



HALITRAC SURVEY REPORT BRIEFING

HALIFAX SURVEY REPORT



Purpose Of The Note

This briefing note provides an overview of the 2022-2023 Halifax Regional Municipality Travel Activity (HaliTRAC) Survey, developed by the Dalhousie Transportation Collaboratory (DalTRAC) in partnership with the Halifax Regional Municipality (HRM). It outlines the survey's objectives, methodology, and key findings related to travel behaviour in Halifax, Nova Scotia.

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 transportation engineers, planners, and policy makers in making informed decisions for the development of Halifax's transportation network.

Key Observations

- Between June 28th, 2022, and March 6th, 2023, the HaliTRAC survey collected 3,731 completed household samples.
- While there are minor sociodemographic differences compared to the 2021 Canadian Census, the sample is considered broadly representative of the population.
- The data reveals auto-centric travel habits, with respondents making an average of 2.8 trips per day. 77.6% of all trips were made using a personal vehicle, with 64.9% of those trips involving a single occupant.
- The average trip length was 7.6km, with 40.6% of trips being short distances (under 2km).
- Respondents reported an average of 1.57 cars and 0.79 bicycles per household.

Project Description

The 2022-2023 Halifax Regional Municipality Travel Activity (HaliTRAC) Survey was conducted to examine how Halifax residents travel, live, and view emerging transportation options such as electric vehicles. The survey builds on the 2018 Nova Scotia Travel Activity (NovaTRAC) Halifax Survey, by gathering updated travel data for the residents of the HRM.

The resulting data is intended to inform the investment in and development of Halifax's transportation system.

Survey Context

The survey examined Halifax residents' travel choices and behaviours and compared them to previous survey results from the 2018 NovaTRAC survey. 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 2022-2023 HaliTRAC Survey aimed to provide critical data on these travel and lifestyle shifts, supporting evidence-based decisions for the evolution of Halifax's transportation system.

Methodology

DalTRAC developed the survey using a computer-assisted web interviewing (CAWI) instrument. By receiving feedback and doing an independent review of the 2018 NovaTRAC survey, the 2022-2023 HaliTRAC Survey was adjusted to improve performance. 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 four different phases:

- **Civic Address Sampling:** 4,000 postcard invitations were sent in three batches to randomly selected HRM addresses. Sampling was conducted between July and September 2022.
- **Cellphone Sampling:** 32,000 cellphone numbers with 902-area codes generated from random digit dialing (RDD) were texted invitations to participate in the survey. Since the 902-area code includes all of Nova Scotia and Prince Edward Island, and the HRM covers only 39% of that population, it is estimated that only 9,600 – 9,700 true HRM residents were reached of the 24,644 valid phone numbers generated. Sampling was conducted between October 2022 and January 2023.
- **Landline Based Sampling:** 14,500 survey packages were sent to HRM addresses in two batches. Two weeks after package delivery, households who had not completed the survey were contacted, being offered an online survey invitation, or to complete a survey interview over the phone. Sampling was conducted between November 2022 and March 2023.
- **Social Media Sampling:** Meta Ads were utilized to target individuals within the HRM, with two radius sampling methods targeting individuals within 30km of central Halifax and 30km of Ship Harbour, Nova Scotia. This sampling method reached 135 458 HRM residents. Sampling occurred between November 2022 and March 2023, with a sampling pause for three weeks around Christmas.

Additional promotion of the survey was conducted by both DalTRAC and the HRM through dedicated survey webpages, social media posts, and a promotional video. The survey was also promoted during a live news interview in January 2023 with DalTRAC's principal investigator Dr. Ahsan Habib.

DalTRAC obtained ethics approval for this survey from the Research Ethics Board through Dalhousie University, ensuring responses remained anonymous. A total of 27,356 individuals were invited to participate. 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 3,731 households completed the survey across the four sampling methods: 100 from civic address sampling, 1,477 from cellphone sampling, 1,622 from landline sampling, and 532 from social media sampling. Overall, 47.0% of responses were collected through web-based entry during all phases, 36.9% of responses were collected through telephone interviews conducted only during the cellphone and landline sampling, while the remaining 16.1% were collected through mail-in entry during landline sampling.

