Peel Region

2024
Enterprise Asset Management Plan

Investments in Peel's infrastructure

Executive Summary

Maintaining existing assets in a state of good repair and building new infrastructure which meets current and future needs is critical to the success of the Region of Peel. The Region's infrastructure is necessary to provide service levels that the public expects, achieve Term of Council Priorities, and realize the vision of the Region of Peel as a **Community for Life**.[1]

The Region's infrastructure has a replacement value of approximately **$42.6 billion** (in 2022 values, excluding land). The Region is committed to being a strong steward of the public's infrastructure assets. These assets allow the Region to provide high quality and affordable municipal services to the Peel community.

The Region uses a risk-based approach to asset management. This approach is integrated with the Region's Strategic Plan and the Long Term Financial Planning Strategy and supports the desired service outcomes and the long term goal of a Community for Life.

Current State of the Infrastructure

2024 Good[2]

The Region's goal is to achieve an overall infrastructure status of '**Good**'. The 2024 Rating is in line with this goal due to several factors:

- The Region's comprehensive asset management policy and strategy for long range, strategic planning of its infrastructure requirements
- Steady and prudent levels of reinvestments to maintain state of good repair
- Council's priority to maintain the Region's assets in a state of good repair without incurring long term debt

[1] Appendix I Line of Sight shows the link between a single asset and the "Community for Life" vision of the Strategic Plan.
[2] Descriptions of the Infrastructure Risk Management Scores are included in Appendix II *Reading Guide*

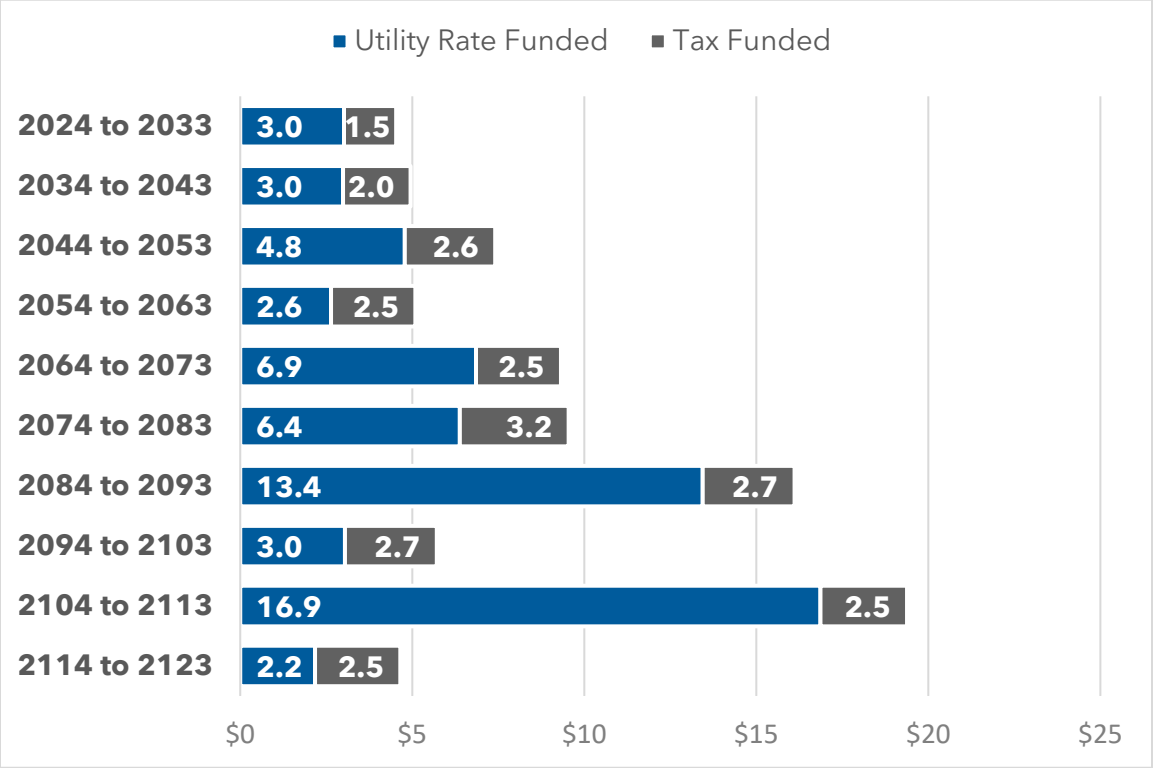
Reinvestment Plan

Reinvestments of **$4,795.2 Million** are included in the 10-year Capital Plan. **$2,951.5 Million** of this will be required to be funded through Utility Rates and **$1,843.7 Million** will be required to be funded through Property Taxes unless alternate funding sources are identified or confirmed and validated for on-going availability.

These planned reinvestments are in line with the forecasted infrastructure reinvestment needs.

Long Term Forecast

Figure 1. 100 Year SoGR Forecast (Uninflated) in millions



As shown in Figure 1 above, Peel's infrastructure reinvestment needs are projected to rise steadily over the next 70 years. While tax-funded infrastructure demands are expected to level off in the next 20 years, the need for utility rate-funded infrastructure will continue to grow. This is largely because most of the water and wastewater systems, which make up about 77% of the Peel's asset replacement value, are still relatively new. As these systems age, they will require increasingly frequent and substantial reinvestments to maintain and upgrade them.

Financing Plan

Peel's Long Term Financial Planning Strategy promotes a "Pay as You Go" philosophy for state of good repair financing and discourages the use of debt to fund such work.

