

The Rise of E-Bikes

Mayor Farrah N. Khan, City of Irvine

Officer Jason Scheafer, Irvine Police Department

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CITY OF IRVINE



Irvine PD & The Rise of E-Bikes



Motor Training Officer Jason Scheafer
Irvine Police Department
Traffic Bureau



E-Bikes

- Electric Bicycles (E-Bikes) are:
 - BICYCLES
 - FULLY OPERATIVE PEDALS
 - Electric motors of less than 750 WATTS
- Not “motorized bicycles”



E-Bike Classes



Class 1

Bicycle with a motor that only provides assistance when the cyclist is pedaling and doesn't provide assistance over 20 mph



Class 2

Bicycle with a throttle-actuate motor that doesn't provide assistance over 20 mph



Class 3

Bicycle with a motor that only provides assistance when the cyclist is pedaling and doesn't provide assistance over 28 mph

Not E-Bikes

Not everything understood by some to be an E-Bike is a legal E-Bike under CA State law...



Altered E-Bikes

If an E-Bike is altered to operate beyond legally defined speeds, is it still an E-Bike?



E-Scooters

E-Scooters = Motorized Scooters



E-Skateboards

E-Skateboards = “Electronically Motorized Boards”



Issue...

- E-Bikes $\neq$ “Motorized Bicycles”
- E-Scooters $=$ “Motorized Scooters”
- E-Skateboards $=$ “Electronically Motorize Boards”

IPD Response to the Rise of E-Bikes

- **Administrative Citation Program – Bicycle and Pedestrian Safety Course**
- **E-Device safety course in partnership with the Irvine Unified School District**
- **Networking with other law enforcement Partners**
- **High Visibility Enforcement (H.V.E)**

Administrative Citation Program

- Juvenile offenders
- CVC violations on bikes, scooters, skateboards, etc.
- Officers receive same credit as if writing a traditional citation
- Recipients must attend a NO COST safety course...

IRVINE POLICE DEPARTMENT
NOTICE OF BICYCLE / PEDESTRIAN VIOLATION **IRB 73888**

WHEN:
☐ APPEARANCE REQUIRED AT BICYCLE SAFETY CLASS WITH PARENT/GUARDIAN ON SATURDAY.
OR
☐ IF YOU FAIL TO ATTEND THE BICYCLE SAFETY CLASS, YOUR PRESENCE IS REQUIRED AT COURT ON:
DATE: ____ / ____ / ____ AT 6:00 AM
☐ To be notified. See back for detailed instructions. **ACT BY THIS DATE TO AVOID A WARRANT OR ADDED FEE.**

☐ HARBOR JUSTICE CENTER, NEWPORT BEACH FACILITY 4601 JAMBOREE RD. NEWPORT BEACH, CA 92660-2595 (657) 622-5460 • WWW.OCCOURTS.ORG
☐ JUVENILE COURT 341 THE CITY DRIVE SOUTH ORANGE, CA 92366-3209 (657) 622-5500 • WWW.OCCOURTS.ORG

Date of Violation (mm/dd/yy) Time ☐ AM ☐ PM Driver's License Number (all states) State
Name (first, middle, last)
Current Address (no., street)
Address (city, state, zip)
Date of Birth (mm/dd/yy) Parent/Guardian Phone No. ☐ Juvenile ☐ Commercial ☐ Insurance ☐ D Y ☐ D N
Race / Ethnicity Sex Hair Eyes Height Weight
Bike Manufacturer Model E-Bike Color
School Serial #
Parent or Guardian
Reason for Stop

CODE	VIOLATION	(X)
CVC 21453 () a () c	RED LIGHT	()
CVC 22450(a)	STOP SIGN	()
CVC 21650.1	RIDING LEFT OF CENTER	()
CVC 21212(a)	BIKE HELMET	()
CVC 21201 () (a) () (b) () (c) () (d)	EQUIPMENT REQUIRED	()
OTHER VIOLATION	CODE DESCRIPTION	

