New Look
The Regional Transportation Plan

2035 Regional Transportation Plan Update

Background Paper:

A Profile of Regional Travel Options and Parking Management Systems

Prepared by:

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Clean air and clean water do not stop at city limits or county lines. Neither does the need for jobs, a thriving economy and good transportation choices for people and businesses in our region. Voters have asked Metro to help with the challenges that cross those lines and affect the 25 cities and three counties in the Portland metropolitan area.

A regional approach simply makes sense when it comes to protecting open space, caring for parks, planning for the best use of land, managing garbage disposal and increasing recycling. Metro oversees world-class facilities such as the Oregon Zoo, which contributes to conservation and education, and the Oregon Convention Center, which benefits the region's economy.

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List of RTP Background Research Papers

- **Environmental Justice** in Metro's Transportation Planning Process
- A Profile of **Security** in the Portland Metropolitan Region
- A Profile of the **Regional Trends and Travel Characteristics** in the Portland Metropolitan Region
- A Profile of the **Regional Bicycle System** in the Portland Metropolitan Region
- A Profile of the **Regional Transit System** in the Portland Metropolitan Region
- A Profile of the **Regional Pedestrian System** in the Portland Metropolitan Region
- A Profile of **Regional Travel Options and Parking Management Systems** in the Portland Metropolitan Region
- A Profile of the **Regional Freight Transportation System** in the Portland-Vancouver Metropolitan Region
- **Preliminary Financial Analysis** for the 2035 Regional Transportation Plan Update
- A Profile of **Safety** in the Portland Metropolitan Region
- A Profile of the **Regional Roadway System** in the Portland Metropolitan Region
- A Profile of **Key Environmental Issues and Metro's Mitigation-Related Activities** in the Portland Metropolitan Region

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2035 Regional Transportation Plan Update

A Profile of Regional Travel Options and Parking Management Systems

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I. Introduction

This paper is one of a series of papers that provide background research and analysis to guide Regional Transportation Plan (RTP) update policy discussions. The papers describe trends and research affecting the regional transportation system, current regional transportation planning policies and regulatory requirements, a profile of the existing transportation system and policy implications to be addressed in the RTP to respond to identified policy gaps and key findings of the background research. Collectively, the background papers will inform future policy discussions by Metro Policy Advisory Committee (MPAC), Joint Policy Advisory Committee on Transportation (JPACT) and the Metro Council and lead to an updated RTP.

This paper provides a profile of the regional travel options and parking management systems in the Portland metropolitan region. The trends shaping future travel needs and performance of the current transportation system are essential considerations for the development of effective goals and strategies to address regional travel options and parking management systems needs in the Portland metropolitan region. The paper concludes with a list of key findings and policy recommendations to be considered during the RTP update process.

II. Background

The Regional Travel Options (RTO) Program implements regional transportation demand management (TDM) policy and strategy to reduce reliance on the automobile and promote alternatives to driving for all trips. Managing demand for parking is also critical to successfully reducing reliance on the automobile. TDM and parking policy benefits are:

- **Maximizing regional transportation investments** in auto, transit, rideshare, pedestrian, bicycle and telecommute infrastructure by introducing residents to effective ways of using each system (e.g., new LRT corridor).
- **Promoting balanced and efficient use** of the existing system (e.g., increasing awareness and use of non-SOV options)
- **Reducing auto trips** (e.g., trip-chaining)
- **Delaying and possibly limiting the need to build** new infrastructure (especially important during times of global increases in cost for raw materials and energy resources).
- **Lowering maintenance** cost per capita.
- **Reducing the use of land for parking** through policies, pricing and designing parking that gives preference to using transportation options (e.g., carpool, biking).
- **Reviving community health** by overcoming barriers for parents, children, seniors and other community segments that have recently reduced their physical mobility (i.e., biking and walking).

TDM and parking management supports, and has many connections to all outcomes (2040 Growth Concept fundamentals).

Foremost, regional TDM and parking management policy seeks to restore and protect a **healthy environment** for current and future residents. Current motor vehicle transportation systems burn non-renewable fossil fuels that negatively impact air quality. They are the largest single source of air pollution in the Portland area. Roads and parking lots are impervious to rain, which collects roadway pollutants that runoff the street affecting water quality and fish habitat. Community health is affected by excessive noise

resulting in stress, air pollutants that result in health conditions, and street design when it presents a barrier to both physical activity for young and aging populations. TDM and parking management can advance the region toward sustainable transportation and toward zero or restorative impacts on the natural environment.

TDM provides the "how-to" of balancing the public's demands on transportation systems. TDM balances regional **transportation choices** using operations, financial incentives, messaging, promoting, informing and creating tools to aid the public in making the best use of transportation infrastructure. TDM also facilitates reductions in trips per capita through trip-chaining (combining errands), telework and alternative work schedules. Parking management, and connecting the price of parking to its users, influences the public's choice of how to use it and mode choice.

A **healthy economy** grows from a balanced transportation system that maximizes use of infrastructure for citizens and business. Citizens benefit from learning less expensive ways to get around and local suppliers of goods and services to meet their needs (e.g., through individualized marketing coupon books featuring local businesses).[1] Businesses benefit from slower increases in congestion and ability for their workforce to arrive at work reliably by a variety of means.[2] The RTO system can respond quickly during economic fluctuations, such as change in the supply and price of fuel, which is an asset to maintaining resiliency of the local economy. Parking management results in less expense across the economy, since parking costs are passed from development to residents, businesses and shoppers.[3]

TDM supports quality travel options for every income and age range, complementing **equity** of transportation investments. Stakeholders are invited from all over the region to convene an open decision-making process, resulting in a balance of regional and local programs.

TDM explains the benefits and removes barriers to transportation options such as biking, walking and carpooling. Implementing TDM is a significant component of creating **vibrant communities** by overcoming perceptions that keep individuals from using transit, sharing rides or feeling safe in urban areas. Assets to TDM are well-planned transportation infrastructure and land use that supports a mix of businesses, residential development and re-generative development in centers. TDM operations, financial incentives, messaging, promotions, information and tools help new and existing residents improve their access to the community. The community is more resilient to fluctuations in energy availability and better prepared to deal with emergencies, like a flu epidemic.

Finally, TDM is a major tool to implement regional **fiscal stewardship** of both public and private resources. Managing demand for existing infrastructure maximizes the benefit of past and present regional investments. Investments in corridors more frequently include TDM as an alternative, or partial alternative, to building new infrastructure. Rising capital and operations costs, because of global demand for materials and energy, will mean a greater emphasis on non-capital alternatives.

III. Trends and Recent Research

This section identifies new trends and research since the last Regional Transportation Plan.

[1] Driven to Spend, Surface Transportation Policy Partnership, 2005, pp.21-22 http://www.transact.org/report.asp?id=236
[2] The Cost of Congestion to the Economy of the Portland Region, Economic Development Research Group, 2005, p. 24 http://www.metro-region.org/article.cfm?articleid=16673
[3] The High Cost of Free Parking, Donald C. Shoup, 2005, p.2

Expanding Scope of Transportation Demand Management Strategies

The scope of TDM has expanded beyond work-related trips to include trips generated by households, trips related to schools, and all other trip purposes. New strategies were piloted, researched and implemented such as individualized marketing. Parking is seen as a greater cost both in materials and land.

2005 Metro Modal Targets Project

The July 2005 "Evaluation of Potential Measures for Achieving Modal Targets" highlighted a number of effective means to achieve increases in the share of trips made using non-single-occupant vehicle modes.

> *The most effective strategies included parking pricing, transportation-efficient development and area-wide application of peak-period or mileage-based strategies.*[4]

A literature review on TDM strategies and their impact on mode share is summarized into a table of the report (reprinted on the next three pages). Chapter 3 of the report then describes strategies and tools for further or future implementation. The study points out that it is difficult to compare (let alone rank) strategies by modal share impact because of difficulty isolating changes. Even when "…quantitative information was available on changes in ridership or VMT related to a given strategy…such changes could not directly be converted to mode share with any degree of confidence."[5]

Table 2. Summary of Literature Review Research

Strategy	Quantitative Evidence (SOV)	U.S. Studies	Oregon Studies	Relative Ease of Implementation	Applicability (PDX Region)	Regional Applicability				Modal Share Impact
						Central City, Regional and Town Centers	Targeted Areas	Transit/Mixed-use Corridors	Other Urban Areas	
Land Use										
Connectivity	○	●	●	◒	●	✓	✓	✓	✓	1% - 2% VMT
Transportation-Efficient Development	●	●	●	◒	●	✓		✓		15% - 24% SOV [12]
Parking										
Parking Pricing	●	●	●	●	●	✓	✓	✓	✓	2.5% - 5% SOV [12] 20% SOV [1] 5% - 35% SOV [1]
Parking Supply and Management	●	●	●	◒	◒	✓		✓		28% RDI [1]; 40% - 50% PKD
Timed Parking	●	●	○	●	●		✓			
Fare Free Area										
Fareless Area	●	●	●	◒	◒	✓				2% - 3% SOV
Transit										
Bus Service Improvements	◒	●	●	●	●	✓	✓	✓	✓	4% - 30% RDI
Demand Responsive / ADA Service	○	●	○	◒	●	✓	✓	✓	✓	40% wheelchair RDI
High Capacity Transit	◒	●	◒	◒	●	✓		✓		20% - 72% of

[4] Evaluation of Potential Measures for Achieving Modal Targets, July 2005, http://www.metro-region.org/article.cfm?ArticleID=12130

[5] Evaluation of Potential Measures for Achieving Modal Targets, July 2005, p.30,34 http://www.metro-region.org/article.cfm?ArticleID=12130

Strategy	Quantitative Evidence (SOV)	U.S. Studies	Oregon Studies	Relative Ease of Implementation	Applicability (PDX Region)	Regional Applicability				Modal Share Impact
						Central City, Regional and Town Centers	Targeted Areas	Transit/Mixed-use Corridors	Other Urban Areas	
Service										new riders shifted mode from auto; 92% RDI over previous bus route
HOV Lane	◒	●	○	◒	◒			✓		Reduce vehicle trips 4% - 30%
Park-and-Ride/ Carpool Lots	●	●	●	◒	●				✓	40% - 60% SOV [2]
Pricing and Fares	●	○	●	◒	○					18% SOV; 12% - 59% mode shift from auto
Site Design / Accessibility	●	●	○	◒	●	✓	✓	✓	✓	2% to 4.75% SOV [12]
Transportation Management and Employer-Based Strategies										
Alternate Work Schedule and Telecommute	◒	●	○	●	●	✓	✓	✓	✓	Auto commute reduced 7% - 10% [9]
Carshare	◒	●	●	◒	●	✓				47% VMT [10]
Guaranteed Ride Home	○	●	○	◒	●				✓	N/A
Rideshare	○	●	○	◒	●	✓	✓	✓	✓	Represents 2% - 7% of commute trips
Shuttle Service	--	--	--	--	--				✓	N/A
Marketing and Promotion	◒	●	●	●	●	✓	✓	✓	✓	21% RDI
Bicycle and Pedestrian										
Bikeway Improvements	◒	○	●	●	●	✓	✓	✓	✓	1 – 4% SOV; 100 – 150% Bike RDI [13]
Elimination of Auto Access	--	--	--	--	--	✓				N/A
Encouragement, Promotional and Individualized Marketing Programs	●	●	●	●	●	✓	✓	✓	✓	6% SOV; 12% VMT
End-of-Trip Facilities	●	●	●	◒	●	✓	✓	✓	✓	77% SOV [4]
Free Bike and "Smart Bike" Programs	○	○	●	◒	◒		✓			N/A
Pedestrian Improvements [7]	--	--	--	--	--	✓	✓	✓	✓	N/A
Safe Routes to School	●	●	○	●	●	✓	✓	✓	✓	13% SOV [11]
Traffic Calming	○	○	○	◒	◒	✓	✓	✓	✓	5% - 54% Ped/Bike RDI
Pricing										
Congestion Pricing	●	●	●	●	◒	✓	✓	✓	✓	15% – 30% transit RDI;

Strategy	Quantitative Evidence (SOV)	U.S. Studies	Oregon Studies	Relative Ease of Implementation	Applicability (PDX Region)	Regional Applicability				Modal Share Impact
						Central City, Regional and Town Centers	Targeted Areas	Transit/Mixed-use Corridors	Other Urban Areas	
										1% - 3% SOV; 28% - 30% transit shift [3]
Vehicle Miles Traveled Tax	○	○	○	○	○	✓	✓	✓	✓	13% VMT [5]
Vehicle Miles Traveled Insurance	○	●	○	◒	◒	--	--	--	--	13% VMT [6]

Evidence of Mode Share Impact
-- = No evidence
● = Direct evidence of impact on SOV use or mode share
◒ = Anecdotal relationship, including quantitative evidence of change in VMT
○ = Indirect relationship based on anecdotal evidence

