



Billing Code: 4163-18-P

**DEPARTMENT OF HEALTH AND HUMAN SERVICES**

**Centers for Disease Control and Prevention**

**[30Day-20-20IP]**

**Agency Forms Undergoing Paperwork Reduction Act Review**

In accordance with the Paperwork Reduction Act of 1995, the Centers for Disease Control and Prevention (CDC) has submitted the information collection request titled "Occupational Driver Safety at Intersections" to the Office of Management and Budget (OMB) for review and approval. CDC previously published a "Proposed Data Collection Submitted for Public Comment and Recommendations" notice on February 25, 2020 to obtain comments from the public and affected agencies. CDC did not receive comments related to the previous notice. This notice serves to allow an additional 30 days for public and affected agency comments.

CDC will accept all comments for this proposed information collection project. The Office of Management and Budget is particularly interested in comments that:

- (a) Evaluate whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility;

- (b) Evaluate the accuracy of the agencies estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used;
- (c) Enhance the quality, utility, and clarity of the information to be collected;
- (d) Minimize the burden of the collection of information on those who are to respond, including, through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, e.g., permitting electronic submission of responses; and
- (e) Assess information collection costs.

To request additional information on the proposed project or to obtain a copy of the information collection plan and instruments, call (404) 639-7570. Comments and recommendations for the proposed information collection should be sent within 30 days of publication of this notice to [www.reginfo.gov/public/do/PRAMain](http://www.reginfo.gov/public/do/PRAMain) Find this particular information collection by selecting "Currently under 30-day Review - Open for Public Comments" or by using the search function. Direct written comments and/or suggestions regarding the items contained in this notice to the Attention: CDC Desk Officer, Office of Management and Budget, 725 17th Street, NW, Washington, DC 20503 or by fax to (202) 395-5806. Provide written comments within 30 days of notice publication.

## Proposed Project

Occupational Driver Safety at Intersections - New - National Institute for Occupational Safety and Health (NIOSH), Centers for Disease Control and Prevention (CDC).

### Background and Brief Description

The mission of the National Institute for Occupational Safety and Health (NIOSH) is to promote safety and health at work for all people through research and prevention. Nearly 40% of all traffic crashes occur at intersections. Erroneous decision-making while crossing a signalized intersection is a significant risk factor for drivers. Such decision-making is even more challenging for occupational drivers (e.g., police and fire truck drivers) due to their job demands, special vehicle characteristics, and frequency of crash risk exposure. NIOSH has initiated a laboratory simulation study on effects of occupation, vehicle type, vehicle approach speed, signal light logic, and emergency response status on emergency vehicle driver decision-making at intersections to advance the safety of approximately 900,000 law enforcement officers and 1,134,400 career and volunteer firefighters.

Study results will be used to develop science-based safety recognition training materials for emergency vehicle drivers and their employers to enhance driver safety at intersections. The

information also will be used to (1) determine the optimal time/distance to activate a traffic signal preemption system for emergency vehicles to obtain the right-of-way at intersections, and (2) conceptualize an advanced driver assistant system (ADAS) that provides signal light status and issues a preemptive warning when an emergency vehicle approaches an intersection at an unsafe speed limit based on the vehicle and environmental conditions. The system will assist occupational drivers in decision making while crossing a signalized intersection.

Thirty-two fire truck drivers, 32 law enforcement officers (LEOs), and 32 general passenger vehicle drivers will be recruited for the experiment. The driving task for fire truck drivers and LEOs will consist of responding to an emergency call and returning to the base station. The general passenger vehicle drivers serve as the baseline reference; they will drive a sedan, simulating normal daily driving conditions. LEOs will perform an additional driving task (off-duty condition) using a sedan (same weight and size as the LEO cruiser) on a separate visit for the experiment. The drivers' performance (e.g., perception and response time, stopping accuracy, and stress level) and safety outcomes (e.g., deceleration at intersection, clearance to intersection, red light running time, and red light running frequency) will be analyzed, based on vehicle locations, vehicle speeds, and drivers' heart rates.

A follow-up study will evaluate the effectiveness of a driver assistant tool (derived from the first experiment) on the drivers' decision-making and overall safety outcomes. The driver assistant tool would be (1) either an algorithm to activate a traffic signal preemption system at optimal time/distance for emergency vehicles to obtain the right-of-way at intersections or, (2) an advanced driver assistant system that provides signal light status and issues a preemptive warning when an emergency vehicle approaches an intersection at an unsafe speed limit. Half of the participants from the first experiment (i.e., 16 truck drivers, 16 LEOs, and 16 general passenger vehicle drivers) and 48 new participants (16 from each of the three groups) will be recruited. The design of this experiment in terms of nature of tasks and outcome measures will be the same as those for the first Experiment.

The two experiments will utilize 192 research participants. An additional six participants may be recruited to replace dropouts during the study due to simulator sickness. The data collection for the two experiments will take three years in total. Informed consent and the data collection are expected to take three to 3.5 hours (total) to complete for Experiment 1 and four to 4.5 hours for Experiment 2 for each participant. The total estimated annualized burden hours are 341. There are no costs to the respondents other than their time.

