

## **Attachment 1: Summary Report on the Challenges and Wins for Kelowna's E-Scooter Program**

This report provides a summary of the challenges and wins for Kelowna's shared e-scooter program since launch on April 19<sup>th</sup>. It summarizes the latest data and information available to support ongoing discussions and decision-making regarding the future of shared e-scooters within Kelowna's Bikeshare (Micromobility) Permit Program.

Key Performance Metrics: To evaluate any program, it is important to understand the key criteria related to its success. This is necessary to understand the benefits and trade-offs and whether a program is meeting its core objectives. The e-scooter program is intended to advance [Council's priorities](#) that "emerging technologies are making it easier to get around", "greenhouse gas emissions are decreasing", and "travel times are optimized". Additionally, the amount of travel within central Kelowna (roughly the triangle formed by Downtown, Pandosy, and Capri-Landmark) is expected to double in the next 20 years. This increased demand cannot be accommodated through single-occupancy vehicles. The e-scooter pilot is intended to provide a safe and cost-effective way to connect our growing urban centres and move more people through our existing road space.

To evaluate the e-scooter pilot against the original objectives of the program, it is important to ensure the program is safe, is being used as a transportation option (i.e. helping take cars off the road), and is cost-effective. The following section summarizes the data available to date for each of these key performance metrics to help Council weigh the program benefits and tradeoffs:

- Safety and Injuries
- Helping take Cars off the Road
- Cost-Effective

To be successful, it is critical that the program deliver on these core objectives. Staff are committed to transparently monitoring the program on an ongoing basis, amending the program as needed, and tracking the data necessary for Council to determine whether the pilot program is a success.

Notably, the data summarized in this report is based on only six weeks of program operation. While it helps provide an early snapshot, a longer observation period would help provide a more complete picture of the program's performance.

### ***Safety and Injuries***

The safety of the e-scooter program is a top priority, as well as ensuring no undue burdens are placed on our health care system or enforcement partners (i.e. police and bylaw). The provincial Motor Vehicle Act and Kelowna Traffic Bylaw require e-scooter riders to:

- Ride in the street, bicycle lanes or multi-use paths (sidewalk riding is illegal)
- Be sober (intoxicated riding is a serious offence, similar to impaired driving)
- Not block sidewalks when parking
- Wear a helmet
- Riders must be 16 years or older (this is true regardless of whether a parent or guardian is present)
- One person per scooter (no doubling up)

- Follow the rules of the road (which are similar to bikes and other small vehicles on our road network)

E-scooter companies are required to include this information to riders before they can unlock an e-scooter. All four companies provide key safety messages within their apps, hang tags and information printed directly on each e-scooter. This information has been reviewed with a lens of educating riders about the laws, and operators are reproducing materials to be more clear. Other safety recommendations include going slow to start, ringing the bell when passing, and being wary of potholes and uneven surfaces.

The City has also worked to get these messages out through a communications campaign. Examples include ongoing social media posts, and the City's [shared bikes and e-scooters](#) web resources, which also include parking do's and don'ts and who to call if you have a question or concern. There are multiple options to provide feedback. Concerned residents can contact e-scooter companies (each e-scooter has a 24-hour phone number), the City, or law enforcement.

Staff have been in contact with Interior Health (IH) since 2019 and again before the program launch in 2021. Following recent media reports citing safety concerns, staff have re-engaged with multiple IH staff to better understand the nature of the concerns. IH has since determined that quantitative data regarding the number of emergency room visits and injuries related to the shared e-scooter pilot program are not yet available. This is because the emergency intake form does not currently have a field for shared e-scooters. As such, IH staff could not confirm the numbers reported in recent media articles, or since the program launch, primarily due to challenges with data collection and quality (for example, distinguishing between private and shared electric scooters, motorized scooters, non-motorized scooters, mopeds, and mobility scooters, among other vehicle types). However, IH has indicated they are interested in tracking this data and are working to update intake forms and search historical records to help the City better understand the safety of the e-scooter program moving forward.

