

# Impacts of VMT Reduction Strategies on Selected Areas and Groups

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# Per Capita Annual VMT Reduction Targets

- RCW 47.01.440 sets these VMT reduction targets:
  - 18% by 2020 → **7,065** VMT per capita
  - 30% by 2035 → **6,031** VMT per capita
  - 50% by 2050 → **4,313** VMT per capita
- Washington's 2008 per capita VMT: **8,440**
- 2020 per capita VMT is projected to be **8,616**

# Other RCW 47.01.440 Requirements

- “establish and convene a collaborative process to develop a set of tools and best practices to assist state, regional, and local entities in making progress towards the benchmarks”

# Other RCW 47.01.440 Requirements

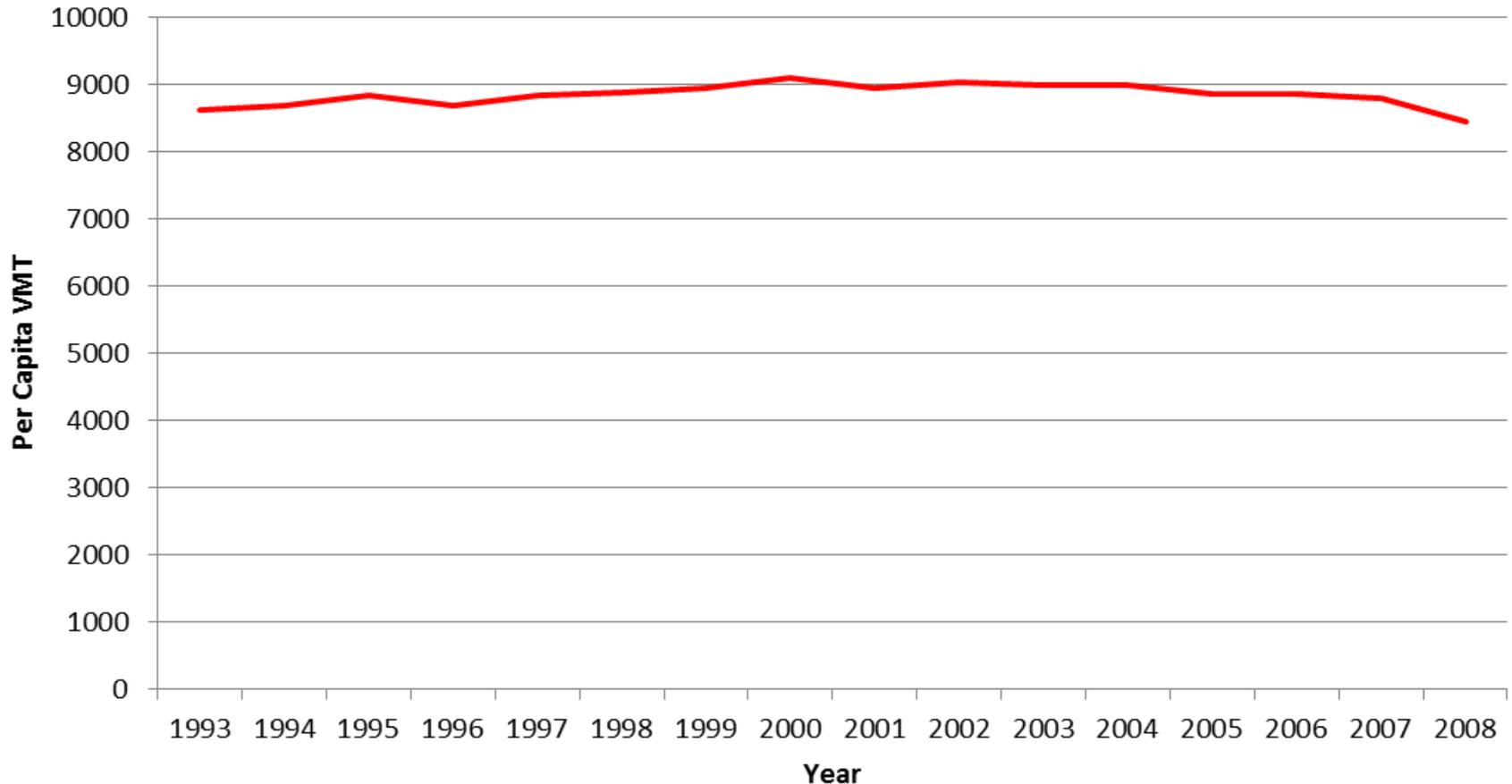
- Report on:
  - (a) The economic hardship on small businesses w.r.t. ability to hire and retain workers who do not reside in the county in which they are employed;
  - (b) Impacts on low-income residents;
  - (c) Impacts on agricultural employers and their employees;
  - (d) Impacts on distressed rural counties;
  - (e) Impacts in counties with more than fifty percent of the land base of the county in public or tribal lands

