



County of Santa Cruz

COUNTY ADMINISTRATIVE OFFICE

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SUSAN A. MAURIELLO, J.D., COUNTY ADMINISTRATIVE OFFICER

April 13, 2001

AGENDA: April 17, 2001

Board of Supervisors
County of Santa Cruz
701 Ocean Street, Room 500
Santa Cruz, CA 95060

Re: Consideration of Motorized Bicycle and Scooter Ordinance

Dear Members of the Board:

On February 13, 2001, your Board considered final adoption of an ordinance (Attachment 1) that would authorize the use of motorized bicycles and scooters powered by electric motors on bikeways within the County unincorporated area, and would prohibit the use of motorized scooters powered by any source other than electrical. On February 13, 2001, prior to final adoption of the ordinance, your Board directed staff to return with a report clarifying issues related to pollution and noise emissions from gas scooters and the legality of the use of unlicensed motorized scooters in roadways with or without bike lanes.

Pollution Emissions

Currently, motorized scooters, e.g., Go-Peds and Vizas, being sold in California are powered by one of three engine types: traditional 2-stroke, catalyzed 2-stroke, and 4-stroke. According to the California Air Resources Board (CARB), these engines emit approximately 110, 50 and 30 grams of hydrocarbon/nitrogen oxides (HC/NOx) per horse-power-hour (hp-hr), respectively. Pollution emissions are significantly higher for traditional 2-stroke engines because they burn a fuel-oil mixture, and lack the pollution mitigation features of the catalyzed 2-stroke engine. The 4-stroke engine is the cleanest because it uses pure fuel rather than a fuel-oil mixture. Because these engines are similar to those used in hand-held leaf blowers, the CARB has elected to regulate motorized scooters according to the same standard as that for leaf blowers, rather than the standard applied to transportation vehicles such as motorcycles and motor scooters, e.g., Hondas and Vespas.

From 1995 through 1999, the CARB standard for leaf-blower-type engines allowed a maximum HC/NOx emission of 120 gms./hp.-hr. Effective 2000 through 2005, the applicable standard is a reduced 54 gms./hp.-hr. As a result, the traditional 2-stroke scooter became non-compliant in 2000, which has resulted in the CARB's issuance of cease-and-desist letters to companies which

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continued to sell traditional 2-stroke scooters in the state. The outcome of this apparent violation is unclear because at least one company has challenged the CARB's authority to regulate as they have, and that appeal has been accepted and is pending before the Federal Environmental Protection Agency. Other scooter manufacturers have switched to California-approved engines, utilizing both the catalyzed 2-stroke and 4-stroke engines, that comply with the CARB's current pollution emission regulations and achieve approximately 100-130 miles per gallon.

With regard to the regulation of motorcycle and motor scooter transportation, e.g., Hondas and Vespas, the CARB currently places no emissions regulations whatsoever on motorcycles or motor scooters with engines smaller than 50 cubic centimeters (cc). The motorized scooters being considered by your Board range from 22 cc to 40 cc. Accordingly, if the CARB regulated motorized scooters in the same manner as it regulates motorcycle and motor scooter transportation, motorized scooter transportation would be exempt from the CARB's emissions standards. Moreover, the CARB reports that it generally places little emphasis on the regulation of motorcycle and motor scooter transportation of less than 800 cc because approximately 90% of the market is composed of larger bikes.

Noise Emissions

Less information is available concerning the measured sound emissions from motorized scooters. However, the CARB reports that a typical 2-stroke leaf blower engine emits sound in the range of 62-75 decibels (dB), full-throttle at 50 feet. (A typical vacuum cleaner emits approximately 70 dB of sound at zero feet.) A similar engine operating in a motorized scooter would be expected to operate at less than half the frequency of such lawn/garden tool engines, due to the increased load on the engine. Since high frequency sounds are considered more annoying and potentially more hazardous than low frequency sounds at any given decibel level, a standard 2-stroke motorized scooter would be expected to emit significantly less noise than a leaf blower. Larger 2-stroke engines, 4-stroke engines, and other new designs being released this summer emit less noise. The noise emissions of standard scooters may be further reduced through the use of larger, optional mufflers, which are available and cost approximately \$35-\$40.

Nevertheless, substantial well-founded concerns do exist regarding the noise emissions of motorized scooters. The worst noise offenders among motorized scooters appear to be competition models. Competition scooters are exempt from CARB regulation. Competition models are characterized by what is known as an expansion exhaust pipe. These expansion pipes increase torque, increase speed by 5-8 mph, and dramatically increase noise emissions. An expansion pipe modification costs between \$140 and \$170.

