

Agenda

Elgin Area Primary Water Supply System

Joint Board of Management

3rd Meeting of the Elgin Area Primary Water Supply System Joint Board of Management

June 1, 2023, 5:00 PM

Committee Room #5

The Elgin Area Water Supply System and its benefiting municipalities are situated on the traditional lands of the Anishinaabek (Uh-nish-in-ah-bek), Haudenosaunee (Ho-den-no-show-nee), Lūnaapéewak (Len-ah-pay-wuk) and Attawandaron (Add-a-won-da-run) peoples.

We honour and respect the history, languages and culture of the diverse Indigenous people who call this territory home.

This region is currently home to many First Nations, Inuit and Métis people today and we are grateful to have the opportunity to live and work in this territory.

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1. Call to Order	
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4.6 St. Thomas Industrial Development Area

(Note: the St. Thomas Industrial Development Area report will be provided on the Added Agenda.)

5. Deferred Matters/Additional Business

6. Upcoming Meeting Dates

October 5, 2023

December 7, 2023

7. Adjournment

Elgin Area Primary Water Supply System Report

2nd Meeting of the Elgin Area Primary Water Supply System Joint Board of Management
March 2, 2023

Attendance: Meeting held on Thursday, March 2, 2023, commencing at 5:00 PM.

PRESENT: S. Hillier (Chair); J. Adzija, P. Barbour, J. Herbert, E. Pelosa, S. Peters and M. Widner and J. Bunn (Committee Clerk)

ALSO PRESENT: B. Haklander, A. Henry and K. Scherr

1. Call to Order

1.1 Disclosures of Pecuniary Interest

That it BE NOTED that no pecuniary interests were disclosed.

2. Adoption of Minutes

2.1 Minutes of the 1st Meeting held on Thursday, January 19, 2023

BARBOUR AND PETERS

That the minutes of the 1st meeting of the Elgin Area Primary Water Supply System Joint Board of Management, from the meeting held on January 19, 2023, **BE NOTED AND FILED. CARRIED**

Motion Passed

3. Consent Items

3.1 Quarterly Compliance Report (4th Quarter 2022: October - December)

PETERS AND HERBERT

That, on the recommendation of the Chief Administrative Officer, the report dated March 2, 2023, with respect to the general, regulatory and contractual obligations of the Elgin Area Primary Water Supply System, for October to December 2022, **BE RECEIVED. CARRIED**

Motion Passed

3.2 Quarterly Operating Financial Status - 4th Quarter 2022

PETERS AND HERBERT

That, on the recommendation of the Chief Administrative Officer, the report dated March 2, 2023, with respect to the Quarterly Operating Financial Status of the Elgin Area Primary Water Supply System, **BE RECEIVED. CARRIED**

Motion Passed

3.3 Capital Status Report

PETERS AND HERBERT

That, on the recommendation of the Chief Administrative Officer, the following actions be taken with respect to the report, dated March 2, 2023, related to the Elgin Area Primary Water Supply System Capital Projects:

- a) the above-noted report **BE RECEIVED**; and,
- b) projects EA2177 Asset Management Plan, EA3024 EMPS Boiler Replacement and EA4055 Pipeline Condition **BE CLOSED**, with surplus funding in the approximate amount of \$135,592 being released to the Reserve Funds. **CARRIED**

Motion Passed

3.4 Environmental Objectives

PETERS AND HERBERT

That, on the recommendation of the Chief Administrative Officer, the following actions be taken with respect to the report dated March 2, 2023, related to the Environmental Objectives of the Elgin Area Primary Water Supply System:

- a) the above-noted report **BE RECEIVED**; and,
- b) the environmental objectives, outlined in the above-noted report, **BE ENDORSED. CARRIED**

Motion Passed

3.5 EA4186 Sodium Hydroxide Assessment Study - Final Report

PETERS AND HERBERT

That, on the recommendation of the Chief Administrative Officer, the report dated March 2, 2023, with respect to the EA4186 Sodium Hydroxide Assessment Study project, **BE RECEIVED. CARRIED**

Motion Passed

3.6 Licence of Occupancy - Birds Canada

BARBOUR AND HERBERT

That, on the recommendation of the Chief Administrative Officer, the Board Chair and the Chief Administrative Officer, the Board Chair and the Chief Administrative Officer **BE AUTHORIZED** to execute a Non-Exclusive Licence Agreement with Birds Canada, substantially in the form appended to the report dated March 2, 2023, for Birds Canada's installation and operation of telecommunications equipment at the Elgin Area water treatment plant; it being noted that there will be no annual fee imposed with respect to the aforementioned Agreement. **CARRIED**

Motion Passed

3.7 EA4198 Filter Emergency Repairs

PETERS AND HERBERT

That, on the recommendation of the Chief Administrative Officer, the report dated March 2, 2023, with respect to project EA4198 Filter Emergency Repairs, **BE RECEIVED. CARRIED**

Motion Passed

4. Items for Discussion

4.1 EA4020 Financial Plan Update

BARBOUR AND HERBERT

That, on the recommendation of the Chief Administrative Officer, the Financial Plan Update for the Elgin Area Primary Water Supply System, as outlined in the report dated March 2, 2023, **BE ENDORSED** by the Board of Management for the Elgin Area Primary Water Supply System; it being noted that the attached presentation, from G. Scandlan, Watson & Associates Economists Ltd., with respect to this matter, was received.

Motion Passed

4.2 Procurement of Goods and Services and Disposal of Assets Policy

PELOZA AND PETERS

That, on the recommendation of the Chief Administrative Officer, the proposed by-law, as appended to the report dated March 2, 2023, **BE INTRODUCED** at the Elgin Area Primary Water Supply System Joint Board of Management meeting held on March 2, 2023, to:

a) implement the policy, as appended to the above-noted by-law, entitled "Procurement of Goods and Services and Disposal of Assets Policy"; and,

b) repeal By-Law No. 2, being "A by-law relating to the procurement and disposal of goods, services and equipment in respect of the Elgin Area Primary Water Supply System", and all of its amendments. **CARRIED**

Motion Passed

Additional Votes:

PELOZA AND BARBOUR

Motion to approve the First Reading of By-law No. 2A-2023.

Motion Passed

PETERS AND PELOZA

Motion to approve the Second Reading of By-law No. 2A-2023.

Motion Passed

PELOZA AND BARBOUR

Motion to approve the Third Reading and Enactment of By-law No. 2A-2023.

Motion Passed

4.3 Delegation of Powers and Duties Policy

HERBERT AND BARBOUR

That, on the recommendation of the Chief Administrative Officer, the proposed by-law, as appended to the report dated March 2, 2023, **BE INTRODUCED** at the Elgin Area Primary Water Supply System Joint Board of Management meeting held on March 2, 2023, to establish a policy for the delegation of powers and duties, as required under section 270(1) of the Municipal Act, 2001. **CARRIED**

Motion Passed

Additional Votes:

PETERS AND PELOZA

Motion to approve the First Reading of By-law No. 5A-2023.

Motion Passed

PELOZA AND BARBOUR

Motion to approve the Second Reading of By-law No. 5A-2023.

Motion Passed

ADZIJA AND HERBERT

Motion to approve the Third Reading and Enactment of By-law No. 5A-2023.

Motion Passed

4.4 EA4166 SCADA Software Upgrade - Consultant Award

PELOZA AND PETERS

That, on the recommendation of the Chief Administrative Officer, the following actions be taken with respect to the report, dated March 2, 2023, related to a consultant award for the Supervisory Control and Data Acquisition (SCADA) Software Upgrade (EA4166):

- a) the proposal from Brock Solutions for the SCADA Software Upgrade, in the amount of \$868,508, including contingency (excluding HST), **BE ACCEPTED**, contingent on the concurrent acceptance by the Lake Huron Water Supply System Board of Management; it being noted that the projected cost to Elgin is \$434,253 or 50% of the proposed amount;
- b) the Board Chair and the Chief Administrative Officer **BE AUTHORIZED** to execute a consulting services agreement with Brock Solutions for the completion of a SCADA Software Upgrade for the Elgin Area Primary Water Supply System; and,
- c) the above-noted report **BE RECEIVED. CARRIED**

Motion Passed

4.5 EA4132 Alum Tank Replacements

BARBOUR AND HERBERT

That, on the recommendation of the Chief Administrative Officer, the report dated March 2, 2023, with respect to the status of the EA4132 Alum Tank Replacements project, **BE RECEIVED. CARRIED**

Motion Passed

4.6 EA4137 Elgin Water Treatment Plant Low Lift Pumping Station Service Water Connection - Tender Award and SCADA Integration Services Award

PELOZA AND BARBOUR

That, on the recommendation of the Chief Administrative Officer, the following actions be taken with respect to the report, dated March 2, 2023, related to the Elgin Water Treatment Plant Low Lift Pumping Station Service Water Connection (EA4137) project:

- a) the Board Chair and the Chief Administrative Officer **BE AUTHORIZED** to execute an agreement with Birnam Excavating Ltd. (Birnam) for the construction of the service water connection in the amount of \$544,895.63 (excluding HST);

- b) the approved budget **BE INCREASED** by \$200,000, for a total approved budget of \$750,000; it being noted that the funds will be provided from the Asset Replacement Reserve Fund;
- c) the Chair and the Chief Administrative Officer **BE AUTHORIZED** to execute an agreement with Eramosa Engineering Inc. for SCADA integration services at an estimated cost of \$12,704, including contingency (excluding HST); and,
- d) the above-noted report **BE RECEIVED. CARRIED**

Motion Passed

5. Deferred Matters/Additional Business

None.

6. Next Meeting Date

June 1, 2023

7. Adjournment

The meeting adjourned at 5:55 PM.

Board of Management Report

Subject: Quarterly Compliance Report (1st Quarter 2023: January - March)

Overview:

- There were no adverse water quality incidents (AWQI) reported during this quarter.
- There are no new or proposed regulatory changes which might have a significant impact on the system.
- The 2022 regulatory reporting required under O.Reg. 170/03 was completed by the specified deadlines.

Recommendation

That the Board of Management for the Elgin Area Primary Water Supply System **RECEIVE** this report for information.

Previous and Related Reports

June 1, 2023 Ministry of the Environment, Conservation and Parks Inspection Report

Background

Pursuant to Board of Management resolution, this Compliance Report is prepared on a quarterly basis to report on general, regulatory, and contractual compliance issues relating to the regional water system. For clarity, the content of this report is presented in two basic areas, namely regulatory and contractual, and does not intend to portray an order of importance or sensitivity nor is it a complete list of all applicable regulatory and contractual obligations.

Discussion

Regulatory Issues

Recent Regulatory Changes: At the time of drafting this report, there are no new regulatory changes for this reporting period which may significantly impact the Elgin Area Primary Water Supply System (EAPWSS).

New Environmental Registry of Ontario (ERO) Postings: At the time of drafting this report, there were no new postings on the ERO that may have a significant impact on the EAPWSS.

Quarterly Water Quality Reports: The [Water Quality Quarterly Report](#) for the period of January 1 – March 31, 2023 was completed by the operating authority, and is posted on the Water Systems' website for public information.

Note: In order to better comply with the *Accessibility for Ontarians with Disabilities Act, 2005*, the detailed tables of water quality test results which were previously appended to this Report have been removed. The full list and test results of drinking water quality parameters is posted on the water system's website and available in print at the Board's Administration Office in London upon request. In addition, the detailed water quality information is also published within the water system's Annual Report required by O.Reg. 170/03 under the *Safe Drinking Water Act*.

Adverse Water Quality Incidents (AWQI): There were no AWQI reported by the operating authority or adverse laboratory results reported by the third-party accredited laboratory during this quarter.

O.Reg. 170/03, Section 11 "Annual Reports": Under the Drinking Water Systems Regulation (O.Reg. 170/03), an Annual Report for the EAPWSS is required to be prepared by February 28th of each year. The 2022 Annual Report summarized water quality and maintenance information for the calendar year. This report was completed by Ontario Clean Water Agency (OCWA), the contracted operating authority for the EAPWSS. Although the report is no longer required to be submitted to the Ministry of the Environment, Conservation and Parks (MECP), the EAPWSS is required to provide copies of the report to drinking water systems that obtain water from this system. The 2022 Annual Report was forwarded to the member municipalities on February 27, 2023. The [2022 Annual Report](#) has been posted on the Water Systems' website for public information.

O.Reg. 170/03, Section 22 "Summary Reports for Municipalities": Under the Drinking Water Systems Regulation (O.Reg. 170/03) a summary report is required by March 31st of each year which:

- Lists the requirements of the Act, the regulations, the system's approval, and any order that the system failed to meet at any time during the period covered by the report, and the duration of the failure. For each failure referred to, a description of the measures that were taken to correct the failure is required.
- In order to allow the system's owner to "assess the capability of the system to meet existing and planned uses of the system" provide a summary of the quantities and flow rates of the water supplied, including monthly average and maximum daily flows and daily instantaneous peak flow rates, with a comparison to the systems rated capacity.

This report was also completed by OCWA. The 2022 Compliance Report (Summary Report for Municipalities) was forwarded to the Board members and member municipalities of the EAPWSS as required on March 17, 2023. The [2022 Compliance Report](#) has been posted on the Water Systems' website for public information. All Compliance Reports are available for viewing at the Elgin Area Water Treatment Plant and at the Board's Administration Office in London. Copies of all reports are available to the public upon request and free of charge as required by O.Reg. 170/03.

Compliance Inspections: The annual inspection by the Ministry of the Environment, Conservation and Parks (MECP) was conducted on December 2, 2022. The final inspection report was received from the Ministry Inspector on February 21, 2023, and is the subject of a separate report to the Board. The final inspection rating for the EAPWSS was 97.01%.

Contractual Issues

ARTICLE 3, "Operation and Maintenance of the Facilities – General": Board staff informally meets with OCWA on a monthly basis to discuss operations and maintenance related issues, and formally on a quarterly basis to review contractual performance. The 2023 first quarter Contract Report was received from OCWA on April 25, 2023, and was scheduled to be discussed at the quarterly administration meeting between Board staff and OCWA on May 11, 2023. Copies of the monthly Operations and Maintenance Reports, and quarterly Contract Reports are available at the Board's Administration Office in London upon request.

Conclusion

Board staff will continue to review new and proposed legislation for potential impacts to the EAPWSS. Board staff will continue to meet with the operating authority on a regular basis to discuss regulatory and contractual compliance issues, and ensure any non-compliances are addressed in a timely manner.

Prepared by: Erin McLeod, CET
Quality Assurance & Compliance Manager

Submitted by: Andrew J. Henry, P.Eng.
Director, Regional Water

Recommended by: Kelly Scherr, P.Eng., MBA, FEC
Chief Administrative Officer

Board of Management Report

Subject: Environmental Management System and Quality Management System

Overview:

- This report provides a summary of Environmental Management System (EMS) and Quality Management System (QMS) activities that took place during the first quarter of 2023.
- A Management Review meeting was held on March 07, 2023. The meeting minutes are attached to this report as [Appendix A](#).
- No internal or external audits were conducted in the first quarter of 2023.

Recommendation

That the Board of Management for the Elgin Area Primary Water Supply System **RECEIVE** this report for information.

Background

Environmental Management System (EMS)

The Elgin Area Primary Water Supply System (EAPWSS) has an Environmental Management System (EMS) which has been registered to the ISO 14001 standard since 2003. The EAPWSS underwent a three-year registration audit in October 2020 and was recommended for registration to the ISO 14001:2015 standard for a three-year period (ending in Feb. 2024).

The continued utilization and registration of the EMS to the ISO 14001 standard is a requirement of the Service Agreement with Ontario Clean Water Agency (OCWA), the contracted Operating Authority for the EAPWSS.

Quality Management System (QMS)

The existing EMS has been integrated with a QMS that meets the requirements of the province's Drinking Water Quality Management Standard, 2017 (DWQMS). The combined EMS/QMS is maintained by the contracted Operating Authority.

The *Safe Drinking Water Act, 2002* (SDWA) and the water system's Municipal Drinking Water License (MDWL) require that an accredited Operating Authority be in operational charge of the drinking water system. To become accredited, the Operating Authority must implement and maintain a QMS, which includes an Operational Plan meeting the requirements of the DWQMS and must undergo yearly external accreditation audits.

OCWA successfully received full scope DWQMS re-accreditation in January 2023 and is currently accredited for the three-year period ending in 2026.

Discussion

Management Review

The documented EMS/QMS and its performance requires Management Review by Top Management a minimum of once every calendar year to ensure that the management team of the Board and the Operating Authority stay informed of environmental and quality related issues. Items discussed at the Management Review meetings include, but are not limited to, water quality test results, environmental and quality performance, legislative changes, identified non-conformances, corrective and preventive actions, staff suggestions, changing circumstances and business strategies, and resource requirements. Corrective and preventive actions include not only those to address non-conformance issues and opportunities for improvement identified as part of internal and external audits, but also non-compliance issues identified by the Ministry of the Environment, Conservation and Parks (MECP), suggestions from staff, and opportunities for improvement identified during the Management Review process.

To carry out more effective Management Review meetings, the Board of Management's administration has opted to conduct shorter meetings at more frequent intervals. Although each required Management Review input may not be covered at every meeting, over the course of the year all required inputs are reviewed at least once. Management Review meetings are held in a combined format for both the EAPWSS and the Lake Huron Primary Water Supply System (LHPWSS).

A Management Review meeting was held on March 07, 2023. The meeting minutes are included as [Appendix A](#) for the information of the Board of Management.

Internal Audits

Pursuant to the international ISO 14001 standard and the provincial DWQMS, periodic "internal" audits are performed by the Board of Management's administration to ensure continued compliance with legislated, contractual, and other requirements, as well as conformance with the ISO 14001 standard and DWQMS. Internal audits also ensure that the ongoing operation of the drinking water system conforms to the EMS and QMS as implemented. As required by the standards, internal audits are performed a minimum of once every calendar year.

No internal audits were conducted in the first quarter of 2023.

An EMS internal audit to verify conformance with the ISO 14001:2015 EMS is scheduled to be conducted on May 17, 2023. An internal audit summary will be included in a future report to the Board of Management.

External Audits

Annual surveillance audits (third-party external audits) are conducted for both the EMS and QMS, with a recertification audit taking place every third year. The external registrar for both the EMS and QMS is currently SAI Global. External audits review all aspects of the EMS or QMS, including the scope and results of internal audits, subsequent management reviews, and corrective action processes.

There were no external audits conducted in the first quarter of 2023.

Corrective and Preventive Actions

For the EMS/QMS to be effective on an on-going basis, an organization must have a systematic method for identifying actual and potential non-conformities, making corrections, and undertaking corrective and preventive actions, preferably identifying, and preventing problems before they occur. The Internal Audit process and Management Review are the two main drivers for proactively identifying potential problems, opportunities for improvement and for the implementation of corrective actions for the EAPWSS. Preventive actions may originate from identified opportunities for improvement as part of an audit, but also staff suggestions and discussions with management.

It is important to note that the action items should not be construed as compliance failures, but rather an action to be undertaken which will improve the EAPWSS overall performance.

Action items are the result of the “Plan-Do-Check-Act” continual improvement process. The identification of action items is a critical component of continual improvement and an essential element of management systems. The identification of action items should be seen as a positive element, as this drives continual improvement.

A key concept of the Plan-Do-Check-Act process is that it does not require nor expect 100% conformance but promotes an environment of continual improvement by identifying shortfalls, implementing corrective and preventive measures, and setting objectives and targets for improvement.

Figure 1 outlines the general process.

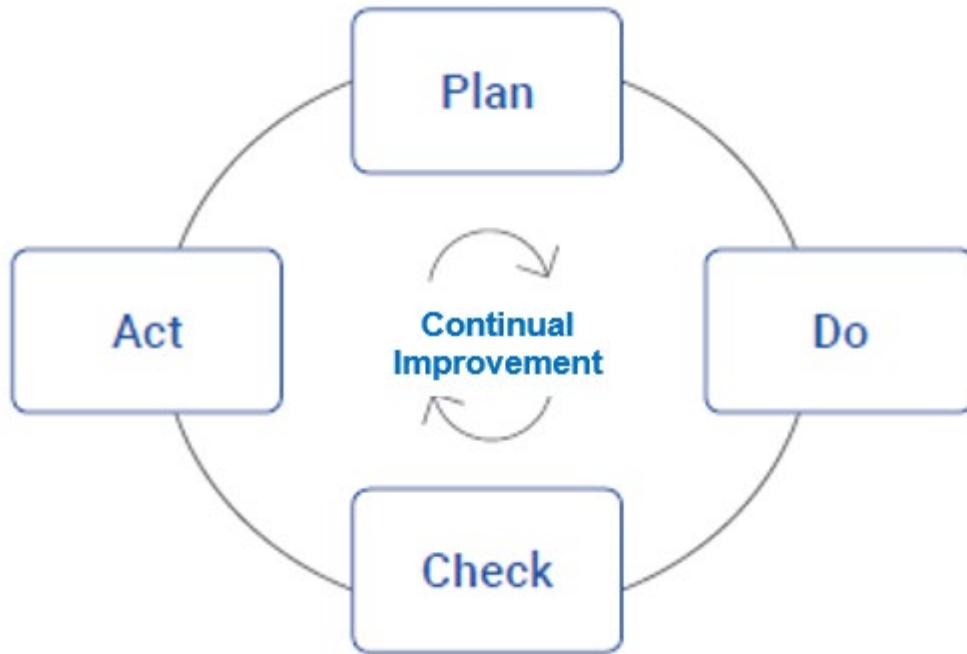


Figure 1: Plan-Do-Check-Act Continual Improvement Process

Since the last report to the Board of Management, the following summarizes new action items that have been added to the EMS/QMS action item tracking system.

- Three (3) new action items were added as a result of the Correction Action process related to an alum no flow event.
- One (1) new action item was added as a result of a Contingency Plan Test (OCWA Corporate Emergency Response Plan Test).
- Six (6) new action items were added as a result of the MECP Inspection conducted February 21, 2023.
- Four (4) new action items were added as a result of the Correction Action process related to a Total Chlorine Residual (TCR) exceedance.
- Six (6) new action items were added as a result of the Management Review meeting on March 07, 2023.

As of May 3, 2023, there were a total of thirteen (13) open action items in the EAPWSS tracking system. All action items are prioritized and addressed using a risk-based approach, and deadlines established given reasonable timeframes and resources that are available. The Board of Management staff are pleased with the performance of the

corrective and preventive action process and have no concerns with the number of open action items.

Conclusion

The Internal Audits and frequent Management Review meetings continue to effectively identify and manage system deficiencies. The EMS/QMS for the EAPWSS continues to be suitable, adequate and effective. Activities by OCWA continue to address the need for change, and the management systems are being revised and refined as required.

Prepared by: Jennifer Levitt
Compliance Coordinator

Erin McLeod, CET
Quality Assurance & Compliance Manager

Submitted by: Andrew J. Henry, P.Eng.
Director, Regional Water

Recommended by: Kelly Scherr, P.Eng., MBA, FEC
Chief Administrative Officer

Attachments: [Appendix A](#) – Management Review Meeting Minutes (March 7, 2023)

Appendix A: Management Review Meeting Minutes (March 07, 2023)

Lake Huron & Elgin Area Primary Water Supply Systems EMS/QMS Management Review

Date: March 07, 2023

Time: 1:00pm

Location: Virtual – Microsoft Teams

Attendees: Andrew Henry (RWS), Erin McLeod (RWS), Jennifer Levitt (RWS), Allison McCann (OCWA), Matt Bender (OCWA), Denny Rodrigues (OCWA), Randy Lieber (OCWA), Greg Henderson (OCWA)

Regrets: -

N.B.: Management Review meetings are held in a combined format for both the Lake Huron Primary Water Supply System (LHPWSS) and the Elgin Area Primary Water Supply System (EAPWSS).

-----Meeting Notes-----

1. Review and Approval of Previous Minutes (LHPWSS & EAPWSS)

The minutes from the previous meeting (November 23, 2022) are posted to SharePoint. Minutes circulated to comment. No concerns noted and documents are approved.

2. Results of the Board Meetings (LHPWSS & EAPWSS)

Huron Board Meeting (Oct. 6, 2022)

- Quarterly Compliance Report: The report was received for information.
- EMS/QMS Report: The report was received for information.

Elgin Board Meeting (Oct 6., 2022)

- Quarterly Compliance Report: The report was received for information.
- EMS/QMS Report: The report was received for information.

Huron Board Meeting (Jan. 19, 2023)

- Quarterly Compliance Report: The report was received for information.
- EMS/QMS Report: The report was received for information. General discussion regarding a long-term energy efficiency strategy.

- Environmental and Quality Policy & QMS Operational Plan: The report was received for information. The Policy and QMS Operational Plan were endorsed by the Board.

Elgin Board Meeting (Jan. 19, 2023)

- Quarterly Compliance Report: The report was received for information.
- EMS/QMS Report: The report was received for information.
- Environmental & Quality Policy & QMS Operational Plan: The report was received for information. The Policy and QMS Operational Plan were endorsed by the Board.

Huron Board Meeting (Mar. 2, 2023)

- MECP Inspection Report: The report was received for information.
- Quarterly Compliance Report: The report was received for information.
- EMS Objectives: The report was received for information. The Board endorsed the new environmental objectives. The Board directed staff to consider opportunities to incorporate climate change mitigation and resiliency into the Environmental Management System. Staff will prepare a Board report for the June 2023 Board meeting that specifically deals with climate change.

Elgin Board Meeting (Mar. 2, 2023)

- Quarterly Compliance Report: The report was received for information.
- EMS Objectives: The report was received for information. The Board endorsed the new environmental objectives. General discussion on the total number of environmental objectives, with staff confirming that they can be amended as additional opportunities arise. General discussion on how these objectives relate to the system's overall objectives.

Andrew - Comment - Energy procurement and energy management strategy will be discussed at the June board meeting. To address climate change mitigation and resiliency the Environmental Policy may be updated Moving forward RWS will also be looking into other environmental opportunities to reduce waste (recycling / packing reduction through procurement).

3. MECP Inspection Report – LHPWSS

- 3 non-compliances (added to tracking spreadsheet)
- 2 best management practices (added to tracking spreadsheet)
- OCWA submitted corrective action forms to review the non-compliances
- Everything is marked complete, MECP file is now closed
- Inspection rating – report card received for Huron 91.12%

4. MECP Inspection Report – EAPWSS

- 1 non-compliance (added to tracking spreadsheet)

- 1 best management practice (added to tracking spreadsheet)
- OCWA submitted a corrective action form to review the 1 non-compliance
- Non-compliance #1 – OCWA advised that 2 operators need to complete the 'Facility Log Book Course'. Currently updating 'Operator in Training' Standard Operating Procedure (SOP) to make it site specific for Elgin.
- Inspection rating - report card received for Elgin 97.01%

5. Raw Water Supply and Drinking Water Quality Trends (LHPWSS & EAPWSS)

These are updated once per year and include 5-year Water Quality trends.

Huron

- Colour - nothing unusual (lab method adjusted in 2019)
- Dissolved Oxygen - only have data from Dec. 2021 to 2022 - more data required to see a trend line
- Temperature - increasing trend
- pH - nothing unusual, regular seasonal trends
- Raw Water Turbidity - very low
- Aluminum - increasing trend (coagulation upgrade project may help with this)
- Free Chlorine Residual - fairly stable, few wintertime high peaks that may have been associated with clearwell repair activities. Ongoing monitoring continues.
- Treated water turbidity - normal, stable
- Treated water average pH - downward trend and would like the level closer to the 8.1 target - **ACTION ITEM** – Further review pH trend at Arva. Responsibility: Erin McLeod. Deadline: July 1, 2023.
- Disinfection byproducts – measured at all extremities of the transmission system –Exeter-Hensall pipeline may have the 'oldest water'
- HAA's - stable, no concerns, low
- THMs - trending upwards over last 5 years. Stantec may be reviewing THMs as part of the Water Quality Facility Plan update which is in progress.
- Relationship Trends - Trends show correlations between pH, temperature, and aluminum residual and the inverse relationship with turbidity.

Elgin

- Colour - lab method adjusted in 2019
- Dissolved Oxygen - trend line is flat
- Temperature - increasing trend
- Turbidity - normal for Lake Erie
- pH - treated water consistent, stable
- Aluminum residual – low, no concerns
- Fluoride - slightly low for 2022 – need to hit target 0.7mg/L

- Free chlorine - no concerns
- Treated water avg. turbidity – typically low and stable (high spike in Sept. 2021 – manganese event)
- HAAs - no concerns, low
- THMs - no concerns, low
- Relationship Trends - no significant findings

Lake Erie Harmful Algal Bloom 2022 Seasonal Assessment – National Oceanic and Atmospheric Administration (NOAA)

The 2022 western Lake Erie cyanobacterial bloom had a severity index (SI) of 6.8, which is considered moderately severe. The bloom developed in mid-July and reached a peak in late August, lasting for several weeks through mid-September. The 2022 bloom (SI of 6.8; 416 square miles) was less extensive than in 2021 (SI of 6; 530 square miles), but was more concentrated, causing the 2022 bloom to be more severe. The high cyanobacterial concentrations persisted through early Nov, resulting in a much longer bloom than usual.

RWS is waiting on Stantec's 'Water Quality Facility Plan' review to determine next steps on monitoring recommendations.

6. Deviations from Critical Control Point Limits and Response Actions (LHPWSS & EAPWSS)

The DWQMS standard requires Critical Control Point Limits and Responses once per year

WaterTrax alerts received in 2022 are collected and categorized.

Elgin

- 81 alerts for Elgin (see Elgin WaterTrax Alert Summary – 2022 in Package material)
- Of significance:
 - Settled water - 14 free chlorine residual alerts
 - Treated water - 45 pH alerts
 - It is typical for Elgin to see a higher volume of alerts

Huron

- 8 alerts
- No concerns (see Lake Huron WaterTrax Alert Summary – 2022 in Package material)
- Typical for Huron to see a low volume alerts.

COMMENT - MATT - can we trend alerts for each system? **ACTION ITEM:** Include a year over year summary of WaterTrax alert trends at a future meeting.

Responsibility: Erin McLeod. Deadline: July 1, 2023.

COMMENT - GREG - can we set alert for pH at Elgin for 7.3? **ACTION ITEM:**
Review pH alert limits in SCADA and WaterTrax. Lower WaterTrax limit if possible.
Responsibility: Erin McLeod. Deadline: April 30, 2023

7. Compliance Obligations Update (LHPWSS & EAPWSS)

Health Canada – Recent Publications:

[Guidance on waterborne pathogens in drinking water](#) (September 2022)

[Guidelines for Canadian Drinking Water Quality: Guideline Technical Document - Dimethoate and Omethoate](#) (September 2022)

[Guidelines for Canadian Drinking Water Quality: Malathion](#) (January 2023)

Health Canada – Consultation:

[Consultation: Draft technical document guidelines for Canadian drinking water quality - Antimony](#)

Source: Health Canada

Date Posted/Notice Received: December 24, 2022

Comments Due: March 8, 2023

Summary:

A maximum acceptable concentration (MAC) of 0.006 mg/L (6 µg/L) is proposed for antimony in drinking water, which is unchanged from the previous document.

Potential Impacts:

None anticipated. The is consistent with the current MAC in Ontario.

Elgin WTP treated water average antimony is 0.00015 mg/L (2018-2022)

Huron WTP treated water average antimony is 0.00011 mg/L (2018-2022)

[Consultation: Draft guidance on sampling and mitigation measures for controlling corrosion](#)

Source: Health Canada

Date Posted/Notice Received: December 16, 2022

Comments Due: February 15, 2023 (closed)

Summary:

The intent of this document is to provide municipalities and water suppliers with guidance on assessing corrosion and implementing corrosion control measures for distribution systems in residential settings to minimize exposure to lead. The document outlines the steps that should be taken to reduce population exposure to lead, which may also reduce the consumer's exposure to other corrosion-related contaminants,

such as copper. Concerns related to other contaminants whose concentrations may be affected by corrosion, such as iron, are also briefly discussed.

This guidance is intended to complement the information provided in the Canadian drinking water quality [guideline technical document for lead](#).

Potential Impacts: None anticipated.

[Consultation: Draft objective for per- and polyfluoroalkyl substances in Canadian drinking water](#)

Source: Health Canada

Date Posted/Notice Received: February 11, 2023

Comments Due: April 12, 2023

Summary:

To reduce exposure from drinking water, an objective of **30 ng/L** is proposed for the sum of total per- and polyfluoroalkyl substances (PFAS) detected in drinking water. Total is defined by two different USEPA methods, or an alternate analytical method that quantifies a minimum of 18 PFAS.

In 2018/19, Health Canada established drinking water guidelines for perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA), and screening values for 9 other PFAS. This new objective, when finalized, will replace these 2 previous drinking water guidelines and 9 screening values.

Potential Impacts:

Unknown at this time. There is currently no PFAS data available for either the LHPWSS or EAPWSS. As part of the Water Quality Facility Plan (WQFP) update in progress, a recommendation will be provided for a sampling plan for PFAS to collect baseline information.

LHPWSS, EAPWSS and OCWA are participating in a PFAS research project in partnership with the University of Waterloo.

[Note: In 2017, Ontario MECP developed interim advice for PFAS, recommending that drinking water used for human consumption not exceed 70 ng/L for eleven different PFAS. Health Canada's draft objective is more stringent.]

Ontario – Consultation and Regulatory Decision Notices:

[Decision: Updates to the Registration Guidance Manual for Generators of Liquid Industrial and Hazardous Waste](#)

Source: Ministry of the Environment, Conservation and Parks (MECP)

Date Posted/Notice Received: December 21, 2022

Comments Due: N/A

Summary:

MECP and the Resource Recovery and Productivity Authority (RPRA) have transitioned to a digital registry for the Hazardous Waste program.

MECP has made updates to the Registration Guidance Manual for Generators of Liquid Industrial and Hazardous Waste (guidance manual), to support the regulated

community in complying with hazardous waste management rules and requirements. The updates align with regulatory changes that take effect January 1, 2023.

Potential Impacts: No major impacts anticipated.

[Proposal: Proposed amendments to O.Reg 507/18 \(“Broader Public Sector: Energy Reporting and Conservation and Demand Management Plans”\) under the Electricity Act, 1998](#)

Source: Ministry of Energy

Date Posted/Notice Received: October 18, 2022

Comments Due: December 1, 2022 (closed)

Summary:

The Ministry of Energy is proposing amendments to O.Reg. 507/18. The proposed amendments would streamline reporting and tracking of energy use by moving required energy reporting from the current SharePoint 2013 platform (that has reached the end of its life) to a more widely used electronic reporting system.

Further changes would allow reporting of energy consumption and greenhouse gas emissions data on the previous calendar year, as opposed to the current two years prior scenario. This requirement will be phased in with 2024 being a double reporting year. Prescriptive elements of the regulation will also be updated.

If the proposed amendments are approved, they will be implemented in 2023.

Potential Impacts: No major impacts anticipated.

[Decision: Amendments to Certain Requirements under the Excess Soil Regulation](#)

Source: MECP

Date Posted/Notice Received: December 23, 2022

Comments Due: N/A

Summary:

The MECP finalized amendments to O.Reg. 406/19 (Excess Soil Regulation) and the Soil Rules to remove the excess soil reuse planning requirements for projects on low-risk sites (examples: agricultural, residential, parkland) and to provide more flexibility when storing excess soil.

The amendments came into effect on **January 1, 2023**.

Potential Impacts:

The necessary planning documents and activities, including required soil sampling, will need to be completed as part of project execution if the Regulation applies to the project. Guidance to help understand these combined requirements can be found on [MECP’s Handling Excess Soil website](#).

Note:

- The Low Lift Service Chamber project (Elgin) – may have excess soils – **ACTION ITEM:** Erin McLeod to follow up with RWS Project Manager on this project. Note there was former soil contamination in the project area.

Deadline: March 31, 2023.

- Huron plant - if new reservoir is built the excess soils regulation will likely apply.

[Consultation: Notice of Public Consultation on Proposed Amendments to the Ausable Bayfield and Maitland Valley Source Protection Plans](#)

Source: Ausable Bayfield Maitland Valley (ABMV) Source Protection Committee (SPC)

Date Posted/Notice Received: January 3, 2023

Comments Due: February 10, 2023 (closed)

Summary:

The ABMV SPC has been working on a review and updates of the Source Protection Plans (SPP) and Assessment Reports for the Ausable Bayfield and Maitland Valley Source Protection Areas. Members of the public are now invited to read and comment on proposed updates.

Potential Impacts:

None anticipated. The key changes in the proposed amendments mainly relate to municipal wells, wellhead protection areas, and road salt management. Pre-consultation with key stakeholders, including the LHPWSS, previously took place in fall 2022.

Consultation: Notice of Pre-Consultation – Draft Updated Kettle Creek Source Protection Plan

Source: Lake Erie Source Protection Region / Committee

Date Posted/Notice Received: January 25, 2023

Comments Due: February 28, 2023 (closed)

Summary:

There are proposed changes to the Kettle Creek Source Protection Plan under s.36 of the Clean Water Act, 2006.

MECP approved the Kettle Creek Source Protection Plan on September 8, 2014. Since then, there have been changes on the landscape and new technical information has become available. These changes and new information have been identified in the section 36 work plan and have resulted in an update of the policy applicability maps for the Municipality of Central Elgin, Village of Belmont Water Supply and EAPWSS; and the revision of current, and the addition of new water quality policies that impact the Municipality of Central Elgin.

Public consultation will follow this pre-consultation period and is scheduled to start on Wednesday April 5, 2023, and close on Tuesday May 9, 2023.

Potential Impacts: None anticipated.

There are no specific actions required by the EAPWSS as much of it focuses on the enforcement/implementation responsibilities for Central Elgin.

The Risk Management Plan for storage and handling of fuel at the Elgin Area WTP remains as an identified significant threat.

Note: The 65,000 L diesel underground storage tank location in relation to the Elgin plant drain is a risk to the intake. If there was a leak or spill the plant drain may be a

conduit for contaminating the intake (see Risk Management Plan for further information).

[Notice: Providing Authority to Waive or Alter the 30-day Waiting Period for Class Environmental Assessment Projects](#)

Source: MECP

Date Posted/Notice Received: February 27, 2023

Comments Due: N/A

Summary: The ministry is proposing to amend the Environmental Assessment Act to provide the Minister with the authority, on a project-specific basis, to issue an order waiving or altering the 30-day waiting period following completion of a Class Environmental Assessment process.

Potential Impacts: None anticipated.

[Notice of amendment: Municipal Class Environmental Assessment](#)

Source: MECP

Date Posted/Notice Received: March 3, 2023

Comments Due: N/A

Summary: MECP has amended the Municipal Class Environment Assessment to better align assessment requirements with potential environmental impacts, including conditional exemptions for certain low-risk projects.

Changes include conditionally exempting certain low-risk, routine municipal road, water and wastewater projects from requiring an environmental assessment to better align assessment requirements with potential environmental impact

An archaeological screening process will be required for various project types that are now eligible for exemption.

The changes are effective March 3, 2023.

Potential Impacts: None anticipated.

[Notice of Study Commencement: Class Environmental Assessment Stormwater Management Master Plan \(SWMMP\)](#)

Source: Municipality of Lambton Shores

Date Posted/Notice Received: February 20, 2023

Comments Due: Not specified

Summary: The Municipality of Lambton Shores has retained Arcadis/IBI Group to develop a Stormwater Management Master Plan (SWMMP) to establish a much-needed road map for the Municipality to advance the development of a comprehensive stormwater management strategy to address current and future needs within the Village of Grand Bend.

Potential Impacts:

The Intake Protection Zone (IPZ) for the LHPWSS is identified within the Ausable Bayfield Maitland Valley Source Protection Plan and extends to the village of Grand Bend. The current location of the IPZ-2 is based on the current understanding of

drainage and flow conditions, including the contributions from stormwater systems and drainage. Any considerations for changes to the stormwater management systems within the village of Grand Bend should, at a minimum, consider potential implications to the water system's Intake Protection Zone(s), possible Issue Contributing Areas, and implications to the related Source Protection Plans including but not limited to restrictions to land use and Risk Management Plans.

COMMENT - ANDREW - Lambton Shores is doing a Storm Water Master Plan for the Grand Bend Settlement Area. That may impact our intake protection zones, with potential implications. RWS provided comments to the consultant and municipality, and will continue to monitor this as the project progresses.

8. Adequacy of Resources (LHPWSS & EAPWSS)

Staffing:

All RWS staff positions are currently filled.

OCWA staffing:

- Huron has a maintenance vacancy (mechanic);
- Elgin has a maintenance vacancy (electrician);

OCWA is seeing fewer applicants applying for jobs and it is challenging to fill some positions (maintenance, admin.) with multiple postings required during the recruitment process. OCWA has seen changes in the availability of trained staff (e.g., electricians, millwrights) due to wages not being competitive. It is an ongoing challenge and they are looking for solutions. OCWA is looking at an operator career path, with maintenance career path to follow.

The co-op program was reinstated with OCWA. A high school co-op student was placed at Huron WTP. The co-op program is continuing with two (2) positions.

Career fairs, facility tours etc. are now being reinstated, which helps promote careers at OCWA.

RWS will be adding a temporary (up to two years) Senior Technologist to work on the Oneida Transmission Pipeline project.

Training:

No concerns at this time. Course availability is good. More in-person training has returned, which some staff prefer. Online options are still available, and the hybrid is nice. It was noted that Ontario Water Wastewater Certification Office (OWWCO) is taking a more stringent approach on recognition of on-the-job (OJT) training. The H&S and operations training is acceptable, but some human resources and personal development training is no longer being accepted towards the operator certification.

Inspection & Audit Results:

For the 2022-2023 inspection period, both systems had a drop in the MECP inspection rating.

- LHPWSS had 3 non-compliances with an inspection rating 91.12%.
- EAPWSS had 1 non-compliance with an inspection rating of 97.01%.

There was a new inspector this year which may have contributed to the inspection ratings (i.e. different focus and “fresh eyes”).

Over the past year both systems had successful internal and external audits, particularly the DWQMS re-accreditation audits (October 2022) with no non-conformities identified. Overall, the management systems and associated compliance programs are working well and being adequately supported. RWS (Top Management) is satisfied with the management systems and associated compliance programs. The management systems continue to identify issues and seek opportunities for improvement.

Supply Chain:

There are still ongoing issues with the supply chain, including availability and lead times on certain parts and materials (e.g., HART cards for instrumentation). Still seeing longer timeframes for equipment delivery, and now also on shop drawing turnaround time. Chemical costs are still fluctuating.

There are no major chemical availability issues at this time, mainly cost impacts. There have been no issues obtaining lab supplies. From a maintenance perspective, OCWA is seeing issues with certain suppliers/manufacturers. Starting to see some improvements. Some electrical components still have slow delivery times but they are getting what is needed.

Water volumes:

In 2020 and 2021 the primary systems sold higher than budgeted volumes to the municipalities. In 2022 the Elgin system sold higher than budgeted volume, but Huron sold less than the budgeted volume. In the short term, there are no immediate concerns from a resource perspective as both systems are still within targeted range. Note that the budget volumes differ slightly from the contractual volumes in the Service Agreement.

There is some potential future development in Elgin County that may have high water demand, potentially triggering an Elgin WTP expansion sooner than previously expected. Board staff are monitoring the long-term implications. The 2024 Master Water Plan update will consider this growth and development and give us a better idea of when this expansion might need to occur. For Huron, Oneida is expected to join the system at the end of 2024 but more likely the end of 2025. There is another possible development near Strathroy.

The Financial Plan updates were recently endorsed at the March 2nd Board meeting.

Capital projects:

RWS is continually reviewing the capital investment program, looking at constructability and timeframes. Projects were scaled back in the past few years due to covid and we still have not fully caught up, as there are around 100 open projects.

Communications between RWS and OCWA is key for planning and coordination. There is still some concern about the lack of availability of support staff in all areas (RWS, OCWA, consultants, contractors). Some projects are more/less operationally invasive than others, and some commissioning issues have been experienced. There are some gaps that need to be addressed on projects (e.g., H&S management including plans, insurance, etc.). We need to close gaps and more oversight will be expected of project managers, so resources will be required to close those gaps.

A higher level of service expectations will require more resources. A new contractor management program is being implemented, which may impact the eligibility of some contractors. The new contractor management program (implementation in progress) may have short term consequences to the project managers.

Conclusion:

In the immediate timeframe we have adequate resources to support the EMS/QMS, despite some challenges noted above.

In the longer term we may be hard pressed to continue to perform at a high level without additional resources. There are longer term implications for our capital program.

9. Communications, Complaints, and Consumer Feedback (LHPWSS & EAPWSS)

LHPWSS - 1 complaint or concern noted in Monthly Operations Reports (August 2022 – January 2023).

October 2022: One complaint received from St. Joseph's area resident called regarding standing water on their property. The resident's contact information was passed on to OCWA. Bluewater to follow up.

EAPWSS - There were no complaints or concerns noted in Monthly Operations Reports (August 2022 – January 2023).

Feb. 11, 2023 – A Board member advised of an Aylmer resident having concerns about high pH, and hardness. EAPWSS provided hardness data for past 5 years. It was

verified the treated water pH target of 7.5 was being met (daily average for 2023 was 7.49). Town of Aylmer also did a pH test in their system near the residence, pH was 7.47 which is consistent.

Feb. 3, 2023 – Train Derailment in Ohio - EAPWSS received several inquiries related to potential impacts to the drinking water. EPA is conducting water and air monitoring in the localized Ohio area. A spill in this location is not likely to impact Lake Erie as it is not part of the great lakes watershed.

Feb. 2023 – RWS received one email noting concern about fluoride in drinking water. RWS provided information about the EAPWSS and LHPWSS. As the email did not state the specific municipality, they resided in they were advised to contact their local municipality.

March 2, 2023 – Notice received from MECP requesting that we ensure our drinking water system profile information is current, including owner and operator information. This has been addressed by OCWA. No action items.

10. Staff Suggestions (LHPWSS & EAPWSS)

EAPWSS: Request to create a weekly RMF internal lab log sheet in WaterTrax, to track process performance and for optimization improvements.

ACTION ITEM: Create weekly RMF internal lab log sheet. Responsibility: Erin McLeod. Deadline: April 6, 2023.

LHPWSS: RWS – Suggestion to consider LEED in the design of the new administration building at the Huron WTP.

RWS – Request for some additional data tracking and reporting for the Asset Management Plan Technical Level of Service (TLOS) metrics. **ACTION ITEM:** RWS to follow-up with OCWA to provide specific details on what additional data is required. (e.g., chemical inventories). Responsibility: Erin McLeod and Ryan Armstrong. Deadline: Dec. 31, 2023.

OCWA

- Huron – nothing related to EMS/QMS
- Elgin – What if there is a Tornado around the plant – emergency SOPs do not address this, and it will be updated. **ACTION ITEM:** Update emergency SOPs to address tornado risk. Responsibility: Allison McCann. Deadline: June 30, 2023

11. Action Items Identified between Reviews (LHPWSS & EAPWSS)

- Huron Management of Change – Walking Beam Flocc Rehab
- Huron Contingency Plan Test – Chemical Spill Test (June 23, 2022)
- Elgin Corrective Action Form – Alum no flow event (Sep. 19, 2022)
- Elgin Contingency Plan Test – OCWA Corporate Emergency Response Plan Test (Nov. 22, 2022)
- Elgin Corrective Action Form – RMF TCR exceedance (Dec. 30, 2022)

12. Action Items - Status Update (LHPWSS & EAPWSS)

Huron - 26 open action items (note 13 of these are related to coagulation system)

Elgin - 16 open action items

See Package material for more information.

13. LHPWSS Adverse Water Quality Incident (AWQI) – Feb. 21, 2023

Corrective action form in progress. Item deferred to next meeting.

End of Meeting

NEXT MEETING – AFTERNOON OF JUNE 07, 2023

Board of Management Report

Subject: Quarterly Operating Financial Status – 1st Quarter 2023

Overview:

- This report shows the current fiscal year's 1st quarter in comparison to its Budgeted amount and the previous year's same time period.

Recommendation

That the Board of Management for the Elgin Area Water Supply System receive this report regarding the Operating Financial Status Report for the period of January 1 to March 31, 2023, noting that this report is unaudited and subject to adjustments including the preparation of the financial statements and completion of the annual audit.

Previous and Related Reports

Quarterly Operating Financial Status – 4th Quarter 2022

Background

At the request of the Board of Management, a Financial Status Report is provided on a quarterly basis for information. The financial status provides a high-level overview of incurred expenditures and revenues on a cash-flow basis and is compared to the approved operating budget of the water supply system. All expenditures and revenues provided in this Financial Status Report are unaudited and may include accrued and/or unaccrued expenses from a previous or future fiscal year.

A high-level summary of incurred expenses and revenues for the water supply system is attached to this report as Appendix A for the first quarter 2022 (January 1 to March 31) as well as a comparative accumulation of expensed for the year to date.

Note: The reported expenditures and revenues may be subject to adjustments, including but not limited to corrections and entries required for the preparation of financial statements and completion of the annual audit.

Discussion

For the information and reference of the Board, the following highlights of the attached summary provides a brief explanation of notable deviations from the approved budget and/or clarifications of the financial summary:

- Contracted Operating Services in the summary report reflects the total direct operating costs of the contracted operation of the water treatment and transmission system, as well as other related contracted services. The total accumulated operating costs over the year (unaudited) is higher than the same period in 2022 and is reflective of contractual increases in service agreements with the operating authority and other contracted services.
- Contracted Administrative Services in the summary report reflects the fees paid to the City of London.
- Electricity expenditures include the purchase of energy and related energy management service charges for the water system. The reported energy cost was lower than the same period of the previous year. Energy savings resulting from the installation of the new high lift pumps at the water treatment plant and other energy-saving programs implemented have significantly contributed to the overall reduction in energy consumption for the system.
- Salaries, wages, and benefits expenditures include all direct labour costs for administrative staff including benefits. Variations over the same period in 2022 are attributed to annual salary adjustments, vacancies, and additional staff added in the 2023 budget.
- Administration and Other Expenses relates to various overhead operating expenses, including subscriptions and memberships, bank charges and interest, and office supplies. While the reported expenditures may be adjusted as part of the year-end process, accounting for 2022 and 2023 pre-payments and other cost accounting adjustments, the costs to date are mostly higher than 2022 due to higher bank charges due to increased interest rates.
- Vehicles and Equipment expenditures include costs associated with vehicles, computers, and office equipment for administrative staff. First quarter 2023 expenditures are currently higher than 2022 largely due to higher charges and additional travel requirements.
- Purchased Services and Professional Fees largely relate to allowances for ad hoc professional consulting and legal services, security services, office lease, telephone charges, network, and SCADA (Supervisory Control and Data Acquisition) maintenance, printing services, and pipeline locate costs. The

increased cost when compared to the same period in 2022 is largely attributed to higher insurance premiums, and additional security fees.

- Debt Principal and Interest payments occur twice per year; in the first and third quarter.
- Contributions to the Reserve Funds occur at the end of the fiscal year (fourth quarter) as part of the year-end process and in preparation for the year-end audit, where the actual contributions are the total remaining revenue in excess of expenditures. Accordingly, the amount of the anticipated contribution will be adjusted to reflect the additional revenue and expenses incurred and may be subject to further adjustment as a result of the completion of the year-end financial statements and audit. The first quarter 2023 showed the transfer to the new EMPS Capital Reserve Fund which was invoiced in the 2nd quarter in 2022.

Prepared by: Archana Gagnier
Budget and Finance Analyst

Submitted by: Andrew J. Henry, P.Eng.,
Director, Regional Water

Recommended by: Kelly Scherr, P.Eng., MBA, FEC
Chief Administrative Officer

Attachments: Operating Financial Status Summary – 1st Quarter 2023

Quarterly Financial Summary Report

Elgin Area Water Supply system
1st Quarter 2023 (January 1 to March 31)

(\$,000's)

	Approved 2023 Budget	Q1 - 2023	2023 Year to Date	Year To Date Variance	2022 Year To Date
Total Revenue	15,679	3,585	3,585	12,094	3,848
<u>Expenditures:</u>					
Contracted Operating Services	5,658	1,361	1,361	4,297	1,010
Contracted Administrative Services	185	43	43	142	46
Electricity	1,050	158	158	892	186
Salaries, Wages, Benefits	1,043	161	161	882	145
Administration and Other Expenditures	554	238	238	316	224
Vehicles and Equipment	115	14	14	101	11
Purchased Services & Professional Fees	1,035	298	298	737	235
Debt Principle Payments	1,184	1,176	1,176	8	1,153
Interest on Long-Term Debt	133	67	67	66	97
Contributions to Reserve Funds	4,723	231	231	4,492	0
Total Expenditures	15,679	3,747	3,747	11,932	3,107

Board of Management Report

Subject: Water System Operation - Contract Status Update

Overview:

- The current Service Agreement with the operating authority is in effect for the term of January 1, 2023 to December 31, 2027.
- In 2022, the operating authority achieved the contractual requirements related to employee retention and received the associated incentive payment of \$30,000.
- In 2022, the operating authority achieved the contractual requirements associated with the performance incentive payment and received the full amount of \$100,000.
- In 2022, the treated water volume was slightly lower than the projected range resulting in an adjustment to the service fee.

Recommendation

That the Board of Management for the Elgin Area Primary Water Supply System **RECEIVE** this report for information.