To ensure the sustainability of Peel's services, the state of good repair of its capital assets is closely monitored and evaluated regularly. Like most municipalities, having sufficient funds to maintain infrastructure is a primary concern, which is why Peel conducts 20-year reviews of its infrastructure condition, following a Council direction from 2014, to ensure adequate capital reserves.

Council approved increases in the dedicated capital reserve contributions of 5.3% from the utility rates and 1.0% from the tax rate as part of the 2024 Budget.

Figure 2. Utility Rate Supported Infrastructure Levy

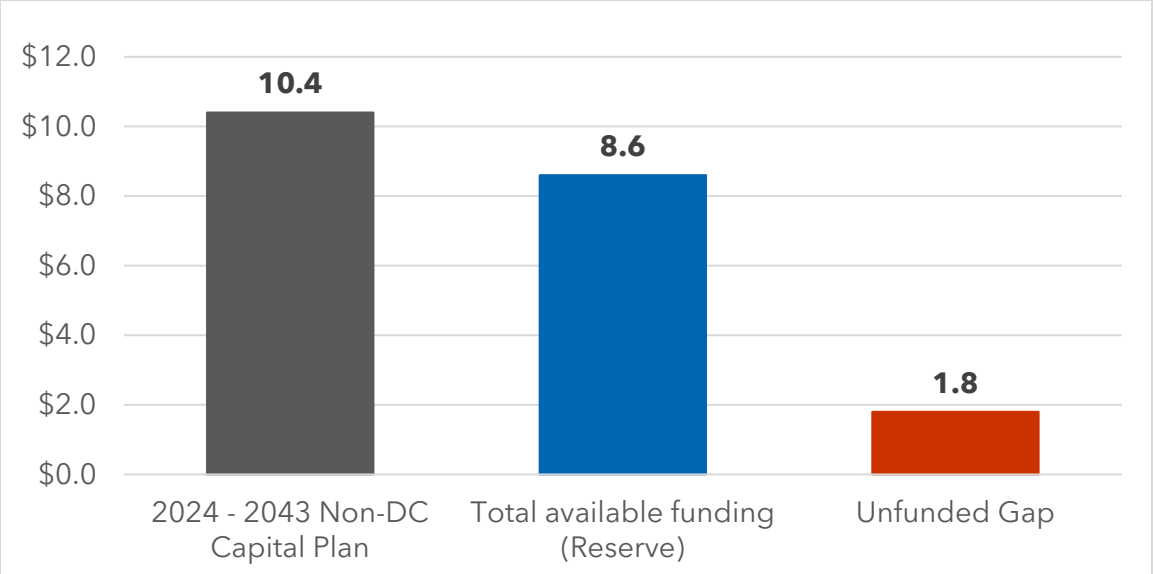


Figure 2. above presents a 20-year outlook (2024 to 2043) for utility rate-supported infrastructure, indicating that approximately $10.4 billion is needed to maintain water and wastewater infrastructure and current service levels. With $8.6 billion available in reserves, this leaves a funding gap of $1.8 billion due to infrastructure growth and aging systems. To close this gap, a 5.3% utility rate increase is proposed for 2024, with 5% annual increases until 2027, assuming the expenditures and revenue sources in the capital plan do not change.

Figure 3. Tax Supported Infrastructure Levy

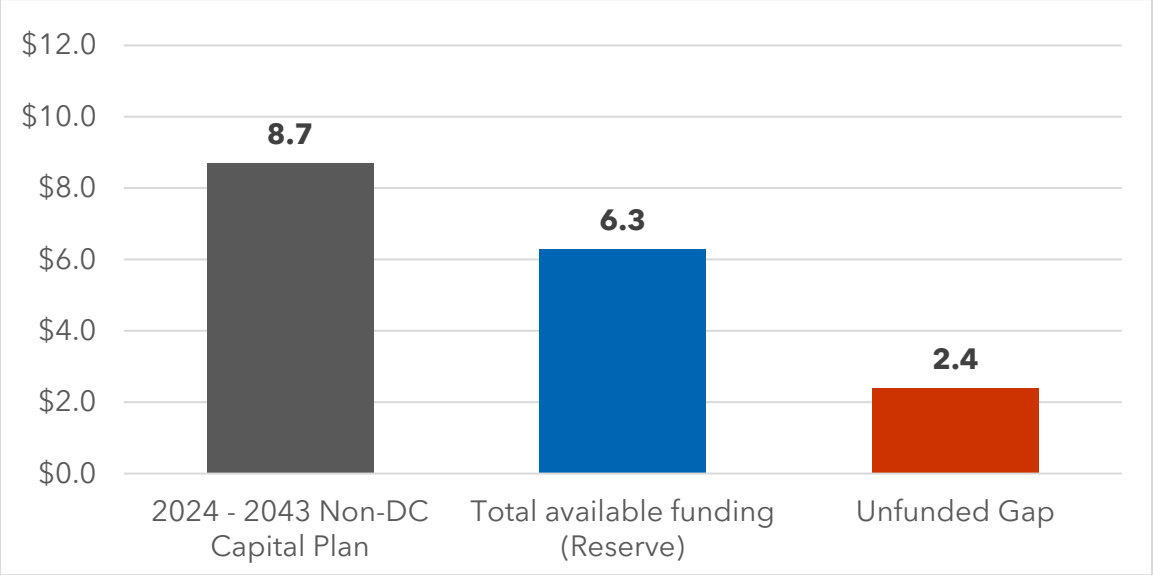


Figure 3. above presents a 20-year outlook (2024 to 2043) for tax-supported infrastructure, indicating that approximately $8.7 billion is needed to maintain tax-supported infrastructure and current service levels. With $6.3 billion available in reserves, this leaves a funding gap of $2.4 billion. To close this gap, a 1% infrastructure levy is proposed for 2024, with continued 1% levies projected for 2025 and beyond to sustain the tax-supported capital plan, assuming no changes in expenditures or revenue sources.

