SmartTrips Green Line Final Report



December 2010





City of Portland Bureau of Transportation 1120 SW 5th Avenue, 8th floor Portland OR 97204 www.GettingAroundPortland.org



SmartTrips Accolades

- * Only in Portland Oregon! Thank you very much for keeping our city so special.
- * Lots of great resources available here! I'm especially excited to see continued development of coupons by businesses who encourage patrons to bike in and save \$. Good incentive!
- **★** This is great. I've wanted to get to work on bike/bus but didn't know how or where to start!
- * This is a fantastic resource. We are starting a walking club at my church and this will provide some great resources. Thanks!
- * Thank you! We really look forward to supporting our local businesses in the Short Tripper.
- * This seems like a great program. Extremely convenient to be able to order online.... plus I love that the materials are delivered by bike!! Thanks
- * We just want to thank you for providing these exciting materials...my family has been wanting to go on more bike rides and walks...thank you thank you thank you!!!!
- ★ Thank you! This is great information at a great price! My tax dollars @ work!!:)
- **★** I love this new program. More exercise and less traffic!

Project Team

City of Portland Bureau of Transportation, Options Division

Linda Ginenthal, SmartTrips Program Manager

Marni Glick, Options Division Manager

Danielle Booth - SmartTrips Production Center and Outreach Events

Dan Bower, Performance Measurement

Rich Cassidy, Ten Toe Express Walking Campaign

Scott Cohen, SmartTrips Business and Evaluations

Timo Forsberg, Portland By Cycle Rides

Donna Green, Senior Strolls

Steve Hoyt-McBeth, SmartTrips Business

Caitlin McCollum, Options Administrative Support

Ianis McDonald, Women on Bike

Andrew Pelsma - SmartTrips Production Center and Outreach Events

Barbara Plummer, SmartTrips Newsletter

Jeff Smith, Portland By Cycle Workshops

Abra Star McNair - SmartTrips Production Center and Outreach Events

Table of Contents - SmartTrip Green Line Final Report

SMARTTRIPS BACKGROUND	. 1
SMARTTRIPS GREEN LINE OVERVIEW	. 2
PROJECT DEVELOPMENT	. 3
Choosing Green Line Portland	. 3
Project Planning	. 3
Community Outreach and Partnerships	, 4
PROJECT DESCRIPTIONS AND EVALUATIONS	. 6
SmartTrips Green Line Residential Order Form	. 6
SmartTrips Green Line Newsletter	. 8
Southeast Portland Walking/Bicycling Map	. 8
Ten Toe Express Walking Campaign	, 9
Senior Strolls	, 9
Portland By Cycle	11
Women on Bikes	13
SmartTrips Business	14
Events/OptionsMobile	15
TriMet Transit Information and Services	16
SmartTrips Events Calendar	17
SmartTrips Web and Email Communications	17
PERFORMANCE MEASUREMENT AND RESULTS	18
MATERIAL DISTRIBUTION	19
STAFFING	20
Volunteers2	20
MATERIALS AND SERVICES BUDGET	21
SMARTTRIPS GREEN LINE TIMELINE	22
APPENDIX A - MEASUREMENT TOOLS AND RESULTS	

SMARTTRIPS GREEN LINE FINAL REPORT

Thirty-three thousand East Portlanders did their part to decrease their neighborhood traffic and pollution and increase their neighborhood's livability. More people are out walking, riding their bicycles, taking transit, carpooling and car sharing than ever before

- because of SmartTrips Green Line.



SmartTrips is in its eighth year working with Portland residents to encourage more people to get around by walking, bicycling, riding transit, carpooling, car sharing, combining trips and reducing their need to drive for their everyday trips. Through a combination of materials, maps, events, activities and personalized information, SmartTrips Green Line showed the same or better results than have been seen in all other SmartTrips projects in Portland. Residents reduced their drive-alone trips by 18.4% and increased their environmentally-friendly modes by 30.4%. More people are choosing healthier, more convenient, and safer ways to get where they are going.

Approximately 25% of those in the target area, or 8,200 SmartTrips Green Line households, either ordered materials or participated in at least one of 95 Transportation Options events including OptionsMobile tabling events. Three thousand four hundred and thirty nine of these households' names and addresses were captured in our SmartTrips database for continued communications. Over 189 area businesses also joined on to promote transportation

options to their employees and customers too. About 900 unsolicited positive comments by area residents showed that the program not only garnered the desired mode-shift changes but fostered a positive attitude toward the work that the City of Portland is doing to make their communities a better place to live.

SmartTrips Background

Portland SmartTrips is a comprehensive approach to reduce drive-alone trips and increase walking, biking transit and carpool trips in targeted geographic areas of the city. It incorporates an innovative and highly effective individualized marketing methodology which, via bike delivery, distributes packets of information to residents who wish to learn more about all their transportation options. Key components feature biking and walking maps and organized activities which help people discover how many trips they can easily, conveniently and safely make without using a car. Success is

tracked by evaluating qualitative and quantitative results from surveys and other performance measures.

Primary goals for the project include:

- Reducing drive alone trips
- Reducing vehicle miles driven by area residents, employees and customers
- Increasing awareness and raising acceptability of all travel modes
- Increasing walking, biking, transit, carpooling and car sharing trips
- Increasing neighborhood mobility and livability
- Increase bicycling and walking safety

The Transportation Options Division of the Portland Bureau of Transportation (PBOT) chooses an area of town each year to implement this program. Area selection is based on analyzing land use patterns, transit service availability, bike and walking infrastructure, and current transit or streetscape infrastructure investments such as new light rail service or bicycle and pedestrian trails.

SmartTrips Green Line Overview

Modeled after the successful "TravelSmart" individualized marketing approach and former "SmartTrips" in seven previous Portland target areas, SmartTrips Green Line invited 33,000 households and 3,500 businesses in a coordinated and comprehensive effort to engage residents, employees and customers in reducing their drive alone trips.

SmartTrips Green Line built and expanded partnerships and programs with health organizations, neighborhoods, businesses and residents in Brentwood-Darlington, Hazelwood, Lents, Madison South, Mill Park, Montavilla, Mt Scott-Arleta, Parkrose, Parkrose Heights, Pleasant Valley, Powellhurst-Gilbert, Foster-Powell, South Tabor, and Sumner.

SmartTrips Green Line, funded in part by a generous grant from Metro's Regional Transportation Options



funds, incorporated successful elements from previous target areas and added a few new ideas in 2010. There were 12 major programs that made up SmartTrips Green Line. Every household was invited to participate in any number of them through mailers and newsletters. Households interested in learning more or attending events were able to order mode-specific information, read newsletters, or attend any of the 95 or more walks, bike rides, workshops, clinics and outreach events in their neighborhood. A detailed description and evaluation of each element can be found under Project Descriptions (page 6).