Additionally, the Medical Health Officer for the Central Okanagan, Dr. Silvina Mema, and Director of Healthy Communities, Dr. Heather Deegan, have clarified the position of IH in regards to e-scooters and provided a letter (Attachment #3). The letter highlights the standing partnership that the City and Interior Health have in supporting healthy environments and notes the role of e-scooters in supporting vibrant, healthy communities. The letter also notes several strategies to mitigate health impacts, which staff have reviewed and incorporated into the current and recommended actions described at the end of this report.

While local injury data is currently limited, staff review published research related to injury rates associated with e-scooters programs around the world on an ongoing basis. A recent report<sup>1</sup> by the OECD's International Transport Forum compared the safety of bicycles, e-bikes, and e-scooters in 15 countries in an urban context. The report concluded that "a road fatality is not significantly more likely when using a shared standing e-scooter rather than a bicycle" and that "the risk of an emergency department visit for an e-scooter rider is similar to that for cyclists". The following table provides a summary of the injury and fatality rates for both e-scooter riders and bicyclists provided in the OECD report:

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<sup>1</sup> Safe Micromobility, Organisation for Economic Cooperation and Development / International Transport Forum (OECD / ITF), 2020

Mode	Injury Rate (Emergency Room Visits)		Fatality Rate	
E-scooter	87 – 251 per million trips	.01% - .03%	78 – 100 per billion trips	.00001% - .00001%
Bicycle	110 – 180 per million trips	.01% - .02%	21 - 257 per billion trips	.00000% - .00003%

Source: Safe Micromobility, Organisation for Economic Cooperation and Development / International Transport Forum (OECD / ITF), 2020

\* Note: The e-scooter injury rate in the table above is similar to the injury rate shared by IH in Attachment #3

In regard to risks for pedestrians, the report found that “pedestrian fatalities are rare” and that “overall, riders themselves represent over 90% of fatalities involving e-scooters.” As far as pedestrian injuries are concerned, the report found that in e-scooter incidents “pedestrian injuries are rare or under-reported” and that pedestrians represent an average of 4 per cent of e-scooter related injuries.

Key safety recommendations from the report include:

- Allocate protected space for bikes and scooters and keep pedestrians safe
- To make micromobility safe, focus on motor vehicles (cars and trucks)
- Regulate low-speed e-scooters and e-bikes as bicycles
- Collect data on micromobility trips and crashes
- Proactively manage the safety performance of street networks
- Include micromobility in training for road users
- Tackle drunk driving and speeding across all vehicle types
- Eliminate incentives for micromobility riders to speed
- Improve micro-vehicle design
- Reduce wider risks associated with shared micromobility operations

Staff reviewed these recommendations and have included recommended actions later in this report. These findings are also similar for the sources shared by IH in Attachment #3. For injury incident data, staff propose to continue working with our IH partners to improve the collection and tracking of shared e-scooter related injuries. Staff would then monitor this data and make consistent revisions to how service is delivered to ensure injury rates do not escalate outside the typical ranges from published research.

### ***Taking Cars off the Road***

To monitor the extent to which e-scooters are taking cars off the road in Kelowna, rather than being ridden purely for entertainment, staff are able to pull from two data sources. The first is the micromobility dashboard that receives real-time data from the e-scooter companies. This dashboard enables staff to see where trips are being taken throughout the city and monitor key travel statistics, summarized below:

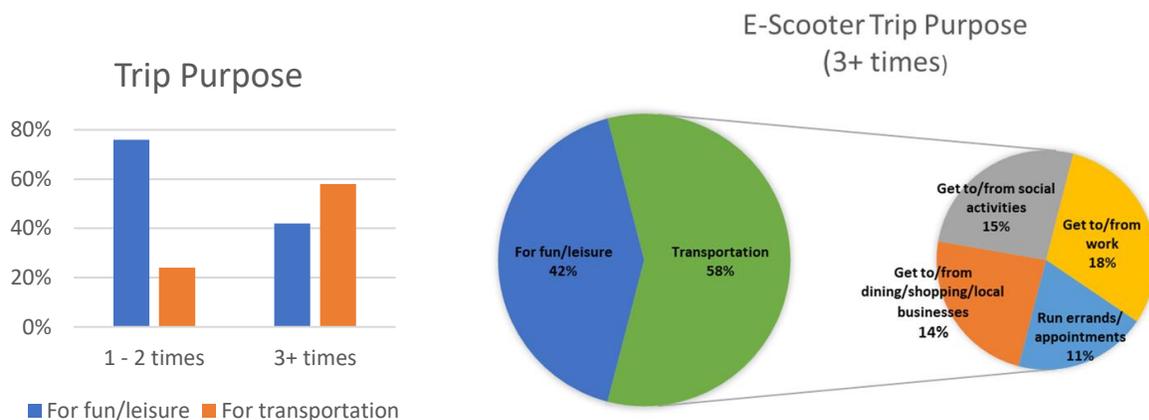
- **Total shared e-scooter trips in the first 45 days:** 77,000 (April 19<sup>th</sup> to June 2nd)
- **Average trips per day:** 1,700
- **Average trip distance:** 2 km
- **Average trip length:** 18 minutes
- **E-Scooter Mode Share within the Service Area:** Approx. 2%

From this data staff can report that the usage of shared e-scooters has been four times higher than the shared pedal-bike pilot in 2018. Within the main e-scooter service area (west of Spall, north of Mission Creek), shared e-scooters have an estimated 2 per cent mode share. For comparison, mode share in the

same area for transit was approximately 4 per cent, and for bikes was approximately 3 per cent in November 2018.

The second data source is a rider survey that the e-scooter companies conducted the week of June 7<sup>th</sup> to help staff better understand critical factors such as e-scooter trip purpose and how trips would have been made if e-scooters were not available. This is a standard transportation survey with questions that are typical for program evaluations. The survey was emailed by the service providers to their customers and the results shared with City staff. A total of 853 survey responses were received. As with all opt-in surveys, respondents are not drawn from a random sample and may not represent all e-scooter riders. Key survey results that are relevant to the discussion are summarized below.

The survey found that 72 per cent of respondents had never ridden an e-scooter prior to the program launch and that the majority of first- or second-time rides were for fun/leisure. This may be due to the need to try something new out first before you can rely on it for reliable transportation. However, for riders that reported riding three or more times, fun/leisure trips dropped to 42 per cent and transportation-related trips rose to 58 per cent. Transportation-related purposes included getting to work (18 per cent), meeting a friend/social activities (15 per cent), shopping (14 per cent) and running errands or getting to appointments (11 per cent).



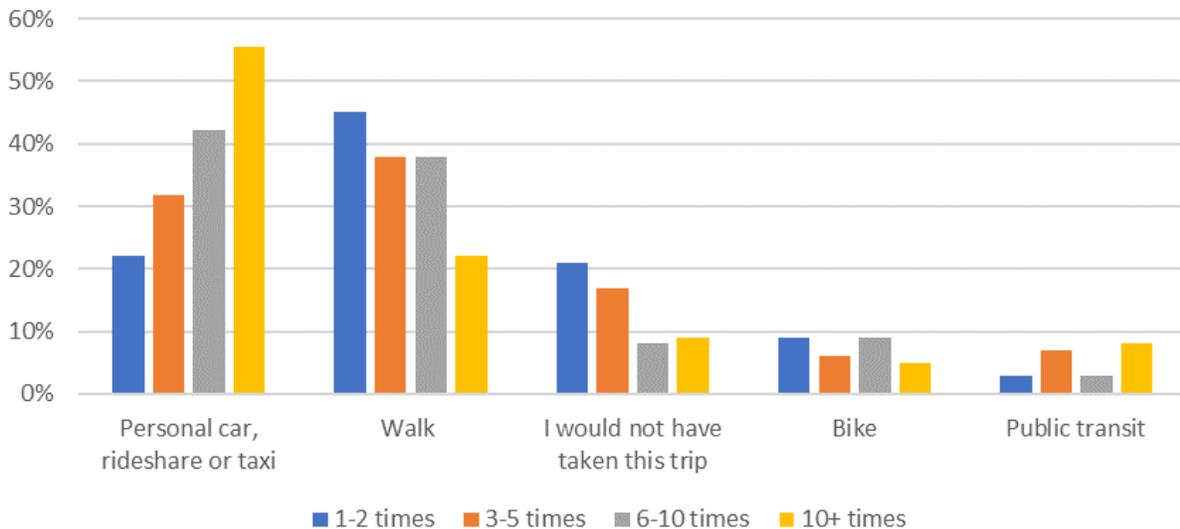
While trip purpose is important, in terms of the taking cars off the road, what really matters is how the trip would have been made if an e-scooter was not available. For example, a visitor that chooses not to rent a car in the busy summer months because e-scooters are available will also help take cars off the road, just like a resident that chooses to take an e-scooter into downtown (for any reason) rather than driving.

