



DWQMS
Operational Plan
For
The Belmont Water System
&
The Central Elgin Distribution System

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Municipality of Central Elgin Operational Plan

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1.0 Quality Management System Introduction

Following the Walkerton Drinking Water System public inquiry by Honorable Dennis R. O'Connor, 121 recommendations were made to improve and strengthen drinking water safety across Ontario. Recommendations 51 to 57 of Justice O'Connor's report speak to the need to implement a Drinking Water Quality Standard and Operational plans for all drinking water systems in Ontario.

Quality Management is defined as the policy with organizational structures, procedures, responsibilities, and evaluation measures to ensure the capability of delivering a product to specified standards. Modern industry has implemented the concept of Quality Management Systems through programs such as ISO. Typically, the implementation of Quality Management Systems has proven to be beneficial in increasing or improving accountability, quality control, efficiency, and productivity. A proven Quality Management System will document what it is that you do, ensure that you do what you say, and will provide for continual improvement to your operation.

Given the Province's commitment to the implementation of Drinking Water Quality Management Systems, this Operational Plan serves as a Quality Management System Manual, which documents and describes the methods of operation that the Municipality of Central Elgin utilizes to operate the municipal drinking water systems to provide drinking water that meets or exceeds provincial standards.

The Municipality of Central Elgin owns and operates two large residential water systems as described under drinking water Regulation 170/03. These water systems are the Belmont Water System and the Central Elgin Distribution System. A detailed description of each system can be found in this operational plan. This document shall serve as the Operation Plan for both of these regulated water systems.

2.0 Quality Management System Policy

The Corporation of the Municipality of Central Elgin realizes that ratepayers depend on and trust the quality of drinking water provided by the Municipality through the municipal drinking water system. The Municipality of Central Elgin is committed to comply with all legislative and regulatory requirements with respect to Municipal drinking water.

To achieve these goals the Municipality of Central Elgin commits to:

- ❖ Managing water quality from source to customer.
- ❖ Ensure that all staff that is responsible for the delivery of drinking water is professional and trained to a level which meets or exceeds regulatory requirements.
- ❖ Regularly monitor and test both raw and treated water to ensure that the municipality's water meets or exceeds regulatory requirements.
- ❖ Continue to invest capital in order to proactively rehabilitate and upgrade the municipal drinking water system.
- ❖ Continue to implement and upgrade policies and practices for the operation of the drinking water system.
- ❖ Continue to investigate new technology to be utilized in operating and upgrading the municipal drinking water system in a cost effective manner while giving regard to public safety.

In an effort to effectively minimize and manage any potential risks and proactively respond to needs of the system the municipality will implement and commit to continual improvement of the Municipal Drinking Water System, through the use of the Drinking Water Quality Management System.

3.0 Commitments and Endorsement

As the Owner and Operating Authority of the drinking water system, the Municipality of Central Elgin supports the implementation, maintenance, and continual improvement of the Quality Management System (QMS) for the Belmont Water System and the Central Elgin Distribution System as documented in the Operational Plan.

In an effort to continually improve the QMS and the drinking water systems, the Director of Planning and Engineering Services, Manager of Water and Wastewater, Water/Wastewater Superintendent, and the Assistant Water/Wastewater Superintendent will participate in the Management Review Process according to the Management Review Procedure.

Top Management shall provide evidence of its commitment to an effective Quality Management System by:

- ❖ Ensuring that a Quality Management System is in place that meets the requirements of the Drinking Water Quality Management Standard.
- ❖ Ensuring that the Operating Authority is aware of all applicable legislative and regulatory requirements. All new and proposed regulatory changes shall be conveyed to Operations Staff through internal or external training. Regulatory changes shall be implemented as required.
- ❖ Communicating the Quality Management System according to the procedure for communications.
- ❖ Determining, obtaining or providing the resources needed to maintain and continually improve the Quality Management System.

The Municipality of Central Elgin has endorsed this Operational Plan in a regular meeting of Council on Monday June 26, 2023. The Owner Representative and Top Management of the Operating Authority have demonstrated its endorsement by affixing their signatures below.

Re-endorsement of the Operational Plan shall be obtained by the owner when there is a change in Mayor/Council personnel and by Top Management when there is a change in personnel.

