

Healthy Community Design Baseline Project:

Neighbourhood Design Survey and Physical- Form Indicators

Centre Wellington



Centre
Wellington



PublicHealth
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Stay Well.

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Introduction

Wellington-Dufferin-Guelph Public Health (WDGPH) partnered with the Township of Centre Wellington to create a tailored baseline of Healthy Community Design (HCD) indicators for the towns of Fergus and Elora/Salem via a survey among local residents and the collection of physical design data.

The objectives of this project were:

1. To determine residents' preferences for the built design of neighbourhoods as well as how residents perceive and travel within their current neighbourhood;
2. To gain an understanding of residents' knowledge of the links between HCD features and healthy lifestyle behaviours; and
3. To collaborate with municipal planning departments to strategically select and map valuable, community-specific, physical HCD indicators to be monitored over time.

The baseline indicator data was used to establish collaborative recommendations and will help Centre Wellington identify priorities for HCD and plan for growth. The survey and collection of physical indicator data will be repeated again in five, ten, and fifteen years to monitor changes over time as the community grows.

Background

There is a strong relationship between population health and the built environment in which people live, work and play. Communities can be designed in ways that provide economic cost-savings, promote healthy choices and behaviours, and enhance the social well-being of residents. However, there has historically been a lack of available data related to healthy community design, both at the physical level and from residents' perspectives. Collaborative data collection and planning efforts between public health practitioners, municipal planners, and other disciplines can address municipal priorities and offer significant benefits to a community.¹

Healthy Community Design Framework

A Framework for Healthy Built Environment developed by the BC Centre for Disease Control, identifies important elements and principles of a healthy built environment and describes the links between design features, planning, and health (Figure 1). Wellington-Dufferin-Guelph Public Health uses the features of this framework to engage with communities to support healthy community design.

The Baseline Indicators Project was structured around four of the five feature areas from this framework: neighbourhood design, transportation networks, natural environments, and food systems. The following sections of the report will highlight the key indicators and findings from these areas.



Figure 1: A Framework for Healthy Built Environment.¹ Adapted with permission by BC Centre for Disease Control (2018).

Icons

Icons used throughout this report indicate the connections among HCD features and the relationships that exist between the various components of this framework.

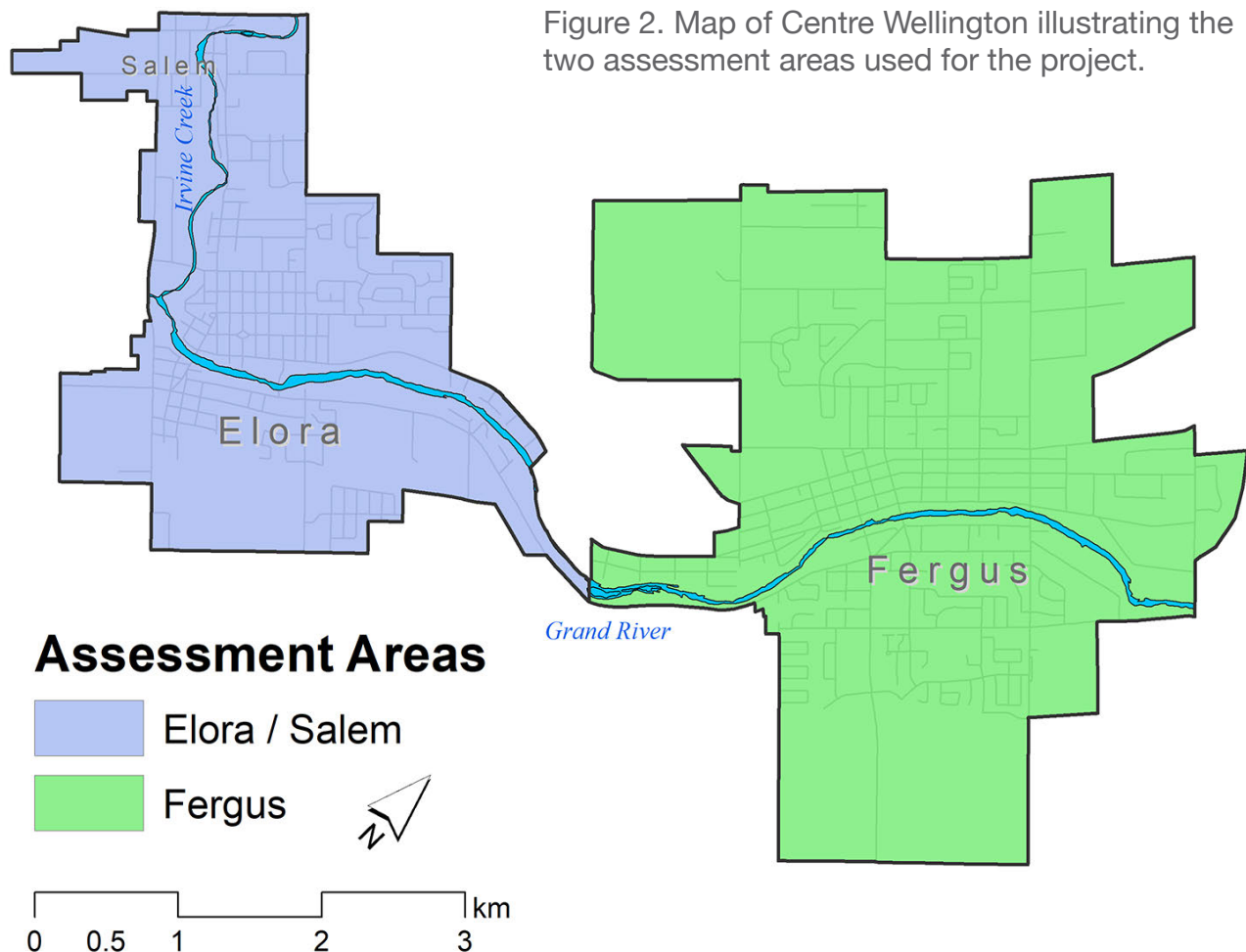


Data Collection

Survey Development and Distribution

The Neighbourhood Design Survey (NDS) was developed by WDGPH with input from Centre Wellington municipal staff. In partnership with Forum Research Inc., survey data was collected from October 10th to December 15th 2017. The NDS was primarily promoted and completed online. However, in order to ensure appropriate geographic representation from each study area, geo-targeted random digit dial telephone recruitment as well as in-person, random (i.e. 4th passerby of the general public) interviewing using tablet devices or hardcopy surveys in public spaces, was used to increase the number of completed surveys.

In recognition of differences in the built design across the township, Centre Wellington was divided into two assessment areas that were aligned to match with urban centre boundaries stated in the Official Plan. They are referred to in this report as the Fergus and Elora/Salem assessment areas (Figure 2). A total of 568 Centre Wellington residents were recruited to complete the NDS through the various primary data collection methods depicted in Figure 3. Fergus residents represented 63% of survey respondents, while 37% were from the Elora/Salem area.



The people who completed the survey tended to be younger in age, more likely to be female, and more educated compared to the general population. To compensate for this, statistical weighting techniques were used to adjust the survey results to reflect the demographics of Centre Wellington residents as measured by the 2016 Census data.²

During analysis of the NDS similar variables were combined into one measure to simplify results and identify themes (e.g. “somewhat prefer” and “strongly prefer” combined into “prefer”). The data presented in the following sections of the report highlight key findings and interpretations of these themes. Detailed tables of all variable data can be found in the Appendix. Additionally, when significance testing identified differences in results among the two urban centres (Fergus and Elora/Salem) findings are presented separately, otherwise, results represent Centre Wellington residents overall.

Physical-form Indicators

Collaborative discussions between WDGPH and Centre Wellington planning staff guided the selection of HCD physical-form indicators that reflected municipal growth priorities. Indicator data on these physical components of the built environment was collected from available data sources and, using GIS technology, the data was mapped to align with the Fergus and Elora/Salem urban centres (assessment areas).³ The physical design indicators, in combination with NDS perception indicators, help to illustrate the complexity of the built environment in Centre Wellington.

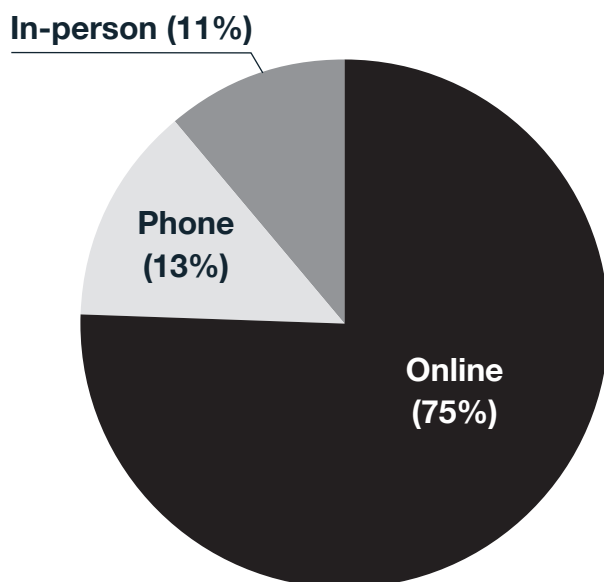


Figure 3. NDS completion rates from online (75%), phone (13%) and in-person (11%) recruitment methods.

Neighbourhood Design

Vision

Neighbourhoods where people can easily connect with each other and with a variety of day-to-day services.¹



Neighbourhood Design

Healthy neighbourhood design describes a community where people of all ages and abilities can live, work, play, connect, and access amenities.¹ When land use decisions prioritize the development of complete, compact, and connected neighbourhoods, communities benefit from environmental and economic gains as well as positive impacts on the health and well-being of residents.¹ Specifically, when neighbourhoods have high residential density, mixed land use, and strong connectivity, residents are encouraged to walk and cycle within their community.¹



For the purposes of this survey, “neighbourhood” was defined as anywhere within approximately one kilometer from a person’s home, which is about a ten minute walk or three minute bicycle ride.

