



Virginia Bicycling Federation



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# E-bikes Primer for the Trails & Blueways Council May 26<sup>th</sup> 2026 Meeting



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Disclaimer: This presentation is meant to be informational and educational. It is not legal advice nor does it represent an official position of the Virginia Bicycling Federation. The opinions and views in the presentation either written or oral are strictly my own.



- The Virginia Bicycling Federation is a statewide advocacy organization working to change public policy and community attitudes, to improve the safety, convenience, and acceptance of bicycling, and to promote bicycling for transportation, recreation, public health and economic development.

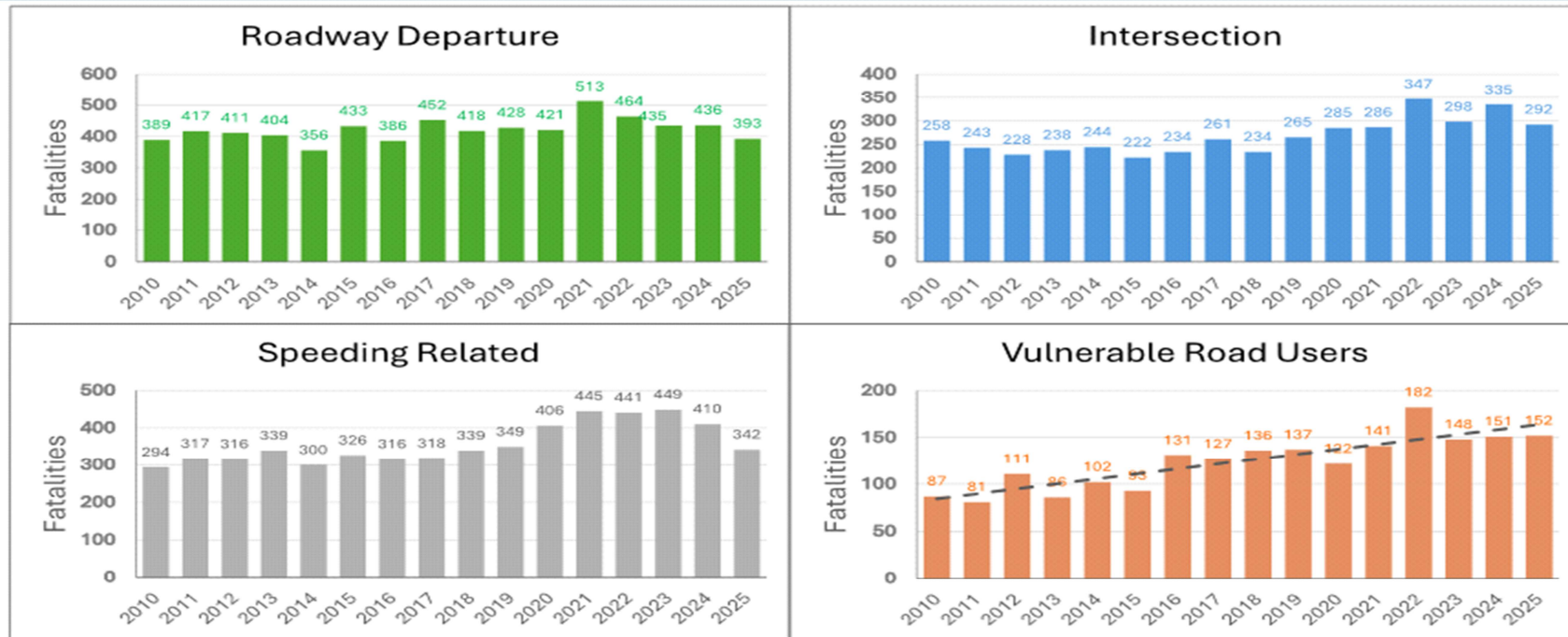


# Why Advocacy

- Advocacy is about being engaged, supporting a cause, and advancing positive change. Advocating for bicyclists and safe bicycling is one of VBF's most important activities. VBF focuses on bicycling-related issues of statewide significance and partners with local and national organizations on these and other issues that impact bicycling.



## Vulnerable Road Users – The only category getting worse





# E-Bikes

- U.S. e-bike ridership has tripled since 2021
- Allows riders to get more exercise
  - Longer distances
  - More frequently
  - Access to more places
    - Hills are less of a barrier
    - Designs have improved with:
      - Gravel e-bikes
      - Mountain e-bikes



## E-bike Classes

### Class One



- Max speed: **20 MPH**
- Pedal assisted
- No assistance beyond max speed

### Class Two



- Max speed: **20 MPH**
- Throttle & pedal assisted
- No assistance beyond max speed

### Class Three



- Max speed: **28 MPH**
- Pedal assisted
- Helmets and speedometers required
- No assistance beyond max speed



# Common attributes for all three classes

No more than three wheels

Pedals that allow propulsion by human power

A seat for the rider

An electric motor with an input of no more than 750 watts

Should have a sticker



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# Examples of Class 1 e-Bicycles



APPLY THEM TO THE MOTOR SURFACE





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# Examples of Class 2 e-Bicycles





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# Examples of Class 3 e-Bicycles

CLASS

**3**

750W  
28MPH





# On-line has changed everything

- The uncontrolled flow of new products and access to modification has created beyond class micromobility devices.
  - E-mottos and out of class vehicles exceeding power and speed regulations
  - Consumer after market modifications
  - Blurring of the lines in the bicycle/e-bike, moped, and motorcycle classifications



# Common Characteristics of E-Motos

- Often unsafe and fail to meet Federal Safety Standards
  - Over 750 watts
  - Often not street legal limited to off-highway
  - not permitted on sidewalks, multi-use paths, or traditional bicycle lanes
- Pedals are often cosmetic or a foot-peg setup
- May be capable of speeds far exceeding 35MPH



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# E-MOTOs / Sur-Rons / Super 73s



NO CLASS RATE STICKER





# HB1120 DMV Study may help to address the confusion

Some possible outcomes

Clarifications that will promote identifying types of vehicles and regulation

Registration/sticker requirements to allow real time identification

Education and enforcement promoting responsible use



# Some Considerations

- E-bike access to trails allowing manual bicycle use will increase access and usage by more folks
- Focus on Speed and Behavior
- Education and enforcement are key to success
- Monitoring and adaptation will be required



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# Questions?