



Transportation and Climate Change Resource Center

REAL SOLUTIONS FOR CLIMATE CHANGE

Reducing GHG through VMT Strategies

MAY 5, 2010

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Questions for the Presenters

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During the webinar, please e-mail your questions to
melvinj@pbworld.com.





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Reducing Greenhouse Gas Emissions through VMT Strategies

FHWA: Activities and Initiatives

MAY 5, 2010

Presented by:

Gloria Shepherd, FHWA
Associate Administrator
Office of Planning, Environment and Realty



Transportation Strategies to Reduce Growth in VMT and GHG Emissions

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A few to start:

- More efficient land use patterns
 - Coordination of transportation/land use
- Increase use of transit, freight rail, bicycling, walking
- Carpooling/vanpooling
- Telework/Trip Chaining
- Congestion relief
- Pricing (PAYD insurance, parking, tolls, congestion pricing)
- Travel Demand Management

Opportunities to Address Climate Change

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- Planning for:
 - Grid street patterns, short blocks, streetscapes
 - Expansion in transit services
 - Planning for bike and pedestrian travel
 - TOD/infill/centrally located development (as it supports transportation and vice versa)
 - System efficiencies (ramp metering, traffic signal synchronization, incident management, etc.)
 - Travel Demand Management
 - Freight strategies



DOT Report on GHG Reductions

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Transportation's Role in Reducing U.S. Greenhouse Gas Emissions Volume 1: Synthesis Report

Report to Congress
U.S. Department of Transportation
April 2010



U.S. Department of Transportation

Mandated by the Energy Independence and Security Act of 2007

Produced by the U.S. DOT Climate Change Center

Analyzes:

- Transportation greenhouse gas (GHG) emissions levels and trends
- Strategies for reducing these emissions

Scope:

- Full range of strategies
- All transportation modes
- Primarily synthesis, snaps to common baseline, should be seen as rough order of magnitude
- GHG reduction, costs, co-benefits, impact on DOT goals, key interactions

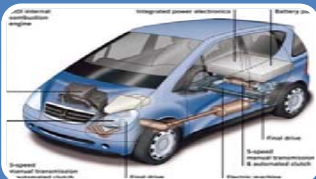


GHG Reduction Strategies

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Low Carbon Fuels



Vehicle Fuel Efficiency



System Efficiency



Reduce Carbon Intense
Travel Activity

Price
Carbon



Transport
Planning
and
Investment



Reduce carbon-intensive travel activity

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Strategies	2030 reduction	Key Assumptions
Pay as you drive insurance	1.1-3.5%	Require states to allow (low) Require companies to offer (high)
Congestion pricing	0.4-1.6%	LOS D on all roads (avg 65c/mi for 29% of urban and 7% of rural VMT)
Public transportation	0.2-0.9%	2.4-4.6% annual increase in service
Non-motorized travel	0.2-0.6%	Comprehensive urban bike/ped improvements 2010-2025
Land use	1.2-3.9%	60-90% of new urban growth in approx. >5 units/acre
Parking management	0.2%	Downtown workers pay for parking (\$5/day avg. for those not already paying)
Commuter / worksite trip reduction	0.1-0.6%	Widespread employer outreach and alternative mode support
Telework / compressed work week	0.5-0.7%	Doubling of current levels
Individualized marketing	0.3-0.4%	Reaches 10% of population
Eco-driving	0.8-4.3%	10-50% of drivers reached, half implement
Combined Strategies	5-17%	

Land Use

Finding: 1-4%↓ (2030), 3-8%↓ (2050)

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How?: Relied primarily on 3 reports:

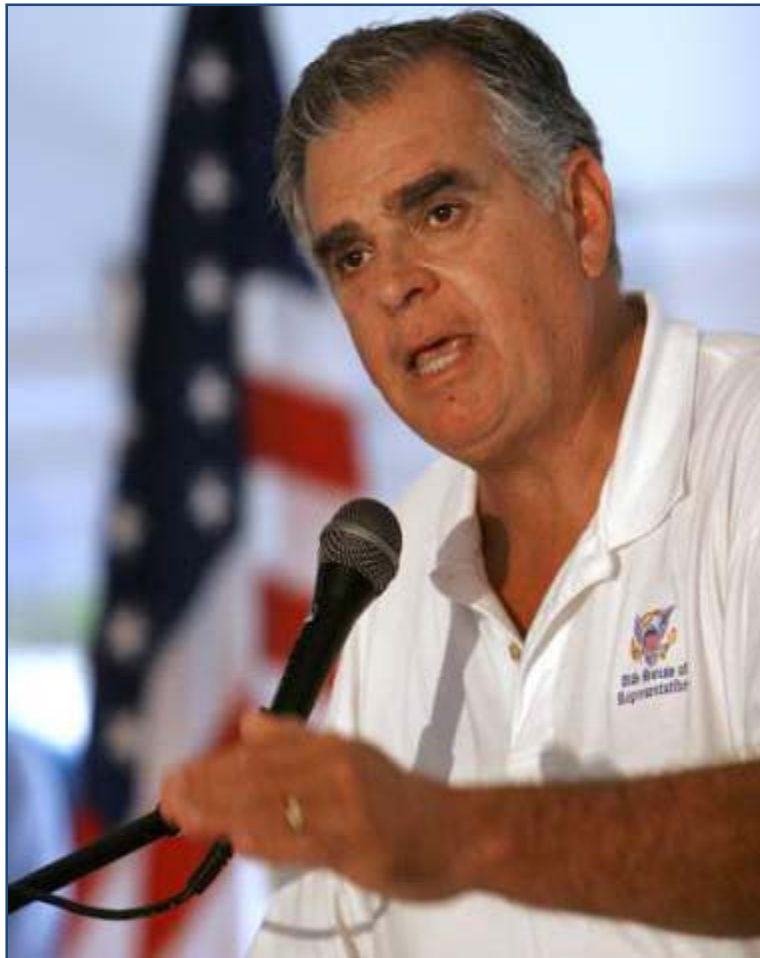
Year 2050	TRB Special Report 298	Moving Cooler	Growing Cooler
U.S. transport GHG reduction (baselines vary)	0.6-6.5%	2-3.4%	7-10%
LDV VMT reduction	1-11%	1.7-12.6%*	12-18%*
% of new urban development "compact"	25-75%	43-90%	60-90%
Definition of "compact"	1.98 DU/acre (~4 DU / residential acre)	>4000 persons per square mile (~>5 DU / residential acre)	Density, diversity, design, destination, accessibility, distance to transit
VMT in compact development	5-25% lower	23% lower	30% lower
% of structures re/developed present-2050	41-55%	64%	67%

* Urban only



What are Livable/Sustainable Communities?

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“Livable Communities are where people have access to many different forms of transportation and affordable housing.....”

**Secretary Ray LaHood,
DOT**

Livable Communities Must Support All Users!

