
To: Mayor and Council

From: Stephanie Schell, Compliance / QMS Coordinator

Meeting Date: April 29, 2024

Subject: Report # - PW-008-2024 DWQMS Annual Management Review

Recommendation

Be It Resolved that Council of the Township of Clearview hereby receive report PW-008-2024 (DWQMS Annual Management Review) dated April 29, 2024, for information.

Background

A requirement of the Drinking Water Quality Management Standard (DWQMS) is to conduct an annual Management Review. Clearview's procedure for this review is outlined in the Operational Plan, section 20 (Appendix A). The purpose of the meeting is to ensure the continuing suitability, appropriateness, and effectiveness of the quality management system. It facilitates discussion, with a focus on a set list of topics, ranging from compliance to operational performance to infrastructure adequacy.

As per the Communications procedure (Appendix B) and the Management Review procedure (Appendix A) of the Operational Plan, a report will be generated based on the outcomes of the Management Review meeting and presented to Council.

Comments and Analysis

The 2023 Management Review meeting was held on March 22, 2024. A summary of the items discussed can be found in Appendix C of this report.

Financial Implications

N/A

Clearview's Strategic Plan

The above initiative supports the following strategic pillars:

- Infrastructure

Report Appendices

Appendix A – Quality Management System, Management Review Procedure

Appendix B – Quality Management System, Communications Procedure

Appendix C – Drinking Water Quality Management System, Management Review
Report for the year 2023

Approvals

Submitted by: Stephanie Schell, Compliance / QMS Coordinator

Reviewed by: Dan Perreault, C.E.T., Director of Public Works

**Financial Implications
Reviewed by:** Kelly McDonald, Treasurer / Director of Finance

Approved by: John Ferguson, CAO



20. Management Review

This procedure defines the Management Review process to ensure the continuing suitability, adequacy, and effectiveness of the QMS.

20.1 Review Frequency

Management reviews shall be conducted at least once every calendar year.

20.2 Review Participants

The Management Review is convened and scheduled by the QMS Representative. Those required but not limited to be in attendance for Management Review are as follows:

- CAO
- Director of Public Works
- Manager of Engineering
- Public Works Manager
- Water / Sewer Foreman
- QMS Representative

20.3 Review Input

The review meeting chairperson shall discuss information and data concerning the following categories during the review.

- incidents of regulatory non – compliance.
- incidents of adverse drinking water tests.
- deviations from identified critical control limits and actions taken.
- results of any internal or external audits.
- results of any relevant emergency responses or tests.
- operational performance and water quality trends.
- changes in resource requirements, infrastructure, process, personnel, Drinking Water Quality Management Standard, or regulations that could affect the QMS.
- consumer feedback.
- any resources needed to maintain the QMS
- a summary of the effectiveness of the Maintenance, Rehabilitation and Renewal program.
- the results of the infrastructure review.
- Operational Plan currency, content, and updates.
- staff comments & suggestions.
- the effectiveness of the risk assessment process.
- best management practices
- potential non-conformities
- follow-up on action items from previous management reviews.

- status of action items identified between reviews.

20.4 Review Process

The Management Review shall be a planned event. A minimum 2 hrs. shall be set aside for all participants to ensure a thorough review of the QMS is conducted. For organizational purposes the QMS Rep. will supply the Foreman, Managers and Director with Doc. # 023 DWQMS Management Review Checklist prior to the Management Review.

Each input category shall be reviewed to identify if, where and when improvements to the QMS and its procedures are required.

The QMS Representative shall make note of any changes or actions required during the review.

20.5 Review Output

A list of changes required to be made to procedures or other QMS based documentation.

A list of “action” items will be noted during the time of review by the QMS Rep. All action items will be assigned to an individual(s) for completion by the Director, Managers, Foreman or QMS Representative. The actions will be assigned a timeline for completion. An Action Item Request form will be completed for each item and used to track and record the results.

Recommendations for any human or financial resources needed for maintenance of improvement of the QMS.

Upon completion of the annual Management Review the QMS Representative will put together a report of the review. This report will be taken to Council for information.

Minutes of management review shall be maintained by the QMS Representative. These minutes shall include the date and time of the review activity and the name of participants and attendees. The minutes will be kept on file by the QMS Representative and will be made available to council upon request.

Associated procedures & documents for referencing

- Doc. # 009 Meeting agenda template
- Doc. # 015 Meeting sign in sheet
- Doc. # 023 DWQMS Management Review Checklist
- Doc. # 377 Action Item Request form



12. Communications

This procedure describes how the Township of Clearview top management communicates the QMS between the Owner, Operating Authority personnel, suppliers and the consumer.