The SmartTrips Green Line target area in east Portland bordered 72nd Avenue on the west, the city limits north and south, and 122nd Avenue to the east.

Project Development

Choosing Green Line Portland

Following the 2009 North-Northwest Portland program, PBOT Transportation Options identified sections of east Portland as its next area. Three major factors contributed to choosing this area.

NEW LIGHT RAIL AND OTHER INFRASTRUCTURE



TriMet and all the regional government partners finished constructing the Green Line MAX along the I-205 corridor in late 2009. This new infrastructure introduced a new kind of transportation option to the community with transit changes and bicycle and pedestrian infrastructure that went along with light rail construction. One of the earliest neighborhood greenways, Bush Street was completed in the middle of the program as well. This added infrastructure, in addition to providing new facilities, opened the door to starting a conversation around how residents, employees and customers get around town.

PARTNERSHIP OPPORTUNITIES

The East Portland Action Plan Committee provided a link to the community that was interested and willing to work with PBOT and Options on shaping

SmartTrips in east Portland. Additionally, the Immigrant and Refugee Community Organization is located in this area, allowing Options to connect with new Portlanders on their transportation options.

ECONOMIC VITALITY

There are fewer business nodes in east Portland. To help address this issue, SmartTrips coupons, business outreach, and employee commute information were utilized to let neighbors know about local businesses to increase local shopping and local commerce.



EAST PORTLAND ACTION PLAN

Project Planning

A major Transportation Demand Management program of the City of Portland Bureau of Transportation, SmartTrips has been consistently recognized as a successful program. As a result, the typical process for garnering political, agency, and community support was much abbreviated. Planning for the 2010 SmartTrips Green Line began in the summer of 2009 with an overall assessment of areas to implement the program.

Notification to political and agency leadership began in September 2009 regarding location. Program staff requested time on neighborhood and business organizations'

agendas to review the program with their constituents and to garner ideas and input.



SmartTrips Green Line conducted performance evaluation survey work with pre- and post-program interviews in September 2009 and 2010, respectively. Performance measurements allow SmartTrips to utilize Business Energy Tax Credits (BETC) and demonstrate the efficacy of the program. A BETC pre-certification application was filed in August 2009.

Intensive program planning and material design and production took

place from November 2008 to March 2009. All materials and incentives were ready for deliveries to residents beginning the first week in April 2009.

Community Outreach and Partnerships

All residents in the area were contacted at least five times during the yearlong campaign. Each segment of the population was reached with different strategies with Transportation Options' messages. The business outreach SmartTrips program assisted area businesses with active transportation information to their employees and customers including businesses either operated by people of color and/or immigrants and/or serving a primarily under-represented ethnic or cultural group.



Opinion makers and leaders in transportation, for the most part, have heard of SmartTrips and are enthusiastically supportive. To reinforce support and inform these key community leaders, the Options newsletter, a quarterly publication posted on the City's website, includes regular updates on the program and results.

Partners involved in one or more project of SmartTrips included:

- All area neighborhood associations
- All area business associations
- TriMet
- Kaiser Permanente
- East Portland Action Plan Committee
- Portland Water Bureau
- Bureau of Environmental Services

- Zipcar
- Elders in Action
- Bosco-Milligan Foundation
- Gracie's Wrench
- Ararat Bakery
- Gary's Bakery & Bistro
- Panaderia Santa Cruz

In addition to these groups and businesses, 55 additional businesses participated by offering discount coupons or in-kind donations to SmartTrips participants and 189 businesses participated in the business outreach program.



Project Descriptions and Evaluations

Every household and most businesses were invited to participate through mailers, media stories and at neighborhood outreach events. Households interested in learning more or attending events were able to order mode-specific information, read newsletters, or attend any of the 95 walks, bike rides, workshops, clinics and outreach events in their neighborhood. The 12 major programs that made up SmartTrips Green Line are detailed below.

SmartTrips Green Line Residential Order Form

(Lead Staff - Linda Ginenthal)

To inform residents about the various projects, Options sent each household a SmartTrips Green Line mailer from the PBOT Director introducing the program to residents. This was coupled with an order with a menu of materials to pick and choose "Who knew there were so many resources for getting around, most without a car! This is a great promotion."

form

regarding all their transportation options. The mailer addressed each transportation mode and offered materials for each project, including the Portland By Cycle bicycle kits and Ten Toe Express walking kits, Women on Bikes and Senior Strolls information and calendars, all event and class schedules, Portland Neighborhood Walking/Bicycling Maps, TriMet, Zipcar



and CarpoolMatchNW.org materials. In partnership with the Portland Water Bureau, the order form included an indoor and outdoor water conservation kit.

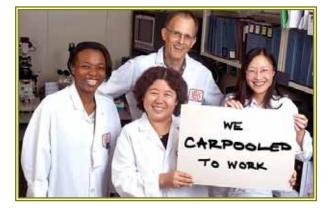
In 2010, the order form was again translated into Spanish and included on the English order form as an added flap. The Spanish flap listed those items available in Spanish including the Walk to Wellness brochure, Oregon Crosswalk Laws flyer, all area walking/biking maps, Portland By Cycle Guide to Your Ride, Oregon Bicyclist Manual, Bicycle Helmet brochure, and Viaje Mejor from TriMet. Only a small number of households

ordered materials in Spanish (20 or .6%).

From November 2009 to March 2010 all materials and incentives were developed and

ordered. This included soliciting area businesses for coupon book inclusion, identifying walk and ride start locations and routes, workshop and clinic topics and locations, and compiling incentives, information and maps that residents could order. Materials were designed, printed, compiled, assembled and stocked in the production center ready for deliveries by April 2010.

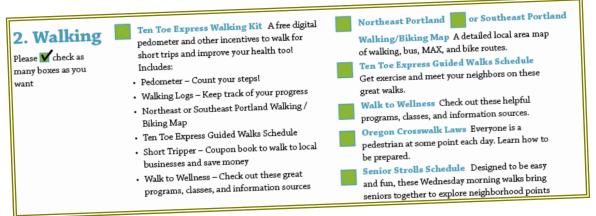
To increase return rates for the project, a letter from the director of PBOT, Sue



Keil, was sent in a PBOT envelope inviting households to participate. It is unclear whether this had any impact on the return rates of the order forms. Order forms were mailed

beginning April 5, 2010. Within two to three weeks of receiving their order, residents received their requested materials in a waterproof vinyl tote bag with an attached paper luggage tag with their name and address.

