

The Surprising Story of Travel Behavior in Bellingham, Washington



April 2012



Introduction

This document tells a story about how people travel in Bellingham; how their transportation choices have changed in recent years; and how their travel behavior is likely to change in the future. It is told from the perspective that increases in walking, bicycling and transit trips and decreases in vehicle trips are desirable. Benefits of increased use of sustainable transportation modes include:

- Reduced traffic congestion
- More mobility and access for less cost
- More capacity for a growing population within the existing transportation infrastructure
- A more vibrant local business community and more dollars circulating locally
- Quieter neighborhoods and higher property values
- Safer streets and sidewalks
- Reductions in greenhouse gas emissions and other types of air and water pollution
- Health benefits for individuals
- Strengthened social connections

The purpose of this document is not to elaborate on these benefits, but to provide detailed mobility data to citizens and decision-makers who are working to improve our community's transportation system. The goals are to provide:

- An overview of transportation behavior
- Specific mobility statistics
- Answers to frequently asked questions
- A story to share with people outside our community about how Bellingham is successfully increasing walking, bicycling and transit trips

Where does the data come from?

The data in this document comes from household mobility surveys conducted in Bellingham by Socialdata, a transportation consulting firm based in Munich, Germany. Socialdata has nearly 40 years of experience in mobility research, with over 500 projects in 15 countries around the world. Socialdata is also known for creating a dialogue marketing technique called Individualized Marketing that is particularly effective at encouraging people to use sustainable transportation.

Socialdata has conducted two Individualized Marketing (IndiMark) projects in Bellingham, a 2004 pilot project and a 2008 large-scale project, and an in-depth mobility survey in 2007. As a result, Bellingham has data from the following surveys:

	Time of Survey	Number of Respondents
2004 IndiMark Project–Before Survey	May – Jun 2004	2,196
2004 IndiMark Project–After Survey	Sep – Oct 2004	1,519
2007 In-depth Mobility Survey	Jan – Jul 2007	6,208
2004 IndiMark Project–2nd After Survey	May – Jul 2007	419
2008 IndiMark Project–After Survey Target Group	Jun – Jul 2009	2,718
2008 IndiMark Project–After Survey Control Group	Jun – Jul 2009	1,145
TOTAL:		14,205

Two things are worth noting. First, large numbers of people have been surveyed – 14,205 survey respondents represents 18% of the population of the city. Second, surveys have been conducted in all months except August, November and December, resulting in data that represents mobility behavior in all seasons of the year.

Accurate and Reliable Data

To collect accurate and reliable data, surveyors must select samples (subsets of the population) that represent the entire population and ask questions in such a way that the answers portray the true behavior of the individuals surveyed. To measure changes in behavior, surveyors must also isolate the changes that occur as a result of the intervention, as opposed to external factors. Socialdata uses many techniques to collect accurate and reliable data. Their survey methodology includes:

- Randomly drawn samples
- High response rates, typically 70-80%
- Survey respondents of all ages (surveys for infants and young children are completed by their parents)
- Survey data from all days of the week
- Survey data for all trips (not just work trips)
- Assigned survey days

- Questions that require objective answers:
 - Where did you begin your first trip?
 - What time did you leave?
 - What was your destination/reason for trip?
 - What modes of transportation did you use? (list all modes used)
 - What was the address of your destination?
 - What time did you arrive?
 - Please estimate the distance of the trip.

Contrast this wording with a question from the American Community Survey (formerly the US Census Journey to Work Questionnaire) - How did this person **usually** get to work last week? If this person **usually** used more than one method of transportation during the trip, mark the box of the one used for **most of the distance**.

- Follow up and correction of errors and incomplete or implausible responses
- Personal interviews to ask about attitudes and preferences (in-depth surveys only)
- Comparison of recorded trips with maps and transit schedules to establish potential for mode shift
- Control groups
- Disassociating marketing projects from the surveys that measure their results
- Survey respondents from all market segments of the intervention (including non-participants)

University of California professor Dr. Konstandinos Goulias, who teaches transportation modeling and has audited one of Socialdata’s mobility surveys said of that project, “In all components of the Socialdata planned assessment, high standards of practice were followed. Overall, the Socialdata survey management method is impeccable and leads to high quality data.”

Socialdata in Bellingham

Socialdata first came to work in Bellingham in 2004 as a result of a Federal Transit Administration grant designed to demonstrate the effectiveness of Individualized Marketing in four American cities (Bellingham, Cleveland, Durham and Sacramento). Whatcom Council of Governments (WCOG) and Whatcom Transportation Authority (WTA) managed the project in Bellingham. Although the results of that project are not discussed in this document, it was very successful and it inspired WCOG staff to seek funding for the large-scale IndiMark project that occurred in 2008. The 2004 pilot project also familiarized WCOG and WTA staff with Socialdata’s mobility research and gave them an understanding of how valuable mobility data is for any community that wants to increase use of sustainable transportation modes. Good mobility data can direct our efforts and resources and tell us when our strategies are successful.

Why do we make the trips that we do?



Data from 2009

Worth Noting

This chart shows the main trip purposes of Bellingham residents. People of working age often think of the trip to work as a primary reason for making trips. However, it is not the most common reason for traveling. We make slightly more shopping trips (20%) than work trips (19%), and the things we do in our free time account for the biggest percentage of our trips (35%).

Why is it important?

To increase use of sustainable transportation modes, we must help people walk, bicycle and ride buses when they are shopping, visiting friends, going to restaurants, attending church, playing soccer, going to the movies, as well as going to work.

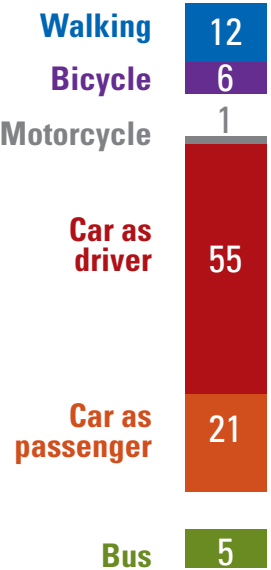
How do Bellingham residents travel in the city?

Worth Noting

This chart shows the percentage of total trips made by Bellingham residents by each mode of transportation. In 2009, 12% of all trips were made by walking, 6% by bicycle, 55% as the driver of a car, 21% as a passenger in a car, and 5% by bus. Note that these numbers represent the main mode used in a trip. Most car and bus trips and some bicycle trips also involve walking to and from the main mode of transportation. The 12% share for walking trips is measuring trips where walking was the only mode. It does not include the large proportion of trips where other modes of transportation are accessed by walking. If we looked at all trip component data, we would see that walking is a very important part of our transportation system. Although trip component data is available for Bellingham from Social-data surveys, it is not included in this report.