Previous and Related Reports

June 2, 2022	Water System Operation – Contract Status Update
October 7, 2021	Operations and Maintenance Services Agreement – Negotiation of Term Extension

Background

On January 19, 2012, the Board of Management for the Elgin Area Primary Water Supply System (EAPWSS), acting concurrently and jointly with the Board of Management for the Lake Huron Primary Water Supply System (LHPWSS), awarded the contract for the management, operation, and maintenance of both drinking water systems to the Ontario Clean Water Agency (OCWA). OCWA began operating the EAPWSS on July 1, 2012. The original contract with OCWA was for a five-year term, with additional five-year optional extensions.

In 2017 an Amending Agreement was executed to extend the term. The Amending Agreement took effect on July 1, 2017, and the term ended on December 31, 2022. The Amending Agreement allowed for an additional five-year extension at the option of the Board.

On March 4, 2021, the Board authorized staff to negotiate the terms and conditions for a term extension agreement with OCWA for the allowable five-year period. On October 7, 2021, the Board approved the Amended and Restated Operations and Maintenance Services Agreement and authorized the Board Chair and the CAO to execute the agreement with OCWA. The Agreement is in effect for the period of January 1, 2023, to December 31, 2027.

Discussion

The service agreement with OCWA contains a considerable number of deliverables. This report does not attempt to cover the status of all deliverables, rather it provides an overview of some of the more notable administrative items.

General Contract Deliverables

Under the service agreement, OCWA is required to provide several regular reports to Board staff, including:

- Monthly Operations and Maintenance Report
- Quarterly Contract Report
- Quarterly Water Quality Report
- Quarterly Financial Report
- Quarterly Health & Safety Activities Report

Board staff and OCWA currently meet monthly to review the day-to-day management, operations, and maintenance activities for the water supply system. The Board's CAO, Director, and the senior management of OCWA also meet quarterly to discuss any financial, contractual, compliance and administrative-level issues. All the above noted reports and related meeting minutes are available from the Regional Water Supply office in London upon request.

Employee Retention Incentive

Under the service agreement, OCWA is entitled to receive an annual employee retention incentive payment if all critical staff positions were filled, and staff turnover for these positions was no more than two persons during the calendar year. This incentive was included in the service agreement to ensure adequate numbers of critical staff were available and incur minimal turnover, which was a significant issue with the previous contracted operating authority.

In 2022, OCWA achieved these requirements for the EAPWSS and received the \$30,000 employee retention incentive payment.

Performance Incentive Payment

At the end of each contract year, OCWA is entitled to receive a performance incentive payment of up to \$100,000, subject to any deductions outlined in the service agreement. Deductions could result from a number of specified issues, such as providing deficient or late reports, failure to meet emergency response requirements, failure to deal with complaints, failure to meet water quality performance criteria, etc. The performance incentive payment is intended to promote performance superior to minimum regulatory standards and best practices.

In 2022 there were no deductions to the incentive payment. In total OCWA received the full \$100,000 incentive payment for the EAPWSS.

The water quality performance criteria specified within the service agreement was met with one (1) exception. In September 2022 there were several instances where the filtered water turbidity was higher than the required contractual performance criteria. This was attributed to raw water conditions in Lake Erie, specifically low dissolved oxygen events that resulted in significant and abnormal treatment challenges. This was the only water quality performance failure in 2022. Therefore, there were no deductions from the incentive payment as this only applies if there have been two or more water quality performance failures.

There were several detection events for geosmin in the treated water in July and August 2022. Geosmin is an organic compound that can cause taste and odour issues. Board staff took into consideration that there is a significant lag time in receiving the lab reports from the external lab. During the operator's onsite daily lab tests, no taste and odour was detected in treated water. Therefore, deductions to the incentive payment were not applied. Each lab detect was individually assessed, with the conclusion that the incentive payment should not be impacted. This assessment was made at the sole discretion of the EAPWSS and may not be construed as precedent for future evaluations and assessments.

It is important to note that all regulatory water quality requirements were met during these events.

Service Fee Adjustment

The service agreement identifies projected annual treated water volumes throughout the contract term, upon which the annual service fee is based. At the end of each contract year, if the actual volume is greater than 105% or less than 95% of the projected volume, an adjustment is made to the service fee (either a credit or additional cost).

In 2022, the actual volume for the EAPWSS was 94.46% of the projected volume. This was outside the accepted range therefore an adjustment to the service fee was required. The reduction in volume was deemed to impact OCWA's actual chemical

costs and residuals disposal costs. This resulted in a total credit adjustment of \$4,105.85, paid by OCWA to the Board.

Conclusion

Board staff will continue to work closely with the operating authority to monitor performance and ensure deliverables under the service agreement. Any contractual issues are discussed at the quarterly operations meetings between OCWA and Board staff.

Prepared by: Erin McLeod, CET
Quality Assurance & Compliance Manager

Submitted by: Andrew J. Henry, P.Eng.
Director, Regional Water

Recommended by: Kelly Scherr, P.Eng., MBA, FEC
Chief Administrative Officer

Board of Management Report

Subject: Asset Management – 2023 State of the Infrastructure Report

Overview:

- The state of the infrastructure (SOTI) report is a high-level snapshot of the asset management profiles of our various assets, grouped by process area.
- Provides insight into the overall status of the utility and the year-over-year changes to the utility's asset management profiles.
- A tool to help inform the ongoing maintenance and future investment planning decision making process.

Recommendation

That the Board of Management for the Elgin Area Primary Water Supply System **RECEIVE** this report with regard to the 2023 State of the Infrastructure for information.

Previous and Related Reports

Oct 7, 2021 Asset Management Policy and Asset Management Plan Update

Jun 2, 2022 Elgin Area Treatment and Transmission Assets – State of the Infrastructure Report

Oct 6, 2022 2022 Asset Management Plan Update Project Completion

Jan 13, 2023 EA4194 Elgin Area Water Treatment Plant Asset Condition Assessment

Jun 1, 2023 Asset Management – 2023 Levels of Service Report

Background

At the June 2, 2022, Board meeting, Board staff presented the inaugural State of the Infrastructure Report for the Elgin Area Primary Water Supply System (EAPWSS) treatment and transmission assets. The information contained in that first SOTI report was compiled through the Asset Management Plan update project. The state of the infrastructure was conceived as an annual report to the Board of Management presented at the June Board meeting with the intention of informing the Board of the various asset management profiles of the system, and the incremental year-over-year change.

There are certain guiding principles from our Asset Management Policy which directly relate to the SOTI report, including:

Long-Term Sustainability and Resiliency: Planning for the long-term, while integrating social, environmental, and financial considerations and constraints.

Fiscal Responsibility and Asset Management Decision-Making: Making the best use of available funds to deliver services.

Transparency: Making infrastructure decisions using an open and transparent process, the utility shall be data-driven and evidence-based.

Discussion

This 2023 state of the infrastructure report represents the first full year of asset reporting. Since that inaugural 2022 SOTI report, we have worked to reconcile asset data to improve data quality and reporting accuracy. The utility has a combination of over 4,150 individual and grouped assets documented and categorized across the following ten process areas:

- Raw Water Handling
- Pre-Treatment
- Filtration, Disinfection & High Lift Pumping
- General Site, Building Services, Fleet & Security
- Residual Management
- Digital Technology
- Primary Power
- Surge Control
- Primary Pipelines & Chambers
- Reservoir & Pumping Station

In the last year, through a combination of operation & maintenance activities and capital construction projects, roughly 130 assets have been retired and taken out of service with approximately 180 new assets installed.

The following asset management profiles are discussed below with the respective process area 2023 State of the Infrastructure Asset Cards attached to this report:

- Asset Replacement Value
- Asset Condition
- Asset Performance
- Asset Remaining Useful Life
- Asset Risk

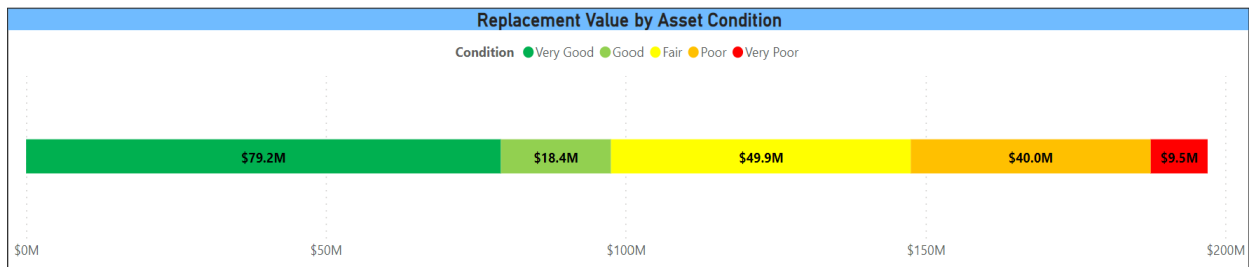
The overall assessment of the state of the infrastructure is a consideration of all these factors. A lower rating in any one factor does not necessarily denote the imminent failure of the asset or system, increasing risk due to poor operational practices, or ineffective investment strategies. Where indicated as such in the discussion below, due to the unique nature of digital technology assets, they might be separated out from the other process areas for the purposes of state of the infrastructure reporting.

A separate annual report on levels of service is also presented at the June 2023 Board meeting which is intended to be read in conjunction with this state of the infrastructure report.

Asset Replacement Value

Across all process areas, the utility has an asset replacement value of approximately \$197 million compared to \$184.7 million reported in the 2022 SOTI report, an increase of 6.7%.

Overall, the utility has an asset replacement value profile as follows:



Asset Condition:	Very Good	Good	Fair	Poor	Very Poor
% Change in Value Over Previous Year:	3.8%	18.7%	-10.1%	31.6%	35.7%

Asset replacement value is the total dollar value of our assets based on the estimated asset replacement costs in 2023 dollars. The current valuation increase is the result of a combination of factors including new assets added to the system, existing asset replacement value year-over-year inflation, and incorporating existing assets reconciled but not otherwise reported previously (e.g., digital technology assets). Through the Asset Management Plan an assumed year-over-year inflation rate has been set at 2.5% noting this does not necessarily account for pandemic-related market conditions or the recent rate of inflation. Using a consistent annual inflation rate is expected to average out the highs and lows which might be experienced over the long term.

Asset Condition

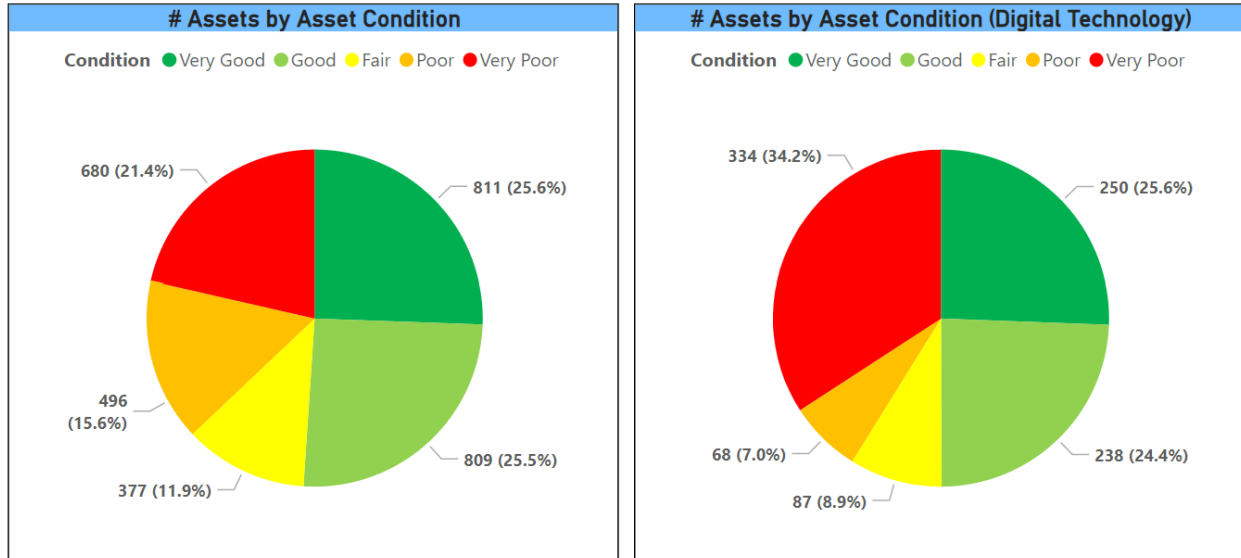
Consistent with the prior year asset reporting, age-based straight-line deterioration methodology was utilized for determining asset condition.

Table 1: Asset Condition Ratings based on Straight-Line Deterioration

Remaining Useful Life			Condition Rating	Condition Grade
80%	-	100%	1	Very Good
60%	-	80%	2	Good
40%	-	60%	3	Fair
20%	-	40%	4	Poor
0%	-	20%	5	Very Poor

Straight-line deterioration is most useful when an asset’s condition is assumed to deteriorate uniformly over time. **It is important to note that age-based asset condition assessment is an indicator of risk, and not the ability of the asset to function as intended.** As our asset management matures, asset condition data will be further refined as data limitations are addressed and asset condition assessments are completed. With the approval of the Board at the January 13th meeting, we have retained a consultant and are presently undertaking a water treatment plant asset condition assessment intended to improve our asset condition information accuracy. This project is anticipated to be completed in the fall of 2023 with the results incorporated into the 2024 state of the infrastructure report.

Overall, the utility has a 2023 asset condition profile as follows:



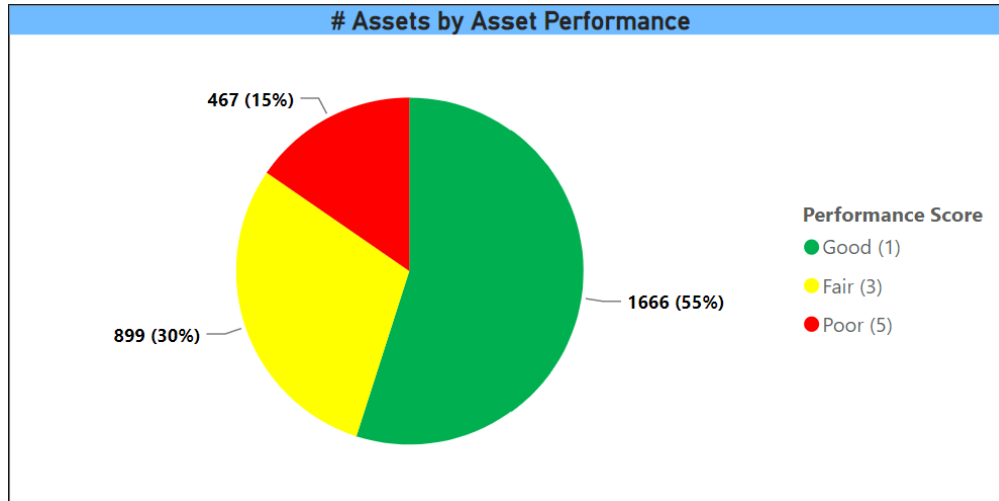
Asset Condition:	Very Good	Good	Fair	Poor	Very Poor
Distribution Change Over Previous Year:	-1.4%	1.2%	0.2%	-1.4%	1.4%

While the summarized age-related assessment indicates that on average ~24% of the assets are in 'Very Poor' condition, it is important to note that this is simply based on those assets having less than 20% of their expected useful life remaining. To add further context, the replacement value of these 'Very Poor' assets represents only 4.8% of the overall utility asset replacement value. Additionally, as demonstrated in the performance section below, collectively the treatment and transmission assets continue to perform at a high level despite any age-related risks.

Asset Performance

Asset performance is a measure of how well an asset is performing in meeting as part of its current operational function, and is assessed independently of other factors (e.g., age-related risks). The contracted operator, the Ontario Clean Water Agency (OCWA), using their collective knowledge, experience, and history with the EAPWSS reports on asset performance as part of their annual asset report. Assets have been assigned a performance rating of 1 – Good, 3 – Fair, or 5 – Poor. Collectively the utility's assets have an average performance rating of 2.2 or Fairly Good.

Overall, the utility has a 2023 asset performance profile as follows:

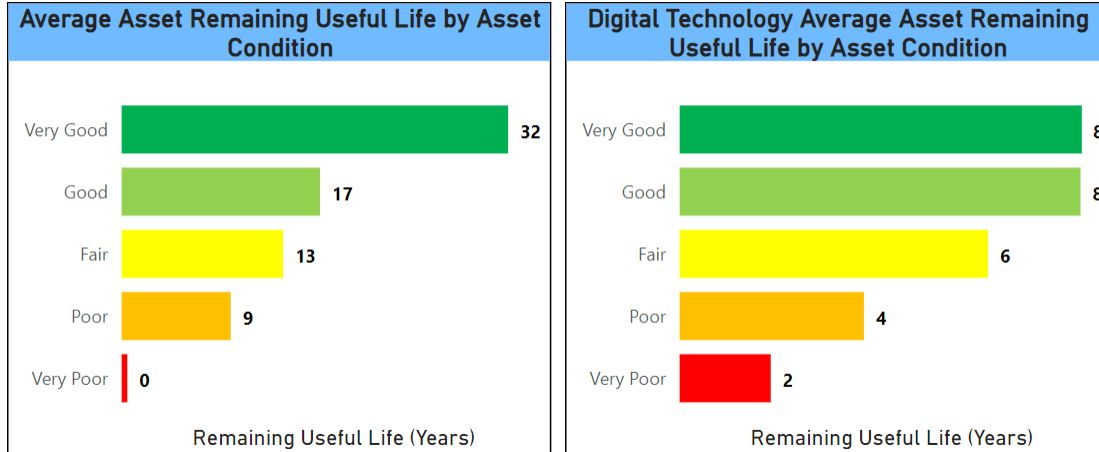


For this state of the infrastructure report digital technology asset performance has not been quantified; in general, digital technology assets are either performing or not.

Asset Remaining Useful Life

An asset's remaining useful life is determined by subtracting the asset age from the asset expected useful life. Asset age is based on the asset installation date; and where an asset is known to have been rehabilitated since original installation the age is adjusted accordingly. Asset remaining useful life (RUL) is expressed as the average of all assets within the same asset condition and is expressed in years. Remaining useful life will continuously fluctuate over time as assets age (decrease in condition), are renewed, replaced, or rehabilitated (increase in condition).

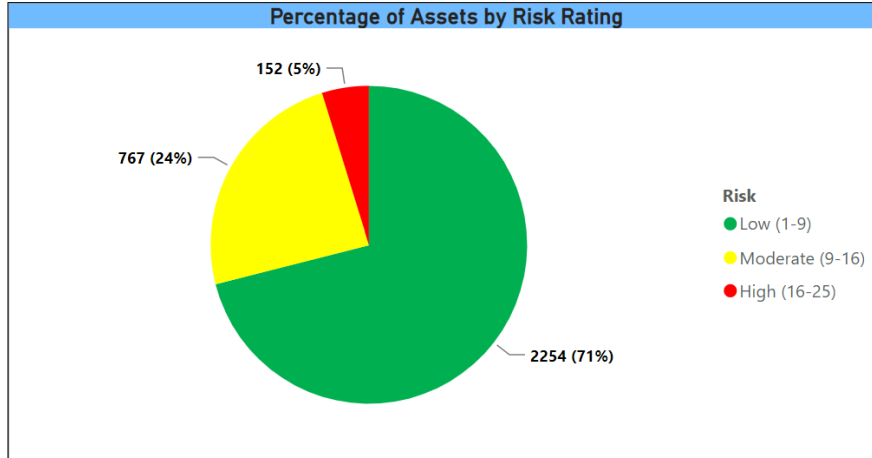
Overall, the utility has a 2023 asset remaining useful life profile as follows:



Asset Risk

New to the state of the infrastructure report is the utility’s asset risk profile. In the context of the Asset Management Plan, risk is a factor of the likelihood of an asset failure (that limits the ability of the asset to deliver the service) and the resulting consequence. Likelihood considers asset condition, performance, and climate change impacts, where consequence considers the severity of the impact and the importance of the asset. By separating condition and performance as two distinct factors, there is an opportunity to consider assets in poor condition that may still be performing well, as well as assets in good condition that may not be reliable. Assets can have a maximum risk rating of twenty-five and are split into three risk zones, High Risk (risk ratings greater than 16), Moderate Risk (risk ratings of 9 to 16), and Low Risk (risk ratings less than 9). Collectively the utility’s assets have an average risk rating of 7.7 or Low.

Overall, the utility has a 2023 asset risk profile as follows:



For this state of the infrastructure report digital technology asset risk has not been quantified; the 2022 AMP indicated 10% of digital assets in the Moderate Risk zone.

Conclusion

This 2023 SOTI report continues to build upon asset condition, performance, remaining useful life, and replacement value data reported in the inaugural state of the infrastructure report. This year's SOTI report has been expanded to incorporate the utility asset risk profile. Future reports are envisioned to continue to be expanded to include system highlights and funding and budgetary considerations. As our asset management program matures and the quality of the asset data continues to improve, the annual year-over-year changes to the utility's asset management profiles will present the overall state of the EAPWSS infrastructure with ever increasing accuracy.

The state of our asset management levels of service (performance compared to targets) will be presented to the Board as a standalone report intended to be read in conjunction with this state of the infrastructure report.

Prepared by: Ryan Armstrong, C.E.T.,
Asset Management Coordinator

Submitted by: Billy Haklander, P.Eng., LL.M
Senior Manager, Capital Programs

Recommended by: Kelly Scherr, P.Eng., MBA, FEC
Chief Administrative Officer

Attachments: Appendix A – 2023 State of the Infrastructure Process Area Asset
Cards

APPENDIX A – Process Area Asset Cards

- Raw Water Handling
- Pre-Treatment
- Filtration, Disinfection & High Lift Pumping
- Residual Management
- General Site, Building Services, Fleet & Security
- Primary Power
- Surge Control
- Primary Pipelines & Chambers
- Reservoir & Pumping Station
- Digital Technology



Elgin Area
Primary Water Supply System

Process Area

Raw Water Handling

Pre-Treatment

Filtration, Disinfection, and HLP

Residual Management

General Site, Building Services, Fl...

Primary Power

Surge Control

Primary - Pipelines and Chambers

Reservoir and Pumping Station

233

Asset Count

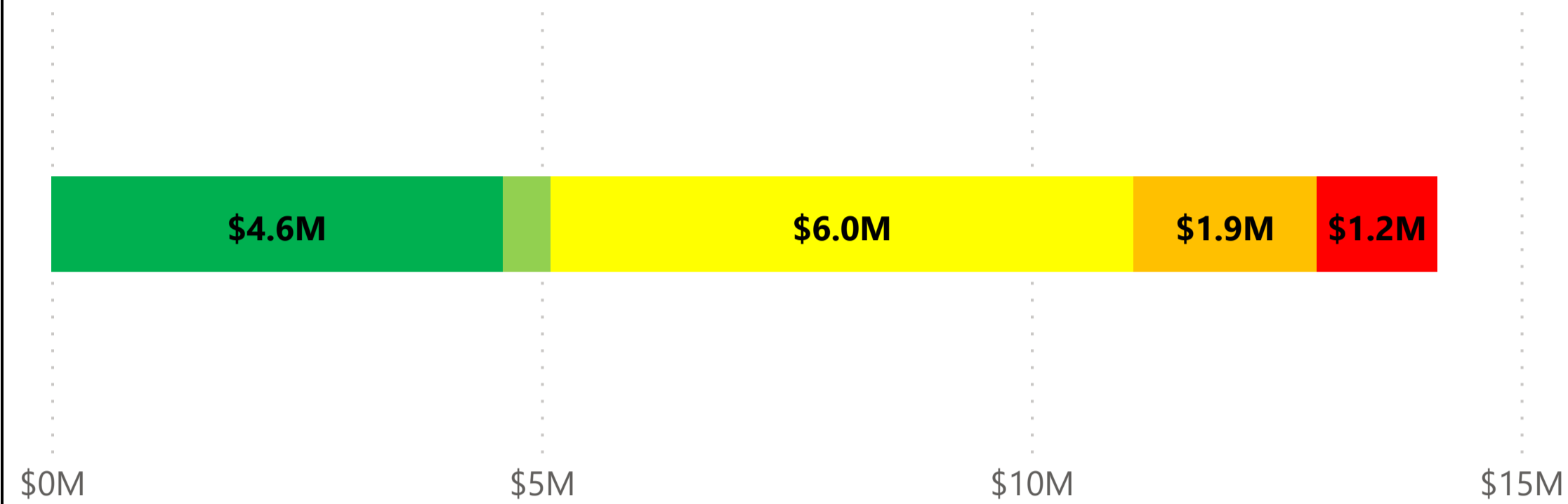
\$14.2M

Replacement Value

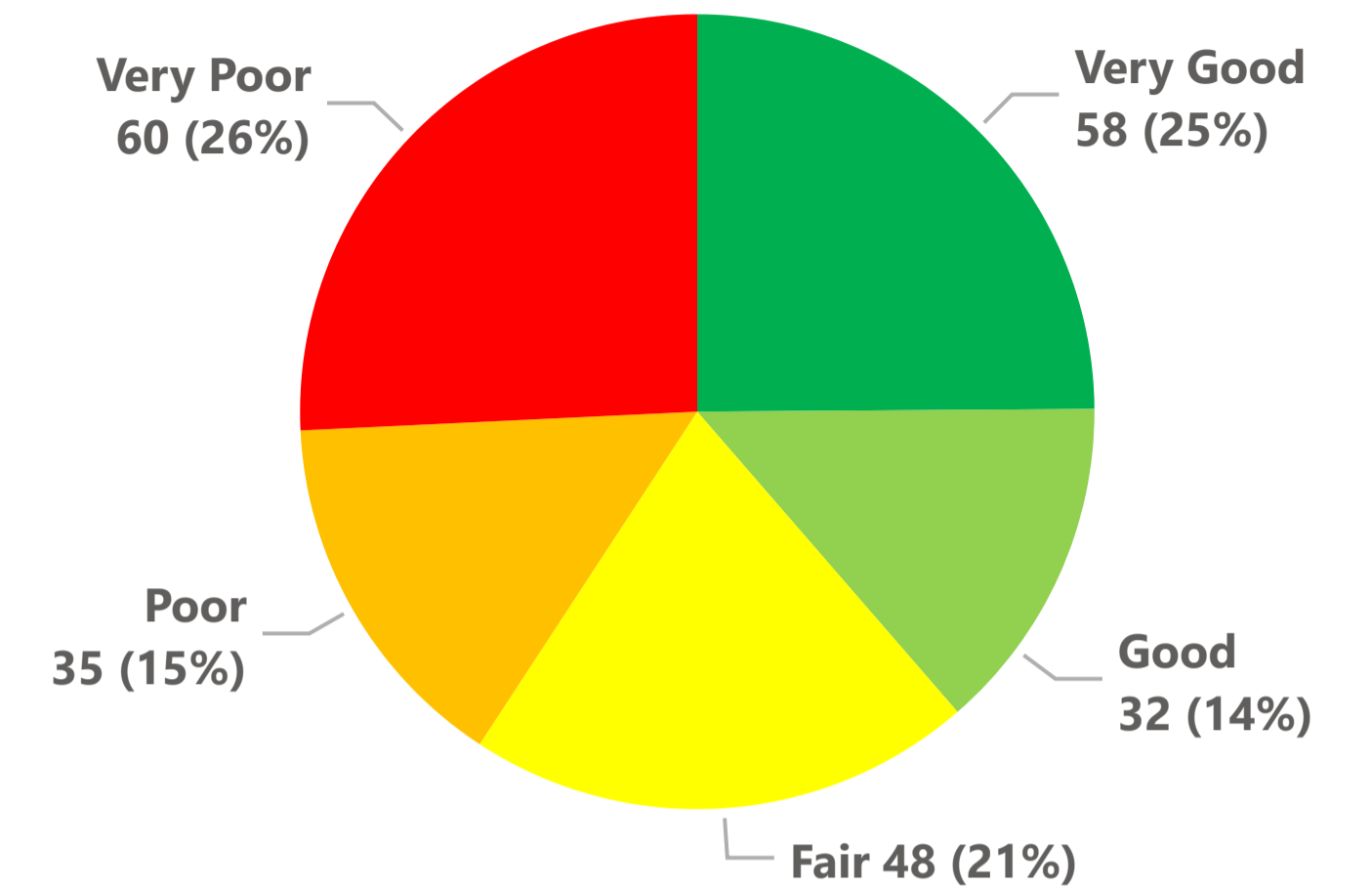
2023 State of the Infrastructure Asset Card

Replacement Value by Asset Condition

Condition ● Very Good ● Good ● Fair ● Poor ● Very Poor



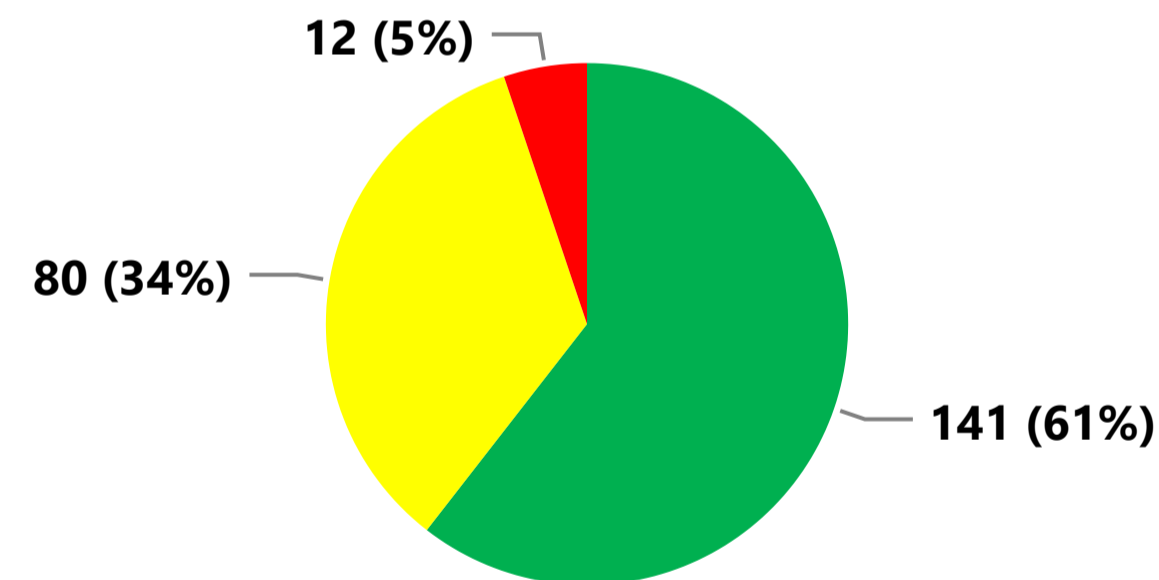
Assets by Asset Condition



Percentage of Assets by Risk Rating

Risk

- Low (1-9)
- Moderate (9-16)
- High (16-25)



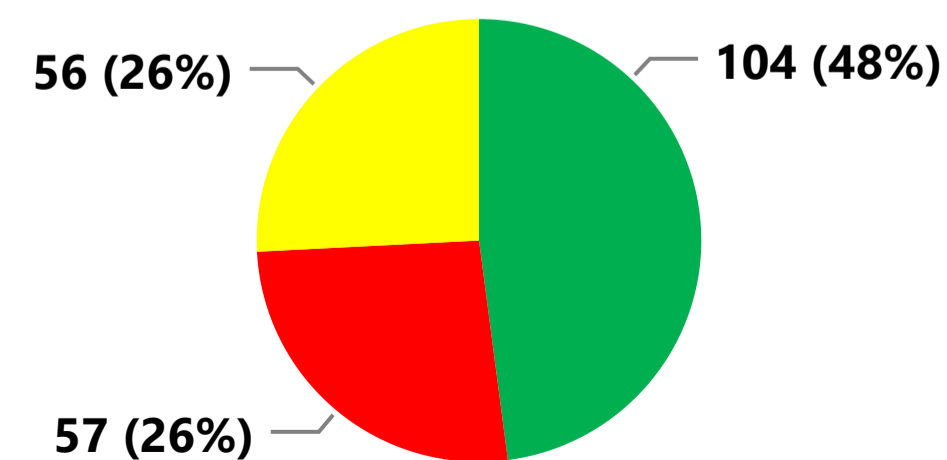
9.0

Average Asset Risk Rating

Assets by Asset Performance

Performance Score

- Good (1)
- Poor (5)
- Fair (3)



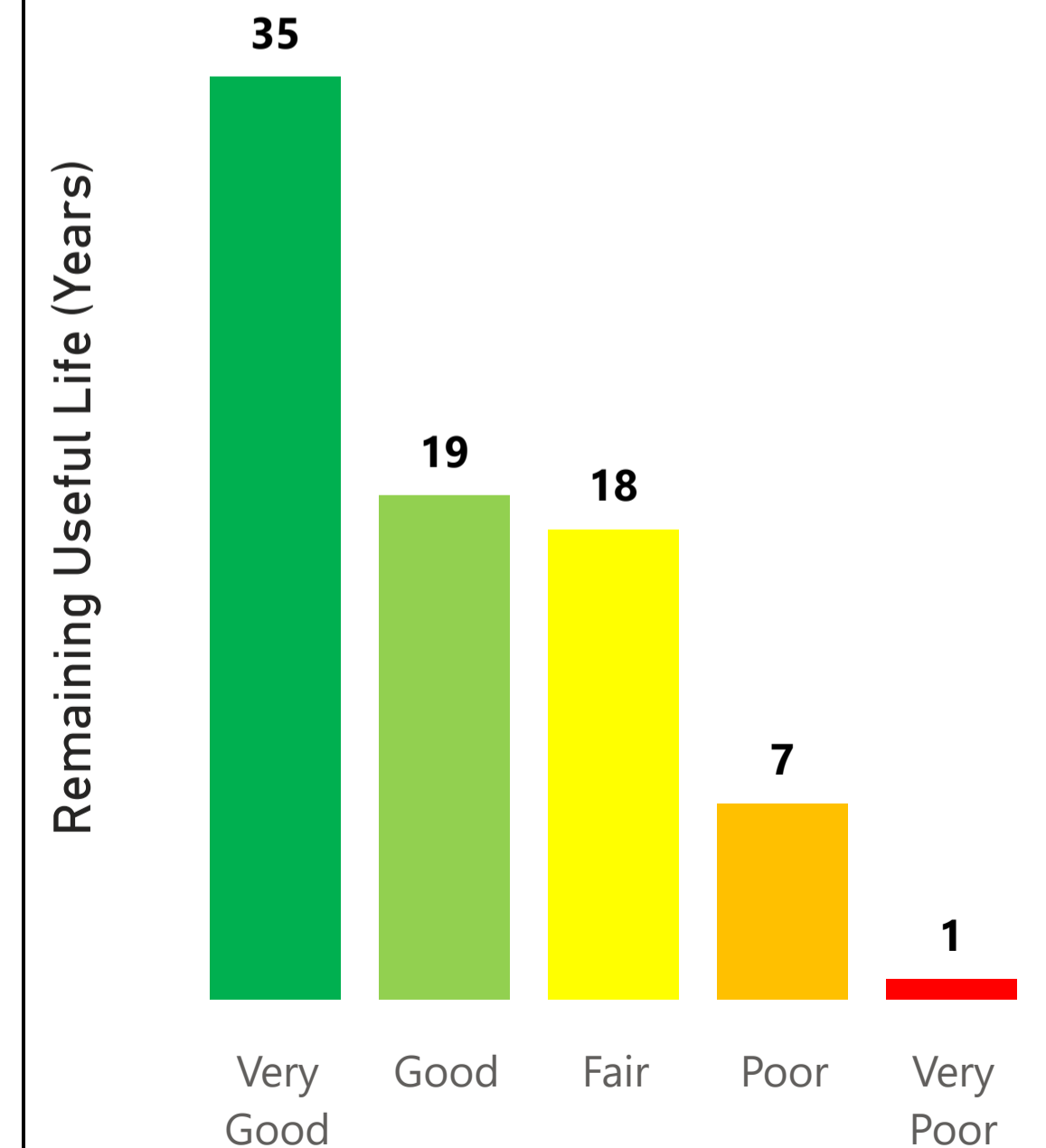
2.6

Average Performance Rating

70

Incidence of O&M Intervention

Average Asset Remaining Useful Life by Asset Condition





Elgin Area
Primary Water Supply System

Process Area

Raw Water Handling

Pre-Treatment

Filtration, Disinfection, and HLP

Residual Management

General Site, Building Services, Fl...

Primary Power

Surge Control

Primary - Pipelines and Chambers

Reservoir and Pumping Station

217

Asset Count

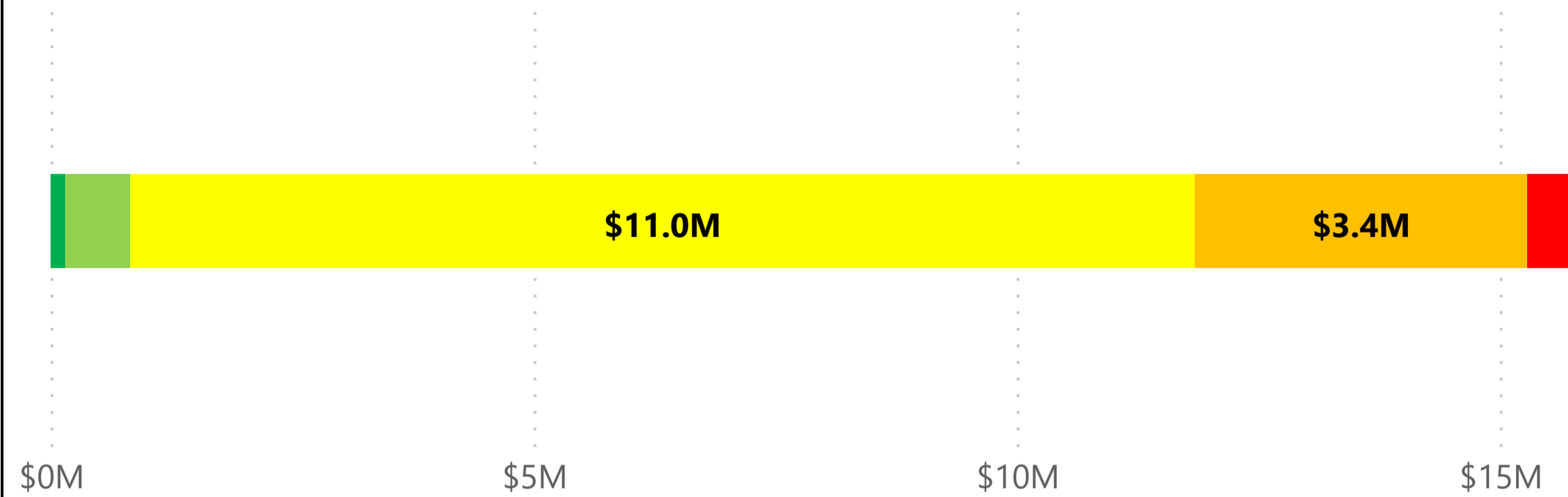
\$15.9M

Replacement Value

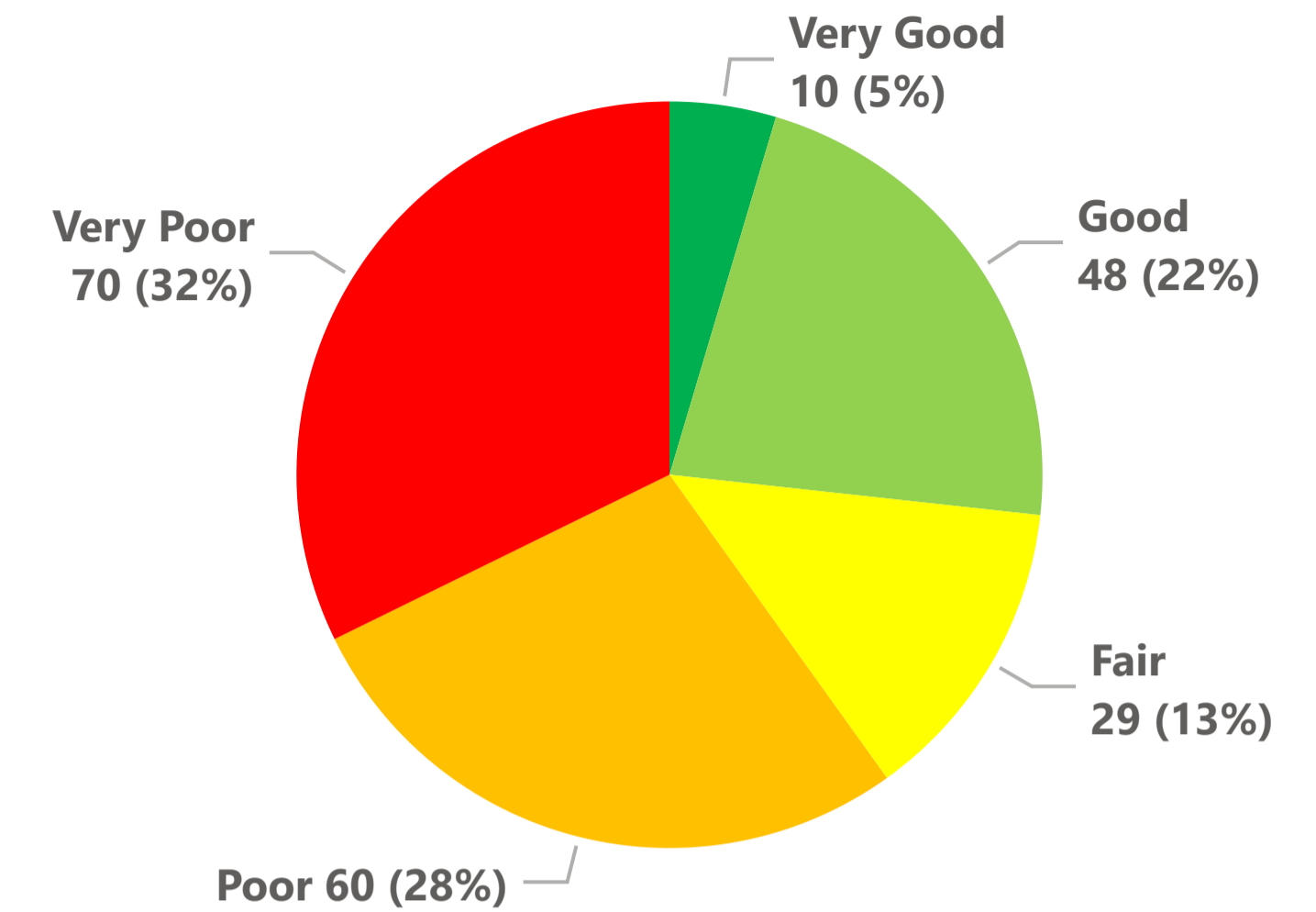
2023 State of the Infrastructure Asset Card

Replacement Value by Asset Condition

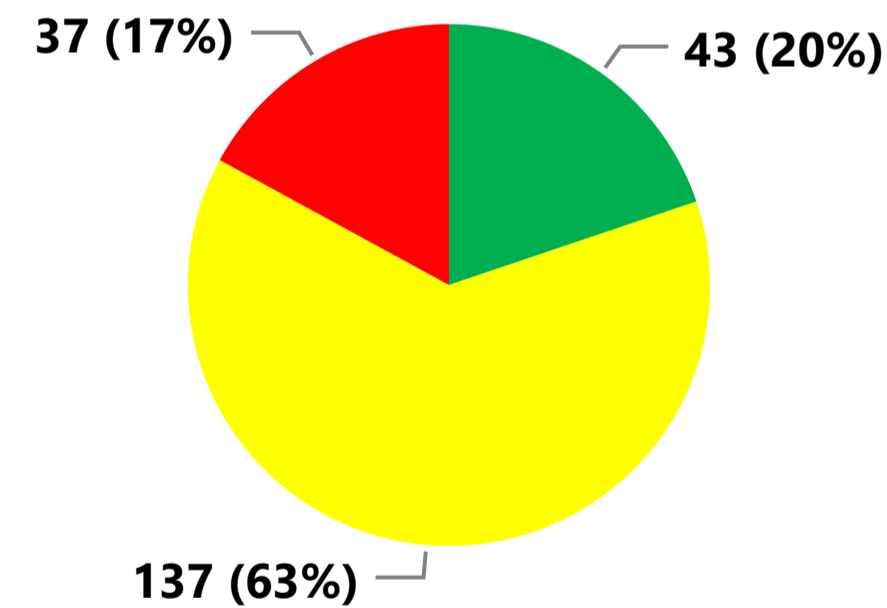
Condition ● Very Good ● Good ● Fair ● Poor ● Very Poor



Assets by Asset Condition



Percentage of Assets by Risk Rating



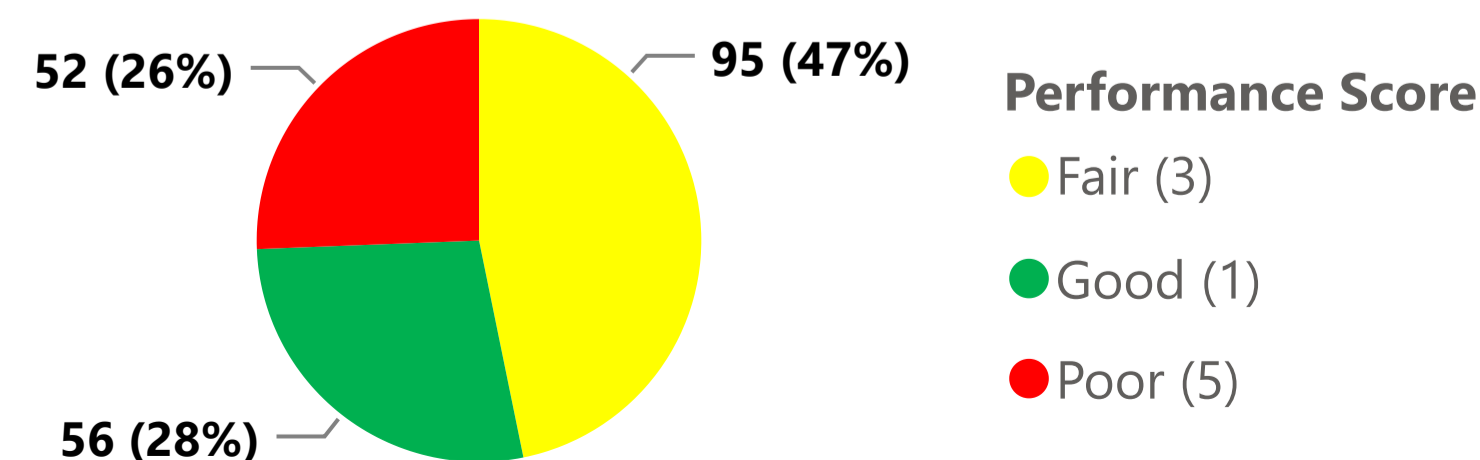
Risk

- Low (1-9)
- Moderate (9-16)
- High (16-25)

12.1

Average Asset Risk Rating

Assets by Asset Performance



Performance Score

- Fair (3)
- Good (1)
- Poor (5)

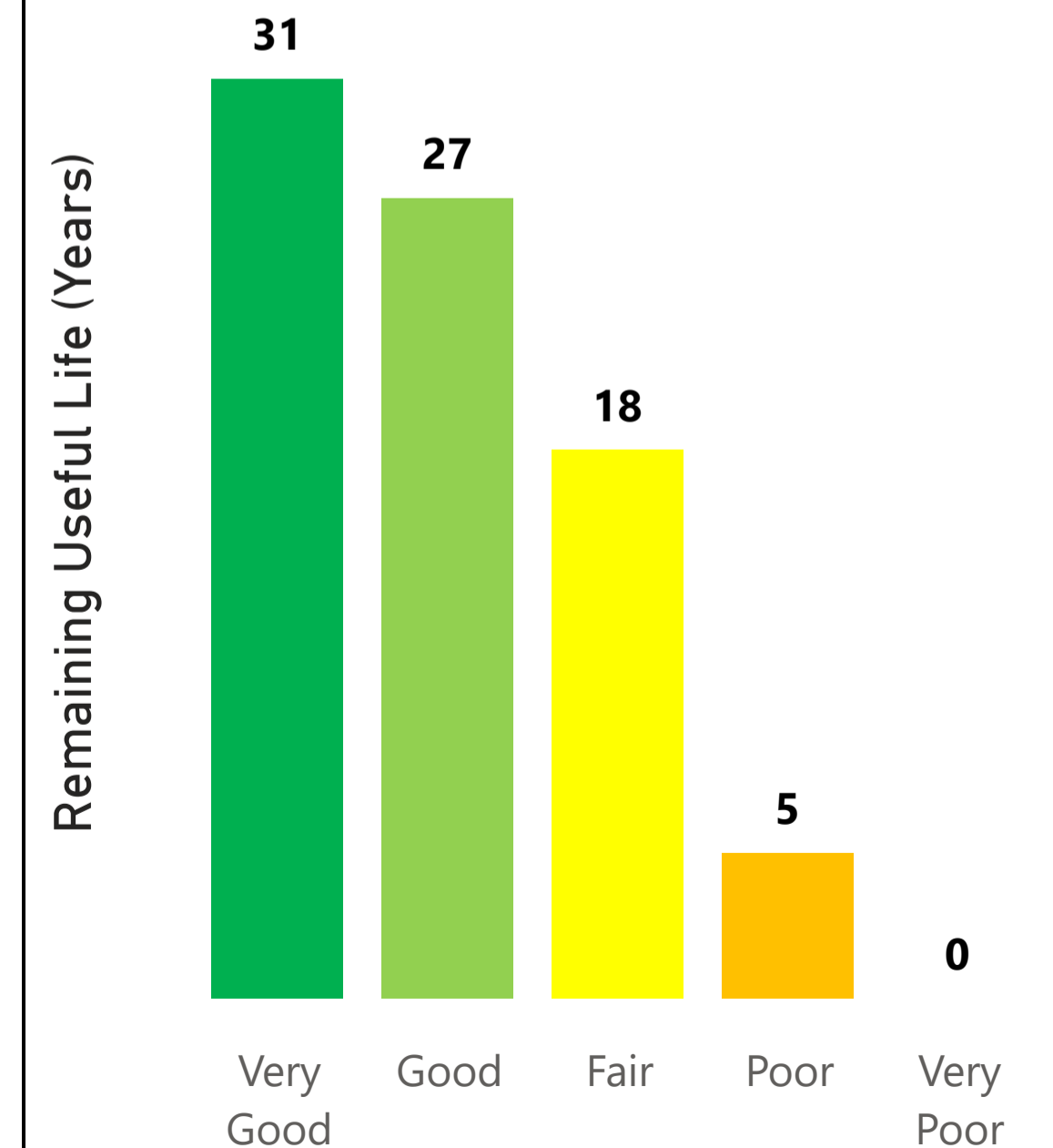
3.0

Average Performance Rating

85

Incidence of O&M Intervention

Average Asset Remaining Useful Life by Asset Condition





Elgin Area
Primary Water Supply System

Process Area

Raw Water Handling

Pre-Treatment

Filtration, Disinfection, and HLP

Residual Management

General Site, Building Services, Fl...