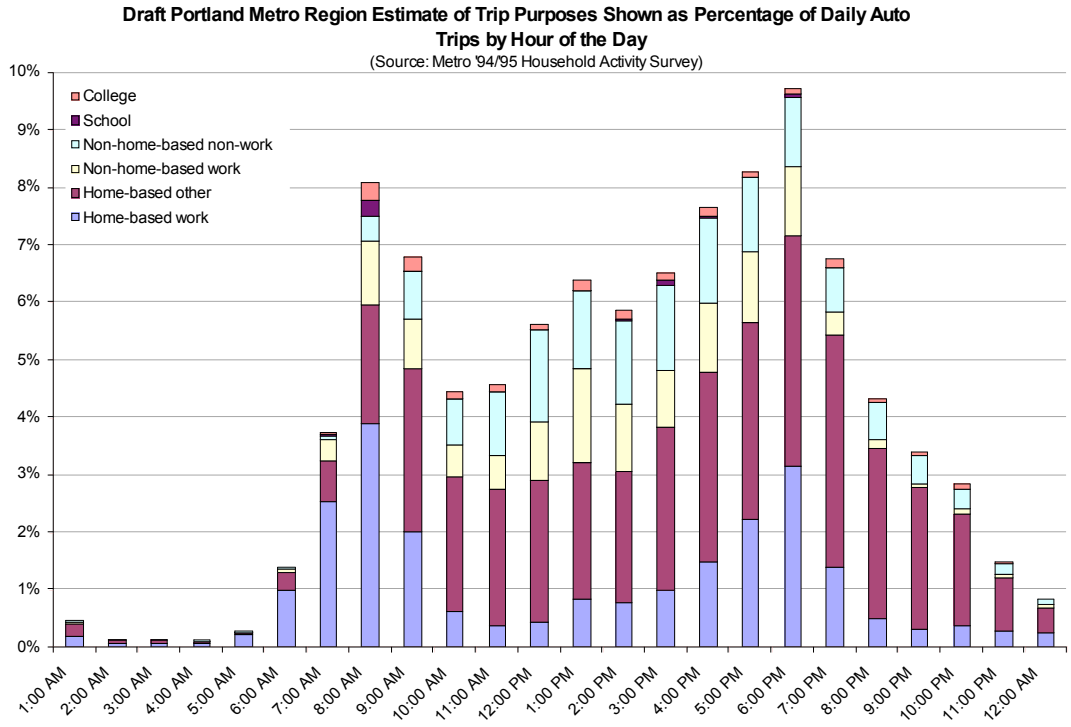
Examples and Data Availability
● = Yes
○ = No

Implementation and Applicability
● = High (easy to implement or very applicable)
◒ = Moderate
○ = Low (difficult to implement or relatively un-applicable)

Modal Share Impact
SOV = Single occupancy vehicle trips
VMT – Vehicle miles traveled
RDI = Ridership increase
PKD = Parking demand

Source: 2005 Metro Modal Targets Report

While past TDM policy and strategies were written to include all trips, program implementation had focused on peak period travel and emphasized the commute. Metro TRMS data show that 48% of peak-hour auto traffic are trips related to the commute between home and work (see 8:00 AM in chart below). Congestion can also occur at any time of day when weather, cultural or accident events occur. TDM implementation needed to expand beyond the employer-based program to work with other trip purposes, not only for off-peak air quality concerns but for peak-hour congestion as well.



Individualized Marketing

Two new programs were implemented to address all household vehicle trips:

- **Drive Less/Save More**, a marketing campaign, blends commercial-style marketing concepts with methods for behavior change (a model that successfully encouraged recycling, reduced household toxics and reduced smoking). Drive Less/Save More encourages auto trip reduction for all trip purposes.
- Individualized marketing, such as **TravelSmart™**, selects an urban area, uses a survey to create market segments, and then provides receptive households with enough information and one-on-one expert advice to make new choices about the ways they get around. Evaluation of this program in Portland has shown more use of non-SOV modes, more local trips and fewer total trips per person.

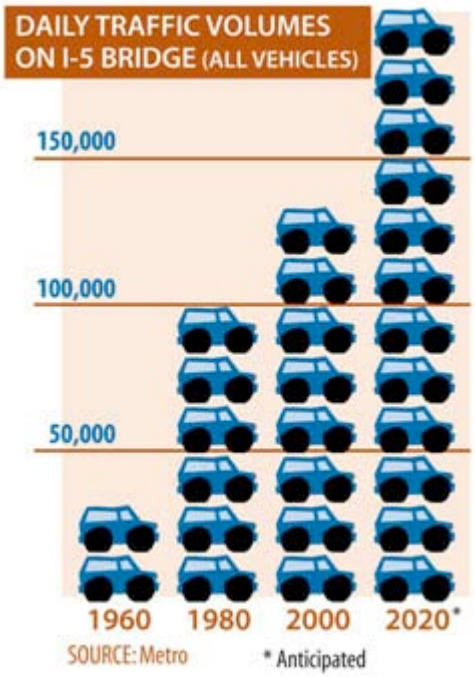
TravelSmart

TDM was found to have a net benefit during a corridor project. The City of Portland completed a large scale TravelSmart™ individualized marketing project in north and northeast Portland, simultaneous with the opening of TriMet Yellow Line MAX light-rail service. TravelSmart™ had never been implemented in an area with a large capital project opening at the same time. In addition, TriMet executed a marketing plan centered on safety and the opening of the new MAX line. In order to contrast the results, the TravelSmart™ project used control groups throughout the neighborhood, surveyed them, but did not offer the individualized marketing package. People in the control group took transit trips 24% more than before the new capital service, while people who received the individualized marketing took 44% more trips.[6]

[6] Interstate TravelSmart Large-Scale Project, City of Portland, http://www.portlandonline.com/transportation/index.cfm?c=36370

Portland/Vancouver I-5 Transportation and Trade Partnership and the Columbia River Crossing Study

The **Portland/Vancouver I-5 Transportation and Trade Partnership** and the **Columbia River Crossing** task force identified strategies to deal with increasing traffic volumes crossing the state line between Oregon and Washington, over the Columbia River (see figure). In addition to congestion, one of the two bridges is nearly 100 years old. Now, and certainly more so with any project, traffic mitigation is needed to handle additional person trips without increasing the number of vehicle trips. While some strategies include new bridges with additional right-of-way for traffic and light-rail, other strategies include expanded coordination of transportation system management and transportation demand management solutions.[7] In addition to regular and express bus service, vanpools help relieve some congestion across the Columbia River. The Clark County and the City of Vancouver recently approved funding for more vanpools.



Travel Behavior Barriers and Benefits Research

Travel Behavior Barriers and Benefits Research was done "…to understand the real and perceived barriers and benefits to changing travel behavior for all types of trips."[8] A general marketing approach underscored "direct contact with people at the community level to promote behavioral change."[9] Supporting campaigns, such as mass marketing and associated branding were seen as working to reinforce and support the direct contact approach. In addition to the general marketing approach, nine strategies were recommended:

1. Employer/Employee Outreach
2. Neighborhood Outreach
3. Neighborhood Interventions
4. Rideshare Parties
5. Street Teams
6. Fairs and Festivals
7. Special Day Promotions
8. Partnerships
9. Special Event Shuttles

The RTO Subcommittee stated that a challenge to removing barriers to increasing biking and walking trips is the lack of public safety messages in the media that promote safe driving. The Subcommittee said

[7] "Preliminary Alternatives Package" Columbia River Crossing, updated 11/6/06, p.6 http://www.columbiarivercrossing.org/materials/projectDocuments/AlternativePackages.pdf
[8] Travel Behavior Barriers and Benefits Research, December 2004, http://www.metro-region.org/library_docs/trans/travel_barriers_ppr_report-121604.pdf
[9] Travel Behavior Barriers and Benefits Research, December 2004, http://www.metro-region.org/library_docs/trans/travel_barriers_ppr_report-121604.pdf

inconsistent road design between county and city roads, with varying safety standards, is a challenge. In addition, road design should encourage local trips. Bike facilities need to be matched with exactly where they are needed for mobility, rather than placed where convenient on back streets. The Subcommittee also acknowledged that culturally, people are increasingly sensitive to time.

Regional efforts have related the demand on the transportation system to home and car ownership. Location efficient mortgages and carsharing help reduce auto ownership, reduce vehicle miles traveled, and **balance costs** for households.

Location efficient mortgages (LEMs)

Location efficient mortgages (LEMs) have highlighted the impact of transportation choices on household budgets. "Location Efficient Mortgages are being tested in Seattle, Chicago, and Los Angeles. In Chicago, the lowered transportation costs create savings estimated to range between $350-$650 per month due to the availability of services and alternative transportation. No policy currently exists that explicitly supports LEMs in Oregon."[10] Although there is no policy for LEMs, a few employers, one housing agency and one lending agency have supported the idea. Employers include Emanuel Hospital and Pacific University; the housing agency is the Housing Authority (working with Swan Island TMA); and, the lending agency was Fannie Mae (program was rolled into energy efficiency mortgages).

Carsharing

Private car ownership enables auto trips and parking needs; however, cars are used for only a fraction of the day and are otherwise left parked. **Carsharing** acknowledges this underutilization of capital. Carsharing changes the equation by creating a short-term car rental service. Typically, for-profit companies supply a fleet of vehicles, disburse them throughout neighborhoods, set up a reservation system and market a fee scale that allows for short-term uses. Participants in car sharing are more likely to reduce the number of cars they own and the number of trips they make by car. Mobility is increased for those without a car, yet new, generated auto trips are well below the number of auto trips reduced by carsharing participants who own cars.[11] Both the public and business community use carsharing. Businesses supplement or replace their company car fleet with carsharing vehicles, saving on maintenance and parking costs. Each car place by Flexcar in Portland is estimated to reduce vehicle ownership by 3.5 cars.[12]

Software developed by Flexcar can work to manage other fleets of vehicles that sit idle much of the day.[13] For example, a van used for a commuter vanpool may sit idle during an eight-hour workday. A nearby retirement home could reserve that van during hours left un-reserved.

Paratransit

Travel options are increasingly important among the aging population of the region as they make transportation decisions in their senior and retirement years. **Paratransit** is a public transportation service required by the Americans with Disabilities Act for people who are not able to ride regular public transit. Paratransit is more expensive and use of it is on the rise. **RideWise** offers travel training for senior

[10] Oregon Transportation Plan Update: Sustainable Transportation and Sustainable Development http://www.oregon.gov/ODOT/TD/TP/docs/otpSustain/SustainTransDev.pdf
[11] Car-Sharing: Where and How It Succeeds, 2005, http://trb.org/news/blurb_detail.asp?id=5634
[12] Car-Sharing: Where and How It Succeeds, 2005, http://trb.org/news/blurb_detail.asp?id=5634
[13] Brodie Hylton, Flexcar, presentation to Oregon Statewide Transportation Options meeting, Corvallis, Oregon, Nov. 17th, 2006.

citizens and people with disabilities to help build their confidence to ride regular transit service safely, achieving more independence.

Trip-chaining

Research on the benefits and barriers posed by different transportation options has shown that people are proud of their **trip-chaining** (e.g., combining errands). This was incorporated into the implementation of Drive Less/Save More and was confirmed by the highest percentage of people willing to commit to reducing auto trips by trip-chaining (84%).[14]

City of Portland Options Ambassador Program

Increases in bike ridership have been posted in the City of Portland including an 18% increase in cyclists crossing four (4) downtown bridges since 2005. Although this is encouraging, the Bicycle Transportation Alliance's blueprint identifies a large gulf between current riders and reluctant yet interested potential-riders. The City of Portland offers an **Options Ambassador** program: 20 volunteers who mentor individuals to reduce the barriers to transportation options including biking.

Tax Credits

Three **tax credits** are available to influence better transportation choices: Oregon Business Energy Tax Credit (BETC), federal tax credits and pre-tax deductions. Oregon Department of Energy (ODOE) offers the Business Energy Tax Credit (BETC) that credits the following:

> *Solutions include increased use of public transit, commuter pool vehicles (shuttle services, vanpools and carpools), bicycles, carsharing, ride share matching services and telework (telecommuting). Employers can also provide financial incentives or work with a transportation management association to encourage employees to change their travel mode.*[15]

Federal tax credits are available to employers who subsidize transit or vanpool costs as an allowable business expense. Federal and Oregon state tax law also allows for tax-free transit benefits, up to $1,200 per employee, per year.[16]

Federal and Oregon state tax law allows employers to offer employees **pre-tax payroll deductions** to reduce taxable earnings to pay for some transportation costs such as transit passes.[17]

The cost to operate an auto is generally applied up front, aside from fuel and regular maintenance. Recent acknowledgement and action is leading toward **distance-based fees** for insurance and auto registration. Changing from flat fee charges to incorporating demand costs "…is estimated to reduce driving by about 9 percent."[18] Oregon tax law provides tax credit to companies that offer insurance policies that charge based on mileage.[19]

Parking Management

Parking costs are associated with a greater impact across the economy. One estimate ranges from $600 to $1,200 for annualized costs per parking space. This cost is compounded by an estimate that there are five parking spaces for every car on the road. Because most of this parking is free to the user, there is no

[14] Metro RTO analysis
[15] http://www.oregon.gov/ENERGY/TRANS/transhm.shtml
[16] http://trimet.org/employers/taxemployer.htm
[17] http://trimet.org/employers/taxemployer.htm
[18]
[19] http://www.oregon.gov/ODOT/TD/TP/docs/otpSustain/SustainTransDev.pdf

economic reason to use it efficiently. When businesses charge for parking indirectly through overhead, the costs are passed along to all their customers. This creates inequity because non-drivers subsidize drivers. Parking management is seen as a solution that can reward both drivers by freeing up parking that is used inefficiently (e.g., to store vehicles) as well as non-drivers (i.e., no longer indirectly charged).[20]

One strategy directed at managing on-street parking calls for performance-based charges subject to market forces. Charges for on street parking would adjust to hold utilization at 85% of spaces filled at any given time.[21] At this level, land is used efficiently while drivers are able to find spaces quickly without circling blocks. This parking management is attractive to adjacent merchants and property owners when revenue generated by parking charges is reinvested locally (e.g., sidewalk maintenance, street trees, security).