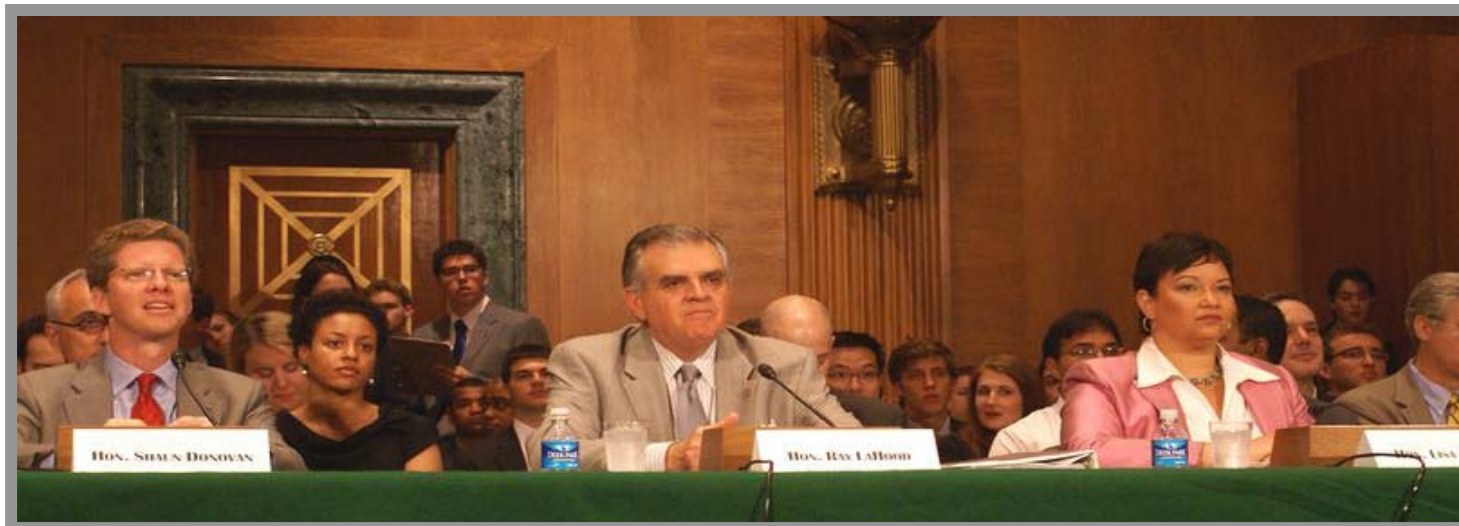
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HUD/DOT/EPA Sustainable Communities Partnership

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- Better coordinate federal transportation, environmental protection, and housing investments and identify strategies that support the Partnership's Guiding Principles



Six Livability Principles of the Sustainability Partnership

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**Provide More
Transportation
Choices**



**Coordinate Policies
and Leverage
Investment**



**Promote Equitable,
Affordable Housing**



**Enhance Economic
Competitiveness**



**Support Existing
Communities**



**Value Communities and
Neighborhoods**



The Future – Policies

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- Performance-Based Planning
- Changes to the Planning Process
- Changes to the Funding Structure

The Future – Positive Outcomes

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Transportation-related GHG emission-reduction strategies have multiple co-benefits in:

- Reducing energy use;
- Reducing U.S. dependence on foreign oil;
- Improving air quality (reducing criteria air pollutants); and,
- Promoting livability



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Strategies to Reduce VMT

MAY 5, 2010

Presented by:

Sarah J. Siwek
President, Sarah J. Siwek & Associates, Inc.



Vehicle Miles Traveled (VMT)

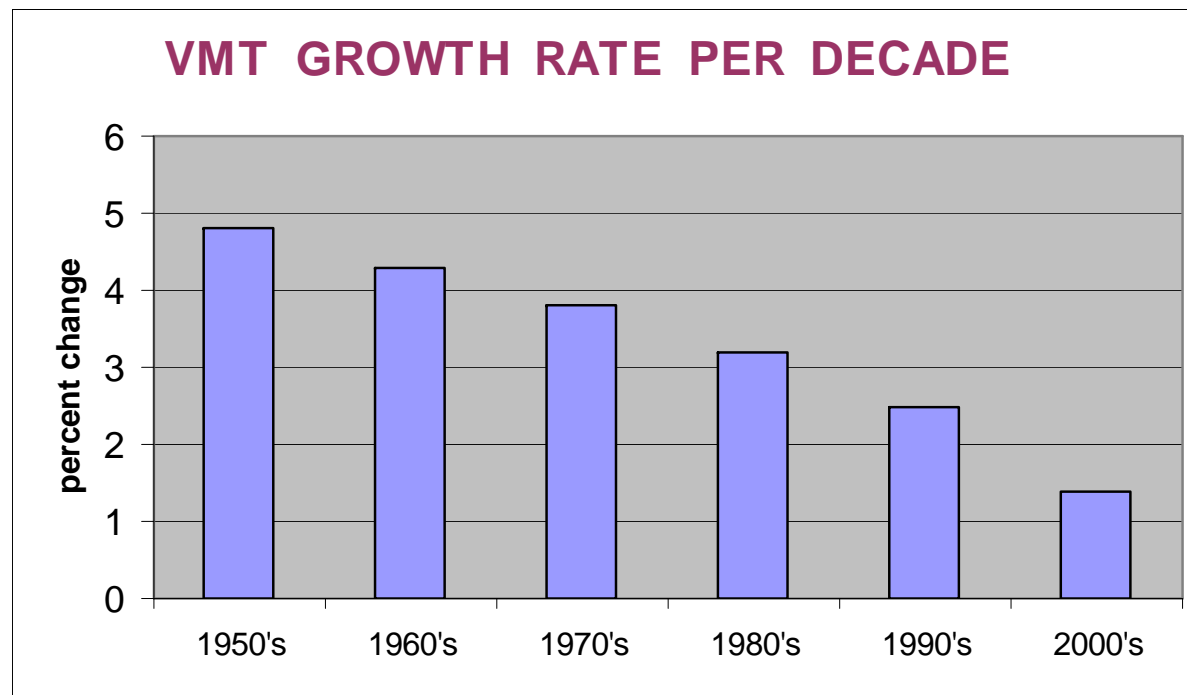
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- VMT Reduction *one of five* sets of GHG reduction strategies:
 - Vehicle efficiency,
 - low carbon fuels,
 - system operation,
 - Construction, maintenance and agency operations,
 - VMT Reductions (travel demand management, land use)
- Today's presentation
 - VMT Trends
 - Strategies to Reduce VMT
 - Impact on GHG Emission Reduction
 - VMT as a Proxy for GHG Reduction

VMT Trends – Growth Rate has Declined

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- VMT growth has been steadily declining since the 1950s
- VMT growth slowed to about 1.5% in early 2000s
- VMT growth was actually negative in 2008
- VMT is affected by population, economy, transportation prices, demographics, land use
- AASHTO supports reducing VMT growth rate to 1% per year



Source: Alan Pisarski and Cambridge Systematics

Many Strategies to Reduce VMT

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- Road Pricing
- Parking Pricing
- Commuter Choice programs
- Carpooling and vanpooling
- Bike/pedestrian
- Transit
- Trip chaining
- Tele-working, tele-shopping, tele-education, tele-medicine
- Compact land use
- Comprehensive land use planning
- Coordination between local government plans
- Smart Growth policies

Pricing

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- VMT Tax
- Congestion Fees
- HOT Lanes
- Pay as you Drive (PAYD) Insurance
- Parking pricing
- Tolls
- Higher user fees

Moving Cooler: Price Affects Vehicle Choice More than VMT

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Strategy	Increased Gas Price	GHG Reduction 2010-2050
VMT Fee – effect on VMT	\$2.53/gallon	3.4 gigatons
Carbon Fee – effect on VMT	\$2.71/gallon	4.7 gigatons
Carbon Fee – effect on Vehicle Choice (e.g., purchase of more fuel-efficient vehicle)	\$2.71/gallon	10.4 gigatons

Pricing

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- Challenges
 - Public acceptance
 - Political will
 - Striking the right balance and price signals (e.g. economic impact)
 - Differences in freight and passenger travel (e.g. should all trip purposes be treated equally?)
- Advantages
 - Raises revenues
 - Public responds to prices; most direct way to impact travel behavior

Carpooling and Vanpooling

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- Currently carpools and vanpools carry *7 times more person miles traveled* than transit
- No infrastructure, cost effective
- Works in all settings (rural, urban)
- Voluntary
- Many programs initially use incentives (e.g. ARC \$3/day to carpool, WASHCOG \$2/day to carpool)
- Many metro areas have had employer-based programs in place since 1990s
- University of South Florida clearinghouse:
<http://www.nctr.usf.edu/clearinghouse/ridematching.htm>

Transit

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- Surge in new transit investments nationwide
- AASHTO policy - double transit ridership by 2030
- Increase transit funding from \$10.5 to \$18.5 billion/year
- Intercity rail - \$8 billion federal commitment
- Public support – in many areas local sales tax or other revenue measures support transit

How much GHG reduction is likely from VMT strategies?