Primary Power

Surge Control

Primary - Pipelines and Chambers

Reservoir and Pumping Station

618

Asset Count

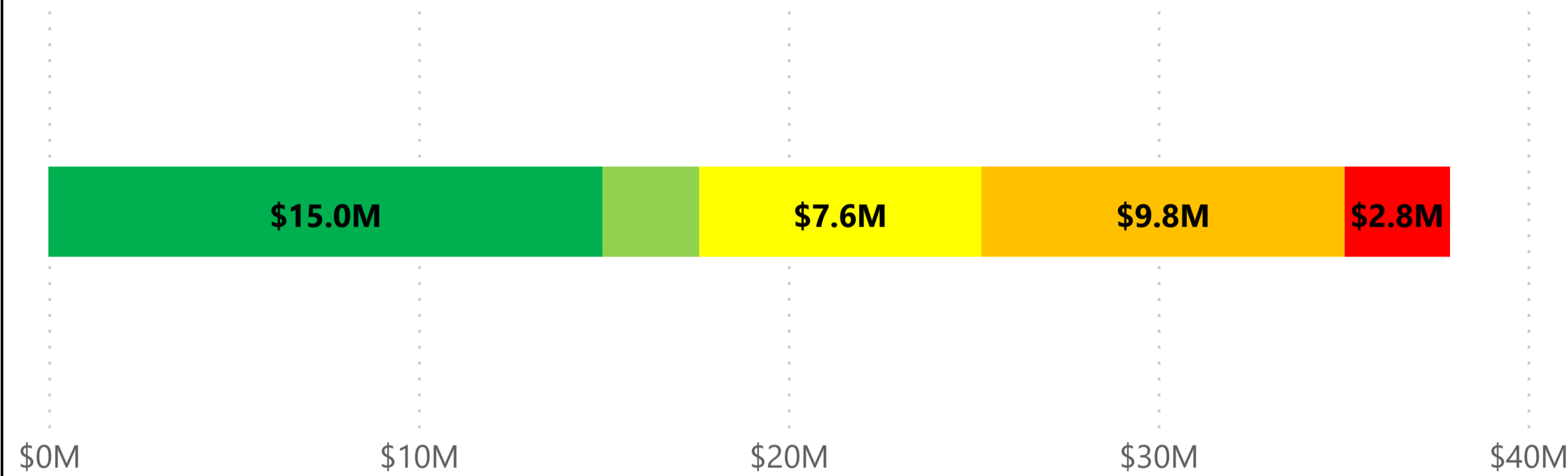
\$37.9M

Replacement Value

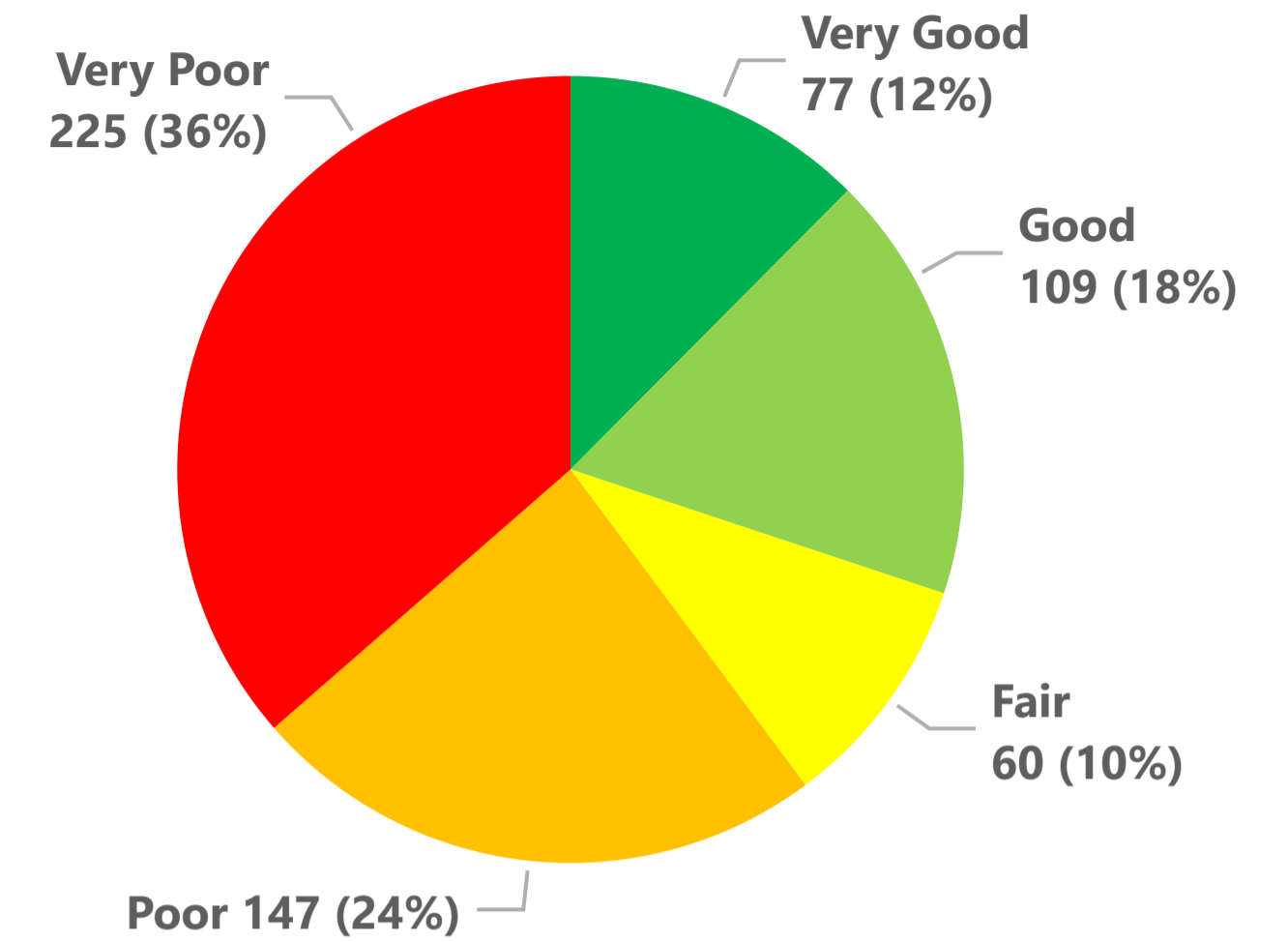
2023 State of the Infrastructure Asset Card

Replacement Value by Asset Condition

Condition ● Very Good ● Good ● Fair ● Poor ● Very Poor



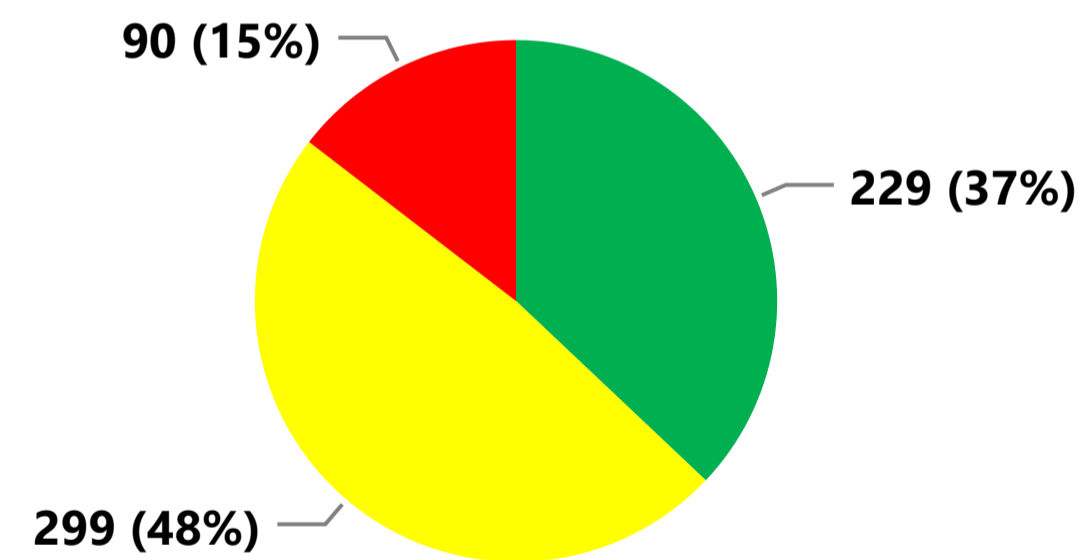
Assets by Asset Condition



Percentage of Assets by Risk Rating

Risk

- Low (1-9)
- Moderate (9-16)
- High (16-25)



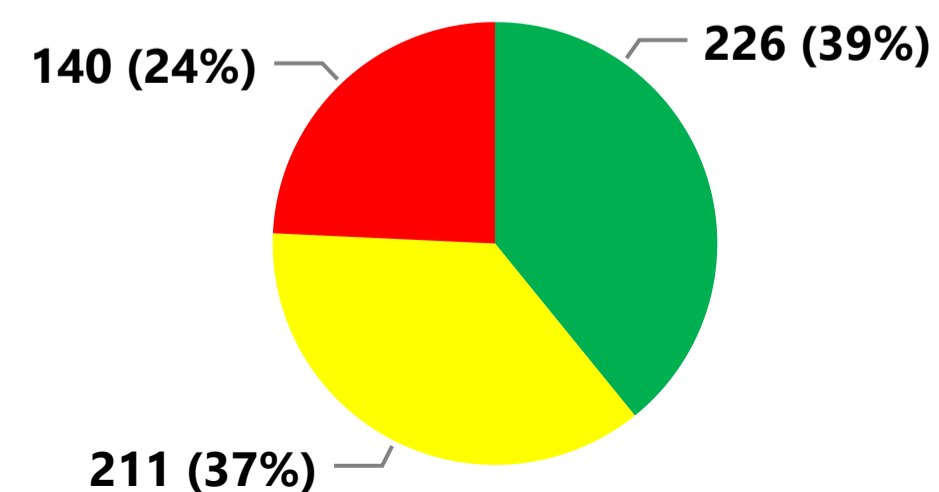
10.8

Average Asset Risk Rating

Assets by Asset Performance

Performance Score

- Good (1)
- Fair (3)
- Poor (5)



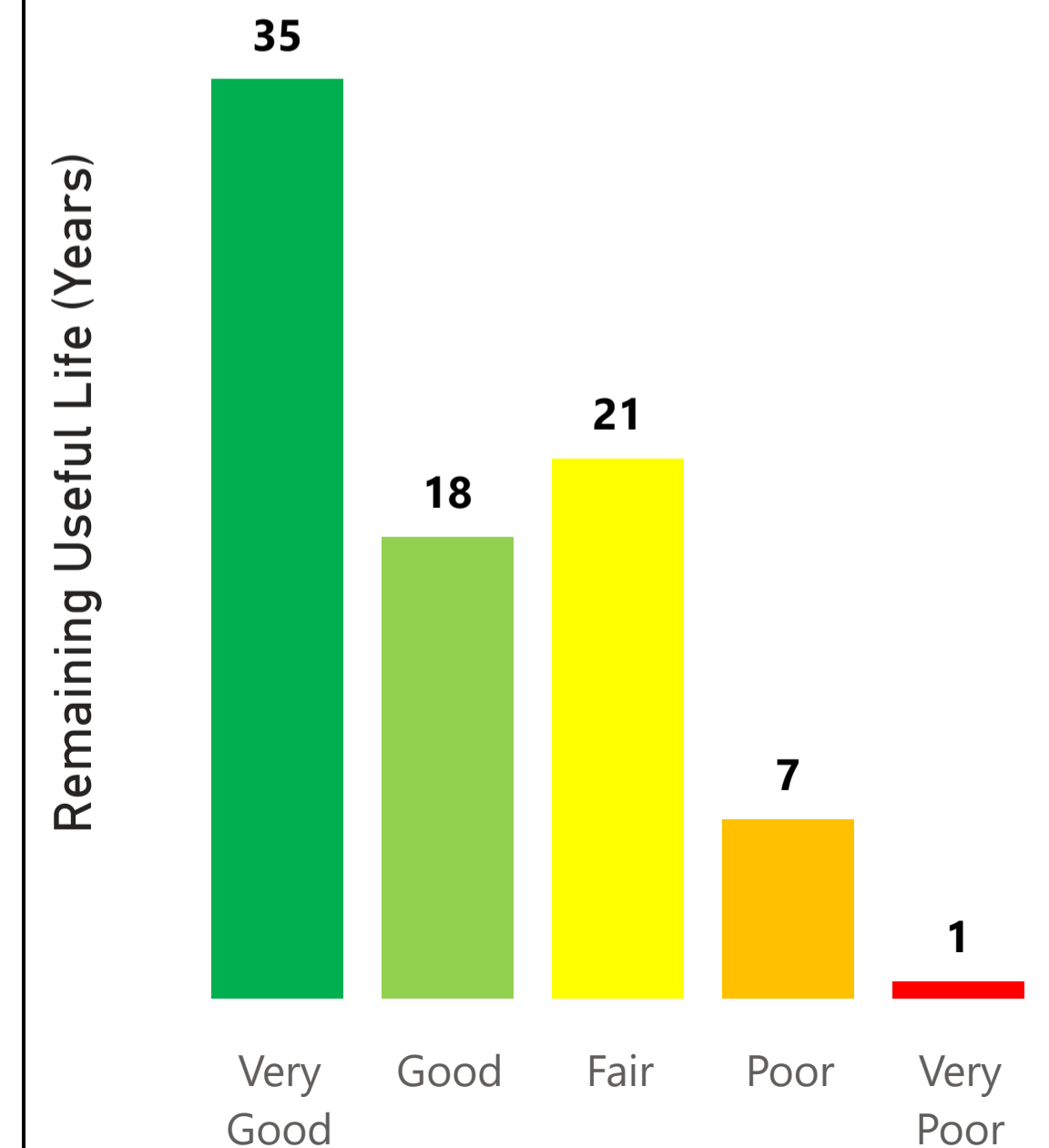
2.7

Average Performance Rating

161

Incidence of O&M Intervention

Average Asset Remaining Useful Life by Asset Condition





Elgin Area
Primary Water Supply System

Process Area

Raw Water Handling

Pre-Treatment

Filtration, Disinfection, and HLP

Residual Management

General Site, Building Services, Fl...

Primary Power

Surge Control

Primary - Pipelines and Chambers

Reservoir and Pumping Station

861

Asset Count

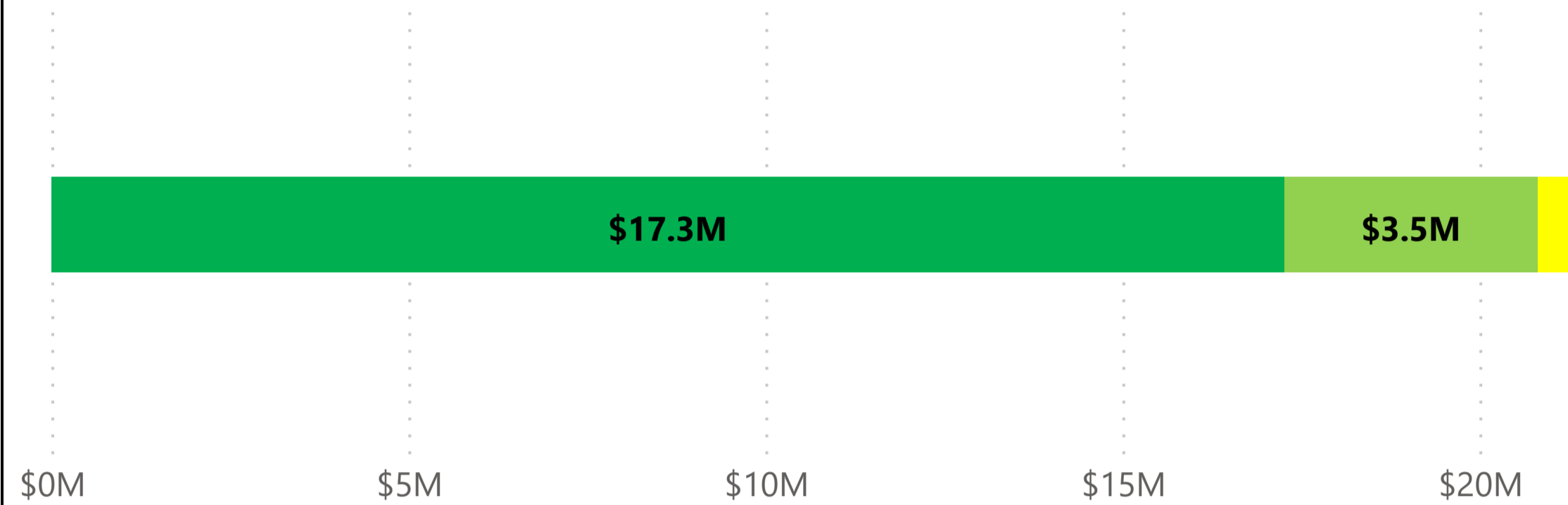
\$21.5M

Replacement Value

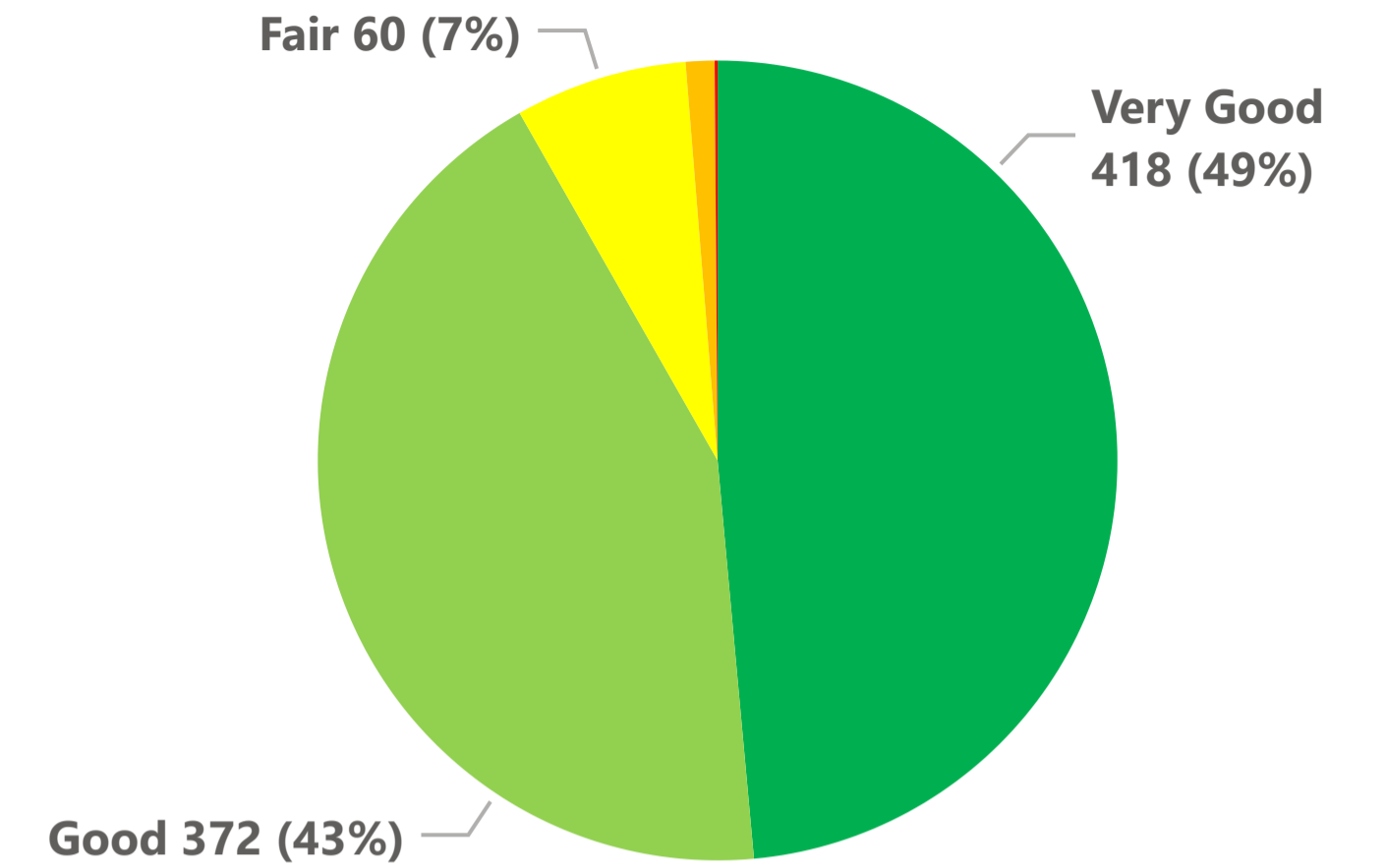
2023 State of the Infrastructure Asset Card

Replacement Value by Asset Condition

Condition ● Very Good ● Good ● Fair ● Poor ● Very Poor

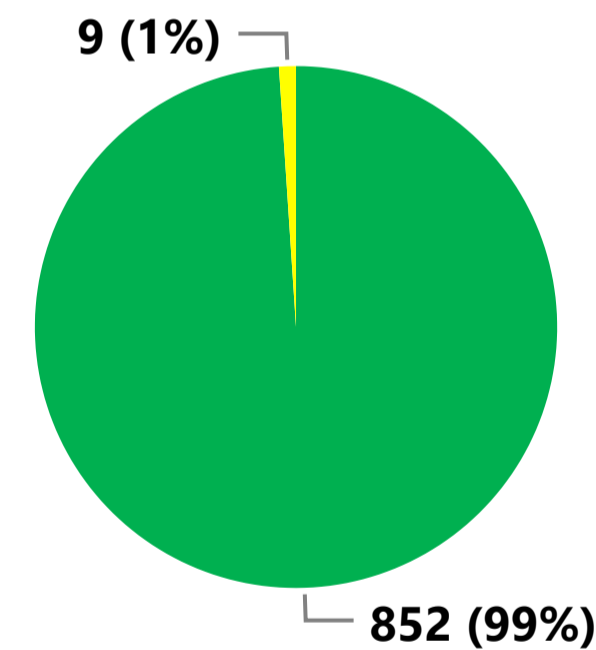


Assets by Asset Condition



Percentage of Assets by Risk Rating

Risk
● Low (1-9)
● Moderate (9-16)

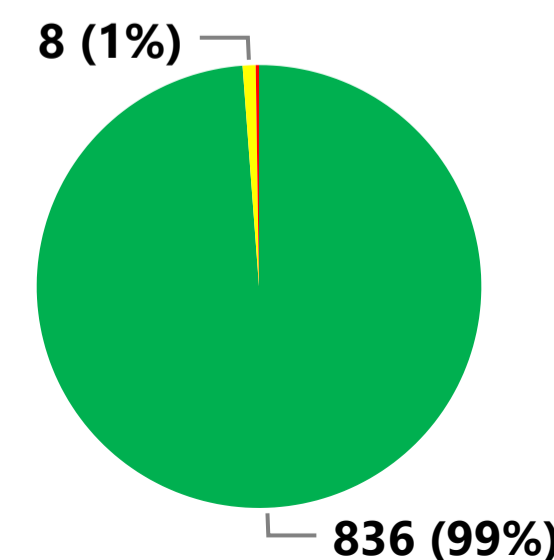


4.9

Average Asset Risk Rating

Assets by Asset Performance

Performance Score
● Good (1)
● Fair (3)
● Poor (5)



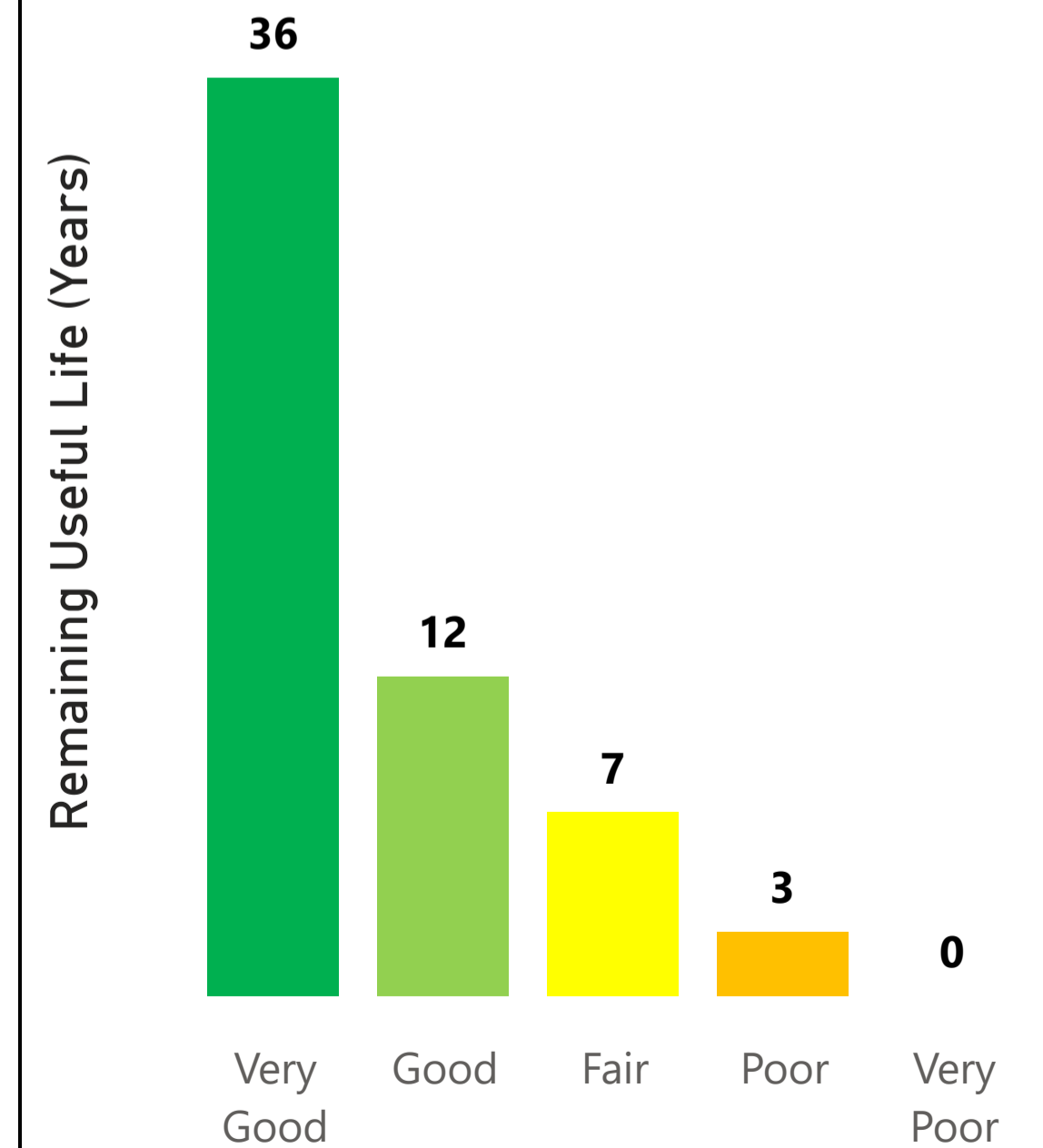
1.0

Average Performance Rating

202

Incidence of O&M Intervention

Average Asset Remaining Useful Life by Asset Condition





Elgin Area
Primary Water Supply System

Process Area

Raw Water Handling

Pre-Treatment

Filtration, Disinfection, and HLP

Residual Management

General Site, Building Services, Fl...

Primary Power

Surge Control

Primary - Pipelines and Chambers

Reservoir and Pumping Station

615

Asset Count

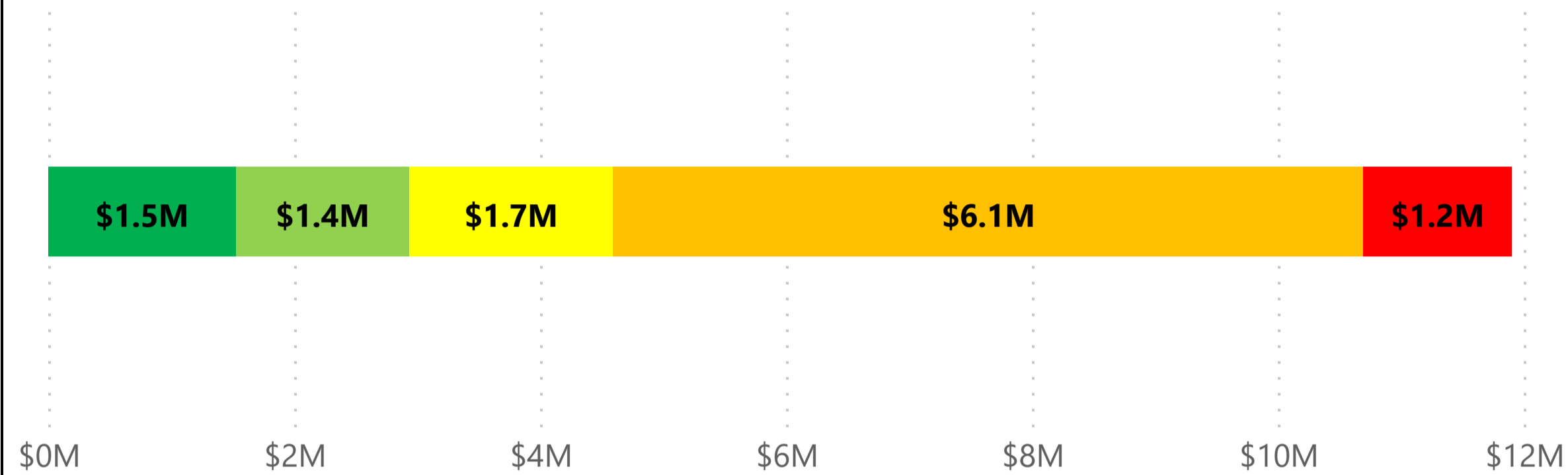
\$11.9M

Replacement Value

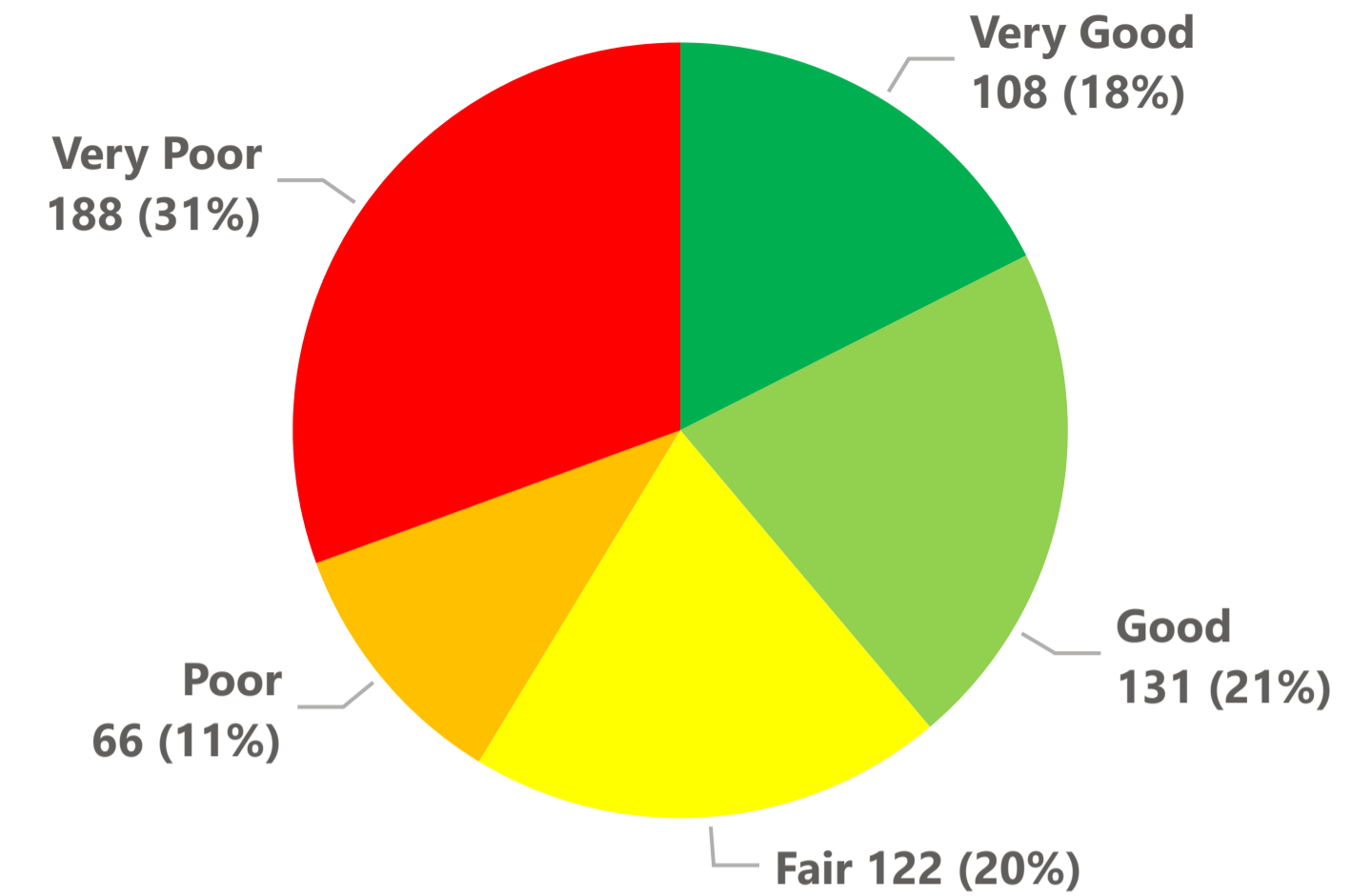
2023 State of the Infrastructure Asset Card

Replacement Value by Asset Condition

Condition ● Very Good ● Good ● Fair ● Poor ● Very Poor



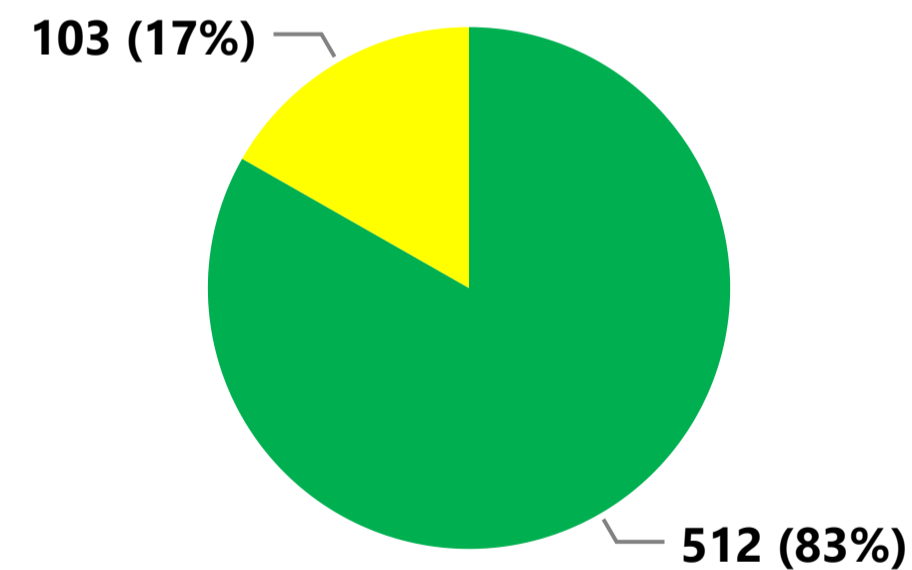
Assets by Asset Condition



Percentage of Assets by Risk Rating

Risk

● Low (1-9)
● Moderate (9-16)



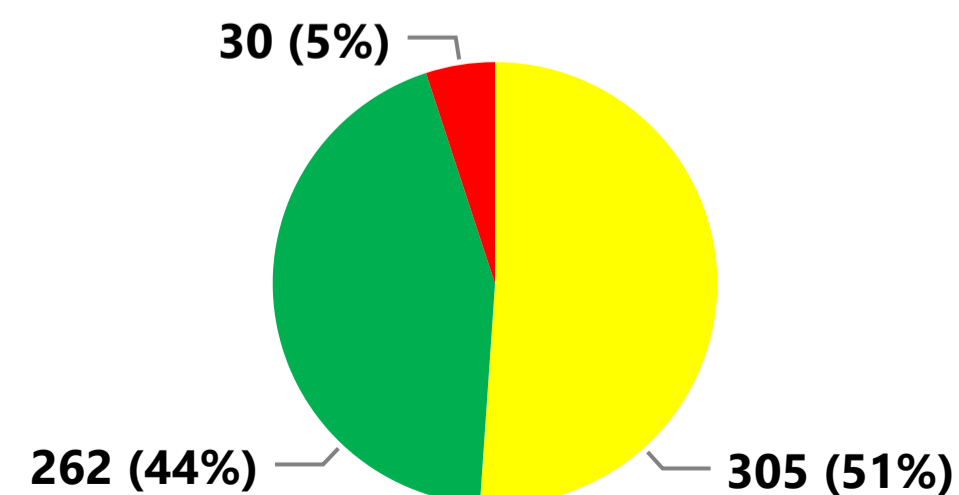
7.0

Average Asset Risk Rating

Assets by Asset Performance

Performance Score

● Fair (3)
● Good (1)
● Poor (5)



2.2

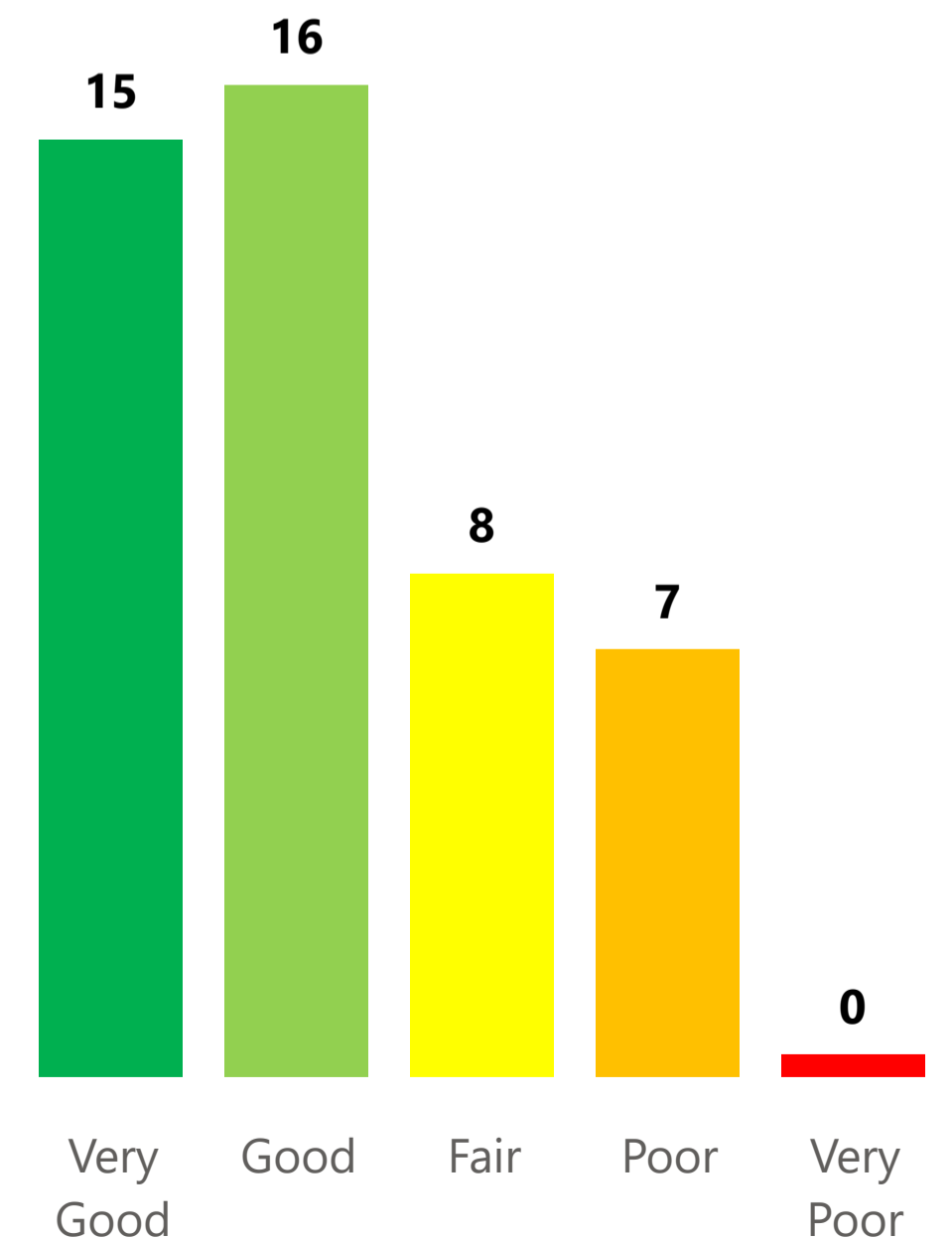
Average Performance Rating

180

Incidence of O&M Intervention

Average Asset Remaining Useful Life by Asset Condition

Remaining Useful Life (Years)





Elgin Area
Primary Water Supply System

Process Area

Raw Water Handling

Pre-Treatment

Filtration, Disinfection, and HLP

Residual Management

General Site, Building Services, Fl...

Primary Power

Surge Control

Primary - Pipelines and Chambers

Reservoir and Pumping Station

65

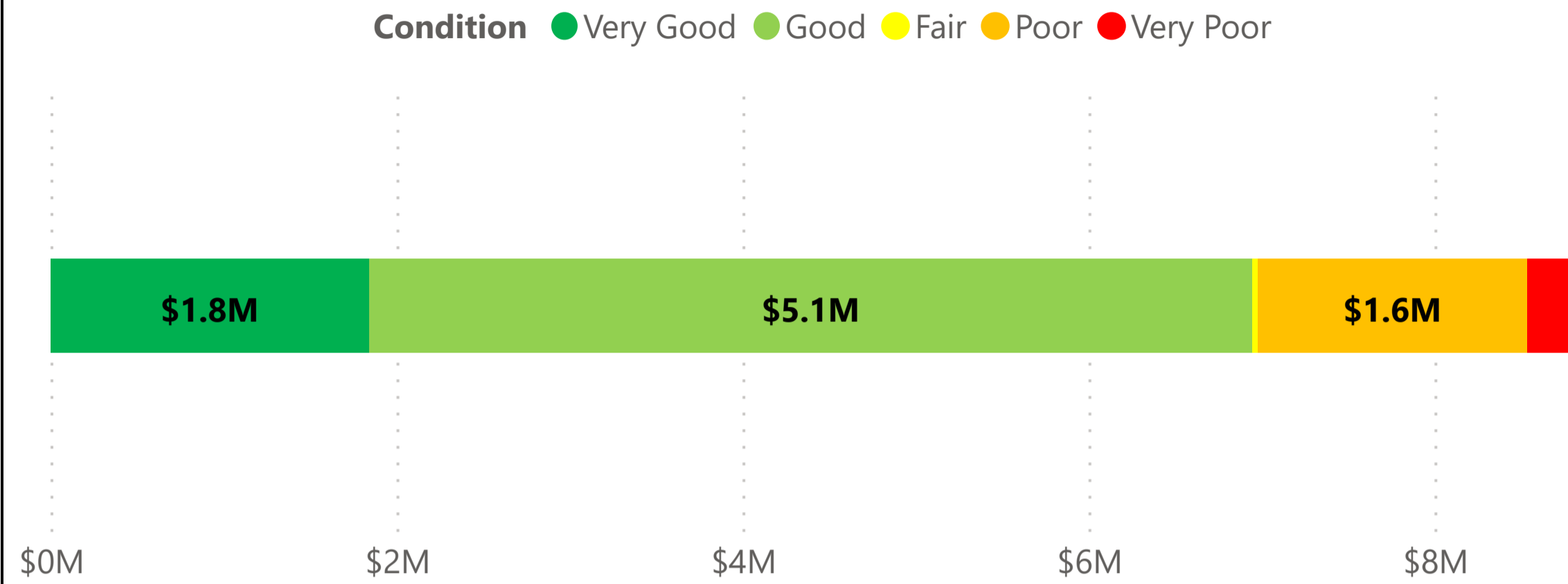
Asset Count

\$8.9M

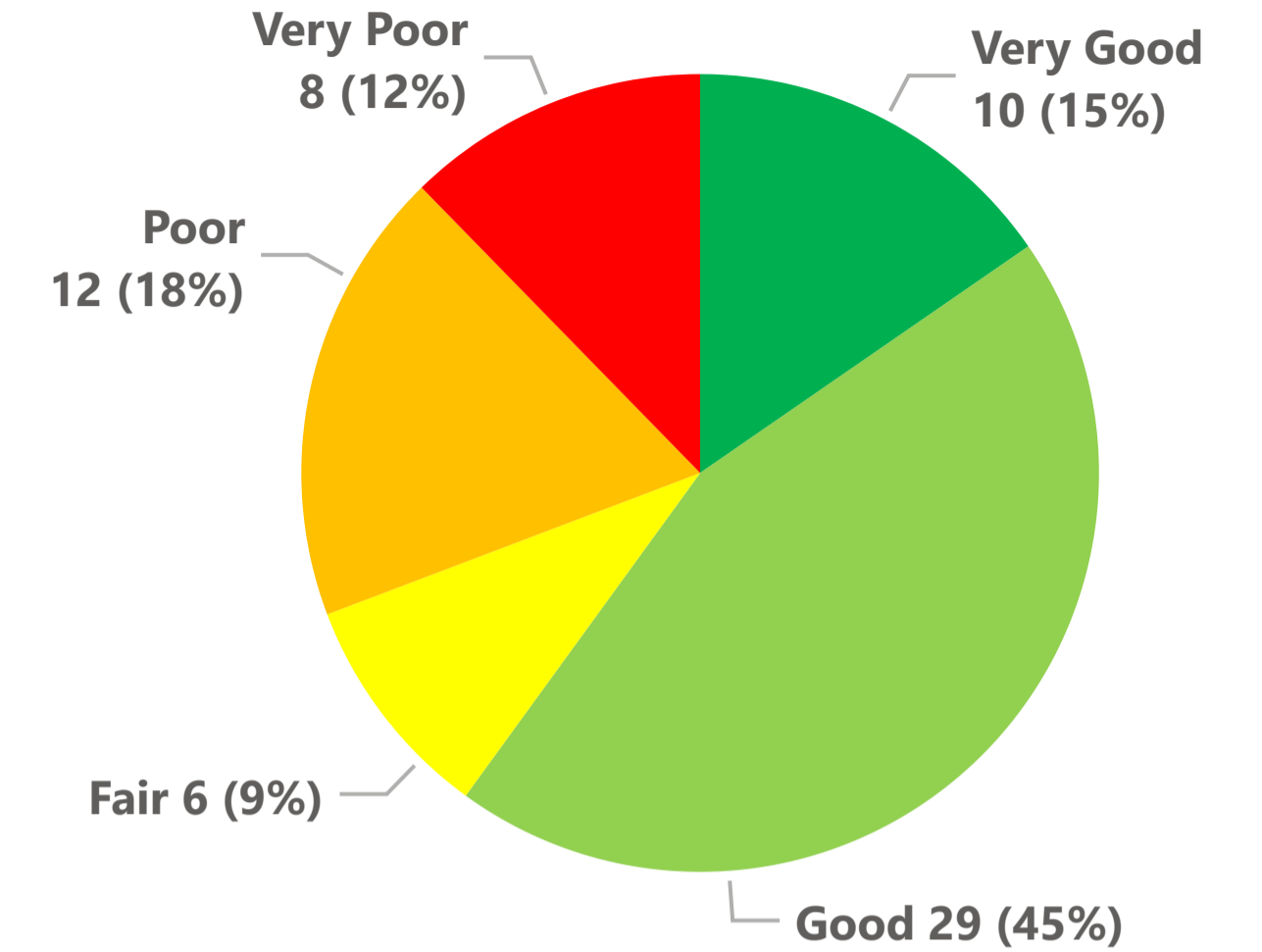
Replacement Value

2023 State of the Infrastructure Asset Card

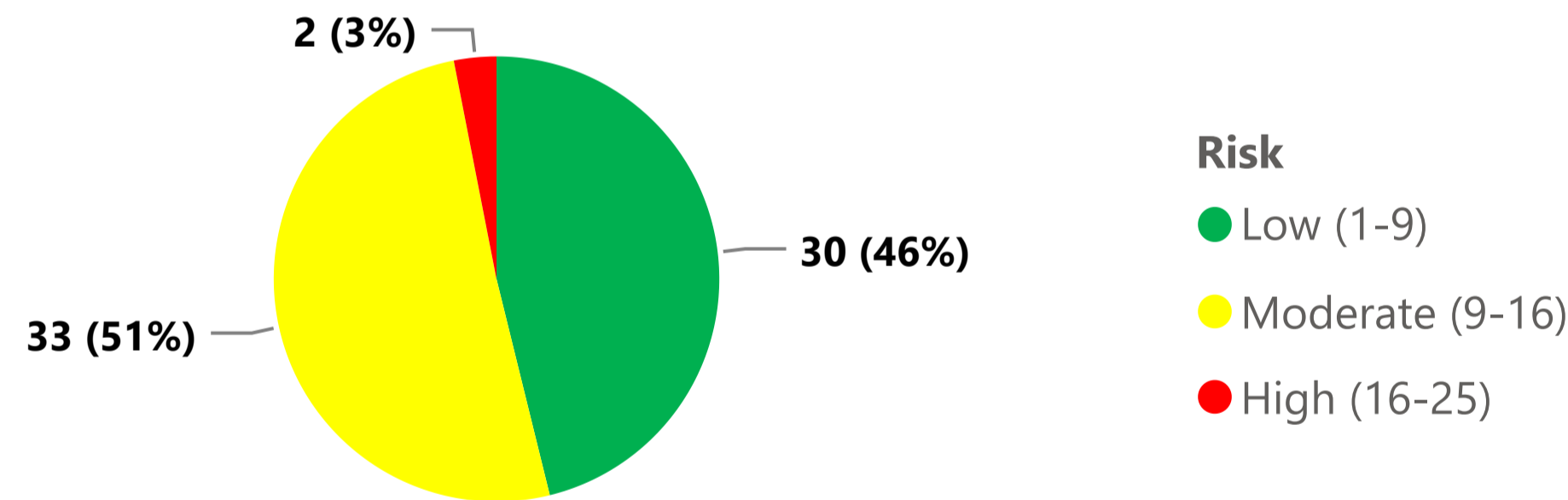
Replacement Value by Asset Condition



Assets by Asset Condition

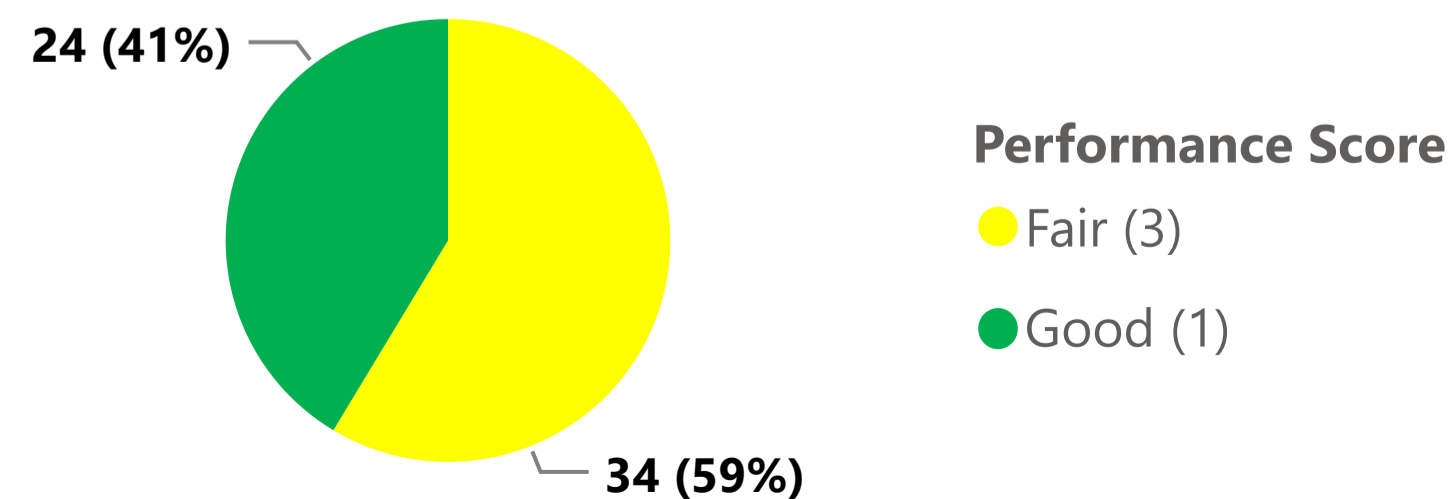


Percentage of Assets by Risk Rating



9.0
Average Asset Risk Rating

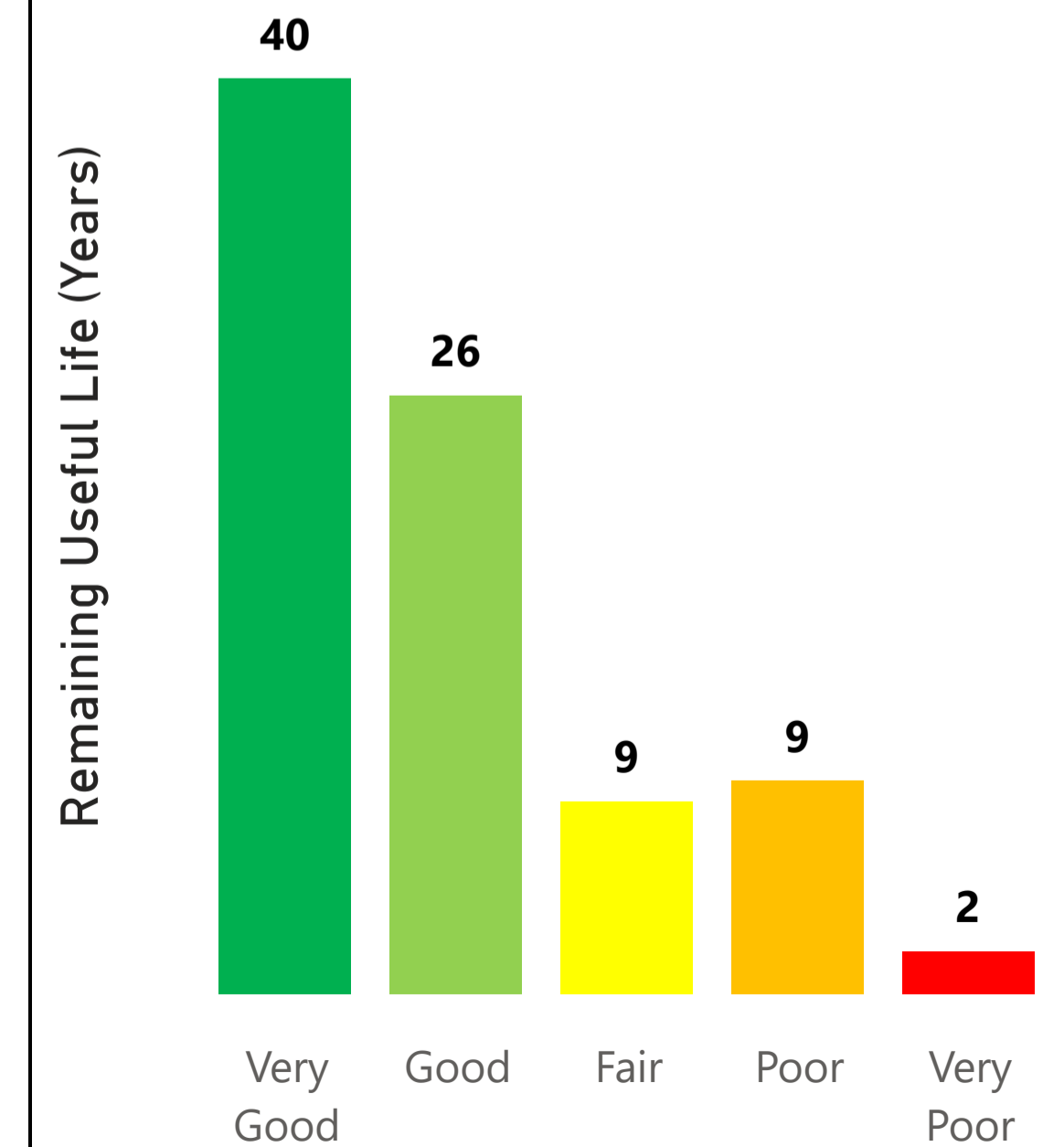
Assets by Asset Performance



2.2
Average Performance Rating

18
Incidence of O&M Intervention

Average Asset Remaining Useful Life by Asset Condition





Elgin Area
Primary Water Supply System

Process Area

Raw Water Handling

Pre-Treatment

Filtration, Disinfection, and HLP

Residual Management

General Site, Building Services, Fl...

