Township of
Oro-Medonte
Proud Heritage, Exciting Future

Operational

Plan

Drinking Water Systems:

Canterbury
Cedarbrook
Craighurst
Harbourwood
Horseshoe Highlands
Maplewood
Medonte Hills
Robincrest
Shanty Bay
Sugarbush
Warminster

VERSION #: 09-2018

Date Endorsed: 15-July-2009

Operational Plan

Table of Contents

Element 1 – Quality Management System

The Township of Oro-Medonte Drinking Water Quality Management System (QMS) is documented in this Operational Plan as part of our efforts to ensure that clean, safe and reliable drinking water is supplied to all customers served by the Township of Oro-Medonte's Water Systems. The development and continual improvement of this Plan will help ensure that all regulatory requirements are met and that consumers can be confident that their drinking water is protected through the effective application of the QMS.

The Township of Oro-Medonte has developed an integrated Operational Plan. For efficiency and clarity, common elements of QMS are outlined in this document and procedural documents and requirements specific to an individual system are referenced.

This Plan was developed to meet the Ministry of the Environment and Climate Change's *Drinking Water Quality Management Standard* under the Safe Drinking Water Act, 2002 (as amended). In 2017, the Standard was changed to *Drinking Water Quality Management Standard, Final – Version 2.0, February 2017*.

Element 2 – Quality Management System Policy

The Township of Oro-Medonte is committed to managing the treatment and supply of clean, safe drinking water to all of its customers and commits to consistently meeting all applicable legislative and regulatory requirements and customer needs. This commitment is defined and documented in the Township's Quality Management System Policy and through the DWQMS Operational Plan.

The Township of Oro-Medonte has established and maintains a Drinking Water Quality Policy that is regularly reviewed, improved and upgraded by management and employees involved in the supply of drinking water. The Operational Plan and Drinking Water Quality Policy are readily available, in hard copy, at the Township Administration office and are available to the public on the Township of Oro-Medonte website (www.oro-medonte.ca).

The Drinking Water Quality Management System (DWQMS) is implemented by the Township to effectively minimize and manage any potential risks to drinking water quality and safety.

Element 3 – Commitment and Endorsement

The Drinking Water Quality Management System and Operational Plan have been reviewed and approved by the Township of Oro-Medonte Council, Management and Operational Staff. An annual review by the Manager of Environmental Services/QMS Representative ensures that the document remains valid, relevant and promotes continual improvement.

Endorsed by:

_____   October 11, 2018
           C.A.O.   _____
    (Owner's Representative)   Date

_____   October 11, 2018
  Manager of Environmental Services   _____
      (QMS Representative)   Date

Element 4 – Quality Management System Representative

The Township of Oro-Medonte has designated the Manager of Environmental Services as the Quality Management System (QMS) Representative.

The QMS Representative, irrespective of other responsibilities, is responsible for the following:

➢ Ensuring that processes and procedures needed for the QMS are established and maintained;

➢ Reporting to Top Management on the performance of the QMS and any need for improvement, as needed, or during the annual Management Review Meetings at a minimum;

➢ Providing QMS document and record control, thereby ensuring that current versions of documents required by the QMS are being used;

➢ Personnel are made aware, through training, of all applicable legislative and regulatory requirements that pertain to their duties for the operation of the Municipal water systems;

➢ Promoting awareness of the Quality Management System throughout the Operating Authority;

➢ Providing all staff with technical and administrative consultation related to QMS document preparation and implementation, as needed;

➢ Reviewing and approving QMS documentation, as required.

In the prolonged absence of the QMS Representative, upper Management will appoint an alternative.

