

# **Vehicle Miles of Travel (VMT) Targets – Technical Report**

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## Purpose

In 2021, the Washington Legislature directed the Washington State Department of Transportation to: develop a process for establishing vehicle miles traveled reduction targets, recommend a suite of options for local jurisdictions to achieve the targets, and identify funding requirements for state and local jurisdictions.

### 2021-23 Transportation Budget SSB 5165, Section 218 (3)

(3) \$250,000 of the multimodal transportation account—state appropriation is provided solely for the department to partner with the department of commerce in developing vehicle miles traveled targets for the counties in Washington state with (a) a population density of at least 100 people per square mile and a population of at least 200,000; or (b) a population density of at least 75 people per square mile and an annual growth rate of at least 1.75 percent as determined by the office of financial management. Given land use patterns are key factors in travel demand and should be taken into consideration when developing the targets, the department and the department of commerce shall partner with local jurisdictions, regional transportation planning organizations and other stakeholders to inventory existing laws and rules that promote transportation and land use, identify gaps and make recommendations for changes in laws, rules and agency guidance, and establish a framework for considering underserved and rural communities in the evaluation. The department and the department of commerce shall provide an initial technical report by December 31, 2021, an interim report by June 22, 2022, and a final report to the governor and appropriate committees of the legislature by June 30, 2023, that includes a process for establishing vehicle miles traveled reduction targets, a recommended suite of options for local jurisdictions to achieve the targets, and funding requirements for state and local jurisdictions.

Washington state's recently updated State Energy Strategy (SES)<sup>1</sup> identifies reducing Vehicle Miles of Travel (VMT) as a key strategy to reducing transportation sector greenhouse gas emissions. Broadly, the strategy calls for the electrification of the transportation fleet, and more germane to this effort, the reduction of VMT through strategic land use planning and providing multimodal transportation options. The SES explicitly calls for “electrifying as many passenger, truck and freight vehicles as possible; investing immediately in the infrastructure required to support massive vehicle electrification; and developing incentives and land-use plans to reduce miles traveled and increase other modes of transport, such as transit, cycling and walking”.

WSDOT is tasked with developing a process for setting VMT targets. Simultaneously, the Department of Commerce is tasked with providing comprehensive plan guidance to local jurisdictions that will address reducing greenhouse gas emissions, per capita VMT, and modeling a climate change and resilience element.

The first deliverable of WSDOT's task is this initial technical report. In this report, we provide background information on previous VMT benchmarks and the land use and transportation connection. We are also providing observed VMT data as a potential baseline for future work. This report also describes engagement efforts to date with city, county, and Regional Transportation Planning Organization (RTPO) partners. The proviso work will include an interim report in June 2022, and

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<sup>1</sup> Washington State Department of Commerce. (2021). 2021 State Energy Strategy. Retrieved from: <https://www.commerce.wa.gov/growing-the-economy/energy/2021-state-energy-strategy/>

culminate in a third and final report delivered in June 2023 outlining a process for developing local targets for VMT reductions.

## Proviso Counties

The proviso language calls out two conditions for including counties in VMT targets specifically:

1. a population density of at least 100 people per square mile and a population of at least 200,000; or
2. a population density of at least 75 people per square mile and an annual growth rate of at least 1.75 percent.

Given the most recent data available from the Office of Financial Management (OFM)<sup>2,3,4</sup>, ten counties are included: Benton, Clark, Franklin, King, Kitsap, Pierce, Snohomish, Spokane, Thurston, and Whatcom. See Figure 1.

There are several implications of this limited scope:

- Ten counties that are required to plan under the Growth Management Act (GMA) are excluded (Chelan, Clallam, Grant, Island, Jefferson, Lewis, Mason, San Juan, Skagit, and Yakima<sup>5</sup>).
- Nine additional counties that optionally plan under the GMA are also omitted (Columbia, Douglas, Ferry, Garfield, Kittitas, Pacific, Pend Oreille, Stevens, and Walla Walla).
- Numerous counties that are currently excluded are identified by the Department of Health as having health disparities, growing rural communities, or large, underserved populations, all of which would benefit from the strategies that will be identified through this effort to help more people reach more of their daily destinations without having to drive as far, or drive at all—e.g., through telehealth.