The Long Term Forecast indicates that Peel's infrastructure reinvestment needs are expected to steadily rise over the next 70 years. Peel will explore options and opportunities to further reduce the unfunded infrastructure investment gap in collaboration with Council and incorporate these solutions into future plans.

Emerging Risks and Challenges

The Region of Peel is a growing, thriving community and a major economic hub, that is facing a changing and dynamic environment especially as it continues the recovery stage of COVID-19.

Notwithstanding the infrastructure financing gap, and despite the '**Good**' rating of the Region's infrastructure, there are a number of challenges and unknown conditions underlying the Region's immense asset portfolio that result in increased service pressures and create infrastructure risks for which the organization must be prepared.

Major trends which are resulting in increased service pressures and more complex community issues are:

Growing and Rapidly Ageing Population

A rapidly growing and ageing population increases service demands and places stress on existing infrastructure, creating more demand for new infrastructure investment.

Ageing Infrastructure

Peel's infrastructure is ageing requiring increased levels of investment to keep them in a state of good repair.

Climate Change

Climate change leading to extreme weather events presents risks for effective and long-lasting infrastructure.

Changing Economy

Changes to economic conditions including inflation, energy costs, grants and subsidies may adversely affect the Financing Plan. Impacts of COVID-19 on the economy will have a long term effect on financial sustainability.

Rapidly Changing Technology

Rapidly evolving technology presents challenges in engaging with residents and delivering services in an uncertain macro environment, while increasing reliance on digital systems heightens vulnerability to cyberattacks, highlighting the need for robust cybersecurity measures to protect sensitive data and critical infrastructure.

Changing Legislative Environment

Constantly evolving legislation and regulations impact infrastructure decisions.

Climate Change

A More Resilient Region is a more Resilient Community for Life

The Region of Peel is already feeling the effects of climate change, with future impacts expected to include more severe heat waves, water supply challenges, extreme storms, and related health risks, all of which could disrupt local society and the economy. Integrating climate change considerations into asset management means assessing how climate impacts will affect the condition, performance, and lifespan of infrastructure. This approach helps identify and prioritize investments to support reliable services now and into the future.

Ontario Regulation 588/17: Asset Management Planning for Municipal Infrastructure requires Peel to include climate change in its asset management policy and planning, and this proactive approach will aid in meeting those requirements.

The Region's Enterprise Asset Management Roadmap

Peel's Asset Management program is guided by industry best practices and regulatory requirements. As such, the program is continuously evolving to leverage opportunities and address challenges.

Anticipated improvements include:

- Staff are undertaking many **technical studies** and **condition assessments** to improve knowledge of the Region's infrastructure conditions.
- **Asset Management planning process improvements** are being undertaken across all services to improve investment forecasting and to manage risks to Regional services.
- **Operations and maintenance costs** have been added to services to provide a full lifecycle perspective on asset ownership. The data and modelling of operations and maintenance is a priority for improvement.
- An **Enterprise Asset Management technology solution** has been introduced to support asset management functions across the organization, with additional programs being integrated gradually.

- Additional **Green Infrastructure** assets and **Information Technology** infrastructure are scheduled for inclusion in the 2025 reporting cycle.
- Engaging in the **continuous improvement** of asset management practices and strategies that can significantly impact asset lifecycle costs, management of risk, and service delivery performance. Continuous Improvement is also an industry best practice and a requirement of Ontario Regulation 588/17: Asset Management Planning for Municipal Infrastructure.

Diversity, Equity, and Inclusion (DEI)

Creating a diverse and inclusive Peel

Advancing DEI for both our workforce and the community is a top priority for Peel Region. Peel is one of the most diverse communities in Canada accounting for 18% of Ontario's immigrant population, and where 69% of residents identify with a 'racialized' group (2021 Stats Canada).

Peel is committed to working with our residents to deliver programs and services that are not only inclusive and equitable, but also reflective of our communities.

Peel Region has developed a DEI Strategy, that focusses on:

- Peel's workforce and community,
- Identifying and addressing systemic barriers within the programs and services we offer to residents. (Systemic barriers are policies, practices, or procedures that result in some people getting unequal access or being excluded.)

DEI principles encourage recognizing and valuing differences among individuals, ensuring fairness, and fostering an environment where everyone has equal opportunities and feels included. Incorporating DEI into infrastructure and service delivery involves actively considering and addressing the diverse needs and perspectives of all communities impacted by the development. This includes ensuring fair representation in decision-making processes, promoting equal access to benefits and opportunities, and fostering a culture of inclusivity to create infrastructure that serves the entire population equitably while addressing historical disparities and promoting social cohesion.

Consideration of DEI in Peel's infrastructure projects means:

- Designing infrastructure with accessibility in mind, considering the needs of people with disabilities or a diverse range of needs to create inclusive and

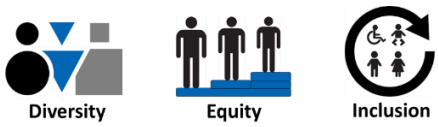
user-friendly spaces.

- Redevelopment projects take into account the historical and cultural significance of the area to various communities, including Indigenous communities, incorporating design elements that reflect and respect diverse cultural heritage.
- Housing projects consider the diverse needs of residents by incorporating a mix of housing types suitable for various family sizes and income levels, addressing the housing challenges faced by different demographic groups.
- Facilities projects that meet Ontario Accessibility Standards and varied individual needs, promoting a more inclusive environment.

