals. Cory explained that Zack has led the onboarding of the electronic log books and the transition went well and has been crucial to eliminating instances of non-compliance from user error that were possible on paper log books. Cory discussed the CLI and the initial delegation of roles earlier in the year. Cory noted that Zack is responsible for coordinating CLI approval works to ensure compliance.

12. Consumer Feedback

Geoff discussed the types of consumer feedback received in 2023. These included:

- High water usage
- Complaints that were determined to be caused by water softener issues
- Discolored water (resulting from watermain flushing)
- Questions re: high sodium

It was noted that most complaints were relatively standard and all inquiries were addressed promptly by staff.

13. Resources Needed to Maintain the QMS

Cory discussed the continued investment in training and IT systems that aid the maintenance of the QMS but most importantly the monthly waterworks meetings which promote the education for all staff on the QMS. Cory noted that water and wastewater systems are being migrated to online systems which required all waterworks staff being issued a MM cell phone in 2023 (for those without). Cory said that continued investment in our IT systems and continual training will occur in 2024.

14. Results of the Infrastructure Review

Zack explained that the infrastructure review normally occurs during the preparation of the annual budget. Cory completes this review. Cory noted that the review includes considerations of operational performance, reliability and redundancy of equipment, and follows applicable studies such as water and wastewater master plan, long term financial plan, and asset management plan. Cory noted that master plans have



included additional development lands which require additional consideration in infrastructure planning.

15. Status of Operational Plan and QMS Procedures

Zack shared that in 2022 the entire QMS and Operational Plan (and its procedures) were reviewed. This was completed during monthly water meetings that were attended by all waterworks staff. As required, the Operational Plan was revised with input from all staff members. Each Standard Operating Procedure (SOP) was reviewed and updated to ensure the SOPs align with current and best practices. Cory added that this review aids in ensuring continued compliance with the Drinking Water Quality Management Standards and heightens staff's knowledge of the QMS and its procedures. As part of the annual internal audit, a complete elemental review was completed to ensure compliance with the Standards.

As of the date of the management review meeting, several OP changes and QMS procedure updates were approved and in queue for implementation. As of the date of the management review minutes, all pending changes to the OP and QMS procedures were completed.

16. Staff Suggestions

The following items were suggested:

- Zack suggested that to provide a full review of the year, that the management review meeting occur in January for the preceding year. It was agreed that this be investigated and proposed actions reviewed prior to implementation.
- Ken suggested that the communications template for Council be reviewed to determine if it could benefit from being updated.

17. Closing

Follow up items include distributing meeting minutes, preparing a council report for Q4 activities, and an Annual Report of the Water System for 2023. Staff suggestions will be addressed by end of Q2, 2024.



Mississippi
Mills

Enclosed: 2022 Management Review Meeting Minutes

Meeting Minutes Prepared By:

Zack Moshonas
Environmental Compliance Coordinator

The meeting minutes constitute the author's understanding of the meeting. Please report any discrepancies to the author within seven (7) business days.

**Ontario Clean Water
Agency (OCWA)
Management Review
2023 Meeting
Minutes**



Ontario Clean Water Agency

Management Review Minutes

Mississippi Mills Drinking Water System

Issue Date: 2022-04-28
Pages: 1 of 5

Reviewed by: Alison O'Connor (PCT)

Approved by: Austin Mitchell (SOM)

Drinking Water System Name:

Mississippi Mill's Drinking Water System

Owner and Location:

Municipality of Mississippi Mill's

Review Period: *January 2023-December 2023*

Meeting Information/Introduction

Date/Time: December 12, 8:00-11:00

Location: Carleton Place WPCP and WebEx Conference

Attendees: Top Management: Austin Mitchell, Senior Operations Manager; Chad Mocha, OMTL; Scott Quackenbush, Water Supervisor

Regrets:

Distribution: Andrew Trader- Eastern Regional Manager, Vanessa Greatrix-Safety Compliance Manager, Austin Mitchell-Senior Operations Manager, Cory Smith-Director of Public Works-Mississippi Mill's, Zach Moshonas, Environmental Compliance Coordinator-Mississippi Mills

Minutes Taken By: Alison O'Connor, PCT

Introduction:

Purpose:
To evaluate the continuing suitability, adequacy and effectiveness of OCWA's QEMS.

Objectives:

The Management Review participants will review/discuss the standing agenda items and the data presented, identify deficiencies, make recommendations and/or initiate action plans to address identified deficiencies as appropriate.

The Management Review includes a review of the DWQMS operational plan, SAI audit report(s), OCWA internal audit report(s) and other related operational documents/records as detailed in the meeting minutes. The information reviewed during the Management Review was provided/made available to attendees as a handout at the meeting.

This meeting covers the standing agenda items for the DWSs noted above. Details of the discussion, any deficiencies identified, decisions made and applicable action items related to each standing agenda item are described under the appropriate item number within the following table. Additional comments/discussion items are described under section 2.



Ontario Clean Water Agency

Management Review Minutes

Mississippi Mills Drinking Water System

Issue Date: 2022-04-28
Pages: 2 of 5

Reviewed by: Alison O'Connor (PCT)

Approved by: Austin Mitchell (SOM)

The minutes from the previous Management Review from December 2022 are also reviewed. Any follow up on actions and/or additional actions required are detailed under section 2.