Element 5 – Document and Record Control

The Document and Record Control procedure is located in the Policies and Procedures Manual. This procedure describes how documents and records, required by the QMS, are:

➢ Kept current, legible and readily identifiable

➢ Retrievable

➢ Stored, protected, retained and disposed of

Element 6 – The Township of Oro-Medonte Drinking Water System

Detailed descriptions of the water systems owned by the Township of Oro-Medonte are outlined in the following documents, located in the Operations Manual and Policies and Procedures Manual:

Drinking Water System Description - Canterbury
Drinking Water System Description - Cedarbrook
Drinking Water System Description - Craighurst
Drinking Water System Description - Harbourwood
Drinking Water System Description - Horseshoe Highlands
Drinking Water System Description - Maplewood
Drinking Water System Description - Medonte Hills
Drinking Water System Description - Robincrest
Drinking Water System Description - Shanty Bay
Drinking Water System Description - Sugarbush
Drinking Water System Description - Warminster

These procedures describe the Township of Oro-Medonte's drinking water system, including treatment processes and distribution components, as well as a process flow chart and descriptions of any upstream or downstream processes relied upon to ensure the provision of safe drinking water.

Element 7 – Risk Assessment

The Risk Assessment procedure is located in the Policies and Procedures Manual. The Risk Assessment procedure is a systematic methodology that identifies, assesses and ranks potential hazards and events, monitors limits and actions taken to prevent, mitigate, or respond to hazards, and considers the reliability and redundancy of equipment. As well, it defines Critical Control Limits and Critical Control Points where required. Risk Assessments for each subject system are documented in the Risk Identification and Assessment Tables located in the Policies and Procedures Manual.

At least once every calendar year, the Manager of Environmental Services and Environmental Services Staff review the risk assessment and ensure information and assumptions remain current and valid.

Every three (3) years, the Manager of Environmental Services will assemble the Environmental Services Staff to conduct a new risk assessment.
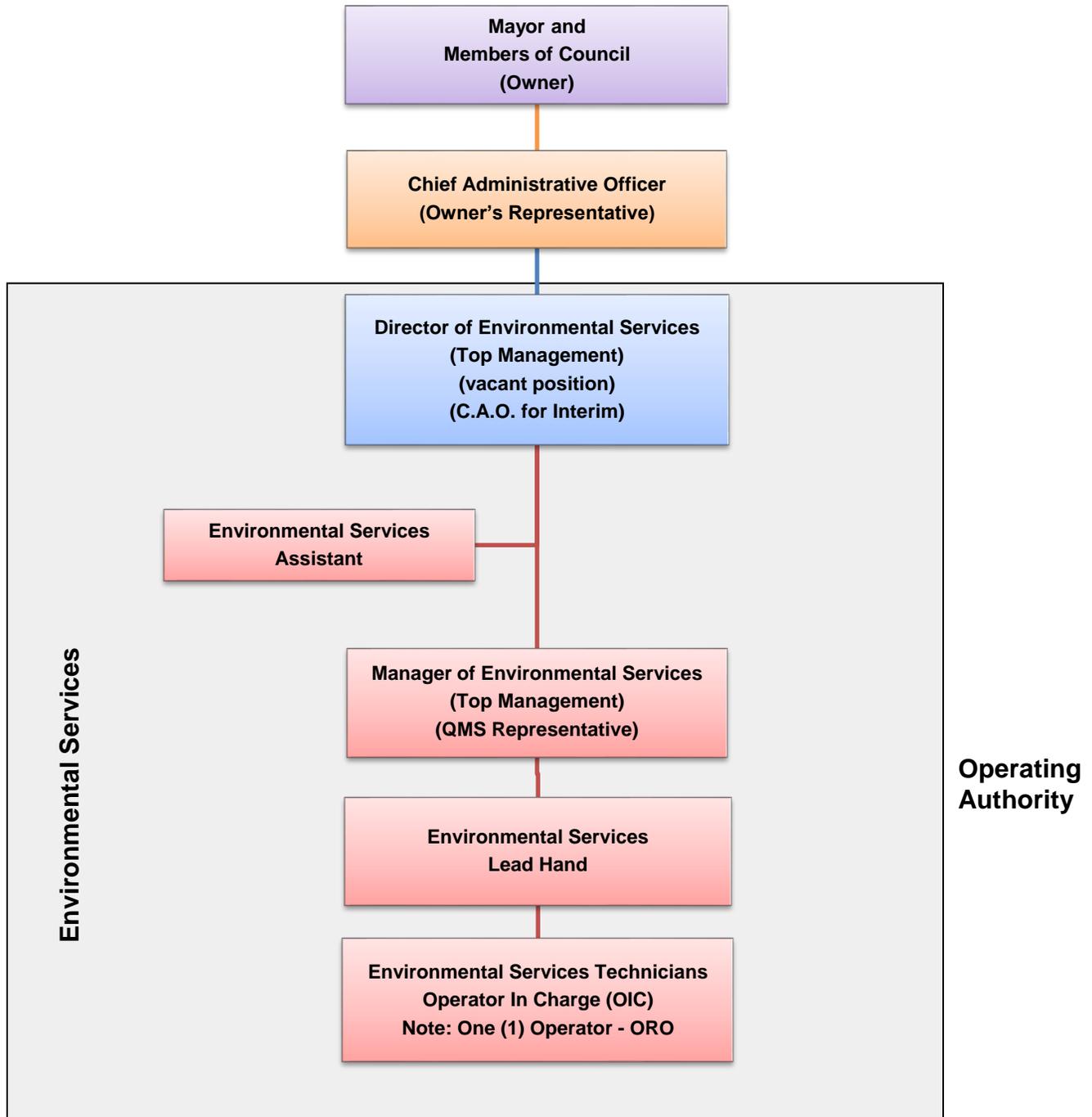
Element 8 – Risk Assessment Outcomes

