SB 21-260

Legislative Council Staff

Nonpartisan Services for Colorado's Legislature

Demographic Note

Drafting Number:	LLS 21-0263	**Date:**	May 23, 2021
Prime Sponsors:	Sen. Fenberg; Winter Rep. Garnett; Gray	**Analyst:**	Elizabeth Ramey | 303-866-3522 Elizabeth.ramey@state.co.us

BILL TOPIC: **SUSTAINABILITY OF THE TRANSPORTATION SYSTEM**

Demographics Analyzed:
- Socioeconomic Status
- Race/Ethnicity
- Sex
- Age
- Geography

Direct Impact(s):
☒ Economic ☐ Health ☐ Public Safety
☐ Employment ☐ Education

Bill Impact: The bill is expected to have economic impacts by increasing user fees, and may have other economic, employment, and health impacts depending on how increased fee revenue is spent. Due to data limitations, the overall impact of the bill on existing disparities across demographic groups is indeterminate.

Report Status: This demographic note reflects the reengrossed bill.

Demographic Impact Summary

This demographic note[1] analyzes potential impacts of SB 21-260 on disparities in economic outcomes based on available data, including by sex, geography, socioeconomic status as measured by income, race/ethnicity, and age.[2] The overall impacts of SB 21-260 on existing disparities across demographic groups is indeterminate. The overall impacts will depend on the impacts of user fees, which are expected to reduce available income for spending or saving by affected users. The demographics of the populations impacted by many of the provisions of the bill could not be identified based on current data limitations. The overall impacts of SB 21-260 also depend on outcomes resulting from increased transportation revenue, expenditures from which will be based on future policy decisions that are unknown at this time.

[1]Pursuant to Section 2-2-322.5, C.R.S., this demographic note uses available data to outline the potential impacts of proposed legislation on disparities within the state. Disparities are defined by statute as the difference in economic, employment, health, education, or public safety outcomes between the state population as a whole and subgroups of the population, as defined by socioeconomic status, race, ethnicity, sex, gender identity, sexual orientation, disability, geography, or any other relevant characteristic for which data are available. It is beyond the scope of this analysis to examine each of the varied causes contributing to a given disparity. For further information on the contents of demographic notes, see "Demographic Notes Overview" Memorandum available at https://leg.colorado.gov/sites/default/files/images/lcs/demographic_notes_overview.pdf. .

[2]Terminology used to distinguish demographic groups (e.g., black/African American, Hispanic or Latina/Latino) is based on the terminology used in the data sources referenced. These terms may differ from the self-identification of these populations.

Key Provisions Impacting Demographic Disparities

The bill creates new sources of dedicated funding for the state's transportation system and creates new enterprises to support the development of that system. New sources of funding come from new fees for users of transportation infrastructure. This includes new fees for purchases of gasoline and diesel fuel, retail deliveries, passenger ride services, electric motor vehicle registrations, and short-term vehicle rentals. The bill indexes new and existing fees either to inflation or to the national highway construction costs index (NHCCI), requires an executive agency review of fees in 2026, and temporarily reduces road safety surcharges on vehicle registrations in 2022 and 2023. The bill modifies an existing enterprise and creates new state enterprises to expand existing transportation infrastructure, develop infrastructure to support the widespread adoption of electric motor vehicles and expanded public transport, and mitigate environmental impacts of transportation system use. Further details can be found in the fiscal note for SB 21-260.

Demographic Considerations

The following analysis presents the demographic considerations raised by the bill and, where data are available, compares the populations affected by the bill to the statewide population across different demographic groups. Pursuant to statute and based on available data on demographic differences between affected and statewide comparison populations, this analysis identifies potential effects of the bill on existing disparities. For each of the major provisions of the bill, the following sections summarize information and data identified by staff in the preparation of this analysis.

Demographic Considerations of New Fees

Gasoline user fees. Overall, some demographics are expected to be impacted more than others by the gasoline user fees based on vehicle miles traveled and vehicle fuel efficiencies. Additionally, for drivers traveling comparable amounts, lower income populations will spend a disproportionate share of their income on these fees relative to higher income populations. The bill imposes a per gallon fee on gasoline to pay for road usage. The fee is phased in from $0.02 in FY 2022-23 to $0.08 in FY 2028-29, and indexed to the NHCCI after FY 2031-32. The Colorado Department of Transportation (CDOT) estimates that the average amount of road user fees paid annually will range between $5.17 in 2022 and $21.37 in 2030, per user.