Neighbourhood Density (Intensification)

In addition to setting provincial mandates for increases in population growth and density, the Government of Ontario prioritizes intensification as a key policy in the Growth Plan for the Greater Golden Horseshoe under the Places to Grow Act (2005). Building compact communities with high increased residential and employment density naturally increases the proximity of community amenities to residents. As a result, residents are regularly encouraged to use active modes of transportation such as walking and cycling to access work, school, recreation or other services.¹

Key Findings:

- Half of Elora/Salem residents and 63% of Fergus residents perceived their neighbourhoods as dense.
- The majority of Centre Wellington residents felt that neighbourhood density would encourage healthy behaviours, but most residents preferred a less dense neighbourhood design.
- The population change data from 2011-2016 indicated population growth in both Fergus and Elora/Salem.

Connectivity of Neighbourhoods

Neighbourhoods with street and sidewalk connectivity to residential, commercial, and recreational spaces create an efficient network that encourages active transportation, participation in social interactions, reduces dependency on vehicles, and contributes to improved air quality.¹

Key Findings:

- Half of Centre Wellington residents preferred a connected neighbourhood design.
- Elora/Salem neighbourhoods showed a slightly higher intersection density than Fergus, but overall, only half of all Centre Wellington residents felt their neighbourhoods were connected.
- The majority of Centre Wellington residents thought that neighbourhood connectivity would encourage healthy behaviours.

Neighbourhood Density (Intensification)

Indicator: Resident perception of neighbourhood density



Neighbourhood A: Mix of different types of housing closer together.



Neighbourhood B: Single detached homes that are further apart.

Illustrations courtesy of: Dr. Larry Frank, Urban Design 4 Health, Inc.; Mr. Christopher Leersen, Abode; Mr. Jim Chapman, Urban Design 4 Health, Inc. (all formerly with the Georgia Institute of Technology).

84%
of residents
preferred
“Neighbourhood B”

NDS questions:

The NDS used imagery questions to ask about residents’ preferences for dense (Neighbourhood A) compared to less dense (Neighbourhood B) neighbourhoods. Residents were asked to select which design looked most similar to their current neighbourhood. “Neighbourhood A” was described as having a mixture of different types of housing that were closer together. “Neighbourhood B” was described as single detached homes that were further apart. A follow-up question asked residents which of the two illustrated neighbourhoods would encourage behaviours such as walking, biking, or rolling to places they needed to go, getting more daily exercise, feeling safe walking, biking or rolling to places, driving less to places, and socializing more with neighbours.

What did residents say?

Overall:

- 84% of Centre Wellington residents preferred less dense neighbourhoods like “Neighbourhood B”.
- 69% of all residents perceived the dense design of “Neighbourhood A” as encouraging of healthy lifestyle behaviours.

Fergus:

- 63% of residents thought their current neighbourhood was similar to the dense design of “Neighbourhood A”.

Elora/Salem:

- 53% of residents thought their neighbourhood was less dense like “Neighbourhood B”.

Making connections:

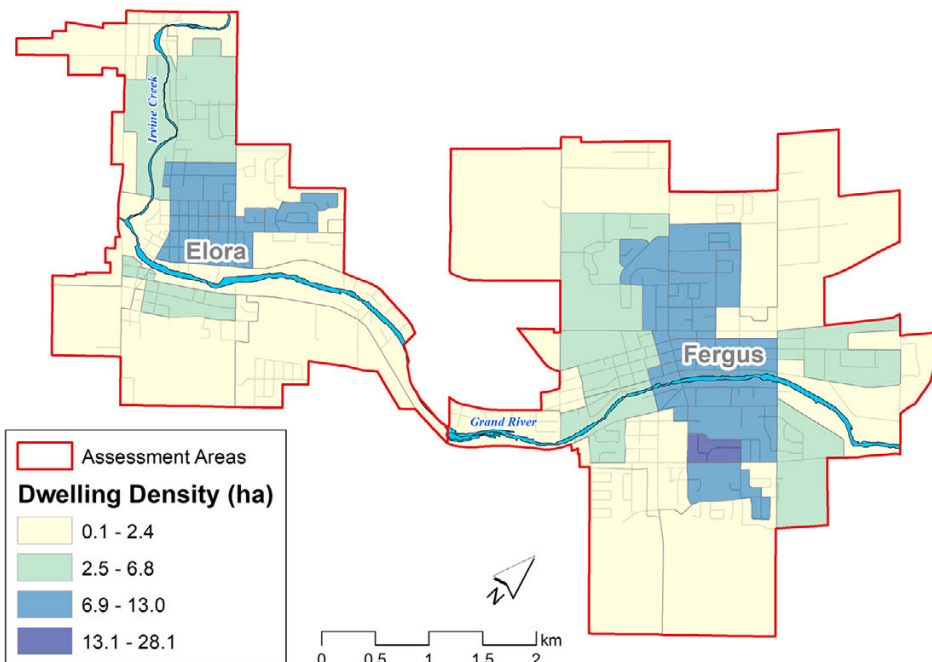
The majority of residents in Centre Wellington recognized that dense neighbourhood design encourages healthy behaviours, but most residents preferred to live in less dense neighbourhoods. As the community aims to reach population targets, intensification is becoming a reality. It would be valuable to explore the discrepancy between residents’ understanding of the benefits of neighbourhood density and their preferences against it, in order to determine strategies for addressing dense community design in Centre Wellington.



Data description:

Statistics Canada 2016 Census (population density, and DA boundaries), Wellington-Dufferin-Guelph Public Health and the Township of Centre Wellington (Assessment Areas).

Dwelling density can be used to illustrate how populated a region is, with specific emphasis on housing, or living quarters (e.g. collective dwellings and private dwellings). Dwelling density was measured by unique dwellings per hectare within a Dissemination Area (DA).



What it tells us:

Overall:

- Dwelling density of Centre Wellington was 5.0 dwellings/ha.
- Dwelling densities ranged from higher densities in central urban core areas to lower densities in the peripheral areas.

Fergus:

- Dwelling density of Fergus was 5.2 dwellings/ha with a maximum dwelling density of 28.0 dwellings/ha.

Elora/Salem:

- Dwelling density for Elora/Salem was 4.7 dwellings/ha with a maximum of 13.0 dwellings/ha.

Making connections:



The dwelling density indicators identified that residential dwellings in Fergus were slightly closer together than in Elora/Salem. This correlated with the NDS findings as more Fergus residents' perceived their neighbourhoods as dense compared to Elora/Salem residents. In addition, with the dwelling densities map signifying many areas of low dwelling density, it is not surprising that 84% of all Centre Wellington residents reported a preference for less dense neighbourhoods.

Neighbourhood Density (Intensification)

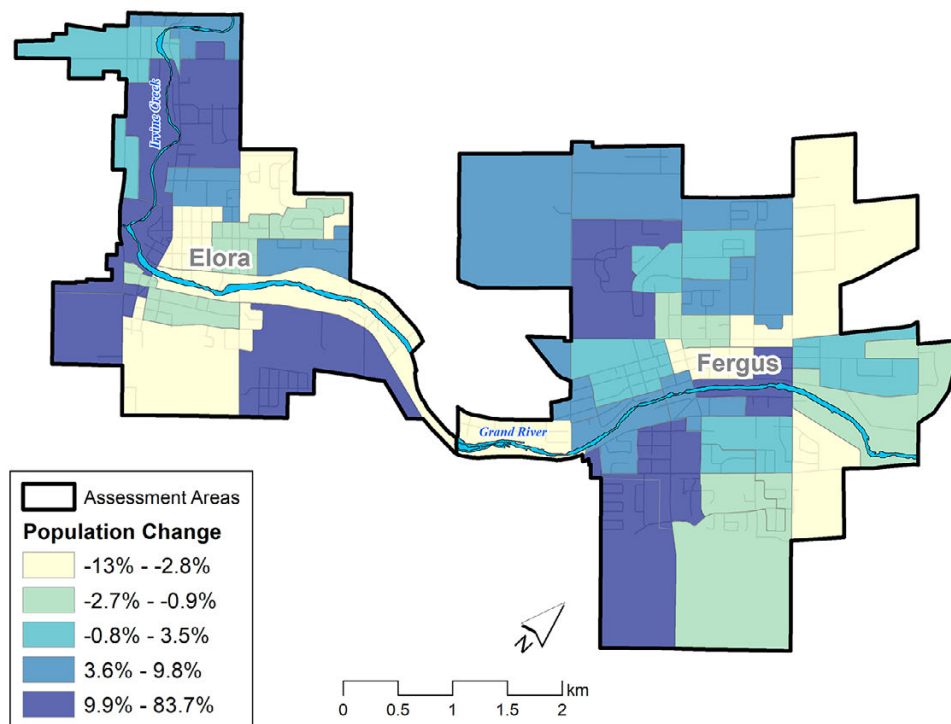
Indicator: Percent of population change



Data description:

Statistics Canada (2016 Census),
Township of Centre Wellington,
Wellington-Dufferin-Guelph Public
Health.

Population change measures the difference in population over a period of time. It provides a quick snapshot of how the population is changing, specifically, whether it is increasing or decreasing. The use of DA boundaries allows for a more specific measure of change within a smaller geographic area.



What it tells us:

Overall:

- Population change from 2011-2016 in Centre Wellington was a growth of 7%.
- The majority of positive population change was occurring in the areas at the edges of the main urban centres.

Fergus:

- Population change from 2011-2016 was a growth of 6%.

