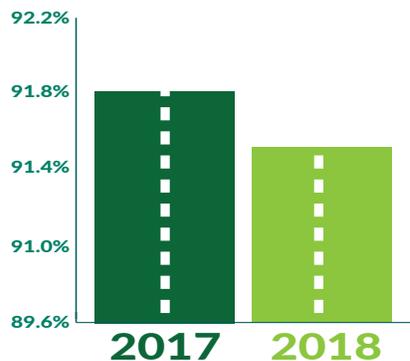


Gray Notebook Lite **76**



PERFORMANCE HIGHLIGHTS reported for the quarter ending December 31, 2019

PERCENTAGE OF PAVEMENT LANE MILES IN FAIR OR BETTER CONDITION DROPPED FOR FOURTH CONSECUTIVE YEAR TO 91.4% IN 2018



383

of 421 projects completed with **Nickel** or **Transportation Partnership Account** funds

77 PERCENT

of **highway maintenance** asset condition targets were achieved by WSDOT in 2019

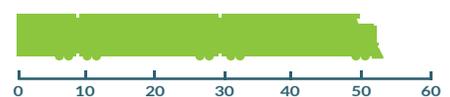
9

written **environmental violation** notices issued to WSDOT and its contractors in 2019, up from six in 2018

206 PERCENT

increase in **public charging ports** for electric vehicles between 2015 and 2019

WSDOT has 53 FREIGHT RAIL PROJECTS UNDERWAY in 2018



\$25.0 MILLION

in economic benefit provided by WSDOT's **Incident Response** teams clearing 14,335 incidents during the quarter

6.0 PERCENT

improvement in WSDOT's agency-wide **Recordable Incident Rate** from 2018 to 2019

Concrete pavement preservation expected to need as much as \$2.64 billion through 2049

WSDOT estimates that it will need a total of \$2.25 billion to \$2.64 billion for concrete preservation through 2049, or \$75 million to \$88 million annually for the next 30 years. This estimate, which does not account for inflation, reflects an average annual need to reconstruct 41 lane miles of concrete pavement and rehabilitate 45 lane miles.

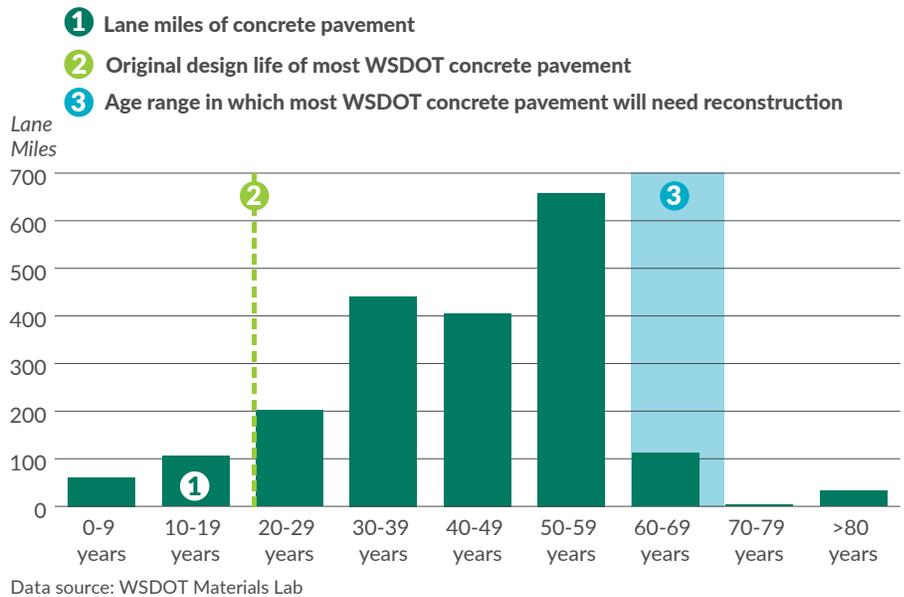
Much of WSDOT's pavement was constructed as part of the interstate highway construction program in the 1960s and 1970s, when concrete roadways were designed to last for about 20 years. WSDOT has been able to use a variety of rehabilitation treatments such as dowel bar retrofit, diamond grinding and selective slab replacement to extend the life of its concrete pavement. These rehabilitation treatments typically cost \$400,000 to \$800,000 per lane mile, and can extend pavement life by 10