The economic impact of per gallon gasoline fees depends on both a driver's behavior (vehicle miles travelled (VMT)) and a driver's vehicle fuel efficiency. Research on the impact of gas taxes and fees in the U.S. suggests that VMT varies by demographic characteristic, particularly age, geography, sex, and income. Working-age people, males, rural residents, households with children, and higher income groups tend to drive more.[3] Within the working age population, younger drivers tend to drive less and are less likely to own a vehicle.

Available data about Colorado drivers suggests a pattern of driving behavior that is broadly consistent with these findings, as shown in Table 1. Annual VMT per driver in Colorado varies significantly by sex and geography, with rural, suburban, and male drivers driving more than the statewide average. Those in younger and senior age groups tend to drive less, as do those in lower income groups, although small sample sizes within groups will lead to larger errors in these estimates.

[3]Bento, A., L. Goulder, M. Jacobsen, and R. von Haefen. 2009. "Distributional and Efficiency Impacts of Increased US Gasoline Taxes." *American Economic Review.* 99 (3): 667-699.

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Table 1
Annual Vehicle Miles Travelled per Driver in Colorado, 2017
Miles Traveled by Selected Demographic Characteristics

All Drivers	**10,798**		
Drivers by Location		**Drivers by Income**	
Rural	13,817	Less than $10,000	2,048
Urban	10,019	$10,000 to $14,999	6,544
Small Town	9,975	$15,000 to $24,999	10,113
Suburban	13,041	$25,000 to $34,999	8,407
Drivers by Select Age Groups		$35,000 to $49,999	11,089
16 to 20	2,927	$50,000 to $74,999	12,061
26 to 29	10,564	$75,000 to $99,999	11,465
35 to 39	10,273	$100,000 to $124,999	12,463
45 to 49	14,242	$125,000 to $149,999	15,348
55 to 59	11,783	$150,000 to $199,999	9,087
65 to 69	9,054	$200,000 or more	10,320
75 to 79	6,842		
Drivers by Race and Ethnicity		**Drivers by Sex**	
Hispanic or Latino	9,406	Female	9,228
White Alone	11,213	Male	12,356
Black or African American Alone	12,056		
Asian Alone	8,126		

Source: U.S. Department of Transportation, 2017 National Household Travel Survey.

Consumers of gasoline in Colorado currently pay a state tax of $0.22 per gallon and a federal tax of $0.18 per gallon. Data from the Colorado Department of Revenue on gasoline tax incidence by income group suggests that while those in lower income groups pay a smaller dollar amount in taxes, the gasoline tax is regressive. That is, those in lower income groups pay a larger share of their income in taxes, as shown in Table 2. Share of income paid in taxes is known as the effective tax rate.

Table 2
Average Gasoline Taxes Paid and Effective Tax Rate by Income Group, 2017

Income	Average State Tax Paid	Effective Tax Rate
$0 to $14,999	$92	1.00%
$15,000 to $29,999	$112	0.50%
$30,000 to $39,999	$150	0.43%
$40,000 to $49,999	$165	0.37%
$50,000 to $69,999	$185	0.31%
$70,000 to $99,999	$225	0.27%
$100,000 to $149,999	$259	0.21%
$150,000 to $199,999	$271	0.16%
$200,000 and Over	$503	0.09%
Average	**$196**	**0.21%**

Source: Colorado Department of Revenue (DOR), 2020 Tax Profile & Expenditure Report.

Diesel fuel user fees. The demographics of those impacted by diesel fuel user fees could not be determined. The bill imposes a per gallon road usage fee as well as a bridge and tunnel impact fee on diesel fuel. Both fees are phased in from $0.02 in FY 2022-23 to $0.08 in FY 2028-29, and indexed to the NHCCI after FY 2031-32. The state and federal government currently assess a special fuels tax on diesel at a rate of $0.205 per gallon and $0.24 per gallon, respectively. Red dyed diesel, used for purposes other than roadway transportation, is exempted from state and federal diesel fuel taxes as well as the user fees under the bill.

Much of the impact of the new diesel fuel fee will be borne by the industries that rely on diesel, which primarily include local and long-distance trucking. The population affected by this provision of the bill cannot be determined, as impacts are dependent on business decisions that are unknown. For example, trucking businesses may pass the higher costs of diesel fuel onto their customers, incur reduced profits, or pursue other modes of transportation under the bill.