12.1 Owner / Operating Authority personnel

The QMS Representative will report any development or changes to the QMS to the Owner as needed. The QMS Representative will also report results arising from Management Review meetings.

The QMS and associated procedures are communicated to all water works employees by the QMS Representative. It will be documented as the training is provided. This will pertain to any new full-time employee as well. Part time employees working with the Water / Sewer Dept. will be trained on the Elements of the Plan that will pertain to them as they carry out their duties.

After initial training, the QMS and associated procedures will be communicated to employees through training sessions and/or meetings as changes are made to the QMS. This will be done by the QMS Representative, Foreman or Manager and will be documented by training records and/or meeting sign in sheets.

Communication on an ongoing basis is encouraged through general discussions and scheduled meetings by the Director, Manager or Foreman. It is at this time that all staff are asked for their input on day-to-day operations of the water systems. Any questions or concerns that arise between meetings are brought to the Director, Manager or Foreman's attention and dealt with in a timely manner. Records of such discussions are noted on the meeting sign in sheets.

12.2 Consumers

The Township of Clearview has the Quality Policy posted in the foyer at the Municipal office and on its website under Municipal Services / Water and Sewer.

12.3 Suppliers

All essential suppliers are provided a statement from the Township informing them of our QMS and how it relates to them on an annual basis. If any changes to the QMS are made and they relate to suppliers, a new statement will be sent out for the effected suppliers. For a more detailed procedure refer to Section 13 Essential Supplies and Services.

Associated procedures & documents for referencing

- Doc. # 014 In House Training Form
- Doc. # 015 Meeting Sign-In Sheet
- Doc. # 161 – 164, 328, 351, 358 QMS supplier statements



**CLEARVIEW
TOWNSHIP**

**Water Systems
Management Review 2023
Management Review Report**

Meeting Date: March 22, 2024

Time: 10:00 am – 12:00 pm

Location: Township Office Administration Boardroom

Attendance:

**Dan Perreault, Director of Public Works
Todd Patton, Public Works Manager / ORO
Patti Kennedy, Manager of Engineering
Dale Lightheart, Water/Sewer Foreman
Stephanie Schell, QMS Representative**

Regrets:

John Ferguson, CAO

In accordance with the Drinking Water Quality Management Standard (DWQMS), on an annual basis Top Management shall hold a review meeting to assess and ensure the continuing suitability, adequacy, and effectiveness of the Quality Management System (QMS).

For QMS purposes Top Management within the Water Systems has been identified to include:

- CAO
- Director of Public Works
- Manager of Engineering
- Public Works Manager

The review meeting chairperson shall discuss information and data concerning the following categories:

- Incidents of regulatory non-compliance.
- Incidents of adverse drinking water tests.
- Deviations from identified critical control limits and actions taken.
- Results of any internal or external audits.
- Results of any relevant emergency responses or tests.
- Operational performance and water quality trends.
- Changes in resource requirements, infrastructure, process, personnel, Drinking Water Quality Management Standard, or regulations that could affect the QMS.
- Consumer feedback.
- Any resources needed to maintain the QMS.
- A summary of the effectiveness of the Maintenance, Rehabilitation and Renewal program.
- The results of the infrastructure review.
- Operational Plan currency, content, and updates.
- Staff comments & suggestions.
- The effectiveness of the risk assessment process.
- Best management practices.
- Potential non-conformities.
- Follow-up on action items from previous management reviews.
- Status of action items identified between reviews.

INCIDENTS OF REGULATORY NON-COMPLIANCE

- None to report.
- 100% compliance rating on all Ministry of Environment, Conservation and Parks inspections in 2023.

INCIDENTS OF ADVERSE DRINKING WATER TESTS

- 1 report made to Spills Action Centre and the Simcoe Muskoka District Health Unit in 2023.
- AWQI # 163435 – Colling-Woodlands – September 14, 2023 - Total Coliform detection in regular weekly distribution sample. Watermain flushed, set of resamples collected and results were all clean. No further action required.