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- Highly variable, highly speculative
- Depends on future behavior change
- Depends on future vehicle/fuel assumptions
- Most studies suggest small VMT impacts – unless there is significant pricing
 - CARB estimate for SB 375
 - Moving Cooler
 - State climate action plans

Moving Cooler: Land Use/Transit, NMT Bundle

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6-9% On-Road GHG Reduction over 40 Years with Aggressive/Maximum Assumptions

	GHG Reductions from On-Road Baseline, 2010-2040	% of On-Road Baseline, 2010-2040
Aggressive Deployment	3.8 gigatons	6 %
Maximum Intensity	6.3 gigatons	9%

- 90% of all future land use is compact, in high-density Census tracts
- 50% cut in transit fares
- \$1.2 trillion transit capacity expansion
- Congestion pricing in 120 metro areas, at 65 cents/mile
- \$400 parking permits required on neighborhood streets
- \$144 billion construction of high speed rail
- Bike/ped Expansion, Parking Pricing, HOV lanes, Car-Sharing, Employer-Based Commute Measures, Urban Nonmotorized Zones, Parking Restrictions, Signal Management, Traveler Information, and Urban (freight) Consolidation Centers

CARB: 3% Impact on LDV GHG in 2020 from SB 375

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- CA's SB375 law is aimed at reducing passenger vehicle VMT and GHG
- CARB's first estimate was that SB375 would reduce GHG by 2 MMT in (<1.5% of CA's LDV GHG) in 2020
- CARB's second estimate was that SB 375 effect on GHG could be 5 MMT in CA (**3% of CA's LDV GHG**) in 2020

Another Perspective: Congestion vs. VMT

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- GHG emissions from traffic congestion in Los Angeles area ~3.4 MMTCO₂e/annually;
- *Two-thirds of the entire 5 MMTCO₂e/annual reduction goal for SB375*
- *Statewide in CA, congestion accounts for 6MMTCO₂e/annually*

Source: UCLA School of Public Affairs: Measuring Vehicle Greenhouse Gas Emissions for SB 375 Implementation

Smart Growth/Transit Strategies in State Climate Plans

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STATE	YEAR	% of ALL GHG REDUCTIONS IN PLAN FROM SMART GROWTH/TRANSIT
California	2020	1%
Colorado	2020	1.3%
Connecticut	2020	<1%
Maine	2020	5.7%
Minnesota	2025	1.25%
New York	2020	1.89%
North Carolina	2020	4.2%
Oregon	2025	6 %
Pennsylvania	2020	<1%
South Carolina	2020	2.6%
Washington	2020	10%
MEDIAN		1.89%

Benefits of Using VMT as Proxy for GHG

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- We can estimate how much VMT is being traveled
- Simpler to estimate and forecast than GHG
- We have historical information to establish baseline
- Co-benefits – could enhance focus on integrated land use and transportation planning
- Supports planning activities in many areas to invest in and encourage travel in non-SOV modes

Shortcomings of VMT as a Proxy for GHG

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- Does not take into account:
 - Fuel efficiency of vehicle
 - Fuel type
 - Number of passengers
 - Purpose of trip
 - Freight
 - Passenger
 - Speed
 - Stop-and-go traffic (Operational conditions)
 - Economic impact
- VMT reductions costly compared to other strategies
- Gallons of fuel sold a better proxy, info. easily available and directly related to GHG

Conclusion

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- We have learned since 1990s
 - Suite of strategies, including pricing, will be most effective
 - Much experience with commuter programs over past 20 years
 - Emission reductions to date typically small
- Potential of pricing strategies to reduce GHG is significant
- VMT strategies not as cost effective as technology-based strategies (e.g. fuels, vehicles, etc.)



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Washington State VMT Reduction: VMT Targets, Strategies, and Challenges

MAY 5, 2010

Presented by:

Kathy Leotta

WSDOT TDM Data and Evaluation Manager and VMT Measurement Process Lead
Public Transportation Division



Washington State VMT and GHG Reduction Targets

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- **Transportation is 47% of Washington State's GHG Emissions (compared to 29% for U.S.)**
- **GHG Reduction (RCW 70.235.020)**
 - Based off of 1990 GHG
 - Return to 1990 levels by 2020
 - 25% Below 1990 levels by 2035
 - 50% below 1990 levels by 2050
- **VMT Reduction (RCW 47.01.440)**
 - Per capita VMT reduction; based off a year 2020 baseline VMT
 - 18% reduction in per capita VMT in 2020
 - 30% reduction in per capita VMT in 2035
 - 50% reduction in per capita VMT in 2050
- **Washington's Leadership on Climate Change (Executive Order 09-05)**
 - Directs the Secretary of the Department of Transportation to work collaboratively with other state agencies, local and regional governments and others to:
 - Estimate current and future state-wide levels of VMT,
 - Evaluate potential changes to VMT benchmarks to address low- or no-emission vehicles,
 - Develop additional strategies to reduce emissions from the transportation sector
 - Cooperatively develop and adopt regional transportation plans that will... reduce greenhouse gases and achieve the statutory benchmarks to reduce annual VMT per capita.

Washington Statewide Light Duty VMT

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Total and Per Capita; BAU and With VMT Benchmarks