This chart shows mode share averages for the entire population of Bellingham. These numbers can be very different depending upon:

- How old you are and your gender
- How far you are going
- The purpose of your trip
- Where you live and where you are going



Data from 2009

Who you are affects how you travel

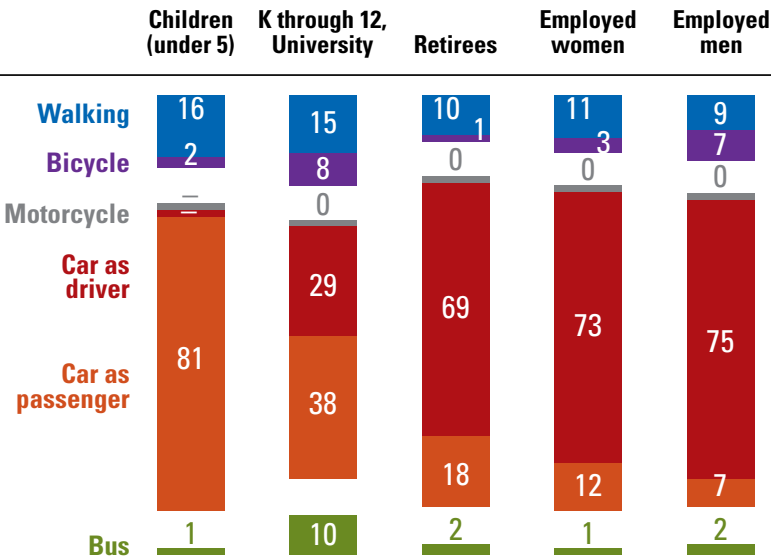
Worth Noting

- Very young children walk to their destination 16% of the time (or are carried by a walking parent or care-giver) – more than any other age group – but they are driven much more. 81% of all their trips are made as passengers in a car.
- School children (K-12) and college students ride the bus more than anyone else – for 10% of their trips. This number includes school bus trips and an ever growing number of WWU student WTA bus trips.
- Retired people spend more time in cars, as drivers or passengers (69% + 18%) than any other age group.
- Employed women ride bicycles less than half as much as employed men do – 3% versus 7%.

Why is it important?

When some members of a social-demographic group are successfully using sustainable transportation modes, it seems reasonable to conclude that, with education and encouragement, other members of that group could increase their use of sustainable transportation. In particular, these numbers suggest that we should reach out to:

- Parents of young children
- School children and college students at Bellingham Technical College and Whatcom Community College
- Seniors
- Women



Data from 2007

How far you are going affects how you travel

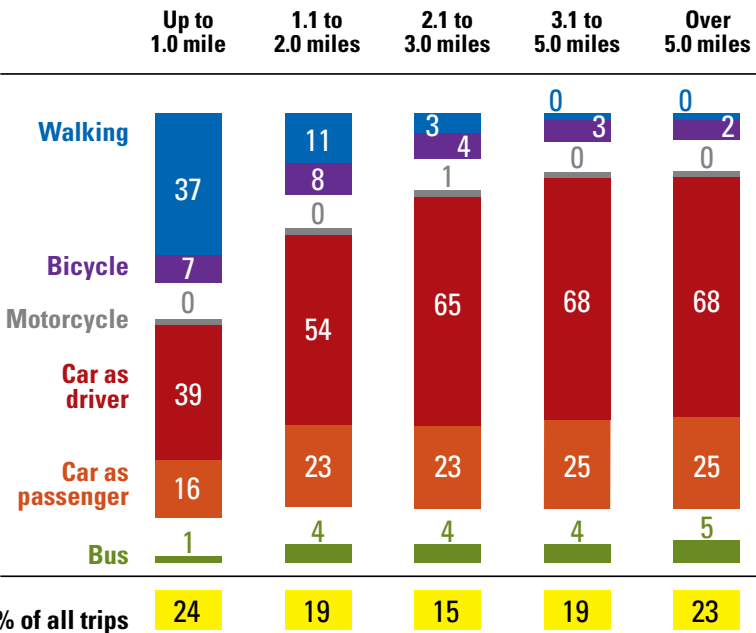
Worth Noting

- 24% of all our trips are a mile or less and we walk for 37% of those trips. But even for these very short trips, we still drive or ride in a car 39% and 16% of the time.
- We ride bicycles significantly more than buses for trips that are two miles or less (7% and 8%, compared to 1% and 4%).

Why is it important?

We have great potential to increase our walking mode share. Nearly a quarter of all trips we make are very short trips. The fact that we already make a lot of those trips by walking suggests that Bellingham residents find their city to be quite walkable. While we can increase walking trips by improving areas with unsatisfactory infrastructure, it is equally true that we can increase walking trips by encouraging people to walk where it is already safe and pleasant.

Bicycling is an important mode of transportation for Bellingham residents. 43% (24% + 19%) of all our trips are two miles or less, and we use bicycles much more frequently for those trips than we use buses. While this may be surprising information to people who don't usually ride bicycles for transportation, it is logical. Buses are limited to a fixed schedule and route. Bicycles are available at any time of day and can go wherever a person needs to go.



Data from 2007

The purpose of your trip influences how you travel there

Worth Noting

- We ride bicycles for 6% of our work, education and leisure trips, but that doesn't mean that bicycle trips are made in equal numbers for these trip purposes. We know from a previous chart that leisure trips account for 35% of all trips, work trips are 19% and education trips are only 9%.
- Similarly, walking trips for education and leisure purposes appear to be equally significant. But again, since leisure trips account for so many more of our trips, more people in Bellingham are walking for leisure purposes than walking to school.
- We ride buses for 18% of our education trips (K – 12 and college). That is roughly ten times the percentage of bus trips for all other trip purposes. This is such a large mode share that even though education trips account for only 8% of trips, there are still more bus trips being made for education than any other trip purpose.

Without access to data, we might draw incorrect conclusions about how our transportation system is being used. A common assumption is that the walking and bicycling trips in our community are being made by school children and college students traveling to school. But careful consideration of the data shows that walking and bicycling trips of adults traveling to work and people of all ages traveling for leisure purposes are much more numerous than walking and bicycling trips to school. On the other hand, many people would guess that children riding school buses and college students traveling to WWU account for the majority of bus trips in our community, and in this case, the hard data supports this.

