

Staff Report



To Council

Department Economic Growth and Community Development Services Department

Meeting Date Council and Committee of the Whole Meetings - 09 Apr 2024

Subject ResiLienT Loyalist Township Climate Action Plan 2023 Report Card

Report Number SR- 2593

Prepared by Luke MacDonald

Recommendation

1. That the report from the Engineering and Environment Division, April 9, 2024 re: ResiLienT Loyalist Township Climate Action Plan 2023 Report Card, be received for information.

Executive Summary

Purpose of Report

The purpose of this staff report is to provide Council with a "report card" type update on the Township's accomplishments in 2023 under the Climate Action Plan.

Report Highlights

The key initiatives highlighted in this report include:

- Amherst Island Flood Damage Road repair project improving resiliency of core infrastructure
- Foodcycler Pilot Program demonstrating effective results at reducing food waste and associated greenhouse gas emissions
- Emergency Services completing controlled burns of local bee hives to help reduce disease and mite infestation in local pollinator populations
- Imagining My Sustainable Community projects approval working with the Odessa Public School to empower youth-led sustainable community initiatives
- Promotion of access to nature through numerous activities such as community BBQs and fitness activities; specialized programs such as soccer, pickleball, and

the "Come out and Play" trailer; and promotional material via newsletters, guides, and social media.

Report Details

Background and Analysis

At their regular session on February 8, 2021, Loyalist Township Council passed the following resolution:

Resolution 2021.42.7.

Moved by Councillor Townend and Seconded by Councillor Budarick that the report from the Engineering and Environment Division, February 8th, 2021 re: ResiLienT Loyalist Township - Climate Action Plan, be received; and that the Climate Action Plan and its goals be approved. **Motion carried.**

Refer to the attached document for the full "report card".

Financial Implications

Several of the goals and actions presented in this plan will have future financial implications. Staff will present Council with a cost-benefit analysis when recommending the implementation of an initiative and will be included in future operations and capital budgets. Initiatives implemented to date were part of already planned and approved projects in the Township's operations and capital budget.

Risks or Stakeholder Implications

The Climate Action Plan presents a series of recommended goals and actions that could be undertaken to meet the GHG reduction targets previously approved by Council. Some of the initiatives could present a level of financial risk, however these will be mitigated through the development of cost-benefits analyses before being presented for Council's consideration and eventual approval.

Communication and Consultation Plan

Staff continue to work with the Communications Division to communicate the implementation of various initiatives highlighted throughout the attached document through social media posts and our website.

The Development Manager, Public Works Manager, Heritage, Culture, and Tourism Manager; Director of Corporate Services, Strategy, and Innovation, Communications Manager, Utilities Manager, Director of Emergency Services, Recreation and Facilities

Manager, Director of Community and Customer Services have been consulted for the content of this report card.

Alternatives

As this report is being presented for information purposes only, no alternatives are presented.

Attachments

[Resilient Climate Action Update Report - 2024 - Final](#)

Approved by

Approved by	Status:
Marie-Josée Merritt, Director of Economic Growth and Community Development Services	Approved - 27 Mar 2024
Shelley Stedall, Treasurer	Approved - 01 Apr 2024
Rebecca Murphy, Chief Administrative Officer	Approved - 02 Apr 2024



ResiLient Loyalist Township Climate Action Plan:
2023 Report Card





Executive Summary:

On February 8, 2021, Council unanimously passed the motion to accept the ResiLienT Loyalist Township Climate Action Plan to act as a road map for local action and keep climate action as a priority for decisions. As part of monitoring and reporting the tangible steps that the Township has undertaken towards the Climate Action Plan, the Township is completing an annual report and assessment across all divisions.