Excerpt SmartTrips Green Line Residential Order Form



The speed, efficiency and professional materials included in the program were central to making the program a success. A packet delivered six weeks after it's ordered is too late. For most households a bicycle delivery person hand-delivered each packet to the SmartTrips residents' home or left it on the porch or another conspicuous spot. When delivery attempts were unsuccessful, staff contacted the resident by their email or phone to arrange delivery. When these methods were also a challenge, packets were mailed.

To ensure prompt delivery the target area was divided into 10 sectors and the order form was mailed in batches over a ten-week period. This made possible a two-three week



delivery turnaround time for most requests. To increase participation, a reminder postcard was sent to households five weeks after the initial order form mailing. An online order form was developed and proved to be effective as 44% of all orders were received online.

Of the 33,000 households in the target area, a total of 3,196 households ordered materials for a return rate of 9.7%. This is a smaller percent return rate than in previous

SmartTrips areas. To address this lower rate of return, Ten Toe Express and Portland By Cycle kits were distributed through several other east Portland venues including libraries, community centers, farmers markets, and at community events.

SmartTrips Green Line Newsletter (Lead Staff - Barb Plummer)



Residents were mailed five newsletters over the course of the program. The newsletters provided information on traffic safety and SmartTrips Green Line projects, a calendar of events, and other useful resources. The first issue was sent out in March, followed by a May issue and three additional issues every two months after that.

The first three newsletters were sent to all households in the target area. Subsequent issues were sent to residents who had expressed interest by returning the SmartTrips order form or attending an event.

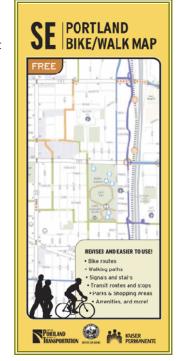
Southeast Portland Walking/Bicycling Map (Lead Staff – Timo Forsberg)

The Southeast Portland Walking/Bicycling Map was the final map revision in the Portland Walking/Bicycling map series. It was revised to include all of southeast including east of I-205 for the first time. The map includes the area bounded by the Willamette River, the eastern city limits, Burnside and the southern city limits. Kaiser Permanente sponsored the printing and production costs for the map.

All households ordering materials received either a Southeast or Northeast walking/bicycling map based on which quadrant they lived in. The maps were also a key component of the Ten Toe Express and Portland By Cycling Kits. Maps were distributed at all neighborhood events and at the Ten Toe Express walks, Senior Strolls, Portland By Cycle rides and classes and Women on Bikes rides and clinics.

In addition to the walking and bicycling routes mentioned above, all the maps highlights stairs, bus and MAX routes and stops, schools, community centers, parks, Heritage trees, retail areas, and other points of interest. The maps also include resource information and a

list of other publications and information on walking clubs and bicycling safety tips.



Ten Toe Express Walking Campaign (Lead Staff - Rich Cassidy)

TEN TOE EXPRESS KITS

Options' Ten Toe Express walking campaign and kit sponsored by Kaiser Permanente were a great success. Five thousand one hundred and twenty



walking kits made there way into Green Line area residents hands. Through SmartTrips Order Forms, 2,594 kits were distributed to residents. An additional 1,905 kits were distributed at libraries and community centers. The remaining 661 were distributed at walks, community events and schools in the area.

"What a great program to encourage walking which is something I am just beginning to do more of..." The kit included a digital pedometer to count one's steps, the Southeast or Northeast Portland Walking/Bicycling Map, a guided walk schedule, and a Short Tripper coupon book with over \$100 in savings at 55 local businesses. According to several

businesses, the coupon book was a particularly welcome item during this economic downturn. Several businesses sent emails praising the books as successful ways of bringing in new customers. Distributing expired versions of previous year's books in the first mailing to the Green Line area businesses, along with quotes from participating businesses, helped get the idea across and boost the initial return (participation) rate.

TEN TOE EXPRESS WALKS

To help people get started and meet others to walk with, Options planned 10 different walking routes in the area of varying lengths. Staff led 17 walks from May to September. Each highlighted great places to walk within various Green Line neighborhoods.

The walks featured many beautiful parks and natural areas, such as Powell Butte and the Grotto. Two business clusters also highlighted were Montavilla and Gateway, as well as historical points of interest in east Portland. Many walkers from the last few years continued to participate in the walking tours. Attendance was very



good with over 200 participants total. Many walks averaged 40-60 people. This year, May and June were exceptionally wet, which depressed turnout for walks. Later in the season, attendance rebounded.

Senior Strolls (Lead Staff – Donna Green)

Senior Strolls is an outreach program intended to get seniors walking more as well as to encourage them to consider walking as a transportation option. A series of stroll routes showcased local points of interest, including residential and commercial areas, parks, historic schools and churches, libraries, transit centers, etc. The series is planned in such a way that

the shorter strolls precede the longer strolls, thus enabling seniors who haven't been walking to build endurance.

The 2010 SmartTrips East Portland Senior Strolls Program offered 22 different strolls between May and October, ranging in length from 1 - 2.5 miles. Despite the cooler-rainier-than-usual summer, this was a banner year for the program: more people attended the strolls in 2010 than in previous years.

The average number of participants per stroll in 2010 was 31. There were 69 new people who attended at least



one stroll in East Portland with at least 1 new person on all but 5 of the strolls. Many participants were repeat strollers from each of the program's 5 previous years. This year included the Senior Cycling Safety class in concert with Portland Parks Senior Cycling program.

"I am a senior and have just moved to Portland. Am so excited to walk the city and meet fellow walkers. Thank you so much."

There were several opportunities to learn about the strolls, be it through the SmartTrips order form, articles in senior publications, or schedules left at senior residential facilities as well as at area community and senior centers. All participants from previous years

were mailed a schedule, and staff mailed out an additional 50+ schedules per phone requests. A follow-up survey is sent to participants at the end of every SmartTrips season.

A welcome kit was given to all participants including information, such as the Northeast and Southeast Portland Walking/Bicycling Maps, a walking log, a pedometer, a Ten Toe Express Walk Schedule, a flier on Multnomah County Aging and Disability Services, Ten Toe coupon book, magnifier/bookmark, and other items.

