

WSDOT MAINTENANCE AND PRESERVATION

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Joint Transportation Committee
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Washington's economy depends on the transportation system

- In 2018, US News & World Report ranked Washington's economy best in the nation
- In 2019, Washington state ranked fourth most trade-dependent state in the nation
- A half trillion dollars of goods and services move on our state transportation system



Washington's economy depends on the transportation system

- Agriculture and the freight industry relies on WSDOT infrastructure
 - If they can't get to market or experience delays – the effects are widespread and costly
- Our transportation system connects people to jobs, services and recreation
- Our state's prosperity is at risk if we continue to underfund the maintenance and preservation of our:
 - Roads and bridges
 - Ferry vessels and terminals
 - Airports and rail
 - Pathways that support alternative modes of travel



WSDOT's transportation system is on a glide path to failure

- Transportation infrastructure is our economic backbone – enables people, goods and services to move around the state and country
- Failure to maintain and preserve our transportation infrastructure will impact the state's economy
- Our continued prosperity is tied to our state transportation system's health



Preservation and maintenance are a priority

- State law, legislative direction, and WSDOT Strategic Plan – all recognize the importance of preserving our transportation infrastructure
- Maintenance and preservation is about taking care of what we have
- Preserving the system enhances people's quality of life and contributes to a continued successful economic future
- Current funding to preserve and properly maintain the system is inadequate compared to needs

Policy Goals for State Transportation System – RCW 47.04.285

- 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, including congestion relief and improved freight mobility;
- Environment: To enhance Washington's quality of life through transportation investments that promote energy conservation, enhance healthy communities, and protect the environment; and
- Stewardship: To continuously improve the quality, effectiveness, and efficiency of the transportation system.



Preservation is needed now

- 4,000 lane miles of pavement are due for preservation, another 3,600 are past due
- 15 bridges need replacement, 19 need major rehabilitation
- 60 steel bridges are due for painting, 39 are past due
- 56 concrete bridge decks are past due for repair, and 30 more are due
- 17 of the 22 Ferry Vessels Have a Preservation Backlog – the average vessel is 28 years old
- More than 20% of the Palouse River and Coulee City (PCC) is in poor condition and only capable of 10 MPH operations
- 110, or 39%, of WSDOT facilities are more than 50 years old



Asset management – All WSDOT

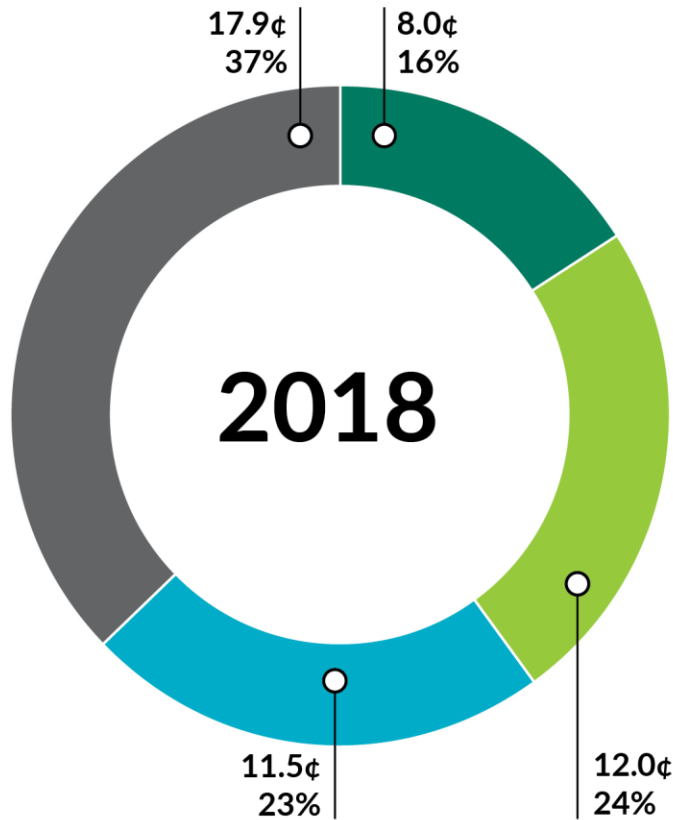
(Millions of dollars)	Replacement Value	10-year Average Spending	10-year Future Annual Avg. Spending	10-year Annual Additional Needs	10-year Budget, Plus Needs Annual Avg.
Highways	\$109,390	\$330	\$335	\$330	\$665
Multimodal (i.e. Aviation, Public Transportation, Rail)	\$600	\$15	\$20	\$90	\$110
Intra-Agency (i.e. IT, Facilities, Fleet, Real Estate)	\$66,480	\$55	\$70	\$55	\$125
Ferries	\$4,940	\$110	\$125	\$215	\$340
TOTAL	\$181,410	\$510	\$550	\$690	\$1,240