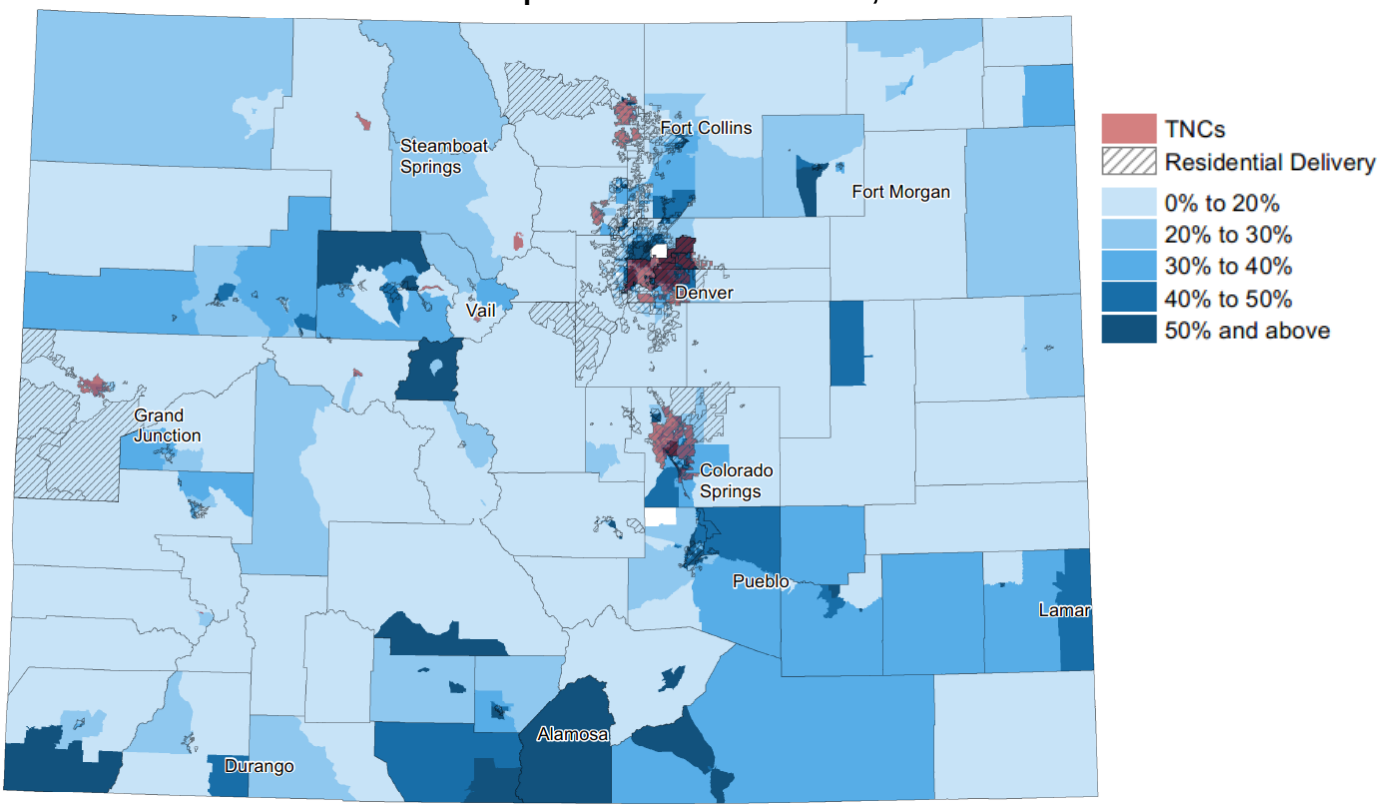
Residential delivery and transportation network company (TNC) fees. Demographic data and other information are limited for populations impacted by residential delivery and TNC fees. Starting in FY 2022-23, the bill imposes fees totaling $0.27 on retail deliveries by motor vehicles that transport tangible personal property subject to the state sales tax. This includes deliveries from companies such as FedEx, Amazon, GrubHub, and Instacart, although many grocery items are excluded from the state sales tax. Based on a 2019 CDOT and CEO study required by SB 19-239, it is assumed that the average customer would pay an additional $8.10 in delivery fees for 30 orders per year.[4]

The bill imposes per-ride fees on passenger rides provided by transportation network companies (TNCs) such as Uber or Lyft that use a digital network to connect riders and drivers for the purpose of transportation. The full fee is $0.30 per ride, although if the ride is shared or taken in an electric vehicle, the fee is discounted to $0.15. It is unknown how this fee will impact TNCs, their drivers, customers, or vehicles as this depends on the future decisions made by these groups. If TNCs pass fee costs onto consumers and driver tips are held constant, using the assumptions in the 2019 emerging mobility study, the average rider would pay an additional $0.63 to $1.26 for 4.2 trips per year.