RESEARCH
SHOWS
THAT
REGULAR
WALKING
CONTRIBUTES
TO YOUR
OVERALL
HEALTH
AND FITNESS
IN THESE
IMPORTANT
WAYS:

- · Helps control weight
- Boosts immune system
- · Relieves stress and worry
- Contributes to "brain fitness"
- Strengthens heart, joints and bones
- Reduces blood pressure, risk of stroke, and cholesterol
- Improves mood, self-esteem, balance, and circulation
- Gives an energy boost and promotes a good night's rest
- Can delay or prevent major disease or illness

Portland By Cycle (Lead Staff -Timo Forsberg and Jeff Smith) The goal of the Portland By Cycle campaign is to encourage new and existing bicycle riders to use their bicycles for more trips and new trip purposes. To help residents overcome barriers to cycling, Options offered a Portland By Cycle kit with accessories and information, Portland By Cycle rides and workshops, Women on Bikes rides and clinics, bicycle helmet distribution, Get Lit bicycling lights distribution, and individualized bike route planning.



PORTLAND BY CYCLE BIKE KIT

The Portland By Cycle Bike Kit proved popular again with local residents. Fifty four percent of all households ordered a kit from the order form. An additional 2,075 kits were distributed at libraries and community centers in the Green Line target area. Seven hundred and twenty

FREE	customiz	ed bik	trip plan	
Tell us when	e you want to go and	we'll show you	the best route:	AESP
NAME ADDRESS				PÖRTLAND IKÄÄSPORTAIDON
ZIP	E-MAIL			_
a to	CHOOSE ONE:	Quickest	■ Least traffic ■	Fewest hills
A §			ADDRESS OR NEAREST	INTERSECTION
B			ADDRESS OR NEAREST	INTERSECTION

kits were given out at Options events and activities. As always, the bicycle maps were in high demand. The reflective leg band, ride and workshop schedules, and Women on Bikes information were also well received.

Staff prepared 7 individualized bike route trip plans requested by SmartTrips Green Line participants.

PORTLAND BY CYCLE RIDES
The 2010 Portland By Cycle rides

consisted of 18 rides aimed at adult riders who are new to cycling. Following tradition, most of the rides took place on Tuesday and Wednesday evenings in July and August. Some innovations in this year's series include the addition of two weekday afternoon rides and a

Sunday morning ride to the East Sunday Parkways.

The Tuesday rides started from Lents Park in SE Portland in July and from Glenhaven Park in NE Portland in August. The Wednesday rides embarked from the East Portland Community Center in SE Portland. Ride themes such as "Parks and Gardens" and



"Public Art" provided a framework for selecting the routes and served to entice participation from a broader audience than committed cyclists.

Most routes were designed to provide a comfortable and safe riding experience, about 8 to 10 miles long for beginning cyclists. The Sunday Parkways ride was less than 3 miles long, and

"I had a great time on the rides in which I participated. It was great getting to know areas I haven't biked before and gave me confidence in knowing that I can get around." designed to encourage Sunday Parkways participants to ride to the event. The 2nd annual "Autumn Adventure" was the final ride for both the Portland By Cycle and Women on Bikes series, lasting 3 hours and covering 25 miles.

Cumulatively the series attracted 127 attendees, comprised of 73 different riders. This was the lowest number of participants in the last five years, and the second lowest number of discrete participants since 2007. This is consistent with the lower participation numbers reported by other bike-related SmartTrips activities and the response rate to the SmartTrips Green Line order form.

In addition, 53 riders participated in the East Portland Action Plan Bike Subcommittee (EPAP Bike) rides. (More below.)

The weekday afternoon rides showed the poorest attendance, though this may have been influenced by start location. The rides starting from East Portland Community



Center averaged 4.4 riders each, compared with 10.75 riders average for the Lents Park rides and 11.5 riders average for the Glenhaven Park rides.

Options staff was aware that attracting riders would be more challenging in this target area, given the existing low-ridership and unwelcoming streetscape conditions for beginning riders (lack of connectivity for neighborhood streets and unsignalized crossings at many large arterials). One strategy to extend the reach of SmartTrips' messages was to partner with EPAP Bike, a group of residents working to improve conditions for biking and increase ridership in East Portland.

Each ride employed at least two volunteers: one to lead the ride and an additional ride assistant. Volunteers were trained and instructed on their roles and responsibilities.

PORTLAND BY CYCLE WORKSHOPS
Eight Portland By Cycle workshops were
offered weekly during May, June and one in
September including Bike Commuting Basics,
Bike Maintenance Basics, Bike Touring,
Shopping by Bike, and All Season Cycling,
Senior Cycling, and Buying a New or Used



Bicycle. There were nearly 100 participants for all the workshops.

There were 97 total attendees for all the classes. The best-attended sessions were Bike Maintenance and Shop By Bike, with 25 and 20 people, respectively. There was a waiting list for both of these sessions. Additionally, Senior Cycling Skills was especially well-attended, with 28 participants. The other five sessions ranged from 4 to 6 participants.

Sessions were led by Transportation Options staff, with content developed by Options staff. For the *Bike Maintenance* class as well as *Buying for a New or Used Bike* we relied on outside experts to lead the sessions. Classes were held at the East Portland Community Center, with the exception of *Buying a Bike*, which was held at *the Outer Rim* bike shop.

<u>Women on Bikes</u> (Lead Staff – Janis McDonald)

The Women on Bikes program held 11 rides, two bonus rides and six clinics. As previous years, participants of all ages



became more familiar with the bicycle. They stretched their comfort levels and conquered their fears, especially with navigating traffic.

East Portland presented some unique challenges. There is an overall lack of street connectivity and high traffic speeds on through streets. Additionally, some neighbors questioned the importance of bicycling. East Portland includes a large number of immigrant



and refugee and low-income families which adds the barriers of language, culture and bicycle ownership.

This year 50 women participated; the lowest year yet for the program. Challenges stated above were exacerbated by the rainy and wet May and June. Most of the participants were 40-50 years old. All had ridden at some point in their lives, but some had not been on a bike for 20-30 years. Also, some did not own a bike at the time of the program. Most women wanted more knowledge (how to ride in traffic,

bike maintenance, gear for themselves) in order to get started or to ride more often.

This year partnerships were formed with Parks, Immigrant and Refugee Community Organization (IRCO), Bureau of Human Relations, Office of Neighborhood Involvement, East Portland Action Plan Committee and Bike Subcommittee,

"Because of the Women on Bikes clinics, I bought a new bike and began riding to work 2 times a week."

Community Cycling Center and Gracie's Wrench. This was the first target area where WOB worked closely with community groups to help in planning and promoting rides and clinic. This kind of collaboration was promising and will be repeated and expanded next year.

The clinics and conversations covered bike selection, gear for bike and cyclist, bike handling

skills, basic to more in-depth bike maintenance, the city's bikeway network, cyclists' rights and responsibilities, and winter commute tips. Rides enabled participants to practice skills, try different routes, meet other women to ride with, and demonstrated the ease of getting around by bike.