Primary Power

Surge Control

Primary - Pipelines and Chambers

Reservoir and Pumping Station

123

Asset Count

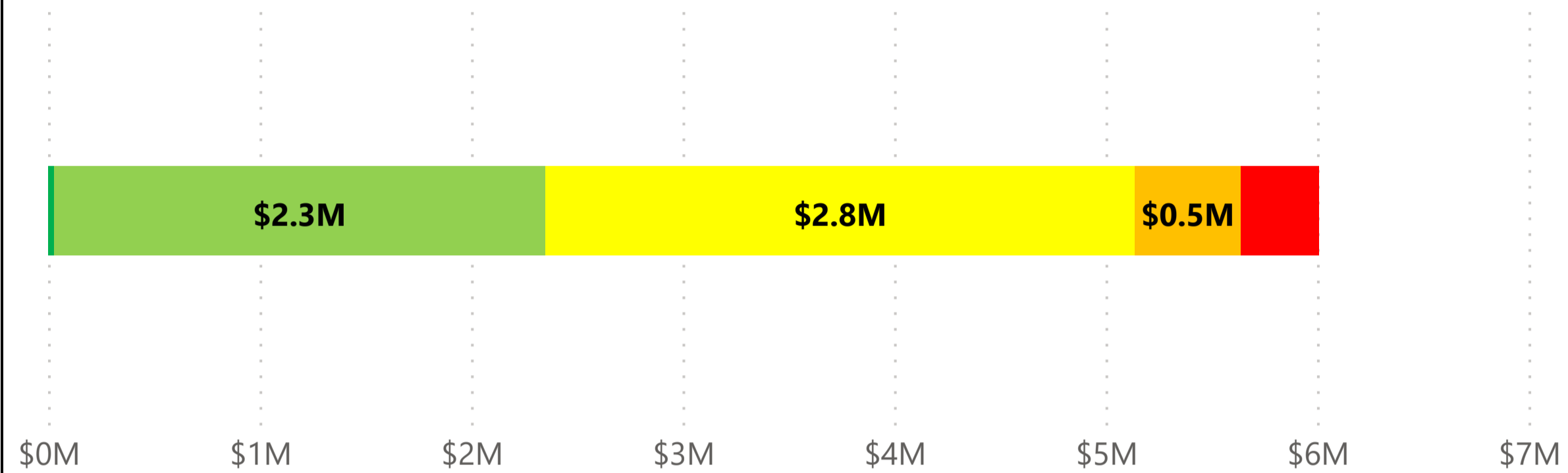
\$6.0M

Replacement Value

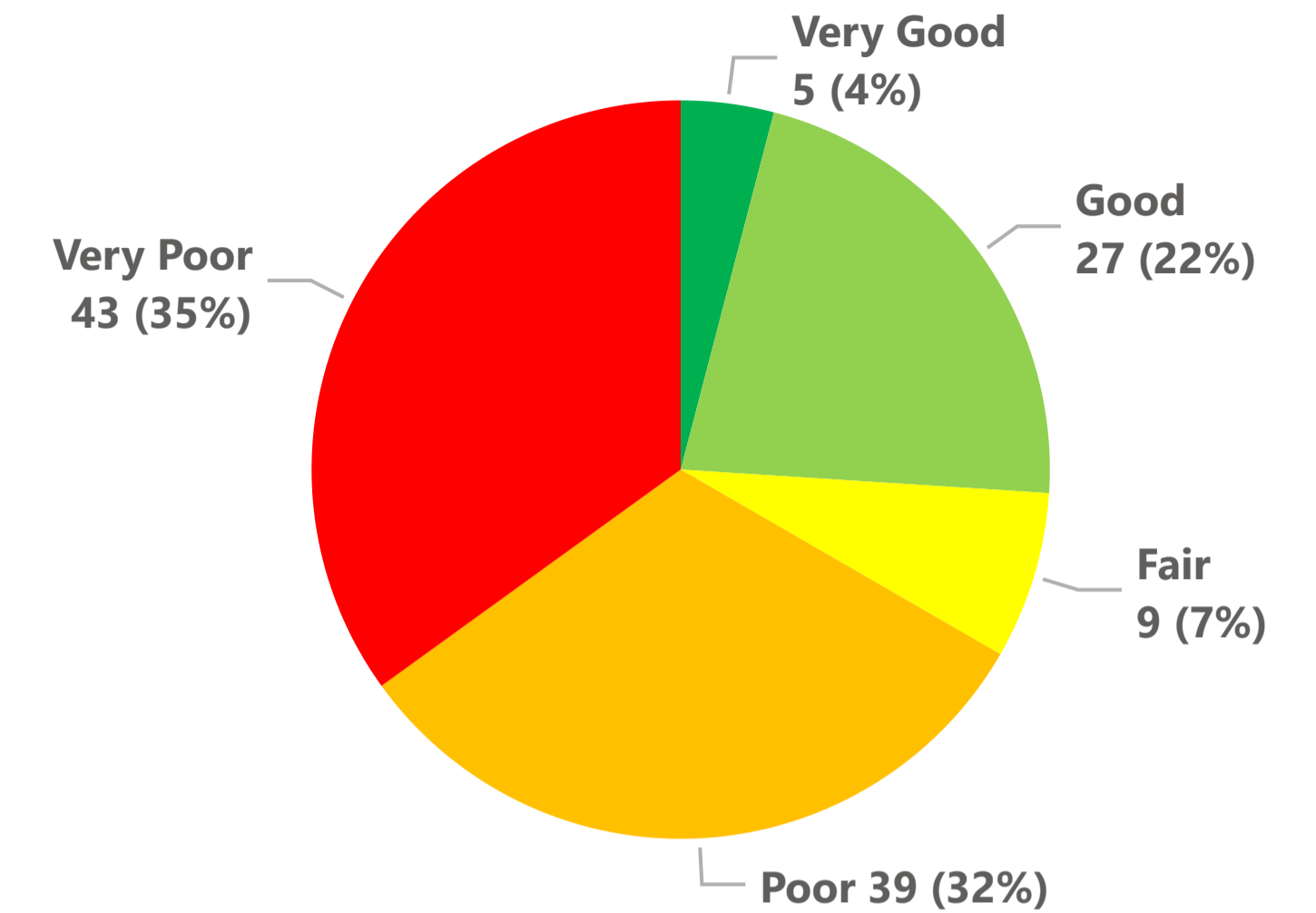
2023 State of the Infrastructure Asset Card

Replacement Value by Asset Condition

Condition ● Very Good ● Good ● Fair ● Poor ● Very Poor



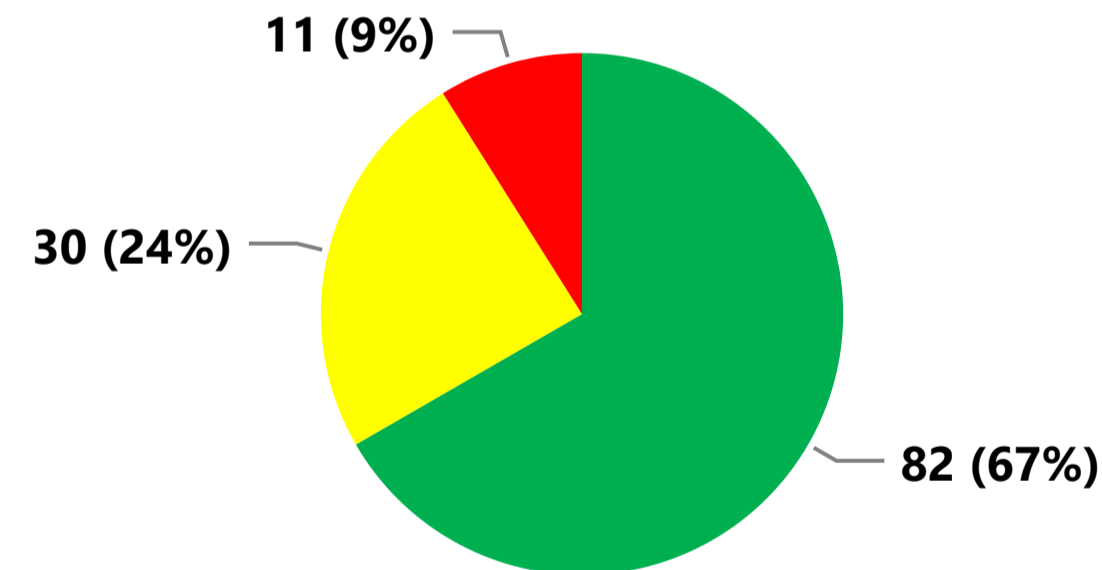
Assets by Asset Condition



Percentage of Assets by Risk Rating

Risk

- Low (1-9)
- Moderate (9-16)
- High (16-25)



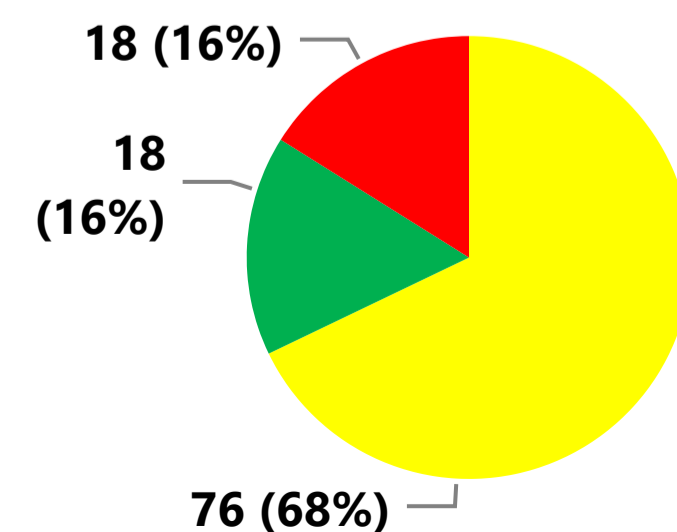
9.5

Average Asset Risk Rating

Assets by Asset Performance

Performance Score

- Fair (3)
- Good (1)
- Poor (5)



3.0

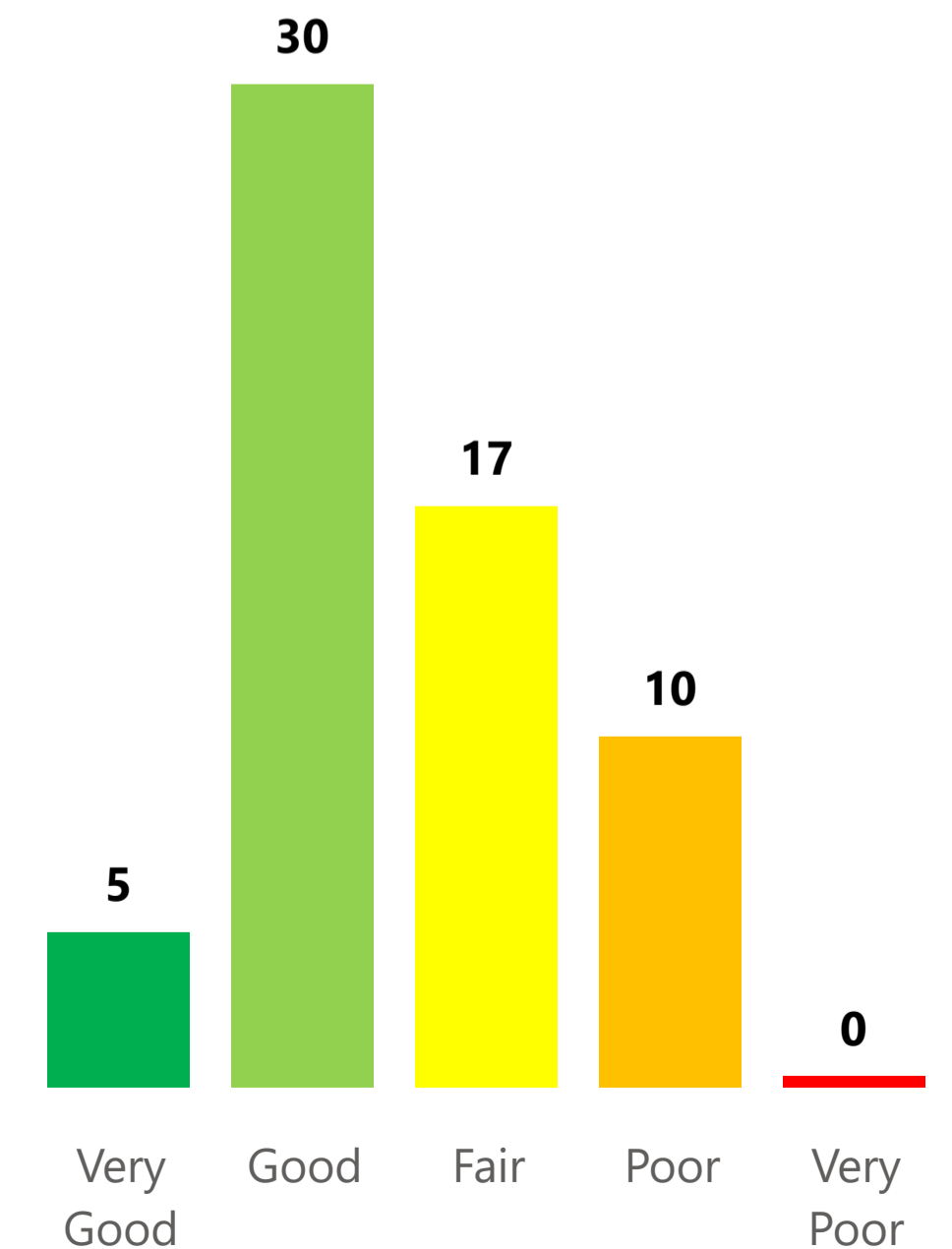
Average Performance Rating

16

Incidence of O&M Intervention

Average Asset Remaining Useful Life by Asset Condition

Remaining Useful Life (Years)





Elgin Area
Primary Water Supply System

Process Area

Raw Water Handling

Pre-Treatment

Filtration, Disinfection, and HLP

Residual Management

General Site, Building Services, Fl...

Primary Power

Surge Control

Primary - Pipelines and Chambers

Reservoir and Pumping Station

186

Asset Count

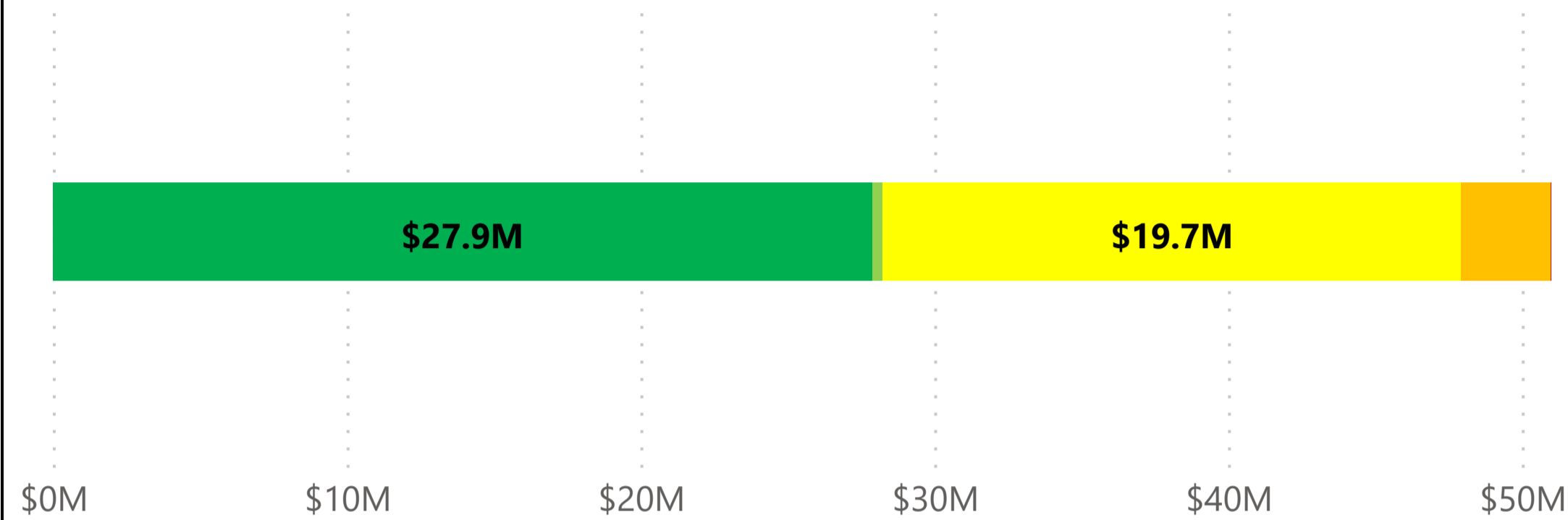
\$51.0M

Replacement Value

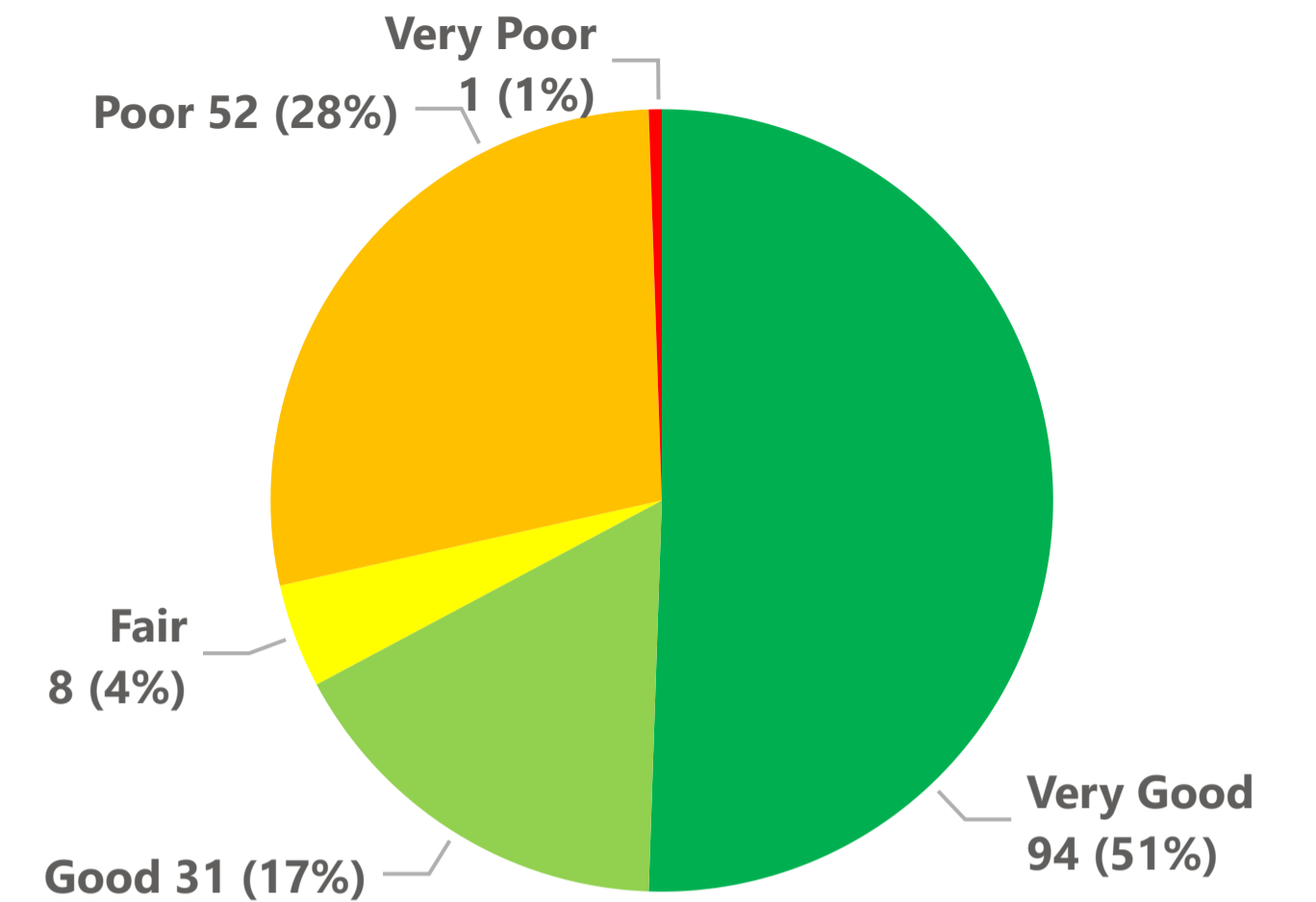
2023 State of the Infrastructure Asset Card

Replacement Value by Asset Condition

Condition ● Very Good ● Good ● Fair ● Poor ● Very Poor



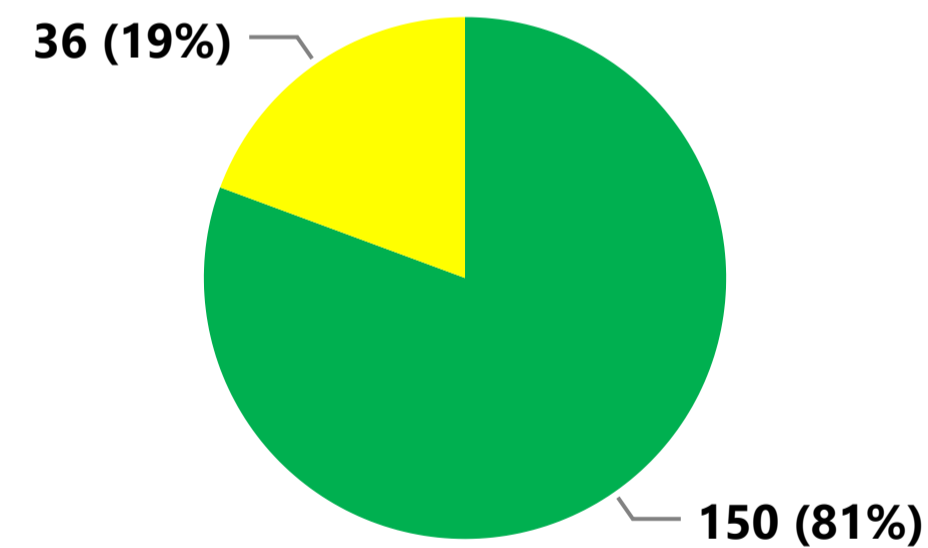
Assets by Asset Condition



Percentage of Assets by Risk Rating

Risk

● Low (1-9)
● Moderate (9-16)



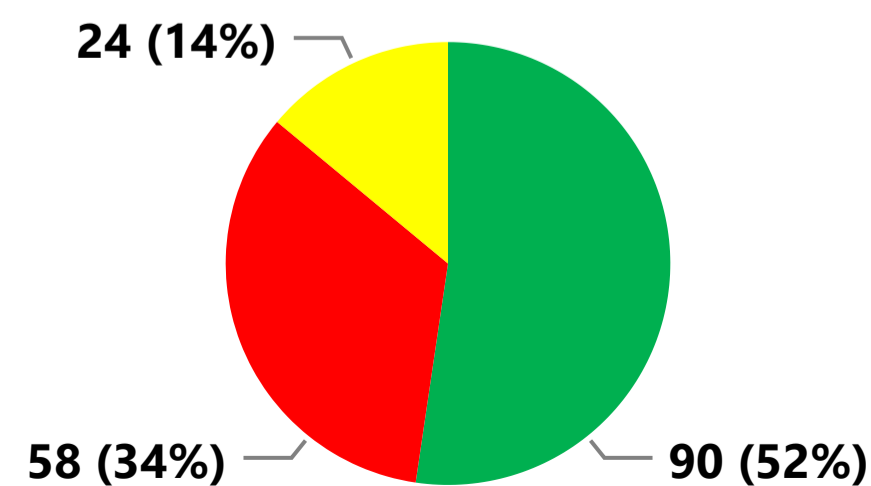
6.1

Average Asset Risk Rating

Assets by Asset Performance

Performance Score

● Good (1)
● Poor (5)
● Fair (3)



2.6

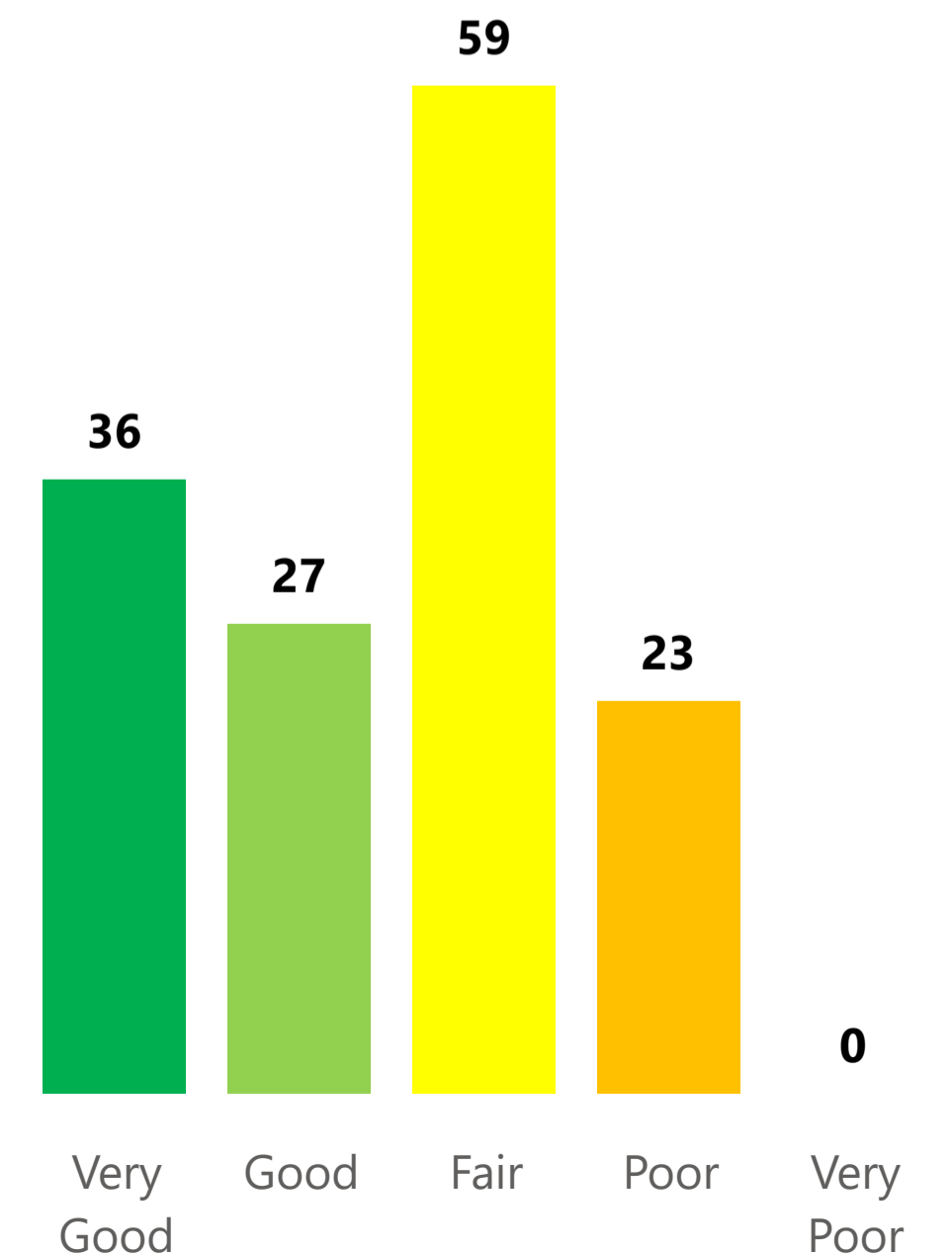
Average Performance Rating

7

Incidence of O&M Intervention

Average Asset Remaining Useful Life by Asset Condition

Remaining Useful Life (Years)





Elgin Area
Primary Water Supply System

Process Area

Raw Water Handling

Pre-Treatment

Filtration, Disinfection, and HLP

Residual Management

General Site, Building Services, Fl...

Primary Power

Surge Control

Primary - Pipelines and Chambers

Reservoir and Pumping Station

255

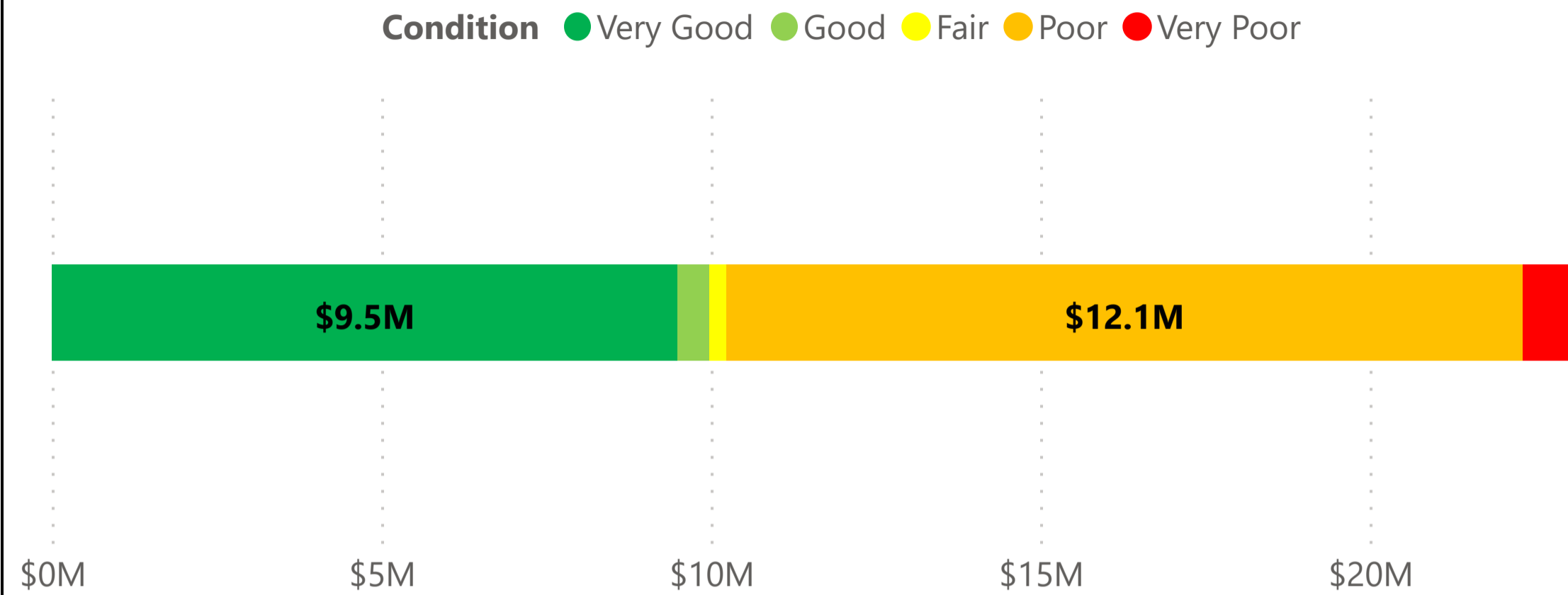
Asset Count

\$23.3M

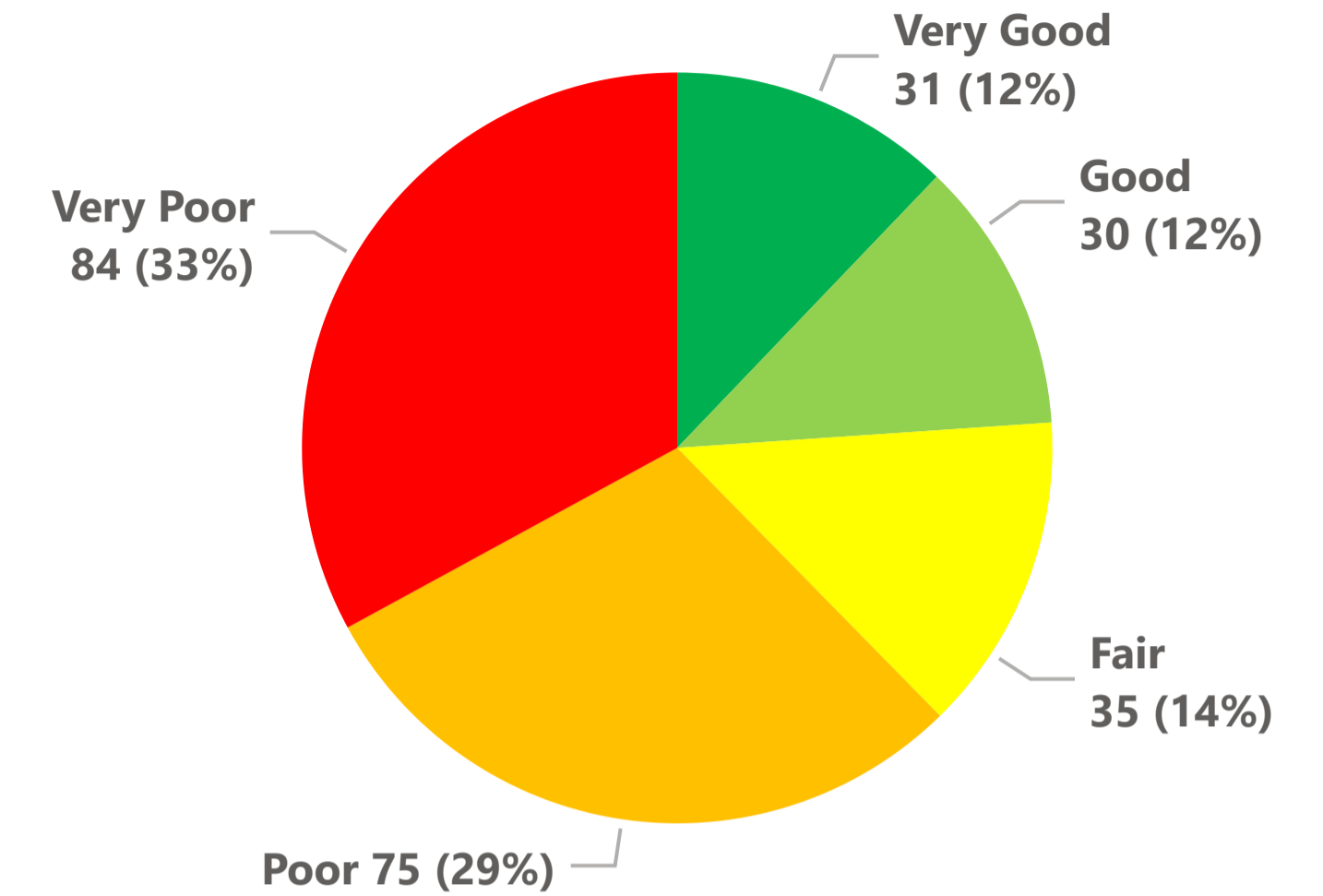
Replacement Value

2023 State of the Infrastructure Asset Card

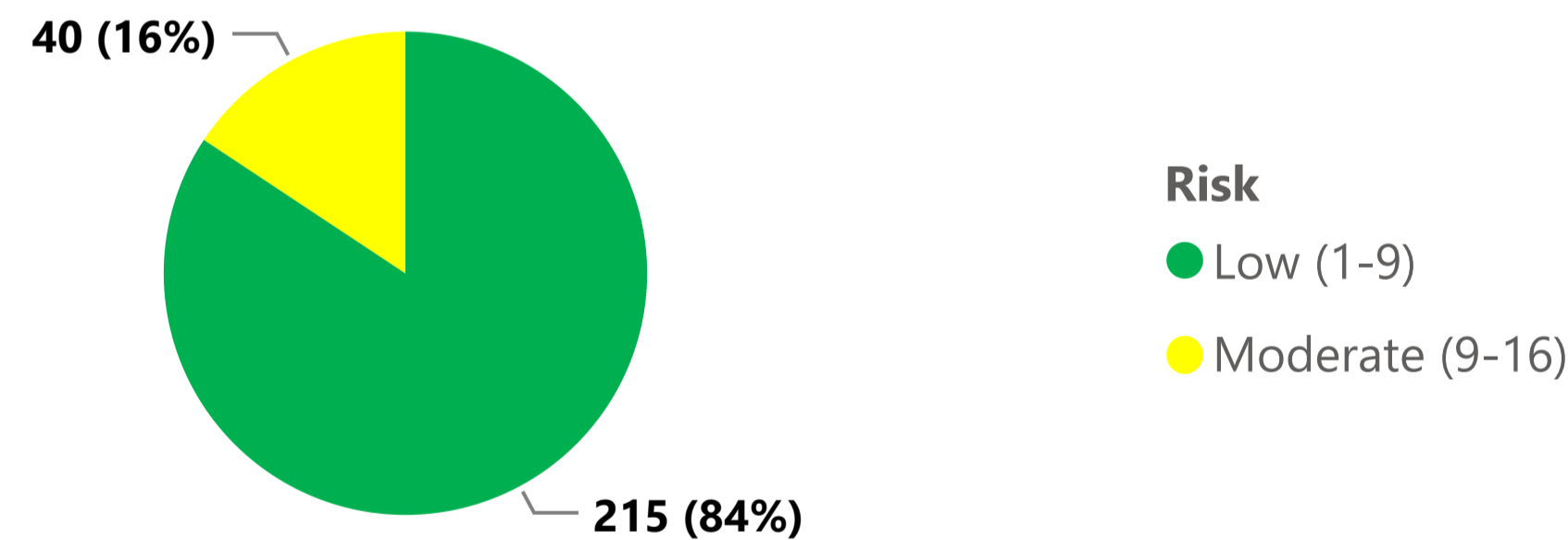
Replacement Value by Asset Condition



Assets by Asset Condition

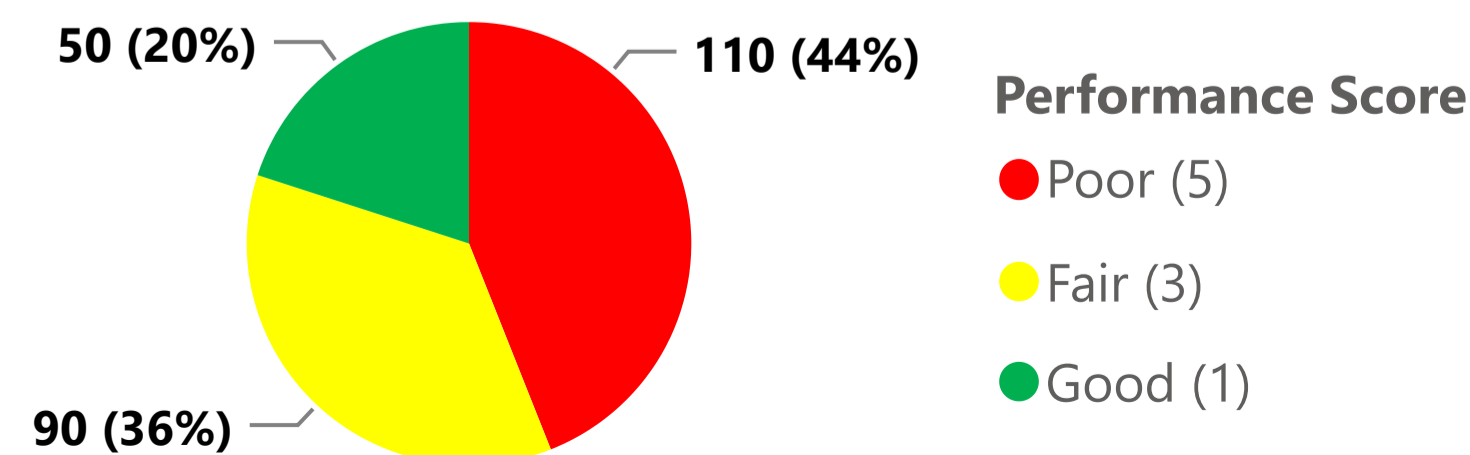


Percentage of Assets by Risk Rating



6.9
Average Asset Risk Rating

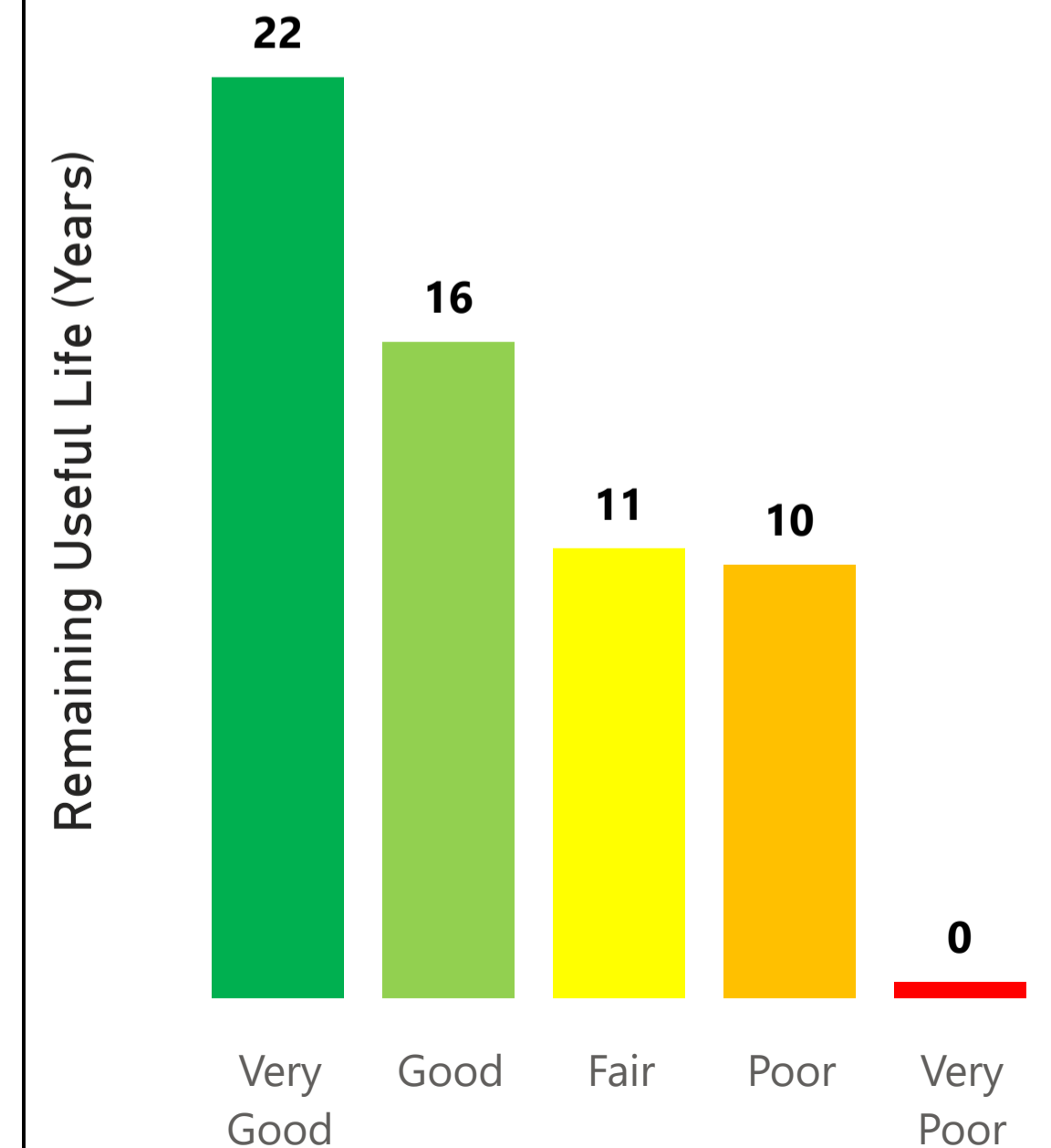
Assets by Asset Performance



3.5
Average Performance Rating

45
Incidence of O&M Intervention

Average Asset Remaining Useful Life by Asset Condition





Process Area

Digital Technology

977

Asset Count

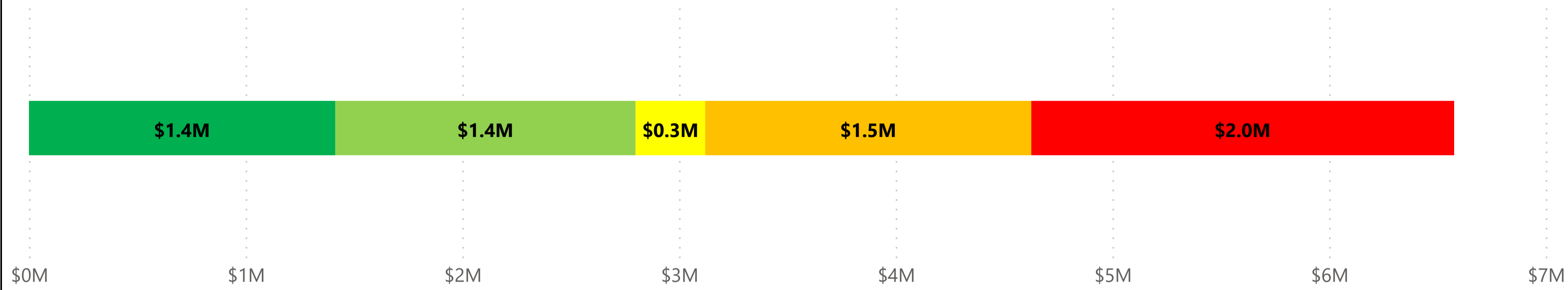
\$6.6M

Replacement Value

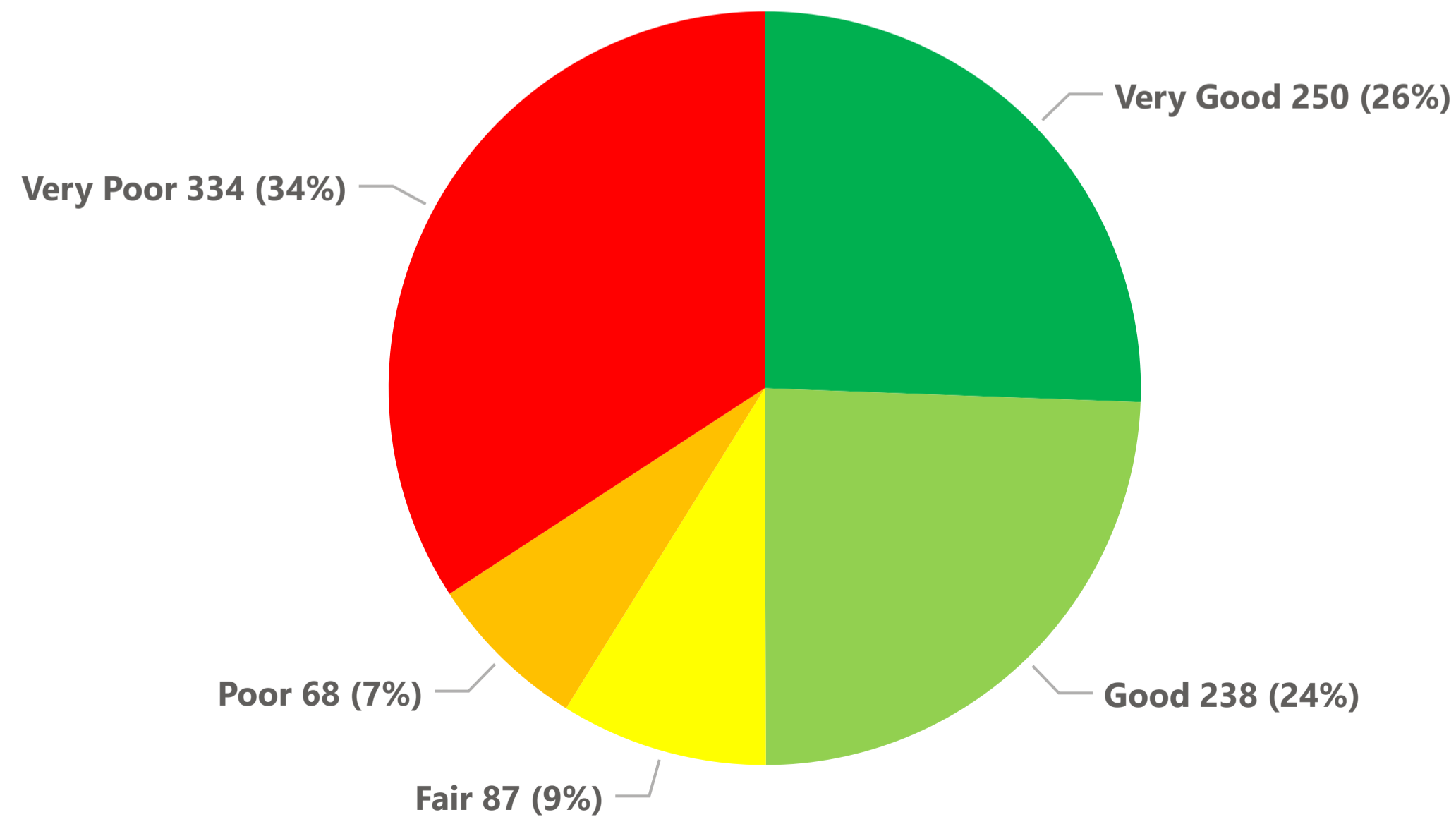
2023 State of the Infrastructure Asset Card

Replacement Value by Asset Condition

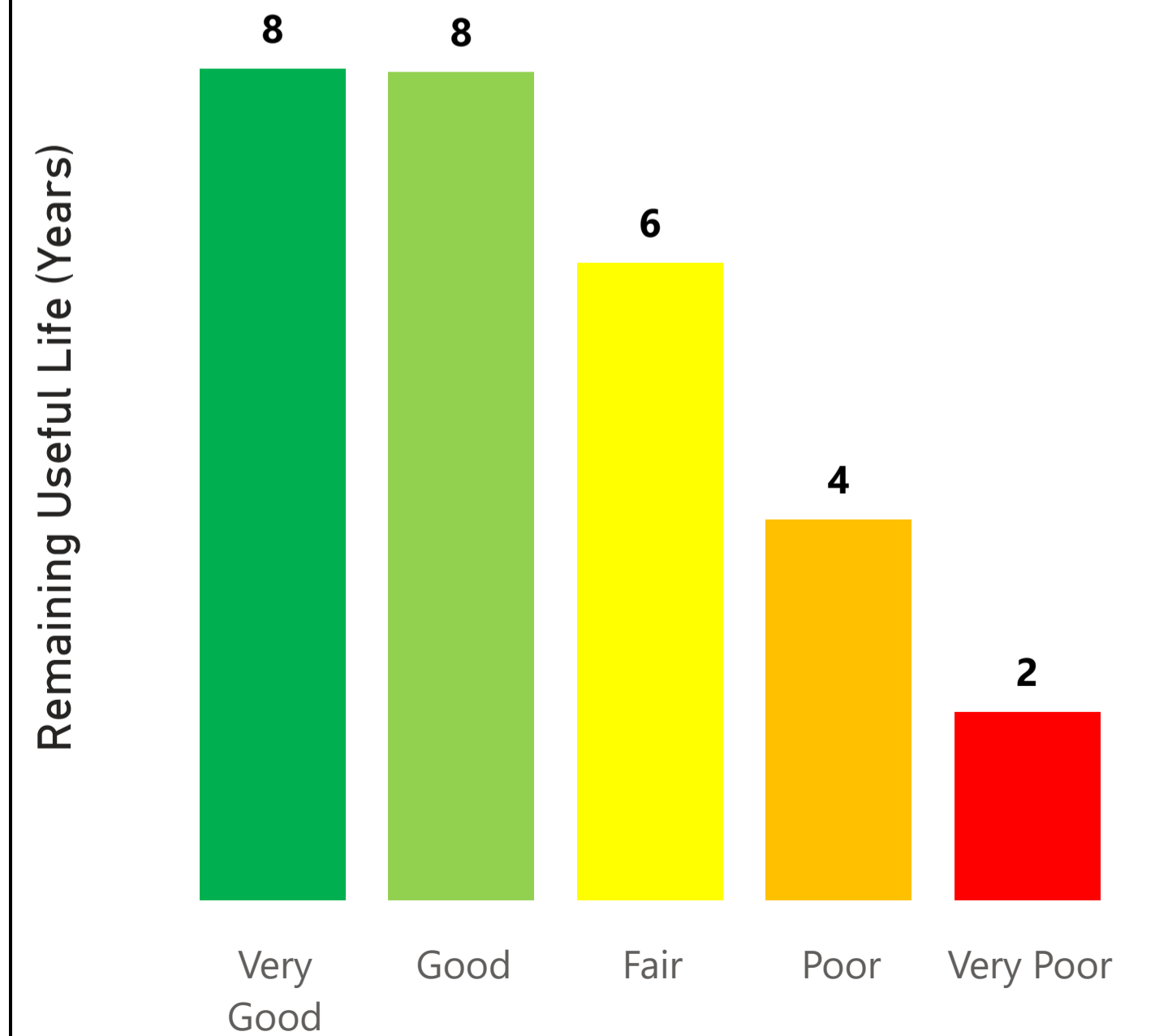
Condition ● Very Good ● Good ● Fair ● Poor ● Very Poor



Assets by Asset Condition



Average Asset Remaining Useful Life by Asset Condition



Board of Management Report

Subject: Asset Management – 2023 Levels of Service Report

Overview:

- Levels of service represent the utility’s actual service performance compared to our targets, as set by the utility, and measured on a continuous basis.
- Our Levels of Service framework has established measures and targets across three parameters: Quality, Availability/Reliability, and Environmental Acceptability.
- Any gaps identified in being able to meet a level of service (measured service performance below target value) could become a priority for action.
- Used in the utility’s decision-making process for operational activities and asset investments.
- This report is a companion report and related to the State of the Infrastructure Report.

