IMPORTANT NOTE ON METHODOLGY FOR EXTRAPOLATING USE OF HANDS-FREE BLUETOOTH DEVICE OR HEADSET

Please read before examining the study

The following report uses actual observational raw data and percentages drawn from that raw data. Researchers acknowledge that the use of Bluetooth devices, speaker phones, headsets and other methods of hands-free cell phone talking while driving is difficult to directly observe, for a wide variety of reasons.

Therefore, in order to have a statistically valid figure for such hands-free usage, methodology was employed, post observation, that matches that used by the National Highway Traffic Safety Administration (NHTSA). It employs the application of a ratio multiplier to the hand-held raw data that matches what surveyed California cell phone using drivers have indicated is the ratio of hand-held to hands-free usage.

The figures in the attached draft study show actual observed hands-free use numbers, prior to the ratio multiplier used to create the statistically valid figure. Application of the ratio multiplier has only been done to a few top-line results which appear in the press release which announced the study, but does not appear in the attached draft study.

As you read the tables in this study, it is important that you remain aware that the hands-free device usage numbers are not indicative of real-world usage. In most cases, those numbers would be significantly higher.

In order to get ratio multiplied figures for any of the categories in the study, you would have to request it from OTS. The researchers would have to go into the layers of data that comprised each of the figures shown and apply the ratio multiplier. If requested, this would take some number of days, depending on the amount of information requested and number of requestors.

Ewald & Wasserman
RESEARCH CONSULTANTS, LLC

OBSERVATIONAL STUDY OF CELL PHONE AND TEXTING USE AMONG CALIFORNIA DRIVERS 2013 AND COMPARISON TO 2012/2011 DATA

METHODOLOGICAL AND ANALYSIS REPORT

Conducted on Behalf of

The California Office of Traffic Safety

The Safe Transportation Research and Education Center - University of California, Berkeley

May 2013

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I. INTRODUCTION

This methodological and analysis report describes Ewald & Wasserman Research Consultants' (E&W) survey research and data collection procedures conceptualized and implemented for the third wave of the "Observational Survey of Cell Phone and Texting Use among California Drivers Study." The study was conducted on behalf of the California Office of Traffic Safety (OTS) and the Safe Transportation Research and Education Center (SafeTREC) at the University of California, Berkeley. This data collection effort constitutes the third wave of a statewide statistically representative observational study of California drivers' distracted driving behaviors, including cell phone and other electronic device use.

The goal of this project was the observation of vehicle drivers at controlled intersections - such as traffic lights and stop signs - using a data collection protocol similar to the National Occupancy Protection Use Study (NOPUS) methodology published by the National Highway Transportation Safety Administration (NHTSA) on electronic device use by drivers in their Traffic Safety Facts publications DOT HS 811 372 and DOT HS 811 361. The data collection plan also incorporated sections of the methodological outline of the Seat Belt Survey Regulation for Section 157 Surveys: 23CRF Part 1340, published by NHTSA.

The final dataset includes a total of 6,099 vehicle observations from 130 sites in the State of California and includes observer-rated information on driver's age, gender, ethnicity, vehicle type, number of passengers in vehicle, and the presence of children less than eight (8) years of age. Additional observations of driver behaviors includes the driver holding a phone to the ear, talking on a Bluetooth or other headset, manipulation of a hand-held device, or talking on a hand-held device.

II. METHODS

A. Sample Methodology and Sample Site Selection

The counties and sites selected in 2013 were exactly the same as those selected in the 2011 and 2012 studies. The data collection effort conducted in 2011 and 2012 was replicated, where the overall sample frame was created using a multi-stage proportional random site selection based on the daily vehicle miles traveled (DVMT) on California roadways, using DVMT by county as the primary sampling units. The DVMT information was derived from the California Department of Transportation's Highway Performance Monitoring System (HPMS) 2009 California Public Road Data. Tables listing the maintained daily vehicle miles traveled by jurisdictions and by county were summarized to create the overall main sample frame for the site selection.

In the first step of sample preparation, all ineligible jurisdictions (areas not open to the public, with limited access, or no roadways) were removed from the sample frame. A list of ineligible jurisdictions can be found in Table 1, below. All remaining jurisdictions were deemed eligible and included city jurisdictions, highways, and unincorporated land and broken down by county.

Table 1. List of ineligible jurisdiction

Army Corps of Engineers	State Department of Water Resources
Bureau of Indian Affairs	State Forestry Service
Department of Defense	State Park Services
Golden Gate Bridge	University of California
Indian Tribal Nation	U.S. Bureau of Reclamation
National Park Service	U.S. Fish & Wildlife Service
Port of Oakland	U.S. Forest Service
San Diego Unified Port District	

After removing the ineligible jurisdictions, all counties in the State of California accounting for less than 1.0% each of the total DVMT in the State were excluded. In this process, ten of California's 58 counties were removed, leaving the sample frame with counties and jurisdictions accounting for 99.2% of the total CA DVMT. The ten excluded counties, which accounted for 0.8% of all DVMT in the State of California, were:

- Amador
- Calaveras
- Plumas
- Mono
- Del Norte
- Modoc
- Trinity
- Mariposa
- Sierra
- Alpine

The next step involved the random selection of counties in a proportional randomized design, where the proportion of inclusion was the DVMT per county. For the eligible 48 counties and jurisdictions, a sample interval was created based on a target of 17 counties, which served as the random value for the first stage of site inclusion. All counties with a DVMT larger than the random value were automatically included in the sample frame due to their size and excluded from the subsequent random selection list. The five counties included by DVMT volume were: Los Angeles County, Riverside County, San Bernardino County, San Diego County, and Orange County. They accounted for 53.6% of all DVMT in the State of California.

The remaining 12 sites to be selected were pulled in a proportional randomized design which increased the probability of inclusion in the sample frame for counties with a higher DVMT volume. The final list of counties selected, together with their DVMT (in 1,000), is shown in Table 2.

Table 2. Total 17 counties included in sample frame and number of DVMT (1,000)

#	COUNTY	DVMT	#	COUNTY	DVMT
1	ALAMEDA	37,675	10	SOLANO	12,752
2	BUTTE	4,518	11	SONOMA	10,897
3	EL DORADO	4,371	12	TULARE	9,792
4	KERN	21,512	13	LOS ANGELES	214,207
5	MERCED	6,973	14	ORANGE	72,778
6	PLACER	9,373	15	SAN BERNARDINO	58,072
7	SAN JOAQUIN	17,066	16	SAN DIEGO	75,014
8	SAN MATEO	17,630	17	RIVERSIDE	54,438
9	SANTA CLARA	40,679			

In the subsequent step of the proportional random selection, the actual sites within each selected county were determined. The secondary sampling unit consisted of either: city or town jurisdictions, unincorporated land, or State Highway jurisdictions. Using a proportional cell selection method, jurisdictions with higher volumes of DVMT had a higher probability to be included in the sample frame. This procedure resulted in 130 sites in the selected 17 counties (Table 3).

