

Things to think about in the preparation of an E-bike Bylaw

Introduction:

ATWA went before City Council on January 20/2020, “to ensure Council [was] made aware of the need to clarify where e-bikes and other electric mobility devices [could] be legally and appropriately used within the City of Whitehorse (COW). See <https://www.activetwa.org/e-bikes.html>.

In our written and Zoom comments to the 2020 Trail Plan consulting team we emphasized the need for such clarification.

We were encouraged to see that *Action #25* of the 2020 Trail Plan recognized that such clarification is needed.

As you know the City of Whitehorse is now preparing an E-bike Bylaw for presentation to the public.

A (what looks like) *pre-draft* bylaw was presented before a Jan. 28, 2021 *Council and Administration Roundtable* meeting. It is suggested that you view that document prior to reading the rest of this material. It can be found at the following site: <https://www.whitehorse.ca/home/showpublisheddocument?id=14701>.

Some points/information that should be considered by the City of Whitehorse when developing an e-bike bylaw:

The presentation given to City Council indicated that there were three major benefits of e-bikes: Equitable Access, Climate Change, and Active Transportation. Unfortunately, there was no information provided on any of these three benefits, although there may have been some relevant discussions that were not made available on the City’s website.

One suspects *equitable access* refers to the effort to “legitimize the use of e-bikes and other e-mobility devices” on our City’s trails, as the activity (unlike others) is “not currently permitted or addressed in existing bylaws.”

Hopefully, some discussion took place at the January 28 meeting to explain how e-bike use can benefit our environment and in particular our atmosphere.

Since the City needs to be taking steps that reflect its recent *climate change emergency* declaration, then it should be focusing on the use of e-bikes as an alternative to gas-powered vehicles for transportation.

All three classes of e-bikes can be used for transportation, and all three can provide some form of exercise and recreation.

However, if an e-bike is purchased only for recreational use, then that purchase will put more strain on our environment, as e-bikes require batteries that have to be built, charged (ideally by renewable energy, but not always), and eventually discarded and replaced. Of course, the bike itself has to be built using the Earth's resources.

In contrast, if an individual buys an e-bike in order to avoid using a gas-powered car or bus to get to work, then it would *seem* more likely that the person is making (or trying to make) a positive contribution to our environmental well being.

In the discussion of the 2020 Trail Plan, and in response to questions raised by councillors, "administration confirmed that a top priority will be to identify the bylaws and policies that need to be updated" in order for them to be integrated and consistent.

The idea expressed numerous times in the 2020 Trail Plan is for *all* policies, plans, definitions, and bylaws associated with trails to be consistent.

For example, we have a new Trail Plan that says a "non-motorized multiple use trail is to be used by a variety of non-motorized users." All e-bike types are *motorized*, so the City must justify allowing such devices on non-motorized trails. How can it do this?

Class 1 e-bikes or pedelecs could be considered as a non-motorized vehicle because they cannot move unless pedalling occurs. So, although technically *motorized* the vehicle will not work unless there is a specific physical action namely pedalling, so in effect they are human-powered rather than motor-powered. As such, they would be permitted on the City's non-motorized trails.

The City could also justify their use on non-motorized trails by referring to the territorial Motor Vehicles Act (MVA), which considers Class-1 e-bikes as *non-motorized*.

The new MVA will most likely have to deal with *all* types of electric mobility devices in the coming draft due to the federal government Department of Transportation relieving itself of all responsibility with regard to the rules and regulations concerning electric mobility devices. The result being that there is no longer any federal legislation to follow with regard to these devices.

The 2020 Trail Plan defines *Active Transportation* as "Any form of human-powered travel, such as walking, cycling, skateboarding, cross-country skiing and more. Walking and cycling are among the most popular and can be combined with other modes, such as public transit."

As Class 1 e-bikes can only work through pedal action they are in effect human-powered. Thus, their use is a form of Active Transportation/Recreation.

But how is the City is going to justify including Class 2 e-bikes as *active* forms of transportation/recreation and also justify their use on non-motorized trails?