Geoff Brooks
Director of Planning and
Engineering Services
Owner Representative

Trevor Martin
Water/Wastewater
Superintendent
Top Management

Alex Piggott
Manager of Water and
Wastewater
Top Management and
QMS Representative

4.0 Quality Management System Representative

The Manager of Water Wastewater shall be the QMS Representative. In the absence of the Manager of Water and Wastewater, the Water/Wastewater Superintendent shall fulfill the role of the QMS Representative. The QMS Representative shall perform the following irrespective of other responsibilities:

- ❖ Ensure that the processes needed for the QMS are established, implemented and maintained.
- ❖ Ensure that the most current versions of policies, procedures, forms and documents are being used to fulfill the requirements of the QMS.
- ❖ Ensure that all personnel are fully aware of and follow the requirements of the QMS and applicable regulatory requirements that pertain to the Drinking water system.
- ❖ Promote to all staff and the public the awareness and effectiveness of the QMS as a tool to effectively manage, operate and improve the drinking water system.
- ❖ Report to the Director of Engineering and Planning Services and Council the effectiveness of the QMS and any improvements that are evident through both internal and external audits.

5.0 Document and Records Control

Details of how Quality Management System documents and records are controlled are outlined in the document control procedure and records control procedure located in the appendices.

- ❖ [Document Control Procedure, Appendix A.](#)
- ❖ [Records Control Procedure, Appendix B.](#)

6.0 Drinking Water System

This Operational Plan describes operations of two separate water systems that are owned and operated by the Municipality of Central Elgin. As a result of this joint Operational Plan, there are two Drinking Water System Descriptions. The First Water System is the Belmont Water System and the Second is the Central Elgin Distribution System.

Detailed drinking water system descriptions along with process diagrams can be found in the appendices.

- ❖ [Belmont Water System Description and Process Diagram, Appendix C.](#)
- ❖ [Central Elgin Distribution System Description and Process Diagram, Appendix D.](#)

7.0 Risk Assessment

The risk assessment outcomes shall be reviewed at least once every calendar year in accordance with the attached Risk Assessment procedure. In addition, a new risk assessment shall be conducted at least every thirty-six months or as operational changes require.

- ❖ [Risk Assessment Procedure, Appendix E.](#)

8.0 Risk Assessment Outcomes

The risk assessment was conducted as outlined in the risk assessment procedure. The outcomes of the risk assessment are documented in the risk assessment outcomes table, which is in the appendices. The procedures associated with assessment outcomes are also in the appendices.

- ❖ [Risk Assessment Outcomes Table, Appendix F.](#)
- ❖ [Belmont WTP Primary Disinfection, CCL Response Procedure, Appendix G.](#)
- ❖ [Distribution Free Chlorine Residual, CCL Response Procedure, Appendix H.](#)
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- ❖ [Water Customer Complaint Procedure, Appendix K.](#)
- ❖ [Drinking Water Advisory Public Notification Procedure, Appendix GG.](#)
- ❖ [Water System Appurtenances Disinfection CCP Procedure, Appendix KK.](#)

9.0 Organizational Structure, Roles, Responsibilities and Authorities

The Operational Organizational Structure can be found in the appendices. The Water/Wastewater Superintendent shall keep the Operational Structure current. The following will outline the roles, responsibilities and authorities of the water operations staff.

- ❖ [Water Operations Organizational Structure Chart, Appendix L.](#)

Mayor and Council (Owner)

The Mayor and Council are responsible for high-level oversight of all Central Elgin operated water systems and are ultimately responsible for the provision of safe drinking water. They are responsible for ensuring compliance with all applicable legislation and regulations.

The Mayor and Council have administrative authority related to the distribution of safe drinking water within the water systems owned and operated by Central Elgin.

Chief Administrative Officer (C.A.O.)

The C.A.O. is responsible for arranging reports to the mayor and council on the oversight of the municipally operated water systems. The C.A.O. will receive reports from the Director of Engineering and Planning Services, Manager of Water and Wastewater and the Water/Wastewater Superintendent regarding issues that are relevant to the overall operation of the water systems.

The C.A.O. is authorized by mayor and council to ensure that management staff is in place to ensure the municipally operated water systems are supplying safe drinking water.

