

Build The Trails And The People Will Come:

A Comprehensive Business Case For
An Inter-Connected Trail System Across Waterloo-
Wellington-Dufferin



Health Valley Trail/Trans Canada Trail St. Jacob's

March 2004



“Build The Trails And The People Will Come”

Trails are a great place for people to walk, cycle and ride. But are they a worthwhile investment? A review of the literature shows that trails are an integral component of healthy communities. Trails provide health, environmental, economic and social benefits to communities.

Health Benefits

Exercise helps maintain healthy bones and muscles, builds cardiovascular fitness and relieves the psychological and physiological stress long linked to poor health. The chance to escape urban noise and bustle also relieves stress, which might otherwise be expressed through aggression or the abuse of drugs and alcohol. We need to increase the physical activity levels of our population to improve our health.

We have an unhealthy population. An epidemic has been declared, as 57% of Canadians are physically inactive.¹ Add to this the convenience of calorie-dense foods available in quick-service restaurants, convenience stores and gas stations and it is harder for Canadian to make healthy choices. The result is that almost **one-half** of Canadians (47%) are overweight or obese.² Moreover, over **one-half** of Canada’s youth are not active enough for healthy growth and development.³

The result of our inactivity is obesity and the introduction of Type II diabetes in our youth. There are 3 main reasons that people do not exercise enough. One answer is that in the early 1970’s over 60% of kids biked and walked to school. Now, less than 10% of school children walk or ride their bicycles to school.

The second reason is our housing areas. While people traditionally walked to school or shopping, in typical new housing areas they cannot. Many of the suburbs lack the connectivity to commerce, education and entertainment. Here is where trails can benefit tremendously: safe and attractive routes to work, school, church and shopping are all ways that people can combine exercise with necessary trips. **Instead of driving to the gym to use the treadmill, our goal should be to make trails part of everyday life for more people.**

The third reason why people do not exercise enough is a lack of time. Trails close to home and work provide frequent outdoor escapes in rural, urban

¹ Heart and Stroke Foundation, Heart and Stroke Foundation Warns Fat is the New Tobacco, February 10, 2004, p. 1.

² Ibid., p. 1.

³ Health Canada, Family Guide to Physical Activity for Youth 10 – 14 Years of Age, 2003, p. 2.

and suburban areas when limited time is available. There is strong scientific evidence that regular physical activity promotes health and reduces the risk of premature death and many chronic diseases.

Walking is the most common form of exercise.⁴ 69% of Ontarians walk for exercise. Walking on trails improves physical vitality, offers good mental health and emotional well-being. We know that active leisure pastimes, that are and will continue to be popular, are those that are unstructured and can be enjoyed close to home, work or a secondary residence. Trails provide affordable, accessible and unscheduled leisure opportunities.⁵

Constituents and visitors use local trails regularly. According to the Credit Valley Conservation Authority, the Island Lake Conservation Area trail system has approximately 20,000 visitors per year, the Belfountain Conservation Area has approximately 18,000 per year, the Silvercreek Conservation Areas has 10,000 visitors per year, the Limehouse Conservation Area has 17,000 per year and the Terra Cotta Conservation Area has approximately 10,000 per year. This does not include the number of visitors to the many other trails and the Conservation area itself. Given that this watershed services a population of over 600,000 people and many visitors, the trails system receives extensive use.⁶

Furthermore, trails that are commuter routes⁷ are used regularly. In the City of Waterloo, commuter trails are used extensively at peak times. On average, there are 139 commuters per 90 minutes using the trails.⁸

In Missouri, 55.2% of trail users who responded to the survey stated that they are walking more now than before they had access to a trail. In addition, women and people with a high school education or less were twice as likely to have increased their amount of walking since using trails.⁹ This is important to note as income is directly related to health outcomes. The higher the income, the more likely a person is to be healthy. Trails provide an inexpensive route to improved health!

Trails provide the opportunity for individuals to help control their **hypertension** (high blood pressure). Moderate physical activity such as walking

⁴ Canadian Fitness and Lifestyle Research Institute, 2001 Physical Activity Monitor for Ontario, 2002.

⁵ Velo Quebec, La Roue Verse Economic Spin-offs Newsletter, special issue, 1998.

⁶ Credit Valley Conservation Authority, Statistics obtained from the Land Management Coordinator, 2004.

⁷ Commuter Routes are trails that provide a connecting link (e.g., walking, biking) between home and work, stores, schools, etc.

