



Town of Minto

DWQMS

Management Review

2024

Meeting Outcome



This report is a summary of items discussed during the December 18th, 2024 DWQMS Management Review Meeting. Also included in the report is a list of outcome and action items.

1.0 Introduction to DWQMS Management Review

- Create a Summary of all discussion.
- Create a list for action items.

2.0 Minto's Quality Management System Policy

- Reviewed Policy Statement, Endorsed by Council Dec. 6, 2022.

3.0 Roles and Responsibilities

- Reviewed

4.0 Drinking Water System Performance

4.1 Incidents of Regulatory Non-Compliance

- Clifford, Harriston, Palmerston and Minto Pines Drinking Water System's MECP Annual Inspection's were completed between May 15th – October 16th, 2024.
- Clifford, Harriston & Palmerston received Final Inspection Ratings of 100%.
- There was 1 Regulatory Non-compliance issue noted for Minto Pines due to a UPS Failure resulting in 34 minutes of missing data due to no power being supplied to the SCADA Pack (PLC). The Town reported this incident to the ministry on April 16, 2024. The Final Inspection Rating for Minto Pines was 96.57%.
 - Discussed Ministry Inspection requirements and expectations.

4.2 Incident of Adverse Drinking Water Tests (Oct. 1, 2023 – Sept. 30, 2024)

- There were 2 AWQIs between all Minto's Drinking Water Systems.
- The first AWQI was for the Minto Pines DWS and this was due to the New Production Well being commissioned and the existing well being de-commissioned with the system being supplied by tankard water (from Harriston). Minto Operations Staff issued a "Precautionary Boil Water Advisory" between May 6 – 10, 2024, until the new well was able to go online.
- The second AWQI was for the Palmerston DWS and was due to a distribution sample location, during regular sampling, having an adverse result of 1 TC (Total Coliform). Clean re-sample results were received and the incident was closed on July 12, 2024.

4.3 Deviations from Critical Control Point Limits and Response Actions

- None

Water Main Breaks (Oct. 1, 2022 – Sept. 30, 2023)

- October 5th 2023 – Harriston, Wellington Rd. 109 (*Service Line*)
- October 19th 2023 – Minto Pines, Murray Way (*Blow Off Valve*)
- November 6th 2023 – Palmerston, Main St. E (*Watermain*)
- February 5th 2024 – Harriston, Thomas St. N (*Watermain*)
- August 18th 2024 – Palmerston, Derby St. (*Watermain*)

Note: All main breaks were classed as Category 1 breaks as per regulated procedures.

- The number of main breaks and service line leaks was down from last years count.



4.4 Operator Certification

- Currently we have 10 Operators shared between Water and Wastewater
 - 4 Class 2 (water) Operators
 - 2 Class 1 (water) Operators
 - 3 (water) Operator in Training
- Staffing levels discussed in Section 6.8.

4.5 Annual and Summary Reports

- Annual Reports, were completed and submitted prior to Feb. 28, 2024.
- The Annual & Summary Reports were endorsed by Council on March 19, 2024.

4.6 Water Taking Levels

Maximum Allowable 24 hour Water Taking

- Flow totals are projected to be similar to totals in 2023.
- Development still has the potential/likely hood to increase water taking levels over the next few years.

Harriston

- 396.72 m³ (40.5% of well capacity) @ Well #1 on May 6, 2024
- 573.30 m³ (27.8% of well capacity) @ Well #2 on April 10, 2024
- 837.68 m³ (51.3% of well capacity) @ Well #3 on Sept. 26, 2024

Clifford

- 174.54 m³ (13.3% of well capacity) @ Well #1 on Oct. 3, 2023
- 239.93 m³ (36.6% of well capacity) @ Well #3 on April 2, 2024
- 84.11 m³ (6.4% of well capacity) @ Well #4 on Nov. 20, 2023

Palmerston

- 472.38 m³ (24.1% of well capacity) @ Well #1 on April 4, 2024
- 948.83 m³ (48.3% of well capacity) @ Well #2 on Aug. 18, 2024
- 1032.15 m³ (45.1% of well capacity) @ Well #3 on Aug. 18, 2024
- 368.55 m³ (16.1% of well capacity) @ Well #4 on April 19, 2024

Minto Pines

- 34.40 m³ (10.5% of well capacity) on April 4, 2024 (well 1)
- 35.46 m³ (10.9% of well capacity) on July 4, 2024 (well1A)

5.0 Raw Water Supply and Drinking Water Quality Trends

5.1 Consumption

- Consumption in 2024 is projected to be similar to totals in 2023. Minto may start to see an increase in consumption over the next few years, due to the increased development ongoing within the Town of Minto.