DEVIATIONS FROM IDENTIFIED CRITICAL CONTROL LIMITS

** Limits have been identified through Risk Assessment process.

Pressure (<20 psi)

- None

Source Water (Total Coliform >0, E-coli >0)

- Coliform detection in raw water samples.
- Of 711 samples collected, 52 of the samples had a bacteria count.
- Occurred in 11 of 18 municipal source wells.
- Across all systems.
- Both wells in New Lowell had samples that were overgrown with target bacteria result. Since then, both wells have been rehabbed and chlorinated also operational change made to allow for longer regular run time of wells. Have not had any detections since.
- No E-coli detections in 2023.

Primary Disinfection (Free Cl₂ <0.30 mg/L)

- 9 Low chlorine alarms (6 in Stayner and 3 in Creemore) over the course of 2023. In all cases, automatic well shut alarm was triggered and an operator responded to site to correct the situation.
- No adverse conditions resulted from alarms and operator response.

Secondary Disinfection (Free Cl₂ <0.20 mg/L)

- None.

RESULTS OF ANY INTERNAL OR EXTERNAL AUDITS

Internal Audit

- Completed between February and March 2023 by Marc denBok.
- Process audits of Hydrant Flushing, SCADA, and Top Management Commitment.
- 2 Opportunities for Improvement (OFI) noted relating to organizational roles, responsibilities & authorities, and essential supplies & services.
- System deemed to be effective.

Discussed possibility of expanding list of qualified internal auditors.

External Audit

- Year 3 reaccreditation audit.
- Performed by auditor from Intertek SAI Global.
- System's audit portion completed on April 3, 2023
- 1 OFI relating to risk assessment outcomes.
- On-site audit conducted between May 1 – 3, 2023
- 5 OFIs relating to document and records control, and measurement & recording equipment calibration & maintenance.
- System deemed to be effective and approved for reaccreditation.
- New certificate of accreditation received on November 3, 2023.

RESULTS OF ANY RELEVANT EMERGENCY RESPONSES OR TESTS

Emergency Responses

- Phillips St. Temporary watermain was damaged and required repair by contractors.
- 2 Water services in Stayner and 1 water service in New Lowell required emergency repairs. Both were as a result of contractors damaging the waterline.
- 1 Main valve was replaced in Stayner.

Emergency Preparedness

- Main line valve exercising and inspections to maintain system preparedness for watermain break response.
- All staff received training in trench safety and Book 7 / traffic protection plans.
- A review of the Water Dept. Emergency / Contingency Plan by all staff was facilitated in April 2023.

OPERATIONAL PERFORMANCES AND WATER QUALITY TRENDS

- Well water provides stable water quality.
- Several wells were rehabilitated in 2023, which will be discussed further in the maintenance, rehabilitation, and renewal program review section. In Stayner, it has been recommended by the contracted groundwater specialist, to change the way that the wells from the two sites cycle and operate together. We will be trying this in 2024.
- Monthly flushing of new developments to maintain water quality within the distribution system while homes are being built has been continuing. Once the watermain is connected Clearview is assuming responsibility for the water quality. Some new developments are taking a considerable amount of time from when the watermains are connected to the point at which there are enough homes occupied to maintain water quality. Saw connections start to be made in Phase 1 of Ashton Meadows, almost 3 years after the watermain was commissioned.
- Seeing a trend in peak flow days occurring in June rather than July or August, due to changes in weather patterns. May and June are becoming hotter and drier leading to increased water consumption during this time. Impacts operations in terms of scheduling items such as spring hydrant flushing so they do not occur at times of peak demand.

- Saw a considerable decrease in consumption at Reinhart Foods in 2023. 17.6 % from previous year and 26% from two years ago.

