



2024 Annual Summary Report

(Schedule 22: Summary Report for Municipalities, O. Reg. 170/03)

January 1, 2024 to December 31, 2024

Township of Wilmot – Infrastructure Services Department

Last Revision: Feb 7, 2025

Purpose

The purpose of this report is to give the Township of Wilmot's drinking water system owners, the Mayor and Council members, an understanding of the system's current state for the reporting period from January 1, 2024 to December 31, 2024. This report has been prepared to comply with Schedule 22 of Ontario Regulation 170/03 (O. Reg. 170/03). For large municipal drinking water systems, this regulation mandates the preparation and submission of a summary report to members of the municipal council by March 31, 2025, covering activities of the preceding year.

Furthermore, the Safe Drinking Water Act 2002 (SDWA) requires that the municipality must:

- Acknowledge that the people of Ontario have a right to expect the safety of their drinking water; and,
- Provide for the prevention of health hazards associated with drinking water by controlling and regulating drinking water systems and conducting drinking water testing.

The information in this report is essential for the system owner to evaluate the system's suitability for both current and future uses. The data in this report will also give you the means to make sure the municipality has fulfilled its obligations under the SDWA. The SDWA and O. Reg. 170/03: Schedule 22, Summary Report are both satisfied by this report.

In addition to this report, an annual water quality report for each drinking water distribution system is posted to the Township websites, which includes information on annual testing and sampling parameters. In order to comply with O. Reg. 170/03 Section 11, these reports were prepared. The Township website also has copies of the approval for each system, the Drinking Water Works Permit (DWWP), the Municipal Drinking Water Licence (MDWL), and any applicable orders that were not followed at any point during the report's reporting period.

A copy of this report is available for viewing online and accessible copies can be made available upon request.

Scope

This Annual Summary Report of Water Distribution systems includes information for the period of January 1, 2024, to December 31, 2024, from the following systems:

- New Hamburg/Baden Distribution System
- New Dundee Distribution System
- St Agatha Distribution System

- Mannheim Distribution System
- Petersburg Distribution System

The information in this report is required to be reported to the following:

- The drinking water systems owners - Township of Wilmot Mayor and Council
- Top management as indicated by the Drinking Water Quality Management System
- The public and interested stakeholders.

System Overview

The Township of Wilmot owns and operates a total of four distribution systems. The distribution systems are connected to and purchase water from the Integrated Urban System (IUS) that is owned and operated by the Region of Waterloo. The Region of Waterloo provides treatment to the water before it supplies the water to the Township.

The Township of Wilmot owns and operates the following distribution systems:

- New Hamburg/Baden Distribution system – Large Municipal Residential
- Mannheim Distribution system – Large Municipal Residential
- St Agatha Distribution System - Large Municipal Residential
- New Dundee Distribution System – Large Municipal Residential

The water distribution system includes all pipes and appurtenances (waterworks). The scope of the waterworks begins at the point where treated water enters the system and ends at the property lines of the consumers. The Township of Wilmot does not provide treatment to the water.

The waterworks is comprised of the following infrastructure:

- 76.89 km of distribution main
- 391 hydrants
- 860 valves (not including service valves)

The Ministry of the Environment, Conservation and Parks (MECP) has developed the Municipal Drinking Water Licensing Program in support of the SDWA. This program requires the Township's drinking water systems to have the following in place in order to be issued licenses to operate the systems:

- A Drinking Water Works Permit (DWWP),
- An approved Operational Plan,
- Accreditation of the Operating Authority, and
- A Financial Plan for the operation of the water system

The Township of Wilmot has a DWWP and License for each of its drinking water systems, issued February 9, 2021.

The Township has operated and maintained the Petersburg drinking water system since May 13, 2024. On January 15, 2024, the MECP issued a notice of intent under the SDWA, directing the Township and Region of Waterloo to assume operational and maintenance responsibilities of the system, effective May 13, 2024. A DWWP was issued to the Township on May 21, 2024. Although ownership of the system remains with Paul Knipfel for the 2024 calendar year, it is scheduled to transfer to the Township in 2025, in accordance with the MECP's schedule for the Petersburg DWWP. For consistency and transparency, information regarding the system will be included in this report, even though the Township does not yet own the Petersburg system.

Compliance

The SDWA provides a legislative framework for all municipal drinking water systems and provides a consistent set of provincewide standards and rules to help ensure access to safe, high quality, reliable drinking water.