Elora/Salem:

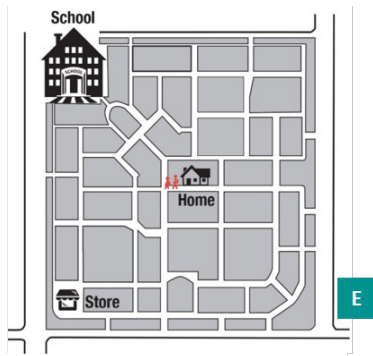
- Population change from 2011-2016 was a growth of 9%.

Making connections:

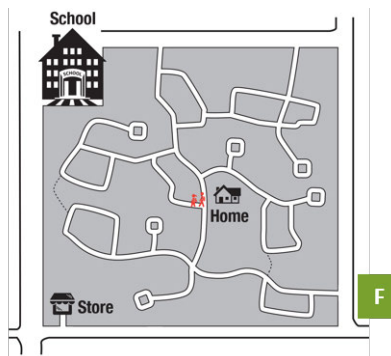
Population change alongside dwelling density may help explain general patterns of change in the community. The areas that experienced the greatest percentage of population change were the same areas identified as having lower dwelling density. Therefore, new developments and even small increases in residential dwellings in areas that were previously less developed, may have contributed to increases in population.

Connectivity of Neighbourhoods

Indicator: Resident perceptions of neighbourhood connectivity



Neighbourhood E: Streets in a grid pattern with sidewalks on both sides of the road



Neighbourhood F: Curved streets, several cul-de-sacs, and may have fewer sidewalks

76%
of residents felt
“Neighbourhood E”
would encourage
healthy behaviours

NDS question:

Residents were presented with images and a brief description of two different neighbourhood connectivity designs. “Neighbourhood E” was described as having streets in a grid-pattern with sidewalks on both sides of the road. “Neighbourhood F” was described as curved streets, with several cul-de-sacs, and possibly fewer sidewalks. Respondents were asked to think about which neighbourhood they would prefer if they were moving to a different neighbourhood as well as which design most resembled their current neighbourhood.

In addition, residents were asked which of the two neighbourhood designs would encourage healthy behaviours such as walking, biking, or rolling to places they need to go, driving less to places, getting more exercise, feeling safe using active modes of travel, and socializing more with neighbours.

What did residents say?

Overall:

- 51% of Centre Wellington residents preferred connected neighbourhoods like “Neighbourhood E”.
- 53% of all residents felt their current neighbourhood was connected.
- 76% of all residents believed that the connected design of “Neighbourhood E” was encouraging of healthy lifestyle behaviours.

Making connections:



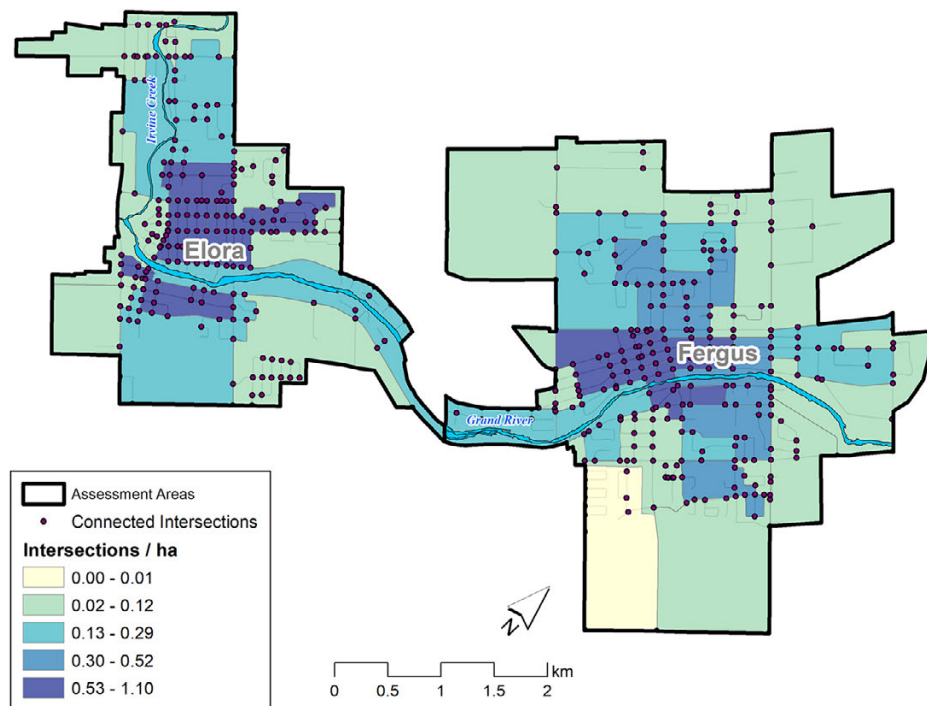
Most Centre Wellington residents thought that connected neighbourhoods encourage healthy behaviours, but only half of residents preferred the design of connected neighbourhoods and just over half perceived their neighbourhood as being connected. Physical design indicators identified a lack of proximity of residential dwellings to schools (pg. 18) and supermarkets (pg. 16), thereby also signifying a lack of connectivity to some amenities within the community. The NDS did find that 69% of Centre Wellington residents reported actively travelling to at least two-thirds of the locations that they felt could be reached through active transportation. This suggests that with enhancements to connectivity and proximity to destinations, residents would likely engage in active travel behaviours.



Data description:

Township of Centre Wellington, Statistics Canada, Wellington-Dufferin-Guelph Public Health, Ontario Ministry of Natural Resources and Forestry Roadnet-Element.

Intersection density can be used to understand the connectivity of neighborhoods and is derived from the number of intersections that connect streets in three or more directions, excluding cul-de sacs, dead-end streets, and crescents that do not provide connections to the broad transportation network.



What it tells us:

Overall:

- The overall intersection density for Centre Wellington was 0.25 intersections/ha.
- Intersection density was highest in the downtown/core areas of Fergus and Elora/Salem and lower in the peripheral areas where road lengths were longer and in residential areas that contained more cul-de-sacs and dead end streets.

Fergus:

- The intersection density of Fergus was 0.20 intersections/ha.

Elora/Salem:

- Neighborhoods in Elora/Salem showed an intersection density of 0.30 intersections/ha.

Making connections:



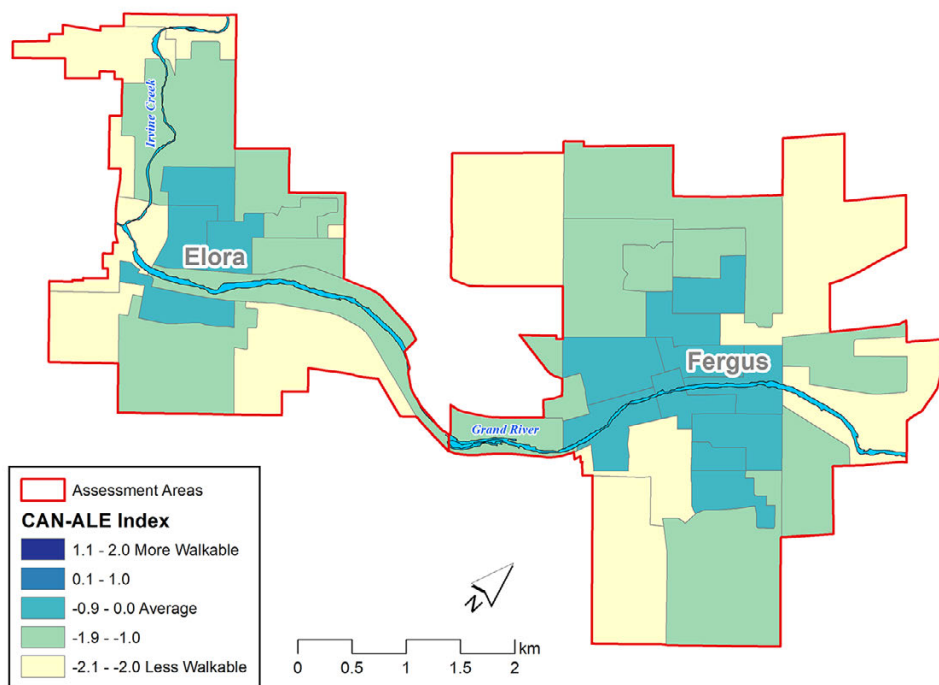
Although the dwelling density in Fergus was higher compared to Elora/Salem, the intersection density in Elora/Salem was found to be slightly greater. The NDS showed that only half of all Centre Wellington residents preferred a connected neighbourhood design and just over half perceived their current neighbourhood as being connected. Centre Wellington may benefit from enhancing connectivity through pedestrian sidewalks, cycling lanes, and seamlessly connected trails networks to further promote active living, reduce vehicular modes of travel, and encourage economic development within the community.



Data description:

CAN-ALE Geo-Social Determinants of Health Research Group McGill University, Township of Centre Wellington, Statistics Canada, Wellington-Dufferin-Guelph Public Health.

The CAN-ALE Index measures how active travel-friendly an area is for connections to common living amenities. It is comprised of three components: dwelling density, number of connected intersections, and number of destinations (e.g. shopping, libraries, and other points of interest).⁴



What it tells us:

- CAN-ALE scores in Fergus were higher than in Elora/Salem.
- Areas in the downtown central areas of Fergus and Elora/Salem appeared as more walkable with higher CAN-ALE Indices compared to areas located outside of the central areas

Making connections:



Generally, higher population density, shorter and connected street blocks, and a variety of things to see and do result in more walkable neighborhoods. The higher CAN-ALE score for Fergus was influenced by the points of interest and dwelling density. The NDS found that residents most frequently reported outdoor recreation destinations as important to actively travel to, but these locations are not captured well by the CAN-ALE Index. Overall, 69% of Centre Wellington residents reported actively travelling to locations they felt could be reached through active modes of travel, suggesting that active transportation in Centre Wellington may be driven by the easy access to parks, greenspace, trails, and exercise opportunities.

