# Community and Infrastructure Services Committee
# Agenda

**Monday, March 6, 2023, 2:00 p.m. - 4:30 p.m.**
**Council Chambers - Hybrid**
**City of Kitchener**
**200 King Street W, Kitchener, ON  N2G 4G7**

People interested in participating in this meeting can register online using the delegation registration form at www.kitchener.ca/delegation or via email at delegation@kitchener.ca. Please refer to the delegation section on the agenda below for registration in-person and electronic participation deadlines. Written comments received will be circulated prior to the meeting and will form part of the public record.

The meeting live-stream and archived videos are available at www.kitchener.ca/watchnow.

*Accessible formats and communication supports are available upon request. If you require assistance to take part in a city meeting or event, please call 519-741-2345 or TTY 1-866-969-9994.*

**Chair: Councillor M. Johnston**
**Vice-Chair: Councillor D. Schnider**

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**Pages**

1. **Commencement**

2. **Disclosure of Pecuniary Interest and the General Nature Thereof**
   *Members of Council and members of the City's local boards/committees are required to file a written statement when they have a conflict of interest. If a conflict is declared, please visit www.kitchener.ca/conflict to submit your written form.*

3. **Consent Items**
   *The following matters are considered not to require debate and should be approved by one motion in accordance with the recommendation contained in each staff report. A majority vote is required to discuss any report listed as under this section.*

4. Delegations

*Pursuant to Council's Procedural By-law, delegations are permitted to address the Committee for a maximum of five (5) minutes. All Delegations where possible are encouraged to register prior to the start of the meeting. For Delegates who are attending in-person, registration is permitted up to the start of the meeting. Delegates who are interested in attending virtually must register by 8:30 a.m. on March 6, 2023, in order to participate electronically.*

4.1 None.

5. Discussion Items



6. Information Items



7. Adjournment

Marilyn Mills
Committee Administrator

| | |
|---|---|
| **REPORT TO:** | **Community and Infrastructure Services Committee** |
| **DATE OF MEETING:** | **March 6, 2023** |
| **SUBMITTED BY:** | **Saleh Saleh, Director, Revenue, 519-741-2200 ext. 7346** |
| **PREPARED BY:** | **Marcy Ignor, Manager, Utility billing and Customer Service, 519-741-2200 ext. 7460** |
| **WARD(S) INVOLVED:** | **ALL** |
| **DATE OF REPORT:** | **January 6, 2023** |
| **REPORT NO.:** | **FIN-2023-032** |
| **SUBJECT:** | **Uncollectable Miscellaneous Receivable Accounts Write-Off December 2022** |

## RECOMMENDATION:

**That uncollectable Miscellaneous Receivable Accounts amounting to $8,781 be written off against the Allowance for Doubtful Receivables.**

## REPORT HIGHLIGHTS:

- As per council policy, approval from Council approval is required for accounts to be written-off and sent to an outside collection agency for third party collection efforts.
- Staff have worked diligently in attempting to collect on these accounts but have not been successful in the process.
- This report recommends that accounts totalling $8,781 be written off and forwarded to an outside collection agency.

## BACKGROUND:

As per council policy FIN-FEE-517 Utility and Miscellaneous Receivable policy, approval from Council is required for accounts to be written-off and sent to an outside collection agency for third party collection efforts.

This report represents Miscellaneous Receivables accounts that are deemed to be uncollectable by collections staff. Miscellaneous Receivables represent services that are generally billed through the City's financial system (SAP). Examples of miscellaneous receivables include Direct Detect for alarm monitoring, Parking and Cemetery sales. Property tax and utility accounts are not included in miscellaneous receivables.

**REPORT:**

Staff are recommending that accounts totalling $8,781 be written off and forwarded to a collection agency. Staff have worked diligently in attempting to collect on these accounts but have not been successful in the process.

The collection procedures staff have undertaken include:

- Sending customers statements and demand letters.
- Verbal request by telephone or in person.
- Negotiating revised payment terms.
- Applying any deposits held to the outstanding amounts.
- Transferring uncollectable items to the customer's property tax account were permitted by the Municipal Act.

The current amount being recommended to be written off relates to 20 customer accounts for services provided in the following areas:

| | |
|---|---|
| Cemeteries | 1,398 |
| Fire | 69 |
| Parking | 6,039 |
| Operations | 333 |
| Utilities | 942 |
| **Total** | **8,781** |

The cumulative amount of write-offs identified in this report equal $8,781 and relate to the years 2021 and 2022. The cumulative write-offs are shown in the table below and the average is well below the targeted upper limit for write-offs set at 0.3% previously approved by Council.

| | Cumulative Write-offs for the Year | Total $ Invoiced Year to Date | Write-offs as a % of Sales |
|---|---|---|---|
| **2022** | $ 12,791 | $ 30,280,755 | 0.0422% |
| **2021** | $ 38,573 | $ 27,380,864 | 0.1409% |
| **2020** | $ 55,769 | $ 23,088,516 | 0.2415% |
| **2019** | $ 44,077 | $ 26,057,740 | 0.1692% |
| **2018** | $ 54,464 | $ 23,132,498 | 0.2354% |
| **Total** | **$ 205,674** | **$ 129,940,373** | **0.1583%** |

**STRATEGIC PLAN ALIGNMENT:**

The recommendation of this report supports the achievement of the city's strategic vision through the delivery of core service.

**FINANCIAL IMPLICATIONS:**

The uncollectable accounts will be written off against the Allowance for Doubtful Receivables account.

**COMMUNITY ENGAGEMENT:**

INFORM – This report has been posted to the City's website with the agenda in advance of the council / committee meeting.

**PREVIOUS REPORTS/AUTHORITIES:**

- FIN-FEE-517 Collections- Utility and Miscellaneous Receivable

**APPROVED BY:** Jonathan Lautenbach, Chief Financial Officer, Financial Services

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|---|---|
| **REPORT TO:** | **Community and Infrastructure Services Committee** |
| **DATE OF MEETING:** | **March 6, 2023** |
| **SUBMITTED BY:** | **Saleh Saleh, Director, Revenue, 519-741-2200 ext. 7346** |
| **PREPARED BY:** | **Marcy Ignor, Manager Utility billing and Customer Service, 519-741-2200ext 7460** |
| **WARD(S) INVOLVED:** | **ALL** |
| **DATE OF REPORT:** | **January 6, 2023** |
| **REPORT NO.:** | **FIN-2023-033** |
| **SUBJECT:** | **Uncollectable Utility Receivable Account Write-Off December 2022** |

## RECOMMENDATION:

**That uncollectable utility accounts amounting to $80,371 be written off against the allowance for doubtful utility receivables.**

## REPORT HIGHLIGHTS:

- As per council policy, approval from Council is required for accounts to be written-off and sent to an outside collection agency for third party collection efforts.
- Staff have worked diligently in attempting to collect on these accounts but have not been successful in the process.
- This report recommends that accounts totalling $80,371 be written off and forwarded to an outside collection agency.

## BACKGROUND:

As per council policy FIN-FEE-517 Utility and Miscellaneous Receivable policy, approval from Council is required for accounts to be written-off and sent to an outside collection agency for third party collection efforts.

Utilities receivable represent invoices generally billed through the City's SAP utility billing System. The majority of these invoices relate to usage for Gas and Water. The current report represents write-off of utility accounts which have been deemed to be uncollectable up to the end of December 31, 2022.

## REPORT:

Staff are recommending that accounts totalling $80,371 be written off and forwarded to the collection agency. Staff have worked diligently in attempting to collect on these accounts but

have not been successful either due to the customer declaring bankruptcy or having no forwarding address. Any tenant deposits previously received on the uncollectable accounts have been applied to reduce the debt outstanding. A total of 162 customer accounts are being recommended to be written off and transferred to a third-party collection agency.

The collection procedures staff have undertaken include:

- Sending customers statements and demand letters.
- Verbal request by telephone or in person.
- Negotiating revised payment terms.
- Applying any deposits held to the outstanding amounts.
- Transferring uncollectable items to the customer's property tax account where permitted by the Municipal Act.

The cumulative amount of utility write-offs identified in this report equal $80,371 and relate to the years 2020, 2021 and 2022. The cumulative write-offs are shown in the table below and the average is well below the targeted upper limit for write-offs set at 0.3% previously approved by Council.

A five-year summary of write-offs is included in the table below.

| Utility Accounts Write-off | | | |
|---|---|---|---|
| | Cumulative Write-offs for the Year | Total $ Invoiced Year to Date | Write-offs as a % of Sales |
| **2022** | 101,429 | $ 233,620,592 | 0.0434% |
| **2021** | $ 156,012 | $ 216,217,805 | 0.0722% |
| **2020** | $ 219,812 | $ 213,604,976 | 0.1029% |
| **2019** | $ 216,675 | $ 202,658,095 | 0.1069% |
| **2018** | $ 261,616 | $ 211,483,209 | 0.1237% |
| **Total** | **$ 955,544** | **$ 1,077,584,677** | **0.0887%** |

## STRATEGIC PLAN ALIGNMENT:

The recommendation of this report supports the achievement of the city's strategic vision through the delivery of core service.

## FINANCIAL IMPLICATIONS:

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The uncollectable accounts will be written off against the Allowance for Doubtful Utility Receivables account.

**COMMUNITY ENGAGEMENT:**

INFORM – This report has been posted to the City's website with the agenda in advance of the council / committee meeting.

**PREVIOUS REPORTS/AUTHORITIES:**

- FIN-FEE-517 Collections- Utility and Miscellaneous Receivable

**APPROVED BY:** Jonathan Lautenbach, Chief Financial Officer, Financial Services

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|---|---|
| **REPORT TO:** | **Community and Infrastructure Services Committee** |
| **DATE OF MEETING:** | **March 6, 2023** |
| **SUBMITTED BY:** | **Greg St. Louis, Director, Utilities, 519-741-2600 ext. 4538** |
| **PREPARED BY:** | **Angela Mick, Manager – Quality Management and Water Programs, 519-741-2600 ext. 4408** |
| **WARD(S) INVOLVED:** | **All Wards** |
| **DATE OF REPORT:** | **January 18, 2023** |
| **REPORT NO.:** | **INS-2023-012** |
| **SUBJECT:** | **Drinking Water Quality Management Standard (DWQMS) Re-Endorsement of the Operational Plan** |

## RECOMMENDATION:

***That the Drinking Water Quality Management Standards (DWQMS) Operational Plan attached to report INS-2023-012 be re-endorsed in accordance with the Safe Drinking Water Act, 2002 and Regulation 188/07.***

## REPORT HIGHLIGHTS:

- The purpose of this report is to obtain written re-endorsement of the Drinking Water Quality Management Standard (DWQMS) Operational Plan as per the requirements of the DWQMS
- This report supports the delivery of core services.

## BACKGROUND:

The DWQMS, under the *Safe Drinking Water Act, 2002* and *Regulation 188/07*, requires the City of Kitchener to be licensed to operate and maintain Kitchener's Water Distribution System. One of the licensing requirements is the preparation of a Quality Management System (QMS) and Operational Plan.

The QMS is based on a "Plan-Do-Check-Improve" methodology that is similar to other international quality standards. The "Plan" requirement of the QMS specifies policies and procedures that must be documented in the Operational Plan for the drinking water system and the "Do" requirements specifies the policies and procedures that must be implemented. "Check": and "Improve" requirements of the standards are reflected in the requirements to conduct internal audits, management reviews and to continually improve the system.

Kitchener has obtained a Municipal Drinking Water Licence and has the required elements in place: Drinking Water Works Permit, Financial Plan, accreditation as an Operational Authority, and an audited Operational Plan.

One of the requirements of the DWQMS is for the Owner to provide a written endorsement of the Operational Plan. The Operational Plan was initially endorsed by Council in 2008 (FIN-08-1130) and re-endorsed in 2015 (INS-15-023) and 2019 (INS-19-007). It is recommended that the Operational Plan be periodically brought forward to Council for re-endorsement, with endorsement to align with each new term of Council.

The *Safe Drinking Water Act, 2002* includes a statutory Standard of Care for individuals who have oversight responsibilities for municipal drinking water systems that can extend to municipal councillors. There are legal consequences for negligence, including possible fines or imprisonment.

**REPORT:**

The Operational Plan documents the QMS, essentially outlining how regulatory requirements are met. The Operational Plan consists of 21 elements including: risk assessment, review and provision of infrastructure, emergency management, audits, and continual improvement. A series of Standard Operating Procedures (SOPs) have been developed as part of the DWQMS. The SOPs are generally high level documents which describe the “who, what and when”. The SOPs refer to Work Instructions, which explains the “how”. Internal and external audits are regularly completed to evaluate the conformity of the DWQMS to confirm that “we say what we do and do what we say.”

The Operational Plan (attached) is a living document with references to approximately 300 associated standards operating procedures, work instructions, forms, and documents. The Standard requires continual improvement of the effectiveness of the DWQMS. Continuous improvement is completed by the creation of new work instructions, training programs and revisions to existing documents.

On an annual basis, council is informed of the results of the annual management review, which may include changes that can affect the DWQMS and Operational Plan. Council receives the results of the DWQMS Management Review on March 6, 2023 (INS-2023-011).

There have been no material changes to the Operational Plan since the last re-endorsement; however, the document is reviewed and updated at least annually to reference infrastructure changes, new SOPs, work instructions, etc., to ensure the plan is kept current.

**STRATEGIC PLAN ALIGNMENT:**

This report supports the delivery of core services.

**FINANCIAL IMPLICATIONS:**

The recommendation has no impact on the Capital or Operating Budgets.

**COMMUNITY ENGAGEMENT:**

INFORM – This report has been posted to the City's website with the agenda in advance of the council / committee meeting. The Drinking Water Quality Management Policy is available on Kitchener Utilities Website.

**PREVIOUS REPORTS/AUTHORITIES:**

There are no previous reports/authorities related to this matter; however, re-endorsement occurred most recently in 2019 (INS-19-007)

**APPROVED BY:** Denise McGoldrick, General Manager, Infrastructure Services

**ATTACHMENTS:**

Attachment A – DWQMS Operational Plan
Attachment B – Top Management Endorsement of Operational Plan

Kitchener Utilities

Re-Endorsement of Operational Plan

Top Management re-endorses the Kitchener Utilities City of Kitchener Drinking Water Distribution System DWQMS Operational Plan. Original endorsement was November 10, 2008.

Denise McGoldrick
General Manager, Infrastructure Services

Greg St. Louis, P.Eng.
Director, Gas and Water Utilities

Tammer Gaber, P.Eng.
Manager, Operations (Gas and Water)

Jan 12, 2023
Date

# The Corporation of the City of Kitchener
# Kitchener Utilities

## Municipal Drinking Water System:
## Kitchener Distribution System

# DWQMS Operational Plan

Operational Plan Number 019-401

# TABLE OF CONTENTS

# PART A - INTRODUCTION

## Purpose

The purpose of this Operational Plan is to describe the comprehensive Drinking Water Quality Management System (DWQMS) developed and implemented by Kitchener Utilities for the operation and maintenance of its water distribution system.

This DWQMS Operational Plan includes references to all components of the DWQMS.

## Scope

This Operational Plan covers the activities and personnel associated with all operational aspects of the drinking water distribution system for Kitchener Utilities, identified by waterworks number 260001458.

This Operational Plan, the procedures, work instructions and other DWQMS documentation that are referenced herein are complementary to the legislated requirements for safe drinking water in the Province of Ontario.

The scope of the waterworks begins at the point where treated water enters the watermain from the treatment facilities, and ends at the property lines of the consumers.

## Permits and Licences

The waterworks system has the following permits and licences:

- Municipal Drinking Water Licences, Number 019-101
- Drinking Water Works Permit, Number 019-201
- Financial Plan, Number 019-301
- Operational Plan, Number 019-401

For Form 1 Review, the City of Kitchener reviews/approves for City owned watermains and the Region completes the review/approval for Regional owned watermains. For those watermains that are dual owned, it is the proponent's responsibility to contact the other owner so that both parties sign-off. Interconnections between the two systems are documented by both parties.

## References

- Drinking Water Quality Management Standard
- Applicable Ontario Safe Drinking Water Legislation

## Definitions and Acronyms

| | |
|---|---|
| • AOP | Advanced Oxidation Process |
| • CAO | Chief Administrative Officer |
| • Distribution | Watermains and related items (i.e. Hydrants, valves) |
| • DWQMS | Drinking Water Quality Management Standard |
| • GAC | Granulated Activated Carbon |
| • GIS | Geographic Information System |
| • ML | Mega Litre |
| • MECP | Ministry of Environment, Conservation and Parks |
| • OIC | Operator in Charge |
| • ORO | Overall Responsible Operator |
| • Primary Response Vehicle /263/Emergency Response Vehicle | Under the Ontario Energy Board distributors are secondary responders; the primary response to emergencies is provided by the 911 Emergency Response service. In Kitchener Utilities documents, Primary Response Vehicle refers to the Construction and Maintenance Kitchener Utilities vehicle/staff equipped and responsible to respond to emergencies. |
| • QMS | Quality Management System |
| • RMOW | Regional Municipality of Waterloo |
| • SCADA | Supervisory Control and Data Acquisition |
| • UV | Ultraviolet |
| • Waterworks | Kitchener Utilities Drinking Water Distribution System |
| • WTP | Water Treatment Plant |

## PART B - OPERATIONAL PLAN

### Quality Management System

This Operational Plan describes the QMS which covers the drinking water distribution system that is owned and operated by Kitchener Utilities.

Kitchener Utilities receives treated water from the Regional Municipality of Waterloo (RMOW).

### Quality Management System Policy

Kitchener Utilities owns, maintains and operates the City of Kitchener's Drinking Water Distribution System. At Kitchener Utilities, we are committed to supplying you with safe drinking water. We work together with the City of Kitchener and the Region of Waterloo to keep water matters top of mind. We are committed to these principles:

1. Quality
Kitchener water is safely treated and regularly tested according to government legislation and regulations for the consistent delivery of safe, quality drinking water. We are committed to maintaining and continually improving the Quality Management System, and complying with applicable legislation.

2. Trust
Trust us to look after your water needs by delivering quality water and reliable service.

3. Value
Tap water is the most economical choice.

4. Communication
We will communicate openly with the public concerning matters of drinking water quality.

### Commitment and Endorsement

The Owner (Mayor and Council) and Top Management endorsement of the Operational Plan shall be demonstrated by a copy of the council meeting minutes where the Operational Plan is accepted and endorsed (see Appendix).

## QMS Representative

The Manager, Quality Management and Water Programs is appointed by Top Management to the role of QMS Representative for the Kitchener drinking water distribution system QMS.

The QMS Representative has the responsibilities and authorities listed in the section of this Operational Plan called 'Organizational Structure, Roles, Responsibilities and Authorities'.

The appointment is documented and filed with the QMS Specialist and on Laserfiche.

## Document and Record Control

Procedures are in place for Document Control and Record Control (attached in the Appendix). These procedures describe how QMS documents and procedures are controlled, including instructions related to currency, legibility, retention, and storage. All QMS system documentation is controlled. Methods of control are defined in the referenced procedures.

Records are maintained as objective evidence of conformance to the DWQMS and compliance with all applicable Safe Drinking Water Regulations.

The Master List of Documents is a complete list of all system components. The most current version of the Master List of Documents is also available.

## Drinking Water Distribution System

The scope of the waterworks begins at the point where treated water enters the watermain from the Regional treatment facilities, and ends at the property lines of the consumers. There is no storage, chlorine boosting, secondary disinfection or pressure boosting within the control of the waterworks.

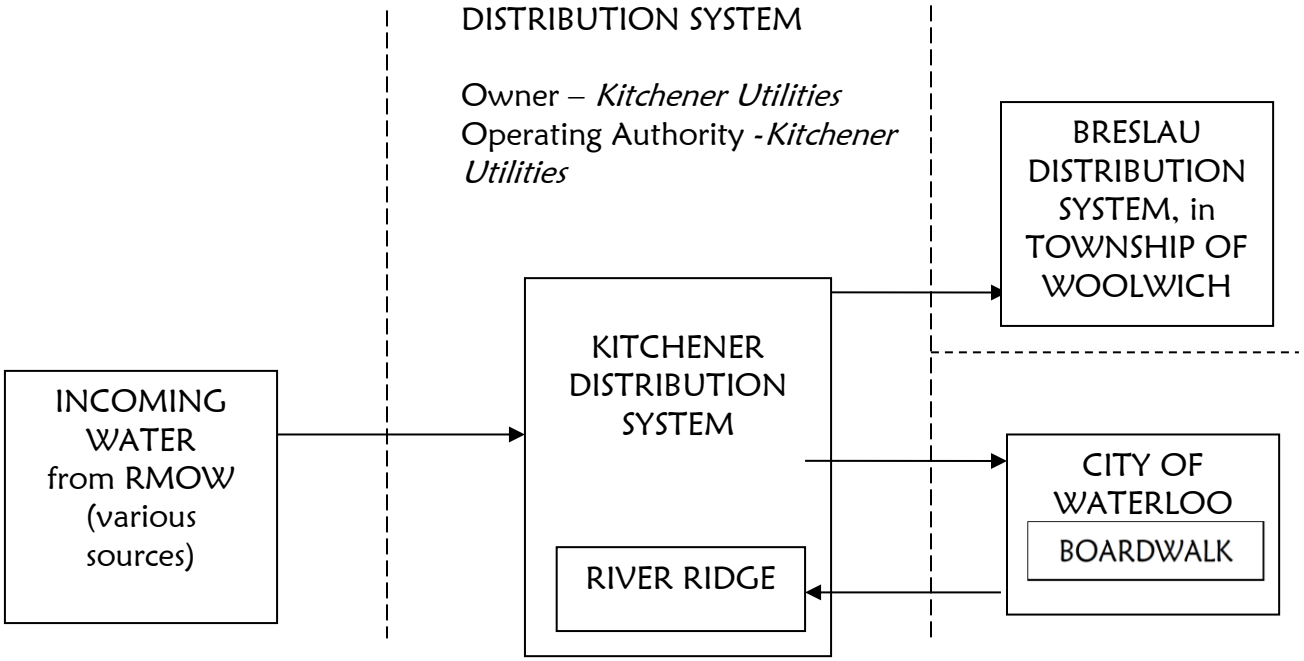
As of the end of 2022, the waterworks consists of approximately:

- 924.6 km of distribution watermain – 792 km Kitchener owned, 23 km Dual owned and 109 km Regional owned (20 km is untreated)
- 70,572 water meters in service
- 4,717 hydrants (not including private hydrants)
- 8,005 valves (not including service valves or hydrant valves) – 7,445 Kitchener owned, 130 Dual owned and 430 Regional owned

Hard copy maps are updated annually along with stats, however digital mapping changes are made daily (available electronically to field staff via laptops in the field). Electronic maps are

updated daily are available internally and externally via Open Data. A copy of the map is included at the end of the Operational Plan.

### *Process Flow Chart*




A map of the distribution system is available on Laserfiche and is filed with the Manager, Quality Management and Water Programs on an annual basis.

### *General Description*

The supply system consists of multiple RMOW pumping stations, treatment systems and wells. Not all systems are required to be in operation at the same time to deliver adequate water supply.

The waterworks also provides distribution to the neighbourhood of River Ridge (commonly referred to as Falconridge). The City of Waterloo Distribution System supplies water to this community, but Kitchener Utilities owns, operates and maintains the distribution to River Ridge. The City of Kitchener supplies water to the City of Waterloo in the Boardwalk area.

The waterworks has a direct connection feeding water to Breslau, including a meter chamber. Breslau is a distribution system within the Township of Woolwich, which is owned and operated by the Township of Woolwich. The distribution system is not owned or operated by Kitchener Utilities.

Some watermains are shared with the RMOW (Dual owned) but are maintained by Kitchener Utilities. The RMOW is back-charged for the maintenance activities performed by the waterworks. The RMOW may participate in watermain repair, however Kitchener Utilities is the first responder.

### *Description of Water Source*

The Kitchener Drinking Water Distribution System is part of the RMOW's Integrated Urban System. All drinking water is supplied by the RMOW's various water treatment plants; the location of these RMOW assets can be found in GIS via Arc Reader.

The water supplied by RMOW is controlled by the RMOW, who owns and operates the treatment plants and equipment, pumps and Supervisory Control and Data Acquisition (SCADA) system which controls the quality and pressure of the supply.

The Kitchener Water Distribution System is supplied by the following RMOW Water Supply Systems:

1. Greenbrook Well Supply System
2. K34 Well Supply System
3. Mannheim Water Treatment Plant
4. Parkway Well Supply System
5. Strange St. Well Supply System
6. Woolners (K80's) Well Supply System

More details regarding the above can be found at: www.regionofwaterloo.ca/water-reports

1. Greenbrook Well Supply System

The Greenbrook Well System is comprised of five ground water wells K1A, K2A, K4B, K5A and K8. These wells pump directly into the Greenbrook Treatment Plant and Pumping Station.

Iron and manganese removal is achieved through the use of three pressure filters. Following filtration, treatment for 1,4-dioxane is accomplished by an advanced oxidation process (AOP) using 50% hydrogen peroxide and Ultraviolet (UV) irradiation.

Treated water from the UV reactors proceeds through upflow Granular Activated Carbon (GAC) contactors before being transferred to 2 storage reservoirs with capacities of 2 million gallons (approximately 10,000 cubic metres) and 500,000 gallons (approximately 2400 cubic metres).

Disinfection is achieved through Ultraviolet (UV) irradiation and by the use of a sodium hypochlorite system consisting of a solution tank complete with spill containment and protection and a metering pump dispensing commercial 12% sodium hypochlorite solution. 20% ammonium sulphate is added to the water at the discharge header of the pumping station prior to the water leaving the station. The purpose of the ammonium sulphate is to convert free chlorine to the combined form, creating a more stable distribution disinfectant.

Continuous analyzers monitor the levels of chlorine, turbidity, UVT and UV dosage prior to the water being discharged. The analyzers are connected with the Mannheim Water Treatment Plant SCADA system which is monitored by an operator 24 hours per day.

There is no emergency standby power at this site.

2. K34 Well Supply System

The K34 well supply is a groundwater supply consisting of two wells, K34 and K36, a treatment facility and an in ground clear well/reservoir. The total storage capacity of the reservoir is 90 cubic meters. Two high lift pumps are used to discharge the treated water into the distribution system. The treatment facility has five closed pressure filters used for removal of iron and manganese.

Disinfection is achieved by the use of a sodium hypochlorite system consisting of a solution tank complete with spill containment and protection and two metering pumps dispensing commercial 12% sodium hypochlorite solution. The sodium hypochlorite is also used as an oxidizing agent prior to filtration. Upon discharge to the distribution system, 20% ammonium sulphate is injected. The purpose of the ammonium sulphate is to convert free chlorine to the combined form, creating a more stable distribution disinfectant.

Continuous analyzers monitor the levels of chlorine and turbidity. The analyzers are connected with the Mannheim Water Treatment Plant SCADA system which is monitored by an operator 24 hours per day.

There is no emergency stand-by electrical power at this facility.

3. Mannheim Water Treatment Plant

The Mannheim Water Treatment Plant receives raw water from the Hidden Valley Low Lift Station located at the Grand River. The raw water entering the WTP is treated with coagulation, flocculation, sedimentation, ozonation and filtration. Immediately after filtration, the water is disinfected prior to entering the clearwells/reservoirs. There are two clearwells/reservoirs that have a combined total usable volume of 15.28 ML.

Disinfection is achieved through ozonation, ultraviolet (UV) irradiation followed by chlorination via a gas chlorination system. Continuous analyzers monitor the levels of ozone, chlorine, turbidity, UVT and UV dosage prior to the water being discharged. The analyzers are connected with the Mannheim Water Treatment Plant SCADA system which is monitored by an operator 24 hours per day.

The water from the Mannheim Aquifer Storage and Recovery Facilities (ASR1, ASR2, ASR3, ASR4, RCW1 and RCW2) can be mixed with the treated water and then stored in the clearwells/reservoirs. This water is then directed to the Mannheim Pumping Station Reservoir, where it blends with seven other ground water wells (K91, K92, K93, K94, K21, K25, and K29). Treated water from the Mannheim Village wells (K22A, K23, K24 and K26) and Shingletown wells (K50 and K51) can also indirectly supply the Mannheim Pumping Station Reservoir. This reservoir has a total storage capacity of 101.3 ML. Prior to the treated water being pumped into the distribution system, anydrous ammonia or 20% liquid ammonium sulphate is injected to convert free chlorine to the combined form, creating a more stable distribution disinfectant.

This facility has emergency standby power available.

4. Parkway Well Supply System

The Parkway Well System is comprised of three ground water wells, K31, K32 and K33. These wells pump directly into the Parkway Reservoir and Pumping Station. The Parkway Reservoir has a capacity of three million imperial gallons (14,000 cubic meters).

Disinfection is achieved by the use of a sodium hypochlorite system consisting of a solution tank complete with spill containment and protection and a metering pump dispensing commercial 12% sodium hypochlorite solution. Ammonium sulphate is added to the water at the discharge header of the pumping station prior to the water leaving the station. The purpose of the ammonium sulphate is to convert free chlorine to the combined form, creating a more stable distribution disinfectant. These chemical systems are located at Parkway Reservoir and Pumping Station.

Continuous analyzers monitor the levels of chlorine and turbidity prior to the water being discharged. The analyzers are connected with the Mannheim Water Treatment Plant SCADA system which is monitored by an operator 24 hours per day.

This site has no emergency standby power available on site.

5. Strange St. Well Supply System

The Strange Street Water Treatment System is comprised of five ground water wells, K10A, K11A, K13A (Currently out of service), K18 and K19. The wells feed into a 450 mm diameter raw water main to the Strange Street Water Treatment Plant (WTP) located at 25 Strange Street in the City of Kitchener, Ontario. The incoming well field water is injected with Sodium Hypochlorite before feeding into the Pre-Oxidation Tank (total volume: 116 m3). Low Lift Pumps situated in the Pre-Oxidation Tank are used to pump the water to three Iron and Manganese Pressure Filters. Each pressure filter contains 3 filter cells. The filtered effluent water is then injected with Sodium Hypochlorite before entering the Treated Water Reservoir (total volume: 250 m3). Disinfection is achieved by the use of sodium hypochlorite systems consisting of solution tanks complete with spill containment and protection and metering pumps dispensing commercial 12% sodium hypochlorite solution. Booster Pumps are then utilized to pump water out of the Treated Water Reservoir towards being discharged from the WTP. Before discharging the water, Ammonium sulphate is added to the water downstream of the Booster Pumps. The purpose of the ammonium sulphate is to convert free chlorine to the combined form, creating a more stable distribution disinfectant.

When the Pressure Filters require cleaning, Backwash Supply Pumps feed the Filters with filtered water from The Backwash Supply Tank (total volume: 340 m3). Wastewater from the Backwash Procedure is sent to two Backwash Waste Tanks (total volume: 442m3 each). Solids from inside these Waste Tanks is pumped into a Sludge Tank (total Volume: 84 m3) using two Sludge Pumps. Supernatant Pumps in the Backwash Waste Tanks are used to either recycle the supernatant water back to the Pre-Oxidation Tank or discharge it to a manhole outside the WTP depending on either Recycle or Waste modes.

Continuous analyzers monitor the levels of chlorine and turbidity prior to the water being discharged. The analyzers are connected with the Mannheim Water Treatment Plant SCADA system which is monitored by an operator 24 hours per day.

This site has no emergency standby power available on site.

6. Woolners (K80's) Well Supply System

The Woolners Well Supply system is comprised of three wells: K80, K81, and K82. These wells combine in a common header prior to entering the Ebydale UV Building. The water from the three wells is injected with sodium hypochlorite located in the well houses of K81 and K82. The systems consist of solution tanks complete with spill containment and protection and metering pumps dispensing commercial 12% sodium hypochlorite solution. The water entering the Ebydale UV Building is then passed through an Ultraviolet (UV) system, which provides primary disinfection. Ammonium sulphate is then added to the water at the discharge header prior to the water leaving the station. The purpose of the ammonium sulphate is to convert the free chlorine residual to a more stable combined chlorine residual.

Continuous analyzers monitor the levels of chlorine, turbidity, UVT and UV dosage prior to the water being discharged. The analyzers are connected with the Mannheim Water Treatment Plant SCADA system which is monitored by an operator 24 hours per day.

In November 2019, the well houses and treatment plant buildings were decommissioned and the connection to the Kitchener Distribution System was removed.

There is no emergency standby power available at this site.

### *Common Fluctuations*

There are known seasonal issues with the water supply:

- Summer – increased water usage can result in pressure challenges in some areas of the system
- Fall - Grand River temperature changes may cause odour challenges in the source water, which may increase flushing requirements
- Winter – temperature extremes may cause more watermain breaks in the system

### Risk Assessment Procedures and Outcomes

The Risk Assessment Procedure is provided in the Appendix.

The Risk Assessment Table shows the identified hazards and hazardous events, ranked risks, control measures, and reference to monitoring and response procedures.