Location of Violation
City/County of Occurrence Case Agency No.
☐ Crash Road Traffic Conditions Weather
Comments Wet / Dry Dry / Fog / Rain / Cloud
☐ I declare under penalty of perjury under the laws of the State of CA that the foregoing is true and correct.
DECL. DATE ARRESTING OR CITING OFFICER ID Number
DECL. DATE ARRESTING OFFICER, (if different from above) ID Number
I promise to act by the date at the top of this citation. Signing DOES NOT admit guilt.
()
CELLPHONE - OPTIONAL (may be used for reminders) EMAIL - OPTIONAL (may be used for reminders)
X SIGNATURE

COURT COPY | FORM INFO
Continuation form ☐
Form Adopted for Mandatory Use
Judicial Council of California
TFS-130, Traffic/Nontraffic Notice to Appear
[Rev. Jan. 1, 2024]
SEE REVERSE
IRB73888
Vehicle Code, §64050(b), 40513(b), 40622, 40600; Pen. Code, §653.9
HERITAGE BUSINESS FORMS, INC. (360) 597-4252

Administrative Citation Program

Bicycle and Pedestrian Safety Course

- **No COST**
- **0800 class start**
- **Covers traffic safety laws for riders and pedestrians**
- **Goal is education**
- **Students must bring a parent or legal guardian**

IPD / IUSD E-Device Safety Course

- Started in 2023
- Attendees participate in a safety class to receiving parking permit
- All high school and middle school students
- Enforcement of permits responsibility of the schools



IPD / IUSD E-Device Safety Course

- Course covers:
 - The Rules of the Road
 - Safety Equipment
 - Laws regarding different devices
 - Tips on riding safely



Networking w/Law Enforcement Partners

- Participating in Conferences and Workshops
- Building Relationships
- Information Sharing



H.V.E.

- Weekly enforcement teams working near schools
- Special Events



HIGH VISIBILITY ENFORCEMENT



IRVINE POLICE DEPARTMENT
TRAFFIC BUREAU



HIGH VISIBILITY ENFORCEMENT



IRVINE POLICE DEPARTMENT
TRAFFIC BUREAU



Lessons learned from the community...

1. Legal confusion and community member frustration
2. Parents need help understanding what they are buying
3. “Leave them alone, they’re just kids having fun.”
4. Staying on top of new technologies and upcoming legislation
5. Social media makes a difference

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Thank you!



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E-Bikes and Orange County



Presenter: Peter Sotherland, OCTA

Overview

Project background & framing

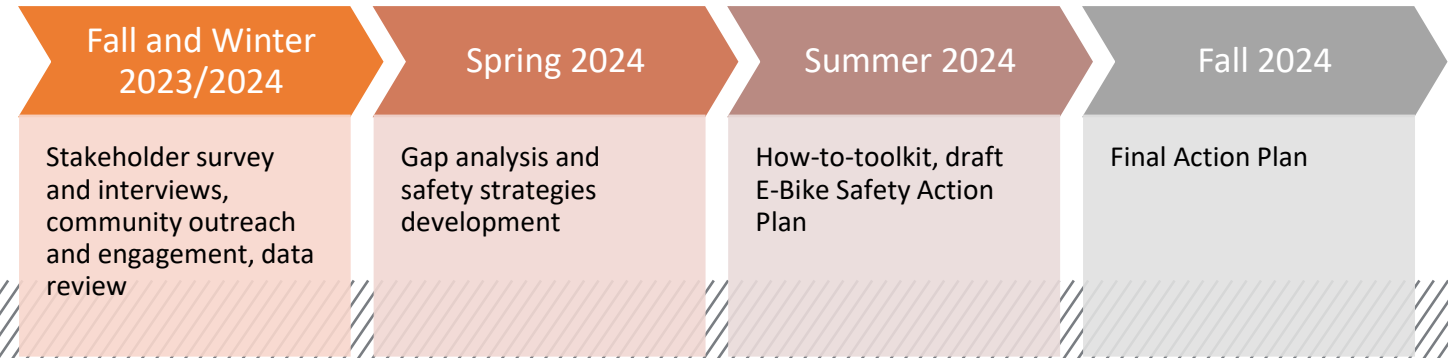
What we discovered

Ongoing efforts

A look forward

Orange County E-bike Safety Study

- **Analyze gaps** in existing e-bike safety resources and strategies
- **Engage the community** and provide e-bike safety education
- **Provide recommendations** to facilitate the use of e-bikes as a safe and reliable form of transportation in Orange County



Framing the conversation - perception

THE ORANGE COUNTY
REGISTER

Welcome to the mecca of the electric cycling craze

Injuries from e-bikes and e-scooters spiked again last year, CPSC finds

©CBS NEWS

Los Angeles Times
On Orange County beaches, proliferation of e-bikes brings battle to the boardwalk

The New York Times
'A Dangerous Combination': Teenagers' E-Bike Risks
ing, but many vehicles are not legal
on the rise.

