

## Staff Report

Council Meeting Date: May 26, 2025

Subject: PWWS-2025-02 Drinking Water Quality Management Standard Review and Updates for Year End 2024

Report from: Chris Legge, Water & Sewer Foreperson

Attachments:

Appendix A - Quality Management Policy

Appendix B – SLD9-2021 Organizational Structure Roles Responsibilities and Authorities

Appendix C – SLD12-2023 Sign Page Owner Communications

Appendix D -SLD14- Review & Provision of Infrastructure

Appendix E- MECP Inspection Reports for AE Water and Tara Water Systems

Appendix F- MECP IRR Inspection Rating Reports (IRR) for AE and Tara Water Systems

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### **Recommendation**

Be It Resolved that Council hereby,

1. Accepts report PWWS-2025-02 which includes Drinking Water Quality Management Standard (DWQMS) review and updates for year-end 2024.
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### **Background**

The Municipality of Arran-Elderslie has an Operational Plan which is part of the Drinking Water Quality Management Standard (DWQMS).

Every year, as part of this DWQMS requirement, a management review is conducted. This report highlights the Management Review and Annual Water & Wastewater Reports. Ministry of the Environment Conservation and Parks (MECP) water inspections are also included as an attachment. This report will also serve as notification to council of the Inspection reports and results

This DWQMS report is provided to Council on a yearly basis in conjunction with DWQMS to provide an annual review of the Water & Sewer Operations Division of the Public

Works Department. Sign-off sheets are included in the report, and the annual reports can be found on the Arran-Elderslie website for review. The Water Annual Reports were also mailed electronically to all councillors corporate email addresses.

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## **Analysis**

### 1. Incidents of Regulatory Non-Compliance:

The MECP conducted the Tara Drinking Water System Inspection on January 17, 2025, and the Arran-Elderslie Inspection on January 31, 2025. Both inspections were done on-site by MECP Provincial Officer Burrell. Both water systems operated by the municipality received inspection reports that indicated no "Actions Required" or "Recommended Actions". The two (2) systems also were given final inspection ratings of 100% with no compliance issues.

### 2. Incidents of Adverse Drinking Water Tests:

The Arran-Elderslie Drinking Water System had zero (0) adverse microbiological samples taken in the 2024 calendar year. This is consistent to zero (0) adverse microbiological sample in 2024. No Adverse Water Quality Incidents (AWQI) were issued in 2024.

The Tara Water System had zero (0) adverse microbiological samples taken in the 2024 calendar year which is consistent with zero (0) in 2023. There were also zero (0) AWQI's in 2024.

### 3. Deviations from Critical Control Point Limits & Response Actions:

The following are considered critical control points from the risk assessment completed on the water system:

- Low Chlorine Residual
- Chlorine Pump Failure
- Ultra-Violet Failure
- Chlorine Contact Time Issues
- Watermain Breaks
- Low Distribution Pressure.

In 2024, the Arran-Elderslie Water System had an operator respond to five (5) alarms, three (3) of which were related to critical control points. These alarms included one (1) water main breaks and two (2) service line leaks. The non-critical control point alarms were two (2) power outage related.

An operator responded to an additional (8) alarms for the Tara Water System, four (4) of which were critical control point alarms. Those included one (1) UV related, two (2) turbidity related, and one (1) chlorine related. Additional alarms included four (4) call for hydro related issues.

Wastewater Alarms included five (5) wastewater alarms in Paisley, three (3) due to equipment issues and two (2) due to hydro outages.

Chesley Wastewater had four (4) alarms. one (1) due weather-related issues and two (2) equipment issues, and one (1) emergency locate.

Overall, staff responded to twenty-two (22) alarms in the 2024 calendar year, up from the twenty-one (21) alarms responded to in 2023. Alarm volume in most systems remained consistent. The volume of Critical Control Alarms increased from six (6) in 2023 to seven (7) in 2024. The volume of alarms remains relatively stable. Staff has consistently prioritized maintenance and capital projects on items that reduce our critical alarms. Additionally, extreme weather events continue to contribute to both power and wastewater related alarms, which is out of the control of operators.

#### 4. Risk Assessment Process of DWQMS:

The risk assessment process for both the Arran-Elderslie and Tara Drinking Water System was completed internally by Staff on Dec 10, 2024. This process included a complete review of the entire risk assessment was conducted in relation to internal training for the DWQMS and was thought to be a good process to complete as part of the training for new Staff members. The full Risk Assessment is triggered every three (3) years for review purposes. The next full review will be in 2027.