Considerations:

Walkability may appear lower than expected in certain areas because the CAN-ALE score does not consider recreational walking opportunities such as existing paths along the Elora Gorge. Raw CAN-ALE scores were used to create a walkability index based on other Ontario communities that had similar populations between 20,000 and 40,000 residents.

Transportation Networks

Vision

Safe and accessible transportation systems that incorporate a diversity of transportation modes and place priority on active transportation over the use of private vehicles.¹



Transportation Networks

Active Travel-Friendly Neighbourhoods

Communities that prioritize active transportation are designed to offer street connectivity, continuous sidewalks, bike lanes, and proximity and connection to trails and greenspace.¹ Active transportation networks promote universal active living, create safe and equitable access to amenities for residents of all ages and abilities, as well as provide environmental benefits through reduced vehicular emissions.¹



Key Findings

- More Fergus residents felt they could travel actively to locations in their neighbourhood compared to Elora/Salem residents.
- Most dwellings in Fergus and Elora/Salem were located within 800m of a park, whereas less than half of dwellings were located the same distance from a supermarket.
- Trail coverage in Fergus measured 8.9m/ha and in Elora/Salem it was 12.3m/ha.

Active Travel Behaviour (and On-road Safety)

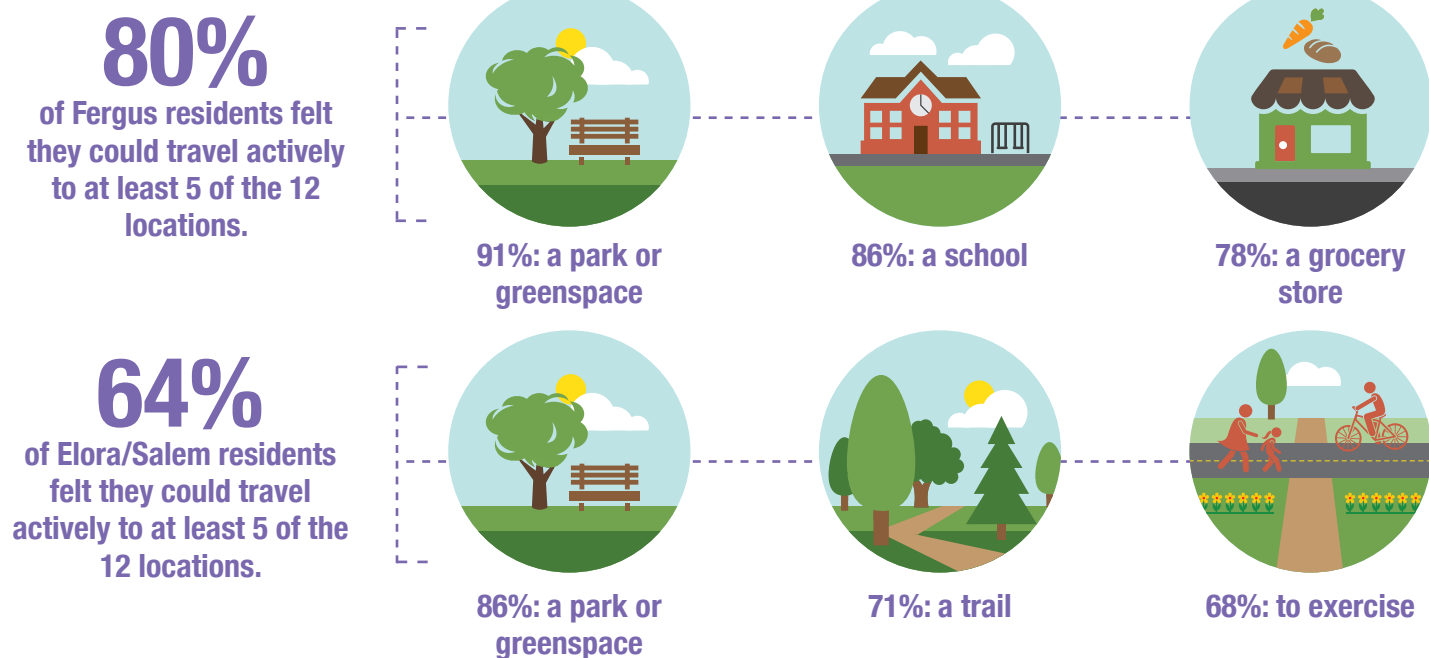
Various factors influence a person's decision about how to travel in their neighbourhood including perceived and real safety, fear of crime and violence, traffic speeds, traffic volume, presence of sidewalks, lighting, cycling lanes, and accessibility of amenities.⁵

Key Findings

- Areas in Centre Wellington ranged from having no sidewalks beside roads to having sidewalks on both sides of the road.
- Many Centre Wellington residents reported travelling actively to at least two-thirds of the locations they believed could be reached by active travel.
- Most residents felt it was important to be able to travel actively to outdoor recreation destinations.

Active Travel-Friendly Neighbourhoods

Indicator: Resident perception of ability to travel actively



NDS question:

Residents completing the NDS were asked to think about their neighbourhood and select, from a list of 12 locations, those that could be accessed by walking, biking, and/or rolling. Locations included: a park or greenspace, a school, a grocery store, farmers market, a community garden, a trail, local stores or shops, work, a health care provider, a community centre, family or friends, and to exercise.

What did residents say?

Fergus:

- 80% of Fergus residents felt they could travel actively to at least five of the twelve locations.
- The locations most frequently selected by residents were: a park or greenspace (91% of residents), a school (86%), a grocery store (78%).

Elora/Salem:

- 64% of Elora/Salem residents felt they could travel actively to five or more locations.
- The locations most frequently reported by residents were: a park or greenspace (86% of residents), a trail (71%), to exercise (68%).

For a breakdown of responses for each specific location, please refer to the Appendix.

Making connections:

Residents' perceptions on whether they could walk, bike, or roll to common destinations conveniently and safely likely influences their decisions to do so. Closeness to active-transportation networks including walkways, sidewalks, trails and bicycle paths, as well as the proximity to daily amenities may have contributed to residents' perceptions. Measuring these types of physical design indicators can help further explain contributing factors in the built design that support residents' abilities to travel actively.



Data description:

Township of Centre Wellington,
Statistics Canada, Wellington-
Dufferin-Guelph Public Health,
Ontario Ministry of Natural Resources
and Forestry.

The indicator identified the proportion of residential dwellings in the Centre Wellington assessment areas located within 800m (measured by Manhattan distance) of a supermarket

What it tells us:

Overall:

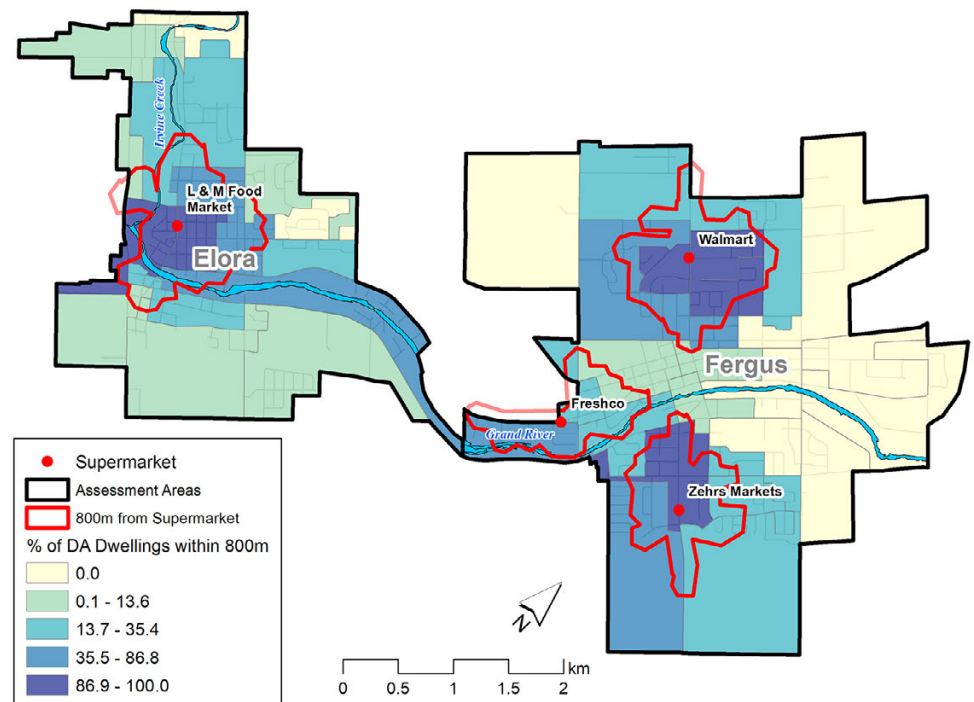
- On average, 35% of dwellings within Centre Wellington were located within 800m of a supermarket.

Fergus:

- 35% of dwellings in Fergus were within 800m of a supermarket.

Elora/Salem:

- 34% of dwellings in Elora/Salem were within 800m of a supermarket.