Table 3. List of sites per county

COUNTY	JURISDICTION	Total
ALAMEDA	COUNTY (UNINCORPORATED)	4
	LIVERMORE	1
	OAKLAND	3
	STATE HIGHWAYS	3
ALAMEDA Total		11
BUTTE	STATE HIGHWAYS	1
BUTTE Total		1
EL DORADO	STATE HIGHWAYS	1
EL DORADO Total		1
KERN	BAKERSFIELD	1
	COUNTY (UNINCORPORATED)	4
	STATE HIGHWAYS	1
KERN Total		6
SOLANO Total		3
SONOMA	SANTA ROSA	1
	STATE HIGHWAYS	1
SONOMA Total		2
ORANGE	ANAHEIM	1
	BREA	1
	BUENA PARK	1
	COSTA MESA	1
	COUNTY (UNINCORPORATED)	1
	GARDEN GROVE	1
	HUNTINGTON BEACH	3
	LA HABRA	1
	SANTA ANA	3
	SEAL BEACH	1
	TUSTIN	1
LOS ANGELES	ALHAMBRA	1
	ARCADIA	1
	BALDWIN PARK	1
	BEVERLY HILLS	1
	COUNTY (UNINCORPORATED)	1
	GARDENA	1
	GLENDORA	1
	HAWTHORNE	1
	INDUSTRY	1
	LA CANADA-FLINTRIDGE	1
	LANCASTER	1
	LAWNDALE	1
	LONG BEACH	1
	LOS ANGELES	1
	MONROVIA	1
	PASADENA	1
	POMONA	1
	REDONDO BEACH	1
	SANTA CLARITA	1
	SANTA MARINO	1
	SOUTH GATE	2
	STATE HIGHWAYS	1
	TORRANCE	1
LOS ANGELES Total		24
MERCED	COUNTY (UNINCORPORATED)	2
	MERCED	1
	STATE HIGHWAYS	4
MERCED Total		7
SOLANO	COUNTY (UNINCORPORATED)	1
	FAIRFIELD	1
	VALLEJO	1

Table 3. List of sites per county (cont.)

ORANGE Total		15
PLACER	COUNTY (UNINCORPORATED)	1
	ROSEVILLE	2
	STATE HIGHWAYS	3
PLACER Total		6
RIVERSIDE	BLYTHE	1
	CORONA	1
	COUNTY (UNINCORPORATED)	1
	INDIAN WELLS	1
	MORENO VALLEY	1
	PALM DESERT	2
	RIVERSIDE	1
	STATE HIGHWAYS	2
SAN JOAQUIN Total		5
SAN MATEO	COUNTY (UNINCORPORATED)	1
	SAN MATEO	1
	STATE HIGHWAYS	2
SAN MATEO Total		4
SANTA CLARA	COUNTY (UNINCORPORATED)	3
SAN DIEGO	CARLSBAD	1
	CHULA VISTA	1
	COUNTY (UNINCORPORATED)	3
	EL CAJON	1
	OCEANSIDE	2
	POWAY	1
	SAN DIEGO	2
	STATE HIGHWAYS	1
SAN DIEGO Total		12
SAN JOAQUIN	STATE HIGHWAYS	4
	STOCKTON	1
	CUPERTINO	1
	SAN JOSE	2
	STATE HIGHWAYS	2
SANTA CLARA Total		8
TULARE	COUNTY (UNINCORPORATED)	2
	TULARE	1
TULARE Total		3
	TEMECULA	1
RIVERSIDE Total		11
SAN BERNARDINO	CHINO	3
	COUNTY (UNINCORPORATED)	1
	FONTANA	1
	HESPERIA	1
	ONTARIO	1
	REDLANDS	1
	STATE HIGHWAYS	1
	VICTORVILLE	2
SAN BERNARDINO Total		11

Table 4 shows the final list of selected counties and the number of selected sites within each county.

Table 4. Total number of selected sites within the 17 counties

COUNTY	Total	COUNTY	Total
ALAMEDA	11	SAN BERNARDINO	11
BUTTE	1	SAN DIEGO	12
EL DORADO	1	SAN JOAQUIN	5
KERN	6	SAN MATEO	4
LOS ANGELES	24	SANTA CLARA	8
MERCED	7	SOLANO	3
ORANGE	15	SONOMA	2
PLACER	6	TULARE	3
RIVERSIDE	11		
		Total	130

Of the 130 selected observation sites, 27 were highway sites and 25 were unincorporated land sites. For the highway sites, only controlled exit ramps with either a stop sign or a traffic light were included. For the unincorporated sites, the controlled intersection closest to the geographically determined site was selected.

After the selection of jurisdictions within each county, each site was pinpointed geographically, using various mapping software. For jurisdiction sites with defined boundaries and where information on boundaries was available for the software, a random site selector was used to select a site within a defined area. For this process, the software created a random number stream based on the x- and y-axis of the jurisdiction boundaries, which were partitioned into polygons using a standard partitioning algorithm. Polygons were further geospatially partitioned into triangles of varying sizes and a number stream created two random numbers based on the axis length of the triangle, thus ensuring that the larger the target area, the higher the probability of selection. For geographic sites with limited geospatial information, a similar but manual process was employed, which determined the outer boundaries of the jurisdiction, the latitude and longitude of the area, and then randomly created a latitude and longitude number set for the target geographic area. The electronic maps used for this purpose were overlaid with a meter grid reference system (MGRS) to produce a grid layer of 1,000 x 1,000 meters and all selected locations were placed in the exact middle of that square kilometer.

During the first wave and original site definition, the final site selected was confirmed using Google Earth to ensure that a) an eligible roadway existed and b) it had an intersection or highway exit ramp that was controlled and eligible for data collection. Sites that did not qualify or those that could not be accessed safely by a field observer for their targeted 45-minute observation period were re-selected by either selecting the opposite side of the intersection, or, for highway exit ramps, selecting the exit ramp for traffic from the opposite travel direction.

