

Date of Hearing: April 7, 2025

ASSEMBLY COMMITTEE ON TRANSPORTATION

Lori D. Wilson, Chair

AB 544 (Davies) – As Amended March 24, 2025

SUBJECT: Electric bicycles: required equipment

SUMMARY: Requires a person under the age of 18 to take an electric bicycle (e-bike) safety course if they receive a violation for failing to wear a proper helmet and want the court to not impose a fee. Requires e-bikes to have red reflectors on the bicycle at all hours of the day instead of just at night.

EXISTING LAW:

- 1) Requires a person under the age of 18 to wear properly fitted and fastened helmet, as defined, while riding on, or being a passenger on, a bicycle, non-motorized scooter, or a skateboard, or while wearing in-line or roller skates.
- 2) Requires the helmet be worn when riding on a street, bikeway, bike path, or trail.
- 3) Requires bicycle helmets to be labeled with the manufacturer's certification that they meet safety standards.
- 4) Prohibits safety helmets that do not meet these standards from being offered for sale to the users of bicycles, non-motorized scooter, skateboards, or in-line or roller skates.
- 5) Requires a fine for the violation of these provisions to be not more than \$25 (\$198 with other penalty assessments).
- 6) Authorizes the court to dismiss a charge for a violation of these provisions if it is the first offense.
- 7) Allows a person under the age of 18 that is cited for not wearing a bicycle helmet to correct the violation within 120 days by proving they have a properly fitting helmet and by attending a bicycle safety course if one is available.
- 8) Requires the proceeds from fines levied for violations of these provisions to be allocated as follows:
 - a) 72.5% for safety education training and to assist low income families in obtaining approved bicycle helmets;
 - b) 2.5% for county administration; and,
 - c) 25% for the city or county depending on where the violation occurred.

- 9) Defines an e-bike as a bicycle with fully operable pedals and an electric motor of less than 750 watts. Creates three classifications of e-bikes based on the ability for motors to achieve high speeds and replace pedaling. Class 1 and 2 e-bikes have a maximum pedal assist speed of 20 miles per hour (mph), while Class 2 e-bikes can have throttle assistance up to 20 mph. Class 3 e-bikes have a maximum pedal assist of 28 mph. (Vehicle Code (VEH) Section 312.5)
- 10) Requires a bicycle, including an electric bicycle, to be equipped with the following when operating during darkness on a highway, a sidewalk, or a bikeway:
 - a) A lamp emitting a white light in the front;
 - b) A red reflector or solid flashing red light with a built-in reflector on the rear;
 - c) A white or yellow reflector on each pedal, shoe, or ankle; and,
 - d) A white or yellow reflector on each side forward of the center of the bicycle. (VEH 21201).
- 11) Requires the Department of the California Highway Patrol (CHP) to develop a statewide safety and training program for electric bicycles. (Streets and Highways Code Section 894)