Research<sup>2</sup> shows that typically 45 per cent of e-scooter trips replace driving trips. The Kelowna rider survey showed that more frequent e-scooter users are more likely to replace a driving trip. Among survey respondents that rode an e-scooter at least three or more times in the first six weeks of the program, an average of 40 per cent of e-scooter trips replaced driving trips. Among riders who rode an e-scooter 10 or more times, 56 per cent replaced driving trips.

<sup>2</sup> NABSA State of the Industry Report 2019; <https://nabsa.net/about/industry/>

These data points indicate a general pattern where people are trying out e-scooters initially as something new, and then those that continue to ride start to use them for more utilitarian transportation trips that take cars off the road.

### Q. If e-scooters didn't exist, how would you have gotten to your destination?



Based on these data from the first six weeks, it is estimated the e-scooter program would take approximately 274,000 km of vehicle travel off our road network each year. This would equate to approximately 50 tonnes of direct vehicle emissions annually. These estimates are based on the current usage and could increase if the observed trend towards more utilitarian travel continues.

#### **Cost-Effectiveness**

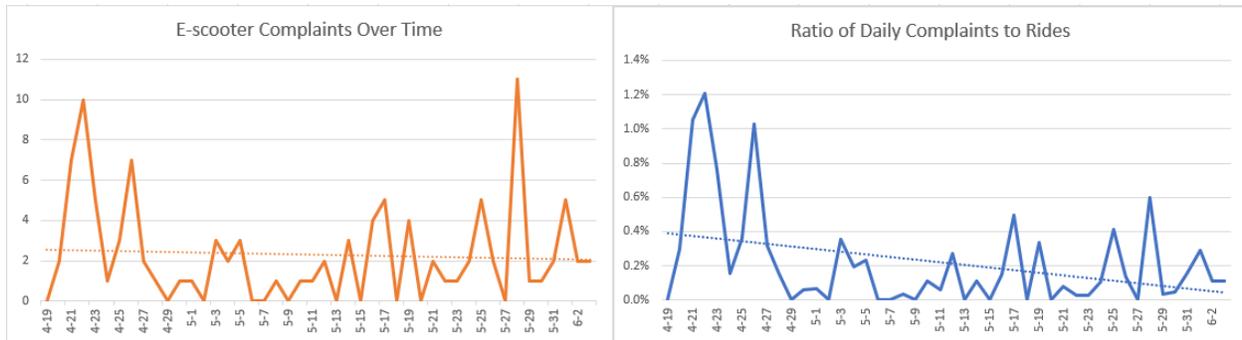
The City's costs to run the e-scooter program are primarily limited to staff time, with some additional costs related to the data dashboard and upcoming educational efforts. These have been accommodated within existing program budgets for 2021. The e-scooter companies are responsible for all the capital and operating costs associated with providing the service, including the staff time involved in e-scooter retrieval and deployment, e-scooter sanitization, rider training and street teams. E-scooter companies can also be fined by the City for failing to comply with the terms of their micromobility permit. These fines are being used to fund materials related to the new sidewalk decals and preferred parking areas.

When considering that shared e-scooters have approached a mode share similar to biking and transit within the core area of the city in just 45 days, and associated VKT and greenhouse emissions reduction potential of the program (at very little cost to the City), the program can be seen as providing a high value to taxpayers. Of course, injury data is currently limited, so future program assessments will need to factor this information in when it becomes available.

