Data Submitted (UTC 11): 1/31/2025 12:38:32 AM First name: Mike Last name: Vandeman Organization: Machine-Free Trails Association Title: Founder Comments: E-Bikes and Conservation Biology Michael J. Vandeman, Ph.D. November 13, 2020

In order to understand the environmental impacts of e-bikes, it's necessary to study conservation biology. It seems that nobody has bothered to do that.

1. Even the lowest-energy e-bike, the Class 1, is designed to go up to 20 MPH. Nobody needs to travel that fast on an unpaved trail! At 20 MPH it is impossible to appreciate anything you are passing, so what is the point of being there?! 20 MPH is above the 15 MPH speed limit in the East Bay (California) Regional Parks.

2. Increasing speed increases erosion. Knobby mountain bike tires are designed to tear up the soil, which will be washed away by the next rain. Why do you think mountain bikers call what they do "shredding"? DUH!

3. Knobby tires create V-shaped ruts in the trail, making that part of the trail unusable, and forcing everyone to widen the trail, thereby destroying more habitat.

4. All mountain biking, but especially 20 MPH mountain biking, is a major threat to hikers and equestrians, who are often hit and/or scared by mountain bikers coming too fast around blind turns. This has even caused the death of horses. Even if you aren't hit, and have the right-of-way, the mountain bikers make you feel guilty for not getting out of their way - which you have no obligation to do. E-bikes, like mountain bikes, will drive hikers and equestrians off of the trails and out of the parks.

5. All of this is pretty obvious. But what few people understand - only those who have studied conservation biology - is that the mere presence of humans on the trail inhibits the native animals from the full use of their habitat - it scares them away. Thus all recreation is harmful to the wildlife, but mountain biking is the most harmful, because a bike allows one to travel much farther - and faster - than a hiker, or possibly even an equestrian. And an e-bike allows one to travel much farther than even an unmotorized mountain bike does. This is called "increasing the human footprint", and is a major cause of the loss of habitat.

6. Lithium ion batteries are flamable and often explode, making them a serious health and fire hazard.

There's no good reason to allow bicycles on any unpaved trail, but especially e-bikes. (For the disabled, a wheelchair, motorized or unmotorized, is allowed, per ADA, and is sufficient to give them reasonable access.)

Vandeman, Michael J., https://mjvande.info, especially https://mjvande.info/scb7.htm, https://mjvande.info/scb9.htm, and https://mjvande.info/mtbfaq.htm.