



WTP2035

WASHINGTON TRANSPORTATION PLAN

CONNECTING WASHINGTON COMMUNITIES
FOR A HEALTHY AND PROSPEROUS FUTURE

January 2015

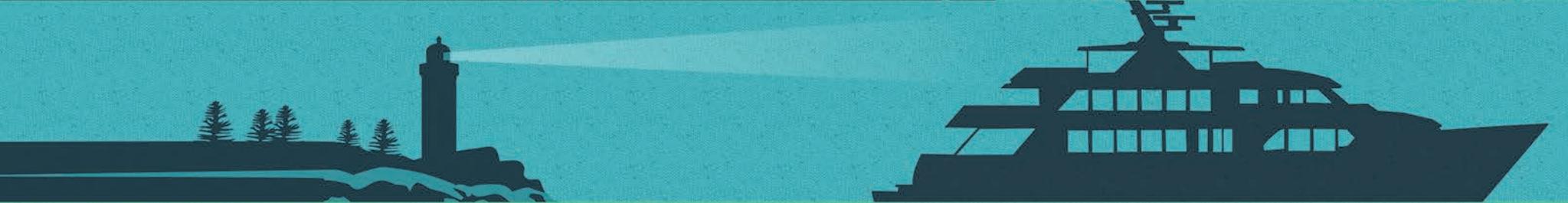
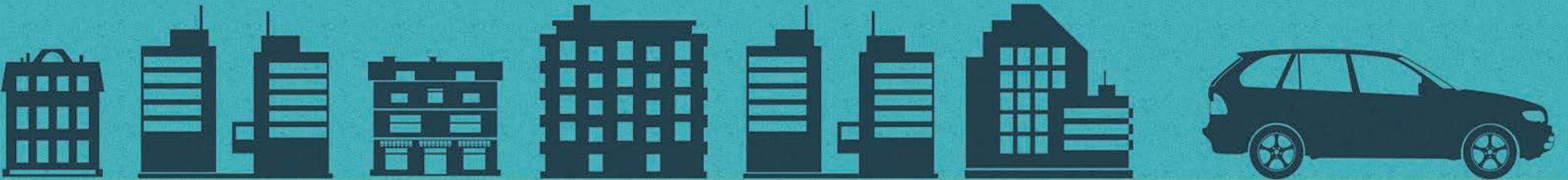


Table of Contents

1.0	Introduction.....	1
1.1	About WTP 2035.....	2
1.2	Key Findings.....	4
1.3	Transportation Trends Influencing WTP 2035.....	8
2.0	WTP 2035 Strategic Policy Plan.....	13
2.1	WTP 2035 Vision and Policy Goals.....	14
2.2	Strategies to Support Transportation Priorities.....	15
2.3	Connecting Transportation and Land Use.....	45
3.0	Travel Trends and System Needs.....	50
3.1	Travel Trends and System Needs.....	51
3.2	Trends in System Use.....	52
3.3	System Maintenance and Preservation Needs.....	60
3.4	System Performance Improvements.....	67
4.0	Funding Trends and Options.....	73
4.1	Funding Trends and Options.....	74
4.2	Federal Revenue Policy, Sources, and Trends.....	75
4.3	State Transportation Revenue Sources and Trends.....	76
4.4	Local Transportation Revenue Sources and Trends.....	79
4.5	Future Funding Scenarios.....	83
4.6	The State Role in Public Transportation.....	87
4.7	Delivering Results.....	90

APPENDICES..... 98
APPENDIX A. GLOSSARY OF TERMS 99
APPENDIX B. WTP 2035 STEERING COMMITTEE AND ADVISORY GROUP 106
APPENDIX C. ADDITIONAL DOCUMENTATION 107

1.0 Introduction

1.1 About WTP 2035

WTP 2035, The Washington Transportation Plan, provides policy guidance and recommendations across all transportation modes and regions in the State. WTP 2035 includes the following sections:

- Section 1 provides a summary of WTP 2035 and presents the most important priorities and policy guidance for transportation investments in Washington. It also briefly highlights the recent trends in Washington transportation that are driving the need for updated strategies and actions.
- Section 2 presents the vision for WTP 2035 and the recommended specific strategies and recommended actions necessary to achieve the State's designated transportation policy goals. This section also highlights a number of high-level themes that should guide transportation policy, including improving connections between land use and transportation policy, tying investments to economic, energy, and other state policies, and more fully integrating transportation planning and policy across the state's numerous modes and jurisdictions.
- Section 3 provides more detailed background information on recent trends in transportation, including a description of system usage, and the need for maintenance, preservation, and performance improvements to the many components of the State's multimodal system.
- Section 4 describes the challenges and opportunities for funding needed transportation investments in Washington State, including trends in federal, state, and local transportation revenues, potential future funding scenarios, and options for addressing future funding needs.

WTP 2035 is an update to the 2010 plan, WTP 2030, and was led by the Washington State Transportation Commission (WSTC) in collaboration with the Washington State Department of Transportation (WSDOT) and the State's Metropolitan Planning Organizations (MPOs) and Regional Transportation Planning Organizations (RTPOs). The plan was developed with engagement and input from a

diverse stakeholder Advisory Group¹ and other partners around Washington. Throughout the planning process, the Commission listened and integrated into the Plan the issues, accomplishments, and needs of WSDOT and other state agencies, RTPOs, MPOs, counties, cities, tribal governments, transit agencies, ports, businesses, and economic development agencies. The Commission held four listening sessions around the state, hosted by Washington's MPOs and RTPOs and made several additional presentations to interest groups around the State. A Steering Committee representing the WSTC, WSDOT, and Washington's RTPOs and MPOs conducted additional communication with stakeholders and member jurisdictions, and met frequently with the Commission's project staff to guide development of the Plan.

Neither WTP 2030 nor the newly updated WTP 2035 constitute an update of the federally-compliant 2007-2026 Washington Transportation Plan, last updated in 2006. WTP 2035 has however been crafted to meet state legal requirements and is poised to be easily augmented to reach federal compliance standards.



¹ Advisory Group members and the organizations represented are presented in Appendix B.

1.2 Key Findings

Since the adoption of WTP 2030 in 2010, Washington has made progress towards fulfilling many of the recommendations of that plan. Progress has been made improving commuter rail, light rail, aviation, and ferry systems. The State has seen increased regional collaboration and investment towards safety goals as well as growth in actions that support enhanced mobility. A variety of programs and projects have contributed towards progress on environmental goals such as reducing storm water impacts, promoting bicycling, walking, and other forms of active transportation, and expanding the charging infrastructure for electric vehicles. Washington has embraced new technology to increase efficiency and has expanded its high-occupancy vehicle (HOV) lane network.

Nonetheless, significant work lies ahead to achieve the state's transportation policy goals and objectives. WTP 2035 focuses on the greatest opportunities and most persistent challenges to achieving real progress in the key areas of system preservation, mobility, safety, environmental protection, energy conservation, and stimulation of the state's economy.

- **Preservation and Maintenance.** Statewide public outreach and engagement effort reinforced transportation system maintenance as a top priority for citizens and businesses, and state and local governments across the state. Regular preventative maintenance as well as long-term preservation of existing streets, highways, bridges, public transportation vehicles and ferries, and other key infrastructure components can produce economic benefits and is more cost effective than full reconstruction. Yet, maintenance and preservation needs are widely perceived to be insufficiently funded and too often deferred in favor of other expenditures. Due to declining revenues relative to need, counties and cities are increasingly challenged with the cost of simply maintaining and preserving their existing infrastructure. The lack of adequate dedicated funding for maintenance and preservation, as well as the inability to shift funds to where they are most needed, is frequently cited as an impediment to improved practice by agencies particularly at the local level. Most leaders in transportation infrastructure acknowledge the economic benefits, including long-term cost savings, of a strategic approach to asset management. Enhanced local transportation revenue options and/or a sustainable funding source established at the state level and directed to local preservation is needed to realize such an approach.
- **Safety.** While Washington has made significant progress in recent years to improve transportation system safety, the Strategic Highway Safety Plan “Target Zero” 2013 Update calls for more coordination and collaboration with partners to continue progress towards the State's aspirational goal of zero deaths on the State's roadways. It is clear from public and stakeholder outreach that

more attention also needs to be paid to improving safety for pedestrians and bicyclists, including those who use these modes in conjunction with public transit. Much of the emerging safety concern related to the growing number of pedestrians and bicyclists sharing roadways with autos and heavy trucks is aimed at local city streets and county roads, rather than at state highways. Safety also is a particular concern on tribal and rural roads.

- **Freight Mobility.** Across the state, stakeholders and the public appreciate the importance of moving freight efficiently and safely to its destination. However, truck freight shipments in the state are expected to grow 80% by 2030 and freight rail shipments are expected to double between 2010 and 2035, raising concerns over future system reliability and safety, while increasing the potential for roadway delays at rail crossings. Recent reports claim that the increased volume of oil and grain shipment by rail has reduced the availability of railroad capacity for other commodities including Washington's agricultural products.² Questions are being raised about whether railroad capacity can catch up with demand, and whether railroads should fund more capacity and safety improvements, including grade-separated crossings. The state's many ports contribute significantly to the state and regional economies, and depend upon effective roadway, rail and water shipping networks and connections. Preservation, smart management, and strategic capacity investments in Washington's multimodal freight system are at the core of the WSDOT Freight Mobility Plan, particularly on strategic freight corridors and "first and last mile" connections to ports and other freight terminals.
- **Energy and Environment.** Transportation should strive to be neither a burden on the natural environment nor a barrier to its restoration. Energy conservation, reducing emissions, and protecting the State's transportation system against the effects of climate change are all considerations of growing importance at the state level. The Washington State Energy Policy underscores the need to reduce transportation's contribution to greenhouse gas emissions not solely through travel demand management strategies but also by improving energy efficiency for all key passenger and freight transportation modes. The Governor's recent executive order³ calls for a wide array of strategies and actions to increase efficiency and reduce both energy costs and greenhouse gas (GHG) emissions from transportation, including market pricing mechanisms. At the same time, recent rapid growth in energy

² Bloomberg News, October 31, 2014.

³ Executive Order 14-04, Washington Carbon Pollution Reduction and Clean Energy Action. (April 29, 2014).

shipments (primarily petroleum shipments by rail) from neighboring states to Washington's marine ports and rail terminals has raised concerns about both safety and the potential threat of impacts to sensitive ecosystems from this shipping activity.

- **Public Transportation.** Public and stakeholder outreach revealed strong support for further investment in public transportation (local and express bus, streetcars, light rail, commuter rail and passenger ferries) to accommodate a growing demand for travel by these modes in many different areas of the state. More aggressive operational and transportation pricing strategies may be necessary components of a comprehensive urban transportation program. Improving public transportation connections between regions of Washington, as well as providing better mobility to the poor, elderly, and other special-needs populations, are challenges of statewide significance and must also be addressed at the state level. Public transportation on, to and from tribal lands is crucial to meeting the economic development, education, and health care needs for Washington's tribes.
- **Interregional Connectivity.** Stakeholders from agricultural centers and rural areas of the state cite the critical importance of programs that provide connectivity between regions of the state, such as all-weather roads, rural transit, and commercial passenger air service at smaller airports. This is true not only for passengers but also for agricultural goods and finished products, as agricultural product transportation is disproportionately important to the local economy in some areas. Ferry service is a critical component of mobility and interregional connectivity for the larger Puget Sound basin.
- **Public Health.** Stakeholders representing a wide cross-section of the general public called for more clear connections between state policies on transportation and public health. Strategies that support increased bicycling and walking, as well as greater use of public transportation, are shown to increase physical activity levels and contribute

The State's Role in Public Transportation

Recommendations of the 2011 Joint Transportation Committee (JTC) study on the State Role in Public Transportation included a clearer state focus on transit policy and resources, consistent performance measurement, and in the long term, additional resources to meet growing public transportation needs. These recommendations were reinforced by public comments heard across the state during the WTP 2035 update and during the previous four years: public transit use is increasing and funding from all sources has not kept up with demand. While management and operation of public transportation should remain a local responsibility, and the majority of transit funding will continue to come from local sources, the state should increase its role particularly in funding and provision of other supportive resources. More than just an efficient and cost-effective way to gain more person-carrying capacity from state and local roadways, public transportation is a critically important tool for achieving legislatively-mandated policy goals including growth management, emission reductions, energy conservation, and storm water management.

to overall improved personal health. When pursued as a statewide strategy, there are significant aggregate health benefits and economic savings to the state as a whole as well as to individuals.

- **Other Regional Priorities.** There are many differences between Washington's regions, with resulting variation in priorities. In the Puget Sound region there is an emphasis on expanded public transportation and tolling of roads and bridges to accommodate growing demand, generate needed revenue, and encourage more economically and environmentally efficient travel behavior, including walking and biking. Rural areas cite the critical importance of programs that provide connectivity to the rest of the State, such as all-weather roads, rural transit, and commercial passenger air service. Ferry service is of course a lifeline to several sub-regions of the larger Puget Sound basin as well as to Ferry, Stevens and Wahkiakum counties. Agricultural product transportation and tourism are disproportionately important to the local economy in some areas.
- **Tribal priorities.** Improved access to education and employment opportunities, health care, and other social services are top tribal priorities, as is improved coordination of the numerous funding and grant programs available for these purposes. Lack of sufficient state and federal transportation funding poses a challenge to necessary maintenance of roadways and bridges. Transportation safety and public transportation are two further areas where additional funding would help address tribal needs and improve economic development opportunities.
- **Business priorities.** Business and industry groups such as the Association of Washington Business and state and regional Chambers of Commerce seek improved efficiency in expenditure of existing funding and greater accountability for results through performance measurement approaches. There is a preference for prioritizing investments in system preservation/maintenance and goods movement infrastructure. Greater reliance on direct user charges, such as tolling, and local option taxes that strengthen the relationship between the source and benefits of transportation expenditures, is preferred over broad statewide tax increases.
- **Accountability.** Not only business and industry groups, but state and local agency representatives as well, call for improved efficiency in expenditure of existing funding, and greater accountability for results through performance management approaches. Washington's transportation policy should be consistent with and reinforce Results Washington, the initiative to build a more responsive, accountable, and data-driven state government. In addition to complying with the performance reporting provisions of MAP-21, the state should pursue a broader program of performance management to improve accountability for expenditures not just of federal transportation dollars, but of state and local funds as well.

1.3 Transportation Trends Influencing WTP 2035

While Washington's transportation system is not dramatically different in 2014 than in 2010, some important trends drive the strategies and recommended actions of WTP 2035.

- Demand on most all components of the transportation system is increasing as the state recovers from a long recession. Passenger volumes are higher on public transportation, and transit operators note they are unable to provide enough peak period service in high-demand corridors to avoid severe crowding. Freight tonnage is higher on highway, rail, barge, and air modes.
- Available revenue will continue to stagnate or decline, as federal contributions shrink and state gas tax receipts flatten out and decline in the long run. With current revenue sources and rates, spending on essential operations, maintenance, and preservation is likely to continue to lag behind estimates of need. As a result, transportation system condition and performance continues to deteriorate, most notably, but certainly not limited to, roadway maintenance and public transportation service.
- The notable exception to the trend of increasing overall transportation demand is the slowing growth in vehicle miles of travel (VMT), primarily that of passenger autos. Since 2002, average annual growth in VMT has been only 0.5%, compared to 2% per year for the previous decade, and 4.5% per year for the period from 1967 to 1990. After considerable study and expert deliberation about the future trend in VMT (and therefore fuel consumption, the state's largest transportation revenue source), WSDOT in 2014 released forecasts that project a very slight increase statewide in annual VMT out to about 2019, followed by a gradual decline each year for the remainder of the forecast period. If this forecast holds, 2035 VMT in Washington will have declined to 2003 levels. A complex mix of social and technological changes will allow VMT growth to moderate and even decline while the state's economy continues to grow.⁴
- Several very significant capital expansion and replacement projects are underway, promising to maintain or improve future mobility in critical corridors, but also consuming a large percentage of available funding and financing capacity. Generally, there is

⁴ Modifications to the VMT Statewide Forecast Model, WSDOT, October 2014.

insufficient discretionary funding available to address both known and unanticipated future transportation needs, as too large a percentage of authorized funding streams are committed to specific projects/programs and to debt service.

Additional aspects of current conditions and recent trends are summarized here, organized by the six transportation system policy goals:

Economic Vitality

- Annual growth of employment in the Washington's freight-dependent industries was back in positive territory in 2011 and 2012 after three successive years of decline. 2012 gross business income for freight-dependent industries totaled \$450 billion.
- Exports, an important part of the state economy, are up over 50% in dollar value since 2010.
- Although freight shipments by rail have not yet returned to their peak levels of 2006, volume continues to grow significantly and is expected to double between 2010 and 2035. The frequency and length of unit trains raises concerns about future system reliability and potential for increase in roadside delays at rail crossings. Because much of the increase is expected to be from shipment of oil, there are additional public safety and environmental concerns as well.
- Communities are considering relatively modest investments in walkable urban settings and attractive street environments that have the potential to generate financial returns in terms of commercial rent, consumer spending, and home values.



Preservation

- Physical roadway condition deteriorated due to insufficient investment in maintenance and recent growth in auto and truck VMT. The percentage of state-managed roads with pavement quality rated “good or very good” falling from 83% to 76% over the period 2008-2012. County arterials saw a similar drop, from 94% to 89% rated “fair or better.”



- Bridge conditions were more constant over the same period; both state- and county-maintained bridges were essentially unchanged over the period 2008-2012, at 87% and 84% in good condition, respectively.

Safety

- Total traffic-related fatalities and serious injuries continued the decline demonstrated since 2005. However, from 2012 to 2013, there were notable increases in fatalities involving young drivers, speeding, running off the road, and older drivers.
- Significant growth in bicycling and walking in some areas of Washington for commuting, shopping, and other utility trips is raising concern about the potential for increased conflict between auto drivers, cyclists and pedestrians.



Mobility

- As noted above, the period 2002 through 2013 saw a distinct flattening of growth rates in annual vehicle miles of travel (VMT.) This trend is not limited to Washington state, nor to the United States, and experts believe the slowdown in VMT growth will continue until annual VMT actually begins to decline year-over-year. Given the state's gradual but steady increase in population, the data together suggest a continuing decrease in *per capita* VMT, signaling that the amount of auto travel (as measured in miles) by each individual is already on the decline.
- Over the same time period, total travel by all motor vehicles (total annual VMT) on all public roads has been essentially flat, suggesting that population growth is offsetting the per capita decline.
- Available data indicate that most of the net increase in Washington's public transportation ridership (from 2009 to 2012) has come via investment in light rail transit (LRT) and streetcars, in those areas that have such modes. Light rail transit trips grew rapidly in the period 2009-2012 due to new service implementation and extensions. Commuter rail ridership was up 12% over the same period while conventional urban bus ridership was essentially flat, due in part to service reductions enacted out of financial necessity. More recent data indicate that bus transit ridership is increasing in select areas since 2012, and it is likely that urban bus systems will continue to require significant capital reinvestment and operating subsidy to meet growing demand and remain competitive with other modes.

Environment

- The transportation sector continues to be Washington’s largest consumer of energy, accounting for 44% of total annual energy usage. It is also the least energy-efficient sector, generating 55% of all the energy that is released as “waste energy” e.g., unwanted heat and noise. (2009).
- Transportation is also the largest sector producer of greenhouse gas (GHG) emissions at 46% of total state GHG emissions, according to the state’s latest Carbon Emission Reduction Taskforce report.
- Federal courts have interpreted Washington’s tribal treaty rights to require accelerated removal and/or replacement of culverts that hinder the passage of salmon and other anadromous fish. Lack of sufficient dedicated funding to implement the required mitigations continues to delay progress in addressing the court order.



Stewardship

- The overriding trend in stewardship of the state’s transportation system is underinvestment in preventive maintenance and preservation of key infrastructure. Several factors contribute to this trend, including failure to keep up with economic and demographic trends, and continuing devolution of funding responsibility from the federal government to the states, and in turn from the state to city and county governments.
- Motor fuel taxes still account for about 53% of projected state transportation revenues from 2011 to 2027, with license, permit, and driver-related fees making up another 28%. All remaining sources account for less than 20% of funding for the state system.⁵ With motor fuel consumption projected to decrease in the long run, further reduction in both federal and state fuel tax revenues can be expected unless the underlying tax rates are adjusted to compensate for improving fleet fuel economy and the effect of inflation.

⁵ Transportation Revenue Forecast Council, June 2014 and June 2010 forecasts for 2011-2027.

- Localities are now picking up a larger share of the transportation tab through property taxes, general sales taxes, and other local sources. Local funding for public transportation, including fares, increased by 23% over the period 2008-2012, while combined federal and state revenues for transit fell 6%. Local sources now account for 85% of public transportation funding.
- Federal requirements such as the Americans With Disabilities Act (ADA) create a growing, unfunded burden on transit agencies. The per-rider cost of providing special needs transit and paratransit services is much greater than for regular fixed-route bus or rail transit, and the gap between cost of providing these services and the revenue available to fund them is growing.

The following section presents the WTP strategic policy plan, and identifies strategies and recommended actions for addressing these findings and trends.

2.0 WTP 2035 Strategic Policy Plan

2.1 WTP 2035 Vision and Policy Goals

WTP 2035 Vision Statement

By 2035, Washington's transportation system safely connects people and communities, fostering commerce, operating seamlessly across boundaries, and providing travel options to achieve an environmentally and financially sustainable system.

WTP 2035 is organized around the six statutory transportation policy goals in RCW 47.04.280. These six policy goals are:

Economic Vitality. To promote and develop transportation systems that stimulate, support, and enhance the movement of people and goods to ensure a prosperous economy

Preservation. To maintain, preserve, and extend the life and utility of prior investments in transportation systems and services

Safety. To provide for and improve the safety and security of transportation customers and the transportation system

Mobility. To improve the predictable movement of goods and people throughout Washington State

Environment. To enhance Washington's quality of life through transportation investments that promote energy conservation, enhance healthy communities, and protect the environment

Stewardship. To continuously improve the quality, effectiveness, and efficiency of the transportation system

While the six policy goals are shared statewide, the implementation strategies and actions to make the goals a reality may vary across Washington. There is some degree of overlap between the transportation policy goals, and many strategies may be appropriate to achieve more than one policy goal.

2.2 Strategies to Support Transportation Priorities

This section presents a number of strategies and actions to help meet the six statutorily defined policy goal areas, updated to reflect emerging trends and themes as well as the progress made since adoption of WTP 2030 in 2010. WTP 2035 is organized to help inform future policy discussions and decisions by leaders and decision makers at all levels. The transportation strategies and actions proposed in this Plan will require state or local action to implement.



Economic Vitality

The Economic Vitality goal area seeks “To promote and develop transportation systems that stimulate, support, and enhance the movement of people and goods to ensure a prosperous economy.”

As one of the most trade-dependent states in the nation⁶, Washington’s multimodal transportation system plays an important role in fostering economic vitality and competitiveness in regional and global markets. In 2013, Washington exported \$16.7 billion of merchandise to China, as well as \$9 billion to Canada and \$7 billion to Japan. Mobility of people is as critical to the economy as movement of goods. In urban areas, transit plays a important role in helping people get to work and school. In the state’s island and peninsular communities, workers and businesses rely on ferries and barges. Across the state, communities benefit from access to airports, freight and passenger rail terminals, and the system of streets, roads and highways.



⁶ In 2013, Washington exported merchandise worth \$82 billion. Exports of NAICS Total All Merchandise from Washington, Foreign Trade Division, U.S. Census Bureau. <http://www.census.gov/eos/www/naics/> (accessed November 25, 2014).

Over the last four years, there have been improvements in passenger rail service, investments in next generation aviation technologies, and significant improvements in freight movement at the major border crossings with Canada. On the other hand, the largest two seaports, the Port of Seattle and the Port of Tacoma, face growing competition from other West Coast ports as well as changes in the maritime shipping industry.