Operational Requirements

In 1999, the California Legislature enacted Senate Bill 441 which added Article 5, of Chapter 1, of Division 11 to the California Vehicle Code, establishing rules for the operation of motorized scooters. These rules include the following provisions:

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1. A person operating a motorized scooter upon a highway has all the rights and is subject to all the rules applicable to a driver of a motor vehicle (Vehicle Code § 21221);
2. No person under the age of 16 years is allowed to operate a motorized scooter (Vehicle Code § 21235(d));
3. A person operating a motorized scooter must wear a proper helmet (Vehicle Code § 21235(c));
4. No person may operate a motorized scooter with any additional passengers (Vehicle Code § 21235(e));
5. No person may operate a motorized scooter carrying any article which prevents the operator from keeping at least one hand upon the handlebars (Vehicle Code § 21235(f));
6. Unlike persons operating motorized bicycles or mopeds, a person using a motorized scooter is not required to obtain either a class M2 driver's license or accident insurance (Vehicle Code § 2112804.9(b)(5));
7. An operator is also not required to have his or her scooter registered or licensed (Vehicle Code § 21230);
8. Motorized scooters operating at night must be equipped with specified safety devices, such as a headlamp, and reflectors (Vehicle Code § 21224);
9. An operator may not wear a headset or earplugs in both ears (Vehicle Code § 21224(b),) and may not carry passengers (Vehicle Code § 21235(e)); and
10. Persons operating a motorized scooter must observe special rules of the road (Vehicle Code § 21228).

Where Motorized Scooters May Operate

The California Vehicle Code presently authorizes motorized scooters, e.g., Go-Peds and Vizas, to operate on certain County roadways and bikeways. The Vehicle Code, however, also provides that the County can adopt an ordinance to prohibit the use of motorized scooters on its bikeways (Vehicle Code § 21225). Currently, motorized scooters can legally operate in the following areas:

1. All Class I bikeways' (Vehicle Code § 21230).
2. All Class II bikeways² located on roads that are posted over 25 MPH (Vehicle

¹A Class I bikeway is defined as a completely separated right-of-way for the exclusive use of bicycles and pedestrians with cross flows minimized, such as the Summit Road Bikepath (Streets and Highways Code § 890.4(a); Index 1001.1(1) CALTRANS Highway Design Manual).

²A Class II bikeway is defined as a restricted right-of-way identified by signs and pavement markings for the exclusive or semiexclusive use of bicycles with through travel by motor vehicles prohibited except for cross flows and parking. Examples include portions of Soquel Drive and Freedom Boulevard (Streets and Highways Code § 890.4(b); Index 1001.1(2))

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Code § 21235). Motorized scooters must remain within the Class II bikeway except when performing specified maneuvers such as making a left-hand turn or avoiding debris. (Vehicle Code § 21229).

- 3. All Class III bikeways³ on roads that are posted 25 MPH or less (Vehicle Code § 21235).
- 4. All roads without bikeways that are posted 25 MPH or less (Vehicle Code § 21221).

Vehicle Code § 21228 requires that a motorized scooter operated at less than the normal speed of traffic must ride as close as possible to the right hand side of the road (except when performing specified maneuvers). Other provisions of the Vehicle Code currently prohibit the operation of a motorized scooter on any road (including those designated as a Class III bikeway) where the posted speed is over 25 MPH (Vehicle Code § 21235); or on any sidewalk, except when entering or leaving the adjacent property.

The previously-approved ordinance (Attachment 1) includes a provision authorizing the operation of a motorized bicycle powered by an electric motor (Vehicle Code § 406(b)) on all bikeways under the County’s jurisdiction. Without such an ordinance, motorized bicycles would be prohibited from operating on Class I bikeways (Vehicle Code § 21207.5).

If your Board were to adopt the previously-approved ordinance as proposed, motorized scooters would be prohibited from operating on any Class I, Class II or Class III bikeway. However, motorized scooters would still be able to use any road without a bikeway that is posted at 25 MPH or less, e.g., residential streets (Vehicle Code § 2 122 1). At your last meeting, this inconsistency in the Code was discussed and staff was asked to clarify this issue.

One alternative would be to specifically designate all County roads posted at 25 MPH or less as bikeways. However, CALTRANS rules would then require the installation and maintenance of appropriate signage. Staff believes that such signage would create visual clutter in our neighborhoods at additional cost, and with little other value to the public.

Another approach could be to prevent the use of motorized scooters on County-owned and/or controlled property, e.g., streets, parks, parking lots, and other County facilities. This alternative is outlined in an attached ordinance (Attachment 2), and it would prohibit the use of motorized

CALTRANS Highway Design Manual).

³A Class III bikeway is defined as a “bike route” identified by signs in which the road right-of-way is shared by bicycles, pedestrians, and motor vehicles. There are several signed Class III bikeways in Santa Cruz County including portions of 7th Avenue, East Cliff Drive, San Andreas Road, and Soquel Drive (Streets and Highways Code § 890.4(c); Index 1001.1(3) CALTRANS Highway Design Manual).