Survey Results

Key survey findings to inform future infrastructure investments include:

- **Travel Patterns:** Residents' travel patterns remain heavily auto centric, with 77.6% of trips made using a personal vehicle. Most trips occurred during the midday period (9:00AM to 3:00PM, 37.3%), followed by the afternoon peak (3:00PM to 6:00PM 25.1%) and morning peak (6:00AM to 9:00AM, 20.6%). Trips started most frequently during morning and afternoon peaks, as seen in Figure 1.
- **Transport Mode Use:** Travel mode preferences varied by gender. Men made more trips by car (78.3% to 77.7%) and cycling (1.9% to 0.9%) than women. Women made more trips by transit (6.0% to 4.8%) and walking (13.1% to 11.9%) than men. Additional findings include preference for walking over driving (55.4%), comfort using public transit (53.1%), and discomfort using carpool/rideshare services (44.5%).
- **Pandemic Travel Response:** The COVID-19 pandemic influenced travel behaviours, with 68.1% of respondents favouring flexible work schedules, 75.0% preferring in-person activities, and 55.0% preferring in-person shopping instead of virtual alternatives.
- **Electric Vehicle Interest:** 39.0% of respondents indicated a desire to purchase an EV in the next five years. Key barriers to adoption identified by respondents included purchase price (31.6%), not enough public charging stations (19.0%), and insufficient driving range (15.1%). Respondents indicated purchase time rebates (25.9%) and discounts on home charger installation (20.2%) as preferred policy options for supporting EV adoption.

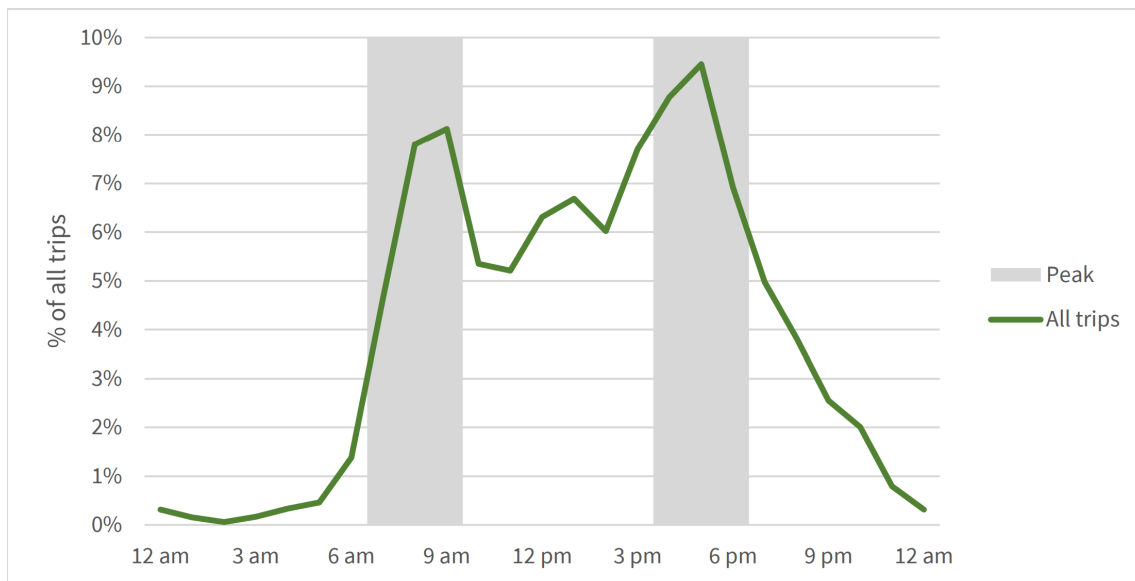


Figure 1: Distribution of Start Time of all Trips.

Conclusion

Understanding how citizens move around cities is crucial to developing successful and sustainable transportation networks. In Halifax, Nova Scotia, the 2022-2023 HaliTRAC survey revealed how Halifax residents get around the region. The survey revealed key findings showing both how 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 revealed how implementation of the municipality's Integrated Mobility Plan and the HalifACT: Acting on Climate Together Plan have influenced travel behaviour in the region, and what further actions need to be pursued to achieve these plans' goals of car trips making up 70% or less of mode share.

DalTRAC's 2022-2023 HaliTRAC study provides valuable insights into residents' current travel preferences, habits, and willingness to use electric vehicles in the future. These findings will help the Halifax Regional Municipality achieve its climate action and mode share goals through supporting evidence-based transportation decisions, while ensuring the city's transportation network aligns with 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.