⁸ Waterloo Trails Advisory Committee, 2004 Statistics from the Laurel Trail in Waterloo Park, averaged over a one to two hour period, from February 8th – March 3rd.

⁹ Equisearch.com, Benefits of Trails and Greenways, p.2.

and cycling on trails can protect against developing non-insulin dependent diabetes.¹⁰

Depression and **stress** are a burgeoning problem in North American society. Walking is a simple and much less expensive way to feel better. Walking causes the release of calming brain chemicals called endorphins, which are natural tranquilizers. Also walking releases adrenaline, which is produced by the body to cope with real or perceived danger. If the adrenaline isn't released from the body, it accumulates, causing muscle tension and feelings of anxiety. Through aerobic exercise, walking and cycling on trails, we can improve symptoms of mild-to-moderate depression and anxiety of a magnitude comparable to that obtained with some pharmacological agents.¹¹

Osteoporosis is a bone disease that affects mostly older women who lack sufficient amounts of calcium. This deficiency reduces bone density, increases the bone's porosity and brittleness, leading to a susceptibility to broken bones. Walking and hiking help reverse the negative effects of osteoporosis by increasing the bone density and slowing the rate of calcium loss, thus strengthening the bones and decreasing their susceptibility to break.

Studies have reported that walking 4 or more kilometres per day reduces the chance of **premature death** by 50%.¹² 43 separate studies by the U.S. Centre For Disease Control showed that by exercising, individuals significantly reduce their chances for heart problems, while those who do not exercise are twice as likely to have coronary heart disease.¹³

Trails offer many opportunities like:

- Bicycling
- Bird watching
- Cross-country skiing
- Fishing and hunting
- Horseback riding
- Jogging and running
- Playing with children
- Rollerblading/In-line skating
- Snowshoeing
- Spending time with friends and relatives
- Strolling with infants and toddlers
- Walking as a break from driving

¹⁰ Knowler, W.C., Barrett-Connor E., et al., "Diabetes Prevention Program Research Group: Reduction in the Incidence of Type II Diabetes With Lifestyle Intervention or Metformin", New England Journal of Medicine 2002, February 7, pp. 393-403.

¹¹ Ibid.

¹² Hakim, A.A., H. Petrovitch et al., "Effects of Walking on Mortality Among Non-Smoking Retired Men", New England Journal of Medicine 1998, pp. 94-99.

¹³ Burke, Dr. Edmund R., Benefits of Bicycling and Walking to Health (For FHWA), Washington D.C., 1992, p. 10.

- Walking as a break from work
- Walking the dog
- Walking to a scenic location
- Wheelchair accessible recreation.

These opportunities are just what is needed. Study after study has shown that suburban residents walk less, bike less and are less physically fit than city dwellers.¹⁴ Their cars are parked adjacent to their homes and typically driven to within a few feet of their destinations. Their neighbourhoods often lack sidewalks or other paths safe for pedestrians and bicycles. Entertainment facilities, workplaces and stores are so far from residences that a car often must be used. Even public transportation, where it exists, is usually too far from home for most people to reach on foot.

Public health officials, community planners, conservation authorities, school personnel and politicians need to re-think vehicle-friendly communities and seek to design developments and retrofit established communities to encourage outdoor physical activity. Dr. William Dietz, from the Centre For Disease Control and Prevention in Atlanta, Georgia, says, "...most communities designed since WW II are unfriendly to pedestrians and cyclists."¹⁵

Compounding the problem of our community design is our aging population. Currently, **68%** of women and **53%** of men 65 years of age and older are inactive.¹⁶ Most seniors have at least one chronic condition and many have at least two. Research has shown that seniors who have healthy lifestyles that include regular physical activity reduce their risk for chronic diseases and have half the rate of disability of those who do not.¹⁷ The power of physical activity to improve mood and prevent disabilities and chronic diseases is especially pronounced for older adults.¹⁸

Trails connect people with places, enabling them to walk or cycle, to run errands or commute to work. A majority of the daily trips people make are short, providing an opportunity for physical activity that can be built into the daily routine. Individuals must choose to exercise, but **communities can make the choice easier.**

Walking improves a person's health and lowers health care costs. Through exercise bones gain mass, slowing the process of osteoporosis, which can lead to fewer fractures and lower medical costs. The anticipated benefits of increased participation in physical fitness include reductions in both the direct

¹⁴ American Trails, Health-Based Benefits of Parks, Trails and Open Space, September 1999, p. 2.