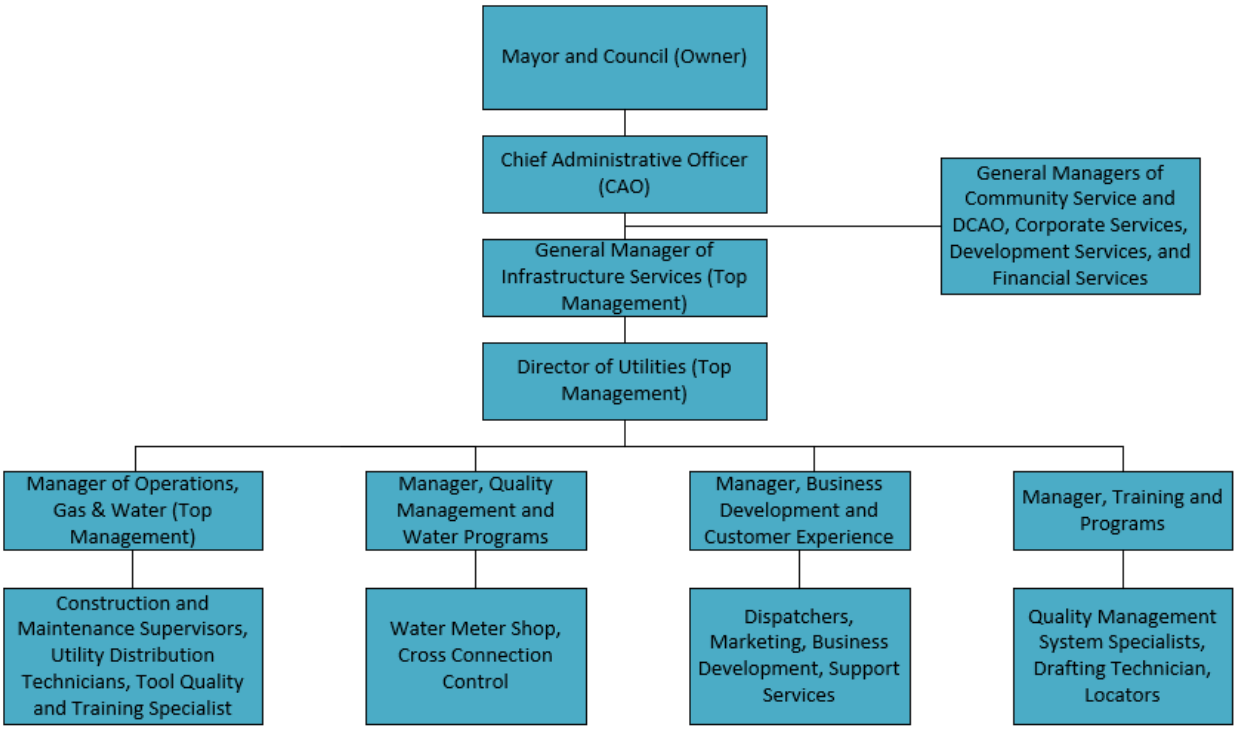
The Critical Control Points identified in the Risk Assessment are:

- Asset operation and maintenance:
  - to reduce water adverses
  - to reduce backflow / siphonage hazards including water chambers full of water with air relief valves

- to reduce chambers full of water with air relief valves
- to reduce valves accidentally left closed after watermain cleaning

## Organizational Structure, Roles, Responsibilities and Authorities

A basic overall organization chart is shown below. A detailed Organizational Chart that includes all key waterworks staff is provided in the Appendix. A list of backup or designated contacts in case of absence is available on the Kitchener Utilities Important Numbers List.




Key waterworks roles are listed as follows, with associated responsibilities and authorities. This information is communicated to staff as per the Communication Procedure.

| *Role* | *Responsibilities** | *Authorities* |
|---|---|---|
| City of Kitchener Council and Mayor (Owner) | • Prescribe requirements and monitor operations of the waterworks<br>• Provide resources and system infrastructure, as necessary<br>• Represent the waterworks to end users and the public | • Prescribe requirements and obligations for the operation of the waterworks<br>• Ensure a continual supply of safe drinking water<br>• Provide resources and system infrastructure, as necessary<br>• Designate responsibilities as appropriate |

| *Role* | *Responsibilities** | *Authorities* |
|---|---|---|
| General Manager, Infrastructure Services (Top Management) | • Obtain and provide resources as required for operation of the waterworks<br>• Attend meetings with Council and senior leadership teams<br>• Report issues to the CAO and Council, as necessary<br>• Participate in Management Review<br>• Member of Emergency Operations Centre Management Team | • Approval of hiring of all waterworks personnel<br>• On-Warn Assistance declaration |
| Director, Gas and Water Utilities (Top Management) | • Responsible for the day-to-day leadership and operation of the Utilities division. Develops and implements Utilities programs, policies, budgets, rates, and strategies that are aligned with Council's priorities and corporate strategic direction and Regulatory requirement. Accountable for ensuring regulatory compliance<br>• Supervises Utilities Managers<br>• Overall responsibility for the operation of the waterworks<br>• Attend meetings with Council as required<br>• Ensure QMS is in place<br>• Ensure Operating Authority staff are aware of applicable legislation<br>• Determine, obtain and provide resources required for QMS<br>• Report issues to the General Manager Infrastructure Services, as necessary<br>• Participate in Management Review<br>• Designates On-Call Manager as per On-call Schedule<br>• Declares Emergency exemptions for Hours of Service (MTO), or designate | • Allocation of provided resources<br>• Administration of labour agreement(s)<br>• Oversees utilities water assets<br>• Monitors expenditures, expenses and controls costs through the budget year to ensure high levels of financial, operational and service integrity on a day-to-day basis<br>• Recommends rate structures for water<br>• Designate responsibilities as required |
| Manager, Operations (Gas and Water) (Top Management) | • Manages the safe and reliable distribution of water<br>• Maintain regulatory compliance<br>• Supervise Construction and Maintenance Supervisors<br>• Schedule work assignments<br>• Work safety program<br>• Reporting of deviation from critical limits to the Manager of Quality Management & Water Programs, appropriate<br>• Report issues to the Director of Utilities as necessary<br>• Hire waterworks personnel | • Direct supervisors and staff<br>• Develop/improve departmental practices<br>• Designate responsibilities as required |

| *Role* | *Responsibilities** | *Authorities* |
|---|---|---|
| | • Determine, obtain and provide resources required for Operations<br>• Participate in Management Review<br>• Develops On-call schedule and designates ORO as per On-call Schedule<br>• Response to deviations, as required | |
| Supervisor, Utilities | • Supervise Utilities Construction & Maintenance staff in the daily operation of the City's water system; to respond to and direct staff during water emergencies.<br>• Reporting of deviation from critical limits to the Manager of Operations, as appropriate<br>• Overall Responsible Operator (ORO) when on-call<br>• OIC when not on-call<br>• Response to deviations, as required<br>• One Supervisor is designated to support training and complete training on equipment | • Direct staff in day-to-day operations and maintenance activities<br>• Schedule construction activities as they affect operations<br>• Recommend to the Manager of Operations ways to improve operational effectiveness<br>• Designate responsibilities as required |
| Manager, Training and Programs | • Reporting of deviation from critical limits to the Manager of Operations, as appropriate<br>• Manages QMS Specialist, Locator and Drafting Technician<br>• Responsible for organizing maintaining all training needs for staff directly affecting drinking water quality<br>• Training and development<br>• Backup for the Manager, Quality Management and Water Programs<br>• Participates in Top Management Review<br>• Maintain Utilities Training Matrix | • Recommend to the Manager of Operations ways to improve operational effectiveness<br>• Designate responsibilities as required<br>• Ensure training of supervisors and Construction and Maintenance staff meets requirements |

| *Role* | *Responsibilities** | *Authorities* |
|---|---|---|
| Manager, Quality Management and Water Programs – Designated as QMS Representative | • Ensures the distribution of a safe supply of drinking water to customers, including meeting regulatory requirements, developing related standards and enforcement<br>• Perform specified duties as per training and/or direction of superiors<br>• Maintain operational parameters of the waterworks<br>• Prepare Annual Regulatory Reports, Management Reviews and communication to Top Management<br>• Prepare and present reports to council<br>• Represent the waterworks in communication with the RMOW<br>• Compiling/Reporting waterworks performance operations data to council<br>• Review and Approval of Form 1 includes review of Construction drawings for new construction/ reconstruction<br>• Review and approval of commissioning plans<br>• Review of water quality reports and approval to connect<br>• Communicate QMS as per communication<br>• Monitor water quality & demand<br>• Ensure Operating Authority are aware of applicable legislation<br>• Supervises Cross Connection group and Water Meter Shop<br>• Preparation and provision of training as related to QMS<br>• Communicates to operations/supervisors for water quality related response<br>• Preparation of budget documents as related to QMS, Capital works<br>• Supports continual improvement<br>• Sits on Regional Best Management Practices committees for standard development<br><br>Designates for this position (portions) may be:<br>• Manager, Training and Programs<br>• On-Call Manager<br>• QMS Specialist | • Designate responsibilities as appropriate<br>• Arrange for corrective actions for water quality adverse<br>• Completes reporting for adverses<br>• Report of adverse water quality incidences to Top Management |
| On Call Manager | • Perform back-up to the Manager, Quality Management and Water Programs for specific water quality related items requiring immediate response<br>• Declares emergency for Hours of Service MTO | • Same as Manager, Quality Management and Water Programs |

| *Role* | *Responsibilities** | *Authorities* |
|---|---|---|
| Construction and Maintenance Staff – Utilities Distribution Technician or Operator-in Training | • Perform specified duties as per training/work instructions/procedures and/or direction of superiors<br>• Complete all paperwork/supplemental work orders – Cityworks and associated paperwork are considered to be MECP regulatory requirements<br>• Maintain operational parameters of the waterworks<br>• Maintain and repair equipment where qualified<br>• All staff must maintain Internal Responsibility System (Safety as per Occupational Health and Safety Act) | • Operate and maintain the waterworks under direction of OIC/ORO/Manager |
| Construction and Maintenance Staff - Utilities Staff – Utility Crew Leader/Temporary Crew Leader | • The OIC is the Crew Leader or the Temporary Crew Leader<br>• Constructor's representative, all duties associated with Ministry of Labour requirements<br>• Duties as outlined in Utilities Staff – Utilities Distribution Technician<br>• Rotation on 263 Emergency Response Vehicle – secondary response<br>• Complete all paperwork/supplemental work orders – Cityworks and associated paperwork are considered to be MECP regulatory requirements<br>• Perform all regulatory requirements of an OIC | • Direct crews<br>• Enforce all applicable Ontario Regulations (MECP, MOL)<br>• Enforce all applicable City policies |
| Construction and Maintenance Staff - Tool Quality Support and Training Specialist | • Maintain and repair equipment and Owner's/Manufacturer's manuals<br>• Ensure equipment is in good working order<br>• Verification/Calibration of equipment<br>• Training staff on equipment use<br>• Maintenance of equipment/sign-out logs | • Purchase equipment/supplies<br>• Maintain tools/equipment in accordance with manufacturer specs<br>• Contacting suppliers/manufacturers/ calibration companies |
| Utilities Assistant and Operational Services Support Person | • Support operational/construction related activities including scheduling, follow-up, invoicing, communication<br>• Creation of work orders | |
| Cross Connection Control Specialist | • Implements, administers and enforces the Cross Connection Control/Backflow Prevention By-law<br>• Inspection of new devices | • Determine hazards and appropriate device selection<br>• Commencement of enforcement activities (e.g. fines, water shut-off) in consultation with superiors |

| *Role* | *Responsibilities** | *Authorities* |
|---|---|---|
| Manager, Business Development and Customer Experience | • Provides leadership and direction to Dispatch staff/marketing staff<br>• Manages the collection and reporting of information regarding citizen inquires, complaints<br>• Oversees marketing, communications and branding strategies to ensure consistent messaging | • Develops operating procedures, policies, manuals and training related to customer service |
| Dispatcher | • Receive and process incoming calls from the public and internal staff for general inquires, appointments, complaints and emergencies<br>• Dispatch Construction & Maintenance Staff<br>• Provides general information and direction on the services, procedures, practices, policies and programs provided by the City through public and internal inquirers | • Follows established procedures and makes calm decisions as required in an emergency services environment<br>• Deploy resources, as required<br>• Refers escalated issues to the supervisor and/or on-call manager, when applicable |
| QMS Representative – designated as Manager-Quality Management and Water Programs | • Develop, implement and maintain the QMS<br>• Report on the performance of the QMS to Top Management<br>• Identify needs for improvement in the QMS<br>• Ensure that the current versions of documents required by the QMS are in use at all times<br>• Ensure that all personnel are aware of all applicable legislative requirements that are relevant to the operation of the works<br>• Stay up to date on changes to relevant legislative and regulatory requirements<br>• Promote the QMS throughout the Operating Authority | • Delegate duties as necessary |
| QMS Specialist | • Manages the development, implementation and maintenance of the DWQMS<br>• Develop, implement and maintain the QMS<br>• Identify needs for improvement in the QMS<br>• Ensure that the current versions of documents required by the QMS are in use at all times<br>• Ensure that all personnel are aware of all applicable legislative requirements that are relevant to the operation of the works<br>• Promote the QMS throughout the Operating Authority<br>• Assists with the preparation of water quality related reports<br>• Prepares and submits data for benchmarking<br>• Review of water quality data<br>• Review of water quality tests and provides approval to connect | • Delegate duties as necessary<br>• Arrange for corrective actions for adverse water<br>• Completes reporting for adverses |

| *Role* | *Responsibilities** | *Authorities* |
|---|---|---|
| Drafting Technician | • Processing records for operational staff (e.g. valve replacements)<br>• Updating/correcting attribute info<br>• Completing/processing records for engineering related record changes<br>• Map tentative as-built watermains based on red-line | • Record changes |
| * Job duties are as related to the DWQMS, detailed job descriptions are developed in conjunction with Human Resources for CUPE 791 and non-union management staff. Job postings may include additional information. | | |
| **Additional Resources Outside of Kitchener Utilities**<br><br>Engineering – Development Engineering, Engineering Design and Approvals and Building, Engineering Construction - design, construction and inspection of new installation and reconstruction of watermains as well as provision of as-builts<br><br>Technology Innovation and Services- mapping as-builts and maintenance of GIS system and maps<br><br>Asset Management and Business Solutions – develops the annual 10 year Road & Utility Capital Forecast using water asset condition information developed via the Infrastructure Maintenance, Rehabilitation and Renewal procedure.<br><br>Corporate Contact Centre (CCC) – some Dispatch duties after hours | | |

## Competencies

The Competencies Procedure describes the process for identifying, developing and maintaining required competencies for personnel performing duties directly affecting drinking water quality. The procedure also describes activities to ensure personnel are aware of the relevance of their duties.

Records show evidence of activities to meet and maintain the competencies described in the procedure, and to ensure personnel awareness. The Procedure is provided in the Appendix.

## Personnel Coverage

The Personnel Coverage Procedure describes the process for ensuring personnel are available for duties. The Procedure is provided in the Appendix.

## Communications

The Communications Procedure describes the process for ensuring relevant aspects of the QMS are communicated between Top Management and the Owner, waterworks personnel, suppliers and the public. The Procedure is provided in the Appendix.

## Essential Supplies and Services

The Essential Supplies and Services Procedure describes the process for identifying essential supplies and services, and ensuring quality requirements and procurement methods are established and communicated. The Procedure is provided in the Appendix.

## Infrastructure Review and Provision

The Infrastructure Review Procedure describes the process for the review of the infrastructure adequacy. This Procedure is provided in the Appendix. The procedure also describes the provision of infrastructure, and the communication of review findings to the Owner. The Procedure is provided in the Appendix.

## Infrastructure Maintenance, Rehabilitation and Renewal

The Infrastructure Maintenance, Rehabilitation and Renewal Procedure describes the maintenance programs undertaken by Kitchener Utilities, and how the system is rehabilitated and renewed. The Procedure is provided in the Appendix.

## Sampling, Testing, and Monitoring

The Sampling, Testing and Monitoring Procedure describes procedures used to maintain chlorine residual in the Distribution System by sampling, testing and monitoring at the waterworks. Maintenance programs including dead end main flushing and new development flushing maintain chlorine residuals within the distribution system. The procedure outlines requirements for bacteriological testing within the distribution system, including temporary watermains. Additional sampling requirements as per regulatory requirements are also included in the procedure (see Appendix).

## Calibration

The Calibration Procedure describes procedures for maintenance and calibration of measurement and recording equipment. The Procedure is provided in the Appendix.

## Emergency Management

An emergency is considered to be a potential situation or service interruption that may result in the loss of the ability to maintain a supply of safe drinking water to consumers.

The Emergency Management procedure describes the process of maintaining a state of emergency preparedness at the waterworks. It refers to applicable emergency response procedures. The procedure is provided in Appendix.

## Internal Audits

The Internal Audits Procedure describes the procedure for internal audits, including audit criteria, frequency, scope, records, methodology and schedule. The Corrective Action Procedure describes the process of initiating, investigating, performing and documenting corrective actions. Both procedures are provided in the Appendix.

## Management Review

The Management Review Procedure describes the procedure for management review, including review items, reviewers, outcomes, and documentation. The Procedure is provided in the Appendix.

## Continual Improvement

Kitchener Utilities strives to continually improve the effectiveness of its QMS through the use of corrective actions, especially from the annual internal audits (as per the Internal Audit Procedure), staff suggestions and management reviews (as per the Management Review Procedure). The procedure can be found in the Appendix.

## History of Changes

| Revision | Date | Description | By |
|---|---|---|---|
| 24.0 | January 30, 2019 | Updating infrastructure summary, deleting outdated information. | Steve Young |
| 25.0 | September 30, 2019 | Filing of approval of QMS Rep, new element 15 procedure, updating job titles | Steve Young |
| 26.0 | March 5, 2020 | Update of Drinking Water Distribution System section and other sections as a result of the Kitchener Utilities Re-org. | Dean Chapman |
| 27.0 | April 17, 2020 | Updated Description of Water Source section to be consistent Region of Waterloo's Water Quality Report. | Ras Sonthisay |
| 28.0 | March 3, 2021 | Updates to the Drinking Water Distribution System section. | Dean Chapman |
| 29.0 | January 12, 2022 | Updates to the Drinking Water Distribution System stats and Strange St Well Supply system. | Dean Chapman |

| | | | |
|---|---|---|---|
| 30.0 | September 29, 2022 | Primary response vehicle added to definitions section. | Angela Mick |
| 31.0 | January 10, 2023 | Updates to the Drinking Water Distribution System and Sampling, Testing and Monitoring sections. | Angela Mick, Dean Chapman |

## SUBJECT SYSTEM DESCRIPTION FORM

Print Form

Ontario — Ministry of the Environment and Climate Change

**Schedule C – Director's Directions for Operational Plans (Subject System Description Form)**
**Municipal Residential Drinking Water System**

Fields marked with an asterisk (*) are mandatory.

Owner of Municipal Residential Drinking Water System *
The Corporation of the City of Kitchener

Name of Municipal Residential Drinking Water System *
Kitchener Distribution System

**Subject Systems**

☑ Check here if the Municipal Residential Drinking Water System is operated by one operating authority. Enter the name of the operating authority in the below table.

| | Name of Operational Subsystems(if Applicable) | Name of Operating Authority * | DWS Number(s) * |
|---|---|---|---|
| 1 | | City of Kitchener | 260001458 |

Add item (+)

Provide the information outlined in the 'Contact Information' section for **each** Operational Subsystem.

**Contact Information** Remove

| Last Name * | First Name * | Middle Initial |
|---|---|---|
| Mick | Angela | L |

| Title * | Phone Number * |
|---|---|
| Utilities Water Engineer | 519 741-2600 |

Email Address *
angela.mick@kitchener.ca

Add item (+)

Save Form | Print Completed Form | Clear Form

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## APPENDICES

WATER DISTRIBUTION SYSTEM MAP

Appendix 1 Endorsement
Appendix 2 Document Control Procedure
Appendix 3 Record Control Procedure
Appendix 4a Risk Assessment Procedure
Appendix 4b Risk Assessment Table
Appendix 5 Critical Control Point Procedure
Appendix 6a Current Position/Employee List
Appendix 6b Organizational Chart
Appendix 6c Construction and Maintenance Staff
Appendix 7 Competencies Procedure
Appendix 8 Personnel Coverage Procedure
Appendix 9 Communications Procedure
Appendix 10 Essential Supplies and Services Procedure
Appendix 11 Review and Provision of Infrastructure Procedure
Appendix 12 Sampling, Testing and Monitoring Procedure
Appendix 13 Emergency Management Procedure
Appendix 14 Maintenance and Calibration of Measuring & Recording Equipment Procedure
Appendix 15 Internal Audits Procedure
Appendix 16 Corrective Action Procedure
Appendix 17 Management Review Procedure
Appendix 18 Continual Improvement Procedure
Appendix 19 Infrastructure Maintenance, Rehabilitation and Renewal Procedure
Appendix 20 Drinking Water Works Permit

| | |
|---|---|
| **REPORT TO:** | **Community and Infrastructure Services Committee** |
| **DATE OF MEETING:** | **March 6, 2023** |
| **SUBMITTED BY:** | **Greg St. Louis, Director, Gas & Water Utilities, 519-741-2600 ext. 4538** |
| **PREPARED BY:** | **Angela Mick, Manager, Quality Management and Water Programs, 519-741-2600 ext. 4408** |
| **WARD(S) INVOLVED:** | **Ward(s)** |
| **DATE OF REPORT:** | **February 2, 2023** |
| **REPORT NO.:** | **INS-2023-011** |
| **SUBJECT:** | **Drinking Water Quality Management Standard (DWQMS): Management Review Summary for 2022** |

## RECOMMENDATION:

**That the City of Kitchener Drinking Water Quality Management Standard (DWQMS): Management Review Summary for 2022 Report be received for information.**

## REPORT HIGHLIGHTS:

- The purpose of this report to inform the decision-making authority about the status of the drinking water system
- The key finding of this report is that the Kitchener distribution system meets the requirements under the *Safe Drinking Water Act*.
- There are no financial implications of this report
- This report supports the delivery of core services.

## BACKGROUND:

The *Safe Drinking Water Act, 2002* and *Regulation 188/07*, requires the City of Kitchener to be licensed to operate and maintain Kitchener's water distribution system. Some of the licensing requirements include the development and management of a Quality Management System (QMS) and Operational Plan as well as communication to the owner. The City of Kitchener became licensed in August, 2009 with a Financial Plan submitted in July, 2010. The licence was renewed in 2019.

Section 19 of the *Safe Drinking Water Act* imposes a statutory standard of care on persons who oversee the municipal drinking water system: "…every person who, on behalf of the municipality, oversees the accredited operating authority of the system or exercises decision-making authority over the system". This standard of care includes Council since they have decision-making authority. Part of the standard of care includes requiring system owners to undertake financial planning and implement the Drinking Water Quality Management System (DWQMS). The following link is a guide for municipal councillors to help understand their responsibilities under the *Safe Drinking Water Act, 2002* and provides information on how Ontario's drinking water is

safeguarded: Taking Care of Your Drinking Water: A Guide for Members of Municipal Councils | ontario.ca

Three things to remember as a municipal councillor (as outlined in the above Guide):

- It's your duty. There are legal consequences for not acting as required by the standard of care, including possible fines or imprisonment.
- Be informed. Your decisions can have an impact on public health. You don't have to be an expert in drinking water operations, but you do need to be informed about them.
- Be vigilant. It is critical you never take the drinking water safety for granted or assume all is well with the drinking water systems under your care and direction.

**REPORT:**

The purpose of this report is to inform Council as the decision-making authority about the status of the drinking water system on an annual basis. The Kitchener water distribution system meets the requirements under the *Safe Drinking Water Act*. There are specific areas that must be reported per regulatory requirements, which include; but are not limited to consumer feedback, results of infrastructure review, results of audits and summary of maintenance.

The DWQMS requires Top Management to "report the results of the management review, the identified deficiencies, decisions and action items to the Owner". Top Management is defined as "a person, persons or group of people at the highest management level within an Operating Authority that makes decisions respecting the QMS and recommendations to the Owner respecting the subject system or subjects systems". The Owner of the water utility is the Corporation of the City of Kitchener, represented by City Council.

The 2022 Management Review was completed with Top Management: Denise McGoldrick, General Manager, Infrastructure Services, Greg St. Louis, Director, Gas & Water Utilities, and Tammer Gaber, Manager, Operations (Gas & Water) as well as Matt Ryan, Manager, Training and Programs, Angela Mick, Manager, Quality Management and Water Programs and Dean Chapman, Quality Management System Specialist. The Management Review report is attached.

Highlights of the report are:

- The Summary Water Report-2022 (INS-2023-010) confirmed that the drinking water system was in compliance with regulatory water sampling requirements during 2022. The DWQMS Management Review confirms the continuing adequacy and effectiveness of the quality management system which includes compliance, customer feedback, operational performance, audit information etc. as outlined in this report.
- COVID restrictions were minimal and largely did not impact 2022 operations; however, construction and operating costs increased.
- Year Five Water Infrastructure Program (WIP) maintenance end of year achievements (specific areas of improvement identified by WIP):
    - Cleaned approximately 168km of watermain. 2022 was the final year of the 6 year program to complete all main cleaning over 6 years. In 2023 the program will restart with the area previously cleaned in 2017.
    - Water quality complaints continue to decrease. There were 105 complaints total with 28 discoloured water complaints for 2022; which has greatly decreased from pre-watermain cleaning/pre-treatment plant upgrade levels in 2016 (395 complaints total with 147 discoloured water).

    - 21 broken valves and/or failing valves were either replaced or removed which allows for quicker isolation for water emergencies. Broken valves are tracked in real time and the majority are addressed within weeks (except for winter).
    - Approximately 1,873 valves were proactively operated (23%); the majority were within the watermain cleaning area and the 2022 reconstruction areas. Operating valves ensures that they will work when they are needed in an emergency or for construction activities.
    - Completed spring and fall maintenance of fire hydrants.
    - Underground utility locates – continued to meet regulatory requirements with a combination of in-house and contract staff (17,885 locates completed; representing the largest number of locates completed over the past 10 years).
    - Approximately 3,300 services are protected by Backflow Prevention (BFP) – the focus is on high risk use.
    - Regulatory reliefs were provided by the Ministry to decrease the number of monthly samples and to limit the fall lead testing programs (customer premises) to hydrants only due to COVID restrictions. A relief has also been granted for the spring 2023 lead testing program (hydrants only).
- An inspection of approximately 130 air relief valves in chambers was completed. No air reliefs were replaced in 2022. A study was commenced to determine which air reliefs require replacement and which may be removed.
- There were 93 watermain breaks in 2022, which is above than the 5-year average of 84.
- Approximately 6,065 aging/problem water meters were replaced.
- Hydrant painting program for corrosion protection was re-started with 450 hydrants painted, painting will continue in 2023. Hydrants are also stencilled with the watermain diameter for the Fire Department.
- Unaccounted for water was 10% (At the 10% industry target). The unaccounted for water generally fluctuates around 10% (9-12%, with 10% being the approx. 10 year average).
- Pressure reducing valve maintenance was completed.
- The Water Utility Asset Management Plan was completed in 2022. The water assets have a value of more than $1 Billion and are generally in very good condition. Overall, watermains are more than halfway through their useful life. This is being addressed through the WIP.
- Staff training programs included: Ethics for Drinking Water Operators, Water Quality for Distribution System Operators and New Watermain Commissioning Course. DWQMS Awareness training occurred for new staff.
- Replaced watermains as outlined in the 2022 City of Kitchener Engineering & Water Utility Capital Forecast.
- External audit determined that the management system is effectively implemented and maintained and recommended continued certification of accreditation for the municipal drinking water system.
- Increased erosion and sediment control procedures during watermain breaks to minimize sediment from entering storm sewer and to provide rehabilitation steps if sediment does enter storm sewer or watercourses. Sediment control/rehabilitation costs associated with watermain breaks can be significant.
- Locate related costs are expected to increase significantly in 2023 due to new regulatory requirements. Locating costs are split between gas and water. A Locate Review is

currently being led by the City's Internal Auditor to evaluate the service level, risk and resourcing needs associated with new legislative requirements.

Continuing Areas of Focus are:

- Continue with tasks associated with the next WIP review.
- Re-endorsement of the DWQMS Operational Plan by Council.
- Approval of the Water Distribution System Financial Plan as part of Application for Renewal of Licence due later this year.
- Proceed with improvements to the As-built process in conjunction with Engineering, specifically hiring the additional resource approved through the budget process. There has been difficulty filling this position. Hiring staff is the last outstanding item related to the 2020 MECP inspection which flagged that The owner did not have up-to-date documents describing the distribution components as required. As-builts and GIS mapping is required within 12-months from when a new watermain is commissioned. A number of process changes have been completed over the last 2 years to improve turn-around time.
- Development and roll out AMANDA solution for better tracking of Backflow Prevention/Cross Connection program.
- Development of a water disruption communication tool. The existing Watermain Break App provides for updates to the website and email for emergency watermain breaks but there is no notification for planned water outages or emergency outages associated with other infrastructure (valves, services).
- Check valves along the LRT. The valves are largely new but are deemed to be critical due to potential impacts to the LRT.
- Hydrant mobile field inspections are anticipated to be rolled out in spring 2023. It is anticipated that the solution will provide efficiencies by minimizing data entry and provide faster deficiency follow-up.
- Proceed with OnPoint roll-out to replace ArcReader infrastructure mapping.
- Proceed with filling technical water position approved as part of the 2023 budget process.
- Participation in locates review with Internal Auditor.

**STRATEGIC PLAN ALIGNMENT:**

This report supports the delivery of core services.

**FINANCIAL IMPLICATIONS:**

The recommendation has no impact on the Capital or Operating Budgets.

**COMMUNITY ENGAGEMENT:**

INFORM – This report has been posted to the City's website with the agenda in advance of the council / committee meeting. The Drinking Water Quality Management Policy is available on the Kitchener Utilities website.

**PREVIOUS REPORTS/AUTHORITIES:**

There are no previous reports/authorities related to this matter; however the Management Review Summary Reports are provided on an annual basis with the last report being INS-2022-038

**APPROVED BY:** Denise McGoldrick, General Manager, Infrastructure Services

**ATTACHMENTS:**

Attachment A – Drinking Water Quality Management Standard Review - 2022

# Kitchener Utilities
# City of Kitchener Drinking Water Distribution System

# Drinking Water Quality Management Standard
# Management Review – 2022

# City of Kitchener Water Distribution

# DWQMS Management Review

## TABLE OF CONTENTS

# City of Kitchener Water Distribution

# DWQMS Management Review

## PART A - INTRODUCTION

### Purpose

The purpose of this report is to inform the decision-making authority about the status of the drinking water system. The Drinking Water Quality Management Standard (DWQMS) under the Ministry of Environment, Conservation and Parks (MECP) requires management to review and evaluate the continuing suitability, adequacy, and effectiveness of the Quality Management System at least once a calendar year and that the results of the management review, identified deficiencies, decisions and action items are provided to Council as the 'Owner' of the drinking water system.

### Executive Summary

Highlights of the report are:

- The Summary Water Report-2022 (INS-2023-010) confirmed that the drinking water system was in compliance with regulatory water sampling requirements during 2022. The DWQMS Management Review confirms the continuing adequacy and effectiveness of the quality management system which includes compliance, customer feedback, operational performance, audit information etc. as outlined in this report.
- COVID restrictions were minimal and largely did not impact 2022 operations; however, construction and operating costs increased.
- Year Five Water Infrastructure Program (WIP) maintenance end of year achievements (specific areas of improvement identified by WIP):
    - Cleaned approximately 168km of watermain. 2022 was the final year of the 6 year program to complete all main cleaning over 6 years. In 2023 the program will restart with the area previously cleaned in 2017.
    - Water quality complaints continue to decrease. There were 105 complaints total with 28 discoloured water complaints for 2022; which has greatly decreased from pre-watermain cleaning/pre-treatment plant upgrade levels in 2016 (395 complaints total with 147 discoloured water).
    - 21 broken valves and/or failing valves were either replaced or removed which allows for quicker isolation for water emergencies. Broken valves are tracked in real time and the majority are addressed within weeks (except for winter).
    - Approximately 1,873 valves were proactively operated (23%); the majority were within the watermain cleaning area and the 2022 reconstruction areas. Operating valves ensures that they will work when they are needed in an emergency or for construction activities.
    - Completed spring and fall maintenance of fire hydrants.
    - Underground utility locates – continued to meet regulatory requirements with a combination of in-house and contract staff (17,885 locates completed; representing the largest number of locates completed over the past 10 years).
    - Approximately 3,300 services are protected by Backflow Prevention (BFP) – the focus is on high risk use.

  - Regulatory reliefs were provided by the Ministry to decrease the number of monthly samples and to limit the fall lead testing programs (customer premises) to hydrants only due to COVID restrictions. A relief has also been granted for the spring 2023 lead testing program (hydrants only).
- An inspection of approximately 130 air relief valves in chambers was completed. No air reliefs were replaced in 2022. A study was commenced to determine which air reliefs require replacement and which may be removed.
- There were 93 watermain breaks in 2022, which is above than the 5-year average of 84.
- Approximately 6,065 aging/problem water meters were replaced.
- Hydrant painting program for corrosion protection was re-started with 450 hydrants painted, painting will continue in 2023. Hydrants are also stencilled with the watermain diameter for the Fire Department.
- Unaccounted for water was 10% (At the 10% industry target). The unaccounted for water generally fluctuates around 10% (9-12%, with 10% being the approx. 10 year average).
- Pressure reducing valve maintenance was completed.
- The Water Utility Asset Management Plan was completed in 2022. The water assets have a value of more than $1 Billion and are generally in very good condition. Overall, watermains are more than halfway through their useful life. This is being addressed through the WIP.
- Staff training programs included: Ethics for Drinking Water Operators, Water Quality for Distribution System Operators and New Watermain Commissioning Course. DWQMS Awareness training occurred for new staff.
- Replaced watermains as outlined in the 2022 City of Kitchener Engineering & Water Utility Capital Forecast.
- External audit determined that the management system is effectively implemented and maintained and recommended continued certification of accreditation for the municipal drinking water system.
- Increased erosion and sediment control procedures during watermain breaks to minimize sediment from entering storm sewer and to provide rehabilitation steps if sediment does enter storm sewer or watercourses. Sediment control/rehabilitation costs associated with watermain breaks can be significant.
- Locate related costs are expected to increase significantly in 2023 due to new regulatory requirements. Locating costs are split between gas and water. A Locate Review is currently being led by the City's Internal Auditor to evaluate the service level, risk and resourcing needs associated with new legislative requirements.