THE ORANGE COUNTY
REGISTER

E-bikes have joined the Southern California landscape — bringing new lifestyles, laws with them

VOICE of OC

Orange County Cities Crack Down on E-Bikes With Stricter Regulations

THE ORANGE COUNTY
REGISTER

E-bike sales and usage already on the rise surge during pandemic

Framing the conversation - reality

Substantial increase in e-bike use

Teens are the early adopters

- Replacing short auto trips by parents
- Teenage behavior vs. e-bike behavior

Growth in commuter and leisure use

- Access to destinations as range and reliability increases
- Added mobility for aging population

E-bikes are here to stay

- Technology improvements
- Falling price
- Incentive programs



What we discovered: general trends

Domestic E-bike Sales

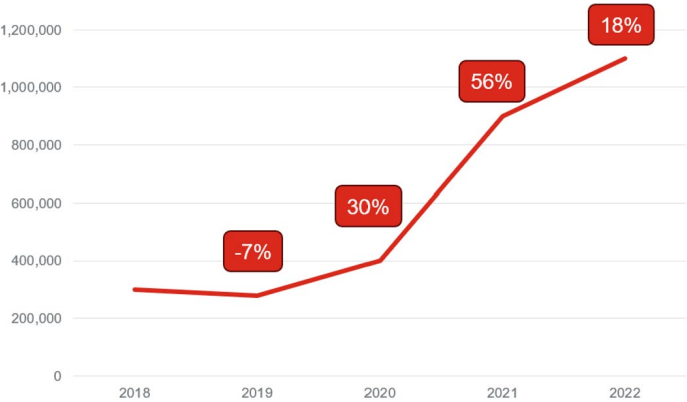
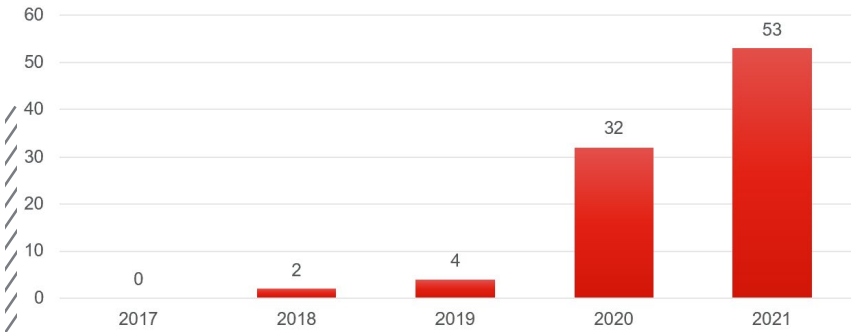


Chart: Ricki Lee, Insider.

Orange County Crashes Resulted in Towed E-bikes



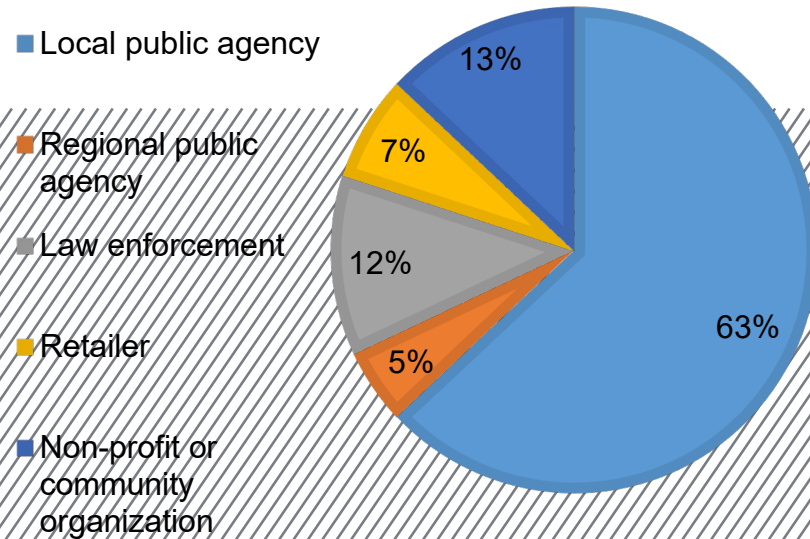
CHP 2017-2021

Growth in E-bike Trauma Patients by Age Groups (Providence Mission Hospital)

