ELECTRIC BICYCLE AND SCOOTER LAWS AND REGULATIONS

for the Lake Tahoe Region

Photo: Tahoe South

Prepared by the Lake Tahoe Pathway Partnership

Updated January 2020

LAKE TAHOE
Pathway Partnership

TABLE OF CONTENTS

DEFINITIONS

Motorized Vehicle Types in California

E-bike and e-scooters are classified and defined in the following way by the State of California[1]:

Class 1 e-bike: Pedal-assisted electric bicycle (assistance only when rider is pedaling) with a maximum assisted speed of 20 mph.

Class 2 e-bike: Throttle-assisted electric bicycle (used to propel bicycle up to 20 mph).

Class 3 e-bike: Speed-pedal-assisted electric bicycle (only when rider is pedaling), maximum speed of 28 mph & equipped w/speedometer.

E-scooter: A two-wheeled device that has handlebars, a floorboard designed to be stood upon when riding, and is powered by a motor with a maximum speed of 15 mph. In many cities electric scooters are left in various locations and made available for short term rentals by private companies.

Electric Bicycles and Scooters in Nevada

E-bikes and e-scooters are defined the following way in the State of Nevada:

Electric Bicycle: "a device upon which a person may ride, having two or three wheels, or every such device generally recognized as a bicycle that has fully operable pedals and is propelled by a small electric engine which produces not more than 1 gross brake horsepower and which produces not more than 750 watts final output, and:

1. Is designed to travel on not more than three wheels in contact with the ground but is not a tractor; and
2. Powered solely by such a small electric engine, is capable of a maximum speed of not more than 20 miles per hour on a flat surface while carrying an operator who weighs 170 pounds. The term does not include a moped" (NRS 484B.017).

Electric Scooter: A vehicle with handlebars and an electric motor that is designed to be ridden on in an upright or seated position and propelled by its electric motor or by propulsion provided by the rider. Such a vehicle:

1. Must not weigh more than 100 pounds without a rider; and
2. Must have a maximum speed of not more than 20 miles per hour when powered solely by its electric motor (NV AB485).

[1] California e-bike classes and definitions are used throughout the document for consistency and clarification, although Nevada has adopted a separate definition for electric bicycles as noted above. The California classes are used to effectively relate allowable e-bikes between each jurisdiction and the two states. California's class I and II e-bikes fall under Nevada's existing definition of an electric bicycle.

Federal Law

E-bikes and e-scooters are defined as motor vehicles under Federal Transportation Law:

23 U.S.C. § 217 Bicycle Transportation and Pedestrian Walkways, Part (i)(2) - Electric bicycle.--The term "electric bicycle" means any bicycle or tricycle with a low-powered electric motor weighing under 100 pounds, with a top motor-powered speed not in excess of 20 miles per hour.

Federal Consumer Product Safety Law:

15 U.S.C. § 2085 Low-Speed Electric Bicycles, Part (b) - the term "low-speed electric bicycle" means a two- or three-wheeled vehicle with fully operable pedals and an electric motor of less than 750 watts (1 h.p.), whose maximum speed on a paved level surface, when powered solely by such a motor while ridden by an operator who weighs 170 pounds, is less than 20 mph.

> *USFS Motor Vehicle:* any vehicle which is self-propelled, other than:
> (1) a vehicle operated on rails; and
> (2) any wheelchair or mobility device, including one that is battery-powered, that is designed solely for use by a mobility-impaired person for locomotion, and that is suitable for use in an indoor pedestrian area.

Federal Funded Transportation Facilities: (23 U.S.C. § 217)

Bicycle Transportation and Pedestrian Walkways
(h) Use of Motorized Vehicles -- Motorized vehicles may not be permitted on trails and pedestrian walkways under this section, except for—

(1) maintenance purposes;
(2) when snow conditions and State or local regulations permit, snowmobiles;
(3) motorized wheelchairs;
(4) when State or local regulations permit, electric bicycles; and
(5) such other circumstances as the Secretary deems appropriate.

Bike Route Classes

TRPA has adopted the following bicycle classifications for infrastructure in the Lake Tahoe Region:

> *Class I Shared-Use Path:* A shared-use path is a completely separate trail for active transport users. The path is recommended to be 10 feet wide and provide for two-directional travel.
>
> *Class II Bike Lane:* Bike lanes are striped six feet wide lanes and provide one-way travel on a shared roadway with vehicles.
>
> *Class III Bike Route:* A bike route is a shared roadway typically located on low-volume and low-speed streets. Signs and painted "sharrows" assist with wayfinding and show the preferred location of the biker within the roadway.
>
> *Class IV:* A travel lane exclusively for bicyclists physically separated from motor vehicle travel lanes, parking lanes, and sidewalks (TRPA, 2018).

USFS Roads or Trails: A road or trail wholly or partly within or adjacent to and serving the National Forest System that the Forest Service determines is necessary for the protection, administration, and utilization of the National Forest System and the use and development of its resources (USFS, 2007).

REFERENCE LIST

Bike Tahoe. 2017. E-bikes Know Before You Go. Retrieved from https://biketahoe.org/electric-bicycles-or-e-bikes-know-before-you-go/

California Department of Motor Vehicles (CADMV). 2019. Motorized Scooter. Retrieved from https://www.dmv.ca.gov/portal/dmv/detail/vr/scooters

California Department of Parks & Recreation (CADPR). 2019. Burton Creek State Park. Retrieved from https://www.parks.ca.gov/?page_id=512

State of California (CAGOV). 2016. Vehicle Code Operation of Bicycles. 21207.5. Retrieved from http://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=VEH&sectionNum=21207.5.

Carson City Code (CCC). 2019. 10.26.300 - Sidewalk riding. Retrieved from https://library.municode.com/nv/carson_city/codes/code_of_ordinances?nodeId=TIT10VETR_CH10.26MIRU_10.26.300SIRI

City of Baltimore (COB). 2019. Baltimore City Dockless Vehicle Pilot Program. Retrieved from https://transportation.baltimorecity.gov/sites/default/files/Pilot%20evaluation%20report%20FINAL.pdf

City of Denver (COD). 2019. Denver Dockless Mobility Program. Retrieved from https://www.denvergov.org/content/dam/denvergov/Portals/705/documents/permits/Denver-dockless-mobility-pilot-update-Feb2019.pdf

Douglas County Code (DCC). 1991. 10.28.010 Moped Defined. Retrieved from https://dcnvda.org/CountyCodes.aspx?TID=52&CID=98&SID=289#10.28.010

Douglas County Code (DCC). 1986. 10.24.020. Operation of a Motorized Vehicle on a Recreational Trail Unlawful. Retrieved from https://dcnvda.org/CountyCodes.aspx

Douglas County Code (DCC). 1991. 10.28.050 Restrictions on the Operations of Mopeds, Motorcycles, & Trimopeds. Retrieved from https://dcnvda.org/CountyCodes.aspx?TID=52&CID=98&SID=289#10.28.010

El Dorado County Code (EDCC). 2019. Ordinance No. 5038. Retrieved from https://library.municode.com/ca/el_dorado_county/codes/code_of_ordinances?nodeId=PTAGECOOR_TIT10VETR_CH10.32VERETRFA_S10.32.030EX

Lime. 2018. User Agreement. Retrieved from https://www.li.me/user-agreement

Lake Tahoe Basin Management Unit (LTBMU). 2011. North Shore Motor Vehicle Use Map. Retrieved from https://usfs-public.app.box.com/v/ltbmu-mvum-north

Lake Tahoe Basin Management Unit (LTBMU). 2011. South Shore Motor Vehicle Use Map. Retrieved from https://usfs-public.app.box.com/v/ltbmu-mvum-south\

Lake Tahoe Bicycle Coalition. 2019. Share the Path. Retrieved from https://www.tahoebike.org/sharethepath/

Logemann, A. & Lommele, M. 2015. New E-bike Law Passes in California. *People for Bikes.* Retrieved from https://peopleforbikes.org/blog/new-e-bike-law-passes-in-california/

Maloney, L. 2019. Re: Pre-Draft Bill for Electric Scooters. Email.

