

E-BIKE REGULATION EVALUATION

BOARD OF DIRECTORS MEETING MARCH 12, 2021



TAHOE DONNERSM



PURPOSE

- Provide the board with an overview of the e-bike regulation evaluation
- Discuss the spectrum of e-bike regulation available
- Staff proposed rule change recommendation at the March 26 board meeting



GOALS

Develop a rule change recommendation through a transparent process that includes regular member outreach. Any recommendation will be expected to be widely accepted, sensible and sustainable rule change built on an informed foundation.

- **Widely Accepted** = Wide acceptance by all major user groups (i.e. hikers, bikers, equestrian)
- **Sensible** = A rule change and policies that effectively address the issues
- **Sustainable** = Includes both sustainable environmentally and as a long-term rule/policy
- **Informed** = Based on facts and expert advice



TAHOE DONNER

E-BIKE REGULATION EVALUATION METHODOLOGY

INFORMING THROUGH RESEARCH AND EXPERIENCE

- Federal, State, local laws and TDA regulations
- Facts and myths about e-bikes and mountain bike e-bikes (eMTB)
- Land management benchmark
- Compliance review
- Literature review and other research

INFORMING THROUGH PERSPECTIVES

- Member outreach
- Land managers' assessments



REGULATION LANDSCAPE

FEDERAL + STATE + LOCAL LAWS

FEDERAL

- E-bikes are classified as motorized vehicles and are only allowed on motorized trails, including Bureau of Land Management (BLM) and National Forest (USFS) lands. *Each of these organizations/land managers is going through a similar process as TD by attempting to clarify language and e-bike categorization.*

CALIFORNIA

- Motor Vehicle Code: AB 1096 amended MVC and defines “motorized bicycle” as a moped and established new vehicle class for “electric bicycles”, classes 1-3. Many other states mirror this legislation template.

LOCAL

- Local governments have the authority to authorize the use of e-bikes on bike or pedestrian paths.

TDA POLICIES AND RULES

TRAILS MASTER PLAN (2013)

- Establishes policies for a multi-use trail system

COVENANTS RULES

Section II Common Area, Other Association Owned Property, and Amenities, subsection




Off-Road Vehicles. Snowmobiles, motor-powered bikes*, all-terrain vehicles (ATV’s), off-road motorcycles and off-road use of any motorized vehicle is prohibited on Common Areas, and other Association-owned properties, except that the Association may use such vehicles in the furtherance of its operations.

* Per CA MVC motor-powered bike is considered a moped

WHAT IS AN E-BIKE?



DIFFERENCES BETWEEN A BIKE VS E- BIKE

	BIKE	VS.	ELECTRIC BIKE (E-BIKE)	VS.	ELECTRIC MOUNTAIN BIKE (eMTB)
					
DESIGN	<ul style="list-style-type: none"> » Bikes are used for mobility and recreation. » Bikes are exclusively human-powered, include a wide variety of designs and offer an endless amount of uses. 		<ul style="list-style-type: none"> » E-bikes are used for mobility and recreation. » E-bikes are used similarly to bikes but can help resolve barriers to biking related to commuting, carrying kids or cargo, physical limitations and/or terrain. » E-bikes are either powered by a motor that assists when pedaling or activated by a throttle. They are designed like bicycles. 		<ul style="list-style-type: none"> » eMTBs are often used for recreational purposes, especially on trails. » Riding an eMTB is similar to riding a traditional mountain bike, with the assistance of a small motor. » eMTBs are either powered by a motor that assists when pedaling or activated by a throttle. In general, eMTBs are pedal-assist only.
REGULATION	<ul style="list-style-type: none"> » Bikes are defined as human-powered vehicles that don't generally require licensing, registration or insurance to operate. » State and local regulations determine where bikes are allowed to travel on streets and paths. » There may be additional state or local laws around speed limits, age restrictions, the use of helmets and other equipment and operating requirements. 		<ul style="list-style-type: none"> » The first sale and manufacturing of e-bikes is federally regulated by the Consumer Product Safety Commission. » E-bikes are defined in a state or local traffic code for operation. » States and cities determine which class, if any, of e-bikes are allowed on streets, bike lanes, bike paths and sidewalks. » States and cities may set additional requirements such as speed limits, age restrictions and the use of helmets. 		<ul style="list-style-type: none"> » eMTBs access is primarily governed by a state or local natural resource department. » eMTBs are generally allowed on motorized trails and roads. » Agencies determine which class, if any, of eMTBs are allowed on non-motorized, natural surface trails. » Agencies may determine additional requirements such as speed limits, etiquette guidelines and access provisions.