Figures 1 and 2 show information about the areas served by on-demand residential delivery (beyond traditional delivery companies such as USPS, FedEx, and UPS) and TNCs, overlaid with demographic information by census tract, including the percent of the population that is nonwhite and percent of the population below the poverty level. As shown, these services are primarily located in the metropolitan and mountain resort areas of the state.

[4]Colorado Department of Transportation and Colorado Energy Office. *2019 Emerging Mobility Impact Study.* Available at: https://www.codot.gov/library/studies/emerging-mobility-impact-study.

Figure 1
TNC and Residential Deliveries Service Areas and Percent of the Population that is Nonwhite, 2017

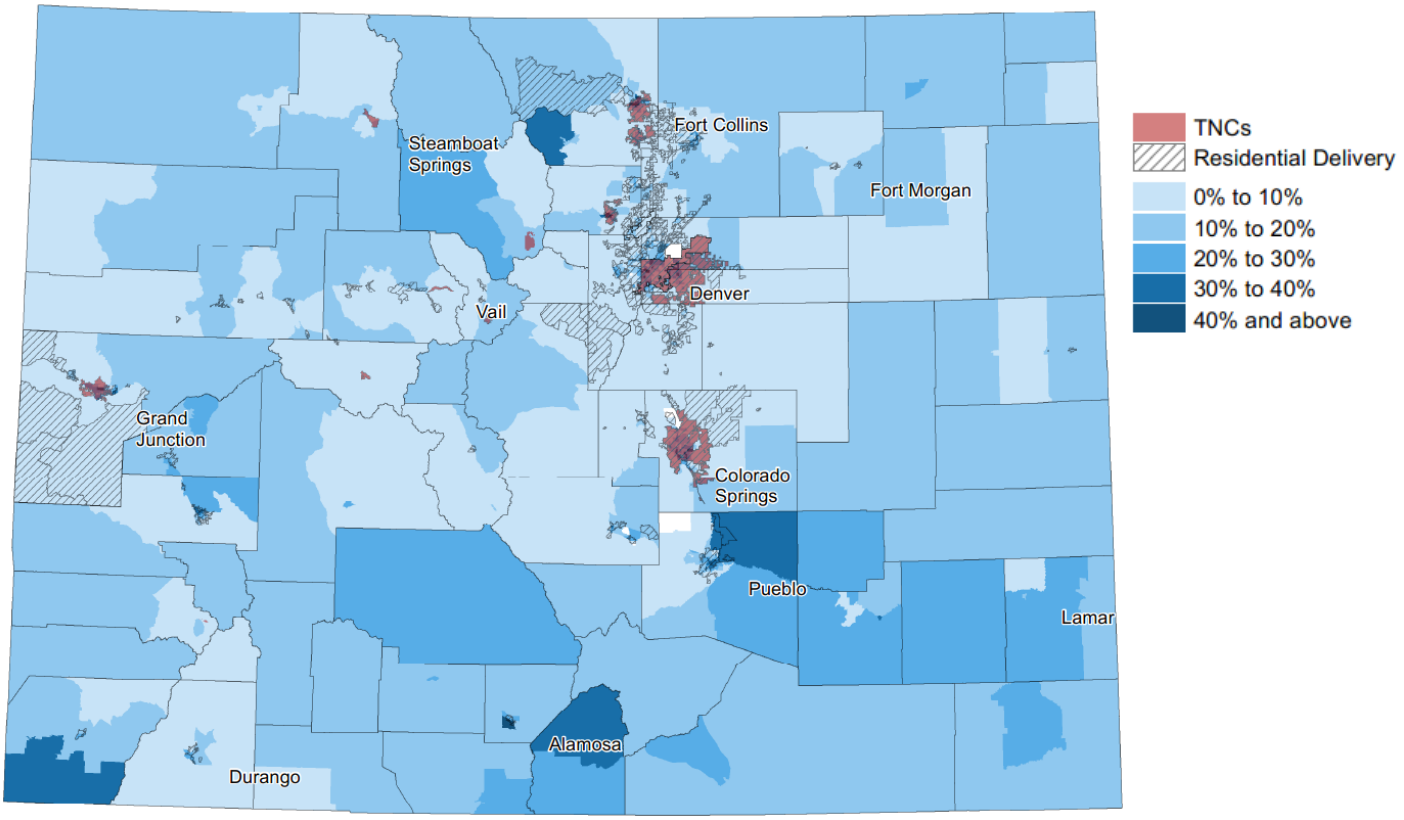


Source: LCS adaptation from Colorado Department of Transportation and Colorado Energy Office, 2019 Emerging Mobility Impact Study.

Additional demographic information about online retail consumers could not be identified, although there is some evidence to suggest that on-demand retail shoppers have higher incomes than shoppers in general.