Some of the more notable climate actions in 2023 were:

- Amherst Island Flood-damaged Road Repairs Project – The repair of flood-damaged roads on Amherst Island by Loyalist Township is a proactive measure in climate change adaptation. Addressing the damage caused by the 2017 high water levels, this project involved repairing and reinforcing crucial infrastructure such as South Shore Road, Second Concession Road, and others.
- FoodCycler Pilot Program – From October to December 2023, the FoodCycler Pilot Program in Loyalist Township achieved significant success in waste management and environmental conservation. With 100 households participating and an 82% response rate in the post-program survey, the program saw a notable reduction in landfilled food waste, high participant satisfaction, and a strong commitment to continue using the FoodCycler. This initiative effectively reduced landfill waste and raised community awareness about sustainable practices, highlighting the impact of community-driven environmental efforts.
- Loyalist Township Emergency Services supported a unique initiative to maintain healthy bee populations through controlled burns conducted a few times a year. This practice, aimed at reducing disease and mite infestation among hives, involved transporting hives from local beekeepers Hogan Apiaries and Shane’s Apiaries to the fire training centre for safe burning.
- The “Imagining My Sustainable Community” project, spearheaded by students from Odessa Public School and facilitated by Loyalist Township, culminated in a presentation to Council on October 23, 2023. Students advocated for their innovative ideas, such as a reading garden and a rainbow crosswalk. Following the presentation, Council approved the plans, setting the stage for these student-envisioned projects to begin in the spring of 2024, marking a significant step in youth-led sustainable community development.
- In 2023, Loyalist Township promoted access to nature through various outdoor programs and events, ranging from community BBQs and fitness activities to specialized programs like soccer, pickleball, and the “Come Out and Play” trailer. Additionally, seasonal park promotions and the marketing of outdoor spaces through newsletters, guides, and social media aimed to enhance community engagement with natural spaces. These efforts were geared towards encouraging residents to explore and appreciate the natural environment within their community.



Introduction:

Launched in 2021, the ResiLienT Loyalist Township Climate Action Plan serves as a strategic guide to reduce greenhouse gas (GHG) emissions, enhance energy efficiency, and strengthen resilience to climate change. The development of the plan was guided in part by the Federation of Canadian Municipalities Partners for Climate Protection program. The ResiLienT Plan is divided into six key sectors — Sustainable Land Use, Waste Reduction, Transportation, Buildings, Water & Wastewater, and Others — the plan sets ambitious GHG reduction goals, targeting a 49% corporate and 25% community reduction of GHG by 2031. The 2023 Report Card for the Resilient Loyalist Township Climate Action Plan provides a strategic overview of the township's efforts to reduce greenhouse gases and enhance environmental sustainability.

The plan serves as both an aspirational guide and a practical framework for decision-making across all departments in Loyalist Township. The plan also acts as a community-centric plan and is not limited to initiatives undertaken by the Township. This report highlights some community-led initiatives but is certainly not an exhaustive list. It aims to integrate sustainable practices at all levels, tracking progress across the 33 goals.

This is the second year Loyalist has completed this annual assessment. This report recognizes that while some goals may advance more rapidly than others due to varying resources and needs, the overarching objective remains to foster a more sustainable Loyalist Township through strategic decisions.

Community Engagement & Communication:

In 2023, community engagement and communication were pivotal in advancing the ResiLienT Loyalist Township Climate Action Plan. The adoption of a Community Engagement Framework by Council on April 3, 2023, established a structured approach for participation, with a comprehensive matrix for communication methods. This framework plays a critical role in the effective and consistent engagement of residents and stakeholders in the Climate Action Plan. Many are interested and willing to participate in initiatives combatting climate change, but simply don't know where to start or what resources are available to support them along the way. This is why strategic communications have been a vital part of projects related to the ResiLienT Loyalist Township Climate Action Plan.

Communication and education have gone hand-in-hand in notable 2023 climate initiatives, including:

- Loyalist Township was a registered organization that participated in Earth Day Canada, utilizing the movement's recognizable branding during Township climate action promotions. In addition, being an organization member, provided the Township with abundant educational resources that were shared on the corporate website and across social media including guides, blogs, videos, and more that highlighted actions we can all take from the comfort of our homes to help work towards a greener future.



- Recycle Coach launched on December 1, 2022. This new tool is available in various formats (app, web, direct messaging, and calendar integration) and helps residents easily access information on waste collection services. The Communications Division pushes out key waste collection messages and reminders, which can be customized per route. 2023 messages included Christmas tree collection, holiday impacts, leaf and brush pick-up, e-waste drive information, and more. By the end of 2023, Loyalist Township accumulated 950 subscribers and 89,109 interactions.
- Communication is vital for Township resource promotion, as Loyalist has a variety of programs and services available for residents that simply go under-used because of lack of knowledge. Some of the initiatives that have raised public awareness in the last few years due to increased strategic communications include the e-waste drop-offs at the Amherstview Fire Station, and Renewable Energy Grant Fund applications via local community groups.

