

**County of Santa Cruz Health Services Agency
Bicycle Safety Education Program**

BICYCLE SAFETY OBSERVATION STUDY 2009

BACKGROUND AND PURPOSE

The County of Santa Cruz Health Services Agency has been working over the years to reduce bicycle-related injuries in Santa Cruz County. During the months of May and June in 2009, Chronic Disease and Injury Prevention staff, members of the Community Traffic Safety Coalition (CTSC), members of the Santa Cruz County Regional Transportation Commission's (SCCRTC) Bicycle Committee, youth volunteers from Jovenes SANOS, and community volunteers conducted a countywide bicycle safety observation survey to inform bicycle safety education efforts. The 2009 data was then compared with the last five studies done in 2003, 2006, 2007, and 2008.

The purpose of this survey is to learn about bicycle safety from observing bicycle behavior. The survey is designed to observe what is generally considered safe and unsafe behavior when riding a bicycle. While some behaviors might be legal, such as those over the age of 18 years choosing not to wear a helmet while cycling, those behaviors could increase the risk of injury or death and are therefore considered unsafe in this survey.

METHOD OF DATA COLLECTION

A total of 27 staff and volunteers collected data at 41 locations throughout Santa Cruz County, 25 observation sites located in North County and 16 in South County. All of the observation locations for the 2009 survey were the same as used in previous observation surveys, except for the school sites. Three elementary schools in Santa Cruz, Freedom and Watsonville were added.

The survey included three types of locations: commuter, school, and weekend. The commuter sites were observed on weekdays from 4:00 pm to 6:00 pm. School sites were observed for an hour before school started on a weekday morning. Weekend sites were observed from 11:00 am to 1:00 pm on a Saturday or Sunday. Each observer had a sheet to collect data that included approximate age, sex, wearing a helmet, riding with traffic, stopping at a stop sign/light, and riding on the sidewalk. Also recorded were date, day of the week, and weather conditions. Observers were given standardized data collection procedures to ensure reliable results.

SUMMARY OF RESULTS

A total of 2,725 bicyclists were observed. Significant overall findings for 2009 included:

- 76% of cyclists were men, 23% were women
- Females cyclists had a helmet use rate of 57% compared to men at 38%
- South County cyclists wore helmets at a rate of 14% compared to 48% for North County cyclists

- 83% of cyclists rode with traffic on the right side of the road
- 67% of cyclists stopped at stop signs and lights
- 30% of cyclists rode on the sidewalk

Tables 1, 2 and 3 summarize the results from the 2009 survey.

Table 1: Santa Cruz County (All 41 sites)

	Sample Size	%	Wore a Helmet	Rode with Traffic	Stopped at signs/ lights	Rode on sidewalk
Total Bicyclists	2725	100%	42%	83%	67%	30%
Males	2075	76%	38%	81%	64%	31%
Females	640	23%	57%	90%	75%	27%
Children (0-12 yrs)	148	5%	46%	49%	75%	77%
Teens (13-17 yrs)	242	9%	36%	70%	57%	61%
Young Adults (18-24 yrs)	785	29%	34%	85%	76%	27%
Adults (25+ yrs)	1541	57%	47%	88%	62%	20%

Table 2: North County Sites (25 sites)

	Sample Size	%	Wore a Helmet	Rode with Traffic	Stopped at signs/ lights	Rode on sidewalk
Total Bicyclists	2262	100%	48%	89%	68%	22%
Males	1645	73%	44%	88%	65%	22%
Females	609	27%	58%	91%	75%	25%
Children (0-12 yrs)	94	4%	63%	53%	72%	76%
Teens (13-17 yrs)	198	9%	44%	74%	53%	56%
Young Adults (18-24 yrs)	653	29%	38%	91%	79%	20%
Adults (25+ yrs)	1310	58%	53%	93%	63%	13%