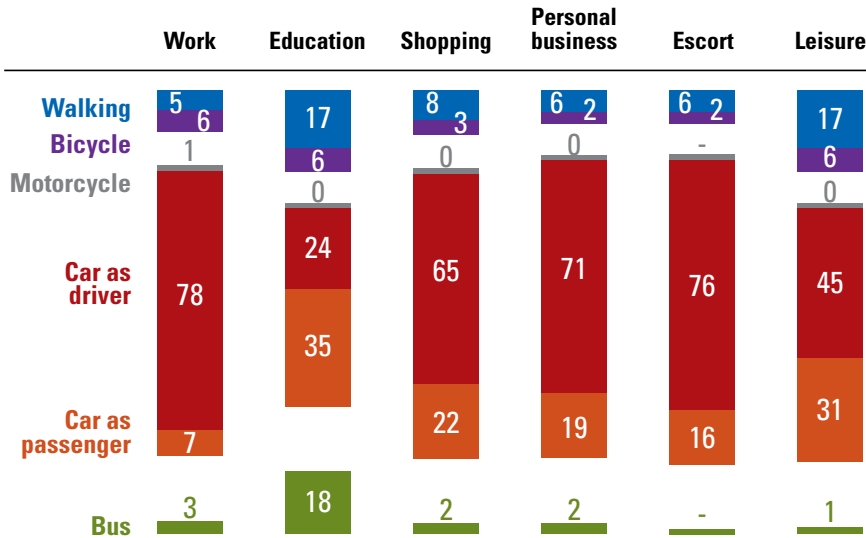
Why is it important?

While there are valid reasons for working with all social demographic groups, the data suggest that certain groups or trip purposes hold more potential for mode shift. For example, we may be inspired to work with parents of young children, since we could make an important contribution to the future of our community. Seeing adults using active forms of transportation is the best way to teach children that walking, bicycling and riding the bus are efficient, healthy and convenient forms of transportation. On the other hand, escort trips account for only 8% of all trips. We might achieve more mode shift to sustainable transportation if we focus on leisure and shopping purposes, since these trips account for 35% and 20% of all trips.

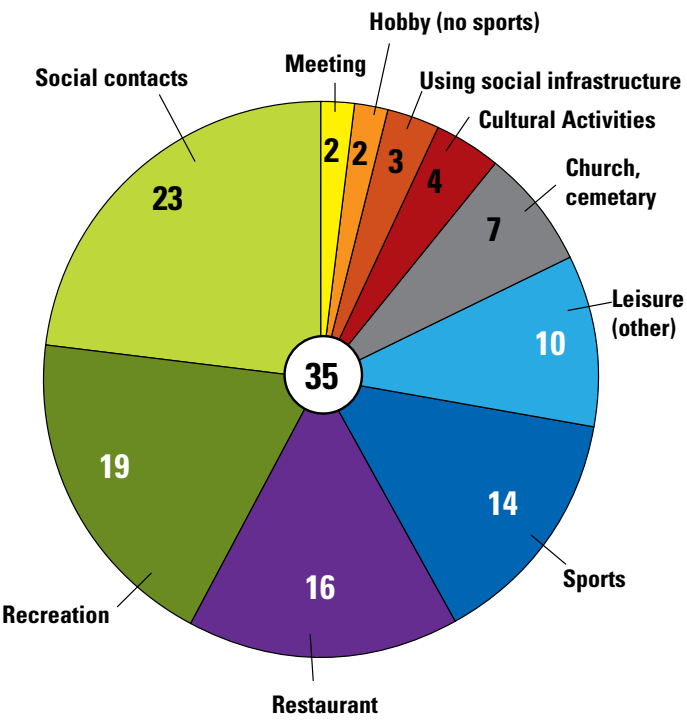
Escort and Leisure Trips Defined

As adults we usually have complete control over our trips. It's easy to forget that people of all ages have reasons to travel, even people who aren't able to travel independently, such as very young children and the elderly. In this data set, people who accompany non-independent travelers are making escort trips. The person whom they are accompanying has his/her own trip purpose and mode, even though the mode is likely controlled by the person escorting him/her. For example, a one year old who goes to a doctor for a vaccination is making a personal business trip. If his/her parent takes them there in a stroller, then the child's trip is considered a walking trip. The parent's trip counts as a walking trip with "escort" as the trip purpose.

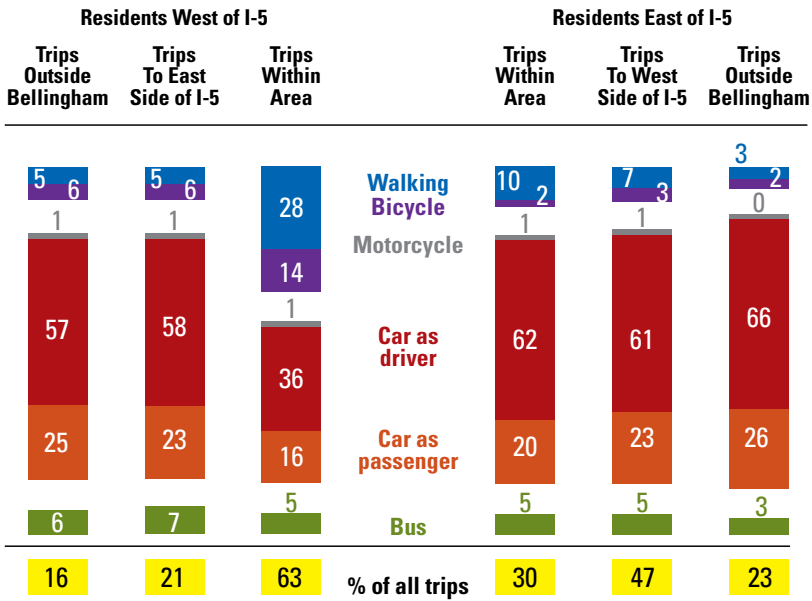
In this data set, leisure trips are trips people make in their free time, when they are not traveling to work or school, for shopping or personal business, or to escort someone else. 35% of our trips are leisure trips. This chart shows a breakdown of more specific leisure trip purposes. Examples of "Using social infrastructure" include traveling to a retirement home, playground or library.



Data from 2007



Where you live and where you're going affect how you travel



Data from 2009

Worth Noting

The columns on the left show the mode of choice of people who live west of I-5 when they are traveling: outside of Bellingham; to the other side of I-5; or staying on the west side of I-5 (within area). The columns on the right show the mode choice of people who live east of I-5 for the same travel patterns.

