

Challenge: Healthy City

Challenge Statement:

How might the city incorporate the social determinants of health to shift how it makes decisions using available data?

Challenge Outcome:

Insights from research will support action in the Healthy Cities Strategy.

Background:

- In 2021, City Council unanimously signed the Urban Diabetes Declaration and joined the Cities for Better Health (CBH – formerly Cities Changing Diabetes) program.
- Since then, to pursue an evidence-informed approach to developing a Healthy City Strategy, external collaborations were established with various research and data experts. The organizations include the University of Toronto Mississauga (UTM) Novo Nordisk Network for Healthy Populations (NHP), Institute for Better Health Trillium Health Partners Family and Child Health Initiative, and Peel Public Health.
- In June 2023, the University of Toronto Mississauga Novo Nordisk Network for Healthy Populations (NHP) provided data to the City showing that the prevalence rates of type 2 diabetes in most neighbourhoods in Mississauga ranged from 13 to 16.9%. These rates exceed the Ontario average of 9.8%.
- On December 11, Mississauga City Council unanimously approved the [Healthy City Strategy](#), aimed at reducing risk factors associated with type 2 diabetes. The strategy empowers City staff and decision makers to apply a health equity lens in the planning and development of City programs, policies, initiatives and infrastructure.
 - To effectively apply a health equity lens to City building, staff require some guidance, and a key action is to establish Equity Action Areas, and build a consolidated data index with mapping
- Currently, the City explored various tools, but none consider all social determinants of health.
- The Region of Peel's [Neighborhood Information Tool](#), which was piloted with the City of Mississauga in 2017, offers a strong foundation for social and economic indicators, but has not been updated since and lacks essential indicators related to climate change, environment, and health data.
 - Additional benefit to adapting existing tool is that the Region of Peel has made decisions on weighting of social indicators, which are often seen as political decisions that can be controversial.

Challenge Division/Department Sponsor: Manager, Emergency Management

Documents to reference for further inquiry:

- Healthy City Strategy
- Methodology for Region of Peel's Neighborhood tool
- Summary of research on existing tools

Data/Shape Files for reference:

- Chronic Disease Data from the Region of Peel
- Various City Data sets

Staff interest in the topic:

- There is limited internal resources to devote to this, but high need across the corporation as different teams attempt to use an inclusion lens to their work.

Ideal Staff deliverables:

- Review of possible data sets for index.
- Presentation recommendations for weights and data sets.
- Report summarizing research findings.

Challenge: Forestry – Environmentally Sensitive or Significant Areas

Challenge Statement:

How might the City determine what are the most appropriate environmentally sensitive or significant areas to protect and ensure a thriving ecosystem today and in the long term?

Challenge Outcome:

This research will be a key tool for staff to update the criteria for identification of Environmentally Sensitive or Significant Areas to reflect the current land cover of the City and advancements in ecological science. The results will inform how the City identifies, protects, manages and plans for these important natural heritage features.

Background:

- An Environmentally Sensitive or Significant Area (ESA) is a natural area that is important for the long-term maintenance of the environment.
 - They represent potentially the largest and most unique or sensitive ecosystems with high concentrations of plants and animals and support important ecological functions.
 - Environmentally Sensitive or Significant Areas can contain forests, meadows, wetlands, lakes, rivers and landforms.
- The City's Official Plan includes Environmentally Sensitive or Significant Areas as a significant natural area in its Natural Heritage System, which confers a level of oversight and protection through the development process.
- ESAs in Mississauga were first identified via a study commissioned by the Credit Valley Conservation Authority in 1979. These areas were later adopted by the conservation authority in 1984. Since that time, the responsibility to identify and protect ESAs has shifted to the municipality. It has been more than 40 years since the initial study was completed and the criteria and methodologies used to identify ESAs have become outdated. The suite of species and habitats that could be considered sensitive or significant now may be vastly different than those identified 40 years ago, and the City needs to ensure that it is protecting what matters.
- The City has been inventorying its natural areas since 1996 as part of the [Natural Areas Survey \(NAS\)](#).
 - The NAS identifies and tracks 144 natural areas across the City including woodlands, wetlands, and successional areas.
 - Surveys are conducted annually, but each natural area is surveyed every 4 years.
 - Data collected includes the following: flora, fauna, vegetation communities, boundary changes, general condition, and management concerns.
- The [Official Plan](#) provides the basis for Mississauga's land use and urban design, in line with the [City's Strategic Plan](#). Its policies address important parts of City-building that affect everyone that lives and works in Mississauga, including transportation, housing, culture and heritage, the environment, and the economy.