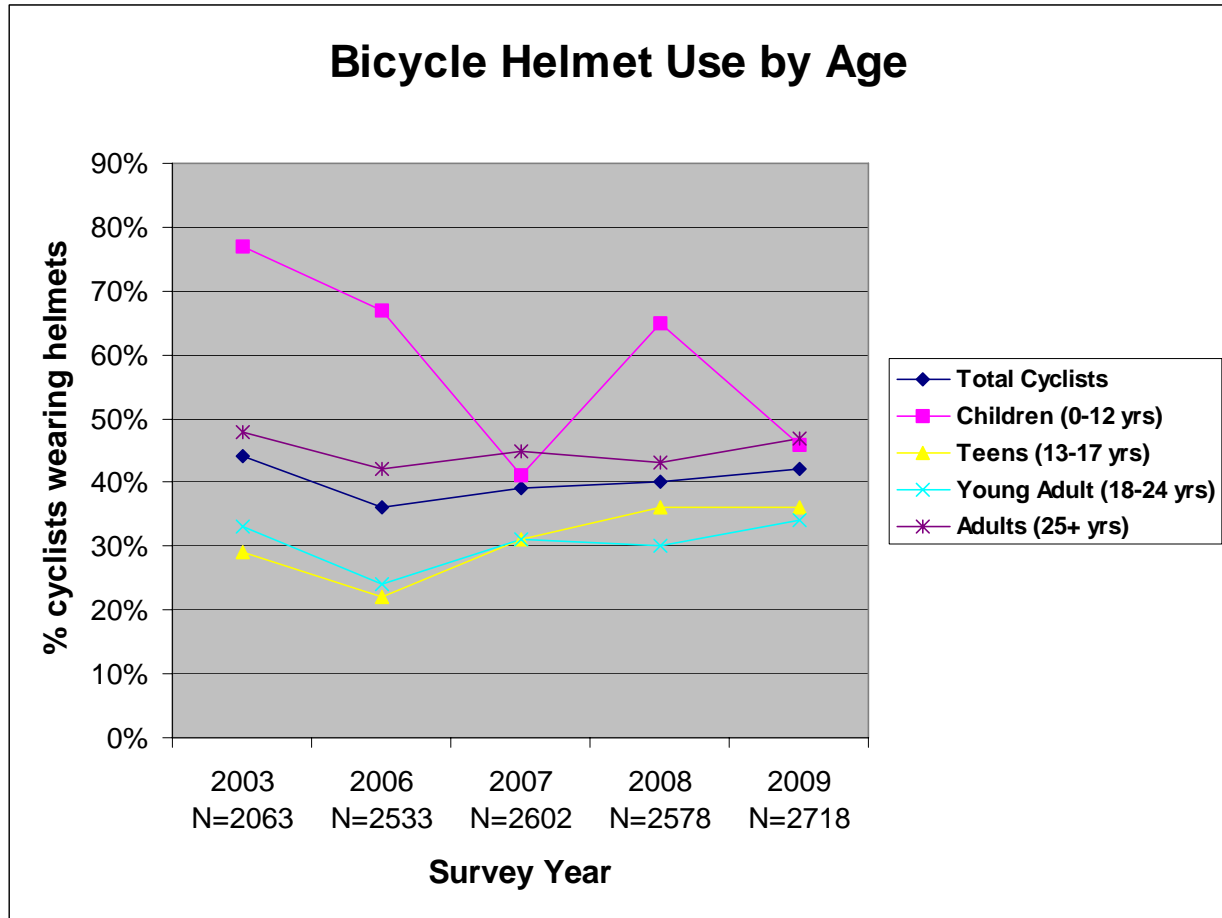
Table 3: South County Sites (16 sites)

		%	Wore a Helmet	Rode with Traffic	Stopped at signs/ lights	Rode on sidewalk
Total Bicyclists	454	100%	14%	56%	62%	62%
Males	423	93%	12%	55%	61%	62%
Females	30	7%	47%	75%	77%	59%
Children (0-12 yrs)	52	11%	17%	40%	83%	80%
Teens (13-17 yrs)	42	9%	0%	54%	71%	88%
Young Adults (18-24 yrs)	129	28%	15%	50%	51%	51%
Adults (25+ yrs)	230	51%	16%	63%	60%	59%