The recent proliferation of long unit trains, particularly those carrying crude oil and bulk grain, has disrupted the timing and reliability of passenger and freight rail service for other agricultural producers and other traditional rail users.⁷ And with the welcome economic rebound, congestion once again delays commuters, international freight and local delivery vans, adding direct and indirect costs to families and businesses.

Strategies

A. Improve Washington's Economic Competitiveness

Washington today more than ever before competes on a global scale for the export and import of goods and services.

Transportation policy and investment decisions that create an economic advantage for Washington's businesses directly affect the state's economic vitality and resiliency. A wide range of policy and investment actions can deliver this sort of advantage, such as

Seaports and Trade in the Washington Economy

Washington's economy depends on trade more than any other state in the U.S., with forty percent of Washington jobs connected to trade. The Ports of Seattle and Tacoma together move \$77 billion in cargo annually, ranking third in container volume in North America and fourth in total export value. In recognition of the economic significance of marine cargo, and of the competitive business environment for west coast ports, the Ports of Seattle and Tacoma have formed the SeaPort Alliance to jointly manage operations and assets.

The Columbia Snake River System is the top U.S. wheat export gateway, number one for west coast wood exports and bulk mineral exports, and the second largest U.S. soybean export gateway. The Port of Longview handled a record 7.4 million metric tons of cargo in 2013, 18 percent over 2012, as demand for logs and grain increased in Asia and steel imports grew by 47 percent. The Port of Vancouver moves about 5 million tons a year, predominantly grain and other bulk products. The Port of Grays Harbor moved 2.7 million tons of grain, soybeans, cars and heavy equipment in 2014, up from 50,000 tons in 2003. The Port of Everett handles Boeing parts and other large cargo.

⁷ "BNSF to Spend \$6 Billion in 2015 to Ease Rail Gridlock", Bloomberg News, November 20, 2014. American railroads hauled 12 million carloads in the third quarter, the most since at least 2006, according to Association of American Railroads. Through mid-November 2014, shipments rose 14 percent for grain and 13 percent for petroleum products, mostly crude oil.

improving first- and last-mile connections between ports, freight terminals, and airports; and reducing delays through strategic elimination of at-grade rail crossings. Policies that maintain or expand flight offerings from smaller commercial airports create additional regional economic options and opportunities for Washington businesses and customers.

Recommended Actions:

- Invest in strategies to mitigate the negative impacts of congestion on the economy, the environment, and human health, including system preservation, travel demand management, and transportation system management and operations.
- The Legislature should prioritize improvements for major corridors, such as I-5 and I-90, the major north-south and east-west connections between Washington and the rest of the U.S.
- Keep moving forward with incremental intercity passenger rail improvements to the Pacific Northwest Rail Corridor, from Eugene, Oregon to Vancouver, British Columbia.
- Invest in and support policies to increase use of the Columbia-Snake River barge system.
- The Legislature should streamline and expand the ability of the state to partner with the private sector on financing and developing projects such as ferry terminal improvements, development and expansion of park and ride facilities and freight collection and distribution facilities for agricultural goods.
- Partner with the military to prioritize transportation investments that support military related economic activities.
- Design, plan, and fund transportation infrastructure that supports tourism, such as non-motorized trail networks, scenic byways, intermodal connections for travelers, and enhanced traveler communication systems.



B. Strengthen Connectivity of People and Communities

An effective, efficient transportation system is one in which the various modal systems and services are connected and coordinated, providing people with realistic transportation options and reliable access to home, work, school, and other destinations.

Recommended Actions:

- Support strategies and investments to better link people and commerce, such as transit-oriented development, bicycle and pedestrian networks, park and ride lots, and broadband access.

- Connect regional economies by improving north-south and east-west round trip passenger train service between major metropolitan areas.
- Support the location of transportation facilities, such as transit only and high occupant vehicle lanes, where transit operation in the corridor is critical to maintaining and improving mobility in urban centers.
- Maintain and improve connectivity of island and peninsular regions to Washington State Ferries.

C. Support the Coordinated, Connected, and Efficient Movement of Freight and Goods

Washington State's freight system underpins the state economy, supports national and civil defense, directly sustain hundreds of thousands of jobs, and distributes the necessities of life to the state's residents. Washington's manufacturers, industrial producers, and farmers rely on the freight system to ship Washington-made products to local customers, to major U.S. markets and worldwide. To remain competitive, policies are needed that support and foster investment in improved connectivity to freight destinations, improve the all-weather functionality of the system, and promote more efficient use of existing capacity.

Recommended Actions:

- Promote strategies that address the “first and last mile” of freight connectivity, including prioritizing key connections to ports, freight terminals, agriculture storage facilities, and airports.

Washington's Freight Mobility Plan

Washington DOT completed the State Freight Mobility Plan in June 2014, setting out recommendations for policies, operational improvements, and capital projects to help the state build economic activity and retain its competitive edge. The Plan's three main objectives are:

- Develop an urban goods movement system
- Maintain Washington's competitive position as a Global Gateway
- Support rural economies including the farm-to-market, manufacturing, and resource industry sectors.

The Freight Mobility Plan is multimodal and considers the needs of state's entire freight system, whether owned and operated publicly or privately. Notable features of the Plan include:

- It provides methods to analyze the economic impact of freight-related improvements to the state's highways
- It identifies Washington's State Freight Economic Corridors, analyzes performance gaps in these corridors, and creates a new process to include Tribal, MPO, RTPO, and port strategies to improve performance in these corridors
- It is a performance based plan that meets the intent of the Moving Ahead for Progress in the 21st Century Act (MAP 21) by setting measurable freight performance goals.

- Develop collaborative, systematic, corridor-based approaches, involving local jurisdictions and rail operators, to address safety and connectivity issues associated with at-grade rail crossings.
- The Legislature should invest in designated freight corridors by making connections with ports (such as completing SR 509 to connect with I-5 near Sea-Tac and SR 167 to connect with the Port of Tacoma) and assist in the development of freight modal centers (such as airports and intermodal facilities) to maintain Washington’s competitive advantage for trade.
- Help establish an all-weather transportation system, prioritizing investments that will minimize closures affecting agriculture, freight dependent industries, and tourism. Each region should define a core of all-weather state and local roads that meet designated state standards for weight and safety, and improve access from agricultural storage facilities to long-haul routes via county roads.
- Explore incentives for freight carriers to use ferries during off-peak hours.

D. Invest in the State’s Aviation System

Washington’s commercial and general aviation system is an essential component of an effective multimodal transportation system and critical to a healthy and vibrant economy. Increased demand for air passenger and cargo travel is expected to constrain airport facilities, runways, and taxiways, particularly at the state’s busiest airports. According to the 2013 Washington State Airport Pavement Management System, pavement funding needs for the 95 airports documented in the study totaled \$338 million from 2012 to 2020. This amount would allow the system to meet overall condition goals and eliminate the backlog of major pavement rehabilitation projects. WSDOT’s 2014 Airport Investment Study identified almost \$2 billion in eligible, likely-funded 20-year capital needs, and another likely unfunded \$1.7 billion in need. Retaining commercial air service to Washington’s smaller airports is important to the economic viability of the communities they serve.

Recommended Actions:

- WSDOT should collaborate with the Department of Commerce, the Washington Tourism Alliance and smaller commercial service airports to explore the feasibility of maintaining or expanding flight offerings between smaller commercial service airports to “hub” airports.
- The Legislature should direct aviation taxes and fees to fund investments in airport infrastructure.

- The Legislature and WSDOT should treat aviation capacity as a resource and preserve, protect, and enhance such capacity through strategies focusing on airport operations, technology, safety, and land use. Consider strategic aviation system investments that can leverage the value of the aerospace industry and commercial travel to the State's economy.
- Congress and the FAA should continue to invest in aviation technologies, including NextGen and biofuels development, to meet future aviation needs and reduce greenhouse gas emissions.

E. Ensure the Ability to Build and Maintain the Performance of Essential Public Facilities

Washington State's Growth Management Act designates interstate highways, airports, marine and river port facilities, the Columbia/Snake navigable river system, and intercity passenger rail as "essential public facilities." Marine ports and airports receive special consideration under the port-enabling statutes, Shoreline Management Act and Planning Enabling Act. Private transportation facilities such as rail lines are identified for special protection under federal interstate commerce laws as well as state laws designed to protect large container port operations. Protecting and preserving these essential elements of the transportation system is vital to meet growing needs of the state.

Recommended Actions:

- Identify key multimodal transportation corridors in local, regional, and state land use and transportation plans.
- The Legislature should expand the definition of essential public facilities to include highways of statewide significance and identified megaprojects.
- Local transportation plans should specifically protect difficult-to-site facilities and the routes that access those facilities, such as airports, marine and inland waterway ports, and intermodal facilities, from encroachment by incompatible land uses. These plans should anticipate and provide for potential future expansion of such facilities.
- Preserve and improve the freight and passenger rail system where there are sufficient public benefits to the State, its businesses, and communities, based on a systematic assessment and comparison of benefits and costs across users and modes.



Preservation

The Preservation goal area seeks “To maintain, preserve, and extend the life and utility of prior investments in transportation systems and services.”

Preservation of the capital assets of the statewide transportation network is the most critical transportation challenge facing the state. Preservation encompasses preventive and major maintenance and replacement of the assets that make up the statewide network of all forms of transportation, including capital assets of roads, bridges, ferries, buses, terminals, and locks. While preservation needs vary across the state, the fundamental priority is to reinvest in existing infrastructure and systems before funding new projects.

Much of the state’s roadway system, including the interstate highways, was built between the 1950s and 1970s and is at or near the end of its useful life. Statewide, over 80,000 miles of state highways, county roads, city streets, and roads managed by other jurisdictions require continuous preservation and maintenance. Sometimes, preservation alone is no longer adequate or feasible and major rehabilitation or total replacement of the asset is necessary.

Strategies

A. Focus on Preserving the Existing State and Local Transportation Network

Preserving our existing infrastructure is critical to ensuring reliable, safe travel on the transportation system, supporting individuals dependent on certain modes of travel, and bolstering the economic vitality of Washington farms and businesses that rely on efficient and dependable goods movement through the state and beyond. There is a need to establish a higher priority for maintenance and preservation of critical transportation system components. This will require development of dedicated, sustainable funding sources that allow a more cost-effective, proactive approach to system maintenance, preservation and eventual rehabilitation or replacement of critical infrastructure including transit vehicles and ferries.

Seismic Rehabilitation

The State, county, and cities in the Puget Sound area have a 10-year plan for seismic rehab for emergency response and economic recovery called the Lifeline Corridor Initiative. WSDOT needs \$48 million to secure the Puget Sound Lifeline System by building a usable route around the I-5 section through downtown Seattle via SR 99 and I-405.

Recommended Actions:

- The Legislature should prioritize and dedicate an adequate stream of new transportation revenue to preserve and maintain the existing system.
- Establish a long-term system reinvestment strategy that includes criteria to replace or remove infrastructure from service at the end of its life.
- Emphasize the importance of roadway system preservation -- along with operating efficiently, managing demand, and adding capacity strategically -- for continued economic growth and vitality.
- Apply practical design concepts and operational and system management strategies to ensure that transportation improvements are cost-effective and appropriate for the situation.
- The Legislature should phase out use of studded tires to reduce pavement repair and replacement.
- Use technology and research to reduce costs and improve and extend the life of infrastructure.

B. Explore New Funding Strategies for Public Transportation

Thirty-two transit agencies operate in Washington, serving most of the urbanized area of the state. Transit operations, which make up the bulk of transit agency costs, are funded primarily by voter-approved local sales and use taxes (about 75% of operating revenues in 2012) and farebox revenues (about 14 percent of operating revenues in 2012). The state investment in public transportation programs and grants makes up less than 1 percent of operating revenues—compared to a national average of 20 percent state investment. Transit agencies have also seen a dramatic reduction recently in Federal funds for capital investments in buses and bus facilities. Public transit agencies also provide most of the paratransit trips in this state, with very little funding from the state. Paratransit costs are consuming an increasing share of transit agency budgets, particularly for small and rural systems that spend as much as 40 percent of their budget on paratransit .

Many public transportation agencies have had successful ballot measures to increase tax revenues for transit. Unfortunately, five of the state's public transportation systems have reached their maximum taxing authority and have no other funding sources without additional authority. Additional local option authority and flexibility for those transit agencies that have used their existing authority is consistent with the transportation policy goals of preservation and stewardship.

Recommended Actions:

- The Legislature should provide transit agencies with adequate revenue authority, including expanded local-option funding authority, to preserve current infrastructure and maintain desirable service levels, particularly where transit service is critical to managing demand on key highway and arterial corridors.
- WSDOT should maintain an ongoing public transportation planning process, working with local transit agencies, cities, and counties to identify public transportation corridors of statewide significance. Designation would influence prioritization of the speed and reliability of transit service on designated corridors.
- Transit agencies should explore the feasibility of funding transit system development and operating costs from land value capture, that is, by taxing the additional value of adjacent properties that result from improved transit accessibility.

C. Invest in Preservation of Ferry Vessels and Terminal Infrastructure

In 2013, Washington State Ferries (WSF) transported over 22.5 million riders in and around the Puget Sound.⁸ In addition to WSF, there are several county-operated ferries, a separate WSDOT-operated ferry on Lake Roosevelt, one tribally-operated ferry, and several private ferry operations in Washington. (See Figure 1.) To maintain current service levels, the statewide system must replace 16 of its 22 aging vessels by 2040 and invest in preserving and restoring the other 6 boats. In addition, the region must preserve its terminal infrastructure, which includes replacing and upgrading several terminals. The PSRC's *Transportation 2040* projects \$6.7 billion in WSF state-of-good-repair needs from 2010 to 2040. Inadequate funding of critical long-term preservation and replacement needs could lead to future service reductions on the WSF network.

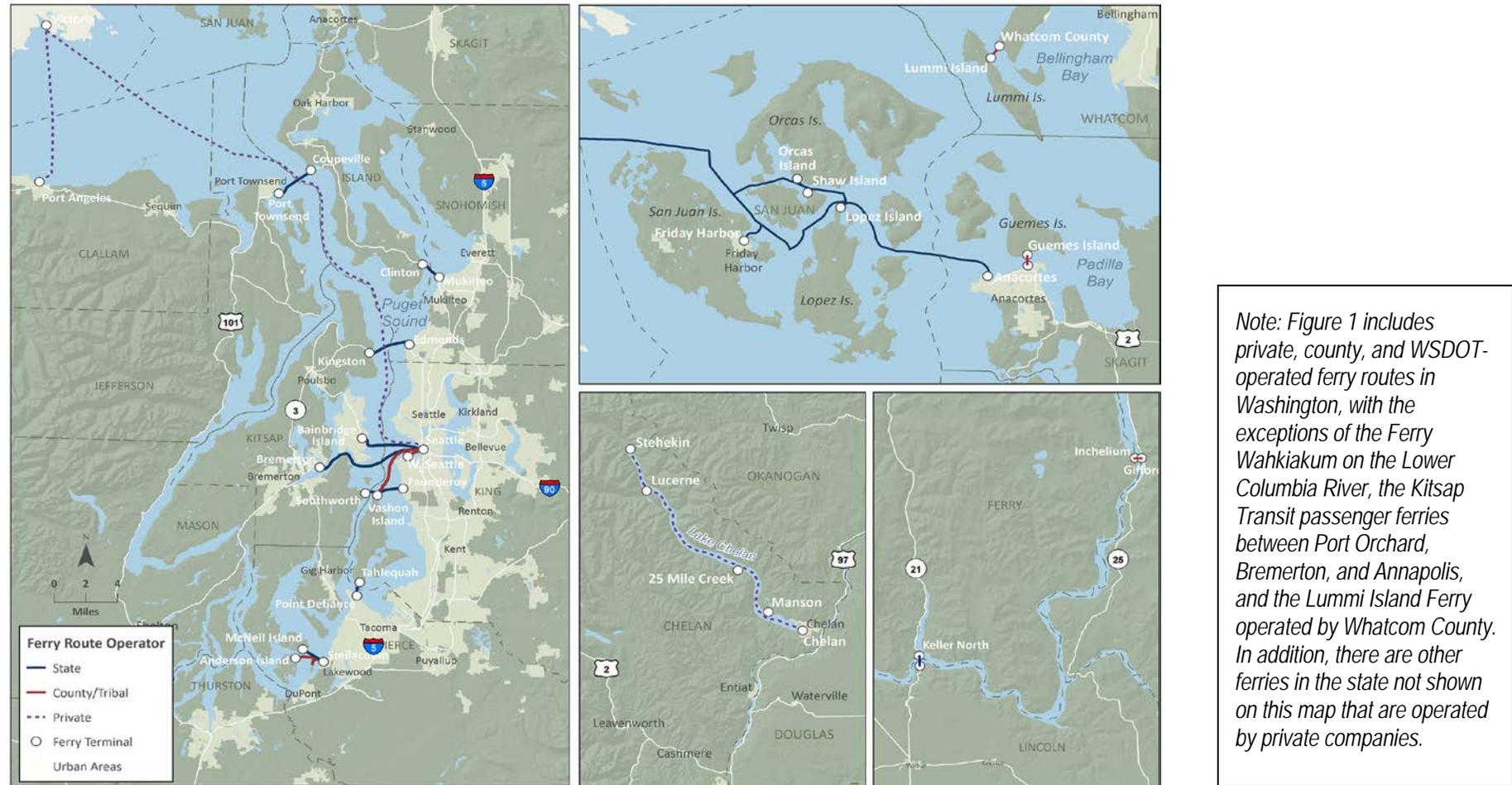
Recommended Actions:

- The Legislature should invest in vessels needed to meet and maintain service level objectives.
- The Legislature should continue to support policies and fare structures that pay for the majority of WSF operating and maintenance costs from vehicle and passenger fares.

⁸ Washington State Department of Transportation, Washington State Ferries Traffic Statistics. http://www.wsdot.wa.gov/ferries/traffic_stats/ (accessed November 25, 2014).

- Fare differentials should be used to encourage a shift from auto passengers to those who walk or ride on board in order to maximize person-carrying capacity of the WSF fleet.

Figure 1. Major Ferry Routes in Washington State



Note: Figure 1 includes private, county, and WSDOT-operated ferry routes in Washington, with the exceptions of the Ferry Wahkiakum on the Lower Columbia River, the Kitsap Transit passenger ferries between Port Orchard, Bremerton, and Annapolis, and the Lummi Island Ferry operated by Whatcom County. In addition, there are other ferries in the state not shown on this map that are operated by private companies.

Source: WSDOT, 2010.



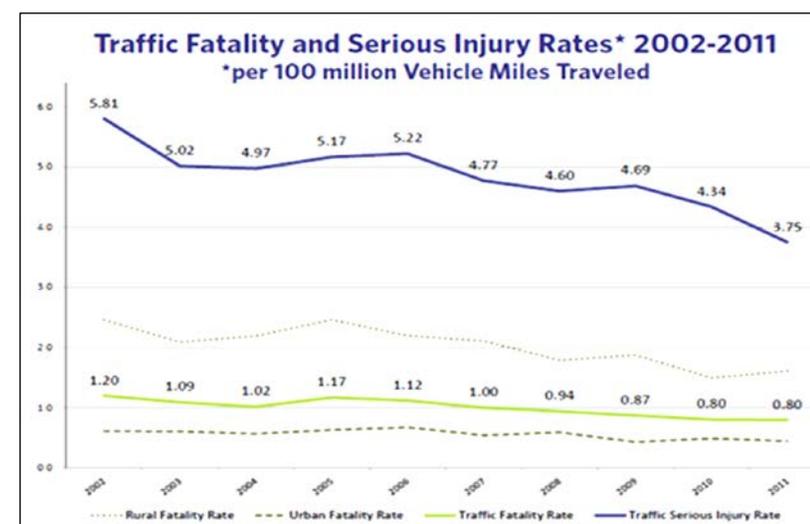
Safety

The Safety goal area seeks “To provide for and improve the safety and security of transportation customers and the transportation system.”

Washington is a national leader in traffic safety and has achieved continued success in improving traffic safety with the implementation of *Target Zero, the Strategic Highway Safety Plan*. The total number of traffic fatalities declined 5% between 2010 and 2013 from 460 to 436. Serious injuries declined 23% over the same period.⁹ Despite the overall success of *Target Zero*, fatalities and serious injuries on two-lane roads in rural areas and on Indian reservations warrant focused effort to improve safety outcomes. While fatality and serious injury rates have declined steadily in both urban and rural areas between 2002 and 2011 (Figure 2), 61% of traffic fatalities occurred on rural roads, even though urban roads are more heavily traveled. The Target Zero Priority Areas chart below points to the need for special attention to rural roads to achieve continued reduction in traffic fatalities.

Other relevant changes include the increase in crude oil shipments by rail that has created new safety concerns for those communities located along the affected rail lines and near oil refineries and terminals. And, Federal law requires state plans to address the security of the transportation system. Security concerns include protecting potentially vulnerable facilities such as ports and public transportation lines, but also features such as international border crossings, and minimizing exposure to natural risks like seismic activity and extreme weather.

Figure 2. Traffic Fatality and Serious Injury Rates per 100 Vehicle Miles Traveled, 2002 to 2011



⁹ Washington Traffic Safety Commission, 2014.

TARGET ZERO PRIORITY AREAS

	Washington State 2009-2011	
	Fatalities Percent of Total	Serious Injuries Percent of Total
Priority Level One		
Impaired Driver Involved	50.1%	21.0%
Run-Off-the-Road	43.7%	29.7%
Speeding Involved	39.5%	29.3%
Young Drivers 16-25 Involved	34.6%	38.0%
Distracted Driver Involved	30.3%	11.9%
Intersection Related	20.6%	34.1%
Priority Level Two		
Unrestrained Vehicle Occupants	24.8%	10.5%
Unlicensed Driver Involved	18.0%	N/A
Opposite Direction	15.7%	9.7%
Motorcyclists	14.7%	17.0%
Pedestrians	13.7%	12.0%
Priority Level Three		
Older Drivers 75+ Involved	9.0%	5.2%
Heavy Truck Involved	8.2%	4.7%
Drowsy Driver Involved	3.2%	3.6%
Bicyclists	1.8%	4.7%
Work Zone	0.6%	1.8%
Wildlife	0.6%	1.1%
School Bus Involved	0.2%	0.2%
Vehicle-Train	0.6%	0.0%

Target Zero Priorities

The adjacent chart indicates Washington's Target Zero priority focus areas, which are grouped into three levels of priority based on the percentage of traffic fatalities and serious injuries involving each factor. To complement the policies and priorities of Target Zero, which by design is focused on auto and truck crashes, *Results Washington* has established a parallel goal of reducing bicyclist and pedestrian fatalities from 84 in 2012 to zero by 2030.

Note: More than one factor is commonly involved in fatalities and serious injuries. Therefore, each fatality and serious injury tallied in "Total" may be represented in multiple factors in the table.

Strategies

A. Foster Implementation of Comprehensive Safety Strategies Across All Jurisdictions and Transportation Modes

Changes in transportation system usage in recent years are creating new safety challenges for Washington. There is a need to continually improve safety and security for all transportation modes and users on the complete system including state, local and tribal infrastructure. Beyond Target Zero, further efforts are needed to improve the safety of the growing number of bicyclists and pedestrians using streets, roads, and highways, including those who bike or walk to and from public transportation. In response, Results Washington¹⁰ has established goals of reducing bicyclist and pedestrian fatalities to zero by 2030.