O. Reg. 170/03 regulates drinking water systems in Ontario and O. Reg. 169/03 regulates water quality standards that must be met.

Under Schedule 22 of O. Reg. 170/03, the owner of a water system must annually prepare a Summary Report for Municipalities and present it to Council by March 31st of each year. The report must contain any regulatory requirements that the drinking water system failed to meet and must be summarized with information about the non-compliance events. The report must also include a summary of the quantities and flow rates of water supplied for the year, including monthly average and maximum daily flows.

Statement of Compliance

The Township of Wilmot complied with the requirements of the Act, the Regulations, and the conditions of all licenses and permits for the municipal drinking water systems. The details of these compliance requirements are located in the following sections.

MECP Inspections

Each year, the Township of Wilmot's water distribution system undergoes a comprehensive inspection of its drinking water system conducted by the MECP. For the calendar year 2024, the annual inspection process has been completed, it commenced on December 6th, 2024, with a site visit and was completed on January 14th, 2025. The inspection was completed for the calendar year of 2024, encompassing a thorough review of the drinking water distribution systems for compliance with relevant legal requirements, including an examination of maintenance records. The inspection

conducted yielded a commendable compliance rating of 100% for the Township's distribution system.

Drinking Water Quality Management System

The Ontario Government implemented the Municipal Drinking Water Licensing Program in 2007 as recommended by Justice O'Conner as a result of the Walkerton Inquiry. The MECP developed the Drinking Water Quality Management standard ("DWQMS") that applies to owners and operating authorities for municipal drinking water systems. The implementation of the DWQMS is mandated by the provincial government through the Safe Drinking Water Act, 2002.

Under the Safe Drinking Water Act, 2002 and Ontario Regulation 188/07, the Township of Wilmot is required to maintain licensing to operate the municipal water distribution systems. The Township has drinking water permits and licenses to operate each of the Township's water distribution systems in compliance with the Safe Drinking Water Act 2002, Regulation 170/03, Regulation 169/03 and Regulation 188/07. The licenses and permits are posted for information purposes on the Township website for public review.

The DWQMS is a system that provides an understanding of the drinking water system, the roles and responsibilities associated with the system, and a commitment and endorsement by the owner to provide safe drinking water. The DWQMS requires the operating authority to develop Operational Plans that explains how the Township should operate the drinking water systems. The Operational Plan details how management and staff structure, process, and document their activities to achieve the goal of delivering clean and safe drinking water. The Operational Plan is a controlled administrative document, available for viewing in hard copy only at the Township Public Works administrative building. It does not require direct Council approval, however Council endorsement is required for the overarching goal of the quality management system which is to provide clean and safe drinking water.

Audits

The operating authority is required to conduct annual internal and external audits on the effectiveness of the DWQMS. The internal audit was conducted by qualified staff and no corrective actions were identified. The external audit is conducted by an independent accredited third-party organization that reviews the operating authority conformance to the QMS. In 2024, NSF-ISR Management conducted the external audit finding 1 corrective action and 2 opportunities for improvement in the water distribution system. Both audits resulted in listings of Opportunities for Improvements and Corrective Actions Required, of which the Operating Authority resolved in the given time. These findings are communicated in the Management Review.

Management Review

As per DWQMS, an annual Management Review is to be conducted with findings conveyed to the owner. A Management Review was conducted on December 20th, 2024. The review included findings from the internal and external audits, MECP inspections and other prescribed items. The minutes are included in Appendix A – 2024 Management Review.

Township of Wilmot Water System

The SDWA and the Ontario Water Resources Act each require that operating authorities record and report water being supplied to the the Township of Wilmot.

Water Usage

The information in Appendix B – 2024 Water Usage summarizes the quantities of water used, and has been gathered using Region of Waterloo pumpage reports attached to monthly invoices sent to the Township.

Adverse Conditions

There were no orders issued against any of the systems in 2024. There were five (5) adverse water quality incidents in 2024 within the Township system, they are listed in the following table.