¹⁵ Ibid., p.2.

¹⁶ Statistics Canada, Physical Activity Among Adults, Canadian Community Health Survey 2001.

¹⁷ U.S. Department of Health & Human Services, Trails for Health: Promoting Healthy Lifestyles and Environments, (Pamphlet).

¹⁸ Partnership For Prevention, Creating Communities For Active Aging: A Guide to Developing a Strategic Plan to Increase Walking and Biking by Older Adults in Your Community, 2001.

and indirect costs of illness and disease, improvement in lifestyle and a reduction in elder care costs.



Mill Race Winter Scene, Photo Courtesy of Bob Moar

Environmental Effects

In a survey of Canadians, it was found that air pollution was seen to be the most serious environmental issue facing provinces and the concern over car emissions had increased from 34% of the population in 1991 to 41% in 1998.¹⁹ Car emissions are a major problem. Approximately 6 million young Canadians aged 5 to 19 years (21% of the population) spend many of their 12 million daily trips (60 million weekly home to school commutes) in non-active modes of transportation.²⁰ The average North American vehicle makes about seven trips a day that are 3 km or less.²¹ Walking or cycling to and from school on the trails can eliminate at least four of these daily trips.

According to the Ontario Medical Association, smog is a growing concern and will become a “health crisis” if action is not taken now. There is a direct link between air contaminants, children’s health, schools and the mode of journey to and from school:

¹⁹ Go For Green, Environics Survey done for Go For Green, 1998.

²⁰ Active & Safe Routes to School Resource Manual, 2000, p. iv.

²¹ Ibid., p. iv.

- The number of vehicle trips to and from school is increasing and comprises over 20% of commuter traffic today.
- Asthma is one of the most prevalent childhood respiratory diseases, with incidents doubling in the past decade, making it the number one cause of school absenteeism.
- Hospitalization of young children in Canada for asthma increased by 28% among boys and 18% among girls between 1980-81 and 1989-90. Some research indicates that the increase in hospital admissions for children with asthma in recent years is directly related to worsening air pollution.
- Health Canada has noted an 8% increase in the number of hospital admission rates for Ontario children (general population admission rates have increased 5%) attributed to Southern Ontario's increasing smog levels.

This trend of convenience has turned out to be a trend of reduced childhood health, through exposure to high levels of air pollution and a general lack of physical activity. Trails can alleviate congestion on roadways and at schools by offering alternate transportation and routes. Trails also provide green space that can lessen air and noise pollution.

Trails also help improve air and water quality. Trails provide enjoyable and safe options for transportation, which helps reduce air pollution. Furthermore, trails improve air quality by protecting the plants that naturally create oxygen and filter out air pollutants such as ozone, sulphur dioxide, carbon monoxide and airborne particles of heavy metals.

Trails on land and in the water provide living laboratories. Water trails provide aquariums for teachers, students and the community by providing inexpensive, practical ecosystems and their living populations. Land trails are hands-on environmental classrooms on the forest pathway and in the fields. People of all ages can see for themselves the precious and intriguing natural world from which we often feel so far removed.

Trails can also be an important tool for improving water quality. Trails and greenways allow us to treat land and water as a system, as interlocking pieces in a puzzle, not as isolated entities. In addition, trails (and greenways) provide important tools for improving water quality. They provide natural buffer zones that protect streams, rivers and lakes from pollution run-off caused by the frequent use of fertilizers and pesticides on yards and farms. Such non-point source pollution degrades waterways and threatens water quality and the health of aquatic species.

Trails (and greenways) can serve as agricultural buffers. According to the U.S. Department of Agriculture's Natural Resources Conservation Service, agricultural buffers, if properly installed with trails, can remove up to 50% or more of nutrients and pesticides and up to 75% or more of sediment that would

otherwise by washed into waterways.²² Communities realize the benefits of buffers for raising water quality and saving money on artificial water filtration systems.

By protecting critical habitat, trails and greenways also support communities through eco-tourism.