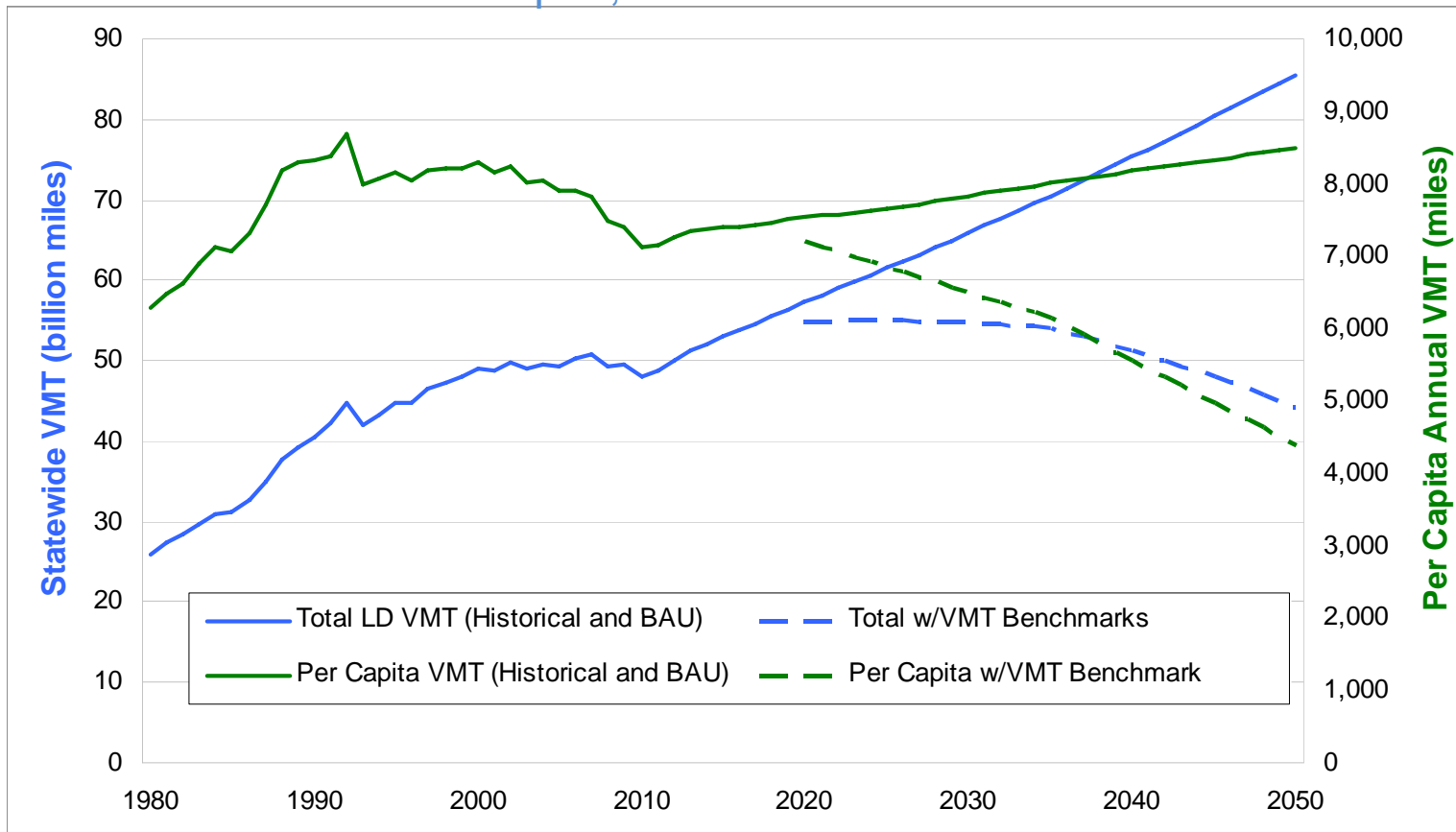


Figure Source: Karin Landsberg, WSDOT

BAU = Business as usual



Large Portion of LDV GHG Reduction Expected from VMT Reductions

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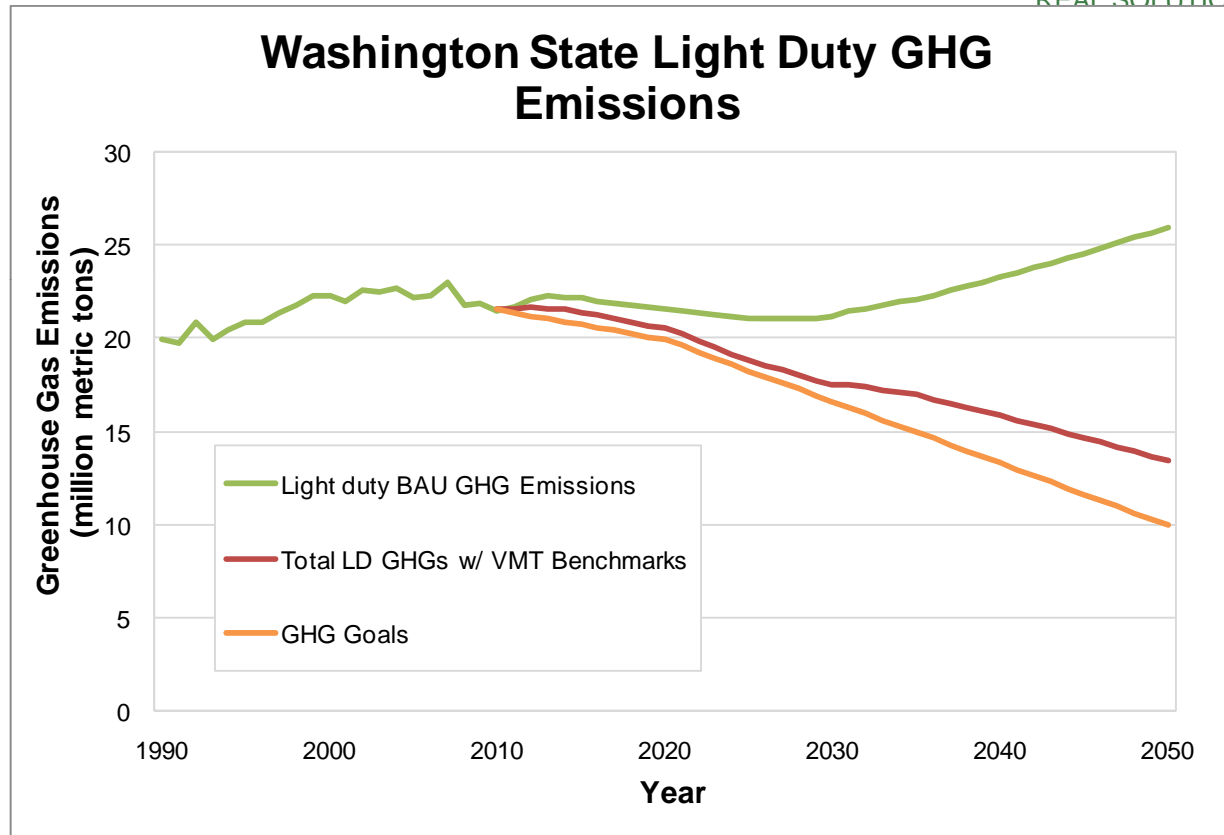


Figure Source: Karin Landsberg, WSDOT; LDV fleet fuel economy for all analysis improves from 21.1 mpg in 2010 to 35.5 in 2050. Does not include low carbon fuel standard or assumptions for increased penetration of PHEVs and EVs, as currently under development by Washington State Department of Ecology.

Effectiveness of VMT Reduction Strategies

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- Several major studies provide estimates of effectiveness of strategies in reducing VMT and/or GHG (typically ranges).
- Studies include many caveats, qualifiers, etc. Such as:
 - “The benefits of the strategies in this report are based on limited data and good faith assumptions. Numerical estimates contain substantial uncertainties.”
Transportation’s Role in Reducing GHG Emissions, Report to Congress, April, 2010
- Does there appear to be a gap between benchmarks and what appears achievable?
- Options to fill/reduce gap, implications, etc.

No One Strategy or Set of Strategies Can Get Us There

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- The largest body of research indicates we will need significant progress on all fronts:
 - More ambitious/aggressive vehicle and fuel regulations and technologies.
 - Pricing incentives to encourage travel behavior changes and more widespread use of more efficient vehicles.
 - Improvements to operational efficiency.
 - Reductions in growth rate of VMT.