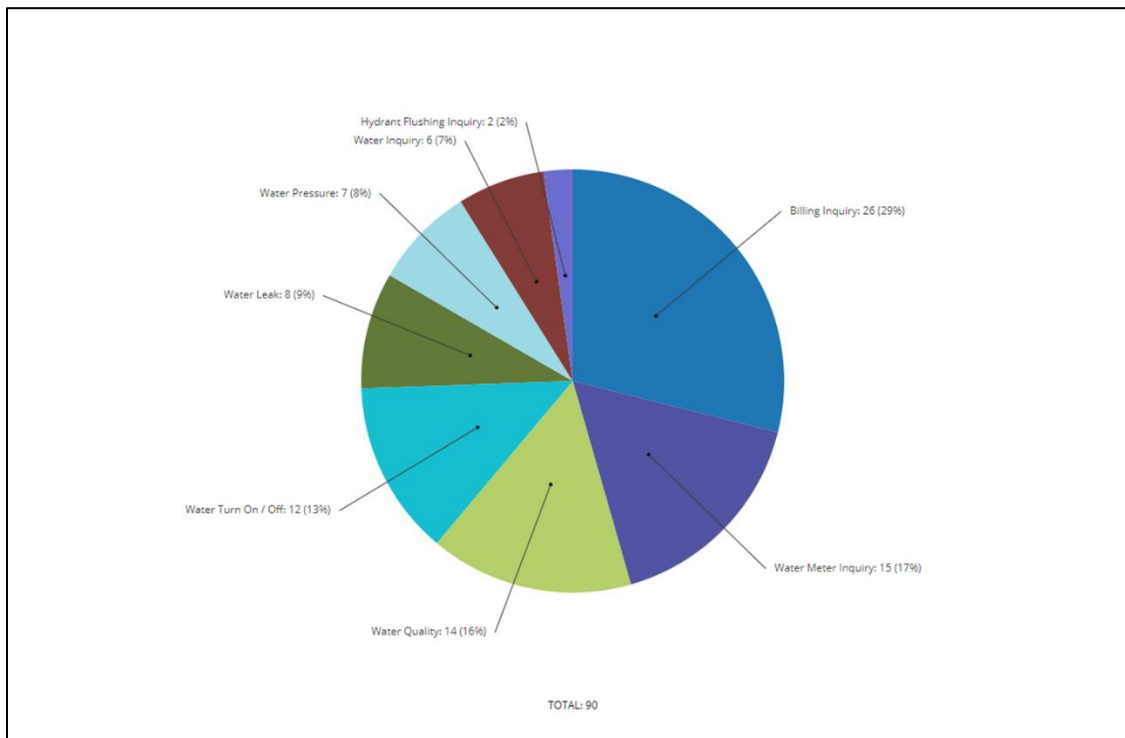
CHANGES IN RESOURCE REQUIREMENTS, INFRASTRUCTURE, PROCESS, PERSONNEL, DWQMS OR REGULATIONS THAT COULD AFFECT THE QMS

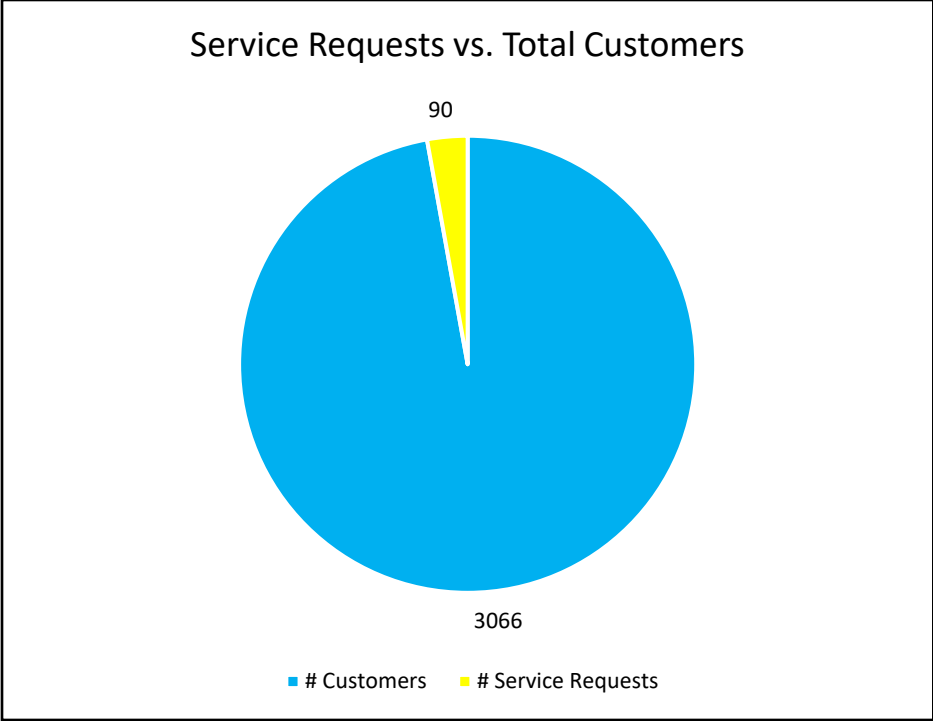
- Retirement of Mike Rawn as Director of Public Works at end of 2023.
- Dan Perreault promoted to Director of Public Works position.
- New Manager of Engineering position and filling of position in September.
- Organizational chart revision.
- No changes to regulations in 2023.