Making connections:

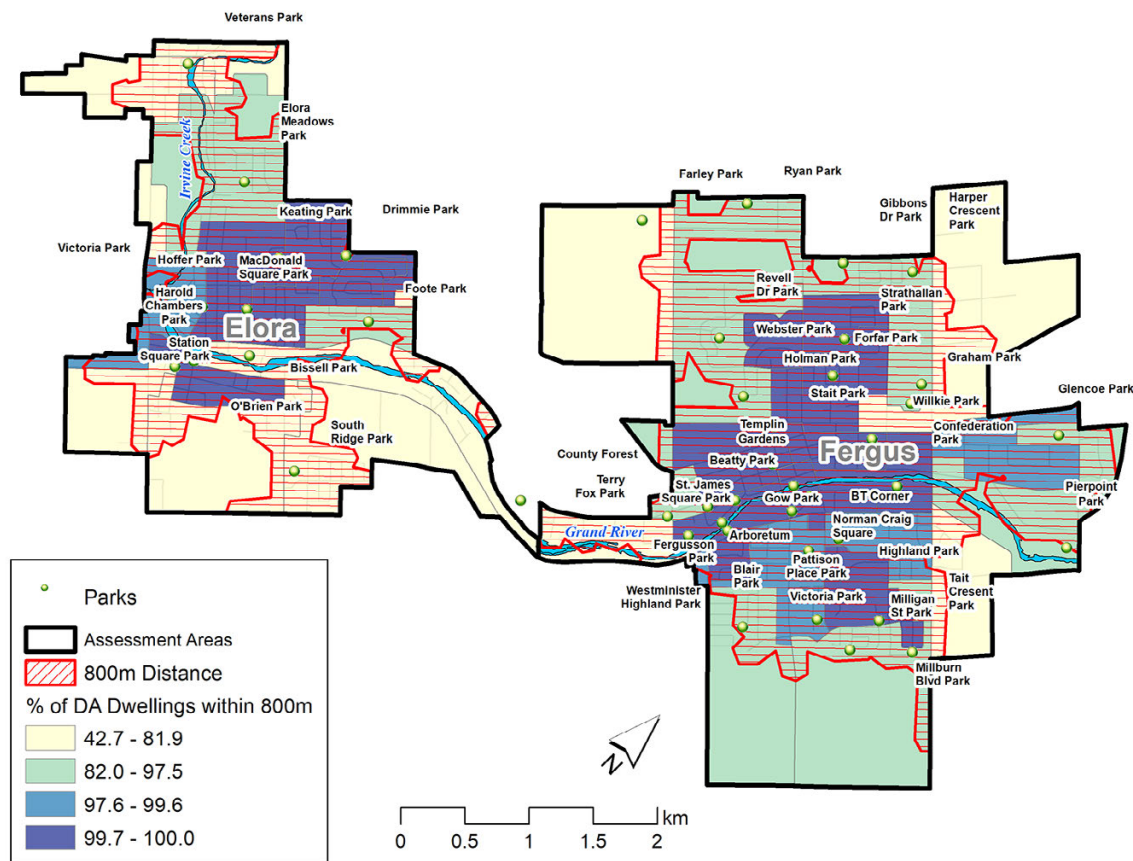
The NDS found that 78% of Fergus residents and 53% of Elora/Salem residents felt they could actively travel to a grocery store, which was higher than what would be expected based on the physical design indicator. Further exploration of related community design indicators or resident perception of what defines a supermarket, may be useful in explaining this discrepancy.

Considerations:

L&M Food Market in Elora, the only supermarket in Elora/Salem, was closed shortly after the physical-form data was collected. This may impact the future availability and access to a supermarket for residents in Elora/Salem. Also, the FreshCo supermarket in Fergus announced a planned location change which may alter access to a supermarket for some residents.

Active Travel-Friendly Neighbourhoods

Indicator: Percent of dwellings within 800m distance to a park



Data description:

Township of Centre Wellington, Statistics Canada, Wellington-Dufferin-Guelph Public Health, Ontario Ministry of Natural Resources and Forestry.

The indicator identified the percentage of residential dwellings in the Centre Wellington assessment areas located within 800m (measured by Manhattan distance) of a park.

What it tells us:

Overall:

- An average of 92% of dwellings within Centre Wellington were located within 800m of a park.

Fergus:

- 93% of dwellings in Fergus were within 800m of a park.

Elora/Salem:

- 90% of dwellings in Elora/Salem were within 800m of a park.

Making connections:



Many of the high dwelling density areas also appeared to be in close proximity to one or more parks. Resident perception data from the NDS closely matched this physical design indicator as 91% of Fergus residents and 86% of Elora/Salem residents felt they could actively travel to a park or greenspace.



Data description:

Township of Centre Wellington, Statistics Canada, Wellington-Dufferin-Guelph Public Health, Ontario Ministry of Natural Resources and Forestry.

The indicator identified the proportion of residential dwellings in the Centre Wellington assessment areas that were within 800m (measured by Manhattan distance) of a school.

What it tells us:

Overall:

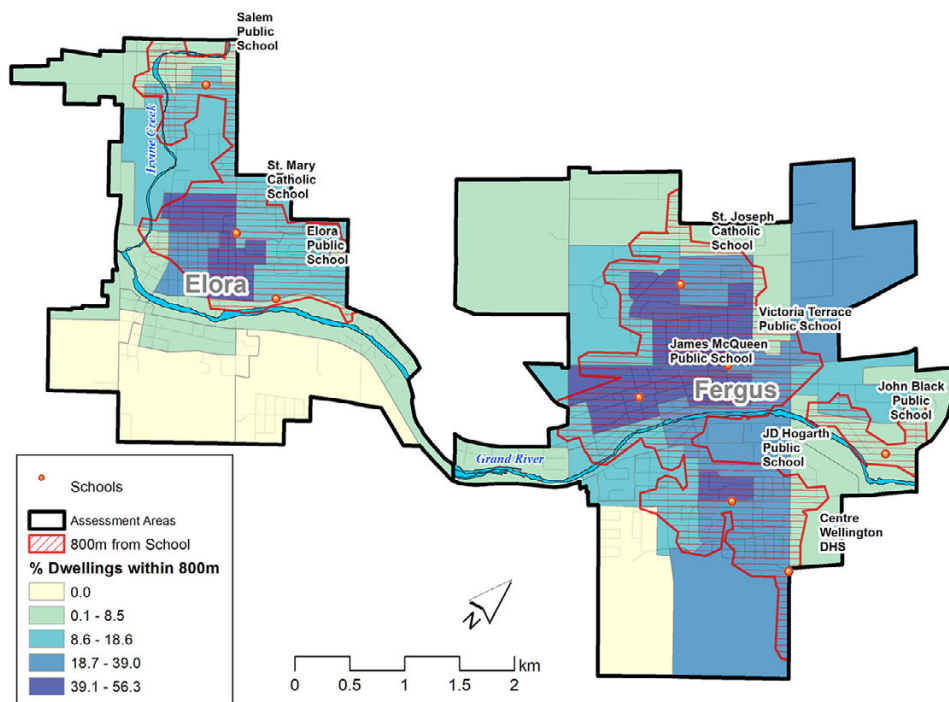
- An average of 44% of dwellings within all of Centre Wellington were located within 800m of a school.

Fergus:

- 56% of Fergus dwellings were within 800m of a school.

Elora/Salem:

- 31% of Elora/Salem dwellings were within 800m of a school and 0% of Elora/Salem dwellings were within 800m of a high school.



Making connections:



Resident perception data indicated that 86% of Fergus residents and 65% of Elora/Salem residents felt they could walk, bike, or roll to a school. These perceptions are higher than would be expected based on the physical indicator map which showed that only 56% of Fergus dwellings and 31% of Elora/Salem dwellings were within 800m of a school. Further exploration of related community design indicators and considerations of whether survey respondents had children may help explain this discrepancy.

Considerations:

School bussing policies in the region require that students walk to school beyond the 800m distance that was used in this indicator. The travel distance for students to be eligible for bus transportation is 1.6 km (ages 4-11), 3.2 km (ages 12-14) and 3.5 km (14 and older).⁶



Data description:

*Township of Centre Wellington,
Statistics Canada, Wellington-
Dufferin-Guelph Public Health.*

Measuring the length of designated trails per hectare of land is used to indicate trail coverage in a community. The indicator was calculated by measuring the total metres of trails in each Dissemination Area (DA) divided by the total area of the DA.

What it tells us:

Overall:

- Centre Wellington had an abundance of trails across the region, many of which also extended into the downtown/central areas of Fergus and Elora/Salem and connected the two communities.
- Beyond the main trails, the connectivity of trails was not highly apparent due to numerous smaller, discontinuous trails, particularly south of the Grand River.

Fergus:

- Trail coverage in Fergus measured 8.9m/ha.

Elora/Salem:

- Trail coverage in Elora/Salem measured 12.3m/ha.

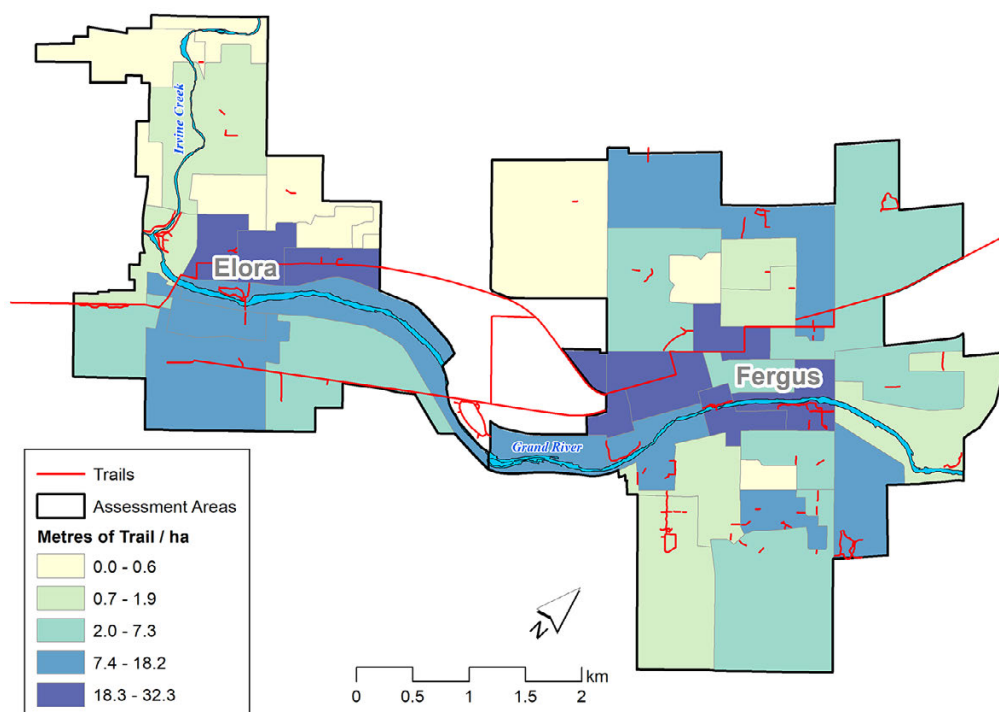
Making connections:



Trails were evident throughout the Township. However, some of the areas experiencing increases in population change could be improved with the addition of trails or access to existing trails. This indicator aligned with the NDS findings that 65% of Fergus residents and 71% of Elora/Salem residents felt they could walk, bike, or roll to a trail and 67% of all residents felt it was important to do so. Similarly, over 70% of residents stated nearby walking trails were important features for a neighbourhood.