- People who live west of I-5, no matter where they are going, use sustainable transportation modes significantly more than people who live east of I-5.
- When westiders travel within the area (staying west of I-5), they walk and bicycle (28% and 14%) as much as people living in many European cities.
- Westiders make a majority of their trips (63%) within the area.
- For trips within their own area, eastiders ride the bus as much as westiders. But for longer trips (to the other side of I-5 or outside of Bellingham), westiders use transit (6% and 7%) at significantly higher rates.

This chart is both a cautionary tale for city planning and an inspiring story of what a small American city has achieved in encouraging the use of sustainable transportation. On the west side of the freeway, Bellingham developed before automobiles were such a dominant mode of transportation. One hundred years later, we are still benefitting from land use patterns that make walking, bicycling and bus riding easier in that part of the city. On the east side, walking, bicycling and bus riding are more difficult because:

- There is less street connectivity. Eastiders are less able to use quiet neighborhood streets to travel to their destination, and instead must travel on arterials designed for faster-moving cars and higher volumes of cars.

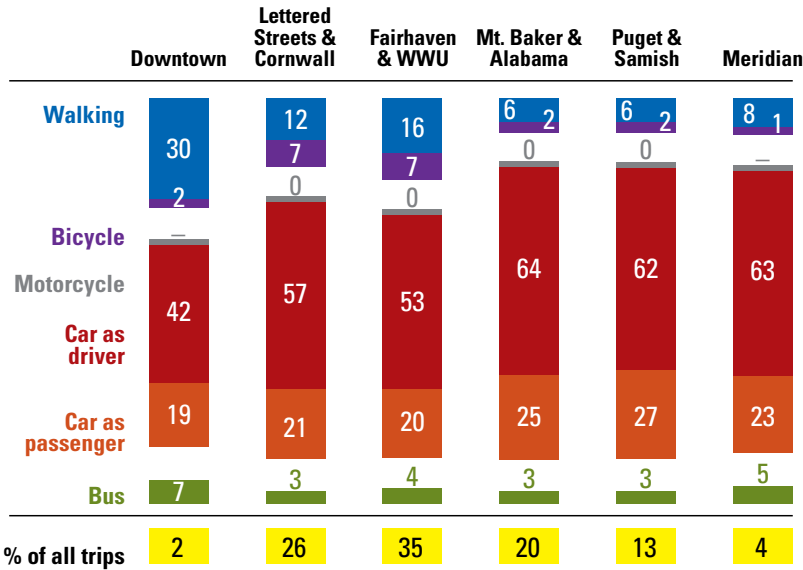
- There are fewer destinations. Eastiders are less able to shop, work, recreate and conduct personal business on their side of the freeway and must travel greater distances to accomplish the same trip purposes as westiders.
- I-5 is a barrier for walking and bicycling safely to destinations west of the freeway, particularly for residents of the Puget and Samish Neighborhoods.
- There is less density, which means fewer people live near any given bus line, so WTA has less justification to provide as frequent bus service or cover as much area as on the west side.

Why is it important?

As we make choices about how to develop new parts of the city – the Waterfront District, Cordata, – or redevelop older parts of the city – Samish Way, the Fountain District – we would do well to imitate development patterns of neighborhoods with high percentages of walking, bicycling and bus trips. The chart at right offers yet another view of mode choice based on where residents live.

Note that the neighborhoods with the most use of sustainable transportation modes – Downtown, Lettered Streets & Cornwall, and Fairhaven & WWU – account for 63% (2% + 26% + 35%) of all the trips made in Bellingham. The next largest share of trips comes from residents of the Mt Baker and Alabama neighborhoods (20%). This is good news for people working to maximize sustainable transportation use, since these neighborhoods have better access to trails and I-5 crossings, and

therefore, better potential to improve their mode share. That also means that only 17% (4% + 13%) of trips are being made in neighborhoods where it is most difficult to promote walking and bicycling. (Transit is doing quite well in the Meridian neighborhood because of increased service with the Green and Gold GO Lines and the addition of the second system hub at Cordata Station.)



Data from 2007

How are we doing compared to other North American cities?

In recent years, Bellingham citizens, city staff and elected officials have hosted a wide variety of gatherings where the question has been asked, how do we increase the number of sustainable transportation trips being made in our community? Often, these public meetings include a discussion of the strategies that other cities are using to increase their walking, bicycling or transit mode share. The implication is that Bellingham isn't doing as well as those other cities. The truth is that Bellingham is doing very well indeed, even compared to much larger cities that are famous in transportation circles for their progressive policies, such as Eugene, Portland, Seattle and Vancouver, BC.

Worth Noting

Walking trips in Bellingham (12%) are second only to Seattle (13%) and Vancouver, BC (16%), and greatly exceed the percentage of walking trips in the other cities.

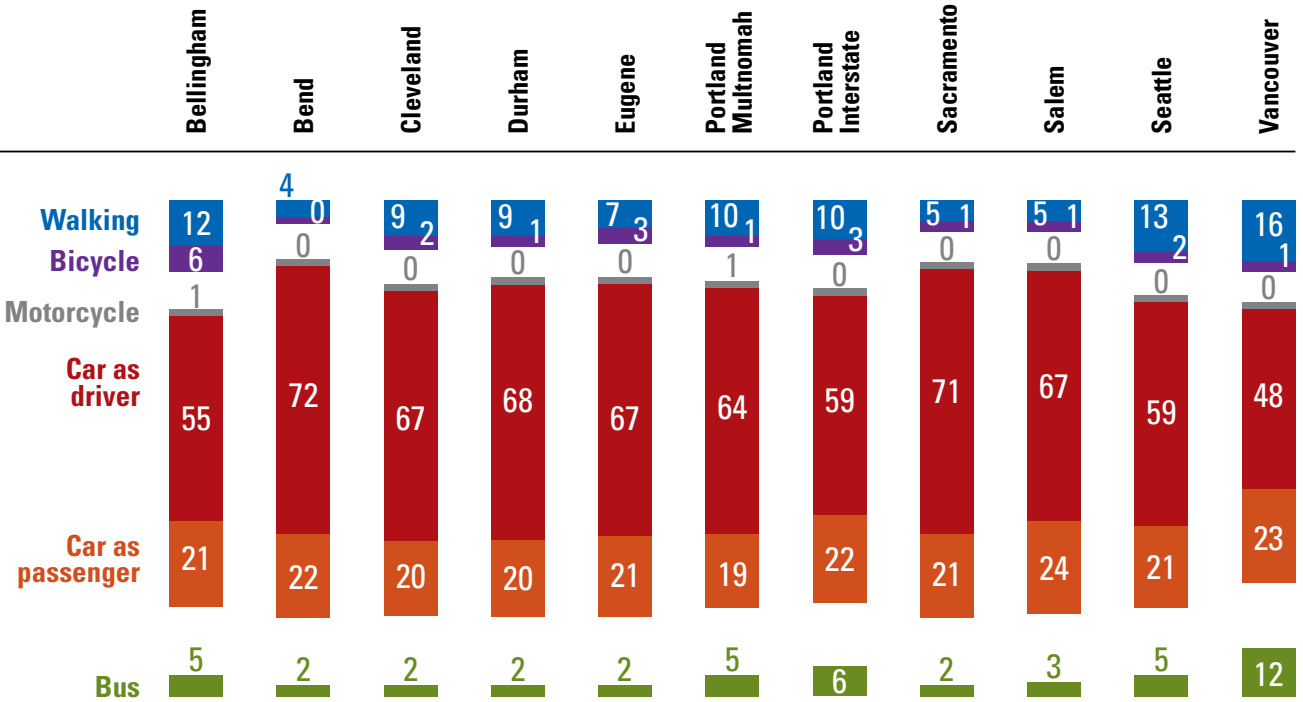
For bicycling trips, Bellingham (6%) leads by two, three or six times the percentage in other cities. In fact, Bellingham's lowest bicycling rates (2-3% among residents who live east of I-5) match or exceed the averages for these other cities, whereas our highest rates of bicycling (14% among people living and traveling west of I-5) are astounding! (The Portland data in this chart doesn't represent the entire city. The most comparable city-wide data available suggests that Bellingham has equal or a percentage point less mode share for bicycling.)