Examples of Individual and Combined VMT Reduction Strategies

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- Pricing
 - Parking pricing / restrictions
 - Carbon pricing VMT impact (cap and trade, higher fuel taxes, carbon tax, etc.)
 - Various other roadway pricing (congestion, tolls, cordon, etc.)
 - PAYD insurance
 - VMT fee
- Land Use:
 - Smart Growth/TOD
 - Non-motorized strategies
- Transit and Passenger Rail:
 - Transit fares
 - Transit frequency
 - Urban transit expansion
 - Intercity passenger rail
 - High-speed passenger rail
- HOV and Employer Based Programs
 - HOV lanes
 - Car-sharing
 - Employer-based commute strategies (CTR/GTEC)

Some of The Challenges We're Working Through

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- Benchmark based on 2020 forecast rather than historical VMT
- Measuring VMT at state versus regional/local levels
- Lack of clarity, common agreement as to whether benchmarks are goals or mandates
- Benchmarks set for state; no directives on regional target setting
- Regional differences in Washington State complicate target setting
- We believe the “law” should be “emissions reduction” not VMT reduction
- Sense of little influence/certainty on technological advances in vehicles/fuels
- Limited resources

Status

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- Working closely with other state agencies (Dept. of Ecology and Dept. of Commerce) to provide guidance to the Governor
- Working with Executive Order 09-05 Working Group
- Report due by late 2010 on:
 - Current and future state-wide VMT,
 - Potential changes, if any, to current law and other GHG reduction strategies, such as low- or no-emission vehicles,
 - Additional strategies to reduce emissions from the transportation sector.
- Report due by the end of 2011 on:
 - Which RTPOs have developed, or are developing, plans with GHG strategies,
 - Which strategies appear to have the greatest potential to achieve the benchmarks, and
 - What policy or funding issues need to be resolved to ensure implementation.

VMT is One Strategy for Reducing Greenhouse Gas Emissions

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- VMT is one “leg of the stool” for reducing GHG:
 - Supporting improved vehicle technology,
 - Lowering the carbon content of fuels,
 - Improving the efficiency of the transportation system, and
 - Increasing travel options to reduce vehicle miles traveled per capita.
- Other important benefits of reducing drive-alone:
 - Health impacts of increased walking and biking,
 - Safety, time, economic impacts of reduced congestion,
 - Frees-up urban corridors for freight access,
 - Strengthens a diverse transportation system,
 - Less dependence on foreign oil, and
 - Alternative fuel and technology development in US helps create jobs and a stronger economic recovery.



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Washington State VMT Reduction: The Commute Trip Reduction Program

MAY 5, 2010

Presented by:

Brian Lagerberg
Assistant Director
Public Transportation Division



Presentation Outline

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The evolution of demand management in Washington state

- CTR program 1991 – 2003, “improve the program”

How we have changed our approach

- Since 2003: “Reframe and expand”
- Targeting demand management investments: Construction Traffic Management
- Creating the infrastructure for future success

Where we are going from here

- Integrating our approach: Moving Washington

Demand Management 1991-2003

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A model employer-based demand management program

1991 – 2003 Commute Trip Reduction

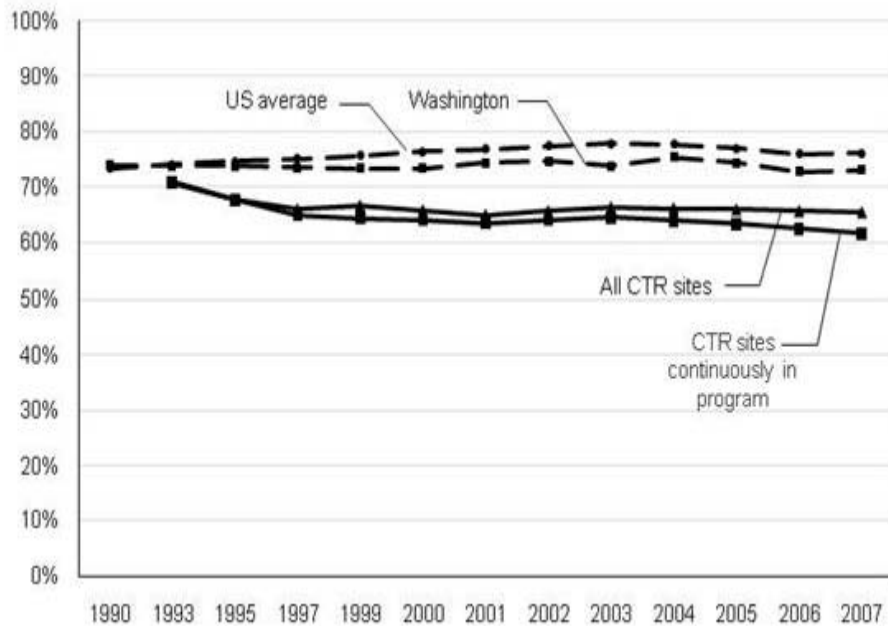
- Employer, part of the problem, part of the solution
- Mandated approach, peanut butter application
- Highly structured—narrow focus
- Goal driven—politically calculated goals
- Incremental changes

Despite its limitations, the program is considered successful

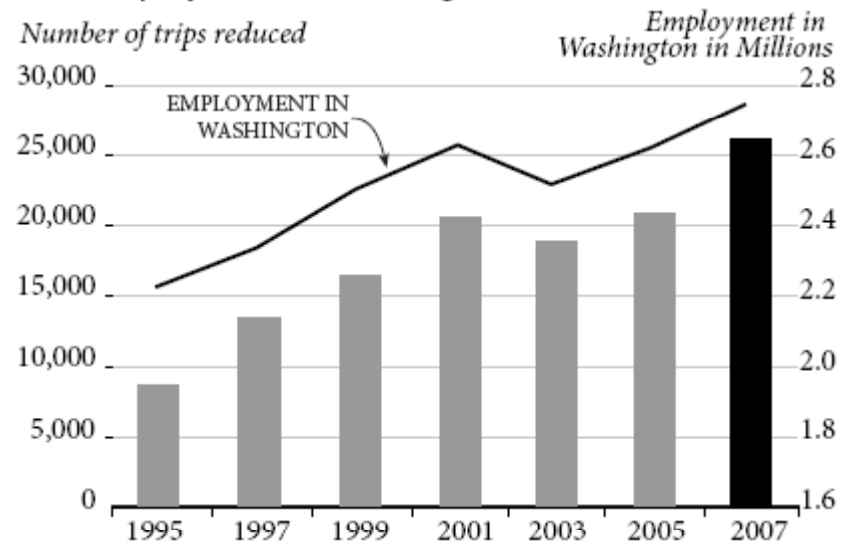
Impacts of CTR

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Drive Alone Comparison:
CTR work sites, Washington State, and the United States, 1990 to 2007
Percent of commuters who drive alone



**Number of Vehicle Trips Reduced at CTR sites
And Employment in Washington**



Data Source: CTR Survey Database. One way trips reduced per average day. Represents all sites with measurement surveys in the cycle indicated.
Employment Data Source: U.S. Census Bureau

Driving The Evolution Since 2003

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- From 2003 into the future

- **Modify the program**

- Focus the program on recognized transportation deficiencies
 - Make real, and meaningful goals for the state
 - Require local and region governments to define their own goals but within statewide framework
 - Develop new tools to help the locals achieve their goals: Growth and Transportation Efficiency Center (GTEC)
 - Establish the flexibility that broadens ownership of the program

- **Meet customer needs with supplemental services**

- Vanpooling: State investments in flexible transportation options
 - Trip Reduction Performance program: innovation and efficiency
 - Construction Traffic Management: maintaining capacity during construction