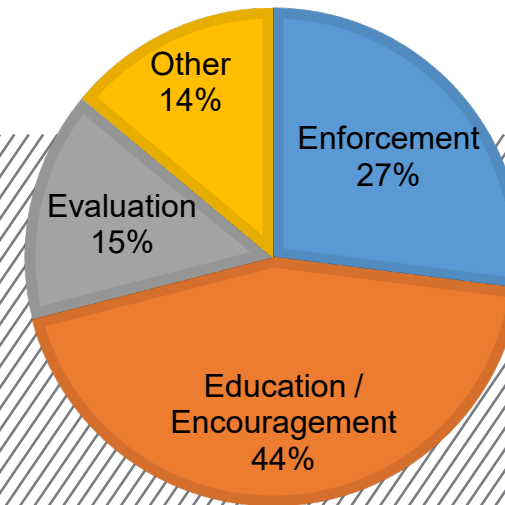
Year	Growth in E-bike Trauma Patients	Age Groups		
		Growth in patients 17 and under	Growth in patients 18-54	Growth in patients 55 and above
2020-2021	211%	450%	154%	177%
2021-2022	104%	134%	121%	28%

What we discovered: survey responses

SURVEY RESPONDENTS

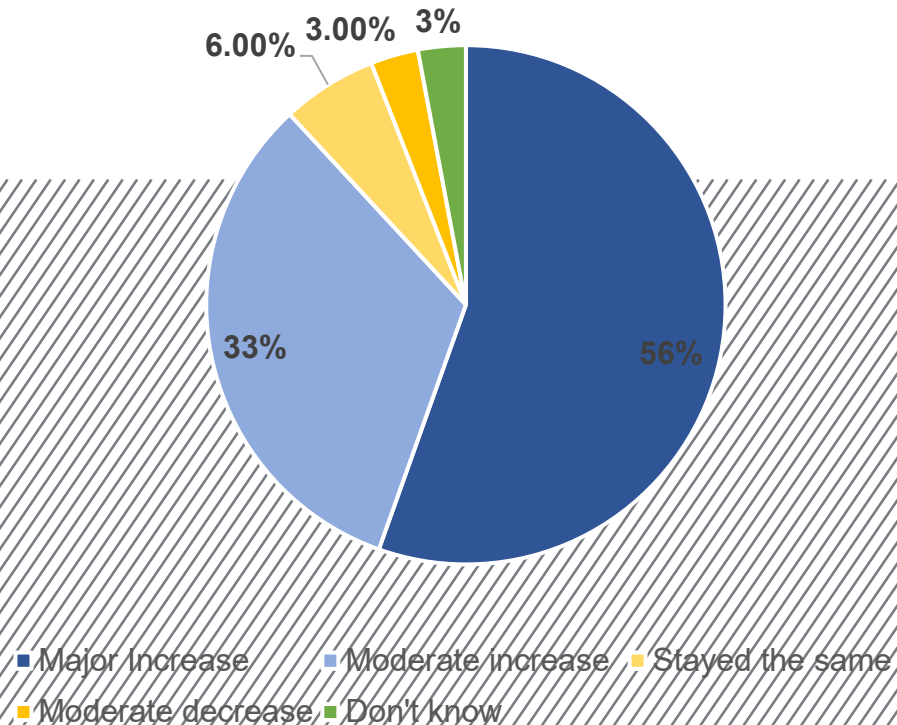


WHAT RESOURCES ARE MOST NEEDED?

