

E-Bike Benefits & Issues

Mike Swire

May 5, 2026

San Mateo County Board of Supervisors

Mike Swire

- County resident for 20+ years - Redwood City, Belmont, Hillsborough, San Mateo
- Avid bike rider and safe streets advocate (speaking on my own behalf)
 - Vice Chair, C/CAG Bicycle & Pedestrian Advisory Committee
 - Safe Routes to School (SRTS) Lead - West Elementary, Crocker Middle, and San Mateo High Schools
 - Member, City of San Mateo SRTS Strategic Planning Committee
 - Member, County of San Mateo SRTS Community Advisory Committee
 - Ambassador, Families for Safe Streets (survivors of traffic violence)
 - Co-Lead, Move San Mateo
- Victim of traffic violence
 - Cousin killed on a sidewalk by a drunk driver
 - Hit twice by drivers

E-bikes have revolutionized transportation

- Equity - financial
- Environment
- Municipal
- Public health
- Congestion
- Safety benefits
- Problems

E-bikes have democratized transportation for lower income San Mateo County residents and others.

- Transportation costs are prohibitive for many SM County residents
 - ~30% of monthly spending for lower income residents
 - Average cost of a car in the United States is almost \$50,000 for a new car and >\$26,000 for a used car; entry level e-bikes cost \$600+
 - Average operating cost is \$11,000/year for a car vs. \$5/month for an e-bike
 - Fuel costs per mile - \$0.17 for ICE car, \$0.15 for an EV, and \$0.01 for an e-bike
- More than 15% of residents in Equity Priority Neighborhoods may not own a car
 - Without a car, many residents are dependent on public transportation; this requires them to live close to transit, where rents are higher
 - E-bikes, however, provide last mile(S) connectivity, enabling access to transit AND lower priced housing - can take e-bike on Caltrain, BART, and Samtrans
- Many lower income parents work long hours and may have difficulty driving to and from school

E-bikes have democratized transportation for lower income San Mateo County residents and others.

- E-bike rebate beneficiaries (e.g., Peninsula Clean Energy):
 - Large mix of non-car owners
 - High response rate from families well under the poverty level
- E-bikes, unlike cars, do not require expensive parking spots
 - Up to \$300/month to rent a private spot in San Mateo County
 - Less car parking demand = lower cost to build new housing
- E-bikes provide low cost access to delivery jobs that used to require car ownership
- Lower income residents are more likely to face childhood asthma and other ailments due to pollution from cars
- Lower income, people of color are more likely to be victims of car-driven traffic violence

OPINION

American Road Deaths Show an Alarming Racial Gap

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Why dangerous streets are concentrated in minority neighborhoods, and what to do about it.

E-bikes are perhaps the most environmentally friendly mode of transportation.

- E-bikes are incredibly climate friendly:

Vehicle Type 🔗	Estimated Lifecycle CO ₂ e/km	Comparison
E-bike	13–22g	~90–95% lower than cars
Electric Car (EV)	60–110g*	~50–70% lower than ICE
ICE Car	170–270g+	Highest footprint

- PCE provides clean electricity

E-bikes save taxpayer money.

- San Mateo entities spend tens of millions of dollars per year to repave roads
- E-bikes provide nearly zero impact on local roads:

Vehicle Type	Estimated Annual Road Damage Cost	Notes
E-Bike	<\$0.01	Effectively zero; only causes surface micro-abrasion.
Small Sedan	\$10 – \$20	Standard wear for residential streets.
Large SUV / EV	\$40 – \$90	Heavier batteries in EVs increase road wear significantly.

E-bikes save taxpayers money (vs. driving).

- Local governments spend enormous amounts each year to accommodate car drivers (tens or hundreds of millions of dollars?):
 - Building and maintaining municipal parking garages
 - Municipal real estate dedicated to garages or on-street parking
 - PD, EMS, and FD response to crashes - in the past decade, there have been 26,000 reported injury car crashes in San Mateo County
 - Medical costs associated with these crashes - hits residents and public insurance
 - Traffic enforcement costs
 - High health care costs due to inactivity/obesity
 - \$1 billion (?) in proposed highway expansions in San Mateo County

E-bikes save taxpayers money (vs. driving).

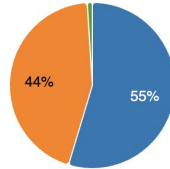
Date & Location

Date	01/01/2016 - 12/31/2025
County	San Mateo
City	All

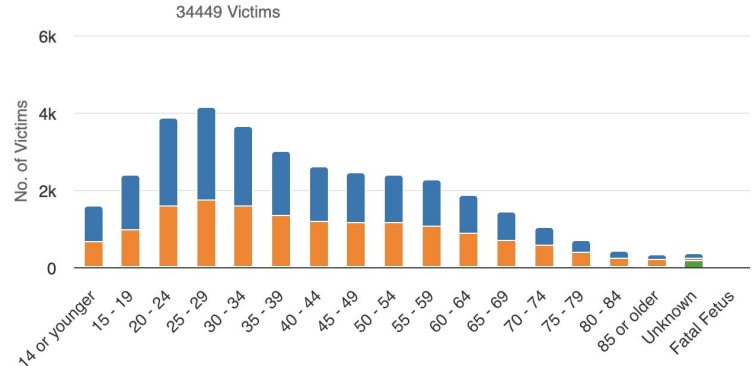
Crash Severity	Count	%
1 - Fatal	328	1.25%
2 - Injury (Severe)	1944	7.39%
3 - Injury (Other Visible)	12794	48.64%
4 - Injury (Complaint of Pain)	11240	42.73%