#### 5. Internal and Third-Party Audit Results:

A Systems Audit was conducted by SAI global for the DWQMS on September 23, 2024. This was a surveillance audit conducted off-site with just a document review due. The systems audit found no minor or major non-conformances, and zero (0) (OFI) opportunities for improvement.

An internal audit was completed by Katrina Eke on August 22-27, 2024. Four (4) OFI were noted during the Audit and Recommendations were implemented by staff.

A full re-accreditation audit was conducted by SAI Global on October 8th, 9th 2024. These larger in-depth audits are conducted every three (3) years. This includes an outside auditor on-site, inspecting sites and reviewing documentation. This Audit identified four (4) OFI's and one (1) minor non-conformance. The OFI's were considered and implemented as appropriate, the minor non-conformance was remedied and the DWQMS system was Re-accredited on December 6, 2024. The next Re-accreditation will be due to be completed in 2027.

#### 6. Results of Emergency Testing:

In conjunction with the review of the DWQMS manual on December 10, 2024, Staff also reviewed all emergency policies. Again, with new Staff hired it was believed that reviewing all policies would be best to get Staff familiar with Emergency Response Plans (ERP), a review of remote log-in procedures was conducted. Staff reviewed the Re-Accreditation Audit results and implemented any changes to SLD's that were required.

These ERPs relate directly to the risk assessment review we completed allowing Staff to look at each ERP.

## 7. Operational Performance:

Over the last few years, gas projects, as well as the Fibre to Home projects have required staff assistance with locates. Staff are marking all water and wastewater mains and services as well as hydrants, valves etc. In conjunction with these locates, our GIS information systems are being updated as needed to ensure accuracy. The Ontario One Call locate volume that the Department continues to consume a significant amount of staff time. In 2024 staff completed 576 locates. These locates can take 20 minutes to 1 hour depending on complexity which includes documentation, field marking and map creation.

The Arran-Elderslie Water & Sewer Operations Division of the Public Works Department employed Five (5) certified operators in 2025. In 2023 the Water and Sewer Division has also been tasked with the maintenance and operations of the three (3) Urban Stormwater systems. With this change essentially all capital underground service work projects and repairs are the responsibility of Water/Sewer, adding increased responsibility and workload.

The Arran-Elderslie Water & Sewer operations staff continue to maintain the water systems to a high standard, ensuring compliance with MECP requirements.

## 8. Roles, Responsibilities and Authorities of the Owner and Top Management:

SLD-9 is the section of the Operational Plan that lists the roles and responsibilities of everyone's position and is included in this report. This has been included for multiple years to highlight the importance of each of the roles and responsibilities. There are training opportunities that exist for Council as well as Management to take a course offered at the Walkerton Clean Water Centre pertaining to these roles.

## 9. Summary of Key Performances Element 15:

DWQMS Element 15 is the infrastructure, maintenance, rehabilitation, and renewal portion of the operational plan.

The following key performance indices will be highlighted in this review: water per capita, number of water mains and service leaks, new services connected in each town, and meters of water main replaced.

The 2024 water numbers are the recorded numbers processed through the treated water at each water plant or site. The following numbers indicate approximate usage by Arran-Elderslie water users:

Chesley:	2024 usage of 204,214 m <sup>3</sup> or 207m <sup>3</sup> per connection(985)
	2023 usage of 203,520m <sup>3</sup> or 206m <sup>3</sup> per connection(984)

Paisley: 2024 Usage of 117,515m<sup>3</sup> or 209 m<sup>3</sup> per connection(561)  
2023 Usage of 123,668m<sup>3</sup> or 223 m<sup>3</sup> per connection(555)

Tara: 2024 Usage of 116,119 m<sup>3</sup> or 222m<sup>3</sup> per connection(523)  
2023 Usage of 111,455 m<sup>3</sup> or 214m<sup>3</sup> per connection (520)

## 10. Water Main Breaks and Service Leaks 2023

The Chesley distribution system had two (2) watermain breaks and four (4) service leaks in 2024, the service leaks were due to poly lines, in the tower park area, this is a newer section of Chesley and if this trend continues there may be a need to look at capital upgrades in this area. There was one (1) additional service added to the system.

The Paisley distribution system had four (4) water main breaks of older cast iron watermain, but zero(0) service leaks. In addition, six (6) new services were installed in Paisley. The Paisley Trunk watermain had zero (0) service connections added.

The Tara distribution system had three (3) water main breaks. There were zero (0) service leaks in 2024. An additional three (3) services in were connected to the system.

