

In-Vehicle Drowsiness Detection and Alerting Information Collection Request

Appendix A: Justification for Forms

1. *(NHTSA Form 1441) Phone Screening* provides a brief description of the study and ensures that respondents who move to the next step are interested in participating, available to take part in the study, and meet inclusion criteria. The morning/evening questionnaire items ensure that participants are self-described “morning people,” as part of the phone screening. Limiting participants to those who prefer to be active during the daytime will reduce variance in the data.
2. *(NHTSA Form 1443) Consent Form* describes the study procedures and potential risks of participation. The document also explains how participants’ data will be protected. The video release form describes how the research team may use and share recorded video and audio data collected in the study.
3. *(NHTSA Form 1444) Wellness Survey* evaluates symptoms of simulator sickness immediately after the screening drive. This will allow those who experience motion sickness in the simulator to be screened out of the study.
4. *(NHTSA Form 1445) Activity Log* records sleep, activity, and food/beverage intake in the twenty-four hours prior to the study visit. This will allow the research team to verify whether the participant adheres to the study procedures (i.e., awake by 8am and no caffeine after 1pm).
5. *(NHTSA Form 1446) Sleep Survey* records information about sleep patterns not captured in the activity log. This information is collected at the start of the study visit and helps ensure participants followed study procedures the day of the study visit.
6. *(NHTSA Form 1447) Stanford Sleepiness Scale* evaluates self-rated sleepiness on a scale from 1 to 7, recorded every half hour as participants wait for the study drive and immediately before and after the drive. This provides a measure of subjective sleepiness, which compliments the objective measures of drowsiness collected during the study drive.
7. *(NHTSA Form 1448) Drive Break Survey* is administered during voluntary breaks in the drive to record participants’ rationale for resting. The survey also includes a Stanford Sleepiness Scale to evaluate subjective sleepiness when participants decide to stop to rest. These surveys are completed at the beginning and end of the rest break.
8. *(NHTSA Form 1449) Post-Drive Survey* evaluates decision making throughout the study drive and preferences regarding the drowsiness countermeasure. The survey questions also evaluate whether participants felt like the motivational conditions produced by the incentive matched those of a drowsy driving situation and whether they considered the same factors as they would have during real driving.