For the third wave of the Observational Study of Cell Phone and Texting Use among California Drivers, the same site locations as those in the previous waves, conducted in 2011 and 2012, were selected. Some minor location differences to the previous data collection locations were the result of road closures or other traffic re-routing due to accidents and similar reasons. Additionally, any change in the expected number of observations per site was controlled throughout the data collection. Significant differences in the volume of traffic according to the vehicle count between the current and last year was flagged and that location was re-visited at another time to confirm any long-term change in traffic volume and to avoid biases as a result of temporary traffic changes.

B. Interview Locations, Times, and Duration

The data collection was conducted between February 22, 2013, and April 10, 2013, by Ewald & Wasserman Field Observer teams based out of the San Francisco Bay Area and Southern California (Los Angeles and San Diego). Data collection times ranged from 6:58 a.m. to 5:25 p.m., during daylight hours on non-rainy days, and included weekend days and weekdays. The field observers were rigorously trained in the methodology and protocols and assigned batches of location sites where they would conduct the 45-minute observation. The field observers were monitored and managed by the E&W Project Manager throughout the study period.

The team in Southern California was responsible for visiting sites in San Bernardino, San Diego, Riverside, Orange, and Los Angeles counties. The Bay Area team in Northern California was assigned Alameda, Butte, El Dorado, Kern, Merced, Placer, San Joaquin, San Mateo, Santa Clara, Solano, Sonoma, and Tulare counties for their data collection routes. The teams were instructed to contact the Project Manager regarding site identification issues, weather, or safety concerns.

C. Staff Training

Training procedures and pre-testing of observation form

The E&W Field Observer teams in Northern and Southern California were trained in a team meeting format, including a detailed review of data collection procedures and observation protocol, followed by a closely supervised on-site visit and a 45-minute round of test observations. The final version of the observation form can be found in Appendix A.

The Northern California team was trained during the third week of February 2013. The team and Research Coordinator visited several selected test sites in the San Francisco area together, practicing all aspects of data collection, including site positioning, identifying the accurate lane to code, and swift and accurate markings in the coding selections on the observation form. The Southern California team was also trained by the on-site Research Coordinator in the same week of February 2013 and visited four training sites in the Los Angeles/Long Beach area to practice in a group setting, as well as individually. During the training, the E&W Research Coordinator monitored all staff for accuracy and quality control. All observers were instructed on the coding categories in advance of the data collection, as outlined on the data collection form.

The field observers were provided with a packet of materials which included observation forms, specific site locations, a validation letter on UC Berkeley SafeTREC and OTS letterhead (see Appendix B) for respondents inquiring about the purpose of the observations, and guidelines for procedures while in the field. The field observers also received explicit instructions on: a) locating and ensuring the accurate assigned location; b) confirming that the position and orientation of the observation direction was as specified on the detailed map for that location; and c) implementing an exact procedure for time recording, accurate lane selection, and coding accuracy.

Field data collection

After the training, all field observer staff was assigned a number of sites for traffic observations. Selection of sites for a staff member was guided by multiple factors, including the actual staff location. A total six (6) field staff were deployed in California, some of whom had also conducted the 2012 observation. The number of observations gathered per site ranged from one to 160 vehicles. After completing observations at the assigned sites, field observers submitted forms and all additional documentation to the E&W headquarters in San Francisco for a comprehensive data review and data entry into electronic format. The data from the observation forms were entered electronically using a data entry program specifically written for this project. This program was designed to eliminate data entry errors and ensure accuracy of the electronic data.

D. Study Outcomes

Note: Differences in the data between the 2011, 2012, and 2013 observation waves are only shown when they constitute a large and/or significant differences Field observation locations

A total 17 counties were included in the sample frame and a total 6,099 valid observations were made. Overall, the sample frame consisted of 130 unique sites which were each visited for a 45-minute data collection period. The number of observations per site ranged from 1 to 160 observations; the average was 40 observations per site.

Table 5, below, shows the 17 counties with the number and percentages of observations per county as well as the 2011 and 2012 observation numbers.

Table 5. Counties and number of observations per county

COUNTY	% observations 2013	# observations 2013	# observations 2012	# observations 2011
Alameda	9.1%	556	483	567
Butte	0.5%	28	26	21
El Dorado	1.3%	80	74	40
Kern	3.0%	182	134	182
Los Angeles	20.9%	1,272	1,337	1,215
Merced	4.2%	258	179	291
Orange	12.8%	782	604	606
Placer	6.1%	375	343	231
Riverside	3.3%	203	181	289
San Bernardino	2.4%	149	404	118
San Diego	13.5%	824	890	553
San Joaquin	3.3%	203	101	115
San Mateo	4.6%	280	235	358
Santa Clara	7.6%	464	459	418
Solano	1.7%	101	102	78
Sonoma	0.7%	41	28	164
Tulare	4.9%	301	84	167
Total	100.0%	6,099	5,664	5,413

Time frames of data collection and comparison to 2011 and 2012 data

The observational data was collected between February 22, 2013, and April 10, 2013, by the E&W field teams. Data collection times ranged from 6:58 a.m. to 5:25p.m., and included weekend days and weekdays, with a higher emphasis on data collection during morning and evening rush hours as described in the NOPUS methodology. About a third of all observations were completed during morning and evening rush hours, defined to be weekdays from 7:00 a.m. to 9:30 a.m. and from 3:30 p.m. to 5:00 p.m.

The distribution of data collection time frames by the definitions of rush hour, weekend, and all other times is shown in Table 6, together with the comparison to the 2011 and the 2012 values. In total, 34.1% of all observations were made during rush hour, 18.7% were completed on a weekend day, and the remaining 47.2% of data was collected at all other times.

Table 6. Time points of data collection and difference to 2011 and 2012

Time frame	2013 Frequency	2013 Percent	2012 Percent	2011 Percent
Rush Hour	2,080	34.1%	29.7%	30.3%
Weekend	1,141	18.7%	22.4%	19.1%
All Other	2878	47.2%	47.9%	50.7%
Total	6,099	100.0%	100.0%	100.0%

E&W also gathered information on the actual time frame of the data collected so future analysis of the 'rush hour' definition would be possible. However, for the purpose of this study, analysis adhered to the NOPUS methodology definition.

Data site definitions and comparison to 2011 and 2012 data

The data on road types and area types collected are shown in Table 7. In total, 21.2% of all observations were made at highway exit ramps, including major California routes and freeways, and 76.7% of observational data was collected on surface streets. The "Other" categorized streets included other surface street sites at intersections and exits of shopping malls that did not fall into the other two categories.