Portland Bureau of Transportation (PBOT). 2018. 2018 E-scooter Findings Report. Retrieved from https://www.portlandoregon.gov/transportation/article/709719

People for Bikes, 2019. Nevada's E-bike Law. Retrieved from https://peopleforbikes.org/wp-content/uploads/2017/10/E-Bike-Law-Handouts_NV_Revision_compressed.pdf

San Francisco Municipal Transportation Agency (SFMTA). 2019. Powered Scooter Share Mid-Point Evaluation Report. Retrieved from https://www.sfmta.com/sites/default/files/reports-and-documents/2019/04/powered_scooter_share_mid-pilot_evaluation_final.pdf

State of Nevada. Act AB485. Retrieved from https://www.leg.state.nv.us/App/NELIS/REL/80th2019/Bill/6935/Overview

Thomaselli, L., Stroud, H. 2019. Lime Scooter Agreement. City of South Lake Tahoe. Retrieved from https://legistarweb-production.s3.amazonaws.com/uploads/attachment/pdf/340230/01-Staff_Report_Lime_Agreement_Final.pdf

Tahoe City Public Utility District (TCPUD). 2019. Rules of the Road. Retrieved from https://www.tcpud.org/biketrails

Tahoe Regional Planning Agency (TRPA). 2018. Linking Tahoe: Active Transportation Plan Technical Amendment #1. Retrieved from http://www.trpa.org/wp content/uploads/2018_ATP_Technical_Amendment_1_FINAL.pdf

Tahoe Rim Trail Association (TRTA). 2019. New Technology on the Trail. Retrieved from https://tahoerimtrail.org/stories/new-technology-on-the-trail/

United States Bureau of Reclamation (USBR). 2019. Reclamation creating more opportunities to recreate on public lands. Retrieved from https://www.usbr.gov/newsroom/newsrelease/detail.cfm?RecordID=68364

United States Forest Service (USFS). 2007. 212.1 Definitions. Forest Road & Trail. Retrieved from https://www.law.cornell.edu/cfr/text/36/212.1

Washoe County Code (WCC). 2016. Unauthorized Use of Bicycle Trails. Retrieved from https://library.municode.com/nv/washoe_county/codes/code_of_ordinances?nodeId=CH95PARE_USCOPASYFA_95.365UNUSBITR

INTRODUCTION

The Pathway Partnership has a vision of an interconnected and attractive non-motorized network at Lake Tahoe that contributes to the environment, economy, and community. To reach this vision, a group of government agencies, nonprofits, and advocacy representatives collaborate to build partnerships, leverage funding opportunities, and share best practices to achieve regional transportation goals.

E-bikes and e-scooters offer low cost, energy efficient, emission-free transportation and are more accessible compared to traditional bikes and scooters. E-bikes are growing in popularity and e-scooter share companies are continuing to expand their services. As result, there is an increasing presence of e-bikes and e-scooters on Tahoe's network of shared use paths that is not regionally permitted. The introduction of e-bikes and e-scooters has created a need for additional policy refinement as riders can cross multiple jurisdictions while travelling on the shared use paths and will ride wherever regardless of the policies in place.

This document outlines and compares e-bike and e-scooter laws across State, County, and City jurisdictions within the Lake Tahoe Region with a goal to identify inconsistencies and provide guidance towards developing unified policy as the vehicles increase in popularity.

FEDERAL E-BIKE LAWS & POLICIES

United States Forest Service (USFS)

160,000 acres of national forest lands surround Lake Tahoe and are managed by the USFS. This acreage includes ~200 miles of National Forest System Roads and 350 miles of National Forest System Trails.

The Lake Tahoe Basin Management Unit (LTBMU) classifies electric bicycles and electric scooters as motor vehicles, so they are subject to regulation under travel management rules (TMR). Their use is only permitted on motorized trails including the following TMR designations:

- "Roads open to all vehicles"
- "Trails open to all vehicles"
- "Trails open to vehicles 50" or less in width"
- "Trails open to motorcycles only"

The USFS Motor Use Vehicle Maps depict which routes in the North & South shore are open to e-bikes. The USFS designates a numbered route to each road and trail on LTBMU land. See Appendix A for tables that depict which routes in the North & South shore are open to e-bikes according to their TMR designation.

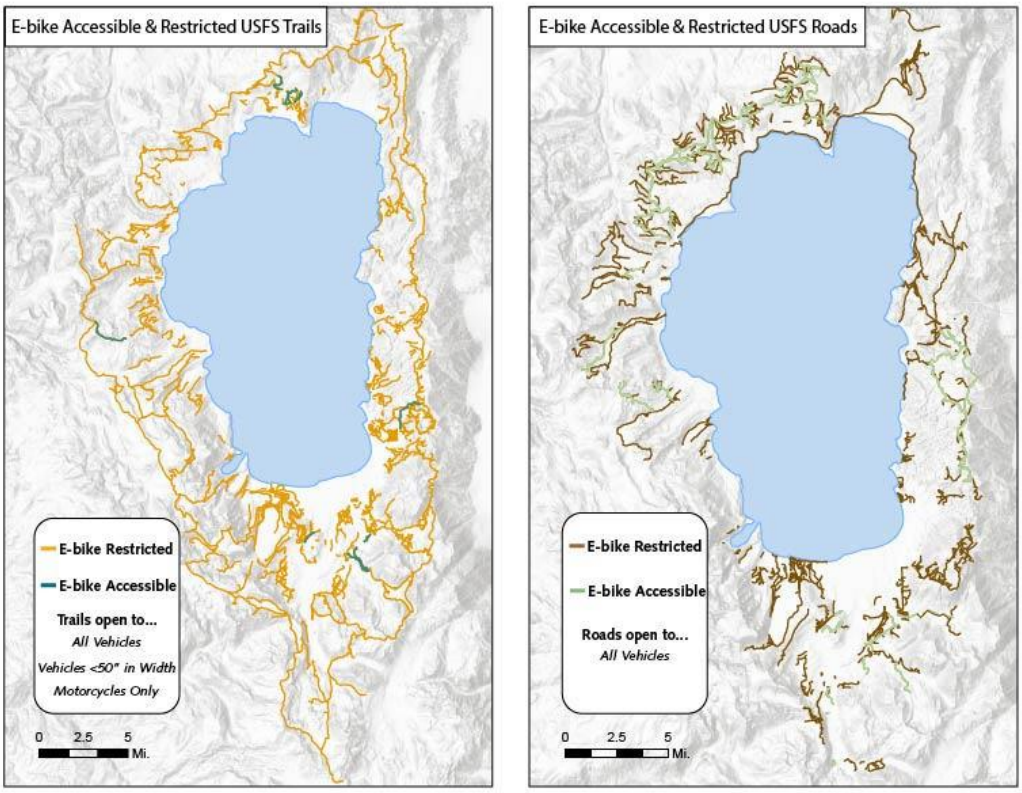
The USFS has received questions from the public about the use of e-bikes as an assistive device for people with motor disabilities, but e-bikes do not meet qualifications for exemption. Assistive devices are defined as “Any wheelchair or mobility device, including one that is battery powered, that is designed solely for use by a mobility-impaired person for locomotion, and that is suitable for use in an indoor pedestrian area” (36 CFR 212.1).

E-bikes are not designed solely for use by mobility-impaired persons and it would be inappropriate to operate them in an indoor pedestrian area, so they do not qualify as an assistive device.

The USFS has also received questions from the public about the use of e-bikes as an ‘Other Power-Driven Mobility Device’ (OPDMD). OPDMDs are defined as “any vehicle or device powered by batteries, fuel, or other engines including devices not primarily designed for people with mobility disabilities that are used by individuals with mobility disabilities for the purpose of locomotion. Ex) Golf cars, electronic personal assistance mobility devices, like the Segway, or any other mobility device that is not a wheelchair.”

OPDMDs are operable anywhere unless signage is posted, or the device has been previously deemed inappropriate for the area. The USFS determined e-bikes are inappropriate for use on non-motorized National Forest System trails and roads, so use is limited to TMR designated routes only.

Figure 1. TMR E-bike Designated USFS Trails & Roads



USFS laws classify e-bikes as motorized vehicles while State, County, and City laws have modernized, treating e-bikes more like traditional bicycles. As a result, e-bikes are inconsistently permitted on shared use paths, since some sections of the existing bikeway in Tahoe are under USFS jurisdiction.

Table 1. E-bike Restricted Sections of Tahoe Bikeway under USFS Jurisdiction

Name	From	To	Maintenance	Implementation	County
Pope Baldwin Path	Valhalla	Pope Beach Entrance	El Dorado Co.	USFS	El Dorado Co.
Pope Baldwin Path	Heritage Way Visitor Center	Spring Creek	El Dorado Co.	USFS	El Dorado Co.
Fallen Leaf Lake Trail	Sr 89	Fallen Leaf Lake Campground	El Dorado Co.	USFS	El Dorado Co.
Zephyr Cove Bike Path	Zephyr Cove Stables	Warrior Way	Douglas Co.	USFS	Douglas Co.
15th St Bike Path	15th St Bridge	Pope/Baldwin Path	USFS	El Dorado	El Dorado

The LTBMU forest service is actively working on a process to approve class 1 e-bike use on class I multi-use paths. The USFS is only considering class 1 e-bikes for approval because the pedal assist feature functions similarly to traditional bicycles as opposed to the throttle assist feature found on class 2 and 3 e-bikes and e-scooters.