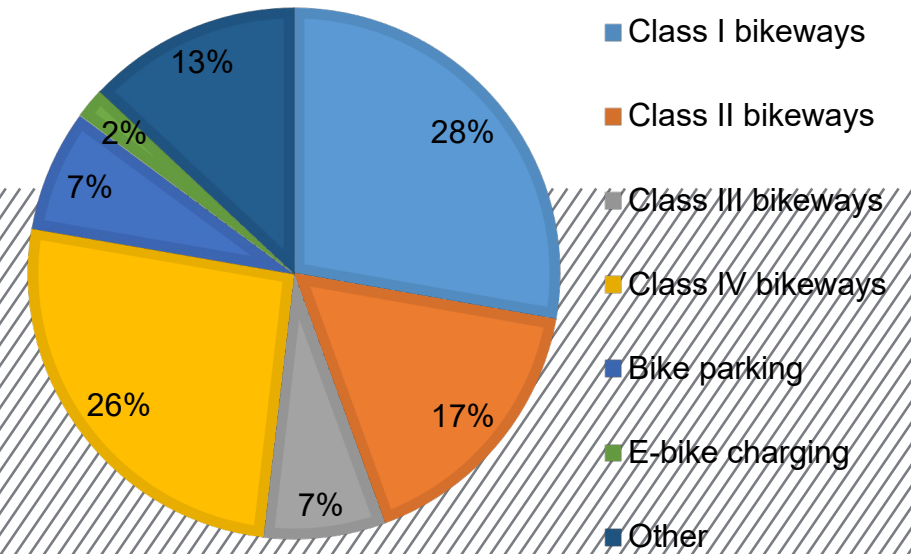


What we discovered: survey responses

How has e-bike usage in your city/region changed over the last year?