Table 7. Road types of observations with 2011 and 2012 data

Road type	2013 Frequency	2013 Percent	2012 Percent	2011 Percent
HWY exit ramp	1,293	21.2%	26.6%	28.8%
Surface Street	4,677	76.7%	72.8%	70.5%
Other	129	2.1%	0.5%	0.7%
Total	6,099	100.0%	100.0%	100.0%

The type of the observation area was defined as one of three categories and included: rural, urban, and suburban, which were confirmed or changed by the interviewer in the field. The rural locations constituted 24.4% of the sites observed, 46.5% of sites were coded as urban, and the remaining 29.1% sites were in suburban locations (Table 8).

Table 8. Area type of observations with 2011 and 2012 data

Area type	2013 Frequency	2013 Percent	2012 Percent	2011 Percent
Rural	1,488	24.4%	21.0%	20.6%
Urban	2,838	46.5%	49.6%	45.4%
Suburban	1,773	29.1%	29.4%	29.4%
Total	6,099	100.0%	100.0%	100.0%

Demographic characteristics of drivers and comparison to 2011 and 2012 data

The observer-coded age demographic of drivers is shown in Table 9, together with the percentages of both the 2011 and 2012 studies. Overall, the observed age of drivers is comparable to the previous waves with the majority of drivers, or 87.6%, coded as between the ages of 25 and 69, while 7.6% were ages 16-24, and 4.8% were older than 70 years.

Table 9. Observed age of drivers with 2011 and 2012 data

Age of driver	2013 Frequency	2013 Percent	2012 Percent	2011 Percent
16-24	466	7.6%	7.6%	8.7%
25-69	5,338	87.6%	87.2%	88.2%
70 and older	295	4.8%	5.2%	3.1%
Total	6,099	100.0%	100.0%	100.0%

The observed gender of the vehicle driver is comparable to the 2012 distribution, with 57.3% of drivers being male and 42.7% female (Table 10).

Table 10. Observed gender of drivers with 2011 and 2012 data

Gender of driver		2013 Frequency	2013 Percent	2012 Percent	2011 Percent
	Female	2,606	42.7%	54.0%	41.4%
	Male	3,493	57.3%	46.0%	58.6%
	Total	6,099	100.0%	100.0%	100.0%

The cross-tabulation between gender and age is shown in Table 11. The percentage of females in the 16-24-year-old age group (54.7%) was significantly higher than the percentage of females in the other age groups (p=0.00). That age group was also the only one that saw more female than male drivers.

Table 11. Gender and age crosstabulation

Age by gender		16-24	25-69	70 and older	Total
Gender	Female	54.7%	41.6%	44.4%	42.7%
	Male	45.3%	58.4%	55.6%	57.3%
	Total	100.0%	100.0%	100.0%	100.0%

Similar to the other observed demographic attributes of drivers, the ethnicity distribution is comparable to the data collected in 2011 and 2012 (Table 12). For the racial/ethnic coding of drivers, 54.6% were coded White, 28.4% were Hispanic/Latino, 11.1% were Asian, and 4.1% African American.

Table 12. Observed ethnicity of with 2011 and 2012 data

Ethnicity driver		2013 Frequency	2013 Percent	2012 Percent	2011 Percent
	White	3,333	54.6%	55.9%	57.7%
	African American	248	4.1%	4.4%	3.3%
	Asian	674	11.1%	10.6%	11.8%
	Hispanic/Latino	1,734	28.4%	26.1%	25.7%
	Other	110	1.8%	3.1%	1.6%
	Total	6,099	100.0%	100.0%	100.0%

The observed number of vehicle passengers is listed in Table 13 and ranged from 1 passenger (only the driver) to 7 passengers total (the driver plus 6). The majority of drivers, or 68.6%, drove alone, while 24.2% of vehicles had two passengers (the driver plus one passenger) in the car. The number of single drivers decreased from 2012 by 3.2%, a decline which is significant at p=0.00. Similarly, the number of two-occupant vehicles increased by 3.1%, which is significant at p=0.00.

Table 13. Observed number of passengers in vehicle and difference to 2011 and 2012

# passengers	2013 Frequency	2013 Percent	2012 Percent	2011 Percent	Difference 2013-2012
1	4,185	68.6%	71.8%	67.9%	-3.2%
2	1,479	24.2%	21.1%	25.8%	+3.1%
3	321	5.3%	5.0%	4.6%	+0.3%
4	85	1.4%	1.8%	1.5	-0.4%
5	24	0.4%	0.2%	0.2%	+0.2%
6	3	0.0%	0.0%	0.1%	0.0%
7	2	0.0%	0.0%	0.0%	0.0%
Total	6,099	100.0%	100.0%	100.0%	--

Overall, 7.0% of observed vehicles (429 vehicles) had a passenger under the age of eight, the exact same percentage as in the 2012 data collection (Table 14).

Table 14. Presence of children under age 8 in vehicle with 2011 and 2012 data

# children < 8 in car	2013 Frequency	2013 Percent	2012 Percent	2011 Percent
Yes, kid < 8 in car	429	7.0%	7.0%	5.3%
No	5,670	93.0%	93.0%	94.7%
Total	6,099	100.0%	100.0%	100.0%

The coding of the observed vehicle types is listed in Table 15, below, with 52.9% of all vehicles coded as passenger cars, 29.2% as vans or SUVs, and 17.9% as pickup trucks. These numbers were very similar to the 2011 and 2012 data.

Table 15. Observed vehicle type with 2011 and 2012 data

Vehicle type	2013 Frequency	2013 Percent	2012 Percent	2011 Percent
Passenger Car	3,227	52.9%	51.3%	51.5%
Van or SUV	1,781	29.2%	32.1%	29.8%
Pickup Truck	1,091	17.9%	16.6%	18.7%
Total	6,099	100.0%	100.0%	100.0%

III. RESULTS

A. Statewide Results on Distracted Driving by Electronic Device Use

Note: Due to rounding, some of the table percentages to do not add up to a full 100%

Overall electronic device use and distracted driving due to electronic devices variable

Table 16, below, shows the percentage of driver behavior and electronic device use in all observed locations in California. The "distracted driving due to electronic devices" (DD) variable was created from the observation of three behaviors:

1. holding a phone to the ear;
2. manipulating a hand-held electronic device while driving; and
3. talking on a hand-held device.

