

Changing transportation behaviour in B.C.

Overview

Transport Canada offers a wealth of case studies and issues papers profiling programs and strategies that encourage the use of more sustainable transportation modes in Canada.

But how do those initiatives affect the individual? This article profiles several British Columbians who have changed their transportation habits as a direct result of their participation in a sustainable transportation program. Their stories illustrate how even simple transportation initiatives can have a long-term, beneficial impact on people's travel behaviours—changing drivers into carpoolers, transit users, cyclists, pedestrians and teleworkers.

Selected Resources

BC Climate Action Toolkit. [Diverse Zoning Strategies for Diverse Communities](#).

City of Calgary's [Transit Oriented Development Best Practices Handbook](#).

The British Columbia Experience

Since 1990, emissions from the transportation sector in British Columbia have risen by 42% (considerably faster than the national average of 30%) and make up 37% of the province's total greenhouse gas (GHG) emissions. More than half (60%) of these emissions come from passenger vehicles.

While municipalities, employers and community organizations may have little direct control over actual fuel consumption, they can provide or support sustainable transportation services that can encourage healthier commuting habits. In addition, local governments can influence how land use and transit is planned within a community.

In this article, Transport Canada shares the stories of six British Columbians who changed their travel behaviours as a direct result of municipal bylaws, policies, programs or other initiatives available within their community.

Employer-based programs

In the first story, Daniel shares his experience using a shuttle bus service offered by the Cambie Corridor

Consortium (CCC), one of the few transportation management associations (TMA) in Vancouver. During the early 1990s the Cambie area of Vancouver was growing considerably and with that growth came a marked increase in the number of cars on area roads.

Several of the employers in the area—led by the Vancouver General Hospital—came together to form the CCC as a way of reducing traffic around the hospitals and providing employees with better transportation options.

TMA's are one of the most effective ways to change people's regular commuting habits for two main reasons. First, TMA's often involve many different employers and can, therefore, access economies of scale to provide a broad range of transportation services. Second, TMA services can be easily marketed to the target audience right at their place of work—through employee newsletters or workplace events, in pay stubs, or by advertisements around the workplace.

Land-use planning

Municipal zoning bylaws can shape smart land use by implementing sustainable land-use policies set out in official community plans or strategies. For example, zoning for concentrated development and mixed land uses means that residents have shorter distances to travel to their daily destinations.

According to the BC Climate Change Action Toolkit, one person living in a compact neighbourhood with transportation options saves two tonnes of carbon emissions per year, drives up to 26% less and walks or bikes to destinations five to 10 times more often than a suburban dweller.

This paper includes three stories of residents who changed their transportation behaviour simply by choosing to live at Dockside Green, a transit-oriented and energy-efficient condominium development. The City of Victoria created a specific bylaw for the area that spells out the criteria for live/work arrangements and the bylaw was instrumental in encouraging Dockside Green's mix of residential, retail and commercial features as well as supporting access to sustainable and active transportation systems.

The bylaw lowered the city's parking requirements (the development provides car-sharing and will provide mini-transit in future), changed zoning to accommodate

affordable housing units, and waived sewer charges since the development treats its own water on site. All of these changes had a profound effect on how Docksider Green was developed and will act as a precedent for future city developments in the downtown area.

School transportation

The last two stories in this paper illustrate how a school transportation program in B.C.—developed by a non-profit organization with support from businesses and several non-profit organizations—addresses not only children’s health and safety issues but also helps to change the transportation habits of parents.

Like employer-based programs, school transportation programs can often be easier to promote; they respond to many parental concerns about children’s health and fitness, their safety, and a cleaner local environment.

A national school travel planning pilot program is now underway for the 2009/2010 school year and will involve hundreds of schools, along with provincial and territorial partners. Two of the participating cities in B.C. are Vernon and Surrey. School travel planners will conduct school site assessments that include walk-about around the schools to identify areas that are unsafe or need infrastructure improvements, such as better roads, sidewalks and the inclusion of cycling lanes.

Changing habits, one person at a time

Shuttle service cuts car use

Three years ago, Daniel, a radiologist and nuclear medicine physician, began using a shuttle bus service offered by the Cambie Corridor Consortium (CCC), a transportation management association in Vancouver.

Daniel learned of the CCC’s programs and services from advertisements posted at the Vancouver hospital he works at and from conversations he had with his coworkers who were already using the shuttle service.