5.2 Sampling

Distribution Chlorine Residuals

- Strive to remain above 0.20 mg/L (or ppm). No samples collected in 2023/2024 were below 0.20 mg/L.

Lead

- Minto is currently on a Reduced sampling schedule – we sample for Lead every 3 years with Alkalinity and pH samples yearly.
- MECP is looking into lowering Maximum Acceptable Concentration of lead from 10ug/L to 5ug/L. It is possible that private plumbing testing will be required again at some point in time.
- In 2024 Minto collected pH, alkalinity samples from the distribution systems. (not household plumbing)
- Minto is required to collect Lead samples in 2026.
- All parts used in system must be NSF 372 (certification related to lead content).

Quarterly Samples

- All Nitrite/Nitrate and THM (Trihalomethane) sample results are well below the regulated standards.
- All HAA (Haloacetic Acid) samples and the RAA (running annual average) results are well below the regulated standard.
- All Arsenic samples for Clifford are below the 10 ug/L limit, however wells #1 & #4 continue to be above 5 ug/L.
- All results continue to remain within MECP guidelines and fairly consistent throughout each DWS.

Schedule 23 & 24

- Collected in 2022 for Clifford, Harriston & Palmerston – Every 3 Years
 - Next sampling due in 2025.
- Collected in 2022 for Minto Pines – Every 5 years
 - Next sampling due in 2027.

Sodium/ Fluoride

- Tested every 5 years
- Several of Minto's water systems are showing an increasing trend in Sodium levels, towards the 20 mg/L regulated standard. If any of Minto's Sodium sample results exceed 20 mg/L, the Public Health Unit must be notified.
- Sodium results exceeding 20 mg/L are only reportable once within a 5 year period.
- Minto Water Operations staff have been collecting more frequent Sodium samples to establish trending of Sodium levels on a year-to-year basis.
- Additional Sodium samples were collected on April 25, 2024.
- Next regulatory required sampling due May of 2027.
- Minto will be re-posting the Counties "Winter Maintenance/Salt Awareness Campaign" (once ready) on our social media platforms, beginning in January and running till March.
- Fluoride results remain very low within the DWS.
- All Fluoride in the raw water is naturally Occurring.

Arsenic

- Limit for Arsenic is 10 ug/L.
- Clifford wells #1 & #4 are **sampled quarterly** due to having sample results exceeding $\frac{1}{2}$ of the 10 ug/L standard. Well #1 – 6.4 to 8.1 & Well #4 – 6.6 to 7.8
- Treatment for Arsenic is very costly.
- The rest of Minto's systems are below the 10 ug/L standard.
- Minto operations staff have implemented a new Arsenic sampling procedure as recommended by R.J. Burnside Engineering.

Manganese

- Currently not regulated
- Health Canada has proposed lowering the AO (aesthetic objective) guideline to 0.02 mg/L and a MAC (maximum acceptable concentration) of 0.1 mg/L.
- If or when this change happens, this may cause some of Minto's systems to exceed $\frac{1}{2}$ of the MAC standard and may likely result in extra sampling.
- In November 2023 Water Operations collected Manganese samples for the purpose of updating Raw Water General Characteristics data and to establish a trend.
- Manganese, Iron and Hardness are going to be sampled more frequently.

Strontium

- Not currently regulated
- Health Canada has proposed a MAC of 7 mg/L.
- Strontium bonds with calcium.
- Harriston wells are all above the proposed MAC.
- Clifford Well #1 is above the proposed MAC and Well #4 is over $\frac{1}{2}$ the MAC and Well #3 is very close to half.
- Palmerston Wells #3 & #4 are over $\frac{1}{2}$ the MAC and Wells #1 & #2 are very close.
- Softening the water can be used to reduce strontium, however there are challenges with putting soft water into a system.

5.3 Consumer Feedback

- CityWide has proven to be a very valuable tool for tracking water complaints.
- The number of complaints for 2024 is 39 and 2023 was 71.
- The largest number of complaints continues to be high water bills with data log requests.
- Sold Meter readings also take time, in 2024 there was 141 and in 2023 there was 174.