Results

Total Crashes	26,306
Total Victims	351 Killed & 34,098 Injured
State Highway	13,090 (49.8%)
Ped Involved	2,320 (8.8%)
Bike Involved	2,222 (8.4%)
Motorcycle Involved	1,865 (7.1%)



Number of Victims by Victim Gender and Age



E-bikes have numerous public health benefits vs. driving.

- Aerobic activity - weight loss, cardiovascular health
- Better mental health - happier, social connections, stress relief, road rage
- More independent seniors when they can no longer drive
- Smarter kids
- Lower air pollution, childhood asthma, and cardiovascular disease
- Lower noise pollution

Bloomberg

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CityLab
Transportation

The Link Between Kids Who Walk or Bike to School and Concentration

For too many American families, this is not a problem that's easily solved.

E-bikes can reduce car congestion.

- E-bike adoption is skyrocketing - more e-bikes than EVs; 10% of adults
- Car-free alternative for more users than traditional bikes
 - Expand “comfortable” range from three miles to 15 miles
 - Access to the hills
 - The sweat averse
 - Storage capacity - cargo bikes
- Avoid \$1 billion in highway expansions in SM County

Why more parents are riding cargo bikes, skipping the minivan

OCTOBER 18, 2025 - 7:43 AM ET

HEARD ON WEEKEND EDITION SATURDAY

By Jacob Fenston

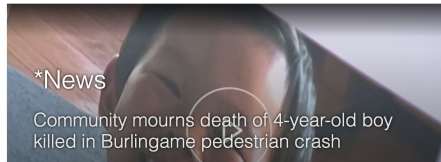


E-bikes produce safety benefits.

- Reduces speed & acceleration differential with cars, a major cause of crashes - honking
- Encourages riders to take the lane without fear of angering drivers - more conspicuous
- When a teen crashes into someone on a 50 lb. e-bike it is safer than doing so in a 6,000 pound SUV - recent teen crashes:

Community mourns 4-year-old killed in Burlingame car accident

By Zak Sos | Published August 11, 2025 6:21am PDT | Burlingame | KTVU FOX 2 | →



Father killed, mother seriously injured after being hit by teen driver in Gilroy, police say

Friday, January 16, 2026



There are several issues that have arisen with the skyrocketing popularity of e-bikes.

- Manufacturers and retailers continue to market illegal e-motos as legal e-bikes, for on road use
- Parents have unwittingly bought e-motos, unaware of the danger - 80% of kids riding e-motos vs. e-bikes
- More kids are riding in the street due to increasing penetration and ability to ride with traffic. This is scary to many.
- **But our streets lack infrastructure that keeps kids safe on the road. Sidewalks are often the only safe spaces for kids to get around.**
- PDs lack the resources to enforce existing traffic rules sufficiently to deter bad behaviors
 - Bikes - illegal e-motos, equipment, helmets, illegal double riding
 - Cars - speeding, impaired driving, distracted driving, red light running, etc.
- PDs (and others) can't easily differentiate between legal e-bikes and illegal e-motos

There are several issues that have arisen with the skyrocketing popularity of e-bikes.

- Data vacuum
 - How many crashes are from illegal e-motos vs. legal e-bikes?
 - How many crashes are the fault of car drivers?
 - How many crashes are on streets that lack safe bike infrastructure?
- Drivers block and park in bike lanes, forcing kids to ride in traffic or on the sidewalk
- Human behavior
 - Many drivers dislike people who bike and don't know the law - recent road rage incidents
 - Risk tolerances vary across parents, others - 215,000 American children <14 years-old are treated in emergency rooms each year for football injuries



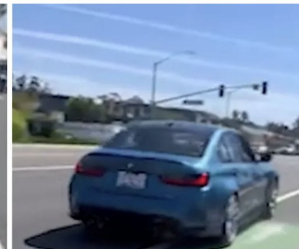
Caught on Camera: BMW Driver Arrested After Allegedly Targeting Cyclists — What This Means for Drivers and Road Rage Crackdowns

John Lloyd
Fri, April 3, 2026 at 11:30 AM PDT
5 min read

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Asks - general - not specific to legislation

- Encourage adoption of legal e-bikes, ridden safely
- Respect those that ride legal bikes, safely
- Follow the data - what devices are crashing and why? (Mineta Institute)
- Give education a chance before increasing regulation
- Stop the flow of illegal e-motos
- Do not ban sidewalk riding where it isn't safe to ride in the street
- Endorse state legislation that provides consistency statewide and provides scale; wait for other legislation to settle before creating County rules
- Create safe spaces for kids to ride (Mineta Institute)
- Adequately fund police to enforce existing traffic laws - bikes/motos and cars
- Prohibit car parking in bike lanes, too
- Enable joy / childhood