Sustainable Land Use

The Sustainable Land Use section of the ResiLienT Loyalist Township Climate Action Plan emphasizes optimizing land use for diverse benefits, including biodiversity, carbon capture, food production, and housing. It aims to balance land development with environmental conservation, promoting energy-efficient policies and engaging the agricultural community in eco-friendly practices. The plan supports reducing pollution, enhancing natural ecosystems like wetlands, and fostering sustainable farming. Emphasizing the importance of nature in community well-being, it also focuses on creating compact, complete communities for a sustainable, resilient future.

The Sustainable Land Use priority sector goals and applicable updates in 2023 include:

Goals	Updates
Plant 20, 000 Trees Over the Next 10 Years	<ul style="list-style-type: none">• Planted 110 trees replacement from Emerald Ash Borer – memorial trees included.• Drafted urban forest management plan.• 30 trees on Amherst Island replaced as part of the Flood Damage Road Repair project.
Rewild Township Owned Lands	<ul style="list-style-type: none">• Nothing to report.



Goals	Updates
Incorporate LIDS into Stormwater Management Practices	<ul style="list-style-type: none">• A 7500-gallon rainwater collection system installed at the County Road 6 Public Works Garage.
Develop a Pollinator Protection Strategy	<ul style="list-style-type: none">• Partnership with the Bath Gardening Club, a community organization dedicated to gardening education and beautification in Bath. This partnership aims to enhance local environmental initiatives and community engagement through gardening projects and activities.• The Emergency Services Department completed a few controlled burns to help local apiaries maintain healthy hives. To help reduce the spread of disease/mite infestations, the hives were taken to the Fire Training Centre and burned.





Goals	Updates
<p>Promote Access to Nature</p>	<ul style="list-style-type: none"> • The Amherstview West Secondary Plan (AWSP) and the Infrastructure Master Plan (IMP) explore the integration of active transportation and trail networks, aiming to enhance mobility and recreational options within the community. • A partnership with KAYAKOMAT for self-serve kayak and SUP rentals at Centennial Park South. This rental system, accessed via an app, offers affordable water sports options, and aims to boost local tourism and business activity. 2023 serves as a pilot year for this project. • Family Fishing Day on Amherst Island on May 13, 2023, included industry professionals on hand with booths to showcase and share water safety tips and information on invasive species, natural habitats, and impact of pollution. • In 2023, Loyalist Township emphasized access to nature through various outdoor programs: <ul style="list-style-type: none"> - Community BBQ and fitness activities - Season-specific park events - Summer programs with outdoor activities - Soccer and pickleball programs - “Come Out and Play” trailer events including Summer Drop-In - Parrott’s Bay and pole walking programs - Enhanced marketing of outdoor spaces in newsletters, guides, and social media to highlight natural areas and educate about park features, fostering community engagement with natural spaces
<p>Support Local Agriculture</p>	<ul style="list-style-type: none"> • The Township processed a tile drainage application through the OMAFRA program. • Spreading biosolids from the sanitary sewage treatment process to certified local agricultural fields. • Upgraded bulk water station. This change made it easier for farmers to obtain clean water for their farm operation during drought conditions. • Supported the Bath and District Lions Club in setting up the Bath Community Garden. The ten garden beds offer residents their own space within the garden by donation.



Goals	Updates
Promote Local Foods	<ul style="list-style-type: none">• The Bath Sunday Market and Amherstview Farmers Market, providing platforms for local food producers and artisans, continued their weekly operations throughout the warmer months in 2023. These markets are a staple in the community, supporting local businesses and offering residents access to fresh, locally sourced products.• Continue to promote Bath Sunday Market and Amherstview Farmers Market, through social media and the Township calendar.• Amherstview Lions Foodbank, and Fresh Food Market partnership with Kingston Community Health Centres & Lion Hearts provides subsidized access to fresh produce. The Township helps with promotion, and running them out of the Amherstview Community Hall.