Director of Engineering and Planning Services (Owner Representative)

The Director of Engineering and Planning Services is responsible for ensuring that operations within the Central Elgin operated water systems are being performed in a manner to ensure that municipal drinking water is safe and provisions are in place to ensure compliance with current legislation and regulations. The Director must provide long term planning and budgeting, inform the C.A.O., Mayor and Council of deficiencies and required resources and provide them with current technical and administrative information and advice. The Director will also be responsible for participating in the management review activities and other Quality Management activities as needed.

The Director has the authority to ensure staff are in place to manage the water supply systems, develop administrative and technical policy, evaluate and prioritize long-term needs.

Manager of Water and Wastewater (Top Management & QMS Representative)

The Manager of Water and Wastewater is the QMS representative. Working with the Director of Engineering and Planning Services, the Manager is responsible for ensuring that operations within the Central Elgin operated water systems meet the requirements of all drinking water legislation and regulations. The Manager of Water and Wastewater will be responsible to provide technical guidance on capital projects, assist in administrative duties where required and be liaison between the water operations staff and project contractors. The Manager of Water and Wastewater will also be responsible to participate in the management review activities, internal auditing if required and other Quality Management activities as required.

The Manager of Water and Wastewater has the authority to advise the Director of Engineering and Planning Services on technical policy, administrative requirements, budget expenditures and long term needs.

Water/Wastewater Superintendent (Top Management)

The Water/Wastewater Superintendent is the Overall Responsible Operator (O.R.O.). The Water/Wastewater Superintendent is responsible for the management of the daily operations of the Central Elgin operated water systems. The Water/Wastewater Superintendent will provide guidance to and receive feedback from the Assistant Water/Wastewater Superintendent and all operators regarding operations and future needs. Responsibilities include making recommendations to the Manager of Water and Wastewater, preparing annual MECP. reports, provide input into preparing and maintaining operating budgets, provide input on capital expenditures, maintenance activities, training requirements, internal audits and management review activities.

The Water/Wastewater Superintendent is authorized to direct operators, direct on-site contractors, make adjustments to processes, direct other operators to make adjustments to processes, develop policies, communicate with regulatory and technical authorities, make purchasing related decisions, communicate with other top management and the general public.

Assistant Water/Wastewater Superintendent (Top Management)

The Assistant Water/Wastewater Superintendent is the backup Overall Responsible Operator (O.R.O.) and is responsible for the daily delegation of work assignments to operators, collection of operating data, schedule and coordinate maintenance activities, ensure that operating procedures are followed, required water testing is complete, provide over the shoulder supervision where necessary, participate in Quality Management activities such as Management Reviews or internal audits and provide feedback to the Water/Wastewater Superintendent on

abnormal conditions. The Assistant Water/Wastewater Superintendent is also responsible for performing operator duties and be Operator in Charge (O.I.C.) when necessary.

The Assistant Water/Wastewater Superintendent is authorized to make adjustments to processes, direct other operators to make adjustments to processes, minor purchasing, communicate with top management when required and the general public.

Water/Wastewater Operators

All certified Water/Wastewater Operators are responsible to be an Operator in Charge (O.I.C.) when required. Water/Wastewater Operators are also responsible for carrying out the daily duties of the Central Elgin Operated water systems to ensure operations are completed and compliant with all pertinent legislation and regulations. All certified operators are responsible for reporting any non-compliant situations to the Water/Wastewater Superintendent or Assistant Superintendent.

All certified Water/Wastewater Operators are authorized to be O.I.C., make adjustments to processes, collect samples, perform tests, perform maintenance or repairs, complete facility logbooks, make data entries and make recommendations to supervisors and top management.

Public Works and Community Services Coordinator (Full Time)

This position is located at the Central Elgin Administration building and is primarily limited to administrative duties; thus, their water operational responsibilities are not significant. They are the primary contact for the public during regular working hours and may be responsible for documenting public complaints and forwarding them to either the Water/Wastewater Superintendent or designate. They are also responsible for immediately notifying the Water/Wastewater Superintendent of any emergencies reported by the public and any adverse water sample notifications from the laboratories.

This position is authorized to receive and document customer complaints, communicate with the Water/Wastewater Superintendent, Assistant Water/Wastewater Superintendent, Operators and the general public.