Regional Travel Options Subcommittee

The **RTO Subcommittee** identified the following trends:

- More interest in TDM from private sector because of freight and delivery reliability, plus employee retention and Business Energy Tax Credits.
- More interest from the public as global demand for fuel increases the price and greater concerns for climate change issues.
- Growing bike culture showing greater awareness and more use.
- Housing choices (both developers and individuals) increasingly driven by transportation alternatives, often designed for mixed use (e.g., ground floor retail) and often near frequent transit service.
- Greater consideration for the concentration of impacts on one segment of the population, or one area of the region, to advance environmental justice and equity.

The **RTO Subcommittee** identified several trends for better air quality that may represent challenges for land use. Developments in fuel-efficient vehicles and alternatives to petroleum fuels will yield better air quality. Reformulation of diesel also improves air quality. The need to use land for roads and parking is not affected with these improvements. Similarly, two Daimler-Chrysler "Smart" cars fit into one parking space. While that eliminates some land for parked cars, auto trips in any car will likely take use road infrastructure the same as a regular sized vehicle.

When asked what is most important about TDM strategies, the Subcommittee underscored that the public wants good information about realistic transportation choices and alternatives to driving alone that are sensitive to their time, or even save them time. Employers that provide incentives and facilities to employees negatively react when they encounter layers of complicated procedures. At a policy level, the public and government must communicate through common language that roads are increasingly difficult to build and there is less interest in paying for them through public funds. In fact, this is true of all capital-intensive projects. Policy must also account for the effect of the built environment on community health and active living. Finally, the Subcommittee acknowledged a need for better tools by which to rank RTO strategies and make decisions.

Moving forward, the RTO Subcommittee recommends that all new transportation projects implement a TDM component. For example, a transit or road corridor would be complimented by pairing

[20] "Parking Management: Innovative Solutions To Vehicle Parking Problems
APA" Todd Litman www.planetizen.com
[21] "The Price Of Parking On Great Streets" Donald C. Shoup, FAICP, Urban Land Institute Great Streets Symposium, Washington, DC, January 17-20, 2006 ULI Great Streets Symposium, Washington D.C., http://www.planetizen.com/node/19150

individualized marketing to households one-half mile to either side of the project. While TDM is a cost-savings measure for any new transportation project, TDM strategies must be chosen on the basis of what is most cost-effective for the unique qualities and demographics of the location. TDM then accounts for populations in cities, urban unincorporated areas, suburbs and areas outside of the region. Finally, the Subcommittee would like to see a strengthened culture of TDM implementation, for instance among employment sites and coordinated with groups concerned with public health.

IV. Policy and Regulatory Framework

This section is organized by:

- Federal
- State of Oregon
- Metro Region
- Local
- Other

Federal Context

Congress enacted the Intermodal Surface Transportation Efficiency Act (ISTEA) in 1991. ISTEA gave Metropolitan Planning Organizations (MPOs) increased funding, expanded authority to select projects and mandates for new planning initiatives in their regions. The act emphasizes to a greater degree than previous legislation the need to provide safe accommodation on non-motorized users and that they be considered throughout the planning, design and construction phases of transportation projects. Bicyclists and pedestrians were to be considered in comprehensive transportation plans developed by each metropolitan planning organization and the State.

The legislation also focused on improving transportation not as end in itself but as the means to achieve important national goals including economic progress, cleaner air, energy conservation and social equity. ISTEA promoted a transportation system in which all modes and facilities were integrated to allow a "seamless" movement of both goods and people. New funding programs provided greater flexibility in the use of funds, supported improved "intermodal" connections and emphasized upgrades to existing facilities over building new capacity – particularly roadway capacity.

To accomplish these goals, ISTEA doubled funding for MPO operations and required the agencies to evaluate a variety of multimodal solutions to roadway congestion and other transportation problems. MPOs were also required to broaden public participation in the planning process and see that investment decisions contributed to meeting the air quality standards of the federal Clean Air Act Amendments.

Transportation Equity Act for the 21st Century (TEA-21)

The next two reauthorizations of Federal Transportation legislation, TEA-21 and SAFETEA-LU continued the multi-modal emphasis of ISTEA. Congress passed the Transportation Equity Act for the 21st Century (TEA-21) in 1998. It reduced the 15 planning factors from ISTEA to seven and continued the majority of its predecessor's programs. TEA-21 recognized that transportation investments impact the economy, environment, and community quality of life.

Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU)

On August 10, 2005, Congress built on both ISTEA and TEA-21 with the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). SAFETEA-LU addresses the

many challenges facing our transportation system today, such as improving safety, reducing traffic congestion, improving efficiency in freight movement, increasing intermodal connectivity, and protecting the environment. SAFETEA-LU promotes more efficient and effective Federal surface transportation programs by focusing on transportation issues of national significance, while giving State and local transportation decision makers more flexibility for solving transportation problems in their communities.

In addition, SAFETEA-LU poses key modifications to metropolitan planning processes, one of which concerns operational and management strategies that includes TDM.[22] Such strategies must be included in metropolitan transportation plans to improve the performance of the existing transportation facilities to relieve congestion and maximize safety and mobility of people and goods. Metro's current RTP includes a TDM provision and code citation:

> [Plan must identify] *operational and management strategies to improve the performance of existing transportation facilities to relieve vehicular congestion and maximize the safety and mobility of people and goods..."*

State Context

Oregon Transportation Plan (OTP)

The **Oregon Transportation Commission** amended the **Oregon Transportation Plan (OTP)** September 20, 2006.[23] TDM is called for in the following goal, policy and strategy

> *GOAL 2 - MANAGEMENT OF THE SYSTEM - Transportation demand management is an array of techniques that can be used to address congestion and sustainability concerns by seeking to reduce the need to travel. Practices include locating traffic generators near public transit and other transportation facilities, encouraging carpools, and providing flexible work schedule and telework options. Peak period pricing is another technique for reducing demand on a highway. It involves applying tolls which vary according to the level of congestion on the highway. Charging higher tolls when congestion is heavier encourages highway users to drive during offpeak periods or to use alternate modes or routes."*
> *POLICY 2.1 - Capacity and Operational Efficiency, STRATEGY 2.1.1 Promote transportation demand management and other transportation system operations techniques that reduce peak period travel, help shift traffic volumes away from the peak period and improve traffic flow. Such techniques may include high occupancy vehicle lanes with express transit service, truck-only lanes, van/carpools, park-and-ride facilities, parking management programs, telework, flexible work schedules, peak period pricing, ramp metering, traveler information systems, traffic signal optimization, route diversion strategies, incident management and enhancement of rail, transit, bicycling and walking.*

This is complemented by:

> *POLICY 4.3 – Creating Communities, STRATEGY 4.3.5 Reduce transportation barriers to daily activities for those who rely on walking, biking, rideshare, car-sharing and public transportation.*

OTP Discussion on TDM included the importance of land use to provide mobility while reducing auto trips:

> *Oregon Transportation Plan Policy 2A, Land Use states: It is the policy of the State of Oregon to develop transportation plans and policies that implement Oregon's Statewide*

[22] http://www.fhwa.dot.gov/safetealu/legis.htm
[23] http://www.oregon.gov/ODOT/TD/TP/docs/ortransplanupdate/06otp/06otpVol1sep.pdf

> *Planning Goals, as adopted by the Land Conservation and Development Commission. Action 2A.1: Support local land use planning with system plans that implement this policy, with the objective of providing the needed level of mobility while minimizing automobile miles traveled and number of automobile trips taken per capita. Elizabeth Deakin, a Transportation Research Board researcher, estimates that land use planning strategies and aggressive demand management will achieve a six- percent national reduction in greenhouse gas by 2020 and 15 percent by 2040. Travel distance to basic services and land utilization rates are indicators of transportation sustainability.*[24]

OTP policy discussion emphasizes managing existing transportation infrastructure before adding new facilities:

> *Policy 4G - Management Practices: It is the policy of the State of Oregon to manage effectively existing transportation infrastructure and services before adding new facilities.*
> *Progress Summary: Priority is on managing existing infrastructure and services before adding new facilities. Practices include access management, demand management, size and weight enforcement of commercial motor vehicles, use of management systems, and training and technology-sharing. More life-cycle costing could be used.*[25]

> *[OTP] Policy 1A, "Balance," recognizes the benefits of creating a balanced set of travel options and of reducing peak hour traffic volumes. Action 4G. Use demand management and other transportation systems operation techniques that reduce peak period single occupant automobile travel, that spread traffic volumes away from the peak period, and that improve traffic flow. Such techniques include HOV (high occupancy vehicle) lanes with express transit service, carpools, parking management programs, peak period pricing, ramp metering, motorist information systems, route diversion strategies, incident management, and enhancement of alternative modes of transportation including bicycling and walking.*[26]

Transportation Planning Rule (TPR)

In 1991, the Land Conservation and Development Commission adopted the **Oregon Transportation Planning Rule** (TPR). The TPR implements State Land Use Planning Goal 12, Transportation[27], which was adopted by the Oregon Legislature in 1974, with the purpose "…to promote the development of safe, convenient and economic transportation systems that are designed to reduce reliance on the automobile…." The TPR requires most cities and counties and the state's MPOs, such as Metro, to adopt transportation system plans that consider all modes of transportation, energy conservation and avoid principal reliance on any one mode to meet transportation needs. By state law, local plans in MPO areas must be consistent with the regional transportation system plan (TSP). In the Portland metropolitan region, the Regional Transportation Plan serves as the regional TSP. Likewise, the regional TSP must be consistent with the OTP.

A major goal of the TPR is reducing reliance on the automobile and encouraging pedestrian, bicycle, and transit facilities as part of a multi-modal transportation system. The state TPR also requires that transportation system plans provide an adequate system of improvements that meet adopted performance

[24] http://www.oregon.gov/ODOT/TD/TP/docs/otpSustain/SustainTransDev.pdf
[25] http://www.oregon.gov/ODOT/TD/TP/docs/otpSteering2/2Apr04/ReportCard.pdf
[26] http://www.oregon.gov/ODOT/TD/TP/docs/otpSustain/SustainTransDev.pdf
[27] Goal 12 states, "…to promote the development of a safe, convenient, and economic transportation systems that are designed to reduce reliance on the automobile."

measures. These objectives are to be achieved by increasing the share of non-automobile trips (pedestrian, bicycle or transit), reducing the number of single occupant vehicle trips, increasing average vehicle occupancy, or reducing the number of trips and/or length of trips required through more intensive land use and/or a better mix of land uses. TPR requirements include:

- Mandates that transportation planning in Oregon reduce reliance on any one mode of transportation.
- Requires vehicle miles traveled (VMT) per capita reduction targets for local jurisdictions. The RTP identifies 2040 Non-SOV modal targets in place of and consistent with the requirement to reduce VMT per capita. As required by the TPR, jurisdictions within the Metro region must adopt policies and actions that support an increase in the share of trips by walking, bicycling, transit and shared ride.
- Requires a plan for transportation demand management for areas within an urban area containing a population greater than 25,000 persons.

ODOT Transportation System Planning Guidelines

ODOT Transportation System Planning (TSP) Guidelines summarize objectives, requirements, applicability and strategies for incorporating TMD into System Plans.[28] The guidelines also call for an "assessment of TDM services and facilities in the course of describing current conditions/deficiencies…and in developing and evaluating system alternatives that eliminate deficiencies…" ODOT says, "TDM works best under the following circumstances:

- Favorable community demographics for employment/residency.
- Appropriate travel distances for the trip to work.
- Appropriate travel patterns for the trip to work.
- Supportive community attitudes.

Oregon Department of Environmental Quality ECO Rules

Oregon Department of Environmental Quality (DEQ) passed the **Employee Commute Options (ECO) Rules** July 12, 1996 as part of a larger implementation package to improve air quality. The ECO rules requires large employers to reduce auto trips made to work among their employees by 10% over three years and sustain the reduction through 2006. In 2006, DEQ changed the ECO rules in the following ways:

> *The main changes include 1) raising the compliance threshold from more than 50 to more than 100 employees at a work site, and 2) to require all employers to survey every other year instead of every year.*[29]

DEQ analysis showed that larger employers were contributing proportionately more to auto trip reductions; and, reducing the number of employers affected allows DEQ more resources to enforce the rules. Change takes affect December 2006.