Economic Benefits

Like a magnificent gem on display, trails attract visitors from near and far. Many communities realize the economic potential of these highly desirable recreation destinations. One of the fastest growing industries is outdoor recreation. Consequently, trails stimulate the economy by:

- Increasing property values and local tax revenues.
- Potential corporate relocation and retention. Quality of life attracts businesses and physicians.
- Reduces health care costs by providing safe, accessible areas to walk, jog and bike.
- Stimulating small business development, tourism and resident spending based on outdoor recreation.
- The ecological benefits of trails that help communities mitigate costs associated with the control of water, air pollution and flood management.

The indirect effects to trail creation such as job creation, resulting in increased income and tax revenues have a ripple effect across the economy where the purchase of one product, results in purchases that support and create more. This multiplier effect of trail creation supports and enhances the local economy.

The body of academic work regarding the economic benefits of trails is substantial. The methodology of such studies varies greatly, just as different trails vary in characteristics such as length, populations served, and the nature of adjacent residential and commercial areas. Therefore, it is difficult to apply the conclusions of one or two studies to every trail and predict what impact a new trail might have on a given community. Nonetheless, the evidence supporting the conclusion that trails improve economies is extensive.

- 70% of all trail users spent money on non-durable goods during their visit to the Bruce Trail. Of those 70%, the average expenditure per group was \$60.99. 75% of this \$60.99 was spent within a 10-km corridor on either

²² National Conservation Buffer Initiative, Natural Resources Conservation Service, U.S. Department of Agriculture, Buffer Strips: Common Sense Conservation, www.nhq.nrcs.usda.gov/CCS/Buffers.

side of the trail, resulting in a high local economic benefit. Each group had an average of 3.12 persons.²³

- Analyzing the spending of 556 trail users from nine trails in Nova Scotia found that the average spending per party of non-Nova Scotians is about \$1,210.00. This breaks down to about \$1,120.00 per party beyond a 30-minute drive of the trail and about \$90.00 within a 30-minute drive of the trail.²⁴



Winter Scene Mill Race Trail/Trans Canada Trail – St. Jacob's

- Visits to the Overmountain Victory National Historic Trail (OVT) sites were found to generate a significant economic impact in 1995. On average, users spent \$49.05 per person per day on their trips. The average daily expenditures on the OVT were: restaurants \$11.29, food and beverages \$2.69, lodging \$12.29, retail purchases \$7.35 and all other expenses \$8.49.²⁵ (The OVT follows the Revolutionary war route of Patriot militia men from the state of Virginia to Georgia).
- Direct expenditures of Bruce Trail users annually now support over 1,100 full-time equivalent jobs in the province of Ontario, with at least 191 of these supporting local jobs in the communities along the Bruce Trail.²⁶
- The annual Welland Canal Parkway construction budget of \$2.5 million lead to the creation of approximately 40 direct jobs and 50 indirect jobs.²⁷
- Property values will rise. Real estate agents regard trails as an amenity that helps to attract buyers and to sell property. Trails are considered

²³ Go For Green, The Economic Benefits of Trails, Trail Monitor 1, p. 3.

²⁴ Ibid., p. 3.

²⁵ Ibid., p. 3.

²⁶ Ibid., p. 4.

²⁷ Ibid., p. 4.

lifestyle enhancements and are usually included in the sales package for a property.^{28, 29}

- In a 2002 survey of recent home buyers sponsored by the National Association of Realtors and the National Association of Home Builders, trails ranked as the second most important community amenity out of a list of 18 choices.³⁰

Traffic congestion relief is another solution that trails can provide. We know that 50% of all car excursions are less than 3 kilometres, a distance that could easily be walked or biked. Residents of La Canada Flintridge, California, use trails to commute to their jobs at the NASA Jet Propulsion Laboratory, reducing commuter's costs and improving air quality. Using human-powered transportation could result in a savings of 17.9 billion motor vehicle miles, seven billion gallons of gas and 9.5million tons of exhaust emissions annually.³¹ What that could do for our environment, ozone layer and our future generations!

Trails promote family unity as well as strengthen friendships and neighbour relations. They are places where families, friends and neighbours can gather and recreate safely. Anyone with shared recreational interests, either motorized or non-motorized, can share quality time on a trail.

Civic trails can improve pride in a community in different ways. A trail that runs through a community can serve as a focal point for a community for social events and a gathering place. These activities can lead to greater interaction between residents and improve the cohesion of a community.

Trails are a great resource to a community as they provide an opportunity for the interaction of people of varying backgrounds and experiences. They are accessible to all income groups and build community partnerships which in turn build community connectivity.