The outcomes from the risk assessment process are documented in the Risk Identification and Assessment Tables.

This document summarizes outcomes, Critical Control Points and limits, and control measures determined through the risk assessment process.   This document also describes the procedures for recording Critical Control limit deviations.

Element 9 – Organizational Structure, Roles, Responsibilities and Authorities

Key roles in the management of drinking water quality for the Township of Oro-Medonte are defined in the following Organizational Chart:

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                    ┌─────────────────────────┐
                    │      Mayor and          │
                    │   Members of Council    │
                    │        (Owner)          │
                    └───────────┬─────────────┘
                                │
                    ┌───────────┴─────────────┐
                    │ Chief Administrative     │
                    │ Officer                  │
                    │ (Owner's Representative) │
                    └───────────┬─────────────┘
                                │
          ┌─────────────────────┴──────────────────────────┐
          │   ┌─────────────────────────────────────┐      │
          │   │  Director of Environmental Services  │      │
          │   │        (Top Management)              │      │
          │   │        (vacant position)             │      │
          │   │        (C.A.O. for Interim)          │      │
          │   └──────────────┬──────────────────────┘      │
          │                  │                              │
          │ ┌───────────────┐│                              │
          │ │ Environmental ││                              │
          │ │ Services      ││                              │
          │ │ Assistant     ││                              │
          │ └───────────────┘│                              │
          │                  │                              │
          │   ┌──────────────┴──────────────────────┐      │
          │   │ Manager of Environmental Services    │      │
          │   │       (Top Management)               │      │
          │   │       (QMS Representative)           │      │
          │   └──────────────┬──────────────────────┘      │
          │                  │                              │
          │   ┌──────────────┴──────────────────────┐      │
          │   │   Environmental Services             │      │
          │   │   Lead Hand                          │      │
          │   └──────────────┬──────────────────────┘      │
          │                  │                              │
          │   ┌──────────────┴──────────────────────┐      │
          │   │ Environmental Services Technicians   │      │
          │   │   Operator In Charge (OIC)           │      │
          │   │   Note: One (1) Operator - ORO       │      │
          │   └─────────────────────────────────────┘      │
          └────────────────────────────────────────────────┘
Environmental Services                        Operating Authority
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Responsibilities and authorities for positions directly affecting drinking water quality for the Township of Oro-Medonte are defined in the Safe Drinking Water Act, 2002 (as amended), through Operator job descriptions located in the Policies and Procedures Manual, and are further communicated through on-the-job training. Job descriptions can be found in personnel files. Top Management Roles and Responsibilities are defined below:

Owner and Owner's Representative – Responsibilities and Authorities:

The Township of Oro-Medonte, which is represented by an elected Mayor and Municipal Council, is responsible for ensuring the delivery of a safe and reliable supply of drinking water to the residents of Municipal water supply systems within the Township of Oro-Medonte. The Mayor and Members of Council, as Owners, have the authority to delegate the management of the drinking water system to qualified staff. Council has appointed the Chief Administrative Officer as the Owner's Representative.