Oregon Department of Energy (ODOE) Business Energy Tax Credits

Oregon Department of Energy (ODOE) includes **Business Energy Tax Credits (BETC)** to cover "…35 percent of the eligible project costs - the incremental cost of the system or equipment that's beyond standard practice."[30]

[28] http://www.oregon.gov/ODOT/TD/TP/docs/publications/TSP/tspPart3_9.pdf
[29] http://www.deq.state.or.us/nwr/ECO/eco.htm
[30] http://www.oregon.gov/ENERGY/CONS/BUS/BETC.shtml

> *Solutions include increased use of public transit, commuter pool vehicles (shuttle services, vanpools and carpools), bicycles, carsharing, ride share matching services and telework (telecommuting). Employers can also provide financial incentives or work with a transportation management association to encourage employees to change their travel mode.*[31]

In 2003, the Oregon State Legislature passed House Bill 2043 to give tax credit to companies with auto insurance policies that base premiums on distance driven. The underlying policy is; those who own a vehicle should pay fees directly tied to their impact. Researched referenced by the State of Oregon says "A national system of mileage-based automobile insurance is estimated to reduce driving by about 9 percent."[32]

Executive Order (EO) on Sustainability

Governor Ted Kulongoski issued Executive Order No. 06-02 "Sustainability for the 21st Century" in 2006 which directed state agencies to continue work on incorporating sustainable practices and created an interagency team between ODOE, ODOT and DEQ to reduce greenhouse gases.

2003 Oregon Legislature Transportation Options Marketing Program

The 2003 Oregon Legislature appropriated $1.5 million biennially into ODOT budget for transportation options marketing. The money was specifically for media-based marketing to reach drivers in the most congested parts of the state with information about efficient driving and other options. This money began a statewide marketing campaign called "Drive Less/Save More" in the Portland Metro area first and later across the state.

Regional Context

Metro Charter

In 1979, the voters in this region created Metro, the only directly elected regional government in the nation. In 1991, Metro adopted Regional Urban Growth Goals and Objectives (RUGGOs) in response to state planning requirements. In 1992, the voters of the Portland metropolitan area approved a home-rule charter for Metro. The charter identifies specific responsibilities of Metro and gives the agency broad powers to regulate land-use planning throughout the three-county region and to address what the charter identifies as "issues of regional concern." Among these responsibilities, the charter directs Metro to provide transportation and land-use planning services. The charter also directed Metro to develop the 1997 Regional Framework Plan that integrates land-use, transportation and other regional planning mandates.

Regional Framework Plan

Updated in 1995 and acknowledged by the Land Conservation Development Commission in 1996, the RUGGOs establish a process for coordinating planning in the metropolitan region in an effort to preserve regional livability. The 1995 RUGGOs, including the 2040 Growth Concept, were incorporated into the 1997 Regional Framework Plan to provide the policy framework for guiding Metro's regional planning program, including development of functional plans and management of the region's urban growth boundary. The Regional Framework Plan is a comprehensive set of policies that integrate land-use, transportation, water, parks and open spaces and other important regional issues consistent with the 2040

[31] http://www.oregon.gov/ENERGY/TRANS/transhm.shtml
[32] http://www.oregon.gov/ODOT/TD/TP/docs/otpSustain/SustainTransDev.pdf

Growth Concept. The Framework Plan is the regional policy basis for Metro's planning to accommodate future population and employment growth and achieve the 2040 Growth Concept.

Chapter 2 of the **Metro Regional Framework Plan (RFP)** contains policy on TDM:

> *2.28.1 Enhance mobility and support the use of alternative transportation modes by improving regional accessibility to public transportation, carpooling, telecommuting, bicycling and walking options.*[33]

The RFP also includes parking management policy:

> *2.29.1 Manage and optimize the efficient use of public and commercial parking in the central city, regional centers, town centers, main streets and employment centers to support the 2040 Growth Concept and related RTP policies and objectives.* [34]

Title 2 of the Urban Growth Management Functional Plan (Parking)

The region advanced a significant parking policy. "**Title 2**" of the Urban Growth Management Functional Plan was adopted into nearly all city TSPs:

> *Title 2 (Metro Code Sections 3.07.210 - 3.07.220) - Regional Parking Policy*
> *The Metro 2040 Growth Concept calls for more compact development to encourage more efficient use of land, promote non-auto trips and protect air quality. In addition, the federally mandated air quality plan adopted by the state relies on the 2040 Growth Concept fully achieving its transportation objectives. This title establishes regionwide parking policies that set the minimum number of parking spaces that can be required by local governments for certain types of new development. It does not affect existing development. Parking maximums are also specified. By not creating an over supply of parking, urban land can be used most efficiently.* [35]

The table on the next page shows the minimum and maximum parking ratios established by Title 2. The following map shows maximum permitted parking areas associated with zone a and zone b.

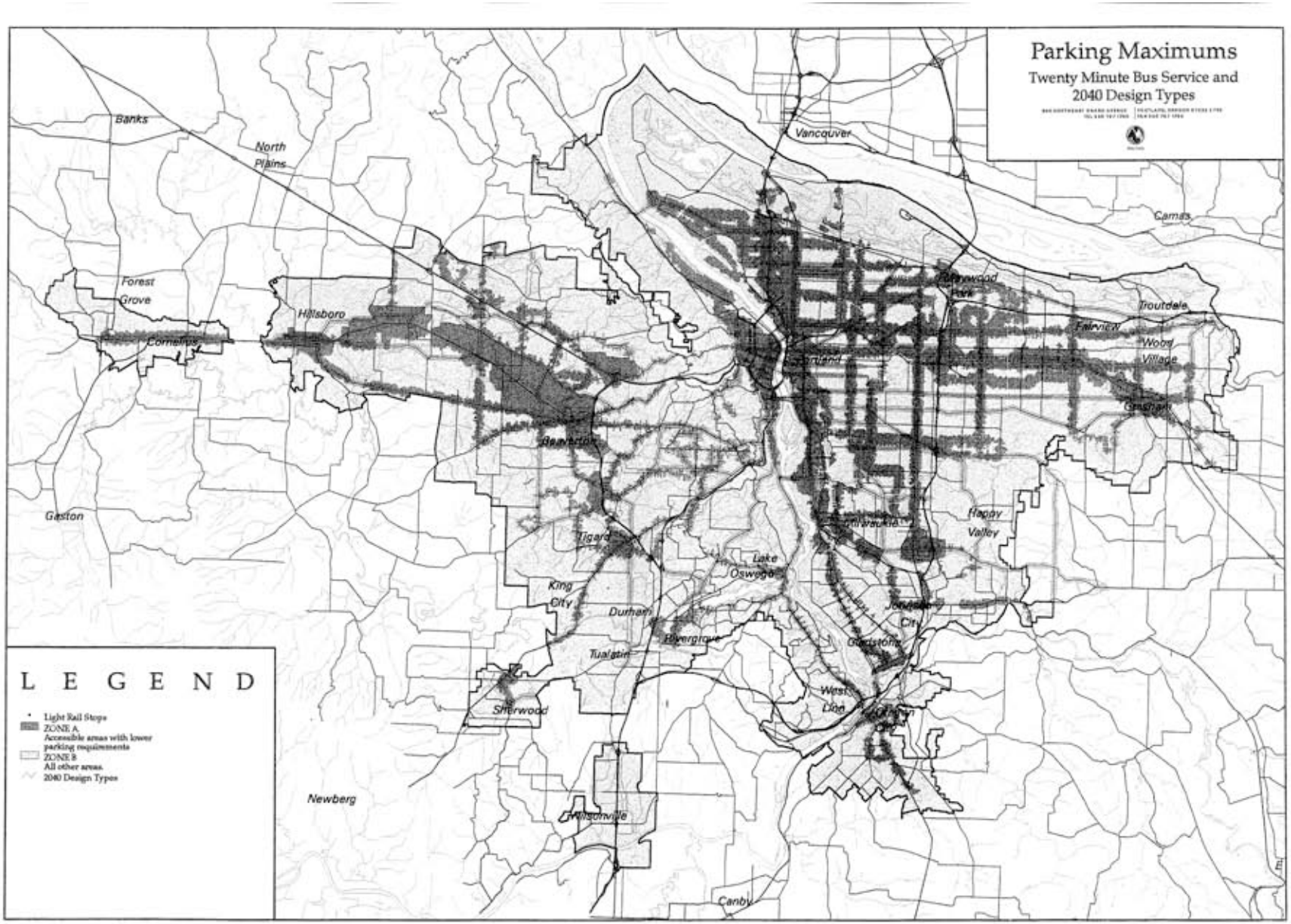
Provision for **bike parking** is included in the current RTP Policy 16.1; "…work with local jurisdictions, ODOT and other public agencies to provide appropriate short and long-term bicycle parking…"[36] Bike parking is also an important component of TDM (i.e., end-of-trip facilities). City of Portland zoning code requires minimums by land use for both short and long-term bike parking.[37] For example, one long-term bike parking space is required in multi-dwelling housing for every 4 units. City of Portland also offers a guide to designing effective bike parking.[38] Washington County also has bike parking requirements. Other cities and counties likely have bike parking requirements but research was not completed on other jurisdictions.

[33] http://www.metro-region.org/article.cfm?articleid=432
[34] http://www.metro-region.org/article.cfm?articleid=432
[35] http://www.metro-region.org/article.cfm?ArticleID=274
[36] 2004 Regional Transportation Plan, chapter 1, page 53, http://www.metro-region.org/library_docs/trans/2004rtp_chapter1no_maps.pdf
[37] Table 266-6 Minimum Required Bicycle Parking Spaces, Chapter 33.266 Title 33, Planning and Zoning Parking And Loading 1/20/06 http://www.portlandonline.com/shared/cfm/image.cfm?id=53320
[38] http://www.portlandonline.com/transportation/index.cfm?&a=58409&c=34813

Table 3.07-2 - Regional Parking Ratios
(Section 3.07.220(A)(1))
(parking ratios are based on spaces per 1,000 sq. ft of gross leasable area unless otherwise stated)

Land Use	Minimum Parking Requirements (See Central City Transportation Management Plan for downtown Portland stds)	Maximum Permitted Parking - Zone A:	Maximum Permitted Parking Ratios - Zone B:
	Requirements May Not Exceed	Transit and Pedestrian Accessible Areas[1]	Rest of Region
General Office (includes Office Park, "Flex-Space", Government Office & misc. Services) (gsf)	2.7	3.4	4.1
Light Industrial Industrial Park Manufacturing (gsf)	1.6	None	None
Warehouse (gross square feet; parking ratios apply to warehouses 150,000 gsf or greater)	0.3	0.4	0.5
Schools: College/ University & High School (spaces/# of students and staff)	0.2	0.3	0.3
Tennis Racquetball Court	1.0	1.3	1.5
Sports Club/Recreation Facilities	4.3	5.4	6.5
Retail/Commercial, including shopping centers	4.1	5.1	6.2
Bank with Drive-In	4.3	5.4	6.5
Movie Theater (spaces/number of seats)	0.3	0.4	0.5
Fast Food with Drive Thru	9.9	12.4	14.9
Other Restaurants	15.3	19.1	23
Place of Worship (spaces/seats)	0.5	0.6	0.8
Medical/Dental Clinic	3.9	4.9	5.9
Residential Uses			
Hotel/Motel	1	none	none
Single Family Detached	1	none	none
Residential unit, less than 500 square feet per unit, one bedroom	1	none	none
Multi-family, townhouse, one bedroom	1.25	none	none
Multi-family, townhouse, two bedroom	1.5	none	none
Multi-family, townhouse, three bedroom	1.75	none	none

[1] Ratios for uses not included in this table would be determined by cities and counties. In the event that a local government proposes a different measure, for example, spaces per seating area for a restaurant instead of gross leasable area, Metro may grant approval upon a demonstration by the local government that the parking space requirement is substantially similar to the regional standard.


Parking Maximums
Twenty Minute Bus Service and 2040 Design Types
LEGEND
Light Rail Stops
ZONE A
Accessible areas with lower parking requirements
ZONE B
All other areas.
2040 Design Types
Banks
North Plains
Forest Grove
Cornelius
Hillsboro
Beaverton
Gaston
Tigard
King City
Durham
Tualatin
Sherwood
Newberg
Wilsonville
Canby
Lake Oswego
Rivergrove
Vancouver
Camas
Troutdale
Fairview
Wood Village
Gresham
Happy Valley
Gladstone
West Linn

2040 Growth Concept

The 2040 Growth Concept text and map identify the desired outcome for the compact urban form to be achieved in 2040. It envisions more efficient land use and a diverse and balanced transportation system closely coordinated with land use plans. Pedestrian facilities are an important element of the transportation concept envisioned in Region 2040. The 2040 Growth Concept has been acknowledged to comply with statewide land use goals by the Land Conservation and Development Commission (LCDC). It is the foundation of Metro's 1997 Regional Framework Plan.

The **Metro 2040 Growth Concept** includes 3.07.920 Performance Measurement B:

> *Protect and restore the natural environment through actions such as…reducing air emissions; [and,]*
> *Provide a balanced transportation system, including facilities for bicycling, walking and transit, as well as for motor vehicles and freight.*

2004 Regional Transportation Plan

The RTP implements the goals and policies in 1995 RUGGOs and the 1997 Regional Framework Plan, including the 2040 Growth Concept. The region's planning and investment in the regional travel options and parking management systems are directed by current RTP policies and objectives described below.