COMPARISONS TO PREVIOUS DATA

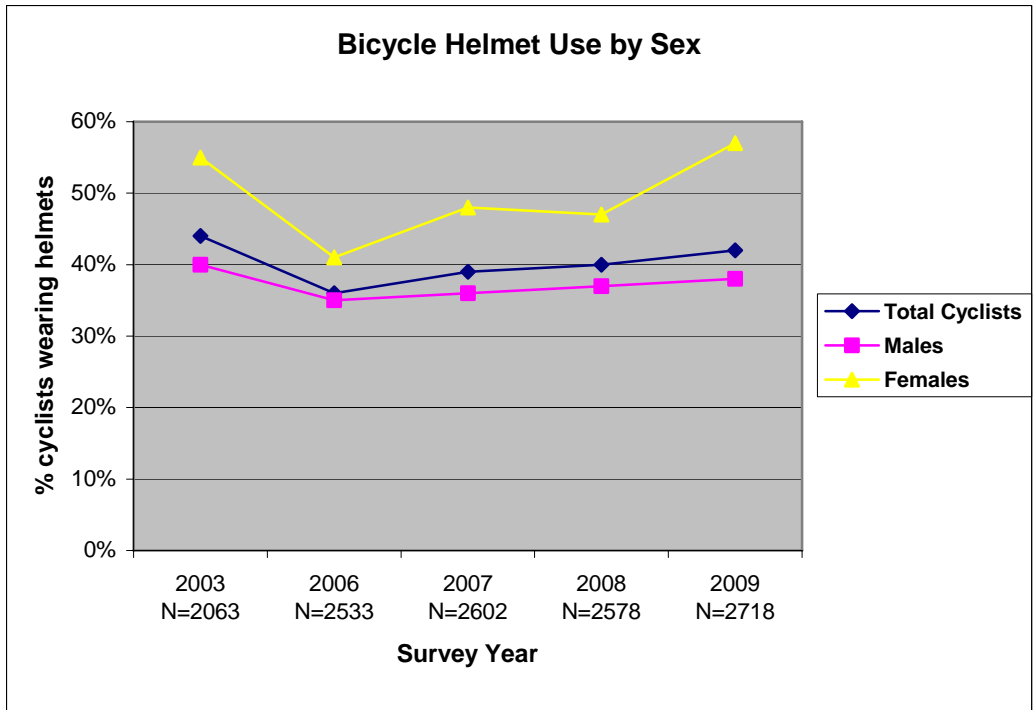
The tables below compare data over nine years for five observational surveys looking at helmet use, riding with traffic, stopping at stop signs/lights, and riding on the sidewalk by sex and age.

*Changes in Bicycle Helmet Use

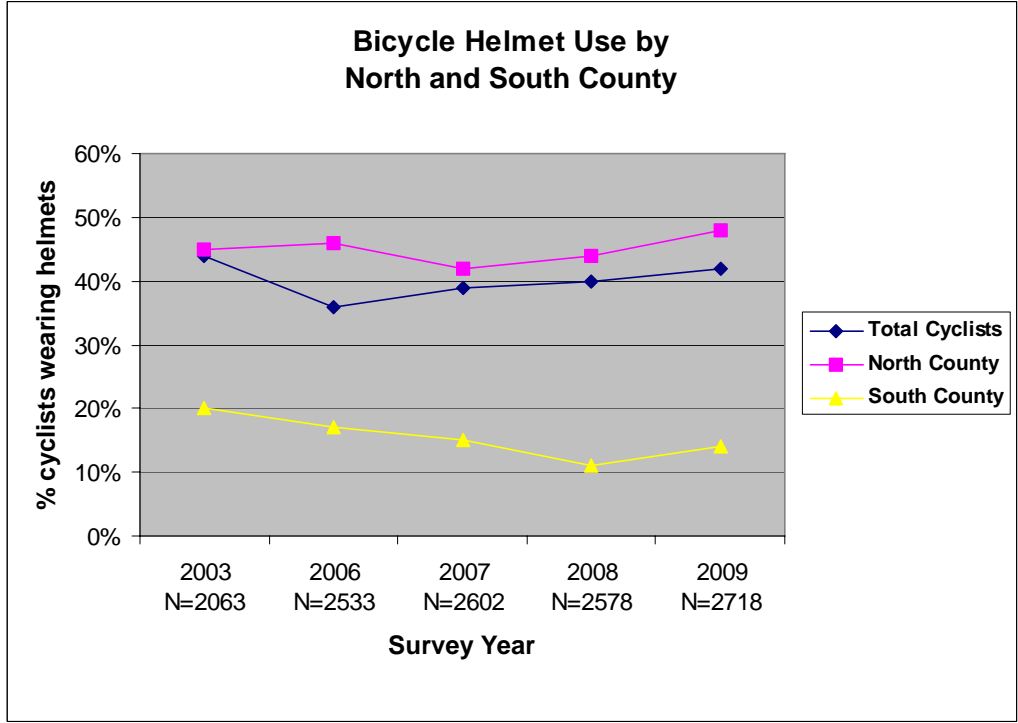


A decrease in helmet use occurred this year among children from 65% in 2008 to 46% in 2009. Helmet use for children was more erratic than the other age groups surveyed over the past five survey years. Helmet use remained the same among teens from 2008 to 2009 at 36%, and all other groups, except children, increased slightly in 2009.