Additionally, the Owner assumes the applicable responsibilities and authorities outlined in the Safe Drinking Water Act, 2002 (as amended) and the DWQMS, which include:

- ➢ Ensuring the Operating Authority is accredited;
- ➢ Endorsing and submitting the Operational Plan to the Ministry of the Environment, Conservation and Parks;
- ➢ Submitting applications for the Municipal Drinking Water Licence and Drinking Water Works Permit;
- ➢ Developing and submitting Financial Plans to the Ministry of Municipal Affairs and Housing.

Director of Environmental Services – Responsibilities and Authorities:

- ➢ The Director is responsible for arranging reports to the Mayor and Members of Council on the oversight of the Municipal water supply system. The Director will receive (information) reports from the Manager of Environmental Services regarding issues that are relevant to the overall operation of the water system;
- ➢ The Director is responsible for the management review of the QMS;
- ➢ The Director is responsible for providing resources/infrastructure;
- ➢ The Director ensures the DWQMS is implemented and communicated to Council;
- ➢ The Director is authorized by Council to ensure that management staff is in place to ensure the Municipal water system is supplying safe and reliable drinking water in accordance with all applicable legislation and regulations.

Manager of Environmental Services – Responsibilities and Authorities:

➢ The Manager is responsible for ensuring that operations within the Municipal water supply system are being performed to ensure that Municipal drinking water is safe and systems are in compliance with current regulations;

➢ The Manager must provide long-term planning and budgeting;

➢ The Manager must inform the Director and Council of deficiencies and required resources;

➢ The Manager will provide the Director and Council with current technical and administrative information;

➢ Responsibilities also include preparing reports for capital expenditures, budgeting, maintenance activities, infrastructure condition assessment, and Annual and Summary Reports for the Director, Council, regulatory authorities and public;

➢ The Manager has the authority to ensure staff is in place to manage the water supply system, appoint a QMS Representative, develop administrative and technical policy, and evaluate and prioritize long-term utility needs;

➢ The Manager maintains a provincial Operator's license at system certification level.

Element 10 – Competencies

Competencies required by personnel whose duties directly affect drinking water quality for the Township of Oro-Medonte are defined in Operator job descriptions, located in the Policies and Procedures Manual. Top Management competencies are defined below:

Chief Administrative Officer (C.A.O.) – Competencies:

➢ The C.A.O. is briefed on operating conditions and is provided updates required by regulations at regular meetings with the appropriate personnel. These activities provide the C.A.O. with the awareness and competency to perform his/her duties.

Director of Environmental Services – Competencies:

➢ Shall possess advanced theoretical and working knowledge of administrative skills expected of a senior level manager;

➢ Shall possess an intermediate theoretical and working knowledge of the Safe Drinking Water Act, 2002 (as amended) and applicable regulations, and the Township of Oro-Medonte Water Supply Systems;

➢ Shall possess a basic understanding of the Drinking Water Quality Management System.

Manager of Environmental Services – Competencies:

> ➢ Shall possess advanced theoretical and working knowledge of administrative skills that are expected of a mid-level Manager;

> ➢ Shall possess advanced theoretical and working knowledge of the Safe Drinking Water Act, 2002 (as amended) and applicable regulations, and the Township of Oro-Medonte Water Supply Systems;

> ➢ The Manager shall hold at a minimum, Class II Water Distribution and Supply Sub System Certificate;

> ➢ Shall possess a working knowledge of the Drinking Water Quality Management System.