Recommendation

That the Board of Management for the Elgin Area Primary Water Supply System **RECEIVE** this report with regard to the 2023 Levels of Service for information.

Previous and Related Reports

Oct 7, 2021 Asset Management Policy and Asset Management Plan Update

Mar 3, 2022 Asset Management Plan – Levels of Service Framework

Oct 6, 2022 2022 Asset Management Plan Update Project Completion

Jun 1, 2023 Asset Management – 2023 State of the Infrastructure Report

Background

At the March 3, 2022, Board meeting the utility’s updated asset management levels of service (LOS) framework, developed as part of the Asset Management Plan update, was presented to and endorsed by the Board. That update was intended to bring the LOS framework into alignment with global best practice standards for Asset Management such as ISO (International Organization for Standardization) 55000 standard, and established customer and technical LOS measures and targets.

The guiding principles from the Asset Management Policy that relate to the LOS framework include:

Service Delivery: Service delivery is the key purpose of infrastructure assets. Decision-making should be focused on delivering defined levels of service that reflect customer expectations and balance risk and affordability.

Environmentally Conscious: The utility shall minimize the impact of infrastructure on the environment and address the vulnerabilities and risks caused by climate change through lifecycle management. This includes energy and resource optimization, meeting environmental standards such as ISO 14001 in our operation, considering end of product life disposal or reuse options, and whole lifecycle considerations at the time of repair, replacement, or new build.

Discussion

As defined in the ISO 55000 standard, Level of Service is the parameter or a combination of parameters that reflect the social, political, environmental, and economic outcomes that the organization delivers. The parameters can include safety, customer satisfaction, quality, quantity, capacity, reliability, responsiveness, environmental acceptability, cost, and availability.

The utility's level of service framework encompasses three parameters and associated objectives that reflect the outcomes that the utility strives to achieve:

Quality:

- to provide drinking water quality that meets or is superior to regulatory requirements.

Availability/Reliability:

- to deliver water to customers when demanded
- to provide resilient water production
- to provide safe and secure operations

Environmental Acceptability:

- to minimize water system impacts on the environment
- to detect changes in source water quality and environmental impacts that affect the water system

Each parameter has a defined set of Customer and Technical levels of service and their respective target metric. A Customer LOS is defined as what service the customer receives while a Technical LOS is defined as what service the utility delivers.

The purpose of setting targets for LOS is to clearly define the objectives of the utility in the provision of treated drinking water to the benefiting municipalities. Levels of service are the service performance targets for the utility and are used in the utility's decision-making process for operational activities and asset investments. These targets are

measured on a regular basis, where any gaps identified in being able to meet a level of service could become a priority for action.

Across the three LOS framework parameters the utility has thirteen (13) customer levels of service and thirty-two (32) technical levels of service. Since the 2022 endorsement of both the LOS framework and the Asset Management Plan, Board staff have developed a level of service monitoring program that actively tracks and reports on fifteen (15) of the established technical LOS. Board staff will be implementing the tracking and reporting mechanisms for the remaining technical LOS metrics as our levels of service monitoring program matures. It is important to note that data for most of these 'outstanding' technical LOS metrics is presently being collected through various means, and the data simply has not been formally rolled-up into our level of service monitoring program to date.

The Elgin Area Primary Water Supply System customer and technical LOS framework is attached to this report in **Appendix A**. For the Board's information and reference, we have included in **Appendix B** our LOS monitoring program internal dashboard presenting our data tracking of the technical levels of service metrics. As our LOS monitoring program continues to mature, all tracked levels of service metrics will be incorporated into our LOS dashboard to facilitate ease of analyzing the data and identifying any gaps in meeting a level of service.

It is important to note that data collected and reported for the purposes of this level of service monitoring program is solely related to the utility's asset management program. The level of service data is not intended for or representative of any legislated compliance or other regulatory reporting.

The annual report on state of the infrastructure is also being presented at the June 2023 Board meeting and is intended to be read in conjunction with this LOS report.

Conclusion

The Elgin Area Primary Water Supply System has a level of service framework and Board staff are actively implementing a level of service monitoring program. Presently 15 of 32 technical levels of service are actively being tracked and reported on, with the others planned to be incorporated as our levels of service monitoring program matures.

The utility's state of the infrastructure report will be presented to the Board as a standalone report intended to be read in conjunction with this levels of service report.

Prepared by: Ryan Armstrong, C.E.T.,
Asset Management Coordinator

Submitted by: Billy Haklander, P.Eng., LL.M
Senior Manager, Capital Programs

Recommended by: Kelly Scherr, P.Eng., MBA, FEC
Chief Administrative Officer

Attachments: Appendix A – Customer & Technical LOS with Targets
Appendix B – LOS Dashboard

APPENDIX A – Level of Service (Quality)

Objective	Customer Level of Service	Technical Level of Service	Target	Measure	2019	2020	2021	2022	2023
Provide drinking water quality that meets or is superior to regulatory requirements	Meet target of no adverse water quality incidents	# of adverse water quality incidents	0		1	0	0	0	
	Satisfy MECP regulatory compliance requirements	# of non-compliances identified in MECP inspection reports	0		1	0	0	1	
		MECP Inspection score	100%		97%	100%	100%	97%	
	Satisfy Superior Water Performance Criteria	# of superior water performance criteria met (Schedule B)	10 of 10						
	Meet Plant Maintenance/ Performance Requirements	Planned maintenance completed in month scheduled	100%						

Objective	Customer Level of Service	Technical Level of Service	Target	Measure	2019	2020	2021	2022	2023
		Preventative maintenance covered by Standard Operating Procedure (SOP) completed	100%						
		Condition of critical assets maintained at good or very good	100%						
		Chemical supply availability	100%						

APPENDIX A – Level of Service (Availability / Reliability)

Objective(s)	Customer Level of Service	Technical Level of Service	Target	Measure	2019	2020	2021	2022	2023
Deliver water to customers when demanded	Measurable flow when customer connection is open	# of service interruptions where duration exceeds commitments of the Water Supply Agreements	0						
		% of time reservoirs are above low level	100%						
Water Production is Resilient	Chemical working volume greater than demand	# inventory days > delivery period	100%						
	Power supply greater than peak demand	Peak energy usage < rated capacity	100%						
	Assets operate with % reserve capacity	Peak hour production < rated capacity + emergency strategic allowance by %	Less Than 100%	Average max day (@85% of plant rated capacity)	65.6%	67.9%	68.1%	69.9%	

				Peak max day (@85% of plant rated capacity)	73.2%	82.0%	75.6%	78.3%	
		Intake capacity is available (observed lake level within design min)	100%						
Safe and Secure Operations	Physical Security	# of physical security incidents	0						
	Computational (IT, IAS) Security	# of unpatched vulnerabilities of critical or high severity (based on CVSS ratings)	0						
		% of unidentified devices (not included in asset inventory)	0						
		# of cyber security incidents	0						

- *IT: Information Technology
- **IAS: Intelligent Autonomous Systems

APPENDIX A – Level of Service (Environmental Acceptability)

Objective(s)	Customer Level of Service	Technical Level of Service	Target	Measure	2019	2020	2021	2022	2023
Minimize water system impacts on the environment	Environmental sustainability best practices	Energy intensity (ekWh/m3)	= < baseline (TBD)	Energy + Diesel + Natural Gas	0.760	0.726	0.736	0.729	
		Energy efficiency (kWh/m3)	= < baseline (TBD)	Energy at WTP only	0.597	0.590	0.601	0.608	
		Total GHG emissions (Energy Use Only)	= < baseline (TBD)	Equivalent L of Gasoline; Energy at WTP only	1.23M	1.183M	1.201M	1.191M	
		Backup generator use (planned vs. unplanned)	100%	Monthly average	81.7%	58.9%	85.4%	80.6%	
		Chemical efficiency (kg chemicals/m3 treated)	= < baseline (TBD)	All Chemicals	0.071	0.074	0.072	0.067	
		% Non-Revenue Water Loss (treated water)	5% or less	System Loss	3.4%	1.3%	0.6%	2.6%	

Objective(s)	Customer Level of Service	Technical Level of Service	Target	Measure	2019	2020	2021	2022	2023
		leaving plant vs. water billed)							
		% Process Water Loss (compare treated water leaving plant with raw water coming into plant)	5% or less	Plant Usage	0.3%	2.4%	2.2%	2.7%	
	Meet other regulatory compliance requirements	Chlorine residual in discharge water (meet allowable)	100%	Monthly Average <0.02mg/L					
		TSS Discharge (meet allowable)	100%	Monthly Average <25mg/L	100%	100%	100%	100%	
		# of reportable spills to Spills Action Centre	0		3	5	3	2	
		Solids landfilled from Residuals Management Facility (kg)	= < baseline (TBD)		168	173	184	167	

Objective(s)	Customer Level of Service	Technical Level of Service	Target	Measure	2019	2020	2021	2022	2023
		solids landfilled/ML)							
		# of non-compliance in permit to take water reports	0	# days (@ max day) exceeding PTTW	0	0	0	0	
Detection of changes in source water quality and environmental impacts that affect the water system	Operations and services are continuous	# of incidents where source water quality is outside normal operating range (e.g., dissolved oxygen, turbidity, presence of cyanobacteria) (Note 1)	0						
		Progress on implementation of Climate Change Vulnerability Assessment projects	on schedule						



Elgin Area

Primary Water Supply System

Report No.: EA-2023-03-13

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Meeting Date: June 1, 2023

File No.:

Note 1: This target relates to the asset LOS (i.e., system design) and early detection of any changes in source water quality is a leading indicator for asset management strategies, such as adjustments to Standard Operating Procedures (SOP) and/or upgrades to assets or processes.



Report No.: EA-2023-03-13

Report Page: 13 of 17

Meeting Date: June 1, 2023

File No.:

APPENDIX B – Level of Service Dashboard



97%
MECP Inspection Rating

1
MECP Non-Compliances

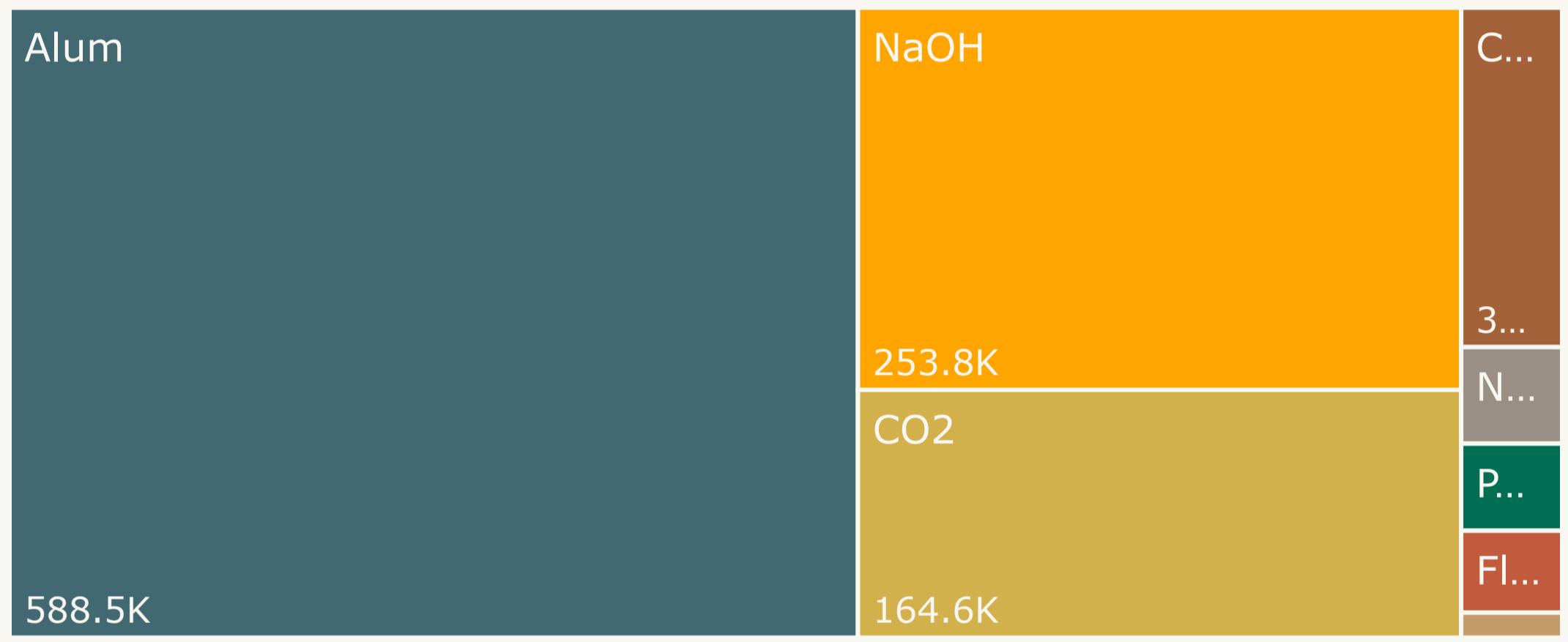
0
Adverse Water Quality Incidents

16,451
Raw Water - Total (ML)

2
Spills Reported to SAC

16,013
Treated Water - Total (ML)

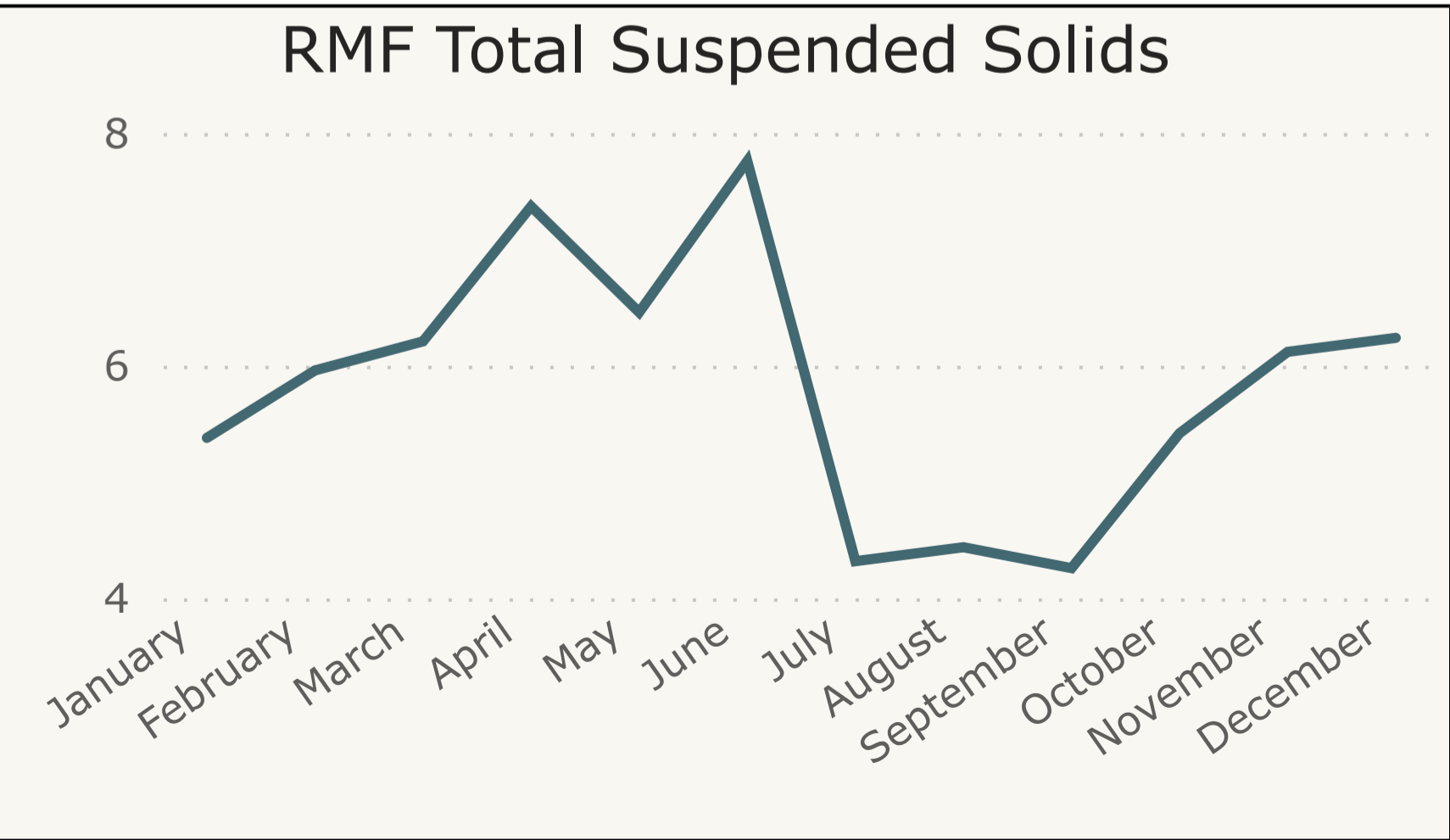
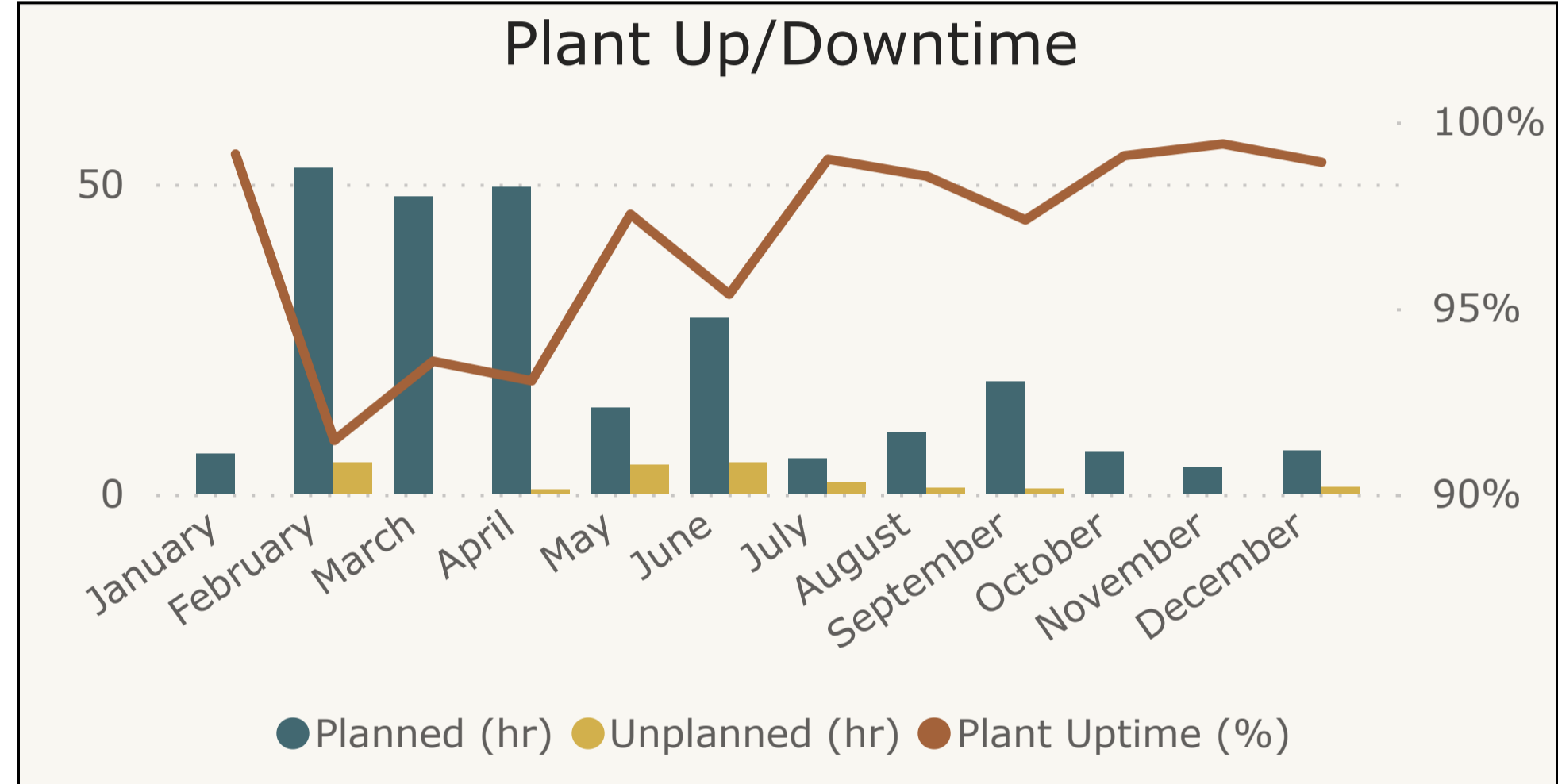
Chemical Usage Breakdown



1.077M
Total Chemical (kg)

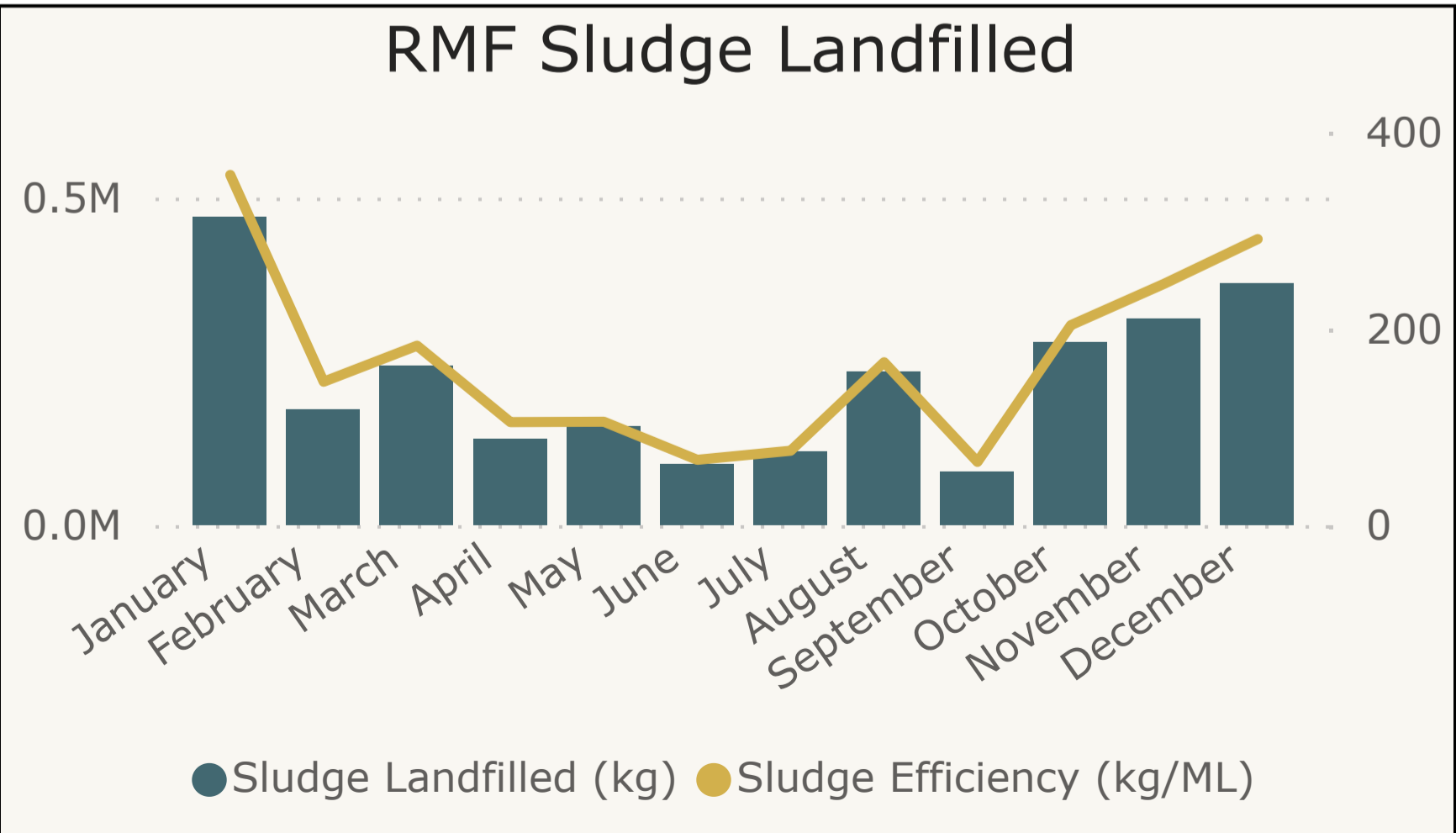
0.067
Chemical Efficiency (kg/m3)

Chemical Page →



6
Average TSS

0
TSS > 25mg/L



167
Sludge Efficiency (kg/ML)

-6.4%
Avg. % Change Over Prior Year

85
Sludge Landfilled (Loads)

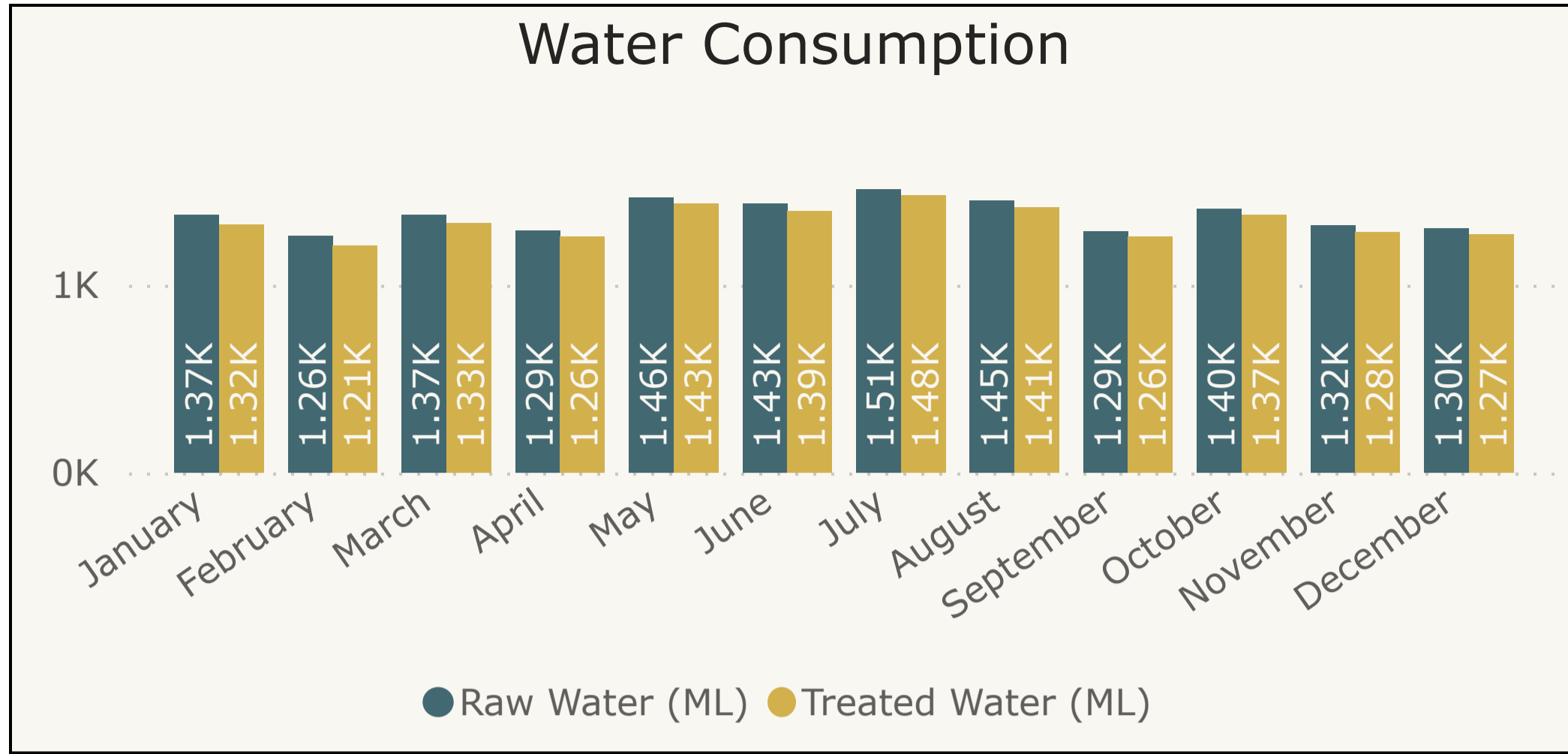


Year

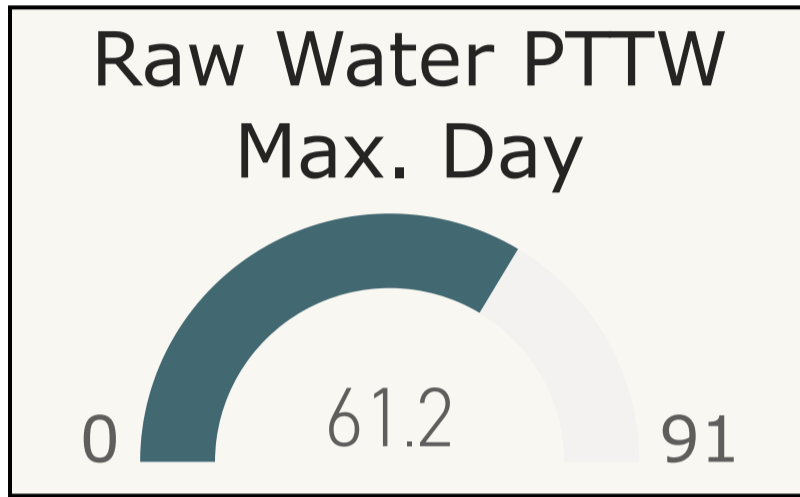
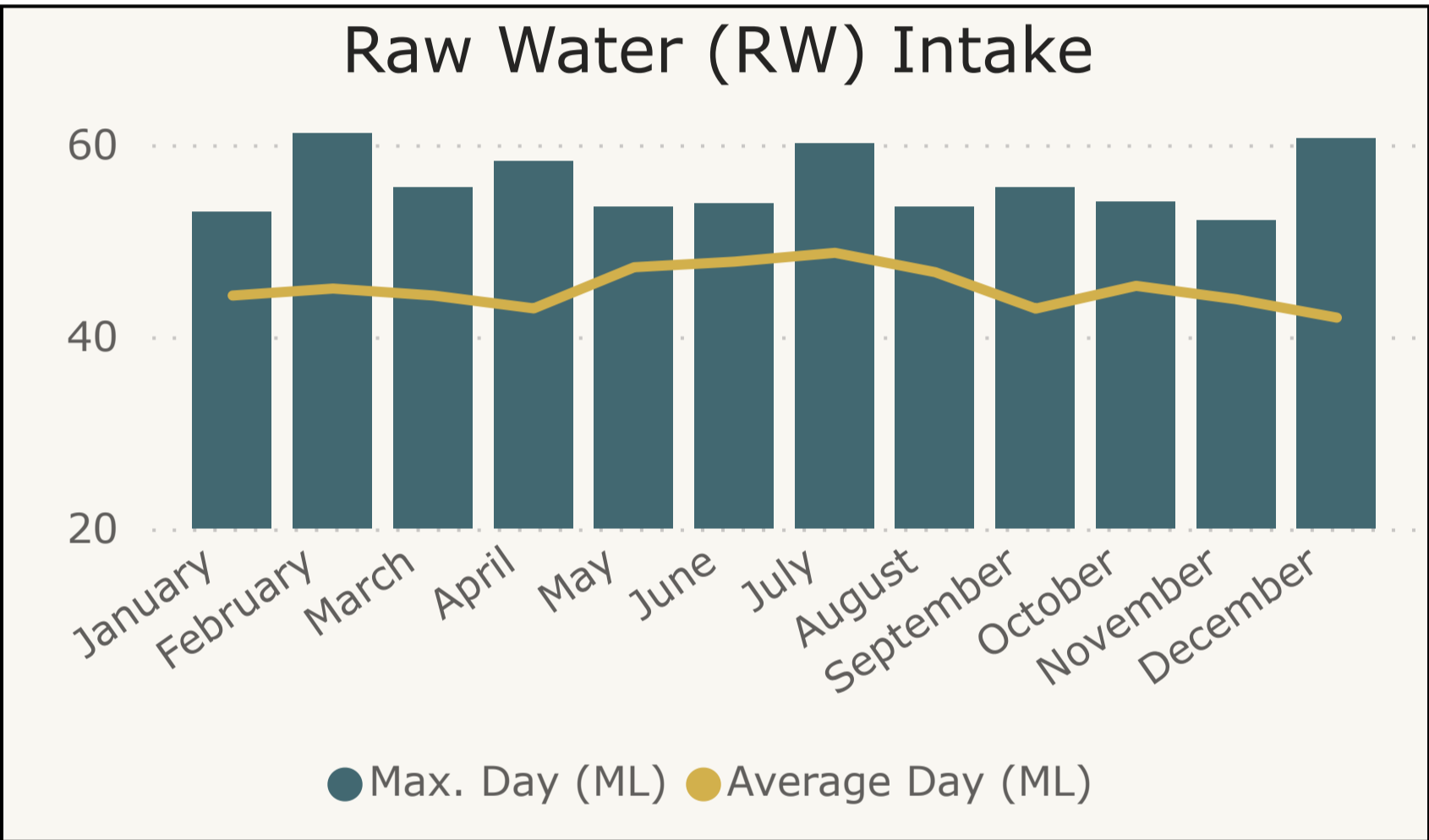
- 2019
- 2020
- 2021
- 2022**
- 2023

16,451
Raw Water Total (ML)

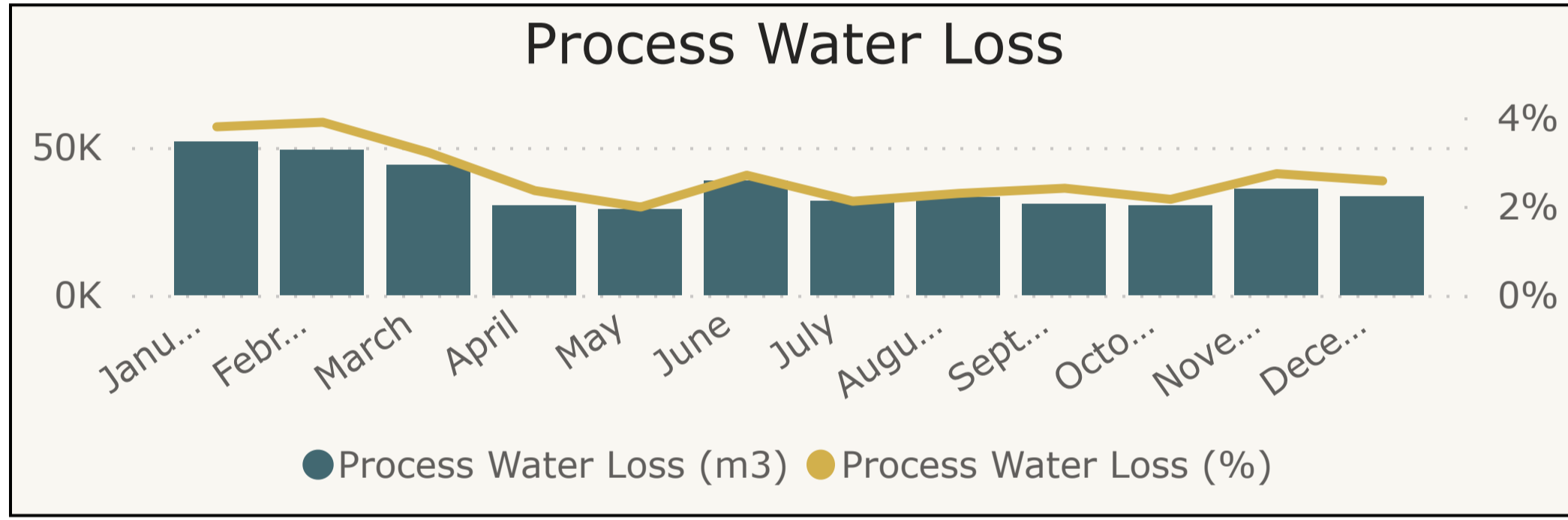
16,013
Treated Water Total (ML)



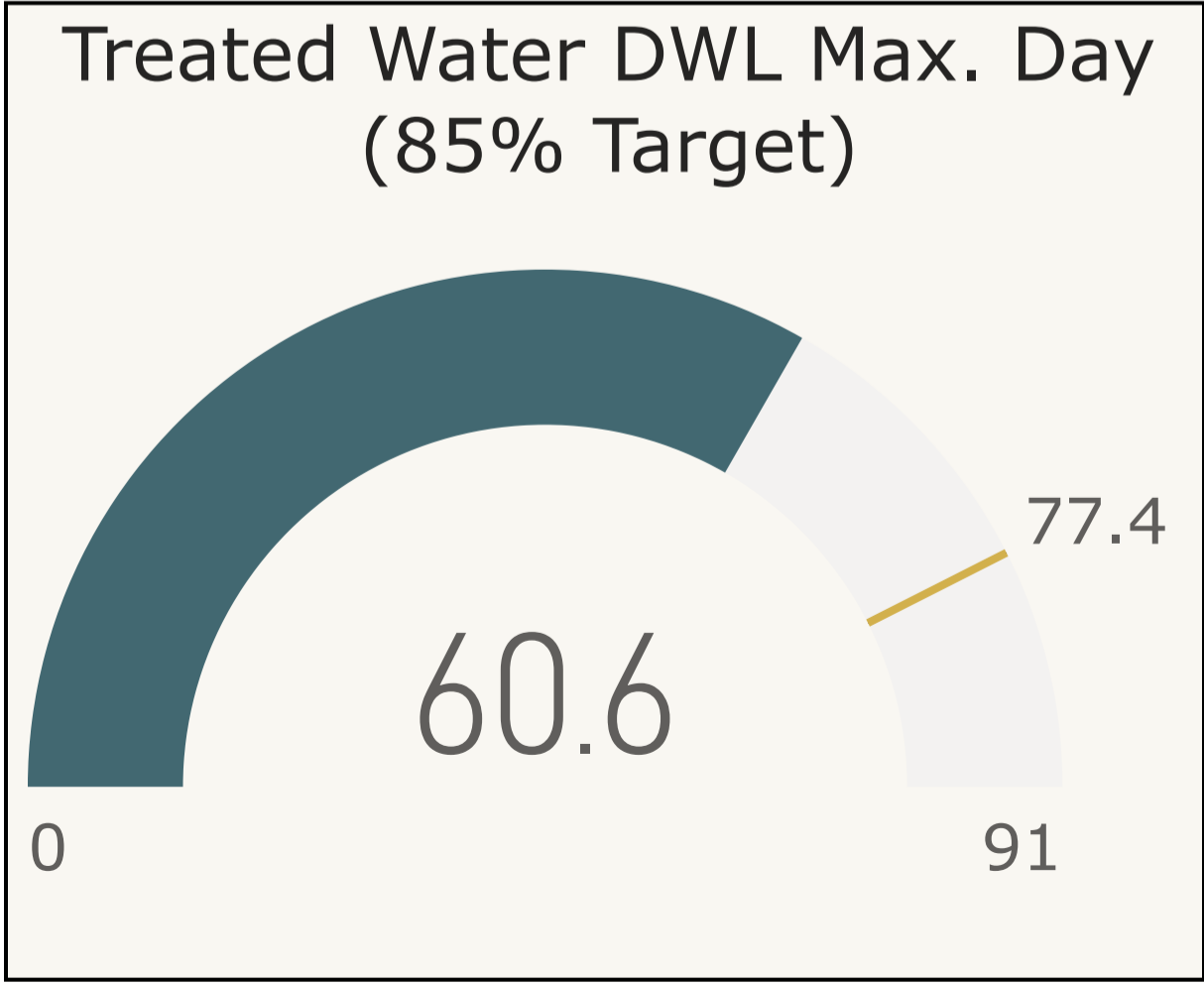
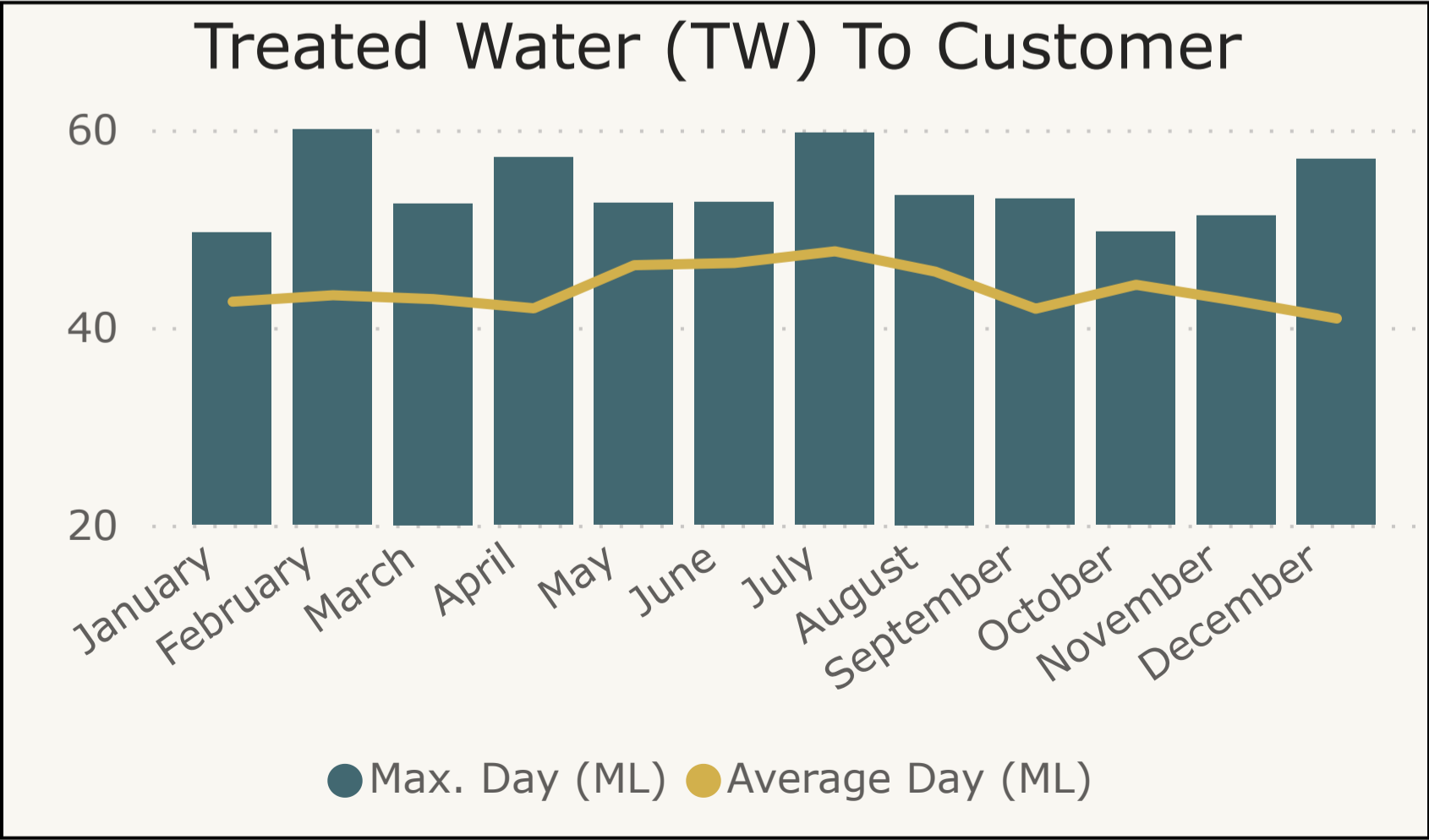
0.91%
Raw Water Total - Average % Change Over Previous Year



67.2%
RW Max. Day % PTTW



36.56K
Avg. Month Process Water Loss (m3)



69.9%
TW Avg. Max. Day % of 85% DWL

78.3%
TW Max. Day % of 85% DWL

0.42%
Treated Water Total - Average % Change Over Previous Year

2.7%
Average Process Water Loss





9,707,050
Energy Consumption (kWh)

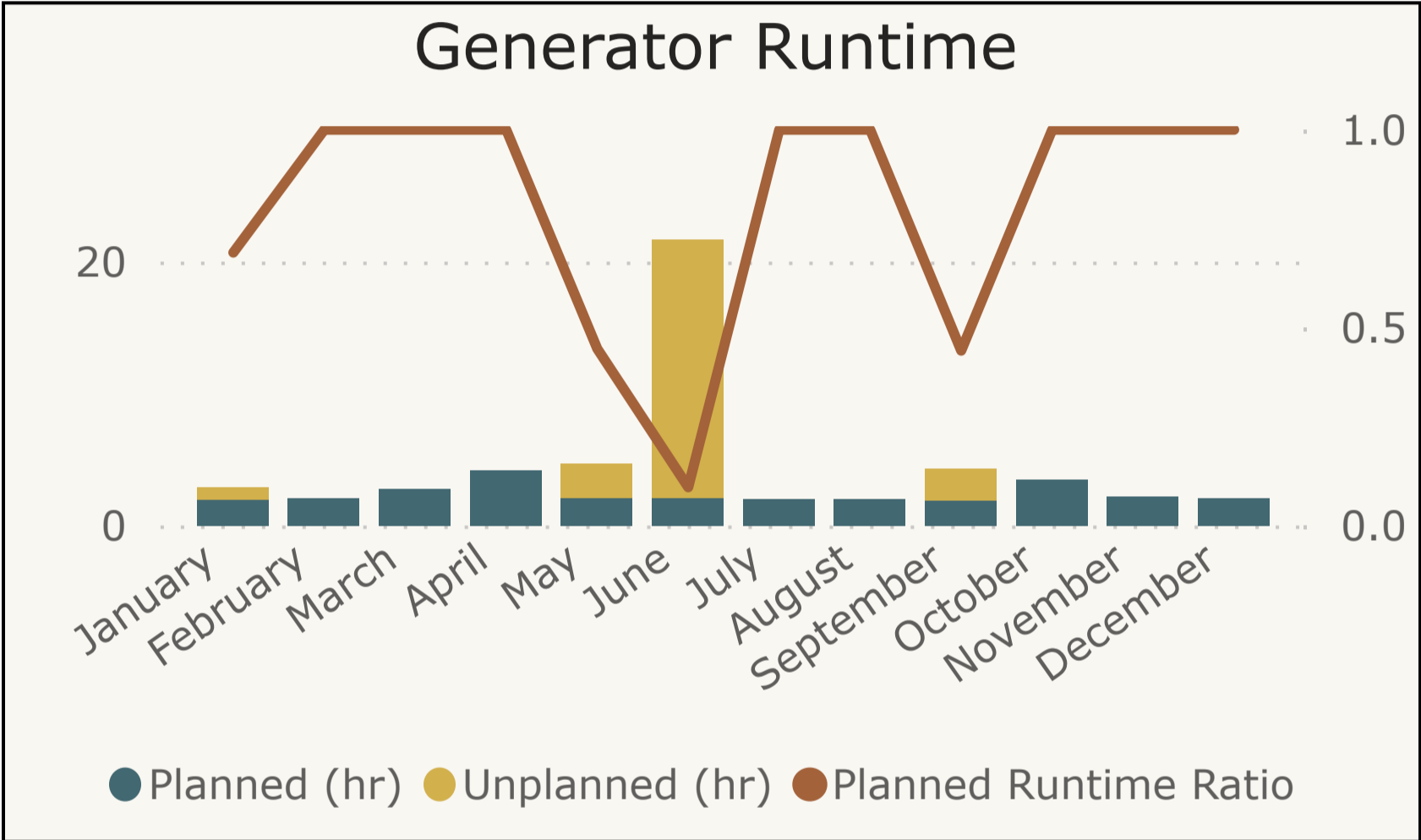
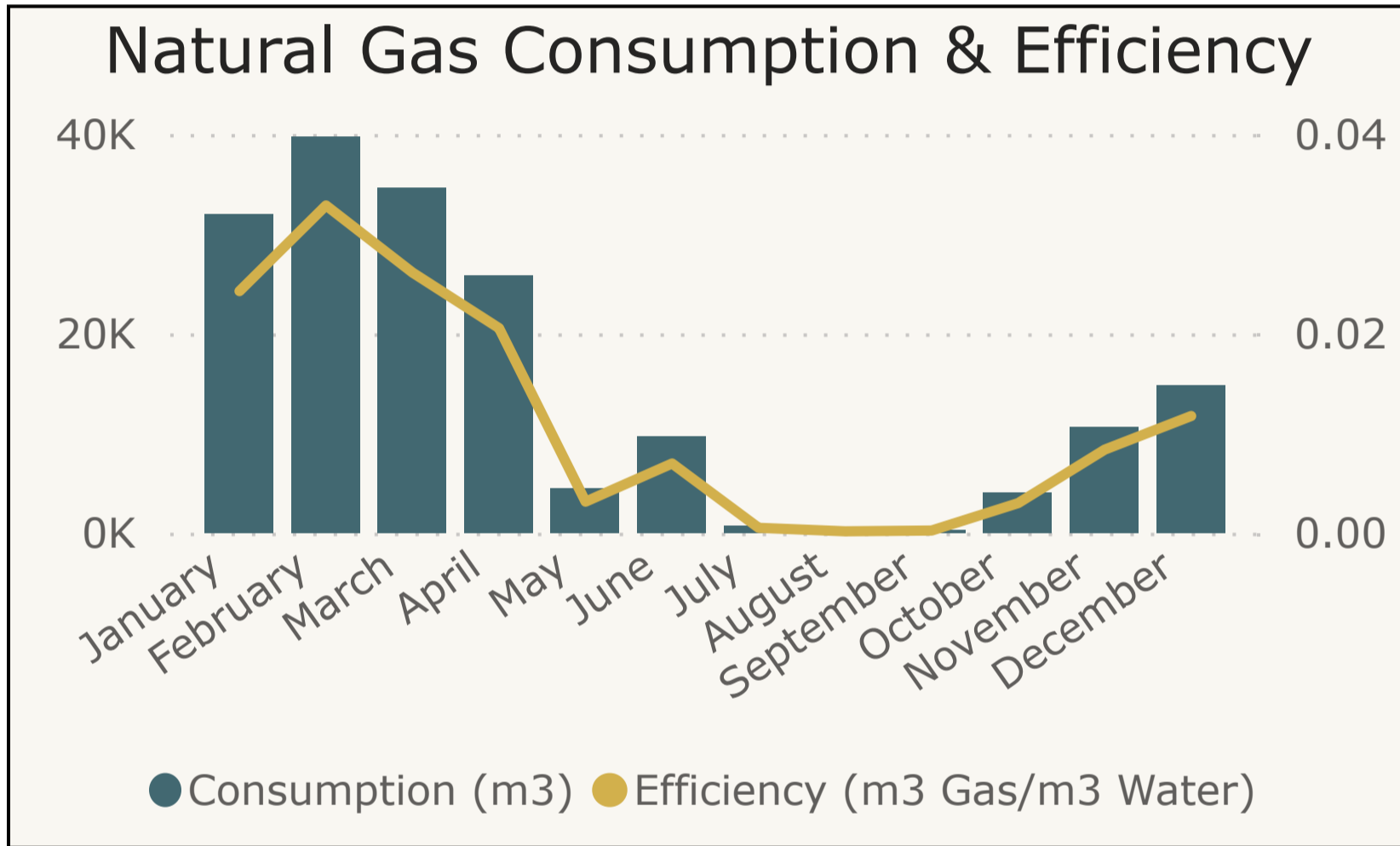
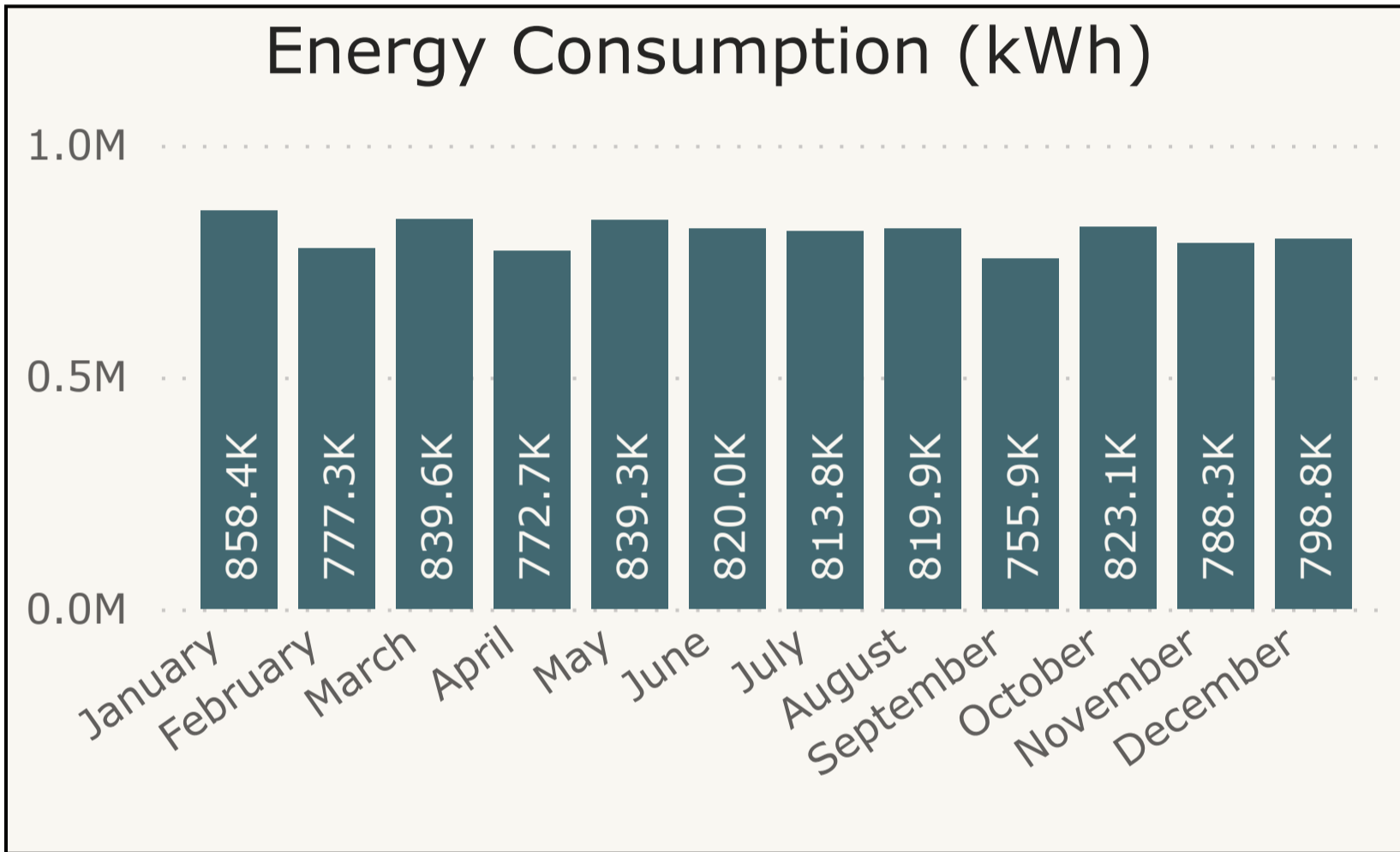
4261
Diesel (L)