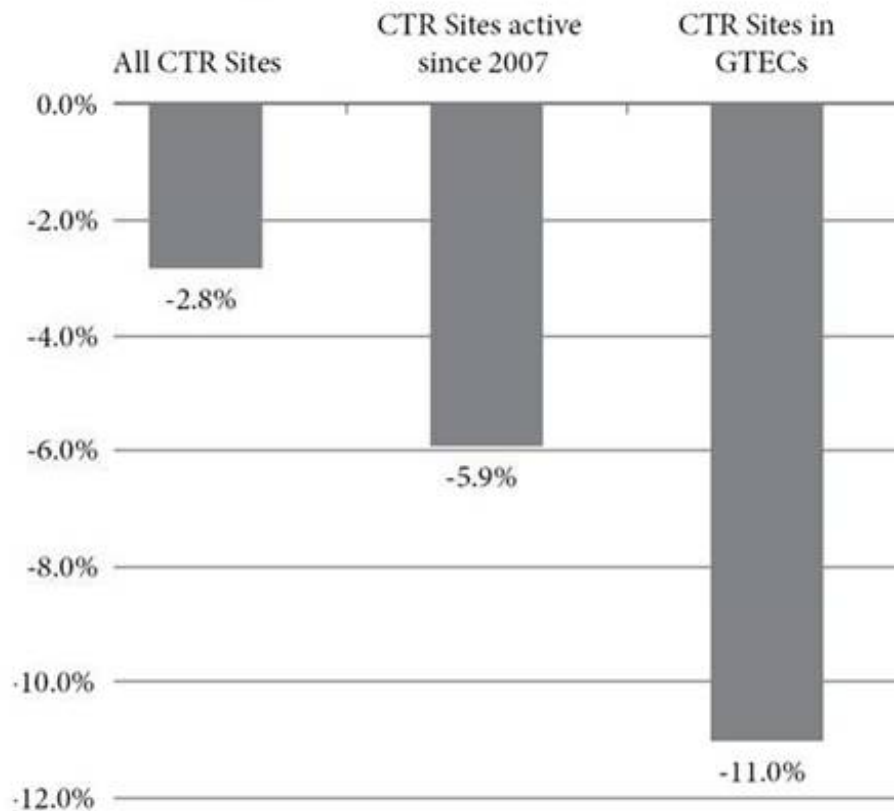
- What Happened?



Employees Changed Their Behavior

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Percent Change in Drive Alone Rate from 2007 to 2009



Sources: U.S. Census Bureau and CTR survey database



Applying the Lessons Learned

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Construction Traffic Management

- Develop meaningful, credible goals for mitigation
 - Set targets for each strategy
 - Monitor, monitor, monitor
 - Report
-
- Example from a mitigation project, I-405

Example: Construction Traffic Management

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Investment Strategy	Total Cost	Vehicle trip reduction daily round trips		Implementation Timeline	Total one-way trips reduced during project	Average daily cost per one-way trip reduced
		Target	Actual			
Promote carpooling	\$95,340	330	142	1/2008 - 12/2008	71,000	~\$1.3
Outreach to residents	\$72,322	183	95	6/2008 - 11/2008	23,750	~\$3.0
Outreach to Bellevue employers	\$75,082	171	264	1/2008 - 12/2008	132,000	~\$0.6 ¹
Outreach to south King County employers	\$37,374	135	163	10/2007 - 12/2008	101,875	~\$0.4 ¹
Relocate vanpools	\$54,000	180	180	4/2007 - 8/2008	127,500	~\$0.4
Outreach to Bellevue employees	\$11,068	108	92	4/2008 - 12/2008	34,500	~\$0.3
Install and promote bicycle lockers	\$16,235	16	7	Installed June 2008	1,750	~\$9.3 ²
Promote vanshare	\$4,560	24	65	1/2008 - 12/2008	32,500	~\$0.1 ³
SUBTOTAL	\$365,981	1,147	1,008		524,875	\$0.7 ⁴
Commuter trip reduction	-	-	1,232 ⁵	10/2007 - 12/2008	770,000	-
Vanpools	-	-	462 ⁵	10/2007 - 12/2008	288,750	-
TOTAL	-	-	2,702	-	1,583,625	-

Documenting What We Do

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Mitigation Strategies

Investment strategy	Target market	Why this strategy
Promote and offer carpool incentives	I-405 corridor drivers	Research shows that commuters in east King County are receptive to the idea of carpooling and traffic data indicates that there are a lot of empty seats in vehicles on the I-405 corridor. Also, CTR data showed that many I-405 commuters had common origins and destinations in numbers significant enough to support carpools.
Outreach and incentive program to get residents to commit to reduce their drive-alone trips	Central Renton and Renton Highlands residents that commute on the I-405 corridor	Past home-based outreach programs showed that providing information about highway construction, transit, carpool, vanpools, walking, bicycling, trip chaining and shopping closer to home and getting local businesses and residents to commit to trip reduction would help reduce highway trips.
Outreach to downtown Bellevue employers, offering commute assistance and incentives for those who join the FlexPass program	Commuters on I-405	The popular FlexPass program offers transit benefits to commuters. Data shows incentives can help attract new businesses to provide the passes and that those who join continue the program even after the incentives diminish. With FlexPasses, commuters incorporate non-SOV modes into their routine workday, reducing trips during rush hours.
Outreach to south King County employers, offering commute assistance and incentives for those who join the FlexPass program	Commuters on I-405 and SR 167	The popular FlexPass program offers transit benefits to commuters. Data shows incentives can help attract new businesses to provide the passes and that those who join continue the program even after the incentives diminish. With FlexPasses, commuters incorporate non-SOV modes into their routine workday, reducing trips during rush hours.

Demand Management Infrastructure

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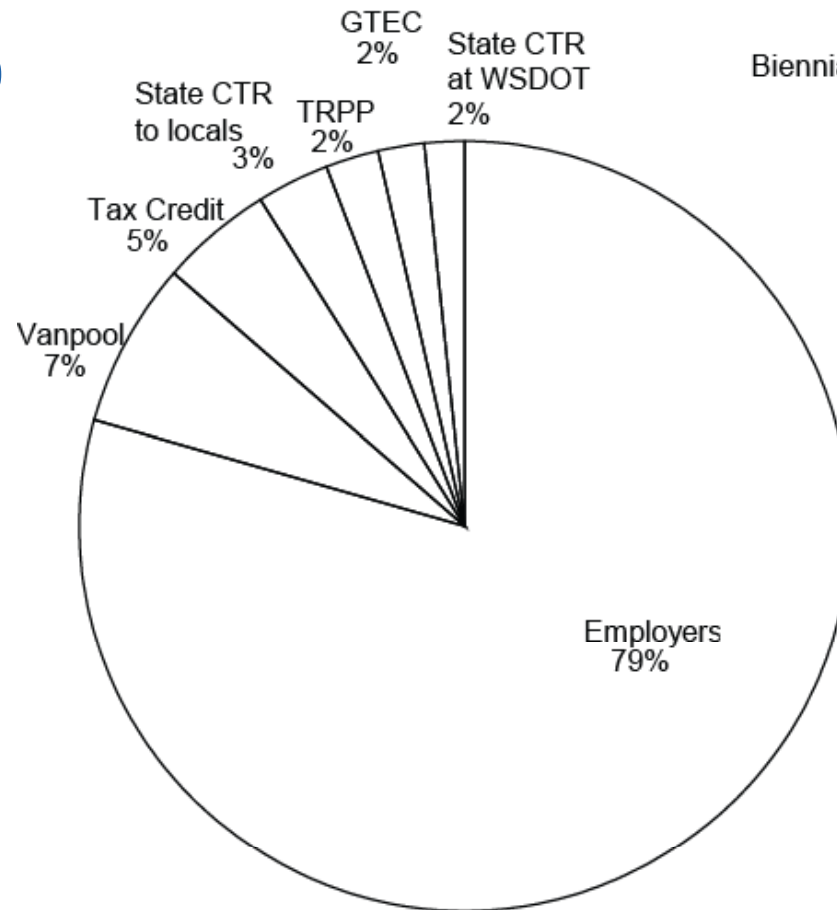
Partnerships