Current Metro **Regional Transportation Plan (RTP)** policy 19.0 (see Appendix A) calls for Regional TDM to:

> *Enhance mobility and support the use of alternative transportation modes by improving regional accessibility to public transportation, carpooling, telecommuting, bicycling and walking options.*[39]

Policy 19.1 (see Appendix A) calls for Regional Parking Management:

> *Manage and optimize the efficient use of public and commercial parking in the central city, regional centers, town centers, main streets and employment centers to support the 2040 Growth Concept and related RTP policies and objectives.*[40]

Policy 19.2 is to:

> *Manage and optimize the use of highways in the region to reduce congestion, improve mobility and maintain accessibility within limited financial resources.*

Central to this policy were strategies for peak period pricing. Such strategies were the subject of the Metro "Traffic Relief Options Study" which found that such a policy would work best with long stretches of new highway, but would not be received well by the public if charging for existing highway infrastructure.[41]

These three policies follow Transportation Systems Management Policy 18.0 to "…optimize performance of the region's transportation systems."

[39] http://www.metro-region.org/library_docs/trans/2004rtp_chapter1no_maps.pdf
[40] http://www.metro-region.org/library_docs/trans/2004rtp_chapter1no_maps.pdf
[41] http://www.metro-region.org/article.cfm?ArticleID=230

The modal target goal for the RTP is to create a regional transportation system where about half of all trips are made using transportation means other than driving alone. The non-SOV modal targets included in the table on this page range from a lower, financially constrained level of investment in the transportation system to the preferred level of investment.[42]

2040 Regional Non-SOV Modal Targets[1]

2040 Design Type	Non-SOV Modal Target
Central city	60-70%
Regional centers Town centers Main streets Station communities Corridors	45-55%
Industrial areas Intermodal facilities Employment areas Inner neighborhoods Outer neighborhoods	40-45%

[1] The targets apply to trips *to and within* each 2040 Design Type. The targets reflect conditions appropriate for the year 2040 and are needed to comply with Oregon Transportation Planning Rule objectives to reduce reliance on single-occupancy vehicles.

The July 2005 "Evaluation of Potential Measures for Achieving Modal Targets" includes findings directly related to RTP changes to the TDM section:.

> *Revise descriptions of transportation elements in Chapter 1 to incorporate information in this report related to…transportation management and parking.; [and],*
>
> *Update modal requirements sections of Chapter 6 to incorporate*
>
> - *Suggested changes to existing requirements for TMAs…*
> - *Potential new minimum mode share target requirements.*
> - *New procedures for measuring impacts of required strategies on mode share.* [43]

July 2005 "Evaluation of Potential Measures for Achieving Modal Targets" looked into a number of local Transportation System Plans (TSPs). The following table (next page) was included in that study to show the status of TDM measures entering into local TSPs.[44]

[42] http://www.metro-region.org/library_docs/trans/2004rtp_chapter1no_maps.pdf
[43] http://www.metro-region.org/article.cfm?ArticleID=12130
[44] http://www.metro-region.org/article.cfm?ArticleID=12130

Table 1. Summary of Major Transportation Demand Management (TDM) Measures by Jurisdiction

TDM Measure	Portland	Beaverton	Gresham	Wilsonville	Oregon City	Clackamas County
Modal Targets (RTP)	●	●	●	●	●	●
Parking Management and Requirements (RTP)	●	●	●	●	●	●
Support of TMAs (RTP)	●	●	●	⊙	○	●
Roadway Connectivity Requirements (RTP)	●	●	●	●	⊙	●
Transit Pass Program in Regional Centers (RTP)	●	●	○	●	○	⊙
Other Transit Strategies	●	●	●	●	●	●
Neighborhood-based Travel Management	●	○	○	⊙	○	○
Development Incentives	●	●	●	●	○	○
Implementing Bicycle/Pedestrian Facilities	●	●	●	●	●	●
Carpool/ Match	●	○	●	⊙	○	●
Other	Carshare support	○	○	Shuttles	○	⊙

Sources of Data: City of Wilsonville TSP, Clackamas County TSP, Clackamas County Zoning Ordinance 1007.07, Clackamas County Comprehensive Plan, City of Gresham TSP, City of Portland TSP, City of Portland Comprehensive Plan, City of Beaverton TSP, City of Oregon City TSP, and telephone interviews with staff of respective jurisdictions.

Legend:
- ○ Not in TSP or Codes
- ⊙ In TSP
- ● In TSP or Codes and currently implementing

State of Washington Commute Trip Reduction Program

The **State of Washington** passed **Commute Trip Reduction (CTR)** into law in 1991. Vancouver, Washington is subject to this law. The statewide CTR program:

> *...uses partnerships among employers, local jurisdictions, planning organizations, transit systems, and the state to encourage employees to ride the bus, vanpool, carpool, walk, bike, work from home, or compress their workweek. The major goals for the CTR program are to:*
> *• Improve transportation system efficiency*
> *• Conserve energy*
> *• Improve air quality*[45]

The 2006 Washington State Legislature passed the CTR Efficiency Act (ESSB 6566). Changes are to make the program:

- *More effective by reducing more drivealone commute trips,*
- *More efficient by focusing on drivealone trips that, when shifted into other modes, provide the best return for the level of investment,*

[45] http://www.wsdot.wa.gov/tdm/taskforce/tfmaterials.cfm

- *More targeted on those areas with the greatest need for trip reduction,*
- *More integrated with local land use and transportation policies, plans, and regulations, and*
- *More aligned with local, regional and state transportation investments.*[46]

Changes become official January 1, 2008.

To implement the CTR Efficiency Act, the Washington State Department of Transportation (WSDOT) is working with cities, counties, planning organizations, and transit systems to develop the rules and create new plans.[47]

V. Regional Travel Options and Parking Management Systems Profile

This section is organized by:

- regional programs,
- local programs,
- state and national programs.

Regional Implementation Programs

The Regional Travel Options (RTO)/Transportation Demand Management (TDM) and parking management systems are different from other transportation systems, such as transit, in that the infrastructure is weighted towards programs, some operations and few capital elements. Metro and RTO partners offer region-wide programs and operations. Many local organizations implement programs. The impact of the TDM system can be seen through changes in travel behavior, reduced VMT and fewer vehicle trips per capita. Parking management progress can be seen through rules adopted into local transportation system plans. Implementation of RTO is funded through Regional Transportation Priorities, matching amounts from local jurisdictions, and private funds.

Regional Travel Options Program

Metro administers the RTO program, convening regional partners and helping to leverage public and private resources, building on the success of the program. Administration includes awarding RTO Grants for innovative strategies, starting up Transportation Management Associations (TMAs) and will soon include an individualized marketing project.

Regional Rideshare Program

Metro RTO also implements an "umbrella" marketing campaign for regional partners to use. Recently, Metro RTO started operating the regional rideshare program, leading evaluation and offering technical assistance to partners. The rideshare program forms carpools and vanpools by supporting employers and operating ride matching software. The evaluation program records impacts on trip behavior and provides analysis for strategic decision-making. RTO technical service creates tools for partners to coordinate (e.g., contact management), track data and analyze results from individual programs.

[46] http://www.wsdot.wa.gov/tdm/tripreduction/download/CTR_Report_05.pdf
[47] http://www.wsdot.wa.gov/tdm/taskforce/tfmaterials.cfm

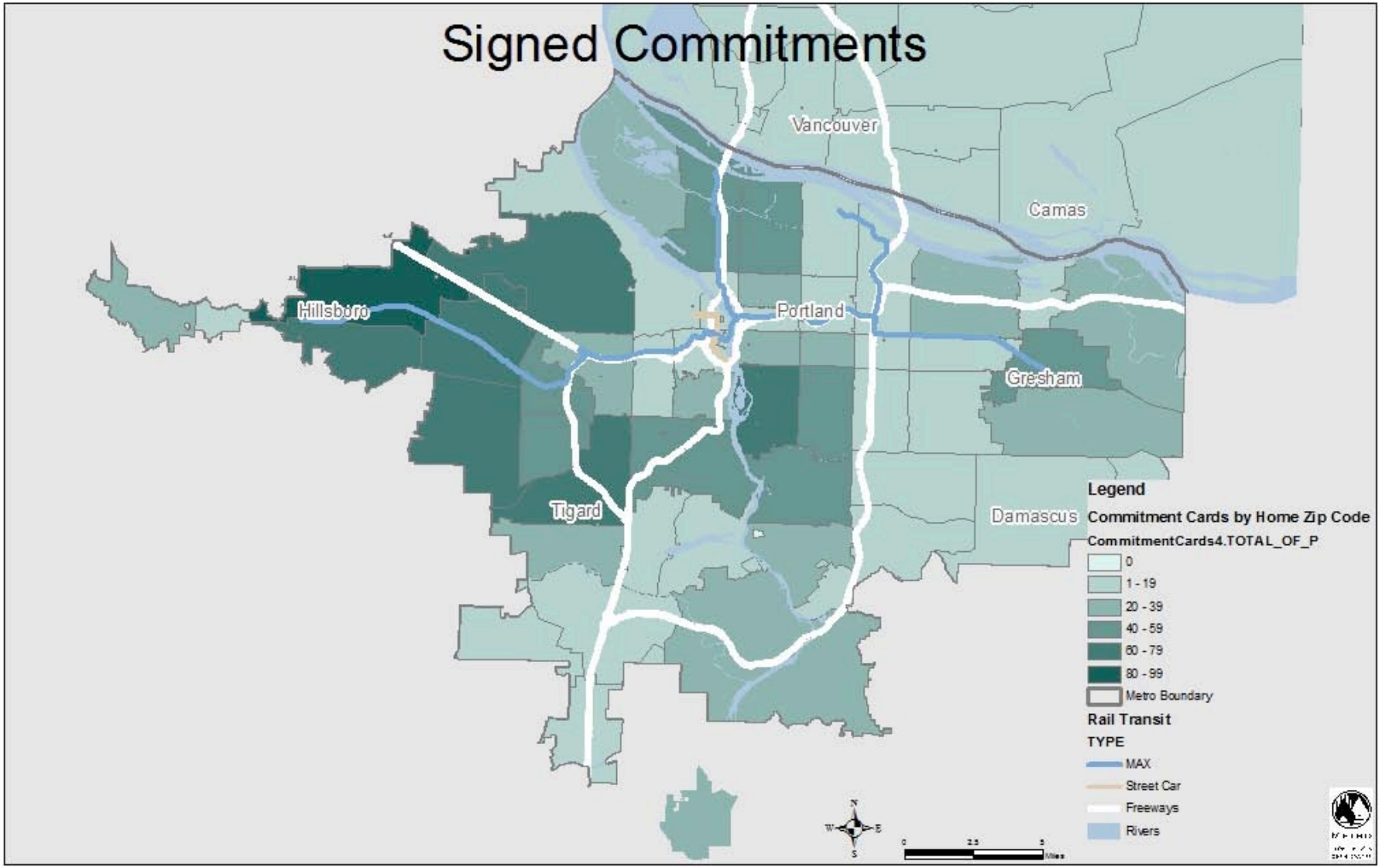
Collaborative Marketing Program

Metro RTO coordinates events and outreach through the **Collaborative Marketing Program**. Metro RTO has provided targeted and tested messages through the Drive Less/Save More marketing campaign.

Drive Less/Save More

ODOT and Metro launched **Drive Less/Save More**. Advertising and earned media began in February 2006 and a summer outreach program reached 6,300 people across the region, 2,600 of them pledged to reduce auto trips (see "Signed Commitments" map). "In 2003, $1.2 million were provided to the RTO program from ODOT Congestion Mitigation Air Quality and Surface Transportation Program funds (both are FHWA programs)."[48]

[48] Oregon Transportation Plan Policy Analysis, October 2005, p4-17, http://www.oregon.gov/ODOT/TD/TP/docs/otpSustain2/3oct05/apdxG.pdf


Signed Commitments
Vancouver
Camas
Hillsboro
Portland
Gresham
Tigard
Damascus
Legend
Commitment Cards by Home Zip Code
CommitmentCards4.TOTAL_OF_P
0
1 - 19
20 - 39
40 - 59
60 - 79
80 - 99
Metro Boundary
Rail Transit
TYPE
MAX
Street Car
Freeways
Rivers

Regional implementation organizations also include DEQ and TriMet. **DEQ** supports employers affected by the ECO rules.[49] **TriMet** supports employers to comply with ECO or manage parking issues by offering programs to subsidize transit, provide an Emergency Ride Home (reducing a barrier employees have toward leaving their car behind) and other transportation program support (see "Participating Employment Sites" map). TMAs also work with employers in their local areas (see "Transportation Management Associations" map). The combined regional result, from participating and surveying employment sites, is a weekday non-SOV commute trip rate above 33% (see chart below).