177.2K
Natural Gas (m3)

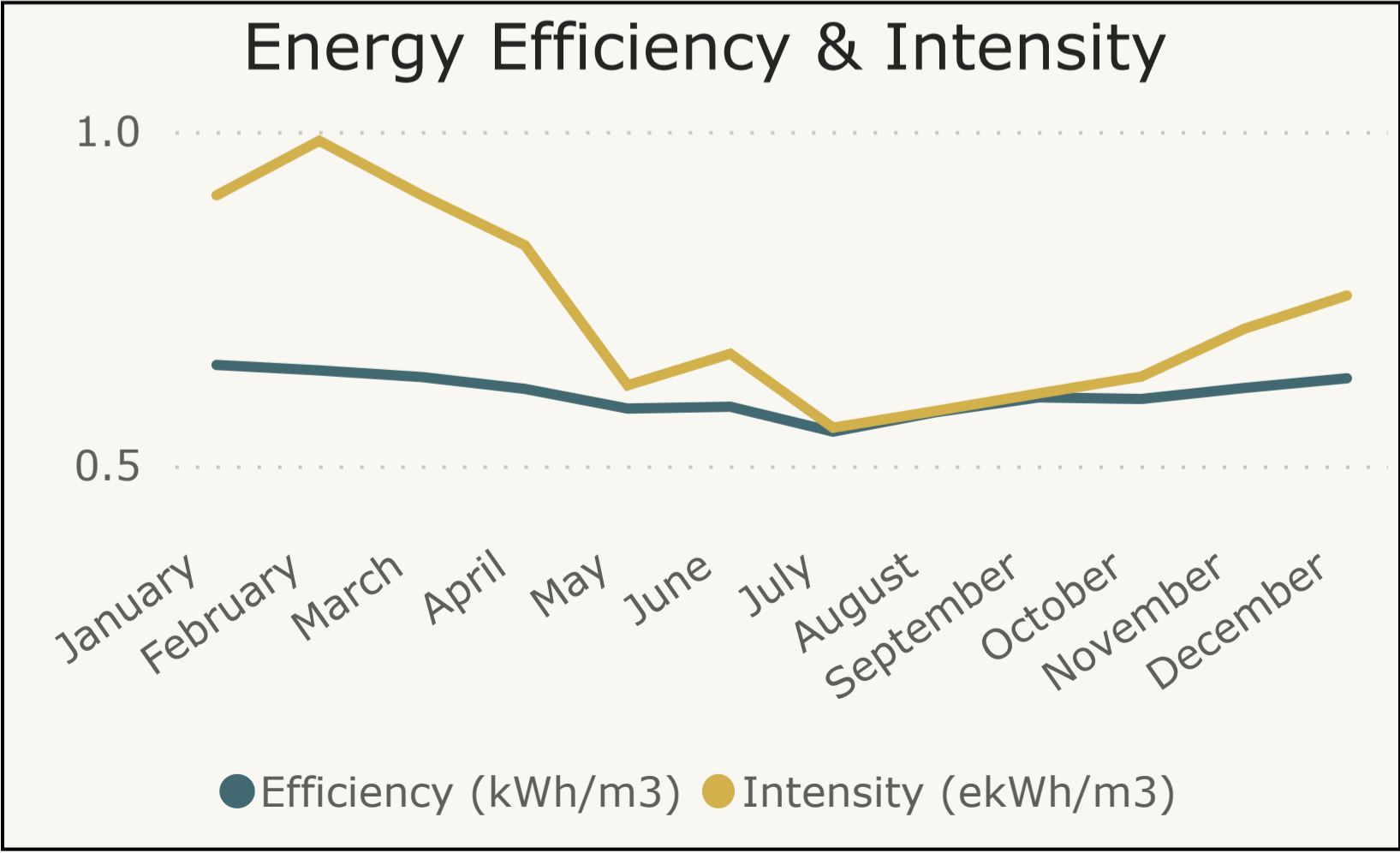
1.191M
GHG Equivalency
(Litres of Gasoline)

16,451
Raw Water Total (ML)

16,013
Treated Water Total (ML)



808.9K
Average Monthly Energy Consumption (kWh)



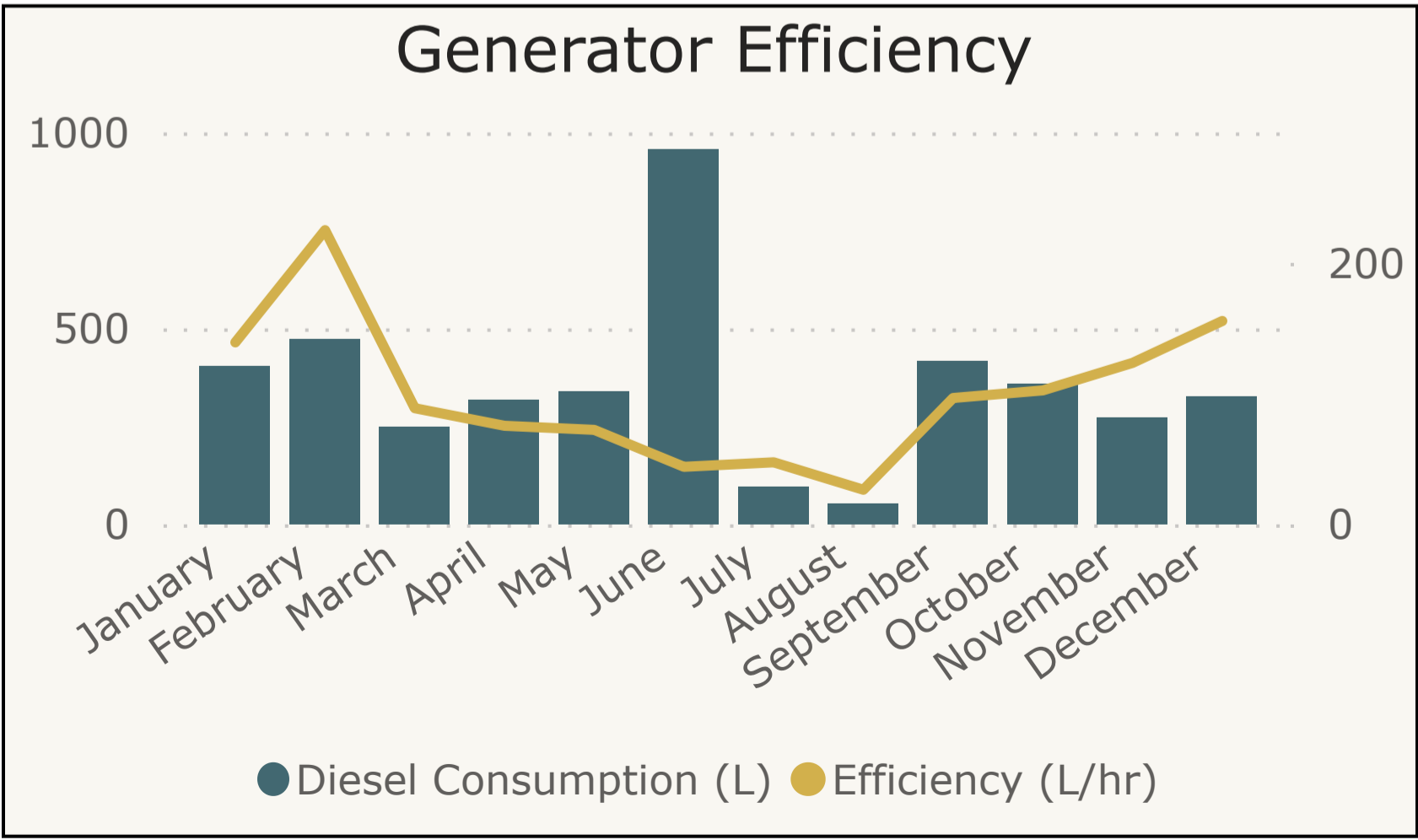
0.729
Energy Intensity (ekWh/m3)

-0.77%
Avg. % Change Over Prior Year

1.5%
Avg. % Change Over Prior Year

0.608
Energy Efficiency (kWh/m3)

1.14%
Avg. % Change Over Prior Year





Year

2019

2020

2021

2022

2023

1.077M
Total Chemical (kg)

0.0673
Overall Chemical Efficiency (kg/m3)

-6.52%
Efficiency - Avg. % Change Over Prior Year

16,451
Raw Water - Total (ML)

16,013
Treated Water - Total (ML)

Month	CL2 (Mussel)	Alum	CL2 (Pre)	Poly (Filter)	PAC	CL2 (Post)	Fluoride	CO2	NaOH	NaHSO3	Poly (Thickener)	Poly (Centrifuge)
January	180	63119	1179	13	0	1319	626	13805	20770	674	37	245
February	0	39263	1092	7	0	1319	568	14689	17122	818	25	179
March	0	55183	1127	11	0	1491	654	18425	21678	880	31	201
April	286	44661	981	5	0	1430	622	12875	17810	1162	26	214
May	562	44098	976	6	0	1571	770	14636	20620	709	45	222
June	527	40613	1009	6	420	1670	747	14356	22390	583	41	129
July	591	45727	1297	8	2426	1912	908	14736	26340	675	30	91
August	553	43638	1336	7	3551	1969	940	13883	24050	801	32	124
September	767	39669	1325	7	1966	1715	832	8995	17500	1270	30	302
October	665	58923	1401	12	1318	1572	908	12050	22932	2044	44	182
November	504	53307	1184	11	0	1393	842	13193	21660	691	48	191
December	480	60340	986	13	0	1367	690	12949	20971	429	47	161
Total	5115	588541	13893	106	9681	18728	9107	164592	253843	10736	436	2241

49045
Average Month - Alum
-10.0%
Avg. % Change ...

759
Average Month - Fluoride
9.9%
Avg. % Change ...

232
Average Month - Polymer (All Process)
28.3%
Avg. % Change ...

895
Average Month - NaHSO3
53.6%
Average of % C...

13716
Average Month - CO2
5.8%
Avg. % Change ...

21154
Average Month - NaOH
-3.5%
Avg. % Change ...

3145
Average Month - CL2 (All Process)
-1.8%
Avg. % Change ...

Chemical by Type

Board of Management Report

Subject: Public Access and Tour Policy

Overview:

- The proposed Public Access and Tour Policy, as amended, addresses safety and security related issues, and provides clear direction related to accountability and areas of the facility which may be accessed by the public on a tour.
- Public tours were temporarily suspended in November 2017, and are planned to resume in September 2023.

Recommendation

That the Board of Management for the Elgin Area Water Supply System ENDORSE the Public Access and Tour Policy attached to this report.

Previous and Related Reports

- Dec. 7, 2017 Public Access & Tour Policy – Temporary Suspension of Public Tours
- Dec. 5, 2013 Public Access & Tour Policy
- Jan. 20, 2011 Public Access & Tour Policy

Background

The Elgin Area Primary Water Supply System (EAPWSS) has a history of providing tours to public groups, by appointment only. Tours have typically been provided to high school, college and university students for educational purposes, as well as public interest civic groups.

The current policy was last updated in 2013 to better incorporate the policies and practices of the contracted operating authority, the Ontario Clean Water Agency (OCWA), and to clarify responsibilities of the Operating Authority and Board staff in arranging and undertaking public tours of the water treatment plant.

It is the intent of the Public Access and Tour Policy to maintain this practice to the degree possible, while recognizing legislative requirements, the safety of both staff and the public, and the ongoing security of the water treatment and supply system.

The Public Access and Tour Policy was temporarily suspended on November 9, 2017, due to concerns regarding the safety of tour attendees largely due to the significant amount of capital construction that was being undertaken in the subsequent years.

The suspension of public tours to the water treatment plant was continued at the onset of the global pandemic.

Discussion

The original policy adopted in 2011 specifically addressed issues related to the *Building Code Act*, the *Accessibility for Ontarians with Disabilities Act*, availability of staff resources for conducting public tours, and public safety. Following the transition to the current contracted operating authority, the Policy was updated and reflective of the newly adopted standard operating procedures of OCWA, as well as the requirements of the *Occupational Health and Safety Act*.

Board staff have reviewed the Public Access and Tour Policy and, in conjunction with the contracted operating authority, are recommending additional changes to address safety and security. The proposed Public Access and Tour Policy is attached to this report as [Appendix A](#) for the Board's reference. Some notable changes to the Policy include:

- The Policy has been reorganized and formatted to be consistent with other Policies adopted by the Board of Management.
- The Policy clearly identifies circumstances where the Policy does not apply (e.g., access for 'tours' related to procurement processes, construction, etc.).
- The Policy clearly articulates the conditions upon which public access and tours are granted, including the ability to suspend the tours due to safety and/or security concerns.

Of particular note, public tours for school-aged children and youth are intended for those that are fourteen years old and older (grade 9 and above). While tours had occasionally been given to younger school-aged children (grade 8 or lower) previously, there are ongoing concerns related to allowing younger children into areas that are potentially harmful and unsafe. In consultation with the contracted operating authority, Board staff feel that this age group is better served by providing a presentation within their classroom including supporting educational materials.

- The Policy clearly identifies areas that can be accessed for the purpose of a public tour, as well as areas that are restricted to the public.
- The Policy outlines the responsibilities of the staff person conducting the tour (tour guide), as well as the responsibilities of the Operating Authority, the Regional Water Director, and the Regional Water Security Manager

Resumption of Public Tours

With the Board's endorsement of the Public Access and Tour Policy proposed in this report, Board staff, with the concurrence of the contracted operating authority, have proposed to resume public access and tours of the water treatment plant at the start of the next school term in September 2023.

Anticipated Operating and Service Impacts

The accommodation and provision of public tours of the water treatment plant is clearly outlined within the operations and maintenance services agreement with the contracted operating authority. There are no anticipated impacts to the operation of the facility.

Conclusion

Board staff are undertaking a detailed review of all Policies and Bylaws of the regional water system to ensure consistency and currency of the documents. The proposed Public Access and Tour Policy has been reviewed with the contracted operating authority, as well as the Board's solicitor, to ensure compliance with related legislation as well as addressing safety and security concerns.

Submitted by: Andrew J. Henry, P.Eng.,
Director, Regional Water

Recommended by: Kelly Scherr, P.Eng., MBA, FEC
Chief Administrative Officer

Attachments: [Appendix A](#) - Public Access and Tour Policy (2023)

Appendix A – Public Access and Tour Policy (2023)

Approved: 5 December 2013

Revised:

Legislative History: Approved by resolution, 20 January 2011; Amended and approved by resolution, 5 December 2013; Suspended due to capital construction 7 December 2017 and continued due to the global pandemic.

Last Reviewed Date: 5 December 2013

Policy Lead: Director, Regional Water

1 Purpose

To provide the general public with access to the facilities and properties of the Elgin Area Primary Water Supply System which are owned and governed by the Water Board, within the limitations outlined by this Policy and applicable legislation, codes and standards.

2 Applicability

2.1 This Policy applies to the provision of access and tours of the regional water Facilities to the general public. The Public Access and Tour Policy specifically applies to any person or persons which are not employees or agents of Elgin, the Water Board, RWS, or OA, including but not limited to:

- a) Public groups, associations, special interest groups, and civic organizations;
- b) Students or groups of students where access and tours are requested for educational purposes, academic instruction, or course content; and,
- c) Site access and “site tours,” authorized by the RW Director and conducted by the RWS and/or OA, for a water-related agency or group including but not limited to a source protection committee and source protection region.

2.2 This Policy does not apply to:

- a) Site access and “site tours” conducted by the RWS and/or OA as part of a public procurement process for contractors, consultants and/or service providers. A public procurement process includes sole source procurement, single source procurement, requests for tenders, requests for quotations, and requests for proposals in accordance with the procurement policies of the OA, and/or the Procurement of Goods and Services and Disposal of Assets Policy of the Water Board;
- b) Site access by a consultant or contractor of the RWS or OA for the purpose of conducting an engineering assignment, a contracted service, or construction;

- c) Site access and “site tours” approved by the RW Director and conducted by the RW Director or designate, to members of the Water Board, or the Council and/or staff of the benefiting municipalities supplied by the Elgin Area Primary Water Supply System;
- d) Site access and/or inspection by an inspector or employee the Ministry of the Environment, Conservation and Parks, the Ministry of Labour, or similar senior government agency, as required from time to time, in accordance with applicable legislation;
- e) Site access by third-party registrars and accreditation bodies for the purpose of undertaking an accreditation audit and/or surveillance audit;
- f) Site access which is specifically granted to a lessee by the Water Board in accordance with a lease agreement or licence of occupancy agreement, for a designated area or location and for a specified purpose, as identified within the applicable lease agreement or licence of occupancy agreement;
- g) Site access by the Ministry of the Environment, Conservation and Parks, or their agent, for the purpose of operating and maintaining the air quality monitoring station in accordance with the Lease Agreement (L11854) with the Province of Ontario; and,
- h) Site access by the Hawk Cliff Raptor Foundation for the purpose of capturing, banding and observing birds at the Foundation’s monitoring stations located along the service road to the low lift pump station.

3 Background

The Elgin Area Primary Water Supply System has a history of providing tours to public groups, by appointment only, which pre-exists the current ownership and governance by the Water Board. Tours have been typically provided to high school, college and university students for educational purposes, as well as civic and public interest groups.

It is the intent of this policy to maintain this practice to the degree possible, while recognizing legislative requirements and the safety of the public, contractors and employees of the water system, as well as the ongoing security of the water treatment and supply system.

4 Legislative Reference

Occupational Health and Safety Act, R.S.O. 1990:

Industrial Establishments – Ontario Regulation 851/90

Construction Projects – Ontario Regulation 213/91

Building Code Act, S.O. 1992:

Building Code – Ontario Regulation 350/06

Accessibility for Ontarians with Disabilities Act, S.O. 2005:

Accessibility Standards for Customer Service – Ontario Regulation 429/07

Exemption from Reporting Requirements – Ontario Regulation 430/07

5 Definitions

Board of Management (and Board) – shall mean the Board of Management for the [Elgin Area Water Supply System as established under the Municipal Water and Sewage Systems Transfer Act, 1997 and pursuant to Transfer Order Lake Elgin Area #W1/1998 dated effective September 15 [November 29], 2000.

Building – shall mean any structure, vault, chamber or tunnel including, without limitation, the electrical, plumbing, heating and air handling equipment (including rigid duct work) of the structure, vault, chamber or tunnel.

Contracted Operating Authority (and Operating Authority) – shall mean the authority (entity) contracted for the operation, maintenance and management of the Elgin Area Primary Water Supply System.

Elgin (and Elgin Area) – shall mean the Elgin Area Water Supply System as established under the *Municipal Water and Sewage Systems Transfer Act, 1997* and pursuant to Transfer Order Elgin Area #W1/1998 dated effective November 29, 2000.

Facility (and Facilities) – shall mean a building, group or buildings, or similar structures, including water storage reservoirs and monitoring stations.

OA – shall mean the Contracted Operating Authority

OA Senior Operations Manager – shall mean the Senior Operations Manager for the Contracted Operating Authority of the Elgin Area Primary Water Supply system.

Project – shall mean work or undertaking as defined by the Construction Project Regulation (O.Reg.213/91) or the Industrial Establishments Regulation (O.Reg.851/90) under the *Occupational Health and Safety Act, 1990*.

RW Director – shall mean the Director of the Regional Water Supply Division for the City of London in its capacity as Administering Municipality for the Elgin Area Primary Water Supply System.

RWS – shall mean the Regional Water Supply Division of the City of London in its capacity as Administering Municipality for the Elgin Area Primary Water Supply System

RW Security Manager – shall mean the Security Manager of the Regional Water Supply Division of the City of London in its capacity as Administering Municipality for the Elgin Area Primary Water Supply System.

Service Agreement – shall mean the Operation and Maintenance Services Agreement between the Water Board and the Contracted Operating Authority for the operation, maintenance and day to day management of the Water Treatment Plant, Facilities and water transmission pipeline.

Water Board – shall mean the Board of Management for the Elgin Area Primary Water Supply System.

Water Treatment Plant – shall mean Elgin Area Primary Water Supply System water treatment plant owned and governed by the Water Board and located at 43665 Dexter Line in the Municipality of Central Elgin.

6 The Policy

6.1 Public Access and Tours

6.1.1 It is the policy of Elgin that a property, Facility or Building which is owned by Elgin shall not be deemed or designated as a “public building”, “public facility”, “public space”, “public access”, or generally open to the public. A person or persons may be granted limited access to a Building and/or Facilities for the purpose of a facility tour, scheduled in accordance with Section 6.2 of this Policy, conducted for educational purposes and only when guided and controlled by the OA and/or RWS.

6.1.2 Scheduled limited access as provided by this Policy may only be granted for tours of the Water Treatment Plant and shall exclude any other Building or Facility of Elgin including reservoir facilities, booster pumping facilities, control chambers, monitoring stations, and valve chambers.

- 6.1.3 Access will not be granted to the public to any area which has been specifically designated and identified as an area where a Project is being undertaken for the purposes of construction, and as defined by the Occupational Health and Safety Act.
- 6.1.4 The RW Director or designate, at their sole discretion, may suspend, restrict or alter public access and tours, in whole or in part, in consideration of health, safety and/or security issues that cannot otherwise be resolved or mitigated, including emergencies and incidents involving Elgin.
- 6.1.5 The RW Director or designate, at their sole discretion, may decline and/or prioritize requests for tours where limited resources and staff are available on requested days.
- 6.2 Conditions of Public Access and Tours
- 6.2.1 It is the policy of Elgin that, subject to the conditions of this Policy, limited access to the Water Treatment Plant may be granted for the purpose of conducting a public tour for educational purposes.
- 6.2.2 A request to access and tour the Water Treatment Plan may be submitted in person, in writing (including by email), or by telephone, and shall be at least thirty (30) days prior to the requested tour date. Requests for access and tour may be submitted directly to the OA or RWS. If tours are arranged through RWS, RWS shall confirm the date and time of the tour with the OA no less than fifteen (15) days in advance of the tour. In all cases, the OA and/or RWS shall notify the RW Security Manager immediately upon the approval and scheduling of a tour.
- 6.2.3 Access and tours are subject to the availability of a designated guide provided by the OA or RWS and shall be conducted during the regular working hours of the Facility, Monday through Friday, 8:30am to 4:30pm, excluding Statutory Holidays. Tours may be conducted outside normal working hours with the written approval of the OA Senior Operations Manager or RW Director, and subject to the availability of staff.
- 6.2.4 A tour group shall be no larger than ten (10) people. Larger groups may be accommodated, subject to the availability of OA or RWS staff, provided that the tour group can be split into smaller sub-groups of not more than ten (10) people each.
- 6.2.5 Children and youth less than fourteen (14) years old (grade 8 or lower) may not participate in a plant tour.

- 6.2.6 Youth between the age of fourteen (14) and seventeen (17), inclusive, must be accompanied by an adult, with no more than nine youth per adult.
- 6.2.7 Open-toed shoes, including sandals and “flip-flops”, may not be worn by any person granted access and/or participating in a tour. Attendees found to be wearing open-toed shoes will be withheld from participating in the tour and may not enter the Facility.
- 6.2.8 The person requesting the access and tour and the tour group participants must acknowledge that the Facility does not meet accessibility standards under the Accessibility for Ontarians with Disabilities Act (i.e., is not wheelchair accessible) and persons with certain disabilities cannot be accommodated on a tour of the Facility.
- 6.2.9 A tour may be cancelled at any time if any unsafe condition develops and at the discretion of the tour guide, the OA Senior Operations Manager, the RW Director, the RW Security Manager, or their designate.
- 6.2.10 Tours will be conducted in accordance with the OA procedure for conducting tours. See Schedule A.
- 6.2.11 All tour participants will be required to sign a waiver. See Schedule B.
- 6.2.12 At the discretion of the RW Director or RW Security Manager, tour groups may be accompanied by a security guard.
- 6.2.13 Exceptions or deviations to the conditions outlined in this Policy may be made only through the express written approval of the OA Senior Operations Manager or RW Director.
- 6.3 Accessible Areas
- 6.3.1 The following areas of the Water Treatment Plant may be accessed by the public in accordance with this Policy:
- Security office lobby
 - Plant main entrance and lobby
 - Second floor corridor, main building
 - Plant boardroom
 - Men’s and Women’s washroom
 - Plant laboratory
 - High lift pump bay (first level basement)
 - High lift pump gallery (ground level)
 - Filter gallery and filter lobby/corridor area
 - Pipe gallery (second level basement)



Elgin Area

Primary Water Supply System

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- Connecting tunnels
- Chlorine building, excluding bulk storage room
- Chemical building, excluding carbon dioxide area
- Emergency backup generator building, excluding high voltage and primary switchgear room
- Low lift pump station
- Flocculation area
- Clarifier area
- Centrifuge area
- Residuals management building

6.4 Restricted Areas

6.4.1 The following areas of the Water Treatment Plant are restricted from public access and may not be included in a public tour under any circumstances:

- Administration offices
- Operator control room
- Any high or medium voltage electrical room
- Primary transformer station
- Chlorine bulk storage room
- Sodium hydroxide storage room
- Plant loading dock and chemical unloading station
- Maintenance/storage building
- Maintenance shop
- Any area where a construction activity or Project is being undertaken, as defined by the *Occupational Health and Safety Act, 1990*, and in accordance with section 6.1 of this Policy.

6.5 Photography and Videography

6.5.1 Photography and videography shall not be permitted within the Facility at any time without the express written permission of the RW Director or RW Security Manager.

7 **Responsibilities**

7.1 Tour Guide

7.1.1 Subject to the conditions of this Policy, public tours shall be conducted by the staff of the OA, unless the RW Director agrees to undertake and conduct the tour using RW staff.

- 7.1.2 It is the responsibility of the OA staff or RWS staff that is conducting the public tour to ensure that all persons participating in the tour are aware and agree with the conditions and limitations imposed for the tour as outlined in Section 6 of this Policy.
- 7.1.3 It is the responsibility of the OA staff or RWS staff that is conducting the public tour to ensure that all persons participating in the tour have signed-in with plant security upon arrival at the water treatment plant and have signed out upon completion of the tour and immediately preceding departure.
- 7.1.4 It is the responsibility of the OA staff or RWS staff that is conducting the public tour to ensure that all persons participating in the tour conduct themselves in a manner which does not endanger the safety of the tour participants, the OA staff, the RWS staff, or the public. The tour may be suspended or terminated, at the sole discretion of the OA staff or RWS staff conducting the tour should a tour participant pose a danger to themselves, the tour participants, the OA staff, the RWS staff or the public, or the participant's actions or inactions may cause a risk to the water treatment process and/or drinking water quality.
- 7.1.5 In the event of an emergency, the OA staff or RWS staff shall evacuate the tour participants to the nearest designated emergency assembly area in accordance with the Emergency Response Plan for the Water Treatment Plant.
- 7.1.6 At least seven (7) days prior to the tour, the designated tour guide of the OA or RWS shall confirm that the RW Security Manager has been notified of the tour.
- 7.2 RW Director
- 7.2.1 The RW Director, at their sole discretion, may authorize RW staff to undertake and conduct a tour in lieu of OA staff in accordance with this Policy.
- 7.3 OA and OA Senior Operations Manager
- 7.3.1 It is the responsibility of the OA to ensure that the plant health and safety policies and procedures are followed by the public, as applicable. If tours are being undertaken by RWS, the OA Senior Operations Manager shall provide directions with regard to health and safety which will be followed, in accordance with the Service Agreement.
- 7.4 RW Security Manager
- 7.4.1 The RW Security Manager shall ensure that plant security has been advised of the planned tour, including relevant details regarding the group taking the tour and the purpose of the tour.

7.4.2 The RW Security Manager shall ensure that the security office at the water treatment plant has an adequate number of hard hats and high visibility safety vests for the tour, as needed.

8 Related Documents

- Visitor Sign-in Logbook
- Schedule A – Operating Authority’s Procedure for conducting a tour
- Schedule B – Tour Waiver

9 Revision History

Board of Management Report

Subject: Environmental & Quality Policy – Climate Change Update

Overview:

- Climate change mitigation and adaptation are essential to improve both operational performance and resilience.
- The existing Environmental Management System (EMS), Energy Conservation and Demand Management Plan, and Asset Management Plan (AMP) are the main programs that have been utilized to date for climate change considerations and actions.
- There is an opportunity to add a commitment to the Environmental and Quality Policy related to climate change mitigation and adaptation. This would provide clear directions to the Elgin Area Primary Water Supply System (EAPWSS) and allow for future objectives to be aligned.

Recommendation

That the Board of Management for the Elgin Area Primary Water Supply System (EAPWSS) take the following actions with regard to the Environmental Management System (EMS):

- a) The Board of Management for the EAPWSS **RECEIVE** the report for information; and,
- b) The Board of Management for the EAPWSS **ENDORSE** the updated Environmental & Quality Policy attached to this report.

Previous and Related Reports

March 2, 2023	Environmental Objectives
January 19, 2023	Environmental & Quality Policy and Quality Management System Operational Plan
October 7, 2021	Asset Management Policy and Asset Management Plan Update

Background

The EAPWSS has an Environmental Management System (EMS) which is registered to the ISO14001:2015 Standard. The EMS has been in place since 2003 and the current three-year registration period expires in Feb. 2024. Later this year, the EAPWSS will be seeking re-registration for another three-year period.

At the March 3, 2023, meeting of the Lake Huron Primary Water Supply System (LHPWSS) Board of Management, during a discussion regarding environmental objectives, the LHPWSS Board directed staff to consider opportunities to incorporate climate change mitigation and resiliency into the EMS. Although not specifically requested by the EAPWSS Board of Management, for consistency between the two drinking water systems this opportunity is also being considered for the EAPWSS.

This report outlines how climate change mitigation and adaptation have presently been incorporated into the EMS and other management systems and programs for the EAPWSS. The report also looks at risks and opportunities, and future considerations related to climate change.

Discussion

The ISO14001:2015 Standard references the two-way relationship between organizations and the environment. Organizations must consider the many ways in which it might impact the environment, but also how the environment might impact the organization. Climate change is a key example of this interaction.

The EAPWSS must address its impact on the environment, including its contributions to climate change (e.g., greenhouse gas emissions). It must also be resilient and adapt to the changing world where it is or may be impacted by climate change. This environmental stewardship, in combination with organizational response and resilience, is a principle that is embedded in the EMS.

When addressing climate change there are two primary approaches which should be integrated into the EMS: mitigation and adaptation.

- **Climate change mitigation** includes taking actions to reduce greenhouse gas (GHG) emissions. Mitigation involves understanding the causes of climate change, the sources of GHG emissions, and the most effective ways to reduce them and the water system's environmental footprint. Examples of mitigation include reducing the use of fossil fuels, addressing energy inefficiencies, system leaks, fugitive emissions, travel, and transportation.
- **Climate change adaptation** includes adjusting systems in response to actual or expected climate change effects. Preparing for the impacts of climate change minimizes harm and risk.

Both climate mitigation and adaptation are essential. Through these complementary approaches, both operational performance and resilience can be improved.

The following sections provide information on how some key areas of the existing EMS and other management systems have been utilized for climate change considerations and actions. There are additional opportunities to address climate change. The EMS

provides a management system framework that can be used to drive climate action, through the Plan-Do-Check-Act model.

Environmental Aspects

The EAPWS's role in affecting climate change can be determined. Through the EMS, the EAPWSS has conducted an analysis to determine the environmental aspects of its activities, materials, products, and services which can be controlled or influenced. The analysis also identifies how the EAPWSS affects the environment (i.e., the associated environmental impacts) when considering a life cycle perspective.

In order to take action against climate change, organizations must understand the sources of their GHG emissions. As part of the EMS, the EAPWSS has determined its environmental aspects, including activities that produce GHG emissions. Environmental aspects related to climate change mitigation can include both direct and indirect impacts.

[Appendix A](#) contains a summarized list of environmental aspects related to climate change mitigation (both directly and indirectly) and adaptation for the EAPWSS.

Environmental & Quality Policy

The Environmental & Quality Policy sets the Board's overall guidance on how the EAPWSS will approach environmental and quality management. The Policy sets the intentions and direction for the EAPWSS related to its environmental performance.

The current Environmental & Quality Policy was endorsed by the Board at the Jan. 19, 2023, meeting. The approved Policy is included as [Appendix B](#) for reference.

The current Policy contains three (3) mandatory commitments which are required by the ISO14001:2015 Standard. The mandatory commitments include:

- protection of the environment, including prevention of pollution and other specific commitment(s) relevant to the context of the organization;
- fulfilling the organization's compliance obligations;
- continually improving the EMS to enhance environmental performance.

Several additional commitments that are tailored to the EAPWSS have been included in the Policy. Under protection of the environment, the EAPWSS has chosen to include specific commitments related to energy management, chemical usage, and process water optimization. These commitments align with the current environmental objectives.

The reference to "protection of the environment" provides an opportunity to include climate change mitigation and adaptation as a specific commitment relevant to the EAPWSS. Staff recommend that the Board consider incorporating climate change

mitigation and adaptation into the Environmental & Quality Policy. An updated Policy to be considered by the Board for endorsement is included as [Appendix C](#) for reference.

Environmental Objectives

At the March 2, 2023, Board meeting, the Board approved the 2023-2027 environmental objectives, targets, and the associated programs to achieve them.

The current environmental objectives are:

- Reduce the demand on the Provincial electrical generation and transmission system through efficiency, conservation, and displacement efforts.
- Optimize the use of chemicals in the production of treated potable water and associated residuals treatment.

These two (2) environmental objectives are aligned with the Environmental & Quality Policy. They relate to two (2) significant environmental aspects: electricity consumption and chemical consumption. These environmental aspects have indirect impacts on climate change mitigation.

There are no set number of environmental objectives that must be in place. New objectives can be added at any time or closed out once programs have been completed.

Environmental objectives must be consistent with the Policy. If a commitment to climate change mitigation and adaptation is added to the Environmental & Quality Policy, it provides clear direction and allows for meaningful objectives to be set and alterations to management programs that will align with the amended Policy. Future considerations will be given to set objectives that directly relate to climate change mitigation (e.g., natural gas consumption, greenhouse gas emissions). Future objectives that relate to climate change adaptation can also be considered, such as conducting a climate change risk assessment and impacts review to identify the highest risk sites, processes, and operations.

Environmental objectives must be measurable and monitored. Board staff are currently in the process of collecting baseline data and creating a greenhouse gas emissions inventory. The first step towards reducing emissions is to understand the sources and their relative contributions. The Ontario Water Works Association (OWWA) recently released a new [Water/Wastewater Utility Greenhouse Gas \(GHG\) Emissions Inventory Tool](#) which is being utilized to establish the inventory. Once a baseline emissions inventory has been established, the EAPWSS can review opportunities for reduction efforts, associated targets, and programs.

Any proposed new environmental objectives, whether related to climate change mitigation and adaptation, or any other environmental aspects, would be presented to the Board at a future meeting for consideration and endorsement.

Energy Conservation and Demand Management Plan

The EAPWSS is required to maintain and update an Energy Conservation and Demand Management Plan (CDM Plan) as per O.Reg. 25/23 (Broader Public Sector: Energy Reporting and Conservation and Demand Management Plans) under the *Electricity Act*.

O.Reg. 25/23 has a specific requirement for public agencies to prepare energy and conservation demand management plans. The plans must include a summary of annual energy consumption and greenhouse gas emissions, previous and planned activities and measures to conserve energy consumption, and the results achieved. The plans must be updated every five (5) years.

The EAPWSS [Energy Conservation and Demand Management Plan](#) is published on the water system's website. The CDM Plan was originally developed in 2014 and was last updated in June 2019. The CDM Plan re-iterates that it is of utmost importance that EAPWSS improve energy efficiency, minimize operating costs, and reduce impact on the environment, without adversely impacting operations and water quality. The CDM Plan sets a reduction in overall energy intensity as a goal and objective. The environmental objectives and targets developed for the EMS align with and have been referenced within the CDM Plan.

The CDM Plan is scheduled to be updated within the next year, prior to the regulatory deadline of July 1, 2024.

Emergency Preparedness and Response

The EMS requires that emergency plans be established, tested, and reviewed, with the intention of preventing or mitigating adverse impacts. The EAPWSS must plan how to respond should climate related risks and emergencies occur. Emergency plans must be tested and reviewed, with adequate training and information provided to staff.

This EMS element mainly relates to climate change adaptation and resilience, where the EAPWSS must be prepared for extreme weather events and changes to environmental conditions that may significantly impact the drinking water system, including changing lake ice patterns, water temperatures, shore erosion rates, and migration of invasive species.

There are existing emergency procedures within the EMS that address several climate related issues. These include procedures related to power failures, critical staffing shortages, and various types of infrastructure failures. The operating authority is currently in the process of developing a site-specific procedure for employee response

during a tornado and/or other severe weather event. Environmental impacts occurring over longer periods of time, such as average temperatures, invasive species, lake ice, etc. are monitored as part of our Source Protection program and Master Plan initiatives.

The EAPWSS also has a separate Incident Management System (IMS) in place. The IMS provides the management framework to identify, analyse and evaluate risks that have the potential to disrupt normal operations of the EAPWSS to such a degree that it would require coordinated resources to respond and recover. The IMS includes a risk registry, and an Emergency Management Plan that details the roles, responsibilities and actions required of the EAPWSS in responding to and recovery from an incident.

Asset Management Plan

In 2022 the EAPWSS completed a comprehensive update to the Asset Management Plan (AMP). As part of this AMP update an [Asset Management Policy](#) was developed for the EAPWSS. The Policy was approved by the Board of Management at the October 7, 2021, Board meeting.

As outlined in the Asset Management Policy, two (2) of the EAPWSS's guiding principles for infrastructure asset management incorporate climate change risk, awareness, and resilience.

- **Long-Term Sustainability and Resilience:** Services and infrastructure assets should be socio-culturally, environmentally, and economically sustainable over the long term. Achieving this involves long-term planning that incorporates triple bottom line considerations, climate change awareness, and the development of resilience.
- **Environmentally Conscious:** The utility shall minimize the impact of infrastructure on the environment and address the vulnerabilities and risks caused by climate change through lifecycle management. This includes energy and resource optimization, meeting environmental standards such as ISO 14001 in our operation, considering end of product life disposal or reuse options, and whole lifecycle considerations at the time of repair, replacement, or new build.

A key outcome of the AMP is that climate change is part of the risk management approach embedded in asset management and lifecycle management strategies to enhance the resilience of the infrastructure. The EAPWSS is looking at opportunities to further develop the asset risk register to capture climate change impacts on infrastructure assets to help inform prioritization of capital projects.

Conclusion

The EAPWSS Board of Management has directed staff to consider opportunities to incorporate climate change mitigation and resiliency into the EMS. By adding a specific commitment to climate change mitigation and adaptation into the Environmental & Quality Policy, it acts as the driver and provides direction for the EAPWSS. Providing clear direction in the Policy allows for meaningful environmental objectives to be set that will align with it.

Prepared by: Erin McLeod, CET
Quality Assurance & Compliance Manager

Submitted by: Andrew J. Henry, P.Eng.
Director, Regional Water

Recommended by: Kelly Scherr, P.Eng., MBA, FEC
Chief Administrative Officer

Attachments:

- [Appendix A](#) – Environmental Aspects
- [Appendix B](#) – Current Environmental & Quality Policy (Jan. 19, 2023)
- [Appendix C](#) – Revised Environmental & Quality Policy (June 1, 2023)

Appendix A: Environmental Aspects

Environmental Aspects: Climate Change Mitigation

Direct impacts are the activities where greenhouse gas (GHG) emissions can be controlled by the EAPWSS. Direct impacts include:

- Natural gas consumption in the heating of the facilities.
- Diesel fuel consumption for emergency power.
- Diesel fuel and gasoline consumption for travel and transportation (e.g., fleet vehicles, residuals trucking).
- Use of refrigerants in cooling systems.

Indirect impacts (i.e., impacts that occur offsite) include:

- Electricity consumption, where the source(s) of purchased electricity produces emissions at the point of the energy production.
- Emissions across the wider supply chain. For example, resources and energy used in producing input materials such as water treatment chemicals, and construction materials such as steel and cement.
- Transportation of chemicals and materials to the site.
- Offsite treatment and handling of wastes.

Environmental Aspects: Climate Change Adaptation

- Impacts from extreme weather events (e.g., thunderstorms, lightning strikes, flooding, wind damage, ice storms).
- Impacts from high water levels and shoreline erosion.
- Extreme weather may impact employee's ability to get to work, or supply of materials (e.g., chemical deliveries) to the sites.
- Treatment chemicals and water treatment processes can be sensitive to temperature changes.
- Increased demand for water during heat waves and droughts.

Appendix B: Current Environmental & Quality Policy (Jan. 19, 2023)

ENVIRONMENTAL AND QUALITY POLICY

The Elgin Area Primary Water Supply System (EAPWSS) and Ontario Clean Water Agency (OCWA) as the Operating Authority are committed to:

- Maintaining and continually improving the Environmental Management System (EMS) and Quality Management System (QMS) to enhance environmental and quality performance.
- Providing the customer with safe drinking water.
- Meeting all relevant compliance obligations and encouraging suppliers and subcontractors to similarly meet these requirements.
- Developing and implementing policies and environmental objectives in partnership.
- Protecting the environment, including prevention of pollution, energy management, and chemical usage optimization.
- Managing and operating the drinking water system in a responsible manner.
- Being environmental and quality leaders in the municipal drinking water industry.
- Promoting owner and consumer confidence in the safety of the drinking water supply.
- Promoting resource stewardship, including conservation.
- Aligning and coordinating the EMS and QMS with the Asset Management System.
- Accomplishing these commitments through the dedication, support and participation of all personnel.

The EAPWSS and OCWA will periodically undertake reviews, evaluations and performance measurements of the operations to promote conformance with the Environmental and Quality Policy.

OCWA also maintains a separate Quality Management System Policy which governs the activities of the Operating Authority as a Corporation.



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Meeting Date: June 1, 2023

File No.:

A blue ink signature of Andrew Henry, consisting of a large, stylized 'A' and 'H' followed by a long horizontal stroke.

Andrew Henry
Director, Regional Water Supply
Elgin Area Primary Water Supply System

Date Signed: January 24, 2023

A blue ink signature of Matt Bender, featuring a stylized 'M' and 'B' followed by a long horizontal stroke.

Matt Bender
Regional Manager
Ontario Clean Water Agency

Date Signed: January 24, 2023

Effective Date: January 19, 2023

Appendix C: Revised Environmental & Quality Policy (June 1, 2023)

ENVIRONMENTAL AND QUALITY POLICY

The Elgin Area Primary Water Supply System (EAPWSS) and Ontario Clean Water Agency (OCWA) as the Operating Authority are committed to:

- Maintaining and continually improving the Environmental Management System (EMS) and Quality Management System (QMS) to enhance environmental and quality performance.
- Providing the customer with safe drinking water.
- Meeting all relevant compliance obligations and encouraging suppliers and subcontractors to similarly meet these requirements.
- Developing and implementing policies and environmental objectives in partnership.
- Protecting the environment, including prevention of pollution, **climate change mitigation and adaptation**, energy management, and chemical usage optimization.
- Managing and operating the drinking water system in a responsible manner.
- Being environmental and quality leaders in the municipal drinking water industry.
- Promoting owner and consumer confidence in the safety of the drinking water supply.
- Promoting resource stewardship, including conservation.
- Aligning and coordinating the EMS and QMS with the Asset Management System.
- Accomplishing these commitments through the dedication, support and participation of all personnel.

The EAPWSS and OCWA will periodically undertake reviews, evaluations and performance measurements of the operations to promote conformance with the Environmental and Quality Policy.

OCWA also maintains a separate Quality Management System Policy which governs the activities of the Operating Authority as a Corporation.



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Meeting Date: June 1, 2023

File No.:

Andrew Henry
Director, Regional Water Supply
Elgin Area Primary Water Supply System

Date Signed:

Matt Bender
Regional Manager
Ontario Clean Water Agency

Date Signed:

Effective Date: **June 1, 2023**

Board of Management Report

Subject: 2022 Audited Financial Statements and Auditors Report

Overview:

- The Independent Auditors' Report confirms that the 2022 financial statements provided represent the financial position of the Elgin Area Water Supply System in accordance with the Canadian Public Sector Accounting Standards.

Recommendation

That the Board of Management for the Elgin Area Primary Water Supply System **RECEIVE AND ACCEPT** the 2022 Audited Financial Statements and Independent Auditors' Report for the Elgin Area Primary Water Supply System.

Discussion

On an annual basis, the finances and financial statements for the Elgin Area Primary Water Supply System are audited by a financial auditor, acquired in partnership with the City of London in its capacity as Administering Municipality for the water system. The draft audited financial statements have been provided to the benefiting municipalities, as well as the reconciled volumes supplied to each municipality, to allow the municipalities to complete their respective financial audits and statements.

Submitted by: Andrew J. Henry, P.Eng.,
Director, Regional Water

Recommended by: Kelly Scherr, P.Eng., MBA, FEC
Chief Administrative Officer

Attachments: Independent Auditors' Report
2022 Audited Financial Statements, Elgin Area Water Supply System

INDEPENDENT AUDITORS' REPORT

To the Board of Directors of Elgin Area Primary Water Supply System

Opinion

We have audited the financial statements of Elgin Area Primary Water Supply System (the "Entity"), which comprise:

- the statement of financial position as at December 31, 2022
- the statement of operations and accumulated surplus for the year then ended
- the statement of changes in net financial assets for the year then ended
- the statement of cash flows for the year then ended
- and notes to the financial statements, including a summary of significant accounting policies

(Hereinafter referred to as the "financial statements").

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of the Entity as at December 31, 2022, and its results of operations, its changes in net financial assets and its cash flows for the year then ended in accordance with Canadian public sector accounting standards.

Basis for Opinion

We conducted our audit in accordance with Canadian generally accepted auditing standards. Our responsibilities under those standards are further described in the "Auditors' Responsibilities for the Audit of the Financial Statements" section of our auditors' report.

We are independent of the Entity in accordance with the ethical requirements that are relevant to our audit of the financial statements in Canada and we have fulfilled our other ethical responsibilities in accordance with these requirements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Responsibilities of Management and Those Charged with Governance for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with Canadian public sector accounting standards, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the Entity's ability to continue as a going concern, disclosing as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Entity or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Entity's financial reporting process.

Auditors' Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Canadian generally accepted auditing standards will always detect a material misstatement when it exists.

Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the financial statements.

As part of an audit in accordance with Canadian generally accepted auditing standards, we exercise professional judgment and maintain professional skepticism throughout the audit.

We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion.

The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Entity's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Entity's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditors' report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditors' report. However, future events or conditions may cause the Entity to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Chartered Professional Accountants, Licensed Public Accountants

London, Canada

Date

Financial Statements of

**ELGIN AREA PRIMARY WATER SUPPLY
SYSTEM**

And Independent Auditors' Report thereon

December 31, 2022

ELGIN AREA PRIMARY WATER SUPPLY SYSTEM
Statement of Financial Position
December 31, 2022, with comparative information for 2021

	2022	2021
Financial assets		
Due from the Corporation of the City of London (note 3)	\$ 15,645,242	\$ 13,473,990
Trade and other receivables	712,820	759,334
Loan receivable (note 4)	130,271	154,588
Total financial assets	16,488,333	14,387,912
Financial liabilities		
Accounts payable and accrued liabilities	821,275	954,628
Accrued interest on long-term debt	42,647	59,998
Long-term debt (note 5)	5,333,202	7,641,188
Total financial liabilities	6,197,124	8,655,814
Net financial assets	10,291,209	5,732,098
Non-financial assets		
Tangible capital assets (note 6)	62,453,643	64,351,174
Prepaid expenses	230,053	192,993
Total non-financial assets	62,683,696	64,544,167
Accumulated surplus (note 7)	\$ 72,974,905	\$ 70,276,265

The accompanying notes are an integral part of these financial statements.

ELGIN AREA PRIMARY WATER SUPPLY SYSTEM

Statement of Operations

Year ended December 31, 2022, with comparative information for 2021

	Budget	2022	2021
	(note 9)		
Revenues			
User charges	\$ 14,734,000	\$ 15,024,168	\$ 14,339,882
Investment income	81,000	249,206	207,725
Other	25,000	29,700	557,466
Total revenues	14,840,000	15,303,074	15,105,073
Expenses			
Salaries, wages and fringe benefits	974,571	928,768	813,024
Materials and supplies	6,730,960	6,842,875	6,448,934
Contracted services	972,894	831,377	1,043,618
Rents and financial expenses	98,200	81,289	56,844
Interest on long-term debt (note 5)	180,877	180,877	238,563
Amortization of tangible capital assets (note 6)	3,570,463	3,570,463	3,531,538
Administrative charges to the Corporation of the City of London	182,800	168,785	180,096
Total expenses	12,710,765	12,604,434	12,312,617
Annual surplus	2,129,235	2,698,640	2,792,456
Accumulated surplus, beginning of year (note 7)	70,276,265	70,276,265	67,483,809
Accumulated surplus, end of year (note 7)	\$ 72,405,500	\$ 72,974,905	\$ 70,276,265

The accompanying notes are an integral part of these financial statements.

ELGIN AREA PRIMARY WATER SUPPLY SYSTEM
Statement of Change in Net Financial Assets
Year ended December 31, 2022, with comparative information for 2021

	Budget	2022	2021
Annual surplus	\$ 2,129,235	\$ 2,698,640	\$ 2,792,456
Acquisition of tangible capital assets	(4,644,906)	(1,672,932)	(1,042,594)
Amortization of tangible capital assets	3,570,463	3,570,463	3,531,538
	1,054,792	4,596,171	5,281,400
Change in prepaid expenses	-	(37,060)	(68,646)
Change in net financial assets (debt)	1,054,792	4,559,111	5,212,754
Net financial assets (debt), beginning of year	5,732,098	5,732,098	519,344
Net financial assets (debt), end of year	\$ 6,786,890	\$ 10,291,209	\$ 5,732,098

The accompanying notes are an integral part of these financial statements.