Continuing Areas of Focus are:

- Continue with tasks associated with the next WIP review.
- Re-endorsement of the DWQMS Operational Plan by Council.

- Approval of the Water Distribution System Financial Plan as part of Application for Renewal of Licence due later this year.
- Proceed with improvements to the As-built process in conjunction with Engineering, specifically hiring the additional resource approved through the budget process. There has been difficulty filling this position. Hiring staff is the last outstanding item related to the 2020 MECP inspection which flagged that The owner did not have up-to-date documents describing the distribution components as required. As-builts and GIS mapping is required within 12-months from when a new watermain is commissioned. A number of process changes have been completed over the last 2 years to improve turn-around time.
- Development and roll out AMANDA solution for better tracking of Backflow Prevention/Cross Connection program.
- Development of a water disruption communication tool. The existing Watermain Break App provides for updates to the website and email for emergency watermain breaks but there is no notification for planned water outages or emergency outages associated with other infrastructure (valves, services).
- Check valves along the LRT. The valves are largely new but are deemed to be critical due to potential impacts to the LRT.
- Hydrant mobile field inspections are anticipated to be rolled out in spring 2023. It is anticipated that the solution will provide efficiencies by minimizing data entry and provide faster deficiency follow-up.
- Proceed with OnPoint roll-out to replace ArcReader infrastructure mapping.
- Proceed with filling technical water position approved as part of the 2023 budget process.
- Participation in locates review with Internal Auditor.

**Background**

One of recommendations from Justice O'Connor's Part Two Report of the Walkerton Inquiry was "The Ministry of the Environment should require the owners of municipal water systems to obtain an owner's licence for the operation of their waterworks". Justice O'Connor also recommended that the Owners and Operating Authorities of these systems implement a quality management approach to operations and management. As a result of these recommendations a Drinking Water Quality Management Standard (DWQMS) under the *Safe Drinking Water Act, 2002* was released in October 2006.

The *Safe Drinking Water Act, 2002* and *Regulation 188/07*, requires the City of Kitchener to be licensed to operate and maintain Kitchener's Water Distribution System. Some of the licensing requirements include the development and management of a Quality Management System (QMS) and Operational Plan as well as communication to the Owner. The City of Kitchener became licensed in August 2009 with a Financial Plan originally submitted in July 2010. Renewals of the Licence and Financial Plan were complete and brought forward to Council in 2014 and 2018, and every 4-5 years thereafter prior to each Drinking Water System License

renewal. The Financial Plan will be brought forward to Council in 2023 and an application for licence renewal will be made in late 2023.

Section 19 of the *Safe Drinking Water Act, 2002* imposes a statutory standard of care on persons who oversee the municipal drinking water system: "…every person who, on behalf of the municipality, oversees the accredited operating authority of the system or exercises decision-making authority over the system." This standard of care includes Council since they have decision-making authority as the 'Owner" of the system. Part of the standard of care includes requiring system owners to undertake financial planning and implement a QMS.

The following link is a guide for municipal councillors to help understand their responsibilities under the *Safe Drinking Water Act, 2002* and provides information on how Ontario's drinking water is safeguarded: Taking Care of Your Drinking Water: A Guide for Members of Municipal Councils | ontario.ca

Three things to remember as a municipal councillor (as outlined in the above Guide):

- It's your duty. There are legal consequences for not acting as required by the standard of care, including possible fines or imprisonment.
- Be informed. Your decisions can have an impact on public health. You don't have to be an expert in drinking water operations, but you do need to be informed about them.
- Be vigilant. It is critical you never take the drinking water safety for granted or assume all is well with the drinking water systems under your care and direction.

**Other Related Water Quality Reports**

The City of Kitchener Summary Water Report for 2022 is a regulatory report provided to Council, which provides a summary of drinking water including adverse water quality incidences and water volume.

The Kitchener Distribution System prepares an annual summary of the number of tests taken within the distribution system as well as the range of the results. A copy of this report is available on the Kitchener Utilities website.

The Kitchener Distribution System is part of an Integrated Urban System, meaning the Regional Municipality of Waterloo is responsible for water treatment and the development and operation of a trunk water network to distribute treated water to Kitchener, Cambridge, Waterloo, Woolwich, and Wilmot. There is a variety of groundwater supply wells (80%), treatment facilities as well as a Grand River (20%) source. The Region of Waterloo's water infrastructure system is complex, consisting of numerous supply sources, pressure zones, reservoirs, and pumping stations. Ensuring sufficient pressure and quantities to meet current and planned growth requires a long-term, co-ordinated strategy. The Region provides annual summaries for each supply and the information is available on their website with a link available at the Kitchener Utilities website.

A portion of Kitchener (River Ridge area) is supplied by the City of Waterloo. Kitchener supplies water to a small section of Waterloo (Ira Needles area) and water travels through the Kitchener distribution system to Breslau (Woolwich). The City of Waterloo's water quality report is available on their website.

**Quality Management System Policy**

Kitchener Utilities owns, maintains, and operates the City of Kitchener's Drinking Water Distribution System. At Kitchener Utilities, we are committed to supplying the City with safe drinking water. We work together as the City of Kitchener and the Region of Waterloo to keep water matters top of mind. We are committed to these principles:

1. Quality

Kitchener water is safely treated and regularly tested according to government legislation and regulations for the consistent delivery of safe, quality drinking water. We are committed to maintaining and continually improving the Quality Management System and complying with applicable legislation.

2. Trust

Trust us to look after your water needs by delivering quality water and reliable service.

3. Value

Tap water is the most economical choice.

4. Communication

We will communicate openly with the public concerning matters of drinking water quality.

## PART B – MANAGEMENT REVIEW

### System Description

The scope of the waterworks begins at the point where treated water enters the watermain from the treatment facilities and ends at the property lines of the consumers. There is no storage, chlorine boosting, secondary disinfection or pressure boosting within the control of the waterworks.

At the end of 2022, the waterworks consists of approximately:

- 924.6 km of distribution watermain – 792 km Kitchener owned, 23 km Dual owned (joint ownership between Kitchener and Region) and 109 km Regional owned .
- 70,572 water meters in service.
- 4,717 hydrants (not including private hydrants).
- 8,005 valves (not including service valves or hydrant valves) – 7,445 Kitchener owned, 130 Dual and 430 Regional.

(See **Appendix** for a map at end of this document)

The waterworks system has the following permits and licences:

- Municipal Drinking Water Licence
- Drinking Water Works Permit
- Financial Plan
- Operational Plan

### Water Infrastructure Program

The Water Infrastructure Program (WIP) was initiated in spring 2017. Targets for Year 5 of maintenance-related work were achieved, included:

- Watermain cleaning program - cleaned 168km of the City.
- Valve maintenance and replacement programs – operated approximately 1,873 valves and replaced 21 broken or failing valves.
- Hydrant operation and maintenance – completed as required.
- Underground utility locates – continued to meet regulatory requirements with a combination of in-house and contract staff (17,885 locates completed).
- Approximately 3,300 services are protected by Backflow Prevention (BFP), approximately 2,400 still require protection. The exact number of devices will not be reportable until the new system is fully operational, anticipated in 2023.

### COVID Impacts

- COVID impacts were lessened in 2022, however there were ongoing difficulties with parts/supplies on back order and cost increases. There are indications that the cost increases and supply chain issues will continue into 2023 and may impact reconstruction project costs. Staff are monitoring trends closely to determine appropriate mitigation actions.
- A regulatory relief was provided for the spring and fall lead sampling program – hydrants were only sampled, no internal sampling. A request for relief from the spring 2023 program has been granted.

**Incidents of Regulatory Non Compliance**

A Ministry of Environment, Conservation and Parks (MECP) completed an announced inspection on June 23, 2023, and covered June 23, 2021, to June 23, 2022. There were no notices of non-compliance.

A notice of violation was created by the MECP on September 16, 2022, relating to three watermain breaks which occurred on September 14, 2022. Due to a lack of erosion and sediment control measures, significant sediment was discharged to Sandrock Creek. Corrective action included hiring a third party to assess the creek, completion of recommended remediation activities, creation of new procedures to prevent future issues and training staff on the procedures.

**Incidences of Adverse Drinking Water**

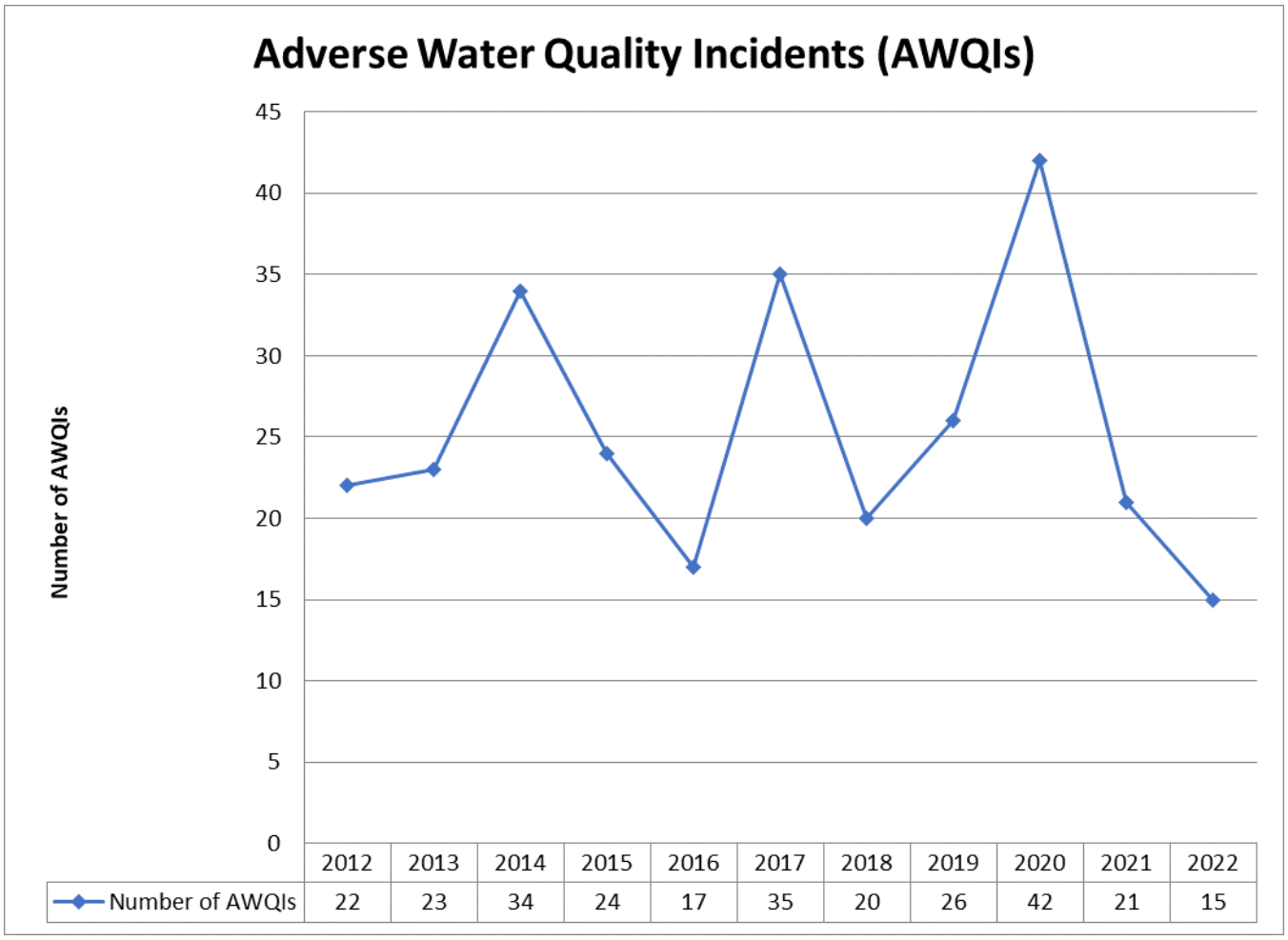
There were 15 Adverse Water Quality Incidences (AWQI) during the year. One self-imposed Boil Water Advisories (BWA) was initiated in 2022 and one Drinking Water Advisory (DWA) was initiated. The volume of AWQIs decreased from 2021, the majority of the decrease was related to temporary watermains used during construction. Temporary watermains are particularly sensitive as they are above ground systems influenced by the water heating up in warmer temperatures. This may increase the potential for bacteriological growth. Warmer weather seems to increase the incidences of Total Coliform. The additional challenge with temporary watermains is the sample port is located outside and subject to unsanitary conditions. Many contractors remove the sampling ports when not in use because they are subject to vandalism/theft. These ports need to be maintained in a sanitary condition between uses. The general nature of reconstruction projects often leads to “false positives”, where the results received are more reflective of what is on the sampling tap, rather than what is in the water. Every positive result is reportable, and resampling must occur in accordance with regulations. When the resamples are clear, it is an indication that the issue was with the sampling port, not in the water. Additional communications efforts to contractors regarding the importance of maintain the sampling ports in a sanitary manner was made over the 2022 construction season. These communication efforts will continue for 2023 and beyond.

- Low chlorine AWQIs (8 total)

  - Six were in areas of new subdivisions with no houses yet built. Along with dead ends, KU proactively flushes new areas until there are homes built and water is being used.
- Total coliform AWQIs (5 total)
  - 4 were at temporary main sampling locations.
  - 1 was at a distribution sampling location.
- Boil Water Advisory (BWA – 1 total)
  - E-Coli present in distribution sample for KID 129 Victoria Hills Community Centre.
- Drinking Water Advisory (DWA – 1 total)
  - Non-Potable Grease found on Fitting at 2 services
- Lead:
  - No lead adverses were reported in 2022. Due to COVID, the spring and fall lead program was reduced to sampling for lead at hydrants (relief was granted by MECP). No exceedances were reported.

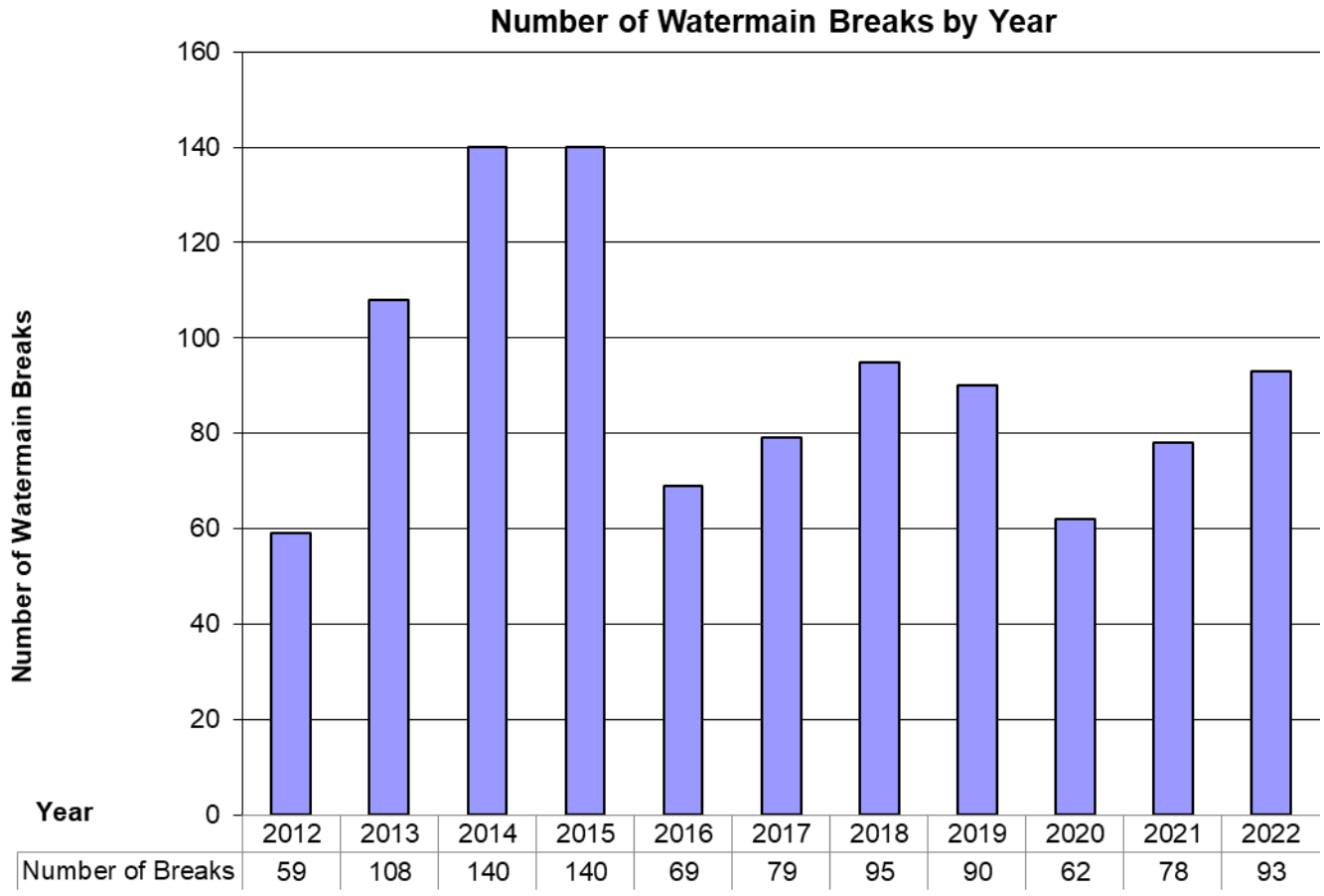
In general, corrective actions include reporting, flushing and resampling. The above AWQIs were all resolved. The Summary Water Report for 2022 discusses water quality compliance and corrective actions further.

Action: No further action required – for information only



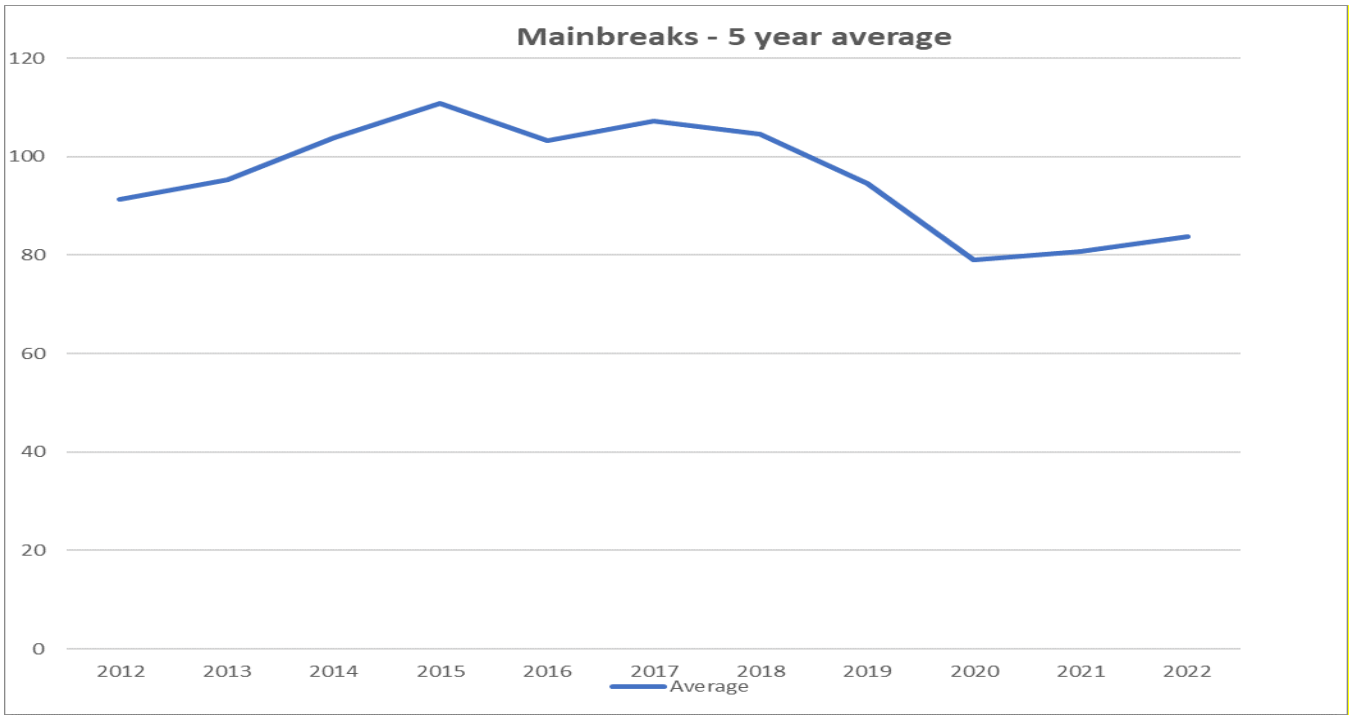

**Deviations from Critical Control Points Limits and Response**

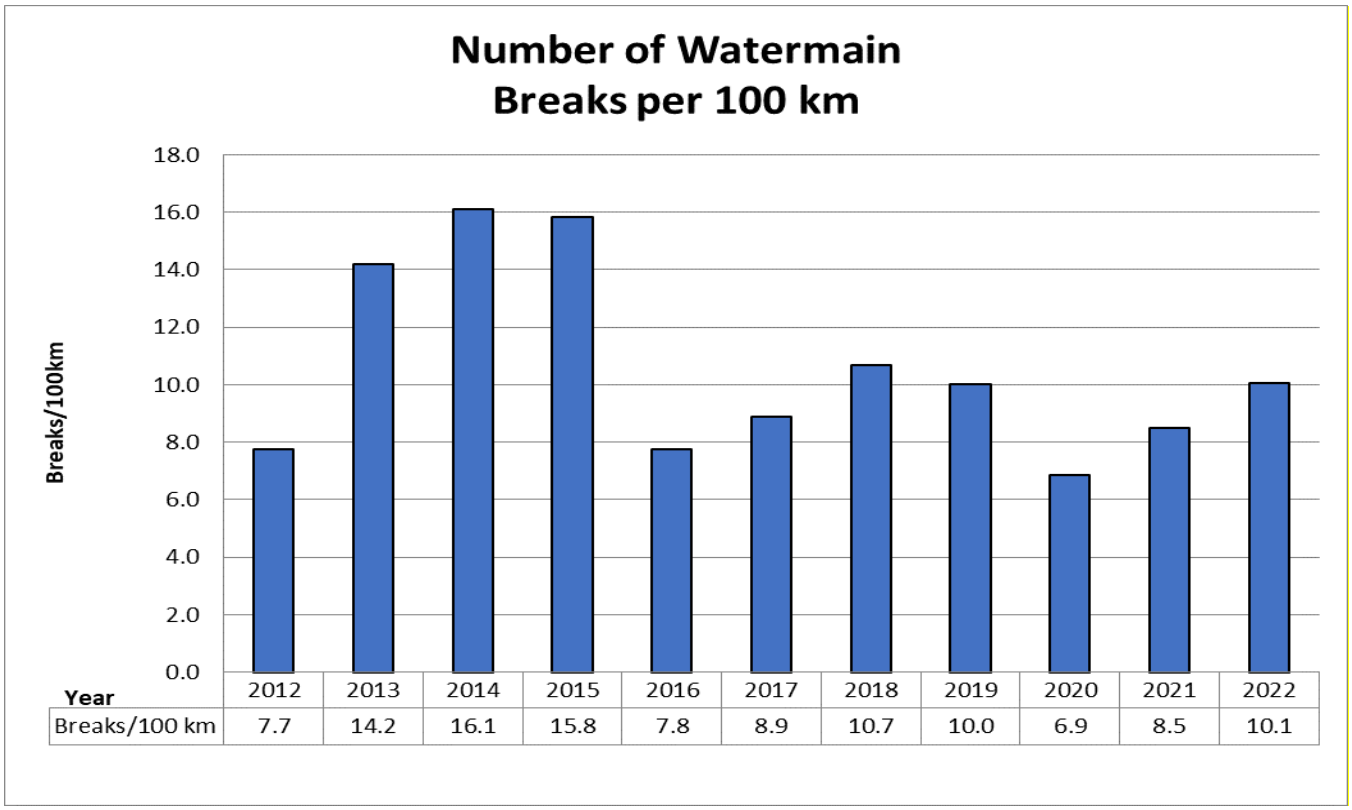
- There were 93 watermain breaks in 2022, which is slightly higher than the 5-year average of 84. Of the 93, 17 were deemed to be Category 2. Category 2 watermain breaks require bacteriological sampling upon completion. The 5-year average increased slightly due to an increase in watermain breaks in 2022 over 2021 as well as the removal of a low break year (2017 was 79 breaks). Watermain breaks are influenced by the watermain age/condition, material type, and is also heavily weather dependent due to the frost movement with colder winters resulting in more breaks. Incident debriefs are completed for watermain breaks and break history is included as part of asset condition. This information helps to determine priorities for replacement due to condition.


Number of Watermain Breaks by Year
Number of Watermain Breaks
160
140
120
100
80
60
40
20
0
Year
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
Number of Breaks
59
108
140
140
69
79
95
90
62
78
93

# City of Kitchener Water Distribution

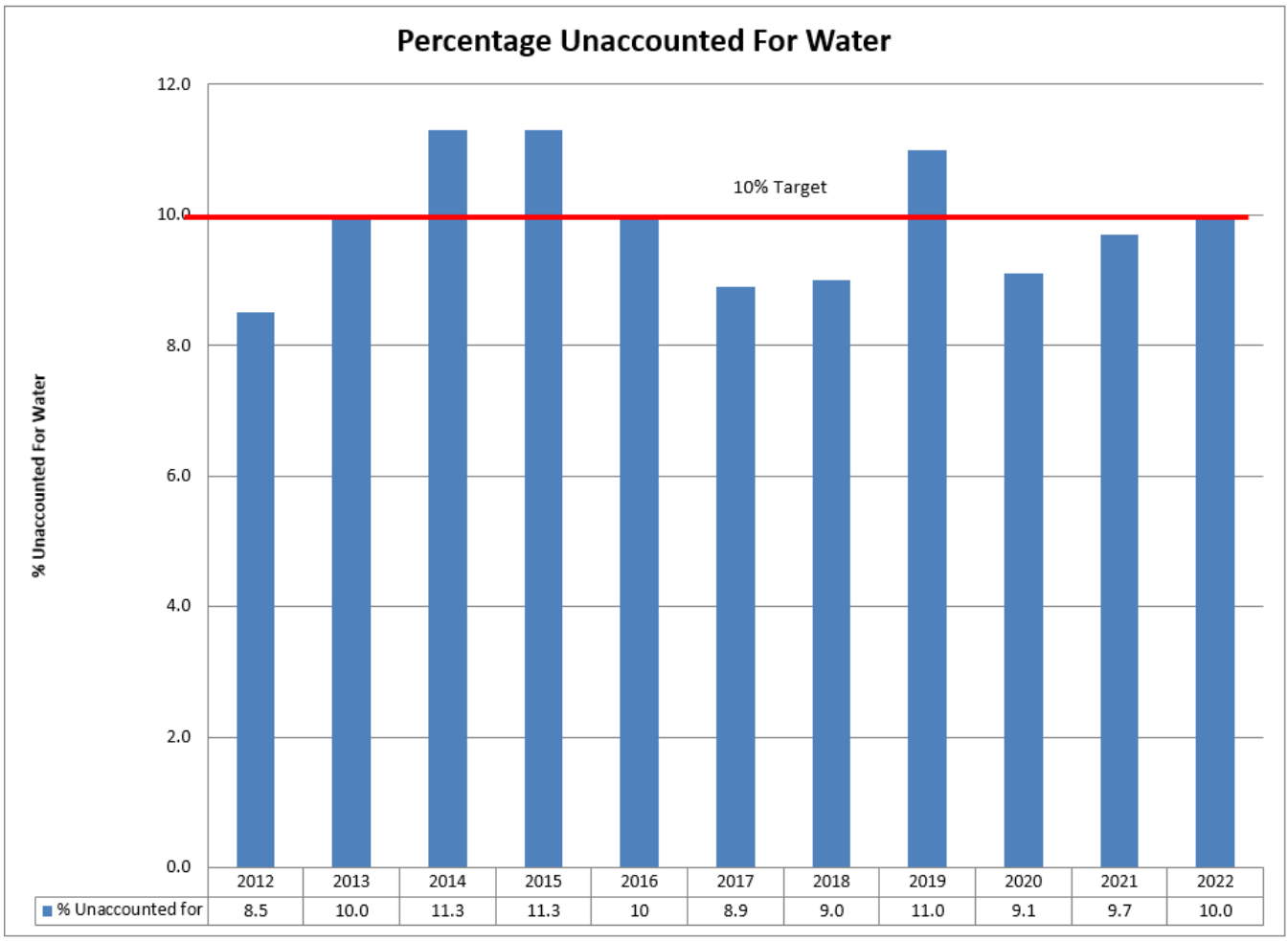
# DWQMS Management Review

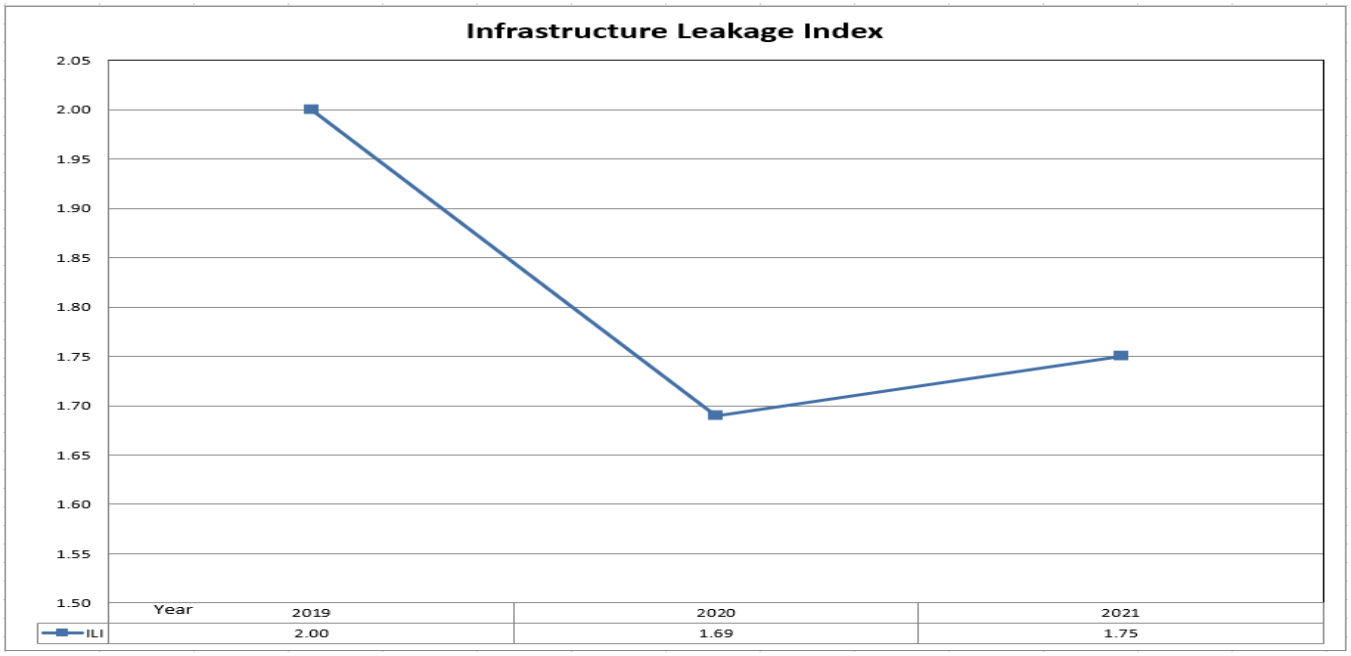


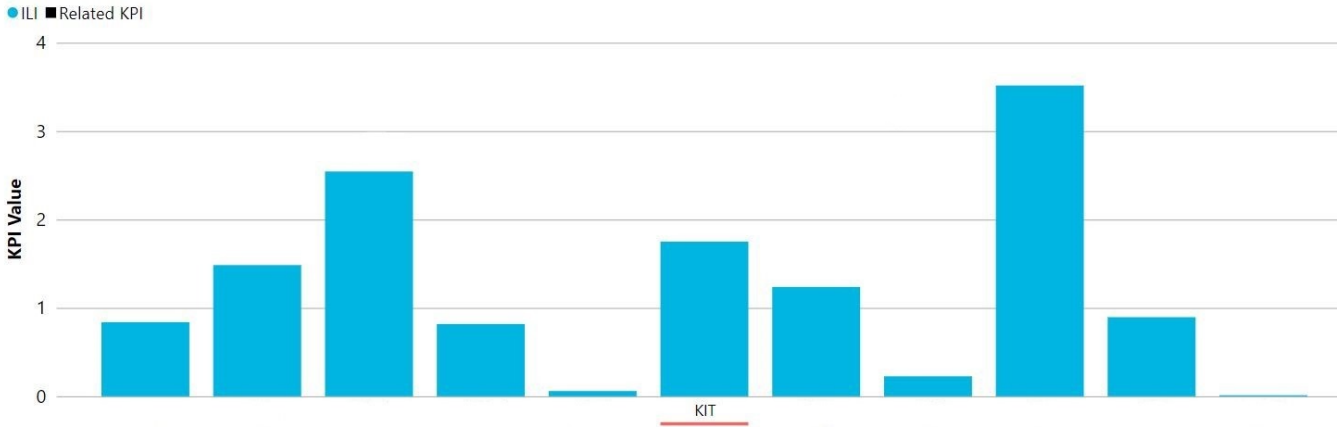

| Year | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Breaks/100 km | 7.7 | 14.2 | 16.1 | 15.8 | 7.8 | 8.9 | 10.7 | 10.0 | 6.9 | 8.5 | 10.1 |

- Unaccounted for water for was 10%; the MECP target is 10%. Water loss includes water used for construction watermain commissioning (e.g., new mains and replacement mains), water for temporary main supply during reconstruction, and water use for reactive flushing). The 10-year average for Kitchener is 9.9%, although the percentage fluctuates.
- Infrastructure Leak Index (ILI) is a performance indicator which is the ratio of the level of Current Annual Real Losses (CARL) to the Unavoidable Annual Real Losses (UARL). The UARL considers the total length of watermain in the distribution system, number of hydrants, average pressures, number of service connections, length of service and hydrant connections. The UARL is the theoretical low limit of leakage that could be achieved if all the current best leakage management could be implemented. The URAL is specific to each water system. For example, the UARL for a large system with high pressure will be higher than a small system with low pressure. Leakage in any water system can never be totally eliminated. One caveat is that the calculation is made based on an average pressure. Kitchener has several pressure zones with a great deal of variation across the city. As part of the National Water and Wastewater Benchmarking Initiative (Benchmarking), Kitchener recently began reporting ILI and trending will be established as more data is generating. Benchmarking is completed on the previous year's data. The 2021 ILI value was 1.75 meaning the current level of real losses is 1.75 times greater than the theoretical low level losses. The ILI graph is a comparison to other Cities participating in 2021 benchmarking.