Goals	Updates
Create Resilient, Low Carbon Communities	<ul style="list-style-type: none">• Transit ridership of Route 10 rebounded to pre-COVID levels.• Through the Amherstview West Secondary Plan exercise, a well-designed neighborhood will be created with a set of Urban Design Guidelines to promote a resilient, low-carbon community.• The Amherst Island Flood Damage Shoreline restoration project is helping to better protect our infrastructure by preparing for future high water and flooding.• A second Amherst Island Flood Damage study was undertaken to identify other areas on the Island that may be susceptible to flood damage and help create a plan to prevent further damage.• Township staff participated (reviewed and provided comments) to assist in the development of the draft County of Lennox and Addington Natural Heritage System Study in 2023.• Township staff processing several infill development applications that assist in increasing intensification and density in urban settlement areas.• Incorporate sustainable practices, such as shuttles to events, renting a water buggy for refilling water bottles, promoting the outdoors, and buying local food and supplies, into Township-hosted community events.

Waste Reduction

The Waste Reduction sector of the ResiLienT Loyalist Township Climate Action Plan in 2023 prioritizes reducing GHG emissions linked to solid waste management. It focuses on the significant issue of methane generation from decomposing organic waste in landfills. The Township employs a “pay as you throw” system for residential waste and is exploring advanced waste diversion strategies and partnerships for organic waste management. The Plan also encourages small and medium enterprises to actively participate in waste reduction. Innovative technologies like composting and anaerobic digestion are considered for converting waste into resources. In line with the Government of Canada’s Climate Action Plan, the Township aims to enhance methane capture and treatment at landfills to further reduce emissions. This commitment to waste reduction aligns with the broader goal of effective waste management to minimize GHG emissions and enhance landfill longevity.

The Waste Reduction priority sector goals and applicable updates in 2023 include:

Goals	Updates
<p>Divert Residential Waste Away from Landfills</p>	<ul style="list-style-type: none"> The FoodCycler Pilot Program in Loyalist Township, implemented from October to December 2023, demonstrated remarkable success in waste management and environmental conservation. The program involved 100 participating households, with an impressive 82% response rate in the post-program survey. Key highlights include: <ul style="list-style-type: none"> - A significant reduction in food waste: The program achieved a reduction of 0.37 standard garbage bags per household each week, equating to 19.2 garbage bags per household per year being diverted from local landfills. - High participant satisfaction: The average rating for the overall pilot project experience was 4.7 out of 5 stars. - Long-term commitment: A substantial 97.5% of participants indicated they would continue using the FoodCycler after the pilot. Continued collection of e-waste. The Violet Waste Disposal Site, Amherst Island Waste Disposal Site, and Amherstview Fire Station played key roles in this effort. The Fire Station collected a total of 12.3 tons of e-waste in 2023. Additionally, Township staff organized an e-waste drive on Saturday, April 29, 2023, to help promote the ongoing program.

Creating an Impact

"In just 5 weeks since getting our FoodCycler, we've managed to cut our food waste in half, and as a bonus, our trash no longer has that unpleasant smell. During this time, we've transformed our kitchen scraps into 6 kilograms of by-product. We love it!"

- Maureen Sharpe, Loyalist Township Resident



Testimonial shared by FoodCycle Science



Goals	Updates
Divert Residential Waste Away from Landfills	<ul style="list-style-type: none">• The Recycle Coach suite of tools simplify recycling and waste management for residents, with personalized schedules, reminders, and information on how to recycle or dispose of various items. By end of 2023, the Township had 950 registered users, roughly 5.30% of the population, with 70% of users choosing the mobile app.
Support SME Waste Reduction Efforts	<ul style="list-style-type: none">• Battery recycling drop-offs year-round.• Annual e-waste drive at the Amherstview Fire Station.
Turn Waste into a Resource	<ul style="list-style-type: none">• Spreading treated biosolids from the sanitary sewage treatment plants to certified local agricultural fields.• Recycled asphalt, utilize RAP when able. Asphalt collected is available to use on certain projects.
Reduce Methane Emissions	<ul style="list-style-type: none">• Nothing to report.

Transportation

The Transportation sector, crucial for daily life, also contributes to air pollution and GHG emissions. Loyalist Township's approach includes promoting low-carbon fuels, enhancing public transport, and introducing Mobility as a Service (MaaS) solutions, alongside encouraging active transportation for better health and reduced emissions. Efforts to increase electric vehicle charging infrastructure and educate about low-emission vehicles align with federal goals for zero-emission vehicle sales. Optimizing the municipal fleet's energy use and transitioning to low-carbon fuels, while maintaining essential services, is also a focus. These measures aim to reduce emissions in the transportation sector over the next decade, while ensuring service levels and essential services are unaffected.

