



Oregon Highway Cost Allocation Study
2023-2025 Biennium
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2023-2025 Oregon Highway Cost Allocation Study

Study Review Team

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Study Team

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The study team received valuable assistance from Dan Porter at Oregon Department of Transportation and Josh Lehner at the Office of Economic Analysis.

The purpose of the biennial Oregon Highway Cost Allocation Study (HCAS) is to:

- Determine the share that each class of road user should pay based on their respective share of costs for Oregon's highways, roads, and streets
- Recommend adjustments (if needed) to tax rates and fees to ensure equity between payments and responsibilities for each vehicle class
- Explore topics related to highway cost allocation through issue papers

Highway Cost Allocation in Oregon

For over 70 years, Oregon has based the financing of its highways on the principle of cost responsibility:

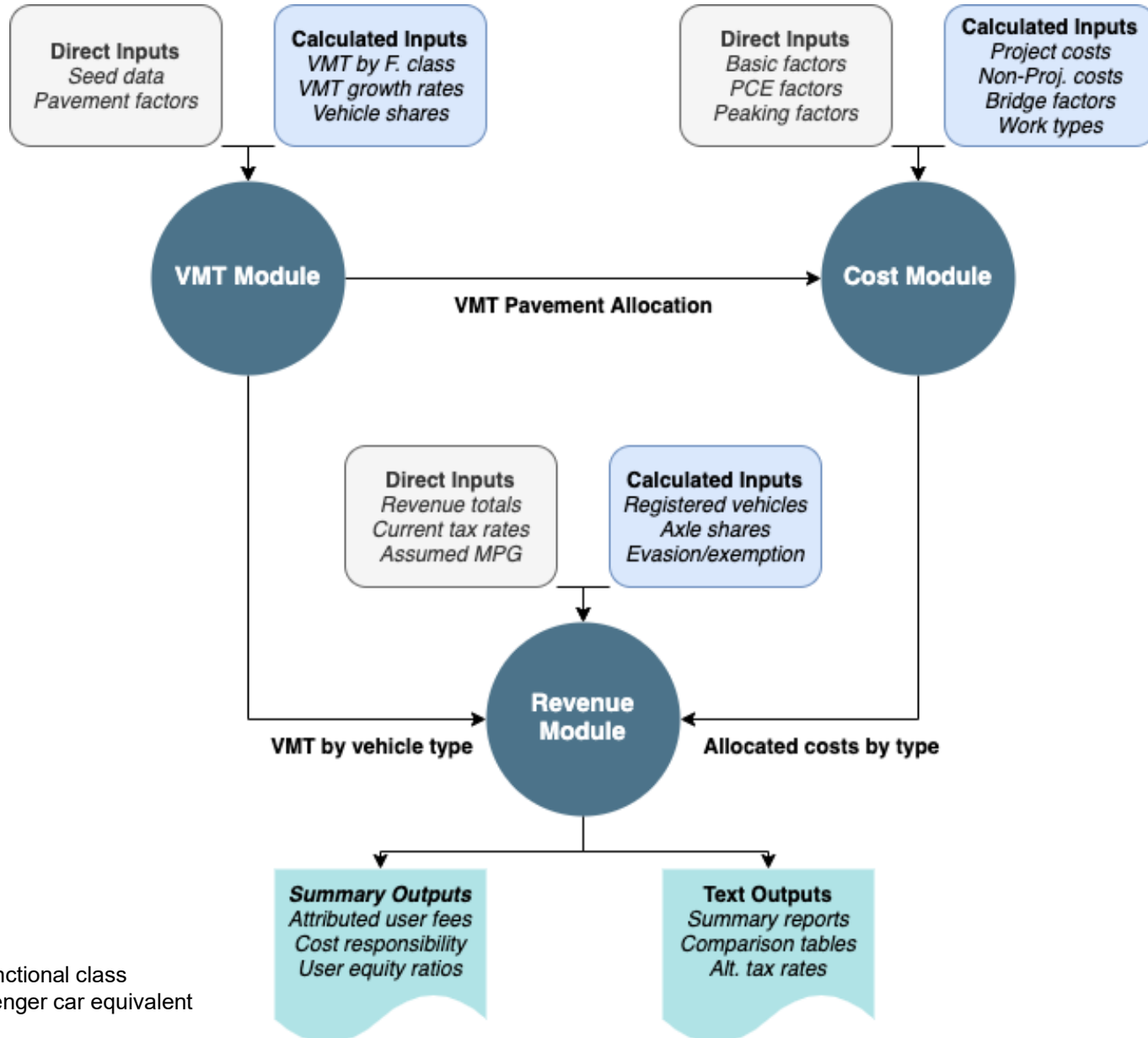
- This is Oregon's 23rd study; the first was in 1937 by Conde McCullough
- Since 1999, Oregon's constitution requires a study biennially, and adjustment of rates if necessary (IX section 3a, ORS 366.506)
- The 2023-2025 HCAS study was prepared by ECONorthwest, under the guidance of a Study Review Team comprised of stakeholders and experts.