Peel has commenced its journey of implementing DEI principles into infrastructure through various projects. Additionally, a strategy is being developed to promote a holistic approach in embedding DEI principles into our asset management practices, including levels of service endorsement by Regional Council.

The following examples show how Peel has integrated DEI considerations into infrastructure projects:

- Wastewater Treatment Facility: An accessible gender-neutral changing and washroom space has been constructed to meet the needs of our diverse workforce.
- Housing Support: Barrier free showers are installed for residents to directly roll into the shower using a shower wheelchair.
- TransHelp: To enable eligible residents to travel into other municipalities, Peel has partnered with other paratransit providers in a shared ride public service for cross boundary trips.
- Transportation: Inclusion of multi-use trails for shared use by cyclists, pedestrians, and other authorized devices.



Ontario Regulation 588/17

Levels of Service

In addition to the Council approved Levels of Service, the following Community Levels of Service (Qualitative Description) and Technical Levels of Service (Technical Metrics) are in accordance with compliance with the Ontario Regulation 588/17 for Asset Management Planning.

Water

Community Levels of Service

Scope

1. Description, which may include maps, of the user groups or areas of the municipality that are connected to the municipal water system:

   Please refer to page 13

2. Description, which may include maps, of the user groups or areas of the municipality that have fire flow.

   Please refer to page 14

Reliability

1. Description of boil water advisories and service interruptions:

   There was no Boil Water Advisory Notice

Technical Levels of Service

Scope

1. Percentage of properties connected to the municipal water system:

   84.07%

2. Percentage of properties where fire flow is available:

   97.77%

Reliability

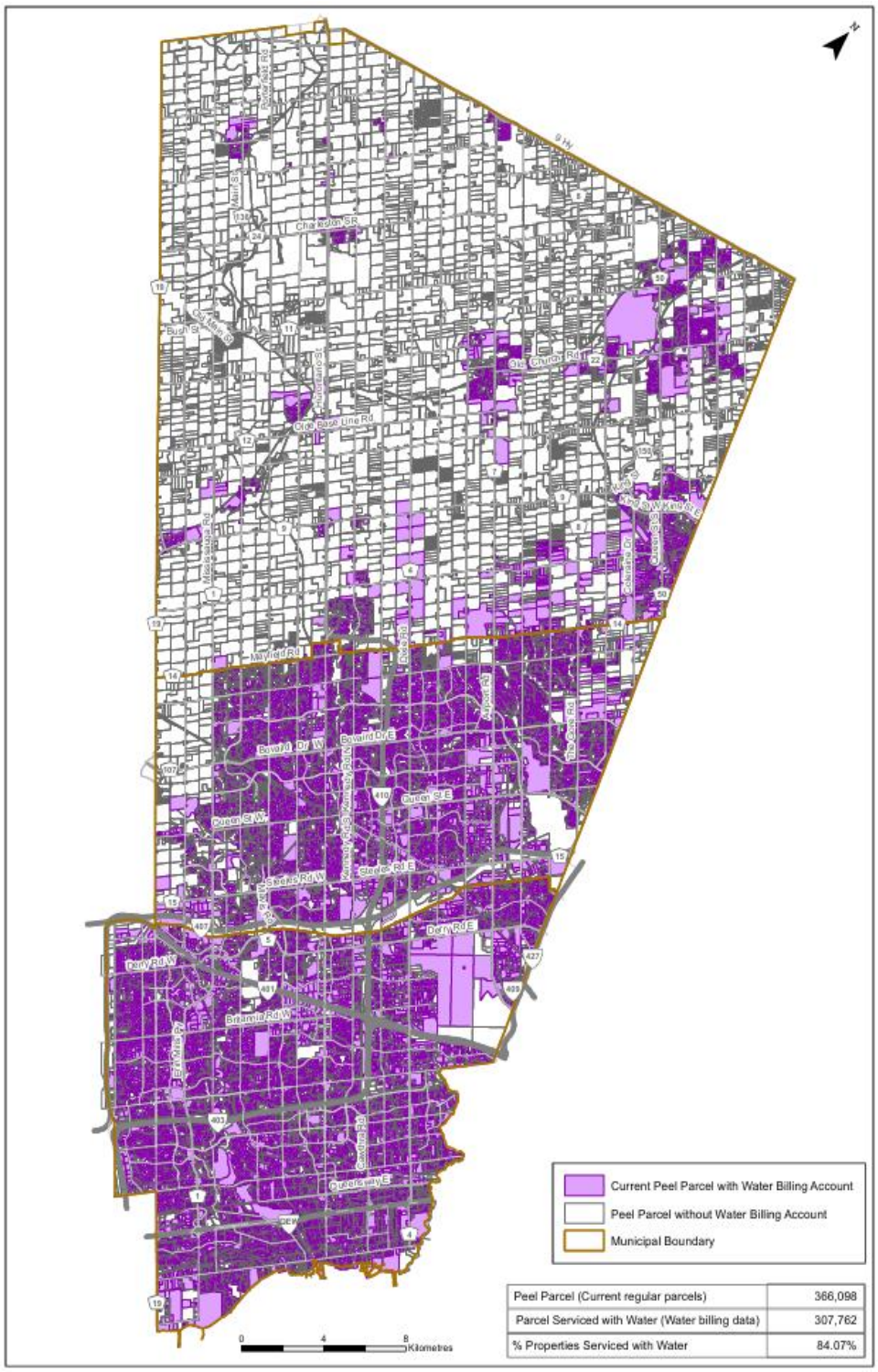
1. The number of connection-days per year where a boil water advisory notice is in place compared to the total number of properties connected to the municipal water system:

   0.0%

2. The number of connection-days per year due to water main breaks compared to the total number of properties connected to the municipal water system:

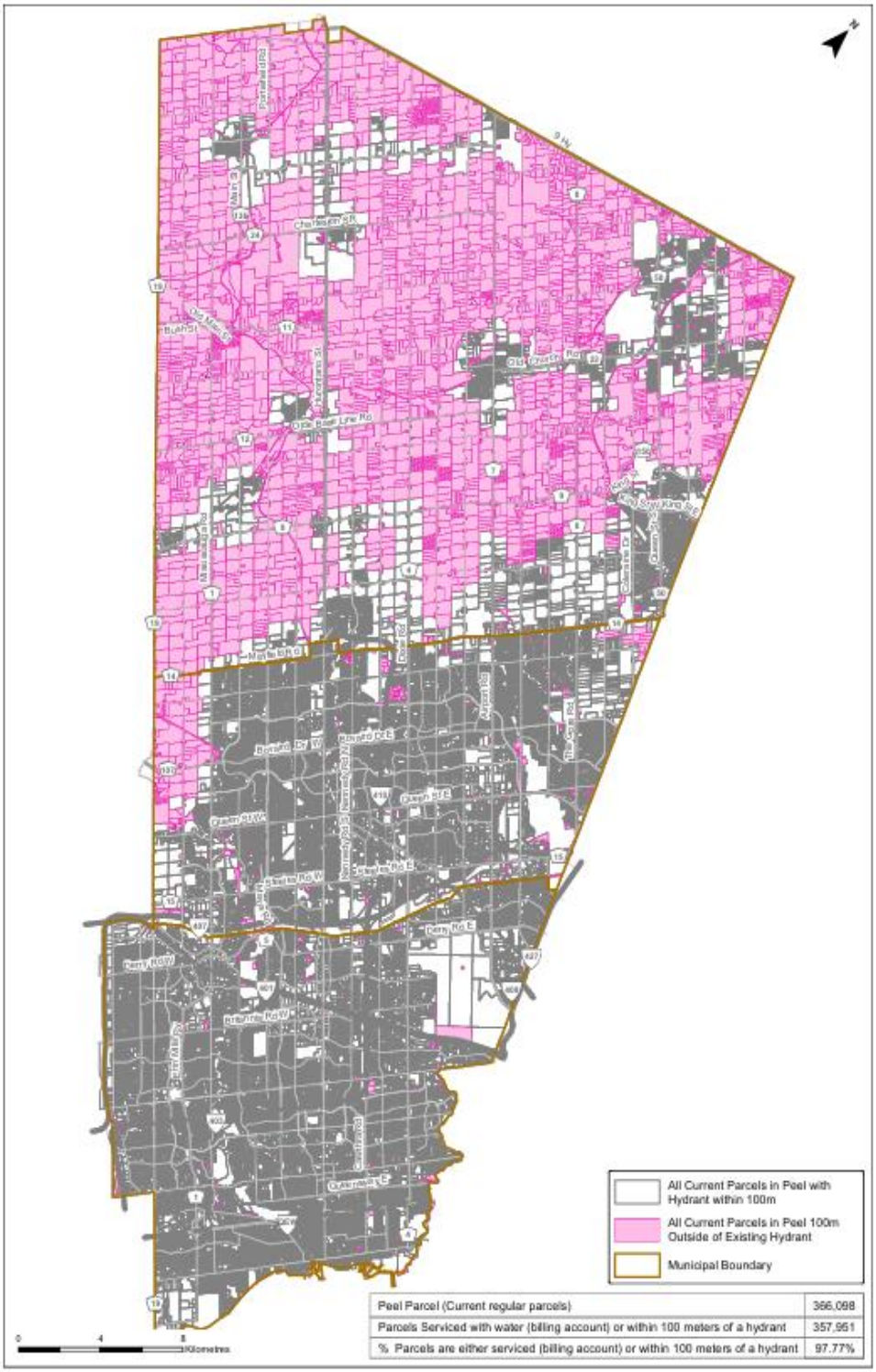
   0.003% (2022 number)

Properties with Water Serving



Peel Parcel (Current regular parcels)	366,098
Parcel Serviced with Water (Water billing data)of a hydrant	307,762
% Properties Serviced with Water	84.07%

Properties with Fire flow



Peel Parcel (Current regular parcels)	366,098
Parcel Serviced with Water (Water billing data) or within 100 meters of a hydrant	357,961
% Parcels are either serviced (billing account) or within 100 meters of a hydrant	97.77%

Wastewater Levels of Service

Community Levels of Service

Scope

1. Description, which may include maps, of the user groups or areas of the municipality that are connected to the municipal wastewater system:

   Please refer to Page 17

Reliability

1. Description of how combined sewers in the municipal wastewater system are designed with overflow structures in place which allow overflow during storm events to prevent backups into homes:

   Not Applicable

2. Description of the frequency and volume of overflows in combined sewers in the municipal wastewater system that occur in habitable areas or beaches:

   Not Applicable

3. Description of how stormwater can get into sanitary sewers in the municipal wastewater system, causing sewage to overflow into streets or backup into homes:

   Storm water can enter sanitary system via three distinct ways:

   a) Through holes and cracks in manholes and sewers often caused due to age (wear and tear)

   b) Through non-conforming connections to the sanitary system such as cross-connected downspouts or catch basins, etc.