10.0 Competencies

The Municipality of Central Elgin owns and operates two regulated water systems, the Belmont Water System and the Central Elgin Distribution System. The competency requirements of staff working in either of these water systems must meet the water operating licensing requirements of the highest level of water system. The Belmont Water System is classified as a level III Water Distribution & Supply System while the Central Elgin Distribution System is classified as a level II Water Distribution System. Therefore, all operators are encouraged to meet the requirements of the Belmont Water System and strive to obtain a level III Water Distribution & Supply certificate.

The following will outline the competencies of each staffing position that is directly related to water operations within the Municipality of Central Elgin. All new employees outlined below must provide evidence of certification and other competency requirements. Operator Certificates are posted in the Operations Work Centre.

❖ [Training Procedure, Appendix M.](#)

Water/Wastewater Superintendent

Shall possess a valid level III Water Distribution & Supply Operators Certificate, demonstrated operating knowledge and experience in a Level III or greater Water Distribution & Supply System, knowledge of all relevant Ontario Drinking Water Acts and Regulations, demonstrated leadership skills, valid class G driver's license, knowledge of the Occupational Health and Safety Act, knowledge and understanding of both operational and capital budgeting, general administration skills, and knowledge of the water systems that are owned and operated by the Municipality of Central Elgin.

Desired competencies include a Water Treatment Operators Certificate, WHIMIS training, first aid certification, technical knowledge and experience in water systems construction/design and project management skills.

Assistant Water/Wastewater Superintendent

Shall possess a valid level III Water Distribution & Supply Operators Certificate, demonstrated operating knowledge and experience in a level III or greater Water Distribution & Supply System, understanding of all relevant Ontario Drinking Water Acts and Regulations, leadership skills and training, valid class G driver's license, understanding of the Occupational Health and Safety Act and knowledge of the water systems that are owned and operated by the Municipality of Central Elgin.

Desired competencies include a Water Treatment Operators Certificate, WHIMIS training, first aid certification, confined space training, technical knowledge and experience in water systems construction/design and a valid class DZ driver's license.

Water/Wastewater Operators

Operators shall possess a minimum of a valid Operator in Training Water Distribution & Supply Operators Certificate, an understanding of all relevant Ontario Drinking Water Acts & Regulations and a valid class G driver's license.

Desired competencies include a level III Water Distribution & Supply Operators Certificate, WHIMIS training, first aid certification, confined space training, a valid class DZ driver's license and knowledge of the water systems that are owned and operated by the Municipality of Central Elgin.

Training

- ❖ All water operators will be trained in The Municipality of Central Elgin's Drinking Water Quality Operational Plan and Procedures. This training will include reviewing operating procedures to ensure operators are competent to perform these duties.
- ❖ All new water operators will undergo orientation training by the Water/Wastewater Superintendent that will include a review of the DWQMS operational plan. All new employees will receive health and safety orientation training by a member of the joint health and safety committee.
- ❖ All employees who perform water operational duties receive training which meets or exceeds the requirements of Ontario Regulation 128/04. All applicable training is paid for by the Municipality.
- ❖ All records of training are maintained as proof required training has been successfully completed. A training matrix will track training to ensure all essential training has been received. The Water/Wastewater Superintendent is responsible for ensuring that all identified training is completed.
- ❖ Operators are encouraged to upgrade their water operator's certificates. Compensation is given to operators who obtain higher levels of Water Distribution & Supply Operators Certificates as outlined in the collective agreement. The Municipality of Central Elgin will pay for all certificate upgrade costs including exam preparation courses and exam fees.

- ❖ Any Changes to the DWQMS Operational Plan, drinking water regulations or the drinking water systems themselves are communicated to all Water Department staff by the Water/Wastewater Superintendent or other external sources.

11.0 Personnel Coverage

The water department of the Municipality of Central Elgin is staffed by eight operators who are all certified in both water and wastewater operations. The operators work a straight day shift from 7:00 AM to 3:30 PM, Mondays to Fridays. The Belmont Water Treatment Plant, Belmont Water Tower, Port Stanley Water Tower, Fruit Ridge Booster Station and all PRV chambers are also monitored by a SCADA system that will call operators in the event of an alarm. Outside of these hours of work, including weekends and Statutory Holidays, one of the operators is designated to be on call. All after hour customer calls and S.C.A.D.A. alarms will go to the on-call operator for first response. In addition to being responsible for the above, the on-call operator will perform all scheduled weekend work to ensure compliance with Drinking Water Regulations, Drinking Water Permits and Licenses.