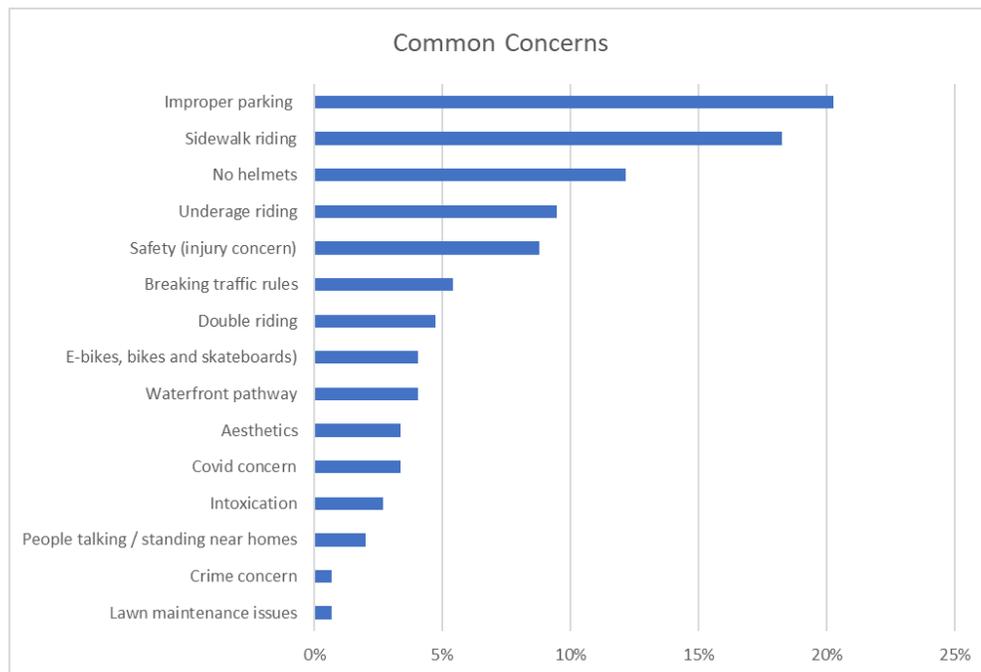
The remaining portion of this report provides a summary of public feedback received since program launch. Actions currently underway and recommended to address these concerns are provided at the end of the report.

Summary of Public Feedback and Common Concerns:

Since the launch of the e-scooter program, staff have been tracking the number of contacts from the public regarding e-scooters. Between April 19<sup>th</sup> and June 3<sup>rd</sup> there were 106 total complaints that came in either as a service request, contact to city staff, or contact to Council. The charts below show both the absolute number of complaints and the complaints received as a ratio of total shared e-scooter rides over the same time period. E-scooter complaints are typically related to improper riding or parking, so understanding complaints as a ratio to rides can be helpful.



Common concerns that the public reached out to staff with are summarized in the chart below:



Staff have also been coordinating closely with our enforcement partners (RCMP and Bylaw Services) to understand key concerns and issues related to e-scooter safety and rider compliance. RCMP and Bylaw Services are taking a proactive, education-based approach (i.e., issuing verbal warnings with selective enforcement), as resources allow. Since the program launch, RCMP and Bylaw issued approximately 260 warnings and responded to less than 30 e-scooter related complaints. The most common issues observed and reported include failure to wear a helmet, sidewalk riding, underage riding, and impaired riding.