INFRASTRUCTURE NEEDS



What we discovered: interviews

Schools

- Additional resources
- Parent participation
- In need of relatable role models

Cities/enforcement

- Education resources
- Consistent, connected infrastructure
- Better data

Retailers

- Generational shift in attitude towards bicycles
- Open to innovation

Hospitals

- Data/reporting standardization
- Point of sale education

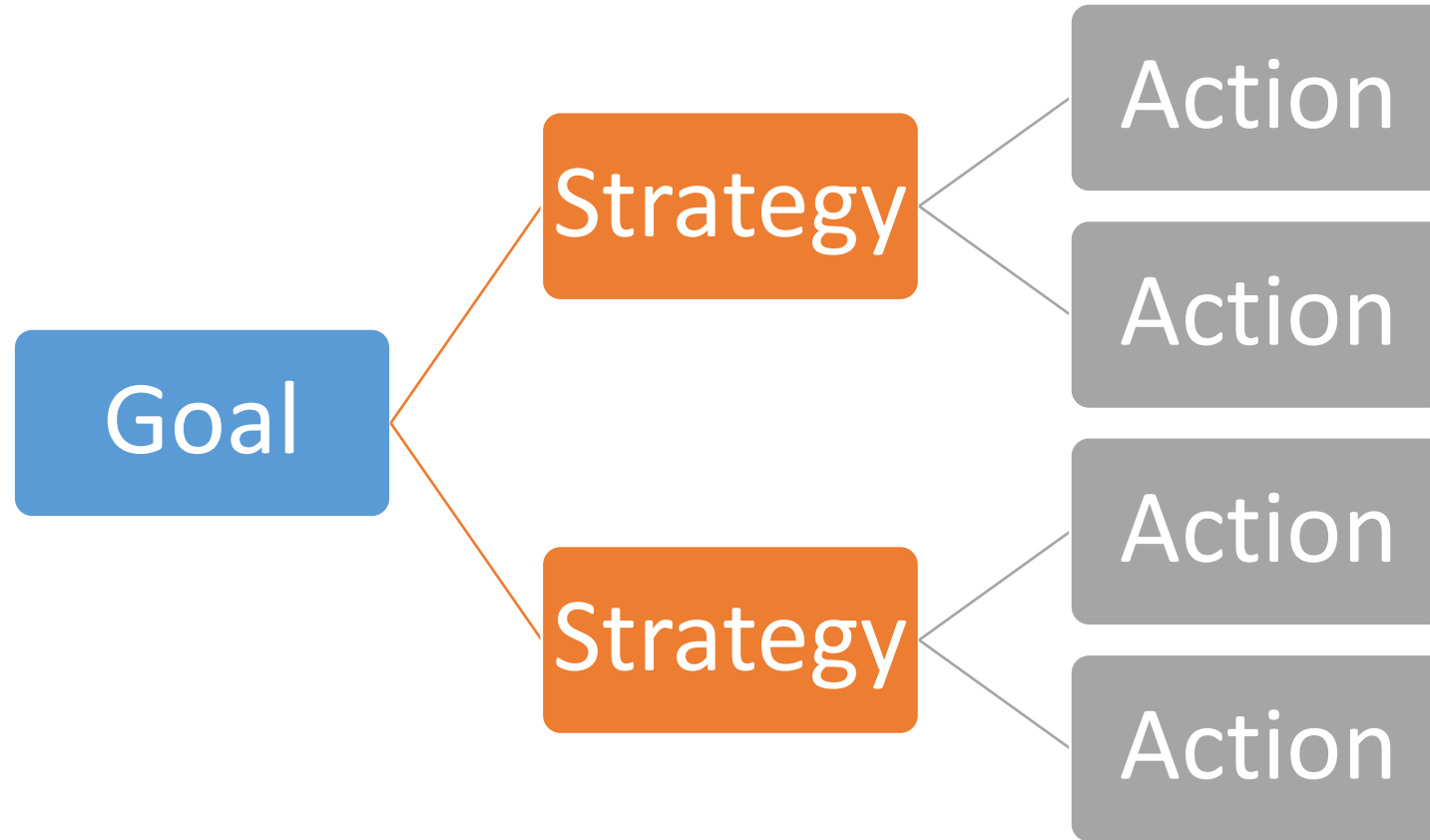
(Some) Recommendations

Safety Strategies

- Recommendations to support safe e-bike usage in Orange County
 - Key roles
 - Priority actions
 - Benchmarks to evaluate progress



Safety Strategies: Structure



Infrastructure



Legislation

Goal

Strategy

Example Action

Promote e-bikes as a sustainable transportation mode and encourage safe adoption of active modes

Continue to **monitor local and state legislation** related to e-bikes to act as resource for jurisdictions and advocates.

Where possible, **update County regulations** to support consistent policies.

Regularly update OCTA matrix to track regulatory landscape. Share out to jurisdictions with context of trends in the e-bike policy space.

Collisions and Injuries

Goal

Build understanding of micromobility crash and risk factors, especially those resulting in KSIs

Strategy

Collaborate with agencies to **enhance standardized tracking and monitoring** of county-wide micromobility-involved crashes.

Example Action

Collaborate with Orange County Health Care Agency (HCA) to monitor and track injuries of micromobility users.

Education and Encouragement

Goal

Strategy

Example Action

Target behavior change for key groups affected by e-bike safety issues

Develop **targeted education on e-bike safety** to riders who are most at risk in Orange County: the school community (parents, students, and staff) and older adults.

Develop delivery method for education/encouragement that effectively engages with the community in a cost-effective manner.