We also compare favorably in transit ridership (5%), despite being the second smallest city in this grouping. It's no surprise that Vancouver, one of the densest cities in western North America has more than twice the percentage of transit trips as Bellingham, but perhaps it is surprising that transit ridership in Bellingham matches or exceeds that of all the other cities in this group.

And finally, the percentage of car driver trips in Bellingham (55%) is the second lowest, behind Vancouver, BC (48%), significantly lower than most of the other cities in this group.

Why is it important?

So at the next public meeting when we are discussing the bike sharing program of Paris, the Ciclovias of Bogotá, the bikeways of New York City, or the bike boulevards of Portland, we can engage in the discussion with a different perspective. To the extent that we can imitate these larger cities with our small city resources – good for us. In the meantime, we are increasing the number of trips we make by walking, bicycling and riding the bus in ways that are appropriate for a small city, and most importantly, we are succeeding!



This chart is not intended to provide definitive comparisons of mode share among these cities. It includes mobility data for all ages and trip purposes, but in some instances represents only part of the city. However, comparisons with work trip data from the American Community Survey corroborate the general conclusion that Bellingham has higher or equally high sustainable mode shares than other American cities.



How have we achieved our high levels of walking, bicycling and transit?

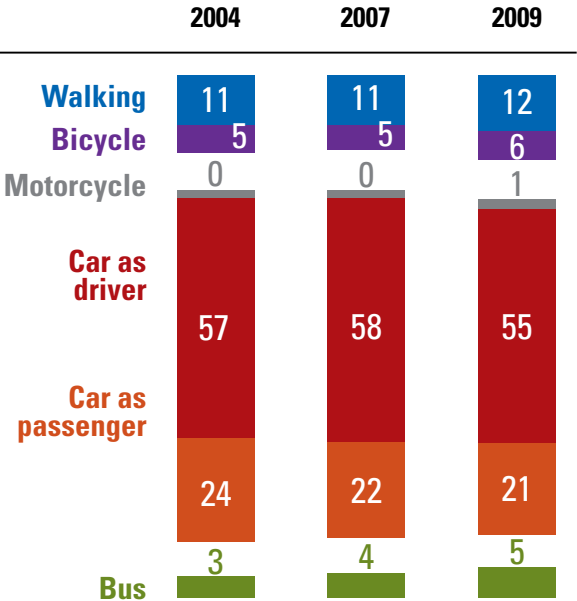
Bellingham citizens, elected officials and transportation staff from the City, WTA and WCOG have all made commitments to increasing the use of sustainable transportation modes, including:

- Supporting greenways levies
- Implementing the Commute Trip Reduction Law in Bellingham and Whatcom County
- Creating a grassroots-led Bike to Work & School Day
- Expanding the mission of WTA beyond serving the needs of the transit dependent
- Prioritizing bicycle and pedestrian improvements when using local, state and federal funding sources
- Reducing parking requirements for downtown developments
- Selecting locations for future urban villages
- Creating the high frequency GO Lines
- Putting bike lanes in at the expense of travel lanes and vehicle parking
- Creating and funding Whatcom Smart Trips
- Participating in Whatcom Smart Trips as individuals, employers and schools
- Setting mode shift goals in the Comprehensive Plan
- Implementing Safe Routes to Schools projects and programs
- Voting for a student funded universal bus pass at WWU
- Creating a Transportation Commission
- Voting to be taxed for a Bellingham Transportation District
- Creating Traffic Impact Fee reduction credits for developers who invest in strategies to reduce vehicle trips to and from their sites



While these policies and actions clearly support sustainable transportation, we don't know to what extent they have increased walking, bicycling and transit trips. However, something has been working, because in 2004 (the first year for which we have comprehensive mobility data), Bellingham already had rates for walking (11%), bicycling (5%) and transit (3%) that surpassed many other communities. (Compare chart on the next page with the one on page 15.)

What has happened to mode share over time?



Worth Noting

Surveys conducted in 2004 and 2007 show that transit trips increased from 3% to 4%. The likely explanation is that existing customers were better served and new customers were created when WTA introduced its first four GO Lines.

Surveys conducted in 2007 and 2009 show that walking trips increased from 11% to 12%, bicycling from 5% to 6% and transit from 4% to 5%. These mode share increases were almost entirely due to the 2008 Individualized Marketing campaign. The next several charts explain how the 2009 survey isolated the effect of the campaign from everything else that could have caused the increases.