[5] Similarly, additional demographic information about Colorado TNC consumers could not be identified, but recent nationwide studies offer demographic comparisons that may reflect similar characteristics. For example, a 2019 study of the socioeconomic characteristics of TNC riders found that they tend to be younger, higher income, with higher levels of education, and are more likely to reside in urban areas than the population as a whole.[6] Similar limitations apply to data on Colorado TNC drivers. A 2020 study of TNC drivers in King County (Seattle), Washington found that these drivers are more likely to be male, black, foreign born, with lower levels of education, and lower income than the county population as a whole.[7]

[5]For example, see: Hanbury, M. 2020. "The Average Amazon Shopper Still Earns More Than Wal-Mart's." *Business Insider.* January 25. Available at: https://www.businessinsider.com/amazon-shoppers-richer-than-walmart-2020-1
[6]Grahn, R., et al. 2019. "Socioeconomic and Usage Characteristics of Transportation Network Company (TNC) Riders." *Transportation*. April: 1-21.
[7]Parrott, J Report for the City of Seattle. Available at: Parrott-Reich-Seattle-Report_July-2020(0).pdf

Figure 2
TNC and Residential Deliveries Service Areas and
Percent of the Population Living Below the Poverty Level, 2017



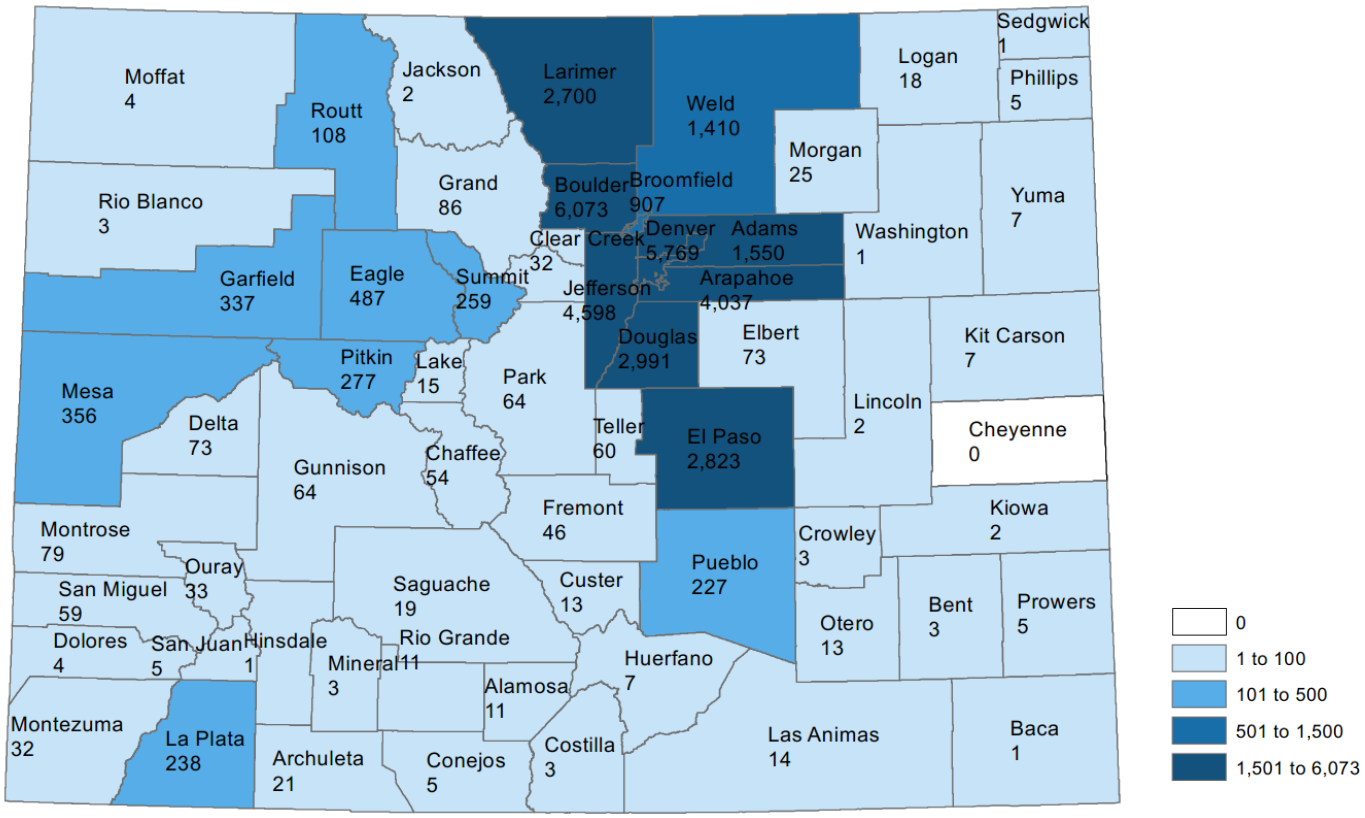
Source: LCS adaptation from Colorado Department of Transportation and Colorado Energy Office, 2019 Emerging Mobility Impact Study.