Oregon's approach to cost allocation

Oregon's HCAS is prospective, with equity ratios predicted for upcoming biennium based on:

- Vehicle miles traveled (VMT) forecasted by ODOT as part of their revenue forecasting process
- Expenditures as forecasted by agency budget requests and STIP
- Revenue forecast, which assumes current-law instruments and rates

Overview of HCAS model



F. class = functional class
PCE = passenger car equivalent

We calculate **equity ratios** for each weight class: each vehicle class's share of attributed revenues divided by its share of allocated expenditures

- Ratio = 1.0 means perfect equity for users
- Ratio > 1.0 users paying more than fair share
- Ratio < 1.0 users paying less than fair share

Changes from 2021-2023 study

- ODOT's 2022 - 2024 **VMT forecast** reflects ongoing adjustment to economic changes due to COVID.
- **Weigh-in-Motion data** was collected and provided by a new data vendor, increasing station coverage and resulting in better data for weight/axle distributions.
- We received new information about two-axle vehicles in unfiltered **Weigh-in-Motion data**, which resulted in better accounting of pavement factors for basic vehicles.
- **Rates** have been updated to reflect upcoming increases stipulated by HB2017.

Principal Vehicle Classes

We calculate **equity ratios** for many vehicle weight class, but also for aggregate classes:

- Basic or Light-Duty Vehicles: Under 10,000 lbs.
- Medium-Duty Vehicles: 10,000 – 26,000 lbs.
- Heavy-Duty Vehicles: Over 26,000 lbs.

2023 Equity Ratios

Declared Weight	2023 VMT (in millions)	2023 Cost Responsibility (in millions)	2023 User Fees (in millions)	2021 Equity Ratio (Full Fee)*	2023 Equity Ratio (Full Fee)*
1 to 10,000	32,319	\$1,662	\$1,021	0.928	0.878
10,001 to 26,000	723	\$75	\$57	1.065	1.076
26,001 and up	2,144	\$548	\$521	1.107	1.358
Total	35,186	\$2,285	\$1,598	1.000	1.000

*Full fee excludes vehicles that are not required to pay full registration or other fees, such as federal or charitable vehicles.