Because hospital staff members often work at more than one hospital or medical centre, the CCC introduced a shuttle bus service to transport employees between sites. The shuttle makes more than 2,000 trips each month, carrying about 9,000 passengers.

Before the shuttle was introduced, Daniel used to drive alone to work every day.

“I began taking the bus for my regular commute around 2006,” he says. He takes transit 3-4 days per week to a hospital in Vancouver and drives one day per week to a hospital outside of the city. “I switched for two reasons: the regular city transit service had improved and the shuttle meant that I could easily go between sites.”

Daniel says that using transit and the shuttle is a good combination. “The convenience of having the shuttle

outweighs driving and I don’t have to pay for parking,” he says. “I need to travel quite often between hospital sites and the shuttle service is frequent and reliable enough to be very useful,” he says, noting that, unlike some of his trips by transit, he always gets a seat on the shuttle.

He’s also formed friendships with other regular shuttle users.

“You get to know the drivers and they’re all great guys,” he says. “There’s a sense of community because the passengers are usually the same, too. We banter and catch up. It’s part of the attraction for me—I get a ride, I get to chat and it’s a much more pleasant experience.”

If you build it, they will come

Victoria’s Docksider Green was designed as an energy-efficiency and transit-oriented condominium development.

Located by the Victoria Harbour, along the Galloping Goose multi-use trail, a 100-kilometre former railway line, Docksider Green’s transportation amenities include close proximity to public transit, a car-share program with the Victoria Car Share Co-Op and several secure bike areas. It will also, eventually, provide a “mini-transit” vehicle that will run during the day between Docksider Green and drop-off points downtown.

Three residents of Docksider Green—Taylor, Shirley and Dan—share their experiences of living in this transit-friendly development.

Taylor finds driving a hassle

Taylor is a photographer and works mainly at home. Although daily commuting is not as important for him, he says that sustainable and accessible transportation was a big factor in his decision to move to Docksider Green.

“I heard about Docksider Green when I was researching a story about it. In the end, I didn’t end up working on the story but I did end up moving there!”

Taylor owns a car but hasn’t had to use it much since moving to Docksider Green in May 2009 since the development is very close to the downtown and there are shops and bus stops nearby.

“I pretty much exclusively bike or walk everywhere. It saves me huge amounts of time and I don’t have to figure out where I’m going to park,” he says. “Downtown is within walking distance and it actually takes longer to drive than to walk. Driving that short distance is a hassle.”

Shirley ditches the car

Shirley and her husband moved from Yellowknife to Victoria in early 2009. Shirley, who is now semi-retired, chose Docksider Green mainly for its transportation services.

While still in Yellowknife, Shirley says that she and her husband were already moving towards more sustainable transportation.

“We lived 60 kilometres from Yellowknife and there is no public transportation so we had an old truck,” she recalls. “When we moved into Yellowknife, we lived in the downtown area so we rarely used the car.”

Once they decided to move, they chose Victoria based on their work situation and bought a condo to renovate.

“On one of our trips to Victoria while renovating the condo, I picked up a community newspaper that was advertising Dockside Green,” she says. That was three years ago.

“We happened to be there at the right time and chose to buy into Dockside Green because we knew it would evolve into a community and we wouldn’t need to travel far for services. We wouldn’t need a car and could walk or use taxis.”

When they moved into Dockside Green, Shirley got rid of their 20-year old vehicle. “I don’t miss the maintenance or the upkeep or the insurance,” she says.

“There are challenges to not owning a car, so you need to be organized and have a plan for specific trips because you just can’t jump in the car and go somewhere,” says Shirley. “That’s not a bad thing. There are too many cars in this small city already and I think that I and others here think: why do we need to add to the problem?”

Dan appreciates the secure bike room

Dan found out about Dockside Green from news stories and advertisements. He liked the fact that the development was energy-efficient, and the wealth of transportation amenities, he says, sealed the deal.

As a graduate student at the University of Victoria, Dan takes transit to campus (the university offers a discounted transit pass to students) then walks the 8 kilometres home.

“It’s not a huge difference from what I was doing before [Dan hasn’t owned a car in 10 years], but if they hadn’t offered the things they did, I wouldn’t have moved here,” he says. “It’s close to everything—restaurants, shops, grocery store, downtown and the Galloping Goose trail. Even people who have cars don’t use them much because downtown is less than a 10-minute walk way.”