   c) Through floor drains in flooded basement, or via top of the manholes in a flooded road, etc. Such situations happen only when the storm water management system is overwhelmed and is not capable to handle rainwater or river flow

4. Description of how sanitary sewers in the municipal wastewater system are designed to be resilient to avoid events described in paragraph 3:

   Stormwater inevitably enters the sanitary system, and preventing this is impractical. Therefore, allowances for stormwater are included in the design of sanitary sewers.

a) Peel maintains infrastructure through programs that ensure repairs to holes and cracks.

b) Peel identifies and fixes non-conforming connections, such as downspouts and cross-connections.

c) Peel ensures watertight seals on vulnerable manholes, but stormwater management is mostly outside the Region's mandate. When overwhelmed, stormwater can quickly impact the sanitary system.

5. Description of the effluent that is discharged from sewage treatment plants in the municipal wastewater system:

   Not Applicable

Technical Levels of Service

Scope

1. Percentage of properties connected to the municipal wastewater system:

   82.56%

Reliability

1. The number of events per year where combined sewer flow in the municipal wastewater system exceeds system capacity compared to the total number of properties connected to the municipal wastewater system:

   Not Applicable

2. The number of connection-days per year due to wastewater backups compared to the total number of properties connected to the municipal wastewater system:

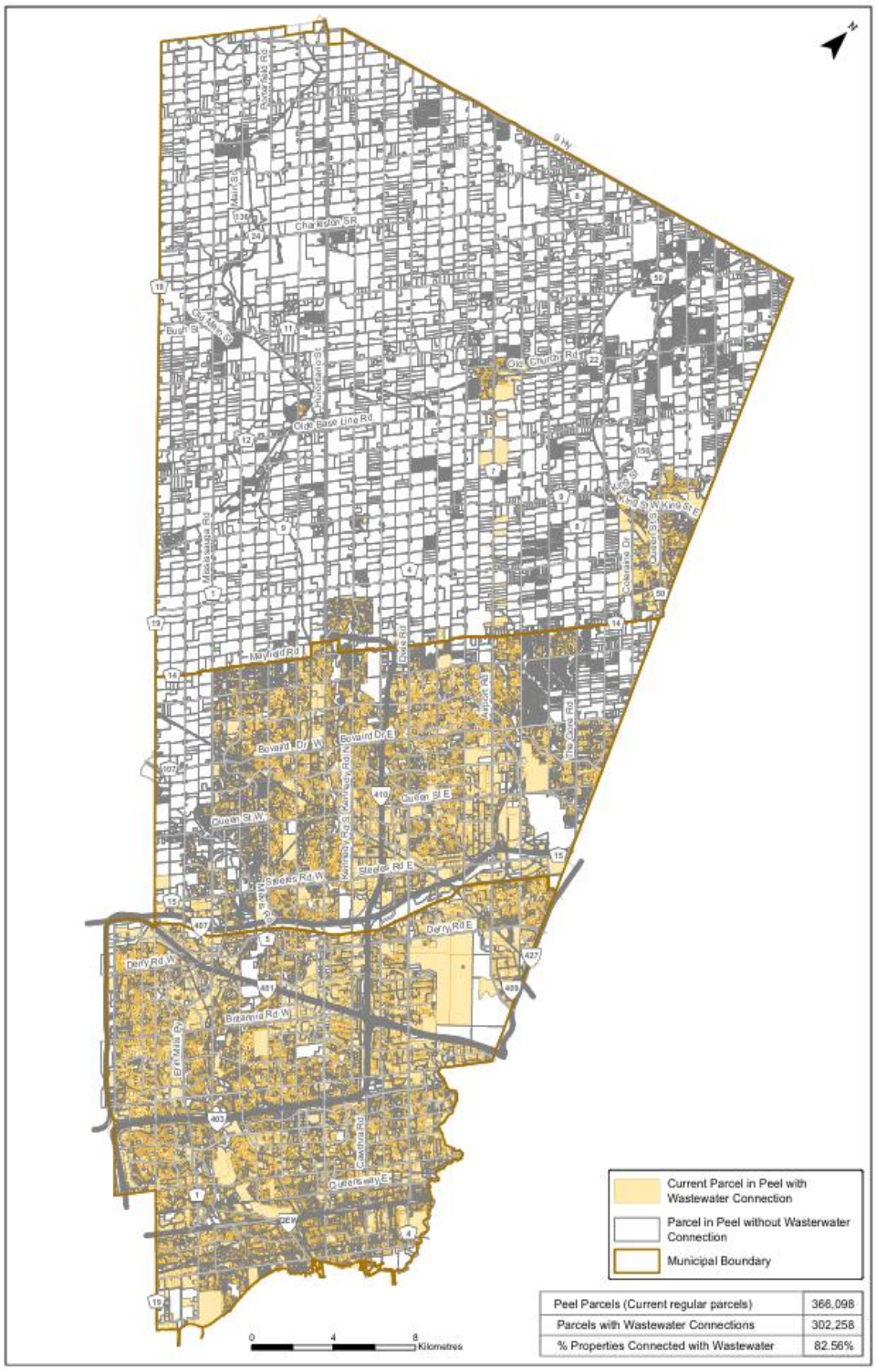
   0.1%

3. The number of effluent violations per year due to wastewater discharge compared to the total number of properties connected to the municipal wastewater system:

   0.0%

   (Includes Spills, Bypass or Overflows that exceed effluent quality limits prescribed in the Environmental Compliance Approval)

