



NOVA TRAC SURVEY REPORT BRIEFING

NOVA SCOTIA SURVEY REPORT



Purpose Of The Note

This briefing note provides an overview of the 2022-2023 Nova Scotia Travel Activity (NovaTRAC) survey, developed by the Dalhousie Transportation Collaboratory (DalTRAC) in partnership with the Province of Nova Scotia and the Joint Regional Transportation Agency (JRTA). This note outlines the survey's objectives, methodology, and key findings related to travel behaviour of Nova Scotia residents.

Specifically, the briefing note:

- Summarizes the survey's purpose and development;
- Describes the methodology used to collect and analyze data on residents' travel choices, lifestyle preferences, and any impacts the COVID-19 pandemic had on travel; and,
- Highlights insights into residents' willingness to adopt electric vehicles (EVs) in the future.

This briefing note is intended to support various Nova Scotian agencies in making evidence-based transportation planning and investment decisions.

Key Observations

- Between July 2022 and November 2023, the NovaTRAC survey collected 4,867 completed household samples.
- Demographic data from the 2022-2023 NovaTRAC survey aligns with the data from the 2021 Canadian Census, meaning the sample is considered representative of the population.
- The data reveals auto-centric travel habits, with respondents making an average of 3.2 trips per day. 79.1% of all trips were made using a personal vehicle, with 63.7% of those trips involving a single occupant.
- The average trip length was 9.4km, with 55.9% of trips being short distances (4km).
- Respondents reported an average of 1.63 cars and 0.83 bicycles per household.

Project Description

The 2022-2023 Nova Scotia Travel Activity (NovaTRAC) Survey was conducted to understand how Nova Scotia residents travel, live, and view emerging transportation options, such as electric vehicles. The survey expands on the 2018 NovaTRAC Halifax Survey by collecting modern data from residents across the province.

The resulting data is intended for use in informing the development of Nova Scotia's transportation system.

Survey Context

The survey examined travel choices and behaviours of residents from Nova Scotia's 18 counties to both identify changes in residents travel habits compared to the 2018 NovaTRAC Halifax Survey, and to expand the area sampled. The survey also examined travel and behaviour changes from the COVID-19 pandemic. According to Statistics Canada (2022), daily commuter numbers across Canada dropped by 2.8 million people during the pandemic, caused by increased teleworking and restrictions on regular daily activities like shopping. The 2022-23 NovaTRAC Survey aimed to provide critical data on these travel and lifestyle shifts, to support transportation planning and investment decisions that align with the habits and preferences of Nova Scotia residents.

Methodology

DalTRAC developed the survey using a computer-assisted web interviewing (CAWI) instrument. The questionnaire collected socio-demographic information, travel choices and preferences, weekday travel behaviour, and COVID-19 impacts on travel. Additionally, the survey included lifestyle and policy preference questions, offering a greater understanding of electric vehicle interest and adoption.

The survey was conducted in three different phases, corresponding to three different regions of Nova Scotia. These phases included:

- **Halifax Regional Municipality:** Sampling occurred between July 2022 and March 2023, using civic address, cellphone, landline, and social media sampling methods.
- **Colchester, Lunenburg, Hants, and Kings Counties:** Sampling occurred between March and June 2023, using civic address, cellphone, landline, and social media sampling methods.
- **All of Nova Scotia:** Sampling occurred between June and November 2023, using only social media as the sampling method.

The sampling methods used included:

- **Civic Address Sampling:** 6,500 postcard survey invitations were sent in three batches to randomly selected Nova Scotia addresses, depending on the active phase of the survey.
- **Cellphone Sampling:** 36,000 cellphone numbers were generated from random digit dialing (RDD) and were sent invitations to participate in the survey. If no survey response was received within a week of the initial invitation, follow up calls were made for telephone interviews, or until the participant indicated they were not interested in the survey.
- **Landline sampling:** 18,500 landline numbers were generated using RDD and were mailed survey packages. If no household survey response was received within one to two weeks of the package being mailed, follow up calls were made for telephone interviews, or until the participant indicated they were not interested in the survey.
- **Social Media Sampling:** Meta Ads' radius sampling method was utilized to target individuals within Nova Scotia, with each phase having different focus locations. In phase one, two 30km radii were used around central Halifax and around Ship Harbour. In phase two, four 40km radii around Truro, Lunenburg, Kings County, and Windsor were used. In phase three, radius sampling occurred in various locations across Nova Scotia.

DalTRAC obtained ethics approval for this survey from the Research Ethics Board through Dalhousie University, ensuring responses remained anonymous. A total of 45,105 individuals were invited to participate in the survey. DalTRAC provided incentives for completing the survey by giving respondents a chance to win one of eleven VISA gift cards.