The USFS must conduct individual NEPA analyses for each trail to determine whether e-bike use is appropriate. The Department of Interior (DOI) recently announced new policies to allow e-bikes on trails within National Parks, but the Department of Agriculture (DOA), where the USFS is housed, has not. It's possible the DOA will follow in the steps of the DOI in the future, but until that happens, LTBMU will continue conducting individual NEPA analysis on trails.

E-scooters will not be allowed on USFS paths because they are not considered 'pedal assisted'. They only require a few kicks to start, then function like a motorized vehicle for the duration of the ride. The USFS worked with Lime to set geofencing boundaries at USFS facilities where riders may take the scooters, but currently the USFS cannot restrict Lime riders from riding into their facilities.

United States Bureau of Reclamation

In October 2019, the United States Bureau of Reclamation (USBR) implemented Secretary's Order 3376 allowing low-speed e-bike use on all USBR paths. Class 1 e-bikes with a small electric motor (less than one horsepower) power assist will be allowed on paths and treated as traditional bicycles.

USBR owns and maintains the section of bike path over the bridge in Tahoe City, CA. The move by the Bureau of Reclamation to permit class 1 e-bikes is intended to expand recreation opportunities for users with limited mobility and to increase access on public lands (USBR, 2019).

REGIONAL E-BIKE LAWS & POLICIES

California State

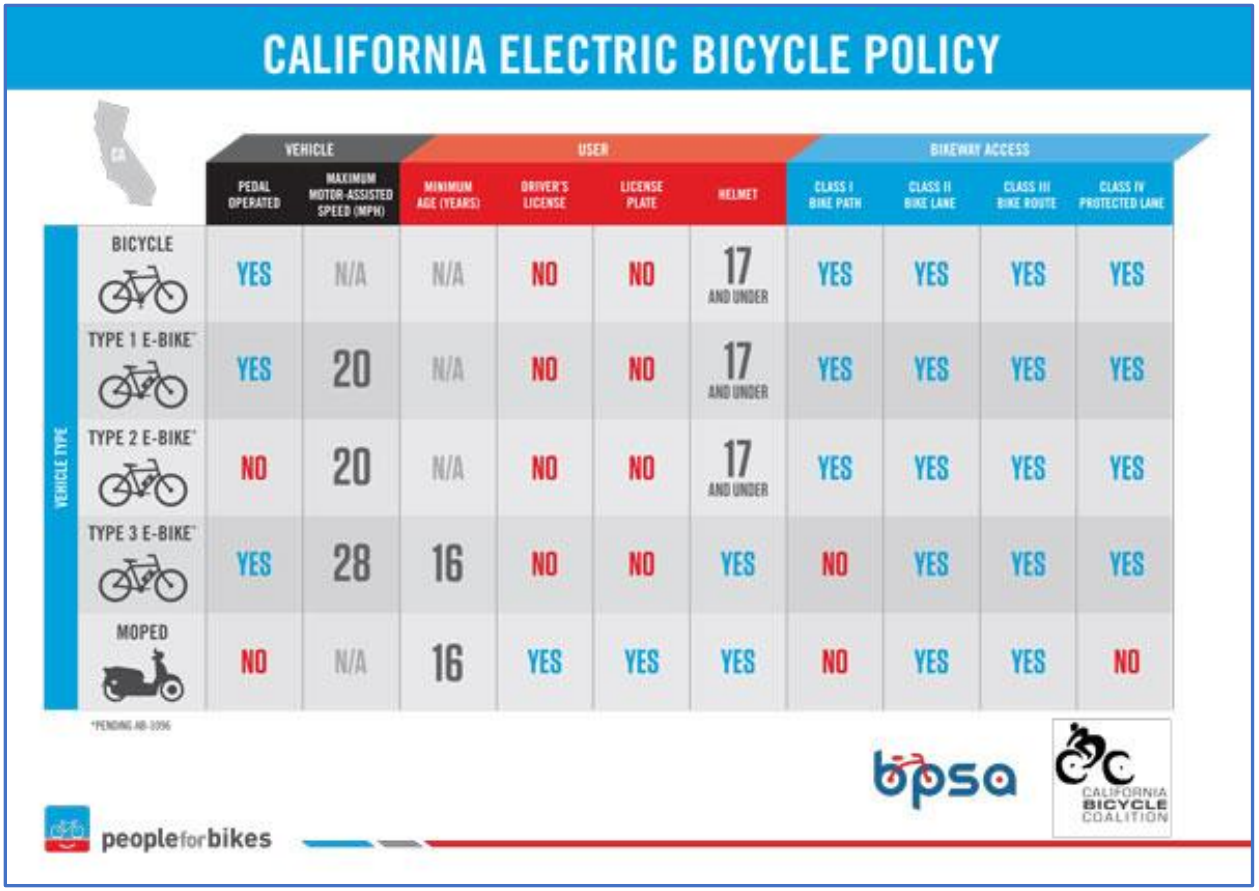
E-Bike Laws

In the state of California, the following laws apply to e-bike riders (CA VEH 312.5):

- Type 1 and 2 e-bikes are pedal-assist and/or throttle-assist with a maximum speed of 20 mph
- Type 3 e-bikes are pedal-assist and throttle-assist with a maximum speed of 28 mph
- Helmets are required for riders under 17 operating Type I & II e-bikes
- Helmets are required for all riders operating Type III e-bikes
- Type 3 e-bike riders must be 16 or older
- Type 1 and 2 e-bikes are allowed on every class of bikeway.
- Type 3 e-bikes are not allowed on Class I bikeways, but are allowed on Class II, III, & IV.

Currently only class I, II, and III, bikeways exist within the Lake Tahoe region.

Figure 2. California E-Bike Policy Diagram (Logemann & Lommele, 2015).

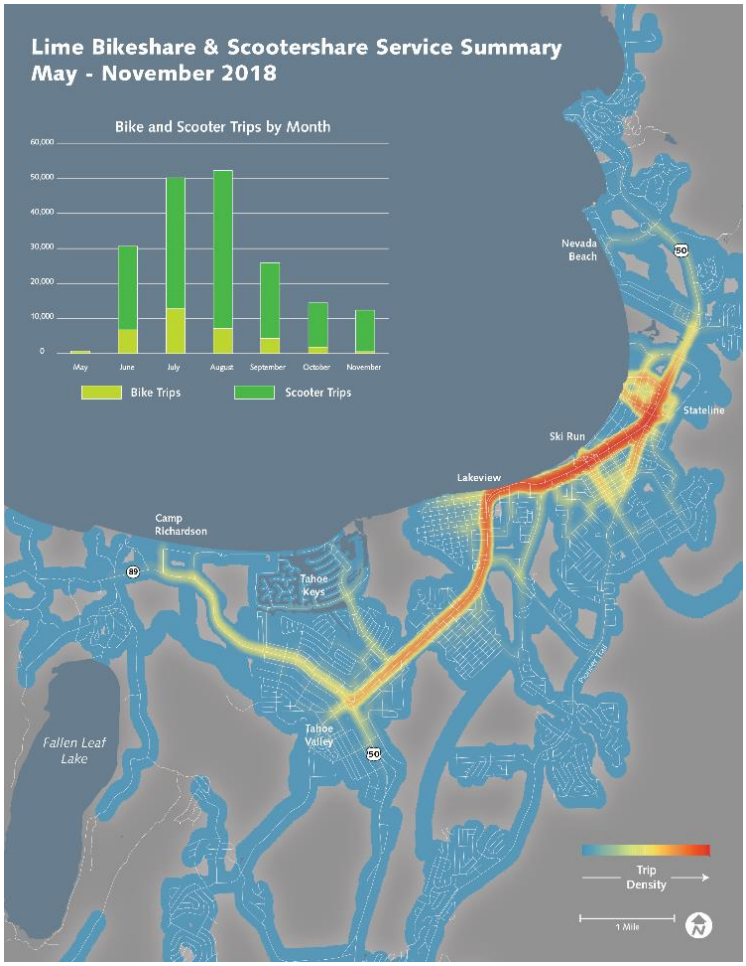


E-Scooter Laws

South Lake Tahoe welcomed e-scooters to the Tahoe region through a partnership with Lime, providing residents and visitors access to a fleet of 550 scooters. Lime e-scooters cost $1.05 to unlock and an additional 15 cents per minute to ride.