# Some Quick Facts

...from an extensive literature review

# State per capita VMT is stable/declining

## Washington State per Capita VMT



(Sources: U.S. Census, Washington State Department of Transportation)

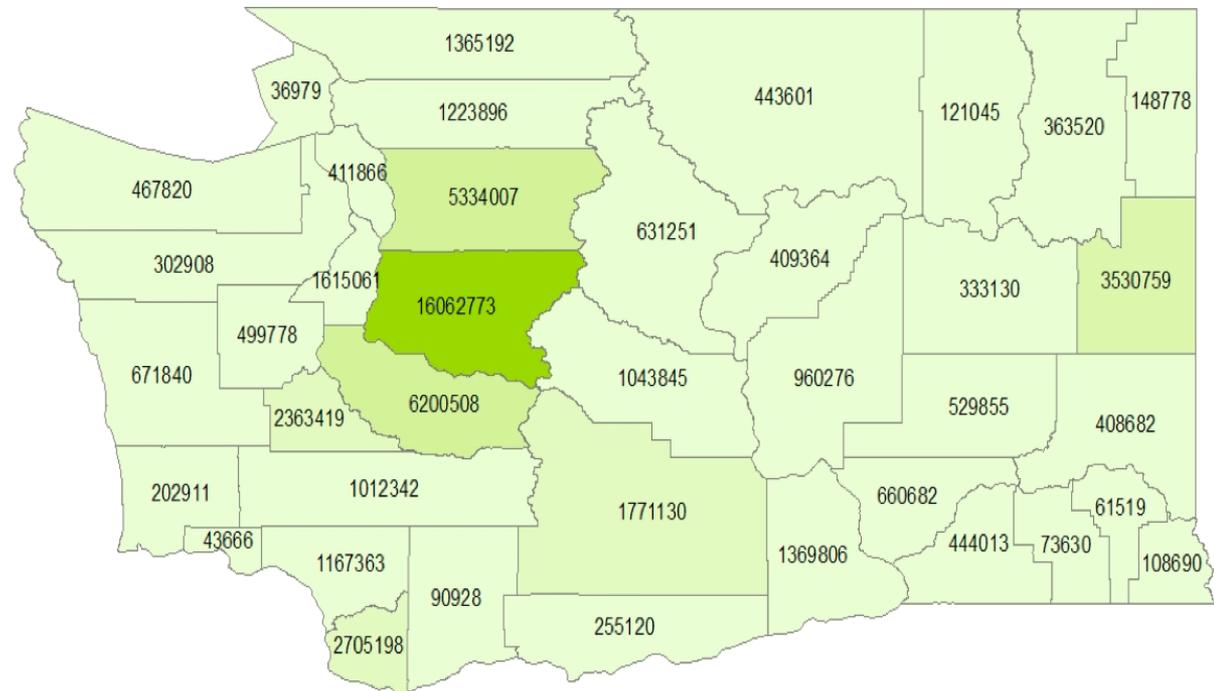
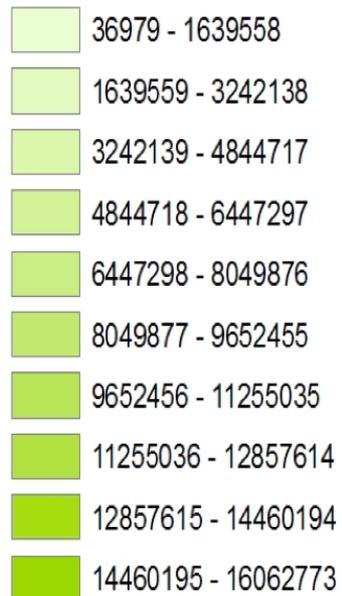
# VMT Is Concentrated in Urban Areas