6.0 DWQMS Management System Performance

6.1 Efficacy of the Risk Assessment Process

- The Annual and 36 month Full Risk Assessment Review was completed on Aug. 28th 2024.
- The next Full Risk Assessment review is required to be completed by August 2027.
- The 2023 Annual Risk Assessment Review was completed on Sept. 20, 2023.
- Outcomes from the 36-Month/Annual Review were revised risk assessment outcomes, additional Control Measures for some hazards, new natural gas generators and revised hazard rankings.

6.2 Operational Plan Currency, Content and Updates

- In 2023/24 the Operational plan underwent several changes and updates, related to findings from the 2023 External Audit and the 2024 Internal Audit.
- The Operational Plan was last updated on Sept. 16th.
- The SOP Manual was updated on June 24th, Sept. 10th & Oct. 9th 2024.

6.3 Infrastructure Review

- Status Updates for 2024 Capital Projects:
 - Clifford – N/A
 - Harriston – Well #3 VFD has been installed but not operational at this time
 - New Production Well Exploration continues through 2025
 - Palmerston – Main St. Re-Construction planning continues in 2025
 - Derby St. Re-Construction continues
 - New Production Well Exploration continues through 2025
 - Minto Pines – New Production Well complete and Online as of May 10th 2024
 - Other – SCADA Upgrades including computer hardware & software

6.4 Projected Water Works Projects/Items

- Ongoing cycle of computer hardware and software upgrades.
- SCADA Panel replacements, SCADA upgrades and Water Meters will be yearly items in the Capital Budget.
- Palmerston – Main St. Engineering & Prep.
- Palmerston – New Well exploration
- Harriston – Tower Inspection, Interior Repairs & Painting
- Harriston – New Well exploration
- Harriston – Well #3 VFD commissioning
- Harriston – New Chlorine Pumping Board
- King St. S and Webb St. engineering
- Clifford – New Chlorine Analyzer
- All Systems – Ground Water Modelling is something newly mandated by MECP to be completed
- All Systems – Consulting Financial Plan

6.5 Internal and Third-Party Audit Results

- The 2023 External Audit was completed by Intertek SAI Global on Oct. 23rd & Nov. 2nd 2023 – 2 OFI's and 1 Minor Non-Conformance were identified related to Elements 13, 15 & 17.
- The 2024 Internal Audit was completed by Mike Doucette, Todd Rogers, Clarke Richardson and Nicole Clelland between May 28th – July 24th 2024 – 2 OFI's were identified related to Elements 5 & 20.
- The 2024 External Audit was completed by Intertek SAI Global on Oct. 1st 2024 – No OFI's or Non-Conformances were identified.
- All OFI's from the 2023 External and 2024 Internal Audits have been completed or are needing re-visited and the manuals have been updated.

6.6 Results of Emergency Response Testing

In 2024 the Town of Minto decided to complete a tabletop discussion regarding the upcoming Harriston Water Tower being temporarily taken out of service for some short & long term maintenance. The short-term shutdown would be to complete an interior cleaning and some minor repairs due to ice. The long-term shutdown would be to complete an exterior coating overcoat, which could take up to 2 – 3 months to complete. It is important that all operators know the responsibilities, expectations, operational challenges and how to respond to abnormal situations during the shutdown periods of time. The emergency exercise was completed on November 21, 2024.

6.7 Follow-up on Action Items from Previous Management Reviews

Corrective Action Request (CAR)

CAR MR15-02 Inventory Control

UPDATE 2024: Please see the most recent update under the *CityWide GIS* heading on page 8 of this report titled “Update 2024”.

CAR IA19-07 CityWide Asset Management/Infrastructure Updates

UPDATE 2024: Please see the most recent update under the *CityWide GIS* heading on page 8 of this report titled “Update 2024”.

CAR IA21-01 Equipment, Operational and Training Manuals Library

UPDATE 2024: *Plan to continue with this project in late 2024 & early 2025.*

Additional Action Items

Long Term Capital Asset Management Plan (Gord)

- **UPDATE 2024:** The updated Asset Management Plan required under O. Reg 588/17 was adopted by the Council of the Town of Minto on September 6, 2022.
- Financial Forecasting is incredibly difficult with the reality of inflation challenges.

DWQMS 2.0 Training for Operators

- **UPDATE 2024:** Virtual courses are still available, however more & more training providers have moved back to in person training courses. There is a need for training related to the DWQMS as a general overview and for operators and/or other staff members outside of water operations to be trained on completing Internal DWQMS Audits.

Water operations staff are looking into dates for a DWQMS 21 Elements Overview and DWQMS Internal Auditor course to be scheduled in 2025.