SmartTrips Green Line residents were offered the Women on Bikes brochure with a calendar of rides and clinics. The brochure was also included in the Portland By Cycle kit.



<u>SmartTrips Business</u> (Lead Staff – Steve Hoyt-McBeth and Scott Cohen) SmartTrips Business (STB) is the outreach component of SmartTrips promoting transportation options for employers, commuters, and shoppers. SmartTrips Business



partners with Portland employers citywide to promote commute options, while supporting area businesses by encouraging neighbors to walk and bicycle to local shops. Each spring and summer, SmartTrips Business conducts focused outreach in the SmartTrips target area.

In the Green Line Target Area, STB assisted 189 businesses to provide active transportation information to their employees and customers. This support included 30 businesses either operated by people of color and/or

immigrants and/or serving a primarily under-represented ethnic or cultural group.

STB offered businesses a suite of free transportation resources, including a bike rack installation, employee commute options kits, neighborhood bike and walk maps for customers, and information on the Business Energy Tax Credit and TriMet's transportation program. The project placed a human face on PBOT to the local business community while

demonstrating the economic benefit to local businesses of supporting sustainable transportation.

STB used direct mail to make initial contact with employers. Program staff sent a brochure with a postage-paid, tear-off order form to the 3,500 business mailing addresses in the target area. Every employer that returned the order form was entered into a drawing for a free advertisement in their local neighborhood newspaper. In addition,



STB staff contacted every business association in the target area and presented at four association meetings. Finally, program staff went door-to-door in each of the target areas' eight commercial corridors to offer free resources.

This free assistance to businesses and employees included:

- **★** Educating local employees about transportation options by providing 956 sustainable transportation kits to employees, including 79 Spanish-language packets. These kits included carpool, transit, walking and bicycle resources.
- Distributing 4,803 neighborhood bike and walk maps to customers of participating businesses, including 244 Spanish language maps. STB offered businesses a map holder with their neighborhood walk/bike map, along with a window sticker to drive foot traffic into the business. One-hundred fifty eight businesses (158) offered their customers these neighborhood bike/walk maps.
- Installed ten bike racks in front of participating businesses at no charge to the business.
- STB was unable to fulfill roughly two-thirds of rack requests because of insufficient right-of-way, as PBOT can only install these racks on public property. A large number of businesses in the target area were in strip retail centers with private, off-street parking.
- Partnered with the Gateway Business Area Association (GABA) to hold their first GABA Mother's Day Bicycle Ride. Over 75 families attended the event and 100 youth were fitted with free bicycle helmets. GABA has already contacted STB about continuing this event in 2011.

Small business owner Randy Plew shows off his newly installed bicycle rack.

Events/OptionsMobile (Lead Staff - Danielle Booth, Abra McNair and Andrew Pelsma) The OptionsMobile, a hybrid vehicle modified to act as a mobile display and tabling event

car, was at six outreach events the SmartTrips Green Line area. Twenty trained volunteers, known as Options Ambassadors, helped staff these events along with the bike delivery staff. Information on SmartTrips activities was available as well as a host of other Portland Transportation materials including bicycle and walking maps, transportation fact sheets, and brochures and information about transportation options.



all

<u>TriMet Transit Information and Services</u> (Lead Staff - Danielle Booth, Abra McNair, and Andrew Pelsma)

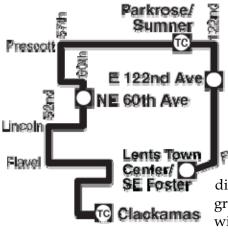


the TriMet and Transportation Options partnership.

"This is a great program, especially for someone like me, who takes the bus and likes to walk!"

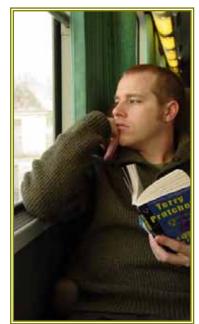
One thousand nine hundred and three households, or 60% of SmartTrips participants, ordered some kind of transit information including bus and MAX

schedules and Honored Citizen guides. Personalized transit tracker cards were distributed to 1,166 households 37% of all orders.



Transit tracker cards included the two to four closest bus stop ID numbers, enabling participants to find out, real time, when their next is going to arrive at that stop. This service, once discovered by participants, greatly increases the willingness to ride transit –

eliminating the waiting factor. Even with a schedule, the certainty of when the next bus will actually arrive contributes greatly to a better overall transit experience.

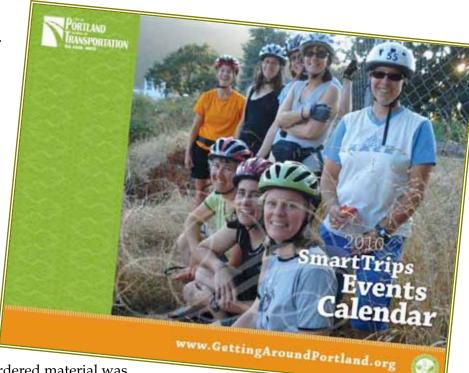


or

in bus

SmartTrips Events Calendar (Lead Staff - Linda Ginenthal)

To pull all the programs together, an events calendar was created for May through December with dates, times, start locations and a location map for the SmartTrips walks, strolls, rides, clinics, workshops and kick-off event. Each month highlighted different programs including Portland Sunday Parkways in September and Safe Routes to School International Walk + Bike to School Day in October.



Every household who ordered material was given this handy schedule along with a thank you letter with contact information.

<u>SmartTrips Web and Email Communications</u> (Lead Staff - Scott Cohen, Timo Forsberg and Barb Plummer)

SmartTrips Business maintains an ongoing robust online presence with a Commuter Central Blog and Facebook and Twitter accounts. SmartTrips Green Line website was developed and launched in March 2010. All rides, clinics, classes and walks were posted



to both the SmartTrips calendar and PortlandOnline Calendar of Events. The Commuter Central Blog enjoys 10,000 average monthly visitors. To date, 165 have "liked" SmartTrips on Facebook and 207 follow SmartTrips Business on Twitter.

SmartTrips messages were also sent every two weeks to the 8-9,000 SmartTrips participants from previous years. As Green Line residents participated, they were added to this list for 3-4 short story communications. These email blasts covered all



SmartTrips events as well as other interesting and timely topics on transportation options, healthy and active living, and other Portland themes.

Performance Measurement and Results

The SmartTrips Green Line conducted both before and after surveys in the SmartTrips area. Professional survey consultants conducted these phone interviews in September 2009 and October 2010. Additionally, mail and web qualitative surveys were sent to specific program participant households.