FISCAL EFFECT: Unknown

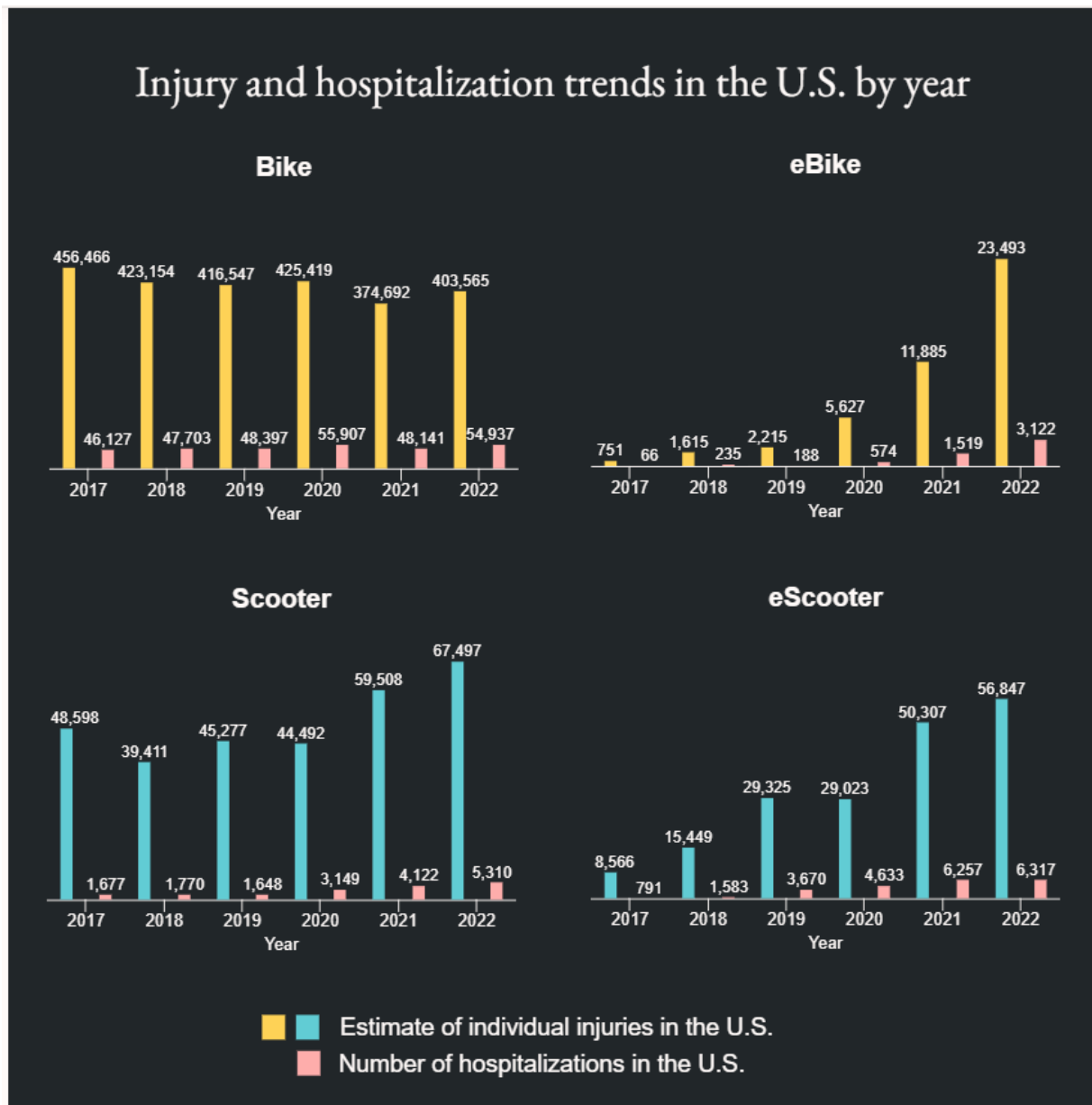
COMMENTS: The California Legislature passed AB 2268 (Caldera), Chapter 1000, Statutes of 1993, which required a person under 18 years of age to wear a properly fitted helmet to operate a bicycle. Safety organizations became increasingly concerned that law enforcement may be unwilling to issue a child a nearly \$200 ticket for breaking the law. As a result of this concern, the Legislature passed AB 3077 (Caballero), Chapter 502, Statutes of 2018, which allows a person under the age of 18 that is cited for not wearing a bicycle helmet to have the fine waived within 120 days by proving they have a properly fitting helmet and by attending a bicycle safety course if one is available. This bill would require a child riding an e-bike to take an e-bike specific safety course if they wish to have the fine waived.

According to the author, “California is leading the way when it comes to our push for cleaner ways to get around our communities. One of the great technologies to come out of this push is the popularity of electric bicycles. While these products are easy to access, they do require some getting used to. This is especially true if the person operating one has never driven anything before. AB 544 is a simple measure to ensure these products have enhance safety features and codify into law a requirement they are equipped with both front and rear reflector lights. This small change can help protect not only the user, but also oncoming motorists on busy streets.”

Electric bicycles are an increasingly popular option for reducing personal car trips. According to the US Bureau of Transportation statistics, more than half of all trips in the US are under three miles. According to the University of Oxford study *The Climate Change Mitigation Effects of Daily Active Travel in Cities*, riding a bike just once a day can slash an individual’s transportation emissions by 67%.

As electric bicycle purchases have gone up, so have injuries. The Los Angeles Times reported in January of 2023 that during the first 10 months of 2022, staffers at Providence Mission Hospital in Mission Viejo documented 198 e-bike injuries, up from just 34 in 2020.

While e-bike injuries are rising, they are still far outpaced by injuries from conventional bicycles, scooters, and electric scooters. According to a UCSF national study *Injuries with Electric vs Conventional Scooters and Bicycles*, 23,493 individuals were injured while riding an e-bike in 2022, resulting in 3,122 hospitalizations. Hospitalizations and injuries for electric scooters were twice as high (58,847 injuries and 6,317 hospitalizations). Conventional cyclist's injuries and hospitalizations were the highest (403,465 injuries and 54,937 hospitalizations).



