

County of Santa Cruz Health Services Agency

BICYCLE SAFETY OBSERVATION STUDY 2015

BACKGROUND AND PURPOSE

The Santa Cruz County Health Services Agency (HSA) along with the Community Traffic Safety Coalition (CTSC) and other community partners, has spent more than a decade working to reduce bicycle-related injuries and increase ridership in Santa Cruz County. To evaluate yearly trends in the number of cyclists and their behaviors, and to guide bicycle safety education efforts, this annual countywide survey was conducted during the months of May and June in 2015. Observations were made by HSA Community Health Education staff, members of the CTSC and their South County Bicycle and Pedestrian Work Group (SCBPWG), Santa Cruz County Regional Transportation Commission's (SCCRTC) Bicycle Committee members, and other community volunteers.

The study is designed to observe behaviors considered safe or unsafe by traffic safety experts 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 same behaviors could increase the risk of injury or death and are therefore considered unsafe in this survey. Sidewalk riding, as an example, may be legal in some areas but could increase the risk of collision or conflict with other road users.

METHOD OF DATA COLLECTION

For the 2015 survey, a total of 24 staff and volunteers collected data at 52 locations throughout Santa Cruz County, 30 in North County and 22 in South County. This year the number of school sites observed increased from 17 to 19 with the deletion of Green Acres Elementary School and the addition of San Lorenzo Valley Elementary School, Cesar Chavez Middle School and Pajaro Valley High School. Also added this year was the intersection of Soquel Drive and Trout Gulch Road in Aptos.

The survey included three types of locations: commuter, school, and weekend. The commuter sites were observed on a Tuesday, Wednesday or Thursday, from 4:00 p.m. to 6:00 p.m. School sites were observed for an hour, beginning 45 minutes before each school's start time on a Tuesday, Wednesday or Thursday morning. Weekend sites were observed from 11:00 a.m. to 1:00 p.m. on a Saturday or Sunday. To ensure reliable results, observers were given instructions and a standardized data collection sheet. Data gathered included estimated age and gender, wearing a helmet, riding with traffic, stopping at a stop sign or red light, and riding on the sidewalk. Also recorded were the date, day of the week, and weather conditions. A section was available for observer comments as needed.

SUMMARY OF RESULTS

Significant overall findings for 2015 include:

- A total of 2,548 bicyclists were observed, compared to 2,786 in 2014 and 3,047 in 2013.
- 1,509 people were observed at commuter sites, 633 at weekend sites and 406 at school sites.
- 74% of cyclists were men, 25% were women.
- 58% of cyclists wore a helmet.
- Female cyclists had a helmet use rate of 70% compared to males at 54%.
- 86% of cyclists rode with traffic on the correct side of the road.
- 62% of cyclists stopped at stop signs and red lights.
- 21% of cyclists rode on the sidewalk.
- Safe cycling behaviors were consistently lower in South County than in North County.
- 275 cyclists, the highest number at a single site, were observed at High and Bay Streets in Santa Cruz.

Tables 1, 2 and 3 summarize the results of the 2015 survey by location, age and gender.

Table 1: Santa Cruz County (All 52 sites)

	Sample Size	%	Wore a Helmet	Rode with Traffic	Stopped at signs/ lights	Rode on sidewalk
Total Bicyclists	2548	100%	58%	86%	62%	21%
Males	1897	74%	54%	85%	59%	23%
Females	640	25%	70%	89%	69%	15%
Children (0-12 yrs)	130	5%	72%	67%	83%	67%
Teens (13-17 yrs)	219	9%	50%	72%	63%	47%
Young Adults (18-24 yrs)	579	23%	58%	90%	70%	11%
Adults (25+ yrs)	1608	63%	58%	88%	57%	16%

Table 2: North/Mid County Sites (30 sites)

	Sample Size	%	Wore a Helmet	Rode with Traffic	Stopped at signs/ lights	Rode on sidewalk
Total Bicyclists	2222	100%	63%	89%	64%	15%
Males	1602	72%	60%	88%	62%	16%
Females	609	27%	72%	91%	71%	12%
Children (0-12 yrs)	113	5%	81%	72%	86%	64%
Teens (13-17 yrs)	156	7%	66%	79%	63%	39%
Young Adults (18-24 yrs)	535	24%	62%	92%	74%	6%
Adults (25+ yrs)	1406	63%	62%	90%	59%	11%