Two of Victoria’s main transit routes are within a block of his home.

“There are essentially three routes that go near here—two are the main cross-city ones—and the city is planning to introduce another cross-town bus route.”

Dan also uses the Galloping Goose trail several times a week.

“Our secure bike room leads right to the trail so it’s really convenient,” he says, noting that the bike room often has 2-3 times more bikes than there are cars in the parking spaces. “I don’t even have to go one block and I’m right on the trail. It gets me to a lot of places that I want to go to.”

Like Shirley, Dan has reaped financial benefits. “At Dockside Green you have the option not to buy a parking space, which would have cost me \$35,000 for one space.”

As a Dockside Green owner, Dan also enjoys free membership in the car-share program. Currently, there are two care-share vehicles and once the development is fully complete, eight more will be added to the fleet. He says that one of the drawbacks to many car-share programs is the fact that you have to travel to get to the car. Not at Dockside Green.

“The car-share car is parked 10 feet from the door of my building. It’s great to have it for occasional trips.”

The tale of two parents

Young people spend more time in cars than ever before. Over a 15-year period (1986 to 2001), weekday travel by car for 11-15 year olds increased 83%, while the per capita increase for adults was only 11%. The rates of overweight and obese children have also tripled over the past two decades, due in part to decreased physical activity.

Sustainable transportation programs aimed at children not only improves children’s fitness and health levels but can often impact their parents’ travel decisions as well.

These next two stories show how a walk to school program changed the lives of two parents. And got their kids walking, too.

Bonny sets up a monthly walking program

Parents are all too aware of the sheer amount of information that their children bring home every day from school: PTA notices, forms, newsletters and details about school and community programs.

It was an information package on the Green Communities’ walk to school programs that caught Bonny’s eye.

“I had been walking with my daughter to school but I had gotten a bit lazy and did drive occasionally,” says Bonny, “so the information struck a chord.”

Bonny lives in Port Moody and had been feeling isolated in the small community. “People had said that things would change, but you don’t meet people when you’re driving,” she said. “Once I read through the International Walk to School Day materials, I decided to take part,” she says.

That’s a bit of an understatement. Bonny soon became the go-to person for the program. “I couldn’t get many parents involved at the beginning, so having the Green

Communities' web site and a contact person to speak with really helped."

She started by organizing a monthly Walk to School day. "One of the things that parents are really afraid of is the safety of their children," she says, "so I asked some parents to simply stand on corners along the route."

Bonny also involved the school's principal and teachers. "We started rewarding kids for taking part, just little things like bike reflectors or water bottles, but the kids loved it," she says. The teachers keep records of how many children walk every day and prizes are awarded to the class that has the most walkers. "One year we bought a rose plant as the reward, planted it on the school grounds and erected a plaque with the class name."

Bonny's efforts paid off. Her daughter's school was chosen as a pilot school site for an Active and Safe Routes to School Program (ASRTS) with funding to hire a dedicated coordinator.

Bonny says that the ASRTS program gave the walk to school programs more credibility and led to more parents getting involved. She also notes that many of those parents had been trying for years to get the city to make some changes to the roads around the school.

"Suddenly we had the city listening," she says. City staff conducted a walk-about of the area and made some improvements, including amending some curbs to improve stroller and wheelchair accessibility.

About 75% of the children at the school now participate in the monthly Walk to School days, carpooling among parents has increased and there are fewer people parked in the school parking lot most mornings and afternoons. The program also prepares students who are graduating from the elementary to the middle school, like Bonny's daughter, for their new walking route.

"There was one mum I met who started parking her car three blocks away and walking her two sons to school," recalls Bonny. "She noticed that her sons started performing better in school because of the regular exercise, and she was able to socialize with other parents. That was a real win."

As a result of her involvement, Bonny is driving less.

"It's changed my life," she says. "I really like the time I get with my daughter, seeing the seasons change, and I also know a lot more neighbours now. I was always driving before so this has been a great community-building exercise."

She adds that as the walk to school coordinator, she felt compelled to show a good example. "I can't be seen in the car!" she laughs, adding that the occasional time she does still need to drive, she parks a few blocks away from the school and walks the rest of the way.

Walk to school program came at the right time for Laura

Like Bonny, Laura was also prompted to begin participating in the Green Communities' walk to school programs because of an information package she received.