Recommended Actions: The following section provides an overview of actions currently underway in response to the public feedback received, as well as additional recommended actions for immediate implementation. Staff are working to be responsive to concerns and have already made approximately 55 amendments to how shared e-scooter service is delivered over the first 45 days of the program, as a direct result of public feedback. Actions underway and new recommended actions are demarcated below and organized according to common concern / theme:

### ***Impaired Riding***

Research<sup>3</sup> indicates that one third of e-scooter related injuries could be associated with alcohol consumption. The following actions are being implemented to reduce the likelihood of impaired riding:

- **Intoxicated Riding Test and Pledge** [*underway*]: The City has required an intoxicated riding pledge or cognitive test when attempting to unlock an e-scooter in the late evening. Operators without this feature are not permitted to operate between 8pm and 4am. Three of the four e-scooter companies now have this feature in place. No late-night e-scooter rides happen without the rider first reviewing the dangers of intoxicated riding and pledging to ride sober or completing a cognitive test.
- **Late-Night Riding Restrictions** [*underway*]: In addition to the above, the City has also banned e-scooter riding in the downtown area (Sutherland to Recreation, Richter to the lake) between the hours of 10:30 pm and 4 am on weekends. On June 3<sup>rd</sup> this was extended to include weekday nights as well.

### ***Sidewalk Riding***

- **Walk your Wheels Sidewalk Stickers** [*underway*]: Pedestrians and people with diverse abilities need to feel safe on our sidewalks. To help discourage sidewalk riding, new sidewalk decals have recently been placed on the curb letdowns near our busiest sidewalks reminding people that "Sidewalks are for Pedestrians" and to "Walk Your Wheels."
- **Sidewalk Riding Detection** [*new action*]: To help reduce sidewalk riding, new technologies that utilize vibration sensors are now available that enable e-scooters to detect when they are being ridden on the sidewalk. While these technologies are still being tested and refined, this action may help deter sidewalk riding. When sidewalk riding is detected, e-scooter companies could issue warnings or fines to the customer account for violating the terms of the rental contract. Staff will work with the e-scooter companies to implement this new technology, when available.

### ***Safe Riding***

- **Street Teams** [*underway*]: As of June 1<sup>st</sup>, every e-scooter company is now required to have company staff Street Teams in the field for a total of 100+ hours per week to educate riders as well as deliver fines and warnings for unsafe riding behaviours.
- **Service-Provider Enforcement Process** [*underway*]: Any member of the public can submit a photo of improper riding or an improperly parked e-scooter with a time and location to the e-scooter companies. The e-scooter companies will review and issue a warning and/or fine to the customer account, as appropriate.

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<sup>3</sup> [https://austintexas.gov/sites/default/files/files/Health/Web\\_Dockless\\_Electric\\_Scooter-Related\\_Injury\\_Study\\_final\\_version\\_EDSU\\_5.14.19.pdf](https://austintexas.gov/sites/default/files/files/Health/Web_Dockless_Electric_Scooter-Related_Injury_Study_final_version_EDSU_5.14.19.pdf)

- **E-Scooter Safety Education Campaign** [*underway*]: Staff are currently working to engage a marketing firm to help boost the reach of our safety messaging and reach a broader audience, including riders of privately-owned e-scooters. It is anticipated that more in-community messaging would be launched over the months of July and August.
- **Low Speed First Ride** [*new action*]: Just like other vehicles, less experienced riders are more likely to have an injury. E-scooter safety research highlights that 29 per cent of e-scooter injuries occur during first rides. Staff will require that e-scooter companies limit first-time e-scooter rides to half speed to lower the likelihood of injury.
- **Rider Training Events** [*new action*]: Staff will require each e-scooter company to host rider training events twice a month. These free events would help provide a safe environment for new riders to take their first ride with instructions about how to ride, receive a helmet fit check, run a course, learn to signal, and get comfortable riding an e-scooter.

### **Improper Parking**

To discourage e-scooter riders from blocking sidewalks when parking, riders must take a photo of how they parked to end their trip. Warnings and fines are issued if they leave the scooter parked improperly. GPS and tip sensors alert operators when e-scooters fall over or get moved out of place. Current response times related to improper parking are under one hour. Any concerned resident can also call the City or the service provider to have an e-scooter moved. They can also move the errant e-scooter out of the path of travel themselves if they feel comfortable and are able to do so.

- **Parking Audits** [*underway*]: City staff have been conducting parking audits on an ongoing basis since the program launched. The results show five times fewer improperly parked e-scooters over the first month of the program.