Talking on a phone using a headset or Bluetooth device was NOT included in the "distracted driving due to electronic devices" behavior variable created for the purpose of this evaluation. A positive confirmation of any one of those three behaviors with an observed driver was coded as "distracted driving by electronic device" in a separate variable. The data collection on these three driver behaviors included every instance observed and was noted as an exclusive occurrence on the observation form. The "distracted driving by electronic device" variable created reflects the number of unique vehicles in which the behavior was observed; the number of unique observations is higher.

The total percentage of distracted driving due to electronic devices observed decreased from 6.4% in 2012 to 4.6% in 2013, a reduction of 1.8% which is significant at p=0.00 (see Table 16). At a 95% confidence level the true percentage of the difference lies between 1.01% and 2.67%. This means there is a significant (yet small in percentage) decrease in the observed rate of distracted driving due to electronic devices (as defined by the protocol outlined above).

Table 16. Distracted driving due to electronic devices variable and difference to 2011 and 2012

DD	2013 Frequency	2013 Percent	2012 Percent	2011 Percent	Difference 2013-2012
Yes	280	4.6%	6.4%	4.2%	-1.8%
No	5,819	95.4%	93.6%	95.8%	+1.8%
Total	6,099	100.0%	100.0%	100.0%	

The frequency of individual distracted driving behaviors is compared with using a headset or Bluetooth device in Table 17, together with the 2011 and 2012 data. All observed distracted driving behaviors decreased slightly between 2012 and 2013. The behavior of holding the phone to ear and the manipulation of a hand-held device each decreased by 0.8%, significant at p=0.00 and p=0.01, respectively.

Table 17. Frequencies of device use behaviors and difference to 2011 and 2012

DD behavior * not part of the distracted driving variable	2013 Frequency	2013 Percent	2012 Percent	2011 Percent	Difference 2013-2012
Phone to Ear	96	1.6%	2.4%	2.1%	-0.8%
Talking w/headset or Bluetooth*	109	1.8%	2.0%	1.5%	-0.2%
Manipulating hand-held	154	2.5%	3.3%	1.7%	-0.8%
Talking on hand-held	40	0.7%	0.9%	0.6%	-0.2%

Distracted driving due to electronic devices and gender, location, and age of driver

The examination of any shifts in gender and distracted driving due to electronic devices is shown in Table 18. Compared with the 2012 data variables, there is a significant decrease in the behavior of 1.5% for females (significant at p=0.01) and 2.2% for males (significant at p=0.00).

There is no significant difference between males and females in the rate of distracted driving.

Table 18. Distracted driving due to electronic devices by gender and difference to 2011 and 2012

Gender	2013 Frequency	2013 Percent	2012 Percent	2011 Percent	Difference 2013-2012
Female	125	4.8%	6.3%	4.3%	-1.5%
Male	155	4.4%	6.6%	4.1%	-2.2%
Total	280	4.6%	6.4%	4.2%	-1.8%

The geographic segmentation of all surveyed areas, defined as rural, urban, or suburban together with the comparison to 2011 and 2012 data is shown in Table 19. The decreases in rural and urban distracted driving due to electronic device use is significant at p=0.02 and p=0.00, respectively. There is no significant difference among the three area types in the level of distracted driving.

Table 19. Distracted driving due to electronic devices by area type and difference to 2011 and 2012

DD by area type		2013 Percent	2012 Percent	2011 Percent	Difference 2013-2012
Area type	Rural	4.0%	5.8%	3.6%	-1.8%
	Urban	4.3%	6.9%	4.1%	-2.6%
	Suburban	5.6%	6.0%	4.7%	-0.4%

The comparison of area type and the observation of the driver talking on a headset or Bluetooth device showed a significant difference (p=0.00). Overall, 2.4% of drivers in rural areas talked on a headset or Bluetooth device compared to 1.2% in urban areas. This difference is similar to the finding of 2012 (which was significant as well), but showed an overall lower rate of Bluetooth or head set use (see Table 20). The changes since 2012 are not significant.

Table 20. Area type by talking on headset or Bluetooth and difference to 2011 and 2012

Bluetooth/headset by area type		2013 Percent	2012 Percent	2011 Percent	Difference 2013-2012
Area type	Rural	2.4%	3.1%	0.9%	-0.7%
	Urban	1.2%	1.4%	1.1%	-0.2%
	Suburban	2.3%	2.4%	2.5%	-0.1%
Total		1.8%	2.0%	1.5%	-0.2%

The comparison of distracted driving due to electronic devices by age group is shown in Table 21. The difference in observed device use among the three age groups is significant at p=0.00; the younger the driver, the higher the percentage of electronic device use while driving. The 5.8% decrease in the 16-24 age group from 2012 to 2013 is significant at p=0.00, as is the 1.5% decrease among 25-69-year-old drivers (p=0.00). The significance of the difference for the group of drivers 70 and older was not calculated due to the very small number of observations.

Table 21. Distracted driving due to electronic devices by age and difference to 2011 and 2012

DD by age 2012		2013 Percent	2012 Percent	2011 Percent	Difference 2013-2012
Age	16-24	5.6%	11.4%	5.3%	-5.8%
	25-69	4.7%	6.2%	4.2%	-1.5%
	70 and older	0.3%	3.4%	1.8%	-3.1%

The comparison of male and female 16-24-year-old drivers and distracted driving behavior by electronic devices did not show any significant differences. However, female drivers in that age range have a higher rate of electronic device use while driving compared to males (see Table 22). There are no significant differences between gender and distracted driving among the other age groups either (no table created).

The 6.6% decrease in observed distracted driving among 16-24 year-old males is significant at p=0.00 (though with a small number of observations).

Table 22. Distracted driving due to electronic devices by gender for 16-24 year-olds and difference to 2011 and 2012

DD 16-24 year-old by gender		2013 Percent	2012 Percent	2011 Percent	Difference 2013-2012
Gender	Female	7.1%	12.3%	4.3%	-5.2%
	Male	3.8%	10.4%	4.4%	-6.6%

Distracted driving due to electronic devices by time of observation

The comparison of distracted driving due to electronic devices by time of observation does not show any significant differences among the rush hour, weekend, or other observation times. The 2.3% decrease in rush hour distracted driving compared to the 2012 percentages , however, is significant at p=0.00 (see Table 23).

Table 23. Distracted driving due to electronic devices by time of observation and difference to 2011 and 2012

DD by time		2013 Percent	2012 Percent	2011 Percent	Difference 2013-2012
Time	rush hour	4.7%	7.0%	3.5%	-2.3%
	weekend	4.5%	6.0%	3.1%	-1.5%
	all other	4.6%	6.3%	5.0%	-1.7%

Distracted driving due to electronic devices by geography and age

Table 24 shows the breakdown of age and individual distracted driving behavior by electronic devices as well as the comparison to the 2011 and 2012 data. The percentages for all individual behaviors add up to a higher percentage distracted driving due to electronic devices compared to Table 21 due to double-counting cases that displayed more than one behavior.