Properties with Wastewater Servicing



Peel Parcel (Current regular parcels)	366,098
Parcels with Wastewater Connections	302,258
% Properties Connected with Wastewater	97.77%

Stormwater Levels of Service

Community Levels of Service

Scope

1. Description, which may include maps, of the user groups or areas of the municipality that are protected from flooding, including the extent of the protection provided by the municipal stormwater management system:

   Please refer to Page 19

Technical Levels of Service

Scope

1. Percentage of properties in municipality resilient to a 100-year storm:

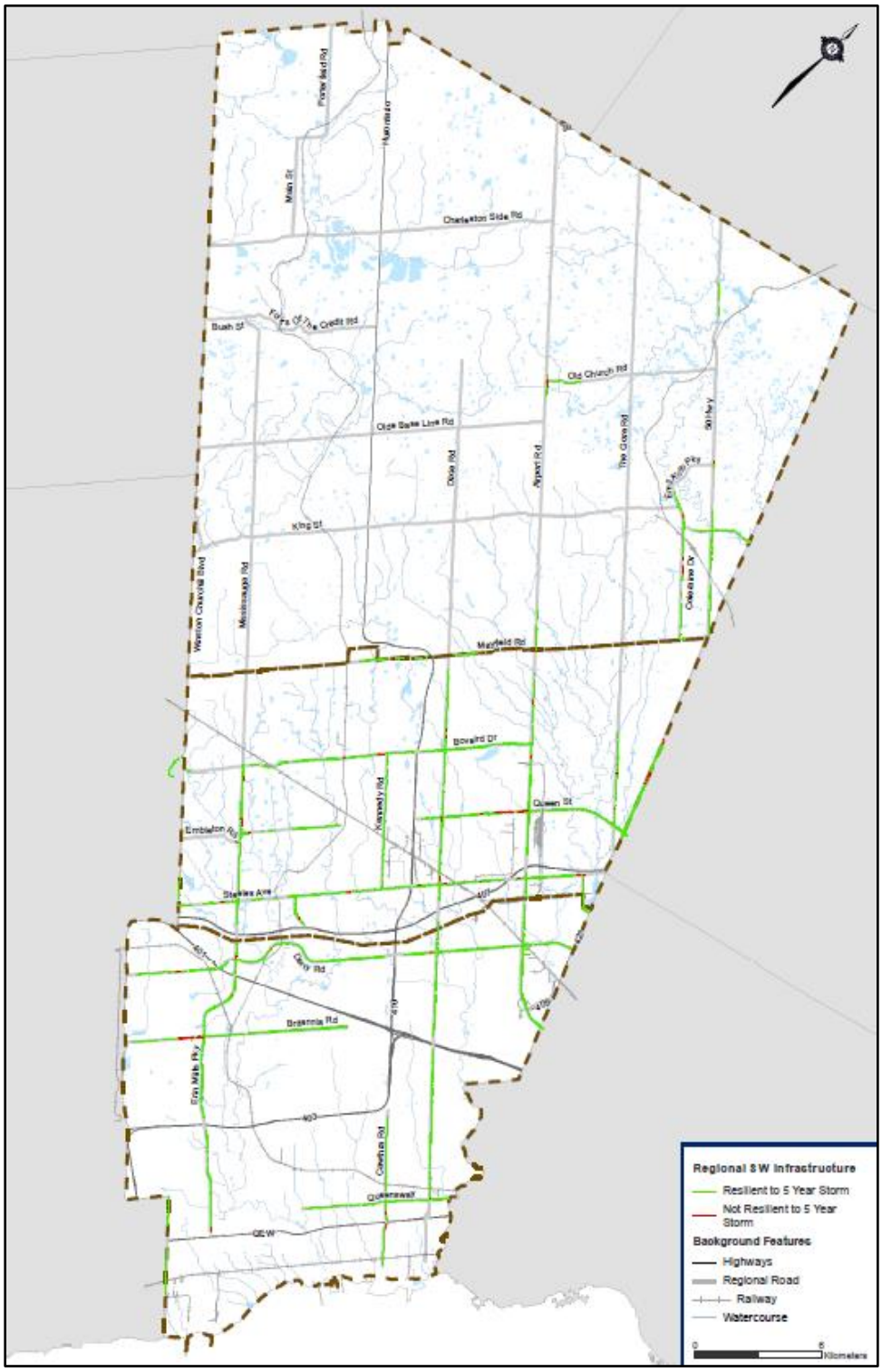
   *Not Applicable

2. Percentage of the municipal stormwater management system resilient to a 5-year storm:

   *97%

***** The above metrics only includes Region owned infrastructure. For the Local Municipalities reported levels of service, please refer to their Asset Management Plans: City of Mississauga, City of Brampton, and Town of Caledon

Existing Stormwater Infrastructure



Roads Levels of Service

Community Levels of Service

Scope

1. Description, which may include maps, of the road network in the municipality and its level of connectivity:

   Please refer to Page 21

Quality

1. Description or images that illustrate the different levels of road class pavement condition:

   Pavement Rating Scale categorizes pavement conditions as follows-

   Very Good: PCI > 72

   Good: 60 < PCI ≤ 72

   Fair: 45 < PCI ≤ 60

   Poor: 30 < PCI ≤ 45

   Very poor: PCI ≤ 30

Technical Levels of Service

Scope

1. Number of lane-kilometers of each of arterial roads, collector roads and local roads as a proportion of square kilometers of land area of the municipality:

   *1.64 lane km

Quality

1. For paved roads in the municipality, the average pavement condition index value:

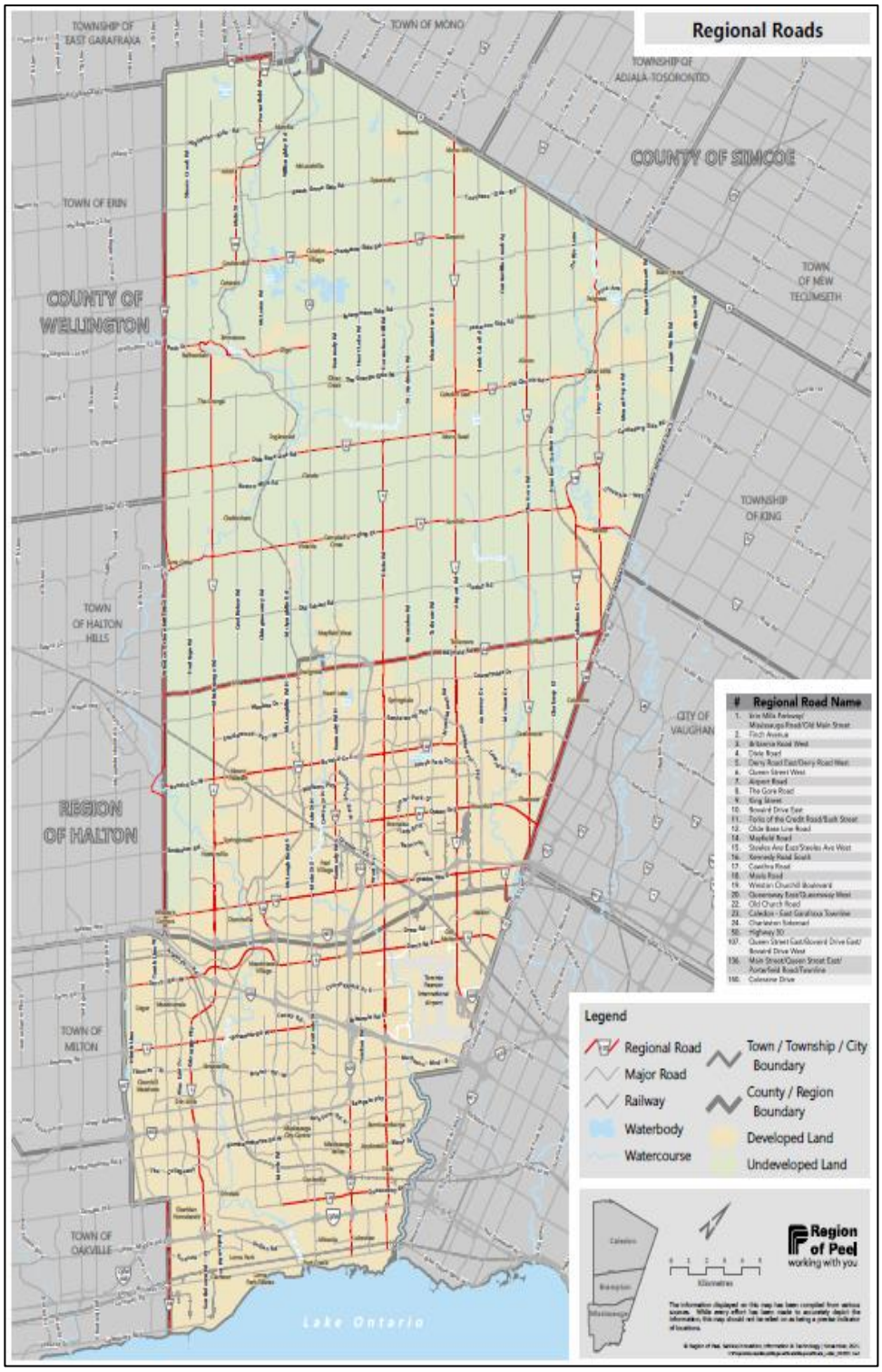
   *76.7

2. For unpaved roads in the municipality, the average surface condition (e.g. excellent, good, fair, or poor).:

   *Not Applicable

***** The above metrics only includes Region owned infrastructure. For the Local Municipalities reported levels of service, please refer to their Asset Management Plans: City of Mississauga, City of Brampton, and Town of Caledon

Existing Regional Road Network



Bridges and Culverts Levels of Service

Community Levels of Service

Scope

1. Description of the traffic that is supported by municipal bridges (e.g., heavy transport vehicles, motor vehicles, emergency vehicles, pedestrians, cyclists):

   Region owned bridges are located along Arterial roadways and support a variety of vehicular and pedestrian uses such as:

- heavy and light commercial vehicles
- passenger vehicles
- emergency vehicles
- public transit vehicles
- pedestrians and cyclists

Quality

1. Description or images of the condition of bridges and culverts and how this would affect use of the bridges:

   The Region rates the condition of bridges and major culverts (span greater than 3 m – structural culverts) using the MTO Bridge Condition Index (BCI) format as follows-

   Good: BCI > 70

   Fair: 60 < BCI ≤ 70

   Poor: BCI ≤ 60

Technical Levels of Service

Scope

1. Percentage of bridges in the municipality with loading or dimensional restrictions:

- Vehicular: 0%
  Long Range Transportation Plan (LRTP) identifies road capacity needs, EA for specific road widening projects identifies bridge dimensional restrictions and alternatives.

- Pedestrian/Cycling: Not Applicable

- Dimensional: Not Applicable

Quality

1. For bridges in the municipality, the average bridge condition index value:

   75.3

2. For structural culverts in the municipality, the average bridge condition index value:

   77.5