The Water/Wastewater Superintendent is the Overall Responsible Operator (O.R.O.) while the Assistant Water/Wastewater Superintendent has been designated as the backup O.R.O. Any certified operator of level 1 or greater may be designated Operator in Charge (O.I.C.) on any given day. All Operators in Charge time is logged in the daily logbooks.

In the event of a labour strike, the certified non-Union Water/Wastewater Superintendent and Assistant Water/Wastewater Superintendent will perform the day-to-day operations. The Water/Wastewater Superintendent shall seek assistance from other non-union Municipal staff for assistance if needed.

The attached personnel coverage procedure will further outline how the Municipality of Central Elgin ensures that water operations are covered at all times.

- ❖ [Personnel Coverage Procedure, Appendix N.](#)

12.0 Communications

The QMS representative shall ensure that the owner (Mayor and Council) is provided with access to a current copy of the operational plan. The QMS representative shall ensure that the owner is informed of any significant changes to the QMS, the results of annual management review meetings and other QMS issues as required. The owner shall be informed through regular meetings of council at least once per year.

Operations staff shall be informed of any changes or updates to the QMS through communication meetings or staff meetings. A current version of the Operational plan is kept at the Municipal Office, the Operations Work Centre and the Belmont Water Treatment Plant.

Essential suppliers shall receive information regarding the QMS from the Water/Wastewater Superintendent if and when necessary.

Water consumers shall be informed of the QMS and any significant changes by billing stuffers or billing footnotes.

The QMS policy shall be posted at the Municipal Office, Operations Work Centre, Belmont Water Treatment Plant, Belmont Arena, Port Stanley Arena and the municipal web site.

The communication procedure is located in the appendices and will provide staff with communication guidance.

❖ [Communication Procedure, Appendix O.](#)

13.0 Essential Supplies and Services

Below is a list of suppliers and service providers along with their contact information for essential supplies or services required by the Municipality of Central Elgin's Water Department. Where applicable, supplies must meet AWWA and ANSI standards. Assurances of the quality of essential supplies and services are achieved through the documentation of applicable accreditation, licenses or certificates where applicable. The essential supplies procedure is located in the appendices and will provide staff with guidance.

❖ [Essential Supplies and Services Procedure, Appendix P.](#)

Material or Service Provided	Supplier or Service Provider	Contact Information
Accredited Microbiological Water Sampling	SGS Canada Inc. (London Branch)	657 Consortium Drive London, Ontario N6E 2S8 PH: 519-672-4500
Accredited Chemical Water Sampling	SGS Canada Inc. (Lakefield Branch)	185 Concession St. Lakefield, Ontario K0L 2H0 PH: 705-652-2038

Sodium Hypochlorite	Anchem Sales	120 Stronach Crescent London, Ontario N5V 3A1 PH: 519-451-1614
Sodium Silicate	Anchem Sales	120 Stronach Crescent London, Ontario N5V 3A1 PH: 519-451-1614
Chemical Feed Pumps and Parts	Bisan Inc	16&17-3190 Ridgeway Drive Mississauga, Ontario L5L 5S8 PH: 905-542-2293
On Line Water Quality Analyzers and Parts	Metcon Sales & Engineering	15 Connie Crescent Unit 3 Concord, Ontario L4K 1L3 PH: 905-738-2355
On Line Water Quality Analyzers and Parts- Belmont Water Tower	SPD Sales Ltd.	3230-B American Drive Mississauga, Ontario L4V 1B3 PH: 905-678-2882
S.C.A.D.A. Repairs	Actemium (Summa Engineering)	6423 Northam Drive Mississauga, Ontario L4V 1J2 PH: 905-678-3388
Instrumentation or P.L.C. Repairs	Actemium (Summa Engineering)	6423 Northam Drive Mississauga, Ontario L4V 1J2 PH: 905-678-3388
S.C.A.D.A. Communication Repairs	Execulink Telecom	Box 130 Burgessville, Ontario N0J 1C0 PH: 1-877-393-2854 Ext: 800
Flow Meter Calibrations	Actemium (Summa Engineering)	6423 Northam Drive Mississauga, Ontario L4V 1J2 PH: 905-678-3388