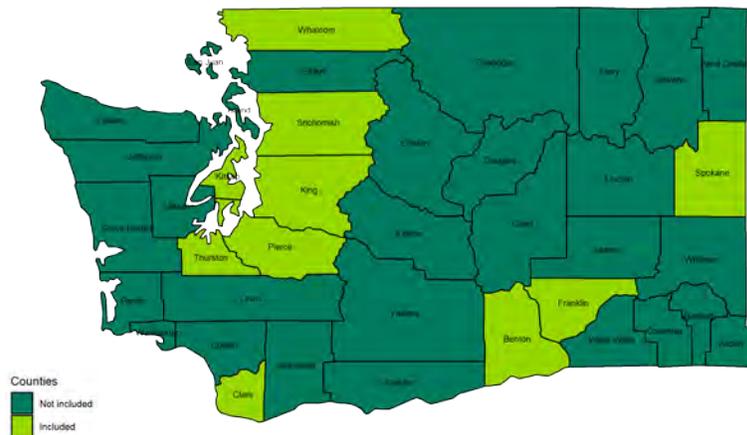


Figure 1: Counties included based on proviso language

The proviso language directing WSDOT and Commerce to develop VMT targets for counties meeting specific criteria may be viewed by local agency partners as a limitation on their ability to influence the

<sup>2</sup> Office of Financial Management (OFM). (2021). April 1, 2021 population of cities, towns, and counties used for the allocation of selected state revenues [Data file]. Retrieved from <https://ofm.wa.gov/washington-data-research/population-demographics/population-estimates/april-1-official-population-estimates>

<sup>3</sup> Office of Financial Management (OFM). (2021). Estimates of April 1 population density. State and county, 1900-2010 by decade, intercensal 2001-2009, postcensal 2011 to present [Data file]. Retrieved from <https://ofm.wa.gov/washington-data-research/population-demographics/population-estimates/population-density>

<sup>4</sup> Office of Financial Management (OFM). (2021). Components of April 1 population change. Population, population change, births, deaths, and residual migration by state and county, 1960 to present [Data file]. Retrieved from <https://ofm.wa.gov/washington-data-research/population-demographics/population-estimates/components-population-change>

<sup>5</sup> Department of Commerce. (2017). The Growth Management Act status of Washington counties and cities. Retrieved from <https://deptofcommerce.app.box.com/s/z8vgn0ifeimybnlh4j6v8cl1wxkp1jfa>

target setting process through a collaborative approach. WSDOT has requested that the language restricting the included counties be removed as part of WSDOT's 2022 Supplemental budget request. Removing the language would allow for comprehensive data evaluation, review of best practices, and partnering efforts to shape a recommendation for setting geography-specific targets and recommending actions to meet those targets.

## VMT Targets

In 2008, Washington state established statewide per capita VMT reduction benchmarks, which are codified in RCW 47.01.440<sup>6</sup>. These benchmarks are established relative to a forecast 2020 baseline of 75 billion minus the VMT from vehicles over 10,000 pounds.

Since 2008, total per capita VMT and light duty (LD, vehicles under 10,000 pounds) per capita VMT have remained roughly steady. For about the last two decades, total VMT has increased at roughly the same rate as population, which indicates a generally steady level of average per capita VMT. For a national context, 40 years ago in 1981, Washington State was well above the national average in per capita VMT, while today it is well below and among the states with the lowest per capita VMT<sup>7</sup>; a measure of success despite the apparent consistency of per capita VMT since 2008. Figure 2 shows statewide per capita VMT by year, both total VMT and light duty VMT.