Organization	Regional program	Awareness and participation	Travel impacts
ODOT/Metro	Drive Less/Save More marketing campaign	Outreach to 6,300 people, 2,600 committed to driving less, TV ads to 98% of adults ages 18+, radio ads to 60% of adults ages 18+, outdoor billboards to 250,000 people/month	To be determined
DEQ, TriMet (and now Metro rideshare program)	Employer outreach	212,000 employees working for employers who offer transportation options program	36.7 million vehicle miles reduced annually[50], 33% non-SOV commute trips
Metro (formerly TriMet)	Traditional vanpools and shuttles)	16 vanpools/ 2 shuttles	1.2 million vehicle miles reduced annually[51]
Metro (formerly City of Portland)	CarpoolMatchNW and rideshare marketing	1,059 carpools	4.1 million vehicle miles reduced[52]

Regional Rideshare Program

The regional **rideshare** (carpool and vanpool) program recently moved to Metro. **CarpoolMatchNW.org** is a database with 4,800 registrants who are able to match their trips with others who have a similar origins and destinations. Several "Cool to Carpool" campaigns got a number of people to register with the system but there is evidence of new registrants being frustrated not finding quality matches. Metro is currently considering ways to improve the quality of the registration pool.

There are currently 16 **vanpools**, many originating in Clark County, Washington. Metro has hired a consultant and vanpool program administrator to find effective and financially sustainable ways of increasing the use of vanpools. A recent rideshare market study identifies many prospective

[49] http://www.deq.state.or.us/nwr/ECO/ECO_Rules.pdf
[50] average of low and high estimates from Regional Travel Options 2004-05 Program Evaluation http://www.metro-region.org/article.cfm?ArticleID=12130
[51] average of low and high estimates from Regional Travel Options 2004-05 Program Evaluation http://www.metro-region.org/article.cfm?ArticleID=12130
[52] average of low and high estimates from Regional Travel Options 2004-05 Program Evaluation http://www.metro-region.org/article.cfm?ArticleID=12130

markets totaling 30,000 commuters that are potential carpoolers and vanpoolers around the region.[53]

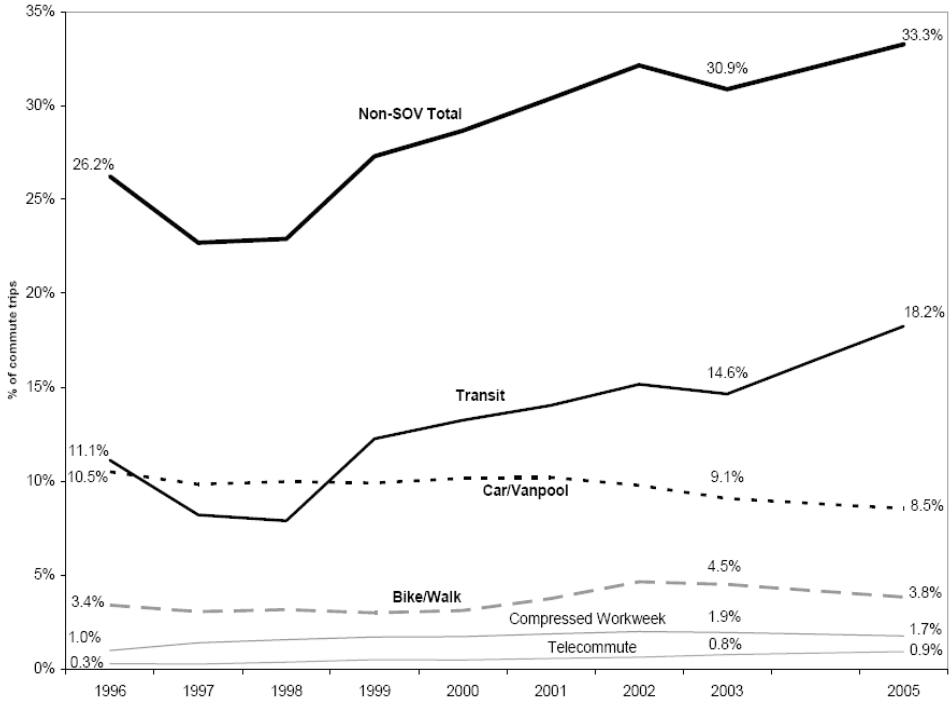
Designated carpool parking spaces exist at approximately 14% of RTO-participating employment sites.[54] The City of Portland administers over 900 carpool parking-lot spaces, plus designated on-street parking (usually at long-term metered spaces) in the Central City. Over 6,000 carpool parking permits were issued in FY03/04 by the City of Portland.[55]

High-Occupancy Vehicle (HOV) Lanes

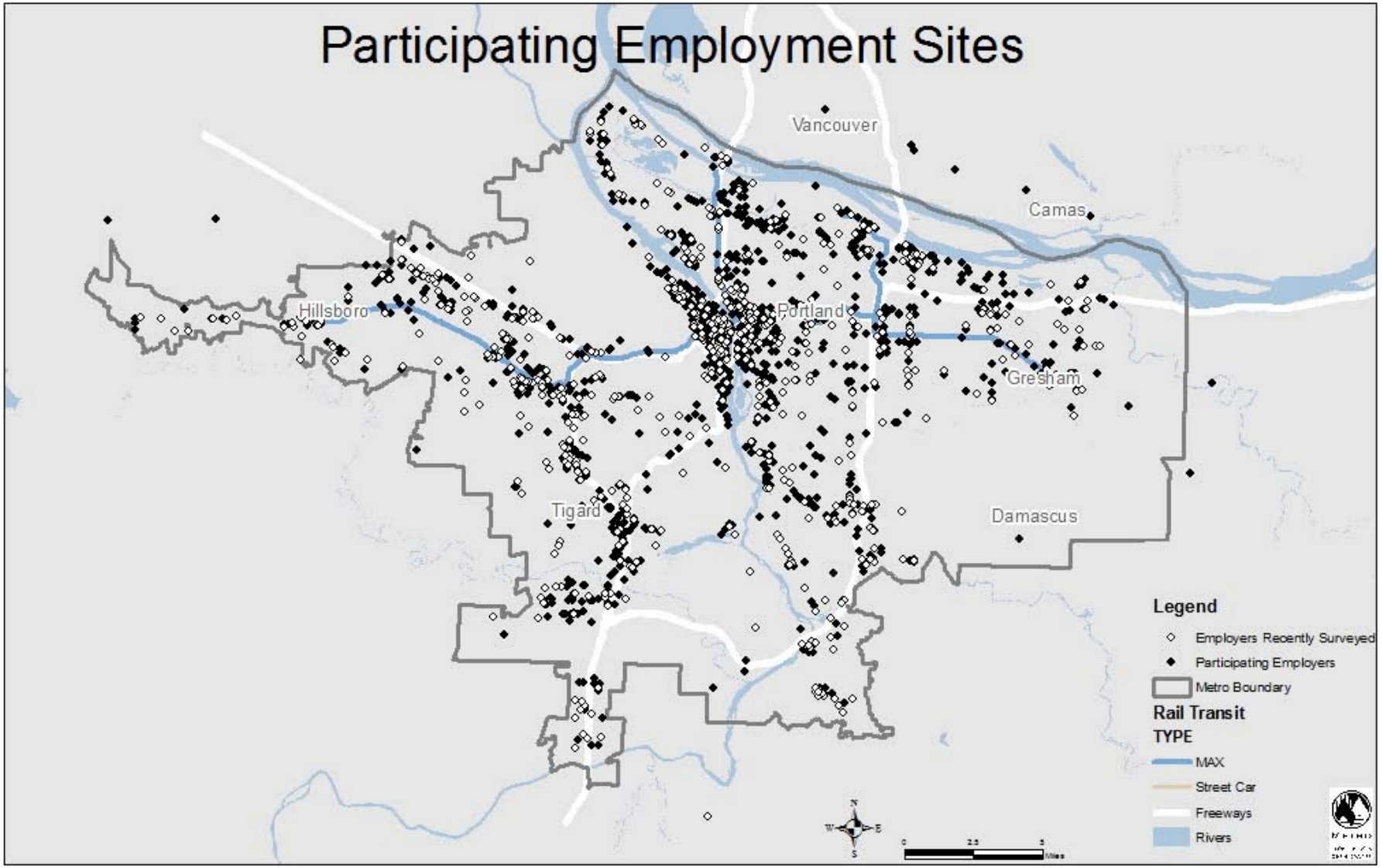
The Portland region has few high-occupancy vehicle (HOV) lanes; one reason for low rideshare figures cited in a recent evaluation of the RTO program.[56] A High Occupancy Vehicle (HOV) facility was opened in the region as a test project in 2001 and was extended as a pilot project in 2003. The HOV lanes run along Interstate 5 for four miles from Northeast 99th Street south to Mill Plain Boulevard. The HOV facility offers carpoolers, vanpoolers and transit users time savings in crossing the Columbia River.[57]

Employee Commute Option Surveys

Employee Commute Option surveys show that RTO partners working on employer outreach have built non-SOV trips to work to 33.3%. The following chart shows the share of trips by mode based on surveys administered between 1996 and 2005.



[53] http://www.metro-region.org/article.cfm?ArticleID=12130
[54] Metro analysis of TriMet ECO survey incentive data.
[55] http://www.portlandonline.com/shared/cfm/image.cfm?id=65168
[56] http://www.metro-region.org/article.cfm?ArticleID=12130
[57] http://www.metro.dst.or.us/library_docs/trans/rideshare.pdf


Participating Employment Sites
Vancouver
Camas
Hillsboro
Portland
Gresham
Tigard
Damascus
Legend
Employers Recently Surveyed
Participating Employers
Metro Boundary
Rail Transit
TYPE
MAX
Street Car
Freeways
Rivers

Regional Travel Options Grants

Recent **RTO Grants** were awarded to projects such as:

- Wilsonville SMART received $32,000 to implement the "Walk Smart" program over two years from 2004-2006. SMART contributed $8,000 in matching funds.
- Swan Island TMA received $12,500 to increase vanpools from Clark County, Washington.
- WTA received $35,653 for the Carefree Commuter Challenge.
- Gresham Regional Center TMA received $29,900, with and local match of $9,800 to promote bicycling in the area.

Transportation Management Associations

The **TMA start-up** process is currently underway. South Waterfront, Southwest Downtown Portland, and the Pearl District (downtown NW Portland) have all expressed interest in starting a TMA. This process is informed by lessons learned over the years of TMAs and requires a feasibility study, local jurisdiction partnership, supportive planning and private interest and funding.

Carsharing

Carsharing in the Portland region is currently provided by Flexcar, a for-profit company with programs in many cities across America. "The first large-scale US program, CarSharing Portland (subsequently sold to Flexcar), also opened for business in 1998, and the early years saw rapid, almost exponential growth in the number of members, vehicles and organizations…"[58] Flexcar has 5,000 members and 130 vehicles in the region. A study shows that auto ownership decreases by 3.5 vehicles for every Portland Flexcar vehicle (not surprisingly lower than the average rate of 6 vehicles per carsharing car in Europe) (TCRP 108, 2005). Prices at the time of TCRP Report 108 were:

> *Regular Plan – $35 annual fee, $9 per hour. Each hour includes 30 miles – $0.35 per additional mile*
> *Bundled Plan – for example, $35 annual fee, $80 per month including 10 hours and 300 miles. Additional hours at $8.50, including 30 miles. Other bundled plans range from $42.50 to $700 per month, including 5-100 hours and 150-3000 miles*
>
> *Cost by example trips:*
> *Groceries (1 hr, 5 miles)= $7-$9*
> *Airport (4 hrs, 75 miles)= $28-$36*
> *Hiking (8 hrs, 25 miles)= $56-$72*

Regional Parking Management

Regional parking management (RTP Policy 19.1) was implemented when cities of the region adopted Title 2 of the Urban Growth Management Functional Plan.[59] New construction of parking is limited by maximums that decrease the number of spaces allowed based on proximity to frequent transit service and 2040 Design Types (e.g., regional centers). Data on existing levels

[58] Car-Sharing: Where and How It Succeeds, 2005, http://trb.org/news/blurb_detail.asp?id=5634
[59] http://www.metro-region.org/library_docs/about/chap307.pdf

of parking and regulations has not been summarized. Objective "e" calls for preferential parking stalls for carpool, vanpool, motorcycle, bicycle and motorized bicycle parking at major retail centers, institutions and employment centers. Data has not been collected to summarize levels of each of these.

DEQ ECO rules allow employers to comply by, "Discontinuing parking subsidies and charging all employees for parking."[60] Another method to compliance is to demonstrate that parking is limited and meets DEQ maximum parking ratios (OAR 340-242-0300 through 340-242-0390). Just under 10% of ECO affected employment sites are complying with ECO rules through parking ratio restrictions.

Local Implementation Programs

Local implementation organizations are local jurisdictions, public-private partnerships and private entities.

Local jurisdictions include:

- City of Portland Transportation Options residential and employer program
- Wilsonville South Metro Area Rapid Transit (SMART) "Smart Options" employer program and WalkSmart program for the general public
- City of Vancouver Commute Trip Reduction (CTR) employer program for Clark County, Washington

Individualized Marketing

Local implementation of **individualized marketing** (e.g. TravelSmart™) by the City of Portland (with RTO partners) brings transportation tools and know-how into households to help residents think about the trips they make, choose options to driving alone and save transportation costs. This strategy supports using travel options for all trips in the household. Individualized marketing campaigns were located in much of North, NE and SE Portland and a small project in Multnomah/Hillsdale neighborhoods.