Electric motor vehicle registration fees. Based on available data, Colorado electric vehicle owners tend to live along the 1-25 corridor, and relative to the population as a whole, data for other states suggest that they tend to be male, white, and have higher incomes. Under current law, owners of battery electric vehicles (BEVs) and plug-in hybrid electric vehicles (PHEVs) pay a $50 annual registration fee. Starting in FY 2022-23, the bill will adjust the fee annually for inflation. It also imposes additional road usage equalization registration fees on commercial electric vehicles as well as BEVs and PHEVs, with owners of PHEVs paying a lower fee due to their consumption of liquid fuels for which they pay an additional usage fee under the bill. These fees are phased in through FY 2031-32, and then adjusted annually using the NHCCI. It is estimated that the fee increase in FY 2022-23 will be $5.35 for BEVs and $4.35 for PHEVs.

According to the Colorado Energy Office's Electric Vehicle Dashboard, there are currently 36,171 electric vehicles (EVs) in Colorado.[8] Of these vehicles, 25,372 are BEVs and 10,799 are PHEVs. As shown in Figure 3, EV owners are more likely to be located in the state's metropolitan and mountain resort areas, particularly along the Front Range, with Boulder County having the highest number of electric vehicles at 6,073.

[8] *Colorado Energy Office and Atlas Public Policy, "EVs in Colorado Dashboard." Available at: https://energyoffice.colorado.gov/zero-emission-vehicles/evs-in-colorado-dashboard#:~:text=The%20dashboard%20allows%20people%20to,on%20vehicle%20electrification%20in%20Colorado.*

Figure 3
Electric Vehicles in Colorado by County, 2021



Source: Colorado Energy Office and Atlas Public Policy, "EVs in Colorado Dashboard."

While additional demographic information on Colorado EV drivers could not be identified, recent studies in other states offer demographic comparisons that may reflect similar characteristics. For example, a 2018 study of the socioeconomic characteristics of EV drivers in Maryland found that relative to owners of vehicles with combustion engines, EV owners are more likely to be male, white, older (a majority are between 40 and 69 years old), have a bachelor's degree or higher, and have higher incomes (about 81 percent of EV owners earned over $100,000, compared to only about 28 percent of combustion engine owners).[9] As EV prices decline toward those of combustion engine cars, ownership is expected to widen beyond early adopters with demographics shifting accordingly.