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<sup>6</sup> RCW 40.01.440. (2008). Adoption of statewide goals to reduce annual per capita vehicle miles traveled by 2050—Department's duties—Reports to the legislature. Retrieved from <https://apps.leg.wa.gov/rcw/default.aspx?cite=47.01.440>

<sup>7</sup> Eno Center. (2019). US VMT per Capita by State. Retrieved from <https://www.enotrans.org/eno-resources/u-s-vmt-per-capita-by-state-1981-2017/>

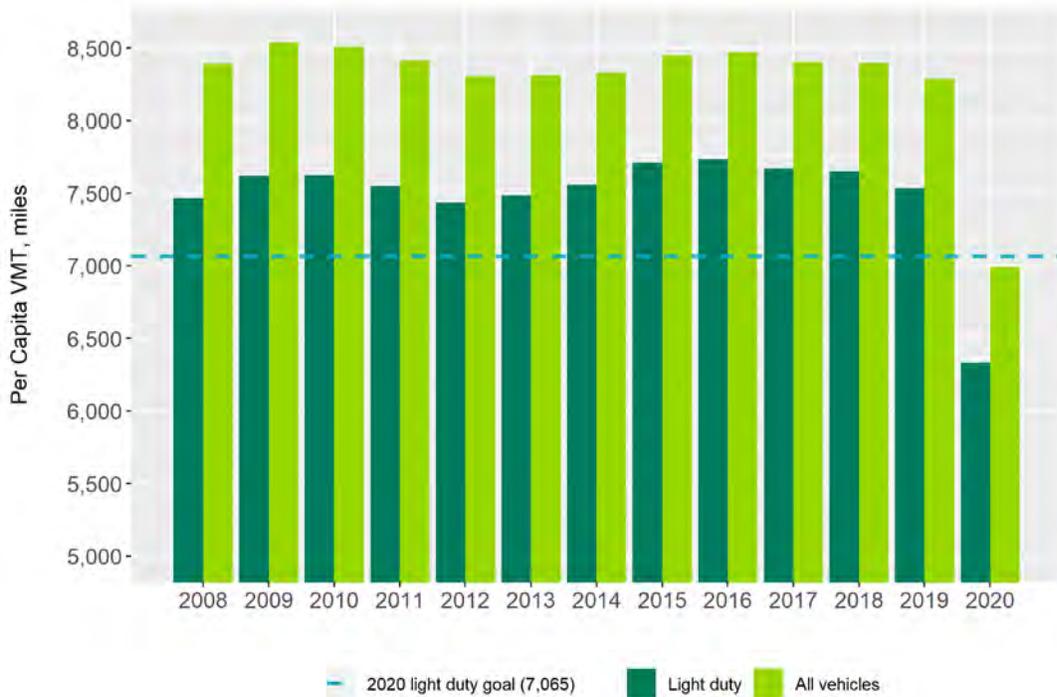


Figure 2: VMT over time<sup>8,9,10</sup>

In 2008, the state set ambitious VMT reduction targets. Still, the forecast baseline for 2020 was higher than what we see in current VMT. To set the forecasted baseline in RCW 47.01.440, vehicle activity percentages from the Highway Performance Monitoring System “travel activity by vehicle type” and OFM’s population forecast from 2008 were used. Forecasts are frequently updated, which can create confusion about the baseline as codified in RCW 47.01.440. Alternatively, using recent historical data as a baseline could provide a stable reference point for planning VMT reductions and evaluating progress over time.

The current statutory VMT benchmark seeks to reduce light duty travel. In many ways this focus makes sense. The strategies to reduce VMT are primarily focused on light duty travel. The travel each of us makes in our daily lives can be reduced with changes in how we build our communities, by offering other options for getting around—e.g., sidewalks and transit options, and by expanding options for avoiding travel—e.g., telework and telehealth.

There are also reasons to look at total per capita VMT as a metric. This measure is easier to track over time without needing complicated analysis to determine progress. In addition, using light duty vehicles as a proxy for personal travel is becoming increasingly complicated as the relationship between personal travel and goods movement is changing with the rise of e-commerce and delivery services. Furthermore, progress in urban goods movement, loading dock locations, the size of vehicles, among other innovations,

<sup>8</sup> Please note that Washington state has seen a significant decline in travel across all modes of transportation since mid-March 2020 due to COVID-19. Details available at WSDOT’s COVID-19 Multimodal Transportation System Performance Dashboard. See: <https://www.wsdot.wa.gov/about/covid-19-transportation-report/>

<sup>9</sup> Washington State Department of Transportation. (2020). Annual Mileage and Travel Information. Retrieved from <https://wsdot.wa.gov/mapsdata/travel/hpms/annualmileage.htm>

<sup>10</sup> Office of Financial Management (OFM). (2021). April 1, 2021 population of cities, towns, and counties used for the allocation of selected state revenues [Data file]. Retrieved from <https://ofm.wa.gov/washington-data-research/population-demographics/population-estimates/april-1-official-population-estimates>

make freight a potentially fruitful area to explore as part of a holistic approach to managing VMT to reduce greenhouse gas emissions.