The competency requirements, as outlined above and in the Operator job descriptions, are ensured through the following activities:

> ➢ All new employees must provide evidence of Ministry of the Environment, Conservation and Parks certification and other competency requirements. All Operator certificates are filed in their training file at the Administration Building;

> ➢ All new employees undergo training under the QMS Representative, including a review of the Operational Plan, the Policies and Procedures Manual, and on-the-job instruction;

> ➢ Employees are trained annually. Annual training ensures that employees are aware of the relevance of their duties and how they affect drinking water safety.

Actions taken to verify competence can include: observing job performance, appropriate on-the-job training documentation, internal audit results, corrective actions issued and annual job performance evaluations.

Documented evidence of these requirements is maintained in Human Resources personnel files and in Environmental Services training files. Personnel files include training, education, skills, experience and performance reviews. These records are maintained for all permanent employees.

Element 11 – Personnel Coverage

The Personnel Coverage procedure, located in the Policies and Procedures Manual, describes how adequate staffing and personnel coverage are ensured and maintained within the Operating Authority. The procedure details personnel coverage measures followed during regular business hours, as well as during evenings, weekends, holidays and emergency situations.

Element 12 – Communications

The following activities describe how the relevant aspects of the QMS are communicated between Top Management and the Owner, operating authority personnel, suppliers and the public:

➢ The Director of Environmental Services ensures that the Owner (Mayor and Council) is provided with a current copy of the Operational Plan;

➢ The Director of Environmental Services keeps the Owner informed of any changes to the QMS, the adequacy of infrastructure requirements, the outcome of on-going activities as a result of Management Review, and other QMS issues;

➢ The Operational Plan is circulated and reviewed by all Environmental Services employees and meetings are recorded on the Training/Safety Talk – Report Form;

➢ Procedures are circulated and reviewed by all Environmental Services employees through on-site training meetings and documented in the staff training files and excel sheets;

➢ New Environmental Services staff is required to be given a copy of the QMS to review and to sign the Training/Safety Talk – Report Form;

➢ Copies of the currently approved QMS for all staff are kept in the office of the Manager of Environmental Services. Personnel are informed of the QMS, and any changes or updates to it, through informal meetings and feedback between the QMS Representative and Operators;

➢ Water System Work Order/Complaint Forms are reviewed and signed by the appropriate personnel. These forms are reviewed annually for trends and opportunities for improvement as part of the requirements of Elements 14 and 15 of the DWQMS;

➢ Essential suppliers receive information regarding the QMS for the Township of Oro-Medonte, if and when necessary, as described in the Essential Supplies and Services procedure;

➢ Copies of the QMS are publicly available at the Township Office, 148 Line 7 South, and on the Township website at www.oro-medonte.ca.

➢ Consumers are also notified through social media of the availability of the Annual and Summary Reports, as required by Ministry regulations, and of the DWQMS Operational Plan at the Township Office and on the Township website;

➢ Any consumer comments or concerns with respect to the QMS are forwarded to Top Management through the QMS Representative, whom responds to the consumer.

Element 13 – Essential Supplies and Services

The Essential Supplies and Services procedure, located in the Policies and Procedures Manual, identifies the supplies and services deemed essential to the delivery of safe drinking water and describes how the quality of these essential supplies and services is met on a continual basis. The list of essential suppliers is reviewed annually during the Internal Audit.

Element 14 – Review and Provision of Infrastructure

The immediate status and adequacy of the Township of Oro-Medonte's drinking water infrastructure is assessed by the Manager of Environmental Services on an ongoing basis. Resource requirements for maintaining adequacy are determined and communicated annually through the budget process.

The Review and Provision of Infrastructure procedure, located in the Policies and Procedures Manual, documents the process followed by the Township of Oro-Medonte for the annual review of the adequacy of its drinking water system infrastructure.