E-BIKE FACTS

- Motorized Vehicle, Motorized Bicycle or Electric Bicycle?
 - Consumer Product Safety Commission
 - Pedal assist e-bikes with maximum **assisted** speed of 20 mph are not a motorized vehicle.“
 - CA Motor Vehicle Code definition of a motorized bicycle is a moped. E-bikes are a distinct class of vehicles.
- Safety
 - Speed
 - Downhill: No faster than the rider's ability.
 - Flat and Uphill: electric motor assists pedaling only up to its max. speed. Speed of e-bike still relies greatly on rider's ability. Some studies suggest conventional bikes can be faster.
 - Fire risk
 - The fire risk by e-bike batteries is negligible, similar to the 1,000s of cell phones currently on the trails.



E-BIKE MYTHS

- Trail Character
 - Trail Congestion: E-bikes will increase bike use on trails
 - Initial studies are showing e-bikes are a replacement for traditional bikes.
 - Trail usage is increasing across all user types
 - Biking, including e-bikes, is increasing as technology and price points eliminate barriers.
 - Disturbance
 - Noise: E-bikes effectively silent.
- Environmental and Physical Concerns
 - Trail damage: Negligible difference between traditional MTB and eMTB.



LAND MANAGEMENT BENCHMARK

OUR NEIGHBORS

- USFS Truckee District
 - E-bikes allowed on motorized trails and roads
 - Pending Action: to allow e-bikes on 35 miles of single-track trail
 - Emigrant, Big Chief/Sawtooth, DonkeyTown area
- USFS Lake Tahoe Basin
 - Currently evaluating and developing a plan to improve e-bike access to single-track trails
- Truckee Donner Land Trust
 - Defer to policy established by USFS, adjacent neighbor and/or partner
- Town of Truckee
 - The Town does not manage any soft surface trails
- An extended benchmark is included in documents for reference



COMPLIANCE REVIEW

- All land managers, both large and small, public and private, with sworn public safety rangers or without, **all rely heavily on education and the honor system to achieve voluntary compliance**
- Education and Communication
 - Website
 - Map
 - Apps
 - Kiosks
 - Wayfinding Signage
 - Stewardship/ambassador programs



LITERATURE REVIEW + OTHER RESEARCH

Illustrative list of review and research performed

- **E-bike Reports**
 - IMBA Comparison of Environmental Impacts Report (2015)
 - USFS Truckee District East Zone Connectivity and Restoration Project Preliminary Environmental Assessment (2020)
 - Jefferson County, CO Measuring Impacts and Acceptance of E-bikes (2018)
 - Ebike Safety: A Review of Empirical European and North American Studies (2019)
- **E-bike Perception and User Studies**
 - Boulder County, CO E-bike Pilot Study (2019)
 - Jefferson County, CO E-bike Pilot Study (2018)
 - E-bikes on Public Lands, A Survey of E-bike Users in Colorado (2020)
 - Perceptions of Conflict Surrounding E-Bike Use on the Arizona Trails (2020)
 - Pedal Assist Mountain Bikes: A Pilot Study Comparison (2019)
- **Agency E-bike Regulation Assessments**
 - USFS Truckee District East Zone Trails and Roads Projects Assessment: *under consideration*
 - East Bay Regional Park District, CA: *e-bikes allowed on designated trails*
 - Marin Water District, CA: *under consideration*
 - Jefferson County, CO: *e-bikes allowed on designated trails*
 - Boulder County, CO: *e-bikes allow on designated trails*
 - Summit County, UT: *special e-bike permit for 65+ and medical reasons*
 - Draper City, UT: *e-bikes allowed on designated*