City administration has mentioned that the Government of BC's definition of active transportation says that such transportation "includes travelling with the help of a *device that gives you a boost*, such as: Mobility aids, Electric bikes (e-bikes), Electric kick scooters (e-scooters)." Class 1 e-bikes fall into the category of a device that does *give you a boost*, but that boost is *only available* if you are *actively* pedalling.

It is our understanding that in BC Class 2 and 3 e-bikes are described as throttle-assisted bicycles that can reach top speeds of 32 and 45 kilometres per hour, respectively. They are considered *motor vehicles* under BC government and Park, Conservancy and Recreation Area (PRCA) regulations.

So the BC Active Transportation definition may only refer to Class 1 e-bikes, as all other types are considered by BC to be *motorized* vehicles. In any case, we are not dealing with BC's definition of active transportation, but rather our city's definition, a long-standing definition that has been upheld/confirmed in the just approved 2020 Trail Plan.

In the pre-draft E-Bike Bylaw document presented before City Council there is no clear definition of any one of the three classes of e-bikes. One expects that full definitions of each of these types will be included in the Draft Bylaw. The *Resort Municipality of Whistler* has adopted the following definitions of the three classes of e-bikes, definitions that take into consideration government of BC requirements:

Class 1: A bike equipped with a motor that provides assistance only when the rider is pedalling (pedal assist) and ceases to provide assistance when the bike reaches 32 km/h and has a maximum continuous wattage output of 500 watts.

Class 2: A bike equipped with a motor that can be used exclusively to propel the bike (throttle equipped) and ceases to provide assistance when the bike reaches 32 km/h. Class 2 e-bikes are classified as **motorized vehicles** according to the Recreation Sites and Trails BC's (RSTBC) e-bike policy.

Class 3: A bike equipped with a motor that provides assistance only when the rider is pedalling (pedal assist and ceases to provide assistance when the bike reaches 45 km/h. Class 3 e-bikes are classified as **motorized vehicles** according to the RSTBC e-bike policy.

(See https://www.whistler.ca/sites/default/files/2019/Jul/related/25085/appendix_a.pdf.)

As indicated previously, we can justify the use of Class 1 e-bikes on non-motorized trails and, for that matter, on any City trail. We can also justify Class 1 e-bike use as an active form of recreation/transportation.

There is no concern with Class 3 e-bikes as they will apparently *only be permitted* on motorized multiple use trails in the City, so even if the territorial government follows the BC government and classifies them as motorized vehicles in the new MVA, it will not make any difference as to where one can ride them in the City. Their use would still be confined to MMU trails and City streets. As well, like a Class 1 e-bike, the City can justify a Class 3 e-bike as an active form of transportation or of recreation.

The problem comes with Class 2 e-bikes, which administration's pre-draft E-bike Bylaw indicates will be allowed on "all City trails."

Unlike Class 1 and 3 e-bikes they can be driven *without pedalling*, and one suspects that is the reason why they are considered as motorized vehicles in other jurisdictions including BC. As such, in places like Whistler, Class 2 e-bikes are not permitted on non-motorized recreational trails, or "on all recreational trails located on municipally controlled lands." (See https://www.whistler.ca/sites/default/files/2019/Jul/related/25085/appendix_a.pdf.)

However, common sense would suggest that if you buy a bike with pedals that can be used, then at some point you are going to use them.

As well, when the territorial government updates its MVA it will have to address electric mobility devices in more depth than it does at present, and if it follows the BC government and classifies Class 2 e-bikes as motorized vehicles, then the City will have to follow suit. As such, Class 2 e-bikes would not be allowed on non-motorized trails as per the 2020 Trail Plan.

It would be more sensible and less controversial to confine Class 2 e-bikes to MMU trails. In any case, Class 1 e-bikes are likely to be the most popular e-bike, as according to Recreational Equipment Incorporated (REI) they "are the most affordable and, from a regulatory standpoint, the most universally accepted."

Therefore, the number of people purchasing a Class 2 e-bike could be much smaller than those purchasing Class 1 or Class 3 e-bikes, so there may not be a great outcry should their use be restricted to MMU trails and City roads. However, this is something that administration could verify by consulting with local e-bike sellers.

City administration should also determine why other jurisdictions classify Class 2 and 3 e-bikes as motorized vehicles. As well, it should determine why other jurisdictions ban Class 2 e-bikes from non-motorized recreational trails.