For the 2013 data, the differences among age groups on the observations of “manipulating hand-held” are significant at p=0.00. However, the actual number of observations is very small (see also the frequencies in brackets next to percentages).

Table 24. Age by distracted driving behavior with 2013 frequencies and difference to 2011 and 2012

Age	Phone to ear 2013	Phone to ear 2012	Phone to ear 2011
16-24	1.1% (5)	4.7%	3.2%
25-69	1.7% (91)	2.2%	2.0%
70 and older	0.0% (0)	1.4%	0.6%
Total	1.6% (96)	2.4%	2.1%
Age	**Headset/Bluetooth 2013**	**Headset/Bluetooth 2012**	**Headset/Bluetooth 2011**
16-24	0.6% (3)	2.3%	2.3%
25-69	1.9% (104)	2.1%	1.5%
70 and older	0.7% (2)	1.0%	0.6%
Total	1.8% (109)	2.0%	1.5%
Age	**Manipulating hand-held 2013**	**Manipulating hand-held 2012**	**Manipulating hand-held 2011**
16-24	4.1% (19)	6.3%	1.9%
25-69	2.5% (134)	3.1%	1.7%
70 and older	0.3% (1)	1.0%	1.2%
Total	2.5% (154)	3.3%	1.7%
Age	**Talking on hand-held 2013**	**Talking on hand-held 2012**	**Talking on hand-held 2011**
16-24	0.6% (3)	0.5%	0.2%
25-69	0.7% (37)	0.9%	0.7%
70 and older	0.0% (0)	1.0%	0.6%
Total	0.7% (40)	0.9%	0.6%

Table 25 shows the breakdown of distracted driving due to electronic devices for a range of selected counties within the sample frame and their comparison to 2011 and 2012 data. For the 2013 data, the differences among all counties in the percentages of the “phone to ear” variable range from 0.0% in San Bernardino to 4.5% in Placer and are significant at p=0.00, although the actual numbers are very small.

For the variable of headset or Bluetooth use, the percentages of observation range from 0.0% in San Bernardino to 4.7% in Santa Clara counties and are also significant at p=0.00. Similarly, for the variable “manipulating handheld,” the range of 0.0% for San Joaquin County and Butte County (not listed in table below) and 12.2% for Sonoma County are significant at p=0.00. For the variable “talking on hand-held” there are no significant differences among the counties. No comparisons between the data observation years have been made due to the small number of observations.

Table 25. Selected counties by distracted driving behavior –and difference to 2011 and 2012

Age	Phone to ear 2013	Phone to ear 2012	Phone to ear 2011
Alameda	2.9%	1.0%	1.1%
Los Angeles	1.5%	2.5%	2.1%
Orange	0.5%	1.0%	1.3%
Placer	4.5%	3.2%	2.2%
Riverside	2.0%	2.8%	4.5%
San Bernardino	0.0%	4.0%	2.5%
San Diego	0.5%	2.2%	1.1%
San Mateo	1.1%	3.8%	2.0%
Santa Clara	1.3%	1.1%	0.5%
Sonoma	2.4%	0.0%	0.6%
Age	**Headset/Bluetooth 2013**	**Headset/Bluetooth 2012**	**Headset/Bluetooth 2011**
Alameda	2.0%	2.7%	1.2%
Los Angeles	1.2%	1.0%	0.7%
Orange	1.5%	2.0%	1.8%
Placer	2.7%	1.7%	1.7%
Riverside	3.0%	0.6%	2.8%
San Bernardino	0.0%	0.5%	3.4%
San Diego	0.7%	1.5%	0.2%
San Mateo	1.1%	3.8%	6.4%
Santa Clara	4.7%	1.7%	1.0%
Sonoma	0.0%	3.6%	0.6%
Age	**Manipulating hand-held 2013**	**Manipulating hand-held 2012**	**Manipulating hand-held 2011**
Alameda	3.1%	3.9%	2.5%
Los Angeles	2.5%	3.4%	2.2%
Orange	3.2%	2.6%	0.3%
Placer	3.2%	2.9%	0.4%
Riverside	1.0%	0.0%	3.5%
San Bernardino	4.0%	3.5%	5.9%
San Diego	2.8%	4.8%	1.4%
San Mateo	2.5%	3.8%	2.8%
Santa Clara	2.4%	2.4%	0.0%
Sonoma	12.2%	3.6%	1.8%
Age	**Talking on hand-held 2013**	**Talking on hand-held 2012**	**Talking on hand-held 2011**
Alameda	1.1%	0.0%	0.5%
Los Angeles	0.7%	0.7%	0.7%
Orange	0.3%	1.3%	1.5%
Placer	1.1%	0.9%	0.4%
Riverside	1.0%	0.0%	0.7%
San Bernardino	0.0%	0.0%	0.8%
San Diego	0.7%	0.8%	0.5%
San Mateo	0.0%	0.4%	0.0%
Santa Clara	0.9%	0.9%	0.2%
Sonoma	4.9%	0.0%	0.6%

B. Countywide and Regional Results on Distracted Driving

Overall electronic device use and distracted driving due to electronic devices variable by county

The comparison of observed distracted driving by county is shown in the Table 26 and ranges from 1.5% to 14.6%. There are noticeable differences among some of the included counties in the level of distracted driving, but the actual number of observations per county is very small. However, the observed distracted driving rate of 14.6% in Sonoma County is significantly higher compared to other counties (p=0.00).

Table 26. Distracted driving due to electronic devices by county with 2011 and 2012 data

DD by county	2013 Percent	2012 Percent	2011 Percent
Alameda	6.3%	5.0%	3.2%
Butte	3.6%	15.4%	0.0%
El Dorado	2.5%	6.8%	2.5%
Kern	5.5%	3.0%	6.0%
Los Angeles	4.7%	6.6%	5.0%
Merced	1.9%	8.4%	5.8%
Orange	4.0%	5.0%	3.0%
Placer	8.3%	6.1%	3.0%
Riverside	3.9%	2.8%	8.3%
San Bernardino	4.0%	7.4%	9.3%
San Diego	4.0%	7.9%	3.1%
San Joaquin	1.5%	10.9%	4.3%
San Mateo	3.6%	8.1%	4.7%
Santa Clara	4.1%	4.4%	0.7%
Solano	4.0%	10.8%	7.7%
Sonoma	14.6%	3.6%	1.8%
Tulare	5.3%	7.1%	4.8%

Region Variable

Similar to the previous waves of the study, three regions were delineated by county into “Northern California,” “Central California,” and “Southern California.” Table 27 shows the grouping of counties into the three geographic strata.