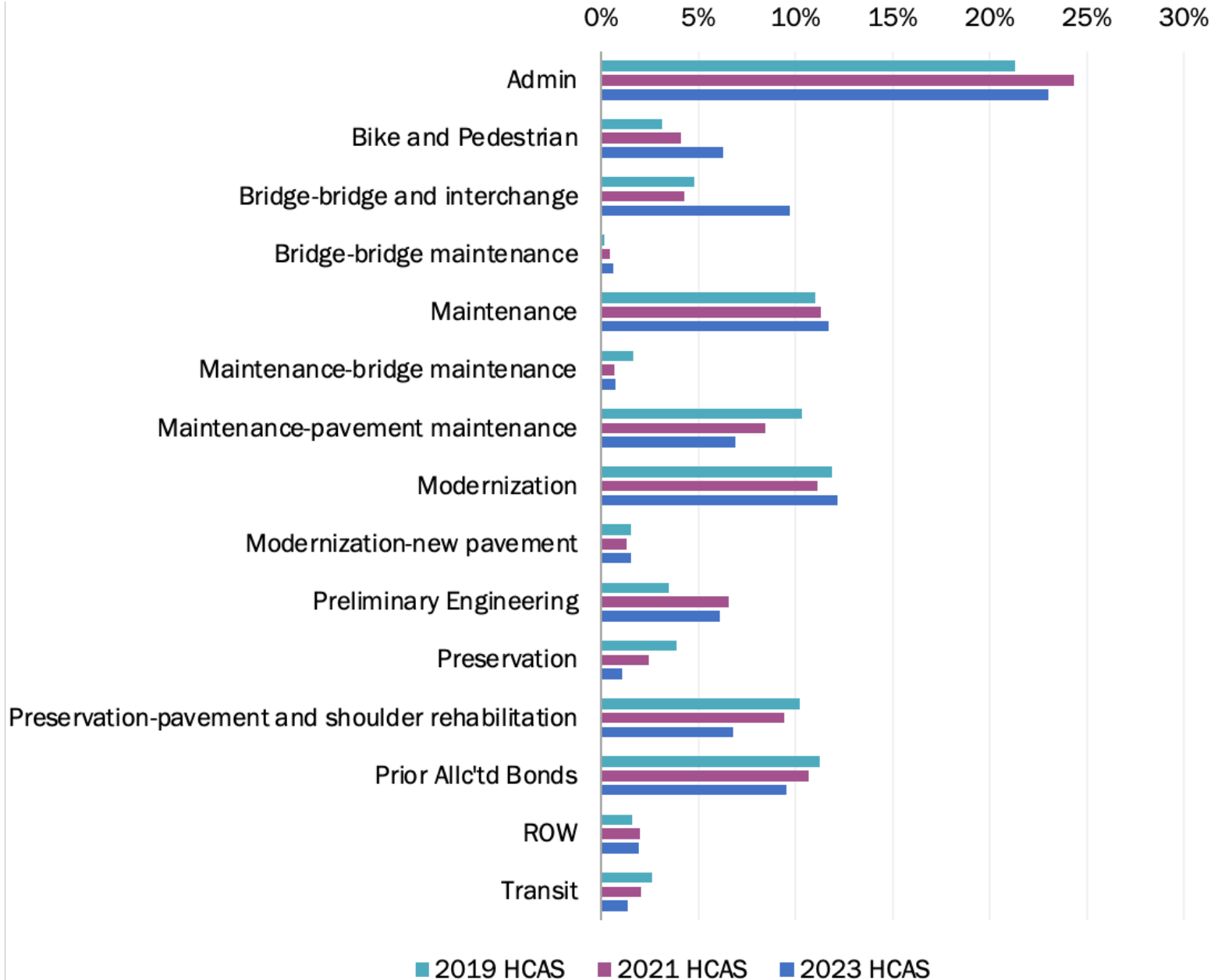
What has changed since the last biennium?

- **Standard Updates:**
 - VMT Forecasts
 - Revenue Forecast
- **Updates Unique to 2023 HCAS:**
 - Each biennium has a new mix of project investments
 - Pavement factors (new data source)
 - Tax Rates (HB2017)

Project mix has been changing over time

- Bike and Ped investments have increased
- Pavement expenditures have declined
- Modernization and bridges
- Unique projects: e.g. I-205 project
 - Phase 1A
 - Retrofit and widen Abernethy Bridge
 - Project funded with a short -term loan