- As part of chapter 6, value of the environment, the Official Plan outlines the intent for the City's planning approach to support generations to come by ensuring growth does not compromise the natural environment.

Challenge Division/Department Sponsor: Manager, Forestry

Documents to reference for further inquiry:

- City's Official Plan – Environmental Section
- Municipal Examples:
 - City of Toronto. Environmentally Significant Areas. [Link here.](#)
 - City of London. Environmentally Significant Areas. [Link here.](#)
- An example of recent advancements in identifying environmentally / ecologically important areas:
 - IUCN. (2016). A Global Standard for the Identification of Key Biodiversity Areas. [Link here.](#)
 - KBA Canada Coalition. (2021). National Standard for the Identification of Key Biodiversity Areas in Canada. [Link here.](#)

Data/Shape Files for reference:

- Natural Areas System
- Natural Areas Survey

Staff interest in the topic:

- Under the current process staff are protecting what is technically an environmentally significant area, but the foundation of this knowledge is outdated.

Ideal Staff deliverables:

- Undertake a review of the current literature surrounding what are considered Environmentally Sensitive or Significant Areas, and the criteria to determine what is meaningful today.
- Presentation summarizing research findings
- Report summarizing research findings, better understand how other jurisdictions are doing this, and perhaps criteria to consider.

Challenge: Forestry – Ecological Buffers

Challenge Statement:

How might the City leverage best practices in ecological buffers to protect the City's natural assets?

Challenge Outcome:

This research will be a key tool for staff to confidently respond, assess developments, and propose changes in existing developments to protect the City's natural heritage system.

Background:

- Mississauga [Official Plan](#) guides how the City will grow and develop, as required by the [Ontario Planning Act](#).
- The Official Plan provides the basis for Mississauga's land use and urban design, in line with the [City's Strategic Plan](#). Its policies address important parts of city-building that affect everyone that lives and works in Mississauga, including transportation, housing, culture and heritage, the environment, and the economy.
- The Official Plan also sets standards for the review and approval of [development applications](#) in the City. However, there is very limited guidance on appropriate parameters for ecological buffers required to protect the Natural Heritage System in Mississauga, which include woodlands, significant wildlife habitats, wetlands, and more.
 - An ecological buffer is an area of land located adjacent to a natural feature and usually bordering lands that are subject to development or site alteration.
 - The primary purpose of a buffer zone is to insulate natural heritage features from potentially damaging external influences, especially those caused by inappropriate forms of land use, to ensure the feature and its ecological functions are not negatively impacted.
- When applications for development are reviewed by staff the City is often relying on recommendations in an Environmental Impact Study made by environmental consultants that are hired by developers, and have limited resources or tools to request otherwise. There are currently no minimum buffers set.
 - Local conservation authorities have some guidelines (e.g., CVC & NPCA); however, in some cases guidelines that were relied on have been achieved.
 - There is no guidance provided on the circumstances that would warrant a buffer greater than the minimum width.
 - There is no guidance provided on what conditions or actions would allow a buffer less than the minimum width to be considered. For example: if a woodland buffer were fenced off from development a reduction of Xm could be considered.

Challenge Division/Department Sponsor: Manager, Forestry

Documents to reference for further inquiry:

- City's Official Plan – Environmental Section
- Credit Valley Conservation Authority. (2012). Ecological Buffer Guideline Review. Prepared by Beacon Environmental. [Link here](#).