The seven most populous counties produce 71 percent of the state's VMT

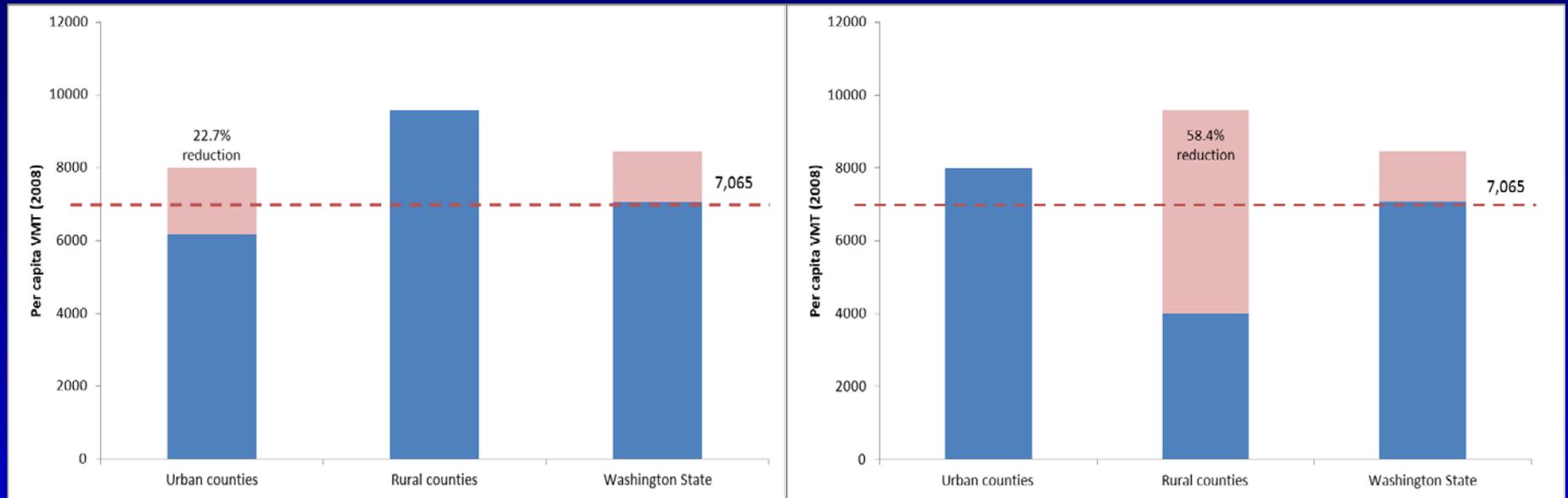
The remaining 32 counties produce 29 percent

## 2008 VMT by county

vmt2008



# VMT reduction in urban counties is essential to meeting statewide benchmarks



VMT reduction in the seven-most populous counties is more than twice as effective at reducing statewide per capita levels of VMT.

(Sources: U.S. Census, Washington State Department of Transportation)

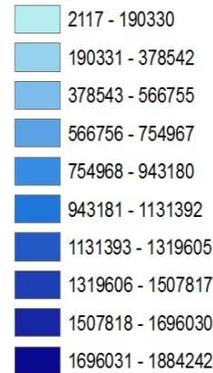
## Three ways to reduce VMT

- Shift modes
- Increase vehicle occupancy
- Travel less

# VMT Reduction has more impact in more populous counties

- The most populous counties in Washington are also the densest.
- VMT reduction strategies have more of an impact in denser areas, where alternatives to SOV are more feasible.

2008 population



2008 pop density



(Sources: U.S. Census, Washington State Recreation and Conservation Office)

Impacts on the five groups and  
areas of interest

# The strategy of Applying VMT Charges

- Pricing – VMT charges, tolls, etc. – is proven to reduce VMT.
- We assumed a cost of .05 to .25 per mile as a surrogate for any “drive alone disincentive” programs the state might adopt.

# Small business workers who commute across county lines

Approximately 228,000 workers commute across county lines to work at a small business.