"At the time, I was frequently driving to school, but that was partly because the children were very young at the time," says Laura. She says that the information came at a time when her oldest child was getting to the age when he could start walking to school.

Laura is a school trustee in Tsawwassen and the mother of two children, aged nine and 12. The ASRTS walking and cycling programs in her community have been in place for more than eight years.

"Once you get involved in a program like ASRTS, there are all sorts of spin-off impacts," she says. "We started an anti-idling campaign, I bike to the school if one of my kids forgets something in the morning, and I've told the kids that we're done with drive-throughs."

As a trustee, Laura sometimes has to travel to several school sites during the day. Although she does still drive for some trips, she says that there is a higher level of awareness among her colleagues thanks to ASRTS, so they carpool whenever they can.

Programs, policies and initiatives

Each of the programs highlighted in this paper is described below.

Cambie Corridor Consortium

The CCC was the first transportation management association (TMA) established in Canada. It aims to reduce car travel in and around the Cambie area of Vancouver and primarily serves the employees at several hospitals and medical centres.

For more than 10 years, the CCC has offered sustainable transportation programs including the shuttle service, discounted transit passes for its member employees, van and carpooling services and an emergency ride home program. It also responded to the concerns of active commuters by adding additional shower and change facilities at some sites.

Dockside Green

Dockside Green is 15-acre condominium development situated in the heart of Victoria on former harbourfront industrial lands. At full build-out in 2014, it will have 1.3 million square feet of residential, office, retail and commercial space.

In 2009, Dockside Wharf became the first neighbourhood of the development to be completed. Two more areas— Dockside Commons and Dockside Village—will be

completed in the coming years and sales of condos in Phase II are now being sold.

It was designed to LEED (Leadership in Energy and Environmental Design) Platinum standard, making it one of the most energy-efficient residential developments in British Columbia. It is estimated that its energy efficiency will exceed Canada's Model National Energy Code by 45-55%.

Aside from the sustainable transportation amenities referred to earlier in this paper, the developer upgraded a portion of the Galloping Goose trail; will provide a bicycle, car-share membership and a bus pass subsidy to 75 affordable housing units; will install a new dock facility for harbour passenger ferry service; and is working with BC Transit to add more bus routes.

Active and Safe Routes to School

Green Communities' Active & Safe Routes to School is a community-based initiative that promotes the use of active and efficient transportation for the daily trip to school, addressing health and traffic safety issues while taking action on air pollution and climate change.

Its web site provides resources, tools, information and links for schools and communities to create their own unique programs. All of its resources for teachers are also linked to the provincial curriculum.

In British Columbia, it is delivered through the HASTE (Hub for Action on School Transportation Emissions) program.

Highlights

Anyone who has ever tried to lose weight or quit smoking knows that breaking a habit is hard to do. Changing transportation habits can be just as challenging. The perceived convenience of single occupant vehicle travel can sometimes outweigh the very tangible advantages that come with sustainable transportation modes: a healthier lifestyle, financial savings, and community and social benefits.

All of the people interviewed for this paper made a change to their commuting behaviour and did so because of a program or initiative offered in their community.

This section presents a few of their insights on the barriers they have faced and what program organizers might do to improve their initiatives.

Land-use planning advice

Municipal governments control how land is used within any given area of a community, through bylaws and policies, design guidelines, and other plans such as city, neighbourhood and transit station plans. In the case of Dockside Green, the city amended some existing zoning

bylaws and created a new bylaw specific to the area to encourage greater environmental stewardship.

For information on how your municipality can encourage transit-oriented development, see the **Selected Resources** section at the beginning of this paper for links to a best practices handbook developed by Calgary Transit and to zoning strategies offered by the BC Climate Action Toolkit.

Taylor says that the city and the developers of Dockside Green made it easy for people to "do the right thing."

"Without sounding too cynical, laziness needs to be factored in," he says. "If they [city and developers] make it easy for people to use sustainable transportation, if they provide services nearby, and they can incorporate that all into one complex—like they did at Dockside—then it has a huge quality of life impact for residents."

Developments that are specifically designed with transit and other sustainable transportation modes in mind are still a relatively new concept in North America. But builders who have incorporated such amenities into their designs often cite reduced costs as a motivating factor. Some municipalities offer developers incentives to include sustainable transportation; other cost savings can come from reducing the amount of parking required.