- Niagara Peninsula Conservation Authority. (2022). Buffer Width Discussion Paper. Prepared by North-South Environmental. [Link here](#).

Data/Shape Files for reference:

- Development applications
- Official Plan Growth Areas
- Natural Areas Survey (NAS) Boundaries
- Development applications and building permits

Staff interest in the topic:

- Under the current process City Staff review development applications, but have limited means to challenge recommendations made by the environmental assessment, which is paid for by the developer.

Ideal Staff deliverables:

- Undertake a review of the current literature surrounding ecological buffer guidelines, particularly for natural heritage features common to Mississauga
- Presentation summarizing research findings
- Report summarizing research findings and general recommended guidelines for ecological buffers
- A tool or reference that identifies the conditions that would allow an increase or decrease in a buffer width.

Challenge: Public Education in By-Law Enforcement

Challenge Statement:

How might the City deliver more effective public education on existing bylaws to the many diverse communities of Mississauga?

Challenge Outcome:

Enforcement is looking to improve its public education efforts and will be looking to apply lessons to their work immediately, and is particularly interested in applying insights leading up to Diwali each year.

Background:

- The City of Mississauga is one of the most diverse cities in Canada. It is also considered one of the most diverse in the world with over 60% of residents identifying as visible minority.
 - By ethnic origin, the City of Mississauga has significant Indian, Hindu, and Punjabi representation, with 112,830 residents.
 - Ethnic origin in the Canadian Census refers to the ethnic or cultural origins of the person's ancestors.
 - Diwali is celebrated by Hindus, Sikhs and other South Asian communities and is considered one of the most important yearly celebrations for the Indian diaspora. South Asians are a significant visible minority population in Mississauga with 180,800 residents.
- By-laws are laws that local municipal governments create and they apply within city limits. The City of Mississauga has by-laws regarding a number of areas, including: animal control, zoning, parking, noise, and more. These are enforced by by-law officers.
- Bylaws are enforced, but the ideal scenario is that they never have to be enforced because of a strong approach to public education, but when engaging diverse communities one messaging or traditional forms of engagement and public education may not be sufficiently effective.
- The Fireworks By-law regulated the sale and use of fireworks in Mississauga. It was repealed in November 2023 with the enactment of the Fireworks Licensing and Use By-law.
 - The new by-law permits the use of fireworks on private property on Diwali, which is one of five days that Mississauga residents are allowed to set off fireworks on private property without a permit. Other days include the Lunar New Year, Victoria Day and Canada Day.
 - In the review, staff acknowledged that a comprehensive public education plan be conducted.
 - In 2024, between Oct. 31 and Nov. 2, the City received 225 firework complaints.
 - The Mayor has indicated the City should revisit implementing a ban on private-use fireworks. No specific date has been set for when the firework issue will be revisited by Council.

- Diwali's official firework holiday last year, Sunday, Nov. 12, saw 97 firework-related complaints reported to the city.
- Diwali is celebrated by Hindus, Sikhs and other South Asian communities and is considered one of the most important yearly celebrations for the Indian diaspora.
- Caledon and Brampton has prohibited the private sale of fireworks since 2022.

Challenge Division/Department Sponsor: Manager, Compliance & Enforcement

Documents to reference for further inquiry:

Firework By-law Review Presentation

Fireworks By-law

Overview of prior engagements by enforcement during Diwali

Data/Shape Files for reference:

- 2021 Census Hub
- Data of firework related infractions and reports
- Overview of prior engagements

Staff interest in the topic:

- The City has received a number of reports related to fireworks, it has required an increase of by-law officers be available after hours.
- Enforcement is interested in growing and enhancing its efforts.

Ideal Staff deliverables:

- Literature review, particular interest on best practices for public education to South Asian communities.
- Presentation summarizing research findings.
- Report summarizing research findings and recommendations for Enforcement to implement in future engagements.

Challenge: MiWay

Challenge Statement:

How might the City better support the ridership experience of women using transit, particularly when it comes to safety?