- Finding
  - 53% of the affected workers work in King, Pierce, and Snohomish counties, and many of these workers can make use of rideshare, transit, and other VMT-reducing strategies.
- Assumption
  - Cross county commutes are 50% longer than national average (14 mi \* 1.5 = 21 mi)
- Impacts
  - VMT charges would raise SOV-dependent worker costs \$2.10 to \$10.50 daily.

(Source: U. S. Census data)



# Low-income residents

Low-income households already produce between 40% and 50% fewer VMT than other households.

## •Strategies

- VMT charges (regressive to low-income)
- Reward transit use and ride-sharing (benefits low-income)
- Encourage affordable housing near places of work

## •Assumption

- Low income commuters travel the same distance as other commuters.

## •Impacts

- VMT charges (of \$.05-.25 per mile) or tolling disproportionately affect this group \$1.40 to \$14/day

(Sources: Murakami and Young, 1997; Plotnick et al, 2009)

# Agricultural workers

In 2007, there were 93,500 agricultural workers, most of them seasonal.

- Finding
  - California's AITS vanpool program reduces VMT by 15 million annually, returning 2 - 3 % of disposable income to participants.
- Strategy
  - A scaled down version of California's program would produce proportional costs and benefits.
- Impacts
  - A similar program in Washington could reduce VMT by up to 5 million while saving migrant workers \$30 - \$45 monthly.

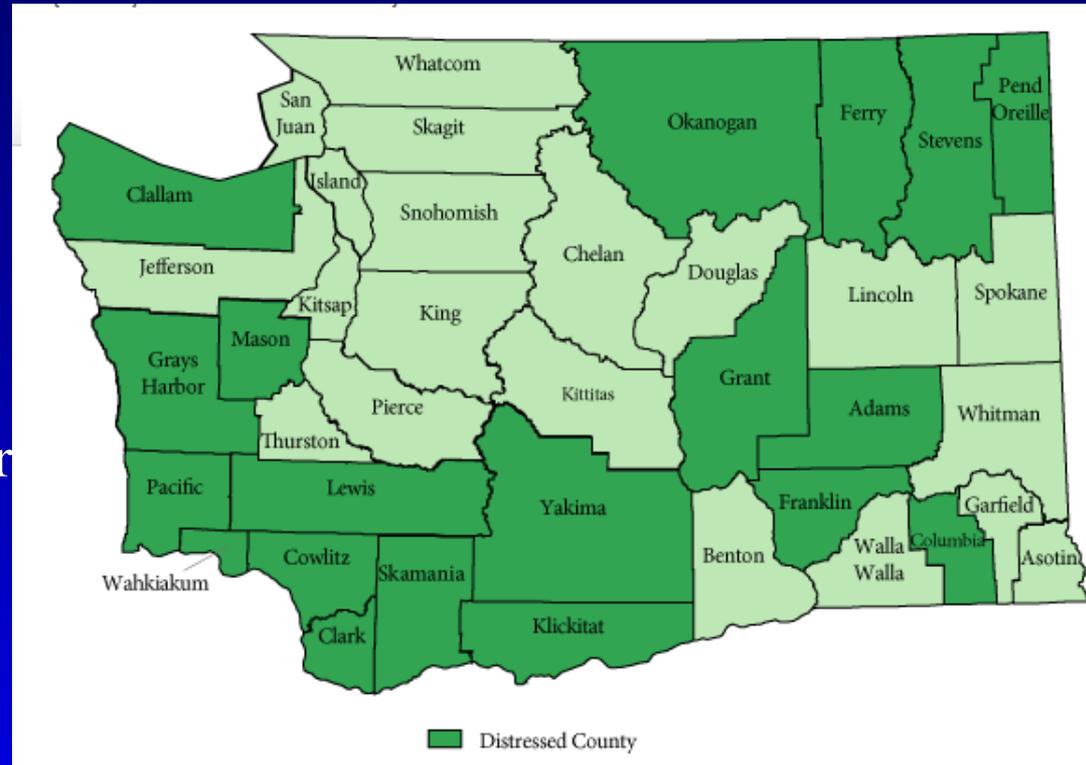
# Distressed rural counties

## Distressed

- 3 year average unemployment rate is equal to or greater than 120% of the statewide unemployment rate.