Inputs to Infrastructure Review can include, but are not limited to:

  ➢ The current Capital Plan

  ➢ Results from previous infrastructure reviews

  ➢ Corrective and Preventative Maintenance histories
  ➢ Customer complaint reviews
  ➢ Life Cycle Cost analysis
  ➢ Information regarding water quality initiatives and regulations
  ➢ Water quality data, and
  ➢ Any other relevant information

Outputs of the Infrastructure Review can include, but are not limited to:

  ➢ Documented Capital Plan

Element 15 – Infrastructure Maintenance, Rehabilitation and Renewal

The Infrastructure Maintenance, Rehabilitation and Renewal procedure, located in the Policies and Procedures Manual, describes how the Township of Oro-Medonte carries out maintenance and infrastructure renewal programs related to the drinking water infrastructure. Infrastructure maintenance is addressed by both the planned (preventative) and unplanned (corrective) maintenance.

Planned (Preventative) Maintenance:

Preventative maintenance is a schedule of planned maintenance activities with the purpose of preventing breakdowns and failures. Preventing the failure of equipment before it occurs ensures the safe and reliable supply of drinking water.

Maintenance activities are described in procedures specific to the equipment being maintained. Scheduled maintenance activities and frequencies are developed from manufacturer's recommendations, operator experience / observations and generally accepted practices. Planned maintenance tasks are communicated to the person responsible by issuance of the Water System Work Order/Complaint Form. Completed forms are reviewed and signed by the appropriate personnel. Completed and signed Water System Work Order/Complaint Forms are filed in the Environmental Services Assistant's area.

Unplanned (Corrective) Maintenance:

Unplanned maintenance tasks result from equipment malfunction, breakage and / or customer complaints. The Operator in Charge (OIC) responds to unplanned maintenance, as required. Results of unplanned maintenance are documented on the Water System Work Order/Complaint Form. Completed and signed Water System Work Order/Complaint Forms are filed in the Environmental Services Assistant's area.

Annual Maintenance Review:

At minimum, once every calendar year, the Manager of Environmental Services prepares a summary of the infrastructure maintenance, rehabilitation and renewal program, and specifically looks at unplanned maintenance work to determine if additional planned maintenance or replacement is required. This data may be used as input to the annual Review and Provision of Infrastructure program and Management Review. This summary is also communicated to Top Management during the yearly Management Review meeting and during Budget review.

Element 16 – Sampling, Testing and Monitoring

The Sampling, Testing and Monitoring procedure, located in the Policies and Procedures Manual, describes how the Township of Oro-Medonte performs water sampling, testing and monitoring to ensure the production and distribution of safe drinking water. This document includes requirements for sampling and monitoring at the conditions most challenging to the subject system.

A description of how results are communicated throughout the organization is also provided in this document.

Sampling, testing and monitoring requirements are identified and incorporated into system specific sampling plans and sampling schedule documents, and are based on the requirements set out by the Ministry of the Environment, Conservation and Parks. These documents are reviewed and updated, as necessary, to incorporate regulatory and/or operational sampling, testing and monitoring requirements. Incidents of regulatory non-compliance, incidents of adverse drinking water tests, deviations from Critical Control Point limits and response actions, and water quality tests are discussed during Management Review.

All ground water systems are non-GUDI wells and as such, required no upstream sampling.

Element 17 – Measurement & Recording Equipment Calibration & Maintenance

The Measurement and Recording Equipment Calibration and Maintenance procedure, located in the Policies and Procedures Manual, describes the requirements for the calibration and verification of measurement and recording equipment used for monitoring raw, in-process and potable drinking water through treatment, storage, pumping and distribution systems owned by the Township of Oro-Medonte.

This procedure lists the equipment governed under this program. For each type of measurement and recording equipment, the procedure provides information, including maintenance / calibration frequency and methods, a listing of who is responsible for the maintenance of equipment (internal or outsourced), and related record keeping requirements.

Element 18 – Emergency Management

Potential emergency situations that have been identified in the Contingency Plan, located in each of the pumphouses.

Emergency management incidents are reported on the Corrective Action Report form. The Continual Improvement procedure describes how this form is used. Both the procedure and the form are located in the Policies and Procedures Manual.