## 11. Water Main Replacement in 2024

Cedarwell Excavating replaced 240 meters of undersized 4 inch cast iron water mains to 6-inch PVC on Francis Street Tara. Construction took place from Brooke Street W, south to Matilda. This project included a future use loop to planned subdivision east of Francis on Matilda Street unused road allowance. This project was in conjunction with Sewer improvements, New Stormwater piping from in the entire works area, as well as a new road surface and curb /sidewalk replacement.

Arran-Elderslie Water Staff replaced 70 Meters of 6-inch Cast Iron watermain with 6 inch PVC on Church Street in Paisley between Queen St N and Ross Street.

RF King Excavating completed a project on Queen Street N Paisley from Ross Street to Bristow Street. This Project was in completed at the request and a cost sharing agreement with Abraflex Corporation in Paisley. This project replaced 80 meters of undersized 4 inch main with a 8 inch PVC and provided needed fire protection water flow to Abraflex. Arran-Elderslie paid the cost of replacing water service lines affected by the upgrade and replacing the existing and out of date Fire Hydrant. This cost sharing allowed the municipality to upgrade a portion of our water infrastructure at a fraction of the cost of a of normal contract price.

WT Land and JT Excavating replaced 120 meters of undersized 4 inch watermain with 6 inch PVC on Arnaud Street, between George and Albert Streets, for a townhouse project. This project was another cost sharing arrangement that facilitated an upgrade to the Municipality's infrastructure at a reduced cost output. This project for 14 future use Water services and 14 future use Sewer services, New Stormwater, Curb and Road were provided by the contractor.

## 12. Raw Water Supply and Drinking Water Quality Trends:

The Arran-Elderslie and Tara Drinking Water System has received continual maintenance and any needed capital upgrades to ensure reliability and production of the raw water supply in each town.

The Arran-Elderslie system has had motors replaced in both the CP#2 and CP#3 wells in the past five years. Included in these jobs is rehabilitation work within the well, and a review of overall condition like piping and check valves. A comparison of well Draw down levels (when well pumps are operating) between 2020 and 2024 show that the wells continue to operate safely at their expected capacities.

All Raw water supply wells in Arran-Elderslie are sampled for E-coli and Total coliform weekly. CP#2 had zero (0) instances of E-coli and one(1) instance of total coliform counts and CP#3 had zero (0) instances of e-coli or total coliform counts in 2024.

As mentioned in many of the past management reviews, CP#1 well had continued to have on-going issues. The capital budget for 2022 and subsequent year had funds set aside to begin the process of exploring for another water source within the Community Park area. This process is ongoing and was included in the 2024 budget. In June of 2021, the Community Park Well #1 was taken offline.

Since that time CP#1 has not been operated and CP#2 and CP#3 ran very well through the hot days of summer with no issues for demand. In the spring of 2022, a 6-inch test well (TW1/22) was drilled by Well Initiatives. This well was located near the southeast corner of the Chesley Community Park property.

The site chosen was based on hydrological studies that were conducted in the early 2000's, as part of the construction of CP#3 and the Arran-Elderslie water treatment plant. After initial drilling a pump test was conducted in the summer. The pumping volume of the test well was 10 liters/second. CP#1 flow was 20.8L/sec. In August the decision was made to not continue with the development of TW1/22, and second site was chosen for another Test Well. Well Initiatives was unable to complete the drilling of a second TW in 2022. Drilling of TW2/23 was conducted in the spring of 2023.

It is much more promising with production in the similar range of CP#3 at 30L/sec. A public Meeting was held on May 2, 2024, No Members of the Public attended. TW 2/23 is the preferred option for replacing CPW #1. TW2/23 will become CPW#4 once operational. CPW 4 was drilled out to a 10-inch Stainless Steel Well in Feb 2025. Ministry of Environment Climate and Parks (MECP) approvals and licensing are ongoing as of this reports writing with the anticipation of CPW 4 being operational by late 2025 or spring 2026

The Tara Drinking Water System has also seen extensive work completed to the wells in the past few years. In October 2019, a new wet-end pump was installed at Well #2 in Tara, and the well piping was shortened by twenty (20) feet. In June of 2020, Well #3 in Tara had the pump, motor and three lengths of pipe replaced within the well. A comparison of well draw-down levels in the Tara raw water wells between

2020 and 2024 show that the wells continue to operate safely at their expected capacities.

All three production wells in the Tara drinking water system are sampled weekly for E-Coli and total coliform. Well #2 and well#4 had zero (0) instances of E-Coli or total coliform. Well # 3, the only GUDI (Groundwater Under Direct Influence) had Twenty-three (23) instances of Total Coliform and nine (9) instances of E-coli in a raw water sample. The instances typically occur in the spring and fall. While this is more than we typically experience in Tara Well 3. This is not unexpected with a GUDI well and the treatment system is designed for and capable of treating these instances. 2025 Budget includes well maintenance capital to ensure that Well 3 is structurally sound.