- Local governments
 - Regional governments
 - Transit agencies
 - Employers
 - Non-profit organizations
 - Entrepreneurs
 - Community groups
-
- Focus on creating a benefit for our partners: Leveraging impacts

Linking Objectives Leverages Funds

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Total investment
in CTR, 2007-2009



Biennial CTR funding 2007-2009

	Millions
Employer	96.0
Vanpool	8.6
Tax Credit	5.5
State CTR funding	
to locals	3.9
to WSDOT	2.1
TRPP	2.5
GTEC	2.4

Moving Washington

WSDOT's strategy to address congestion supports climate change goals

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- Adding Capacity Strategically
- Operating Efficiently
 - Getting the most out of the infrastructure we have
 - Real Time Traffic Information
 - Incident Response
 - HOV Lanes
- Managing Demand
 - Providing people choices
 - Commute Trip Reduction programs
 - Transit
 - Vanpools and Carpool programs
 - Roadway pricing
 - Travel information
 - Telecommuting and flexible work schedules



Why Does Demand Management Work?

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“Commuter Trip Reduction efforts are vital for businesses looking to make the most of their human and financial resources. Employers take strongly into consideration the cost of community infrastructure, the importance of conservation, and a commitment to livable growth centers as they make their operational decisions. Smart commuting has become a business imperative.”

David Graybill, President & CEO, Tacoma-Pierce County Chamber

“We believe rideshare participation has a direct, positive impact on employee retention, absenteeism, and punctuality, which ultimately promotes increased productivity, company morale and business sustainability.”

Sage Manufacturing, Kitsap County

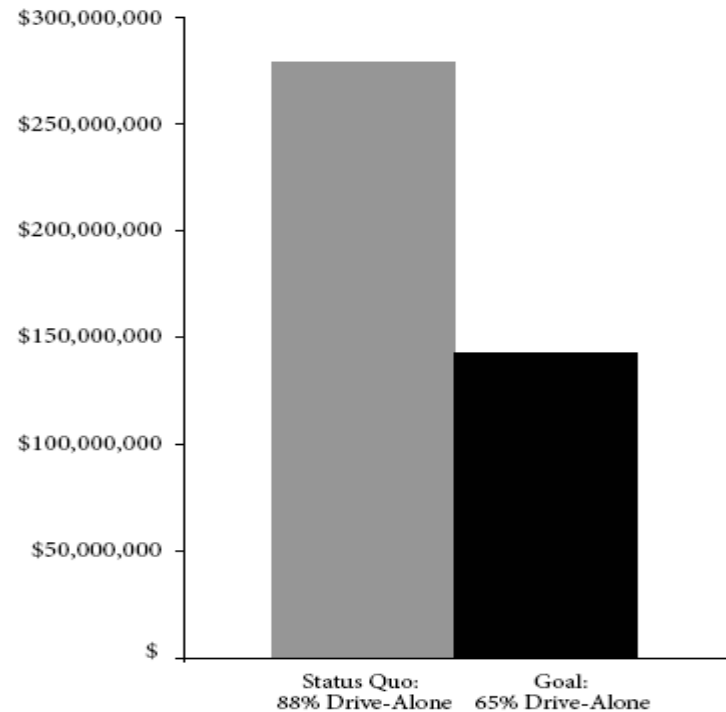


Why Does Demand Management Work?

REAL SOLUTIONS FOR CLIMATE CHANGE

Downtown Vancouver Employee Parking Costs

Total capital cost of different rates of driving-alone



Source: City of Vancouver





Transportation and Climate Change Resource Center

REAL SOLUTIONS FOR CLIMATE CHANGE

Gateway 1:

Linking Land Use and Transportation to
Preserve Capacity and Enhance Community &
Economic Development

MAY 5, 2010

Presented by:

Kat Beaudoin, AICP, Chief of Planning
MaineDOT



What is Gateway 1?

REAL SOLUTIONS FOR CLIMATE CHANGE

- Comprehensive U.S Route 1 corridor transportation / land use planning process
- Goal – to preserve transportation facilities / community quality of life along mid-coast U.S. Route 1

Who are the Partners?

REAL SOLUTIONS FOR CLIMATE CHANGE

- 20 Communities – Interim Steering Committee
- MaineDOT
- Federal Highway Administration
- State Planning Office
- 2 Economic Development Districts/5 RPCs
- Local, Regional, State Interest Groups
- Federal and State Agencies
(ACOE, Maine Historic Preservation, USF&W, etc)



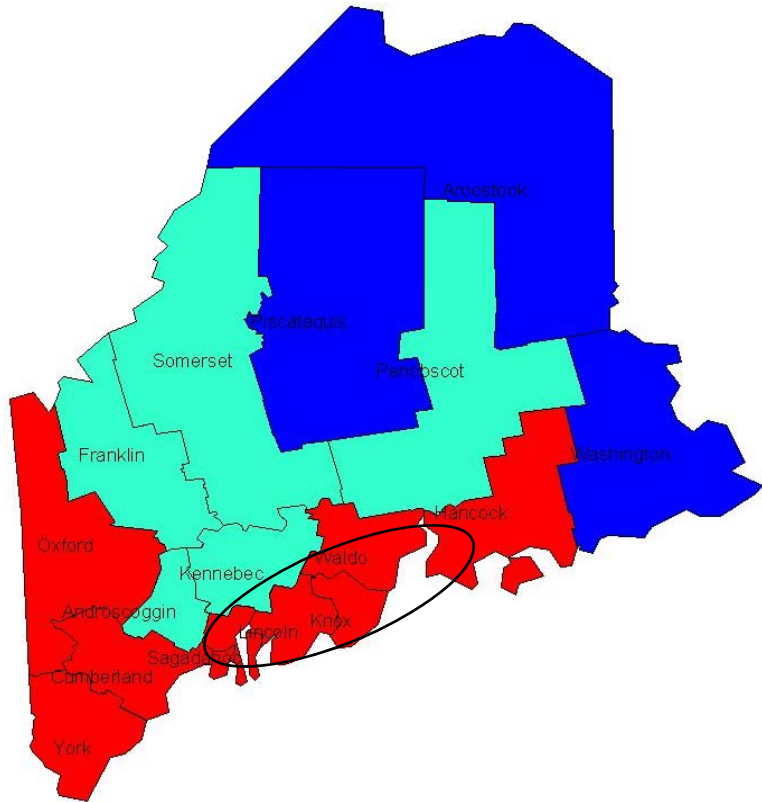
Why Undertake Gateway 1?

REAL SOLUTIONS FOR CLIMATE CHANGE

- Disconnect between land use decisions & transportation investments
- MaineDOT's vision of Route 1 different than communities'
- Mobility & safety needs are escalating
- Need to Integrate state / federal laws
- Hypothesis: "There has to be a better way!"