to 15 years. Rehabilitation cannot extend the life of concrete pavement indefinitely. As its condition declines, pavement becomes rougher, unexpected panel failures become more common, and rehabilitation

becomes less cost effective. WSDOT estimates that most of its concrete pavement will reach the point where rehabilitation is no longer cost effective between the ages of 60 and 70 years.

Over half of WSDOT's concrete pavement is more than 40 years old in 2018

Lane miles of WSDOT concrete pavement by age group



Traveling by transit continues to be far safer than general travel on public roadways

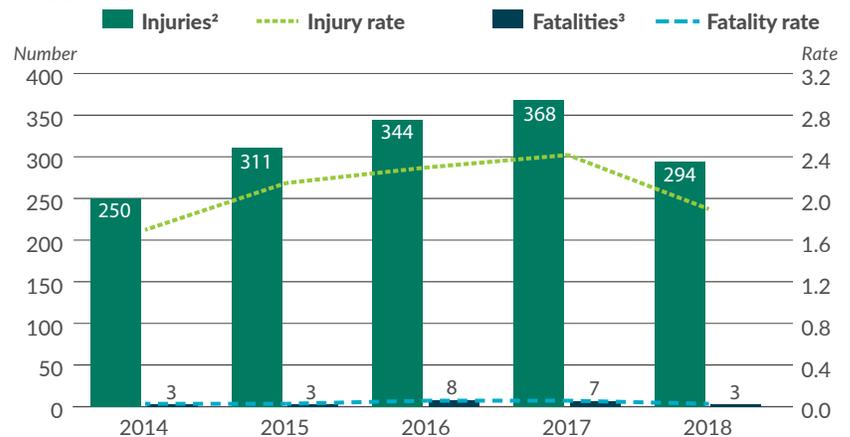
In 2018, there were three fatalities related to transit (buses, light rail trains, trolley buses and vanpools) in Washington state, a 57% decrease from seven in 2017 (see chart at right). The transit-related fatality rate in 2018 was 0.02 per million vehicle revenue miles, a 60% drop from 0.05 in 2017.

The five-year (2014-2018) average fatality rate was 0.03 per million VRM. The rate of fatalities on all public roads in Washington averaged 87.9 per million vehicle miles traveled from 2014 through 2018 (see [Gray Notebook 75, p. 14](#) for details)

Transit-related injuries decreased by 20% in 2018, dropping to 294 from 368 in 2017.

Transit-related fatalities and injuries in Washington both decrease in 2018

2014 through 2018; Number of injuries and fatalities; Rate of injuries and fatalities per million VRM¹



Notes: Data for 2014, 2015 and 2016 has been updated since Gray Notebook 68 to include Demand Response transit service. **1** Vehicle Revenue Miles (VRM) is the number of miles traveled by a transit vehicle while in revenue service; this measurement excludes miles traveled to or from an assigned route. **2** Injuries are individuals transported away from the scene of a transit-related incident for medical attention, including for emotional harm. **3** Fatalities are deaths related to transit-related incidents confirmed within 30 days of the incident, excluding deaths due to illness or natural causes.

Washington state exceeds Gov. Jay Inslee's goal of registering 50,000 electric vehicles by 2020

Washington state had 53,307 plug-in electric vehicle registrations (EVs) as of December 31, 2019, surpassing Gov. Jay Inslee's Results Washington goal of 50,000 registered EVs by 2020. This is a 24% increase in EV registrations from 42,878 in 2018 and a 222% increase from 16,579 in 2015.

Washington state is second in the nation in terms of EV market share, with more than 26 EVs per 1,000 registered vehicles.