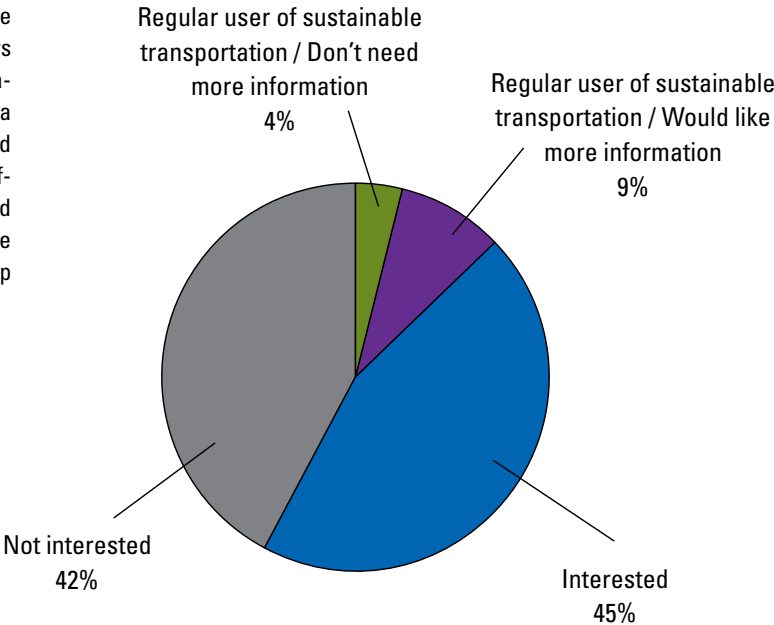


Enter a Major Intervention: 2008 Individualized Marketing Campaign

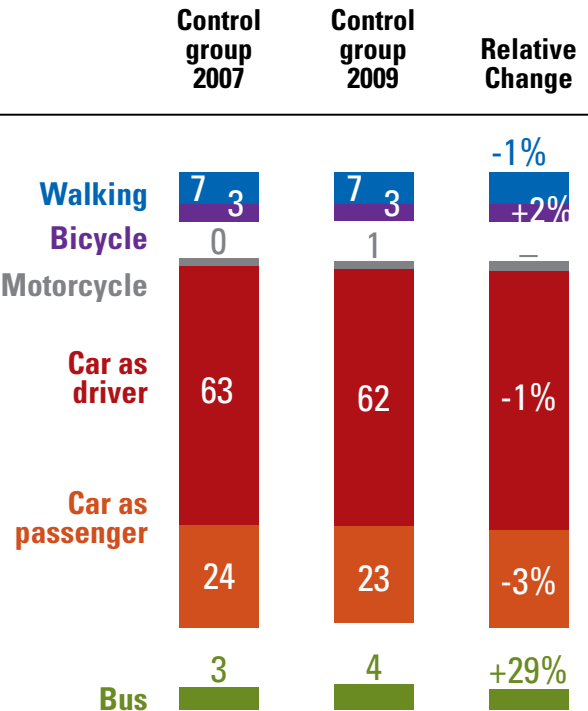
Individualized Marketing has been used in cities around the world. People in a targeted area are contacted at home and engaged in their own educational process, with the result being that they discover their own internal motivations for walking, bicycling and riding transit. The approach is labor intensive, but it produces durable behavior change. Follow-up surveys in Bellingham and other cities have found that reductions in drive-alone trips were maintained or increased three and five years after the projects.

In Bellingham, Individualized Marketing was branded as Neighborhood Smart Trips. For the 2008 campaign, 10,037 households west of I-5 (about one-third of the city) were asked if they were interested in information about walking, bicycling and public transportation. The result is shown in the chart at right.

The campaign provided education and encouragement to the Interested Group (45%) and the regular walkers, cyclists and transit riders who said that they would like more information (9%). The Regular Users without further need for information (4%) were thanked and given a small reward and the Not Interested Group (42%) was left alone. The effect of the campaign was measured by comparing a survey done before the campaign (2007) to a follow-up survey in 2009.



What happened to mode share among residents who were not part of the campaign (the control group)?



The 2007 and 2009 surveys compared mobility behavior in the area of the city where the campaign was conducted, which included most households in the 98225 ZIP code area (target area), with a control group located east of I-5. (As noted in previous charts, sustainable mode use is lower on the east side of the city.) The purpose of the control group was to identify mode share changes caused by activities or conditions in the community that impacted everyone versus the effect of the campaign in the target area.

Worth Noting

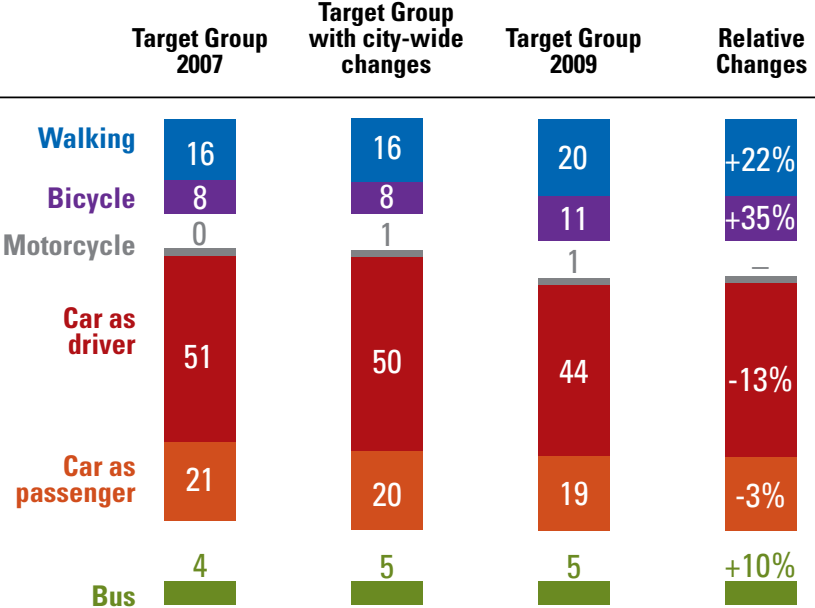
From 2007 to 2009, WTA added another high-frequency GO line and WWU students voted to charge themselves for a universal bus pass. These two activities are a probable explanation for the 29% increase in transit trips and the corresponding decrease in car as driver (-1%) and car as passenger (-3%) trips. A spike in gas prices during the summer of 2008 might also have contributed to increased transit ridership and decreased vehicle use, but that is a less likely explanation, since there weren't similar increases in walking and bicycling trips. (The relative changes in walking (-1%) and bicycling (2%) shown at left are insignificant because they are small changes in small mode shares.) Also, the price of gas had fallen back to previous levels by the time of the survey in 2009.

Why is it important?

We can assume that whatever caused the changes in transit and vehicles trips was something that affected the entire city, including the area of the city where the Neighborhood Smart Trips campaign occurred. In order not to overstate the effect of the campaign, the mode share changes described above must be applied to the target area results. (See next chart.)



What happened to mode share among residents targeted in the campaign (the target group)?