Why U.S. Route 1...Why now?

REAL SOLUTIONS FOR CLIMATE CHANGE



Rate of Population Change 1990 - 2000

- (15) - (2.1) %
- (2) - 2.5 %
- 2.6 - 15 %



Three Phases

REAL SOLUTIONS FOR CLIMATE CHANGE

- Phase I – Agreement on Problem
- Phase IIA – Understanding the Problem
- Phase IIB – Designing Solutions & Solidifying the Partnership

What are the Problems?

REAL SOLUTIONS FOR CLIMATE CHANGE

- Speeding
- Loss of image, aesthetics & open space
- Safety
- Lack of inter-municipal cooperation
- Truck Noise/Safety
- Threats to downtowns
- Traffic congestion
- Lack of Bus/Rail/Ferry

Process Highlights

REAL SOLUTIONS FOR CLIMATE CHANGE

- Phase I - Each “partner” signs MOU on process/roles/problems
 - Steering Committee reps officially appointed locally
 - Role of DOT/FHWA as resources - not *directors*
 - Consultants selected by committee
- Scope detailed with municipal representatives’ input
- Multiple outreach mechanisms
 - Keep elected officials in the know
- Regional Planning staff liaisons

Key Components of Plan

REAL SOLUTIONS FOR CLIMATE CHANGE

- **Inventory & Analysis – traditional plus**
 - Attitudes & Values
 - Towns feel they are doing ok with land use –neighboring towns could do better!
 - Open to working together
 - Want state leadership not control
 - High degree of multimodal support
 - Economics more important than aesthetics
 - Detailed business sector analysis
 - What's growing, where and how re employment?
 - Considered different futures
 - What strategies will work no matter the level of economic activity

Key Components of Plan

REAL SOLUTIONS FOR CLIMATE CHANGE

- **Measures of Effectiveness**
 - Chosen by Steering Committee
 - Addressing corridor goals
 - **Mobility (3 measures incl. “change in VMT/day”)**
 - **Transportation Choice (3 measures)**
 - **Jobs-Housing Balance (5 measures)**
 - **Rural Land/Habitat Preservation (2 measures)**
 - **Community Character (2 measures)**

Measures of Effectiveness

REAL SOLUTIONS FOR CLIMATE CHANGE

Development Pattern	Economic Vitality				Quality of Life							Mobility							
	Downtown Viability	New Jobs by Town	Job Agglomeration	Fiscal Benefit Index	Compact Area/Access	Distribution of DU's	Commercial Strip	Viewshed Impact	Safety	Accessibility	EMS Response	Acres Consumed	Habitat Impacts	VMT/VHT	Rte 1 Level of Service	O&D Travel Times	Transit Ridership	Walkability	Bikeability
Micropolitan	●	●	●●		●	NC	●	●	●	NC	NC	●	●	●	●	NC	●	NC	●
Transit Oriented Corridor	●	●●	●		●	●●	●	●	●	●●	●●	●●	●●	●●	●	●	●●	●	●●

● Improves
 ●● Improves Significantly
 ● Worsens
 ● Varies
 ●● Varies Widely

VMT Reduction?

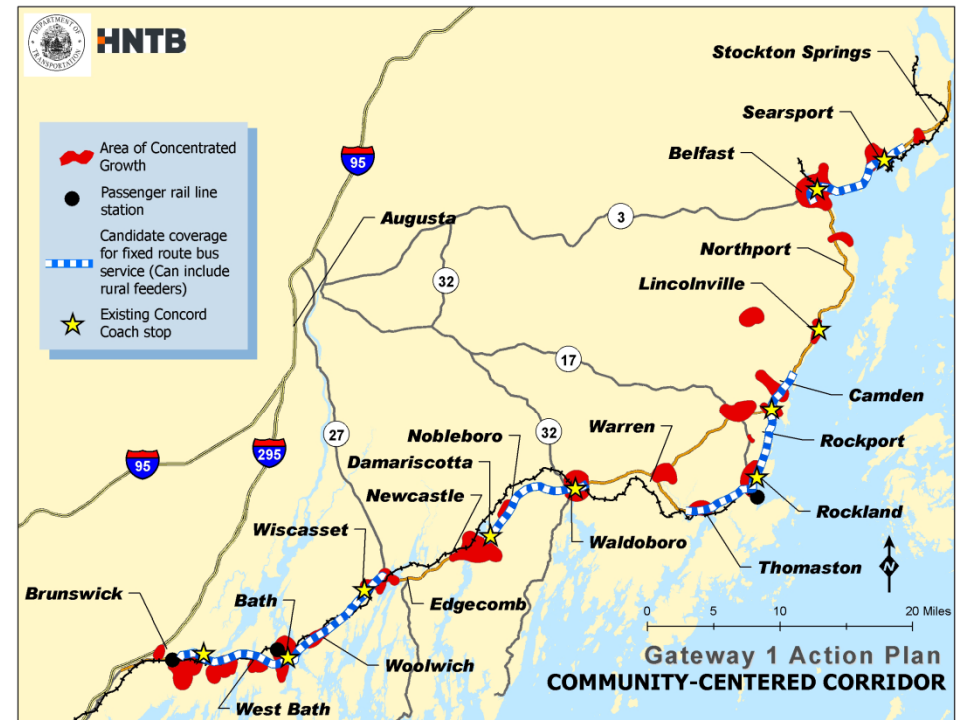
REAL SOLUTIONS FOR CLIMATE CHANGE

- Choosing a different future
 - Patterns of Development options & their effects
 - Visual examples of patterns from near and far
 - Steering Committee elects to measure effects of two patterns
 - A hybrid emerges as the preferred pattern based on likelihood of political success

Community Centered Corridor

REAL SOLUTIONS FOR CLIMATE CHANGE

- Guides jobs and housing to core growth areas
- Supports economic development
- Protects village areas & downtowns
- Protects rural/open space/view sheds
- Provides opportunities for transportation choice
- Preserves capacity of Route 1



Some Specific Strategies – Some of the 8Ds

REAL SOLUTIONS FOR CLIMATE CHANGE

- Create Core Growth Areas (**Density**)
 - using tools such as
 - TIFs and other tax shelter vehicles
 - Floor Area Ratio minimums
- Promote mixed use (**Diversity**)
- Link modes of transportations at Destinations (**Distance**)
 - Explore feasibility of ride sharing services (fixed route, seasonal, GoMaine vanpools)
 - Build sidewalks and bike trails
 - Reduce off-street parking requirements near bus stops
 - Limit non-compatible land uses near rail lines
- Protect rural lands/habitats – transfer of trip rights (**Design**)
- Access Management (**Design**)
 - Limit access on rural portions of Routes 1 & 90
 - Require shared access / build service roads
 - Retrofit/combine access points in built up areas
- Create redundant street network (**Design**)

Executing the Plan

REAL SOLUTIONS FOR CLIMATE CHANGE

- **Incentives** for towns that adopt the Plan
 - Shared decision making
 - Bonus prioritization points
 - Reduced local match requirements
 - Access to other funding programs
 - Coalition has political clout
- **Status** – 16 towns still in

For copies of these slides and webinar recording, go to AASHTO's website:
http://environment.transportation.org/center/products_programs/climate_change_webinars.aspx

**These materials will also be available on AASHTO's climate change website,
where you can also find more information on climate change:**
<http://climatechange.transportation.org/webinars/>

Thank you!