It is very possible that the City has already consulted with the Government of Yukon to get an idea as to whether or not the latter intends to classify Class 2 and 3 e-bikes as motorized vehicles.

One other issue that various jurisdictions have addressed is the age at which a person is permitted to use an e-bike. In BC and Ontario one has to be 16 to be either an operator or a passenger.

Our territorial government only refers to Class 1 e-bikes in the MVA, and does not set any age limitations. However, this may well change when the MVA is updated. There must be very valid reasons why other jurisdictions confine e-bike use to those 16 and over. City administration should determine those reasons.

As Class 3 e-bikes are only going to be restricted to MMU trails it is essential that there is a usable and updated motorized trail map to which operators can refer. ATWA has asked many times that an improved and usable MMU trail map be made available (in various forms) for motorized users. See <https://www.whitehorse.ca/home/showpublisheddocument?id=4210>.

Action #19 of the 2020 Trail Plan refers to the need “to update the motorized trail use map (2015) to reflect completed Neighbourhood Trail Plans and improve legibility with a legend, north arrow, scale, trail names and labels [and] at the same time incorporate basic information related to seasonal trail use, and safe and respectful riding.” This needs to be made available to all MMU trail users the day the E-bike Bylaw is approved by City Council.

The photographs included in administration’s presentation before City Council on the E-bike Bylaw, indicate that there are other types of electric mobility devices whose legal and appropriate uses will have to be determined. The two that may present the greatest challenges are the e-scooter and e-skateboard.

Other questions that administration should explore concerning e-bikes are the following:

Should all e-bikes be required to be equipped with speedometers? As it is likely that e-bikes will be restricted to certain speed limits depending on where they are being used, it would seem essential that they be equipped with speedometers.

In Whitehorse, ATVs and snowmobile allowable speeds range from 10 to 50 km per hour depending on various factors. (See ATV and Snowmobile Bylaws for more information: <https://www.whitehorse.ca/departments/bylaw-services/bylaws>.)

Should e-bike operators be allowed to wander off-trail in the City’s greenbelts and open spaces?

Should they be prohibited from Environmentally Sensitive Areas unless on appropriate City designed and designated trails?

Has the potential impact (wear and tear) of heavier e-bikes on existing non-paved trails been considered? E-bike users may be able to do many more circuits of (for

example) a loop trail than a regular mountain bike due to the ability to use the electric motor.

Some associates have noticed a distinct deterioration of trails in recent years, which *may be* the result of increased mountain bike use and/or by the increased use of our trails by *all* users. Running on popular trails where root systems are being increasingly exposed is becoming an increasing concern. As the popularity of e-bikes grows this could result in more root exposure.

“Electric bikes are 40-50% heavier than traditional bicycles but are considerably lighter than motorcycles. An average electric bicycle weighs around 45-50 pounds (18-22 kg). A typical traditional non-electric bike may weigh around 30-35 pounds (12-13 kg).” See <https://easyebiking.com/how-much-does-an-e-bike-weigh/>.

Should e-bike owners be required to obtain liability insurance? (They should at least be informed of the consequences of not having such insurance.)

Additional information, which may be necessary to include in the E-bike Bylaw:

- E-bikes must not weigh more than 120 kg (includes the weight of bike and battery).
- All operators and passengers must be at least 16 years of age.
- All operators and passengers must wear an approved bicycle or motorcycle helmets.
- All electrical terminals must be completely covered.
- Two independent braking systems consistent with requirements for motorcycles and motor-assisted bicycles (mopeds) that applies force to each wheel and is capable of bringing the e-bike, while being operated at a speed of 30 km/h, to a full stop within 9 metres from the point at which the brakes were applied.
- The minimum wheel width is 35mm.
- The minimum wheel diameter is 350mm.
- No modifications to the motor to allow it to exceed a power output greater than 500W and a speed greater than 32 km/h.

The battery and motor must be securely fastened to the vehicle to prevent them from moving while the e-bike is operating. See <http://www.mto.gov.on.ca/english/driver/electric-bicycles-faq.shtml>.

Active Trails Whitehorse Association