Individualized marketing has resulted in a five (5) percentage-point shift away from trips made driving alone. Individualized marketing has reached 48,000 households (105,000 people) in Portland (see "Individualized Marketing" map). Extended research in Perth, Australia shows that this shift is sustained from 3 to 5 years.[61]

SMART Options is the transportation demand management arm of Wilsonville's SMART Transit and provides services to area. SMART Option's boundaries are those of the Wilsonville city limits for the TDM outreach, with transit service provided to other areas in the region. SMART Options has provided a number of programs to employers, school children and residents of Wilsonville.

Currently there are 67 employers involved in the Commute Trip Reduction (CTR)

[60] http://www.deq.state.or.us/NWR/ECO/ECO_Rules.pdf
[61] Perth TravelSmart emphasized TravelSmart to build transit ridership while not expanding service. A study of the same households beyond five years would probably suffer in gathering data from the same households since people often move in after that many years.

program in Vancouver, Washington. The Washington State CTR law, which affects most of the participating employers, requires distribution of a CTR brochure on program benefits to employees annually and new employees when hired.

Organization	Awareness and participation	Travel impacts
City of Portland	Individualized marketing to 48,000 households, 105,000 people	5 percentage-point shift away from drive-alone trips
Wilsonville SMART	3,500 employees, 712 people enrolled in WalkSmart (2004/2005), 100 new residents per year contacted	3,200 vehicle miles reduced by WalkSmart (2004/2005), others unknown
Clark County/City of Vancouver CTR	67 employers	Currently being calculated

Transportation Management Associations/Public-Private Partnerships

Public-private partnerships include six Transportation Management Associations (TMAs). Current Metro RTP objectives call for locating these TMAs in the region's centers. Current TMAs are:

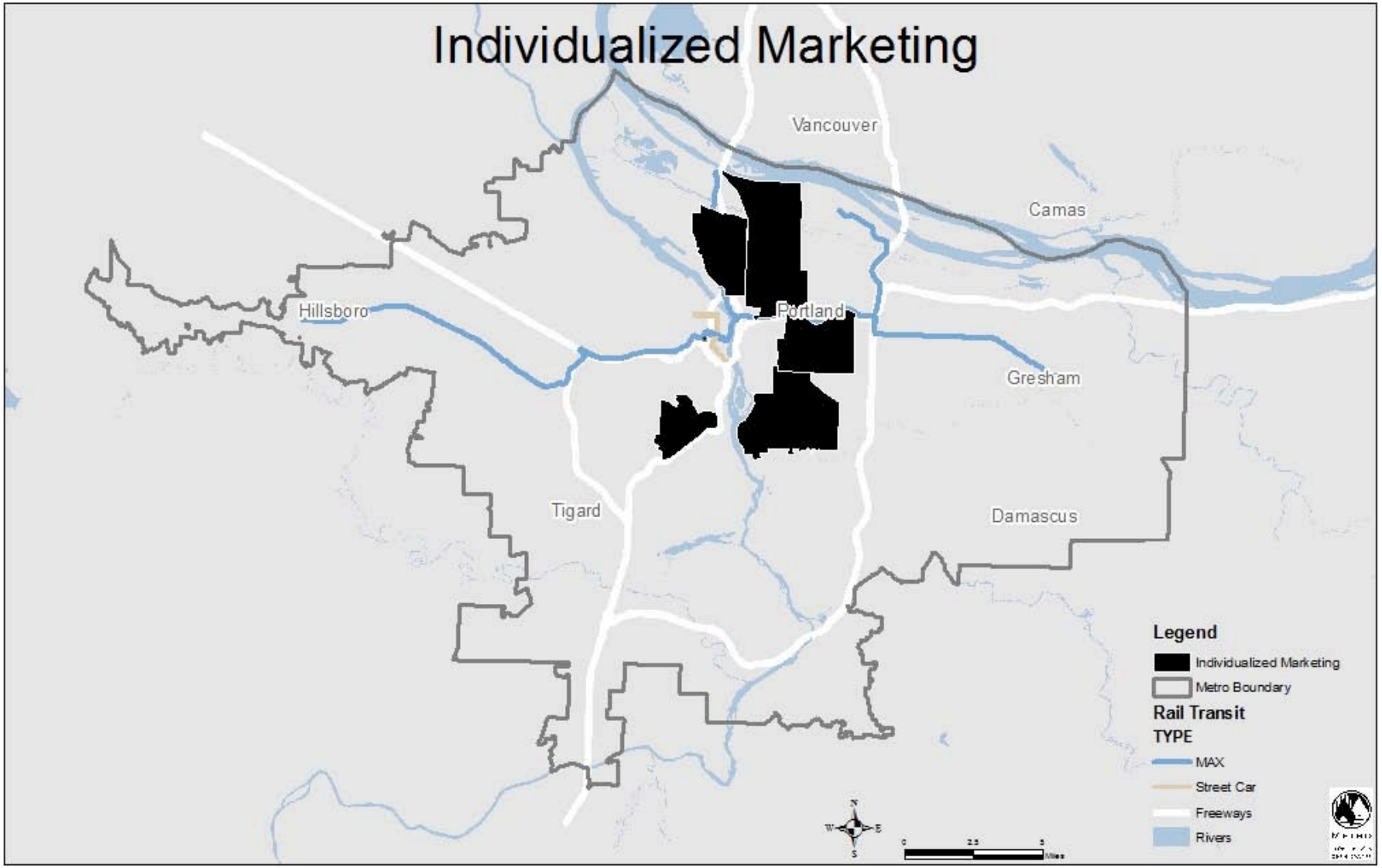
- Clackamas Regional Center TMA, facilitated by the North Clackamas County Chamber of Commerce
- Gresham Regional Center TMA, facilitated by the Gresham Downtown Development Association (a business association)
- Lloyd TMA
- Swan Island TMA
- Troutdale TMA, facilitated by the West Columbia Gorge Chamber of Commerce
- Westside Transportation Alliance

Organization	Awareness and participation	Travel impacts
Clackamas Regional Center TMA	4,000 employees	Unknown
Gresham Regional Center TMA	2,700 employees	20% non-SOV
Lloyd TMA	8,000 employees	3.8 million vehicle miles reduced, 52% non-SOV commute trips
Swan Island TMA	7,000 employees	24% non-SOV commute trips
Troutdale TMA	Unknown	Unknown
Westside Transportation Alliance	29,000 employees	235,000 vehicle miles reduced in Carefree Commuter Challenge

The RTO Subcommittee conducted a study and determined that a TMA would not be feasible in the Kruse Way employment area of Lake Oswego. Although employers supported the TMA concept, County and City plans did not show complimentary planned investment in multi-modal transportation.

Two TMAs were discontinued. Columbia Corridor Association TMA worked in an employment area close to the Portland International Airport. The TMA operated between 1999 and 2001. Three reasons are thought to have contributed to the TMA discontinuing service: the TMA did not begin with a feasibility study; the TMA was an exploratory project for the TMA; and, not enough business partners lent financial support to sustain the TMA.

The Tualatin TMA served Tualatin town center and nearby employment area from 1997 to 2002. Two reasons are thought to have contributed to the TMA discontinuing service: the chamber of commerce (that co-sponsored and hosted the TMA) changed board and executive leadership rapidly and then changed priorities; and, lack of financial support from enough business partners.


Individualized Marketing
Vancouver
Camas
Hillsboro
Portland
Gresham
Tigard
Damascus
Legend
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TYPE
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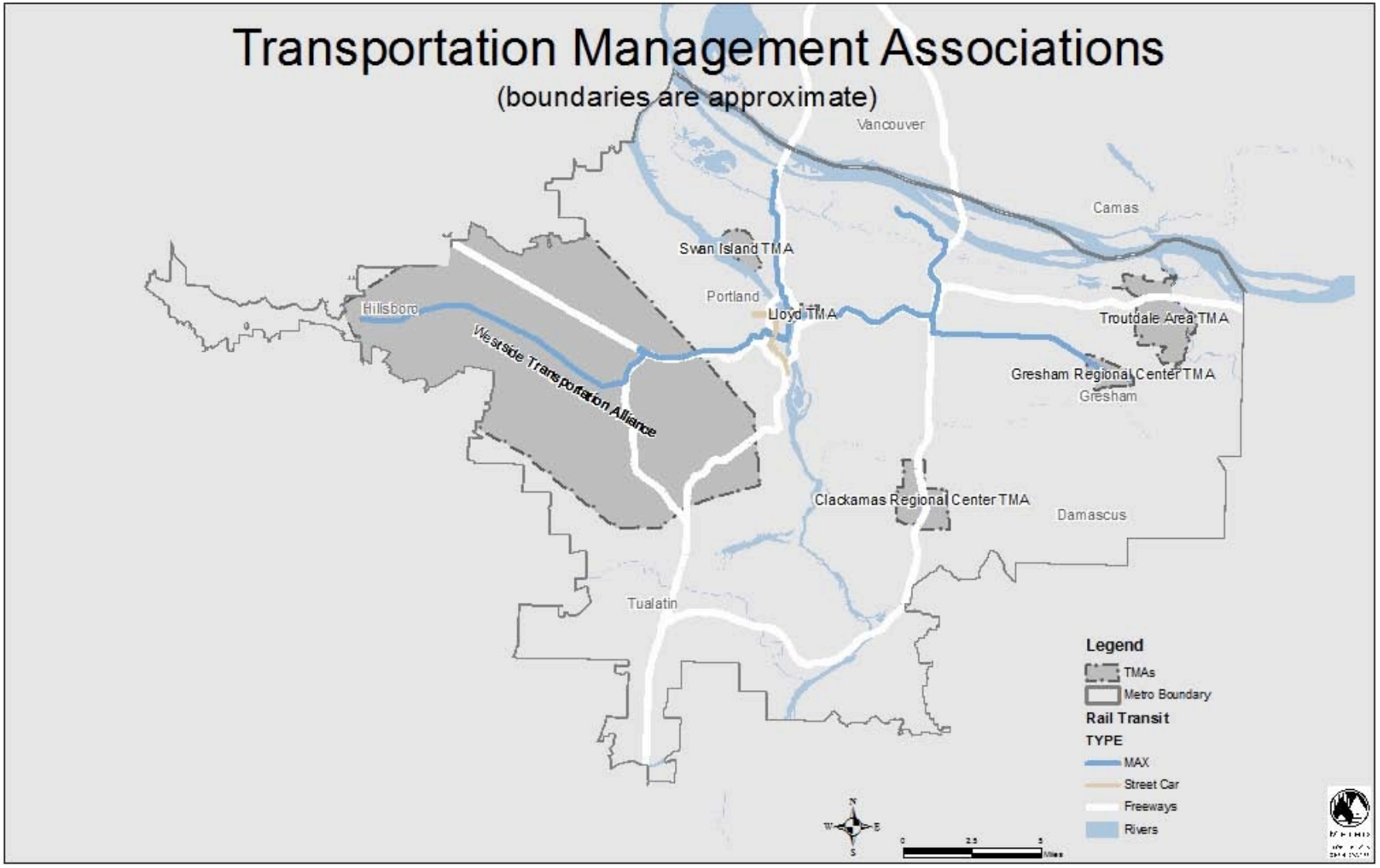
Freeways
Rivers


Transportation Management Associations
(boundaries are approximate)
Vancouver
Camas
Swan Island TMA
Portland
Lloyd TMA
Hillsboro
Westside Transportation Alliance
Troutdale Area TMA
Gresham Regional Center TMA
Gresham
Clackamas Regional Center TMA
Damascus
Tualatin
Legend
TMAs
Metro Boundary
Rail Transit
TYPE
MAX
Street Car
Freeways
Rivers

Private Implementation Programs

Private employers help build the TDM program through their dedication of staff time and sometimes capital such as bike racks and carpool spaces. Staff helping with TDM are called Transportation Coordinators (TCs) and spend anywhere from a few hours per year to full-time, assisting with commute options. There are over 1,000 TCs at an equal number of employment sites across the region. A few large employers with multiple sites have dedicated staff, sometimes in the facilities department and sometimes in the benefits department. These employers are Kaiser, Intel, Portland State University and Oregon Health Sciences University. The last two examples are large universities in or near the central city where they also manage parking.

The City of Portland is currently gathering data to analyze **parking** utilization in the downtown Portland area. Data are gathered on parking costs in downtown Portland because they are found to "…have a major influence on the mode of travel for CBD commuters."[62]

Monthly average public **parking rates** in downtown Portland for garages and surface lots have increased slightly more than inflation in the Lloyd District and twice that of inflation in the Pearl and Old/Town Chinatown (areas north of West Burnside Street) (see table below.

Garage and surface lot public parking rates in downtown Portland[63]

Portland Central City Area	Average monthly rate 1995	Average monthly rate 2004	Rate increase since 1995*
Lloyd District	$ 60.59	$ 78.64	30%
CBD, north of Burnside St.	$ 71.52	$ 120.26	68%
CBD, south of Burnside St.	$ 109.84	$ 160.10	46%
Consumer Price Index*	$ 1.00	$ 1.28	28%
*for all urban consumers in the Portland-Salem area.			