Table 27. Counties by region

Northern California	Central California	Southern California
Butte	Tulare	Los Angeles
Alameda	Kern	Riverside
Santa Clara	Merced	San Bernardino
El Dorado		Orange
San Joaquin		San Diego
San Mateo		
Santa Clara		
Solano		
Sonoma		

A total 2,128 observations (34.9%) were completed in Northern California, 741 (12.1%) in the central region, and 3,230 (53.0%) in Southern California; the percentages were overall comparable to the 2012 data collection (Table 28).

Table 28. Number of observations by region with 2011 and 2012 data

Region	2013 Frequency	2013 Percent	2012 Percent	2011 Percent
North	2,128	34.9%	32.7%	36.8%
Central	741	12.1%	7.0%	11.8%
South	3,230	53.0%	60.3%	51.4%
Total	6,099	100.0%	100.0%	100.0%

Distracted driving due to electronic devices by region

Table 29 shows the number of distracted driving cases by region. There is no significant difference in the incidence of distracted driving due to electronic devices as a combined variable among the three defined regions.

Table 29. Distracted driving due to electronic devices by region with 2011 and 2012 data

DD by region		2013 Percent	2012 Percent	2011 Percent
Region	North	5.2%	6.3%	3.0%
	Central	4.2%	6.3%	5.8%
	South	4.3%	6.5%	4.7%

Additional comparisons were made between the region variable and the observed individual distracted driving behaviors of “talking on hand-held phone” and “manipulating hand-held device while driving” without any significant difference (no tables created).

There is a significant difference between the northern and southern California regions with respect to holding a phone to the ear while driving (p=0.00), with 2.3% of drivers in the north compared to 1.0% of drivers in the south displaying that behavior (see Table 30). The comparison of 2012 and 2013 rates show a significant decrease of holding the phone to the ear while driving only in the south (-1.3%, p=0.00) and no significant differences were found in the Central region.

Table 30. Holding phone to ear by region and 2011 and 2012 comparison

Talking on hand-held by region		2013 Percent	2012 Percent	2011 Percent	Difference 2013-2012
Region	North	2.3%	2.5%	1.5%	-0.2%
	Central	2.2%	2.0%	4.1%	+0.2%
	South	1.0%	2.3%	2.0%	-1.3%

Between the region variable and talking on a head-set or Bluetooth device is a significant difference (p=0.00, see Table 31) with the northern region drivers showing a higher rate of headset or Bluetooth use compared to the other regions (2.9% in the North versus 1.2% in the Central and South). There are significant differences between the two data collection years for the Central region drivers, with a reduction of headset/Bluetooth use of 6.6% (p=0.00); however, the absolute number of observations is very small.

Table 31. Talking on headset/Bluetooth by region and 2011 and 2012 comparison

Talking on headset by region		2013 Percent	2012 Percent	2011 Percent	Difference 2013-2012
Region	North	2.9%	2.3%	2.0%	+0.6%
	Central	1.2%	7.8%	1.9%	-6.6%
	South	1.2%	1.2%	1.2%	0.0%

Distracted driving due to electronic devices by passenger and vehicle characteristics

Table 32 shows the percentage of distracted driving by presence of children under the age of eight in the car, together with the 2011 and 2012 comparison. There is no significant difference between drivers with or without children in the car with respect to being distracted by electronic device use. There is, however, a significant decrease from 2012 to 2013; a reduction of 4.1% with a child in the car and 4.0% without, which is significant at p=0.00.

Table 32. Distracted driving due to electronic devices by presence of children under age eight in car and 2011 and 2012 comparison

DD by kids under 8 in car		2013 Percent	2012 Percent	2011 Percent	Difference 2013-2012
Kid < 8 in car	Yes, kid <8 in car	2.8%	6.9%	1.7%	-4.1%
	No	2.4%	6.4%	4.3%	-4.0%

There is no significant difference of the distracted driving variable by vehicle type (Table 33).

Table 33. Distracted driving due to electronic devices by vehicle type with 2011 and 2012 data

DD by vehicle type		2013 Percent	2012 Percent	2011 Percent
Vehicle	Passenger Car	4.3%	6.5%	3.8%
	Van or SUV	5.0%	6.3%	4.6%
	Pickup Truck	4.9%	6.4%	4.5%

There are significant differences in the incidence of distracted driving and the number of passengers in the car (Table 34). The more passengers in a vehicle, the lower the rate of distracted driving with the highest percentage of 5.6% observed for drivers being alone in a car (p=0.00).

The difference between the 2012 and 2013 rates for drivers with no additional passengers and those with one or two passengers in the car are also significant, at p=0.03 for lone drivers and p=0.00 for a driver with one passenger. Other differences are not calculated because of the very small number of observations.

Table 34. Distracted driving due to electronic devices by number of passengers in car and 2011 and 2012 comparison

DD by # of passengers		2013 Percent	2012 Percent	2011 Percent	Difference 2013-2012
Passengers	1	5.6%	6.7%	5.1%	-1.1%
	2	2.4%	5.8%	2.1%	-3.4%
	3	2.8%	6.7%	3.2%	--
	4	2.4%	2.9%	1.3%	--
	5	0.0%	7.7%	0.0%	--
	6	0.0%	0.0%	0.0%	--
	7	0.0%	0.0%	0.0%	--

Distracted driving by electronic devices combined with observation categories

Table 35 through Table 38 show the combined observation categories by the distracted driving by electronic device use variable.