Date	Location	Adverse condition	Corrective Action
June 20, 2024	Mannheim Distribution System	Total Coliform presence	Flushed and Re-sampled
June 27, 2024	Mannheim Distribution System	Total Coliform presence	Flushed and Re-sampled
June 28, 2024	Mannheim Distribution System	Total Coliform presence	Flushed and Re-sampled
July 5, 2024	Mannheim Distribution System	Total Coliform presence	Flushed and Re-sampled
July 16, 2024	Mannheim Distribution System	Total Coliform presence	Flushed and Re-sampled

All adverse test results were remediated by flushing and re-sampling in accordance with O. Reg.170/03 and reported to both the Owners and Top Management.

Appendix A

2024 Management Review

Utilities Management Review Agenda & Minutes

Meeting Date:	December 20 th 2024	Next Meeting: TBD
Attendees:	Chris Thorne (CT), Chad Woodhouse (CW), April Rooke (AR)	
Absent:		
Minutes by:	Chris Thorne	
MEETING TOPICS AT A GLANCE		
<ul style="list-style-type: none">a) Incidents of regulatory non-complianceb) Incidents of adverse drinking water testsc) Deviations from critical control point limits and response actionsd) The effectiveness of the risk assessment processe) Results of internal and 3rd party auditsf) Results of relevant emergency response testingg) Operational performanceh) Water quality trendsi) Follow-up on actions items from previous management reviewsj) Status of management action items (if any) identified between reviewsk) Changes that could affect the QMSl) Consumer feedbackm) The resources needed to maintain the QMSn) The results of the infrastructure reviewo) Operational Plan currency, content and updatesp) Staff suggestions		

Item	Discussed	Action By	Timing
A	<p>Incidents of regulatory non-compliance:</p> <ul style="list-style-type: none"> • There were no incidents of regulatory noncompliance reported in 2024. The 2024 annual MECP inspection for systems owned and operated by the Township is underway. The results of this inspection has not yet been reported. 	CT to provide MECP report to MGMT	Q1 2025
B	<p>Incidents of adverse drinking water tests:</p> <ul style="list-style-type: none"> • In 2024, there were five incidents of adverse drinking water quality, all involving total coliform exceedances in the Mannheim distribution system: <ul style="list-style-type: none"> • June 20: A total coliform exceedance was identified. • June 27: A second exceedance occurred. • June 28: A third exceedance was identified. • July 5: A fourth exceedance was identified. • July 16: A fifth exceedance occurred. • Each of these incidents was resolved through flushing and resampling of the system. 		
C	<p>Deviations from critical control point limits and response actions:</p> <ul style="list-style-type: none"> • No deviations from critical control points were identified in 2024 		
D	<p>The effectiveness of the risk assessment process:</p> <ul style="list-style-type: none"> • On June 10th a review of the risk assessment process was conducted. During this review assigned values for likelihood, severity and detectability were reviewed. The newly acquired Knipfel (Petersburg) DWS was included in this years risk assessment. 		
E	<p>Results of internal and 3rd party audits:</p> <ul style="list-style-type: none"> • The 2024 internal audit was conducted between September 28th and October 7th. Two opportunities for improvement were identified. <ul style="list-style-type: none"> ○ OFI/PA-2024-01 – Although generally found to meet the standard’s requirements, an opportunity exists to further clarify how long term forecast of major infrastructure maintenance, rehabilitation and renewal activities are conducted. ○ OFI/PA-2024-02 – Although generally found to meet the standard’s requirements, an opportunity exists to further define “Infrastructure Services (Top Management)” • The external audit was conducted on November 28th by Rose Johnson of NSF International. 3 Opportunities for improvement were identified. <ul style="list-style-type: none"> ○ Although generally found to meet the standard’s requirements, there is an opportunity to establish a consistent format for form footers, e.g. all pages, use of revision level and/or date (e.g. form 1, 43, 44) ○ Although generally found to meet the requirements of the standard, an opportunity exists to involve others in the internal audit process (e.g. Licensing and Compliance Coordinator) ○ Although generally found to meet the requirements of the standard, consideration could be given to: 	CT to respond to internal and external OFIs	Q1 2025