The State Energy Strategy states that a “balanced approach includes two complementary elements: using energy more efficiently and decarbonizing the energy that is used. Pursuing one without the other will result in a costlier and less efficient transition. The first element, transportation system efficiency, can be addressed by reducing the number of vehicle-miles required to meet people’s needs and support economic activity”<sup>11</sup>. The fewer miles that need to be electrified, the less clean energy that needs to be produced and transmitted. The analysis behind the 2020 State Energy Strategy was based on a 29 percent light duty per capita VMT reduction and a 15 percent reduction in heavy duty per capita VMT. Together, these equate to a 26 percent reduction in per capita VMT<sup>12</sup>. In the June 2022 report, we will explore past and current analysis of statewide VMT reduction targets and provide this information for consideration by the legislature. Having clear, consistent, and up-to-date statewide VMT per capita baseline and targets would provide a strong foundation for local targets.

## The Land Use and Transportation Connection

Reducing VMT is not an issue for transportation alone or for land use alone. It must be addressed jointly. Land use patterns—e.g., density, multimodal connectivity, are a key factor in demand for transportation: VMT is a function of the distances between destinations, the availability of transportation options, and the availability of technologies and services that could replace travel.

In transportation, it has been assumed that the highest benefit can be provided by moving more people faster, often in private vehicles. But the underlying need that people are trying to meet is access. Access can be improved while reducing reliance on automobiles in three ways:

- Improving proximity by locating people and the activities they need to get closer to each other—e.g., neighborhood centers, urban villages, compact small towns, and transit oriented developments.
- Avoiding the need for physical travel using telecommunications.
- Providing mobility options, and supportive programming and incentives (such as Commute Trip Reduction), for all people to be able to travel where they want to go without needing a private vehicle.

The state transportation system has been primarily focused on the movement of large numbers of vehicles across long distances. However, an over-dependence on vehicles has several fundamental challenges.

Transportation is the single largest source of climate destabilizing greenhouse gas emissions in Washington<sup>13</sup>. Transportation efficient communities support health, prosperous economies, energy conservation and a sustainable environment by requiring less driving to meet daily needs. They do this by improving the proximity between the places people live and the destinations they regularly need to travel to, providing complete networks for walking and bicycling and options for high occupancy vehicle travel, siting long-term facilities in areas unlikely to be impacted by natural disasters, and by protecting green spaces. By improving the efficiency of their transportation systems, cities and counties can reduce VMT

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<sup>11</sup> Washington State Department of Commerce. (2021). 2021 State Energy Strategy. Retrieved from: <https://www.commerce.wa.gov/growing-the-economy/energy/2021-state-energy-strategy/>

<sup>12</sup> Washington State Department of Commerce. (2020). Washington State Energy Strategy Decarbonization Modeling Final Report. Retrieved from <https://www.commerce.wa.gov/wp-content/uploads/2020/12/Appendix-A.-WA-SES-EER-DDP-Modeling-Final-Report-12-11-2020.pdf>

<sup>13</sup> Washington State Department of Ecology. (2018). Washington State Greenhouse Gas Emissions Inventory: 1990-2015. Retrieved from <https://apps.ecology.wa.gov/publications/documents/2002020.pdf>

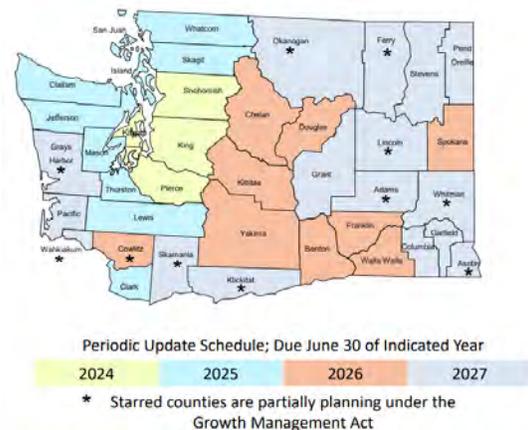
and carbon emissions, improve air quality, and reduce the risks to infrastructure from flooding, landslides, and wildfires.