Short term vehicle rental fees. The demographic impacts of vehicle rental fees cannot be determined at this time due to data limitations and as the affected population will depend on unknown decisions made by vehicle rental businesses. Beginning in FY 2022-23, the bill indexes the existing short-term vehicle daily rental fee of $2 to inflation and requires car sharing programs to collect the daily rental fee for any short-term vehicle rental of 24 hours or longer. The populations incurring fees include companies offering car rental and ride sharing services as well as business and leisure travelers, many

[9]Farkas, Z. Andrew et al. 2018. "Environmental Attributes of Electric Vehicle Ownership and Commuting Behavior in Maryland: Public Policy and Equity Considerations." Report for the Mid-Atlantic Transportation Sustainability University Transportation Center. Available at: https://www.morgan.edu/Documents/ACADEMICS/CENTERS/NTC/Environmental%20Attributes%20of%20Electric%20Vehicle%20Ownership%20and%20Commuting%20Behavior%20in%20Maryland%20-%20Public%20Policy%20and%20Equity%20Considera.pdf

of whom are traveling from outside of the Colorado. Depending on decisions made by vehicle rental providers, fees may reduce business incomes, be passed on to consumers, or result in other business decisions. Based on these considerations and data limitations, the demographic impact of this provision cannot be determined at this time.

Road safety surcharge. According to tax profile data from the Colorado Department of Revenue (DOR), vehicle registration fees operate in a regressive manner similar to gasoline taxes. These temporary reductions will therefore likely operate to offset the regressive impacts of other fees imposed in the bill. The bill reduces the amount of each road safety surcharge imposed on motor vehicle registrations by $11.10 for registrations during 2022 and by $5.55 for registrations during 2023. Surcharges for 2024 and later years are unaffected.

Demographic Considerations of Increased Transportation Funding

Enterprises to support transportation electrification and other infrastructure. The populations impacted by the funding to the new and modified state enterprises under the bill are unknown at this time and may affect a portion of or all current and future users of the state's transportation system. The demographic impacts of this funding will depend on future policy decisions and therefore cannot be determined at this time.

Pollution non-attainment areas. The bill creates a new enterprise to mitigate transportation-related emissions in ozone nonattainment areas by funding projects that reduce traffic or directly reduce air pollution through the congestion mitigation and air quality improvement program. To the extent that the enterprise improves air quality more than would otherwise be the case, populations living in areas where air quality is improved will be impacted.

According to the Environmental Protection Agency, nonattainment areas in calendar year 2021 include Adams, Arapahoe, Broomfield, Boulder, Denver, Douglas, Jefferson, Larimer, and Weld counties. The population in these areas represents 68.0 percent of the statewide population and the demographic composition of these areas is very similar to that of the state as a whole. Based on data for 2019, the racial, ethnic, and age composition of nonattainment areas were within the margin of error for the statewide population estimates. The population in nonattainment areas had slightly higher educational attainment and incomes, and were slightly more likely to be employed. Table 3 provides a summary of the demographic composition of counties in nonattainment areas and the statewide population.

Table 3
Demographics of Nonattainment Areas, 2019

	Nonattaintment Areas*		Colorado	
	Population	Share	Population	Share
Total Population	3,913,309	100.0%	5,758,736	100.0%
Age				
Under 10 years	454,669	11.6%	671,504	11.7%
10 to 19 years	503,945	12.9%	731,951	12.7%
20 to 29 years	585,994	15.0%	839,960	14.6%
30 to 39 years	621,831	15.9%	880,103	15.3%
40 to 49 years	521,113	13.3%	738,549	12.8%
50 to 59 years	468,854	12.0%	697,406	12.1%
60 to 69 years	411,736	10.5%	648,341	11.3%
70 to 79 years	231,545	5.9%	373,640	6.5%
80 years and over	113,622	2.9%	177,282	3.1%
Race				
White alone	3,236,618	82.7%	4,822,379	83.7%
Black or African American alone	180,231	4.6%	240,538	4.2%
American Indian and Alaska Native alone	29,500	0.8%	57,578	1.0%
Asian alone	155,973	4.0%	188,461	3.3%
Native Hawaiian and Other Pacific Islander alone	4,143	0.1%	7,756	0.1%
Some other race alone	150,558	3.8%	209,081	3.6%
Two or more races:	156,286	4.0%	232,943	4.0%
Two races including Some other race	22,130	0.6%	34,753	0.6%
Two races excluding Some other race, and three or more races	134,156	3.4%	198,190	3.4%
Ethnicity				
Not Hispanic or Latino	3,042,161	77.7%	4,501,833	78.2%
Hispanic or Latino	871,148	22.3%	1,256,903	21.8%
Educational Attainment				
Total Population	2,696,348	100.0%	3,974,943	100.0%
Less than high school graduate	207,875	7.7%	302,220	7.6%
High school graduate (includes equivalency)	518,850	19.2%	836,590	21.0%
Some college or associate's degree	716,055	26.6%	1,140,531	28.7%
Bachelor's degree	772,707	28.7%	1,057,825	26.6%
Graduate or professional degree	480,861	17.8%	637,777	16.0%
Employment Status				
Total Population, 16+	3,152,876	100.0%	4,645,780	100.0%
Employed	2,152,002	68.3%	3,033,694	65.3%
Household Income				
Total Households	1,518,082	100.0%	2,235,103	100.0%
Less than $10,000	62,653	4.1%	102,815	4.6%
$10,000 to $14,999	37,220	2.5%	64,818	2.9%
$15,000 to $24,999	83,469	5.5%	138,576	6.2%
$25,000 to $34,999	89,666	5.9%	149,752	6.7%
$35,000 to $49,999	147,145	9.7%	234,686	10.5%
$50,000 to $74,999	256,595	16.9%	391,143	17.5%
$75,000 to $99,999	206,671	13.6%	308,444	13.8%
$100,000 to $149,999	294,724	19.4%	411,259	18.4%
$150,000 to $199,999	157,153	10.4%	203,394	9.1%
$200,000 or more	182,786	12.0%	230,216	10.3%

