

**Background:** Assess e-mobility (e-scooters) as safe mode of personal transportation

- Electric kick scooters are battery-powered devices with a motor, two to four wheels, a platform for standing and handlebars for steering.
- Studies show that micro-mobility devices can reduce vehicles trips and traffic congestion.

**E-scooters and BC Motor Vehicle Act (MVA):** Currently, the act does not allow electronic personal transportation (e-mobility devices) on public roads or sidewalks.

**E-mobility Pilot Project<sup>1</sup>:** Amendments to BC MVA in 2021 over a 3-year period allowed constituents of 13 communities (Coquitlam, Cranbrook, Kelowna, Nanaimo, North Vancouver (city and district), Richmond, Vancouver, Vernon, West Vancouver, Oliver, Osoyoos and Langley Township) to legally ride an e-scooter on some municipal streets and paved pathways. The project has been extended, starting April 5, 2024, for another 4 years.

- Communities can prescribe how and where e-scooters can be used.
- City bylaws varied with regards to where these devices can operate, as well as how fast they can go.
  - In Richmond for example, e-scooters can go 20 km/h on roadways; 15 km/h on paved pathways shared with pedestrians<sup>2</sup>
  - Some communities allowing sidewalk use (e.g., Vernon) while others (e.g., Vancouver) e-scooters are only permitted to operate in streets with and without cycling facilities (e.g., bike lanes; on streets <50km), as well as shared multi-use pathways.
- Some communities are using their participation as a way to test e-mobility (e-bikes and e-scooters) shared-service programs.
- Safety evaluation is ongoing and currently led by Ministry of Transportation and Infrastructure, ICBC and the BC Injury Research and Prevention Unit.

**Sample of Findings from Participating Communities<sup>3</sup>:**

- Vernon reported more than 470,000 kilometres travelled by users of its shared electric kick scooter provider, with 50% of users using the devices to commute.
- Surveys from participating communities show that the majority of respondents are supportive of the project although report some concerns with safety (e.g., injuries, speed) and parking of e-scooters from shared programs.
  - More data is needed to assess injuries. Emerging data from Interior Health<sup>4</sup> reports that in Kelowna, between April 2021 and September 2022, 108 injuries were identified out of 453,000 trips. After a spike in the first two months, the injury rate for e-scooters was similar to the estimated rate for bicycles. There was a 30 per cent reduction in confirmed e-scooter injuries in 2022 compared to 2021.
  - Greater public education and awareness is needed to support compliance.
  - Enforcement and regulation is challenging particularly for personal use.

**Micro-mobility in the Capital Regional District (CRD)**

- Promoting active travel are directly relevant to the climate action targets of the CRD. Micro-mobility devices including e-scooters offers an alternative form of carbon-efficient transportation.
- E-bike use accounted for 30 percent of all bike trips in the CRD in 2022<sup>5</sup>.
- Active walking and bicycling modes of travel increased by 7 percent throughout the region from 2017 to 2022<sup>6</sup>.

## Considerations Outlined by the Traffic Safety Commission (TSC)

- Findings from a scoping review of the literature conducted by the TSC revealed that a range of factors affect the adoption, risk and safety of micro-mobility devices including demographics (variability across SES, age, geography) and city infrastructure, as well as the implication of these devices on the environment (sustainable production of components, reducing carbon emission/meeting climate action targets) and life-long health of users (effects on physical activity and injuries)<sup>7</sup>. Future considerations based on the findings of this review are provided in the Table below.
- The Commission recommends if interest from numerous contiguous municipalities in participating in the provincial E kick scooter pilot, that the CRD consider drafting a model bylaw which local municipalities can use to regulate e-scooter use. This model bylaw should consider placing e-scooters in the same category as bicycles subject to the same regulations (i.e., allowed on roads <50km/h, bike lanes, and multi-use pathways; not permitted on sidewalks). Given the variability in how communities interact with the e-mobility pilot program, it is recommended that the CRD consult with the latest amendment to the MVA<sup>8</sup> related to speed regulation of e-scooters and consider applying such regulation to other modes of active transportation on shared multi-use pathways. The onset of these regulations will need to coincide with the launch of related safety and etiquette campaigns aimed at promoting public awareness. A focus on injury prevention is critical. Public health messaging should emphasize helmet use and dangers of impaired use.