Recommended Actions:

- Implement the road safety strategies recommended in Target Zero.
- Implement Results Washington strategies to reduce bicyclist and pedestrian fatalities to zero by 2030.
- Invest in sidewalks and other facilities, such as improved crossings, to provide a safer transportation experience for pedestrians.
- Embrace the 4 E's of traffic safety (education, enforcement, engineering, and emergency medical services) when planning and implementing transportation safety projects.
- Encourage all modal system operators – air, rail and water - to adopt a data driven approach to prioritize and target areas that pose the greatest risks to safety and security.
- The state, city and county agencies with authority for setting speed limits should periodically review posted speed limits in areas or corridors that have experienced changes in development density, traffic volumes, or where specific safety concerns have been identified.



¹⁰ Goal 3.2.c of Prosperous Economy in Results Washington. Washington State, 2014. <http://www.results.wa.gov/what-we-do/measure-results/prosperous-economy/goal-map> (accessed November 25, 2014).

B. Continue to Plan and Engineer Projects for Safety

Transportation providers at all levels should continue to prioritize safety in project-specific planning and design, taking advantage of technological and methodological improvements such as construction materials, wayfinding, illumination, traveler information, and other disciplines. Roads should be designed using best practices to prevent collisions, and to reduce the severity when they do occur. Design should consider current and future anticipated system users, incorporate dedicated bicycle and pedestrian facilities where appropriate to improve the safety of active transportation, and use suitable design elements to enhance safe transit passenger access to stops, waiting, and vehicle boarding.

Recommended Actions:

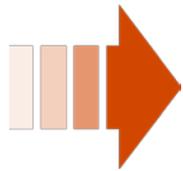
- Accelerate efforts to reduce serious injuries and fatal crashes on the roads with highest incident rates, including rural and tribal roads, by implementing low cost safety improvements, and combining engineering with enforcement and public education to achieve the most beneficial impact.
- Increase use of technology for all travel modes to reduce fatalities and serious injuries, such as “red light” cameras and roadside-based collision-avoidance or deterrence systems.
- Use a risk-based assessment approach to continue to build and retrofit transportation facilities and services to withstand severe seismic events, flooding and other disasters.
- Continue to reduce airspace impacts due to wildlife and man-made structural obstructions to critical airspace near airports.

C. Encourage Inter-Agency Collaboration and Cooperation on Emergency Preparedness and Response

Transportation stakeholders at every level – policy making, planning, implementation and operation – are increasingly collaborating with a range of emergency management organizations to prepare for and optimize the response to a range of potential disruptions, whether from natural or man-made events. This includes preemptive actions to reduce the likelihood of such an event, e.g. through better system security; actions to minimize the immediate impacts of an event, such as interoperable communications that allow public safety agencies to share resources to meet emergency response demands; and actions to accelerate recovery after an event has occurred, such as prioritizing repairs and actively managing capacity and demand on alternate routes and modes.

Recommended Actions:

- Work with the Department of Military's Emergency Management Division (EMD) to identify additional risks to critical transportation infrastructure and mitigation strategies not specified in EMD's Enhanced Hazard Mitigation Plan. Support the EMD and regional transportation agencies in implementing recommendations for transportation recovery after a major earthquake or other catastrophic event.
- Identify networks of redundant or alternative routes and choices to maintain mobility, beginning first with corridors critical to commerce and emergency services.
- Enhance Regional Catastrophic Preparedness and continuity of operations by further defining and communicating regional approaches to coordination and collaboration that will strengthen Washington transportation systems against risks associated with catastrophic events.
- Recognize and support public transit's role in emergency response efforts, such as evacuating large numbers of people or transporting those with special needs.



Mobility

The Mobility goal area seeks “To improve the predictable movement of goods and people throughout Washington State.”

Mobility encompasses many themes in transportation policy, including congestion reduction, connectivity, and access to a variety of transportation modes. Predictability of travel times, the ability to access needed goods and services, the ability to travel to work, school or other activities, and the expense of how and when to travel or move products are all linked to mobility. Questions of mobility are important to people in both rural and urban areas and a key factor in the quality of life and economic vitality of Washington communities.

Since the adoption of WTP 2030, there have been important improvements in system mobility through expanding capacity and through operational improvements, as well as greater collaboration in addressing regional mobility needs. Looking ahead to 2035, Washington will continue to improve transportation system performance through a widening range of strategies that includes but is not limited to physical capacity expansion. Operational improvements such as signal coordination or disabled vehicle patrols can help to reduce both recurring daily congestion as well as episodic backups due to special events or incidents. Congestion pricing is being implemented in Washington, through variable toll charges and managed lanes, to shift discretionary or peak-period auto travel to other time periods or other modes. System operations improvements extend to bus and rail transit, ferries, and freight modes as well, and strive to extract the maximum effective people-or goods-carrying capacity from existing capital infrastructure. The Federal *NextGen* program of air traffic management is a good example of applying technology to systems operations to improve safety and capacity of the existing infrastructure of airports and aircraft.

Strategies

A. Support Mobility Options to Help Communities Meet the Public’s Travel Need

Although the private auto is still the mode used for about 83% of commute trips across Washington, travel by modes other than the auto is up sharply in some areas and continues to grow, while per capita auto VMT is flat or declining slightly. And, while the commute period is still the focus of most congestion management strategies, trips for all purposes other than home to work constitute the majority of total trips made, and contribute significantly to overall economic activity, individual livelihood and quality of life. Where land use policies have created communities that can be cost-effectively served by bus and rail transit, and where land densities and street

designs make biking and walking realistic options for many trips, supportive transportation policies and actions can continue to improve mobility and accessibility for individuals. Single-occupant vehicles constitute only about 35% of commute trips into downtown Seattle, for example. Reliable transportation options that link home, school, work, essential services, entertainment and other destinations enable people to meet more of their needs without a car. When accompanied by supportive land use policies these options can help meet other state goals and objectives in environmental protection, energy conservation, and public health.

Recommended Actions:

- Cities and counties should couple land use policy, siting decisions, demand management, and transportation resources to leverage the value of existing infrastructure investments and future transportation investments, such as: 1) Create incentives to concentrate jobs and housing close to transit hubs; 2) Make corridor improvements holistically, including local multimodal street connectivity improvements that support bicycle, pedestrian, car, and truck travel to and from the corridor; 3) Require siting of selected government facilities, such as schools or social services offices, to be accessible by travel modes that meet the needs of the users.
- To address congestion and improve reliability of travel times, the state should invest in and collaborate regionally with cities, counties and transit agencies to maximize the use and effectiveness of HOV lanes, HOT lanes, and transit lanes by managing system demand and efficiently operating the system. At a minimum, this will necessitate coordination with local and regional transit providers to understand operational needs. In some instances, the state may need to invest directly in transit service within a corridor.
- Continue to promote employer compliance with Washington's Commute Trip Reduction program, which supports alternatives to driving or driving alone including car/vanpools and telecommuting.
- Through FMSIB, or legislative prioritization, establish a cross-jurisdictional approach to maintain and improve connections from producers to distributors for freight, to capture those pathways that may be important at a regional or statewide level but not significant or fundable by an individual city or county.
- Plan for and accommodate the emergence of more energy efficient modes of transportation, such as electric-assisted bicycles and shared ride services, by encouraging collaboration between planning staff across modes and jurisdictions and promoting greater flexibility in the use of transportation funds.

B. Improve Connectivity to Facilitate Travel Across Modes and Communities

Improving connectivity between Washington's communities is essential to achieving greater economic vitality and other top-level goals. Improved physical connections between communities and regions is one important approach to better connectivity; more effective coordination between transportation providers of all modes is another. When bus or train schedules are not coordinated with ferry landings and departures, for example, it adds time to the trip and passengers who might otherwise walk onboard the ferry may choose to use their cars instead. By prioritizing projects that provide safe, efficient pedestrian and bicyclist connections to transit, more users will be able to take public transit for a larger number of trips of all purposes. Addressing gaps and bottlenecks in local and state roadway networks is critical to ensuring the timely and reliable movement of people and goods between communities and regions. Private sector data providers are increasingly working with transportation agencies to improve reliability and connectivity by making information such as bus arrival times, traffic congestion, and incident alerts more accurate, timely, and easily accessible.

Recommended Actions:

- Provide expanded travel options by prioritizing projects that improve pedestrian and bicyclist connections to transit, including park-and-ride lots serving regional express bus routes, ferries, and other medium-distance transportation services.
- Identify gaps and improve intermodal connectivity for freight movement (e.g., ship to rail or truck, and air to truck).
- Encourage partnerships among the state, counties, cities, and transit operators to develop and implement strategies to improve connections between cities, counties and regions for both freight and passenger modes. Approaches may range from improving multimodal connections, such as completing gaps between adjacent service areas and synchronizing schedules among different service providers, to adding capacity strategically for all modes, including public transportation, by completing the system improvements underway today.
- The Legislature, Congress, and railroads should seek expanded sources of revenue dedicated to funding additional separated grade crossings between trains and vehicles in strategic locations where doing so will relieve roadway congestion and improve connectivity within communities.

C. Accommodate Changing Demographics, Preferences, and Technologies

A number of socioeconomic and demographic trends are changing the nature of both transportation demand and supply. An aging population will become more reliant on modes other than the single-occupant auto, creating demand for alternative modes and special

services. Younger residents are currently not being licensed, nor driving, at the same rate as previous generations, and are making a larger percentage of their total trips via public transit, active transportation, and demand responsive services including taxis and shared ride vehicles.

Changes in the state's employment base will effect transportation demand in the future as well. The traditional peak-period commute from home to work is less dominant, incrementally giving way to a larger number of jobs that feature flexible hours and offer the opportunity to work from home or other remote location. The growth in service and information technology jobs, relative to traditional manufacturing professional services, with something other than the traditional Monday to Friday "9 to 5" commute pattern, means that transportation infrastructure will be in demand more hours of the week.

Technological advances such as real-time hand-held traveler information and "connected" vehicles with onboard information and driver-assistance features will further change the relationship between the traveler and the mode of transportation. Transportation planners and policy makers should prepare for impacts and benefits of this constantly evolving technology by reviewing and revising system plans every few years, supporting applied research that leads to development of cost-effective methods to address future transportation needs, and adopting innovative technologies more rapidly.

While many of these changes will unfold independent of any concerted government action, and much of the investment in technology for transportation improvement purposes will be made by private business and consumers, there is a growing role for the state, cities and counties to try to anticipate these changes and develop accommodative or supportive policies that will result in improved transportation performance and minimized negative social and environmental impacts.

Recommended Actions:

- Anticipate, monitor, and plan for changes in technology that affect how people and goods are transported, such as telework, autonomous vehicles, car-sharing, bike-sharing and mobile device applications that impact travel behavior and choices.
- Integrate freight delivery into plans for livable communities, ensuring that freight and small package delivery is an integral component of complete streets, providing efficient access to businesses and residences even in dense, walkable communities.
- Ensure that the project prioritization process for the transportation improvement program includes objective project evaluation metrics that incorporate the costs and benefits of non-motorized travel. Plan and design bicycle and pedestrian facilities to accommodate future growth in these modes, address safety needs, and avoid future capacity constraints.

- The Legislature should fund WSDOT and local governments to implement design standards to accommodate the needs of an aging population. For highways this includes larger font on signage, roadway markings, and lighting and design solutions. For transit and rail this includes easy-to-read schedules and terminal information and facilities designed with the elderly in mind.
- Use Coordinated Human Services Transportation Plans and enhanced regional coordination to efficiently and economically increase the productivity of travel options for the growing elderly population.
- Seek funding and support for MPOs to create regional travel demand models and methodologies to more accurately reflect the factors that are causing current shifts to alternative modes and include the implications of such shifts for scenario planning or other regional planning exercises.

D. Support Transportation for Special Needs Populations

Regardless of their abilities, people need the ability to travel, whether for work, school, medical care and other social services, as well as to shop, visit family and friends, and otherwise pursue life's needs and interests. Many low income or disabled people, including retired military, rely on public transit for these needs. The need for improved mobility for these special population groups is particularly apparent in the state's rural and exurban areas where distances are greater, and where fixed-route bus service is limited or unavailable. Serving these needs through paratransit puts a strain on every transit agency, and is especially hard on smaller transit agencies' operating budgets.

Recommended Actions:

- Seek enhanced collaboration and coordination between state agencies, regional transportation organizations, and public transportation providers to efficiently and economically increase the productivity of travel options for people with special needs. This may include offering educational opportunities to move people from paratransit services to public bus routes, where possible.
- The Legislature and transit agencies should consider the needs of rural areas that currently lack transit, ride sharing, or vanpool options, by enhancing coordination opportunities with human service transportation, and possibly with school transportation providers.
- Transit agencies should increase the use of small, on-demand transit vehicles, which may be more cost effective than large buses in many areas of the state.
- Identify funding and other sources of state support for paratransit.



Environment

The Environment goal area seeks “To enhance Washington’s quality of life through transportation investments that promote energy conservation, enhance healthy communities, and protect the environment.”

Maintaining and expanding transportation options may conflict at times with environmental policies and principles of sustainability. Recognizing that transportation choices and investments directly affect air and water quality, and that transportation is responsible for nearly 50% of the state greenhouse gas emissions, integrating transportation plans and projects with land use planning and environmental policies can avoid costly conflicts and facilitate mitigation where necessary. In every area of the state, transportation also has been recognized as a key to healthy communities. Community design impacts transportation choices, influencing whether and how often people can use active transportation, such as walking or bicycling to get around. Since the adoption of WTP 2030, progress has been made towards reducing stormwater runoff, promoting non-motorized transportation and expanding the use of electric vehicles.

Greenhouse Gas Emissions and Clean Transportation

Washington State’s Climate Change Framework, passed by the legislature in 2008, set limits on greenhouse gas (GHG) emissions. The regulation calls for the state to reduce GHG emissions to 1990 levels by 2020, to 25% below 1990 levels by 2035, and to 50% of 1990 levels by 2050. Subsequent executive orders from governors Gregoire and Inslee have called for further collaboration and action to promote clean technology and reduce emissions. Results Washington seeks to reduce average GHG emissions per vehicle mile traveled by 25% of 2010 levels, the increase of average fuel economy of passenger and light duty trucks by almost 20%, and an increase in plug-in electric vehicles from approximately 8,000 in 2013 to 50,000 in 2020. Washington State is unusual in that it generates such a large percentage of its electricity from clean hydroelectric power sources, which will make achieving transportation GHG reduction goals that much more feasible.

Strategies

A. Transportation Investments Should Support Healthy Communities

There is a rapidly growing awareness of both the positive and negative links between current transportation behavior and public health. Collaboration between transportation and public health officials is pointing towards the significant aggregate and individual benefits that can result from transportation policies that promote active transportation, reduce mobile source pollutant emissions, and improve safety for travelers. Multiple studies reveal a positive return on community investment in active transportation infrastructure and programs, in terms of reduced health care costs and economic benefits.¹¹ Forty percent of all trips taken in Washington State are under two miles in length, and many more of these could be made by walking or biking.

Recommended Actions:

- Promote “Complete Streets” and Safe Routes to Schools policies and implementation for appropriate arterials and collectors within urban growth areas.
- Promote bicycling and walking as viable transportation options and as a means to improve public health and maintain environmental quality by identifying and addressing multimodal system gaps, such as sidewalk or trail connections.

B. Manage the Transportation System to Foster Environmental Sustainability

Long-term environmental impacts associated with transportation are particularly acute related to greenhouse gas (GHG) production, and water pollution (hydrocarbons and heavy metal deposits in surface water and receiving waters), and consumption of non-renewable energy resources.

Recommended Actions:

- To minimize transportation impacts on anadromous fish and other wildlife and their habitat, the Legislature should develop a funding source and policies to improve or replace fish passage barriers such as culverts, reduce stormwater runoff, and provide wildlife crossings where highways present barriers to natural migration routes.

¹¹ See e.g., <http://industry.traveloregon.com/research/cycling-research/>.

- Support work to identify areas at high risk of environmental damage due to spills or releases from crude oil shipments, as indicated in Executive Directive 14-06.
- The Legislature should develop a funding source to help the state, counties, and cities manage stormwater runoff polluted by cars and trucks, including collection and treatment of runoff from existing transportation facilities.¹²
- Couple land use policy, siting decisions, demand management, and transportation needs to leverage the value of existing and future transportation infrastructure investments.

C. Accelerate Clean Transportation Options

Reducing pollution impacts of the transportation sector will require advances on several fronts, including improved transportation system management, taking full advantage of improved vehicle and fuel technology, and creating greater opportunities for use of low and zero-emission modes. Improving coordination between land use and transportation planning will also create more opportunities for clean transportation options to take hold across a larger cross-section of the state.

Recommended Actions:

- Make significant progress toward meeting statewide greenhouse gas reduction goals through vehicle and fuel technology, system management and operations, land use, transportation options, and pricing strategies. Identify both near- and long-term actions appropriate for implementation at both state and regional levels.
- Continue to invest, in and create incentives for, smart charging infrastructure for plug-in vehicles and create incentives for the purchase of plug-in vehicles.
- Partner with Federal agencies, private sector and university researchers, and utility companies to develop and implement energy efficient transportation systems that use advanced communication software and manufacturing techniques developed in our state.

¹² King County Stormwater Services: "Stormwater runoff is rain that falls on streets, parking areas, sports fields, gravel lots, rooftops or other developed land and flows directly into nearby lakes, rivers and Puget Sound. The drizzling or pounding rain picks up and mixes with what's on the ground."



Stewardship

The Stewardship goal area seeks “To continuously improve the quality, effectiveness, and efficiency of the transportation system.”

Stewardship means making wise management and investment decisions to ensure the transportation system operates effectively and efficiently, now and in the future. This goal envisions performance measurement as a means to ensure accountability and transparency. Stewardship also includes integration of land use and transportation policies, and preservation of essential public facilities, to ensure existing and future infrastructure investments are optimized. Increasingly, stewardship embraces technology to increase the effective capacity of the existing transportation network and improve the financial sustainability of the system.

Since the adoption of WTP 2030, there has been meaningful expansion in the use of technology to improve transportation systems, through advances in passenger and freight mobility, safety, and other important areas. Stewardship also is measured by how public agencies and the private sector work together to deliver better outcomes.

Strategies

A. Continue to Implement Performance Measures to Ensure Accountability

Washington State is a national leader in using performance measurement to evaluate future projects and report on the performance of the state transportation system. Because of this long history of performance data collection and reporting, there is widespread agreement on the value of using a common set of performance measures to evaluate the results of transportation investments, both before and after construction. There has been less agreement on the use of performance standards or targets to make investment decisions, however.

In 2012, Congress enacted MAP-21, the “Moving Ahead for Progress in the 21st Century” transportation funding reauthorization bill. The act creates a performance-based framework for federal funding of transportation projects and programs. When fully implemented, states and regions will be required to adopt performance standards and report on progress in key areas including safety, infrastructure condition, traffic congestion, freight movement, environmental protection, and project delivery. Beyond what is required to comply with specific federal provisions, however, Washington should continue to pursue accountability for expenditures not just of federal

transportation dollars, but of all state and local funds as well. While the majority of Washingtonians support increasing the available funding for transportation to take care of essential maintenance and system performance improvement needs, there is also a call for increased transparency in expenditure of funds and accountability for promised results. Support for future funding requests depends in part on being able to demonstrate to voters that existing funds are being wisely applied and are returning measurable benefits to individuals and the state as a whole.

Recommended Actions:

- WSDOT and the MPOs should continue to work with the RTPOs, public transportation providers, and other affected transportation partners to implement Federally-required performance measures and targets that emerge from MAP-21.
- WSDOT should coordinate and work with the Transportation Improvement Board, County Road Administration Board, Freight Mobility Strategic Investment Board, and other regional and local transportation partners to establish an implementable set of performance measures and objectives for all state-funded transportation investments.
- The Transportation Commission should periodically evaluate and report on the status of WTP 2035 implementation, noting the degree to which state and regional plans, policies, and programming documents support WTP Policy Goals and Strategies.

B. Leverage Available Technologies to Maximize Efficiency in the Transportation System

Using appropriate technologies to improve the efficiency of existing transportation systems is critical, particularly when demands on financial resources are many. Arterial traffic management systems can relieve traffic congestion by improving the flow of vehicles through traffic signals and other pinch-points. Integrated Corridor Management Systems (ICMS) take this approach a step further, tying together many elements of a multimodal transportation corridor, such as advanced communications, real time traffic alerts, ramp metering and variable speed limits to improve total passenger throughput and reduce the frequency and impact of traffic incidents. Active traffic management of this sort also can help relieve congestion by improving the quality and timeliness of traveler information, which helps manage demand by allowing travelers to make up-to-the-minute decisions about route and mode choice.

Similarly, the Federal Aviation Administration's *NextGen* program uses communication technology and satellite based navigation systems to improve the efficiency and safety of the aviation system. Washington State Ferries' migration to advance reservations and variable pricing will help manage demand to available capacity, spreading peak vehicle traffic and reducing wait times.

Recommended Actions:

- Continue to develop and implement ITS improvements, such as signal coordination, integrated traveler information, and customized scheduling and trip planner information.
- Maintain and expand HOV and Express Toll Lanes in major highway corridors to improve travel options, optimize speed and increase travel time reliability.
- Encourage transportation agencies to make data available to software application developers to develop and improve real time travel and scheduling information. Develop and maintain traveler information for interregional public transportation connections.
- Complete implementation of Washington State Ferries' reservation system. Continue to implement variable pricing to help manage demand, spread peak vehicle traffic, improve asset utilization, and reduce wait times.

C. Develop Sustainable Funding Strategies

While Washington has emerged from the recent economic recession, not only WSDOT but city and county transportation providers all continue to face financial uncertainty. State and Federal motor fuel taxes provide the majority of transportation-related revenues. With motor fuel tax revenues unlinked to inflation and dependent on consumption rates, revenues continue to be subject to the variability caused by changing fuel prices, greater fuel efficiency of diesel and gasoline vehicles, and a slow but inevitable shift towards more hybrid and all-electric passenger vehicles. This impacts state fuel tax revenues available to the state, counties and cities for roadway projects, and also impacts transit operators and others who share in Federal fuel tax revenues which, unlike the state tax, are not restricted to highway system use. The decline in both state and federal funds available for local transit has left transit operators more dependent upon local revenue options and passenger fares to meet operating and capital expenses.

To ensure a sustainable transportation program far into the future, Washington should secure alternate funding sources not based so heavily on gallons of fuel consumed. As the State's transportation maintenance and performance improvement needs continue to grow and outstrip revenue projections, the state should prioritize use of existing primary funding sources to preservation of existing infrastructure, and adopt user-based funding mechanisms such as tolls and mileage fees for future system performance improvements.

Recommended Actions:

- The Legislature should rely on tolling where appropriate as a way to fund project construction, and should maintain tolls after project completion to fund ongoing preservation, maintenance and traffic management for those facilities.

- Develop a sustainable statewide strategy for funding transportation that articulates the economic and social benefits of the transportation system, more clearly defines the role of the State in funding non-highway modes, and provides funding options that are flexible and equitable, balancing user-pay with ability-to-pay approaches.
- Explore new, sustainable funding opportunities that keep pace with growth and inflation and are not affected by decreases in motor fuel consumption. Options may include further expansion of toll roads and express toll lanes, road usage charges, congestion pricing, employer-funded transportation choices, strategic private sector partnerships, and value-capture strategies.

D. Review Regulations That Require the Same Standard and Performance Level for All Transportation Improvements

Given the constrained transportation funding environment that persists in Washington, the need for uniform standards in some areas including system maintenance and performance has been questioned by city and county road departments. WSDOT has adopted more flexible design standards that allow local jurisdictions to tailor transportation solutions to the unique needs of the specific facilities and communities, without compromising functional integrity of the system. A mechanism that allows local road departments to exchange their federal funds for state funds would provide additional flexibility in meeting federal design requirements on local projects.

Recommended Actions:

- Review and offer recommendations for acceptable levels of preservation and maintenance for city streets and county roads; use available and recognized performance measures to assess network performance and new investment needs.
- Encourage and promote both WSDOT and local transportation departments to take greater advantage of flexible design criteria based on community and roadway characteristics and explore innovative measures for accommodation of all users within the right-of-way.