*Whereas adults are not required to wear a helmet in California, the law requires persons under 18 years of age to wear an ASTM or CPSC approved, properly fitted and fastened helmet as an operator or a passenger when bicycling, skateboarding, roller-blading/skating or using a scooter.

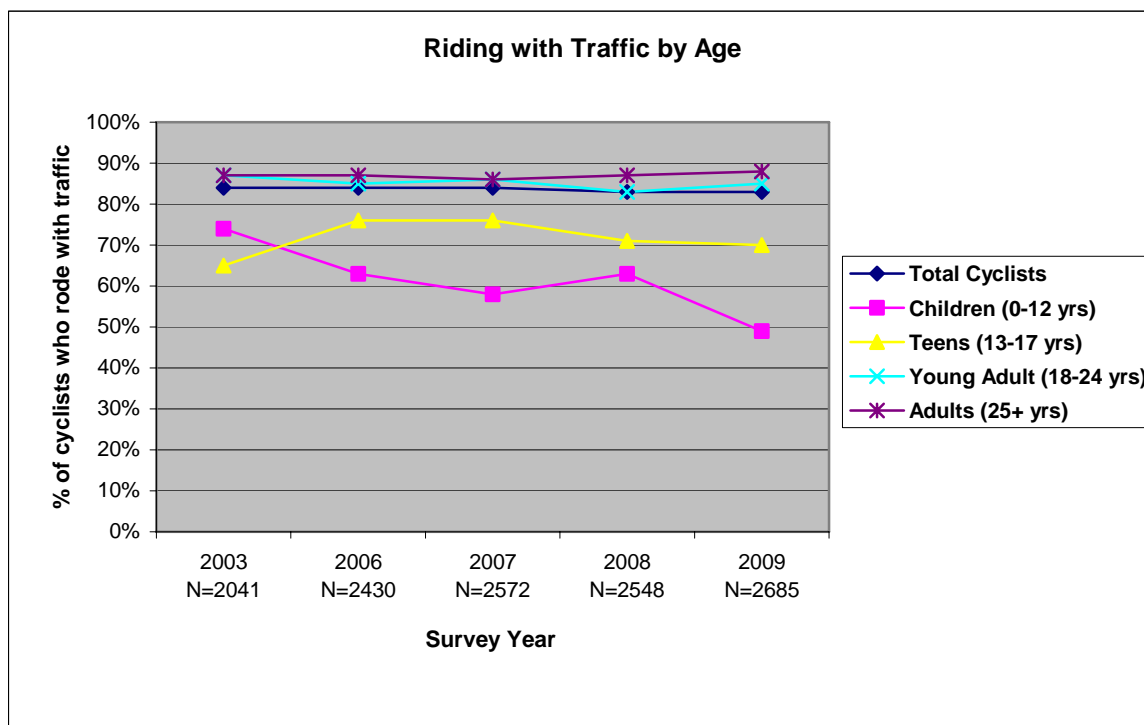


Overall helmet use for the county increased slightly from 40% in 2008 to 42% in 2009. An increase in helmet use took place for females from 47% in 2008 to 57% in 2009. Females consistently wear helmets at a higher rate than males.



South County cyclists have had a lower helmet use rate each year the survey has been conducted; however, the number of cyclists observed in South County has always been much lower than those observed in North County.

Changes in Riding with Traffic



Riding with traffic remained similar over the years surveyed for all demographic groups except children and teens. Children who were riding with traffic declined significantly over the previous survey year from 63% in 2008 to 49% in 2009. There was a decrease in riding with traffic for teens from 76% in 2007 to 71% in 2008, but this decline steadied in 2009 at 70%.