Source: U.S. Census Bureau, American Community Survey, 1-year estimates.
**Nonattainment areas for 2021 include: Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, Jefferson, Larimer, and Weld counties.*

Analysis and Findings

The overall impact of SB 21-260 on existing demographic disparities is indeterminate. The overall impact will depend on the impacts of user fees, which are expected to reduce available income for spending or saving by affected users. The demographics of the populations impacted by many of the provisions of the bill could not be identified based on data limitations. The overall impacts of SB 21-260 also depend on outcomes resulting from increased transportation revenue, expenditures from which will be based on future policy decisions that are unknown at this time.

User fee impacts. SB 21-260 is expected to have multiple and sometimes offsetting impacts on economic outcomes through higher fees for users of Colorado's transportation systems that may impact existing demographic disparities across income groups. Higher fees on gasoline are expected to have a larger impact on populations living in rural areas, men, people with children, drivers of working age, and those with lower incomes. These impacts may be partially offset by the other user fees under the bill, which are expected to increase costs for populations living in urban areas and belonging to higher income groups. Due to data limitations, the overall impact of user fees on economic disparities is indeterminate.

Enterprise impacts. Impacts on affected populations depend on the demographics of those paying user fees as well as on the outcomes resulting from the expenditure of fee revenue. To the extent that increased transportation revenue under the bill expands existing transportation infrastructure, develops new infrastructure to support the adoption of electric motor vehicles and expanded public transport, and mitigates adverse environmental impacts of transportation system use, these outcomes may improve economic and health outcomes for affected populations. Additional transportation funding may increase employment opportunities in some industries, and may offset impacts in other industries resulting from increased fess. Reduced transportation costs from increased travel times due to congestion or vehicle wear and tear due to road hazards may offset the costs of increased fees for some affected populations.

Demographics Not Analyzed

Some demographic groups have not been included in the analysis due to data limitations. Data on the relevant populations delineated by gender identity, sexual orientation, and disability were not available at the time of the analysis. Should data become available, this analysis may be updated.

Other data limitations. The COVID-19 pandemic has resulted in dramatic shifts in the usage of transportation systems. Many of these shifts exacerbated economic inequality across income and other demographic groups. For example, Household Pulse data from the U.S. Census Bureau suggest that Coloradans in higher income groups are more likely to have been able to shift to remote work during the pandemic, while those in lower income groups were more likely to suffer job and income loss.[10] Pandemic-related shifts in consumption patterns have resulted in the dramatic expansion of ecommerce and therefore retail deliveries, while curtailing TNC activity by an estimated 40 percent annually. Ecommerce activity increased rapidly after the onset of the pandemic, jumping from 11.8 percent of retail trade in the first quarter of 2020 to 16.1 percent in the second quarter. It is currently unknown to what extent these shifts will persist once the pandemic has subsided. Therefore, these shifts may limit the applicability of available demographic data included in this analysis.

[10]See LCS Memo, February 2021, "Income Inequality in Colorado and COVID-19 Impacts" available at: https://leg.colorado.gov/publications/income-inequality-colorado-and-covid-19-impacts

Data Sources and Agencies Contacted

Transportation
Revenue
Energy Office
Public Health and Environment