E. Strengthen the Integration between Land Use and Transportation Decision-Making

Better coordination of land use planning and transportation investment could significantly increase the long-term efficiency and effectiveness of transportation. Washington's Growth Management Act (GMA) requires that necessary transportation improvements be made concurrent with new growth. Responsibility for land use planning, however, is spread widely among hundreds of local jurisdictions with different priorities, making it difficult to bring together all the divergent plans in a region to deliver a coordinated comprehensive plan for land use and transportation. Regional Transportation Planning Organizations (RTPOs) and Metropolitan Planning Organizations (MPOs) have a major planning and coordination function, and these agencies adopt regional plans to which

local plans are expected to conform. Local transportation agencies need to work together with local government planning departments in the design, planning and permitting of development to ensure the linkage between land use and transportation decisions and investments. Supporting infill and redevelopment in transit-supported corridors will help to meet the state's vehicle miles traveled benchmarks and GHG reduction requirements. City and county governments can work with transit agencies to devise policies and ordinances that balance transit-oriented development and non-motorized infrastructure with roadway and parking capacity.

Recommended Actions:

- WSDOT transportation strategies and investments should align with state environmental goals, air quality and water quality laws, and land use policies including the Growth Management Act, by supporting local efforts to site growth within existing Urban Growth Areas (UGAs) identified in compliant county and city comprehensive plans; encourage infill development in transit-supported corridors; and provide more transportation options.
- Include representatives from the public health field in transportation planning to ensure direct and indirect health impacts are considered in transportation investment prioritization. Provide greater connectivity to health services, more consideration of Human Service Transportation Plans, and the options for increased physical activity in transportation planning.
- The Legislature should evaluate and reconsider the concurrency requirement to clarify the roles and responsibilities of the state and local governments. This should include extending concurrency to highways of statewide significance and using multimodal concurrency approaches, where possible, to promote density in urban areas and reduce infrastructure development costs to the public.
- Improve the performance and safety of non-access controlled highways by seeking opportunities to close and consolidate multiple access points in urbanized areas. In urbanizing areas, require access to properties through frontage roads rather than individual access points.

F. Support Inclusive, Equitable Planning

Throughout the stakeholder and public outreach conducted in the development of WTP 2035, participants repeated the call for a more inclusive transportation planning process that reaches a broader cross-section of the state's many different user groups. Understanding the different preferences, needs and abilities of these groups is an important step to developing a plan that accommodates and provides support for unique needs of all users, while still providing an overall framework of state goals and top-level priorities.

Recommended Actions:

- Engage lower income, immigrant, youth, and transit-dependent populations in the transportation planning process to better understand their unique needs and constraints.
- Support state and regional economic development goals in identified opportunity zones, industry sectors, and innovative partnership zones.
- Ensure coordination of transit and human services providers to improve access to essential health and social services for vulnerable populations in rural areas.

G. Address Tribal Transportation Needs

Washington's tribal governments have unique and complex transportation issues. Safety of motorists and pedestrians on reservation roads is a priority focus of Target Zero, the state's highway safety plan. Coal and oil shipments by rail through the state create risks to fisheries and other natural resources critical to tribal culture and well-being, in addition to the mobility and safety challenges all communities in the state face from these train shipments. Reservation lands are often in rural areas. Many tribal members need public transportation services for medical and social services, education, and employment, both on and off the reservation. Tribal enterprises, including destination resorts, not only attract visitors but also employ significant numbers of tribal and non-tribal workers, generating congestion on rural roads.

Collaboration between tribal, state and local governments has solved some transportation needs; however, many remain. State and Federal transportation funding pose severe challenges for the necessary maintenance and repair of roadways and bridges in Indian Country. Under MAP-21, federal transportation funding for tribal transportation programs has declined and allocation of formula funding has changed to the detriment of many Washington tribes.

Recommended Actions

- Accelerate efforts to reduce serious injuries and fatal crashes on the roads with high incident rates, including rural and tribal roads.
- Support work to better respond to environmental damage due to spills or releases from crude oil shipments, and identify areas at high risk as indicated in Executive Directive 14-06.

- Build on the success of those regional transportation planning agencies that engage and form partnerships with tribal governments, and encourage all MPOs and RTPOs to partner with tribal governments to increase access, mobility, and safety on and to tribal lands.
- Similarly, support efforts to improve cooperation and coordination between tribal and non-tribal providers of public transit services.
- Funding processes for transportation improvements on or connected to tribal lands are too numerous and complex. Simplification of Federal and state funding for tribal transportation needs must be a priority.



2.3 Connecting Transportation and Land Use

Land use and transportation have a critical two-way relationship. Infrastructure is an important determinant of land use choices, and development decisions can be influenced by the type, availability and siting of transportation systems. Conversely, transportation demand is shaped by characteristics of land use, such as the intensity and configuration of development, as well as location relative to housing, jobs, and amenities such as shopping, health services, and schools.

WTP 2035 acknowledges this relationship and recommends further strengthening linkages between desired outcomes in both land use development and the transportation system. A continued focus on integrating land use and transportation policies, planning and decisions over time will help bring about more proximate location of jobs, housing, and essential services, reducing the need for some automobile trips, and making public transportation and non-motorized modes more attractive choices for many shorter trips. This would not only improve accessibility for many residents, but also squeeze the maximum benefit from the existing system of streets and other utility networks.

Benefits of Improved Coordination

There are many potential benefits of improved transportation and land use coordination that accrue not only to those using the transportation system but to Washington's residents at large.

- **Improved Access to Necessary Services and Goods.** A key component of building transit markets and promoting alternatives to driving alone is a consistent emphasis on pedestrian and non-motorized mobility and access. When accompanied by land use policies that support transit-oriented development, compact, mixed-use communities, transit use, and increased walking and bicycling, these options can improve access to jobs, essential services such as health care and education, and social and recreational amenities.
- **Healthier Communities.** Transportation choices can play an important role in supporting healthier communities and populations. The way a community is designed and its proximity to services and amenities has an impact on which transportation choices are viable. Public health objectives are supported by land use policies that promote the viability of public transportation, walking, and bicycling, through increased physical activity and reduced mobile emissions.

- **Healthier Natural Environment.** Integrated transportation and land use planning can help Washington meet environmental goals by reducing impacts of the transportation system such as storm water runoff, greenhouse gas emissions, and excessive energy consumption. More concentration of future growth into existing urbanized areas reduces the acreage converted from open space to developed uses.
- **Economic Development.** Integrated planning should generate economic development opportunities for Washington land owners and businesses. In the proper context, more compact development with proximate, complementary land uses will contribute to economic growth in a region. In addition to local governments and transit providers, Washington State Department of Transportation (WSDOT) also plays a role in enabling more efficient land use and development, particularly in many communities where state highways serve as the main street or intersect major arterials.
- **Transit-oriented Development.** One proven, effective mechanism for an urban area to reap the benefits of integrated transportation and land use policy and planning is Transit-oriented development. Transit-oriented development provides a mix of housing, employment, retail, and other amenities integrated into a walkable community served by public transportation. Done successfully, it can reduce household reliance on driving, which may lower both local and regional congestion, increase access to jobs and other economic opportunities, and reduce transportation and other infrastructure costs.



Integrating Transportation and Land Use Decision-making: Washington's Growth Management Act

For the last 25 years, Washington has aspired to integrate its land use decisions with transportation planning. A key factor driving passage of the Growth Management Act (GMA) in 1990 was recognition, by the legislature, that sprawling development increased infrastructure costs exponentially: capital costs for roads, water, and sewer and operating costs for transit, police, and fire all were growing at an unsustainable rate.



Through the GMA's concurrency provision, county and city plans are required to link land use, transportation planning and capital investments. The legislature also established regional transportation planning organizations to develop regional transportation strategies and review county and city plans to ensure consistency and coordination among jurisdictions. In subsequent years, statewide transportation planning and GMA were linked to complete a top-down and bottom-up structure for integrated decision-making.

Although evidence indicates that the GMA has led some of Washington's communities to use land and other resources in a more sustainable way, the statutory exemption from concurrency for highways of statewide significance substantially weakens the connection between local land use planning and state investment in transportation.

Under GMA,¹³ local jurisdictions must adopt and enforce ordinances that prohibit development approval if the development would cause the level of service on a local (i.e., non-state owned) transportation facility to decline below the standards adopted in the comprehensive plan, unless transportation improvements or strategies to accommodate the impacts of development are made alongside the development.¹⁴ With over half of the roadway miles on the state system designated as highways of statewide significance, local developments are approved in spite of their negative impact on state highways.

¹³ Applies to those jurisdictions that are required to plan, or choose to plan, under Who must plan – Summary of requirements – Resolution for partial planning – Development regulations must implement comprehensive plans, RCW 36.70A.040. (May 16, 1995).

¹⁴ In this case, “concurrent with the development” requires that improvements or strategies are in place at the time of development, or that a financial commitment is in place to complete the improvements or strategies within six years.

Past studies of the effectiveness of concurrency have identified several limitations:¹⁵

- Cities and counties have consistently set level of service standards that allow increased congestion;
- Some local governments and developers exploit the failure to extend concurrency to the state highway system and effectively shift the congestion problems there;
- Historically, WSDOT has not aggressively used the tools at its disposal (e.g., access management, the State Environmental Policy Act, and GMA consistency), to limit development that exceeds system capacity; and
- Few jurisdictions have taken a multimodal approach to concurrency, which is available to them under the GMA, and thus fail to access the benefits that transit, pedestrian and bicycle mobility can bring to achieving concurrency.

The Transportation Commission has previously made several recommendations¹⁶ that would improve the efficacy of the GMA and the concurrency provision specifically:

- The concurrency requirement should be extended to state highways, beginning with those state highways that serve as major arterials and eventually including limited access freeways.
- In urban centers and/or transit-oriented developments, concurrency should be multimodal, including walking, biking, and transit access. (Counties and cities can apply multimodal values to concurrency but are not required to do so; few have.)
- Concurrency standards for efficient freight movement should be established where the situation is appropriate.



¹⁵ E.g., Hallenbeck, Mark E., et al., *Options for Making Concurrency More Multimodal. Final Report. Executive Summary*. Washington State Transportation Center, University of Washington, Seattle. December 2006.

¹⁶ In its *2008 Annual Report* and *2009 Annual Report* (Washington State Transportation Commission, January 2009 and January 2010), as well as the *Washington Transportation Plan 2030* (Washington State Transportation Commission, 2010).

- Public facilities, such as schools and social services offices, should be sited to be accessible, e.g., on existing public transportation lines.

In addition to reemphasizing these previous recommendations, other revisions that would strengthen the transportation and land use connection include:

- Clarify the respective roles, responsibilities, and relationships of the state and local governments where new development generates demand for transportation infrastructure.
- Find additional methods to facilitate transit-oriented development in urban settings.

Perhaps the biggest impediment to successful implementation of the concurrency requirement, however, is that neither the state nor local governments have invested adequate revenue in the transportation system, an issue of statewide significance that is addressed throughout WTP 2035.

3.0 Travel Trends and System Needs

3.1 Travel Trends and System Needs

This section summarizes key socioeconomic and demographic changes since 2010, and the resulting changes in transportation system utilization. Information about system performance and condition is included as well. It addresses changes such as lower vehicle ownership and shifting modal preferences. A rough estimate of needs has been assembled from numerous existing sources to identify order-of-magnitude funding requirements for system maintenance, and preservation. A technical report on current transportation system conditions was developed to support analysis of future needs and guide development of recommended actions.¹⁷

Uncertainty in Transportation Planning

Transportation planning utilizes historical trends, research, and models to predict future transportation demand and conditions. No matter how consistent historical trends, there is inherent uncertainty in future projections. There are advanced tools that contemporary planners can utilize for narrowing the range of uncertainty. Calibrated models are capable of weighing numerous variables and in many cases the models provide reasonably accurate and useful projections of future traffic volumes and transit

Autonomous Vehicles

Autonomous vehicle (AV) technology may fundamentally change our transportation systems in the future, reducing collisions, improving system efficiency, and reducing energy consumption and pollution. Major auto manufacturers have incorporated AV functions over the past decade, including parking assist, crash warning systems, lane keeping systems, and automatic braking technology. It is estimated that nearly a third of all collisions could be prevented with common assisted-driver functions such as forward collision and lane departure warning systems, blind spot assist, and adaptive headlights.

In addition to improving highway safety, AV technology can increase system efficiency and reduce congestion by increasing the number of vehicles capable of safely using the roadway. Roughly one quarter of all roadway delay is due to crashes, and AVs can greatly reduce this traffic burden as well. As cars become more safe and smaller, further gains in system efficiency can be achieved. All major manufacturers are investigating the technology and commercial production of fully autonomous vehicles is currently expected between 2020 and 2035.

¹⁷ WTP 2035 Technical Memorandum #2 – Existing Conditions and Trends, May 2014.

ridership. However, practitioners should be familiar with the many assumptions underlying the model estimates, and with the range of important input variables such as future population or employment levels. Projecting a range of plausible outcomes, rather than trying to predict a specific future outcome, has recently become more common in transportation planning. Scenario planning, a process encouraged by the Federal Highway Administration, focuses on a range of interactions between controllable factors, such as transportation investments, and external factors such as economic, demographic, and land use changes. Planners utilize sensitivity analyses to determine which underlying factors have the biggest impact on the future projections, estimate the likely range of variability within those most important factors, and thus develop a range of future likely values or outcomes for the projections. This approach gives policy-makers a greater degree of confidence that the actual future outcomes will in fact fall somewhere within the predicted range of outcomes, and increases the likelihood that plans and investment strategies will adequately prepare us for the future.

3.2 Trends in System Use

In terms of condition and performance, Washington's transportation system is not dramatically different in 2014 than it was in 2010, but there are some notable changes in the travel options available to Washingtonians, and the way they are choosing to use the transportation system. These trends will have critical implications for the scale and distribution of funding needs across Washington in the years to come.

Generally speaking, demand on the overall transportation system is increasing as the state recovers from a long recession; some very significant capital projects are underway; and funding for essential operations, maintenance and preservation of the system continues to lag behind most estimates of need. The following are a few recent trends that may impact how we plan for and fund transportation in Washington.

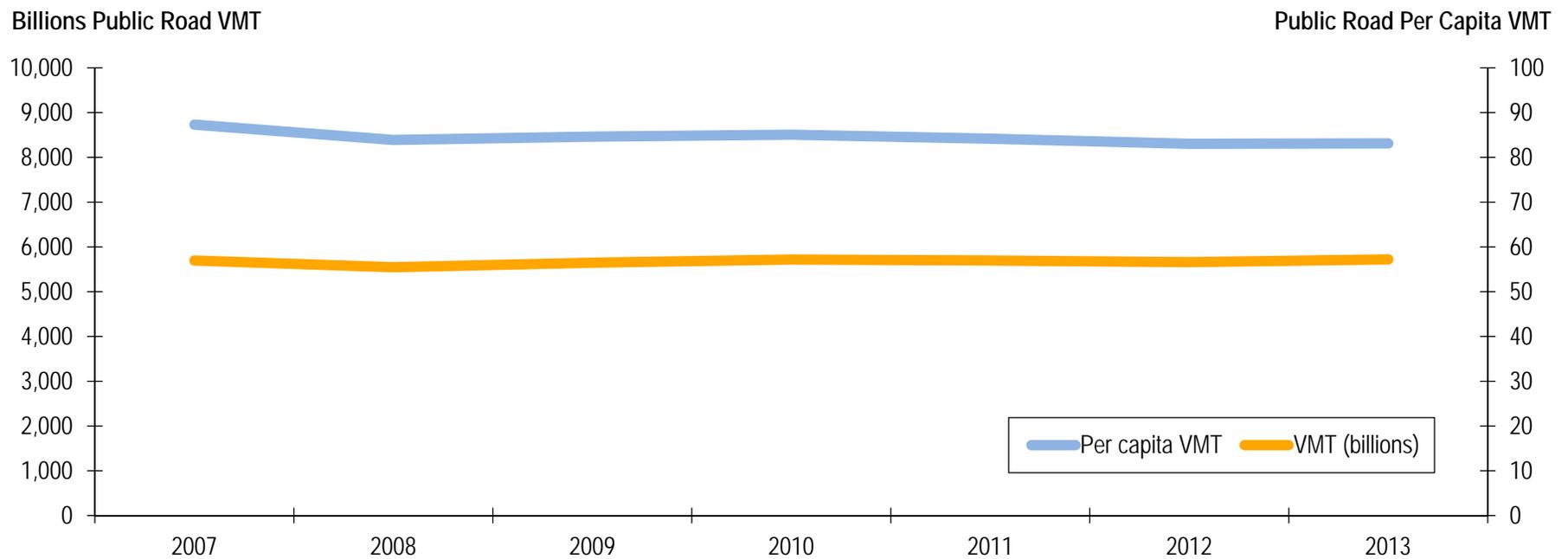
Slowing Growth in Vehicle Travel Demand

When the statewide transportation plan was last updated, Washington was climbing out of an extended economic recession. In transportation, the recession translated into a period of reduced personal and commercial travel, reduced roadway congestion in most areas, and reduced revenue from motor fuel



taxes because of declining fuel consumption. By 2010, travel by motor vehicles on all public roads, as measured in vehicle miles of travel (VMT), had returned to prerecession levels, though this figure has declined slightly since then (see Figure 3).¹⁸ Thanks to the economic recovery, total statewide motor fuel consumption is on the rise again, and is now projected to increase slightly from now until 2027. There has been a slight decrease in VMT per capita and projected decrease in motor vehicle fuel consumption per capita, suggesting that the amount of travel, and motor fuel consumption, by each individual will continue to decline, but that population growth will offset these declines.

**Figure 3. Annual Statewide VMT and VMT Per Capita
Calendar Years 2007 to 2012**

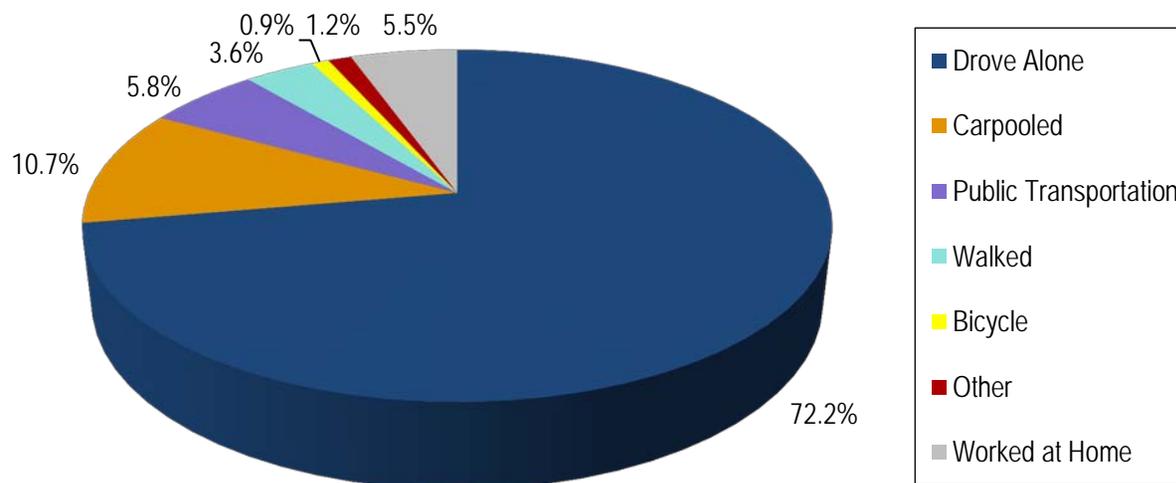


¹⁸ Washington State Department of Transportation, *The 2013 Corridor Capacity Report*, November 2013.

Growing Interest in Alternatives to Single-Occupant Vehicle Travel

According to the 2012 American Community Survey, although travel by non-auto modes is up sharply in some areas, auto trips still represent about 83% of commute trips across Washington, down only about 1 percentage point from 2008 (see Figure 4). Public transportation and nonmotorized travel make up another 12% of commute trips statewide, although this percentage is of course higher in urban areas where most bus and rail transit service is concentrated and where land use and street designs make biking and walking safe and accessible choices. Currently, only about 35% of commute trips to downtown Seattle are made by single-occupant vehicle. The share of commute and other trips to and within the downtown core made by foot, bicycle, transit and taxi is expected to continue to increase over time, given the projected future growth in higher-density housing and employment there.

Figure 4. Washington Commute Choice, 2012



Source: 2012 U.S. Census American Community Survey.

Public Transportation

Due to growing demand, expanded public transportation service is a growing priority in many of Washington's highest population regions. Rail ridership grew significantly from 2010 to 2013; light-rail transit trips grew rapidly in the period 2009-2012 due to new service implementation and extensions. Commuter rail was up about 12% in the same period. Sound Transit Express Regional Bus, Sounder Commuter Rail, and Central Link light-rail boardings all increased each year during the four-year period ending in 2013. Traditional urban bus transit, which carries about 87% of all public transportation trips, saw little or no growth in ridership in many parts of the State between 2009 and 2012, due in part to recessionary service reductions. Ridership for King County Metro Buses grew modestly at 5% from 2010 to 2012 and remained the highest in Washington. Boardings on Ben Franklin Transit (Benton and Franklin Counties), Community Transit (Snohomish County), and Pierce Transit fell from 2010 to 2013.



Active Transportation

Active transportation is a term that generally refers to nonmotorized transportation, such as walking and bicycling. While nonmotorized commuting is limited statewide, it is a growing priority in urbanized metropolitan areas. According to the 2012 American Community Survey, 12.5% of Seattle commuters walked or bicycled to work, up from 9.3% in 2000.¹⁹ In Tacoma, this number was 4.5%, up from 3.8%. Vancouver also experienced an increase in bike and pedestrian mode share, up to 2.9% in 2012 from 2.3% in 2000.

Changing Preferences

Shifting preferences appear to be at least somewhat behind the rise in demand for active transportation and public transportation options. Figure 5 depicts the composition of Washington's licensed drivers by age group in four years 1997, 2002, 2007, and 2012.²⁰

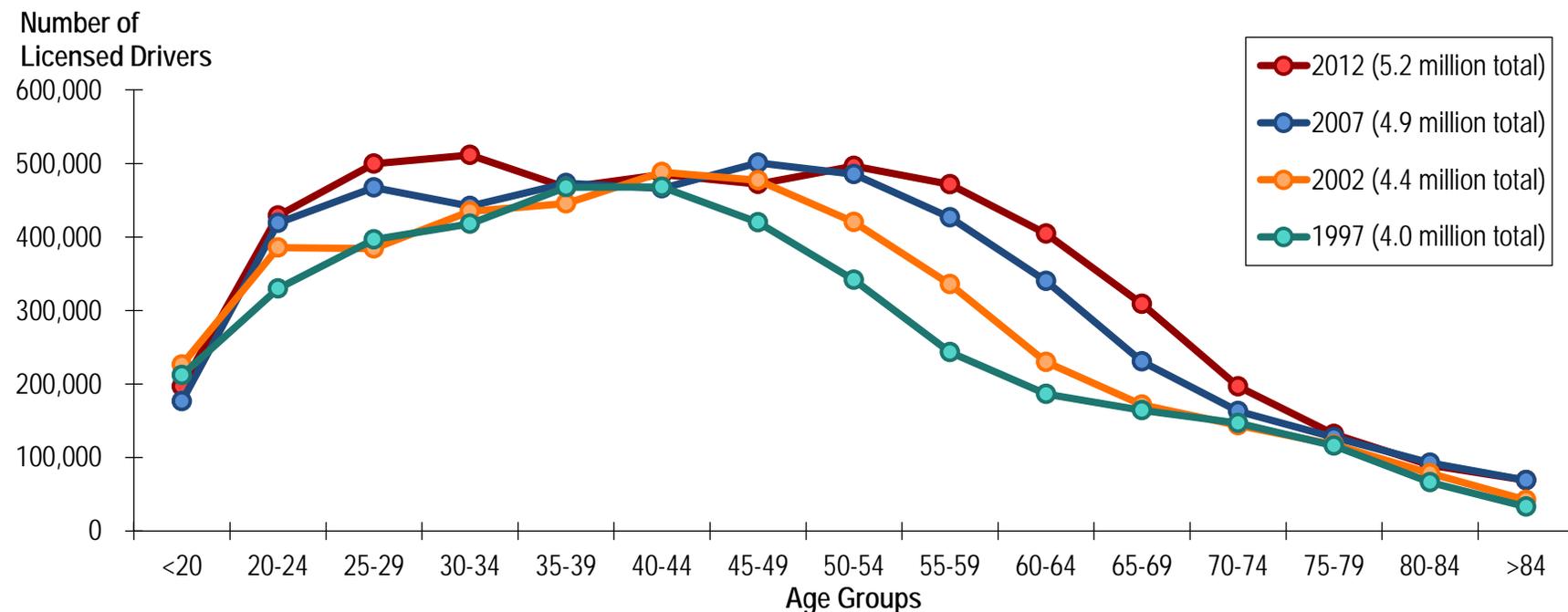
¹⁹ United States Census, 2000.