### 13. Status and Follow-Up from previous reviews:

As mentioned earlier, staff are moving forward on an alternative drinking water source in the community park for the Arran-Elderslie supply, as a replacement for CP#1.

### 14. Changes that could Affect the DWQMS:

The Arran-Elderslie and Tara Drinking Water System both had the license for each system updated in early 2021. These are valid for 5 years and will need to be renewed in 2025. Permits To Take Water (PPTW) are Valid for 10 years. Tara DWS was renewed April 2019 and is valid until April 2029. Arran-Elderslie DWS was renewed September 2015 and is valid until September 2025.

This will be renewed and altered with the Addition of a new Community Park Well 4 and the removal of Community Park Well 1.

The Arran-Elderslie and Tara Drinking Water Systems Operations Manuals were updated in March/April of 2024. They will need reviewed and updated in March of 2026. These updates were completed by Department Staff

The current water financial plan was completed by the Water and Sewer Operations Division and the Finance Department in 2020 for the Years 2021-2026, It will need to be reviewed and updated in 2026.

The DWQMS had an internal Audit completed by Katrina Eke in August 2024 external systems audit conducted in Sept 2024 by SAI global as well a re-accreditation audit on Oct 8,9 2024 by SAI Global . There will be a Systems audit in 2025, as well as an Internal Audit.

### 15. Consumer Feedback:

There were no written complaints from Arran-Elderslie ratepayers in 2024. Often, staff receive calls from the municipal office or ratepayers and quick response times often diffuse or resolve problems quickly. The Citizen Request Portal had six(6) general Water & Sewer inquiries in 2024. All were billing or clerical inquiries.

## 16. Resources needed to Maintain the DWQMS:

Resources to update the licenses for both the Arran-Elderslie and Tara Water systems. However, this will be primarily handled internally through the Water and Sewer Division and Finance Department. Some assistance from GSS Engineers will be required

Re-accreditation of the DWQMS was completed in 2024. This again involved staff time to prepare documents and send them off and have on-site interviews with the auditing team. In addition, Re-Accreditation was done in 2024 and staff contracted SAI global for Services through 2027. The Re-Accreditation costs are our thousand (\$4,000) and system audits are two thousand five hundred (\$2,500) each

Internal Audits are conducted with internal staff costs only

## 17. Results of Infrastructure:

Included in the report is SLD-14 for the 2024 season. This table is completed based on MECP compliance, grants, upgrades, and financial plans. Cedarwell excavating replaced water mains and water services as well as needed sewer services on Francis Street in Tara. RF King Construction Replaced water mains and water services on Queen Street in Paisley from Ross Street to Bristow Street, in conjunction with Abraflex . JT Excavating replaced Watermains on Arnaud Street in Paisley. AE Staff replaced Water main on Church Street in Paisley. Work for a new water source for the Arran-Elderslie water system, as mentioned before is ongoing.

The SCADA computer systems in both Tara and Arran-Elderslie Drinking Water Systems had Data Loggers installed in 2024. These loggers capture critical control point data as a safeguard and data collection redundancy for compliance with MECP requirements under the Safe Drinking Water Act

## 18. Operation Plan Currency, Content and Updates:

The DWQMS was reviewed by Staff in December 2024, the team was able to review a large portion of the manual. A complete Risk Assessment (Table 8.2) was conducted. Staff reviewed changes to SLD's as well as reviewed any changes because of there-Accreditation, Systems and Internal Audits. A Practical training exercise on Remote Login was conducted. Staff have updated their First Aid and CPR as needed with Management setting up a rotating schedule. Staff continue to be diligent to obtain the proper training via online and in person courses to maintain their respective Operator Licenses.

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## **Link to Strategic/Master Plan**

### 6.1 Protecting Infrastructure, Recreation and Natural Assets



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## **Financial Impacts/Source of Funding/Link to Procurement Policy**

The DWQMS document requires Staff resources on a yearly basis. The Ministry of Environment Conservation and Parks (MECP) requires external audits for accreditation. Internal audits are conducted both by Arran-Elderslie personnel, and by sharing resources with neighboring municipalities. These all require changes, training, and staff time to review and implement recommendations.

Finance has completed a review of the financial plans for the water system. This process aligns with both the Arran-Elderslie and Tara Drinking Water System license approvals that again were completed internally in early 2021.

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Approved by: Emily Dance, Chief Administrative Officer