Worth Noting

The first column in this chart shows the mode share for the target area in 2007. (As previously noted, sustainable mode use was already much higher there than in the rest of the city.) The second column represents mode share for the target area with the city-wide changes (measured by the control group) superimposed on it:

- Car as driver trips are assumed to be 50% instead of 51%
- Car as passenger trips are assumed to be 20% instead of 21%
- Bus trips are assumed to be 5% instead of 4%

The third column shows the mode share for the target area in 2009, and the fourth column shows the difference between the mode share in the second and third columns. In other words, the fourth column shows the result of the Neighborhood Smart Trips campaign:

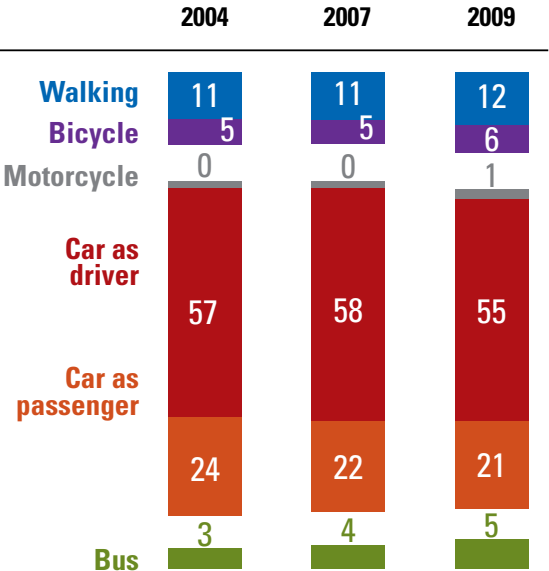
- 22% increase in walking trips
- 35% increase in bicycling trips
- 10% increase in bus trips
- 13% decrease in vehicle trips

Why is it important?

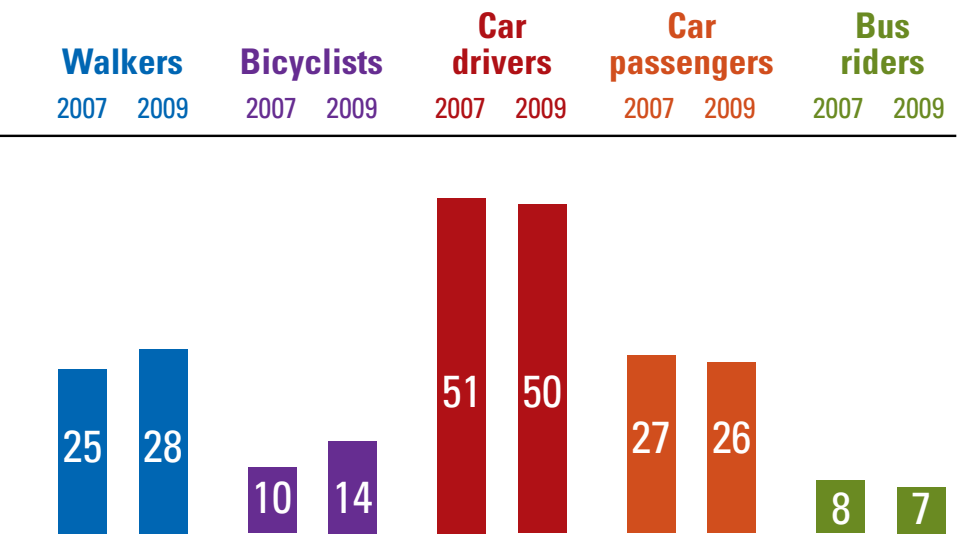
This is the largest measured reduction in vehicle trips of any single project or program designed to increase walking, bicycling and/or transit mode share in a U.S. city. Most strategies to decrease vehicle trips achieve single digit reductions and only for a small subset of the population. For example, a Safe Routes to School project only impacts trips to a certain school, and Washington State’s Commute Trip Reduction program only reduces work trips to large worksites. Similarly, a new bike lane is used mainly by people who live near it. In addition, bike lanes offer no guarantees that users will make fewer vehicle trips, since bike lanes can also prompt cyclists to shift their bike trips from routes with unimproved streets. The mode share changes caused by these types of projects and programs are too small to move the needle for the entire population.

In contrast, the 2008 Neighborhood Smart Trips campaign produced double-digit mode shift among one-third of City residents (survey results include everyone living in the target area, not just those who participated in the campaign). Such large mode shifts impacted city-wide averages, shown in the chart at right:

- Walking increased from 11% to 12%
- Bicycling increased from 5% to 6%
- Transit increased from 4% to 5% (the control group shows that some of this result was due to WTA service improvements and the WWU universal bus pass for students)
- Vehicle trips declined from 58% to 55%



Another way to view the data: Mode Participation



For citizens and professionals working to create a more sustainable transportation system, mode share is the most important statistic to track. Are more of our trips being made by walking, bicycling and riding transit? However, we also want to know if more people are participating in that increased mode share. (We can gain mode share from a group of people making more of their trips with sustainable modes and/or from a larger group of people using sustainable modes.) This chart shows changes from 2007 to 2009 in the average number of people who use a particular mode at least once on a given day in the target area.

Worth Noting

In 2007, 25% of people made one or more walking trips, 10% made bicycle trips, 51% drove a car, 21% rode as a passenger in a car, and 8% rode the bus. As a result of the 2008 Neighborhood Smart Trips campaign, in 2009 more people were walking and bicycling, and fewer people were making car trips:

- 28% walking
- 14% bicycling
- 50% driving cars
- 26% riding as passengers in cars

Although fewer people were riding buses in 2009 than in 2007 (7% down from 8%), we saw on a previous chart that transit mode share still increased 10%. This means that people who were already riding transit made even more of their trips by bus.

Why is it important?

When sustainable mode shares (trips) increase, we gain community-wide benefits: reduced traffic congestion, increased mobility for less cost; reduced pollution, increased support for local businesses, etc. When more people are using those modes, we gain individual benefits: improved health, reduced household expenses, strengthened social connections, etc. We also benefit as a community when a larger percentage of our population uses sustainable modes at least some of the time. For example, drivers who also make walking and bicycling trips are more aware of pedestrians and cyclists, which increases safety for everyone. Greater participation in sustainable modes also increases support for investments in bike/ped infrastructure and transit service.



Another way to view the data: Vehicle Use

In addition to increases in sustainable mode share (trips) and mode participation (people), a third indicator of the success of the 2008 campaign was the reduction in vehicle miles traveled (VMT).