²⁰ FHWA Office of Highway Policy Information, *Highway Statistics Series*, 1997, 2002, 2007, and 2012.

While the total number of total licensed drivers rose in each of these years, the population on the road has aged significantly over the period due to the aging baby boomer generation. The number of drivers under the age of 20 rose slightly from 2007 to 2012 but remains lower than 1997 and 2002 figures.

These changing trends in personal travel choices are evident, but their net impact on system demands or durability over time remains unclear. Regardless, personal travel trends will vary by region in the State. In addition to state transportation policy goals, long range investment plans will need to reflect the different regions, traveler groups and other factors that cause variation in travel frequency, mode choice, etc.

Figure 5. Washington Licensed Drivers by Age Group
1997, 2002, 2007, and 2012

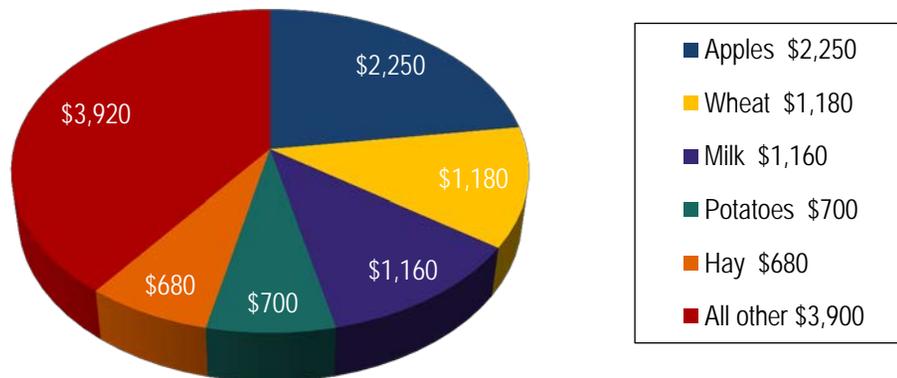


Source: FHWA Office of Highway Policy Information, Highway Statistics Series (2012, 2007, 2002, and 1997).

Accommodating Goods Movement Remains Critical to the State Economy

The Washington State economy is closely linked to the movement of all kinds of freight, including natural resources, agricultural products, and manufactured goods. Annual growth of employment in Washington’s freight-dependent industries was back in positive territory in 2011. This total grew by 2.6% in 2012, with 1.23 million jobs total. In 2012, gross business income for freight-dependent industries was \$450 billion.²¹ Exports, an important part of the state economy, are up over 50% since 2010 (see Table 1). Notably as of 2013, Washington generates more than 50% of the total U.S. exports of civilian aircraft, engines, and parts.

Figure 6. 2012 Washington State Agricultural Output
Millions of Dollars



²¹ Washington State Department of Transportation, “Washington State Freight Mobility Plan,” (Draft), 2014.

Agriculture, Transportation, and the Washington Economy

Agricultural products produced in Washington in 2012 were valued at just under \$10 billion (Figure 6, left.) The top five crops amounted for 60% of the total. In 2011, Washington was the fourth largest wheat grower in the nation, producing 167.8 million bushels of wheat grown on 2.3 million acres. Wheat, corn, soybeans and other grain also enter Washington by train from other states and are exported by ship throughout the world. Over ten million tons of wheat is exported annually through the Columbia River ports alone.

Apple exports in 2013-14 to Mexico, Canada, Dubai, Taiwan and India all exceed 2 million 40-pound boxes. Mexico, at 10.5 million boxes of apples and 3.4 million pounds of cherries and pears, is the largest export destination for Washington fruit. Fresh fruit – such as cherries and peaches – require rapid delivery to markets, underscoring the economic value of reliable, efficient connections between farmlands and freight terminals.

Table 1. Washington State Aggregated Exports Abroad, by Value and Share of U.S. Total, 2010 to 2013 (Values in Millions of 2013 Dollars)

Export	2010	2011	2012	2013
Total Washington Exports	\$53,345	\$64,774	\$75,619	\$81,939
Percent Share of U.S. Total	4.2%	4.4%	4.9%	5.2%

Source: United States Census, Foreign Trade, State by Six-Digit Harmonized Commodity Description and Coding System (HS) Code.

Overall System Safety Performance Has Improved, but Young Driver Fatalities Rose in 2013

Overall, traffic-related fatalities and serious injuries declined since 2005, reflecting most likely a combination of positive impacts from aggressive and multi-faceted highway safety programs, and reduced VMT. That said, fatalities increased slightly from 2012 to 2013. From 2012 to 2013, there were increases of 18 or more fatalities in each of the following priority areas: young drivers (age 16-25), speeding, running off the road, and older drivers (age 75+).²²

Target Zero, the Washington State Strategic Highway Safety Plan, aims to reduce traffic-related fatalities and serious injuries to zero by 2030. In the past Target Zero emphasized three factors that are involved with the majority of fatalities and serious injuries: impaired driving, run-off-the-road collisions, and speeding. The 2013 Update to Target Zero added three new areas of focus: young drivers, distracted driving, and intersection-related incidents.

Washington is addressing the traffic fatality rate for Native Americans, which is almost four times that of the general population, with the help of the Tribal Traffic Safety Advisory Board. Also, given recent and anticipated future increases in bicycling, walking, and

²² Fatality data from WSTC Traffic Safety Commission. 2013 numbers are preliminary.

motorcycling for trips of all purposes, Washington needs to more fully integrate safety considerations into the long-range planning process to help deliver infrastructure improvements that support the safety and mobility for users of these modes.²³

While Transportation Demands Increase, Revenues Have Remained Stagnant

Maintaining the overall quality, effectiveness, and efficiency of the existing transportation system requires significant and ongoing funding of transportation operations, maintenance, and preservation efforts. As noted in WTP 2030, preservation and maintenance needs outstrip available local, state and Federal funding sources, most of which continue to decline. Motor fuel taxes account for about 53% of direct state transportation revenues, down from 60% in 2010.²⁴ License, permit, and driver-related fees make up another 28%. Tolling revenues have increased and now account for roughly 7% of Washington State Department of Transportation (WSDOT) funds, up from approximately 3% in 2010. In the long term, motor fuel consumption in Washington is expected to increase only slightly, with a resulting decline in the real purchasing power of fuel tax receipts unless the tax rate itself is increased. At the county and city level, local sources, including a variety of city and county taxes as well as transit fares, make up the majority of funding for non-state system expenditures. The local contribution to public transportation capital and operating expenses has increased from 2008 to 2013 as Federal and state contributions have declined both in absolute and percent terms. As discussed further below, all trends point towards the need for a long-term source of revenue to support adequate maintenance and preservation of all transportation modes, regardless of jurisdictional responsibility.

²³ Target Zero tracks bicycle and pedestrian fatalities and serious injuries resulting from collisions with motor vehicles but does not capture incidents in which motor vehicles are not involved.

²⁴ Direct revenues exclude bond sales, Federal funds, and interest earnings.

3.3 System Maintenance and Preservation Needs

While Washington has not secured substantial new revenue streams, its transportation infrastructure continues to age. Preserving our existing infrastructure is critical to ensuring reliable, safe travel on the transportation system, supporting individuals dependent on certain modes of travel, and bolstering the economic vitality of Washington farms and businesses that rely on efficient and dependable goods movement through the state and beyond. This section reviews the estimated unfunded transportation preservation needs, by mode.

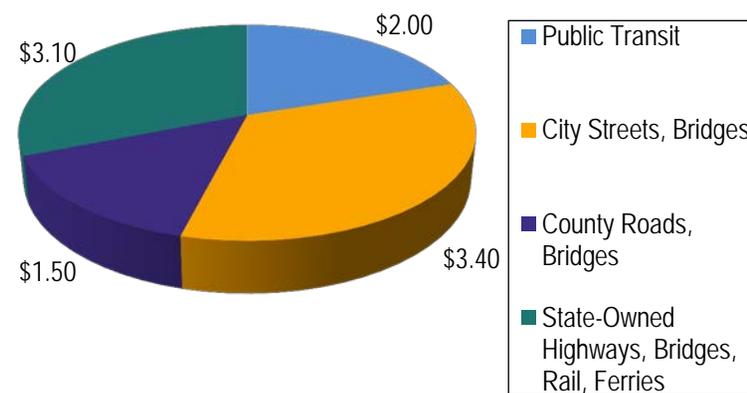
Systemwide Maintenance Needs

Connecting Washington, a 2012 transportation funding analysis, reviewed transportation system conditions and reported approximately \$10 billion in unfunded maintenance and operation needs across jurisdictions (state, county, city) over a ten-year period (see Figure 7).²⁵

Roadway System

Washington State's public roadway system consists of roads and bridges on state highways, county roads, city streets, and other public roads. WTP 2035 does not include a discussion of the other public roadways, which include those maintained by other public agencies including State Parks, Port Districts, U.S. Forest Service, and National Parks.

**Figure 7. 10-Year Maintenance and Operations Needs, All Modes and Jurisdictions
Billions of 2012 Dollars**



Source: 2012 Final Report of Connecting Washington Task Force. Includes state-, county- and city-owned infrastructure.

²⁵ Need to show total need (funded and unfunded) from Connecting Washington Task Force, Connecting Washington – Strategic Transportation Investments to Strengthen Washington's Economy and Create Jobs, January 6, 2012.

State Roadways

WSDOT roadways, including interstates and other vital arterials, represent less than 10% of the system's centerline miles, but over one-half of its daily vehicle miles traveled.²⁶ According to the 2012 *Connecting Washington* report, Washington needs an additional \$3.1 billion to maintain the state-owned highways and bridges over the next 10 years. This funding would allow WSDOT to keep 90% of its roadways in good or fair condition, and would include funding to maintain ferry services at current levels.



The WSDOT 2013 Unfunded System Investments report specified \$9.1 billion in unfunded maintenance, operations, preservation, and safety needs across Washington's regions. The unfunded projects' timeframes vary.

County Roads

County roads account for approximately one-half of Washington's total centerline miles of public roads. *Connecting Washington* reports that counties need \$1.5 billion over the next 10 years in order to maintain and operate their respective roadway systems. If secured, this figure would enable counties to keep 90% of their roadways in fair or good condition. It would also fund repairs of structurally deficient and functionally obsolete bridges. Aside from maintaining road and bridge conditions, the \$1.5 billion would help counties address storm water and fish passage requirements.

City Streets

City streets contain just under one-quarter of Washington's centerline miles and support slightly more than a quarter of its vehicle miles of travel (VMT.) Preserving city bridges and maintaining 80% of city arterials in fair or good condition would require an estimated \$3.4 billion across a 10-year timespan.

²⁶ Washington State Department of Transportation, 2012 Annual Mileage Information. <http://www.wsdot.wa.gov/mapsdata/travel/hpms/annualmileage.htm> (accessed November 25, 2014).

Public Transportation

In Washington State, the public transportation system includes local and regional bus transit, light rail, commuter rail, and vanpool programs; tribal transportation providers; Medicaid transportation brokers (paratransit, special mobility services, etc.); community transportation providers (e.g., special needs, low-income, underserved areas, veteran services, and senior services); rural intercity bus; ferries (state and county operated), and in Seattle, streetcars and the Monorail.

Bus and Rail Transit

Bus and Rail transit networks offer an alternative to driving on the roadway system, particularly in Washington's more densely populated regions. About 87% of public transit trips took place on fixed-route bus services in 2013. Light rail is now the second most frequently used mode of public transit in the state, carrying 5% of all transit trips in 2013.²⁷ Connecting Washington estimated that public transportation agencies will require \$2 billion over the next 10 years to restore 2008 levels of service and maintain those systems going forward, including the costs associated with maintaining services and rolling stock preservation.

The state government plays only a minor role in supporting these public transportation systems, which are primarily operated by regional and local entities. Stakeholders in transit-dependent regions have advocated for a stronger state role in public transportation funding, noting that regional public transportation systems reduce usage and congestion on the state highway system. Examples of regional public transportation needs include:

- **Puget Sound region.** In the Puget Sound region, where more than half the state's population lives, a higher proportion of commuters use public transportation than in other parts of the State. According to the Puget Sound Regional Council's (PSRC) Transportation 2040 plan, \$10.2 billion is needed to keep Sound Transit in a state of good repair over the 2010 to 2040 timeframe. For other local transit systems, PSRC predicts that \$27.3 billion are needed to keep these networks in a state of good repair²⁸.

²⁷ Washington State Department of Transportation, *2013 Summary of Public Transportation*, December 2014. For this discussion of bus and rail transit, percentages are based on total passenger trips carried by fixed and variable route bus service, demand responsive service, vanpools, and light rail, streetcar rail, and commuter rail. Excluded are trips made by school bus, Medicaid and community service providers, Travel Washington rural intercity bus, ferries, and the Seattle monorail.

²⁸ Transportation 2040 does not explicitly specify how much projected revenue will be used for either system preservation or expansion.

- **Spokane region.** In Horizon 2040, the Spokane Regional Transportation Council highlights an increasing need for public transportation – a 73-percent uptick in trips by 2040 – citing an aging and growing population and lack of sufficient local funds. Without additional funding, the Spokane Transportation Authority (STA) will be unable to sustain operations at current levels by the year 2016.
- **Southwest Washington.** The Clark County Public Transportation Benefit Authority (C-TRAN) offers public transportation to residents of Vancouver, Washington, and surrounding municipalities. Preservation and maintenance costs over a 24-year period are expected to total \$2.24 billion.²⁹

Commuter Rail

Commuter rail in Washington State is operated by Sound Transit as the Sounder, which covers a 74 mile route between Everett and Tacoma. Commuter rail is considered both public transit and passenger rail; other forms of passenger rail, including intercity and long distance passenger rail, are not considered public transit in this plan. According to the State Rail Plan, ridership on the Sounder grew from 100,000 annual riders in 2000 to 2.8 million in 2012. By 2035, it is estimated that annual ridership will be close to 5.8 million. Sound Transit contracts with BNSF for operating crews and Amtrak for maintenance of the equipment. A small portion of the track is fully owned by Sound Transit, while much of access was gained through operating easements of BNSF owned infrastructure.

Ferries

In 2013, Washington State Ferries (WSF) transported over 22.5 million riders in and around the Puget Sound.³⁰ Riders include vehicles (10.08 million) and passengers (12.45 million). The ferry system comprises 22 vessels and 20 ports ranging from Tacoma, Washington to Sidney, British Columbia.³¹ Aside from WSF, there are several county-operated ferries, a WSDOT-operated ferry on Lake Roosevelt, one tribally-operated ferry, and several private ferry operations in Washington.



²⁹ Southwest Washington Regional Transportation Council, *Metropolitan Transportation Plan for Clark County – 2011 Update*, December 6, 2011.

³⁰ Washington State Department of Transportation, Washington State Ferries Traffic Statistics. http://www.wsdot.wa.gov/ferries/traffic_stats/ (accessed November 25, 2014).

The PSRC's *Transportation 2040* projects \$6.7 billion in WSF state-of-good-repair needs from 2010 to 2040. To maintain current service levels, the statewide system must replace 16 of its 22 aging vessels by 2040 and invest in preserving and restoring the other 6 boats. In addition, the region must preserve its terminal infrastructure, which includes replacing and upgrading several terminals. The plan expects \$5.4 billion of revenue for the ferry system under current laws and \$2.9 billion from new sources.

Air Travel

Washington's aviation network includes 134 public-use airports used to transport people and cargo within Washington as well as to and from the rest of the world.³² According to the U.S. Federal Aviation Administration, all Washington airports enplaned 18.75 million passengers in 2012. About 16.1 million of these passengers embarked from Seattle-Tacoma International Airport.

WSDOT's 2014 Airport Investment Study identified \$3.6 billion of eligible 20-year capital funding needs, split between likely funded (\$1.9 billion) and likely unfunded (\$1.7 billion). Federal sources share \$3.0 billion of these costs, higher than the state (\$0.2 billion) and local shares (\$0.3 billion).³³

Increased demand is expected to constrain facilities, runways, and taxiways, particularly at the State's busiest airports. According to the 2013 Washington State Airport Pavement Management System, pavement funding needs for the 95 airports documented in the study totaled \$338 million from 2012 to 2020. This amount would allow the system to meet overall condition goals and eliminate the backlog of major pavement rehabilitation projects.



³¹ Washington State Ferries web site (<http://www.wsdot.wa.gov/Ferries/>).

³² Washington State Department of Transportation, Aviation Division, *Washington Airport Investment Study*, April 2014.

³³ The Study does not explicitly distinguish preservation and expansion needs.

Goods Movement

Goods movement requires adequate road, rail, waterway, and intermodal infrastructure such as air and marine ports. This multimodal system enables Washington's agribusiness, manufacturing, construction and retail/wholesale trade sectors to ship and receive products regionally, domestically, and internationally. The Washington State Freight Mobility Plan includes preservation and freight mobility priority projects and associated costs submitted by state, regional and local governments, and ports.

- **Roadways.** The Freight Mobility Plan emphasizes the need to analyze and address freight bottlenecks that cause delays, create safety hazards, or are in a state of poor repair. The Plan provides policy, operational, demand management and capital improvement strategies. Figure 8 illustrates Washington's Freight and Goods Movement System highway corridors, and differentiates these corridors according to the maximum allowable loads that are specified for pavement preservation and safety reasons.
- **Railroads.** According to the Washington State Rail Plan, many short line railroads are not adequately maintained. There are capacity constraints on the mainline freight rail system. The State will need to mitigate impacts of freight rail growth on communities, including safety issues and delays at crossings.
- **Ports.** As of 2011, the combined container load of the Port of Seattle and the Port of Tacoma was in the top three nationwide. PSRC's Transportation 2040 recommends improving roadway and rail connections to the state's major ports and notes that increasing off-peak cargo movements is one option to manage congestion, though labor requirements are a potential constraint. Maintaining connectivity to each of the state's 75 ports remains important to the state economy.
- **Waterways.** According to the Freight Mobility Plan, maintaining the Federally-authorized navigation channel depth on the Columbia/Snake River system is a challenge, as is maintaining an aging dam and lock structure. A 3-barge tow on the Columbia/Snake River system can move as much wheat as a unit train. The future of transportation on the river system faces environmental pressures and the rising cost and complexity of maintaining an aging dam and lock structure.

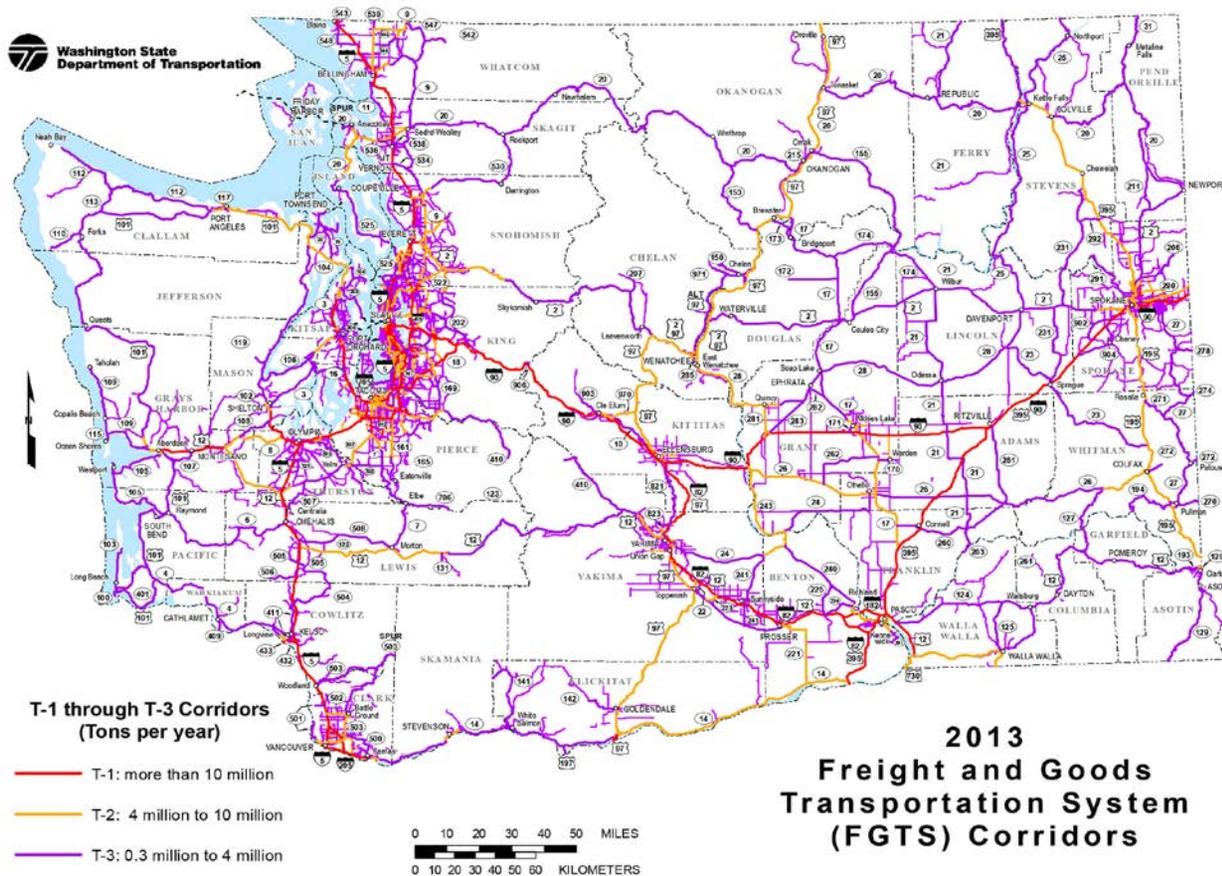
Freight Rail and Fossil Fuels

As post-recession freight rail volumes increase, operators look to maximize existing rail capacity without displacing trains.

Some stakeholders are concerned with growing volumes of unit trains carrying fossil fuels, such as coal, oil, and gas, as well as other petroleum-based products. These cargoes can present spill hazards and compete with other types of commodities for the system's limited capacity. Increased volumes at rail crossings create potential for adverse safety and congestion impacts.

- Aviation.** According to the Washington State Aviation System Plan, the vast majority of the state’s air cargo flies through Seattle-Tacoma International Airport, Boeing Field, or Spokane International Airport. According to the plan, there are not significant air cargo constraints, although demand is expected to grow. The Washington State Freight Mobility Plan notes that the lack of efficient truck freight access through congested routes to the state’s cargo airports disrupts many high-value supply chains.