Two operators have been signed up to completed the Internal Auditor Certification course in March 2025. One operator has completed an Introduction to Auditing course in early Dec. 2024 and we are looking into having another operator complete the same course in Feb. 2025.

Ontario One Call

- Large # of locates, however they are still being completed within the 5 day requirement.
- The number of locates for 2023 is 467 (48 Relocates) locates.
- The number of locates for 2024 (Jan. – Sept. 30) is 354 (16 Relocates) locates.
 - Since Oct. 1st there has been an additional 78 (4 Relocates) locates.
 - Total Locates 2024 = 432 (20 Relocates)
- Locates continues to be a full-time job for 1 operator all summer.

6.8 Changes Affecting the Quality Management System

Staffing

- In 2023/24 the total number of licensed Water and Wastewater Operators is ten (10), shared between the two departments. Included in those ten operators are the Water & Wastewater Service Managers and DWQMS Representative.

City Wide Works

Service Requests

- Operations staff have been completing Complaints through CityWide Works and has found to be a very effective tool for tracking complaints, especially for issues that require multiple visits.

CityWide GIS

- **UPDATE 2024:** Collected – Water Hydrants, Hydrant Valves, Manholes and Catch Basins (Harr, Cliff & Palm) and Watermain Valves (Harriston & Clifford) except for the main streets due to traffic control being required. Water service valves have started to be collected in Harriston. *MINTO PINES* – Almost all service valves have been collected, however some service valves are needing located and collected.
- A testing database has been created within CityWide so the testing for the linkage between CityWide Asset Manager and the GIS and be tested & checked prior to the information going into the “Live Database”. A meeting was held on Nov. 7th with CityWide to discuss the next steps for uploading and linking the collected assets between CityWide Asset Manager & GIS viewer with the hope for this process to go as smoothly as possible and as little impact on the financial side of things.

New Equipment Purchased

Minto Pines:

- New production well (#1A) commissioned and old existing well (#1) de-commissioned including associated equipment, parts and materials.

Harriston:

- New Back-up Chlorine Chemical Feed Pump
- New Hydro Service into well #2

Palmerston:

- Upgraded SCADA PLC for wells #3 & #4
- Electrical upgrades @ wells #1 & #2

General (for all systems):

- New DR300 Pocket Colorimeter
- Replacement parts/valves for chlorine chemical feed pumps
- Replacement parts for Chlorine Analyzers (different types)
- Reagents used for low and high range Free & Total Cl testing
- New equipment used during locating of services
- Water Meters for residential services
- Subscriptions (Annual & Monthly) for Infrastructure Asset GPS and Data Collection

7.0 Water System Requirements

Metered Water Rates

- 2024 Update: The Financial Plan & Metered Water Rates are going to be undergoing some revisions/updates in the near future due to the Financial Plan time frame being updated to meet the requirement of the Municipal Drinking Water License/Drinking Water Works Permit needing renewed with an **expiry date of May 25, 2026** and the information/documentation with application **submitted by November 25, 2025**.
- The current Financial Plan is good until 2030, however the MDWL & DWWP (for all systems) renewal requirements are to have a Financial Plan covering the time period through to the end of 2031, based on Minto's DWS renewal period.

Servicing Strategy

- 2024 Update: The Servicing Strategy is going to be undergoing some revisions in the near future due to the Financial Plan being updated to meet the requirement of the Municipal Drinking Water License/Drinking Water Works Permit needing renewed with an expiry date of May 25, 2026 and the information/documentation with application submitted by November 25, 2025.

Water Treatment Chemicals Price Increase

- 2024 Prices:
 - Chlorine (per 20L pail) Jan. – Dec. = \$51.00 (no increase)
 - PW 1680 (per 280 kg drum) Jan. – Dec. = \$1274.00 (no increase)
 - Sodium Silicate (per 290 kg drum) Jan. – Dec. = \$536.50 (no increase)

SCADA

- 2024 Update: We have implemented numerous cyber security measures to improve our system. These measures include internet access from all sites have been blocked, a secured VPN access to SCADA via 2 factor verification and limiting access to SCADA resources. The new SCADA Server was installed in October 2023. On September 24 - 26, 2024 the SCADA PLC @ Palmerston wells #3 & #4 was completed with Belwood Electric, Eramosa and Minto operations staff.

Derby St. Road and Infrastructure Project (Palmerston)

- Replacement of approximately 530 m of existing watermain with new 150 mm dia. DR-18 Class 235 PVC watermain and appurtenances on Derby St. between Cumberland St. to Toronto St., including tie-in's to existing watermain at Derby/York St. intersection and the Derby/Cumberland St. intersection.