Percentage Unaccounted For Water
% Unaccounted For Water
12.0
10.0
8.0
6.0
4.0
2.0
0.0
10% Target
2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022
% Unaccounted for 8.5 10.0 11.3 11.3 10 8.9 9.0 11.0 9.1 9.7 10.0




Displaying: Infrastructure Leakage Index - Non Outliers




Action: No further action required – for information only

## Effectiveness of the Risk Assessment Process

- A risk assessment was completed on September 22, 2022. For 2022, attendees included staff from the Region of Waterloo and City of Kitchener. The purpose of the risk assessment was to brainstorm potential risks and identify counter measures, where appropriate. The following is a summary:

- Reviewed all risks to ensure all information and assumptions are current and valid. Also discussed and added the following new potential risks:
  - Cyber Security.
  - Telecommunications provider outage.
  - OnPoint GIS mapping system to replace existing ArcReader system (not scored – additional info required).
  - Equipment and Supplies shortages.
  - Cost of chemicals, construction costs, etc. due to inflation.
- Preventive / Control measures and risk score updated for several existing risks and added for the new risks above.

Action: For Information Only

**Results of External and Internal Audits**

The DWQMS Standard is divided into Plan, Do, Check, and Improve sections. Audits are completed to analyze processes to confirm that what is stated in the procedures and work instructions is what is being done. External Audits are completed by a third party while Internal Audits are completed by accredited City saff.

External:

- In 2022, two audits were conducted and completed by a certified external auditor (SAI Global) – Certificate of Accreditation achieved.
  - Systems Audit – October 5 – October 6, 2022. No non-conformances were found. One opportunity for improvement was identified.
  - Reaccreditation Audit – November 1 – November 2. 2022. No non-conformances were found. Three opportunities for improvement were identified.

Internal**:**

- 5 Field audits were conducted in 2022:
  - New Development Flushing
  - Tool Room
  - Water Tapping
  - Water Service Cut-offs
  - Curb Stop Repair
- 4 Element audits were conducted in 2022.
- 17 opportunities for improvement were identified from internal audits in 2022. As of December 31, 2022,
  - 5 (29%) of these opportunities have been acted upon and implemented;
  - 2 (11%) of these opportunities could not be implemented; and
  - 10 (60%) of these opportunities are still being investigated.
- Zero nonconformances and zero non-compliances were found during the internal audits.

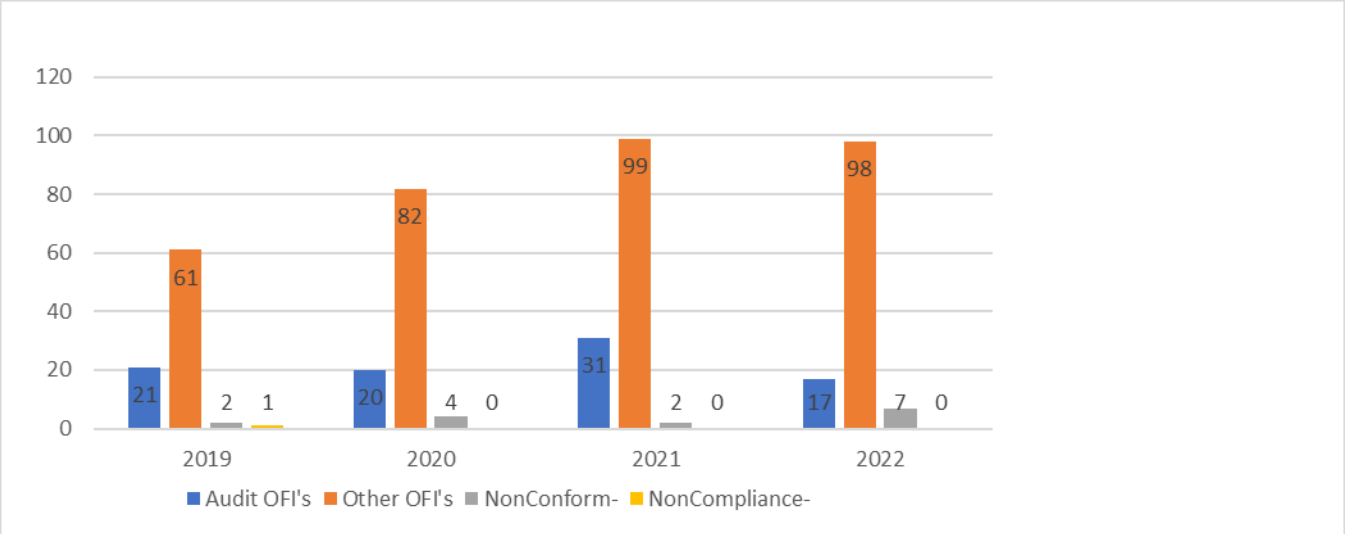
- Seven nonconformances were found outside of the internal audits. All have been resolved with follow-up completed:
    - Plug style main stop with non-NSF grease
    - Chlorine residuals above 2.0mg/L need to be reported since equipment does not accurately read above this level
    - Notice of violation relating to sediment release
    - Digital sign-off was delayed on weekly chlorine residuals
    - Categorization of watermain break was incorrect
    - Water sample was not taken immediately after a main break
    - Low chlorine residual adverse was not called in by staff member immediately
- A previous 2020 non-conformance is still outstanding (CAR 42). The Owner did not have up-to-date documents describing the distribution components as required. At the time of the inspection, the City was in the process of updating the distribution map which is referenced in Table 1 of the DWWP. Condition 3.5 in Schedule B of the DWWP requires the City to update the map within 12 months of any additions, modifications, replacements or extensions to the distribution system. For further clarification, the 12 month clock starts when a watermain is commissioned and the public is able to consume the water from the respective watermain. A number of process improvements were made. The remaining item is to fill a dedicated AutoCAD resource position to complete as-recorded drawings/submissions for internal projects as well as process those completed by consultants on City reconstruction projects. Process improvements have been made over 2020/21 include:
    - A First Submission Asset Drawing Checklist was developed for consultants
    - Kitchener Utilities will not conduct final water inspections until as-builts have been received and mapped in GIS
    - Letter of Credit is not reduced until the As-Recorded information has been accepted
    - GIS boundaries to flag projects under construction, until as-builts have been received.
    - New Water As-Built Drawing Work Instruction Procedure with monthly email alerts
    - Regional mapping of projects where City infrastructure is replaced
    - Development Storyboard as a reference for consultants to fill out as-built information
    - Revised attribute template to streamline data connection
    - Topology fixer to minimize errors back to consultant
    - Attribute checker to allow consultants to check their own data
    - Entering red-line construction documents

**Continuous Improvement**

Continual Improvement is a key element of all quality management systems and we are regulated to have a process to identify and implement preventative actions to eliminate the occurrences of potential non-conformities. Opportunities for improvement can come from many sources, such as external audits, staff suggestions, public concerns, management reviews, debriefs, or the risk assessment meeting. In total for 2022, excluding the results from internal audits, there were:

- 98 opportunities for improvement, of which:
  - 51 (52%) were acted upon and implemented;
  - 6 (6%) could not be implemented; and
  - 41 (42%) are still being investigated.

OFI's, Non-Conformances, Non-Compliances by Year




Action: The Continual Improvement Log is updated monthly to discuss new items, track process and circle back to determine the effectiveness of implementation. The log is be reviewed annually with Top Management as part of the Management Review.

**Results of the Emergency Response Training/Testing**

- New On-Call Management Staff took the IMS-100 Introduction to the Incident Management System (IMS) for Ontario training
- Water Emergency – Management training was provided to supervisors and management in January 2022.
- Debriefs are also completed for selected events. For example, debriefs after Boil Water and Drinking Water Advisories are completed to improve our processes.

Action: No further action required – for information only

## Operational Performance

- Ongoing work with the Region for the Zone 2 and 4 Optimization – this will improve water pressures and supply in the southeastern end of the city. The majority of the work is Regional; however, there is coordination work with the City. This work is dependent on timing of development in the areas and as development proceeds, additional sections of the main are installed. The section between Strasburg Road and Robert Ferrie Drive is awaiting the completion of the Environmental Assessment for the Road extension.
- The Region's Zone 4 Trunk Watermain project includes the installation of 750mm concrete pressure pipe watermain from the Mannheim Water Treatment plant across the southern portion of the City to Strasburg Rd. The watermain was brought into service on January 23, 2023.

Action: No further action required – for information only

## Raw Water Supply and Drinking Water Quality Trends

There are known seasonal issues with the water supply:

- Fall - Grand River temperature changes may cause odour challenges in the source water, which may increase flushing requirements.
- Winter – temperature extremes may cause more watermain breaks in the system.

Action: No further action required – for information only

## Follow-up on Action Items from Previous Management Reviews

Action items were completed as part of the revised report and associated council report.

Action: No further action required – for information only

## Status of Management Action Items Identified Between Reviews

There were no items identified between the management reviews.

Action: No further action required – for information only

## Changes That Could Affect the Quality Management System

- The Federal government has a manganese limit, however the current provincial regulations, which Kitchener is required to follow only has an aesthetic limit. It is anticipated that the Province will follow the federal guidelines and implement a maximum allowable concentration. The Strange Street upgrades were complete in anticipation of this regulatory change.

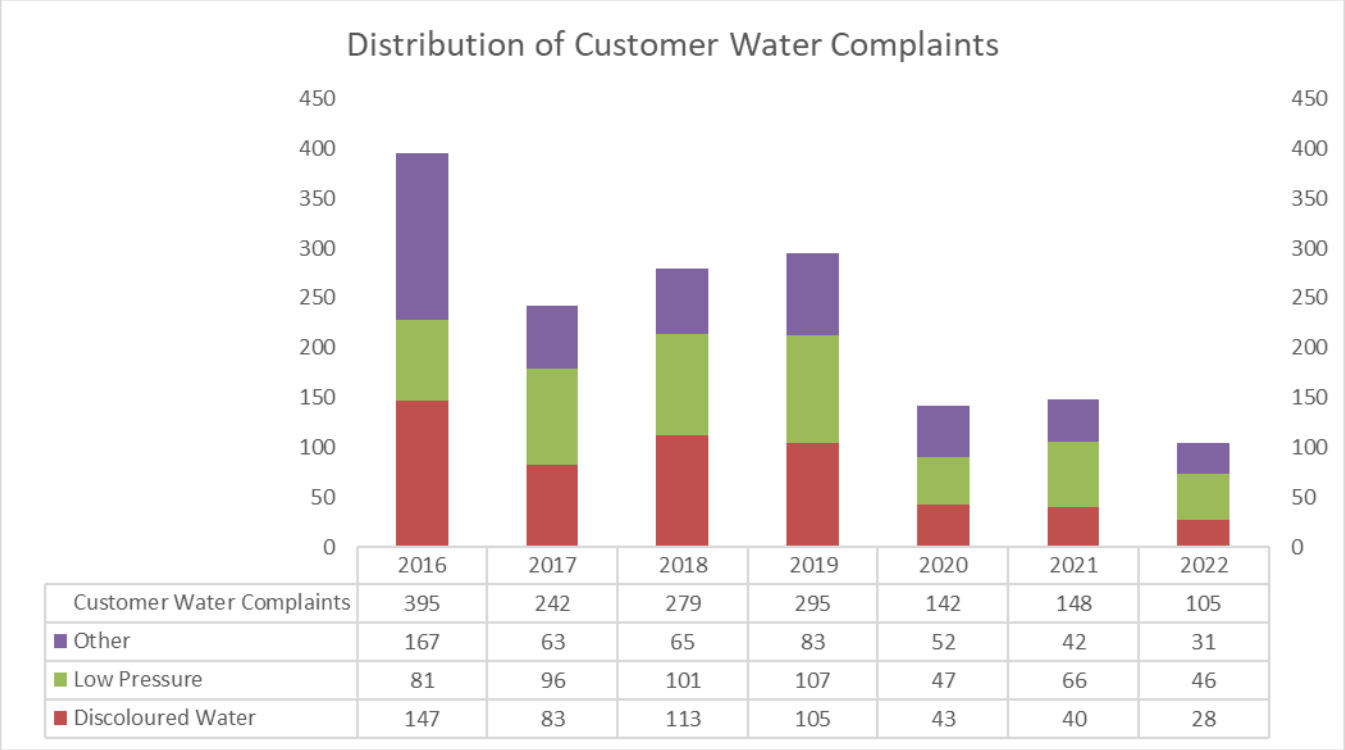
- There are indications that the lead maximum allowable concentration will be reduced, which will likely increase the number of lead tests that exceed the regulatory limits. Customers are not required to complete any corrective actions when elevated lead exists. The City is required to flush and resample if there is a lead adverse in the distribution system. The City tracks streets with lead or suspected lead and includes them as part of the considerations for replacement. It is most cost effective to replace a number of lead services as part of a road reconstruction project, rather than individual services.
- Bill 23, *More Homes Built Faster Act,* 2022 and Bill 109, *More Homes for Everyone Act, 2022.* It is anticipated that changes in the Development Charge (DC) Framework and decreased DC revenue could hamper the City's ability to supply infrastructure in a timely and coordinated manner to support grown (e.g., Strasburg Road South & Watermain project).
    - Kitchener does not have surplus funds in the DC reserve fund that are not allocated to a future project.
    - It is anticipated that the Province's investment to help unlock and build housing supply will increase the volume of subdivision and site plan review and processing for Drinking Water Works Permits.
    - Bill 23 may impact the Region's Official Plan update and the existing urban boundary.
    - Bill 93 – "An Act to amend the Building Broadband Faster Act, 2021 and the Ontario Underground Infrastructure Notification System Act, 2012" which is related to locating infrastructure, has set out several new requirements that the City of Kitchener (the infrastructure owner) must meet. The first being a strict adherence to a 5 day locate completion timeframe. Locates not completed within this timeframe are now subject to an Ontario One Call fine and it is now possible for excavators to seek compensation from a loss or expense incurred due to the locate being late. It is expected that locating costs will increase significantly in 2023. A Locate Review is currently being led by the City's Internal Auditor to evaluate the service level, risk and resourcing needs associated with new legislative requirements.

Action: No further action required – for information only

**Consumer Feedback**

- The number of customer water complaints continues to decrease. Dispatch staff guide customers through a number of questions to determine whether the problem is suspected to be internal (plumbing) or external (distribution system).
- The problem, cause, and remedy are tracked for each complaint.
- Discoloured water complaints are often the result of changes in flow in the system. This can be due to reconstruction, watermain cleaning, watermain breaks, valve replacement and other construction.

- Low pressure complaints are largely internal issues (softeners, internal plumbing).
- Other complaints include water hardness, no water, odour/taste, air in lines (white water), customer sample requests. We are seeing more residents moving into Kitchener who may not be familiar with water hardness and education is a component of resolving the concerns.
- In general, a number of customer complaints can be resolved by educating the customer (water hardness), flushing/sampling (discoloured water) or confirming private side issue (water softener, pressure reducing valve, drain issues)




| | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
|---|---|---|---|---|---|---|---|
| Customer Water Complaints | 395 | 242 | 279 | 295 | 142 | 148 | 105 |
| Other | 167 | 63 | 65 | 83 | 52 | 42 | 31 |
| Low Pressure | 81 | 96 | 101 | 107 | 47 | 66 | 46 |
| Discoloured Water | 147 | 83 | 113 | 105 | 43 | 40 | 28 |

Action: Continue with proposed watermain cleaning area in 2023.

**Resources Needed to Maintain the Quality Management System**

- A mobile solution for inspection data entry would decrease administrative burden. A mobile water valve program was implemented in 2020 and there are a number of programs that could be mobile. Anticipated that a mobile application for hydrant inspections will be rolled-out in 2023.
- An Issue Paper requesting a technical position to address the growing demand on the water utility was submitted for the 2023 budget.

Action: Proceed with posting for the position following approval of 2023 budget process.

**Results of the Infrastructure Review**

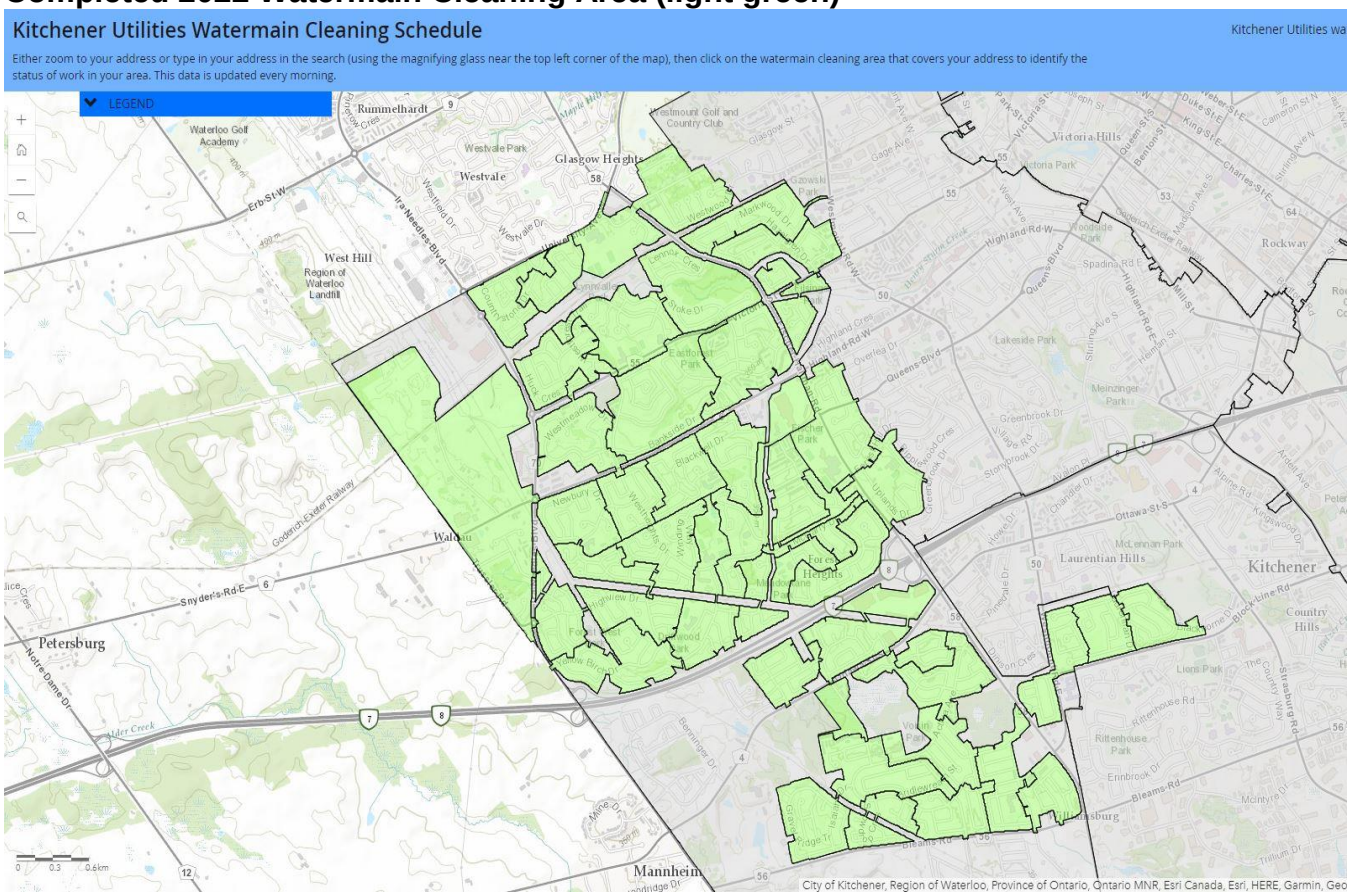
- The Water Utility Asset Management Plan was completed and captured watermains, valves, hydrants, and meters. Asset Management Plans are required for all core and non-core asset classes (roads, storm, parks, facilities etc.), prepared in accordance with Ontario Regulation 588/17 – Asset Management Planning for Municipal Infrastructure. The water assets have a value of more than $1 Billion and are generally in very good condition. Overall, watermains are more than halfway through their useful life. This can be attributed to an increase in infrastructure investments made between the 1950s and 1970s. These assets may be beginning to deteriorate and could require replacement or rehabilitation. This is being addressed through the WIP.
- Individual project selection is based on a number of factors including condition (watermain break history), material, criticality, watermain size, presence of lead services, shallow mains, and other infrastructure needs (storm, sanitary, road).
- 2022 reconstruction projects were largely completed as per the 2022 Engineering/Storm/Sanitary/Water Capital Forecast
- The Region replaces some Kitchener infrastructure as part of their projects (Kitchener funded).
- 2023 projects were finalized; however, it should be noted that there were a number of Regional projects moved out to future years in the Regional capital program.
- Meetings were held with Asset Management and Engineering staff at both the City and the Region to determine future project needs.
- Issue papers are brought forward as part of the budget process, additional funding requests related to maintenance and water-only capital projects. The majority of water-only projects are included as part of Regional roadwork to minimize disruptions to citizens and be cost effective.

Action: No further action required – for information only

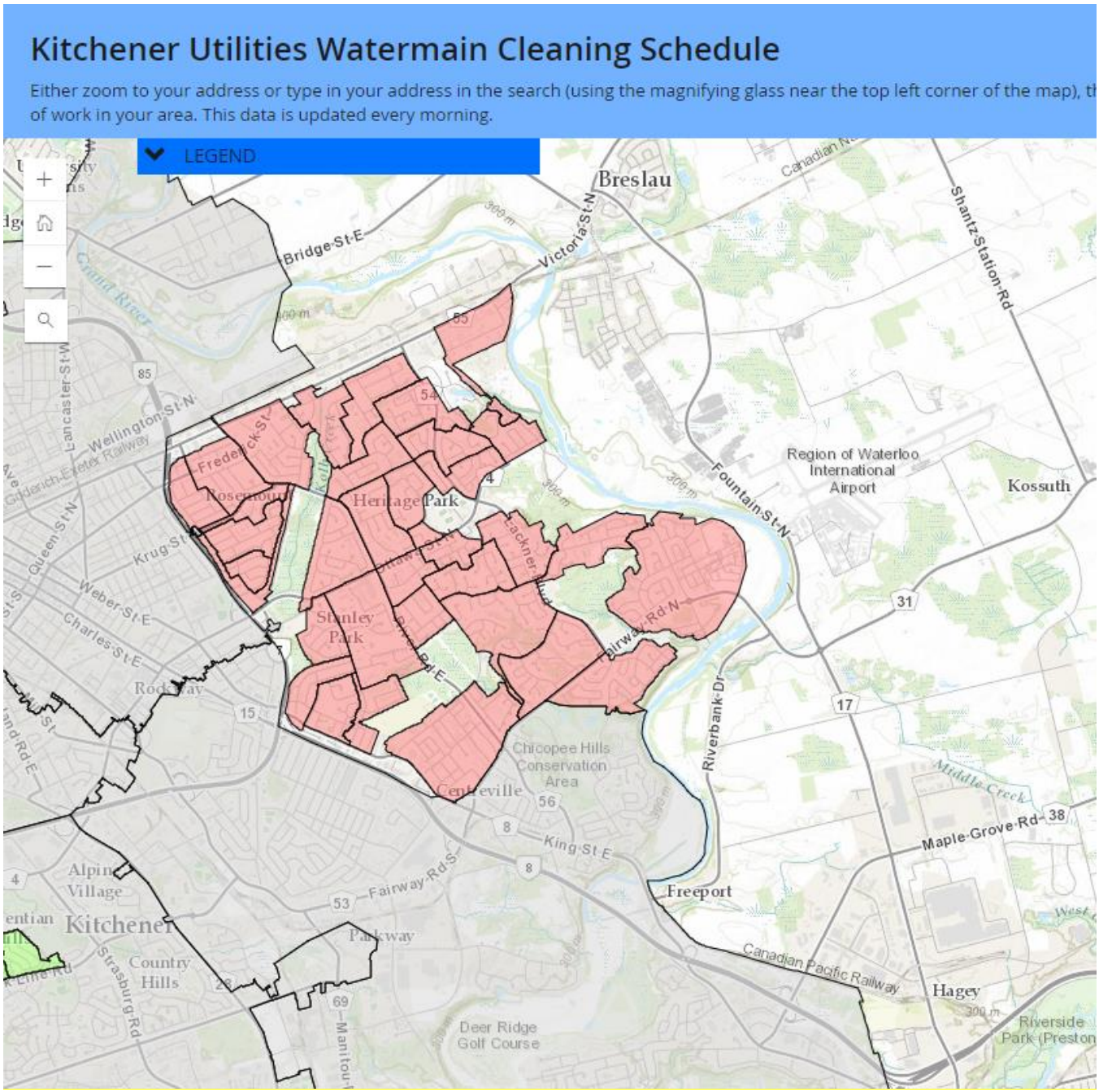
**Summary of Maintenance**

- Watermain cleaning – Approximately 168kms of watermain was cleaned in 2022. The 2022 watermain cleaning area map is shown below. The next map shows the proposed 2023 area in pink/red. The 2023 area was previously cleaned in 2017 thus re-starting the 6-year cleaning cycle. The purpose of watermain cleaning is to remove iron and manganese build up in the watermains. The iron and manganese cause discolouration in the water. Although iron and manganese are naturally occurring and not health related, discoloured water causes a public perception of issues with the drinking water. Provincial health related regulations are anticipated for iron and manganese.

## Completed 2022 Watermain Cleaning Area (light green)




## Proposed 2023 Watermain Cleaning Area




- Hydrant maintenance – spring maintenance was completed on all hydrants and all hydrants were dipped in the fall.
- Hydrants are flushed to maintain chlorine residuals was completed in spring and fall.
- New development areas are flushed monthly until the subdivision is built-up.
- A valve turning/exercising program was completed for 1,863 valves – the majority of valves were operated in the watermain cleaning area with additional valve operation in

areas of reconstruction. Operating valves ensures that they will work when they are needed in an emergency or for construction activities.

- There were 21 broken valves and/or failing valves were either replaced or removed which allows for quicker isolation for water emergencies. Broken valves are tracked in real time and the majority are addressed within weeks (except for winter). At the end of 2022 there were 11 broken valves remaining, 7 of which will be replaced as part of future reconstruction work.
- 450 hydrants were painted.
- Leak detection survey – 1/3 of city completed each year. Follow-up is completed on potential leaks. Approximately 330km of mains were surveyed resulting in 4 possible hydrant leaks – the majority of which were repaired by tightening the nuts of the hydrants. No leaks were found.
- Staff continue to inspect new connections and cut and caps for reconstruction and new development. Staff complete all new service tappings for development as well as witness old service abandonment. This work requires 48 hours to schedule and is driven by new development and watermain replacement work.
- Erosion and sediment control procedures were developed and rolled-out to staff.
- Anodes are installed on existing watermains whenever they are exposed (e.g., watermain breaks, valve repairs, hydrant repairs).
- Pressure Reducing Valves (PRVs) were inspected.
- Chamber inspections/pump outs for chambers containing air relief valves – approximately 130. Air reliefs are a potential risk to the system if they become submerged and there is a watermain break or incident in the distribution system. A study was commenced in 2022 to determine which air reliefs could possibly be removed.
- Staff continue to use the watermain break app for reporting breaks, which improves customer communication for breaks

Action: No further action required – for information only

**Effectiveness of Maintenance**

Completion of numerous maintenance programs associated with the water and the infrastructure are essential for the delivery of safe drinking water, although not all maintenance programs have been identified. The effectiveness of the maintenance program is determined by the following key factors:

- Number of Adverse Water Quality Incidents
- Water loss/unaccounted for water
- Water quality complaints
- Number of watermain breaks

The system performance has demonstrated effectiveness by achieving:

- There were 15 AWQIs (downward trend and an indication of water quality).
- Water loss/unaccounted for water was 10% (at the target of 10%).
- The number of quality complaints was at 105, 26% of which were related to discoloured water and 44% pressure (largely internal issues). The remainders included complaints relating to hard water (new residents are not always familiar with hard water), and general safety concerns. The watermain cleaning program has decreased the number of complaints.
- There were 93 watermain breaks in 2022, which is a bit higher than the 5-year average of 84 breaks/year.

Action: No further action required – for information only

**Operational Plan Currency, Content and Updates**

- The Operational Plan is updated annually.

Action: No further action required – for information only

**Staff Suggestions**

Staff suggestions are included under the new Continual Improvement section of the report.