Considerations:

Since trails may have been a series of connected trails or a single long, linear trail, the connectivity of trails or the main use of trails was not identified with this indicator. Specific trails were also added to the indicator map to capture trails located slightly outside of the assessment areas but still serving as connections within the communities.

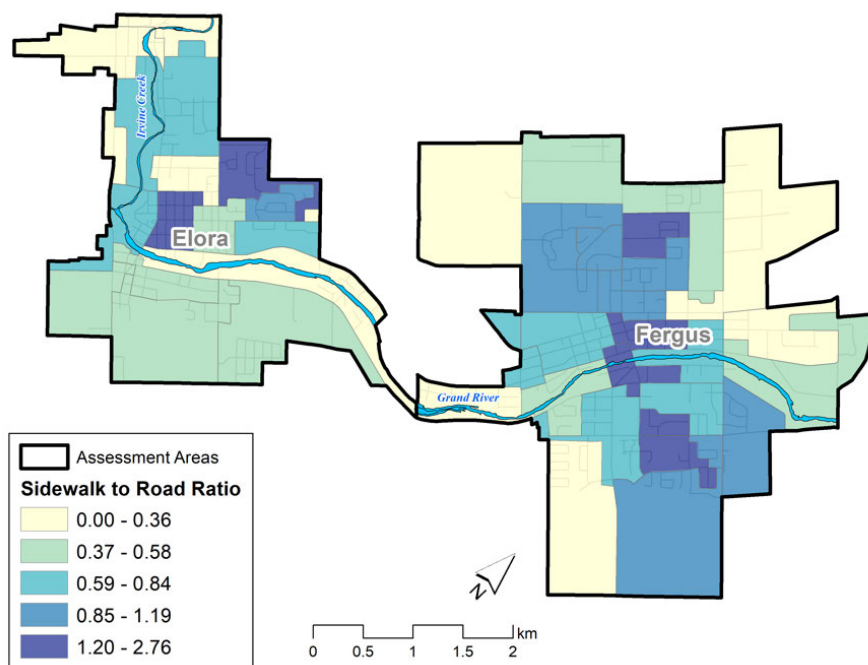




Data description:

Township of Centre Wellington.

The sidewalk to road ratio was used to measure the number of roads with sidewalks on one or both sides of the street. It was calculated by dividing the length of sidewalks located in a Dissemination Area (DA) by the length of roads within the DA. For example, a measure of 2.00 represented a road that had sidewalks on both sides and a value exceeding 2.00 indicated that there were additional sidewalks or walkways where roads were not present.



What it tells us:

Fergus:

- The sidewalk to road ratio in Fergus was 0.82, indicating a low presence of sidewalks on both sides of the street.
- The ratio was highest in the central core area and lowest in some of the surrounding areas, including some areas with little to no presence of sidewalks.
- Some central areas designated as pedestrian only areas exceeded a ratio of 2.00 due to the presence of sidewalks without associated roads.

Elora/Salem:

- In Elora/Salem the sidewalk to road ratio was slightly lower than Fergus at 0.71.
- Most areas appeared to have a sidewalk on one side of the road or less.

Making connections:



This indicator found some trends of higher sidewalk to road ratios in areas with higher dwelling density, but there were also areas that lacked sidewalks on both sides of the road. The areas with lowest sidewalk to road ratios were measured in the areas of lowest dwelling density as well as areas of high greenspace. Fergus and Elora/Salem both contain some rural properties which accounted for some of the lower sidewalk to road ratios in the peripheral areas.

Considerations:

Sidewalks are often fractured and non-continuous which presents a challenge to link directly with roads and creates difficulty in quantifying this type of relationship.



69%

of residents walked, biked, or rolled to at least two-thirds of the locations they reported as active travel-friendly.



NDS question:

For the locations residents indicated in a previous question that they could actively travel to, residents were subsequently asked whether they actually did walk, bike, or roll to those places in the past three months.

What did residents say?

Overall, 69% of Centre Wellington residents reported travelling actively to at least two-thirds of the locations they reported could be travelled actively to.

Making connections:



The NDS found that more Fergus residents (80%) felt they could travel actively to common destinations compared to only 64% of Elora/Salem residents. However, it also identified that there was no significant difference between the two assessment areas for the proportion of residents that reported actual active travel behaviours to the locations they felt were reachable by active modes of travel. This may be explained by the NDS indicator that found the majority of Centre Wellington residents reported outdoor recreation destinations as important places to travel actively to, meaning that easy access to parks, greenspaces, trails, and exercise were main drivers of active transportation in Centre Wellington.



67%: outdoor recreation destinations



43%: community life destinations



25%: commuting destinations

NDS question:

The NDS asked residents to imagine moving to a different neighbourhood and to indicate the importance of being able to walk, bike, or roll to a list of 13 different destinations. For analysis, locations were categorized into three general destination categories: 1) community life destinations included grocery store, farmers markets, community garden, local stores/shops, health care provider, community centre, and family/friends; 2) outdoor recreation destinations included park/greenspace, trail, and exercise; and 3) commuting destinations included school, bus stop*, and work.

What did residents say?

- 67% of Centre Wellington residents felt it was important to be able to travel actively to outdoor recreation destinations.
- 43% of all residents felt it was important to use active modes of travel to access community life destinations.
- 25% of all residents felt it was important to use active modes of travel to access commuting locations.
- The destinations most frequently selected by residents as being important to travel actively to were: a park/greenspace (73% of residents), to exercise (69%), a trail (58%), local stores/shops (57%), and a community centre (57%).

For an outline of all locations and responses, please refer to the Appendix.

Making connections:

Although more residents reported outdoor recreation destinations as important to travel actively to compared to community life and commuting destinations, municipal planners could look towards prioritizing mixed-use and connectivity throughout the community. Street connectivity, continuous sidewalks and bike lanes, as well as the proximity to common amenities has been shown to not only support active travel behaviours but also provide environmental and economic benefits within the community.¹

*Note: there is currently no bus transit in Centre Wellington, but bus stop was included in the survey to assess resident interest.

Natural Environments

Vision

A built environment where natural environments are protected. Natural elements are incorporated and are experienced by/accessible to all.¹



Natural Environments

The development of communities that integrate and connect to natural heritage spaces and greenspaces can be beneficial for the health and well-being of the population while sustaining a healthy environment.¹

Buildings, shade, greenspace, and parks and playgrounds that are plentiful and appealing, support activity-friendly environments for residents of all ages and abilities.¹



Greenspace

Designing neighbourhoods that are connected closely to recreational parks and open greenspace provides easy access for residents to engage in various ways with the natural environment. This has been shown to have a positive impact on physical activity levels, mental health, and overall well-being.¹ In addition, regular maintenance and snow removal on trails and pathways, allows residents to enjoy the benefits from natural parks and greenspace throughout the year.

Key Findings

- The majority of Centre Wellington residents felt nearby natural features, walking trails, and playgrounds were important features for a neighbourhood.
- The overall greenspace in Centre Wellington measured 8.8% of total area with a slightly higher percentage in Fergus compared to Elora/Salem.

Green Infrastructure

The benefits of nature are not limited to access to natural parks and open greenspace. The incorporation of natural landscapes, such as street trees, can offer many public health benefits including improved air quality, reduced storm water runoff, and decreased impervious surface cover which minimizes extreme weather events.¹ Furthermore, a tree canopy can provide an increase in shade, thereby offering UV protection as well as an aesthetic appeal that can encourage residents' engagement in outdoor physical activity.

Key Findings

- Street trees, nearby natural features (e.g. forest, river, pond, lake, etc.), and nearby walking trails were commonly reported by Centre Wellington residents as important neighbourhood features.



Percentage of residents who felt each identified feature was important in their neighbourhood:



80%
Street Trees



73%
Nearby Natural Features



71%
Nearby Walking Trails



61%
**Neighbourhood
Cafes or Shops**



60%
Playgrounds



37%
Heritage Buildings

NDS question:

Residents were presented with a list of six features and asked to report on whether they felt the identified feature was important to have if they were moving to a different neighbourhood.

What did residents say?

- Centre Wellington residents frequently reported natural environment and green infrastructure features as important for neighbourhoods they would want to live in.
- The importance of street trees was reported by 80% of residents, nearby natural features by 73% of residents, and nearby walking trails by 71% of residents.

Making connections:



The most commonly selected features correlated with the NDS survey responses indicating that 67% of residents reported the importance of being able to travel actively to outdoor recreation destinations such as park/greenspace, trails, and to exercise. Also, the physical-form indicators showed supportive neighbourhood design since 92% of all residential dwellings were within walking distance to a park and there was a strong presence of trail networks throughout Centre Wellington.



Data description:

*Township of Centre Wellington,
Statistics Canada, Wellington-Dufferin-
Guelph Public Health, Ontario Ministry
of Natural Resources and Forestry.*

The percentage of parks, school yards, and designated greenspace (trails excluded) within the community was calculated by the number of hectares of such greenspace in a Dissemination Area (DA) divided by the overall area of the DA.