The Transportation priority sector goals and applicable updates in 2023 include:

Goals	Updates
<p>Enhance Transit Services</p>	<ul style="list-style-type: none"> • Introduced an accessible transit program in partnership with the Kingston Area Taxi Commission. This service, focused on the existing transit service area, addresses the need for accessible vehicles and adheres to the Accessibility for Ontarians with Disabilities Act. Launched in September 2023, the program aims to make transportation more accessible to all residents. • Explored different rural transit options as presented in the Rural Transit Study Report. The report outlines two potential service extensions to Bath and Odessa, including new rural routes and an expansion of Route 10. This plan, presented to Council, aims to enhance public transportation in rural areas of Kingston, Gananoque, South Frontenac, and Loyalist. The report includes cost projections, public consultation data, and a summary of current transit initiatives. • Additional promotional campaigns for Route 10 service. • Providing shuttles for events, including Family Fishing Day, Bath Canada Day, and Light Up the Season.



Goals	Updates
Increase the Active Transportation Network	<ul style="list-style-type: none">• Improvements were made to the Babcock Mill parking lot to allow for easier access to the Trail network.• IMP and AWSP both explore expansion and improved linkages of trail and multi-use pathway network.
Facilitate the adoption of EVs in the Community	<ul style="list-style-type: none">• The W.J. Henderson Recreation Centre Renewal Project design includes installing electric vehicle (EV) chargers. These chargers will offer publicly accessible charging options for electric vehicles, supporting the community's transition to sustainable transportation.
Optimize Use of Municipal Vehicles	<ul style="list-style-type: none">• Organizing crews to help with the reduction of vehicles.
Electrify the Municipal Fleet	<ul style="list-style-type: none">• Infrastructure to support electric vehicle charging has been installed at the County Road 6 Public Works garage, with an EV charger to be installed in 2024.
Replace Heavy-Duty Vehicles with Zero Emissions Alternatives	<ul style="list-style-type: none">• Nothing to report.

Buildings

The Buildings sector of the ResiLienT Loyalist Township Climate Action Plan recognizes the significant emissions from residential and commercial buildings. Technological advancements have improved energy efficiency in new structures, but retrofitting existing buildings is key to substantial emission reductions. Energy-efficient retrofits often yield higher returns than renewable energy production. Federal initiatives and local programs offer incentives for homeowners and SMEs to reduce energy usage through retrofits and energy management, prioritizing older buildings with outdated standards. Renewable energy systems in municipal facilities are considered, but prioritizing energy reduction is essential. Monthly energy data and management software help identify effective initiatives. New construction aims for energy intensity targets using efficient designs and systems. Promoting energy retrofits supports vulnerable community members, stimulates the local economy, and creates jobs. Education and support for businesses in the application process are vital. This comprehensive approach aims to significantly reduce GHG emissions in the Buildings sector.

The Buildings priority sector goals and applicable updates in 2023 include:

Goals	Updates
Reduce Residential Energy Usage by Retrofitting Existing Homes	<ul style="list-style-type: none"> Nothing to report.
Increase Commercial and Institutional Energy Efficiency	<ul style="list-style-type: none"> Nothing to report.
Develop Green Buildings Standards for New Construction	<ul style="list-style-type: none"> Nothing to report.



Goals	Updates
Reduce Energy Usage in Municipal Facilities	<ul style="list-style-type: none">• The W.J. Henderson Recreation Centre design is Net Zero Ready. Systems are all electrified or capable of conversion, energy capture, cold water ice resurfacing machine flooding, heat capture from arena to heat rest of building, and the roof design is solar ready.
Incorporate Renewable Energy Infrastructure into Municipal Facilities	<ul style="list-style-type: none">• Nothing to report.



Facility Energy Usage

Goals #22 and #23 of the Climate Action Plan target the reduction of energy usage and incorporation of renewable energy infrastructure in municipal facilities. Figure 1 shows energy usage, reported as fuel consumption, at all Township facilities since 2016. Water & Sewage includes all treatment facilities, distribution, and collection systems. Commercial/Institutional encompasses public buildings, offices, storage facilities, fire halls, and a variety of other Township owned buildings.