The total EV count in Washington includes 36,129 battery electric vehicles (BEVs) and 17,178 plug-in hybrid electric vehicles (PHEVs). Washington has maintained a ratio of approximately two BEVs for every PHEV since 2015.

In an effort to reduce its environmental footprint, WSDOT is purchasing EVs for its passenger vehicle fleet. As of 2019, EVs made up 23% of WSDOT's fleet with 88 vehicles, up from 21 EVs in 2015.

Plug-in electric vehicle registrations surge upward in Washington

2015 through 2019; Number of plug-in electric vehicle registrations by vehicles type; Includes battery electric vehicles and plug-in hybrid electric vehicles

Vehicle type	2015	2016	2017	2018	2019
BEV	11,551	14,573	20,010	27,853	36,129
PHEV	5,028	7,424	10,015	15,025	17,178
EV totals	16,579	21,997	30,025	42,878	53,307

Data source: Washington State Department of Licensing.

Notes: BEV = Battery electric vehicles. PHEV = Plug-in hybrid electric vehicles. EV = Electric vehicles.

WSDOT able to meet targets for highway maintenance

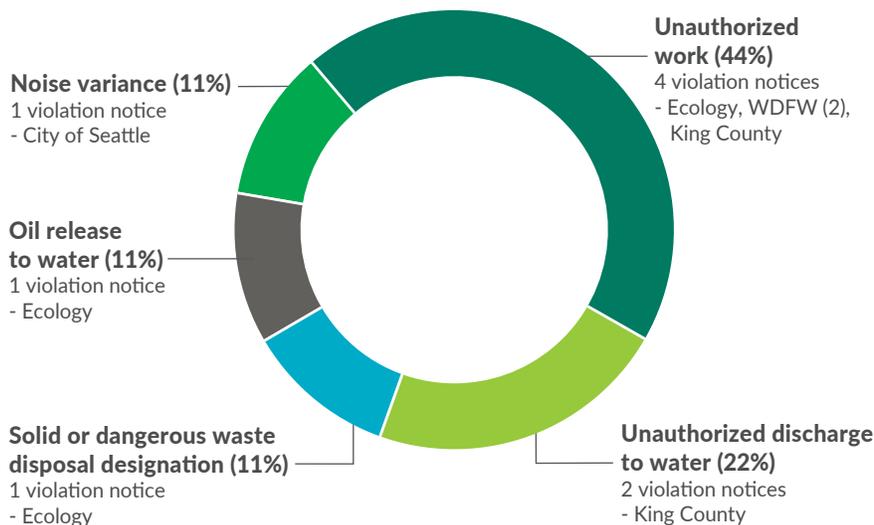
WSDOT was able to meet 77% (20 of 26) of its highway maintenance asset condition targets for 2019—the same percentage as in 2018. Maintenance funding has not kept pace with the increased needs associated with system additions from new projects, or the inflation-adjusted costs of construction materials and supplies like salt used for snow and ice control.

Static funding and increased prices have driven WSDOT to defer some highway maintenance activities, reducing levels of service (LOS) and making it more difficult to adequately maintain highway infrastructure.

WSDOT reduced its LOS targets on three of its 26 maintenance activities in 2019. The reductions were based on a five-year history of WSDOT being unable to consistently meet LOS targets with available funds.

WSDOT activities receive nine environmental violation notices in 2019

Number of notices and percent of total by category and issuing agency



Data source: WSDOT Environmental Services Office.

Note: Percentages do not add to 100 due to rounding. Ecology = Washington State Department of Ecology. WDFW = Washington Department of Fish and Wildlife.

WSDOT and its contractors receive nine environmental violation notices in 2019

WSDOT had 827 active construction projects, completed 162,135 ferry sailings, and performed 216,472 maintenance activities in 2019. During this time, WSDOT and its contractors received nine written notices of environmental violations, an increase from the six violation notices received in 2018. In 2019, regulatory agencies issued four environmental violation notices for two highway construction projects, two violation notices for a ferry terminal construction project, and three violation notices for maintenance activities.