ELGIN AREA PRIMARY WATER SUPPLY SYSTEM**Statement of Cash Flows**

Year ended December 31, 2022, with comparative information for 2021

	2022	2021
Cash provided by (used in)		
Operating activities		
Annual surplus	\$ 2,698,640	\$ 2,792,456
Items not involving cash		
Amortization of tangible capital assets	3,570,463	3,531,538
Amortization of debenture discount	15,178	15,178
Change in non-cash assets and liabilities		
Due from the Corporation of the City of London	(2,171,252)	(3,443,152)
Prepaid expenses	(37,060)	(68,646)
Trade and other receivables	46,514	358,216
Accounts payable and accrued liabilities	(133,354)	118,765
Accrued interest on long-term debt	(17,351)	(15,674)
Net change in cash from operating activities	3,971,778	3,288,681
Capital activities		
Purchase of tangible capital assets	(1,672,932)	(1,042,594)
Net change in cash from capital activities	(1,672,932)	(1,042,594)
Financing activities		
Long-term debt repayments	(2,323,163)	(2,272,512)
Loan receivable	24,317	26,425
Net change in cash from financing activities	(2,298,846)	(2,246,087)
Net change in cash flows and cash, end of year	\$ -	\$ -

The accompanying notes are an integral part of these financial statements.

ELGIN AREA PRIMARY WATER SUPPLY SYSTEM
Notes to Financial Statements
Year ended December 31, 2022

1. Nature of Reporting Entity

The Ontario Water Resources Commission (the “Commission”) of the Province of Ontario constructed, owned and operated a water treatment plant on Lake Erie and pipeline to the City of St. Thomas and the Ford Talbotville Assembly Plant on or about 1967. The Ministry of the Environment (the “Ministry”) was created in about 1973 and assumed all operations and activities of the Commission. In or about 1991, operational related activities (water and wastewater systems) of the Ministry were transferred to the Ontario Clean Water Agency, a Crown corporation of the Province of Ontario. In accordance with agreements with the associated municipalities, the Ministry extended pipelines to the present communities of Port Burwell, Port Stanley, and Southwold, and in 1996 to the City of London and the Town of Aylmer.

In accordance with the *Municipal Water and Sewage Systems Transfer Act, 1997*, the final Transfer Order for Elgin Area Primary Water Supply System (the “Entity”) was effective on November 29, 2000.

Under the transfer order, the works, properties and all assets, liabilities, rights and obligations of the system were transferred jointly to The Corporation of the City of London, The Corporation of the Town of Aylmer, The Corporation of the Municipality of Bayham, The Corporation of the Municipality of Central Elgin, The Corporation of the Township of Malahide, The Corporation of the Township of Southwold and The Corporation of the City of St. Thomas. The Corporation of the City of London (the “Corporation”) was named as the administering municipality. The Corporation of the Municipality of Dutton Dunwich joined the joint board of management in 2018. The appointment and voting structure was approved in the December 2019 board meeting.

The transfer order established a joint board of management to govern the management of the water supply system. The joint board of management is comprised of seven members appointed by the respective councils of participating municipalities. The Board composition is as follows:

Municipality	Members	Votes
The Corporation of the City of London	3	3
The Corporation of the City of St. Thomas	2	2
The Corporations of the Township of Southwold and the Municipality of Central Elgin and the Municipality of Dutton Dunwich (acting jointly)	1	1
The Corporations of the Municipality of Bayham, Township of Malahide and Town of Aylmer (acting jointly)	1	1

ELGIN AREA PRIMARY WATER SUPPLY SYSTEM
Notes to Financial Statements (continued)
Year ended December 31, 2022

2. Significant Accounting Policies

The financial statements of the Entity are prepared by management in accordance with Canadian generally accepted accounting principles as defined in the CPA Canada Public Sector Handbook - Accounting. Significant accounting policies are as follows:

(a) Accrual Accounting

Sources of financing and expenses are reported on the accrual basis of accounting.

(b) Non-financial Assets

Non-financial assets are not available to discharge existing liabilities and are held for use in the provision of services. They have useful lives extending beyond the current year and are not intended for sale in the ordinary course of operations.

(i) Tangible capital assets

Tangible capital assets are recorded at cost which includes amounts that are directly attributable to acquisition, construction, development or betterment of the asset. The cost, less residual value, of the tangible capital assets, excluding land, are amortized on a straight line basis over their estimated useful lives as follows:

Asset	Useful Life - Years
Buildings and building improvements	15 – 40
Vehicles	5 – 15
Machinery and equipment	7 – 20
Water infrastructure	10 – 60
Computers	3

Annual amortization is charged in the year of acquisition and in the year of disposal using the half year rule. Assets under construction are not amortized until the asset is available for productive use.

(ii) Interest Capitalization

The interest costs associated with the acquisition or construction of a tangible capital asset are not capitalized.

(c) Revenue Recognition

The Entity recognizes revenue when water is drawn by each customer, collection of the relevant receivable is probable, persuasive evidence of an arrangement exists and the sales price is fixed or determinable.

ELGIN AREA PRIMARY WATER SUPPLY SYSTEM
Notes to Financial Statements (continued)
Year ended December 31, 2022

2. Significant Accounting Policies (continued)

(d) Government Transfers

Government transfer payments to the Entity are recognized in the financial statements in the year in which the payment is authorized and the events giving rise to the transfer occur, performance criteria are met, and a reasonable estimate of the amount can be made. Funding that is stipulated to be used for specific purposes is only recognized as revenue in the fiscal year that the related expenses are incurred or services performance. If funding is received for which the related expenses have not yet been incurred or services performed, these amounts are recorded as a liability at year end.

(e) Use of Estimates

The preparation of financial statements in conformity with Canadian generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the year. Significant items subject to such estimates and assumptions include the valuation allowances for receivables and useful lives assigned to tangible capital assets.

Actual results could differ from those estimates.

(f) Budget Figures

Budget figures have been provided for comparison purposes. Given differences between the budgeting model and generally accepted accounting principles established by the Public Sector Accounting Board ("PSAB"), certain budgeted amounts have been reclassified to reflect the presentation adopted under PSAB.

(g) Liability for Contaminated Sites

Under PS 3260, liability for contaminated sites are defined as the result of contamination being introduced in air, soil, water or sediment of a chemical, organic, or radioactive material or live organism that exceeds an environmental standard. This Standard relates to sites that are not in productive use and sites in productive use where an unexpected event resulted in contamination.

ELGIN AREA PRIMARY WATER SUPPLY SYSTEM
Notes to Financial Statements (continued)
Year ended December 31, 2022

2. Significant Accounting Policies (continued)

(h) Related Party Disclosures

Related parties exist when one party has the ability to control or has shared control over another party. Individuals that are key management personnel or close family members may also be related parties.

Disclosure is made when the transactions or events between related parties occur at a value different from what would have been recorded if they were not related and the transactions could have a material financial impact on the consolidated financial statements.

(i) Inter-entity Transactions

Transactions between related parties are recorded at carrying amounts with the exception of the following:

- Transactions in the normal course of business are recorded at exchange amount.
- Transactions with fair value consideration are recorded at exchange amount.
- Transfer of an asset or liability at nominal or no consideration is recorded by the provider at carrying amount and the recipient has the choice of either carrying amount or fair value.
- Cost allocations are reported using the exchange amount and revenues and expenses are reported on a gross basis.
- Unallocated costs for the provision of goods or services maybe recorded by the provider at cost, fair value or another amount dictated by policy, accountability structure or budget practice.

(j) Future Accounting Pronouncements

These standards and amendments were not yet effective for the year ended December 31, 2022, and have therefore not been applied in preparing these financial statements. Management is currently assessing the impact of the following accounting standards updates on the future financial statements.

(i) Asset Retirement Obligations

PS 3280, Asset Retirement Obligations, addresses the recognition, measurement, presentation, and disclosure of legal obligations associated with retirement of tangible capital assets in productive use. This standard is effective for fiscal years beginning on or after April 1, 2022 (the Entity's December 31, 2023 year-end).

ELGIN AREA PRIMARY WATER SUPPLY SYSTEM
Notes to Financial Statements (continued)
Year ended December 31, 2022

2. Significant Accounting Policies (continued)

(j) Future Accounting Pronouncements (continued)

(ii) Financial Statement Presentation

PS 1201, Financial Statement Presentation requires entities to present a new statement of remeasurement gains and losses separate from the consolidated statement of operations and accumulated surplus. This new statement includes unrealized gains and losses arising from remeasurement of financial instruments and items denominated in foreign currencies and any other comprehensive income that arises when a government includes the results of government business enterprises and partnerships. This standard is effective for fiscal years beginning on or after April 1, 2022 and applies when PS 3450, Financial Instruments, and PS 2601, Foreign Currency Translation, are adopted (the Entity's December 31, 2023 year-end).

(iii) Financial Instruments

PS 3450, Financial Instruments, establishes the standards on accounting for and reporting all types of financial instruments including derivatives. The effective date of this standard has been deferred and is now effective for fiscal periods beginning on or after April 1, 2022 (the Entity's December 31, 2023 year-end).

(iv) Revenue

PS 3400, Revenue, establishes a single framework to categorize revenues to enhance the consistency of revenue recognition and its measurement. This standard is effective for fiscal years beginning on or after April 1, 2023 (the Entity's December 31, 2024 year-end).

3. Due from the Corporation of the City of London

As the Administering Municipality, the Corporation manages the daily operations of the Entity. The Corporation maintains a separate general ledger on behalf of the Entity. All funds are paid and received through the Corporation's bank account and held for use by the Entity.

ELGIN AREA PRIMARY WATER SUPPLY SYSTEM
Notes to Financial Statements (continued)
Year ended December 31, 2022

4. Loan Receivable

	2022	2021
Buy-in Charge Loan - Municipality of Dutton Dunwich	\$ 130,271	\$ 154,588
Interest Earned on Loan at prime rate less 1.53%	\$ 3,683	\$ 1,576

Effective January 1, 2018, the Municipality of Dutton Dunwich entered into a four-party water supply agreement with the Township of Southwold, the St. Thomas Secondary Water Supply System, and the Elgin Area Water Primary Supply System resulting in a buy-in charge of \$252,000. Dutton Dunwich has requested and the Entity has consented to payment of this buy-in charge over a 10 year term bearing interest on the outstanding amount. During the year, \$24,317 was received as payment on the loan. This loan is paid quarterly and will mature in December 2027.

5. Long-term Debt

Long-term debt is stated as follows:

	2022	2021
Long-term debt assumed by the Corporation of the City of London, as Administering Municipality, on behalf of the Elgin Area Primary Water Supply System, with semi-annual interest payments:		
at a rate of 3.20% (2021 - rates ranging from 3.05% to 3.20%), maturing September 2022.	\$ -	\$ 1,170,450
at rates ranging from 1.95% to 2.70% (2021 - 1.70% to 2.70%), maturing March 2026.	2,971,630	3,677,592
at rates ranging from 2.00% to 2.85% (2021 - 1.80% to 2.85%), maturing March 2027.	2,391,931	2,838,682
Total long-term debt	5,363,561	7,686,724
Less: Unamortized debenture discount	(30,359)	(45,536)
Net long-term debt	\$ 5,333,202	\$ 7,641,188

ELGIN AREA PRIMARY WATER SUPPLY SYSTEM
Notes to Financial Statements (continued)
Year ended December 31, 2022

5. Long-term Debt (continued)

The long-term debt repayment schedule is as follows:

2023	\$ 1,176,124
2024	1,201,240
2025	1,227,615
2026	1,255,363
2027	503,219
Total	\$ 5,363,561

Total interest charges for the year for long-term debt, which are included in the statement of operations, are as follows:

	2022	2021
Interest on long-term debt	\$ 165,699	\$ 223,385
Amortization of debenture discount	15,178	15,178
	\$ 180,877	\$ 238,563

ELGIN AREA PRIMARY WATER SUPPLY SYSTEM
Notes to Financial Statements (continued)
Year ended December 31, 2022

6. Tangible Capital Assets

Cost	Balance at December 31, 2021	Additions	Disposals	Balance at December 31, 2022
Land	\$ 1,251,559	\$ -	\$ -	\$ 1,251,559
Buildings and building improvements	31,384,548	509,593	-	31,894,141
Machinery and equipment	32,199,576	509,554	528,717	32,180,413
Vehicles	11,527	-	-	11,527
Water infrastructure	25,654,691	-	1,200	25,653,491
Computers	406,549	9,526	-	416,075
Assets under construction	496,975	794,891	150,632	1,141,234
Total	\$ 91,405,425	\$ 1,823,564	\$ 680,549	\$ 92,548,440

Accumulated Amortization	Balance at December 31, 2021	Amortization Expense	Amortization Disposals	Balance at December 31, 2022
Land	\$ -	\$ -	\$ -	\$ -
Buildings and building improvements	9,447,314	1,018,459	-	10,465,773
Machinery and equipment	11,919,662	1,888,971	528,717	13,279,916
Vehicles	7,414	1,646	-	9,060
Water infrastructure	5,532,519	524,206	1,200	6,055,525
Computers	147,342	137,181	-	284,523
Assets under construction	-	-	-	-
Total	\$ 27,054,251	\$ 3,570,463	\$ 529,917	\$ 30,094,797

	Net Book Value December 31, 2021	Net Book Value December 31, 2022
Land	\$ 1,251,559	\$ 1,251,559
Buildings and building improvements	21,937,234	21,428,368
Machinery and equipment	20,279,914	18,900,497
Vehicles	4,113	2,467
Water infrastructure	20,122,172	19,597,966
Computers	259,207	131,552
Assets under construction	496,975	1,141,234
Total	\$ 64,351,174	\$ 62,453,643

ELGIN AREA PRIMARY WATER SUPPLY SYSTEM
Notes to Financial Statements (continued)
Year ended December 31, 2022

6. Tangible Capital Assets (continued)

(a) Assets Under Construction

Assets under construction with a cost of **\$1,141,234** (2021 - \$496,975) have not been amortized. Amortization of these assets will commence when the asset is available for productive use.

(b) Tangible Capital Assets Disclosed at Nominal Values

Where an estimate of fair value could not be made, the tangible capital asset was recognized at a nominal value. Land is the only category where nominal values were assigned.

(c) Write-down of Tangible Capital Assets

There were **\$nil** write-downs in tangible capital assets during the year (2021 - \$nil).

7. Accumulated Surplus

Accumulated surplus consists of individual fund surplus and reserve funds as follows:

	2022	2021
Surplus		
Invested in tangible capital assets	\$ 57,212,499	\$ 56,761,115
Reserve funds set aside for specific purpose by the Entity		
Infrastructure renewal - water operations	15,762,406	13,515,150
	\$ 72,974,905	\$ 70,276,265

8. Financial Instruments

(a) The carrying values of Due from the Corporation of the City of London, Trade accounts receivable and Accounts payable and accrued liabilities approximate their fair values due to the relatively short periods to maturity of the instruments.

The fair value of Long-term debt approximates its carrying value as interest rates are similar to current market rates of interest available to the Entity.

(b) Financial Risks

The Entity is not exposed to any significant interest, foreign currency or credit risks arising from its financial instruments.

ELGIN AREA PRIMARY WATER SUPPLY SYSTEM
Notes to Financial Statements (continued)
Year ended December 31, 2022

9. Budget Data

Budget data presented in these financial statements are based upon the 2022 operating budget approved by the joint board of management. Adjustments to budgeted values were required to provide comparative budget values based on the full accrual basis of accounting. The chart below reconciles the approved budget with the budget figures as presented in these financial statements.

	Budget
Revenues	
User charges	\$ 14,734,000
Municipal revenue - other	31,000
Total revenues	14,765,000
Expenses	
Personnel costs	961,321
Administrative expenses	35,850
Financial expenses - other	415,000
Financial expenses - interest and discount on long-term debt	180,877
Financial expenses - debt principal repayments	2,323,163
Financial expenses - transfers to reserves and reserve funds	3,770,629
Purchased services	1,112,200
Material and supplies	5,736,325
Furniture and equipment	46,835
Other expenses	182,800
Total expenses	14,765,000
Net surplus as per budget	-
PSAB reporting requirements	
Transfers to reserves and reserve funds	3,770,629
Debt principal repayments	2,323,163
Capital expenses not resulting in capital assets	(469,094)
Amortization	(3,570,463)
Reserve fund interest earned	75,000
Net PSAB budget surplus as per financial statements	\$ 2,129,235

Board of Management Report

**Subject: Ministry of the Environment, Conservation and Parks
Inspection Report**

Overview:

- The annual Ministry inspection identified one (1) non-compliance and one (1) best management practice.
- The final inspection rating was 97.01%.
- Corrective actions were completed as required and the file has been closed by the Ministry.

Recommendation

That the Board of Management for the Elgin Area Primary Water Supply System **RECEIVE** this report for information.

Background

The Ministry of the Environment, Conservation and Parks (MECP) conducts an inspection of the Elgin Area Primary Water Supply System (EAPWSS) annually. The objective of the inspection is to determine the compliance of the drinking water system with specified requirements under the *Safe Drinking Water Act* and associated regulations, as well as licences and permits issued by the MECP. An inspection report is issued by the MECP which outlines any non-compliances as well as recommended best management practices for the water system's consideration.

Violations identified within an inspection report, if any, have been evaluated by the MECP based on the potential and degree of risk to consumers. Any identified violations are monitored for compliance with the minimum standards for drinking water in Ontario as set forth under the *Safe Drinking Water Act* and associated regulations. Where risk is deemed to be high and/or compliance is an ongoing concern, violations are forwarded to the Ministry's Investigation and Enforcement Branch by the Ministry Inspector.

Discussion

Inspection Findings

The MECP conducted an announced "focused" physical inspection of the EAPWSS on December 2, 2022. The final inspection report was issued by the MECP on February 21, 2023. The inspection covered the period from October 1, 2021, through October 31, 2022.

The final inspection report issued by the MECP contained an inspection rating of 97.01% for the inspection period. There was one (1) non-compliance and one (1) recommended best management practice (BMP) identified by the Ministry Inspector.

The non-compliance was outside the scope of the focused inspection checklist, therefore was listed in the final report under the category of “Other Inspection Findings.” Corrective actions were required by the operating authority to immediately address the non-compliance. For the Board’s information and reference, the specific details of the non-compliance and required corrective action is found in [Appendix A](#) of this report.

The non-compliance relates to drinking water system operations. The operating authority has Operators-In-Training (OITs) working in the system. A person who holds an OIT certificate cannot be designated as an Operator-In-Charge (OIC). An OIT has the ability to work alone (e.g., on a night shift or weekend shift) provided they do not perform the duties of an OIC. An OIT may set operational parameters while working alone, provided they are not doing so independently, and are within the scope established by a standard operating procedure.

The Ministry Inspector determined that, on several occasions, an OIT was making operational decisions such as adjusting chemical dosages and making pump changes without consulting an OIC prior to these changes. The specific corrective action required in the inspection report was staff training on the regulation. The training has been completed by the operating authority as required.

As a result of the non-compliance, the operating authority has created a Standard Operating Procedure (SOP) for OITs which documents the EAPWSS operational parameters (i.e., ranges they are allowed to operate within) and outlines when an OIC needs to be informed and consulted. The SOP provides detailed operational ranges for water treatment parameters, and clear decision points and actions required by an OIT.

All corrective actions were completed by the deadlines established. The Ministry Inspector confirmed by email on March 30, 2023, that the file is now closed for the EAPWSS 2022/2023 inspection report.

The inspection report also included one (1) recommended best management practice (BMP) identified by the Ministry Inspector for the water system’s consideration. BMPs and related recommendations are provided by the MECP with the goal to improve the owner and operating authority’s ability to protect public health, and/or ensure continuous improvement in the overall operation and maintenance of the drinking water system. BMPs do not impact the final inspection rating, nor are they considered non-compliance findings. The details of the best management practice and recommendation are included in [Appendix B](#) of this report.

The BMP falls under the category of security and relates to physical protection of the drinking water system. The Inspector provided a recommendation to assess all treated water access hatches and ensure that they are fitted with a proper watertight seal to adequately prevent the ingress of contaminants, insects, etc. The BMP recommendation has been addressed by the operating authority.

Due to the length of the Ministry's final inspection report, this Board report contains a summary only for the general information of the Board. Copies of the complete inspection report as issued by the MECP are available from the Regional Water Supply office in London upon request.

It is noted for the Board's information and reference that these annual inspection reports were previously posted to the water systems' website for ease of public access. Unfortunately, the Inspection Report issued by the MECP does not comply with the *Accessibility for Ontarians with Disabilities Act*. As a result, previous inspection reports have been removed from the water systems' website. This and future annual inspection reports issued by the Ministry will only be made available upon request until such time as the Ministry makes the document compliant with the Act.

Risk Rating

The MECP applies a risk rating methodology to establish an annual inspection rating. Any non-compliance identified in the inspection report is evaluated based on the potential to compromise the delivery of safe drinking water to the public. For example, a "failure to document" may have a relatively low risk to the consumer, whereas a "failure to disinfect" would have a relatively high risk. The primary goal of this type of assessment is to encourage ongoing improvement and to establish a way to measure improvement, which is weighted by the severity of the risk. A low inspection rating does not necessarily mean that drinking water is unsafe, but rather it is an indication of the degree to which there is room for improvement with respect to a drinking water system's operation and related administrative activities.

This methodology of risk assessment and rating has been used consistently by the MECP since the 2008-2009 inspection period, and therefore can serve as a comparative measure both provincially and specifically to the EAPWSS since that time. The methodology utilized for annual inspections is reviewed by the MECP every three years. If changes occur in the application of the methodology and risk ratings, ratings from one three-year period may be slightly inconsistent with another.

The following table outlines inspection ratings for the EAPWSS over the last five years:

Inspection Year	Final Inspection Rating	# of Non-compliances	Type of Inspection	Operating Authority
2018-2019	100.00%	0	Focused	OCWA
2019-2020	97.11%	1	Detailed	OCWA
2020-2021	100.00%	0	Focused	OCWA
2021-2022	100.00%	0	Focused	OCWA
2022-2023	97.01%	1	Focused	OCWA

Correspondence and Communications

Prior to issuing the final inspection report, the Ministry Inspector issued a draft copy to the operating authority and owner representative, providing the opportunity to comment or request clarification on the findings.

Board staff opted not to comment on the specific details of the non-compliance, as it generally relates to the operating authority's operations. The operating authority did not formally submit comments regarding the non-compliance as they had previously met with the Ministry Inspector to discuss a similar finding for the Lake Huron Primary Water Supply System (LHPWSS) during the inspection for that water system.

The non-compliance and BMP recommendation were discussed at the March 7, 2023, Management Review meeting between top management and staff. The discussion included a root cause analysis of the non-compliance. Further internal action items were assigned to prevent reoccurrence. The subsequent action items were added to the water system's corrective action tracking system. Board staff monitor and track the status of corrective action items through its Environmental Management System (EMS) and Quality Management System (QMS).

Conclusion

The MECP inspection report has indicated that not all requirements of applicable legislation were met by the EAPWSS for this inspection period. Corrective actions have been completed as required to address the non-compliances. Board staff will continue to discuss any inspection findings with the MECP Regional Office to ensure that inspection findings are consistent, appropriate and relevant to the EAPWSS.

Prepared by: Erin McLeod, CET
Quality Assurance & Compliance Manager

Submitted by: Andrew J. Henry, P.Eng.
Director, Regional Water

Recommended by: Kelly Scherr, P.Eng., MBA, FEC
Chief Administrative Officer

Attachments: [Appendix A](#) - Summary of Non-compliance Items
[Appendix B](#) - Summary of Best Management Practice Items

Appendix A: Summary of Non-Compliance Items

Non-compliance #1

Question Group: Other Inspection Findings

Question: Do only certified operators make adjustments to the treatment equipment?

Legislative Requirement: SDWA | O. Reg. 170/03 | 1-2 | (2);

Observation/Corrective Action(s):

Persons other than certified operators made adjustments to the treatment system.

The Elgin Area Primary Water Supply System currently employ a number of operators that hold an operator-in-training certification. Under O. Reg 128/04 s. 25(5) a person who holds an operator-in-training's certification shall not be designated as an operator-in charge, therefore, the Owner/Operating Authority shall designate a person with a Water Treatment Level 1 Certification or higher as an operator-in-charge as per O. Reg 128/04 s 25(1) for the subsystem.

An OIC is defined as a person who is authorized to set operational parameters for the subsystem or for a process that controls the effectiveness or efficiency of the subsystem; and direct or instruct other operators in the subsystem to set such operational parameters.

A review of logbooks submitted indicated that Operators who hold an Operator-in-Training (OIT) certificate were performing duties of an Operator-in-Charge (OIC). OIT's were found to be making operational decisions such as adjusting chemical dosages and pump changes without consulting with an OIC prior to these changes.

CORRECTIVE ACTIONS:

From herein, the Owner/Operating Authority shall ensure that only OICs are authorized to conduct the following as prescribed by Ontario Regulation 128/04 – Section 26(1):

(a) set operational parameters for the subsystem or for a process that controls the effectiveness or efficiency of the subsystem; and

(b) direct or instruct other operators in the subsystem to set such operational parameters.

The Owner/Operating Authority shall also ensure the following conditions are met as prescribed by O. Reg. 128/04 – Section 26 (2):

(c) ensure that records are maintained of all adjustments made to the processes within his or her responsibility

(d) ensure that all equipment used in the processes within his or her responsibility is properly monitored, inspected, tested, and evaluated and that records of equipment operating status are prepared and available at the end of every operating shift.

The Owner/Operating Authority shall provide training for all staff on the requirements stipulated in Ontario Regulation 128/04 and shall submit documentation to ensure compliance with the aforementioned including an Operator sign-off sheet to the undersigned inspector; no later than March 31, 2023.

Status Update: The corrective action was completed. The operating authority was required to provide training for all staff on O.Reg. 128/04 (Certification of Drinking Water System Operators and Water Quality Analysts). The operating authority completed the training and provided a copy of the training records and training presentation to the Ministry Inspector on March 16, 2023.

Appendix B: Summary of Best Management Practice Items

Best Management Practice #1

Question Group: Security

Question: Has the owner provided security measures to protect components of the drinking water system?

Legislative Requirement: Not applicable

Observation/Corrective Action(s):

The owner had not provided security measures to protect components of the drinking water system.

The Elgin Area Water Treatment Plant remains locked at all times and is equipped with a security system which includes intrusion alarms, motion detectors and security cameras. The intrusion and motion alarms are connected to the SCADA System to alert the Owner/Operating Authority of an unauthorized entry. Operators are also located on site along with a security guard 24 hours a day, 7 days a week. Any visitors to the facility are required to sign in and out of the facility.

In addition to the aforementioned, all facilities are enclosed with security fencing with lockable gates and out stations are visited regularly by staff.

However, at the time of the inspection it was observed that there were a number of treated water access hatches that did not have an acceptable gasket or were in poor condition in areas which would prevent the entry of contaminants, invertebrates and arachnids.

Recommendations:

It is strongly recommended that the Owner/Operating Authority assess all treated water access hatches and ensure that they are fitted with a proper watertight seal in order to adequately prevent the ingress of contaminants such as invertebrate, small animals and arachnids as per the "Ten States Standards", which states that each manhole shall be fitted with a solid watertight cover which overlaps a framed opening and extends down around the frame at least two inches. The frame shall be at least four inches high. Each cover shall be hinged on one side and shall have a locking device.

Status Update: The recommendation was addressed.

Board of Management Report

Subject: EA4183 Elgin Water Treatment Plant UV Pre-Selection and Pre-Purchase – Single Source

Overview:

- Ultraviolet disinfection is an essential component of the Elgin Water Treatment Plant (WTP) and ensures the Elgin Area Primary Water Supply System provides a multi-barrier approach to treatment, for the protection of public health.
- Due to the long lead times required to order, fabricate, and deliver a new ultraviolet (UV) disinfection system, pre-selection and pre-purchase is recommended in advance of tendering the construction contract.
- Trojan Technologies is the industry leader in the ultraviolet disinfection equipment worldwide, including the municipal water and wastewater market. Trojan Technologies is a local company, founded and based out of London, Ontario.
- The Elgin Area Primary Water Supply System Procurement of Goods and Services and Disposal of Assets Policy addresses single source procurement.

Recommendation

That the Board of Management for the Elgin Area Primary Water Supply System take the following actions with regards to the to the UV replacement project (EA4183):

- a) the Board of Management for the Elgin Area Primary Water Supply system **ACCEPT** the quotation from Trojan Technologies for the purchase of a UV disinfection system as a single source procurement for a total value of \$670,313.60, including contingency and excluding HST in accordance with Sections 4.13.4 (d) and (e) of the Procurement of Goods and Services and Disposal of Assets Policy;
- b) the Board of Management for the Elgin Area Primary Water Supply system **AUTHORIZE** the Chair and Chief Administrative Officer to execute any contract or purchasing documents associated with the quotation; and,
- c) the Board of Management for the Lake Huron Primary Water Supply System **RECEIVE** this report for information

Previous and Related Reports

October 7, 2021	2022 Operating and Capital Budgets
June 2, 2022	EA4183 Elgin Water Treatment Plant UV Replacement – Consultant Award
October 6, 2022	2023 Operating and Capital Budgets

Background

The existing ultraviolet (UV) disinfection system at the Elgin Water Treatment Plant (WTP) is at the end of its service life and requires replacement. The existing system is considered “first-generation” technology which poses various operational challenges, for equipment service including obtaining replacement parts. The existing system is energy inefficient in comparison to current UV systems now available.

A study was completed in 2020 to evaluate alternatives for renewal or replacement of the existing system. The preferred solution was identified as the replacement of the existing UV system with a new system in a new building. In June 2022, AECOM Canada Ltd. was awarded the consulting engineering services for the detailed design of the Elgin WTP UV replacement. Part of AECOM’s scope of services included a review of the original preliminary design concept outlined in the 2020 study.

Discussion

AECOM has advanced the detailed design of the new Elgin Water Treatment Plant (WTP) ultraviolet (UV) system to a point where the UV equipment can be selected. Once the UV equipment vendor and technology has been formalized, the detailed design can be completed. The current design concept for the UV upgrades consists of two new UV units operating in parallel in the existing building basement, with new piping and modifications.

The UV units, one duty and one backup, would disinfect all treated water processed through the plant’s filters. This optimal design replaces the existing four units, one on each filter effluent pipe, where there is no backup. A failure of one of the existing units causes the individual filter to shut down, removing 25% of the plant’s capacity from production.

The new UV units will require four to six weeks for shop drawing preparation and up to 30 weeks for manufacture before delivery to site. The pre-selection and pre-purchase of equipment with long lead times has proven advantageous on several past projects since it ensures the equipment will be onsite at the beginning of the construction period, and not delay subsequent construction activities.

Three different vendors were approached to provide UV system quotations for this project. Given the space constraints of installing the new UV units within the existing basement area, only two of the vendor's UV systems could be accommodated. An evaluation was completed of each vendor's quotation, based on the following criteria:

- equipment operation and maintenance;
- operator familiarity;
- customer support, service and response time;
- environmental impact;
- equipment compatibility and integration; and
- equipment cost.

Although the Trojan UV system was higher in purchase price than the other UV vendor, the system proposed offered the best overall ranking based on the quantitative consideration of the above criteria, when considering overall lifecycle costs and equipment performance.

Selection of Trojan Technologies as a Single Source Supplier

The procurement policy includes a provision to allow a project to be single sourced to a specific supplier under a predefined set of criteria. Trojan Technologies (Trojan) has been recommended as a single source supplier for the reasons noted in sections 4.13.4 (d) and 4.13.4 (e) of the Elgin Area Primary Water Supply System (EAPWSS) Procurement of Goods and Services and Disposal of Assets Policy:

- 4.13.4 (d): There is a need for compatibility with goods and/or services previously acquired or the required goods and/or services will be additional to similar goods and/or services being supplied under an existing contract (i.e., contract extension or renewal);
- 4.13.4 (e): The required goods and/or services are to be supplied by a particular supplier(s) having special knowledge, skills, expertise or experience.

Trojan is a London-based world leader in UV technology for the water and wastewater industries. At the time that the EAPWSS first installed UV disinfection at the Elgin WTP, Trojan was the clear leader in North America. Trojan remains an industry leader in the supply of municipal UV systems for disinfection of municipal water and wastewater. The existing Trojan UVSwift system has been operated at the Elgin WTP since 2003, and Operations staff are familiar with its use and performance. As it relates to clause 4.13.4 (d), maintaining a common provider of UV treatment products ensures consistent, ongoing product support and service, and consistency of staff training requirements. Maintaining Trojan as the Elgin WTP's UV equipment supplier will help maintain this consistency and efficiency.

With respect to clause 4.13.4 (e)., the UV system proposed for the Elgin WTP, the Trojan UVSwift system, represents the state of the art of ultraviolet disinfection, providing effective disinfection while significantly decreasing electrical consumption as compared with previous technologies. Trojan’s familiarity with the Elgin WTP brings significant value to the EAPWSS and provides further support for the recommendation to approve a single source procurement.

Anticipated Operating and Service Impacts

The operating and service impacts will be outlined in a future tender award board report for the Elgin WTP UV system. While staff anticipate energy consumption to be reduced, the anticipated overall cost impacts can’t be quantified until the final design is completed.

Disposal of Assets

The removal and disposal of the existing Elgin WTP UV system will be addressed in the tender award for the construction contract for this project.

Project Financial Status

EXPENDITURE	FORECAST	INCURRED
Detailed Design	\$436,948	\$40,454
Construction Administration	\$0	\$0
Construction	\$682,111	\$0
Other Fees and Charges	\$0	\$0
Total	\$1,119,059	\$40,454
Approved Budget	\$8,950,000	
Budget Surplus / Deficit	\$7,790,487	

Conclusion

By pre-selecting and pre-purchasing the UV treatment system from Trojan Technologies, the EAPWSS will be provided with the best value in UV disinfection system technology and can effectively proceed with design, tendering and construction of the UV upgrades, as planned. Board staff recommend single source procurement for purchase of the preselected Trojan UVSwift system from Trojan Technologies for the Elgin WTP UV upgrade project, including the execution of a purchase order, as well as any associated amendments, to Trojan Technologies for the proposed UVSwift system.

Prepared by: Marcy McKillop, P.Eng.,
Environmental Services Engineer

Submitted by: Billy Haklander, P.Eng., LL.M
Capital Programs Manager, Regional Water Supply

Recommended by: Kelly Scherr, P.Eng., MBA, FEC
Chief Administrative Officer

Board of Management Report

Subject: St. Thomas Industrial Development Area

Overview:

- The City of St. Thomas owns approximately 600 hectares of land in northeast St. Thomas for an industrial development area. The industrial development area of the city will be supplied by a new pump station owned and operated by the City of St. Thomas.
- The City of St. Thomas has requested a new connection for the proposed pump station, providing an opportunity for the Elgin Area Water Supply System to enter into a formal Water Supply Agreement with the City of St. Thomas.
- The City of St. Thomas has requested consideration for allowing the construction of the proposed pump station on the Elgin terminal reservoir property owned by the Board. If approved, a Licence of Occupancy Agreement is necessary to formalize the arrangements and appropriate conditions.

Recommendation

That the Board of Management for the Elgin Area Water Supply System take the following actions with regard to the City of St. Thomas request for a new connection to the Elgin Area Water Supply System:

- a) That the Board of Management for the Elgin Area Water Supply System **APPROVE** the proposed new connection requested by the City of St. Thomas at the Elgin terminal reservoir site;
- b) That the Board of Management for the Elgin Area Water Supply System **APPROVE** the Water Supply Agreement with the City of St. Thomas substantially in the form attached to this report;
- c) That the Board of Management for the Elgin Area Water Supply System **APPROVE** the Licence of Occupancy Agreement with City of St. Thomas for the proposed occupancy of a portion of the water system's terminal reservoir property located at 490 South Edgeware Road in the City of St. Thomas;
- d) That the Board of Management for the Elgin Area Water Supply System **AUTHORIZE** the Board Chair and Chief Administrative Officer to execute the Water Supply Agreement and the Licence of Occupancy Agreement with the City of St. Thomas; and,
- e) That the Board of Management for the Elgin Area Water Supply System **RECEIVE** this report for information.

Previous and Related Reports

None

Background

Over 600 hectares (1,500 acres) of land has been assembled in northeast St. Thomas for an industrial development area. The development area is roughly located between Ron McNeil Line and South Edgeware Road, and between Highbury Avenue and Yarmouth Centre Road. In order to service this new development area, the City of St. Thomas has approached the Elgin Area Water Supply System and asked for consideration of a new connection to the regional water system. This connection will facilitate the construction of a pump station which will supply potable drinking water to a newly established distribution zone of the City's water distribution system.

The terminal reservoir property owned by the Elgin Area Water System is located in the southwest corner of the development area at 490 South Edgeware Road. This property is also occupied under licence by the City of London, the Aylmer Secondary Water System and St. Thomas Secondary Water System for a joint use building commonly referred to as the Elgin-Middlesex Pump Station.

On April 21, 2023, Volkswagen Group & PowerCo SE, along with the Government of Canada, the Government of Ontario and the City of St. Thomas, announced a North American EV battery cell gigafactory to be located within and occupying much of the industrial development lands.

Discussion

In order to adequately address the requests, this report is divided into two general issues: the supply of water to the City of St. Thomas water distribution system, and the request to construct a new pump station occupying a portion of the Elgin Area Water System's terminal reservoir property.

Water Supply

In addition to water supply from the St. Thomas Area Secondary Water System, the City of St. Thomas has a pre-existing connection to the Elgin Area Water Supply System along the Elgin transmission pipeline at a location south of Elm Line (Elgin County Road 56) and east of Centennial Road (Elgin County Road 28). The pre-existing connection is used to supply the City of St. Thomas' Albert Roberts Booster Station located on Tike Road.

The new connection to supply the northeast industrial development area would ideally be located at or immediately after the Elgin terminal reservoir. The exact location of the point of supply has not been determined but is assumed to be along the suction header

between the Elgin terminal reservoir and the Elgin-Middlesex Pump Station on the regional water system's property.

The requested new connection provides the opportunity for the Elgin Area Water System to enter into a Water Supply Agreement with the City of St. Thomas for both the existing Albert Roberts Booster Station location and the new connection for the industrial development area. The regional water system has a standard template agreement that has been used to clearly identify obligations and commitments between the Elgin Area Water System and its' benefiting municipalities and/or secondary water systems. This includes but is not limited to commitments related to water quality, performance in the supply of water to the municipality, and indemnifications of both parties.

The Elgin Area Water System has entered into a Water Supply Agreement with the St. Thomas Secondary Water System, the Township of Southwold and the Municipality of Dutton Dunwich, and previously with the West Elgin Water System.

The proposed Water Supply Agreement for the City of St. Thomas is attached to this report as [Appendix B](#) for the consideration and approval of the Board.

It is important to note that Article 4 of the template Water Supply Agreement relates to any construction that the Elgin Area Water Supply System would be required to undertake in order to facilitate any new connection, such as a new transmission pipeline. At this time, neither Board staff nor the City of St. Thomas have identified any necessary construction by the Elgin Area Water Supply System that is needed to facilitate the new connection and Article 4 in its entirety has been deleted.

Pump Station

The City of St. Thomas owns the entirety of the industrial development lands, including all lands adjacent to the Elgin terminal reservoir property. While the City of St. Thomas has conceptually considered the construction of a reservoir and pump station on an undetermined adjoining property, they have requested the Board's consideration for the construction of a pump station next to the Elgin-Middlesex Pump Station on the regional water system's property. Regardless of the final location, either on the terminal reservoir property or on an adjoining site, the proposed pump station would be connected to the piping between the Elgin terminal reservoir and the Elgin-Middlesex Pump Station as noted above.

A conceptual-level review was undertaken by staff and determined that the proposed occupancy would not interfere with current and future needs of the regional water system and would be similar to the current licensed occupancy for the Elgin-Middlesex Pump Station by the City of London, the Aylmer Secondary Water System and the St. Thomas Secondary Water System. The proposed location of the pump station would be near the entrance to the property in the southwest corner at the same location as a

currently unoccupied and unutilized building that is jointly owned by the St. Thomas Secondary Water System and the Aylmer Secondary Water System, as shown in [Appendix A](#) attached to this report.

The St. Thomas Secondary Water System and the Aylmer Secondary Water System would need to consent to the demolition and disposal of their unoccupied building on the Elgin system's property.

The location being considered allows for minimal impacts to other operations and activities on the site and removes an existing unoccupied building from the property. The proposed pump station would also be located near the proposed connection point between the terminal reservoir and the Elgin-Middlesex Pump Station and would not impact any future land use needs of the regional water system.

In order to allow the City of St. Thomas to construct, own and operate a pump station on the Board's property, a Licence of Occupancy Agreement is required and is attached as [Appendix C](#) to this report for the Board's consideration. The proposed agreement outlines the licensed area of the Board's property, as well as the ability of the Elgin Area Water System to recover costs incurred including, but not limited to, utilities and incremental property taxes.

Should the Board decline the request to co-locate their pump station on the regional water system's property, the City of St. Thomas would be required to locate the proposed pump station either on the south side of the currently unopened road allowance for South Edgeware Road, or on lands immediately east of the terminal reservoir.

Anticipated Operating and Service Impacts

A preliminary review has estimated peak water supply needs for the battery plant to be 150 liters per second, or about 15% of the Elgin water treatment plant's capacity, when the facility is in full production during summer months and with three working shifts. A significant portion of the estimated value is process cooling water for the battery plant, without recovery and reuse systems being used, and the actual daily consumption would be significantly less. A better average day and maximum day estimate is not available but based on the current development plan, it is not anticipated that the theoretical peak flow rates will be required within the next ten years.

While the current water treatment plant and related infrastructure can supply these estimated peak flows, the potential implications of the proposed development may be significant in the longer term and Board staff have asked for further clarification for Master Planning purposes. The existing transmission system is able to meet the needs of the proposed industrial area.

When considering the long-term, the water treatment plant may likely to require staged expansion of the water treatment plant and processes earlier than previously anticipated but is entirely dependent on the actual average and maximum day consumption of the development area. The regional water system will be undertaking its five-year update of the Master Water Plan in 2024 which would, in part, assess long-term growth needs of the water utility. Previous projections roughly estimated the need for a phased plant expansion starting between 2040 and 2045. Board staff are currently unable to better quantify the macro-level impacts of the development area at this time until more accurate daily and annual volume requirements can be provided by the City of St. Thomas. Notwithstanding, it does not appear that a plant expansion will be necessary within the next ten years based on the limited information currently provided.

The water system's sole source of revenue is the unit rate for water supplied to its benefiting municipalities, currently set at 96.49 cents per cubic meter. The revenue generated from the rate charged not only pays for current operating expenses, including existing debt, but also contributes to the water system's reserve funds which are used for capital programs. The regional water system currently has no ability to assess and collect Development Charges for use to offset future capital needs for growth-related infrastructure.

The additional revenues generated by the supply of water to the industrial development area in the City of St. Thomas will offset incremental increases to current operating costs, as well as additional contributions to the reserve funds. Notwithstanding, the timing and cost implications of the additional development will not be fully estimated until the update to the Master Water Plan has been completed in 2024.

The existing reservoir at the terminal reservoir site is solely used for operational performance optimization of the transmission system and not for distribution-related storage of any municipality. The existing terminal reservoir has a capacity of 55 million litres and is not anticipated to expand for regional water system needs for at least ten to fifteen years.

With specific regard to the proposed City of St. Thomas pump station and the supply of water to the industrial development area, the City of St. Thomas has also identified a need for additional water storage necessary to ensure water reserves needed for firefighting and emergency management purposes, as well as the operational needs of their new pressure zone for the industrial development area. While those needs would be the sole responsibility of St. Thomas, there may be an opportunity to expand the Elgin terminal reservoir to, in part, meet both the needs of the City of St. Thomas and future growth needs of the Elgin system.

As the regional water system does not provide distribution-level service or guarantees, for the purpose of maximizing the mutual beneficial use of assets, the Board could, at a future date, amend the Water Supply Agreement with the City of St. Thomas to expand

the reservoir capacity and commit a minimum volume of the reservoir to meet the firefighting and emergency needs (only) of the industrial development area distribution system. Required volumes for reservoir sizing are typically set out using the Ministry of the Environment, Conservation and Parks design guidelines.

At this time, the City of St. Thomas has not completed design details for their distribution system nor estimated the corresponding reservoir volumes needed. Accordingly, any discussions related to possible reservoir expansion is conceptual in nature only and is not included in the proposed Water Supply Agreement.

Conclusion

The proposed Water Supply Agreement and the Licence of Occupancy Agreement with the City of St. Thomas is intended to clearly identify responsibilities and obligations of both the City of St. Thomas and the Elgin Area Water Supply System in the provision of treated drinking water to the City's water distribution system. The Licence of Occupancy Agreement further maximizes the beneficial use of the terminal reservoir property without compromising the future needs of the regional water utility.

Submitted by: Andrew J. Henry, P.Eng.,
Director, Regional Water

Recommended by: Kelly Scherr, P.Eng., MBA, FEC
Chief Administrative Officer

Attachments: Appendix A – Estimated Location of the South Edgeware Pump
Station

Appendix B – Draft Water Supply Agreement, City of St. Thomas

Appendix C – Draft Licence of Occupancy Agreement, South
Edgeware Road Pumping Station



Elgin Area

Primary Water Supply System

Report No.: EA-2023-03-16

Report Page: 8 of 42

Meeting Date: June 1, 2023

File No.:

**Appendix B – Draft Water Supply Agreement,
City of St. Thomas**

City of St. Thomas Water Supply Agreement

THIS AGREEMENT made in duplicate the ___ day of _____, 2023

BETWEEN:

THE CORPORATION OF THE
CITY OF ST. THOMAS
(herein after referred to as "St. Thomas")

AND

THE JOINT BOARD OF MANAGEMENT
OF THE ELGIN AREA PRIMARY WATER SUPPLY SYSTEM
(hereinafter referred to as "Elgin Board")

WHEREAS St. Thomas has an existing connection to the Elgin Area Primary Water Supply System on Tyke Road in the Municipality of Central Elgin near the City of St. Thomas, for the supply of potable drinking water to a significant portion of St. Thomas's municipal water distribution system (herein after referred to as the "Albert Roberts Pump Station Connection Point");

AND WHEREAS St. Thomas owns, operates, maintains and governs a water distribution system and associated appurtenances for the distribution and provision of potable drinking water to the City of St. Thomas;

AND WHEREAS the Parties agree and acknowledge that St. Thomas has an existing connection to the St. Thomas Secondary Water System, which is subsequently connected to the Elgin Area Primary Water Supply System at the Elgin Terminal Reservoir in the City of St. Thomas, which connections are not the subject of this agreement.

AND WHEREAS the Corporation of the City of London provides certain administrative services to and under the direction of the Elgin Board, and has been designated the Administering Municipality in accordance with the Transfer Order issued by the Province of Ontario on September 15, 2000, pursuant to the Municipal Water and Sewage Systems Transfer Act, 1997;

AND WHEREAS St. Thomas has requested and the Elgin Board has consented to a connection of the St. Thomas water distribution system to the Elgin Area Primary Water Supply system at the Elgin Terminal Reservoir property (herein after referred to as the "South Edgeware Pump Station Connection Point") to supply treated drinking water to the City of St. Thomas (more particularly, the northeast industrial development) and to purchase and supply water from the Elgin Area Water Supply System, subject to the terms of this Agreement;

NOW THEREFORE IN CONSIDERATION OF the mutual covenants contained in this Agreement and other good and valuable consideration, the receipt and sufficiency of which is hereby irrevocably acknowledged, the parties agree as follows:

Article 1 INTERPRETATION

1.1 Definitions:

- "Business Day"** means a day other than any holiday as defined in the *Interpretation Act* (Ontario) and Boxing Day.
- "Connection Point(s)"** means the points of physical connection of the waterworks belonging to the City of St. Thomas and the waterworks belonging to the Elgin Area Primary Water Supply System within or near the City of St. Thomas, and include the Albert Roberts Pump Station Connection Point and the South Edgeware Pump Station Connection Point.
- "Elgin Board"** means the Joint Board of Management of the Elgin Area Primary Water Supply System and/or its Administering Municipality, The Corporation of the City of London.
- "Elgin Facility"** means the water treatment plant belonging to the Elgin Area Primary Water Supply System located at 43665 Dexter Line in the Municipality of Central Elgin, which pre-exist the date of this Agreement.
- "Elgin Terminal Reservoir"** means the water storage reservoir, and valve house, settling ponds, and associated appurtenances located at 490 Edgeware Road in the City of St. Thomas, which pre-exist the date of this Agreement.
- "Elgin Transmission System"** means the water pipelines, booster pumping stations, reservoirs, and associated equipment and works belonging to the Elgin Area Primary Water Supply System from the Elgin Facilities up to and including the Elgin Terminal Reservoir in the City of St. Thomas, which pre-exist as of the date of this Agreement.
- "Meter(s)"** means the meter installed in a chamber or building adjacent to the pipeline at the Connection Point for the purpose of measuring the total flow of water pumped through the interconnection from the Elgin Area Primary Water Supply System to the City of St. Thomas water distribution system; it being noted that the meter may be installed on a pipeline which is owned and operated by the City of St. Thomas.
- "Rate for Water"** means the rate of 96.49 cents (\$0.9649) per cubic metre, or such other rate as determined from time to time by the Elgin Board expressed in cents per cubic metre, which is charged to the benefiting municipalities of the Elgin Area Primary Water Supply System.
- "St. Thomas Distribution System"** means the water pipelines, booster pumping stations, reservoirs, elevated water towers, and associated equipment and works belonging to the City of St. Thomas.
- "St. Thomas"** means the Corporation of the City of St. Thomas
- "Treated Water"** means the potable drinking water that is treated at the Elgin Facility.

"Uncontrollable Circumstance" means any event or condition which materially alters the rights and obligations of the Parties under this Agreement, or the management, operation or maintenance of the Elgin Facility, the Elgin Transmission System, or the St. Thomas Distribution System, which is beyond the reasonable control of or could not reasonably be anticipated by the Party relying thereon as justification for a delay in or non-performance of any obligation of such Party pursuant to this Agreement and shall include but not be limited to:

- (i) an act of God, landslide, lightning, earthquake, hurricane, flood, tornado or other natural disaster, fire, explosion, acts of public enemy, terrorism, war, blockade, sabotage, insurrection, riot or public disturbance;
- (ii) an order of any court, administrative or governmental agency of competent jurisdiction which has not been made as a result directly or indirectly of the actions or inaction of the Elgin Board or St. Thomas. This specific provision shall be construed strictly against the Party seeking to so rely to excuse non-performance or delay;
- (iii) a Change of Laws. This specific provision be construed strictly against the Party seeking to so rely to excuse non-performance or delay;
- (iv) loss or inability to obtain service from a utility;
- (v) provided, however, that a failure by a Party to perform its obligations under this Agreement arising from or related to such Party's insufficient cash flow or its economic or financial condition generally, shall not constitute an Uncontrollable Circumstance.

"Volume Charge" means the volume charge as defined in Subsection 3.1.

Article 2 DUTIES AND SERVICES IN PROVIDING WATER AND DURING CONSTRUCTION

2.1 **Duties of the Elgin Board.** The Elgin Board agrees:

2.1.1 *Access* - Elgin shall permit St. Thomas, its Operating Authority, or its designate, access to the Elgin Terminal Reservoir property located at 490 South Edgeware Road for the purposes of reading, testing, maintaining, inspecting, repairing, calibrating, or altering such equipment as necessary for the operation of the South Edgeware Pump Station.

2.1.2 *Water Supply* – Elgin shall supply water to the St. Thomas Distribution System at the Connection Points on the terms and conditions hereinafter set forth in this Agreement;

2.1.3 *Water Quality* – Elgin shall supply water of a quality equivalent to or better than that required by the *Safe Drinking Water Act, 2002*, as amended, and Regulations made there under or such other standards as may be legislated;

2.1.2.1 Provided Elgin Complies with its obligation under clause 2.1.2, then Elgin neither accepts or assumes any responsibility of liability for the degradation of water quality as a

result of the transportation and distribution of supplied water within the St. Thomas Distribution System;

- 2.1.4 *Delivery Point* – Elgin shall deliver the water supplied hereunder at the Connection Points as shall be determined from time to time by the Elgin Board in consultation with St. Thomas. For the purposes of this Agreement, the Connection Points are identified in Schedule A of this Agreement;
- 2.1.5 *Water Quantity* – Elgin shall deliver such quantity of water as St. Thomas may require, save and except in an emergency as determined by the Elgin Board.
- 2.1.6 *Volume Metering* – Elgin shall install, maintain, repair, inspect, test, and alter such equipment as may be necessary for the purpose of recording the volume or rate of flow of water supplied and delivered to the St. Thomas Distribution System at the Connection Point.
- 2.1.7 *Flow Control* – Elgin shall install, maintain, repair, inspect, alter and test such equipment, including necessary alarms, as may be required for the purpose of controlling the flow of water through the Meter(s), including the remote control of such equipment from the Elgin Facility if and as required.
- 2.1.8 *Monthly Reporting* – Elgin shall record the readings from the Meter(s) monthly for the purpose of calculating the monthly volume of water supplied and delivered to St. Thomas at the Connection Points.
- 2.1.9 *Meter Calibration* - to carry out the calibration of the Meters annually, and as required by applicable legislation, Certificate of Approval, licence and/or permit.
- 2.1.10 *Meter Maintenance* – Elgin shall maintain the Meters at a frequency of not less than that recommended in the literature published by the manufacturer of the Meter.
- 2.1.11 *Calibration Reporting* – Elgin shall provide the results of all calibration testing of the Meters to St. Thomas upon request.
- 2.2 **Duties of St. Thomas.** St. Thomas agrees:
- 2.2.1 *Access* – St. Thomas shall permit the Elgin Board, its Operating Authority, or its designate, access to the Meters, the Connection Points, and associated valves and equipment at the Meter chambers and Connection Points for the purposes of reading, testing, maintaining, inspecting, repairing, calibrating, or altering such equipment as necessary, if such locations are within facilities owned and/or operated by St. Thomas.
- 2.2.2 *Payment* – St. Thomas shall pay all charges in accordance with Section 3.1, and Section 4.1.2 of this agreement.
- 2.3 **No Obligation To Act Where Detrimental.**
- 2.3.1 *Substandard system* - No provision of this Agreement creates any obligation, express or implied on the Elgin Board to supply water hereunder through a system that, in the opinion of the Elgin Board or its designates, has not been constructed or is not being operated in accordance with good engineering or operational principles or practices.