Survey Statistics

A total of 4 867 households completed the survey across the four sampling methods: 138 from civic address sampling (92 from phase one, 46 from phase two), 1,485 from cellphone sampling (1,393 from phase one, 92 from phase two), 1,848 from landline sampling (1,552 from phase one, 296 from phase two), and 1,396 from social media sampling (512 from phase one, 79 from phase two, 805 from phase three). Overall, 52.5% of responses were collected through web-based entry for all phases, 33.4% were collected through telephone interviews during phases one and two, and 14.1% were collected through mail-in entry during phases one and two. Most responses came from the HRM (75.7%), followed by Kings County (4.9%), Hants County (4.1%), Colchester County (3.8%), and Lunenburg County (3.6%). The remaining Nova Scotia counties accounted for less than 2% each of completed household responses.

Survey Results

Key survey findings to inform future infrastructure investments include:

- **Travel Patterns:** Nova Scotia residents travel patterns remain heavily auto centric, with 79.1% of trips made using a personal vehicle. Cars were the primary transport mode for most types of trips, including home-based work trips (83.7%), home-based discretionary trips (83.9%), and non-home-based trips (74.0%). Home-based school trips had a more varied mode share, made up of cars (41.3%), walking (24.2%), other modes (23.9%) and transit (8.0%), as seen in figure 1.
- **Transport Mode Use:** Travel mode preference had little variance between genders. Men made more trips by bicycle (2.3% to 1.1%) and other modes (3.4% to 2.2%). Women made more trips by car (80.1% to 79.1%), transit (4.8% to 4.0%), and walking (11.8% to 11.1%). Additional findings include preference for walking over driving (53.9%) and discomfort using carpooling/ridesharing services (43.5%).
- **Pandemic Travel Response:** The COVID-19 pandemic influenced travel behaviours, with 66.5% of respondents preferring flexible work schedules, 73.7% preferring in-person activities, and 53.8% preferring in-person shopping instead of online.
- **Electric Vehicle Interest:** 32.5% of respondents indicated a desire to purchase an EV in the next five years. Key barriers to adoption identified by respondents included purchase price (30.8%), lack of public charging infrastructure (19.0%), and insufficient driving range (15.5%). Respondents indicated purchase rebates (36.6%), charging infrastructure along highways (23.6%), and discounts on home charger installations (16.6%) as preferred policy options for supporting EV adoption.

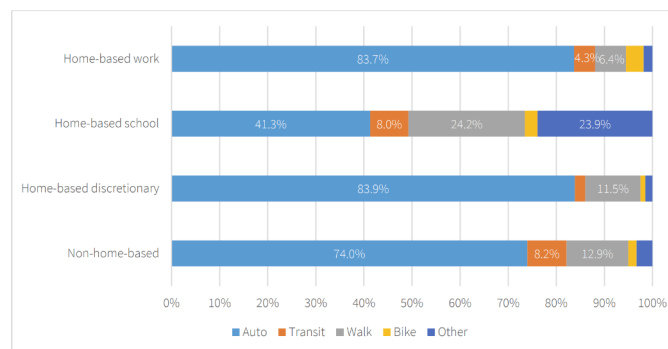


Figure 1: Distribution of Start Time for all Trips.

Conclusion

Understanding the transportation habits and preferences of citizens is crucial to having a successful transportation system. In the Canadian province of Nova Scotia, a modern understanding of how people travel was needed. The 2022-2023 NovaTRAC survey fulfilled this need and revealed the travel habits of Nova Scotians. Survey findings showed how both transportation habits and preferences have changed since the 2018 NovaTRAC Halifax Survey, and how the COVID-19 pandemic influenced residents' lifestyle and travel choices. Data from this survey will be critical in helping provincial agencies develop the provinces' transportation system to match its rapid population growth in an efficient and climate-friendly manner.

DalTRAC's 2022-2023 NovaTRAC study provides valuable insights into residents' current travel preferences, habits, and willingness to use electric vehicles in the future. These findings will assist in making evidence-based transportation decisions, to ensure that Nova Scotia's future transportation network aligns with its residents' evolving mobility patterns.

References

Statistics Canada. (2022, November 30). Has the COVID-19 pandemic changed commuting patterns for good? <https://www150.statcan.gc.ca/n1/daily-quotidien/221130/dq221130c-eng.htm>.

About DalTRAC and CART Network

Dalhousie Transportation Collaboratory (DalTRAC) is a multi-disciplinary research facility dedicated to the advancement of transportation engineering and planning research and practice at Dalhousie University in Halifax, Nova Scotia. The research unit aims to contribute to transportation studies, planning, and analysis at local, regional and national levels.

The Climate Action Research for Transportation (CART) Network is a multi-university, multidisciplinary team of researchers and academics working to advance climate action in the transportation sector. The network focuses on the quantification of greenhouse gas (GHG) emissions at the municipal level and is supported by Environment and Climate Change Canada.

CART was initiated by DalTRAC to support cross-institutional research on transportation and climate action. It brings together expertise from civil and resource engineering, urban planning, computer and data science, and risk management to inform evidence-based transportation planning and climate policy across Canada.

Further Reading

For additional technical reports and research conducted by DalTRAC, please visit the DalTRAC research webpage at <https://www.dal.ca/sites/daltrac/research.html>.

Contact

For more information on this research, contact daltrac.comms@dal.ca.