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scooters on County roads posted at 25 MPH or less, regardless of whether they have a bikeway designation, as well as all other County-owned and/or controlled sites.

Ordinance Considerations

On February 6, 2001, your Board adopted the attached ordinance (Attachment 1) authorizing the use of motorized bicycles and scooters powered by electric motors on bikeways within the County unincorporated area. Following your Board's deliberations, your Board may act to:

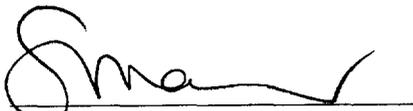
Finally adopt the previously-approved ordinance (Attachment 1), authorizing the operation of electric-powered scooters on all County bikeways, while prohibiting the use of gas-powered scooters on County bikeways; or

Conceptually approve the alternative ordinance (Attachment 2), authorizing the operation of electric-powered scooters on all County bikeways, while prohibiting the use of gas-powered scooters on all County bikeways, as well as all County-owned and/or controlled property, e.g., streets, parks, parking lots, and other County facilities, and direct Counsel to return with the ordinance on May 1, 2001 for final adoption.

IT IS THEREFORE RECOMMENDED that your Board:

- 1) Accept and file this report; and
- 2) Consider possible amendments to the County Code pertaining to the operation of motorized bicycles and scooters on streets and bike paths within the unincorporated area.

Very truly yours,



Susan A. Mauriello
County Administrative Officer

- cc: Sheriff
County Counsel
Public Works
Transportation Commission

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ORDINANCE NO. _____

**ORDINANCE ADDING CHAPTER 9.54 THE
SANTA CRUZ COUNTY CODE RELATING TO
MOTORIZED BICYCLES AND MOTORIZED SCOOTERS**

The Board of Supervisors of the County of Santa Cruz ordains as follows:

SECTION I

Chapter 9.54 of the Santa Cruz County Code is hereby added to read as follows:

Chapter 9.54

**REGULATION OF MOTORIZED
BICYCLES AND MOTORIZED SCOOTERS**

Sections:

- 9.54.010 Regulations.**
- 9.54.020 Violations--Penalty.**
- 9.54.010 Regulations.**

A. Notwithstanding any other provision of this code, a “motorized bicycle” as defined by California Vehicle Code Section 406 (b), and a “motorized scooter” as defined by California Vehicle Code Section 407.5 (a), are authorized to operate on any **bikeway** under the County’s jurisdiction.

B. A “motorized scooter” as defined by California Vehicle Code Section 407.5 (b), is prohibited from operating on any **bikeway** under the County’s jurisdiction.

9.54.020 Violations--Penalty.

Any person violating this chapter shall be deemed guilty of an infraction and shall be punished by a **fine** in accordance with section 1.12.040 of this code.

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SECTION II

This ordinance shall take effect on the 3 1st day after the date of final passage.

PASSED AND ADOPTED this ____ day of _____, 2001, by the Board of Supervisors of the County of Santa Cruz by the following vote:

AYES: SUPERVISORS
NOES: SUPERVISORS
ABSENT: SUPERVISORS
ABSTAIN: SUPERVISORS -

Chairman of the
Board of Supervisors

Attest: _____
Clerk of the Board

APPROVED AS TO FORM:

[Handwritten Signature]

DISTRIBUTION: CAO
Sheriff
Transportation Commission

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A. Notwithstanding any other provision of this code, a “motorized bicycle” as defined by California Vehicle Code Section 406 (b), and a “motorized scooter” as defined by California Vehicle Code Section 407.5 (a), are authorized to operate on any **bikeway** under the County’s jurisdiction.

B. A “motorized scooter” as defined by California Vehicle Code Section 407.5 (b), is prohibited from operating on any **bikeway** under the County’s jurisdiction and or any other property owned or controlled by the County.

9.54.020 Violations--Penalty.

Any person violating this chapter shall be deemed guilty of an infraction and shall be punished by a fine in accordance with section 1.12.040 of this code.

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SECTION II

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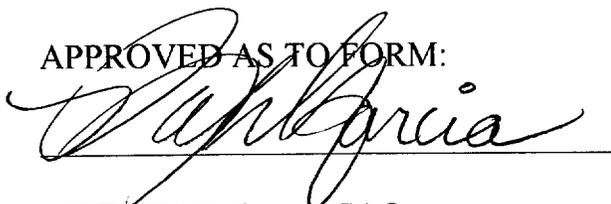
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NOES: SUPERVISORS
ABSENT: SUPERVISORS
ABSTAIN: SUPERVISORS

Chairman of the
Board of Supervisors

Attest: _____
Clerk of the Board

APPROVED AS TO FORM:



DISTRIBUTION: CAO
Sheriff
Transportation Commission

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