Well Pump Repairs	Lottowater Technical Services	92 Scott Avenue Paris, Ontario N3L 3R1 PH: 519-442-2086
Well VFD Repairs	Eaton Electric Canada	697 Consortium Road London, Ontario N6E 2S8 PH: 519-649-2383
Water Meter Parts	KTI Limited	33 Isaacson Crescent Aurora, Ontario L4G 0A4 PH- 1-800-655-9654
Water Meter Parts	Metercor	1100 Burloak Drive, Suite 300 Burlington, On L7L PH- 1-905-336-8944
Water Main and Water Service Parts	Iconix	4080 Dowell Drive London, Ontario N6L 1P9 PH: 519-668-6095
Water Main and Water Service Parts	Evans Utility Supply	338 Neptune Crescent London, Ontario N6M 1A1 PH: 519-453-6515
Water Main and Water Service Parts	Emco Corporation	944 Leathorne Street London, Ontario N5Z 3M5 PH: 519-686-1141
Water Main and Water Service Parts	Wolseley Waterworks	760 Little Simcoe Street London, Ontario N5Z 1P4 PH:519-963-1004
Altitude Valve & Pressure Reducing Valve Parts and Service	Syntec Process Equipment Ltd.	68 Healey Road Bolton, Ontario L7E 5A4 PH: 905-951-8000 PH: 1-800-375-0168
Stand By Generator Maintenance and Service	Sommers Generator Service.	70 Packham Road Stratford, Ontario N5A 0A6 PH: 1-800-690-2396

Stand By Generator Maintenance and Service	H. Broer Equipment Sales & Service Inc.	730 Talbot Street West P.O. Box 188 Aylmer, Ontario N5H 2V1 PH: 519-773-3100
Diesel Fuel Provider	McDougall Energy	43841 Talbot Line RR3 St. Thomas, Ontario N5P 3S7 PH: 519-631-3810
Electrical Contractor	Koolen Electric	47901 Calton Line RR5 Aylmer, Ontario N5H 2R4 PH: 519-773-8951 PH: 519-631-0590
Backhoe, excavator or dump truck	Laemers Excavating	6480 Sunset Road St. Thomas, Ontario N0L 2L0 PH: 519-631-6465 PH: 519-782-4424
Backhoe, excavator or dump truck	Streib Trucking & Excavating	RR7 Stn Main St. Thomas, Ontario N5P 3T2 PH: 519-633-6913

14.0 Review and Provision of Infrastructure

Once every calendar year, an annual infrastructure review shall be completed. The infrastructure review will assess the condition of the existing infrastructure and include recommendations for future upgrades or replacements.

The report that will be generated from this review will be presented to the Mayor and Council within 90 days at a regularly scheduled meeting of council.

The Infrastructure Review Procedure is in the appendices and will provide staff with guidance.

❖ [Infrastructure Review Procedure, Appendix Q.](#)

15.0 Infrastructure Maintenance, Rehabilitation and Renewal

Planned maintenance in all Central Elgin operated water systems is carried out as follows when time permits.

A long-term forecast of major infrastructure maintenance, rehabilitation and renewal activities is included in the annual Infrastructure Review and is reviewed annually.

- ❖ Annual main valve exercising and inspections.
- ❖ Annually a small percentage of service valves are operated and inspected.
- ❖ Fire hydrant flushing and inspections as well as occasional flow testing.
- ❖ Exercising and inspection of fire hydrant isolation valves (to be done with hydrant flushing).
- ❖ Monthly winter hydrant inspections or snow removal when there is danger of freezing or heavy snow build up.
- ❖ Annual preventative maintenance on approximately 10% of fire hydrants.
- ❖ Annually pressure-reducing valve chambers are inspected and cleaned along with minor maintenance such as cleaning of screens, cleaning air release valves and exercising of line valves.
- ❖ Required activities to maintain both the Belmont water tower and the Port Stanley water tower include:
 - Interior and exterior inspections of the tank.
 - Interior tank cleaning when required.
 - Corrosion control system maintenance.
 - Flow meter and pressure gauge calibrations.
 - On-line water quality analyzer maintenance and calibrations.
 - Chemical feed system maintenance (Port Stanley Tower).
 - SCADA system maintenance.
- ❖ Required activities to maintain the Belmont Water Treatment Plant which include:
 - Annual well maintenance.
 - Well video every 5 years.
 - Chemical feed system maintenance.
 - On-line water quality analyzer maintenance and calibrations.
 - Flow meter and pressure gauge calibrations.