The pre- and post-program trip diaries showed a relative decrease in drive alone trips of 18.4% and a 7.3% relative decrease in all driving trips (not including self-defined carpooling) for all residents in the SmartTrips Green Line target area. The discrepancy between drive alone trips and all driving trips is due to a new category in the survey. Respondents can choose "drive with others not as a carpool" to differentiate between intentional carpooling and driving trips that simply include more than one person.

SmartTrips Green Line influenced behavior change across the board to varying degrees, with significant decreases in auto use for work trips and significant increases in carpooling and transit trips. Overall, environmentally-friendly trips increased 30.4% after the SmartTrips program.

For more detailed performance measures see Appendix A.

Material Distribution

SmartTrips Green Line Specific Materials	Quantities Distributed	ST Residential Order Form		
SmartTrips Green Line Newsletters	1^{st} , 2^{nd} , and $3^{rd} = 33,500$ each 2			
	newsletters 4,000 each			
SmartTrips order form & postcards	33,500 each			
SmartTrips Business order form	3,500			
Southeast Portland	4,000 (with Ten Toe, Portland By	X		
Walking/Bicycling Map	Cycle, and Employee kits)			
Northeast Portland	5,000 (with Ten Toe, Portland By			
Walking/Bicycling Map	Cycle, and Employee kits)			
Ten Toe Express walking kits	5,000	X		
Portland By Cycle kits	4,000	X		
Portland By Cycle flyer	7,000 (in PBC kit)	X		
Women on Bikes flyer	5,000 (in PBC kit)	X		
Portland By Cycle Guide	6,000 (in PBC and Employee kit)	X		
Senior Stroll flyer	2,750	X		
Employee kits	877			
Employee kits in Spanish	79			
Incentives				
SmartTrips Umbrellas	1,324	X		
Bandana Bicycle Maps	804	X		
Walk There! Booklets	946	X		
Transportation Options Materials				
Citywide Bicycle Map	6,000 (in PBC kit)	X		
North Portland Neighborhood	650	X		
Bicycling/Walking Map				
Northwest Portland Neighborhood	600	X		
Bicycling/Walking Map				
Southwest Portland Neighborhood	600	X		
Bicycling/Walking Map				
Downtown Bike Map	1,100	X		
All Neighborhood Bicycling/	290	X		
Walking Maps in Spanish				
CarpoolMatchNW.org materials	270	X		
Other Agency/Organizations Materials				
TriMet info, maps, schedules,	5,000	X		
Honored Citizen information				
Zipcar brochure	660	X		
AAA Safe Driving for Seniors	492	X		
booklet				
Smart Driver brochure	850	X		
Water Bureau Conservation kit	2300	X		

Staffing

Staff Person	Lead Role	FTE Time %
Linda Ginenthal	Program Manager; Planning and Implementation	43%
Marni Glick	Options Division Management	17%
Danielle Booth	SmartTrips Delivery and Outreach	27%
Dan Bower	SmartTrips Performance Measures	37%
Rich Cassidy	Ten Toe Express	70%
Scott Cohen	SmartTrips Business and Evaluation	28%
Timo Forsberg	Portland By Cycle Rides, Website	86%
Donna Green	Senior Strolls	41%
Steve Hoyt-McBeth	SmartTrips Business	19%
Janis McDonald	Women on Bikes	84%
Abra McNair	SmartTrips Delivery and Outreach	25%
Andrew Pelsma	SmartTrips Delivery and Outreach	25%
Barbara Plummer	SmartTrips Newsletter, Communications	72%
Jeff Smith	Portland By Cycle workshops, trip planning	8%
Total Staff Time		5.8 FTE

Volunteers

Volunteers were used extensively for the OptionsMobile outreach events, Portland By Cycle and Women on Bikes rides, and Ten Toe Express and Senior Stroll walks. Most volunteers were trained Options Ambassadors. Ambassadors received three to four hours of "classroom" training as well as training on the job. A total of 20 new and returning Ambassadors participated in the SmartTrips Green Line projects.



Materials and Services Budget

The program costs amount to \$10 per person in the SmartTrips area. This 33,000 household or 79,200 resident and 3,500 businesses cost \$721,916. This includes 5.8 FT staff and most materials and services. Not included are computer and general overhead (staff benefits are included) plus printing of some bicycle maps and transit schedules.

Program Categories	Actuals	
SmartTrips Options Materials	\$56,270	
Southeast Walk/Bike Map	\$12,200	Kaiser Permanente
		sponsorship
Professional Surveys	\$35,000	
Ten Toe Express Walking Campaign	\$24,260	Kaiser Permanente
		sponsorship
Portland By Cycle Kit	\$29,270	
Rides and Workshops		
Women on Bikes	\$3,500	
SmartTrips Green Line Newsletter	\$30,900	
Senior Strolls	\$2,150	
SmartTrips Business	\$19,250	
Miscellaneous	\$470	
Totals	\$213,270	

In kind Support included the following:





- **★** Transit Schedules and Honored Citizen kits TriMet
- **★** Water Conservation kits City of Portland Water Bureau
- **★** Zipcar brochures and discounts Zipcar
- * Bicycle Transportation Alliance and Willamette Pedestrian Alliance brochures





SmartTrips Green Line Timeline

September 2009

Before survey in the field

November

- Project work plans developed
- Neighborhood notifications

December

- Finalized Planning
- Solicit sponsorships and coupons

January 2010

- Project materials development and community input on projects
- Partnership agreements finalized
- Continued materials development

March

- 1st Newsletter
- Sent out SmartTrips Business order form
- Materials printed and assembled

April

- 1st SmartTrips Order Form sent
- Began filling resident's orders
- Materials delivered to businesses

May

- 2nd Newsletter
- Resident orders forms mailings and deliveries continue
- Ambassador and Volunteer Trainings
- Senior Strolls began
- Ten Toe Express Walks began
- Portland By Cycle Workshops began
- Women on Bikes clinic and rides began

June

- Resident order forms mailings and deliveries continue
- Ten Toe Express Walks
- Senior Strolls
- Ride leader training
- Portland By Cycle Workshops
- Women on Bikes clinic and rides
- Follow up with participating businesses
- Options Mobile events

July

- Order Form cont. going out
- 3rd Newsletter
- Portland By Cycle rides
- Ten Toe Express Walks
- Senior Strolls
- Options Mobile events
- Women on Bikes clinic and rides
- Door-to-door visits of businesses in main commercial districts
- Sunday Parkways event East Portland with East Portland Exposition

August

- Portland By Cycle rides
- Ten Toe Express Walks
- Options Mobile events
- Senior Strolls
- Women on Bikes clinic and rides

September

- 4th Newsletter
- Options Mobile events
- Portland By Cycle rides
- Ten Toe Express Walks
- Senior Strolls
- Portland By Cycle Workshops
- Women on Bikes clinic and rides
- Survey all participating businesses

October

- Walk and Bike to School Day
- Portland By Cycle rides
- Women on Bikes ride
- Options Mobile events
- Senior Strolls
- After resident survey in the field

November

- Compiled Projects evaluations
- Final Newsletter

December

Final Report written and posted online

SmartTrips Green Line Final Report Appendix A

Measurement Tools and Results

December 2010 Portland Bureau of Transportation Transportation Options

Appendix A Measurement Tools and Results

SmartTrips Portland was once again successful at shifting behavior and reducing drive alone trips in 2010 with SmartTrips Green Line. The individualized marketing approach coupled with outreach activities and customized rides, walks, and clinics reduced drive alone trips and increased environmentally friendly trips for all types of trips including work, leisure, shopping, and school.