* State-owned system only; does not include local asset needs

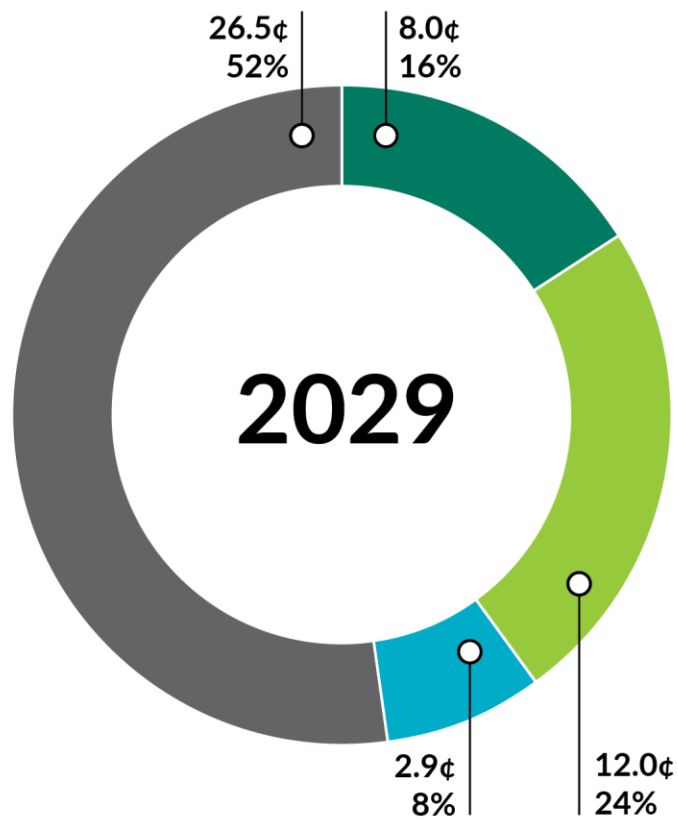
January 2019

Available Funding

Where Does the 49.4¢ State Gas Tax Go?



Where Will the 49.4¢ State Gas Tax Go?



- WSDOT*
- Cities & Counties (Local Government)
- Legislatively Directed Investments**
- Debt Service**

* Includes operations, maintenance, preservation and safety improvements.

** Includes funding for projects specified in the 2003 Nickel, 2005 Transportation Partnership, and 2015 Connecting Washington acts, as well as funding to pay off bonds funded by pre-2003 fuel tax.

Statewide Transportation Asset Management Plan

- Agency wide, WSDOT developed 20 asset management plans to ensure ferry vessels, pavements, locomotives, bridges and information technology systems have a long, useful life cycle – with a clearly defined course for achieving performance outcomes
- Asset management mitigates and manages the rate of deterioration across all assets
- Preserving and maintaining assets saves money in the future while maximizing the condition and performance across the transportation network



Difficult Trade-Offs



- At current funding levels, WSDOT does not expect to meet federally required 10-year condition targets
- In the current plan, starting in 2021-23 and beyond, WSDOT is no longer investing in:
 - Ramp paving
 - Paving on sections in 40 MPH or lower speed zones
- Strategies are fundamentally about reducing the rate of deterioration – not about improving the condition of infrastructure
- We're not funded to make the right investments at the right time, which increases costs

How WSDOT manages assets with limited preservation and maintenance funding

- New management strategies
- Use existing asset service life
- Adjust service levels and expectations
- Accept financial liability due to deferrals



New management strategy – strategic maintenance

- Extends the life on portions of an asset
- Defers more expensive capital costs
- Lowers annual average pavement needs by \$15-20 million by implementing one-touch paving policy
- Slows overall deterioration for a few years – does not solve the growing backlog



Using existing asset service life – concrete pavements

- Most concrete pavements built in the 1960's
- Originally anticipated to last 20 years
- Majority of concrete pavements still in use today
- High preservation costs will need to be addressed in the next 10-15 years



Adjust service levels and expectations – chip seal resurfacing

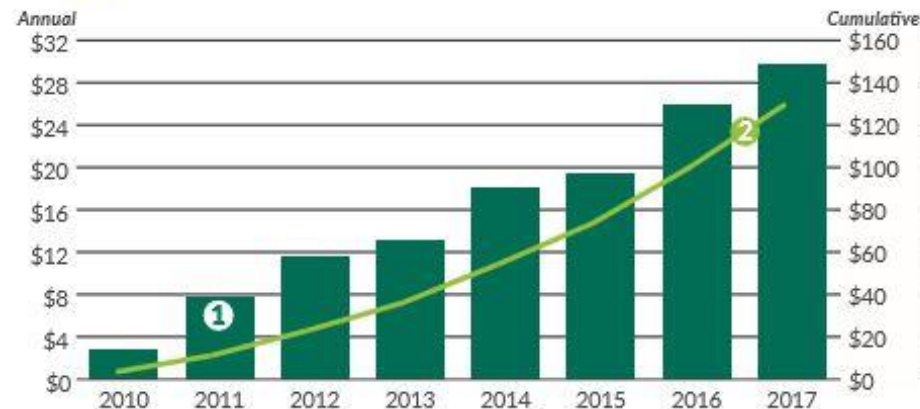
- More cost-effective compared to asphalt surfacing
- Less enjoyable driver experience, but still within acceptable performance
- WSDOT changed application criteria from 2,000 ADT to 10,000 ADT
- In combination with strategic maintenance, generated lower average annual funding needs for pavements
- Funding no longer adequate to continue conversion strategy

Estimated savings from chip seal conversion pass \$120 million in 2017

2010 through 2017; Dollars in millions

① Annual estimated savings from resurfacing asphalt pavement with chip seal

② Cumulative estimated savings from resurfacing asphalt pavement with chip seal



Data source: WSDOT Pavement Office.

Note: Savings are calculated based on an estimate of \$13,000 saved per lane mile per year.

Accepting financial liability due to deferral – investment trade-off decisions

- Starting in 2021-23, no longer investing in chip seal conversions, ramp paving, or pavements with speeds of 40 MPH or lower
- Additional trade-offs required to avoid other network risks include:
 - The need for major rehabilitation work
 - Deteriorated conditions on higher speed facilities



In summary:

- Maintenance and preservation is important to Washingtonians and to the overall health of our economy
- As we've demonstrated today, we have an annual funding gap of \$690 million
- We've been creative and good stewards of the system with the funds we have; however, the system continues to deteriorate
- Our current preservation funding:
 - Defers repairs
 - Incurs more expensive repairs in the future
 - Uses up asset service life
 - Fails to meet public expectations

Questions?

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