Table 3: Watsonville Sites (22 sites)

	Sample Size	%	Wore a Helmet	Rode with Traffic	Stopped at signs/ lights	Rode on sidewalk
Total Bicyclists	326	100%	20%	67%	46%	57%
Males	295	90%	20%	68%	47%	57%
Females	31	10%	26%	60%	39%	63%
Children (0-12 yrs)	17	5%	6%	31%	60%	81%
Teens (13-17 yrs)	63	19%	11%	57%	64%	68%
Young Adults (18-24 yrs)	44	13%	5%	70%	28%	68%
Adults (25+ yrs)	202	62%	28%	73%	44%	50%

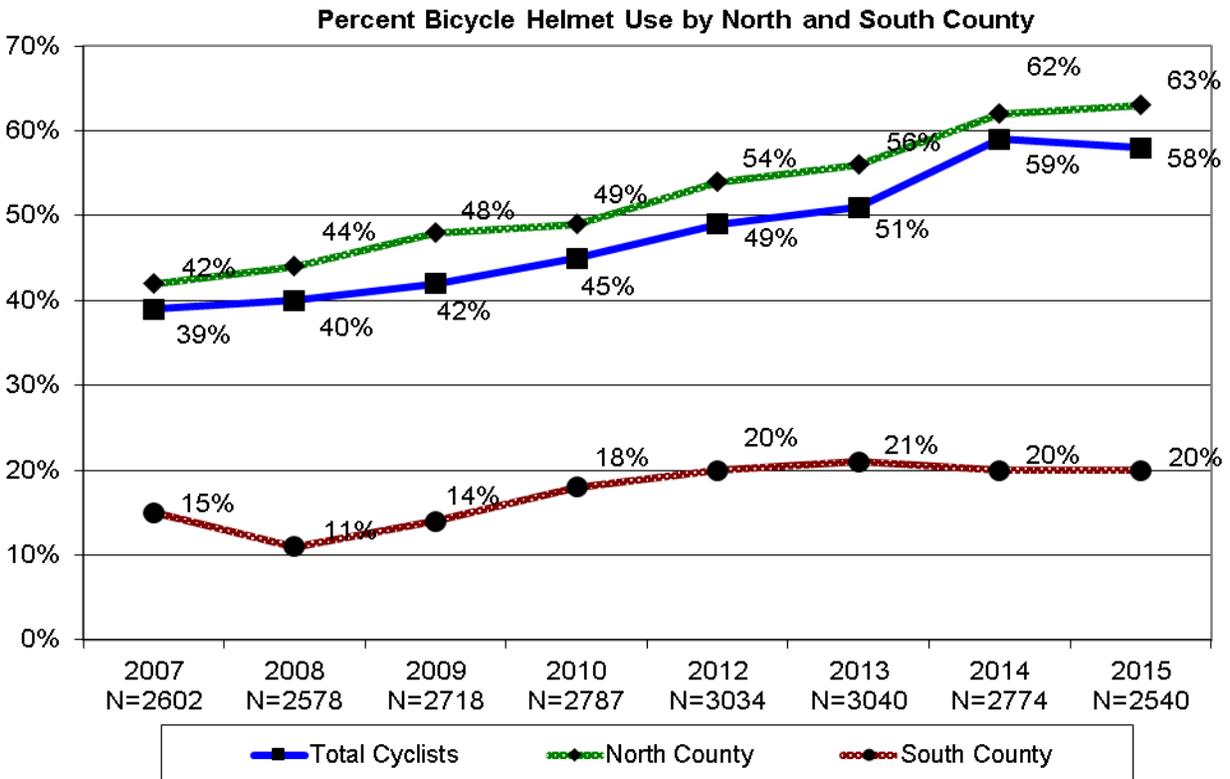
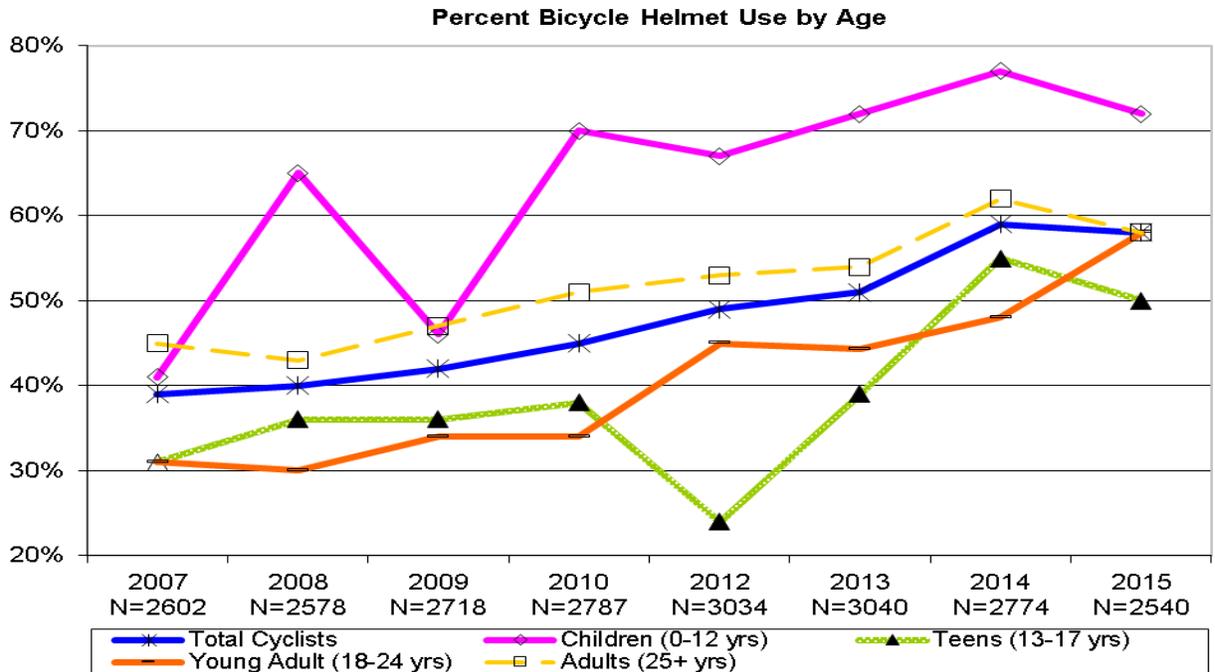
When making comparisons between North and South Counties, it is important to note that 87% (2,222) of the cyclists observed in 2015 were in North/Mid County and 13% (326) in Watsonville/South County.