CUSTOMER FEEDBACK

The Water and Sewer Foreman reported:

- Total of 90 service requests received in 2023, approx. 2.9% of customers.
- A number of the leaks were determined to be on homeowner property or internal plumbing. Staff have helped troubleshoot for homeowners. Discussed looking into Clearview branded water conservation / leak size ruler as a bill stuffer.
- Increase in billing and water meter inquiries. With new meter reading system and meters, we have capability to access hourly readings for the previous 96 days. Easy to export and show customers more detail on their water consumption. A customer portal option is also available but would be expensive to set up given the size of the township.





ANY RESOURCES NEEDED TO MAINTAIN THE QMS

- The Operational Plan and QMS Policy were endorsed by Council on April 23, 2023.
- A link was added on the Township website for requesting a copy of the Operational Plan, as website availability is a requirement of the updated Director’s Direction for Operational Plans. To date no requests have been received.
- In 2024, the Financial Plan is required to be updated. This is a requirement for the application to renew our Municipal Drinking Water Licences (MDWL) and Drinking Water Works Permits (DWWP). The application must be submitted by the end of 2024, so that the new MDWL and DWWP’s can be issued before the current instruments expire in June 2025.

SUMMARY OF THE EFFECTIVENESS OF THE LIFE CYCLE COSTING PROGRAM

- Program is effective.
- The Manager and Foreman review the asset inventory when the budget is being created and then reviewed by the Director.
- Ability to use CityWide for budgeting purposes not there yet. Work needs to be done on replacement values and have found some possible limitations with the original data.
- Watermain replacement reviewed and updated based on attributes and history of breaks and coordination with road needs.
- Long term costs built into water rates; study last updated in 2019. New Study and Plan being completed in 2024.

RESULTS OF INFRASTRUCTURE REVIEW

- 2023 Budget passed by Council on February 27, 2023.

- Water Capital \$49,521,082 in 2023. \$1,200,000 from user fees, \$46,000,000 from development charges. Approx. \$48 M carried over into 2024 as development driven.
- Although development potential is higher than anticipated when the Water Financial Plan and rate study was completed in 2019, operational budget targets are still accurate.
- Creemore Master Servicing Plan well under way.
 - By RJ Burnside, wrapping up in 2024. Expecting final presentation to Council in May.
 - Tribute Homes drilled test wells, Township provided options for aquifer study and modelling.
 - Creemore reservoir needs significant repairs, future storage capacity options will be reviewed with the Master Servicing Plan. Current reservoir single cell, major repairs would be difficult to handle. Would like to see new cell constructed before the largest repairs attempted.
- Water operating budget \$3,086,500 in 2023.
- The DC Study includes all upgrades required to accommodate projected growth. Next update in 2024.
- Construction of the Klondike Park Road well supply and trunk main did not start as expected. Shovel ready and can be started once a financing solution is found. Grant application being made in 2024.
- Nottawa test well drilling for Georgian Communities, completed in 2023 with success.
- Well # 6 in New Lowell continues to be off-line. The well could be used in an emergency, limited growth due to Greenbelt regulations.

MAINTENANCE, REHABILITATION AND RENEWAL PROGRAM REVIEW

- 2286 Work orders completed by water staff in 2023.
- Hydrant flushing and watermain swabbing programs.
 - Stayner monthly new developments and select dead ends.
 - All systems completed in both spring and fall.
 - Targeted unidirectional flushing completed in Stayner.
 - Buckingham Woods and Colling-Woodlands swabbed two times.
- 190 Main valves were exercised.
- 1 Main valve was replaced.
- 2 Fire Hydrants were replaced (1 in Stayner, 1 in Creemore).
- 6 Water services replaced, and 2 new water services installed all in Stayner.
- New 100 mm water line for New Lowell public works and Firehall building.
- Phillips Street watermain replacement and upsizing.
- Mary Street watermain replacement and upsizing.
- Regular maintenance occurred in pumphouses:
 - Chemical feed system; cleaning, part replacements.
 - Standby generators; exercised, oil and filter changes.
 - Equipment calibrations; flow meters, level sensors, chlorine analyzers.
 - Control valve and check valve maintenance.
- Colling-Woodlands, Buckingham Woods, and Nottawa reservoirs cleaned by operations staff.
- Stayner reservoir cleaned with remotely operated vehicle while reservoir was still online.
- Well rehabilitations:
 - Stayner, Wells 1, 3, and 4, motor for Well 4 replaced.