Dockside Green separates the purchase of parking stalls from the condos, giving residents the option to buy a parking space at a cost of \$35,000. This move, as well as the car-share and mini-transit programs, helped the developer reduce its parking requirements and, therefore, the costs to build and maintain parking.

Improve transportation infrastructure

Laura says transit infrastructure in her community needs improvement.

"Transit patterns are organized to get you to major centres, not suburban destinations," she says. Improving transit options to the suburbs, she says, is one way the municipality could reduce car trips. "We're still in road-building mode here but just because there are major highways being built, it doesn't mean they're adding good bus routes."

Although parts of Laura's community are well designed for walking, some areas lack basic sidewalk infrastructure. "This used to be a beach community but when it became more of a suburb city planners didn't improve the sidewalks or curbs," she says.

In Bonny's case, the ASRTS program gave credibility to the issues and led her city to improve some of the sidewalks around the school.

Shirley says that she was surprised that, for all of Dockside Green's environmental benefits, they did not include electric chargers for plug-in hybrids or electric bikes.

As a member of Dockside Green's condo board, the Strata Council, Shirley has been working with some of her fellow condo owners to lobby for a bicycle charging station.

"Electric bikes are very popular in Victoria," she says. "There has been such a move towards hybrids and e-bikes that we're hoping that the infrastructure will be included in the next phases of the development."

In BC, the Electric Power Research Institute (EPRI) is working with the auto industry and more than 30 utilities, including BC Hydro to prepare for the inclusion of electrical infrastructure. EPRI's is simulating the energy load required to recharge electric vehicles and reviewing building codes and safety issues. BC Hydro has also completed charging infrastructure guidelines for the province, an initiative commissioned by BC Hydro and sponsored by Natural Resources Canada with the intent of facilitating consistent and safe deployment of charging infrastructure.

Close the gaps

Dan has almost nothing but good things to say about how the City of Victoria has promoted healthy living, but he does pinpoint a few gaps.

"It's a fantastic city for walking and the bike networking is good but there are some missing links and there are no really good routes to cycle to the university campus," he says. The University of Victoria, he says, has done a lot to get students and staff onto buses but there are still some regional gaps.

Municipalities looking to improve active and sustainable transportation need to be aware of these gaps and work with all stakeholders to find solutions.

Overcoming the "fear factor"

Both Bonny and Laura grappled with the issue of overcoming parents' safety fears for their children.

"Parents don't realize that the day-to-day interaction our kids have in front of schools, with all the cars, is a far greater safety risk than letting them walk or cycle," says Laura. "One of the best ways to protect your kids is to make sure that they know their route and the other basic safety issues that all kids need to know. These programs do that."

Bonny says that the program's credibility helped win over many parents and eased their fears.

"Once we became the pilot site for ASRTS, everyone realized that the program was legitimate...I wasn't just some crazy mum," Bonny laughs. "Parents are busy, and teachers and principals are busy, so having a dedicated coordinator for the ASRTS program helped to make walking to school a part of the school's safety policy."

Let the kids "own" the program

"What's powerful about the ASRTS programs is that you reach the kids and they bring those messages home to their parents," says Laura. "The kids love the feelings of responsibility and independence and that helps grow the awareness of parents."

To be successful, school walking and cycling programs need to be consistent and, wherever possible, child-directed. "We get them to try different options, different routes, different modes," she says. "And, as much as possible, we ask the kids to identify which spots are safe and which spots aren't."

Conclusion

Sustainable transportation programs and policies in B.C. have a strong track record of reducing single occupancy driving, encourage greater uptake of sustainable modes, improve air quality and offer individuals personal and social benefits.

BC now has more bicycle commuters than any other province, and Victoria leads the country in the number of both walking and cycling commuters. In addition, 14% of Vancouver workers who traveled 15 kilometres or more to work used a sustainable mode of transportation in 2001 and by 2006, that proportion had increased to 19%. Similar increases were found in three other cities (Victoria, Kelowna and Abbotsford). Still, given the increasing population of the province, climate change and traffic congestion will continue to be issues that need to be addressed.

Many of the stories in this paper illustrate how greater use of sustainable transportation modes could be achieved—through better land-use planning decisions, zoning changes, and improving transportation infrastructure.

In the final analysis, however, it is always up to the individual to decide what mode to use. As these stories show, once people are open to taking the first step—trying a different travel mode—making sustainable transportation a long-term habit comes easier. And, ultimately, long-term change is the goal of any sustainable transportation program.

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