Introducing e-Scooters to the region, has created a need for additional policy refinement as riders can cross multiple jurisdictions while travelling on the shared use paths and will ride wherever regardless of the policies in place (see image to the right).

Figure 3. Lime Bike & E-Scooter Activity in South Lake Tahoe



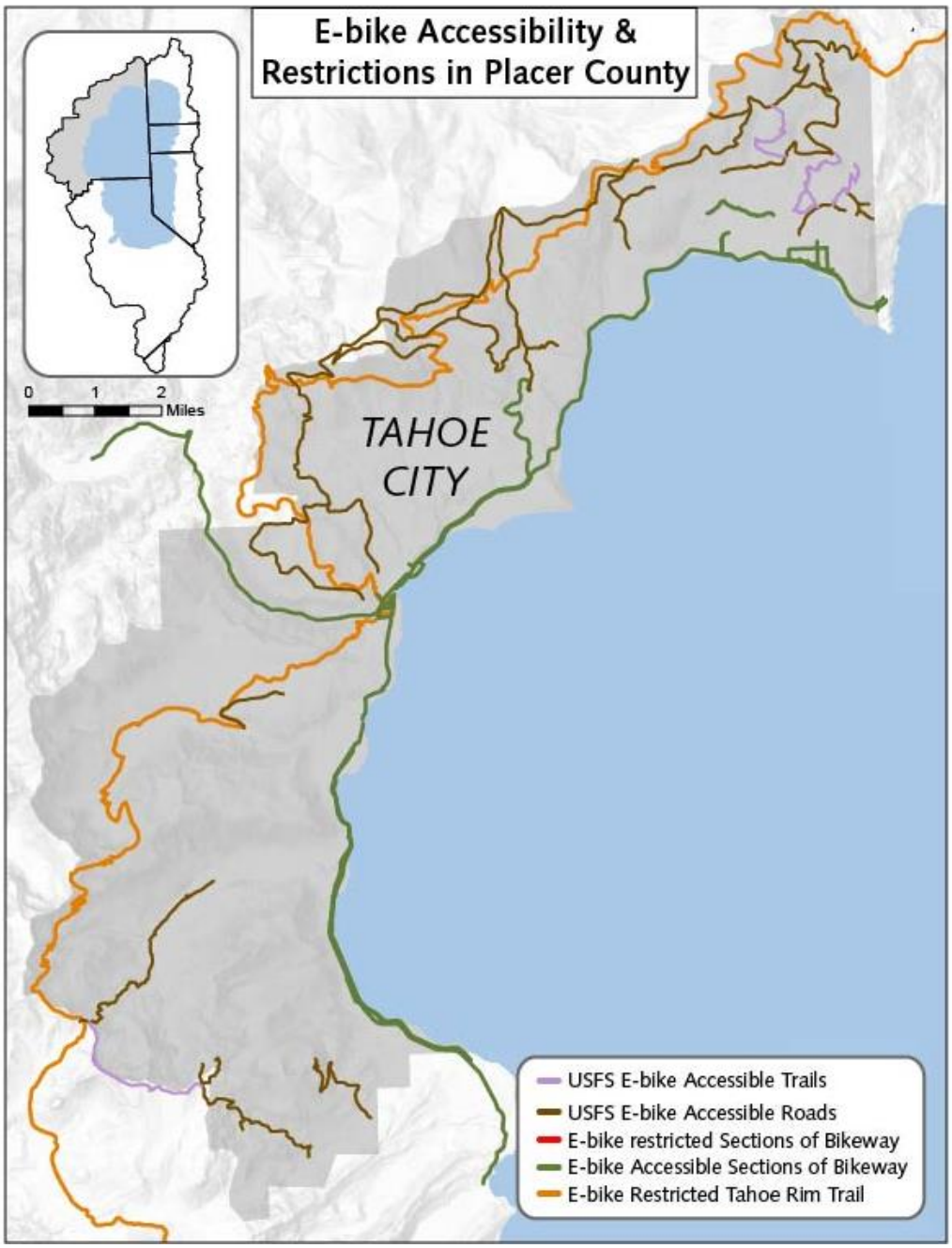
The following laws apply to e-scooter riders in the state of California (CADMV 2019).

- Riders under the age of 18 must wear a helmet
- Riders must have a valid driver's license or instruction permit
- Riders may not ride on sidewalks
- An E-scooter may not be operated at a speed higher than 15mph on all roadways
  including bikeways, regardless of the present speed limit
- E-scooters are not allowed to operate on any roadway with a speed limit greater than 25 mph (up to 35mph with a local ordinance) unless they're riding on a designated class II or IV bikeway
- Regardless of the street's speed limit, scooters are allowed on adjacent class II & class IV bike paths, but cannot exceed 15 mph
- The State of California grants local jurisdictions the right to pass laws and regulations regarding e-bike and e-scooter access on local right of ways and trails

Placer County

Placer County does not have specific e-bike or e-scooter regulations listed within their code, so riders are subject to California's e-bike and e-scooter regulations. The map below depicts where e-bike access is permitted and restricted within Placer County.

Figure 4. E-bike Permitted & Restricted Trails, Roads & Bikeways in Placer County



El Dorado County

El Dorado County restricts motorized vehicles and motorized bicycles on class I paths but allows electric bicycles. The county defines a motorized bicycle as, “any self-propelled device in or upon which any person or property may be moved”. The county defines electric bicycles as, “a bicycle equipped with operable pedals and an electric motor of less than 750 watts.”

Based on these descriptions, class 1 and 2 e-bikes are defined as electric bicycles, while class 3 e-bikes are defined as motorized bicycles. The following paths are owned, maintained, and/or operated by El Dorado County (EDCC, 2019), and restrict class 3 e-bikes.

Figure 5. E-Bike Permitted & Restricted Trails, Roads & Bikeways in El Dorado County

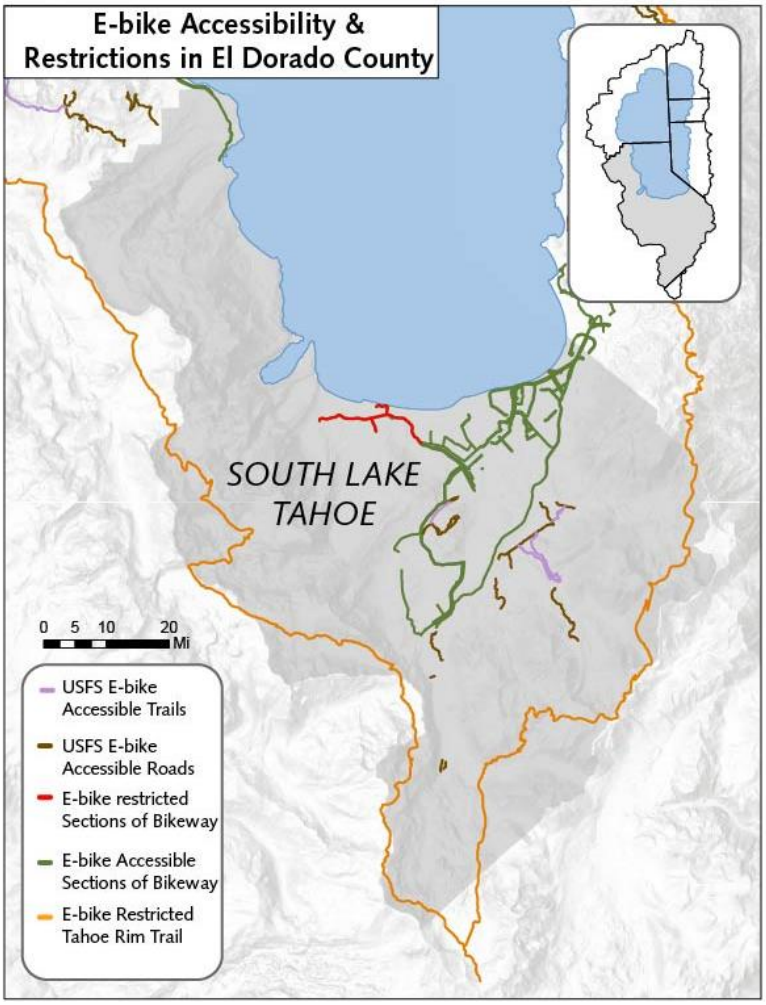


Table 2. Class 3 E-bike restricted sections of Tahoe Bikeway in El Dorado County

Name	From	To	Maintenance Juris	Implementation	County
Lake Tahoe Blvd Path	Viking Road	Sawmill Road	El Dorado	El Dorado	El Dorado
Sawmill Bike Path	Lake Tahoe Blvd	US Hwy 50	El Dorado	El Dorado	El Dorado
Sawmill Bike Path	US Hwy 50	Santa Fe Road	El Dorado	El Dorado	El Dorado
Pat Lowe Memorial Bike Trail (South)	Pioneer Trail	Luther Pass Rd & Pomo St.	El Dorado	El Dorado	El Dorado
Pat Lowe Memorial Bike Trail (North)	Santa Fe Road	US Hwy 50 & SR 89	El Dorado	El Dorado	El Dorado

City of South Lake Tahoe

E-Bikes

The City of South Lake Tahoe (CSLT) does not have specific e-bike or e-scooter regulations listed within their municipal code, so class 1 and 2 e-bikes are allowed on class I paths according to El Dorado County law. Some sections of bikeway within South Lake Tahoe have signs restricting "motorized vehicles and motorized bicycles", which according to El Dorado County's definition, exempt class 1 and 2 e-bikes.