Potential highway expansion, as opposed to other transportation investments, generally increases vehicle miles of travel by making access to land further away more attractive than it previously was. On the other hand, investing in transportation efficient communities can lower vehicle miles of travel by locating people closer to the activities they wish to engage in and providing them with transportation choices other than driving alone.

## Opportunities

This VMT reduction effort builds upon and complements both long standing and recent efforts at the federal, state, regional, and local levels that contribute to VMT reduction, including but not limited to the Congestion Mitigation and Air Quality Improvement (CMAQ) program, complete streets, safe routes to schools, Washington State Department of Commerce’s Transit-Oriented Development Implementation (TODI) Grants, and the new Infrastructure Investment and Jobs Act.

Transportation choices are personal and based on the local circumstances in which people live and work. Much of the work to support people’s ability to meet their daily needs without having to drive long distances occurs at the local level. There is considerable autonomy and authority for land use planning by local jurisdictions under the state’s GMA. The state plays a supportive role in aiding local jurisdictions to define and implement practical solutions that best fit their communities.



comprehensive plans, and a model climate change and resiliency element. Their effort prioritizes communities that experience the first and worst impacts of climate change, like high levels of air pollution and related health disparities, like asthma.

In addition to this close coordination with Department of Commerce, WSDOT has conducted initial engagement with partners including the Municipal Research and Services Center, and representatives from the Association of Washington Cities, Washington State Association of Counties, Washington State Association of County Engineers, and Regional Transportation Planning Organizations. Partners' feedback has been incorporated into this report and helped lay the groundwork for the next phase of work.

## Future

Washington's communities are diverse, and any suggested solutions must be sensitive to individual community needs and must avoid a "one size fits all" approach. In the next, second phase of work, WSDOT will build on initial outreach efforts, coordinate with Commerce to dovetail with their outreach, and significantly broaden engagement. The scale of engagement will depend on the outcome of WSDOT's supplemental budget request and any changes that may be made to the counties included within the proviso.

One of the requests WSDOT will have for local partners moving forward is to share their insights and experience with what success looks like at different geographies. Information will be compiled on what was done, the elements of success, and how others can learn from the experiences of our communities.

## Next Steps

To date, WSDOT has completed several tasks including establishing a project team, conducting background research, and initiating engagement with key partners. Moving forward, WSDOT will align efforts with the Department of Commerce climate proviso<sup>15</sup> work, and will actively engage with local jurisdictions across the state to ensure that the process developed for setting targets, and the recommended suite of options for local jurisdictions to achieve the targets, will be effective in the state's diverse communities. We will also collaboratively develop a clear understanding of funding requirements for state and local jurisdictions to implement this work.

Before the interim report is complete in June 2022, WSDOT will:

- Work with local partners to document how land use and transportation, and VMT reduction, are already addressed in local plans, highlight success stories, and identify challenges and areas for potential changes.
- Research examples of other target setting processes that might be used as a model for VMT target setting—e.g., housing, employment, etc.
- Collaboratively develop a recommended suite of options for local jurisdictions to achieve reductions in VMT that can be incorporated into comprehensive plan updates.
- Propose updated statewide targets based on existing and available data and research. This is a necessary first step in being able to later develop localized targets.

Subsequent reports will:

1. By June 30, 2022: Propose statewide targets and identify immediate actions for local partners.
2. By June 30, 2023: Provide a final report defining a process for allocating local targets.

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<sup>15</sup> Engrossed Substitute Senate Bill 5092. (2021). Retrieved from <https://lawfilesexternal.wa.gov/biennium/2021-22/Pdf/Bills/Session%20Laws/Senate/5092-S.s.l.pdf#page=75>

In order to complete the work as directed by the Legislature, the department will need this initiative fully funded at the \$500,000 level included in the Governor's proposed 21-23 budget and noted in subsequent fiscal notes during the 2021 session. WSDOT has requested this as part of the agency's 2022 Supplemental budget request. Full funding will enable this work to be inclusive, robust, and actionable.