	Target Group 2007	Target Group 2009
Personal Vehicles	16,400	16,400
Miles per day	11.4	9.7
Miles per year (341 days)	63.7 million	54.2 million
Reduction (miles per year)		-9.5 million
Relative reduction		-15%
Reduction of CO₂ (per year)		3,500 tons

Households in the target area owned 16,400 cars in 2007 and in 2009. On average, those cars were driven 11.4 miles per day in 2007. When people in those households started walking, bicycling and riding the bus more, the average car was driven only 9.7 miles per day. To state these as annual figures, one multiplies the number of cars by the miles per day and by the number of days in a year that a person usually spends in their hometown. This means that 9.5 million fewer miles are driven in the targeted area and 3,500 tons of carbon dioxide emissions are avoided each year.

Another advantage to walking, bicycling and transit: Increased Physical Activiity

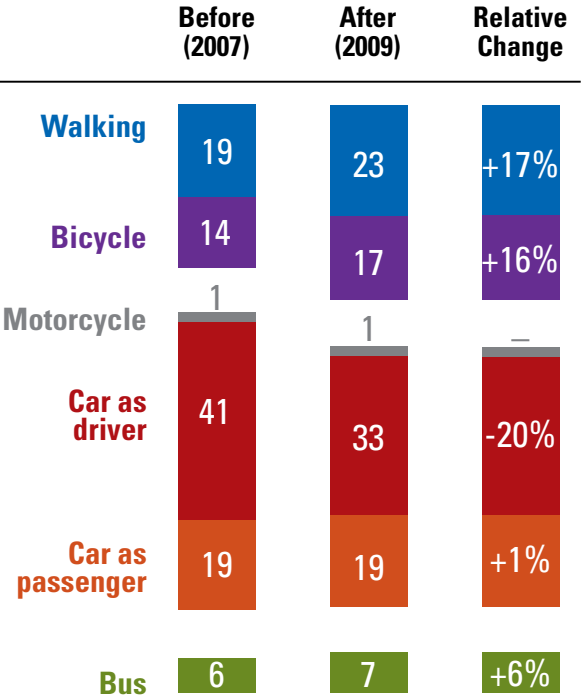
Yet another benefit of the 2008 campaign was the increase in healthy physical activity associated with walking, bicycling and transit trips (which include walking to and from the bus stops).

	Target Group 2007	Target Group 2009
Hours of physical activity per person per year	122	153
Relative increase		25%



Ongoing Smart Trips program boosts the results of the 2008 Individulized Marketing Campaign

Smart Trip Diary Participants



The 2008 Neighborhood Smart Trips campaign was not a stand-alone initiative. It occurred within the context of the ongoing local program called Whatcom Smart Trips, which provides education, assistance and incentives to all community members for all trip purposes. Component programs include:

- Smart Trips Diary (see www.WhatcomSmartTrips.org)
- Smart Trips Incentives
- Emergency Ride Home
- Smart Trips Employer Partners
- Targeted Outreach to Seniors and Women
- School Smart Trips (see www.SchoolSmartTrips.org)
- EverybodyBIKE (see www.everybodyBIKE.com)
- Smart Trips Public Awareness Campaign

The chart at left shows the mode share changes of people who live in the target area and participate in Smart Trip diaries.



Make a difference anywhere you go

Worth Noting

The first column shows that even before the Neighborhood Smart Trips campaign occurred, Smart Trips diary participants living west of I-5 made more walking, bicycling and transit trips than any other group. One might guess that this group had achieved maximum use of sustainable transportation. However, the opposite is true. After receiving educational materials and encouragement from the 2008 campaign, Smart Trips diary participants reduced vehicle trips by 20% (compared to 13% for the entire target area)!

Why is it important?

This is a very encouraging result. It shows that people who are already frequent users of sustainable transportation modes have even greater ability to reduce their vehicle trips. Shifting vehicle trips to other modes has a great deal to do with our attitudes toward and understanding of our transportation options. The more positively we think about sustainable transportation and the more information we have, the greater our opportunities for mode shift.

When asked, many people say that they are prevented from making more of their trips by sustainable modes because of a lack of appropriate infrastructure and inadequate transit service.

Certainly, this is true some of the time. But Smart Trips diary participants in the target area reduced their vehicle trips by 20% *using the same infrastructure and bus service as everyone else in the target area*. In other words, while we can benefit from improved infrastructure and transit service, we already have the ability to switch a large number of car trips to walking, bicycling and transit without these improvements. For many of our trips, the barriers that keep us from making the switch are lack of information and motivation.





Conclusion

In November 2010, Bellingham voters approved a two-tenths of one percent (0.002) sales tax increase to create a Transportation Benefit District (TBD) and provide dedicated funding for priority transportation needs. From 2011 to 2017, WTA will receive \$6 million in TBD funding and the City will spend \$9 million on bike/ped projects. This funding reinstated Sunday bus service and paid for improvements at six intersections/crosswalk locations and the installation of bike lanes on a segment of Ohio Street and the Northwest/Elm/Dupont corridor.

Clearly, these investments will increase safety and provide new opportunities for community members to walk, bicycle and ride transit. They are also important contributions to the continuity of our transportation system. However, because they only benefit a specific area, they are unlikely to noticeably increase city-wide mode share for walking, bicycling and transit. In comparison, three years of Whatcom Smart Trips and one Neighborhood Smart Trips campaign cost \$1.9 million and resulted in significant mode shift in one-third of the city. As mentioned earlier, survey results show that these are permanent increases in sustainable mode use and reductions in vehicle trips.

There is clearly enthusiasm in the community for investments in bicycle and pedestrian infrastructure and transit service. Given the success that Bellingham

has experienced with Whatcom Smart Trips and the 2008 Neighborhood Smart Trips campaign however, we should also seriously consider investments in programs that provide education, encouragement and support. Furthermore, as we continue to invest in physical improvements, we can maximize the benefit of that investment if we accompany it with education and encouragement.

Portland, Oregon has tested the addition of an Individualized Marketing campaign alongside a major investment in transit infrastructure and found that a campaign that cost 0.002% of the total infrastructure investment increased ridership twice as much as the new infrastructure alone. Other cities have found that the effect is even greater in cycling, where the increases in cycling trips are three to four times greater when infrastructure improvements are accompanied by individualized education and encouragement. People working in transportation are fond of the 'low hanging fruit' analogy. Vehicle trips that can be shifted to walking, bicycling or transit trips through education and encouragement are low hanging fruit. When we build better infrastructure and provide more transit service, we are able to pick the 'higher fruit', but even that will achieve greater results if we educate and encourage people to use the new infrastructure.

The text accompanying the tables and charts in this document was written by Susan Horst, Whatcom Smart Trips Program Manager and WCOG project manager for all projects conducted by Socialdata in Bellingham.

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