Minto Pines New Production Well

- 2024 UPDATE: The Amended Schedule C of the DWWP was received by Minto operations staff on May 1, 2024. The new production well #1A was commissioned and put into service on May 10, 2024 with the old existing well #1 de-commissioned prior to the new well being put into service. Well #1A has been operating without incident since it was put into service.

New Well Exploration for Harriston & Palmerston (as of Nov. 11, 2024)

- ***Harriston & Palmerston:*** Triton Engineering is in the process of completing MCEA (Municipal Class Environmental Assessment). Triton will prepare & circulate the remaining necessary MCEA notice letters including: *Notice of Public Information Centre (PIC)* and *Notice of Completion*.

Water Towers (all towns)

- ***Harriston:*** On September 30, 2024 Landmark Municipal Services completed an R.O.V. (Remotely Operated Vehicle) inspection on the interior of the tower and an exterior coating pull test. The results of the exterior coating inspection/testing are within the recommended requirements for an overcoating. Any work to be completed identified in the inspection report will be completed in spring or early summer of 2025.
 - Harriston Tower to be drained & cleaned in spring 2025.
- ***Palmerston:*** No work was completed on the tower during this reporting period.
- ***Clifford & Harriston:*** A review of the proposed antenna installation by Xplore Communications was completed by Landmark for the Harriston & Clifford Water Towers. Both tank roof structures were analyzed for the factored load combination (self-weight & snow load). Permissible stresses in roof stiffeners are exceeded by 23% - 28%. The roof structure is not capable of supporting any additional loads. Suggested solutions may include the following:
 1. Reinforcement of the roof stiffeners.
 2. Relocation of the antennas to a structure not supported by the roof span like a centre antenna base or mounts attached to the top of the pedestal wall.

Routine and Planned System Maintenance

- All routine maintenance through out the year and planned maintenance during the monthly scheduled maintenance programs was completed by Minto Operations Staff.

Resources Needed to Maintain QMS.

- Ongoing Capital support from Council.
- Ongoing training of operators to maintain operator certification and operator training regarding DWQMS 2.0 and Internal Auditor training.
- Continued investment in infrastructure will be needed to maintain and expand services.

Best Management Practices

- Ongoing Asset Inventory improvement, then implementation of CityWide Preventative Maintenance Work Orders and an affective GIS Mapping Database.
- During the completion and presentation of the Management Review, BMP's were considered and discussed.

8.0 Communication/Staff Suggestions

- No staff suggestions

9.0 Next Management Review Meeting

- The next Management Review will be scheduled for final quarter of 2025.



Management Review Action Items

Who	What	Timeline	CAR ID #
Todd R / Mike D / Mark R	CityWide Inventory Control	End of 2025 & Beyond	MR 15-02
Todd R / Mike D / Mark R	CityWide Asset Management and Infrastructure Updates	End of 2025 & Beyond	IA 19-07
Todd/Mike D	Internal Auditing Certification for DWQMS 2.0 – Training for operators	Ongoing through 2025	
Mike D	DWQMS Operational Plan Updates	Ongoing through 2025 & Beyond	
Mike D	SOP manual Updates	Ongoing through 2025 & Beyond	
Mike D	Best Management Practice Suggestions	Ongoing through 2025 & Beyond	
Todd R/Mike D	Implementation of Preventative Maintenance work orders using CityWide	Ongoing through 2025 with full implementation once all Infrastructure Assets have been collected & uploaded to CityWide Asset Manager	
Mike D / Gord / Jackie	Establishing linking of Infrastructure Assets collected to CityWide AM & GIS with no financial impact	Ongoing through 2025 & Beyond	
Mike D / Todd R / Mark R	Establish a more effective procedure for tracking and reviewing Operators training for Certificate Renewals	End of 2025	
Mike D	Equipment, Operational and Training Library Completion & Implementation	End of June 2025	IA 21-01
Todd R/Mike D	Increased Sodium Sampling at different times of the year	Ongoing through 2025 & Beyond	
Todd R/Mike D	More Frequent General Raw Water Characteristics Sampling	Ongoing through 2025 & Beyond	
Gord	Update Financial Plan to cover through the end of 2031 (at a minimum) due to MDWL & DWWP Renewal.	Prior to Nov. 1, 2025 for submission of MDWL & DWWP Renewals	
Mike D	Establish a better method for tracking, schedule and completing On-The-Job and CEU Training for operators.	End of 2025	