What it tells us:

Overall:

- The percentage of greenspace in Centre Wellington was 8.8% of the total area.
- Measures of greenspace were highest in peripheral regions and lower in the downtown areas of Fergus and Elora/Salem.

Fergus:

- The measure of greenspace in Fergus was 9.2% of total area.

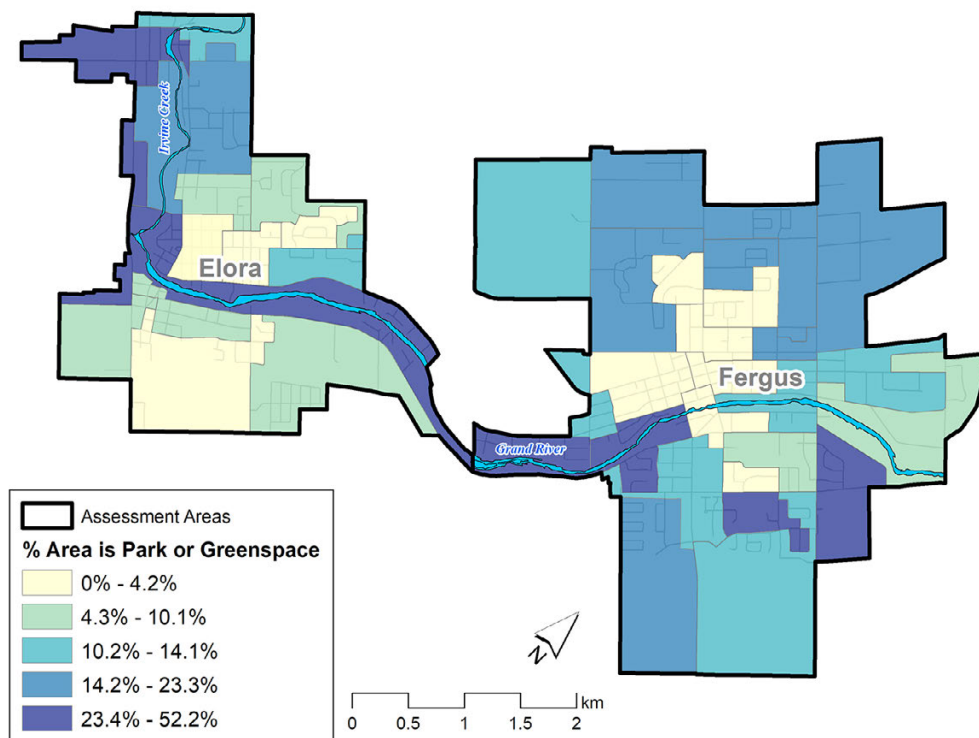
Elora/Salem:

- The measure of greenspace in Elora/Salem was 8.1% of total area.

Making connections:



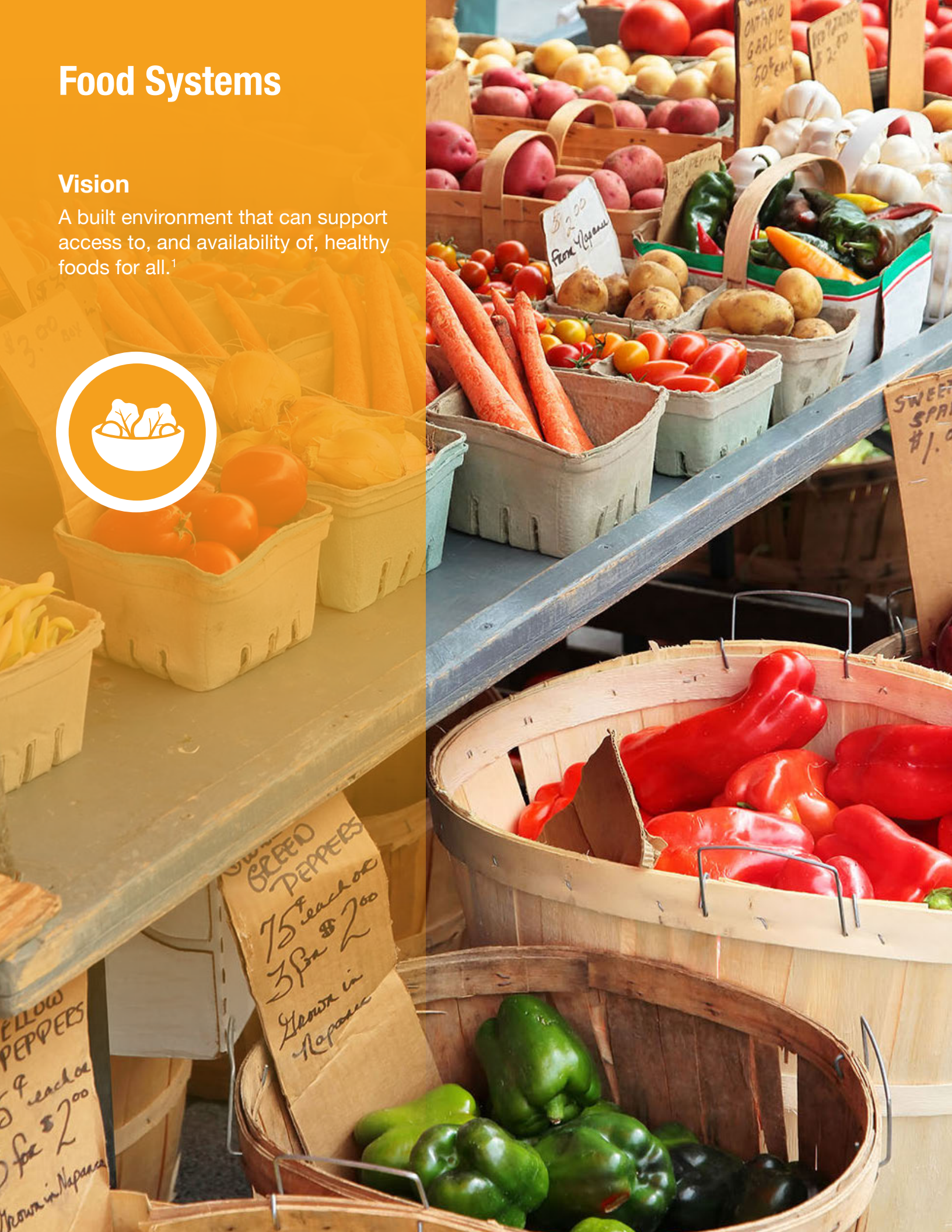
The NDS indicated that various outdoor recreation destinations and natural greenspace features were important to residents. Greenspace as a percentage of total area was lowest in higher density areas and measures were highest in the less densely populated areas. However, the trail indicators showed that even residents residing in the higher density areas had access to greenspaces through the efficient trail networks.



Food Systems

Vision

A built environment that can support access to, and availability of, healthy foods for all.¹



Designing communities that allow for all residents to have equal opportunity to access affordable, safe, nutritious, and culturally appropriate foods, reduces health inequities and supports positive health and well-being of the whole population.¹ Protection of agricultural lands and supporting community food programs, farmer's markets, and community gardens can contribute to food security and the accessibility of healthy foods.



Furthermore, the connection to healthy food retail outlets by use of pathways and trails increases the accessibility to food sources for all residents while also encouraging active transportation.

Access to Healthy Food Options

The Modified Retail Food Environment Index (mRFEI) is commonly used to measure community access to food sources. Specifically, it identifies access to healthy food options and areas that may have an overabundance of less healthy food options.⁷

Food sources are classified as healthy or less healthy according to a definition from the US Centers for Disease Control (CDC). According to this definition healthy food sources include supermarkets, fruit stands, farmers markets, and butchers/seafood.⁷

The healthy food outlets are then calculated into a proportion of all food sources to result in a score between 0-100. Higher scores indicate a greater prevalence of healthy food options in the area and a score of 0 indicates that there are no healthy food sources available.

Key Findings:

- Elora/Salem showed more healthy food outlets in proportion to all food sources compared to Fergus.



Data description:

Wellington-Dufferin-Guelph Public Health,
Statistics Canada.

The mRFEI was calculated by placing one kilometer buffers around centre points of Dissemination Blocks (DB), which are smaller and fully contained by a Dissemination Area (DA). The buffers were then used to identify all food sources that are available to residents within a DA.

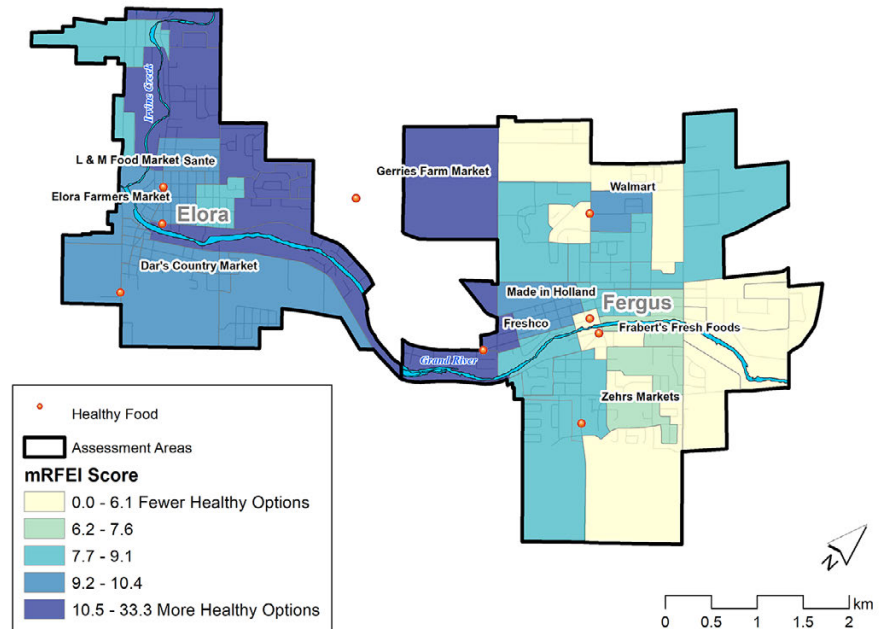
What it tells us:

Fergus:

- Fergus showed less healthy options in proportion to all nearby food sources compared to Elora/Salem with mRFEI scores ranging from 0 - 33.3 and an average mRFEI score of 8.1.
- Healthy food options were particularly limited in the southeast area of Fergus.