TRENDS OVER TIME

The following sections compare survey data over a nine-year period from 2007 through 2015 for helmet use, riding with traffic, stopping at stop signs/lights, and riding on the sidewalk by gender and age. The survey was not conducted in 2011. Please note that the behavior fluctuations of some populations, especially children, are due in part to the small sample size observed.

Helmet Use

Although adults are not required to wear a helmet in California, the law requires those under 18 years of age to wear an approved, properly fitted and fastened helmet as an operator or passenger when bicycling, skateboarding, in-line or roller-skating, or riding a non-motorized scooter.

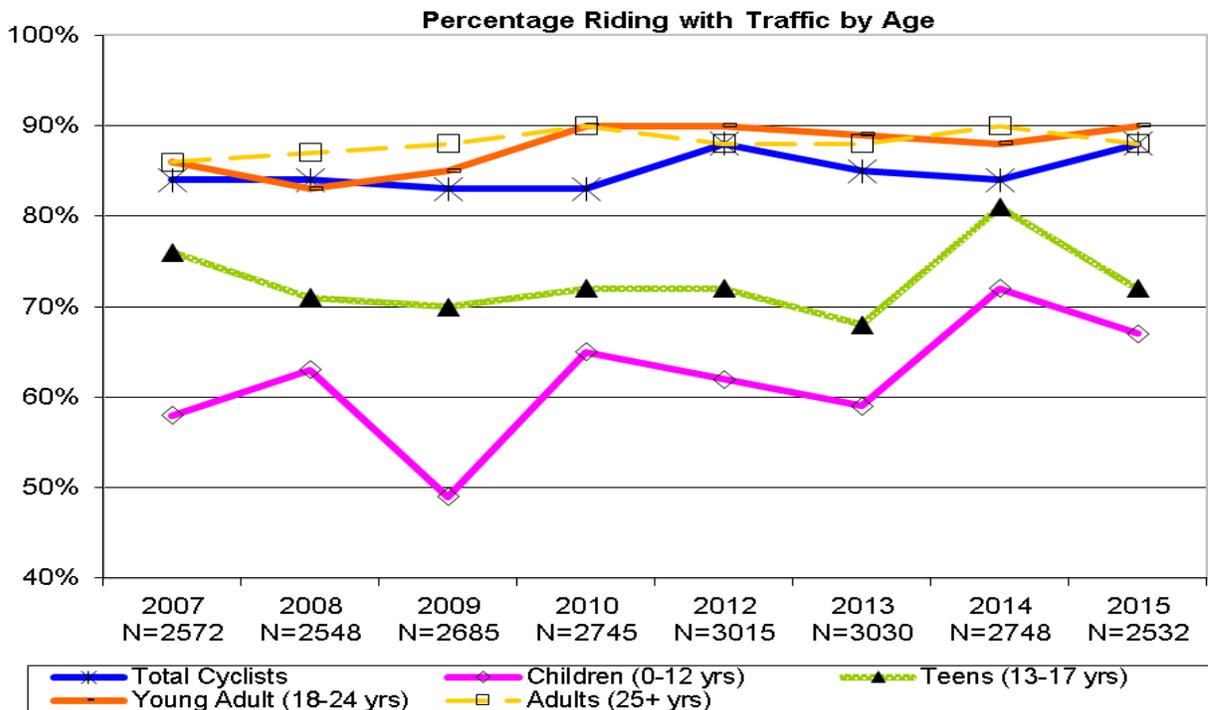


County-wide, children continue to wear helmets far more often than any other age category. Over the past nine years, they have shown an increase of 30 percentage points in helmet use to the current rate of 72%. Adults have seen a consistent but far less dramatic improvement to 58% in 2015. Although teens and young adults have shown a gradual upward trend over time, helmet use remains at less than 60% for both age categories. Females have consistently worn helmets at a higher rate than males in all of the years surveyed.

