Highlights

- **FHWA's Spring 2022 long-term forecast of National Vehicle Miles Traveled** has total VMT increasing by 22% from 2019 to 2049.
- **Light Duty Vehicle VMT,** the largest component of travel demand, is projected to grow by 17% over the next 30 years.
- **Combination Truck VMT** is forecast to increase 57% and **Single-Unit Truck VMT** 101% by 2049.

Summary

Long-Term Economic Outlook

- According to IHS Markit's May 2022 Baseline Economic Outlook, the U.S. national economy is expected to grow at a moderate pace through 2049, with real GDP projected to increase at an average annual rate close to 2.1%.[1] Over the same period, real disposable income per capita is projected to grow at a slightly slower rate of 1.9% per year.

- Population and employment annual growth are expected to average 0.4% and 0.5%, respectively through 2049.

- Real (inflation-adjusted) gasoline and diesel prices are projected to increase in the near term due to the current upward pressure on oil prices. Oil prices are expected to moderate over the next few years through 2030 before leveling out for the remainder of the forecast. Over the 30-year forecast horizon, gasoline prices are expected to average about $2.20 per gallon (in constant 2012$), with average diesel prices being slightly higher at $2.30 per gallon.

Nationwide Vehicle Travel Outlook

- Total VMT by all vehicle types is projected to grow 22% (Table 1) over the entire 30-year forecast period (2019–2049). This outlook represents a move towards more moderate VMT growth rates, and convergence with population growth, compared to the higher growth experienced over the past 30 years, when total VMT grew by 51%.[2]

- Under the Baseline outlook, travel by light duty vehicles—the largest category of total motor vehicle travel—is forecasted to grow by 17% over the next 30 years.

- Combination truck VMT is projected to grow by 57% over the 30-year forecast horizon. Growth in travel by single-unit trucks is projected to grow the most rapidly by 101% over the same forecast period.

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[1] The most recent long-run IHS Markit forecasts (May 2022) were used as inputs for forecasting VMT to capture recent economy-wide shocks due to persistent inflation and energy supply shocks from current geopolitical events. The May 2022 outlook only provides a baseline long-run economic scenario.

[2] The U.S. population is expected to grow by 13% over the entire 30-year forecast. This is compared with population growth of over 32% from 1990 to 2019.

Table 1. Projected Growth Rates in Vehicle Miles Traveled (VMT): Spring 2022

Vehicle Class	Baseline Economic Growth Outlook 2019-2049 (30 Year)
Light Duty Vehicles[3]	17%
Single-Unit Trucks	101%
Combination Trucks	57%
Total	22%

Spring 2022 VMT Forecast

Overview

The Federal Highway Administration's Spring 2022 long-term forecasts of nationwide VMT are based on long-term economic and demographic outlooks produced by the economic forecasting firm IHS Markit.[4] FHWA's national VMT forecasts are produced using statistical models that incorporate a variety of factors affecting historical variation in motor vehicle use; these models are then used to develop forecasts that begin in 2022 and extend through 2049.[5] The following sections highlight the IHS Baseline forecasts of key economic and demographic factors that influence future growth in passenger and freight travel, and discuss their effect on the resulting VMT forecasts.

Economic Outlook

Table 2 summarizes the IHS Spring 2022 long-term Baseline forecast of the key measures of U.S. economic activity used to develop FHWA's VMT forecasts.

The U.S. population is projected to grow by 0.4% annually over the 30-year forecast period, a rate well below its 1.0% annual increase over the previous 30 years. Aggregate economic output, measured by real GDP (2012$) is anticipated to increase 2.1% annually through 2049, which is also lower than the yearly growth rate the U.S. economy has experienced in recent decades.

The IHS Baseline forecast projects that growth in real disposable personal income per capita will average 1.9% annually over the 30-year forecast period, slightly up from the 1.8% average annual growth rate during the past few decades. Growth in the import and exports of goods and consumption of other non-durable goods sectors continue to outpace overall economic growth.

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[3] Light duty vehicle VMT is the largest component of total VMT in 2019 at 90%, with single-unit trucks and combination trucks at 4% and 5%, respectively.

[4] http://www.ihs.com/index.aspx

[5] Following the sharp decline in light duty VMT in 2020, the rebound in light duty VMT for 2021 was imputed based on FHWA Traffic Volume Trends. https://www.fhwa.dot.gov/policyinformation/travel_monitoring/tvt.cfm

Table 2. IHS Baseline Long-Term Economic Forecasts: Spring 2022

Demographic and Economic Indicators	Historical Annual Growth Rate: 1989-2019	Forecast Annual Growth Rate: 2019-2049
U.S. Population[6]	1.0%	0.4%
Total GDP (Real 2012$)	2.6%	2.1%
Disposable Personal Income per Capita (Real 2012$)	1.8%	1.9%
Imports and Exports of Goods (Real 2012$)	5.4%	3.2%
Consumption of Other Non-Durable Goods[7] (Real 2012$)	3.2%	3.5%
Gasoline Price per Gallon (Real 2012$)	0.7%	-0.3%

Gasoline prices are expected to rise sharply during the initial portion of the forecast reflecting growing demand coming out of the COVID-19 pandemic, supply constraints and geopolitical events, before moderating and reaching an average of $2.20 per gallon (2012$) by the mid-2030s and remaining relatively constant out to 2049.

Growth in Vehicle Travel under the Baseline Economic Outlook

Under the IHS Baseline economic outlook, steady long-term growth in employment, business investment, and productivity are expected, leading to continuing increases in real economic output (Gross Domestic Product) and real disposable income. In addition, after increasing in the near-term, energy prices are projected to gradually decline. These trends combine with slow population growth to generate sustained increases in both passenger vehicle and truck travel, although at significantly slower rates than those experienced in recent decades.

Based on these underlying economic and demographic trends, light duty vehicle VMT is expected to increase by 17% between 2019 and 2049, with single-unit truck VMT and combination truck VMT expected to grow by 101% and 57% respectively over the same period. Total VMT is expected to increase by 22% from 2019 through 2049 (see Table 1).

Technical Note: The historic drop in light duty vehicle travel, caused by the COVID-19 pandemic and nationwide lockdowns during the spring and summer of 2020, totaled 355 billion vehicle miles. This was a reduction of over 12% in light duty VMT from 2019 and four times greater than the previous largest drop in VMT travel experienced during the Great Recession of 2008. The significant drop in VMT makes using 2020 as the historical base year for estimating the VMT forecasting model impractical. Therefore,

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[6] The IHS population forecast is based on the Census Bureau's long-term population projections.
[7] Other non-durable goods refers to commodities such as pharmaceutical and other medical products, recreational items, household supplies, magazines and newspapers.

to avoid biased results, and maintain compatibility with previous versions of the long-run VMT forecast, 2019 was set as the base year.

Truck travel in the U.S was not nearly as affected by the pandemic during 2020 as light duty VMT, with truck VMT increasing slightly over 2019 levels by 0.7%.[8] Similarly to the light duty forecast, the truck travel forecasts are also pegged to the 2019 base year.

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[8] Motorcycles and buses are not included in the VMT forecasts. Together they accounted for around 1% of all U.S. motor vehicle travel during 2019.