Estimated Annualized Burden Hours

Type of Respondents	Form Name	No. of Respondents	No. of Responses per Respondent	Avg. Burden per Response (in hrs.)
Experiment 1: Law Enforcement Officers	Pre-Enrollment Confirmation Email (A)	11	1	1/60
Experiment 1: Law Enforcement Officers	Participation Data Collection Form (B)	11	1	1/60
Experiment 1: Law Enforcement Officers	Informed Consent form - including participant orientation (C)	11	1	20/60
Experiment 1: Law Enforcement Officers	Motion Sickness Screen Form (D)	11	1	2/60
Experiment 1: Law Enforcement Officers	Pre and post drive simulator sickness assessment (E)x5 scenarios x3 conditions	11	1	1
Experiment 1: Law Enforcement Officers	Sharpened Romberg Postural Stability Test (F)x2 states x3 conditions	11	1	30/60
Experiment 1: Law Enforcement Officers	Practice Roadmap - Driving practice in simulator (G)x3 conditions	11	1	48/60

Experiment 1: Law Enforcement Officers	Actual test - 120 minutes (H)x3 conditions	11	1	6
Experiment 1: Firefighter	Pre-Enrollment Confirmation Email (A)	11	1	1/60
Experiment 1: Firefighter	Participation Data Collection Form (B)	11	1	1/60
Experiment 1: Firefighter	Informed Consent form - including participant orientation (C)	11	1	20/60
Experiment 1: Firefighter	Motion Sickness Screen Form (D)	11	1	2/60
Experiment 1: Firefighter	Pre and post drive simulator sickness assessment (E)x5 scenarios x2 conditions	11	1	40/60
Experiment 1: Firefighter	Sharpened Romberg Postural Stability Test (F)x2 states x2 conditions	11	1	20/60
Experiment 1: Firefighter	Practice Roadmap - Driving practice in simulator (G)x2 conditions	11	1	36/60

Experiment 1: Firefighter	Actual test - 120 minutes (H)x2 conditions	11	1	4
Experiment 1: General civilian	Pre-Enrollment Confirmation Email (A)	11	1	1/60
Experiment 1: General civilian	Participation Data Collection Form (B)	11	1	1/60
Experiment 1: General civilian	Informed Consent form - including participant orientation (C)	11	1	20/60
Experiment 1: General civilian	Motion Sickness Screen Form (D)	11	1	2/60
Experiment 1: General civilian	Pre and post drive simulator sickness assessment (E)x5 scenarios x1 condition	11	1	20/60
Experiment 1: General civilian	Sharpened Romberg Postural Stability Test (F)x2 states x1 condition	11	1	10/60
Experiment 1: General civilian	Practice Roadmap - Driving practice in simulator (G)x1 condition	11	1	16/60

Experiment 1: General civilian	Actual test - 120 minutes (H)x1 condition	11	1	2
Experiment 2: Law Enforcement Officers	Pre-Enrollment Confirmation Email (A)	11	1	1/60
Experiment 2: Law Enforcement Officers	Participation Data Collection Form (B)	11	1	1/60
Experiment 2: Law Enforcement Officers	Informed Consent form - including participant orientation (C)	11	1	20/60
Experiment 2: Law Enforcement Officers	Motion Sickness Screen Form (D)	11	1	2/60
Experiment 2: Law Enforcement Officers	Pre and post drive simulator sickness assessment (E)x5 scenarios x1 condition	11	1	20/60
Experiment 2: Law Enforcement Officers	Sharpened Romberg Postural Stability Test (F)x2 states x1 condition	11	1	10/60
Experiment 2: Law Enforcement Officers	Acceptance of Advanced Driver Assistance System (I)x1 condition	11	1	40/60
Experiment 2: Law	Practice Roadmap - Driving	11	1	16/60

Enforcement Officers	practice in simulator (G)x1 condition			
Experiment 2: Law Enforcement Officers	Actual test - 120 minutes (H)x1 condition	11	1	2
Experiment 2: Firefighter	Pre-Enrollment Confirmation Email (A)	11	1	1/60
Experiment 2: Firefighter	Participation Data Collection Form (B)	11	1	1/60
Experiment 2: Firefighter	Informed Consent form - including participant orientation (C)	11	1	20/60
Experiment 2: Firefighter	Motion Sickness Screen Form (D)	11	1	2/60
Experiment 2: Firefighter	Pre and post drive simulator sickness assessment (E)x5 scenarios x1 condition	11	1	20/60
Experiment 2: Firefighter	Sharpened Romberg Postural Stability Test (F)x2 states x1 condition	11	1	10/60
Experiment 2: Firefighter	Acceptance of Advanced Driver Assistance	11	1	40/60

	System (I) x1 condition			
Experiment 2: Firefighter	Practice Roadmap - Driving practice in simulator (G) x1 condition	11	1	16/60
Experiment 2: Firefighter	Actual test - 120 minutes (H) x1 condition	11	1	2
Experiment 2: General civilian	Pre-Enrollment Confirmation Email (A)	11	1	1/60
Experiment 2: General civilian	Participation Data Collection Form (B)	11	1	1/60
Experiment 2: General civilian	Informed Consent form - including participant orientation (C)	11	1	20/60
Experiment 2: General civilian	Motion Sickness Screen Form (D)	11	1	2/60
Experiment 2: General civilian	Pre and post drive simulator sickness assessment (E) x5 scenarios x1 condition	11	1	20/60
Experiment 2: General civilian	Sharpened Romberg Postural Stability Test (F) x2 states x1 condition	11	1	10/60

Experiment 2: General civilian	Acceptance of Advanced Driver Assistance System (I)x1 condition	11	1	40/60
Experiment 2: General civilian	Practice Roadmap - Driving practice in simulator (G)x1 condition	11	1	16/60
Experiment 2: General civilian	Actual test - 120 minutes (H)x1 condition	11	1	2

**Jeffrey M. Zirger,**

*Lead,*

*Information Collection Review Office,*

*Office of Scientific Integrity,*

*Office of Science,*

*Centers for Disease Control and Prevention.*