One major goal of the Climate Action Plan is to reduce Township facilities GHG emissions by 49% from 2016 levels by 2031. Figure 2 shows GHG emissions at all Township facilities since 2016.

These figures show a consistent decrease in energy usage and GHG emissions at Township facilities from 2018 to 2023. In addition to these updates, it is important to note the closures of the W.J. Henderson Recreation Centre in 2020 and 2021 due to the COVID-19 pandemic. The pool at the W.J. Henderson Recreation Centre was completely closed in 2022 for repairs and remained closed throughout 2023. These closures reduced the energy usage and related emissions from the Recreation Centre. On average the W.J. Henderson Recreation Centre is responsible for approximately 30% of Township facility energy usage and 40% of Township facility GHG emissions. This signifies the importance of the initiative to improve energy efficiency and reduce emissions with the W.J. Henderson Recreation Centre Renewal Project.

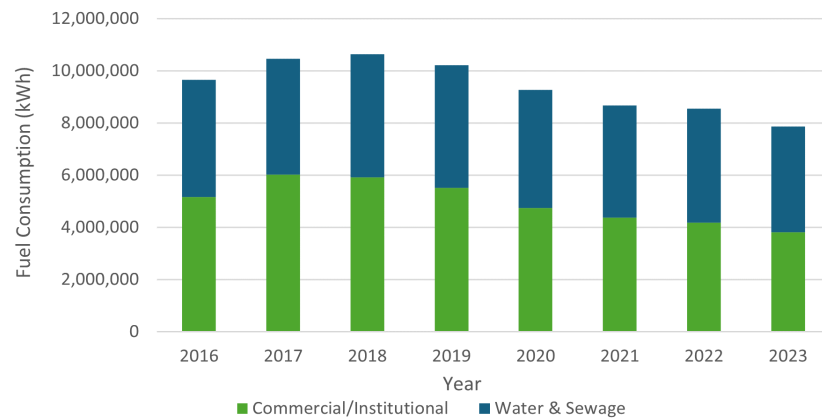


Figure 1. Facility energy usage in the Township. Note energy usage is reported as Fuel Consumption (kWh), which includes hydro and natural gas usage.



Figure 2. Facility greenhouse gas emissions in the Township.

Water and Wastewater

Loyalist Township’s water and sanitary sewage systems, serving about 14,000 residents, focus on energy efficiency in water movement and treatment. Efforts include minimizing water losses in distribution, reducing water consumption per connection, and enhancing mechanical system efficiency. Addressing inflow and infiltration in sanitary sewage collection systems can reduce energy use and costs. Educational and incentive programs aim to reduce residential water usage, impacting energy costs and GHG emissions. Lifecycle-based asset replacements and opportunities to reuse waste energy, such as heat recovery from sewage, are also explored to further reduce energy consumption and emissions.

The Water and Wastewater priority sector goals and applicable updates in 2023 include:

Goals	Updates
Reduce Water Losses in the Distribution System	<ul style="list-style-type: none"> • Water meter replacements, refocused effort to residential close to 100 meters pre-placed this year, as the meters wear down it shows up as a water and revenue loss. • Replaced watermains on Bridge St in Odessa.
Reduce Inflow and Infiltration in the Collection System	<ul style="list-style-type: none"> • Grouting manholes in Odessa. Repairs were done on some of the lines, actively seeking and repairing lines, particularly in Odessa.
Reduce per Capita Water Usage	<ul style="list-style-type: none"> • Water Conservation Incentive had 16 successful applications. • Water wagon rental for July 1st encouraged use of refillable water bottles to event (also reducing waste).
Increase the Efficiency of Mechanical Systems	<ul style="list-style-type: none"> • Bath Sewage Pumping Station #1: Replacement of soft starts on pumps.



Goals	Updates
Capture and Reuse Waste Energy	<ul style="list-style-type: none">• Nothing to report.



Water Distribution System Losses

Goal #24 of the Climate Action Plan focuses on the reduction of water losses from the water distribution systems in the Township. Figure 3 shows non-revenue water in both the Bath and Fairfield distribution systems. Non-revenue water refers to the following: unbilled authorized usage, real water losses (watermain breaks or leaks), and apparent losses (unauthorized consumption or unknown usage).