Social Benefits

Trails offer an opportunity to provide children with outdoor activities and connect us to our heritage by preserving historic places and by providing access to them. They can give us a sense of place and a connection to our history. Other trails preserve transportation corridors, such as rail-trails, which utilize rail corridors and provide a glance at the importance of this mode of transportation. Many canal paths, preserved for their historic importance as a transportation

²⁸ Barthlow, Kelly & Roger Moore, The Economic Impacts and Uses of Long Distance Trails, The National Park Service, 1998, p. 58.

²⁹ Go For Green, Property Values and Trails, p.1.

³⁰ National Association of Realtors and National Association of Home Builders, Consumer's Survey on Smart Choices for Home Buyers, April 2002.

³¹ American Hiking Society, The Economic Benefits of Trails, p. 2.

route before the advent of railroads, are now used by thousands of people each year for bicycling, running, hiking and strolling.

Trails that can be used easily as a route to the corner store, or to commute to work or school, will rapidly become part of community life. Trail users displace abusers. Rail trails are proving to be safe from crime.³² An important by-product of trails is improved self-image and social relationships, reduced crime, a livelier community atmosphere and a lifestyle that encourages young people to find their entertainment in healthier and more wholesome ways.³³

Landowners adjacent to trails or planned trails often express strong concerns about trails because of concerns about loss of privacy, increased congestion, litter, theft, vandalism and lowered property values. Research has shown that these concerns are exaggerated fears that diminish once a trail is opened.^{34 35}

Opportunities Across Waterloo-Wellington-Dufferin

Across Waterloo-Wellington-Dufferin there are over 60 trails. While these trails are extremely beneficial to the communities that have them, there are significant gaps. In the Spring of 2003 our trails workshop identified the gaps in the trails system across Waterloo-Wellington-Dufferin (e.g., linking Arthur, Mount Forest, Grand Valley, Erin, St. Jacob's, Ayr and North Dufferin to other areas).

A committee representing a number of agencies, organizations and trails groups has been working on facilitating the building an inter-connected trails system. Closing the trails gaps is a priority for this group as well as identifying the potential barriers to connecting the trails and successful solutions to the barriers.

Communities can use trails to make exercise more convenient and neighbourhoods more environmentally friendly. By doing so, they can help change bad habits into healthy ones. Some of the steps communities can take to encourage physical activity and protect the environment are:

- Build trails through neighbourhoods and along rivers and other natural landscapes to create attractive and accessible places to exercise.
- Connect parks and playgrounds with trails to create a network of recreational areas.

³² Go For Green, The Social, Health & Heritage Benefits of Trails, Trail Monitor #2, p. 1.

³³ Ibid., p. 1.

³⁴ Kaylen, Michael S., et al., Journal of Leisure Research, "Rural Landowners' Attitudes Towards the Missouri River State Trail, 1993, p. 281.

³⁵ Mazour, L., Converted Railroad Trails: The Impact on Adjacent Property. M.S. Thesis, Department of Landscape Architecture, Kansas State University, 1988.

- Supplement public health promotion with concrete efforts to make more facilities like trails available and accessible.
- Use trails as tools to provide alternative transportation options. Connect neighbourhoods and business districts so that people can walk or cycle to work and school, to complete errands or to visit friends and neighbours. This can help reduce road congestion and mitigate its polluting effects.

Summary

A trail system is a desirable amenity and contributes to the economic and social well-being of a community. With a number of burgeoning issues affecting our health care system (obesity, heart disease, diabetes) we need to approach our planning differently. Our health care system is unsustainable in its' current form. Trails provide many health benefits to a community that far outweigh the cost of building and maintaining the trails.

A study completed by the Saint Louis University and the Missouri Department of Health found that "...in communities that built more walking trails, 40% of people with access to the trails used them and that 55% of trail walkers had increased their walking since starting to use the trail. The study also found that women were twice as likely as men to use the trails. People in lower income brackets were more likely to use the trails than those in higher income brackets."³⁶ Health issues are greater in the lower income sector consequently we need to pay more attention to the solutions are beneficial to all sectors of society.

A trail can guide visitors and residents through diverse neighbourhoods, past interesting shops, enticing restaurants and many other businesses. Trails positively impact individuals and improve communities by providing not only recreation and transportation opportunities, but also influence economic and community development. To build a trail is to build a community – build the trails and the people will come. Build the trails and the health of our communities will prosper!

³⁶ Active Living Communities, November 2000, p. 24.