South County cyclists have had a lower helmet use rate compared to North County each year the survey has been conducted, hovering around the 20% mark for the past five years. In 2015, helmet use among cyclists observed in Watsonville/South County was 43 percentage points lower than among North County cyclists. Among the 17 children observed this year in Watsonville, only one wore a helmet.

Riding with Traffic

Riding with traffic continues to be a relatively safe cycling practice for the majority of cyclists observed. The percentage of children riding in the direction of traffic has been lower than all other age groups over the years surveyed, with a slight upward trend over time. 80 to 90 percent of adults and young adults have consistently ridden with traffic during the years surveyed.



Stopping at Stop Signs and Red Lights

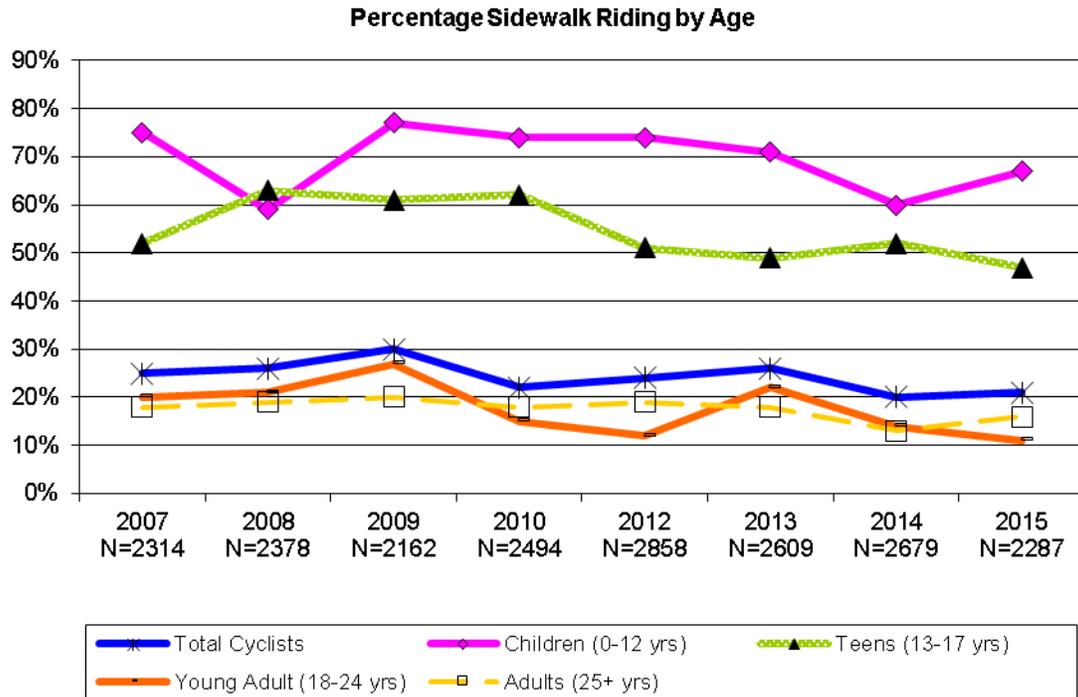
Stopping at stop signs and red lights continues to be a safety challenge for many cyclists. While more than 80% of children were observed stopping in 2015, all other age groups fell between 57 and 70 percent, with minimal improvement over the course of the survey years. Cyclists in South County were less likely to stop at stop signs or red lights (46%) compared to those in North County (64%).