## Rural

- Population density of less than 100 persons per square mile or a geographic land base smaller than 225 square miles.



With the exception of Clark County, all of Washington's distressed counties are also rural.



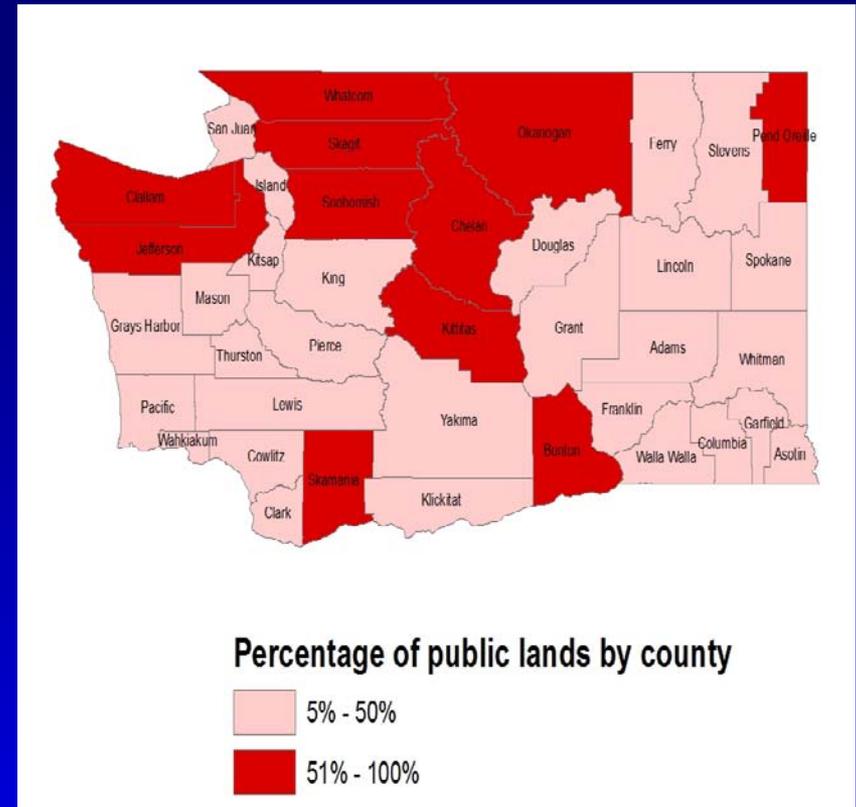
# Distressed rural counties

- Strategies
  - Impose a VMT charge
  - Increase broadband connectivity for teleworking purposes
- Assumption
  - Rural commutes are twice the length of the national average; ( $14 * 2 = 28$  mi)
- Impacts
  - VMT charges add monthly cost from \$1.40-\$7 daily

# Counties with majority public or tribal lands

Eleven counties have over 50% of their land base in public land.

- These counties are diverse – rural and urban, distressed and non-distressed – so travel patterns vary widely.



No counties have more than 45% tribal lands

(Source: Washington State Recreation and Conservation Office)

# Counties with majority public or tribal lands

- Strategies
  - Urban/Rural divide applies. Strategies for urban areas and distressed rural counties could apply.
- Assumption
  - Similar to assumptions previously stated.
- Impacts
  - Similar to strategies previously outlined.

# Conclusions

- Nothing in the law demands uniform reduction across all of these groups
- Metro areas have the alternatives and population density to more easily reduce VMT.

# Conclusions

- No single strategy will reduce VMT for each area or group
- In general, pricing will disproportionately burden and affect the five areas and groups
- VMT reduction strategies will be most effective in metro areas—more people, more SOV alternatives

# Recommendations

- Focus VMT reduction strategies on metropolitan regions.
- Mitigate impacts of strategies on low income and vulnerable populations through subsidy or exemption
- Focus near-term efforts on ridesharing and transit use in urbanized areas.
- Focus mid- and long-term efforts on land use and infrastructure changes and pricing policies for SOV use and affordable housing.
- Collect and track VMT data in different ways, as current counts and estimates are imprecise and inaccurate.