Costs by Work Type 2019-2023



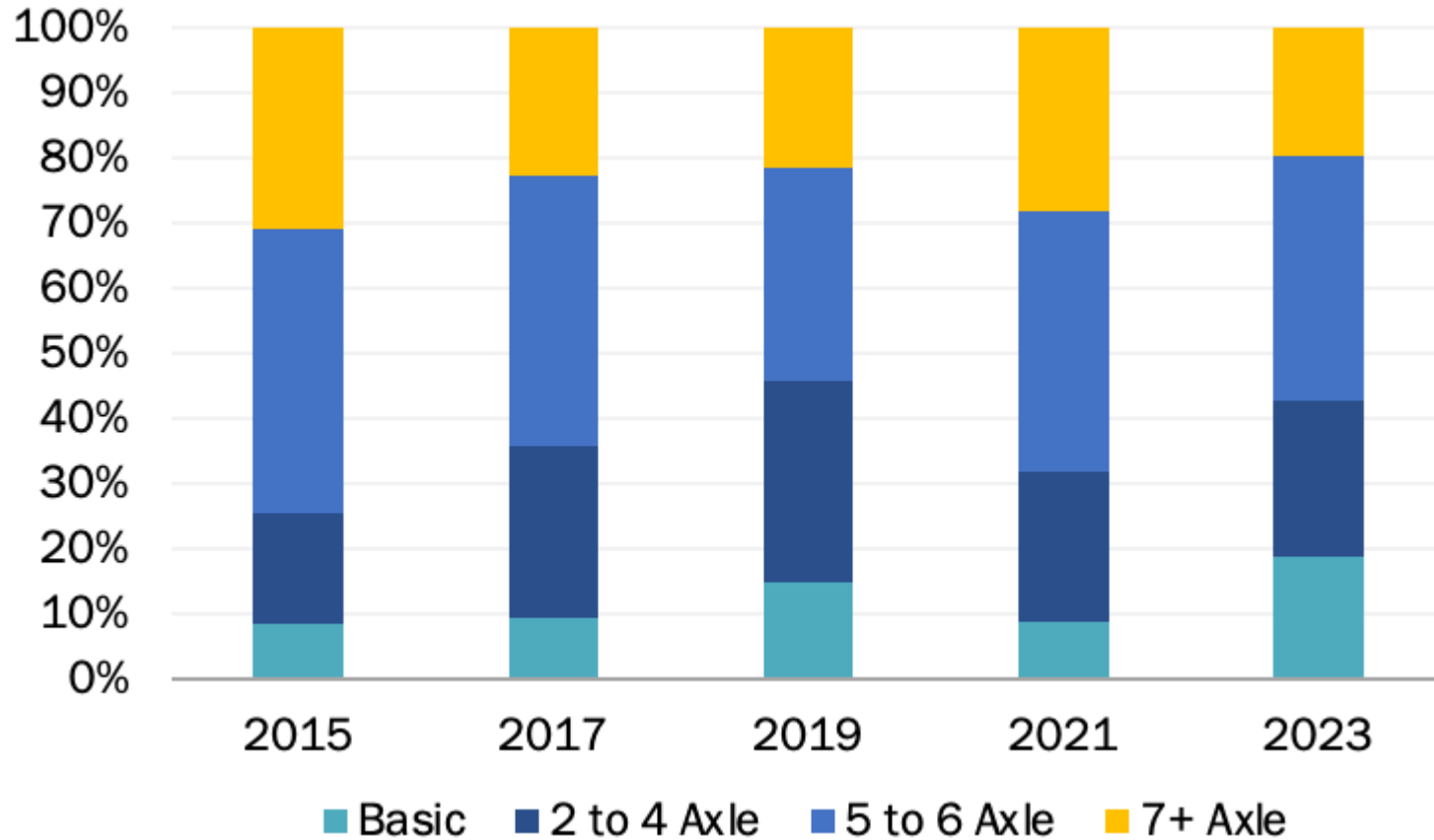
Change in Cost Shares

Declared Weight	Share of Cost Responsibility		
	2019	2021	2023
1 to 10,000	67%	70%	72%
10,001 to 26,000	4%	4%	3%
26,001 and up	29%	27%	24%
Total	100%	100%	100%

Cost responsibility for basic vehicles has grown over time.