- Colling-Woodlands, all 5 wells, pump in Well 4 replaced.
- New Lowell, Wells 1 and 2, pump in Well 2 replaced.
- Items replaced per Life Cycle maintenance program:
 - Buckingham Woods (individual wells and totalizing), Colling-Woodlands, and Nottawa raw water flow meters replaced.
 - New Lowell Jockey pump motor replaced.
 - Stayner wells 2 & 4 level transducers replaced.

OPERATIONAL PLAN CURRENCY, CONTENTS AND UPDATES

- Updated in July 2023 and then again in January 2024.
- Current version 28 – dated January 17, 2024.
- New revisions included updated organizational structure with elimination of Deputy Director of Public Works and addition of Manager of Engineering.
- Clarity on records destruction procedure.
- Addition of section on essential supplier evaluations.
- Updating of Township logo to meet visual identity guidelines.

STAFF COMMENTS AND SUGGESTIONS

- Discussed possibility of a modified work week in the summer months by only working a 4-hour day on Friday's.
- Happy to have full complement of on-call operators now from April to October.

THE EFFECTIVENESS OF THE RISK ASSESSMENT PROCESS

- Quarterly risk assessment meetings have been occurring on schedule.
- Discussions on any corrective action or potential non-conformities.
- 36-month review with rescoring of risk assessment table was completed in December 2023.
- Only small changes from previous assessment as risk assessment evaluation criteria is detailed.
- Lots of control methods in place for monitoring risk or to help mitigate.

BEST MANAGEMENT PRACTICES

- None noted in MECP inspection reports.
- None have been published by MECP to date.
- Increased reservoir cleaning, flushing, and swabbing in small systems have shown to improve water quality.
- Unidirectional flushing being completed in sections of Stayner.
- Reverse flow reports that can be generated from the meter reading system are being used to identify locations where backflow prevention devices have failed and replace the units.
- An evaluation system for essential suppliers was created in 2023 and all suppliers were assessed.
- All operators completed refresher training on Book 7 / Traffic Protection and trench safety.

- Marc denBok completed cross connection control tester course, Jesse and Derek both completed the re-certification course. Now have 3 staff who are qualified to test Township backflow prevention devices.
- Darryl Sweeney completed the required hours and obtained his Class 1 Distribution and Supply certificate. All operators now hold at least a Class 1 certificate.
- Engineering Standards update are well underway. Aim to have approved by fall of 2024, before development within the Township picks up more.
- A backflow prevention program had been discussed a few years ago and would be beneficial. Possibly like the one implemented by the Town of Blue Mountains. Staff time to implement and administer is required.
- A Dedicated Locator Agreement has been worked on to comply with the Underground Infrastructure Locate Act and to the satisfaction of Clearview operations.

POTENTIAL NON-CONFORMITIES

- Discussed at risk assessment meetings:
 - Damaged or missing source water protection road signs.
 - How to ensure alarms from SCADA system are sent out when there is an internet outage.
 - Changes to the way low and high chlorine alarms are set up.
 - Illegal hydrant use.
 - Observation well maintenance.

FOLLOW UP ON ACTION ITEMS FROM PREVIOUS MANAGEMENT REVIEWS

- There was one action item produced from the previous meeting pertaining to the recovery of costs associated with watermain flushing activities for new subdivisions. It is still in progress, as draft language for subdivision agreements was provided to the Planning Dept. and legal. The fees by-law still requires updating to support this initiative. Information for inclusion within the updated Engineering Standards is also being planned.

STATUS OF ACTION ITEMS IDENTIFIED BETWEEN REVIEWS

- Number of items have been identified through corrective actions, risk assessment meetings, audits, best management practices, staff suggestions etc.
 - 22 Action Item Requests
 - 4 Corrective Action Reports
- Items include creation of procedures, operator training, operational improvements.
- Currently in progress
 - 7 items are being worked on.
 - 1 item is complete but waiting for an effectiveness assessment.

Management Review

Action Item Form

Review Date: March 22, 2024

Action Item	Person Responsible For Completing	Required Completion Date	Completed On
Update Safe Water By-Law with regards to illegal hydrant use and associated fines.	Todd / Stephanie	31-Dec-24	
Fees By-law Updates re: cost recovery	Todd / Dan	31-Dec-24	
Investigate information on custom water conservation rulers to be used as bill stuffers and for Public Works Day	Dale	30-Jun-24	
Expand roster of trained internal auditors	Stephanie / Dale	31-Dec-24	
Develop Dedicated Locator agreements	Todd	31-Aug-24	