Sidewalk Riding

Local ordinances exist in several jurisdictions in Santa Cruz County related to bicycle riding on the sidewalk. In the cities of Watsonville and Capitola, sidewalk bicycle riding is illegal in all areas. Within

the City of Santa Cruz, sidewalk riding is illegal only in commercial areas. The City of Scotts Valley and the unincorporated areas of the county do not have an ordinance in place.

While it is legal in some areas, sidewalk riding is generally considered unsafe due to poor visibility, the potential for conflict with other sidewalk users, and motorists not expecting a cyclist to come from the sidewalk to cross driveways or enter the roadway. For young children who may not have the operating skills and judgment to ride safely in traffic, practicing their skills on the sidewalk might be a safer option. These children should be supervised by an adult and always ride in the same direction as traffic.



Children have consistently ridden on the sidewalk at far higher rates than other age groups over the years surveyed, followed by teens. Young adults and adults ride on the sidewalk far less often, between 10% and 30% during the course of the survey. 57% of all cyclists observed in Watsonville in 2015 rode on the sidewalk versus 15% for North/Mid-county sites.

CONCLUSIONS

Based on the 2015 observation data, continued efforts are needed to increase safe cycling behaviors throughout Santa Cruz County. Data justify continued focus on youth through programs such as Ride n' Stride and other community partnerships. Outreach and education are particularly necessary in South County, where safe cycling behaviors observed were significantly lower than in North/Mid County, including a 43 percentage point gap in overall helmet use; a 42 percentage point gap in sidewalk riding; a 22 percentage point gap in riding with traffic; and an 18 percentage point gap in stopping at stops signs and lights.

While helmet use has shown a consistent increase over time, a large number of cyclists were still observed without helmets. This includes children and teens, who are required by state law to wear a helmet. Efforts should focus on identifying and disseminating bike helmet messages that appeal to youth, especially young men.

The County of Santa Cruz HSA provides staff to the CTSC, which works with affiliated partners to address bicycle safety in Santa Cruz County. CTSC programs include the Ride n' Stride Bicycle and Pedestrian Education Program, which reaches over 3,000 elementary and preschool students each year, and the South County Bicycle and Pedestrian Work Group to focus efforts in Watsonville, which are funded in part through the Santa Cruz County Regional Transportation Commission (SCCRTC). HSA also administers a Bicycle Traffic School for bicyclists who receive a traffic violation and a train-the-trainer model Helmet Fit and Distribution Site program to distribute free bicycle helmets. Many other bicycle safety efforts are also underway through partner agencies, such as the SCCRTC, Ecology Action, UCSC Transportation and Parking Services (TAPS), The Bicycle Trip, Bike Santa Cruz County, Santa Cruz County Cycling Club, as well as local public works departments and law enforcement agencies. Detailed results of this survey are available by request to inform all bicycle safety efforts in Santa Cruz County.

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