Figure 8. Washington Highway Freight Corridors



3.4 System Performance Improvements

While system preservation is one of the state's highest transportation priorities, Washington also must look toward improving the performance of its transportation system to meet its policy goals. This process includes evaluating the performance of existing roads, transit lines, non-motorized networks, freight and passenger terminals, etc. to accommodate growing demand; providing more complete infrastructure for bicycle and pedestrian use; and extending transit services to larger segments of the population through service area expansions and improved access by foot and bicycle. This section describes future system needs, by mode, drawn from a variety of sources.

Systemwide

The Connecting Washington Task Force estimated \$50.3 billion was needed to maintain, improve, and expand Washington's transportation system over the next 10 years. This amount includes the \$10 billion in preservation needs and would enable the transportation network to meet performance objectives in system preservation, strategic mobility improvements, system efficiency, and safety.³⁴

Roadways

WSDOT tracks unfunded roadway expansion and improvement projects by region and by category. Some of the unfunded projects are short-term needs, but many are investments of 10 years or longer. Although the Northwest Region³⁵ of the state has the largest unfunded investment needs, each region has substantial unfunded system expansion projects.

³⁴ Connecting Washington Task Force, Connecting Washington – Strategic Transportation Investments to Strengthen Washington's Economy and Create Jobs, January 6, 2012.

³⁵ Whatcom, Skagit, Snohomish, San Juan, Island, and King counties.

Public Transportation

Bus, Light Rail, and Commuter Rail

Extending the reach and expanding the capacity of existing public transportation systems is a growing priority in many of Washington's highest population regions.

In the Puget Sound region, Puget Sound Regional Council's (PSRC) Transportation 2040 aims to augment the public transportation system to meet increasing demand and invest in paratransit, fixed-route services, and demand response services to provide better mobility for people with special needs. The expenditure plan for Sound Transit 2 (ST2), a local sales tax approved by voters in 2008, includes funding for extensions of Sound Transit's light rail transit system north to Lynwood, south to Lakewood, and east to Redmond. The ST2 plan also includes funding for new round trip Sounder commuter rail trains between Lakewood and Seattle and improvements to Sounder stations along the entire line. King County Metro's 2011 Strategic Plan outlines goals strategies for system improvements, but notes that financial constraints have necessitated service cuts in addition to targeted voter-mandated expansions.



In Horizon 2040, the Spokane Regional Transportation Council prioritizes additional public transportation options outside of the current Spokane Transit Authority (STA) service area, better regional commuter service, increased funding for transit options in smaller towns, and increased frequency on current routes.

According to the Southwest Washington Regional Transportation Council's 2011 Metropolitan Transportation Plan for Clark County, C-TRAN, the public transportation provider for Clark County, hopes to add new bus routes, increase capacity on existing bus routes, foster additional Vancouver, WA-Portland, OR connectivity, and meet additional paratransit demand for a growing population of people with disabilities.

Ferries

Washington State Department of Transportation's Ferries Division (WSF) 2009 Long Range Plan focuses on optimizing system utilization and asset preservation. It outlines a strategy to meet future capacity needs by procuring new vessels, re-assigning vessels to optimize route capacity, implementing a vehicle reservations program, and modifying the fare structure to provide more incentives for small cars and walk-on passengers. Despite a long-term legislative commitment to fund the capital program, there remains a funding shortfall to fund the full recommendations in the long range plan. WSF is currently engaged in an update of the Long Range Plan that will look out to the year 2040, by which time some of the largest vessels in the fleet will have been retired and require replacement. WSF planners will be considering a range of capital and operating strategies that will help the system evolve and keep up with changing preferences as well as the address the significant challenge of long-term capital replacement costs. The concept of replacing large vessels with smaller vessels operating on a more frequent schedule will be evaluated. Improved coordination and connections to public transit, and accommodating more bicyclists, are emerging as likely avenues to further optimize the overall person-carrying capacity of the WSF system.

While the bulk of WSF system funding needs to focus on keeping the current system assets in a state of good repair, PSRC's regional transportation plan *Transportation 2040* identifies the system enhancements designed to increase effective capacity:

- Addition of new terminals and docks; and
- Deploying an enhanced vehicle reservation system, new pricing strategies, and a marketing campaign to increase off-peak ridership, and thus better match system demand to capacity.

Development of a number of new passenger-only ferry routes is also proposed in PSRC's plan. Over time, growth in ferry passenger demand on the commute-oriented central Puget Sound Routes may be accommodated more cost-effectively through a shift to more passenger-only ferries on some routes.



Non-Motorized Travel

Expanding accessibility to non-motorized transportation opportunities serves more than the recreation and tourism markets and the economic benefits that accrue from those expenditures. In addition to providing mobility options for a cross-section of the population that has limited or no access to transit or an automobile, safe and convenient access to schools, jobs and everyday errand destinations by walking and bicycling benefits the broader community through improved health and reduced personal transportation costs. Improving cycling and walking infrastructure also extends the reach of transit investments, including ferries, by providing wider access opportunities to transit stops at each end of the trip, making transit more competitive with autos in regions of the state that have well-developed transit service.

Non-motorized options are not exclusively an urban opportunity. While much of the state's current pedestrian and bicycle infrastructure is concentrated in urban areas, there is growing demand for safe and convenient places to walk and ride a bicycle in small towns and rural areas where off-road travel opportunities like sidewalks are lacking. Roadway and trail projects should provide safe non-motorized access to transit (including school buses) and ferries, especially in places where minimal or no off-road options exist, or where gaps in the non-motorized network reduce accessibility. Local and state projects will benefit from regular and timely updating of state highway planning, design, project eligibility and funding guidelines to include new facility types that provide safe and convenient accommodation for people walking and riding a bicycle on all state-funded transportation improvements (or on nearby alternatives where cycling and walking are prohibited on the state facility.)

COMPLETE STREETS

Smart Growth America's National Complete Streets Coalition defines "complete streets" as roadways designed to be safe for all users. While current practice does not anticipate that every mode will be present on every street, many streets designated as "complete streets" have dedicated bicycle and pedestrian facilities and may contain design elements to enhance transit services. Common design features include bike lanes and protected cycle tracks for bicyclists, wider sidewalks, curb extension, an enhanced crosswalks for pedestrians, and bus signal prioritization, bus only lanes, and curb bulbouts for passenger boarding. However, designing a system of complete streets is not a prescriptive process, and requires context sensitivity. Complete streets design should consider current and future system users on the subject corridor and parallel corridors as well.

Aviation

According to the 2009 Long-Term Air Transportation Study (LATS), Washington will meet growing aviation demand through 2030 by preserving existing airports and balancing capacity among the 138 public use airports. In 2009, no facilities were over capacity, however, it is anticipated that capacity constraints will become an issue at some airports by 2030, including Seattle-Tacoma International (Sea-Tac). At Sea-Tac, where the majority of the State's passenger enplanements occur, expansion is physically constrained, but the airport is designing an enhanced International Arrival Facility to bolster its capacity.³⁶ The LATS report concluded that available funding is inadequate to address the state's critical aviation system needs. WSDOT's Aviation Division is in the process of updating its 20-year Aviation System Plan.

Goods Movement

The Washington State Freight Mobility Plan underscores the need to build new capacity strategically to improve the freight system's weak points and recommends operational and capital strategies to address current needs and meet future growth.

- **Trucks.** Washington can enhance the roadway system by adding capacity strategically to fix truck bottlenecks on freight economic corridors and by leveraging technology to obtain truck travel information and optimize signal timing.
- **Air Freight.** While the Washington State Aviation System Plan asserts that the State's airports meet current capacity, cargo loads are expected to grow from 2010 to 2030. Seattle-Tacoma, which handles the largest portion of the State's air cargo, will likely expand its cargo processing facilities. Cargo plane parking and operations constraints may hinder expansion. At Boeing Field, expanding the cargo aircraft parking apron hinges on adjacent land availability.

³⁶ Washington State Department of Transportation, *Washington State Long-Term Air Transportation Study*, July 2009. <http://www.wsdot.wa.gov/aviation/LATS.htm> (accessed November 25, 2014).

- **Ports.** As freight movement grows, Washington ports will need to accommodate more exports and imports. The ports of Seattle and Tacoma are the primary container ports in Washington; other ports handle a variety of bulk products and vehicles. Future needs vary depending on the type of cargo. The PSRC expects the Puget Sound region’s waterways to experience a 169-percent increase in twenty-foot equivalent unit (TEU) containers from 2008 to 2030.³⁷ Adding anchorages along the Columbia River would help meet this increased demand.³⁸ The West Vancouver Freight Access Project currently is underway to expand the Port of Vancouver, the State’s third largest marine port.³⁹
- **Railroads.** Identifying and prioritizing “first- and last-mile” connections between roads and rail that generate freight demand can stimulate economic development.⁴⁰ Growth in freight rail tonnage could eventually overwhelm the current rail system and necessitate expansion, as detailed in the Freight Mobility Plan.

At-Grade Rail Crossings

At-grade crossings of roadways and railroads pose a special challenge to Washington. Safety and mobility are both potentially impacted by these crossings. As the volume of products shipped by rail increases, so typically does the frequency and length of freight trains. As a result, at-grade crossings are blocked more frequently and for longer periods of time. In some Washington communities that straddle high-volume freight rail lines, there is growing concern about the potential impact on reliability for cross-town travel, including that by emergency response vehicles such as police, fire and medical. Compounding the challenge is the high cost of grade-separating an existing at-grade crossing, and the shortage of funding dedicated to this purpose.

During 2014, the Washington Freight Advisory Committee conducted an inventory of at-grade crossings. The inventory only reviewed Class I railroads within city limits that intersect high-tonnage roadways at grade. The preliminary inventory identified over 110 such at-grade crossings and estimated that \$1.1 billion would be needed to address less than half of the first tier and emerging grade separation inventory.

³⁷ Puget Sound Regional Council, *Transportation 2040*, 2014 Update. <http://www.psrc.org/transportation/t2040> (accessed November 25, 2014).

³⁸ Washington State Department of Transportation, *Washington State Freight Mobility Plan*, June 4, 2014.

³⁹ Southwest Washington Regional Transportation Council, *Metropolitan Transportation Plan for Clark County*, 2011.

⁴⁰ Washington State Department of Transportation, Rail Division, *Washington State Rail Plan – Integrated Freight and Passenger Rail Plan 2013-2035*, March 2014.

4.0 Funding Trends and Options

4.1 Funding Trends and Options

While Washington has emerged from the recent economic recession, the State continues to face financial uncertainty. A mix of Federal, state, and local sources fund Washington's transportation infrastructure. State and Federal motor fuel taxes provide the majority of transportation-related revenues. With motor fuel taxes unlinked to inflation and dependent on consumption rates, Washington should secure alternate funding sources, or move away from a flat fixed rate tax system. As the State's transportation maintenance and improvement needs continue to outstrip revenue projections, Washington should prioritize use of existing primary funding sources to preserve the existing infrastructure and adopt user-based funding mechanisms for improvements necessary to maintain transportation system performance in the future.

4.2 Federal Revenue Policy, Sources, and Trends

The United States Federal government provides a portion of Washington's transportation revenues. In its September 2014 forecast, the Transportation Revenue Forecast Council (TRFC) projected \$5.3 billion in Federal revenue apportionments over the Federal fiscal years 2014 to 2023.⁴¹ This amount is less than a quarter the size of the projected Washington State Department of Transportation (WSDOT) revenue over a similar 10-year period.⁴² From 2014 to 2023, WSDOT will receive approximately 66% of the Federal apportionments, and local governments will take the remaining 34%.

In 2012, the Federal government enacted Moving Ahead for Progress in the 21st Century (MAP-21) to secure funding for core transportation programs in fiscal years 2013 and 2014. The Federal motor vehicle fuel tax and other excise taxes fund the Highway Trust Fund, which in turn funds MAP-21. From the Federal government, WSDOT anticipates \$666 million in FY 2014 and again in FY 2015. Projected annual Federal funds fall to \$488 million in FY 2016 and remain in the \$490 million to \$500 million per year range from fiscal years 2016 to 2023.



⁴¹ The Federal Fiscal Year begins October 1. The 13-year period of the TRFC forecast runs from October 1, 2013 to September 30, 2023.

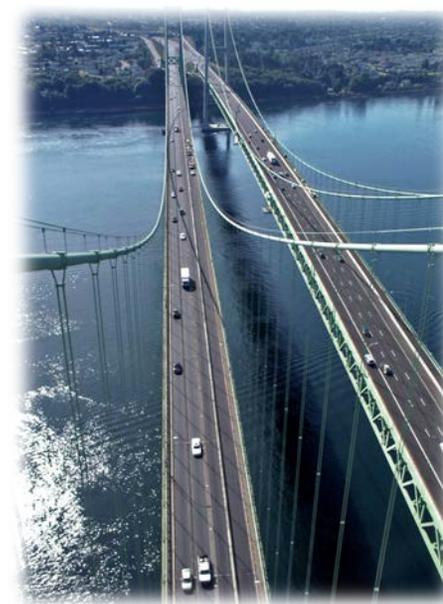
⁴² TRFC projected WSDOT transportation revenue to be \$24.1 billion total from the 10-fiscal year period spanning from July 1, 2013 to June 30, 2023.

4.3 State Transportation Revenue Sources and Trends

The Washington State government generates the largest share of Washington's overall transportation revenues. TRFC regularly forecasts state transportation revenues by source (see Table 2). In its September 2014 forecast, TRFC projected total direct⁴³ revenue to all Washington transportation agencies to be approximately \$38.8 billion for the 16-fiscal year period from 2011 to 2027. This amount, which averages \$2.41 billion annually, is slightly more than the total revenue projected in the June 2010 TRFC forecast for the same 2011 to 2027 timeframe.

According to the 2014 forecast, motor vehicle fuel taxes constituted the majority (53%) of state-generated transportation revenues, followed distantly by licenses, permits, and fees (23%); ferry revenues (8%); and toll revenues (7%). Expected motor vehicle fuel tax revenues had accounted for 60% of state direct revenue in the 2010 forecast for 2011 to 2027. This change reflects the State's increasing need to secure significant revenue sources aside from the motor fuel tax, including driver fees and toll revenues. With the addition of new toll facilities in the state like the SR 520 bridge, projected 2011 to 2027 tolling revenues jumped to 7.1% in 2014 from 2.5% in 2010.

The September 2014 TRFC report divided the \$38.8 billion revenue figure into three distribution categories: approximately \$1.2 billion for Motor Fuel Tax Refunds and Transfers, \$6.0 billion for local uses, and \$31.5 billion for state uses. In comparison, the June 2010 report forecasted roughly \$1.2 billion for motor fuel tax refunds and transfers, \$6.8 billion for local uses, and \$30.2 billion for state uses. Projected state revenue for local uses fell approximately 12% between the two forecasts while state revenues increased by 4.3% due to new fees and fee increases.



⁴³ Direct revenue excludes Federal funding and bond sales.

Table 2. 2011-2027 Programed Direct State Revenue Sources in Billions
June 2010 and September 2014 Forecasts

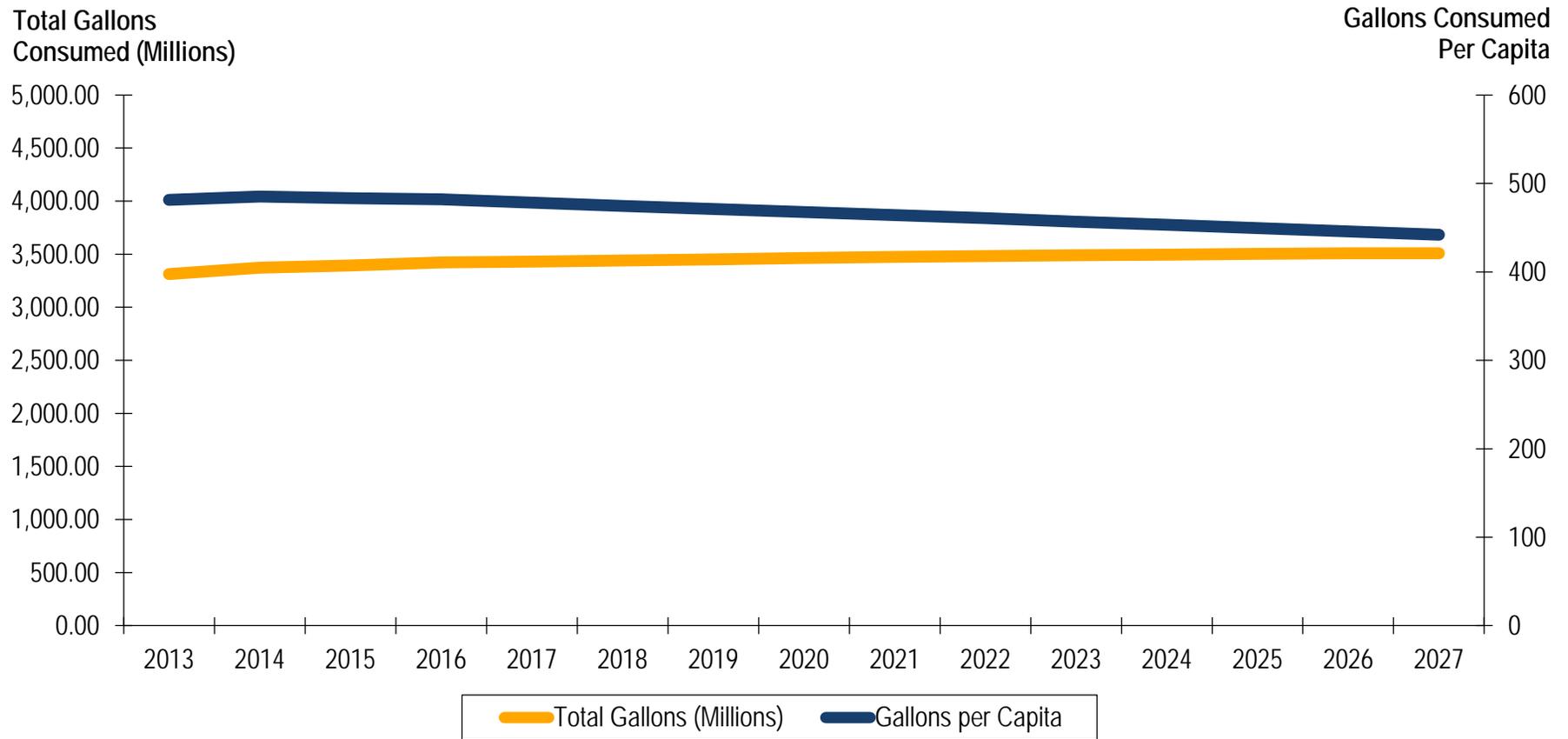
Source	June 2010		September 2014 Forecast	
	2011-2027 Totals	2011-2027 Percentage Breakdown	2011-2027 Totals	2011-2027 Percentage Breakdown
Motor Vehicle Fuel Tax	23.0	60.4%	20.7	53.2%
Licenses, Permits, and Fees	8.2	21.4%	8.8	22.6%
Ferry Revenues	2.9	7.5%	3.0	7.7%
Tolling	0.9	2.5%	2.8	7.1%
Vehicle Sales Tax	0.7	1.9%	0.7	1.8%
Aviation Revenues	0.0	0.1%	0.1	0.1%
Rental Car Tax	0.5	1.4%	0.5	1.2%
Driver-Related Fees	1.7	4.5%	2.2	5.7%
Business/Other Revenues	0.1	0.3%	0.2	0.6%
Total Direct Revenue	38.1	100.0%	38.8	100.0%

Source: Washington State Transportation Revenue Forecast Council, *Transportation Revenue Forecast (September 2014, June 2010)*. Totals are not exact due to rounding.

Washington's transportation system continues to rely heavily on vehicle fuel tax revenues. Figure 9 indicates annual statewide motor vehicle fuel consumption in total gallons and gallons per capita.

According to its September 2014 forecast, TRFC expects Washington's total consumption of vehicle fuels to rise slightly over the next thirteen years, from 3.37 million gallons in FY 2014 to 3.51 million gallons in FY 2027. Total consumption rose 1.8% from 2013 to 2014, and annual increases range between 0.0% to 0.8% for the remaining years in the forecast. Washington's population is expected to grow between 1.0% and 1.2% from 2013 to 2027. TRFC projects the amount of motor vehicle fuel gallons consumed per capita to fall from 485 gallons per capita in 2014 to 442 gallons per capita in 2027.

Figure 9. Projected State Motor Fuel Consumption, Total Gallons and Gallons per Capita, Fiscal Years 2013 to 2027



Source: Calculated using fuel consumption and population growth rate data from Transportation Revenue Forecast Council's September 2014 Transportation Revenue Forecast and base year population from Washington State Office of Financial Management's November 2013 State population forecast.

4.4 Local Transportation Revenue Sources and Trends

While local governments and transit authorities receive some funding from state and Federal sources, they directly generate the majority of their respective jurisdictions' transportation revenues. These local entities use property, sales, and other taxes, as well as ridership fares for funding. A lack of consolidated local data makes projecting local transportation funding difficult.

Counties

Counties levy property taxes to fund transportation infrastructure. In 2013, Washington counties obtained \$960 million for county roads.⁴⁴ Local sources, including property taxes, generated 64.5% of county revenue. Six years earlier, in 2007, local sources generated a slightly smaller share (62%) of county road revenues (see Table 3).

State motor vehicle fuel tax revenues accounted for approximately 22% of county revenues. Federal revenues provided approximately 12.5% of revenue.

⁴⁴ County Road and City Street Revenues and Expenditures, 2003-2013. Data from Washington State Department of Transportation.

Table 3. County Road Revenues by Source
Calendar Years 2007 and 2013

Source	2007		2013	
	Amount	Percent	Amount	Percent
Property Taxes	388,324,667	44%	441,757,634	46.0%
Special Assessments	498,715	0%	297,887	0.0%
General Fund Appropriations	40,802,544	5%	91,333,237	9.5%
Other Local Receipts	116,106,392	13%	85,428,566	8.9%
Subtotal, Local Revenue	545,732,318	62%	618,817,324	64.5%
State Fuel Tax Distributions	162,506,113	18%	159,862,670	16.7%
Other State Funds	53,372,742	6%	51,176,648	5.3%
Federal Revenues	117,247,519	13%	120,319,628	12.5%
Bond Proceeds	4,403,207	0%	5,141,312	0.5%
Ferry Tolls	3,066,785	0%	4,613,216	0.5%
Total Revenues, All Sources	886,328,684	100%	\$959,930,797	100.0%

Source: WSDOT County Road and City Street Revenues and Expenditures, 2003-2013.

Cities

Cities provide the majority of funding for city-owned roads and bridges. In 2013, municipalities obtained \$1.60 billion in revenue for city streets. Cities generated 71% of revenue themselves, an increase from 66% six years prior in 2007 (see Table 4).⁴⁵ According to the Association of Washington Cities' 2013 City Transportation Overview, the three largest sources of city-generated revenue are: general

⁴⁵ County Road and City Street Revenues and Expenditures, 2003-2013. Data from Washington State Department of Transportation.

property taxes, sales and use taxes, and business and utility taxes. These revenue sources are considered general fund revenues and compete with other city responsibilities. The Federal government provided 15% of city street transportation revenues in 2013, and state revenue sources covered 23%.

Table 4. City Street Revenues by Source
Calendar Years 2007 and 2013

Source	2007		2013	
	Amount	Percent	Amount	Percent
Property Taxes	62,687,803	5%	154,272,040	10%
Special Assessments	12,214,434	1%	20,891,010	1%
General Fund Appropriations	283,874,494	22%	348,710,634	22%
Local Road User Taxes	134,476	0%	591,371	0%
Other Local Receipts	487,005,511	38%	613,289,510	38%
Subtotal, Local Revenue	845,916,718	66%	1,137,754,566	71%
State Fuel Tax Distributions	88,508,738	7%	89,225,874	6%
Other State Funds	113,743,634	9%	122,493,111	8%
Federal Revenues	118,523,234	9%	137,314,980	9%
Bond Proceeds	119,634,868	9%	109,981,046	7%
Ferry Tolls	0	0%	0	0%
Total Revenues, All Sources	1,286,327,192	100%	1,596,769,577	100%

Source: County Road and City Street Revenues and Expenditures, 2003-2012.