- 2.3.2 *Elgin systems* - Without restricting the generality of the forgoing, nothing herein contained creates an obligation, express or implied, to enlarge or extend, or modify the Elgin Facility or the Elgin Transmission System, if in the opinion of the Elgin Board or its designate, the effect of such enlargement, extension, alteration or modification could be detrimental to the Elgin Transmission System, the Elgin Facility, or its source of supply.
- 2.4 **Temporary Shut Down.** Elgin shall have the right, after reasonable notice has been given to St. Thomas, to discontinue the delivery of water provided that such discontinuance shall be of a minimum duration, if Elgin or its designate, in its discretion determines that:
- (i) An emergency exists, namely, that a substantial interruption or reduction, whether actual or potential, in the supply and delivery of water to the St. Thomas Distribution System could leave users without drinking water; or,
 - (ii) Such discontinuance is necessary for the operation, enlargement, modification, alteration, repair or replacement of equipment.
- 2.5 **Curtailment of Water Usage.** In the event of an emergency in the area supplied by Elgin, St. Thomas agrees that any unnecessary usage of water in the area supplied by the St. Thomas Distribution System shall be curtailed.

Article 3

VOLUME CHARGES, RATE, INVOICING AND REPORTS

3.1 Volume Charges

- 3.1.1 *Obligation for charge* - St. Thomas shall pay to Elgin, or its designate, all charges for water supplied and delivered hereunder which shall be in accordance with the Volume Charges as set out in Subsection 3.1.2.
- 3.1.2 *Volume Charge* - Subject to the other provisions of this section, the volume charge for water supplied and delivered to the St. Thomas Distribution System at the Connection Points for a month shall be equal to the product achieved by multiplying the Rate for Water and the total volume of water passing through the Connection Points in such month as determined by Elgin or its designate.
- 3.1.3 *Monthly Invoice* - Such Volume Charge shall be paid by St. Thomas to Elgin, or its designate, in accordance with its monthly statement of account delivered to the St. Thomas Distribution System at the Connection Points.
- 3.1.4 *Estimated Volume.* In the event that Elgin, or its designate, determines that the supply and delivery of water to the St. Thomas Distribution System at the Connection Point has not been recorded or has not been recorded accurately for any period of time, Elgin or its designate shall estimate the volume of water supplied and delivered to St. Thomas at the Connection Point during such period of time and such determination and estimation made on a reasonable basis shall, if disputed, be subject to the Elgin Board's Dispute Resolution process.

3.2 Invoicing.

3.2.1 *Payment* - St. Thomas shall pay all amounts payable hereunder within twenty (20) Business Days after the delivery of the statement of account.

3.2.2 *Incorrect Invoice* - If any error or omission is made in any notification or statement of account delivered to St. Thomas under this agreement, Elgin or its designate shall correct such error or omission in the notification or statement of account within five (5) Business Days following the date on which such error or omission comes to the attention of Elgin or its designate and the parties hereto shall be bound and shall comply with such correction.

3.3 Reports.

3.3.1 St. Thomas shall supply to Elgin or its designate upon request at any time or times such other written reports required by legislation or information as Elgin or its designate may reasonably require for the benefit of itself for the proper administration of the delivery of services pursuant to this Agreement.

Article 4 CONSTRUCTION BY ELGIN

~~4.1 Construction of Transmission System and Meter.~~

~~4.1.1 *Construction Responsibility.* Elgin shall provide all project management services including, arrange and pay for the design, construction, and installation of any necessary modifications, alterations, and/or extensions of the Elgin Transmission System and/or the Elgin Facility up to the Connection Point as generally described in Schedule "C" of this Agreement. Elgin Board not be responsible for the construction of any pipeline or waterworks, or modification to the St. Thomas Distribution System or other waterworks, beyond the Connection Point.~~

~~For the purpose of this agreement, the parties agree that the Transmission System, the Connection Points and the Connection Point shall be as illustrated in Schedule A of this agreement.~~

~~4.1.2 *Charge for Capital Construction.* will pay to Elgin or its designate all charges, or proportionate share thereof, relating to the construction of the Transmission System and any waterworks necessary to transmit water from the Elgin Facility to the St. Thomas Distribution System, including administration costs, and other charges incurred by Elgin. The parties agree that the initial estimated costs for Capital Construction, attached as Schedule "B" of this agreement, shall be recalculated and confirmed at the conclusion of the construction of the Transmission System.~~

Article 5 REPRESENTATIONS, WARRANTIES AND COVENANTS

5.1 Representations, Warranties and Covenants of St. Thomas

- 5.1.1 *Authority to Contract* - St. Thomas warrants that it has the power and authority to enter into and carry out all of its obligations under this Agreement.
- 5.1.2 *Construction and Maintenance* - St. Thomas covenants and agrees to construct, repair, maintain, and keep in a good state of repair and in accordance with good engineering practice and applicable laws, certificates of approval, licence and/or permits, all equipment and water works that belong to or are under the control of St. Thomas and that are supplied with water hereunder at the Connection Points and beyond the Connection Points to the point of delivery to its customers.
- 5.1.3 *Skilled Personnel* – St. Thomas represent and warrant to Elgin that they have, and any employee or other person that they may retain to help perform the services hereunder will have all necessary skills, training and qualifications to provide services in accordance with the provisions of this Agreement and applicable law.
- 5.1.4 *Water Quality* - St. Thomas shall use reasonable care and its best efforts not to permit contamination of any kind to enter the St. Thomas Distribution System. In the event that any contamination enters the St. Thomas distribution system, St. Thomas shall forthwith notify Elgin or its designate and take such steps as may be reasonably be taken to correct such contamination.
- 5.1.5 *Provision of Information* - St. Thomas shall use reasonable care to prepare and supply to Elgin or its designate, for the benefit of itself of any report or information required hereunder.
- 5.1.6 *Extension of Service*. St. Thomas shall not extend or permit the extension water supplied by the Elgin Transmission System beyond the municipal boundaries of St. Thomas without the express authorization of the Elgin Board, by written notice of resolution or bylaw of the Elgin Board.
- 5.1.6.1 Without restricting the generality of clause 5.1.6, Elgin acknowledges and accepts the pre-existing supply of water to properties within the existing suburban developments in the Municipality of Central Elgin and Southwold immediately adjacent to St. Thomas.

5.2 Representations, Warranties and Covenants of the Elgin Board

- 5.2.1 *Authority to Contract* - Elgin warrants that it has the power and authority to enter into and carry out all of its obligations under this Agreement.
- 5.2.2 *Water Supply* - Elgin covenants and agrees to use their best efforts to supply and deliver water sufficient for the requirements of St. Thomas pursuant to this Agreement.
- 5.2.3 *Skilled Personnel*. Elgin represent and warrant to St. Thomas that they have, and any employee or other person that they may retain to help perform the services hereunder will have all necessary skills, training and qualifications to provide services in accordance with the provisions of this Agreement and applicable law.

-
- 5.2.4 *Water Quality* - Elgin covenants and agrees to use their best endeavours to supply water and deliver water to St. Thomas of sufficient quality which meets the requirements of applicable law.
 - 5.2.5 *Construction and Maintenance* - Elgin covenants and agrees to construct, repair, maintain, and keep in a good state of repair and in accordance with good engineering practice and applicable laws, certificates of approval, licence and/or permits, all equipment and water works that belong to or are under the control of Elgin.
 - 5.2.6 *Provision of Information* - Elgin shall use reasonable care to prepare and supply to St. Thomas, for the benefit of itself of any report or information required hereunder.

Article 6

LIABILITY, INDEMNITY AND INSURANCE DURING CONSTRUCTION AND THE PROVISION OF SERVICES

6.1 Indemnification of Elgin Board by St. Thomas.

- 6.1.1 St. Thomas shall indemnify and hold the Elgin Board, their respective employees, officers, directors, agents and representatives harmless from and against all liability for all damages of any nature whatsoever, including any bodily injury or personal damage claim and any damage to or loss of use or loss of any personal or real property, which is caused by or directly attributable to the negligent or wrongful act of St. Thomas, its employees, officers, directors, agents and representatives for which it may be responsible in the performance or purported performance of its obligations hereunder, but only to the extent and in proportion to the negligence or fault of St. Thomas.

6.2 Indemnification of St. Thomas by Elgin Board.

- 6.2.1 The Elgin Board shall indemnify and hold St. Thomas, their respective employees, officers, directors, agents and representatives harmless from and against all liability for all damages of any nature whatsoever, including any bodily injury or personal damage claim and any damage to or loss of use or loss of any personal or real property which is caused by or directly attributable to the negligent or wrongful act of Elgin, its employees, officers, directors, agents and representatives for which it may be responsible in the performance or purported performance of its obligations hereunder, but only to the extent and in proportion to the negligence or fault of Elgin.

6.3 Waiver of Consequential Damages.

- 6.3.1 In no event shall the parties be liable to each other, and each party specifically waives as against the other, any and all claims for consequential, incidental, indirect, special or punitive damages resulting in any way from performance or non-performance of this Agreement, whether such damages are characterized as arising under breach of contract or warranty, tort, fault, strict liability, indemnity, or other theory of legal liability.

6.4 Uncontrollable Circumstances.

- 6.4.1 In the event that performance of this Agreement in the reasonable opinion of either Party is made impossible by reason of an Uncontrollable Circumstance, and if a Party seeks to rely on the occurrence of an act, event or condition as an Uncontrollable Circumstance as grounds for not performing its obligations under this Agreement, then the Party relying on such act, event or condition shall;
- 6.4.1.1 Provide prompt notice to the other Party of the occurrence of the act, event or condition as soon as reasonably practicable after the Party first knew of such occurrence and give an estimation of its expected duration and the probable impact on the performance of its obligations hereunder,
- 6.4.1.2 Exercise all reasonable efforts to continue to perform its obligations hereunder,
- 6.4.1.3 In accordance with this Agreement, as expeditiously as reasonably practicable take action to correct or cure the act, event or condition preventing its performance,
- 6.4.1.4 Exercise all reasonable efforts to mitigate or limit damages to the other Party, and
- 6.4.1.5 Provide prompt notice to the other Party of the cessation of the act, event or condition giving rise to its inability to perform,
- 6.4.2 Except as expressly provided under the terms of this Agreement, neither Party to this Agreement shall be liable to the other for any loss, damage, delay, default, or failure to perform any obligation to the extent it results from an Uncontrollable Circumstance. The occurrence of an Uncontrollable Circumstance shall not excuse or delay the performance of a Party's obligation to pay monies previously accrued and owing under this Agreement, or to perform any obligation hereunder not affected by the occurrence of the Uncontrollable Circumstance.

Article 7 GENERAL PROVISIONS

- 7.1 **Dispute Resolution.** If a dispute arises between the parties, the parties agree that the Dispute Resolution Process of the Joint Board of Management for the Elgin Area Primary Water Supply System shall be used, a copy of which has been provided to St. Thomas.
- 7.2 **Applicable Law.** This Agreement and its interpretation shall be governed by the laws of the Province of Ontario.
- 7.3 **Headings.** The headings and captions appearing in this Agreement have been inserted for convenience of reference only and in no way define, limit or enlarge the scope or meaning of this Agreement or any provision hereof.
- 7.4 **Amendments.** No amendment to this Agreement shall be effective unless in writing and signed by all Parties to this Agreement.

- 7.5 **Entire Agreement.** This Agreement constitutes the entire agreement between the parties hereto and supersedes all previous or contemporaneous communications, representations or agreements. No oral agreement or conversation with any officer, agent or employee of the Elgin or St. Thomas, either before or after the execution of this Agreement, shall affect or modify any of its terms or obligations herein contained.
- 7.6 **Enurement and Assignment.** This Agreement shall enure to the benefit of the Parties and be binding upon their respective successors and assigns.
- 7.7 **Survival.** Wherever this Agreement contains an express obligation by one or more Parties to indemnify any other Party, such obligation to indemnify shall survive the completion or termination of this Agreement and continue in full force and effect.
- 7.8 **Severability.** Any provision of this Agreement which is prohibited or unenforceable in any jurisdiction shall, as to that jurisdiction, be ineffective to the extent of such prohibition or unenforceability and shall be severed from the balance of this Agreement, all without affecting the remaining provisions of this Agreement or affecting the validity or enforceability of such provision in any other jurisdiction.
- 7.9 **Waiver.** The failure on the part of either party to enforce its rights as to any provision of this Agreement shall not be construed as a waiver of its rights to enforce such provision in the future.
- 7.10 **Notices.**
 - 7.10.1 **Delivery Mode and Address.** Any notice required to be or may be given or made by one of the parties hereto to the other, it shall be in writing and shall be delivered in person, transmitted by facsimile or similar means of recorded electronic communication, or sent by ordinary or registered mail to the respective addresses of the parties hereto:

If to the Elgin Board:

The Elgin Area Primary Water Supply System
235 North Centre Road, Suite 200
London, Ontario N5X 4E7
Attention: Chief Administrative Officer
Phone: (519) 661-2500 ext.2714
Fax: (519) 474-0451
eMail: General@HuronElginWater.ca
with copy to: ahenry@HuronElginWater.ca

If to St. Thomas:

The Corporation of the City of St. Thomas
545 Talbot St.
St. Thomas, Ontario

Attention: ____
Phone: (519) ____
Fax: (519) ____
eMail:

7.10.2 *Time of Delivery.* Any such notice shall be deemed to have been given and received on the day on which it was delivered or transmitted (or, if such day is not a Business Day, on the next following Business Day), or if mailed, on the third Business Day following the date of mailing; provided, however, that if at the time of mailing or within three Business Days thereafter there is or occurs a labour dispute or other events which might reasonably be expected to disrupt the delivery of document by mail, any notice hereunder shall be delivered or transmitted by means of recorded electronic communications as aforesaid.

7.11 **Effective Date.** This Agreement shall be effective as of ____.

IN WITNESS WHEREOF the Elgin Board and St. Thomas have cause this Agreement to be executed by the affixing of their proper seals attested by the signature of the proper persons duly authorized in that behalf.

**THE JOINT BOARD OF MANAGEMENT OF THE
ELGIN AREA PRIMARY WATER SUPPLY SYSTEM**

Chair

Kelly Scherr
Chief Administrative Officer

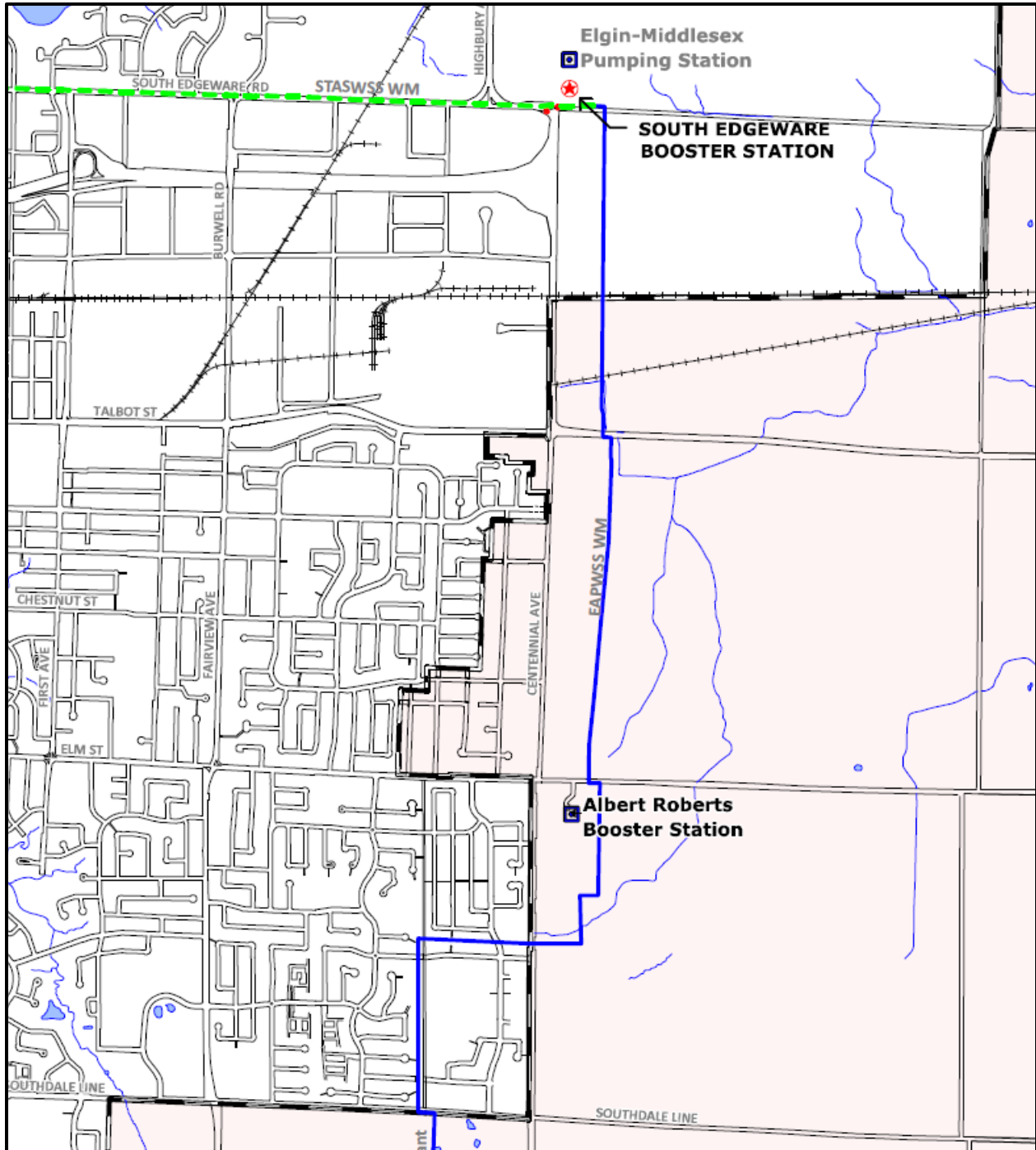
THE CORPORATION OF THE CITY OF ST. THOMAS

Joe Preston
Mayor

Maria Konefal
Clerk

SCHEDULE A

Elgin Transmission System and St. Thomas Connection Points



SCHEDULE B

Initial Estimated Capital Cost for Construction by Elgin

~~SCHEDULE C~~

~~Description of Construction by Elgin~~



Elgin Area

Primary Water Supply System

Report No.: EA-2023-03-16

Report Page: 23 of 42

Meeting Date: June 1, 2023

File No.:

Appendix C – Draft Licence of Occupancy Agreement, South Edgeware Road Pumping Station

“South Edgeware Booster Station (SEBS)”

LICENCE OF OCCUPATION

**ELGIN AREA PRIMARY WATER SUPPLY
SYSTEM**

AND

CITY OF ST. THOMAS

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THIS LICENCE is dated _____, 2023 and is made

BETWEEN:

ELGIN AREA PRIMARY WATER SUPPLY SYSTEM BOARD OF MANAGEMENT, a Elgin Board of management established by the Transfer Order for the Elgin Area Primary Water Supply System dated November 29, 2000 made pursuant to the *Municipal Water and Sewage Transfer Act, 1997*

(hereinafter called the "**Elgin Board**")

OF THE FIRST PART

AND

CITY OF ST. THOMAS

(hereinafter called "**St. Thomas**")

OF THE SECOND PART

WHEREAS:

- A. The Elgin Board owns the property municipally known as 490 South Edgeware Road in the City of St. Thomas (the "Lands") at which the Elgin Board owns and operates a terminal reservoir and associated appurtenances;
- B. The Elgin Board owns a building on the Lands that is jointly occupied under licence by the City of London, the Aylmer Area Secondary Water Supply system and the St. Thomas Area Secondary Water Supply System (the "Elgin-Middlesex Pump Station");
- C. St. Thomas owns and operates a municipal water distribution system for the benefit of the City of St. Thomas; and,
- D. St. Thomas has requested it be permitted to install and operate a water pumping station (the "South Edgeware Booster Station") on the Lands and adjacent to the Elgin-Middlesex Pump Station and the Elgin Board has agreed to permit St. Thomas to do so subject to the terms and conditions contained in this Licence.

NOW THEREFORE THIS LICENCE WITNESSES that in consideration of the mutual covenants and agreements herein contained, and the sum of Ten Dollars (\$10) now paid by each of the parties to the other (the receipt and sufficiency of which is hereby acknowledged), the parties agree as follows:

ARTICLE 1
DEFINITIONS AND SCHEDULES

1.1 **Definitions**: In this Licence:

“Business Day” means a day other than any holiday as defined in the *Interpretation Act* (Ontario) and Boxing Day.

“Elgin” means the Elgin Area Primary Water Supply System including all related treatment facilities, appurtenances, pipelines, and storage facilities transferred by the Transfer Order for the Elgin Area Primary Water Supply System dated November 29, 2000 made pursuant to the Municipal Water and Sewage Transfer Act, 1997, including the Elgin Board and its designates.

“Elgin Board” means the Joint Board of management established by the Transfer Order for the Elgin Area Primary Water Supply System dated November 29, 2000 made pursuant to the *Municipal Water and Sewage Transfer Act, 1997*.

“Elgin Terminal Reservoir” means the drinking water storage and associated appurtenances, including the suction header between the water storage and the Elgin Middlesex Pump Station, located on the Lands at 490 South Edgeware Road.

“Elgin Middlesex Pump Station” means the building on the Lands which contain the pumps and associated equipment of the City of London, Aylmer Area Secondary Water Supply System, and St. Thomas Secondary Water Supply System, whose occupancy on the Lands is the subject of a separate agreement. For clarity, this includes the original pump station building constructed in about 1967 and the building addition constructed in 1996 and the associated building services.

“Lands” mean the lands municipally known as 490 South Edgeware Road in the City of St. Thomas, at which the Elgin Board owns and operates a drinking water storage reservoir and associated appurtenances.

“Laws” means all laws (including the related principles of common law and equity), statutes, regulations and by-laws, orders, rules, requirements, guidelines, policies and directions of all governmental authorities having jurisdiction, over the Lands, the Pump Station, St. Thomas, or the Elgin Board, now or hereafter in force including without limitation, the *Safe Drinking Water Act, 2002* S.O. 2002, c. 32.

“Licence” means this agreement and all schedules attached hereto.

“Licensed Area” means the area located near the southeast corner of the Lands, as more particularly shown on Schedule A to this Licence.

“Property Taxes” means the aggregate of all taxes, rates, duties, levies, fees, charges (including local improvement charges) and assessments whatsoever, imposed, assessed, levied, rated or charged against or in respect of the Lands or any improvements thereon, from time to time by any lawful taxing or assessing authority, whether school, municipal, regional, provincial, federal, or otherwise, and any taxes or other amounts which are imposed in lieu of, or in addition to, any of the foregoing whether or not in existence on the commencement of

the Term and whether of the foregoing character or not, but excluding taxes on the income or profits of the Elgin Board except to the extent that they are levied in lieu of the foregoing.

“**Pump Station**” means a drinking water pumping station to be installed, owned and operated by St. Thomas within the Licenced Area, and having a footprint of not more than ■ metres by ■ metres, and a height of not more than ■ metres, and associated water distribution pipeline connecting it to the 1050 mm suction header between the Elgin Terminal Reservoir and the Elgin Middlesex Pumping Station, all of which shall be non-corrosive and non-leaching and otherwise environmentally friendly. For the purpose of this Agreement, the Pump Station may also be referred to as the “South Edgeware Booster Station”)

Term” means the period commencing ■, 2023 and continuing until terminated pursuant to Section 2.2.

“**Work**” means the original installation of the Pump Station and all maintenance, repairs, alterations, replacements and removal thereof.

ARTICLE 2 LICENCE

2.1 Licence

The Elgin Board hereby grants to St. Thomas, for the Term, a non-assignable, non-exclusive license to install, maintain and operate the Pump Station on the Licensed Area for the purpose of providing water to the northeast quadrant of St. Thomas and enhance the supply of treated drinking water to the City of St. Thomas and for no other use or purpose whatsoever, together with access to and egress from the Licensed Area. St. Thomas acknowledges and agrees that the scope of this Licence is limited to the occupancy and use of the Licensed Area, and excludes the provision of operating services by the Elgin Board and its contracted operating authority, or the operation of water works by any of the parties.

2.2 Terminable Without Cause

This Licence is terminable by St. Thomas, without cause or recourse, on twelve (12) months' prior written notice to the Elgin Board.

2.3 No Property Rights Granted

St. Thomas acknowledges that the rights granted under this Licence confer no property right, leasehold interest, or easement on or to St. Thomas in connection with the Licensed Area or the Lands. The Licensee's rights under this Licence are subordinate to the rights of all lenders, mortgagees, and secured creditors of the Elgin Board, and of all persons claiming by or through them.

**ARTICLE 3
LICENCE FEE**

3.1 Licence Fee

Intentionally Deleted.

**ARTICLE 4
PROPERTY TAXES AND RECOVERABLE EXPENSES**

4.1 Property Taxes

St. Thomas shall pay any Property Taxes, or payments in lieu of taxes, assessed on either or both the Pump Station and any associated water distribution pipeline and appurtenances connecting the Pump Station to the Elgin Terminal Reservoir, or against the Elgin Board or the Lands in connection therewith. If the Elgin Board for any reason whatsoever is required to pay all or part of any such taxes that is attributable to the Pump Station, in whole or in part, St. Thomas shall reimburse the Elgin Board for such amount paid by the Elgin Board forthwith on demand.

4.2 Annual Recoverable Expenses

St. Thomas shall pay to Elgin, on demand, all invoices submitted by Elgin to St. Thomas in respect of St. Thomas's share (as allocated by the Elgin Board, acting reasonably) of those costs of operation incurred by the Elgin Board associated with St. Thomas's installation, operation and use of the Pump Station, including without limitation, repair and maintenance of the roadways, security, and necessary alterations to the Lands and the Elgin-Middlesex Pump Station or in connection with St. Thomas' occupation of the Lands.

Annual Recoverable Expenses shall exclude services related to the Lands that are otherwise addressed by the Licence of Occupancy Agreement for the Elgin-Middlesex Pump Station.

4.3 Electricity and Other Services

St. Thomas shall be solely responsible to secure from ■ Hydro or other utility supplier, at St. Thomas's sole cost and expense, all electricity and other utilities and communication services necessary to operate the Pump Station; it being understood and agreed that the Elgin Board is under no obligation whatsoever to provide the same.

An electrical connection to the transformer substation on the Lands or via the Elgin-Middlesex Pump Station may be considered and approved by Elgin and shall be dependent on available capacity and accessibility; however, the planning, design, construction, potential upsizing, alteration and operation of these hydro enhancements shall be at the sole expense of St. Thomas.

ARTICLE 5 LICENSEE'S WORK

5.1 Plans

St. Thomas shall submit to Elgin details of the proposed Work including plans and specifications prepared by qualified architects or engineers, and such Work shall be completed by St. Thomas in strict accordance with the plans and specifications approved in writing by Elgin. St. Thomas shall promptly prepare and deliver to Elgin, at no cost to Elgin, one complete set of "as-constructed" drawings for the Work.

It is agreed that St. Thomas will connect the Pump Station to the 1050 mm suction header located between the Elgin Terminal Reservoir and the Elgin Middlesex Pump Station previously constructed by Elgin on the Lands.

5.2 Compliance with Laws

All Work shall be planned and completed by St. Thomas in strict compliance with all Laws. Prior to commencing any Work, St. Thomas shall obtain at its sole expense all necessary permits, licenses and approvals.

5.3 Contractors to be Approved

All Work shall be performed promptly and in a good and workmanlike manner by fully qualified labourers who have all necessary skills, training and qualifications to perform the Work in question in accordance with the provisions of this Licence and all Laws, and in compliance with both the Elgin' rules and regulations and its security and safety requirements.

5.4 The Elgin Board's Costs to be Reimbursed

St. Thomas shall pay to Elgin forthwith upon request all of Elgin's reasonable costs including, without limitation, fees of architects, engineers and other consultants, incurred in dealing with St. Thomas's request for Elgin's consent to any Work, whether or not such consent is granted. For all Work, St. Thomas shall pay to Elgin forthwith upon request all out-of-pocket expenses paid or payable by Elgin to third parties in connection with the review and approval of St. Thomas's plans and specifications and inspection and supervision of the Work.

5.5 Non-Compliance

If St. Thomas performs any such Work without complying with all of the foregoing provisions of this Article 5, Elgin shall have the right to require St. Thomas to remove such Work forthwith and restore and reinstate the Lands to their original condition.

5.6 No Construction Liens

St. Thomas shall make all payments and take all steps as may be necessary to ensure that no lien is registered against the Lands or any portion thereof as a result of any work, services or materials supplied to St. Thomas. St. Thomas shall cause any such registrations to be discharged or vacated immediately after notice from Elgin, or within ten (10) days after

registration, whichever is earlier. St. Thomas shall indemnify and save harmless the Elgin Board and its agents from and against any liabilities, claims, liens, damages, costs and expenses, including legal expenses, arising in connection with any work, services or materials supplied to St. Thomas. If St. Thomas fails to cause any such registration to be discharged or vacated as aforesaid then, in addition to any other rights of Elgin and the Elgin Board, Elgin may, but shall not be obliged to, discharge the same by paying the amount claimed into court, and the amounts so paid and all costs incurred by Elgin, including one hundred percent (100%) of all legal fees and disbursements incurred by Elgin in this regard, shall be paid by St. Thomas to Elgin forthwith upon demand.

5.7 Maintenance of Pump Station

At all times throughout the Term, St. Thomas, at its sole cost and expense, shall perform such maintenance, repairs and replacements as required to keep the Pump Station, all contents thereof and all services and equipment located in or primarily serving the Pump Station (including without limitation, the associated water distribution pipeline on the Lands connecting the Pump Station to the Elgin Terminal Reservoir), in first-class appearance and condition, and in accordance with all Laws and Elgin's reasonable requirements.

5.8 St. Thomas Responsible for Damage to Roadways and Infrastructure

St. Thomas agrees to carry out the Work in such a manner as to avoid causing any damage to any roadway, walkway, parking area, infrastructure or other improvements on the Lands. If any roadway, walkway, parking area, infrastructure or other such improvement on the Lands is damaged as a result of or arising from, in whole or in part, the Work, St. Thomas shall forthwith on demand reimburse Elgin all of Elgin's reasonable costs including without limitation, fees for architects, engineers and other consultants, incurred in connection with the remedying of such damage. St. Thomas further acknowledges and agrees that it shall install the Pump Station so as to avoid any such damage, including without limitation, damage caused by or connected to the compression of the soils or substrata in the course of installing the Pump Station. In furtherance of the foregoing, St. Thomas agrees to jointly, in the presence of a representative of Elgin, inspect those parts of the Lands where the Pump Station has been placed beneath any roadway, walkway, parking area, infrastructure or other such surface, on Elgin's request, not less than one time per year during each of the first three (3) years of the Term. the Elgin Board shall consult with St. Thomas with respect to the remediation of any such damage, and the Elgin Board may at its sole option, require St. Thomas to remediate any such damage, in which case such shall be deemed to be "**Work**" as defined herein.

ARTICLE 6 FURTHER COVENANTS OF LICENSEE

6.1 St. Thomas's Insurance

St. Thomas, or its contractor(s) or agent(s), as appropriate, shall provide and maintain throughout the Term of this Licence, Commercial General Liability insurance subject to limits of not less than FIVE MILLION DOLLARS (\$5,000,000) inclusive per occurrence for bodily injury, death and damage to property, including loss of use thereof. Such insurance policy shall be in the name of St. Thomas, or its contractor(s) or agent(s) as appropriate, and shall

include the Elgin Board and its agents as an additional insured thereunder. Prior to the commencement of any Work, St. Thomas shall provide Elgin with proof that the required insurance is in place and in good standing and to promptly provide Elgin, on request, a certificate of insurance confirming the same. If St. Thomas fails to provide or maintain the insurance required by this Section, Elgin shall have the right (but not the obligation) to provide and maintain such insurance, in which case the cost thereof shall be payable by the St. Thomas to Elgin forthwith on demand. In the case of an insured loss, any deductible amount payable under St. Thomas's insurance paid or absorbed by Elgin, shall be reimbursed by the St. Thomas forthwith on demand.

St. Thomas agrees to provide Elgin with thirty (30) days' prior written notice of any termination, cancellation or of any material change that would diminish the coverage of St. Thomas's required insurance.

6.3 **Environmental**

In this Section:

"Contaminants" means any substance the storage, manufacture, disposal, treatment, generation, use, transport, remediation or Release into the Environment of which is now or hereafter prohibited, controlled, or regulated under applicable Laws and "substance" includes any sound, vibration, heat, radiation or other form of energy.

"Environment" means the components of the earth and includes:

- (a) air, land and water;
- (b) all layers of the atmosphere;
- (c) all organic and inorganic matter and living organisms; and
- (d) the interacting natural systems that include components referred to in this definition of Environment.

"Release" means, when used as a verb, to release, spill, leak, spray, inoculate, abandon, deposit, seep, throw, place, exhaust, pump, pour, emit, empty, discharge, inject, escape, leach, migrate, dispose of or dump, and when used as a noun, has a corresponding meaning.

St. Thomas shall at all times during the Term observe and comply with and ensure that its Mayor and Council, servants, agents, employees, contractors and persons for whom the Elgin Board is in law responsible, observe St. Thomas shall be solely responsible for any Contaminants at any time resulting from or arising in connection with the Pump Station, or the installation, maintenance, operation or removal of the same, and shall be responsible for the remediation, clean-up and removal of the same and any damages caused by the occurrence, remediation, clean-up or removal of any of the same, and St. Thomas shall indemnify Elgin in respect thereof.

Without limiting the generality of the foregoing, St. Thomas shall:

- (a) promptly provide to Elgin a copy of any environmental site assessment, audit, Environmental report, or test results relating to the Environmental condition of the Licensed Area conducted by or for St. Thomas at any time before, during, or after the Term or any renewal or extension thereof;
- (b) at Elgin's request from time to time, provide Elgin with a certificate of a senior officer of St. Thomas certifying that St. Thomas is in compliance with all applicable Laws in connection with or related to the use or occupation of the Licensed Area and that there has been no Release of Contaminants at, on or under the Licensed Area in non-compliance with Laws, other than as disclosed in writing to Elgin;
- (c) remove, remediate and clean-up any Contaminants at, on or under the Licensed Area after the commencement of the Term to the extent necessary to ensure that none of such Contaminants exceed the applicable Site Condition Standards set out in O. Reg. 153/04 levels as amended or replaced from time to time (collectively, the "**Remediation Work**"); and
- (d) upon the completion of the Remediation Work, St. Thomas shall promptly deliver to Elgin a certificate from St. Thomas's qualified person confirming that concentrations of contaminants in soil and groundwater on and under the Licensed Area are less than the applicable Site Condition Standards of the Ontario Ministry of the Environment, Conservation and Parks.

6.4 Compliance with Laws

St. Thomas shall be solely responsible for obtaining all necessary permits, licenses and approvals as may be necessary to permit St. Thomas to install and operate the Pump Station, as required by all applicable Laws. The parties confirm that, as the Pump Station is part of St. Thomas's water distribution system on the Lands, it is specifically excluded from the Elgin Board's Drinking Water Works Permit and Municipal Drinking Water License.

St. Thomas shall comply at its own expense with all applicable Laws respecting the use, condition and operation of the Pump Station, and all equipment related thereto and contents thereof.

6.5 Elgin Board's Insurance Not to be Affected

St. Thomas shall not do or permit anywhere on the Lands anything which might: (i) result in any increase in the cost of any insurance policy of Elgin on the Lands or any improvements thereon; (ii) result in an actual or threatened cancellation of or adverse change to any insurance policy of Elgin on the Lands or improvements thereon; or (iii) be prohibited by any insurance policy of Elgin.

If the cost of any insurance policies of Elgin on the Lands or improvements is increased as a result of the Work or the Pump Station, St. Thomas shall pay the full amount of such increase to Elgin forthwith upon demand. St. Thomas's responsibility for any increased cost of insurance as aforesaid shall be conclusively determined by a statement issued by the organization, company or insurer establishing the insurance rates for the relevant policy.

If there is an actual or threatened cancellation of or adverse change in any policy of insurance of Elgin on the Lands or improvements thereon by reason of anything done or permitted by St. Thomas with respect to the Work or the Pump Station, and if St. Thomas fails to remedy the situation giving rise to such actual or threatened cancellation or change within twenty-four (24) hours after notice from Elgin, then Elgin may, at its option, either: (i) terminate this Licence forthwith by written notice; or, (ii) remedy the situation giving rise to such actual or threatened cancellation or change; all at the cost of St. Thomas to be paid to Elgin forthwith upon demand.

6.6 Removal of the Pump Station

The Pump Station shall remain the property of the St. Thomas throughout the Term notwithstanding the degree of affixation of the Pump Station to the Lands.

On or before the expiry of the Term or forthwith following the earlier termination, repudiation or disclaimer of this Licence, St. Thomas shall remove all or such part of the Work (including without limitation, the Pump Station), as required by Elgin, and in so doing shall repair all damage resulting therefrom, and shall restore the Lands to their original condition prior to the installation and removal thereof, failing which Elgin may (but shall not be obligated to) do so, at the sole risk of the St. Thomas and in which case, St. Thomas shall forthwith on demand reimburse Elgin all its costs to do so.

6.7 Elgin Board Not Liable

The Pump Station and all property kept, stored, or located therein or thereon shall be kept, stored, and located at the sole and absolute risk of St. Thomas and St. Thomas shall hold the Elgin Board harmless from all claims arising out of damage to it, including without limitation, any subrogated claim by St. Thomas's insurers. St. Thomas agrees that the Elgin Board shall not be liable or responsible in any way for any injury, loss or damage to the Work, the Pump Station, or to any property contained therein or related thereto or used in connection therewith, no matter how caused and whether or not resulting from the negligence or gross negligence of the Elgin Board, its board members, servants, agents, employees, contractors or persons for whom the Elgin Board is in law responsible. Further, Elgin assumes no risk to any property or any person, and for greater certainty "person" includes St. Thomas, its Council members, servants, agents, employees, contractors and persons for whom St. Thomas is in law responsible. In each such case, St. Thomas shall indemnify the Elgin Board and all of its board members, servants, agents, employees, contractors and persons for whom the Elgin Board is in law responsible and hold such indemnities jointly and severally from and against any and all damages, losses, expenses, fines and penalties and all liabilities, claims, suits, actions or other proceedings by whomever made including one hundred percent (100%) of all legal fees and disbursements, arising therefrom. Without limiting or affecting the generality or interpretation of the foregoing, and notwithstanding the foregoing, it is agreed that the Elgin Board shall in no event be liable for any indirect or consequential damages suffered by St. Thomas howsoever caused.

6.8 Elgin Board's Employees and Agents

Every indemnity, exclusion, release of liability and waiver of subrogation contained in this Licence for the benefit of the Elgin Board shall extend to and benefit all of the Elgin Board's

board members, servants, agents, employees, and all others for whom the Elgin Board is in law responsible. Solely for such purpose, and to the extent that the Elgin Board expressly chooses to enforce the benefits of this Section for the foregoing persons, it is agreed that the Elgin Board is the agent or trustee for such persons.

6.9 Non-Liability of the Elgin Board

Without limiting the generality of Section 6.7, the Elgin Board shall not be liable for any damages, direct or indirect, resulting from or contributed to by any suspension, interruption or cessation in supply of any utilities to the Pump Station. Without limiting the generality of the foregoing, the Elgin Board shall not be liable for, and St. Thomas shall indemnify the Elgin Board against any and all direct, indirect or consequential damages suffered by reason of the suspension, interruption or cessation in supply of any utilities to the Pump Station. Further, St. Thomas acknowledges and hereby expressly agrees that neither the Elgin Board, nor those for whom the Elgin Board is in law responsible, shall be in any way responsible or liable for the provision of water to be furnished by St. Thomas to its end-users and customers by means of St. Thomas's Pump Station or the Elevated Storage Tank.

6.10 Rules and Regulations

The Elgin Board may from time to time make and amend reasonable rules and regulations with respect to access to the Lands, security and safety measures, and St. Thomas and all persons under its control shall comply with all of such rules and regulations of which written notice is given to St. Thomas, all of which shall be deemed to be incorporated into and form part of this Licence. The Elgin Board shall not make any rules or regulations which conflict with any express provision of this Licence, unless and only to the extent required by any applicable Laws. The Elgin Board shall act reasonably in enforcing such rules and regulations but shall not be liable for their non-enforcement.

6.11 Registration

St. Thomas shall not register this Licence or any short form or notice hereof on title to the Lands.

**ARTICLE 7
REPAIR**

7.1 Repair by St. Thomas

If any part of the Lands or any improvements thereon are damaged or destroyed through the act or omission of the St. Thomas, its agents, or those for whom the St. Thomas is responsible at law, St. Thomas shall reimburse Elgin the cost of repairs or replacements promptly upon demand.

St. Thomas expressly acknowledges and agrees that Elgin has no obligations with respect to the Pump Station, all obligations being the sole responsibility of St. Thomas.

7.2 Notice by St. Thomas

St. Thomas shall give immediate written notice to Elgin of any accident, defect or damage to any part of the Pump Station, or any equipment or utility systems serving the Pump Station, which comes to the attention of St. Thomas or any of its Council members, employees, agents or contractors, notwithstanding the fact that the Elgin Board may have no obligation in respect of the same.

ARTICLE 8 ALTERATIONS

8.1 Alterations

St. Thomas shall not make any alteration, addition or improvement (each of the foregoing of which shall be considered to be "Work" for the purposes of this Licence) to the Pump Station without the prior written approval of Elgin. The Work shall be done in accordance with Article 5 of this Licence.

ARTICLE 9 DEFAULT

9.1 Termination for Default.

If, after five (5) Business Days written notice, St. Thomas:

- (a) fails to comply with any of its obligations pursuant to this Licence, including without limitation, a failure to comply with Elgin's rules and regulations or the Elgin's security and safety requirements; or
- (b) permits any conduct or act on the Licensed Area or the Lands which in the opinion of Licensor is improper;

then, in addition to its other remedies, Elgin may forthwith terminate this Licence, by notice in writing delivered to St. Thomas, and may take possession of the Licensed Area without prejudice to Licensor's right of recovery for monies due and owing, and at the cost St. Thomas remove all persons, property and improvements from the Licensed Area, by force if necessary, and Elgin shall not, nor shall any of its board members, servants, agents, employees, contractors or persons for whom Elgin is in law responsible, be liable in damages or otherwise by reason of such termination or removal.

9.3 Legal Expenses

If Elgin brings an action against St. Thomas arising from an alleged breach of term, a covenant or condition in this Licence to be complied with by St. Thomas, and the Court establishes that St. Thomas is in breach of the term, covenant or condition, St. Thomas shall pay to Elgin, on demand, all expenses incurred by Elgin in the action including one hundred percent (100%) of the legal fees and disbursements incurred by Elgin in this regard.

9.4 Waiver

The waiver by Elgin of a breach of any term, covenant or condition of this Licence shall not be considered to be a waiver of a subsequent breach of the term, covenant or condition or another term, covenant or condition. The subsequent acceptance of fees by Elgin shall not be considered to be a waiver of a preceding breach by St. Thomas of a term, covenant or condition of this Licence, regardless of Elgin's knowledge of the preceding breach at the time of acceptance of the fee. No covenant, term or condition of this Licence shall be considered to have been waived by Elgin unless the waiver is in writing signed by Elgin.

**ARTICLE 10
ASSIGNMENT, SUBLETTING**

10.1 Assignment by St. Thomas

St. Thomas shall not assign, sublicense or part with this Licence, in whole or in part, or share the use of the Pump Station with any other party.

10.2 Assignment by the Elgin Board

If the Elgin Board sells, leases, mortgages or otherwise disposes of the Lands or any part thereof or assigns its interest in this Licence to the extent that the purchaser or assignee, as the case may be, agrees with Elgin to assume the covenants and obligations of Elgin hereunder, Elgin shall thereupon be released of all liability pursuant to the terms of this Licence.

**ARTICLE 11
DISPUTES**

11.1 Dispute Resolution

In the event of a controversy or dispute between Elgin and St. Thomas arising out of or in connection with this Licence or regarding the interpretation of the provisions hereof, the parties agree that Elgin's Dispute Resolution Policy as set out in the by-law relating to the Dispute Resolution Process for the Elgin Area Primary Water Supply System Board of Management, as amended from time to time, shall be followed.

**ARTICLE 12
GENERAL PROVISIONS**

12.1 Notices

Any notice required to be or may be given or made by one of the parties hereto to the other, shall be in writing and shall be delivered in person, transmitted by facsimile, transmitted by email, or similar means of recorded electronic communication, or sent by ordinary or registered mail to the respective addresses of the parties hereto as follows:

(a) in the case of the Elgin Board, to: Elgin Area Primary Water Supply System
235 North Centre Road, Suite 200
London, Ontario N5X 4E7

Attention: Chief Administrative Officer

Phone: (519) 930.3505
Facsimile: (519) 474.0451

email: GENERAL@HuronElginWater.ca
and copied to: AHENRY@HuronElginWater.ca

(b) in the case of the St. Thomas, to : City of St. Thomas
545 Talbot Street
P.O. Box 520
City Hall
St.Thomas, Ontario N5P 3V7

Attention: ■

Phone: ■
Facsimile: ■

email: ■

Any such notice shall be deemed to have been given and received on the day on which it was delivered or transmitted (or, if such day is not a Business Day, on the next following Business Day), or if mailed, on the third Business Day following the date of mailing; provided, however, that if at the time of mailing or within three Business Days thereafter there is or occurs a labour dispute or other events which might reasonably be expected to disrupt the delivery of document by mail, any notice hereunder shall be delivered or transmitted by means of recorded electronic communications as aforesaid. Either party may give written notice of any change of address in the manner specified above, and thereafter the new address shall be deemed to be the address of that party for the giving of notices.

12.2 **Governing Law**

This Licence shall be construed under the laws of the Province of Ontario.

12.3 **Captions**

The captions and headings of this Licence are for convenience and reference only and shall not affect the interpretation of this Licence.

12.4 **No Agency or Partnership**

Nothing in this Licence creates or shall be construed by the parties or by any third party as creating the relationship of principal and agent or of partnership or of joint venture, it being

understood and agreed that neither the method of computation of fees nor any other provision, nor any acts of the parties create any relationship between the parties other than that of licensor and licensee.

12.5 Time of Essence

Time shall be of the essence of this Licence.

12.6 Entire Licence

The parties acknowledge that this Licence constitutes the entire agreement between the parties with respect to the Pump Station and that there are no representations or warranties, oral or otherwise, except as are contained herein.

12.7 Partial Invalidity

If any term, covenant or condition of this Licence is held invalid or unenforceable, the remainder of this Licence or the application of the term, covenant or condition to persons or circumstances other than those to which it is held valid or unenforceable shall not be affected.

12.8 Interpretation

In this Licence, unless the context requires otherwise, words importing the singular include the plural; any reference to "St. Thomas" includes the contractors, subcontractors, Mayor, members of Council, servants, employees, agents and invitees of the St. Thomas and all others over whom the St. Thomas might reasonably be expected to exercise control; "person" includes any individual, firm or corporation; "hereof", "herein", "hereunder" and similar expressions used in any section relate to the whole of this Licence and not to that section only.

12.9 Amendments in Writing

No amendment to this Licence shall bind Elgin, the Elgin Board or St. Thomas unless in writing and signed by both parties.

12.10 Successors

This Licence shall enure to the benefit of and be binding upon the parties hereto and their respective heirs, executors, administrators, successors, assigns and other legal representatives except only that this Licence shall not enure to the benefit of any of such parties unless and only to the extent expressly permitted pursuant to the provisions of this Licence.

12.11 Monetary Amounts

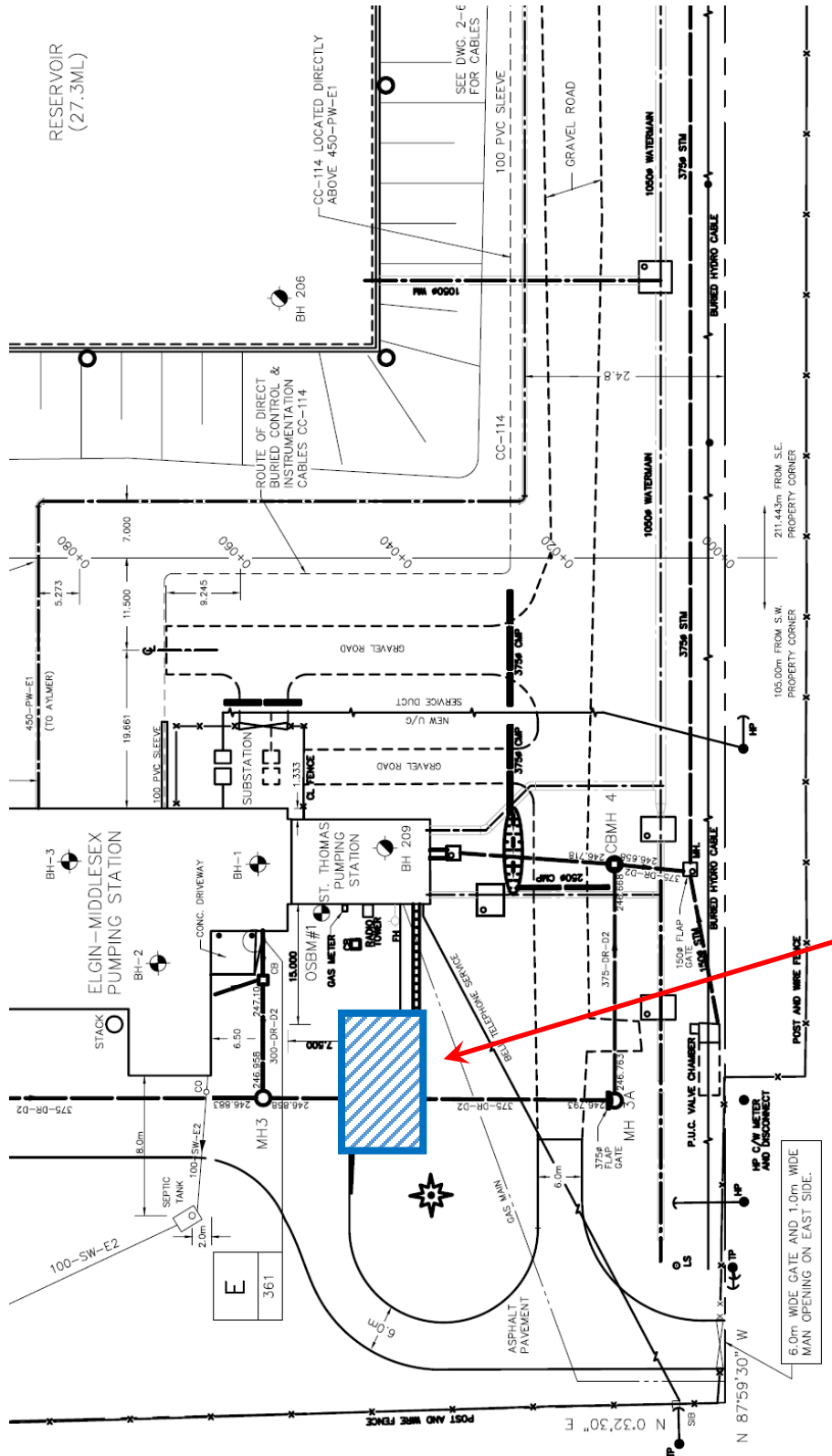
Except as may be otherwise expressly provided herein, all monetary amounts set out in this Licence are in Canadian currency and are exclusive of Canadian Goods and Services Tax, Harmonized Sales Tax, and any other applicable sales taxes.

12.12 Counterparts and Electronic Copies

This Licence may be executed in any number of counterparts. Each executed counterpart shall be deemed to be an original and all executed counterparts taken together shall constitute one agreement. Each of the parties hereto may execute this Licence by signing any such counterpart. Each party hereto agrees that a copy of any signature page of this Licence with an electronic transmission of the signature of the person or persons signing this Licence on behalf of such party shall constitute all required evidence of the execution and delivery of this Licence by such party, it being agreed by the parties that execution of this Licence by electronic transmission is binding.

[Signature Page Follows]

SCHEDULE A APPROXIMATE LOCATION OF THE LICENCED AREA AND THE PUMP STATION



Approximate location of
Licenced Area