Changes in Stopping at Stop Signs/Lights

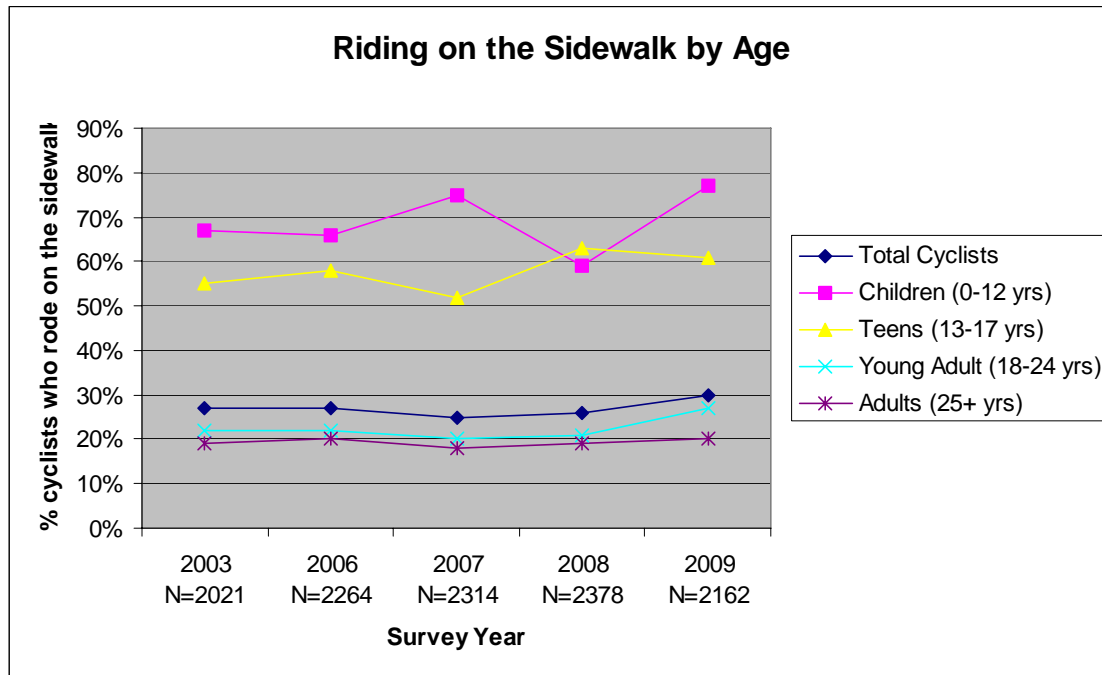
The percentage of bicyclists who stopped at stop signs/lights decreased for all groups surveyed in 2009, except for females and young adults. Females and young adults who stopped at stop signs/lights increased by 8% and 6% respectively from 2008 to 2009. The greatest decrease was with children from 94% in 2008 to 75% in 2009.

Changes in Sidewalk Riding

Local ordinances exist in several jurisdictions in Santa Cruz County related to cycling on the sidewalk. In the cities of Watsonville and Capitola, sidewalk bicycle riding is illegal, while illegal only in commercial areas within the City of Santa Cruz. The City of Scott's Valley and the unincorporated areas of the county do not have an ordinance in place.

Generally, bicycle riding on the sidewalk has been found to carry a greater risk of injury than riding on the roadway. While it is legal in some areas to ride a bicycle on the sidewalk, sidewalk riding is generally considered unsafe; however, there are some exceptions. Children often ride on the sidewalk until their skill and judgment levels develop enough to ride safely in the roadway. There are also some circumstances

where riding on a segment of sidewalk is a safer choice than riding on the roadway, such as going up E. Cliff Drive before Murray Street in the City of Santa Cruz.



Children and teens ride a bicycle on the sidewalk more often than any other group observed over the years surveyed. In 2009, there was an increase in riding on the sidewalk for all groups surveyed, except teens, whose sidewalk riding decreased slightly from 63% in 2008 to 61% in 2009. The greatest increase in riding on the sidewalk was with children from 59% in 2008 to 77% in 2009.

CONCLUSIONS

When comparing the 2009 observation data to the other years surveyed, there have been some areas of improvement. Overall helmet use has been steadily increasing since 2006. The number of those riding with traffic has remained fairly steady over the last five years surveyed. Based on the results of this years' survey, other areas need improvement. Stopping at stop signs and lights had been increasing since 2006 and then decreased slightly in 2009. Helmet use for children has been unsteady and declined in 2009, and Watsonville helmet use remains low compared with North County.

The County of Santa Cruz HSA provides staff to the CTSC. HSA and CTSC affiliated partners have many programs in place to address bicycle safety in Santa Cruz County. CTSC programs include the Ride n' Stride bicycle and pedestrian education program reaching over 3,000 elementary and preschool students each year and the South County Bicycle and Pedestrian Work Group. HSA also administers a Bicycle Traffic School for bicyclists who receive a traffic violation. Detailed results of this survey are available by request to inform all bicycle safety efforts in Santa Cruz County.

Funding for this project was provided by a grant from the California Office of Traffic Safety, through the National Highway Traffic Safety Administration. For more information, please contact the Community Traffic Safety Coalition c/o the Chronic Disease and Injury Prevention Unit of the County of Santa Cruz Health Services Agency at 1070 Emeline Avenue, Santa Cruz, CA 95060, (831) 454-4312.