Basic Vehicle Pavement Shares

Urban Flexible Pavement Shares (Other Principal Arterial Roads)



- Growth in the share of cost responsibility for pavement attributed to basic vehicles: not because the use of basic vehicles has changed, but because of the availability of data on basic vehicles has increased.

Notable Revenue Changes

- Registration fees have increased
- Fuel tax rates increased by **5.3 percent** since 2021
- WMT rates increased by **6.0 percent** since 2021

Annual user fee revenue attributed to heavy vehicles is projected to increase by **10 percent** over 2021, from \$476 million to \$525 million.

Equity Ratio over time

Equity Ratio, Full-Fee		
	Basic	Heavy
2011	1.00	1.01
2013	0.99	1.01
2015	1.00	1.00
2017	1.01	0.99
2019	0.98	1.03
2021	0.93	1.16
2023	0.88	1.32

Basic vehicles – Under 10,000 lbs.
Heavy vehicles – Over 10,000 lbs.

Addressing Inequity

- HCAS model can evaluate alternative tax rates
- There are many combinations of rate adjustments that could help achieve parity
 - Increases/decreases
 - Tax on fuels, registration fees, weight mile tax, etc.
- The expected inequity is also a function of a specific project mix that may change again over time.
 - Non-motorized priorities
 - Expenditures on pavements
- Higher resolution weigh-in-motion data suggests that there may have been some historical under-assessment of pavement costs to basic vehicles.

Summary of Findings

- For the 2023 -25 biennium full-fee-paying light vehicles will contribute 63.9 percent of state highway user revenues, and full-fee-paying heavy vehicles (those weighing more than 10,000 pounds), as a group, will contribute 36.1 percent.
- For the 2023-25 biennium and under existing, current-law tax rates, full-fee-paying light vehicles are responsible for 72.7 percent of state highway costs, and full-fee-paying heavy vehicles (those weight more than 10,000 pounds), as a group, are responsible for 27.3 percent.
- Equity ratios for full-fee-paying vehicles, the ratio of projected payments to responsibilities for vehicles in each class, are **0.8783 for light vehicles** and **1.3242 for heavy vehicles**. Under existing tax rates and fees, light vehicles are projected to underpay their responsibility by 12.2 percent. Heavy vehicles are projected to overpay by 32.4 percent during the next biennium.
- Recent changes in economic conditions from the COVID-19 pandemic have affected the forecasts of miles traveled. Some uncertainty about forecasts for both revenues and vehicle miles traveled remains.

Summary of Findings

- The projected spending attributable to light vehicles has increased as a share of total expenditures and is contributing to the disparity in equity between light and heavy vehicles.
- A new vendor for weigh-in-motion data provided more information on basic vehicles, resulting in a higher share of pavement costs allocated to basic vehicles than for previous HCAS models.
- The legislature enacted incremental rate increases for tax rates and fees between 2018 and 2024, which are now fully accounted for in this study. These rate increases have slightly increased the share of revenues collected from heavy vehicles, having a modest impact on equity ratios between light and heavy vehicles.
- Should the Legislature choose to modify user fee rates for other reasons beyond the scope of this study, the HCAS model can be used to design those rates to ensure those rates produce revenues in proportion to expected costs imposed by light and heavy vehicles.
- Suggested rate adjustments are in full report.