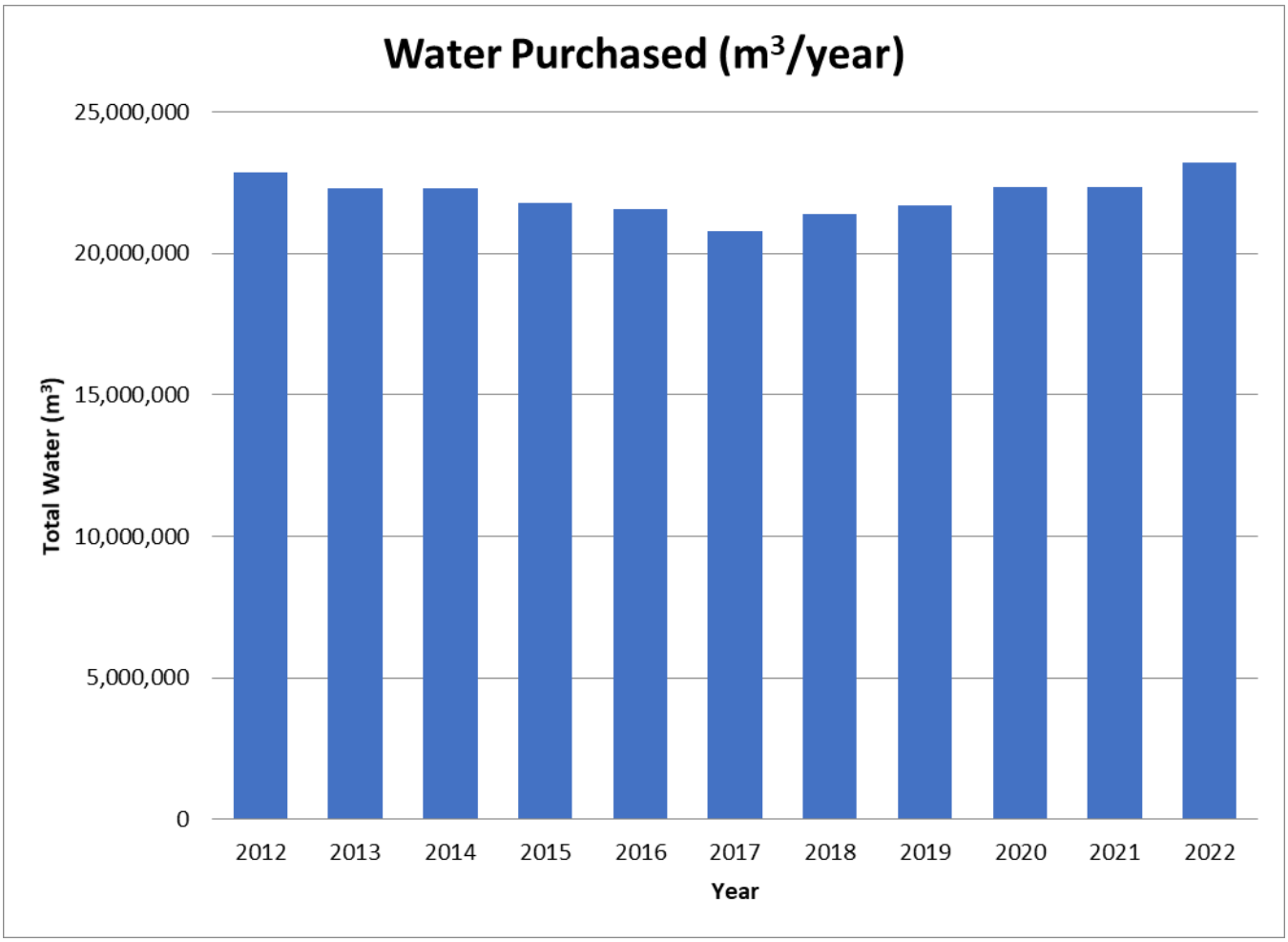
**Other**

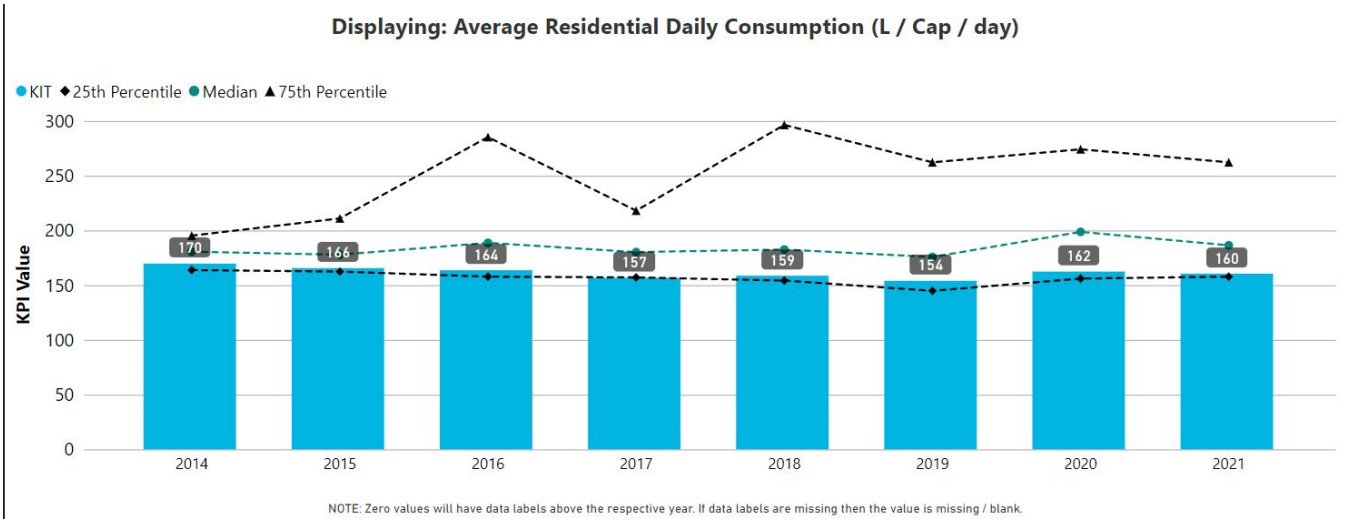
- Water Meter Replacement – 6,065 aging water meters were replaced. There are 70,572 meters in the system. There are currently water meter supply issues. An Advanced Metering Infrastructure (AMI) option will be brought forward as part of the WIP report. Given the meter shortages and potential of meter change outs as part of AMI, there are no large-scale meter replacement plans for 2023.
- Development growth is anticipated to continue with both new subdivision, site plans and redevelopment, which creates technical demands for Drinking Water Works Permit approvals, commissioning plan approvals and on-demand inspection requirements for final connections, tappings and cut and caps.
- Water Consumption Trends – water consumption has increased since 2018 as population growth demands increase. Average residential daily consumption values were decreasing prior to the pandemic but increased in 2020. The 2021 values decreased slightly; however 2022 benchmarking values are not yet available. Kitchener average residential daily consumption levels are lower than many comparison municipalities (around the 25$^{th}$ percentile).

The Region of Waterloo is initiating an update to their Water Supply Strategy, to look at current water supply sources, assessing future water demands and investigating possible new water

sources. The previous Water Supply Master Plan was completed in 2015. The Strategy will develop and evaluate recommendations to meet future water supply needs in Waterloo Region to 2051. The Water Supply Strategy will build on previous master plans, and will look at:

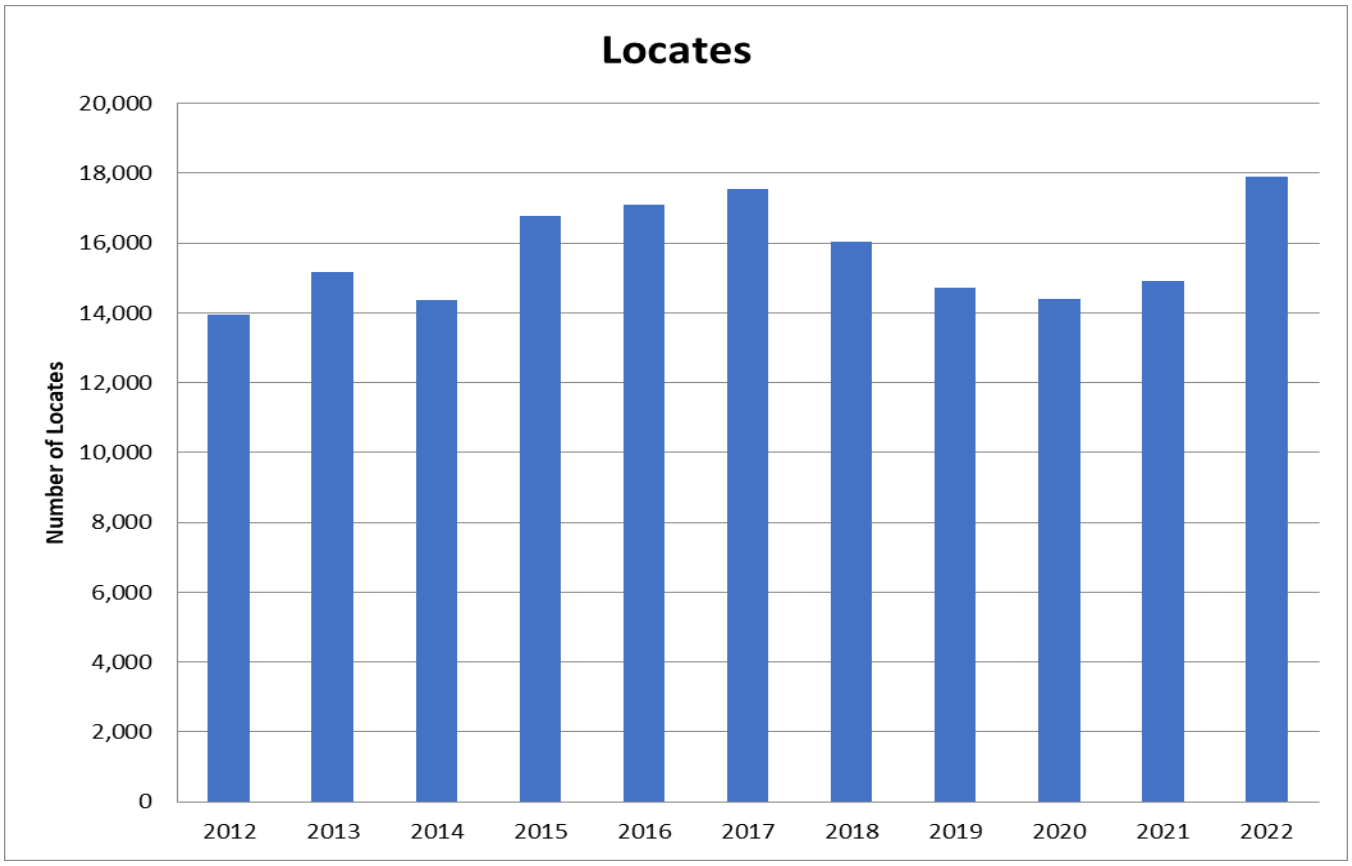
- Current sustainable water supply sources and water demands.
- Population growth and how it impacts future water demands.
- The gap between today’s water supply and tomorrow's needs and resourcing that gap in a sustainable, efficient way.
- The effect of climate change on our water supply resources.


Water Purchased (m³/year)
25,000,000
20,000,000
15,000,000
10,000,000
5,000,000
0
Total Water (m³)
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
Year


Displaying: Average Residential Daily Consumption (L / Cap / day)
KIT
25th Percentile
Median
75th Percentile
300
250
200
150
100
50
0
KPI Value
170
166
164
157
159
154
162
160
2014
2015
2016
2017
2018
2019
2020
2021
NOTE: Zero values will have data labels above the respective year. If data labels are missing then the value is missing / blank.

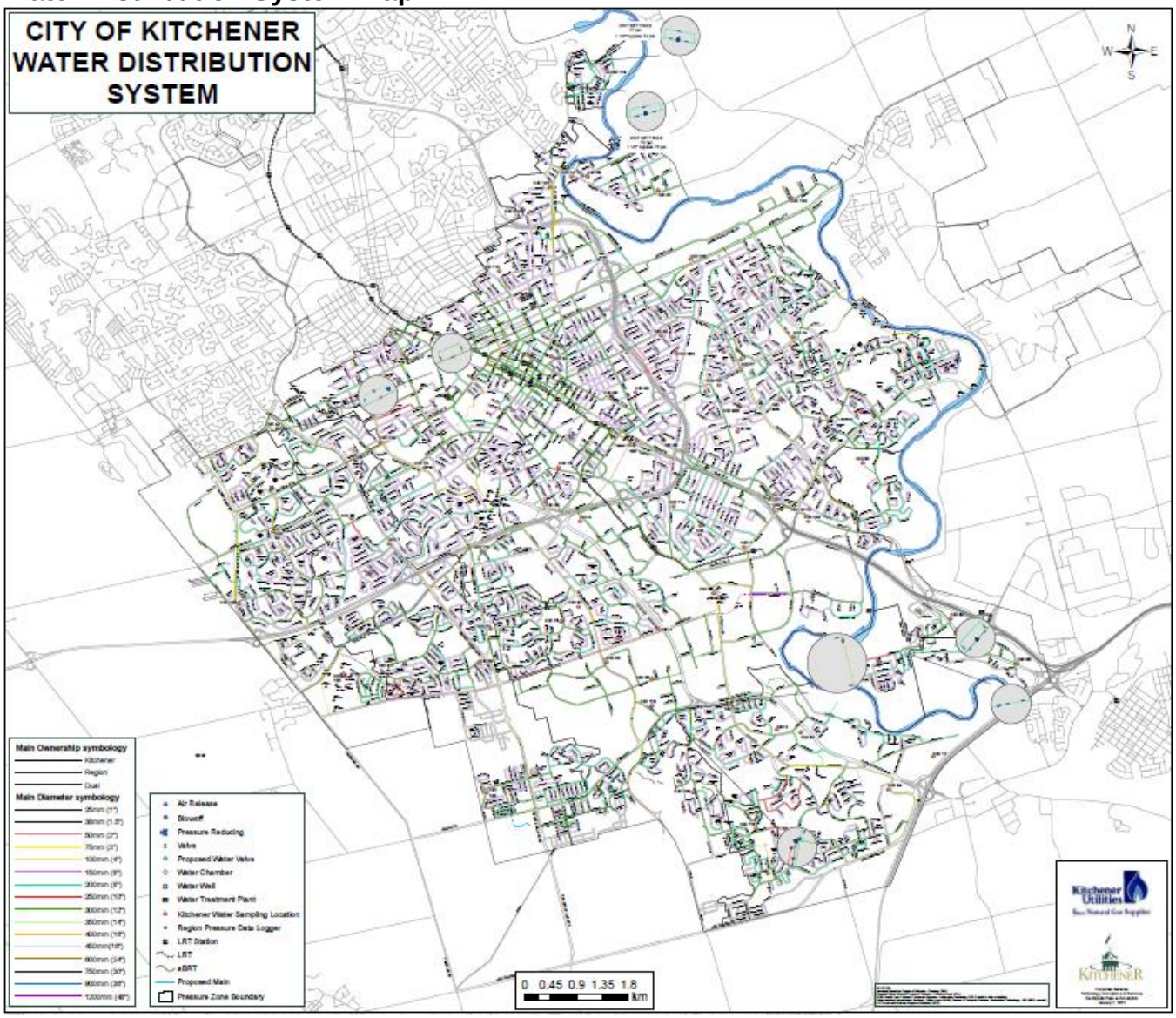
- Locates - Kitchener Utilities and their Locate Service Provider physically locate gas and water infrastructure for contractors prior to construction and excavation work. Approximately 17,885 locates were completed in 2022, which is up from 2021 levels and the highest levels ever experienced. Locate volumes are driven by customer requests and construction. *Bill 93* will likely create additional financial impacts (see Changes That Could Affect the Quality Management System section).

Action: No further action required – for information only



**Appendix**

**Water Distribution System Map**



# Staff Report

*Infrastructure Services Department* *www.kitchener.ca*

**REPORT TO:** **Community and Infrastructure Services Committee**

**DATE OF MEETING:** **March 6, 2023**

**SUBMITTED BY:** **Greg St. Louis, Director, Gas & Water Utilities, 519-741-2600 ext. 4538**

**PREPARED BY:** **Angela Mick, Manager, Quality Management and Water Programs, 519-741-2600 ext. 4408**

**WARD(S) INVOLVED:** **Ward(s)**

**DATE OF REPORT:** **January 19, 2023**

**REPORT NO.:** **INS-2023-010**

**SUBJECT:** **Summary Water Report - 2022**

## RECOMMENDATION:

**That the 2022 City of Kitchener Summary Drinking Water Report be received for information as required by O.Reg. 170/03 Schedule 22 of the Safe Drinking water Act; and,**

**further that the City of Kitchener provide a copy of the Summary Drinking Water Report to the Township of Woolwich and the City of Waterloo as required by Schedule 22 of O.Reg. 170/03.**

## REPORT HIGHLIGHTS:

- The key finding of this report is that the City of Kitchener is in compliance with regulatory water sampling requirements of the reporting period of January 1, 2022 to December 31, 2022.
- There are no financial implications of this report.
- The report supports the delivery of core services.

## BACKGROUND:

As outlined in Schedule 22 of the Drinking Water Systems Regulation (O.Reg.170/03) of the Safe Drinking Water Act, 2002, a Summary Report is to be prepared and given to the members of the municipal council. The following information is required to be included in this report:

(a) list 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 specify the duration of the failures; and

(b) for each failure referred to in (a), describe the measures that were taken to correct the failure.

The report must also include a summary of the quantities and flow rates of the water supplied during the period covered by the report.

**REPORT:**

The following matters are reported to Council in accordance with the requirements of the Safe Drinking Water Act, for the period from January 1 to December 31, 2022:

- The Kitchener Distribution System is part of an Integrated Urban System, meaning the Regional Municipality of Waterloo is responsible for water treatment and the development and operation of a trunk water network to distribute treated water to Kitchener, Cambridge, Waterloo, Woolwich, and Wilmot. The Region provides annual summaries for each supply and the information is available on their website with a link from the Kitchener Utilities (KU) website. Reports from the connected systems have been or will be received.
- A portion of Kitchener (River Ridge area) is supplied by the City of Waterloo. Kitchener supplies water to a small section of Waterloo (Ira Needles area) and water travels through the Kitchener distribution system to Breslau. The City of Waterloo's water quality report is available on their website.
- The Ministry of Environment, Conservation and Parks (MECP) completed an annual inspection on June 23, 2022, which covered June 23, 2021 to June 23, 2022. There were no non-compliances found.
- There were 3,943 chlorine residual samples taken and 2,311 bacteriological samples taken within the distribution system. Of these, there were 15 Adverse Water Quality Incidents (AWQI's) reported in this time period (see **Table 1**) and all resamples were clear.
- The Lead Sampling program was minimal due to a pandemic related sampling relief, however all lead samples taken were below the limits.

**Summary of AWQIs**

An AWQI does not necessarily mean that the water is a risk to the customer. It means that a potential problem has been identified and corrective actions must be taken to resolve the problem. City staff work with ministry staff and the local public health unit to resolve the issue, which generally includes resampling.

Low Chlorine Residual AWQIs

- Low chlorine AWQIs can occur in areas of new subdivisions with no houses yet built. Along with dead end watermains, KU proactively flushes areas with new watermains until there are homes built and water is being used.

- Dead end watermain and new development flushing is a proactive approach to increase the levels of chlorine in the distribution system. The water is initially disinfected (primary disinfection) at the treatment plant and sufficient chlorine is added to protect the water from microbiological contamination as it travels through the pipes in the distribution system (secondary disinfection). Low chlorine does not pose a threat to human health; to have an impact to human health, there must be microbiological contamination and no, or extremely low, chlorine.

Bacteriological AWQIs

- The presence of total coliform on a test does not necessarily mean the water is unsafe to drink. Coliform bacteria can be found in many different environments. There are several different strains of coliform bacteria. Most are harmless and do not cause illness. Coliform bacteria are used as an “indicator organism” to assess the possibility of other disease-causing organisms, and their detection would prompt further investigation and/or corrective action. It is different than E.coli, which is a bacteria only associated with human or animal faecal matter.
- When total coliform is found, a resample is done using a different technique, which provides a number of total coliforms to analyze in consultation with Public Health and the MECP. Based on a risk assessment of a number of factors including the coliform count, chlorine residuals, and upstream/downstream coliform counts, the requirement for a boil water advisory is determined.
- Four (4) total coliform AWQIs were at temporary sampling locations within reconstruction projects. Temporary watermains are particularly sensitive as they are above ground systems influenced by the water heating up in warmer temperatures. This may increase the potential for bacteriological growth. Warmer weather seems to increase the incidences of Total Coliform. The additional challenge with temporary watermains is the sample port is located outside and subject to unsanitary conditions. Many contractors remove the sampling ports when not in use because they are subject to vandalism/theft. These ports need to be maintained in a sanitary condition between uses. The general nature of reconstruction projects often leads to “false positives”, where the results received are more reflective of what is on the sampling tap, rather than what is in the water. Every positive result is reportable, and resampling must occur in accordance with regulations. When the resamples are clear, it is an indication that the issue was with the sampling port, not in the water.
- Six (6) Total Coliform AWQIs were related to flushing within new development areas.
- There was one Boil Water Advisory as a result of a positive E.Coli sample at a community centre. Resamples showed the area was free of contamination

Drinking Water Advisory

- There was one Drinking Water Advisory on two addresses related to manufacture supplied fittings with non-potable grease. The fittings were removed from the system and will no longer be used. Sampling completed before and after the fittings were removed both showed oils and grease and semi-volatiles below lab detection limits. No further action was required.

| Table 1 – Adverse Water Quality Incident Summary – January 1 to December 31, 2022 | | | | | | |
|---|---|---|---|---|---|---|
| **#** | **Adverse Type** | **AWQI Date (verbal)** | **AWQI #** | **Site Name** | **Site Location** | **Results/Notes** |
| 1 | Low chlorine | Jan 12/22 | 157573 | Hydrant 13252 | 332 Broadacre Dr. | Free=0.00mg/L<br>Total=0.21mg/L<br>New development |
| 2 | Low chlorine | Jan 13/22 | 157589 | Hydrant 12972 | 20 Nathalie St. | Free=0.01mg/L<br>Total=0.04mg/L<br>New development |
| 3 | Low Chlorine | Feb 8/22 | 157789 | Hydrant 13395 (hydrant was remapped and given new number) | 332 Broadacre Dr | Free=0.04mg/L<br>Total=0.26mg/L<br>New development |
| 4 | Total Coliform Present | Feb 11/22 | 157827 | KID 103 | 3111 King St E | Total Coliform Present |
| 5 | Low Chlorine | March 8/22 | 157948 | Hydrant 13444 | 912 Nathalie Crt | Free=0.04mg/L<br>Total=0.11mg/L<br>New development |
| 6 | Total Coliform/E.Coli present | May 11/22 | 158359 | KID 129 Victoria Hills Community Centre | 10 Chopin DR | Boil Water Advisory May 11-13<br>Total Coliform/E.Coli Present |
| 7 | Total Coliform present | May 31/22 | 158541 | SP-1A-1 Cambridge Ave Temp main | 115 Heather Ave – Cambridge Temp main | Total Coliform Present |
| 8 | Low Chlorine | June 30/22 | 158951 | KID139 Stanley Park Library | 175 Indian Rd | F=0.04mg/L<br>T=0.26mg/L<br>C=0.22mg/L |
| 9 | Total Coliform present | Sept 1/22 | 159812 | S2 Lot 66 - Greenfield Ave & Traynor Ave Temp Main | 66 Traynor Ave – Traynor Temp main | F=0.03mg/L<br>T=0.71mg/L<br>C=0.68mg/L |
| 10 | Total Coliform present | Sept 1/22 | 159822 | Temp 3-3 - 66 Franklin St. South | 66 Franklin St S – Franklin Temp main | F=0.01mg/L<br>T=0.96mg/L<br>C=0.95mg/L |
| 11 | Low Chlorine | Sept 7/22 | 159875 | Hydrant 13479 | 213 Forestwalk St | F=0.04mg/L<br>T=0.10mg/L<br>C=0.06mg/L<br>New development |
| 12 | Total coliform present | Sept 22/22 | 160106 | 1105 King St E | Ottawa/King Temp main | F=0.04mg/L<br>T=1.19mg/L<br>C=1.15mg/L |
| 13 | Low Chlorine | Nov 7/22 | 160583 | Hydrant 14046 | 115 Forestwalk St | F=0.02mg/L<br>T=0.01mg/L<br>C=-0.01mg/L<br>New development |
| 14 | Low Chlorine | Dec 6/22 | 160902 | 4553 King St E | 4553 King St E | F=0.00mg/L<br>T=0.03mg/L<br>C=0.03mg/L |
| 15 | Drinking Water Advisory | Dec 15/22 | 160986 | 22 and 23 Nipigon Place | 22 and 23 Nipigon Place | Non-Potable Grease on Fitting |

A summary of the quantities of the water supplied by the Regional Municipality of Waterloo during the period covered by the report is noted in **Table 2**. Overall water volumes were up slightly from 2021 volumes; however, there are some monthly differences, largely due to weather.

**Table 2 - Kitchener Distribution System**

**Volume of Water Conveyed from the Region of Waterloo Supply System**

| | 2022 Monthly Total ($m^3$) | Average Day ($m^3$) | 2021 Monthly Total ($m^3$) | Variance from Previous Year |
|---|---|---|---|---|
| January | 1,828,218 | 58,975 | 1,757,181 | 4% |
| February | 1,682,407 | 60,086 | 1,608,412 | 5% |
| March | 1,843,857 | 59,479 | 1,797,763 | 3% |
| April | 1,790,389 | 59,680 | 1,741,837 | 3% |
| May | 2,005,562 | 64,696 | 2,050,462 | -2% |
| June | 2,116,758 | 70,559 | 2,058,790 | 3% |
| July | 2,202,117 | 71,036 | 1,978,721 | 11% |
| August | 2,068,490 | 66,725 | 2,043,450 | 1% |
| September | 1,936,868 | 64,562 | 1,819,106 | 6% |
| October | 1,920,074 | 61,938 | 1,809,145 | 6% |
| November | 1,790,295 | 59,677 | 1,723,132 | 4% |
| December | 1,847,662 | 59,602 | 1,790,483 | 3% |
| Purchases from Waterloo | 160,633 | | 157,983 | 2% |
| **Total** | **23,193,330** | | **22,336,466** | **4%** |

**STRATEGIC PLAN ALIGNMENT:**
This report supports the delivery of core services.

**FINANCIAL IMPLICATIONS:**
Capital Budget – The recommendation has no impact on the Capital Budget.

Operating Budget – The recommendation has no impact on the Operating Budget.

**COMMUNITY ENGAGEMENT:**

INFORM – This report has been posted to the City's website with the agenda in advance of the council / committee meeting. Water Quality information is posted on the Kitchener Utilities website.

**PREVIOUS REPORTS/AUTHORITIES:**
There are no previous reports/authorities related to this matter, however the summary reports are provided on an annual basis with the last report being INS-2022-039

**APPROVED BY:** Denise McGoldrick, General Manager, Infrastructure Services

| | |
|---|---|
| **REPORT TO:** | **Community and Infrastructure Services Committee** |
| **DATE OF MEETING:** | **March 6, 2023** |
| **SUBMITTED BY:** | **Garett Stevenson, Interim Director, Planning Division, 519-741-2200 ext. 7070** |
| **PREPARED BY:** | **Tim Donegani, Senior Planner, 519-741-2200 ext. 7062** |
| **WARD(S) INVOLVED:** | **Wards 3, 9, 10** |
| **DATE OF REPORT:** | **February 22, 2023** |
| **REPORT NO.:** | **DSD-2023-071** |
| **SUBJECT:** | **Inclusionary Zoning for Affordable Housing: Status Update** |

## RECOMMENDATION:

**For information.**

## REPORT HIGHLIGHTS:

- The purpose of this report is to update council on intermunicipal work on inclusionary zoning, share the results of community engagement, and outline next steps.
- There are no financial implications arising from this report
- Community engagement included in person and digital meetings with potential occupants of inclusionary zoning units, the for-profit and non-profit housing development industry, and the community at large. Asynchronous engagement was undertaken on engageWR
- This report supports A Caring Community.

## BACKGROUND:

The City's strategic plan, and Housing for All recognize the importance of using a broad range of tools to advance critical housing affordability objectives. Inclusionary Zoning (IZ) is a tool that allows municipalities to require market residential developments to include some affordable housing units.

IZ works by leveraging increases in value achieved through increased density, development approvals, investment in the ION light rail transit system and, increasing demand for centrally located housing to provide affordable housing. In this way IZ programs can be designed to work without government subsidies. IZ is one tool that can be used along side investments from all levels of government, non-profits and the private sector to help deliver new affordable units required to address the city's critical affordable housing needs. Because IZ results in lower rental or sale price revenue than without an IZ policy, IZ requirements need to be carefully crafted so as not to stifle market housing development in Major Transit Station Areas (MTSAs).

Inclusionary Zoning has been used extensively in the United States and some Canadian cities. Several other Ontario municipalities are working to advance inclusionary zoning. Mississauga's IZ regulations came into effect on January 1, 2023. Toronto's implementation of IZ is awaiting Provincial approval of Protected MTSAs.

In September 2020 staff provided an update to council regarding a financial impact analysis of IZ through report DSD-20-150. The analysis by N. Barry Lyon Consultants (NBLC) tested several IZ policy options at MTSAs across the region. Potential IZ polices were developed using the principles of:

- partnership with the development industry;
- capturing value in new density and directing it toward affordable housing;
- long term policy sustainability without financial subsidies;
- targeting moderately affordable units; and
- minimizing land market disruption.

Key findings of that report were:

- a modest but meaningful number of affordable units can be secured through IZ in the short term with a possibility for future growth;
- different market characteristics across the MTSAs result in differing abilities to deliver affordable units;
- incentives could be used to deliver more affordable units than under the base policy;
- IZ policies should be introduced slowly to minimize land market disruption;
- IZ implementation should be aligned with updating planning frameworks in MTSAs;
- regional coordination, frequent monitoring and policy adjustments are recommended.

Work on inclusionary zoning is being undertaken in collaboration with the cities of Cambridge and Waterloo, and the Region of Waterloo (the partners). Consulting services have been cost shared though a joint services agreement.

In December 2022, through its consideration of report DSD-2022-501 regarding Bill 23, council expressed an interest in accelerating work on inclusionary zoning and asked staff to report back in Q1 2023. The purpose of this report is to explain work to date, provide community engagement highlights and outline next steps.

**REPORT:**

**Regulatory Framework and Bill 23**

IZ can only apply to multi-residential developments with 10 or more units within Major Transit Station Areas. Prior to approving an inclusionary zoning by-law, municipalities must:

| Requirement | Status |
|---|---|
| Prepare a housing assessment report to understand local demographics and housing supply and demand | Complete |
| Obtain an independent review of the impacts of IZ on the housing market and the viability of development; and | Complete. Updates underway |
| Establish Official Plan policies and zoning for Protected Major Transit Station Areas that include, boundaries, density targets measured in persons and jobs per hectare, permitted uses, and minimum site-level density permissions | In progress |

On November 28, 2022, Bill 23 received royal assent. Bill 23, and related regulations, among other things, propose changes to inclusionary zoning requirements which are not yet in effect. A summary of the changes and the City's response are included in report DSD-2022-501. Specifically, the proposed regulatory changes for inclusionary zoning would:

- set an upper limit of 5% of the total proportion of units/floor area in a development that can be required to be affordable;
- set a maximum affordability period of 25 years, and;
- prescribe the lowest price/rent that can be required for inclusionary zoning units at 80% of the average market rent for rental units and 80% of average resale price for ownership units.

**What we've done**

1. **2020 Housing Assessment** - Council received a Housing Needs Assessment as background to Kitchener's Housing for All strategy (DSD-20-006).

2. **2020 Financial Model** - NBLC tested various policy parameters that affect both achievement of affordable housing objectives, and development feasibility including:
   - "set aside" rate (proportion of units or floor area in a building required to be affordable);
   - duration of affordability (how long affordability must be maintained);
   - depth of affordability (the discount in price or rent as compared to the market);
   - the tenure of affordable units (rental vs. ownership).

The implications on land market dynamics and financial viability were explored considering prototypical developments in MTSAs in all three cities. Details are included as appendices B and E to report DSD-20-150.

3. **2022 Financial Model Update** - NBLC updated the model to reflect significant changes to the housing market since 2020 and to enable further updates to reflect contemporary market conditions and test other policy options. This work will be shared with council in late Q2 2023.

These three pieces of work together satisfy the assessment report and financial impact assessment prerequisites for IZ outlined in the Planning Act.

4. **Policy and Program Research and Development**

Over the past few years the partners have been researching best practices, meeting with key stakeholders and analysing policy and program options. This work has informed the following initial draft policy directions that were presented as part of community engagement. The draft policy directions were presented for discussion purposes and to obtain thoughts from stakeholders and the community. Input obtained will be used to inform recommended policy directions anticipated to be tabled for further discussion with the community and Council in late Q2 2023.

| Policy | Initial Direction |
|---|---|
| **Set aside rate** – what percentage share of units or floor area in a building should be secured as affordable housing? | • Start low, transition slowly to higher rate that is supported by the market conditions<br>• Appropriate set aside in each MTSA determined by the financial model<br>• A maximum set aside 5% is proposed to be mandated by the province<br>• Set aside to increase with building height/density<br>• Exempt smaller buildings to encourage missing middle and midrise built forms (e.g., exempt < 50-60 units) |
| **Depth of affordability** - how much lower the rents or prices are than the market? | • Moderate affordability 80%-100% of Average Market Rent<br>• In 2022 Average Market Rent was $1,454/month for a two bedroom |
| **Duration of affordability** - how long affordability is secured for? | • A maximum 25-year term is proposed to be mandated by the province |
| **Tenure of affordable units -** are the affordable units rented or owned? | • Rental a priority in both condominium and purpose-built rental projects |
| **Unit type/mix/design** – should there be unit type, size or design requirements set on affordable units? | • Encourage range of unit size/types/designs comparable to market units<br>• Require functional equivalency of market and IZ units |
| **Offsite units -** should the policy allow affordable units to be located in another building nearby? | • Enable developers to use flexible approaches to meet affordability and financial feasibility objectives subject to strong guarantees |
| **Incentives** – should the city provide financial or non-financial incentives for the development of IZ units)? | • Provide the mandatory exemptions from Development Charges, Community Benefits Charges and Parkland dedication<br>• No additional financial incentives<br>• No parking required for IZ units |
| **Administration** – who, owns and operates units, and who monitors and ensures ongoing affordability? | • Exploring opportunities to shift ongoing IZ administration away from condominium developers and boards<br>• Regional or not-for-profit implementation |

### 5. COMMUNITY ENGAGEMENT

In 2022 the partners retained LURA Consulting to facilitate community engagement on inclusionary zoning as described in the Community Engagement section of this report and in Attachment A.

**Next steps**

The partners are continuing to work together to develop a consistent policy framework across the three cities. Each City expects to implement IZ requirements through adoption of official plan policies and zoning regulations in coordination with updated MTSA panning in their respective jurisdiction. The following is anticipated timing of next steps for Kitchener's IZ process:

| | |
|---|---|
| Q1-Q2 2023 | Additional policy analysis and key stakeholder meetings |
| Q2 2023 | Discussion paper, recommended policy directions and draft implementation guidelines considered by council |
| Q4 2023 | Official Plan and zoning by-law amendment considered for approval alongside updated planning framework for all MTSAs except for Block Line, Fairway and Sportsworld |
| Early 2024 | New development applications to which IZ policy applies must include affordable units |
| 2024+ | IZ requirements for Block Line, Fairway and Sportsworld to be considered together with updated MTSA planning frameworks |

The timing of the steps outlined above is contingent on a decision by the Province on the IZ regulation tabled in October 2022. At this time, it is unknown when IZ regulation revisions will be in effect.