There was a slight increase in non-revenue water in the Fairfield system between 2022 and 2023. This is likely due to an increase in watermain breaks and leaks. Conversely, there was a decrease in non-revenue water in Bath between 2022 and 2023, which is likely due to a reduction in leaks and watermain breaks.

In both systems, apparent losses contribute the most to non-revenue water. To decrease the amount of apparent loss seen in the distribution systems, a meter replacement program has been initiated. Improved metering should identify unauthorized or unknown usage, resulting in less apparent loss in the system.

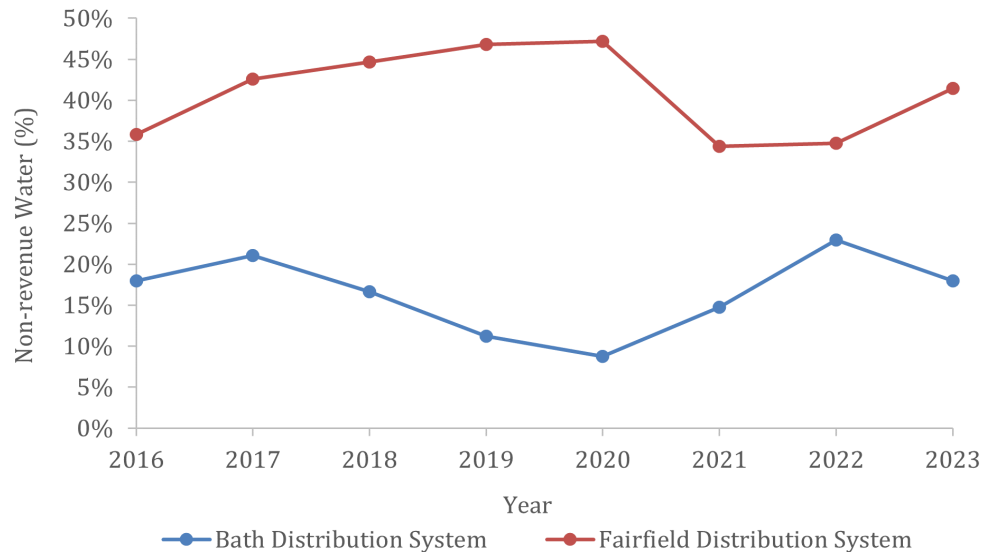


Figure 3. Non-revenue water in Township distribution systems.

Inflow and Infiltration

Goal #25 of the Climate Action Plan highlights the reduction of inflow and infiltration (I&I) in the Township sanitary sewage collection system. I&I refers to water other than sewage that infiltrates the collection system, such as groundwater or stormwater. This can damage collection infrastructure and impact the sanitary sewage treatment process. Peaking factors can be used to approximate the amount of I&I occurring in an area. A peaking factor is the ratio between maximum daily flow and average daily flow. If the peaking factor correlates with heavy precipitation or thawing events, it indicates significant I&I.

Figure 3 shows the peaking factors for both systems based on a three-year average. Overall, the peaking factors have decreased since 2018, with the 2023 values remaining consistent to what was seen in 2022. Although this decrease is a positive indication that there is less I&I in the system, the peaking factors are still considered quite high. More work is being done to decrease I&I even further.

Figure 3 should only be used as an approximation for I&I in the Township. Further investigation will be needed to identify specific areas that are prone to I&I. The Township's sanitary sewer model will be updated, which should help to pinpoint areas with high I&I. Once located, efforts can be made to reduce the amount of I&I.