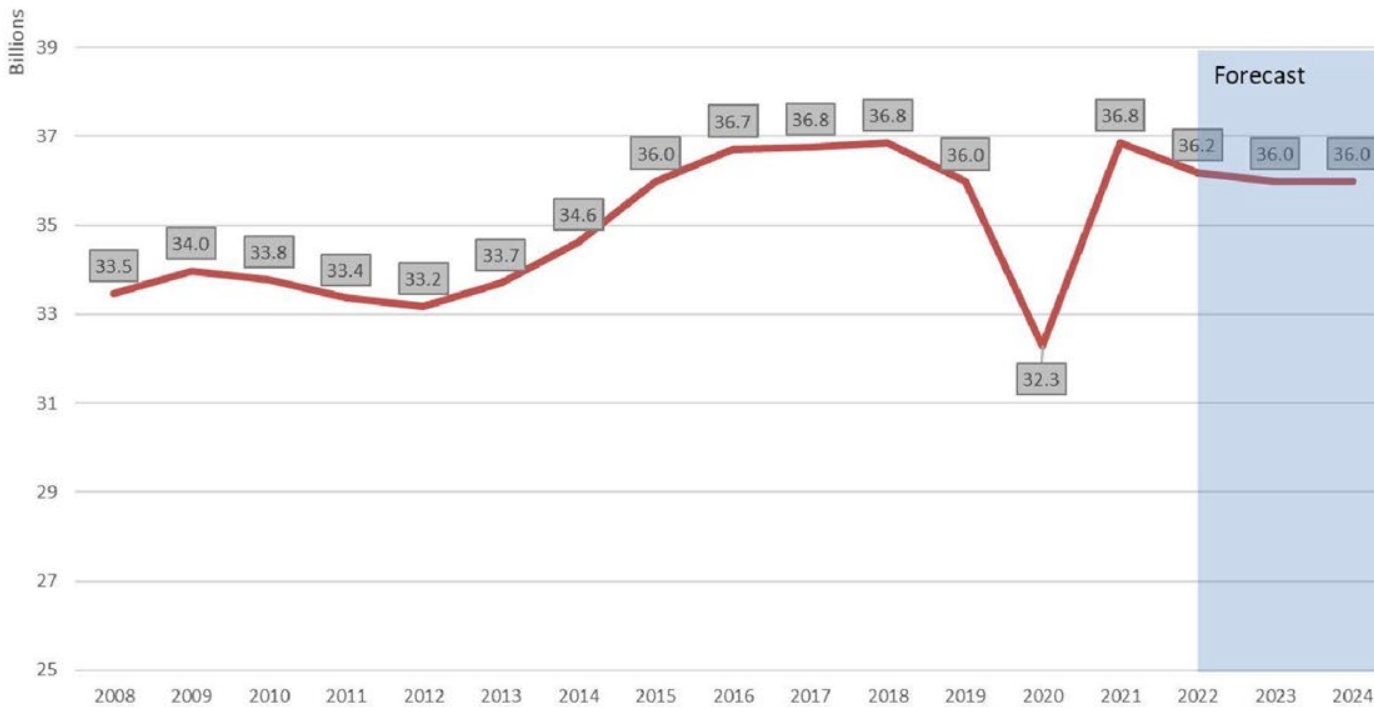


Questions

Reserve Slides

ODOT's VMT Forecast

Total Statewide Oregon VMT



Total Oregon VMT

Light Vehicles (90%)
Passenger vehicles

Medium Heavy Vehicles (3%)
Busses, RVs, Large Trucks

Heavy Vehicles (6%)
Tractor Trailers

Bike/Ped Project Context

Top Five Bike/Ped Projects, 2023		
Project Description	Funding Type	Dollars
HCRH State Trail	federal	\$8,965,090
ADA Indefinite Delivery/Indefinite Quantity	federal	\$6,139,559
US101 curb ramps (Lincoln City/Lincoln Beach)	federal	\$5,234,689
Hayesville Dr: NE Portland Rd - Fuhrer St (Salem)	federal	\$4,533,390
US101/OR241/OR540 curb ramps (Coos Bay/North Bend)	federal	\$4,123,238



Bike/Ped Project Count		
2019	2021	2023
266	249	392

While no single project appears to be driving the increase in bike/ped project mix, the volume of projects has increased by 50%.

Costs by Allocator 2019-2023