	<ul style="list-style-type: none"> ○ Reviewing the corrective actions form to include “containment/immediate action taken” ○ Developing a log (spreadsheet or similar) to summarize OFIs and CARs. 		
F	<p>Results of relevant emergency response testing:</p> <ul style="list-style-type: none"> ● 2024 Emergency response training and testing was completed via 3rd party training on December 4th. Staff were trained on the regulations and best practices. Various mock and tabletop scenarios were discussed. 		
G	<p>Operational performance:</p> <ul style="list-style-type: none"> ● Due to a staff shortage, Valve Maintenance and Hydrant Maintenance were partially completed. Hydrant Flushing, and Dead-end flushing have all been fully completed for 2024. ● There were 16 water main/service repairs/improvements completed thus far in 2024 ● 3 of 6 flush hydrants installed in New Dundee 	CT – staff to install remaining hydrants	Q2/Q3 2025
H	<p>Water quality trends:</p> <ul style="list-style-type: none"> ● No significant water quality trends to note for the New Hamburg/Baden or St Agatha distribution systems. ● No increase in discolored water complaints in New Dundee ● Low pressure and occasional discolored water are known issues in Petersburg 		
I	<p>Follow-up on actions items from previous management reviews:</p> <ul style="list-style-type: none"> ● 2023 MECP inspection was completed and the report was forwarded to management ● All CAR’s & OFI’s from the internal and external audits were responded to and closed out. 		
J	<p>Status of management action items (if any) identified between reviews:</p> <ul style="list-style-type: none"> ● No action items were identified between management reviews. 		
K	<p>Changes that could affect the QMS:</p> <ul style="list-style-type: none"> ● Addition of the Knipfel distribution system is expected to increase daily operational needs. 		
L	<p>Consumer feedback:</p> <ul style="list-style-type: none"> ● Discolored water in the New Dundee and Knipfel DWS systems are the biggest complaints we receive from residents. Additional flush hydrants in New Dundee and a reconstruction in the Knipfel system are expected to reduce these complaints 		
M	<p>The resources needed to maintain the QMS:</p> <ul style="list-style-type: none"> ● As growth occurs GIS and records management needs will continue to expand. Future additional resources may be needed to supplement this expansion. 		
N	<p>The results of the infrastructure review:</p> <ul style="list-style-type: none"> ● An infrastructure review meeting took place on October 30th, 2024. At this meeting the integrity of the water distribution and sewage collection systems was discussed. Future needs and developments were taken into account and a top 5 priority list was adjusted. 		

	<ol style="list-style-type: none"> 1. Knipfel (Petersburg) DWS reconstruction 2. Victoria street, (Waterloo St to Webster St) New Hamburg On ten-year capital plan, Construction TBD 3. Webster St, (Victoria St to Waterloo St) New Hamburg On ten-year capital plan, Construction TBD 4. New Dundee 50mm watermains & valve install 50mm valves need to be hand dug to expose and operate, valves are needed to isolate Main St between Alderview Dr. and Bock St. 5. Mill St and Burns St intersection. 		
O	<p>Operational Plan currency, content and updates:</p> <ul style="list-style-type: none"> • The operational plan and all appendices currently meet the updated standard DWQMS 2.0. • Updates to the Operational Plan for the Knipfel (Petersburg) DWS are complete. 	CT to update line drawings to maps for operations plan	Q1 2025
P	<p>Staff suggestions:</p> <ul style="list-style-type: none"> • Meetings are held as needed to discuss policy & procedures where staff are encouraged to present their views. Changes resulting from these meetings are made on an ongoing basis. 		

Appendix B – 2024 Water Usage (m³)

	January	February	March	April	May	June	July	August	September	October	November	December
Baden-New Hamburg/ Mannheim	85,557.57	82,096.63	84,894.25	88,306.58	99,308.60	93,671.50	97,402.60	90,834.00	94,268.80	92,212.90	86,998.50	89,854.90
New Dundee	5,195.00	4,831.00	5,162.00	5,110.00	6,427.00	6,50.00	6,524.00	6,146.00	6,250.00	5,401.00	4,845.00	5,641.00
St Agatha	2,223.40	1,945.70	2,151.20	2,159.80	2,486.70	2,638.30	2,571.80	2,295.60	2,423.40	2,227.00	1,985.80	2,109.50
Foxboro Green	2,278.00	1,899.00	2,091.36	2,106.53	2,355.64	2,185.31	2,174.15	2,232.14	2,414.40	2,554.06	2,466.75	2,858.95
Petersburg	N/A	N/A	N/A	N/A	1,019.12	963.54	963.54	1,627.74	1,275.60	1,144.83	1,117.32	842.24
Total	95,254	90,772	94,299	97,683	111,597	105,509	109,636	103,135	106,632	103,540	97,413	101,307