What's being done

Ongoing efforts

Education

Enforcement

Outreach, Engagement, and
Coordination

Legislative



What's being done: outreach/engagement

Print

- Door/bike hangers
- Post cards
- Stickers

Videos

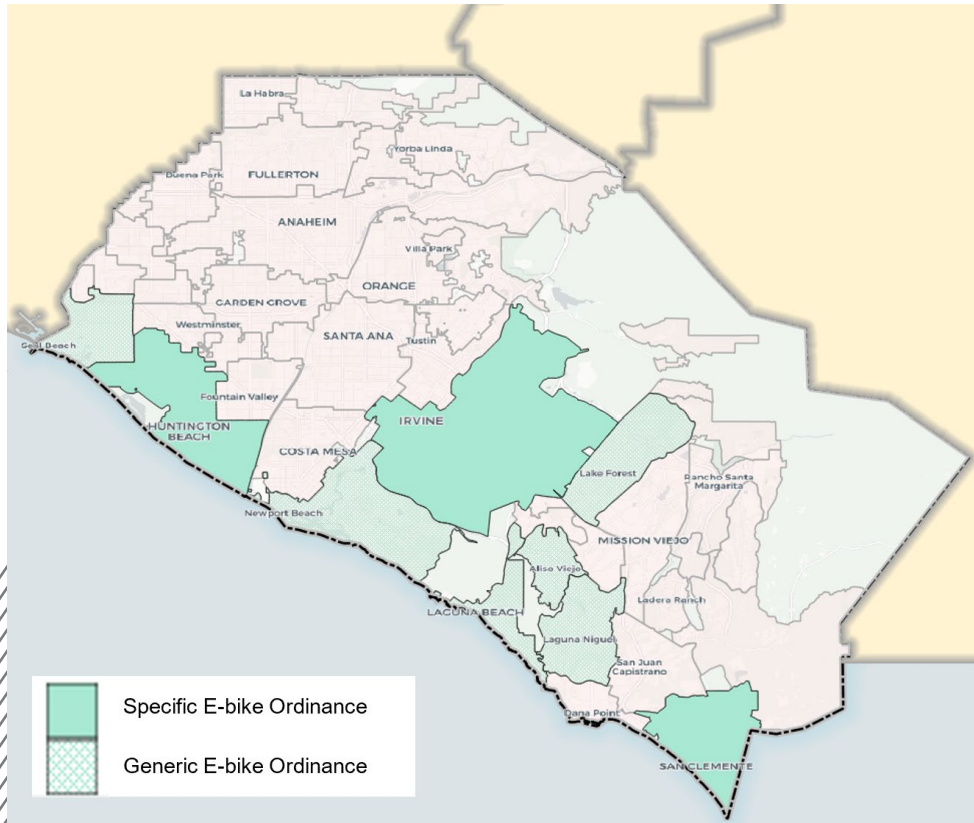
- Targeting youth and adults
- Safety combine with humor (can't take ourselves too seriously)

Coordination

- Quarterly e-bike meetings
- <https://www.octa.net/getting-around/active/oc-bike/e-bikes/>



What's being done: ordinances and legislation



Orange County Cities with specific and generic e-bike ordinances (2023)

California legislative themes

- Licensing requirements & age restrictions
- E-bike safety training
- E-bike storage (batteries)
- E-bike class restrictions
- Modified e-bikes
- Retailer responsibility

Looking forward: key takeaways

Low hanging fruit

- Stakeholder Coordination: early and consistently

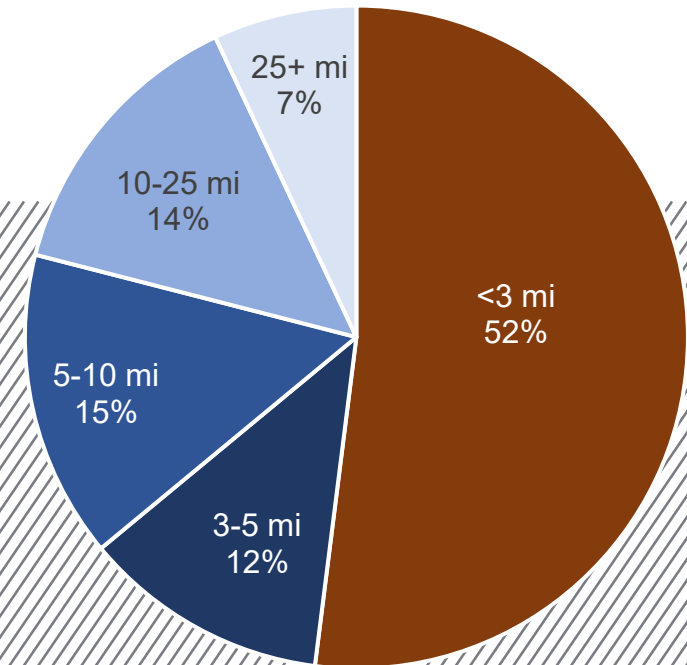
Key Actions

- Quality data
- Comprehensive education approach

Big picture

- Equitable access
- Role in active transportation/planning
- Regulation
- Generational attitudes

Nationwide Trips by Distance



Thank you!

Call to Action

- Adopt E-Bike ordinances to tighten restrictions focused on improving safety education and limiting motor vehicle and E-Bike collisions
- Coordinate with local school districts to ensure that messaging to students is consistent with City messaging
- Reach out to your legislators to let them know that E-Bike safety is a priority issue for your community
- Host E-Bike safety workshops and demonstrations for your local community

Questions?

Thank you!