Public Transportation

Public transportation presents a cross-jurisdictional funding challenge. Table 5 shows public transportation revenues by source. Overall, public transportation revenue grew almost 20% from 2008 to 2012. However, local governments shoulder a higher proportion of the funding responsibilities now than in the past (85% in 2012 versus 81% in 2008), as Federal and state contributions to public transportation have fallen. Transit agencies often bear the costs of special needs transportation as well.

**Table 5. Public Transportation Revenue by Source
2008 to 2012**

	2008				2012			
	Operating	Capital	Total	Percent	Operating	Capital	Total	Percent
Local	\$1,484,129,643	\$47,303,438	\$1,531,433,081	81%	\$1,874,207,290	\$22,784,261	\$1,896,991,551	85%
State	\$19,186,918	\$23,440,696	\$42,627,614	2%	\$18,292,249	\$7,913,035	\$26,205,284	1%
Federal	\$103,331,429	\$224,894,612	\$328,226,041	17%	\$102,420,887	\$219,204,137	\$321,625,024	14%
Total	\$1,606,647,990	\$295,638,746	\$1,902,286,736	100%	\$1,994,920,426	\$249,901,433	\$2,244,821,859	100%

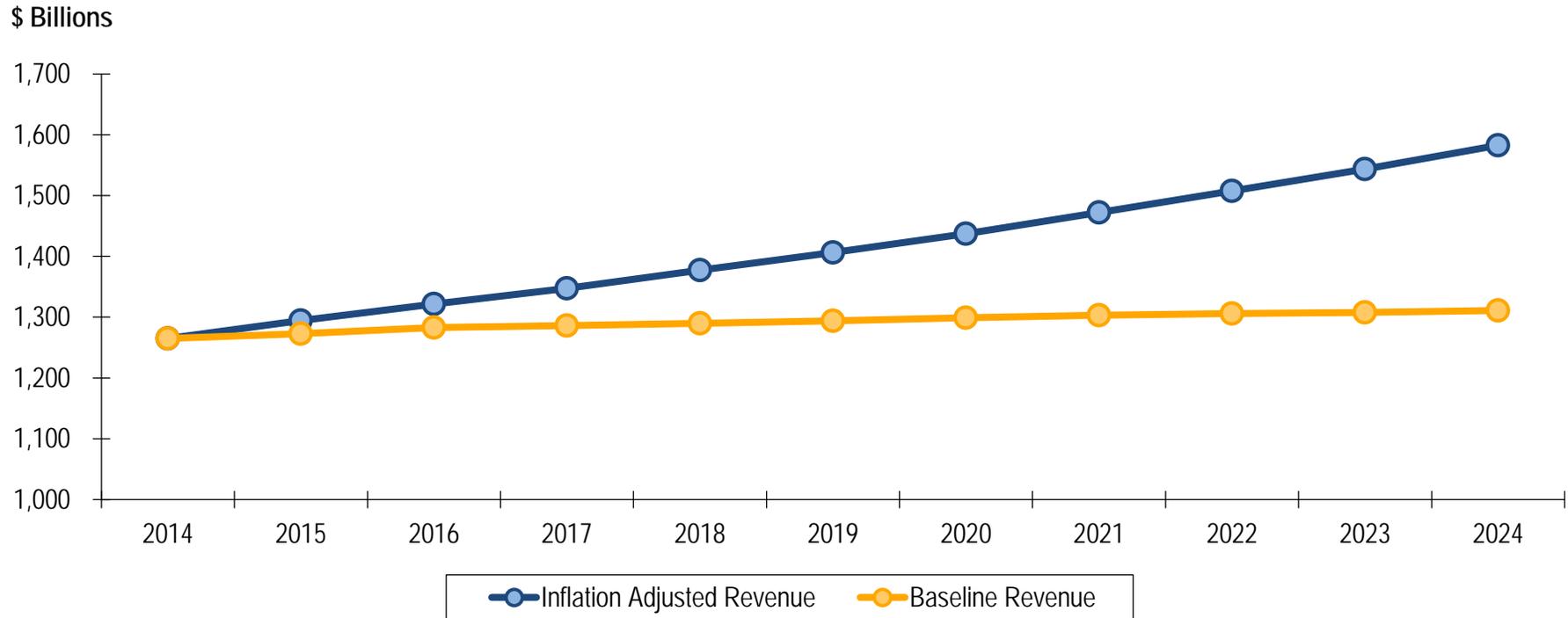
Source: 2013 Washington Summary of Public Transportation.

4.5 Future Funding Scenarios

WTP 2035 examines two different scenarios *specifically regarding the state fuel tax as a primary revenue source*: 1) a baseline scenario in which the motor fuel tax does not undergo any structural change; and 2) a minimal revenue growth scenario in which incremental adjustments to the Washington State motor fuel tax are made to offset the potential reduction in real revenue caused by inflation or decline in total fuel purchases. The scenarios were chosen for several reasons. In recent years, both state and Federal revenues for transportation have been flat or declining, and there has been insufficient support to promote legislation to increase either the state or Federal fuel tax rates. Additionally, the state motor fuel tax is the largest single source of Washington's transportation funding, and its importance and structural vulnerability present a central challenge to the state. While other adjustments, such as annually legislated fuel tax adjustments, are possible, tying the tax to inflation permanently affords a simpler assessment of future real funding levels. Both fuel tax scenarios leave open the possibility for changes in other revenue sources such as direct user fees, local option taxes, etc., but do not assume such actions.

Figure 10 depicts projected year 2014 to 2024 state motor fuel tax revenues, based on both the baseline tax scenario and the inflation-adjusted tax scenario. The revenue and inflation projections are from the Transportation Revenue Forecast Council (TRFC) June 2014 forecast. WTP 2035 uses cumulative percentage increases in inflation to calculate inflation-adjusted tax revenues. Over the 11-year period, indexing the state fuel tax to projected inflation would garner \$15.5 billion in total revenue, a \$1.3 billion increment over the baseline scenario. Because inflation is cumulative, the switch to an inflation-linked motor fuel tax would minimally impact revenues in the short term, but assuming inflation remains positive, the adjustment has an increasingly strong impact in the out-years. In 2024, inflation-adjusted tax revenue would be \$1.5 billion, a 17% increase over the baseline tax scenario.

Figure 10. Projected Direct WSDOT Motor Fuel Tax Revenue, Inflation-Adjusted Tax versus Baseline Tax 2013 to 2024



Sources: Calculated using the Washington State Transportation Revenue Forecast Council. September 2014 Forecast, which uses the Implicit Price Deflator.

Under Washington’s state constitution, the state motor fuel tax must be spent on roads and ferries. The state fuel tax revenue can also be used for off-road projects in cases where these projects improve highway safety and operations. Revenues from other sources, including licenses, permits, and fees, are less restricted and can also be spent on freight rail, bicycling infrastructure, and public transportation. Regardless of which tax regime Washington chooses, the State will likely finance capital intensive mega projects with toll-backed revenue bonds. Thus, users, rather than the public at large, will fund any extensive transportation network improvement and major rehabilitation projects in the future.

Federal gas tax revenues provide the majority of the funding for the Highway Trust Fund. The Highway Trust Fund, which includes both the Highway Account and the Mass Transit Account, disburses funds to state governments, such as Washington. Similar to the Washington State motor fuel tax, the Federal motor fuel tax is not linked to inflation, which will likely limit the real revenue that it can generate. Already, Highway Trust Fund expenditures outpace revenues. The Federal Congressional Budget Office expects FY 14 Highway Account direct revenues to be \$33 billion and spending to be \$45 billion. FY 14 Mass Transit Account direct revenues will likely total \$5 billion compared to \$8 billion in spending.⁴⁶ The Highway Trust Fund will require continued contributions from the general fund, which totaled \$54 billion since 2008 as of May 2014.

The Transportation Revenue Forecast Council provides an Alternate Federal Funds forecast, in which WSDOT's Federal funding changes proportionally to the State's projected fuel gallons consumed rather than falling off in FY 15 and beyond, as discussed above in this section. Under the Alternate scenario, the Federal government would disburse 25% to 34% more funds to WSDOT each year from 2015 to 2027.⁴⁷ TRFC's Alternate scenario is more conservative than the inflation-linked tax scenario, as the former presumes only that Washington's revenues will mirror gasoline consumption without being linked to inflation.

Federal and state motor fuel tax revenues fund some city- and county-operated infrastructure. Therefore, linking these taxes to inflation would also likely benefit city and county governments.

Aside from gas tax revenue, cities secure the majority of their funding from property, sales, and business/utility taxes. The June 2014 Washington State Economic and Revenue Forecast predicts retail sales tax receipts to grow 6.1% in FY 14 and 4.8 to 4.9% each year from FY 15 to FY 17. It also forecasts Business and Occupation taxes to fall 1.3% in FY 14 before growing from FY 15 to FY 17 at rates of 3.7 to 5.1% per year. While this forecast applies to state rather than local taxes, these trends provide a rough sense of how sales and business tax streams are expected to change. Sales and business taxes adjust to inflation, so these projections would likely not vary between the two scenarios.

⁴⁶ Kile, Joseph. "The Status of the Highway Trust Fund and Options for Financing Highway Spending," testimony, May 6, 2014 (Pub. No. 4946), before the U.S. Senate, Committee on Finance.

⁴⁷ June 2014 forecast.

County transportation depends predominantly on the county roads property tax levy. Without voter approval, property tax levies can only grow by the lesser of 1) the inflation rate or 2) 1% per year. For each dollar of tax levied, counties, cities, and road districts are the highest priority recipients and receive \$0.59.⁴⁸ According to the Washington State Economic and Revenue Forecast, state property tax levies are expected to range from 1.8 to 2.4% per year from FY 14 to FY 17. While not equivalent to the county road levy, these percentages are meant to depict overall property revenue trends. Property tax revenues often exceed 1% of previous totals because of additions of assessed property, payment of past due taxes, and voter-approved increases. That said, counties would be better positioned to meet their road needs if tax levies were tied to inflation.



If local revenues do decline in real value, governments can turn to additional sources, such as locally approved sales taxes generated by Transportation Benefit Districts. King County, for instance, levies a countywide sales tax, some of which helps fund King County Metro and Sound Transit.⁴⁹ Sound Transit is funded by local taxes including a motor vehicle excise tax, a sales and use tax, and a rental car tax, along with farebox revenues, grants and interest earnings. Transit systems may also increase fares to maintain service levels.

⁴⁸ Washington State Senate Ways and Means Committee, "A Legislative Guide to Washington State Property Taxes," 2014.

⁴⁹ March 2014 Sales Tax Revenue Forecasts. Data from King County Office of Economic and Financial Analysis: <http://www.kingcounty.gov/business/Forecasting/Forecasts.aspx> (accessed November 25, 2014).

4.6 The State Role in Public Transportation

The state has a variety of interests in public transportation, including:

- the effectiveness and efficiency of public transportation;
- improving mobility, safety and security of the transportation network; and
- the role of public transportation in reducing carbon emissions and improving the health of citizens and communities.

Thirty-one transit agencies operate in Washington, serving most of the urbanized area of the state. State investment, managed through WSDOT's Public Transportation Division provides intercity bus service on four key corridors formerly served by Greyhound or Northwest Stage Lines.

A 2011 Report prepared for a JTC Study on the State Role in Public Transportation recommended better integration of public transportation into WSDOT planning and programming, a clearer focus on policy and resources, consistent performance measurement, and in the long term, additional resources to meet growing public transportation needs. These recommendations track with public comments the Transportation Commission heard across the state during the WTP 2035 Update and during the previous four years: First and foremost, public transit use is increasing and that funding from all sources has not kept up with demand.

In Washington, transit operations, which make up the bulk of transit costs, are funded primarily by voter-approved local sales and use tax revenues (75.2 percent of operating revenues in 2012) and farebox revenues (13.6 percent of operating revenues in 2012). The state investment in public transportation programs and grants makes up less than 1 percent of operating revenues—compared to the national average of 20 percent state investment. Transit agencies have also seen a dramatic reduction recently in Federal funds for capital investments in buses and bus facilities.

The Transportation Commission concluded that:

1. The State’s role in supporting public transit needs to be clarified.
2. The State’s priority should more clearly define the role of public transportation in meeting overall transportation needs and assist in making transit a reliable, affordable option.

Recognizing that resources are limited, and that transit service is expensive, especially in suburban and rural areas, public transportation should remain primarily a local responsibility. We recommend three specific areas for increased state involvement:

Special Needs Transportation: Transit provides a lifeline and critical access to those with special transportation needs or no other transportation options.

Public transit agencies provide most of the paratransit trips in this state, with very little funding from the state. Of the 8.3 million paratransit trips reported in 2011, public transit agencies provided 6.7 million at a cost of \$183 million. King County Metro’s Access Transportation program alone provided over 2 million paratransit trips in 2011 for those meeting Federal ADA requirements.

Demand/response service for special needs populations has the highest operating cost. For many transit agencies those trips cost 10 times more than fixed route bus service. At most, transit agencies are reimbursed for 150% of the fixed route fare. Paratransit costs are consuming an increasing share of transit agency budgets (up from 15 percent in 2007 to 20 percent in 2011). In 2011, three percent of Pierce Transit’s total trips were on paratransit, but the operating costs consumed over 20 percent of their total budget and they only recovered two to three percent of the operating costs through fares. Small and rural systems spend even more of their budget on paratransit – some over 40 percent.

State funding covers only a small fraction of the paratransit costs: for the 2011-13 biennium, the state funded just \$19.5 million (\$9.75 million per year) for special needs transportation grants for public transit agencies and \$5.5 million (\$2.75 million per year) for

In 2010, total transit tax collections were \$2.05 billion.

Of this total, sales tax receipts accounted for \$1.23 billion. Statewide, transit funding is comprised of:

^a Farebox revenue varies significantly depending on the agency and the service. King County Metro, by far the largest transit agency in Washington, has a 29% farebox recovery rate.

non-profit providers. We recommend increased state funding for paratransit service and a concerted effort to help the state and transit agencies better leverage Federal funding to achieve a more equitable reimbursement for paratransit service.

Key Transportation Corridors: Local taxpayers are currently supporting public transit service that benefits the state – and should be funded in partnership with an increased state investment. In our state’s most congested areas, public transportation increases efficiency and capacity on our state’s highways and roads. The increasing trend of commuters relying on public transportation frees up much-needed capacity for freight and other vehicles, which supports mobility and economic vitality. Two-thirds of downtown Seattle’s workers commute on transit (43%), rideshare/vanpool (9%), walk (6%) or use other modes (8%). Only 34% drive alone.

WSDOT’s Corridor Capacity Report shows that use of transit ridership and park and ride facilities is high in congested corridors. In some key corridors, transit demand exceeds supply and threatens the success of HOT and HOV lane operations. Additional transit investment, along with HOV and HOT lanes and other operational improvements, can minimize the need for more costly solutions to add capacity.

Connecting Communities. Transit provides connections between cities and counties, population and employment centers, and to other modes, such as ferries. Connecting people to jobs is a key factor in maintaining economic vitality. Businesses are increasingly looking at available transit service in deciding whether to locate in their districts.

Vanpools are a significant way to connect communities. Washington State has more vanpools than any other state. Each weekday, 2,800 vans take about 22,000 drivers off the road.

Preserving and Building Local Solutions. Public transportation should remain primarily a local responsibility. Many have had successful ballot measures to increase the tax rate for transit. Unfortunately, five of the state’s public transportation systems have reached their maximum taxing authority and have no other funding sources without additional authority. And, local and regional voter-approved funding mechanisms are heavily reliant on sales tax.

The Federal Transit Administration has expressed concerns that under our state’s current approach to transportation funding, the Puget Sound region will be unable to meet demand. Additional local option authority and flexibility for those transit agencies that have used their existing authority is consistent with the transportation policy goals of preservation and stewardship.

4.7 Delivering Results

Substantial evidence supports the need to improve the financial health of Washington's transportation system, from data on bridge and pavement conditions to public attitudes and opinions collected from Voice of Washington Survey responses and outreach conducted for WTP 2035. Two themes are essential to achieving sustainable financial health and security of the Washington's transportation system:

- Improved effectiveness from expenditure of existing revenues; and
- Enhancing existing revenue sources to address future transportation demands of a growing economy and population.

Efficiencies and Reforms

Washington should continue to seek improved efficiency in the planning, delivery and operation of passenger and freight transportation systems and services. Through improved accountability for expenditures, performance management, practical design methods, optimization of existing investments, increased collaboration between state and local agencies, and technology-based efficiency gains, all transportation partners need to seek to extract the maximum possible benefit from existing resources and revenue.

Specific reforms the state should consider include:

- Phasing out the use of studded tires to reduce maintenance and preservation costs. Damage to concrete pavement on state highways from studded tires costs the state between \$18 and \$27 million a year. Annual damage to city and county roads is millions more.
- Public-private partnerships for projects that focus on projects such as ferry terminals, rest areas, park and ride lots, and right of way access and do not involve tolling or highway transfers. Ports in this state have made Washington a national leader in trade through strong partnerships with private business.
- Provide WSDOT greater flexibility to determine the most effective, cost efficient solutions to meet transportation needs and expand the capital construction tools it has available, including alternative contracting methods, such as:
 - increased and streamlined use of design-build contracting;

- allowing use of a general contractor/construction manager delivery method for appropriate transportation projects; and
- allowing out-of-state firms to bid on ferry construction.

Revenue Enhancements

Even with improved efficiency and effectiveness of transportation-related expenditures, there remains a real need to address challenges that include an aging infrastructure, future increases in travel demand to support a growing population and economy, uncertainty of Federal funding, potential future decline in total gas tax proceeds as fleet fuel economy continues to improve, and the decline in real purchasing power of gas tax revenues due to inflation. Washington should consider a range of alternative revenue sources to augment existing mechanisms and address the growth in transportation demand and the eroding effect of inflation. Additionally, Washington should consider more aggressive application of innovative financing mechanisms such as public-private partnerships and intergovernmental partnerships to stretch available funds.

In addition to reiterating the previous WTP 2030 funding recommendations, WTP 2035 assesses the current status and future outlook for Washington's transportation funding and highlights several additional funding options. Several options to consider for increasing revenues over the next 20 years from now to 2035 are presented below. Some could be implemented soon, others later, and others not at all. Table 6 at the conclusion of this sections summarizes the available funding source options.

Increase fuel taxes and vehicle fees

Given potential declines in future state and Federal vehicle fuel tax revenues, Washington seeks more reliable transportation funding. In each of the last three years (2011 to 2013), the Commission has surveyed state residents regarding their perceptions of the transportation network, need for revenue, potential revenue sources, and priorities for the network. The Voice of Washington State (VOWS) survey has provided key insights into public perceptions of transportation funding across the State.

The Commission conducted 5,673 valid interviews for the 2013 VOWS and weighted results by demographics and RTPOs.⁵⁰ In 2013, 59% of respondents agreed that the State “needs additional revenue to keep our transportation system safe, effective, and properly maintained,” down slightly from 62% in 2012, and even with 59% in 2011. In 2013, 60% of respondents supported “raising some taxes and fees to increase funding for those transportation elements they feel are important,” an increase from 51% in 2012.

In addition to increasing the fuel tax by a specific number of cents per gallon, there are five other approaches for increasing vehicle user fees:

- Maintain the purchasing power of the fuel tax by indexing it to a 10 year trailing average of the Washington State Construction Cost Index (CCI). The Washington State CCI is recommended because it examines the weighted average of prices of transportation construction costs such as steel, rebar, metal plate, and portland cement.
- Maintain the purchasing power of licensing fee and permit fee related revenue by indexing them to a 10 year trailing average of the Consumer Price Index (CPI). The CPI is recommended because it examines the weighted average of prices of a basket of consumer goods and services, including transportation.
- Increase passenger vehicle registration weight fees and truck weight fees.

Debt Financing

The state used revenue generated from the 2003 and 2005 gas tax increases to build major highway improvements and ferry vessels, addressing long-deferred needs. While those projects are nearly complete, the gas tax revenue stream is burdened with a significant debt payment for many years into the future. Historically debt service payments were about 34% of the state’s net fuel tax revenue. By 2016, about 70% of the state’s gas tax net proceeds (about \$700 million annually) will go to debt service, and will remain at that level through the year 2030. The proportion could go higher if future fuel consumption declines any more than currently projected. The Transportation Commission recommends that with any future fuel tax increases, the state bond less and fund more transportation construction needs on a “pay as you go” or cash-flow basis, protecting more of the gas tax revenue for highway system maintenance.

⁵⁰ The 2011 VOWS used Addressed Based Sampling and was representative of Washington State adults ages 18 and above. In 2012 and 2013, WSTC sent web surveys to previously recruited VOWS panel members to participate in the survey.

- Increase the electric vehicle registration renewal fee (RCW 46.17.323) in a harmonious, consistent rate with any increases in the fuel tax.
- Reinststate an excise tax on motor vehicles (MVET), as the state had done prior to 1999, but address inequities that led to its repeal. Levy the MVET on the market value of a vehicle using the publicly accepted and currently utilized vehicle depreciation schedule in RCW 82.44.035. To reduce the impact on new vehicle purchasers, assess the MVET one year after the purchase of a new vehicle, rather than at the time of the purchase.

Continue evaluation of road usage charges.

Many states and regions are investigating new revenue sources in which road users are charged a fee based on their usage of the roadway system. In Washington, the legislature directed the Commission to assess whether road usage charges could viably replace the State's gasoline tax revenues.⁵¹ The assessment examined three possible implementation options for a road usage charge. The time permit method would charge a flat fee to operate a vehicle for an unlimited distance over a discrete time period. An odometer charge system would collect per-mile fees based on odometer readings. An automated distance charge would collect per-mile fees based on readings from in-vehicle technology that distinguishes between in- and out-of-state travel.

Although road usage charge systems would cost more to operate than the fuel tax system, it appears they would generate greater and more stable net revenue over the next 25 years. Offering drivers choices for method of payment would improve public approval and mitigate privacy concerns. Fuel tax increases would provide more net revenue than road use charges in the short term (± 10 years), but without subsequent increases, fuel tax revenues would fail to keep pace with transportation costs. Road usage charge systems would be more equitable across different fuel sources and fuel efficiencies.

Use tolling strategically

Tolling and other user-based fees can pay for projects and back financing through revenue bonds. Tolling generates revenue and manages congestion for the transportation network. Currently, WSDOT has three tolling facilities: the SR 520 Bridge, the Tacoma

⁵¹ Road Usage Charge Steering Committee, Washington State Transportation Commission, *Business Case Evaluation – Final Report*, January 7, 2014.

Narrows Bridge, and the SR 167 High Occupancy/Toll (HOT) lanes. WTP 2030 forecasted that WSDOT would obtain 3% of its revenue from tolling from 2009 to 2025, but current TRFC⁵² projections have pushed this figure to 7% for the 2013 to 2022. WSDOT is looking to expand tolling further. The agency plans to open facilities on I-405 and SR 99 and is conducting tolling studies on I-90 and the SR 509/I-5/SR 167 Gateway.⁵³

The Transportation Commission recommends expanded tolling as a revenue source for major transportation projects, where appropriate, to support construction of designated facilities or corridors, as a congestion management tool and, where appropriate, to support long-term maintenance and preservation of those facilities and corridors.

Adjust the ferry capital surcharge

A 25 cent surcharge is paid on the purchase of each ferry fare. As with the fuel tax and license fees, the ferry capital surcharge could be adjusted every 4 years for ferry capital costs by indexing it to a 4 year trailing average of the Washington State Construction Cost Index (CCI). The Washington State CCI is recommended because it examines the weighted average of transportation construction costs including steel and metal plate.