Elora/Salem:

- Elora/Salem showed more healthy food outlets in proportion to all food sources compared to Fergus with mRFEI scores ranging from 7.3 - 33.3 and an average mRFEI score of 16.0.
- There were not many food sources available in Elora/Salem which may have contributed to the higher mRFEI scores.



Making connections:



The mRFEI only indicates that healthy options are available; the same location may also offer unhealthy options. Some areas in Fergus that had lower mRFEI scores but were actually in close proximity to healthy food options were likely the result of a grocery store being surrounded by fast food outlets, variety stores, or restaurants. mRFEI scores may appear higher or lower than reality in areas with few food sources. Although the overall percentage of dwellings located within 800m of a supermarket was greater for Fergus compared to Elora/Salem indicating that healthy food sources were more accessible in Fergus, the proportion of healthy to less healthy food sources in Elora/Salem was greater.

Considerations:

Elora/Salem was serviced by a single supermarket, L&M Food Market, which closed shortly after the data collection was completed. As a result, the percentage of Elora/Salem residents that are within 800m of a supermarket is now 0%, and the perception of residents ability to use active transportation to access a supermarket has also likely changed.

Summary Table

Indicator	Key Findings
Resident perception of neighbourhood density	<ul style="list-style-type: none"> • 84% of Centre Wellington residents preferred less dense neighbourhoods. • 63% of Fergus residents thought their neighbourhood was dense. • 53% of Elora/Salem residents felt their neighbourhood was less dense. • 69% of all residents perceived a dense neighbourhood design as being somewhat or very encouraging of certain healthy lifestyle behaviours.
Dwelling density	<ul style="list-style-type: none"> • Dwelling density ranged from higher densities in central core areas to lower densities in the areas surrounding the urban centres. • The average dwelling density for Centre Wellington was 5.0 dwellings/ha. • Dwelling density of Fergus was 5.2 dwellings/ha with a maximum dwelling density of 28.1 dwellings/ha. • Dwelling density for Elora/Salem was 4.7 dwellings/ha with a maximum of 13.0 dwellings/ha.
Percent of population change	<ul style="list-style-type: none"> • Overall population change from 2011-2016 in Centre Wellington was a growth of 7%. • Population change from 2011-2016 in Fergus was a growth of 6%. • Population change from 2011-2016 in Elora/Salem was 9%. • Most of the positive population change was occurring in the areas at the edges of the main urban centres.
Resident perception of neighbourhood connectivity	<ul style="list-style-type: none"> • 51% of Centre Wellington residents preferred connected neighbourhoods. • 53% of residents felt their current neighbourhood was connected. • 76% of residents felt a connected neighbourhood design was encouraging of healthy behaviours.

Summary Table

Indicator	Key Findings
Intersection density	<ul style="list-style-type: none"> Overall intersection density for Centre Wellington was 0.25 intersections/ha. Neighborhoods in Elora/Salem showed a slightly greater intersection density of 0.30 intersections/ha compared to Fergus at 0.20 intersections/ha. Intersection density was highest in the downtown/core areas of Fergus and Elora/Salem and lower in the peripheral areas.
CAN-ALE Index	<ul style="list-style-type: none"> Areas in the downtown cores of Fergus and Elora/Salem appeared as more walkable with higher CAN-ALE Indices compared to areas outside the city centres.
Resident perception of active travel opportunities	<ul style="list-style-type: none"> 80% of Fergus residents and 64% of Elora/Salem residents felt they could travel actively to at least five of the twelve locations. The locations most frequently selected by Fergus residents as being able to travel actively to were: a park or greenspace (91% of residents), a school (86%), a grocery store (78%). The locations most frequently selected by Elora/Salem residents as being able to travel actively to were: a park or greenspace (86%), a trail (71%), to exercise (68%).
Percentage of dwellings within 800m distance to a supermarket	<ul style="list-style-type: none"> Overall, 35% of dwellings within Centre Wellington were located within 800m of a supermarket. 35% of dwellings in Fergus were located within 800m of a supermarket. 34% of dwellings in Elora/Salem were located within 800m of a supermarket.
Percentage of dwellings within 800m distance to park	<ul style="list-style-type: none"> Overall, 92% of dwellings within Centre Wellington were located within 800m of a park. 93% of dwellings in Fergus were within 800m of a park. 90% of dwellings in Elora/Salem were within 800m of a park.

Summary Table

Indicator	Key Findings
Percentage of dwellings within 800m distance to a school	<ul style="list-style-type: none"> Overall, 44% of dwellings within Centre Wellington were located within 800m of a school. 56% of dwellings in Fergus were within 800m of a school. 31% of dwellings in Elora/Salem were within 800m of a school and 0% of Elora/Salem dwellings were within 800m of a high school.
Total metres of local trail per hectare	<ul style="list-style-type: none"> Trail coverage in Fergus measured 8.9m/ha. Trail coverage in Elora/Salem measured 12.3m/ha.
Sidewalk to road ratio	<ul style="list-style-type: none"> The average sidewalk to road ratio in Fergus was 0.82, indicating not all roads have the presence of sidewalks. The sidewalk to road ratio was slightly lower in Elora/Salem at 0.71.
Resident reported active travel	<ul style="list-style-type: none"> 69% of Centre Wellington residents reported travelling actively to at least two-thirds of the locations they reported could be reached by active travel.
Resident perception of importance of active transportation opportunities	<ul style="list-style-type: none"> 67% of Centre Wellington residents felt it was important to be able to travel actively to outdoor recreation destinations. 43% of residents felt it was important to use active modes of travel to access community life destinations. 25% of residents felt it was important to use active modes of travel to access commuting locations.
Resident perception of importance of neighbourhood features	<ul style="list-style-type: none"> The importance of street trees was reported by 80% of residents, nearby natural features by 73% of residents, and nearby walking trails by 71% of residents.
Percentage of greenspace or parks	<ul style="list-style-type: none"> Overall greenspace in Centre Wellington was 8.8% of total area. The measure of greenspace in Fergus was 9.2% of total area. The measure of greenspace in Elora/Salem was 8.1% of total area.

Summary Table

Indicator	Key Findings
Modified retail food environment index (mRFEI)	<ul style="list-style-type: none">• Fergus showed less healthy options in proportion to all nearby food sources with a mRFEI score of 8.1.• Elora/Salem showed more healthy food outlets in proportion to all food sources with a mRFEI score of 16.0.

Recommendations

1. Further explore public perceptions of intensification and assess need for awareness and education

Findings from this project indicated that even though residents understood the benefits of dense neighbourhoods, they still preferred to live in less dense neighbourhoods. With the reality of future intensification and population growth in Centre Wellington, it would be valuable to explore this discrepancy further to determine the reasons residents would prefer not to live in dense neighbourhoods. WDGPH can assist with the development and delivery of communication resources to meet this need (e.g. “Building Up” campaign).

2. Partner on planning

WDGPH can assist the Township and County by providing healthy community design commentary on policy plans and development applications. Adding WDGPH to circulation lists for review of these types of documents would allow Public Health to highlight areas for consideration that align with best practices. For example, WDGPH could provide comments about ways in which new development plans can enhance connectivity and active transportation in the growing peripheral areas of the community where baseline indicators identified areas for potential improvement.

3. Use the findings to support policy planning

Application of data from the Baseline Indicators report should be used by committees and stakeholders to support advocacy efforts, funding requests, or updates to related documents such as the Strategic Plan, Trails Master Plan, Transportation Master Plan, Parks and Recreation Master Plan, Urban Design Guidelines, Development Standards Manual, Official Plan, Zoning By-law Amendment Plan, etc. For example:

- a. Strategic Planning: It is recommended that report findings be shared with the new Healthy Growth Committee to support strategic planning initiatives.
- b. Trails Master Plan: It was identified that Centre Wellington residents found it important to have nearby walking trails and the ability to actively travel to trails. It is recognized that the Trails Master Plan addresses most of the efficiencies in the trails system. Continued funding from upper and lower tier municipalities could be allocated by councils to continue to implement the plan and formalize trail systems.
- c. Official Plan: It is recommended that baseline indicators be used during the review and updating of the Official Plan.
- d. Zoning By-law Amendment Plan: Baseline indicators should be considered in decision making for policy changes regarding second dwelling units etc.

4. Share findings from the Baseline Indicators Project

Sharing the key findings with the Centre Wellington council and the County of Wellington council may help inform local decision makers of the status of local healthy community design and strengthen efforts towards improving aspects of healthy community design. WDGPH can support this information sharing activity by producing knowledge translation materials in consultation with the Township and the County.

Recommendations

5. Explore increasing access to supermarkets and healthy food

This report identified a lack of nearby grocery stores for residents in both Fergus and Elora/Salem. This will be further exacerbated by L&M Food Market closing and Freshco moving. Food supply economics indicate that a 45,000 square foot market requires a population of approximately 4000 households.⁸ Elora/Salem currently has ~3500 households with an additional rural population that should approach or meet this threshold. It is recommended that this information be used in discussions with council and the economic development officer to demonstrate the need for more grocery stores in the underserviced areas of Centre Wellington and to assist with discussions to identify opportunities for improvement.

References

References

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Supplemental Resources

- *Centre Wellington Neighbourhood Design Survey: Appendix*
- *Physical-form Indicators Maps: Data Methodology*