**STRATEGIC PLAN ALIGNMENT:**

This report supports A Caring Community.

**FINANCIAL IMPLICATIONS:**

Capital Budget – The IZ work is anticipated to be completed with existing resources and approved budgets. Consultant costs were cost shared among the partners as a Joint Services Initiative, and were supported by provincial Streamline Development Approvals Funding.

Operating Budget – The recommendation has no impact on the Operating Budget.

**COMMUNITY ENGAGEMENT:**

INFORM – This report along with project materials have been posted to the City's website with the agenda in advance of the committee meeting and on engageWR .

CONSULT – The partners have engaged with stakeholders and the community at large both online and in person since 2020. In 2022, the partners retained LURA Consulting to assist with developing plain language communication and videos to explain the inclusionary zoning concept. LURA also helped plan, deliver, and facilitate digital and in-person community engagement. Details on engagement and what was heard are included in Attachment A.

Since 2020, the Inclusionary Zoning engageWR project page was visited 3,300 times with over 1,000 engaged visitors. Four synchronous engagements, both online and in person, were attended by over 100 people.

It is recognized that community engagement to date does not reflect the full depth of diversity and the demographics of Waterloo Region. Households earning less than $60,000 per year, people younger than 30, and those without post-secondary qualifications were underrepresented in meeting attendance and through the engageWR platform. Renters and moderate-income households, both groups expected to benefit from IZ, were well represented. Some engagement tactics targeted key stakeholders such as industry and housing providers and as such were not expected to be reflective of the Region's demographics. Furthermore, the consultations were technical in nature, and policy options fall within tight regulatory bounds. Staff identified the likelihood of retraumatizing people with lived experience of homelessness or poverty, as well as reputational and trust risks of engaging intensely with these populations in such technical work, and so did not proactively or intensely engage with them. A concerted and generally successful effort was made to engage with moderate income people who are anticipated to benefit directly from inclusionary zoning. Nevertheless, there is significant room for improvement in pursuit of equity in community engagement through future affordable housing work. The community engagement results should be interpreted with this in mind.

In general, we heard broad support for an inclusionary zoning policy. Support was expressed for flexibility within the policy without 'watering down' the delivery of affordability objectives or unit quality. There was no consensus on how to manage the trade-offs between set-aside rate, depth of affordability and duration of affordability. A general preference for the provision of two bedroom or larger units was identified.

While no consensus emerged on the appropriate price or rents for affordable units, participants expressed a desire to see an IZ program that delivers moderately affordable units complemented by other policies and programs beyond IZ that target the creation of many more deeply affordable units.

Participants encouraged the partners to consider additional zoning measures such as eliminating parking minimums and allowing more low and mid-rise development within residential neighbourhoods to help increase housing supply more broadly through variety of built forms.

Participants expressed the desire for continued advocacy to the Province for the expansion of where inclusionary zoning can be used, and continued municipal discretion on maximum set aside rates and duration of affordability.

The development community indicated the need for all of society to work to provide more affordable housing units. Many support the development industry playing a part in the creation of affordable housing in the Region. They emphasized the need to maintain project viability and not putting undue price pressure on market rate units. Most condominium developers' business model does not align with administering units in the long term; partnerships are needed to fill this gap.

**PREVIOUS REPORTS/AUTHORITIES:**

- DSD-20-006 Affordable Housing Strategy Phase 2: Housing Needs Assessment
- DSD-20-150 Inclusionary Zoning for Affordable Housing: Background and Fiscal Impact Analysis
- DSD-2022-501 Bill 23 More Homes Built Faster Act – Kitchener Comments

- *Planning Act*

**REVIEWED BY:** Natalie Goss, Manager, Policy Planning and Research
Michelle Lee, Senior Policy Planner, City of Waterloo
Matthew Blevins, Senior Planner - Reurbanization, City of Cambridge
Judy Maan Miedema, Principal Planner, Region of Waterloo

**APPROVED BY:** Justin Readman, General Manager of Development Services

**ATTACHMENTS:**
Attachment A – Region of Waterloo and Tri-cities Inclusionary Zoning Study: Engagement Report

# Region of Waterloo and Tri-cities Inclusionary Zoning Study: Engagement Report

February, 2023

Prepared by LURA Consulting Inc.

Table of Contents

## Project Background

In 2019 the cities of Kitchener, Waterloo and Cambridge and the Region of Waterloo started to investigate the development of an inclusionary zoning policy in each of the tri-cities within the framework of the Official Plan for Waterloo Region.

Inclusionary zoning allows cities to require private developers to include a certain percentage of affordable units within new, multi-unit housing developments of ten units or more. The tool can be applied to areas around ION stations - called Protected Major Transit Station Areas (MTSAs.)

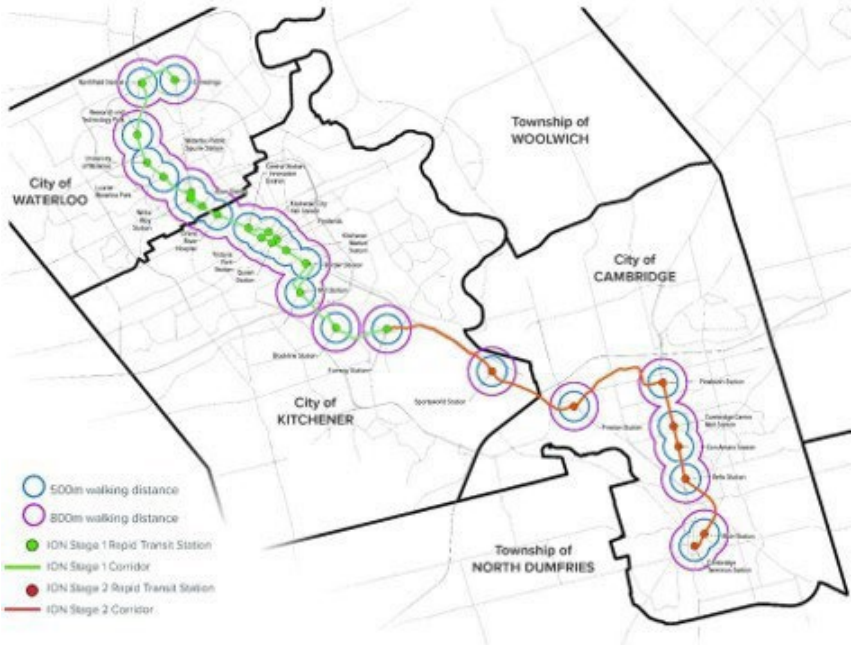



Figure One: Map of ION route where intensification is planned.

In partnership, the tri-cities and the Region contracted N. Barry Lyon Consultants Ltd. (NBLC), a land economics firm, to carry out an assessment of the economic feasibility and financial impact of a potential inclusionary zoning framework for selected MTSAs throughout the region. The results of the NBLC financial impact assessment, a peer review of the NBLC report, and a summary of stakeholder feedback was then presented to respective city councils between Fall 2020-Spring 2021.

In Fall 2022 the project shifted to begin consideration of Official Plan and Zoning by-law amendments to implement inclusionary zoning. The tri-cities retained LURA Consulting to develop and implement a public engagement strategy. The goal of the engagement was to seek specific feedback on policy direction questions from a variety of perspectives. Participants included those who could potentially benefit from an inclusionary housing policy, not-for-profit and for-profit housing providers, and the community at large. This report presents a brief overview of earlier engagement activities and a detailed review and synthesis of the feedback gathered since Fall 2022.

## Engagement Summary

The engagement process identified a general, broad level of support for further developing and implementing an Inclusionary Zoning Policy. It identified a strong desire to create a flexible policy to achieve the goal of providing more affordable units as soon as possible. Engagement participants suggested limits to the height and density trade-offs that might be allowed to secure affordable units through the tool, while at the same time indicating a willingness to be flexible in support of the goal of new affordable homes.

Early Awareness and Beneficiary Preferences
One engagement challenge was to ensure that participants understood that the level of affordability offered by an IZ program without additional incentives was not the deep level of affordability required for those receiving social assistance. This challenge was met by providing additional context, guidance and explanation in on-line postings as well as at in-person meetings.

Builder Comments
The development community was concerned about the effect of the policy regulations on the financial impact to future projects. In particular, impacts on project viability, impacts on the price of market rate units, financing horizons, aligning with the Canada Mortgage and Housing Corporation (CMHC)'s Rental Construction Finance Initiative, and CMHC average market rent definitions were highlighted as areas to review. The development community indicated a strong preference for flexibility to deliver requirements off-site and encouraged the tri-cities to have a unified approach to the policy for the administration of IZ units.

Priorities and Flexibility
Through the on-line survey and the in-person feedback, some policy preferences were clear with more nuance and lukewarm support in other policy areas.

The following priorities were clearly indicated in engagement with the general public:

- A general preference that the policy focus on the provision of two bedroom or larger units
- Support for IZ units to be incorporated into the new buildings along the corridor
- A high degree of support for financial incentives to off-set development costs where the incentives helped meet the goals of additional affordable units or increased duration and affordability of the units
- Support for targeting rental units within the policy

Participants were not united in their support for additional height and density allowances. Some identified little concern for allowing additional heights to meet the end goal of additional affordable units, while others were more hesitant to make too many trade-offs in built form. As well, no clear consensus emerged with regards to recommendations on the appropriate price/rental point for the IZ units.
A slight preference for prioritizing the greatest level of affordability in new units was identified over duration of affordability and set aside rates.

Feedback from all sources outlined concerns about the limitations of Inclusionary Zoning as a policy to address affordability. This new policy tool was identified as a further option alongside more established tools and supports such as social housing. An additional common thread was the idea that partnerships and flexibility are needed to ensure a successful program. Developers, affordable housing providers, regulators and the community at large will need to seek out new partnership opportunities in order to meet the goal of providing additional affordable housing in the region.

## Engagement Methods and Participation

In order to reach a broad spectrum of the public in Waterloo Region, a variety of methods were used throughout the project lifecycle. The use of multiple engagement tactics lowers barriers to participation and recognizes different preferences and opportunities for citizen engagement. The following are the methods of engaged used during the project. Engagement-specific summaries can be found in subsequent sections.

Digital Engagement: EngageWR (https://www.engagewr.ca/inclusionary-zoning). The project page was housed within the Engage Kitchener Hub on the regional EngageWR site, but was also available directly through a link on each of the area municipalities' Engage hubs.

Interest Group Sessions: The project team held listening-based facilitated meetings, both-in person and virtual, focused on generating dialogue from not-for-profit housing providers, the development industry community and future beneficiaries of an IZ policy.

Online Survey: An online survey was posted on the Engage project page.

Public Meeting: A broad community meeting was hosted at a location accessible to residents from any of the three municipalities.

Email/Phone: Contact information for the project team was posted on the Inclusionary Zoning Engage page. Names and photos of project team members were included.

Jan. 23 public meeting on inclusionary zoning

06 Jan 2023




**The Waterloo Region partners want your input on an inclusionary zoning policy. Learn more, ask questions and shape the recommended policy.**

**Day:** January 23, 2023

**Time:** 6:30 - 8:00 p.m.

**!! New Location!! :** 101 Father David Bauer Drive, Waterloo. Rooms 200 and 201

**Please register at: Eventbrite**

The Cities of Kitchener, Waterloo and Cambridge and the Region of Waterloo are exploring a new tool to increase the supply of affordable housing. Inclusionary zoning would allow the Cities to require private developers to include a certain percentage of affordable units within new, multi-unit housing developments along the ION transit corridor.

The Waterloo Region partners are hosting an engagement and feedback meeting for members of the community who have an interest in this housing affordability tool. The tri-cities are seeking input on an inclusionary zoning policy that could successfully secure new affordable housing while meeting other growth and density goals.

The meeting will offer an opportunity to learn about how inclusionary zoning works, ask questions of municipal staff, and shape the recommended policy.

Figure Two: Screen shot from Eventbrite Public Notice

### Educational Videos

Given the complexity of the subject matter and technical language involved in the work, the tri-cities also commissioned the development of two educational videos for posting online. The theme of the first video was affordable housing and it included an introduction to Inclusionary Zoning as a tool within the spectrum of policies to create affordable housing.

The second video focused on the specific meaning and facets of the Inclusionary Zoning policy is forthcoming.


Figure Three: Still from Video #1

## Engagement and Reach

The following tables summarize the reach, or participation rates, of the various methods of engagement used.

**EngageWR Inclusionary Zoning Page**

The EngageWR portal served as an active driver of participation in the project with over 3,300 visits to the site. In addition to serving as a source of information about the project, the site generated active engagement from over two hundred participants who left comments or filled out a survey on the site as of January 31, 2023.

| EngageWR IZ Project Pages March 24,2020-January 31, 2023 | |
|---|---|
| Website visitors who viewed at least one page | 3,330 |
| Ideas Page Visits | 267 |
| Ideas Page Commenters | 109 |
| Online Survey Page Visits | 175 |
| Online Survey Responses | 89 |
| Guest Book Page Visits | 341 |
| Guest Book Commenters | 22 |
| Document Downloads from the site | 924 |

The primary sources of traffic to the EngageWR page are indicated below. Search engine inquiries and links to the page generated through the EngageWR electronic newsletter drove most traffic to the site. Social media also generated considerable traffic to the site with a lower number of traffic coming from the municipal web page and traditional news media website.

| Inclusionary Zoning Engage Page: Top Sources of Traffic | |
|---|---|
| Google | 972 |
| Engage Newsletter | 579 |
| Twitter | 187 |
| Facebook | 148 |
| Kitchener Citynews.ca | 69 |
| Kitchener.ca/MyKitchener.ca | 49 |

Members of the public demonstrated confidence in the capacity of the EngageWR page to serve as a source of official documents and a repository of project information. Over 900 documents were downloaded from the site as outlined in the table below.

| Document Name | Downloads |
|---|---|
| Kitchener staff report to council -September 2020 | 303 |
| Inclusionary Zoning stakeholder engagement session presentation -March 2020 | 226 |
| Evaluation of potential impacts of an affordable housing inclusionary zoning policy | 203 |
| Frequently asked questions | 105 |
| Waterloo staff report to council Dec 7, 2020 | 103 |
| Total | 940 |

## Who Participated

As outlined in the Engagement Methods and Participation section above, the tri-cities Inclusionary Zoning engagement strategy used several techniques to reach different audiences. To lower barriers to participation- such as time constraint challenges, or the need to secure childminding- both digital and in-person engagement were part of the program. Other intentional actions taken to seek out and encourage feedback from different audiences included:

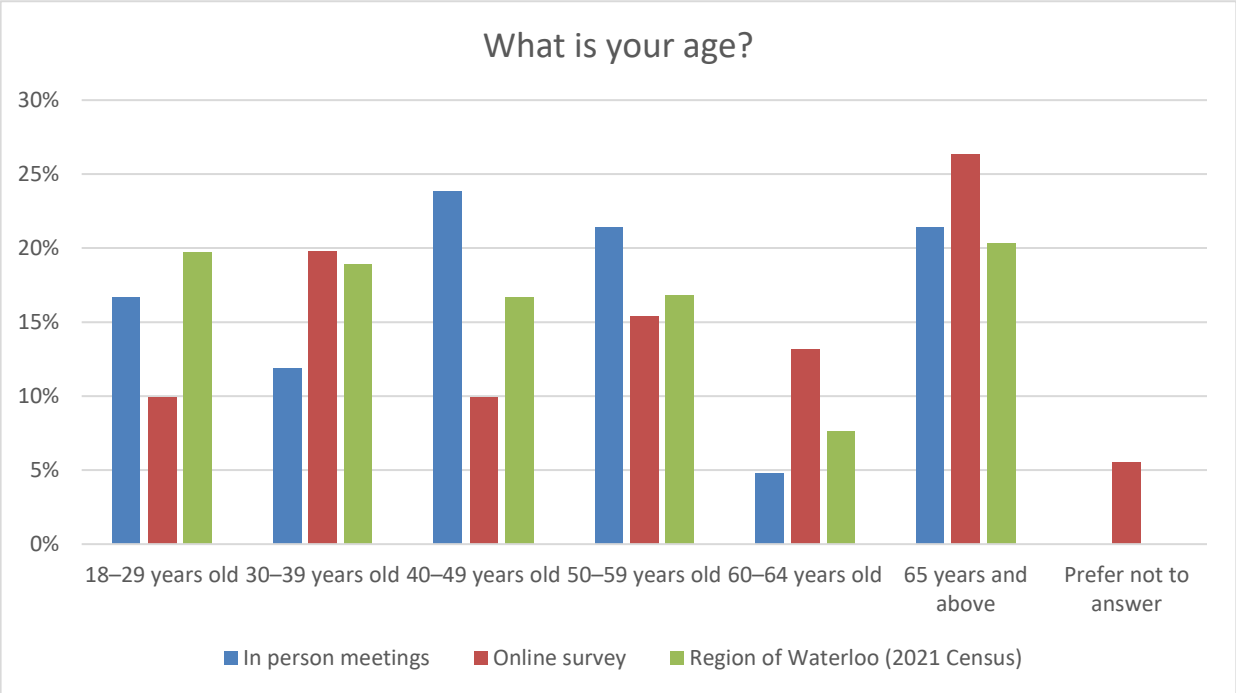
- Specific meetings with interest groups, including individuals with moderate incomes who might benefit from an inclusionary zoning program
- Invitations worded to provide context for the outreach and with an invitation to ask questions about the event from the organizers
- Direct invitations to participate to agencies and associations serving:
    - Students
    - Participants with accessibility needs
    - Age friendly city proponents
    - Indigenous community members
    - Newcomers and refugees
    - Multicultural groups
    - Renters

The project team also made sure to host meetings within an MTSA to reduce reliance on car travel and reduce the need to have home access to the internet.

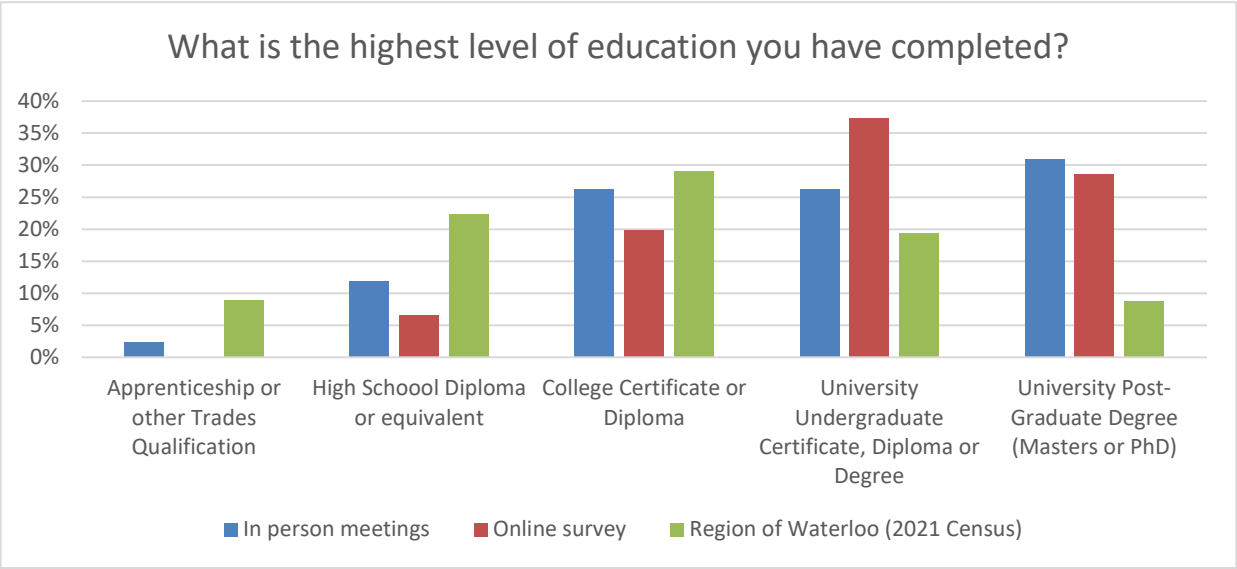
These efforts were made to support the goals of broad awareness and participation from a population reflective of the residents of the tri-cities. They were also taken out of an awareness that in general, organized civic associations and participants in public meetings tend to over-represent citizens with higher levels of education, more leisure time, higher incomes and with better access to technology. Participation is always voluntary and, as reflected in the gap between the number of respondents who indicated that they would participate (took actions to register or RSVP) and the lower number of attendees, municipal engagements compete for attention with the other activities, obligations and realities of citizen participation. Intentional outreach and deliberate care can yield benefits over the longer term as a message from the municipalities that all are welcome and different points of view are wanted.

The Inclusionary Zoning team also collected demographic information from respondents to the online survey as well as attendees at the December 2022 and January 2023 Meetings. Completion was not a requirement of participation. However, it did provide some data to measure against the goal of an inclusive engagement process. The collection of demographic information supports the goal of identifying which individuals and groups were represented through the engagement process thereby allowing an evaluation of methods and lessons learned for future engagement efforts by the municipalities in Waterloo Region. The charts below indicate self-declared responses from three data sets: participants at the public meetings in December 2022 and January, 2023, online survey respondents and 2021 Canada census data for the Region of Waterloo. Unfortunately, not all variables in the City of Kitchener's standard demographic questionnaire used for this project are comparable to variables used in the census. Additional information collected in the participant surveys included: language, race/ethnicity, religion, gender, sexual orientation and disability but are not reported here.

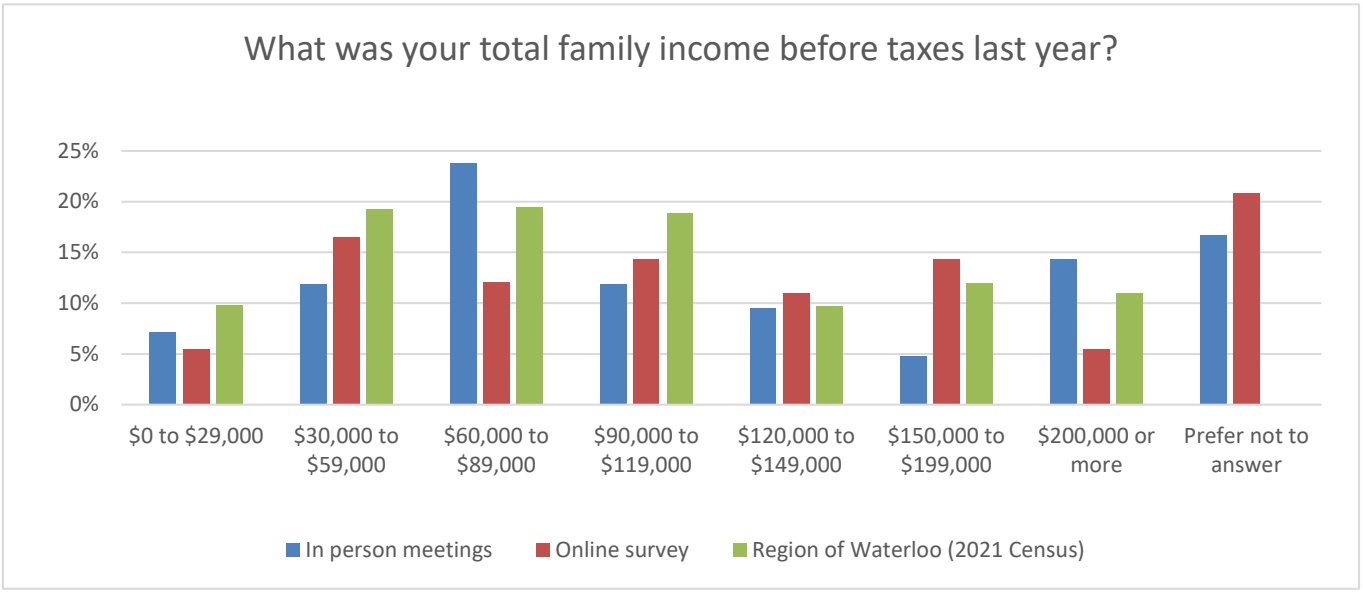
The age of participants in the engagement process indicates a lower participation rate in the online survey for people in the lowest age category and 40-49 year old category. An overrepresentation of responses from participants over aged 60 is indicated. Age distribution for the public meeting was underrepresented for 30-39 year olds and 60-64 year olds. As a whole, there was a general distribution of ages in participants.



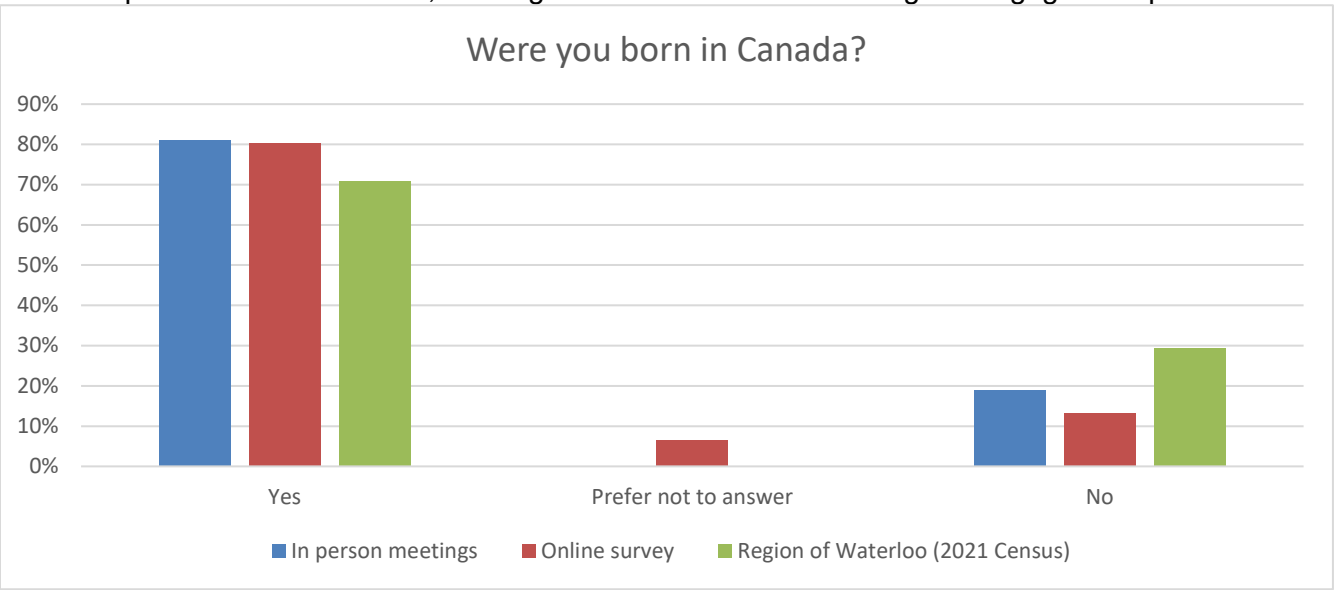
Despite deliberate efforts to facilitate participation from a reflection of the population of the tri-cities area, there was an over representation of residents with higher levels of education. Further attempts to rectify this could include a campaign to promote the videos to ensure broad awareness and help underrepresented communities better understand the relevance of IZ to their issues and concerns.



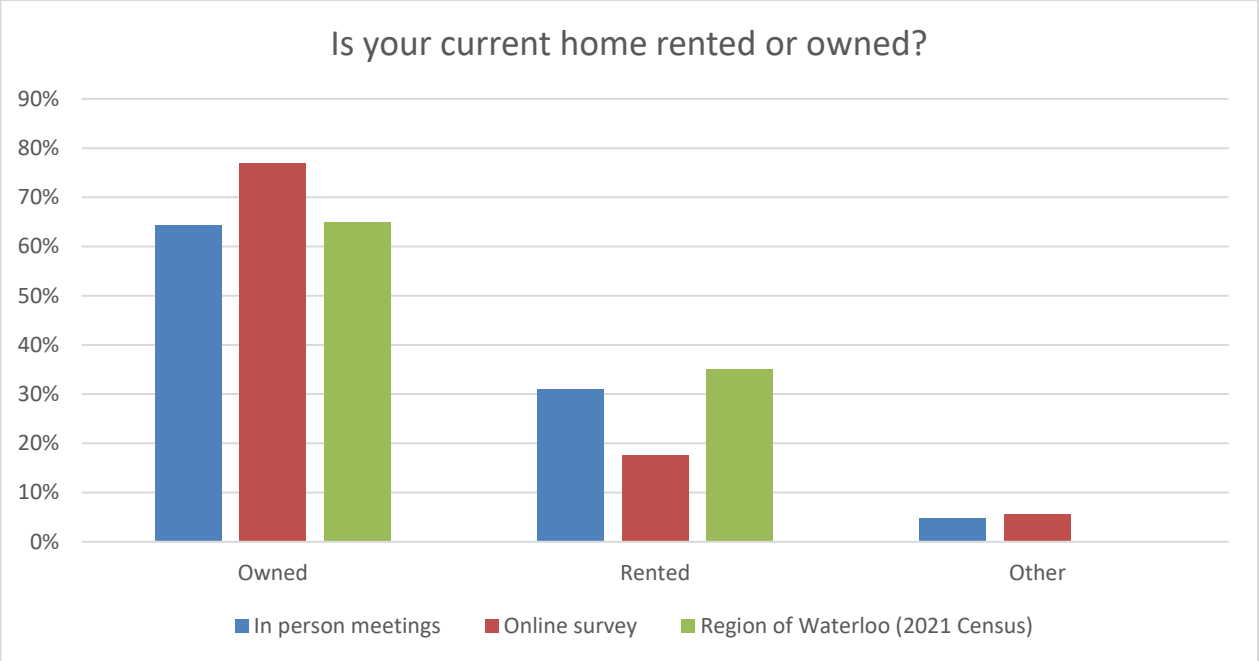

The feedback indicates an underrepresentation in online participation from those with household incomes of $60-$89,000. However, this cohort was well-represented at the public meetings. Specific effort was made during the outreach period ahead of the in-person events to identify interested civic groups who serve potential future beneficiaries of the IZ policy and encourage them to promote participation. In general, the income distribution of participants indicates fair participation in different categories. Moderate income households, who are likely beneficiaries of IZ, were well represented. This is a positive finding for the engagement. Incomes under $60,000 were underrepresented across online and in person engagement.



As outlined above, an effort was made to create awareness of the policy and program development in newcomer communities in the region; despite these efforts, participation in both the online survey and the in-person meeting indicates low participation among first generation immigrants. Additional connections with agencies serving newcomer communities can be pursued to address this gap as the process moves forward, building on the outreach done during the engagement phase.




Affordable housing is needed in both ownership and rental tenures; however, renters were slightly under-represented in the engagement. Additional efforts to increase awareness for renters should continue to be made. The previously identified public advertising could be part of this effort.




## What We Heard

The following section provides detailed summaries of the feedback received during each phase of engagement for the project. Feedback is summarized based on themes pulled from responses. The summaries are not intended as verbatim accounts but rather a synopsis of the major takeaways from the engagements.

# EngageWR Digital Consultation Summary

## Summary:

The project team collected public feedback through a virtual engagement platform. The platform was hosted through the Kitchener Engage website and linked from the engage pages of the other municipal partners. It collected feedback around the question, “What do you think about Inclusionary Zoning?”

The platform collected public feedback from March 24, 2020 to January 31, 2023 with the highest traffic to the site occurring in September 2020, coinciding with the Kitchener staff report to Council.

## Objectives:

- Introduce the Inclusionary Zoning project and policy concepts
- Invite members of the public to connect with project team members
- Encourage participants to share their ideas around the development of the policy and comment on the ideas and comments of others

## Participants:

Between March 2020-January 2023 period, 608 visitors reviewed the “Ideas” and “Guest Book” pages of the site. Here, a total of 131 contributors left comments, responses and guest book entries.

## Key Themes:

The following is a summary of the main themes that emerged through an analysis of the ideas, comments and guest book entries received through the virtual engagement platform. The majority of ideas and responses received (over 90%) date from the early part of the project in 2020 and 2021. The comments reflect a reaction to the initiation of the project and a desire to understand the specifics of the project better.

**1. The development community has a role in affordable housing.**

Many commenters expressed their desire to have more strict requirements for developers (such as increasing the percentage of units that must be affordable and a call for those units to remain affordable permanently.)

An opinion was conveyed that the public paid for the development of the ION through taxes, and developers who benefit from the increased land value should be obligated to provide a public good.

Some participants expressed that putting excess pressure on developers regarding affordable housing could lead to development companies not investing in the region and cautioned not to lose sight of the goal to create the greatest number of units possible.

**2. Taking steps to drive down cost pressures by encouraging development**

Participants indicated that parking minimum requirements were a financial burden for developers and supported their elimination in order to support opportunities to build affordable housing.

Some participants expressed support for the concept that increasing the permitted density of developments can be a tool to accommodate more affordable units.

A number of commenters wished to refocus the conversation toward other planning priorities. Many noted the elimination of Exclusionary Zoning as a goal; these commenters called for the removal of single residential zoning and outlined that such a policy would positively impact regional housing supply and affordability.

Some participants commented that development in the region is booming, and intensification efforts within existing residential neighbourhoods should be prioritized, rather than a focus on units in higher built forms along the ION route.

### 3. IZ should advance city-building goals beyond affordability

Many participants expressed that an Inclusionary Zoning policy should include regulations around the size of affordable units. Affordable family sized units or units for individuals sharing larger units would provide opportunities for rent sharing making further affordability more likely.