Expand city and county funding options

Transportation Benefit Districts. Cities and counties can form Transportation Benefit Districts (TBDs) with independent taxing authority to help fund local roadways, transit, and other infrastructure. With federal and WSDOT financial support uncertain and property taxes capped, cities and counties can use TBDs to fill funding gaps. Councilmanic action can create TBDs that generate some revenue, but, beyond a certain point, revenue increases require voter approval. The Legislature could raise the maximum license fees allowed by councilmanic vote.

⁵² February 2014 Transportation Economic and Revenue Forecasts. Data from Transportation Revenue Forecast Council: http://wstc.wa.gov/documents/2014_February2014SummaryVol1.pdf (accessed November 25, 2014).

⁵³ Washington State Department of Transportation, *WSDOT Toll Division Annual Report FY 2013*, March 2014.

Street Maintenance Utilities. In past years, cities have sought to augment transportation revenue by creating street utilities but these efforts have not survived legal challenges. The Transportation Commission has recommended that cities be authorized to enact a street maintenance utility based on the feet of travel lane (or lanes) abutting the property and capped at the amount that could be charged per foot. Revenue would be available for operations usually done by city crews, such as seal coating, sweeping, street lighting, cleaning and maintaining drains, snow removal, sign repair and replacement and striping. This authority also could be extended to GMA-planning counties for streets and roads within unincorporated urban growth areas.

Local Fuel Tax. Counties currently have the authority to impose a local fuel tax, but it is not implemented. This option is authorized as a percent of the state tax rate and requires a public vote. The authority could be amended to allow counties and cities to impose additional cents per gallon by councilmanic authority.

Partnerships and Innovative Finance

A third general strategy, that of partnering with the private sector or authorizing innovative financing methods, is also important to consider. While not a direct source of additional funding, partnerships can reduce expenditure requirements and some financing methods can accelerate needed investments by borrowing against anticipated future revenue streams. While debt financing does increase the State's future debt obligations, it also allows improvements to be delivered sooner than would be the case with a "pay as you go" approach, and thus the benefits of the investment begin to accrue sooner as well. An innovative finance approach is an important aspect of the overall challenge of paying for needed performance improvements, expansion, maintenance, and preservation of the many components of Washington's transportation system.

Expand partnerships with the private sector.

Partnerships with private sector interests can benefit construction or operation of non-highway transportation projects, such as potential ferry terminal replacements and park-and-ride facilities. The Commission recommends the Legislature implement the recommendations the Transportation Commission made in its 2011 report to the Legislature titled: "Best Practices Review of Washington State Public Private Partnership Programs and Laws for Non-Toll Facility Projects." (For the full report visit the Commission website: www.wstc.wa.gov.) Other partnership opportunities could expand the electric vehicle charging network, maintain and operate rest areas, and support transit oriented development.

Explore viability of Tax Increment Financing.

Tax Increment Financing (TIF), a value capture mechanism, can be used to fund transportation projects that are expected to increase the value of nearby properties, and thus increase local tax revenue. Local governments borrow against these expected tax revenues to finance project construction, sometimes in conjunction with other significant infrastructure improvements or Transit Oriented Developments. Washington is one of two states that cannot implement TIF. Washington's property tax system is the primary barrier to TIF, and although some work-arounds have been authorized, they have been limited in number.

Table 6 below summarizes the available funding source options considered in WTP 2035.

Table 6. Summary of Available Funding Options

1	Maintain the purchasing power of the fuel tax by indexing it to a 10 year trailing average of the Washington State Construction Cost Index (CCI). The Washington State CCI is recommended because it examines the weighted average of prices of transportation construction costs such as steel, rebar, metal plate, and portland cement.
2	Maintain the purchasing power of licensing fee and permit fee related revenue by indexing them to a 10 year trailing average of the Consumer Price Index (CPI). The CPI is recommended because it examines the weighted average of prices of a basket of consumer goods and services, including transportation.
3	Increase passenger vehicle registration weight fees and truck weight fees.
4	Increase the electric vehicle registration renewal fee (RCW 46.17.323) in a harmonious, consistent rate with any increases in the fuel tax.
5	Impose an excise tax on motor vehicles (MVET). To address inequities that led to its repeal, <ul style="list-style-type: none"> levy the MVET on the market value of a vehicle using the publicly accepted and currently utilized vehicle depreciation schedule in RCW 82.44.035; and assess the MVET one year after the purchase of a new vehicle, rather than at the time of the purchase.
6	Support expanded local funding options and associated additional accountability requirements: <ul style="list-style-type: none"> Authorize cities to create street maintenance utilities; Provide Transportation Benefit Districts (TBDs) additional revenue generating capacity, such as raising the maximum license fees allowed by councilmanic vote. Amend the authority for counties and cities to impose a fuel tax.
7	Use tolling as a congestion management tool and a revenue source for major transportation projects, where appropriate, to support construction of designated facilities or corridors, and, through expanded authority, long-term maintenance and preservation of those facilities corridors.
8	Adjust the ferry capital surcharge every 4 years to augment fuel tax revenues for ferry long-term costs by indexing it to a 4 year trailing average of the Washington State Construction Cost Index (CCI), rounded to the nearest nickel. The Washington State CCI is recommended because it examines the weighted average of transportation construction costs including steel and metal plate.
9	Consider changing the method of payment for supporting road and highway costs from the fuel tax to a road usage charge based on the number of miles driven for drivers of passenger cars.

Note: The Washington State Construction Cost Index (CCI) is calculated based on historical use of the seven bid items and is tracked to show the trend in highway material costs. The seven bid items include roadway excavation, crushed surfacing, hot mix asphalt, portland cement concrete pavement, structural concrete, reinforcing bar, and structural steel.

APPENDICES

APPENDIX A. GLOSSARY OF TERMS

American Community Survey (ACS).....An ongoing, yearly survey of Americans, distributed by the United States Census Bureau. This is a representative sample used to describe demographic characteristics of communities and is similar to the decennial census, which is distributed to all households every ten years.

Association of Washington Business (AWB).....The oldest and largest statewide business associate that serves as Washington's chamber of commerce and manufacturing and technology association.

Autonomous Vehicles.....Self-driving, or driverless, cars. The vehicle senses the surrounding environment and safely navigates to a destination automatically, without human involvement. These vehicles are under test and development but analysts and experts predict they will be available for public use sometime within the next fifteen years.

Bike-Sharing.....A public system allowing bicycles to be borrowed for a short time, usually less than one hour, for travel within a city. Bicycles are borrowed for single trips, from point A to point B, and allows users to select a bicycle at the starting location from a bike-station and return the bicycle at another bike-station close to their destination.

Car-Sharing.....A private service allowing users to rent cars for short periods, usually for a few hours. A handful of vehicles are available for rent at a common location and users signup and select which hours they want to use the vehicle. Some companies focus on peer-to-peer car-sharing, allowing private owners to rent their car to others.

Clean Water Act.....Federal and state legislation that regulates water quality standards. In Washington, these laws are administered by the Department of Ecology.

CMAQ.....Congestion Mitigation and Air Quality Program. A federal funding mechanism for surface transportation and related projects that improve air quality and reduce emissions. These funds are only available in air quality nonattainment and maintenance areas.

Columbia/Snake River System.....A major river system in the Pacific Northwest and a vital commercial waterway.

Commute Trip Reduction Program.....A Washington law that addresses air pollution and fuel consumption and is required in cities with traffic congestion. Local governments must establish programs and projects to reduce the number of trips taken in single-occupied vehicles and the total number of vehicle miles traveled (VMT) per capita.

Commuter Rail.....Passenger rail transportation service that provides service from the suburbs, or surrounding area of a city, to the city center. The Sounder, operated by Sound Transit, is the commuter rail service in the Seattle area.

Complete Streets.....A street design that includes infrastructure and features that enables comfortable and safe access for all users, including pedestrians, bicyclists, transit users, and motorists. Some common features includes bicycle lanes, paved shoulders, and crosswalks.

Comprehensive Plan.....The Growth Management Act requires local agencies to develop and adopt long-range plans that guide all development activity. Local Comprehensive Plans must be consistent with the long-range Regional Transportation Plan, which must be consistent with the local plans. This overlapping consistency requirement ensures ongoing coordination between local and regional agencies.

Congestion Pricing.....A toll or variable price that is dependent on the amount of congestion on the roadway. As congestion increases, the price for using the roadway increases to prevent excessive congestion. This allows traffic to run more efficiently and spread travel across the transportation network at different hours of the day.

Connecting Washington.....A 2012 transportation funding analysis that reviewed the condition of Washington's transportation system.

Consumer Price Index (CPI).....The measure of the change in price of goods and services associated with the cost of living, such as food and transportation. The Bureau of Labor Statistics collects this information and is used as a basis for calculating inflation.

Coordinated Human Services Transportation Plan.....A plan identifying the transportation needs of the elderly, individuals with disabilities, and low-income residents. This plan is required to receive certain Federal funding and is used to improve transportation access using all possible resources. The goal of Human Services Planning is providing social equity and improving the overall quality of life for these individuals.

County Road Administration Board (CRAB)..... A Washington State board responsible for providing technical assistance, best management practices, and distribution of state funds for county roads and bridges.

Commute Trip Reduction (CTR).....In 2006, the Washington State Legislature passed the Commute Trip Reduction Efficiency Act, which requires major employers (including state agencies) in those specific areas experiencing the greatest automobile-related air pollution and traffic congestion to develop and implement plans to reduce employee commute auto trips. The Act applies only to major employers, for their employee commute trips only.

Demand Response Transit Service.....A non-fixed route transit system. Service is available anywhere within defined geographic boundaries (usually within a county) and provides door-to-door transportation. Users must call ahead to schedule a trip and service may be exclusive to certain populations or trips, such as individuals with disabilities.

EMD.....Department of Military's Emergency Management Division. Responsible for increasing public awareness of natural disasters, emergencies, and hazards in order to minimize the impact of emergencies and disasters.

Express Regional Bus.....Bus service with limited stops and longer routes, usually between city centers and the suburbs.

Express Toll Lanes (ETL).....In Washington, Express Toll Lanes give drivers the option to use high occupancy vehicle (HOV) lanes by paying a toll.

Federal Land Highways (FLH).....This office is a division of the FHWA and provides technical and financial assistance to coordinate the planning of public roads on Federal and Indian lands.

FHWA.....Federal Highway Administration, the arm of the USDOT with responsibility for federally-funded highways and bridges, among other authorities.

Freight Mobility Strategic Investment Board (FMSIB)Washington state board with authority and responsibility for creating a comprehensive and coordinated program for freight movement in the state. These programs must lessen the impact of freight on local communities.

FTA.....Federal Transit Administration, the arm of the USDOT with responsibility for all forms of public transportation using federal capital or operating funds, including urban bus and light rail systems. Intercity bus and intercity passenger rail are administered by other arms of the USDOT.

GHG.....Greenhouse Gas Emissions; in the transportation sector, primarily carbon dioxide. These gases contribute to climate change and air pollution.

GIS.....Geographic Information System. A system that integrates hardware, software, and data for capturing, managing, analyzing, and displaying all forms of geographically referenced information.

GMA.....Growth Management Act. State legislation passed in 1990 requiring most counties and cities to cooperatively develop and periodically update plans related to land use, infrastructure, services, housing, etc.

Highway Trust Fund.....The primary federal funding account for surface transportation. The HTF receives money from the federal fuel tax on gasoline and other fuel sources.

HOT.....High-Occupancy Toll. An express lane on an interstate or highway that is meant for drivers to bypass congestion. Users must pay a variable or fixed toll and high-occupancy vehicles may be allowed to use the lane for free.

HOV.....High-Occupancy Vehicles. Similar to express toll lanes and HOT lanes though instead of paying a toll, vehicles are permitted to use the express lane if there are a pre-defined number of passengers, usually at least one or two.

ITS.....Intelligent Transportation Systems. A wide range of advanced technologies that improve the safety and operating efficiency of existing transportation facilities or services. Common examples include central dispatch of road emergency assistance, freeway traffic maps shown on TV or internet to warn motorists of accidents, and signs that map 'real-time' location of transit vehicles.

JTC.....Joint Transportation Committee of the Washington State Legislature.

Last Mile.....Term used in describing the importance of connections between a form of transportation (e.g., city bus or freight-carrying truck) and its ultimate destination. The terms "first and last mile", regardless of the actual distance involved, refer to the connection, or lack thereof, between the line-haul portion of the trip and the actual origin and final destination of the passenger or the freight cargo.

Light Rail Transit (LRT).....A form of public transportation that operates on rails, within a dedicated right-of-way. LRT operates at higher speeds and capacity than streetcars but compared to heavy rail it is slower with less capacity. Service areas can extend from downtown to the outlying suburbs with many stops. In Seattle, Central Link, operated by Sound Transit, is the city's LRT system.

MAP-21.....Moving Ahead for Progress in the 21st Century, the Federal transportation funding authorizing legislation.

Megaproject.....Major capital and large-scale construction projects. In Washington, this includes the Alaskan Way Viaduct and the SR 520 Bridge projects.

Mitigation Bank.....The restoration, formation, improvement, or in specific circumstances, preservation of a wetland or other aquatic resource for the purpose of providing compensation for unavoidable impacts and/or losses of the aquatic resource.

Motor Fuel Tax.....Federal, state, and local taxes on gasoline, diesel, and other similar types of fuel. Currently, the Federal tax rate on gasoline is 18.4 cents per gallon. In the State of Washington, the state tax rate is 37.50 cents per gallon.

MPO.....Metropolitan Planning Organization. Agency designated by the Governor to administer the Federally required transportation planning in a metropolitan area over 50,000 in population. Duties include updating a 20-year regional transportation plan (RTP), a transportation improvement program (TIP), and a unified planning work program (UPWP). State law requires MPOs to be the RTPO lead agency where their boundaries overlap.

NextGen Technologies.....Next Generation Air Transportation System. The new, planned upgraded technology for air travel that allows airplanes to navigate via satellite-based technology rather than the current ground-based system. This technology is being implemented in stages across the United States and is expected to increase the efficiency and safety of air travel.

Office of Financial Management.....A governmental department providing vital information, fiscal services, and policy support for Washington State. These services are used by the governor, legislature, and state agencies.

Paratransit..... A non-fixed route transit system, similar to Demand Responsive Transit. Service is available anywhere within defined geographic boundaries (usually within a county) and provides door-to-door transportation. Users must call ahead to schedule a trip and is exclusive to individuals with disabilities. Transit agencies must provide this service to comply with the Americans with Disabilities Act.

Park and Ride Lots.....Designated parking lots adjacent to rail stations, carpool, vanpool, or other transit services transfer locations. This allows commuters to drive to a station or transit stop, transfer to transit, and complete the remainder of their journey via transit.

Public-Private Partnerships (P3)Contractual agreements between a private sector company and a public agency that allows for greater participation from the private sector for financing and the delivery of transportation projects.

Road Usage Charges.....An alternative to the motor fuel tax in which users would be charged based on how many miles they drive rather than the amount of fuel they purchase. The revenue from this system will be used to fund transportation projects. Currently, this program is not implemented in Washington State but is being assessed by WSDOT.

Route Deviated Transit Service.....This transit service is the combination of fixed-route, urban bus service and demand responsive transit. The bus traverses along a fixed route with a set schedule but is allowed to deviate from the route, up to a predefined distance.

RTP.....Regional Transportation Plan. Washington's 11 MPOs and 14 RTPOs are required by state and Federal laws to maintain a plan that looks out over at least a 20-year horizon, and ensures coordination across all jurisdictions for all modes of transport.

RTPO.....Regional Transportation Planning Organization. State-designated agency created to ensure that regional transportation planning is consistent with countywide planning policies and growth strategies for the region. Duties include updating a 20-year regional transportation plan (RTP) and a transportation improvement program (TIP).

Safe Routes to School.....Programs with the goal of enabling and encouraging children to walk and bicycle to school. Conditions surrounding schools are assessed based on safety and accessibility. The program then focuses on infrastructure improvements with education and community support to improve current conditions. The program is a collaboration between parents, schools, local communities, state, and federal governments.

SHSP.....Strategic Highway Safety Plan, a federally-mandated strategic plan for addressing roadway and highway safety at the state level. *Target Zero* is Washington State's Strategic Highway Safety Plan.

Smart Corridors.....'Smart Corridors' is a Regional Transportation Policy Board initiative using Federal Congestion Mitigation and Air Quality (CMAQ) funds to upgrade transportation system technology in key regional strategy corridors as a means of increasing system safety and efficiency without street widening.

SR.....State Road. Limited-access highways including interstates and other vital arterials.

State Environmental Policy Act (SEPA).....Legislation in Washington State used to evaluate various governmental decisions, such as building permits, construction of infrastructure, or new regulations. The evaluation includes possible environmental impacts from implementing the decision in question and is applied to all state and local agencies.

Streetcars.....A transit mode that operates on rails and is powered by overhead electric wires. They operate at lower speeds and capacity levels compared to light rail transit, and typically operate within a downtown or other high-density area or transportation corridor.

Target Zero.....Washington State's federally-mandated Strategic Highway Safety Plan. Refers to the goal of the plan, which is to have zero vehicle deaths and serious injuries in 2030.

TBD.....Transportation Benefit Districts. Legislation in Washington State that authorizes local governments to fund transportation improvements through various taxes and fees.

TDM.....Travel Demand Management. TDM encompasses a suite of tools that modify peoples' travel behavior to better manage capacity resources of the transportation system, and improve operating efficiency. Examples of TDM tools range from "incentive" type programs like employer-subsidized bus passes, compressed work weeks, and telework options, to "market measures" like employee-paid parking and variable-rate toll roads with rates based on time-of-day travel. The State's Commute Trip Reduction program is a TDM element. Even measures like effective land use planning fall under the realm of TDM, since the way a community is built – and the kind of travel options it provides – will influence individual travel behavior.

Telework.....Instead of working at the principal place of employment, an employee works at home or from another office near the employee's home at least once very two weeks. This results in fewer commute trips. See: <http://www.governor.wa.gov/office/execorders/documents/14-02.pdf>

TEU.....Twenty-Foot Equivalent Unit Containers, a term used in marine, rail and truck shipping that is used to describe the capacity of container ships and terminals.

TIF.....Tax Increment Financing. An option to finance public infrastructure using the expected future gains in tax revenue, usually through property taxes of new development. Currently, Washington does not have Tax Increment Financing.

TOD.....Transit-Oriented Development. A type of mixed-use development that is located within walking distance to a quality, frequent transit service. Included are residential units, retail, offices, and other uses that promotes a walkable and accessible area.

Transportation Improvement Board (TIB).....An independent Washington agency that distributes and manages grants for high priority transportation projects throughout the state.

Traveler Information Systems..... One component of Intelligent Transportation Systems. A wide range of information services, public and private, that convey useful information including transportation network condition and performance, weather, schedules, and availability to auto and truck drivers, transit riders, and other modal system users, both in advance of a trip, as well as after the trip is underway.

TRFC.....Transportation Revenue Forecast Council. Within the Office of Financial Management, this council is responsible for forecasting transportation revenues through a variety of funding sources.

UCTF.....Urban Corridors Task Force. A subcommittee of policy-makers from the TPB and TRPC representing jurisdictions in the north urban area and focused on achieving the transportation-efficient land use called for in locally adopted plans.

UGA.....Urban Growth Area. The designated boundaries where urban growth can occur. This tool is provided by the GMA for planning for future urban growth.

Urban Bus Transit.....Fixed-route bus service that follows a pre-defined schedule. Service is based within a city but may extend beyond to provide access to major employment centers or destinations.

Urban Partnership Agreement.....An agreement between USDOT, WSDOT, King County Metro, and Puget Sound Regional Council to test new technologies with the goal of reducing congestion. Projects included in this program involved variable toll on SR 520 bridge, active traffic management, new buses and park and ride locations, expansion of TDM and telework, and ferry projects. Three other regions in the country participated in the testing as well: Miami, Minneapolis, and San Francisco.

USDOT.....United States Department of Transportation. A Federal Cabinet department with multiple, transportation-related agencies, such as the FHWA and FTA.

Value-Capture Strategies.....Financing strategies that attempt to redirect increases in property value surrounding new transit facilities to the public or transit agency. Some examples include air rights, development impact fees, or tax increment financing.

VMT.....Vehicle Miles of Travel. A measurement representing the total number of miles traveled by all vehicles within a region or roadway for a certain length of time.

VOWS.....Voice of Washington State survey. A survey sponsored by the Washington State Transportation Commission to gather public opinion and input regarding transportation policy, taxes, and funding. Surveys are sent throughout the year on a variety of transportation topics.

Washington's Growth Management Act.....See GMA

WSDOT.....Washington State Department of Transportation. Washington's state department responsible for planning, building, maintaining, and operating the state highway system. Other responsibilities includes the state ferry system, and partnering with other agencies to improve the entire multimodal transportation system in the state.

WSF.....Washington State Ferries, a part of WSDOT, a passenger and automobile ferry network providing service to various areas on Puget Sound and San Juan Islands.

WSTC.....Washington State Transportation Commission, also referenced as "the Transportation Commission". This is a public forum for transportation policy development and develops Washington's 20-year Transportation Policy Plan. WSTC also sets the tolls for state highways and bridges as well as the fares for the Washington State Ferries.

APPENDIX B. WTP 2035 STEERING COMMITTEE AND ADVISORY GROUP

WTP 2035 Steering Committee

Jerry Litt, Washington State Transportation Commissioner

Lon Wyrick, Thurston Regional Planning Council

Brian Smith, WSDOT Strategic Planning and Programming

Amy Scarton, WSDOT, Assistant Secretary, Community & Economic Development

Advisory Group Members

Transportation Commissioner Philip Parker

Transportation Commissioner Joe Tortorelli

Association of Washington Business, Gary Chandler

Association of Washington Cities, Alison Hellberg

Department of Commerce, Dave Andersen

Department of Ecology, Nick Roach

Freight Mobility Strategic Investment Board, Ashley Probart

Futurewise, Hilary Franz

Governor's Office/OFM, Robin Rettew

Puget Sound Partnership, Jim Bolger

Puget Sound Regional Council, Charlie Howard

Skagit-Island RTPO, Kevin Murphy

Spokane MPO/RTPO, Kevin Wallace

Nooksack Tribe, Keri Shepherd, Transportation Planner

Transportation Choices, Andrew Austin, Washington

Washington Public Ports Association, Ed Galligan/Port of Olympia

Washington Roundtable, Neil Strege

Washington State Association of Counties, Gary Rowe

Washington State Traffic Safety Commission, Darrin Grondel

Washington State Transit Association, Justin Leighton/Pierce Transit

Healthy Communities, Barbara Wright

APPENDIX C. ADDITIONAL DOCUMENTATION

A number of additional documents were created during development of WTP 2035 to present the results of investigation into various topics, as well as to document the public outreach process. These and other related items are available on the WTP 2035 website, www.wtp2035.com:

Technical Memoranda and Working Papers

Technical Memorandum #1, Document Review and Synthesis, January 2014

Technical Memorandum #2, Existing Conditions and Trends, May 2014

Working Paper #1, Vision and Goals Update, May 2014

Working Paper #2, Needs Assessment, June 2014

Working Paper #3, Draft Strategies and Actions, June 2014

Public Outreach and Stakeholder Engagement

Summary of Stakeholder Roundtable Meetings, May 2014

Summary of Public Comments on Draft WTP 2035, October 2014

Public Outreach Journal, November 2014

Summary of Media Outreach Activities

Database of Public Comments Received at Open Houses and by E-Mail

Public Comment Letters Received

WTP 2035 Draft and Final Documents

WTP 2035 Public Review Draft, July 2014

WTP 2035 Public Review Draft Executive Summary, July 2014

WTP 2035 Final Executive Summary, January 2015