- SCADA system maintenance.
- Stand-By Generator maintenance.

All planned maintenance is scheduled and communicated to operations staff by either the Water/Wastewater Superintendent or the Assistant Water/Wastewater Superintendent. A record of above maintenance is stored at either the Water Operations Centre or the Belmont Water Treatment Plant.

All unplanned maintenance is conducted as required. Unplanned maintenance activities are authorized by the Water/Wastewater Superintendent, Assistant Water/Wastewater Superintendent or the Operator in Charge. All unplanned maintenance records are kept at the Water Operations Work Centre.

Annually the Water/Wastewater Superintendent shall review the maintenance program to determine its effectiveness. The effectiveness of the maintenance program shall be communicated during the annual Infrastructure review meeting.

Infrastructure renewal is prioritized based on water quality, water quantity structural integrity and maintenance activities.

16.0 Sampling, Testing and Monitoring

The sampling, testing and monitoring requirements of the Belmont Water System and the Central Elgin Distribution System are further discussed in the appendices. Since the sampling and monitoring requirements of these two systems are different, a separate plan for each system has been developed. Each of the sampling, testing and monitoring regimes either meets or exceeds legislative requirements. A sampling, monitoring and testing procedure is in the appendices and will guide operators. In addition to this procedure, there is a comprehensive sampling plan and schedule in the appendices that incorporates the sampling requirements of both systems into one easy to follow schedule. Other procedures are also included to assist operators in sampling and testing.

- ❖ [Belmont Water System Sampling, Testing and Monitoring, Appendix R.](#)
- ❖ [Central Elgin Distribution System Sampling, Testing and Monitoring, Appendix S.](#)
- ❖ [Sampling, Testing and Monitoring Procedure, Appendix T.](#)
- ❖ [Central Elgin Water Sampling Schedule and Plan, Appendix U.](#)
- ❖ [Belmont Pump house Daily Site Visits, Checks & Tests Procedure, Appendix V.](#)
- ❖ [Adverse Sample Procedure, Appendix W.](#)
- ❖ [Port Stanley Water Tower Site Visit Procedure, Appendix HH.](#)
- ❖ [Lead Sampling Procedure, Appendix JJ.](#)
- ❖ [Water Tower Routine Inspection Repair & Maintenance Procedure, Appendix MM.](#)

17.0 Measurement and Recording Equipment Calibration and Maintenance

All water quality testers and on-line analyzers are calibrated and maintained as per the manufacturer's recommendations. All calibrations are recorded and kept in a binder at the Water Operations Centre or the Belmont Water Treatment Plant or on the daily facility log sheets. Operators shall refer to the attached procedures to aide them with this process.

All flow measuring equipment such as flow meters are calibrated at minimum annually by a competent person. Records of these calibrations can be found at the Water Operations Work Centre.

- ❖ [Measurement & Recording Equipment Calibration and Mtc. Procedure, Appendix X.](#)
- ❖ [Belmont Pump House Monitoring Equipment Operation & Mtc. Procedure, Appendix Y.](#)

18.0 Emergency Management

The Municipality of Central Elgin is prepared for operational emergencies through the attached procedure and contingency plans. These contingency plans include measures to deal with such emergency conditions as the absence of O.R.O., major power failure, pump failure, loss of well supply water, pipe ruptures, P.L.C. failures, low water pressure, low chlorine level, chemical spills and security breaches. The emergency phone list is posted at the Belmont Water Treatment Plant and at all Water/Wastewater Department land phones at the Water Operations Centre and includes all of the required contact phone numbers. The contingency plans and emergency phone list will be kept current by the Water/Wastewater Superintendent.

The Emergency Conditions Procedure, which is in the appendices, outlines the responsibilities of Central Elgin Water Operations Staff as well as communication protocol during an emergency situation. In the event of an operational emergency, the O.R.O. shall be contacted immediately. In the event of a municipal wide emergency, the O.R.O. shall contact the Director of Engineering and Planning Services whom shall if necessary, assemble the Emergency Control Group as per the Municipality of Central Elgin Emergency Response Plan.

Desktop simulations are conducted annually by Operators for a select group of contingency plans and emergency conditions following the Emergency Conditions Procedure. Contingency plans or emergency conditions shall be selected for desktop simulations in such a manner to ensure all are included over time.