Challenge Outcome:

Research will inform and be incorporated into MiWay's Customer Experience Strategy, which will be developed in 2026, and research findings may support staff ahead of the new MiWay's Service Plan.

Background:

- MiWay is Ontario's third largest municipal transit service provider, and serves a growing population of roughly 766,000 across 179 square kilometres in Mississauga. There are about 500 buses in the fleet servicing 65 transit routes.
- Like all municipalities, MiWay had to adapt and respond to shifting transit patterns during the pandemic, which led to a significant decline in ridership, averaging a 75% decrease. MiWay boardings have now surpassed pre-pandemic levels, seeing a 7.6% increase from January to August 2024 compared to the same period in 2023.
- As well, the City of Mississauga joined the Dedicated Gas Tax Fund for Public Transportation Program, which "provides municipalities with the means to support and improve transportation services". This allowed for 57,000 additional service hours, and corresponding maintenance enhancements.
- Improving safety is a priority for all transit systems. Between 2018-2022 there have been 232 assaults on MiWay buses, at bus stops and at terminals the last five years total (2018 to 2022) in addition to the first four months of 2023. During this period of time there were 103 incidents of fighting.
- MiWay is planning to begin engagement with riders ahead of 2026, staff will conduct a diverse set of engagements, such as focus groups, for deep listening all throughout 2025. If timelines align researcher could sit in some of the planned engagements.

Challenge Division/Department Sponsor: Manager, Customer Experience at MiWay

Documents to reference for further inquiry:

MiWay Infrastructure Growth Plan
MiWay COVID-19 Ridership Recovery Strategy
MiWay Customer Charter
Transportation Master Plan

Data/Shape Files for reference:

- 2021 Census Hub
- Peel police open data
- Transit Routes
- Aggregate of incident reports

Staff interest in the topic:

- Inspired by LAs approach to focus on women's experience to shape and improve the transit experience of all users.
- As MiWay adjusts to the post-covid reality, they have now surpassed pre-pandemic levels, and while there are constraints to growing the system to meet increasing demand, their focus is starting to shift on ensuring the Customer Charter is actioned.

Ideal Staff deliverables:

- Literature review, particular interest on specific programs or pilots done to improve safety
- Presentation summarizing research findings
- Report summarizing research findings and recommended areas of exploration for MiWay

Impacts of urban trails on non-communicable diseases

Background:

Multi-use physical activity trails (urban trails) can reduce non-communicable diseases through increased exercise rates across the community. Preliminary findings in Winnipeg identified that high-use urban trails demonstrated neighbourhood reductions of cardiometabolic conditions such as diabetes, CVD, hypertension, and dyslipidemia in areas with a high use of trails; however, the construction of a new urban trail did not necessarily lead to reduced rates. The research will include qualitative (survey) and quantitative (urban trail mapping) analysis.

The objectives are to:

1. Identify urban trail infrastructure which will be incorporated into a nationwide meta-analysis of urban trail development and changes in rates of diabetes, cardiovascular disease, hypertension, and dyslipidemia, while providing results contextualized for Mississauga, Ontario;
2. Conduct surveys on urban trails to identify factors that influence the use and implementation of urban trails to maximize their fairness and health impact. The survey will provide an understanding of the drivers for successful urban trail development that can be leveraged by the City of Mississauga when developing future trails. The project will contribute to a national-scale study on the relationship between urban trails and health while providing results contextualized for Mississauga, Ontario.

Student Tasks and Responsibilities:

- Collection of survey data on urban trails.
- Interpretation of survey data.
- Supporting focus groups

Anticipated Student Benefits (knowledge and skills development, networking opportunities):

- 1) Field Research-engage in a real-world, hands-on survey.
- 2) Qualitative Data Interpretation- interpret qualitative data from surveys, making sense of narratives and drawing meaningful conclusions.
- 3) Ethical Considerations Research- the project will emphasize the importance of ethical considerations in qualitative research, including informed consent, confidentiality, and respectful treatment of participants