Each Operator is required to review the written Policies and Procedures Manual, Operations Manual and Contingency Plan, annually. When practical, emergency procedures are tested on an annual basis. Records of these reviews are recorded in the Operator's Education Binders and Excel spreadsheet.

Emergency communication protocol and operating authority responsibilities have been included in the response procedures for each potential emergency, as found in the Contingency Plan and Policies and Procedures Manual.

The emergency contact information is located in each pumphouse on the Environmental Services Department Staff "Fan-Out" List, in the Contingency Plan, and in the Essential Supplies and Services procedure.

Owner responsibilities during emergency situations are defined in the Township's Emergency Management Program.

Element 19 – Internal Audits

Internal audits are conducted to ensure that the QMS conforms to the requirements of the Township of Oro-Medonte Operational Plan and meets or exceeds the requirements of the Ministry of the Environment, Conservation and Parks' Drinking Water Quality Management Standard (DWQMS).

The Internal Audits procedure, located in the Policies and Procedures Manual, describes how the Township of Oro-Medonte:

> ➢ Evaluates conformity of the QMS with the requirements of the DWQMS;

> ➢ Identifies internal audit criteria, frequency, scope, methodology and record-keeping requirements;

> ➢ Considers previous internal and external audit results; and

> ➢ Describes how Quality Management System corrective actions are identified and initiated.

Non-Conformances are reported on the Corrective Action Report form. The Continual Improvement procedure describes how this form is used. Both the procedure and the form are located in the Policies and Procedures Manual.

Based on the availability of resources, the Township of Oro-Medonte may use the services of a qualified third party for auditing or staff from other Municipalities. In this event, the outside Auditors must provide proof of equivalent competency prior to conducting an audit.

Element 20 – Management Review

The Management Review procedure, located in the Policies and Procedures Manual, describes the process followed by Top Management in planning, executing and documenting DWQMS Management Reviews. The Management Review process ensures that all levels of the organizational structure are kept informed and aware of DWQMS and DWS performance.

The Manager of Environmental Services co-ordinates and facilitates the Management Review meetings and the compilation of required input data for presentation to Top

Management. Required inputs to Management Review are defined by the DWQMS and are listed in the Management Review procedure. Top Management is responsible for reviewing the input materials presented and generating outputs as specified in the Management Review procedure.

Management Review meetings are conducted at least once every calendar year. However, multiple Management Review meetings can be held within a year, if required, as long as all defined review requirements are addressed over the course of the year.

Management Review outputs are documented on the Management Review Record and retained as documented evidence of the review. The Management Review Record documents topics discussed, as well as action items and can also serve as meeting minutes.

Negative trends in data and opportunities requiring further investigation are reported on the Corrective Action Report form. The Continual Improvement procedure describes how this form is used. Both the procedure and the form are located in the Policies and Procedures Manual.

The Top Management Representative is responsible for communicating Management Review results to the Owner, as defined in the Management Review procedure.

Element 21 – Continual Improvement

The Township of Oro-Medonte identifies and implements changes necessary to ensure and maintain the continued suitability and effectiveness of the DWQMS through the use of the Quality Policy, Operational Plan, audit results, analysis of data, corrective and preventative actions, trends in Work Order/Complaint data, and the Management Review process.

The Continual Improvement procedure, located in the Policies and Procedures Manual, describes how the Corrective Action Report form is used to document drinking water quality incidents including, but not limited to:

- ➢ Emergency responses
- ➢ Deterioration in drinking water quality
- ➢ Internal audit observations
- ➢ Management Review action items
- ➢ DWQMS Non-Conformance's
- ➢ Observations during process monitoring
- ➢ Customer feedback (including complaints)
- ➢ Trends in corrective and preventative maintenance activities
- ➢ Trends in Work Order/Complaint forms
- ➢ Regulatory reviews

The Corrective Action Report form serves as a method for collecting data. This data, along with the Management Review Record, assists in identifying opportunities for improvement to the DWQMS and to implement changes necessary to ensure and maintain the continued suitability and effectiveness of the DWQMS.