Table 35. Combined table of cell phone use and driving by electronic devices by time, road and area type

	Yes		No		Total	
	#	%	#	%	#	%
Time						
Rush Hour	97	4.7%	1,983	95.3%	2,080	100%
Weekend	51	4.5%	1,090	95.5%	1,141	100%
All Other	132	4.6%	2,746	95.4%	2,878	100%
Total	**280**	**4.6%**	5,819	**95.4%**	6,099	**100%**
Road Type						
HWY exit ramp	44	3.4%	1,249	96.6%	1,293	100%
Surface Street	229	4.9%	4,448	95.1%	4,677	100%
Other	7	5.4%	122	94.6%	129	100%
Total	**280**	**4.6%**	5,819	**95.4%**	6,099	**100%**
Area Type						
Rural	59	4.0%	1,429	96.0%	1,488	100%
Urban	122	4.3%	2,716	95.7%	2,838	100%
Suburban	99	5.6%	1,674	94.4%	1,773	100%
Total	**280**	**4.6%**	5,819	**95.4%**	6,099	**100%**

Table 36. Combined table of cell phone use and driving by electronic devices by demographic variables

Age						
16-24	26	5.6%	440	94.4%	466	100%
25-69	253	4.7%	5,085	95.3%	5,338	100%
70+	1	0.3%	294	99.7%	295	100%
Total	**280**	**4.6%**	5819	**95.4%**	6,099	**100%**
Gender						
Female	125	4.8%	2,481	95.2%	2,606	100%
Male	155	4.4%	3,338	95.6%	3,493	100%
Total	**280**	**4.6%**	5,819	**95.4%**	6,099	**100%**
Ethnicity						
White	169	5.1%	657	94.9%	674	100%
African American	17	6.9%	231	93.1%	248	100%
Asian	17	2.5%	1,661	97.5%	1,734	100%
Hispanic/Latino	73	4.2%	106	95.8%	110	100%
Other	4	3.6%	3,164	96.4%	3,333	100%
Total	**280**	**4.6%**	5,819	**95.4%**	6,099	**100%**

Table 37. Combined table of cell phone use and driving by electronic devices by vehicle type and occupancy

No. of Passengers						
1	233	5.6%	3,952	94.4%	4,185	100%
2	36	2.4%	1,443	97.6%	1,479	100%
3	9	2.8%	312	97.2%	321	100%
4	2	2.4%	83	97.6%	85	100%
5	0	0.0%	24	100.0%	24	100%
6	0	0.0%	3	100.0%	3	100%
7	0	0.0%	2	100.0%	2	100%
Total	**280**	**4.6%**	5,819	**95.4%**	6,099	**100%**
Presence of Children < 8						
Yes	12	2.8%	417	97.2%	429	100%
No	268	4.7%	5,402	95.3%	5,670	100%
Total	**280**	**4.6%**	5,819	**95.4%**	6,099	**100%**
Vehicle Type						
Passenger Car	138	4.3%	3,089	95.7%	3,227	100%
Van or SUV	89	5.0%	1,692	95.0%	1,781	100%
Pickup Truck	53	4.9%	1,038	95.1%	1,091	100%
Total	**280**	**4.6%**	5,819	**95.4%**	6,099	**100%**

Table 38. Combined table of cell phone use and driving by electronic devices by geographic

County						
Alameda	35	6.3%	521	93.7%	556	100%
Butte	1	3.6%	27	96.4%	28	100%
El Dorado	2	2.5%	78	97.5%	80	100%
Kern	10	5.5%	172	94.5%	182	100%
Los Angeles	60	4.7%	1,212	95.3%	1,272	100%
Merced	5	1.9%	253	98.1%	258	100%
Orange	31	4.0%	751	96.0%	782	100%
Placer	31	8.3%	344	91.7%	375	100%
Riverside	8	3.9%	195	96.1%	203	100%
San Bernardino	6	4.0%	143	96.0%	149	100%
San Diego	33	4.0%	791	96.0%	824	100%
San Joaquin	3	1.5%	200	98.5%	203	100%
San Mateo	10	3.6%	270	96.4%	280	100%
Santa Clara	19	4.1%	445	95.9%	464	100%
Solano	4	4.0%	97	96.0%	101	100%
Sonoma	6	14.6%	35	85.4%	41	100%
Tulare	16	5.3%	285	94.7	301	100%
Total	**280**	4.6%	5,819	**95.4%**	6,099	**100%**
Region						
North	111	5.2%	2,017	94.8%	2,128	100%
Central	31	4.2%	710	95.8%	741	100%
South	138	4.3%	3,092	95.7%	3,230	100%
Total	**280**	**4.6%**	5,819	**95.4%**	6,099	**100%**

Notes on Limitations

As outlined in the Driver Electronic Device Use Protocol published by NHTSA (DOT HS 811 361), the methodology has two noteworthy limitations. First, the observation protocol only observes drivers during daylight hours. Secondly, it only observes them at controlled intersections, and not while driving. It is therefore plausible that the actual observed numbers on distracted driving might be either higher or lower than observed.

Appendix A– Observation Form

ID of Location: _____ Alternate 1: _____ Alternate 2: _____ Road: 1=HWY Exit Ramp 2=Surface Street 3=Other

Data Collected by: _____ Weather condition: _____ Start Time: _____ Notes: _____

Data Collected on: _____ Area Type: 1=Rural 2=Urban 3=Suburb End Time: _____ Notes: _____

	DRIVER/VEHICLE CHARACTERISTICS						DRIVER BEHAVIOR			
Event #	Age A=16-24 B=25-69 C=70 and older	Gender M=Male F=Female	Ethnicity W=White AA=African American A=Asian H=Hispanic O=Other	Vehicle type 1=Passenger car 2=Van or SUV 3=Pickup truck	Passengers Number in car (If 1 - SKP next question)	Kids under age 8 Y=Yes N=No	Holding Phone to Ear with Hand √	Talking on Headset OR Bluetooth √	Manipulating Hand-Held Device √	Talking on Handheld Device √
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Appendix B– Letter of Confirmation

UNIVERSITY OF CALIFORNIA, BERKELEY

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SAFE TRANSPORTATION
RESEARCH AND EDUCATION CENTER
2614 Dwight Way, MC 7374
BERKELEY, CA 94720-7374
Phone: (510) 642-0566 Fax: (510) 643-9922

February 2013

To Whom It May Concern:

The purpose of this letter is to tell you about a public safety survey being conducted by the University of California, Berkeley Safe Transportation Research and Education Center SafeTREC and the California Office of Traffic Safety (OTS). The purpose of the study is to observe cell phone use while driving throughout the State of California. The results of the study will provide the State with ideas for making the roads of California safer.

We are working with Ewald and Wasserman Research Consultants, a survey research firm. The trained interviewers, who are conducting the observations, will stand at intersections with either stop signs or traffic signals for approximately 45 minutes, and will not interact with drivers. Additionally, they will not interfere with any businesses, residents, etc. in the area.

If you have any questions about the research study, please call Jill Cooper at (510)643-4259.

Thank you in advance for your understanding.

Sincerely,

David Ragland
Director
UC Berkeley SafeTREC

Christopher J. Murphy
Director
California Office of Traffic Safety