Methodology

As with past programs, SmartTrips Green Line was evaluated using statistically significant survey data collected before and after the SmartTrips program. This report outlines the travel behavior change results from the survey.

Data collection firm, Davis Hibbits Midghall (DHM), conducted panel-style, pre- and post-program phone surveys. Six hundred residents living in the SmartTrips Green Line target area responded to a phone survey consisting primarily of a 24-hour trip diary in September 2009 and again in October 2010.¹ In addition to the 24-hour travel diary, the phone survey also asked a number of qualitative questions to help determine if SmartTrips shifted target area residents' attitudes about, and knowledge of, transportation options. In order to accurately represent the target area's demographics, survey respondents are selected to reflect the most recent census data (2000).².

Results

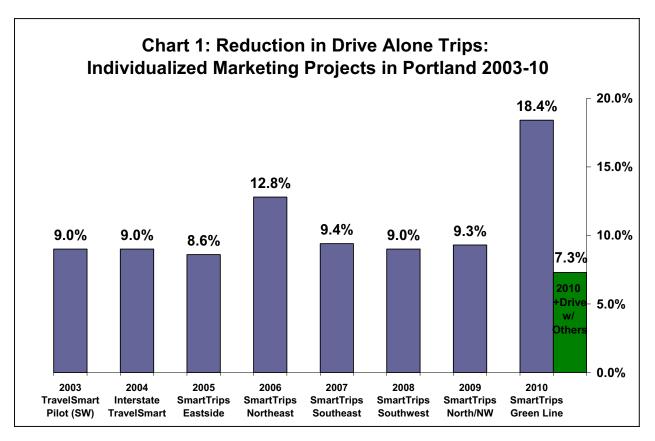
The pre- and post-program trip diaries showed a relative decrease in drive alone trips of 18.4% and a 7.3% relative decrease in all driving trips (not including self-defined carpooling) for all residents in the SmartTrips Green Line target area. The discrepancy between drive alone trips and all driving trips is due to a new category in the survey. Respondents can choose "drive with others not as a carpool" to decipher between intentional carpooling and driving trips that simply include more than one person.

_

¹ The post-program data surveyed 600 east Portland residents, reaching only 193 of the original 600 respondents. The 407 new respondents for the post-program survey have the same age, gender, and area of residence characteristics as the original survey population that did not respond to the post-program survey. In order to mitigate attrition rate for the post-program survey, DHM communicated with respondents via email, mail, or phone after the pre-program survey. However, the low rate of response (32%) for the follow-up survey suggests that additional measures are necessary to maintain the integrity of the baseline survey data or a new data collection method is required.

² Survey respondents did not reflect the overall composition of the target area, requiring DHM to weight the collected data to more accurately reflect census data. This is a common practice.

The 7.3% decrease in driving trips is consistent with past individualized marketing projects in the region, as shown in the Chart 1 below. While an 18.4% decrease is significantly higher than in past years several external factors, most notably the economic recession, probably contributed to the significant decrease in drive alone trips.



Survey respondents recorded an average of 2.16 trips per day in the post survey, which is very similar to the 2.26 trips per day reported in the pre, and signifies that residents can change their behavior without greatly affecting their personal mobility.³

SmartTrips Green Line influenced behavior change across the board to varying degrees, with significant decreases in auto use for work trips and significant increases in carpooling and transit trips. Overall, environmentally-friendly trips increased 30% after the SmartTrips program (Chart 2, below)

_

³ Once respondents reported returning home, surveyors considered the trip diary complete. Respondents may have had taken additional trips that were not recorded.

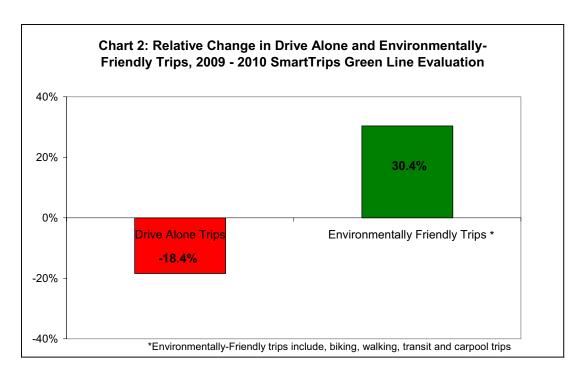
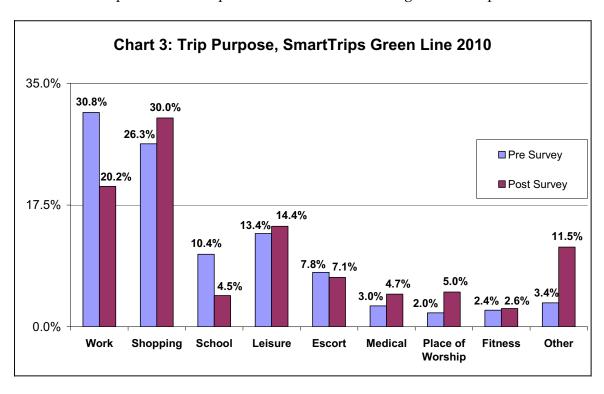


Chart 3 below outlines the trip purposes for both the pre- and post-surveys. Work and school trips declined significantly and trips that were classified as "other" increased nearly 300%. While the decline in work trips most likely reflects the economic recession, the increase in other trips is difficult to decipher. The collected data does not always include a description and it is up to the data collector to categorize the trip as "other".



There was also a correspondingly significant drop in drive alone trips to work which accounted for a large portion of daily average vehicle miles reduced. (See Table 1a)

There were other interesting trends that emerged from the data collection including:

- PBOT's annual bicycle counts showed a 9.5% increase in the number of cyclists at 17 locations in east Portland during the SmartTrips program.
- Carpooling nearly doubled in the target area.
- Transit use increased nearly 15%.
- Approximately 75% of survey respondents said safety concerns did not limit the amount they walk, bike, or take transit. This suggests that other factors are limiting their transportation choices or they are not interested.