SELECT HIGHLIGHTS

- The bike industry is growing exponentially with the e-bike market leading
 - Q1-3 of 2020 bike sales +44%; e-bike sales were +140% in 2020
- Knowledge and understanding is catching up with rapidly progressing technology as more people have exposure to e-bikes
- Exposure to e-bikes increases general acceptance attitudes
- Landowners are evaluating various approaches to e-bike regulation
- eMTBs are a new user type with trail design and construction needs similar to mountain bikes



SELECT HIGHLIGHTS CONTINUED

- TD Member Outreach
 - Forums and Feedback Forums
 - Illustrates diversity, understanding, and perspective on the issue
 - Strong opinions
 - E-bike Survey:
 - More member are using the trails and on a more frequent basis
 - Large contingency of respondents (59%) have not ridden an e-bike
 - E-bike use enables parties of differing abilities to access trails together
 - E-bike use enables access for mobility challenged to enjoy trails
 - Hiker experience has deteriorated
 - E-bikers are older, current eMTB ownership peaks among 50-59 year olds. Those intending to purchase tend to be 50+
 - Large support for permitting e-bikes on double-track
 - Single-track e-bike acceptance strongly diverges between hikers and bikers



SPECTRUM OF OPTIONS



GOALS

Develop a rule change recommendation through a transparent process that includes regular member outreach. Any recommendation will be expected to be widely accepted, sensible and sustainable rule change built on an informed foundation.

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- **Sensible** = A rule change and policies that effectively address the issues
- **Sustainable** = Includes both sustainable environmentally and as a long-term rule/policy
- **Informed** = Based on facts and expert advice



AMPLIFY EXISTING RULE

- **Widely Accepted** = Wide acceptance by all major user groups (i.e. hikers, bikers, equestrian)
 - Not widely accepted by all
- **Sensible** = A rule change and policies that effectively address the issues
 - Avoids the management issue rather than addressing
- **Sustainable** = Includes both sustainable environmentally and as a long-term rule/policy
 - Sustainable environmentally in that it might reduce overall trail use
 - Not a sustainable management given current usage and expected trends
- **Informed** = Based on facts and expert advice
 - **Most** land managers are attempting to find balance and allow access in some way



NO ACCESS

AMPLIFY EXISTING
RESTRICTIVE RULE

FULL ACCESS

- **Widely Accepted** = Wide acceptance by all major user groups (i.e. hikers, bikers, equestrian)
 - Not widely accepted by all
- **Sensible** = A rule change and policies that effectively address the issues
 - May present unforeseen management challenges if e-bike usage patterns increase
- **Sustainable** = Includes both sustainable environmentally and as a long-term rule/policy
 - May present unforeseen environmental impacts and could lead to increased user conflicts
- **Informed** = Based on facts and expert advice
 - Some trail systems permit e-bikes wherever conventional bikes are allowed



FULL ACCESS

SINGLE TRACK +
FIRE ROADS OPEN

ADAPTIVE MANAGEMENT

- **Widely Accepted** = Wide acceptance by all major user groups (i.e. hikers, bikers, equestrian)
 - Flexible enough to allow fine tuning and adaptation in order to achieve wider acceptance over time through structured decision making
- **Sensible** = A rule change and policies that effectively address the issues
 - Gives management the flexible tools it needs to learn from experience and improve trail management for all user groups over time
 - Addresses member desire to find some solution to expand access
- **Sustainable** = Includes both sustainable environmentally and as a long-term rule/policy
 - Gives management the flexible tools to evaluate environmental impacts and respond
 - Sustainable as a policy because it is adaptable to changing conditions and needs
- **Informed** = Based on facts and expert advice
 - Adaptive management is considered best practice for land management, and is anticipated to be used in Tahoe Donner for all user groups and trail types in the future
 - Consistent with other amenity and facilities management authority



ADAPTIVE MANAGEMENT

PARTIAL/LIMITED/RESTRICTED
E-BIKE USE ALLOWED

MOVING FORWARD

- **MANAGEMENT LEVEL**

- Education and communication campaign
 - Trail branding and culture development
 - Trail etiquette
 - Signage – Approved 2021 Replacement Reserves Budget
- Continued efforts to disperse trail users across the trail system

- **POLICY/RULE LEVEL**

- March 26 Board Meeting: Recommendation for e-bike rule change for adaptive management approach
- 2021 Work Plan Goal – Open Space and Trails Master Plan