Figure 6. "No Motorized Bicycles" sign on South Lake Tahoe Bike Route.

Figure 7. "No Motorized Bicycles" Sign entering 15th St bike path towards Pope/Baldwin Path

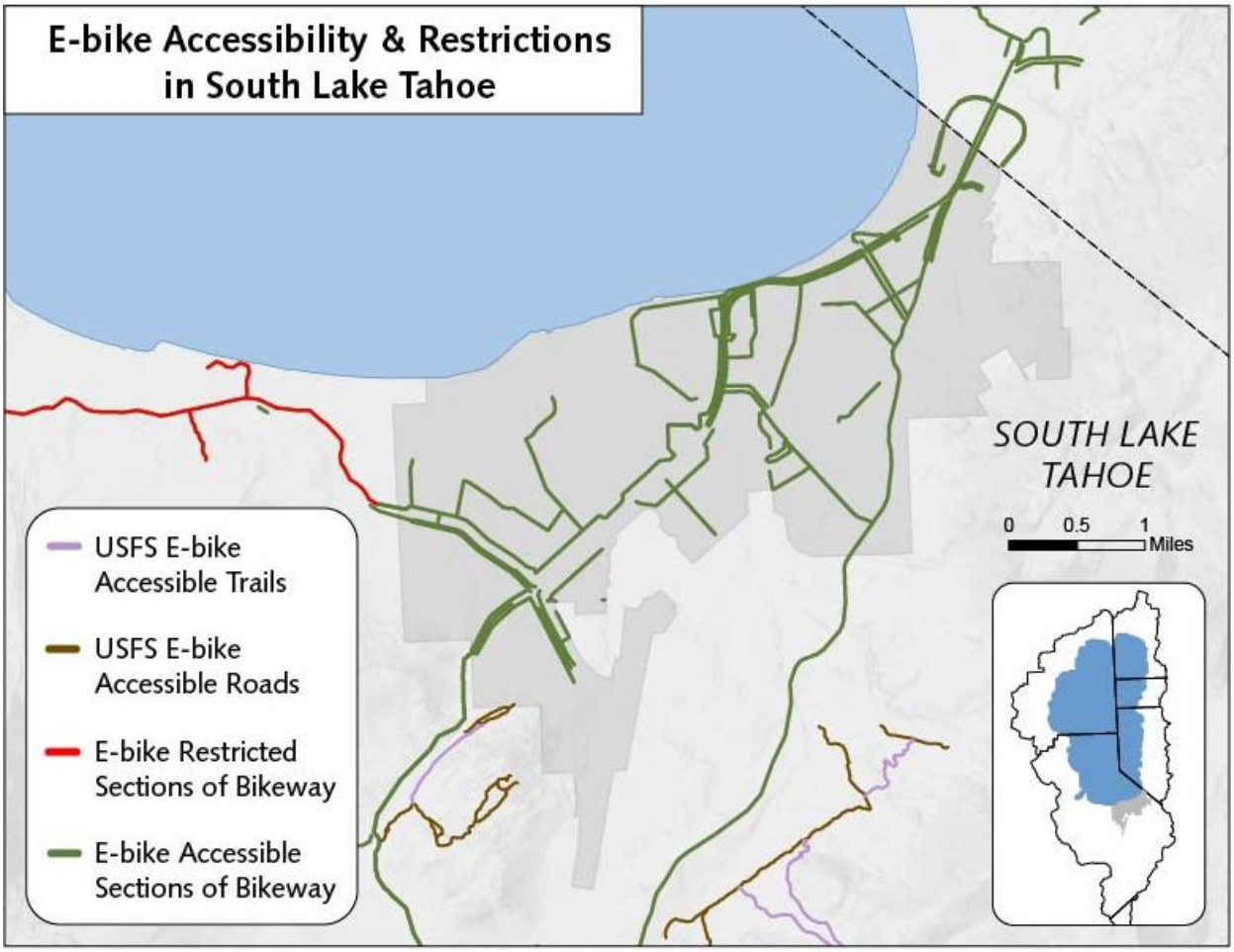
E-Scooters

The City contracted with Lime requiring agreement of the following terms (CSLT 2019):

- Users have a valid driver's license to activate scooters
- Operation by minors is prohibited. Lime must warn users of the vehicle code rules & fines for violation in the user agreement
- The maximum speed is limited to 15 mph

According to Lime's User Agreement & Terms of Service, users are prohibited from riding scooters on unpaved services (Lime, 2018), which means e-scooters are restricted from unpaved trails within the City of South Lake Tahoe, but are allowed on every class of bikeway.

Figure 8. E-Bike Permitted & Restricted Trails, Roads & Bikeways in South Lake Tahoe



Tahoe City Public Utility District

Tahoe City does not have specific e-bike or e-scooter regulations listed within their code, so e-bike and e-scooter riders are subject to California regulations. These regulations are echoed in their "Rules of the Road" below, which permits the use of Class 1 and 2 e-bikes on multi-use trails. Although there is restrictive signage along some sections of the bikeway maintained by TCPUD, only class 3 e-bikes fall under the definition of a "motor vehicle" (*see figure 10 below*).

Figure 9 and Figure 10. TCPUD Rules of the Road (TCPUD, 2019). "No Motor Vehicles" Sign along bike path near W. Lake Blvd & Cherry St.

Tahoe City PUD previously encouraged trail users to walk on the left and bike or ride on the right, but recently adopted the Pathway Partnership's Share the Path rules which encourage users to keep to the right and pass left when safe (Pathway Partnership, 2019). This is a step in the right direction towards reaching universal trail etiquette along the regional bikeway.

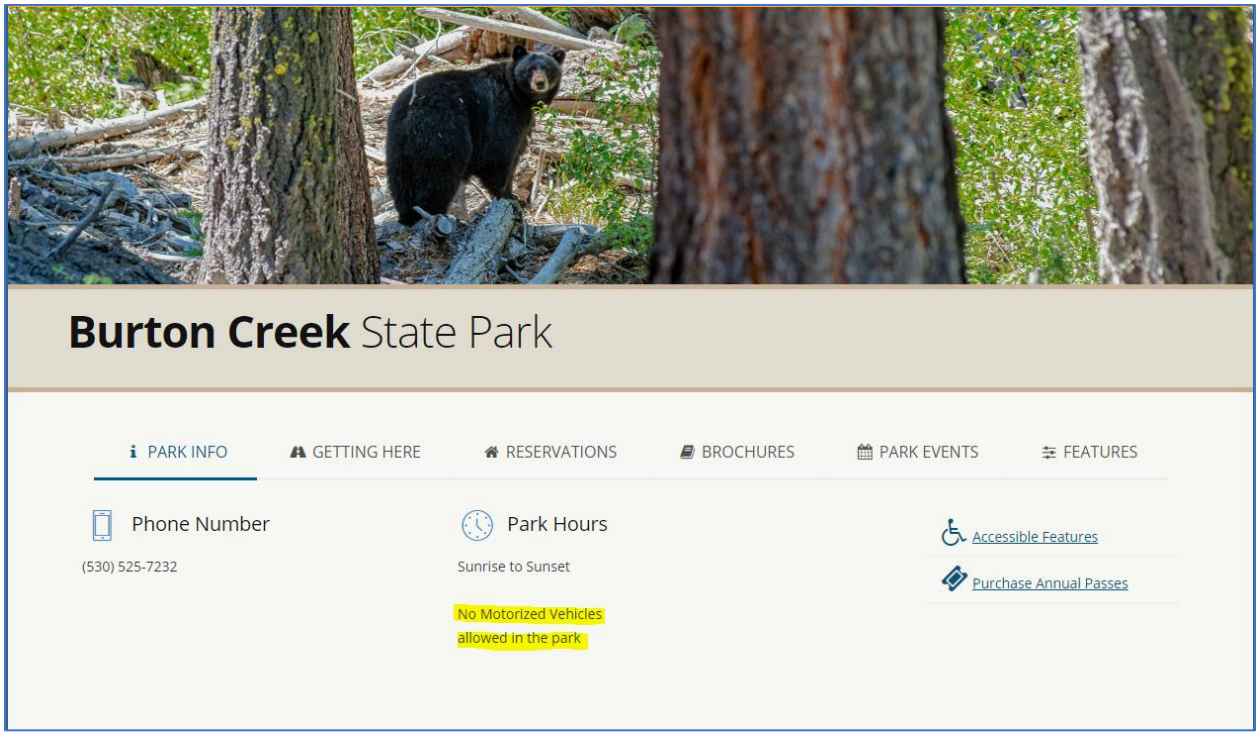
California State Parks

An amendment to the California vehicle code in 2016 permits the use of class 1 and 2 e-bikes wherever bicycles are allowed including hiking, equestrian, and recreational trails, unless specifically prohibited by the local jurisdiction (CA VEH 21207.5). There are several CA State Parks within the Tahoe region featuring these types of trails, including:

- Burton Creek State Park; some hiking trails
- Ed Z'berg Sugar Pine Point State Park; bike & some hiking trails

California State Parks does not allow motorized vehicles beyond paved surfaces. Class 1 and 2 e-bikes are permitted on paved surfaces and class 1 e-bikes are currently allowed on trails in CA State Parks, with exceptions where they have been called out by the Superintendent's Order as being specifically prohibited. As a department, CA State Parks is working on statewide policies to address this rapidly evolving technology. Since access varies on a park by park basis, trail users should ask for clarification from their local land manager.

Figure 11. Burton Creek State Park Motorized Vehicle Restriction



Nevada State

E-Bikes

Nevada does not define electric bicycles by class. Nevada defines e-bikes as "electric bicycles" (NRS 484B.017), so long as the e-bike's motor is under 750w, has a maximum speed of 20mph, and has operable pedals". Class 1 and 2 e-bikes fall under this definition and are allowed on shared-use paths, bike lanes, and bike routes where bicycles are also permitted.

Class 3 e-bikes don't meet Nevada's definition of an "electric bicycle" since the maximum speed is 28 mph Class 3 e-bikes are defined as a moped in Nevada, which is "a motor-driven scooter, motor-driven cycle or similar vehicle that is propelled by a small engine which produces not more than 2 gross brake horsepower, has a displacement of not more than 50 cubic centimeters or produces not more than 1500 watts final output, and is capable of a maximum speed of not more than 30 miles per hour on a flat surface with not more than 1 percent grade in any direction when the motor is engaged" (NRS 484A.125).

Figure 12. E-Bike Fleet Deployed in Las Vegas by the Regional Transportation Commission

E-Scooters

In Nevada, e-scooters are allowed wherever bicycles are allowed, and the same laws apply to them (i.e. safe passing laws, rules of the road, etc.). Nevada's scooter law differentiates between personally owned e-scooters and share system scooters. There is no legal age requirement to operate a privately owned e-scooter, but to rent from an e-scooter share such as Lime, riders must be 16 years or older (NV AB485). Additionally, personal e-scooters have a speed limit of 20mph while share system e-scooters have a speed limit of 15 mph (NV AB485).

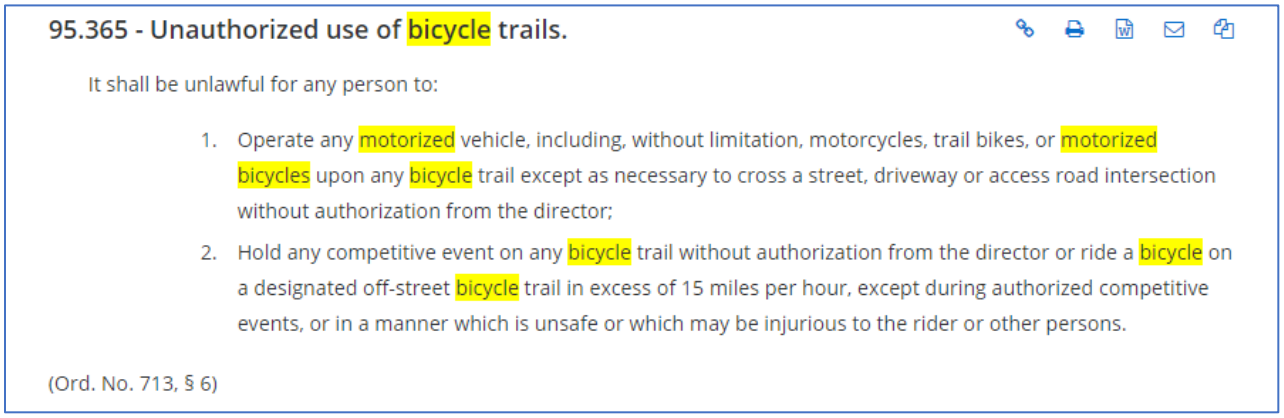
The State of Nevada grants local jurisdictions the right to (NV AB485):

- Prohibit the use of e-scooters in specified areas
- Establish a speed limit for e-scooters operating on sidewalks

Washoe County

According to Washoe County Code, motorized bicycles are not allowed on any bicycle trail without authorization from the director. Further details of the authorization process are unknown. Although this ordinance is in place, e-bikes are not currently restricted anywhere in Washoe County.

Figure 13. Washoe County Code Restricting E-bike use on trails (WCC, 2016)



95.365 - Unauthorized use of bicycle trails.

It shall be unlawful for any person to:

1. Operate any motorized vehicle, including, without limitation, motorcycles, trail bikes, or motorized bicycles upon any bicycle trail except as necessary to cross a street, driveway or access road intersection without authorization from the director;
2. Hold any competitive event on any bicycle trail without authorization from the director or ride a bicycle on a designated off-street bicycle trail in excess of 15 miles per hour, except during authorized competitive events, or in a manner which is unsafe or which may be injurious to the rider or other persons.

(Ord. No. 713, § 6)

Carson City

Carson City does not have specific e-bike or e-scooter regulations listed within their code. However, the City is considering the following updates to their municipal code (Maloney, 2019):

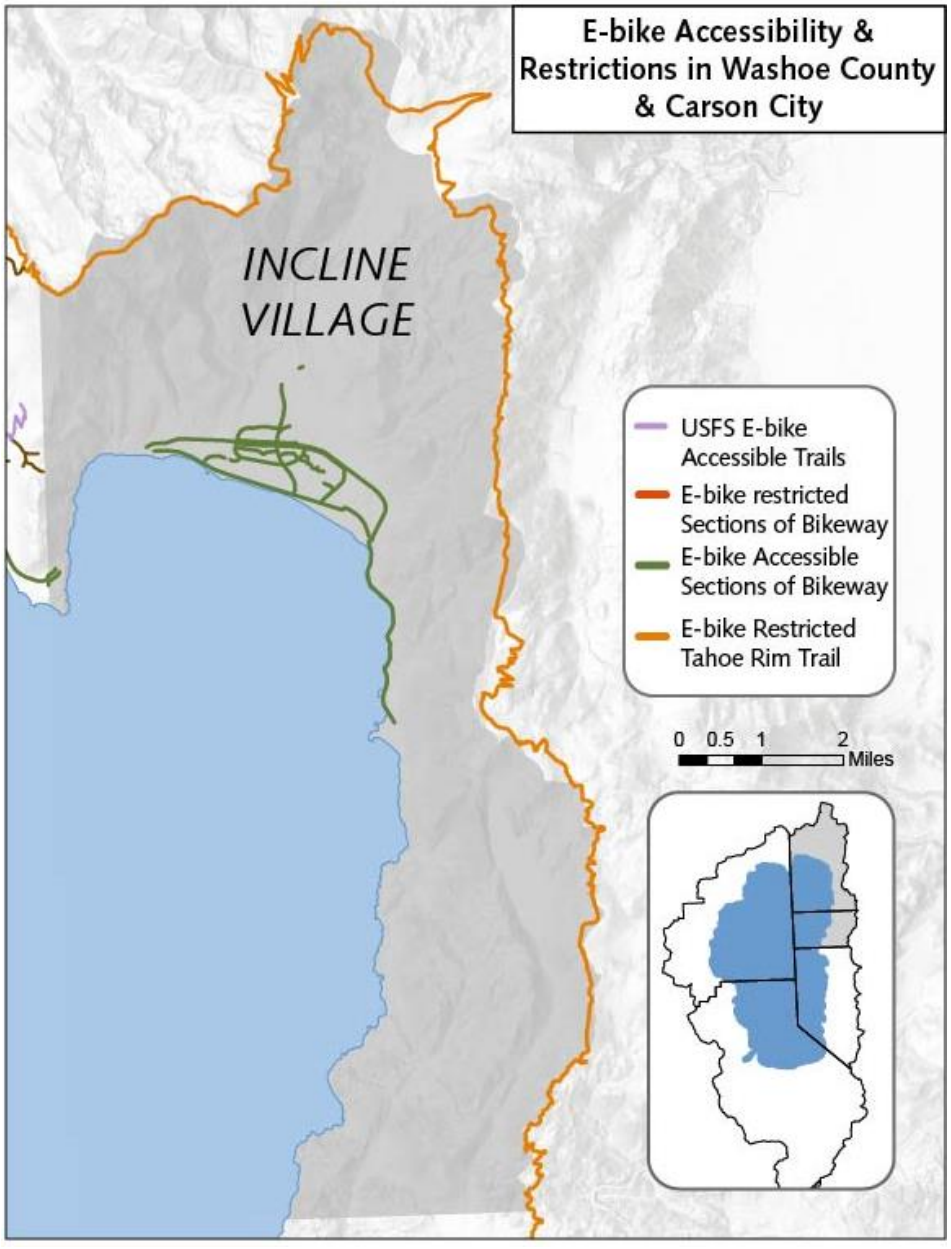
- Redefining e-scooters as a "micro-mobility device", in attempt to provide flexibility for similar devices in the future.
- Allowing scooters on bikeways only, but prefer to allow e-scooters anywhere bikes can go
- Setting speed limit based on facility/infrastructure where it will be used focusing regulation on speed limits rather than engine sizes