Several participants called for new developments to be mixed-use to support walkability in the community. Non-profit agency tenancies, grocery stores and other community needs as well as ground floor retail were identified as preferences.

Some concern was expressed by participants about the focus of Inclusionary Zoning on providing housing affordability for moderate income households rather than low-income households with deep affordability needs.

Concern was expressed by some participants about whether the potential number of units that could be delivered by the program would be too small to have a meaningful impact on the shortage of affordable units.

### 4. Clarifying the meaning and intention of Inclusionary Zoning

Likely owing to the majority of the comments and feedback received through the virtual engagement platform being received during an early stage of the engagement, several participants expressed confusion about the level of affordability that could be offered through an Inclusionary Zoning program and the type of housing it offered within the wider affordable housing spectrum.

Many comments indicated an assumption that the affordable housing units provided through IZ would be deeply affordable subsidized housing units. Continued explanation of the concept in plain language as a tool for the provision of moderate level affordability is encouraged.

The video resources developed as part of the engagement can be used to further support clarification and education in this regard.

## Inclusionary Zoning Beneficiary Group Workshop Engagement Summary

December 13, 2022

6:30-8:00 p.m. City of Kitchener Downtown Community Centre, 35B Weber St W

## Summary:

Members of the project team hosted an in-person focus-group style discussion with individuals associated with groups that could benefit from an IZ policy. The session was held at a centrally located venue in Downtown Kitchener. Fifty-one invitations were issued by email on December 2, 2022 with 27 RSVPs received through a designated EventBrite page issued to invitees. Invitations were issued to a list of groups drawn from the Affordable Housing master contact list with a focus on groups whose clients/users could ultimately benefit from the policy. Care was taken to draw awareness to groups serving middle-income clients since any IZ program is anticipated to be of direct benefit to moderate income households. Groups who received the invitation were encouraged to share the invitation with their networks.

The meeting began with a presentation by Tim Donegani, Senior Planner- City of Kitchener who introduced the project and gave an overview of the Inclusionary Zoning project process to date. A video was shown that explained how housing has become less affordable in recent years and how IZ is one option to increase the amount of affordable housing. Following this, LURA facilitated two break-out group discussions with participants and members of the tri-cities project team that invited meeting participants to provide feedback and ask questions.

## Project Team:

Tim Donegani
Senior Planner- City of Kitchener

J. Matthew Blevins
Senior Planner Reurbanization-City of Cambridge

Judy Maan Miedema
Principal Planner-Region of Waterloo

Michelle Lee
Senior Policy Planner -City of Waterloo

LURA

Liz McHardy, Partner

Franca Di Giovanni, Senior Engagement Specialist

## Objectives:

The objectives of the meeting were to:

- Introduce the Inclusionary Zoning policy concept
- Reach community members through the process who will benefit from such a policy but who may not have awareness of efforts and dialogues established to date
- Promote awareness of the concept and the potential it has to provide new options for creating affordable housing for residents with moderate incomes
- Identify next steps

## Participants:

There were 13 participants in the focus group style session.

## Questions:

The discussion focused around thoroughly explaining the concept of inclusionary zoning and getting feedback on the specific themes and questions noted below.

- Seeking Affordable Housing: How many units, for how long and for what cost of housing?
- Affordable rental or affordable ownership: Should the cities target securing affordable rental units or ownership units or a mix?
- Ensuring a viable program: What are the trade-offs, such as heights and densities that are needed to encourage a viable program? Should the cities use financial and/or non- financial incentives to further advance affordability objectives?
- Location trade-offs discussion: Should developers be permitted to provide the affordable units in other buildings within the area?

## Key Themes:

The main themes that emerged from discussions with stakeholders at the session included:

**1. A preference for larger units (2 or more bedrooms)**

Participants expressed a wide variety of opinions around the need for or uses of three-bedroom units. It was acknowledged that the cost of larger units in new multi-unit buildings is high, both for the builders, renters and buyers, compared to one- bedroom units. However, newcomers and post-secondary students with families coming to the tri-cities to study or work were cited as needing larger homes and therefore benefiting from larger affordable units.

Other participants from the real estate and supportive housing fields identified inconsistencies in the desirability of three-bedroom units citing that they are either highly coveted or languish on the market.

The concept of three-bedroom units as shared space for a larger number of people, but not necessarily from one family or household, was discussed. The question of whether offering larger unit sizes through the program could support the greatest number of people was posed.

In general participants agreed that while it was difficult to identify the ideal unit size for the program, more than one bedroom was the preferred unit size.

### 2. Ownership or rental

There was a general consensus on the need to prioritize rental units as the form of tenure supplied through an Inclusionary Zoning program.

### 3. Incentives and trade-offs

Participants in this group did not express a great amount of concern for the financial impact of IZ requirements on new developments. A general feeling that sufficient profit margins could still be attained was expressed.

There was no specific consensus reached on the trade-offs to be provided. Participants expressed a variety of opinions around the concept of forgiving development charges. Flexibility around development charges was supported if the charges stood in the way of getting something built. Some support for eliminating parking minimums and being more flexible in terms of height was expressed, citing the example that "a 24 storey building versus the 27 storey building doesn't make a difference."

One participant expressed a strong desire not to waive the fees for inclusionary zoning and instead supported redirecting fees toward other housing programs. Another cited empty units in downtown Kitchener as evidence that "it's not true that every one bedroom unit is needed". While another conveyed that "being flexible might dilute what we get". Although the intention was to seek feedback on what cost of housing should be targeted through the policy, no strong discussion and no clear preference was articulated in this regard.

## Questions of Clarification

**Question: Do we have good numbers on how many units are actually required at each price point?**

Answer: Many low and moderate income households are experiencing housing affordability issues. The need is greatest at the lowest incomes. The information we do have is provided in the Housing Data and Needs assessments completed or being completed by each area municipality.

**Question: How long will it take to get IZ in place?**

Answer: The policy is expected to be in place by 2023 with implementation in 2024.

# Inclusionary Zoning Consultation Online Survey Summary

## Summary:

An online survey was added to the IZ Engage page on December 19, 2022. The survey remained online from December 19, 2022-January 31, 2023.

## Objective:

The survey focused on collecting feedback about preferences in response to questions about:

- Overall support for an IZ policy
- Preferences for on-site requirements versus flexibility for off-site units
- Opinions about the trade-offs around financial incentives
- Feedback on additional flexibility in height and density allowances
- Priorities in terms of depth of affordability, length of affordability and number of units created

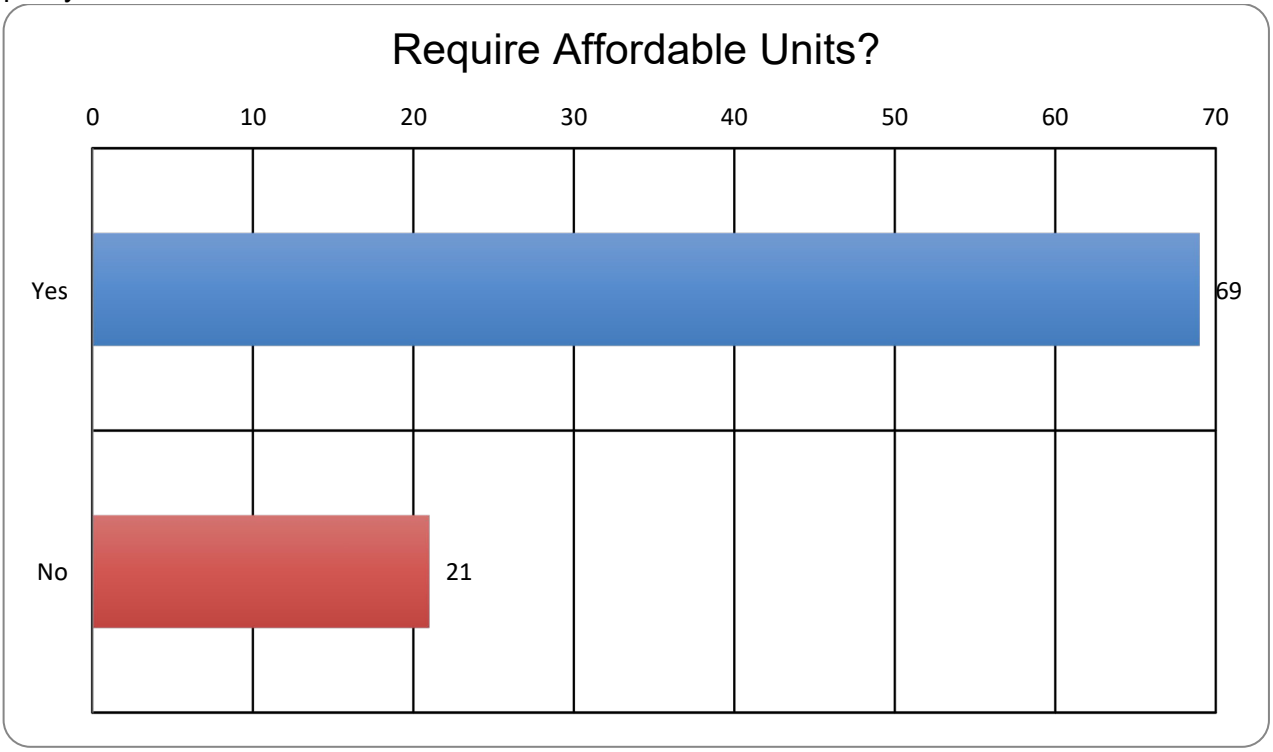
## Participants:

Over the timeline previously indicated, the survey had 175 visitors to the page with 89 contributors completing the survey.

## Survey Questions and Responses:

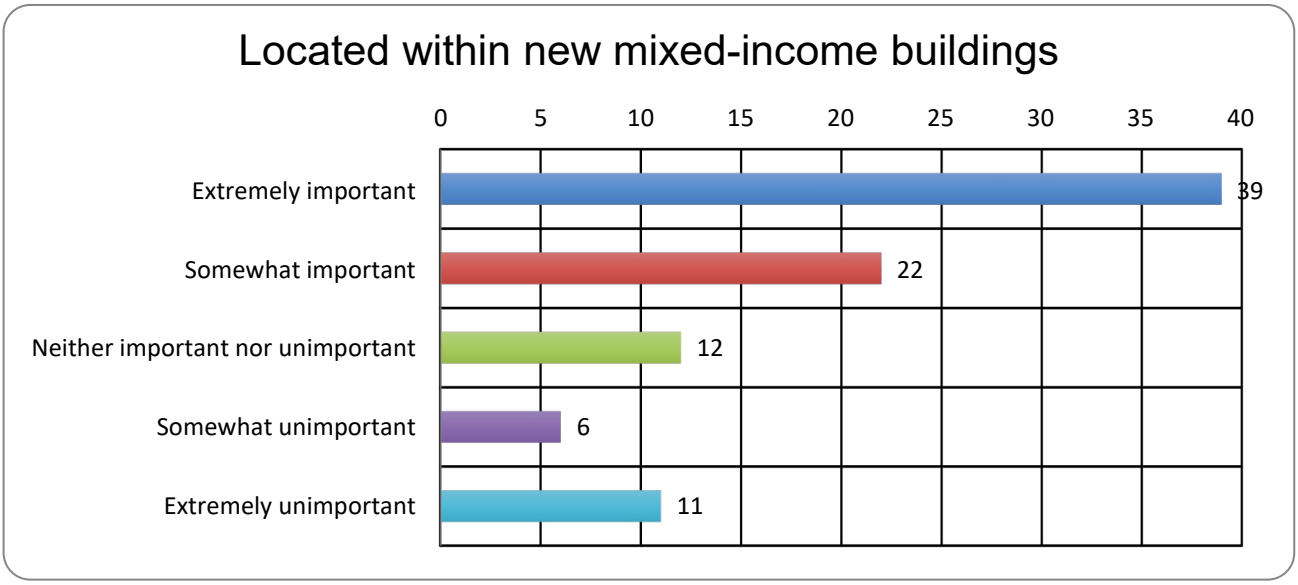
**1. Do you think the cities of Kitchener, Waterloo and Cambridge should require private developers to include some affordable housing within new, multi-unit housing developments near ION stops?**

Survey respondents indicated a high level of support for the development and implementation of the policy.



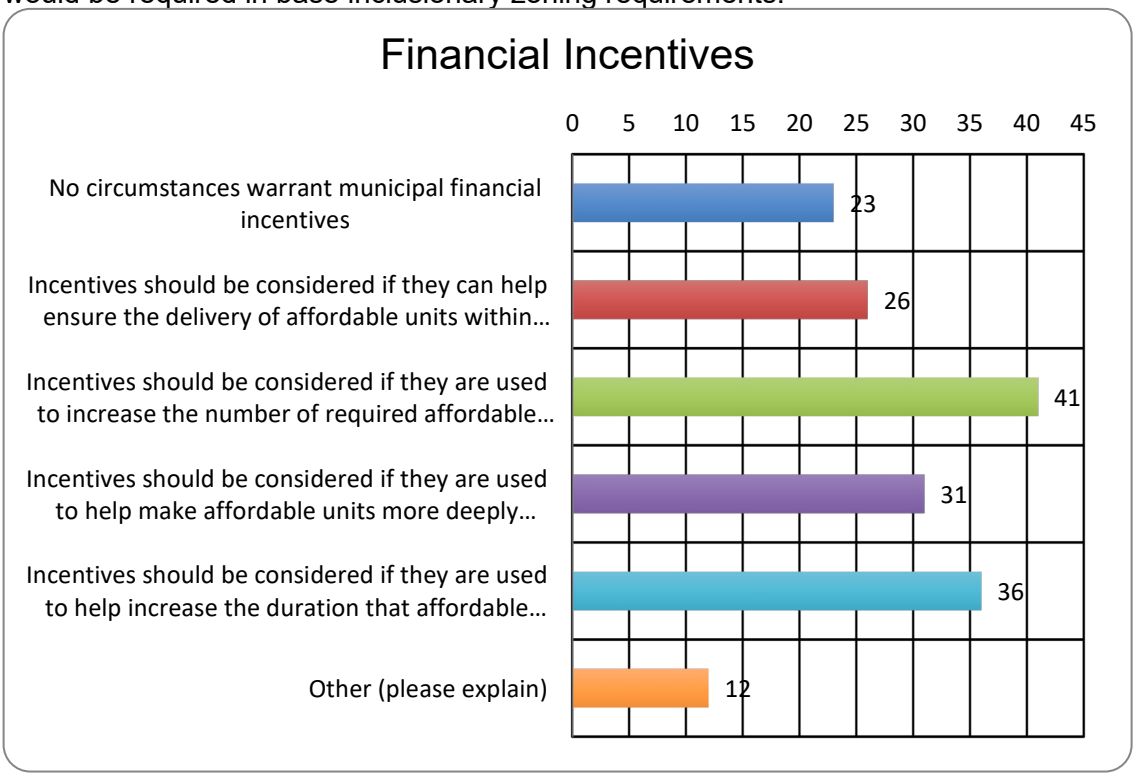
**2. How important is it that affordable housing units are located only within a mixed income building rather than in a building that contains all affordable units?**

Survey respondents expressed a strong preference for the affordable housing units delivered through the program to be located within the new mixed income building(s.)



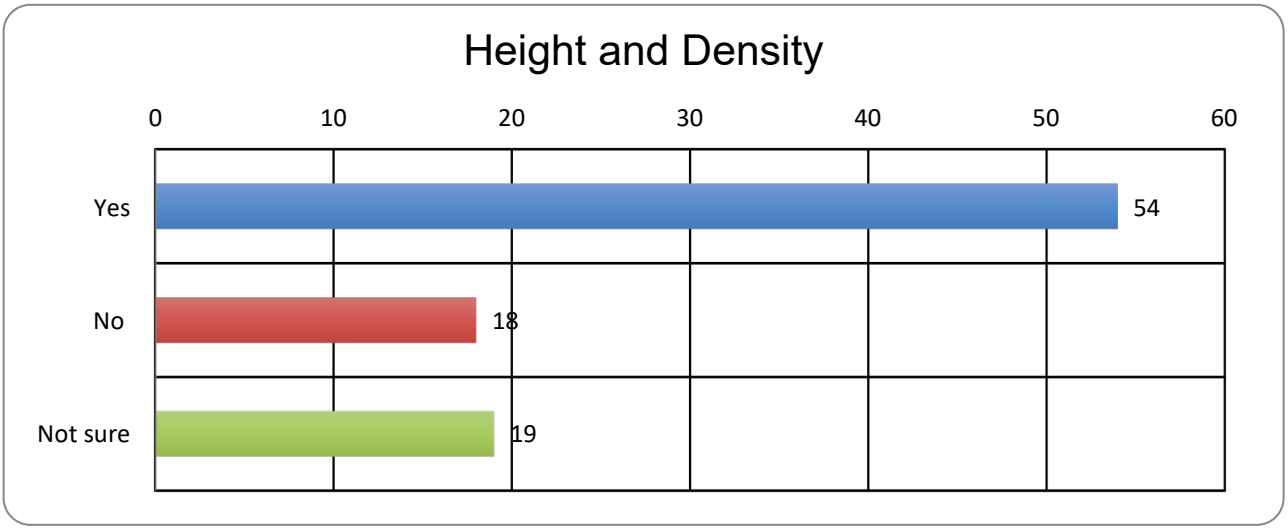

**3. Under what circumstances should financial incentives (such as waiving fees or charges) be considered as a way to support an inclusionary zoning program?**

Survey respondents indicated a high degree of support for the allowance of financial incentives to off-set development costs where affordable units were being provided above and beyond what would be required in base inclusionary zoning requirements.



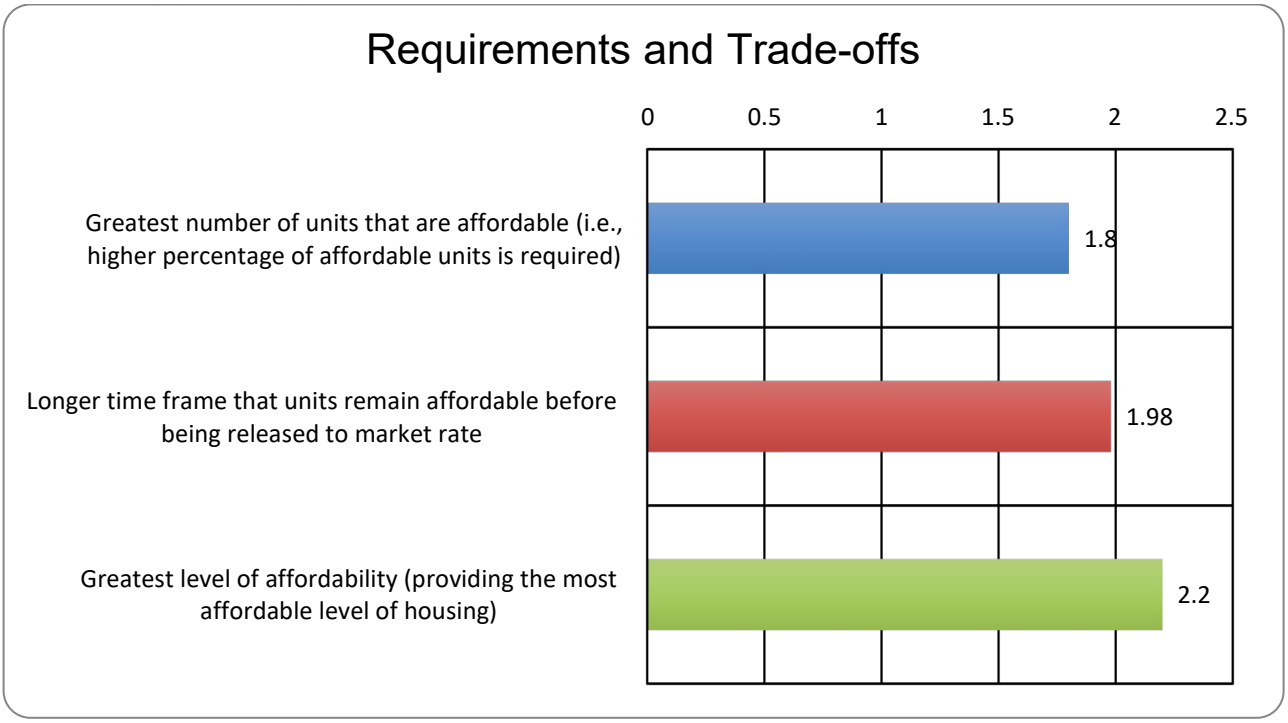
**4. Recognizing that enabling developers to build more units on the same site could help them offset the reduced revenue they receive for the affordable units- do you think the cities should allow more height and density if it means more affordable units can be provided?**

Despite indicating a strong desire for flexibility regarding financial off-sets to support an IZ program, survey respondents were not united in stating their support for additional height and density allowances.




**5. What is the most important to you when considering the various policy requirements and tradeoffs? Rank the following from most important to least important. (Where 1 is most important, 3 is least important)**

Survey results indicated a slight preference for providing the greatest level of affordability in new units. However, the margin between depth of affordability, length of affordability and number of affordable units was less than half a percent. Respondents are seeking a balanced approach to these three policy objectives.




## Affordability Stories:

The survey also included an open text component for participants to write four or five sentences outlining their current experience, or that of someone close to them, affected by housing affordability in Waterloo Region.

The following is a summary of the key themes emerging from the open text section as well as some direct quotes.

**1. High proportion of income being spent on rent**

Contributors noted the challenges faced by their family members, and reflected on what their own circumstances would be if faced with current housing costs.

Some expressed concern for what the near future would bring should there be a change in circumstances:

*I work a full time job and two part time jobs…my mother shares our rental to help offset high prices…we can still barely afford the rent we pay*

*My partner and I recently moved to Kitchener and were unable to find appropriate housing within our financial means without relying on help from our families. Because we don't drive, it was vital for us to live near an ION station and within walking distance of our daily necessities (grocery, pharmacy, etc). Fortunately, we were able to find a place near downtown that met our needs, but the majority of our combined income is going to housing costs now.*

**2. High levels of regional demand**

A few contributors self-identified as employers or landowners and highlighted the demand for housing and the lack of affordable supply.

*I am a landlord and even with recent turnovers in my units (wherein the rent was increased) I was overwhelmed with demand. I feel for the many who are seeking affordable housing.*

*I'm struggling to hire professional employees because they can't afford to move to the region.*

3. **Housing costs limiting mobility**

Several contributors outlined that, despite a desire for new housing, they felt stuck due to the fear of losing an existing affordable arrangement.

For some this meant the prolonged presence of adult children at home or the need to share housing with multiple generations of the family.

*Our 3 generation family is underhoused in a reasonably priced 2 bedroom…to move…will not be possible for us.*

*My daughter is a university graduate with a full time job, unable to afford moving out on her own.*

*My daughter is currently living in off campus housing that was opened up for rent when COVID shut down the Universities. She continues to lease (one room with bathroom) but is not a student.*

## Additional Comments for the Project Team

Respondents were also given the opportunity to leave text comments for the project team. Below is a short summary of the main themes of comments.

**1. Inclusionary Zoning is part of the solution, but other programs are also needed**

Several participants noted support for the policy but expressed concern about the number of units that could be delivered through the program. Participants offered their support for other affordable housing solutions in addition to IZ. A general sentiment was expressed that delivering the maximum number of units was the goal.

*Inclusionary zoning is a very much imperfect solution to this problem…However, it is the best tool we have at the moment within the framework provided by the province, and should be used.*

***2.*** **IZ holds strong possibilities for partnership opportunities**

One respondent expressed enthusiasm for the opportunity to develop new partnerships with not-for-profits to deliver the maximum number of units.

*If two projects like this pooled their off-site resources and provided them to a non-profit, the $5 million in revenue could also be leveraged with funds from CMHC and/or the Region, and could reasonably be expected to bring 40 to 50 new units.*

# Development Industry Meeting Summary

Thursday January 19, 2023 10-11:30 Via Zoom

## Summary:

Members of the project team hosted a virtual meeting with individuals in the development industry. The virtual focus group session was held using the Zoom meeting platform and forty-seven invitations were issued by email Friday January 6, 2023. The list was drawn from the tri-cities Affordable Housing Interested Parties Master List that included all known development industry stakeholders operating within the tri-city area.

The meeting began with a presentation by Michelle Lee, Senior Policy Planner -City of Waterloo. It consisted of an overview of the Inclusionary Zoning work carried out by the cities to date, including some detail from the NBLC study of 2020 and an acknowledgement that this work is being updated. Following this, LURA facilitated a group discussion that invited meeting participants to provide feedback and ask questions. The presentation was circulated to participants after the meeting.

## Project Team:

Tim Donegani
Senior Planner- City of Kitchener

J. Matthew Blevins
Senior Planner Reurbanization-City of Cambridge

Judy Maan Miedema
Principal Planner-Region of Waterloo

Michelle Lee
Senior Policy Planner -City of Waterloo

Franca Di Giovanni, Senior Engagement Specialist

Sesvin Josarosa, Community Engagement Specialist

## Objectives:

The objectives of the session were to:
Re-introduce the Inclusionary Zoning project to the development community
Identify the current direction of policy guidelines
Solicit feedback from the development community around the following questions:

- What is an appropriate initial set aside rate for strong markets? (between 1 and 5%)
- What would be an appropriate unit number/building size to exempt from IZ (with a view to removing disincentives for missing middle)?
- Do you have any preferences for a mandatory vs voluntary vs hybrid program?
- Do you want to share any thoughts on the possibility of offsite units?

# Participa

## Participants

There were 33 participants in attendance, representing approximately 25 development firms.

## Key Themes:

The discussions with stakeholders identified concerns about impacts on project feasibility as well as impacts on the price of market rate units. These concerns were captured under the following themes.

**1. Importance of the average market rent definition**

Several participants remarked on the discrepancy between the average market rent figures seen by looking at rental listings in the tri-cities and the CMHC definition of average market rent for the area. The fact that the CMHC Average market rent definition was so much lower was cited as a significant discrepancy leading to a much too low definition of affordable from a developer point of view.

The project team identified its use of the CMHC-posted average market rent as required by the Ministry of Municipal Affairs and Housing, noting that these numbers take into consideration the global supply. This averaging results in a number that looks lower than typical rents for new rental units.

Several participants offered suggestions for how to address the gap or shortfall between these figures. Suggestions included capital investments and funding from senior levels of government, and tax levies specifically geared toward Affordable Housing.
Several participants noted a shared responsibility between developers, municipalities, and taxpayers.

The project team cited that the 2020 NBLC study used a model of residual land value and also outlined that the Region has invested a significant amount of tax dollars into developing the LRT. This in turn has had the effect of pushing up land values. The idea of the IZ policy is to capture some of that increased land value and redirect it toward affordable units. Local, regional, provincial and federal governments investing capital for affordable housing will be part of the solution but the development industry and existing landowners will also need to be part of the solution.

The project team acknowledged that if there is too much burden on developers, the viability of certain projects will be at risk. That is why the tri-cities have done the updated financial impact analysis. Parkland dedication at the municipal level and Development Charge exemptions at the municipal and regional levels are now mandatory. Reductions in parking requirements were identified as a helpful incentive for affordable units and could also be considered a form of subsidy. In response to suggestions that the cost of affordable housing should be borne by the whole of society through a tax levy, it was noted that the Region of Waterloo currently has a 1.4% tax levy specifically earmarked for Affordable Housing. One participant noted that the question of a portable market rent definition is critical because banks are not going to support financing for projects without CMHC involvement.

**2. Limitations of IZ as a policy to address affordability**

Concern was expressed about meeting the targets for affordable housing development within Waterloo Region during a period of uncertainty and high costs for the development industry . With immigration and local population

increases expected, a participant issued a caution to not lean too heavily on Inclusionary Zoning for the delivery of affordable units.

The project team indicated an awareness that if market economics don't support new builds the delivery of both market and affordable units will certainly be affected. The team acknowledged that it might be necessary at times to adjust the parameters to reflect evolving market conditions and move between different policy tools.

### 3. Rent to Own and fractional ownership programs

A few participants wondered where rent-to-own or other programs that fall in between rental and ownership fit into the equation. It was expressed that CMHC is actively encouraging rent-to-own; however, Inclusionary Zoning appears to recognize only rental tenancies or ownership and nothing in between. Other ownership models such as fractional ownership should be considered.

The project team expressed a position that this is something that warrants further conversation in order to better understand how such programs could fit into the IZ policy.

### 4. Purpose-built rental

One purpose-built rental developer expressed a general opposition to Inclusionary Zoning as a concept to address affordability because it increases rents and prices of market units. It was cited that CMHC financing with a 10 year horizon as opposed to the 25 year affordability horizon for IZ units leads to an inconsistency between financing and the horizon of the IZ financial model. Differences in the quality of finishes as well as maintenance and restoration costs for the units were cited as additional financial concerns.

Tri-city project staff stated that the financial modeling that had been carried out did identify that purpose-built rental is financially more challenging to achieve than condo development. In recognition of the different site economics, IZ policy in Toronto has identified different rules for purpose-built rentals and condos. The possibility of lower Inclusionary Zoning requirements for purpose-built rentals is being considered. The alignment with CMHC financing was identified as a situation that would have to be considered.

### 5. Challenges around the administration of affordable housing units

Several participants discussed administration of the units. Citing the usual process of closing a condominium development company down at the close of the build-out, participants identified challenges related to any continued responsibility of condominium developers to monitor, administer, and maintain affordable units within the buildings.

It was suggested that the administration and oversight of the affordable units should be the purview of the Region and its not-for-profit partners.

Tri-city project staff expressed the importance of working out administration details early on in the IZ policy development process.

With regards to providing units off site, developers expressed that while on the one hand integration of affordable units through the community is beneficial, from a practical point of view it would be easier to create specific buildings where the units could be centrally administered.

One participant suggested that in developments that happen over a longer period of time, consideration could be given to phasing. At a certain point a critical mass would develop and a purpose-built "missing middle" sized affordable housing building could fulfill the IZ requirement.

A preference for flexibility in the policy to allow off-site provision of units was a common theme. Participants saw value in encouraging the Provincial government to allow IZ in areas other than MTSAs.

**6. The need for effective and innovative partnerships**

One nonprofit developer participant expressed an openness to new opportunities for partnership with the for-profit development community in order to meet IZ requirements. Developers expressed the desire for flexibility around the development of affordable units outside of the MTSAs and flexible partnerships to maximize affordable housing .

Partnering between different developers in a specific area was also cited as an easier way to administer and build the units. If a purpose-built affordable rental building was constructed in partnership with a not-for-profit provider, the affordability factor could be retained forever.

## Questions of Clarification

The following are questions of clarification that the project partners provided responses to during the meeting.

**Q1: Will the Inclusionary Zoning policy be implemented at the regional or municipal level?**

A: Inclusionary Zoning will be a municipal by-law.

**Q2: According to Bill 23, the Regional Official Plan has to get downloaded to the various municipalities- including the defined MTSA areas. Wouldn't that happen first before this process would be implemented?**

A: Yes, we are planning any inclusionary zoning policy framework at the same time as updates to various Official Plans that incorporate the new MTSA requirements.

**Q3: What is the proposed parking ratio for the units?**

A: Staff are contemplating a variety of options to offset the impact of inclusionary zoning, and one of these options could be a reduced parking ratio or the elimination of a parking requirement for IZ units. Our hope is to bring forward a parking ratio of 0 although that must be vetted and approved through the various municipalities. This recognizes the high cost of creating parking structures.

**Q4: Can we get a copy of the NBLC modeling and the presentation from today?**

A: The presentation from today will be shared. The updated NBLC model will be shared once it has been completed.

**Q5: Everyone is waiting for the specific regulations on Affordable Housing within the new Bill 23 which will have an impact on this program. Can the cities arrange an updated meeting of this sort when all of the regulations have been identified?**

A**:** Further points of contact can be arranged.

**Q6: With regards to landholdings held by the municipality and the region, will they be rezoning their own land for the purpose of inclusionary zoning?**

A: The Region has an existing program for using Regionally-owned lands for affordable housing. The City of Waterloo has done some initial work looking at its land holdings to meet various

community objectives including how best to use surplus lands for affordable housing. The Region and the tri-cities are likely to want to maximize their land offerings for more deeply affordable units. Surplus public lands that are redeveloped will need to meet certain requirements.

## Policy Questions

A question was also posed by the facilitator and project team within the chat box of the meeting and elaborated on by the senior planner from the City of Waterloo. One participant provided a specific response.

**Q: Do you have any preferences for a mandatory/voluntary/hybrid program?**

Voluntary means if you are asking for additional height and density, IZ requirements would set in.

The hybrid approach would be a sliding scale, the higher the height and density, the higher the set aside rate.

A: There is an understanding that there is a gap between what zoning currently allows and what the industry thinks should be allowed in terms of density. The request for increased density is practically a given on any site that will be redeveloped. Figuring out these numbers is likely to be complicated. Other than increased expenses, the development industry does not like uncertainty and calculating the requirements is likely to be very difficult. A mandatory system could be preferred to voluntary or sliding scale type of approach from a complexity and certainty perspective.

# Inclusionary Zoning Public Meeting Engagement Summary

Monday January 23, 6:30-8pm

Waterloo Memorial Recreation Complex, 101 Father David Bauer Drive

## Summary:

Members of the project team hosted an in-person public meeting at a community centre in Waterloo, accessible to residents from the region and in a different municipality than the December, 2022 meeting in Kitchener. Invitations were issued by email to both subscribers of the Inclusionary Zoning Engage page, and a contact list assembled over time by the project team. The event was promoted on the Engage project page and also listed as a public event on EventBrite.