[62] "Transportation System Monitoring Activities" Metro, January 1993, p. 3
[63] "Combined Monitoring Report" David Horowitz, Metro 2004

State Implementation Programs

Oregon Department of Energy (ODOE) supports employer auto trip reductions through a Telework program that advises on best practices. ODOE also encourages employers to subsidize transit, join a TMA or provide other transportation options that save energy and qualify the employers for a **Business Energy Tax Credit (BETC)**, returning approximately 1/3 of the cost.

The **State of Oregon** supports regional and statewide TDM through the Oregon Department of Transportation (ODOT) and the Oregon Department of Energy (ODOE). ODOT convenes the statewide **Transportation Options** program:

> *Oregon's Transportation Options (TO) program coordinates and promotes travel options including transit, rideshare, cycling and walking. The state TO program centers are housed in ODOT's Public Transit Division and Department of Energy with six additional programs located in the major metropolitan areas. The programs are a part of the state's management of the transportation system to reduce the hours of travel delay caused by congestion and improve air quality. Major objectives are to help employers with 50+ employees develop employee transportation plans to reduce reliance on the automobile and apply available Business Energy Tax Credit. Other program services and activities are listed below with a map of the major areas served." Projects (Program Services):*
>
> *(1) Providing education and outreach that includes mass marketing, employee, and individualized programs to promote to promote transit, rideshare, cycling, walking and rural-to-urban mobility*
> *(2) Marketing and sales of employee group transit passes*
> *(3) Maintaining rideshare carpools and vanpools databases*
> *(4) Promoting employer telework programs*
> *(5) Assisting with transit, corridor, and transit-oriented development planning; and community design related issues*
> *(6) Assisting with Safe Routes to School planning and coordination*
> *(7) Promoting community health through walking and cycling and appropriate community design*

As mentioned previously, ODOT has allocated a significant amount of funding for transportation options marketing, resulting in the Drive Less/Save More campaign that was kicked off in the Portland region before being spread to the rest of the state.

Oregon Department of Energy (ODOE) **Business Energy Tax Credit (BETC)** has supported many regional TDM projects:

> *BETC has been a program within the ODOE for over 25 years. In 2005, BETC had 2,500 projects for over $30,000,000 statewide. Of the four major project categories listed above, transportation services had the highest number of projects (70) and received the most tax credits at $18.2M, transit passes (42) were next at $8.6M, followed by commuter pool vehicles (26) at $1.3M and car sharing (1) at $1.2M. When eligible, BETC provides business dues tax credits to a TMA on behalf of a member which then funds a project for the TMA. Both Lloyd and Swan Island TMAs have participated in this aspect of the program.*
>
> *Metro BETC projects having been growing over the past three years. In addition to the TMA dues, transit pass subsidy and Flexcar are major recipients of the credits in the*

Metro area. One concern raised is that there may not be sufficient [ODOE] staff to process the number of projects and accurately measure program impacts.[64]

Federal Implementation Programs

Federal implementation of TDM in the Portland region occurs when private employers participate in the **Environmental Protection Agency's (EPA) Best Workplaces for Commuters (BWC)**. Beaverton-based Intel was featured as the top BWC among fortune 500 companies.[65] Currently, 23 employers in the region are registered with BWC.[66] RTO and CarpoolMatchNW.org are registered as BWC supporters and included in the BWC network for Oregon resources for employers.

VI. Policy Assessment

This section reviews key findings and implications for the RTP update.

Key Finding	RTP Implication
1. Non-work related travel • Half of peak-hour traffic and the majority of traffic other hours of the day is non-work related travel.	• Continue policies and strategies that apply to all trip purposes at all hours of the day.
2. Targeted and individualized marketing • Employer outreach and individualized marketing continue to show progress shifting trips to non-SOV options. • When asked to commit to reducing auto trips, people most commonly choose trip chaining and walking. • Bike ridership is rising. Potential new groups of bike riders will benefit from mentoring.	• Continue existing, and allow for new targeted strategies. • Pair outreach and marketing with public willingness to change their travel behavior. • Increase support structure for one-on-one travel training.
3. Corridor Planning • Individualized marketing built transit ridership in a corridor greater than the ridership gained by new light-rail transit service alone. • Road design emphasizes through trips, not local trips.	• Pair TDM with corridor and other transportation improvements. • Encourage local trips through road design.
4. Technology • Traveler information improves quality and access to transportation systems. • Applications can provide a transportation management service (e.g., using Flexcar	• Increase policy supportive of technological solutions, studying their potential impact and implementing coordinated, cost-effective strategies.

[64] Regional Travel Options 2004-05 Program Evaluation
http://www.metro.dst.or.us/article.cfm?ArticleID=12130
[65] http://www.bwc.gov/
[66] http://www.ergweb.com/projects/ccli/search/search_for_bwc_employer_results.asp

Key Finding	RTP Implication
reservation software managing other fleets).	• Increase applications for transportation management (e.g., utilization of fleet vehicles).
5. Economics • Households spend more on transportation than any other expense except housing. • Employers and at least one mortgage broker have facilitated individuals and households to locate near transportation options and their key destinations. • When energy costs rise, households make decisions to drive less or cut other costs. This can affect the regional economy or mobility. • Distance-based fees will reduce driving.	• Continue policy to reduce reliance on the automobile, which supports social and economic resilience. • Increase the ability for individuals and households to locate efficiently. • Incorporate distance-based fees into strategies; consider for policy.
6. Incentives • Employers hold the key to capitalize on several State and Federal tax credits by offering benefits to their employees.	• Continue facilitation of financial incentives that achieve outcomes.
7. Carsharing • Reduces car ownership per capita, offers mobility to individuals who do not own cars and manages employer motor pools.	• Continue policy to reduce reliance on the private automobile.
8. Managing parking • Local jurisdictions have adopted parking minimums and maximums in accordance with the Regional Framework Plan. • "Free" parking poses a big challenge for land use and achieving modal targets. • Charging for parking in areas where spaces are used more than 85% will result in better utilization and reduce miles driven (cars searching for free spaces).	• Review parking minimums and maximums based on land use types, new transit infrastructure and other transportation systems. • Build on policy for pricing parking. • Increase shared parking. • Study innovative approaches to reducing required parking. Create regional formulae to incorporate parking management into number of spaces required.
9. World economy • Global demand for materials and energy means increased capital and operating costs for transportation systems.	• Increase non-capital-intensive transportation systems.
10. Aging demographic • New transportation decisions are made during the aging process. • Paratransit has seen sharp increases in use.	• Increase support and safety structures to build confidence in aging population to use regular transit.
11. Community health • Ozone (smog) level is within acceptable limits, yet it still affects health conditions such as asthma. • Air toxics (e.g., benzene, particulate matter) are carcinogenic and pose a health	• Continue to reduce auto trips and therefore air pollutants. • Encourage use of transportation options involving physical activity in every age category.

Key Finding	RTP Implication
risk. • Fewer children walk or bike to school. Obesity is an issue for Oregonians. • Safer driving will reduce barriers to non-auto transportation choices.	• Increase safe driving and traffic calming.

VII. Conclusion

Transportation demand management and parking management have increasingly important roles in the regional transportation system. One simply needs to look at the number of empty seats in vehicles stuck in a traffic jam or the number of empty spaces in many parking lots to know that effective management can allow for more trips and better land use.

TDM is versatile and scalable. Maximizing TDM policy means:

1. continuing strategies to reduce auto trips for various trip purposes, all hours of the day;
2. applying strategies anywhere in the region, before, during or after investing in transportation infrastructure;
3. incorporating TDM study, alternatives analysis and implementation into all transportation projects;
4. partnering with a diverse set of interests including those working with air pollution, energy conservation, land use, community health, for-profit ventures, and the economy;
5. creating tools to better access traveler information; and,
6. educating and supporting the public (all ages and abilities) and business community on efficient use of the transportation systems.

Maximizing parking management policy means:

7. weighing the number of parking spaces built with the road capacity to serve trips;
8. associating innovations and management strategies directly with impact on required parking;
9. directing parking costs to users rather than non-users;
10. expanding use of limited space through shared parking agreements; and,
11. reducing vehicle miles traveled for the purpose of finding parking by providing traveler information about parking utilization.

TDM and parking management work best when growth decisions result in:

a) Accessible streetscapes (e.g., grid for walk/bike/transit, traffic calming)
b) Limited parking (e.g., at capacity, regulated, fees)
c) Supportive land use for short trips (e.g., 2040 vision of nodes and centers, affordable housing in every area of the region)
d) Balanced private vs. public cost (e.g., appropriate incentives, tolls, fees, taxes)

Appendix A: Current RTP TDM and Parking Management Policy:

Policy 19.0. Enhance mobility and support the use of alternative transportation modes by improving regional accessibility to public transportation, carpooling, telecommuting, bicycling and walking options.

Objectives:

a. Promote programs that reduce the number of people driving alone and dependence on the automobile.
b. Promote transit-supportive design and infrastructure in 2040 Growth Concept land-use components, including the central city, regional centers, town centers, station communities, main streets and along designated transit corridors.
c. Establish a non-single occupancy vehicle modal target for each 2040 Design Type.
d. Promote, establish and support transportation management associations (TMAs) in the central city, regional centers, industrial areas and intermodal facilities, town centers and employment centers.
e. Promote private and public sector programs and services that encourage employees to use non-SOV modes or change commuting patterns, such as telecommuting, flexible work hours and/or compressed work weeks.
f. Investigate the use of HOV lanes to improve system reliability and reduce roadway congestion.
g. Promote end-of-trip facilities that support alternative transportation modes, such as showers and lockers at employment centers.
h. Investigate the use of market-based strategies that reflect the full costs of transportation to encourage more efficient use of resources.

Policy 19.1. Manage and optimize the efficient use of public and commercial parking in the central city, regional centers, town centers, main streets and employment centers to support the 2040 Growth Concept and related RTP policies and objectives.

a. Objective: Establish minimum and maximum parking ratios to help the region manage the number of off-street parking spaces in the region.
b. Objective: Support local adoption of parking management plans within the central city, regional centers, town centers, main streets and employment centers.
c. Objective: Promote the use and development of shared parking spaces for commercial and retail land uses.
d. Objective: Implement appropriate parking ratios and investigate implementation of other measures throughout the region that reduce the demand for parking or lead to more efficient parking design options.
e. Objective: Encourage the designation of preferential parking stalls for carpool, vanpool, motorcycle, bicycle and motorized bicycle parking at major retail centers, institutions and employment centers.
f. Objective: Conduct further study of market-based strategies such as parking pricing and employer-based parking-cash outs and restructuring parking rates.[67]

[67] http://www.metro-region.org/article.cfm?ArticleID=236

Appendix B: RTO Subcommittee Policies/Outcomes Discussion

Regional Travel Options (RTO) in the Regional Transportation Plan (RTP) Update:
RTO Subcommittee Policies/Outcomes Discussion
Notes from August 10, 2006 meeting

Question 1 - What changes have occurred in the Portland region since the last RTP update (since 2000) that: (a) affect RTO/Transportation Demand Management (TDM) and (b) will utilize RTO/TDM?

Answers –

- Business Energy Tax Credit (BETC) available.
- More alternative fuels and alternative fuel vehicles/hybrids.
- Gap/system analysis inventory – where are the gaps for transit, walk, bike?
- DEQ ECO Rules change.
- More private sector interest in information.
- "Death by a thousand cuts" – lack of public safety messages on TV and radio – promotion of safe driving.
- Formula fund grants – requirements for security cameras, etc.
- Design of roads isn't consistent with safety needs (county vs. city roads).
- More mixed-use development/Transit-oriented Development (TOD).
- More time sensitive.
- Freight more in the picture.
- Population forecast changed.
- Street design for local area or travel that passes through – need to put emphasis on local travel.
- Availability of fuel supplies/peak oil/cost.
- Awareness of global warming.
- Change in type of cars on the road - % of Sport Utility Vehicles (result of federal tax breaks).
- Bike culture is growing – more use of mode, more awareness.
- Need to shift bike facilities/lanes where we need them.
- Environmental justice and health issues – type of pollution from cars is changing – low-income people more impacted – ultra-fine particles etc.

Question 2 - What is most important about RTO strategy to your constituents and/or customers (end-users)?

Answers –

- People want realistic choices/alternatives.
- People want good information.
- The heart of the strategies should be to maximize the transportation system given the limited capital funds.
- Want/need to understand how TDM works/fits.
- Want to know the timeframe and criteria for ranking RTO strategies and how we select the best strategy.
- Make a distinction between traded sector freight and non-traded sector freight.
- Need to link active living with transportation (improved health, health care cost savings).

- Need a common language approach.
- Need to communicate that we just can't build more roads – people don't want to pay for more roads.
- Need to be more time sensitive – strategies need to save people more time
- Employers don't want to add another layer of administration to work load.

Question 3 – What recommendations have you heard or would you like to make that carry the most weight for you in carrying RTO (TDM strategies) forward?

Answers –

- Individualized marketing (the public wants it).
- Any transit investment should have a TDM element included.
- Percentage of population living in urban unincorporated counties vs. cities should be looked at.
- Transit Cooperative Research Program (TCRP) report on carsharing.
- Look at TDM strategy in parallel to road project development.
- Demographics of suburban communities – where are the needs?
- Look at employment sites.
- Coordination of efforts between similar groups (public health for example).
- Focus on programs based on most bang for the buck.
- Create and strengthen the culture of implementation.