The California Coalition for Children’s Safety and Health, *writing in support of this bill*, argues “Several years ago, one of my sons was riding at night and fell on our neighborhood street. He was protected by safety lighting that alerted a car coming around the corner at too high of a speed, but seeing the bicycle lighting equipment the car was able to stop before running him over. Lighting is important not only when the rider is moving down the road but also if they stop or fall on the road. AB 544 also brings more safety to children and teenagers using e-bicycles beyond the new lighting requirement. AB 544 updates the vehicle code to ensure e-

bicycle riders cited for not wearing a helmet per Vehicle code 21212 can have their citation waived if they attend and succeed in passing an e-bicycle safety course. Without this practical amendment to the state's helmet enforcement law, the e-bike rider could only be sent to a regular bicycle safety course even though the helmet violation involved riding an e-bicycle.”

Head injuries. According to the National Transportation Safety Board, “Research has consistently shown that head injury is the leading cause of bicycle-related deaths. Based on a review of death certificates from the National Center for Health Statistics and emergency department injury data from the National Electronic Injury Surveillance System, researchers found that between 1984 and 1988 62% of bicycle-related fatalities and 32% of bicycle-related emergency department visits were related to head injuries (Sacks and others 1991). Analysis of the 2012 National Trauma Data Bank, which contains information about 6,267 patients with an intracranial hemorrhage after a bicycle crash, showed that 52% of those patients had severe traumatic brain injury and that the mortality rate was 2.8% (Joseph and others 2017).

Attewell, Glase, and McFadden (2001) examined 16 studies published between 1987 and 1998, using data from Australia, Canada, the United Kingdom, and the United States; they found that bicycle helmets could be expected to reduce the likelihood of head injury and brain injury by 60% and 58%, respectively. Hoyer (2018) analyzed 55 studies from 12 countries between 1989 and 2017 and found that bicycle helmets reduced the likelihood of all head injuries by 48%, severe head injuries by 60%, and traumatic brain injuries by 53%.”

Reflective equipment: Existing law requires all bicycles, including e-bikes, to have reflective equipment at night to increase visibility. According to the American Journal of Industrial Medicine article “The impact of weather, road surface, time-of-day, and light conditions on severity of bicycle-motor vehicle crash injuries. “Our results show that time of day and lighting condition was significantly associated with injury severity; unlit dark roads can significantly increase the risk of fatal or disabling injuries in bicycle crashes with motor vehicles.”

E-bike and bicycle safety standard designs are dictated by federal law. Since 2002 Congress has authorized the Consumer Product Safety Commission (CPSC) to regulate e-bikes and their design. These standards preempt state law. All bicycles, including e-bikes, are required to be sold with front and rear reflectors. In March of 2024, CPSC opened a comment period for a notice for proposed rulemaking to regulate the safety design of e-bikes, including special designs for e-bikes for children. CPSC has yet to propose any rules regarding e-bike safety designs.

E-bike safety course. AB 1946 (Boerner), Chapter 147, Statutes of 2022 requires the CHP to develop a statewide safety and training program for e-bikes. The course was unveiled on August 31, 2023. The course includes information on helmet safety, bicycle maintenance, proper equipment and gear, rules of the road, and hazard avoidance. The course is currently being updated to include quiz sections and a certificate of completion. The safety course can be found on the CHP website.

Previous legislation: AB 3077 (Caballero), Chapter 502, Statutes of 2018 allows a person under the age of 18 that is cited for not wearing a bicycle helmet to correct the violation within 120 days by proving they have a properly fitting helmet and by attending a bicycle safety course if one is available.

AB 28 (Chu), Chapter 549, Statutes of 2015, authorized bicycles to have a flashing red light with a built-in reflector.

AB 902 (Bloom), Chapter 306, Statutes of 2015, expanded the existing authorized diversion programs for non-motor vehicle traffic violations to a person over the age of 18.

SB 1924 (O'Connell), Chapter 475, Statutes of 2002, required a person under the age of 18 to wear a helmet while operating, or riding as a passenger, a non-motorized scooter or skateboard or while wearing in-line or roller skates.

AB 2268 (Caldera), Chapter 1000, Statutes of 1993, required a person under 18 to wear a properly fitted helmet to operate a bicycle, with violation of the statute being an infraction with a penalty of not more than \$25.

REGISTERED SUPPORT / OPPOSITION:**Support**

California Coalition for Children's Safety and Health
PeopleForBikes (support if amended)

Opposition

None on file

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