The meeting began with a presentation by Michelle Lee, Senior Policy Planner -City of Waterloo who gave an overview of Inclusionary Zoning and the work done by the project team to date. A short question and answer session with attendees was arranged followed by small group question answer sessions directly with project team members. Participants could also leave comments and feedback on posterboards affixed to the walls. Stickie dots and notes were distributed.
The presentation from the meeting was subsequently posted on the Engage page.

## Project Team:

Tim Donegani
Senior Planner- City of Kitchener

J. Matthew Blevins
Senior Planner Reurbanization-City of Cambridge

Judy Maan Miedema
Principal Planner-Region of Waterloo

Michelle Lee
Senior Policy Planner -City of Waterloo

LURA

Franca Di Giovanni, Senior Engagement Specialist

Sayan Sivanesan, Community Engagement Specialist

## Objectives:

The objectives of the Public Meeting were to:

- Share the latest information on the status of the Inclusionary Zoning policy development project
- Present an overview of the benefits of the project
- Create opportunity for reaction and discussion
- Seek feedback on priorities for depth of affordability, duration of affordability and set-aside rates
- Explain the concept of trade-offs in new builds

## Participants:

Approximately fifty (50) residents attended the session with forty-two (42) signing in and leaving demographic information.

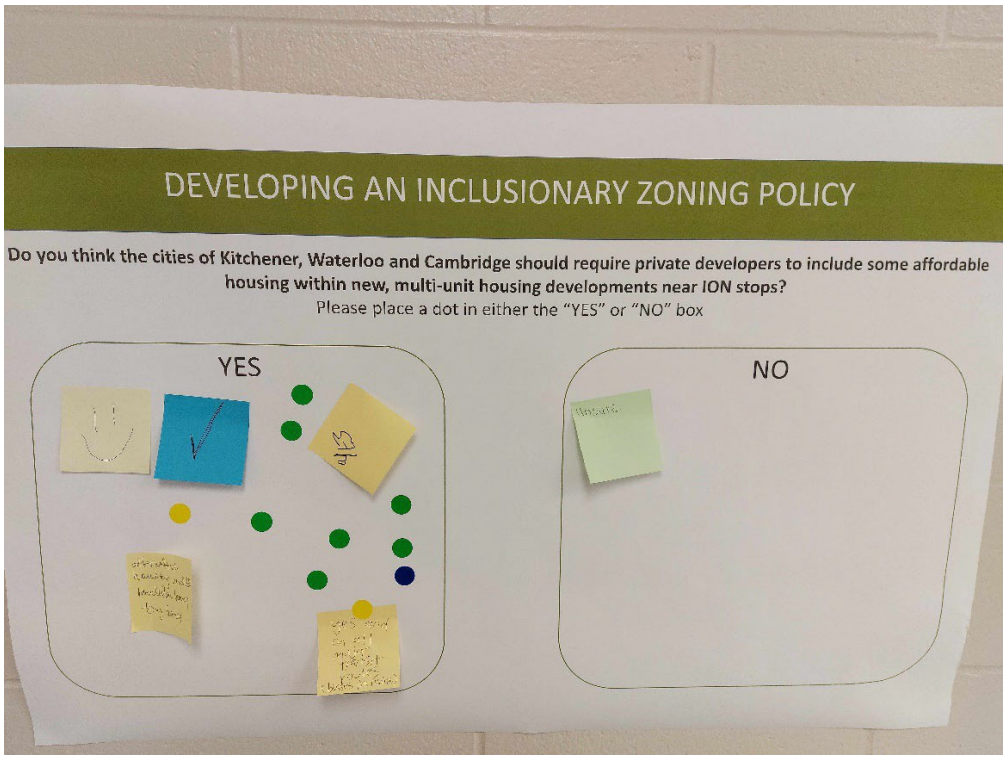
## Dotmocracy responses

The following is a summary of the responses collected on the posterboards displayed in the two adjacent rooms. Project team and engagement team members circulated through the rooms to ensure that participants understood the questions and had the supplies necessary to participate.

**1. Do you think the Cities of Kitchener, Waterloo and Cambridge should require private developers to include some affordable housing within new, multi-unit housing developments near ION stations?**

Respondents at the public meeting indicated strong support for the policy concept.

| Yes | No/Unsure |
|---|---|
| 12 | 1 |



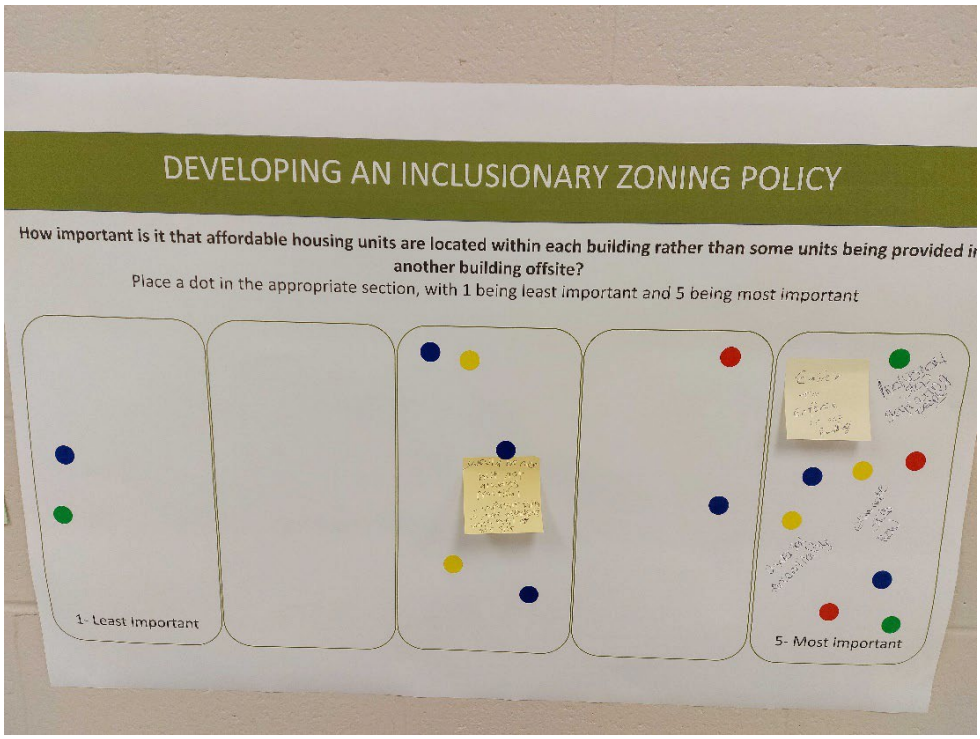
Notable Comments:

One participant encouraged the definition of major transit station areas to include bus routes.

**2. How important is it that affordable housing units are located only within a mixed income building rather than in a building that contains all affordable units?**

In response to this question, the single option with the highest number of responses was the preference for IZ units to be incorporated into the new build.

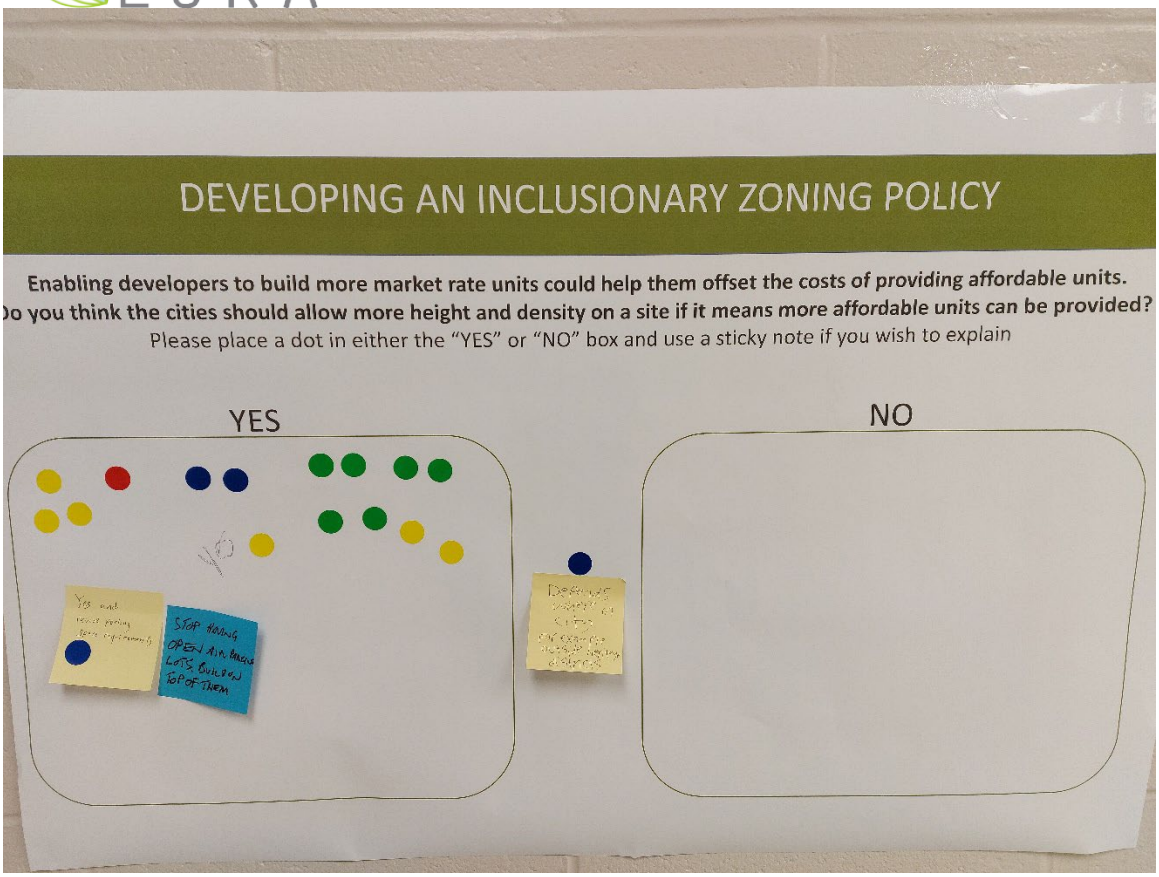
| | |
|---|---|
| Extremely unimportant | 2 |
| Unimportant | 0 |
| Neither important nor unimportant | 5 |
| Somewhat important | 2 |
| Extremely important | 9 |




**3. Do you think the cities should allow more height and density on a site if it means more affordable units can be provided?**

A strong consensus response to this question indicated comfort with flexibility in height and density allowances in order to increase the number of units provided.

| | |
|---|---|
| Yes | 18 |
| Other | 1 |
| No | 0 |




Notable Comments:

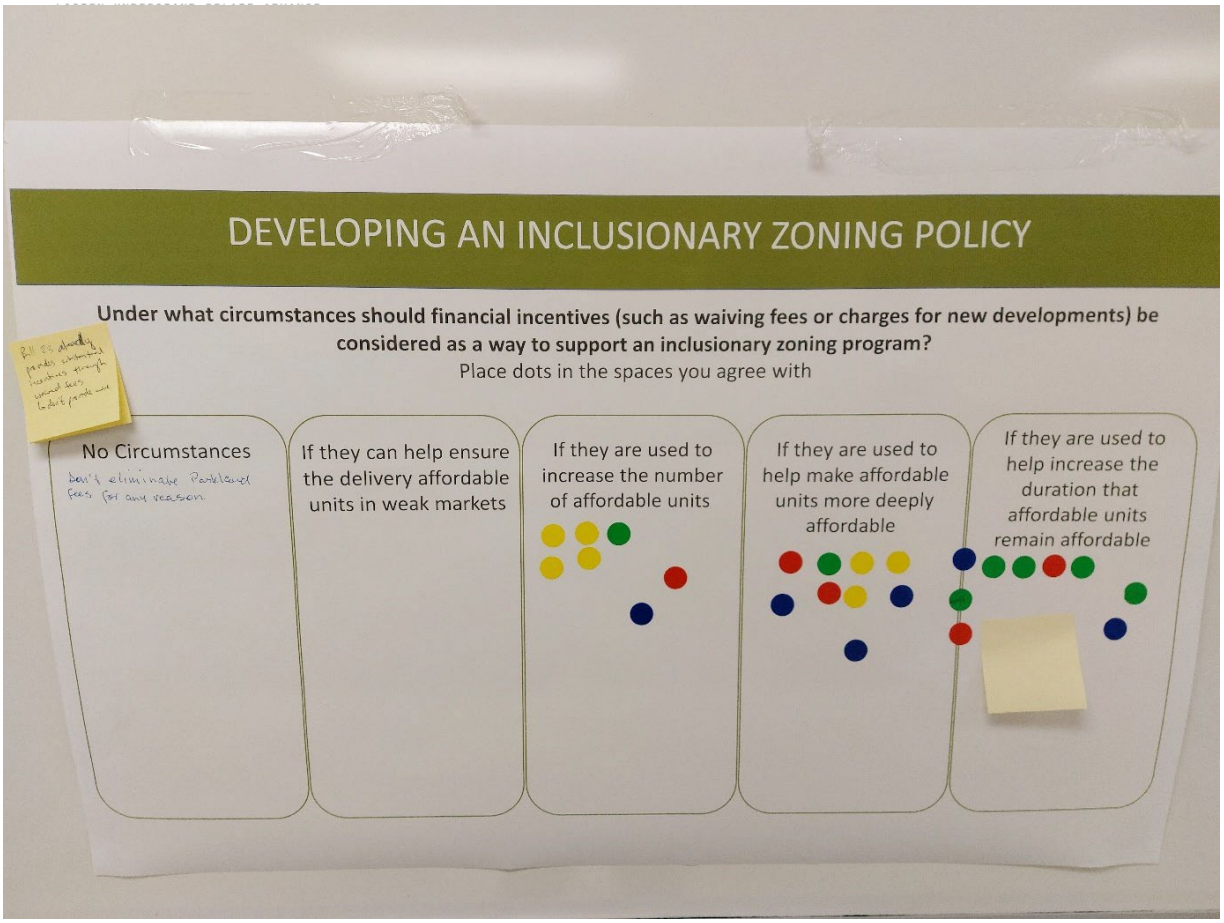
Two respondents identified that the elimination of parking requirements would support cost off- sets.

One respondent identified limited support for off-site flexibility, depending on the off-site location.

**4. Under what circumstances should financial incentives (such as forgiveness of development charges) be considered as a way to support an Inclusionary Zoning program?**

A slight preference from respondents supported the prioritization of incentives to support units with deeper levels of affordability (compared to market rent). Support for incentives to increase the duration of affordability ranked second and some support for incentives to support a higher number of affordable units was also indicated.

| | |
|---|---|
| If they are used to help make affordable units more deeply affordable | 9+3 that are shared with duration of affordability |
| If they are used to help increase the duration that affordable units remain affordable | 6+3 that are shared with affordability level |
| If they are used to increase the number of affordable units | 7 |
| No circumstances | 2 |
| If they can help ensure the delivery of units in weak markets | 0 |




Notable Comments:

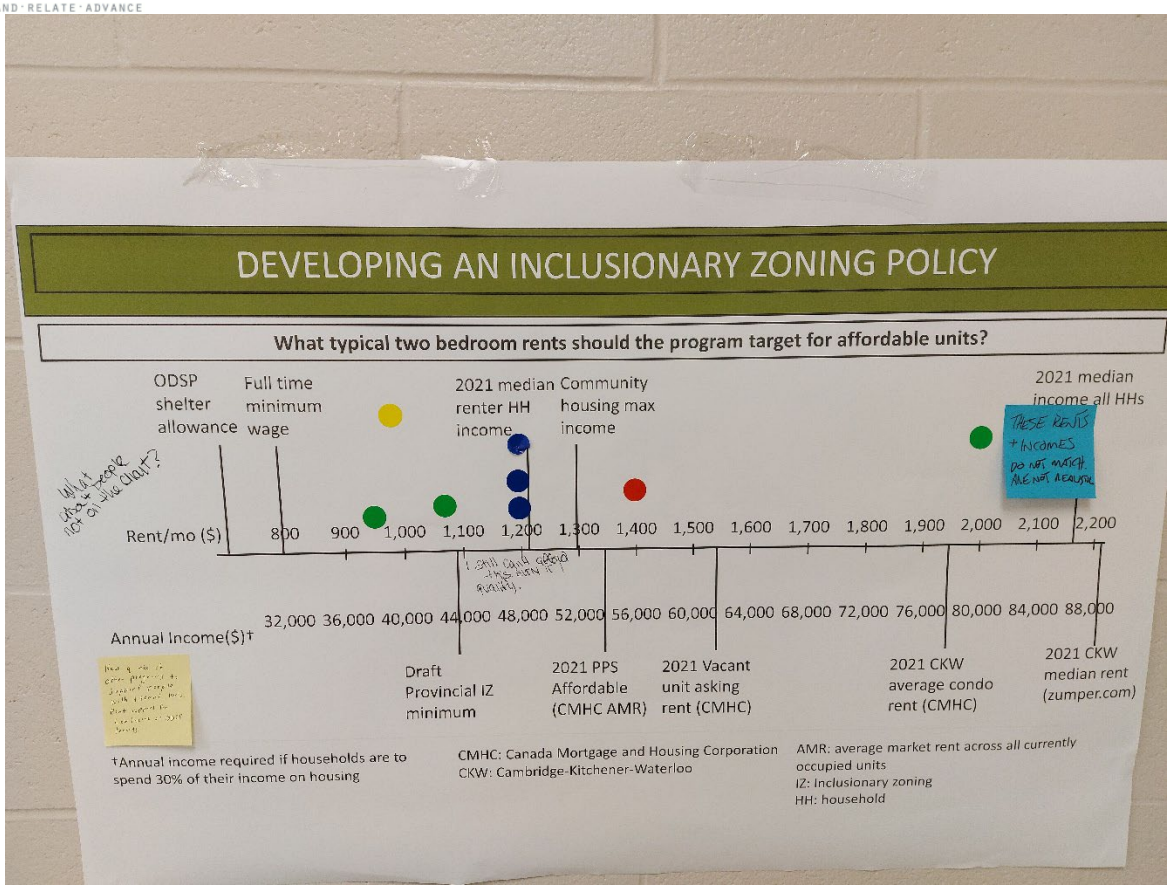
One respondent expressed that new provincial regulations provide enough financial incentives through waived fees and that additional incentives are not required.

One participant identified parkland fees as requiring safeguarding against incentive trade-offs.

**5. Which typical two bedroom rents should the program target for affordable units?**

A lower number of respondents supplied a response to this question, with a mild preference for supporting units in the $1001-$1200/month rental range and incomes in the $44-$48,000 range. The lower number of responses indicates a lack of consensus on an appropriate rent rate at which to focus the program.

| | |
|---|---|
| $900-$1000 | 2 |
| $1001-$1200 | 4 |
| $1201-$1400 | 1 |
| $2000-$2100 | 1 |



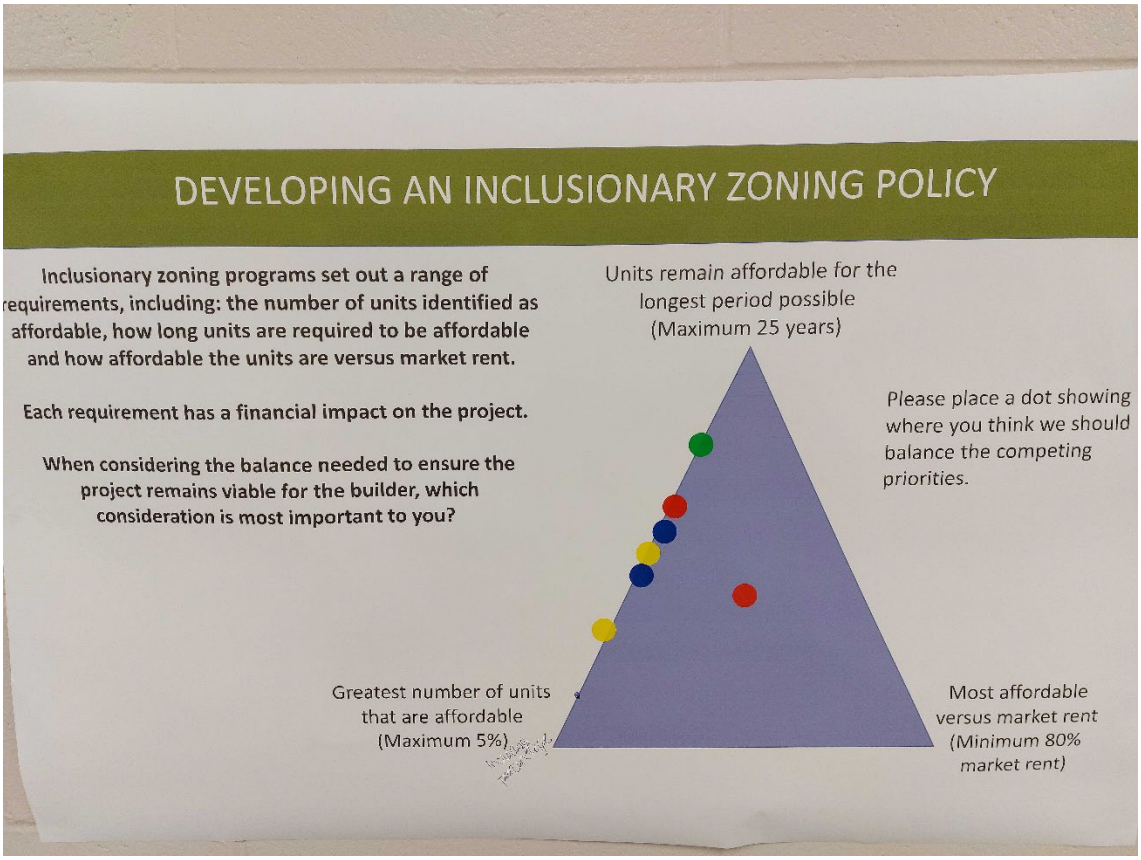

Notable Comments:

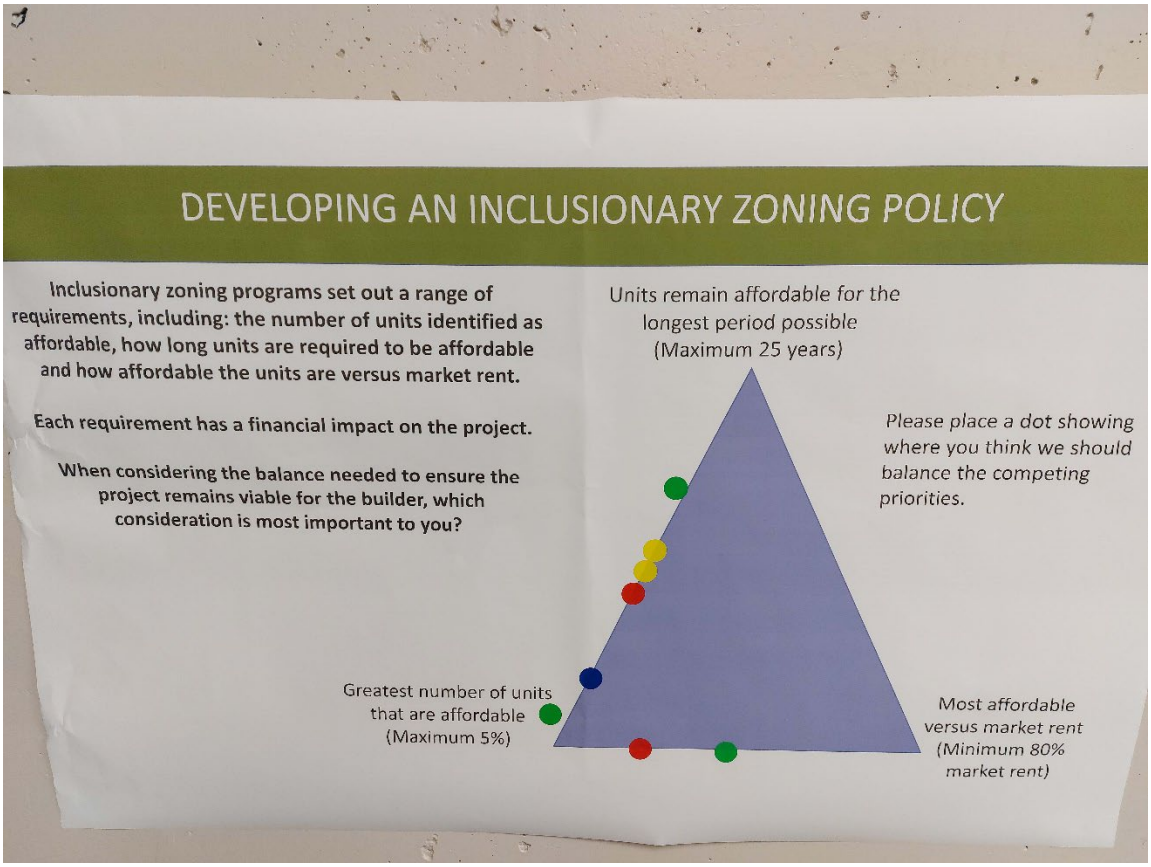
A participant identified that the rents and incomes indicated on the chart did not appear to match up to existing market and income ranges.

**6. When considering the balance needed to ensure the project remains viable for the builder, which consideration is most important to you?**

The vast majority of responses to this question fell on the side of the pyramid listing delivery of the greatest number of units and the longest period of affordability as the most important considerations. The single most important consideration was the number of affordable units.

| | |
|---|---|
| Greatest number of units that are affordable | 7 |
| Combination number-period affordable | 11 |
| Units remain affordable for longest period possible | 3 |
| Combination period affordable-depth affordable | 0 |
| Most affordable versus market rent | 0 |
| Combination number-depth affordability | 2 |
| Equal Importance | 1 |


DEVELOPING AN INCLUSIONARY ZONING POLICY
Inclusionary zoning programs set out a range of requirements, including: the number of units identified as affordable, how long units are required to be affordable and how affordable the units are versus market rent.
Each requirement has a financial impact on the project.
When considering the balance needed to ensure the project remains viable for the builder, which consideration is most important to you?
Units remain affordable for the longest period possible (Maximum 25 years)
Please place a dot showing where you think we should balance the competing priorities.
Greatest number of units that are affordable (Maximum 5%)
Most affordable versus market rent (Minimum 80% market rent)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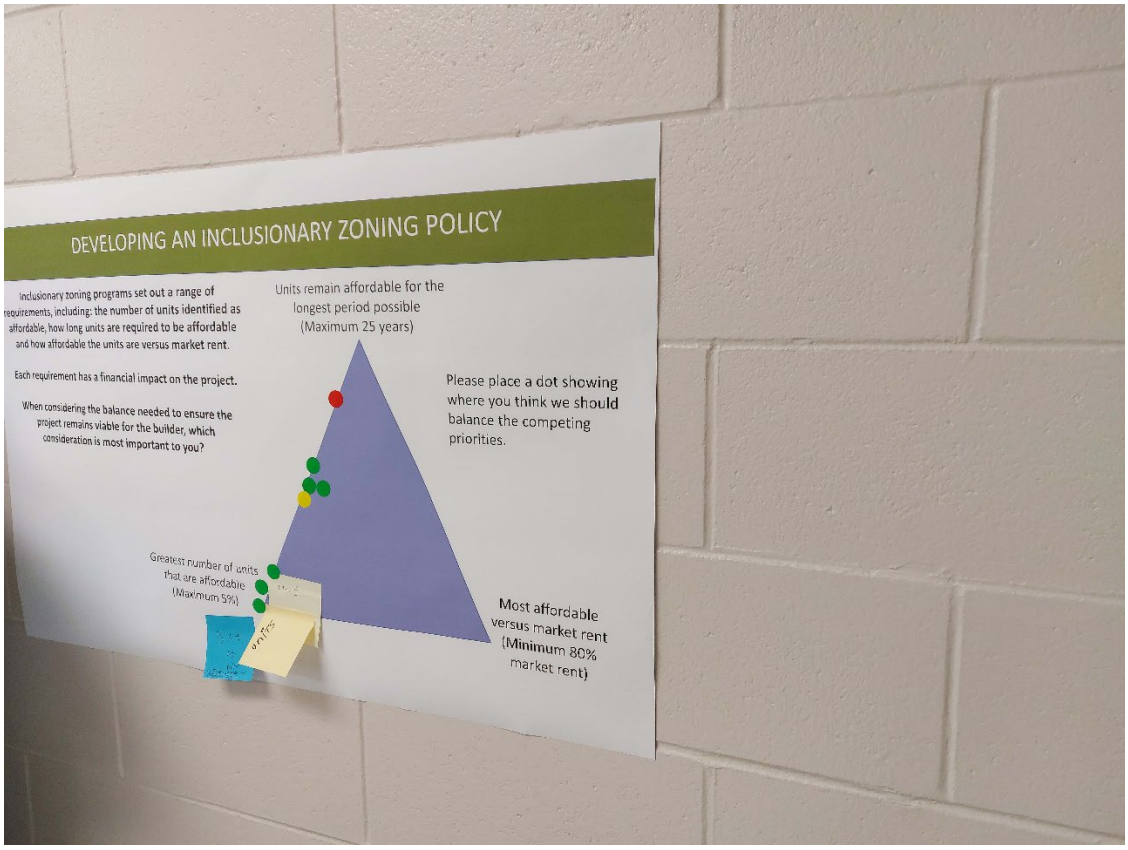
Greatest number of units that are affordable (Maximum 5%)
Most affordable versus market rent (Minimum 80% market rent)




Notable Comments:

Multiple respondents encouraged the municipalities to advocate for the 5%+ set-aside rate as a minimum,

## Questions of Clarification

The following is a synopsis of the questions and responses given during the Q and A portion of the meeting . It is not intended as a verbatim record but to capture the main themes and responses given.

**Q: It's very disappointing that Bill-23 changed the definition for affordability. Would like to see the region push-back more. Would like to see a duration increase in the future – start with 25 years for now but increase it in the future. There is still a significant percentage of people that can't afford 80% of market rate.**

A: The tri-cities have individually submitted comments to the Province. We do have the opportunity to review in 2 years and see if the Province can give greater flexibility to municipalities.

**Q: Targeting middle-income earners does not address the needs of low-income residents. What is being done for those with low-income?**

A: Inclusionary Zoning is only one approach of many that the cities have implemented or are considering with regards to affordable housing. Inclusionary Zoning would help out those with moderate incomes, which would help free up more deeply affordable units to those who need them – the goal is to move people up the spectrum.

**Q: How does this program work for rent control?**

A: Affordable units would be governed by a legal agreement that will include additional requirements

beyond the Residential Tenancies Act's rent-controls.

**Q: What protections are in place to protect affordability for the duration of the tenure and ensure that units are designed equitably?**

A: During the implementation phase the program will develop agreements and parameters for building design standards.

**Q: How does off-site unit provision work – is it possible for all affordable units of a development to be in one building?**

A: An Inclusionary Zoning program would set out rules and conditions for the provision of off-site units. This means that the program could enable units to be provided within a single building.

**Q: How do unhoused people living in encampments fit within the concept of affordable housing?**

A: The Region receives funding from the Federal Government specifically geared towards addressing the housing needs of the unhoused. Inclusionary Zoning is one tool to provide a level of affordability and it does not replace the need to also provide deeply affordable housing. We are still working to address deeply affordable housing needs.

## Conclusion and Next Steps

The engagement identified overall support from engaged citizens within the municipalities of Waterloo Region for the implementation of an Inclusionary Zoning Policy. Participants expressed support for flexibility within the policy as long as the flexibility did not result in a 'watering down' of the standards that would affect the quality of the future affordable homes.

Moving forward, additional educational opportunities should be considered to continue to help members of the public distinguish between Inclusionary Zoning affordable units operating with no on-going subsidy, as opposed to social housing programs geared toward lower income earners. The desire to see the IZ tool complemented by other policies geared toward the creation of many more deeply affordable units should be kept in mind as the cities continue to advance, or begin to develop, their Affordable Housing Strategies.

Participants in the engagement also sought reassurance that additional planning by-laws changes, such as the elimination of parking minimums and continued efforts to implement upzoning, would continue. Therefore, as IZ is implemented in MTSAs, care should be taken to broadly identify and engage on other intensification policies and plans. The engagement feedback expressed a position that affordability concerns in Waterloo Region were best addressed by maximizing the use of all tools available for supporting the supply of additional housing stock in a variety of built forms. A base of support for growth in the Waterloo Region is evident.

A summary of engagement participation indicates that the efforts made during the engagement phase to seek out participation and input from the newcomer community, renters, diverse perspectives and a spectrum of ages should continue. Additional feedback from these segments of the population can provide additional insight that could benefit the end users of the policy.

The development community indicated support for playing a part in the creation of affordable housing in the Region while emphasizing the primacy of partnerships. Concern was expressed about being able to deliver the units without adversely affecting typical project viability with resulting reduction in new supply. A preference for allowance of off-site purpose-built residences was expressed by this group. Joint advocacy with the province to expand the allowable areas for Inclusionary Zoning can be considered. Future developer focused meetings should be convened when specific details emerging from Bill 23 are available and when the specifics of the IZ policy are determined.

Following this phase of the project, the tri-cities intend to draft a Discussion Paper for their respective City Councils expected in Spring. Following this, the policy regulations could be developed for implementation in 2024.