<b>Date</b>	<b>Improper parking rate</b>
27-Apr	15%
29-Apr	13%
05-May	8%
13-May	3%

- **Preferred Parking Areas** [*underway*]: City staff have recently implemented over 30 preferred parking areas in our busiest locations, with 50 more in development. E-scooter companies are required to deploy scooters in these locations to improve orderliness in popular locations.
- **Downtown Deployment Cap** [*underway*]: Limits on the percentage of e-scooters deployed into the downtown will avoid e-scooter crowding. Starting on June 8<sup>th</sup>, operators can only deploy 35 per cent of their vehicles Downtown each day. This also encourages operator to serve new neighbourhoods and extend service more consistently across the City.
- **Faster Response Times** [*new action*]: To help keep e-scooters from blocking sidewalks, staff will require tighter timelines for e-scooter companies to relocate improperly parked scooters (1 hour between 4am-midnight, 4 hours between midnight-4am). This will help make response timelines enforceable.
- **Parking Compliance – Fines for E-scooter Companies** [*new action*]: To help further motivate e-scooter companies to ensure e-scooters do not block sidewalks, staff will continue to conduct

parking audits and issue fines to the e-scooter companies that correspond with the number of improperly parked e-scooters that belong to each company.

### ***Helmet Law Compliance***

The industry has moved away from providing shared helmets directly with e-scooters due to safety considerations (damaged helmets may not be visible) as well as public health considerations. However, the following actions are underway to help support compliance with the helmet law:

- **Free Helmets** [underway]: E-scooter companies are delivering free helmets to riders directly in the community via the company staff Street Teams, and free helmets are also available at the Visitor Center (while supplies last) or can be ordered through the app to receive by mail. E-scooter companies have given away hundreds of free helmets since program launch. It is estimated that 1 helmet will be given away for every 100 people living in Kelowna each year because of the program.
- **Helmet Selfie** [new action]: This feature uses computer vision to provide credits or discounts to riders who take a picture of themselves wearing a helmet before or after their ride. One operator in Kelowna already has this feature enabled and others are looking to have this implemented by the end of the month. Staff will work with the service providers to require the helmet selfie feature.

### ***Pedestrian Safety on Shared Pathways***

- **Low-speed Zones** [underway]: E-scooters have been speed restricted to 13 km/h along the waterfront and City Park. This is slower than the average speed of a bicycle.
- **Share the Path Education** [underway]: In the coming months, e-scooter program and safety messages will be woven into all public communications about multi-use pathway safety and the importance of sharing the path, which is done annually in anticipation of tourism and higher volumes of pathway users.

Permitting Process, Conditions and Limitations: Under the Bikeshare (Micromobility) Permit Program, Council has the option to amend conditions or cancel the program at any time. To help manage the program, staff recommend not issuing any further permits for shared e-scooters in 2021.

### **Conclusion:**

The first six weeks of the e-scooter program have seen both challenges and wins. While the high levels of ridership indicate demand for this type of service, it has also meant a big change for Kelowna in a short amount of time. Over 20,000 e-scooter customer accounts have been created, the majority of whom are new riders trying the service for the first time and learning the rules of the road. Given this level of uptake, the public feedback and concerns summarized in this report are certainly understandable. In response to the concerns, staff have already implemented approximately 55 amendments to how shared e-scooter service is delivered, over the first 45 days of the program. While staff anticipate safe and legally compliant riding behaviors to improve as people become more familiar with e-scooters and the relevant laws, the reality is it may take some time.

Preliminary findings from the data after just six weeks of implementation indicate there is strong potential for the shared e-scooter program to be a cost-effective way to help take cars off the road, reduce greenhouse gas emissions, and help people get around. However, a more robust survey of riders after a longer period of time would help provide a more comprehensive picture. Additionally, while data

related to e-scooter injury rates was not yet available at the time of this report, both Canadian and international evidence suggest they are similar to bicycles.

To address existing concerns, staff recommend continuing with the actions underway described in this report, as well as implementing the new actions identified. Staff also recommend continuing to work with Interior Health to track e-scooter related injuries, monitoring public feedback, and exploring ways to improve the e-scooter program. A full program evaluation could be undertaken in the fall.