Statewide policy goal/ WSDOT performance measure	Previous period	Current period	Goal	Goal met	Five-year trend (unless noted)	Desired trend
Safety						
Rate of traffic fatalities per 100 million vehicle miles traveled statewide <small>(Annual measure: calendar years 2017 & 2018)</small>	0.92	0.88	<1.00 ¹	✓		↓
Rate of recordable incidents for every 100 full-time WSDOT workers <small>(Annual measure: calendar years 2018 & 2019)</small>	5.0	4.7	<5.0	✓		↓
Preservation						
Percentage of state highway pavement in fair or better condition by vehicle miles traveled <small>(Annual measure: calendar years 2017 & 2018)</small>	91.8%	91.4%	≥ 90%	✓		↑
Percentage of state bridges in fair or better condition by bridge deck area <small>(Annual measure: fiscal years 2018 & 2019)</small>	92.5%	92.9%	≥ 90%	✓		↑
Mobility² (congestion relief)						
Highways: Vehicle Miles Traveled (VMT) on state highways <small>(Annual measure: calendar years 2017 & 2018)</small>	34.6 billion	35.4 billion	*	N/A		↓
Highways: Average incident clearance times for all Incident Response program responses <small>(Calendar quarterly measure: Q4 2018 & Q4 2019)</small>	13.6 minutes	14.0 minutes	*	N/A		↓
Ferries: Percentage of trips departing on time ³ <small>(Fiscal quarterly measure: year to year Q2 FY2019 & Q2 FY2020)</small>	93.6%	93.5%	≥ 95%	—		↑
Rail: Amtrak Cascades on-time performance ⁴ <small>(Annual measure: fiscal years 2017 & 2018)</small>	56.3% ⁵	53.9%	≥ 88%	—		↑
Environment						
Number of WSDOT stormwater management facilities constructed <small>(Annual measure: fiscal years 2018 & 2019)</small>	78	66	*	N/A		Not applicable
Cumulative number of WSDOT fish passage improvement projects constructed <small>(Annual measure: calendar years 2017 & 2018)</small>	330	345	*	N/A		↑
Stewardship						
Cumulative number of Nickel and TPA projects completed ⁶ and percentage on time ⁷ <small>(Biennial quarterly measure: Q1 2019-2021 & Q2 2019-2021, trendline for percentage on time)</small>	383/ 86%	383/ 86%	≥ 90% on time	—		↑
Cumulative number of Nickel and TPA projects completed ⁶ and percentage on budget ⁷ <small>(Biennial quarterly measure: Q1 2019-2021 & Q2 2019-2021, trendline for percentage on budget)</small>	383/ 91%	383/ 91%	≥ 90% on budget	✓		↑
Variance of total project costs ⁶ compared to budget expectations ⁷ <small>(Biennial quarterly measure: Q1 2019-2021 & Q2 2019-2021)</small>	Under budget by 1.5%	Under budget by 1.5%	On or under budget	✓		Not applicable

Data source: WSDOT Transportation Safety & Systems Analysis.
 Notes: (*) = goal has not been set. Dash (—) = goal was not met in the reporting period. **1** The Statewide Transportation Policy Goal for this performance measure is different than the federal MAP-21 goal for the same measure. **2** Mobility does not yet include goals for people walking/biking for transportation. **3** Washington State Ferries' on-time departures include any trip recorded by automated tracking as leaving the terminal within 10 minutes of scheduled time. **4** Amtrak Cascades' on-time performance includes any trip arriving within 10 or 15 minutes, depending on the route, of scheduled arrival time. **5** Amtrak Cascades' 2017 on-time performance was reported for calendar year 2017 in GNB 70 and 71. **6** Construction projects only. **7** Projects are on time if they are completed within the quarter planned in the last approved schedule, and on budget if costs are within 5% of the budget set in the last approved state transportation budget.