Meeting Minutes				
Item #	Documentation Reviewed/Discussion Points/Issues Raised/Action Taken to Date /Decisions Made	Actions Identified during Management Review	Responsibility/ Assigned To	Target Date
1 [a]	Incidents of regulatory non-compliance: Reviewed last Ministry Inspection-Last Inspection was Feb •Inspection September 2023 – 100% All Actions required were closed and all recommended actions were reviewed.	No Actions identified during the Inspection and Management Review	N/A	N/A
[b]	Incidents of adverse drinking water tests: None	N/A	N/A	N/A
[c]	Deviations from Critical Control Point limits and response actions: None	N/A	N/A	N/A
[d]	Effectiveness of the risk assessment process: Risk assessment (RA) is effective: 36-month review completed on December 16 th 2021 by Austin Mitchell, Robert Leblanc and Alison O'Connor - no changes made	N/A	N/A	N/A
[e]	Internal and third-party Audit results: Internal and third-party Audit results: Internal Audit by PCT – 0 OFI External Audit by SAI Global completed September 2023 with five (5) Opportunity for Improvement OFI 1: El. 8 #1: Table 2 appears to list CCL's that reflect regulatory minimums. Since critical control limits are defined in the DWQMS as "the point at which a critical control point response procedure	OFI #1 - The CCL limits are below the low low alarm set points on SCADA. Order of notifications are low level alarm, low low level alarm, CCL limit activates further protocol ie. CT calculations	PCT	March 2024



Ontario Clean Water Agency

Management Review Minutes

Mississippi Mills Drinking Water System

Issue Date: 2022-04-28
Pages: 3 of 5

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Meeting Minutes

Item #	Documentation Reviewed/Discussion Points/Issues Raised/Action Taken to Date /Decisions Made	Actions Identified during Management Review	Responsibility/Assigned To	Target Date
	<p>is initiated", the existing CCL's described would be too late (AWQI). Consider updating CCL's to reflect the actual points at which you'd ask staff to take action (e.g. reflecting SCADA set points in treatment, and reflecting the Ministry's "acceptable disinfectant concentration" defined in the latest 2020 Watermain Disinfection Procedure for distribution)</p> <p>El. 8 #2: Consider recording each of the reviews in Table 3 – "calendar year reviews" as well as "36-month reviews".</p> <p>El. 8 #3: The next risk assessment review or update should add "cybersecurity threats" as this hazardous event was added in spring 2022 as part of the MECP's "Potential Hazardous Events..." document.</p> <p>El. 19: Consider including a section in the internal audit report that lists all previous internal and external audit findings (i.e. any non-conformities and opportunities for improvement), providing a status update on each so that El. 19 PLAN c) can have evidence of this consideration with each internal audit. (An example of updates on previous findings is included in s. 21 of this report's DWQMS checklist).</p> <p>El. 20: Consider improving the consistency between Management Review meetings and other</p>	<p>OFI #2 - Add revision history for calendar year reviews</p> <p>OFI #3 - Add "cybersecurity threats" to Risk Assessments before 36-month review in fall 2024</p>		



Ontario Clean Water Agency

Management Review Minutes

Mississippi Mills Drinking Water System

Issue Date: 2022-04-28
Pages: 4 of 5

Reviewed by: Alison O'Connor (PCT)

Approved by: Austin Mitchell (SOM)

Meeting Minutes

Item #	Documentation Reviewed/Discussion Points/Issues Raised/Action Taken to Date /Decisions Made	Actions Identified during Management Review	Responsibility/Assigned To	Target Date
	reports' information (e.g. annual & summary, internal and external audit reports). The Management Review information for the meeting held on Dec. 12, 2022 was not fully represented in the minutes, such as for item e) Internal and third-party audit results systems (as compared to findings summarized under El. 21 of this audit's DWQMS checklist).			
[f]	Results of emergency response testing: Contingency Plan Test – Critical Injury December 28 2023. No revisions made to Contingency Plan procedures (Contingency Plan Review/Test Summary Form completed)	None		
[g]	Operational performance: Reviewed Performance Assessment Reports for Jan-Dec 12 th 2023; Reviewed Summary of Work Orders completed/closed for this audit period;	None		
[h]	Raw water supply and drinking water quality trends: Reviewed 2021 & 2022 plant capacities based on average day flows and maximum day flows;	None		
[i]	Follow-up on action items from previous Management Reviews: None	None		
[j]	Status of management action items identified between reviews: None identified	None		
[k]	Changes that could affect the QEMS: None	None		
[l]	Consumer feedback:	None		



Ontario Clean Water Agency

Management Review Minutes

Mississippi Mills Drinking Water System

Issue Date: 2022-04-28
Pages: 5 of 5

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Meeting Minutes

Item #	Documentation Reviewed/Discussion Points/Issues Raised/Action Taken to Date /Decisions Made	Actions Identified during Management Review	Responsibility/Assigned To	Target Date
	None			
[m]	Resources needed to maintain the QEMS: None	None		
[n]	Results of the infrastructure review: Capital and Major Maintenance Recommendation Report was discussed by Senior Operations Manager about 2023 capital projects	None		
[o]	Operational Plan currency, content and updates: No process changes have been made to plant in audit period	None		
[p]	Staff suggestions: None	None		
[q]	Review/consideration of any applicable Best Management Practices (BMPs): No BMP's were identified, considered or implemented at this time	None		
2.	Roundtable/Other: No comments	None		

Details of next Management Review meeting:

Next Meeting:

The next Management Review meeting will occur in the fall of 2024.