Carson City Code states that people are not allowed to ride 'bicycles, skateboards, roller skates, or similar devices" on sidewalks, streets, or highways, when signs are posted prohibiting it. In the case they are allowed, riders must yield the right of way to pedestrians and audibly signal before passing (CCC, 2019). Since the City's current version of the municipal code does not yet include specific regulations for e-bikes and e-scooters, riders are subject to Nevada State laws.

Incline Village General Improvement District

Incline Village does not have specific e-bike or e-scooter regulations listed within their code, so e-bike and e-scooter riders are subject to Washoe County's regulations. The map below depicts where e-bike access is permitted and restricted within Carson City and Washoe County.

Figure 14. E-bike Permitted & Restricted Trails, Roads & Bikeways in Washoe County & Carson City



Douglas County

Douglas County does not have specific e-bike or e-scooter regulations listed within their code. However, section 10.28.010 defines a moped as a vehicle that "looks and handles essentially like a bicycle and is propelled by a small engine", which could be interpreted as characteristics of an e-bike (DCC, 1991).

Figure 15. Douglas County Moped Definition

10.28.010 Moped defined

As defined in this chapter, "moped" means a vehicle which looks and handles essentially like a bicycle and is propelled by a small engine which produces not more than 2 gross brake horsepower and which has a displacement of not more than 50 cubic centimeters, and:

A. Is designed to travel on not more than three wheels in contact with the ground but is not a tractor; and

B. Is capable of a maximum speed of not more than 30 miles per hour on a flat surface with not more than 1 percent grade in any direction when the motor is engaged. (Ord. 548, 1991)

Section 10.24.020 of Douglas County Code prohibits motorized vehicles from operating on recreational trails within the county, which includes "any area, path, trail, or easement set aside for bicycling, walking, hiking, jogging, or horseback riding" (DCC, 1986).

Figure 16. Douglas County Code Sections 10.24.010 & 10.24.020, Recreation Trail Restrictions

10.24.010 Recreation trail defined

For purposes of this chapter, "recreation trail" means any area, path, trail, or easement set aside for bicycling, walking, hiking, jogging or horseback riding. "Recreation trail" includes any area, path, trail or easement described by deed or designated on any recorded map (whether accepted for dedication or not); described by the board of county commissioners in any minute order or resolution or ordinance; or described by development agreement; and which has been posted with signs that read substantially as follows: recreation trail, use of motorized vehicle prohibited." The signs shall be posted at each point which allows entry onto the recreation trail. (Ord. 626, 1994; Ord. 461 §1(part), 1986)

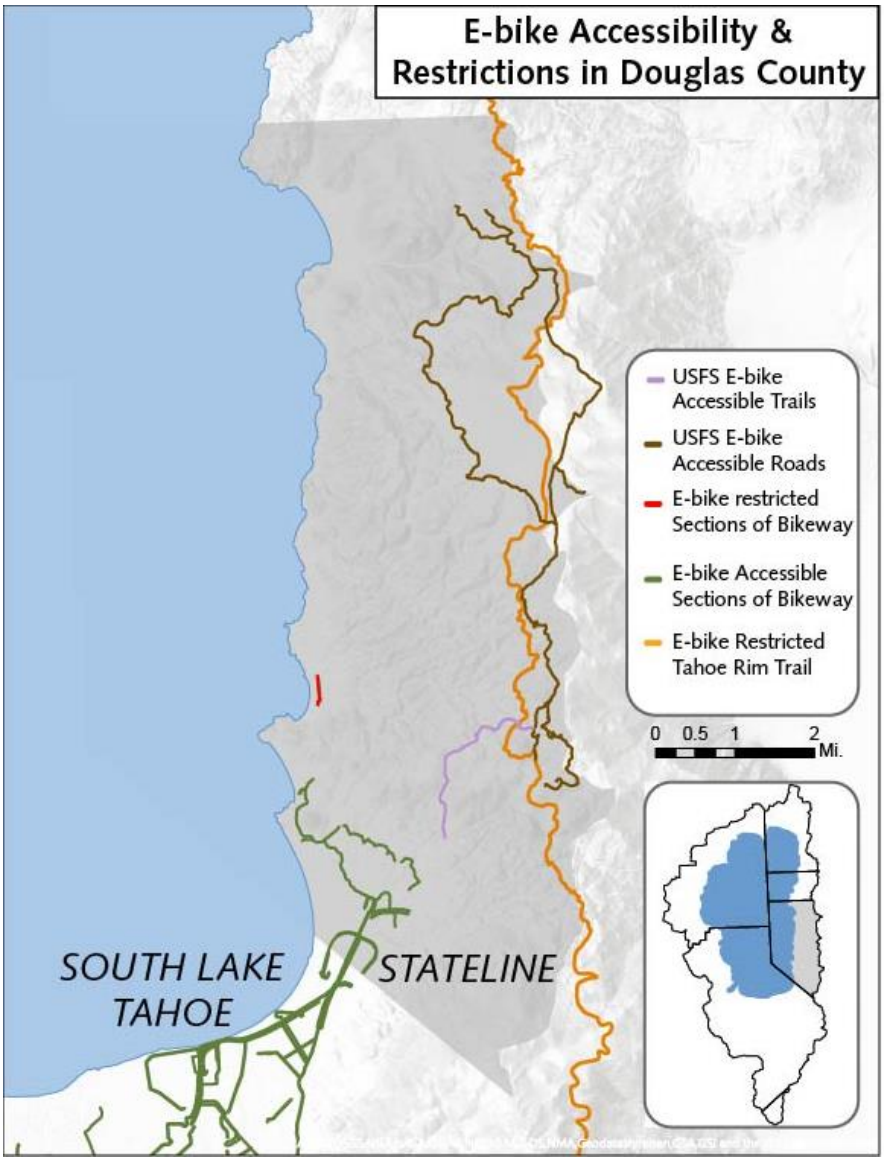
Top

10.24.020 Operation of a motorized vehicle on a recreation trail unlawful

It is unlawful for any person to operate or drive any motorized vehicle on a recreation trail in Douglas County. Any person who violates the provisions of this chapter shall be guilty of a misdemeanor. (Ord. 626, 1994; Ord. 461 §1(part), 1986)

In addition to the restrictions listed above for mopeds and motorized vehicles, e-bike and e-scooter riders in Douglas County are subject to Nevada's e-bike and e-scooter laws. Class 3 e-bikes are likely classified as mopeds in Douglas County and restricted from recreational trails.