## Sources

1. Government of British Columbia. *Electric kick scooter pilot project*. <https://www2.gov.bc.ca/gov/content/transportation/transportation-environment/active-transportation/scooter>
2. City of Richmond. *E-scooters and E-bikes*. <https://www.richmond.ca/parks-recreation/parks-trails-cycling/cycling/e-scooter.htm>
3. Government of British Columbia Transportation and Infrastructure. (2023, December 1). *Detailed safety study coming for electric kick scooters*. <https://news.gov.bc.ca/releases/2023MOTI0196-001901>
4. City of Kelowna. *Shared bikes and e-scooters*. <https://www.kelowna.ca/roads-transportation/active-transportation/shared-bikes-and-e-scooters>
5. R.A. Malatest & Associates Ltd. with David Kriger Consultants Inc. (2022). *CRD Origin-Destination Survey*
6. Litman, T. (2023). *Good news from the 2022 CRD travel survey*. Victoria Transport Policy Institute.
7. van Lankvelt, A. & Sukhawathanakul, P. (2023). *A review of micro-mobility devices: Implications for use and safety*. A report prepared for the CRD Traffic Safety Commission.
8. Province of British Columbia Order of the Lieutenant Governor in Council. *Electric Kick Scooter Pilot Project Regulation. Motor Vehicle Amendment Act, 2023*, S.B.C. 2023, c. 17, s. 43; *Motor Vehicle Act*, R.S.B.C. 1996, c. 318, s. 210. [https://www.bclaws.gov.bc.ca/civix/document/id/oic/oic\\_cur/0640\\_2023](https://www.bclaws.gov.bc.ca/civix/document/id/oic/oic_cur/0640_2023)

**Table 1**

*General Considerations based on the Scoping Review*

	<b>Considerations</b>
<b>Equity Focused Subsidies</b>	<ul style="list-style-type: none"> <li>• Offer subsidies and financial incentives reduce cost barriers for low-income population and ensures a wider range of demographics can access this mode of transportation.</li> <li>• Build equity into micro-mobility sharing programs to ensure affordability for all users (e.g., reduced pricing to low-income or other qualifying riders, affordable flat rates).</li> </ul>
<b>Diverse Active Transportation Infrastructure</b>	<ul style="list-style-type: none"> <li>• Prioritize bike lanes and paths, and facilitate integration with public transport (e.g., dedicated spaces for parking e-bikes and e-scooters at transit hubs).</li> <li>• Consider weather (e.g., sunshades and covered bike parking to encourage year-round use).</li> <li>• Ensure accessibility for individuals with physical limitation.</li> </ul>
<b>Environmental Impact Mitigation</b>	<ul style="list-style-type: none"> <li>• Battery recycling (e.g., regulations and incentives to ensure proper disposal and recycling and promotion of full first life use and second-life applications).</li> <li>• Ensure proper management and redistribution of shared micro-mobility fleet (e.g., placing responsibility on the bike/scooter sharing companies).</li> <li>• Provide support for innovations in battery technology, sustainability, and safety enhancements.</li> </ul>
<b>Safety and Education</b>	<ul style="list-style-type: none"> <li>• Promote rider education programs that address safe riding practices (e.g., riding in adverse weather conditions) especially for at-risk users.</li> <li>• Set effective speed limits.</li> <li>• Enforce traffic laws and regulations.</li> </ul>
<b>Injury Prevention and Data Collection</b>	<ul style="list-style-type: none"> <li>• Develop tailored safety regulations and targeted campaigns based on different demographics.</li> <li>• Collect data on micro-mobility injuries and conduct more analysis to fill in the gaps on injury trends for different areas and demographics.</li> <li>• Expand research on the relation between public health and active transportation infrastructure.</li> </ul>