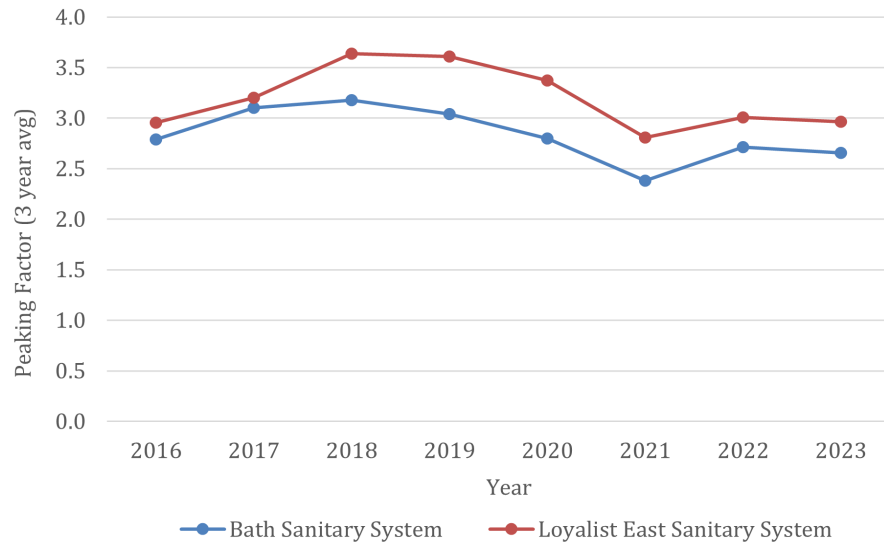


Figure 4. Annual peaking factors in both sanitary systems.

Other

The ResiLient Loyalist Township Climate Action Plan encompasses initiatives for GHG reduction and sustainability enhancement. It emphasizes sustainable municipal operations, promoting eco-friendly goods and services, and reducing construction-related emissions. Community engagement is crucial, achieved through education, partnerships, and volunteering, fostering a culture of sustainability and civic involvement. The plan, with its focus on sustainable procurement and community engagement, aims for long-term positive impacts on residents and local organizations, demonstrating the value of collaborative and informed approaches to climate action.

The Other priority sector goals and applicable updates in 2023 include:

Goals	Updates
Incorporate Sustainability into Corporate Procurement	<ul style="list-style-type: none"> • Lifecycle review incorporated in different departments. • The Emergency Services Department in Loyalist Township successfully transitioned to an eco-friendly firefighting foam, eliminating the use of foams containing Perfluoroalkyl, Polyfluoroalkyl, and other related compounds (PFAS). All PFAS-containing firefighting foam was withdrawn from use and returned to the supplier.
Coordinate the Purchase of Goods and Services with Local Organizations	<ul style="list-style-type: none"> • Nothing to report.
Incorporate Sustainable Practices in Construction Activities	<ul style="list-style-type: none"> • W.J. Henderson Recreation Centre Renewal project design. • Hydroseed instead of sod. • Odessa Water Tower refurbished instead of reconstructed.



Goals	Updates
Partner with Local Industries and Academic Institutions	<ul style="list-style-type: none">Loyalist Township participated in the pre-consultation for proposed amendments to the Cataraqui Source Protection Plan. This plan, under review as part of the Section 36 Work Plan of the Clean Water Act, focuses on safeguarding municipal residential drinking water sources.
Strengthen Community Relationships	<ul style="list-style-type: none">Created the Resilient Loyalist Community Champion Recognition program to acknowledge individuals, groups, and organizations contributing significantly to climate action in Loyalist Township. This initiative celebrates their efforts in promoting and implementing the Resilient Loyalist Township Climate Action Plan, inspiring further community participation in sustainable practices. Recipients are honored across various platforms and at Council meetings, highlighting their role in shaping a more sustainable future for the Township.ResiLienT Champions: Loyalist Cove Marina’s Blue Flag certification was acknowledged by Council and through Township social media.Developed ferry communication notification.Ernestown Secondary School presentation and input on design and Amherstview West Secondary Plan.“Imagining My Sustainable Community” project, students advocated for their innovative ideas, such as a reading garden and a rainbow crosswalk. Following the presentation Council approved the plans, setting the stage for these student-envisioned projects to begin in the spring of 2024.

Conclusion

The Resilient Loyalist Township Climate Plan Update demonstrates our commitment to addressing the challenges posed by climate change and creating a more sustainable future for our community. By focusing on energy efficiency, waste reduction, sustainable transportation, and community engagement, we are proactively taking steps to mitigate the impacts of climate change and foster long-term resilience. The Resilient Loyalist Township Climate Plan Update outlines the progress made to date in our ongoing efforts to create a sustainable, resilient, and prosperous community for our residents. As climate change poses increasingly complex challenges, the actions detailed in this update demonstrate the Township's commitment to reducing greenhouse gas (GHG) emissions, conserving energy, and ensuring the long-term well-being of our citizens and environment.