Figure 17. E-Bike Permitted & Restricted Trails, Roads & Bikeways in Douglas County

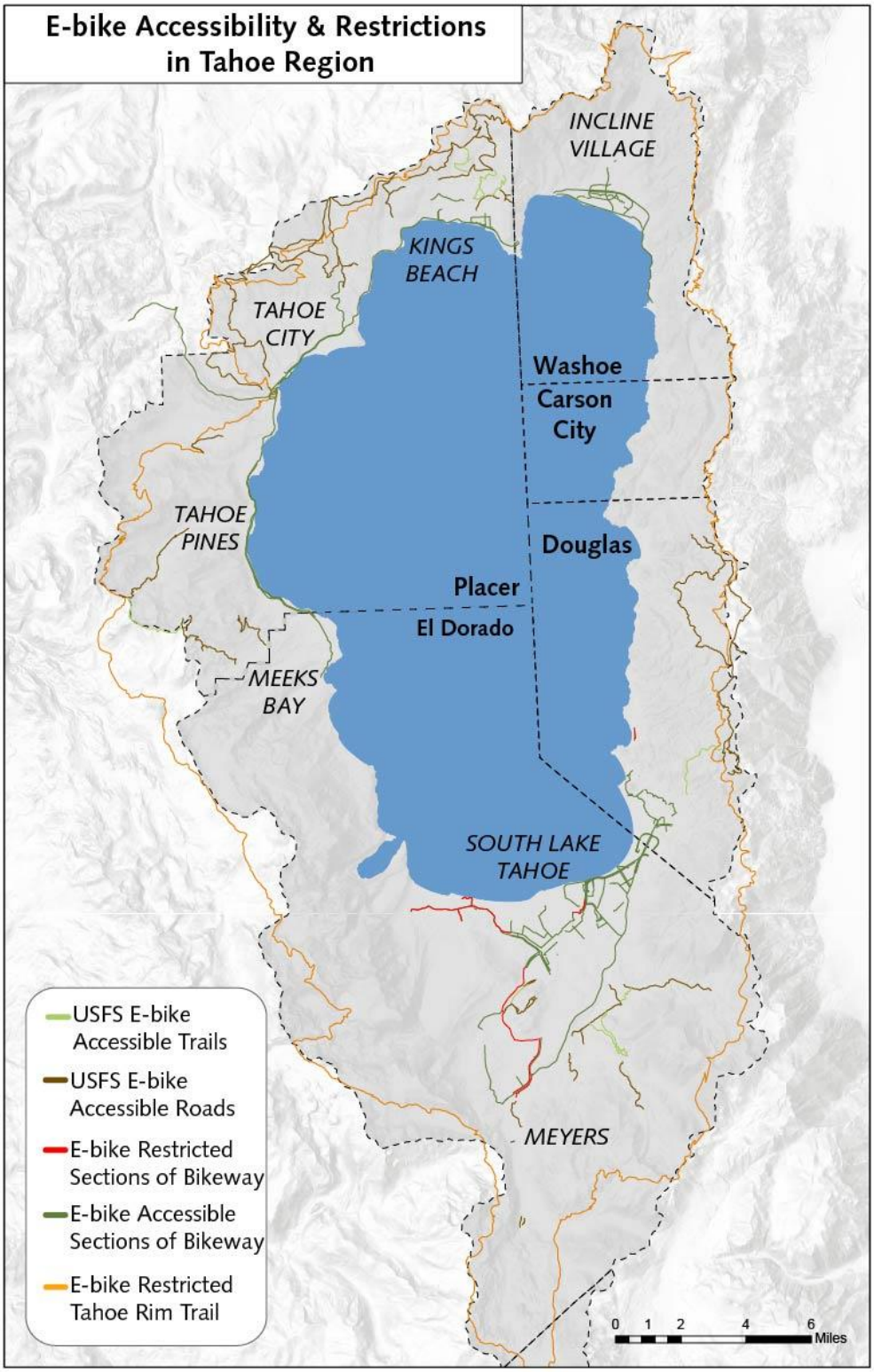


Nevada State Parks

The Nevada Division of State Parks (NDSP) has not established an official e-bike policy for all parks within the state. However, in 2017, the Lake Tahoe Nevada State Park permitted the use of e-bikes within the park on all bike trails, including the Spooner backcountry as long as they are under 750 watts or 1 horsepower (Bike Tahoe, 2017).

The Tahoe Rim Trail (TRT) is designated as a non-motorized trail, but due to Tahoe State Parks e-bike permission, Class 1 e-bikes are allowed in the between Hobart Road and the state park boundary north of Tunnel Creek Road. Class 1 e-bikes are also allowed on the TRT in areas where the trail overlaps with segments of USFS motorized vehicle accessible trails and roads (TRTA, 2019).

Figure 16. E-bike Permitted & Restricted Trails Bikeways, and USFS Roads in the Tahoe Region



CASE STUDY COMPARISON OF E-SCOOTER PILOT PROGRAM REPORTS & SURVEY RESULTS

The following section will review data from several case studies on e-scooter pilot programs in the United States. Survey results from e-scooter pilot programs in several cities highlight ridership frequency, helmet use, collisions, and where users prefer to ride. Data reveals users tend not to wear helmets and feel safest while riding on established class I multi-use paths and sidewalks. This data should be considered when discussing where a jurisdiction chooses to allow e-scooters.

Each jurisdiction reported that only a small fraction of riders wore helmets during their scooter rental period, as indicated in the table below.

Table 4. E-Scooter Pilot Program Reports & Survey Data

City/Jurisdiction	Program Length	# Scooters Permitted	Total Trips	Average Trip Length	Used Helmet	# collisions	% Trips ending in collisions
Portland Bureau of Transportation	July-Nov 2018	2,043	700,369	1.15 Mi	10%	146	0.21%
San Francisco Municipal Transportation Agency	Oct 2018-Aug 2019	1,250	242,398	< 1 Mi	12% of users in collisions were wearing helmets	40	0.02%
Baltimore City	Aug 2018-Jan 2019	100	723,252	1.6 Mi	21	63	0.01%
City of Denver	Aug 2018-Jan 2019	1,265	819,927	.92 Mi	N/A	15	0%

Additionally, several cities reported that users often resorted to riding on sidewalks when bicycle infrastructure was not available.

Portland Bureau of Transportation's (PBOT) survey results show (PBOT, 2018):

- when riding on a street with a class 1 bike path, 8 percent of riders used the sidewalk
- when riding on a street with a class 2 bike lane, 20 percent of riders used the sidewalk,
- when riding on a street with no bicycle infrastructure, 39 percent of riders used the sidewalk.

Baltimore City's Dockless Vehicle Pilot Program Report shows (COB, 2019):

- Over 2,700 respondents answered that providing safe places to ride would be the best way to improve the program, suggesting that potential demand is suppressed by the lack of supporting bicycle facilities.
- 6 percent of riders always ride on the sidwalk
- 23 percent of riders mostly ride on the sidewalk
- 55 percent of riders always ride on the street
- 16 percent of riders mostly ride on the street

This data suggests that users feel safer when riding on designated bicycle infrastructure, like multi-use paths, rather than sharing the road with automobile traffic. When users don't have access to bicycle infrastructure they are more likely to ride on the sidewalk impacting pedestrian safety and comfort. PBOT received 1,622 complaints of sidewalk riding and three percent of the 176 reported ER and Urgent care visits resulted from collisions with pedestrians (PBOT, 2018).

These reports show that e-bike and e-scooter users feel safest while riding on class I multi-use paths, prefer class I paths to sidewalks, and commonly do not wear helmets. This can provide justification for allowing e-scooters ande-bikes on class I bike paths at Lake Tahoe, as riders would have access to a safer route, and would not have to share the road with automobile traffic, or share sidewalks with pedestrians.

APPENDIX A: USFS LTBMU TMR PERMITTED ROUTES

Table 1. North Shore E-bike Permitted Routes (LTBMU 2011)

Roads open to all vehicles	Trails open to vehicles 50" or less in width"	Trails open to motorcycles only
14N32	18E18	16E16
14N32A	18E18B	18E04
14N32C	18E18C	
14N33	18E18D	
14N34A	18E18F	
14N40		
14N40A		
14N40B		
15N38		
15N38A		
15N60		
16N49		
16N50		
16N52		
16N54		
16N55		
16N56		
16N57		
16N57A		
16N57B		
16N63		
16N66		
16N71		
16N73E		
16N74		
16N87		
16N93		
16N95		
73		

Table 2. South Shore E-Bike Permitted Routes (LTBMU, 2011)

Roads open to all vehicles	Trails open to vehicles 50" or less in width	Trails open to motorcycles only
1110	17E48	18E14A
1111	18E14	
1112	18E14B	
1207	18E33A	
12N01A	18E40	
12N01D		
12N08		
12N17		
12N21		
12N28		
12N28A		
12N30		
12N30A		
12N30B		
12N30C		
12N30D		
14N32		
14N35		
14N35A		