- ❖ [Emergency Conditions Procedure, Appendix Z.](#)
- ❖ [Belmont Water System Contingency Plans Appendix AA.](#)

- ❖ [Central Elgin Distribution System Contingency Plans Appendix BB.](#)
- ❖ [Stand By Generator Operation and Maintenance Procedure, Appendix II.](#)
- ❖ [Chemical Spill Response Procedure, Appendix LL.](#)

19.0 Internal Audit

All sections of the Quality Management System will be subject to an internal audit at least once each calendar year. The internal audit procedure and corrective actions procedure, which are located in the appendices, will assist staff in conducting internal audits and correcting issues.

- ❖ [Internal Audit Procedure, Appendix CC.](#)
- ❖ [Corrective Actions Procedure, Appendix DD.](#)

20.0 Management Review

A management review will be conducted once per calendar year with all water management personnel present. The Management Review procedure, which is in the appendices, will assist staff with the management review process.

- ❖ [Management Review Procedure, Appendix EE.](#)

21.0 Continual Improvement

The Municipality of Central Elgin shall strive to continually improve the effectiveness of its Quality Management System through the use of Corrective Actions or Opportunities for Improvements from annual audits, staff suggestions, Management Reviews, Infrastructure Reviews and Emergency Desk Top Exercises. The Continual Improvement Procedure, which is in the appendices, will assist staff with the continual improvement process.

- ❖ [Continual Improvement Procedure, Appendix FF.](#)
- ❖ [Corrective Actions Procedure, Appendix DD.](#)

History of Changes

Revision	Date	Description	By
10	January 8, 2014	-Added History of Changes section. -Element 13, Sommers Generator Services added to the Essential Suppliers List. -Element 15, clarified maintenance activities at the Belmont WTP, Belmont water tower and Port Stanley water tower. -Element 3, added when re-endorsement was required. -Annual Review of Operational Plan. Minor spelling and grammatical changes.	Paul Barletta
11	June 10, 2014	Updated where necessary the reference to the Manager of Community & Environmental Services with Assistant Director of Phys. Serv.	Paul Barletta
12	July 31, 2015	-QMI OFI to make history of changes table match the document revision number. -Updated the Essential Suppliers list to include additional suppliers or service providers where needed and added dump truck and back hoe contractors to the list.	Paul Barletta
13	March 11, 2016	Annual review of document, make edits-Elem-3-added wording to document a process for new regs, Elem19&20 changed wording to once per calendar year for frequency.	Paul Barletta
14	September 20, 2016	Update Element 3.0 to indicate council re-endorsement date of September 12, 2016.	Paul Barletta
15	May 15, 2017	Annual review of documents, make edits where needed to Elements 3, 4, 9, 10, 11 and 15 to	Paul Barletta

		reflect title change of Foreman to Assistant Superintendent. Update Element 18 to clarify how contingency plans are chosen for desk-top.	
16	June 14, 2018	Annual review of documents, make edits where needed. Updated Essential Suppliers list, new water meter supplier. Changed Foreman wording to Ass. Super in a few locations, changed MOE to MOECC where needed. Elem 11, changed number of operators from 7 to 8.	Paul Barletta
17	June 11, 2019	Annual review of documents, make edits to conform with new version 2.0 where needed.	Paul Barletta
18	September 9, 2019	Management structural changes, eliminate Director and Assistant Director of Physical Services and replace with Director of Infrastructure and Community Services where required.	Paul Barletta
19	October 28, 2019	Updated Element 3, endorsement to include most recent council endorsement date.	Paul Barletta
20	May 13, 2020	Annual review of all documents, minor wording changes.	Paul Barletta
21	March 31, 2021	Annual review of all documents, minor grammar changes add new position of Manager of Environmental Services in Element 9 Roles and Responsibilities	Paul Barletta
22	February 18, 2022	Annual review of all documents, update essential suppliers list with new name for Laboratory SGS Canada Inc.	Paul Barletta
23	December 12, 2022	Updated Commitments and Endorsements, updated rolls and responsibilities for the QMS Representative to the Manager of Environmental Services and updated	Alex Piggott

		suppliers list with approved vendors.	
24	June 27, 2023	Council Endorsement of Plan	Alex Piggott
25	August 19, 2026	Updated Commitments and Endorsements based on changes to the organization and reporting structure. Updated the approved suppliers list	Alex Piggott



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