Effectiveness of Reducing Vehicle Miles Traveled (VMT)

The average Portland resident travels 20.3 miles in a vehicle each day, according to Metro's Data Resource Center. The goal of SmartTrips Green Line was to reduce the amount of daily vehicle miles traveled (VMT) by helping residents shift one or two trips per week from driving alone to bicycling, walking, carpool, and/or transit. Each trip, regardless of purpose or distance, represents significant energy savings while contributing to the City's goal of reducing greenhouse gas emissions.

SmartTrips Green Line helped saved over 48 million VMT in 2010, which is equivalent to shifting over two trips per week, per person in the target area from driving alone to a more environmentally-friendly mode such as walking, bicycling, carpooling or transit.

The VMT calculations take into account changes in behavior associated with each type of trip (work, leisure, shopping, etc.) recognizing that some trip types are, on average, longer than others and that SmartTrips Green Line affected different types of trips to varying degrees. For example, the surveys show that the program was most effective at reducing drive alone trips for work trips and ineffective for "other" trips.

Comparing the changes in drive alone rates from pre and post surveys among each trip purpose yielded a net reduction of 2.95 VMT per day, per person in the target area. The majority of the VMT reduction came from work and shopping and leisure trips. Table 1a below details the VMT changes by trip purpose.

Table 1a: Vehicle Miles Reduced Calculations: SmartTrips Green Line (Drive Alone Only)

		Shopping /				
	Work / School	Leisure	Fitness	Escort	Other	
Average Drive Alone Trip (miles)*	8.4	4.9	3.1	4.9	5	
Average Trips Per Day Pre (2.26)	0.93	0.88	0.05	0.18	0.075	
Average Trips Per Day Post (2.16)	0.52	0.95	0.06	0.15	0.24	
Drive Alone Mode Split Pre	73.0%	62.4%	50.0%	47.5%	62%	
Drive Alone Mode Split Post	63.0%	50.0%	28.6%	37.5%	64%	
Average Daily Drive Alone VMT Pre	5.70	2.69	0.08	0.42	0.2325	
Average Daily Drive Alone VMT Post	2.75	2.33	0.05	0.28	0.77	Total
Average Daily Per Capita Vehicle Miles						
Reduced	2.95	0.36	0.02	0.14	-0.54	2.95

^{*}Average trip lengths provided by Metro's Data Resource Center

Table 1b is included to highlight the impact of a new category, drive with others (non-carpool); the past seven years VMT reduced has focused only on drive alone trips. Both the reduction in driving rates and per capita VMT reduced are similar.

Table 1b: Vehicle Miles Reduced Calculations: SmartTrips Green Line (Drive Alone and Drive w/ Others combined)

		Shopping /				
	Work / School	Leisure	Fitness	Escort	Other	
Average Drive Alone Trip (miles)*	8.4	4.9	3.1	4.9	5	
Average Trips Per Day Pre (2.26)	0.93	0.88	0.05	0.18	0.075	
Average Trips Per Day Post (2.16)	0.52	0.95	0.06	0.15	0.24	
Drive Alone Mode Split Pre	79.1%	84.7%	70.0%	83.6%	79.30%	
Drive Alone Mode Split Post	72.7%	79.6%	42.9%	83.3%	83.70%	
Average Daily Drive Alone VMT Pre	6.18	3.65	0.11	0.74	0.29738	
Average Daily Drive Alone VMT Post	3.18	3.71	0.08	0.61	1.00	Total
Average Daily Per Capita Vehicle Miles						
Reduced	3.00	-0.05	0.03	0.13	-0.71	2.40

^{*}Average trip lengths provided by Metro's Data Resource Center

Considering the economic recession, the decrease in the number of work trips and the corresponding decrease in vehicle miles traveled to work was expected. However, SmartTrips was still effective at reducing the percentage of drive alone trips to work significantly. In addition, the program showed success at reducing drive alone shopping and leisure, fitness, and escort trips. As mentioned above, "other" trips saw a small increase in drive alone mode split and a significant increase in the overall number of trips (see Chart 3, above), leading to an increase in per capita VMT in that category.

Table 2a shows annual vehicle miles reduced in east Portland as a result of SmartTrips for all adult residents. Table 2b includes drive alone and drive with others trips.

Table 2a: Annual VMR: SmartTrips Green Line (Drive Alone only)

Residents in SmartTrips Gree Line area	60,838
Residents over 18 years old*	48,001
Average Daily VMR	2.95
Travel Days per Year	341
Total annual VMR	48,286,789

^{*}Based on 21.1% of Portland over 18 (2000 census)

Table 2b: Annual VMR: SmartTrips Green Line (Drive Alone and Drive w/ Others combined)

Residents in SmartTrips Gree Line area	60,838
Residents over 18 years old*	48,001
Average Daily VMR	2.40
Travel Days per Year	341
Total annual VMR	39,284,167

^{*}Based on 21.1% of Portland over 18 (2000 census)

Reducing over 48 million vehicle miles reduces congestion, saves 2.1 million gallons of gas⁴, and has significant benefits for air quality and the environment. Table 3 details reductions in air quality pollutants common to automobile use. In addition, this significantly reduces both particulate matter and air toxic pollutants such as benzene, as outlined in Table 4. Particles smaller than 10 micrometers in diameter can cause or aggravate a number of health problems and have been linked to heart and lung diseases.

Table 3: Annual Air Emissions Reduced by SmartTrips Green Line 2010			
Emission Type Pounds Reduced			
VOC	137,325		
Nitrogen Oxide	115,297		
Carbon Monoxide	1,557,647		
Carbon Dioxide	47,537,388		

Table 4: Annual Particulate Matter and Air Toxics Savings - SmartTrips Green Line 2010		
Particulate Matter	milligrams	
Exhaust Particulate Matter		
10 Microns (PM10)	267,032,129	
Brake PM10	603,578,669	
Tire PM10	386,290,348	
Total PM10	1,256,901,147	
Exhaust Particulate Matter		
2.5 Microns (PM2.5)	242,999,237	
Brake PM2.5	255,917,356	
Tire PM2.5	96,572,587	
Total PM2.5	595,489,180	
Air Toxics		
Benzene	1,591,954,579	
1,3-Butadiene	142,920,924	
Formaldehyde	403,032,717	
Acetaldehyde	293,712,918	
Acrolein	19,874,959	

⁴ Based on Bureau of Transportation Statistics average fuel economy for passenger cars in 2008.

6