

PARTICIPANT INFORMED CONSENT

STUDY: Intelligent Network Flow Optimization (INFLO) – Seattle Demonstration

SPONSOR: US Department of Transportation

PRINCIPAL INVESTIGATOR: Dr. Denny Stephens, Battelle Memorial Institute

WHAT IS THE PURPOSE OF THIS RESEARCH?

The purpose of this research is to study driver travel behavior in relation to traffic congestion and traffic backups with the goal of improving traffic flow. This study is being conducted in the Seattle, Washington area and about 24 drivers will participate. You are being asked to take part in our study because you are at least 18 years old, are available during the data collection period, and you are interested in participating in research.

WHAT DO I HAVE TO DO IF I CHOOSE TO PARTICIPATE?

You are being asked to participate in an on-road driving study and to allow us to place a data collection system in your vehicle. For 5 days, the study will record when and where you are on the I-5 expressway (between mile makers 156 to 179) and how long it takes you to travel from Edmonds to Tukwila. At the same time, we will also be collecting data from the I-5 roadway infrastructure systems.

The data collection will ONLY occur between the hours of 6:00 a.m. to 10:00 a.m. during the data collection period AND when you are between mile markers 156 to 179 on Northbound and Southbound I-5. Data collection will not occur at any other time or any other location.

A three part data collection system will be installed or attached to your vehicle: 1) a global positioning system (GPS) unit, 2) an antenna, and 3) a Samsung cellphone that will send data to our receiving station.

- The GPS unit is completely passive and cannot damage your vehicle or impact your vehicle's performance in any way. This unit will be installed under the driver's seat. When activated, the data collection unit will collect the following information: 1) vehicle location, 2) vehicle speed, 3) vehicle change in speed, 4) vehicle heading, and 5) ambient air temperature. The data collection unit will send the vehicle data to the Samsung cellphone.
- The antenna captures GPS signals and transmits and receives messages. The antenna is not permanently affixed to your vehicle and can be installed/removed without damaging your vehicle. You are able to go through the car wash with the antenna installed on your vehicle.
- The Samsung cellphone will be attached to your windshield or dashboard and will be powered through your vehicle's power plug or cigarette lighter. The cellphone will transmit the following data to our receiving station: 1) vehicle location, 2) vehicle speed, 3) vehicle change in speed, 4) vehicle heading and 5, ambient air temperature. The display of the Samsung cellphone will provide

information messages while you are driving, but the messages are information only and you should continue to make your own driving decisions. The cellphone will be non-functional for any other purposes – meaning that you may not use it for telephone calls or to access the internet.

As a participant, you will be expected to take part in the following activities:

1. Bring your vehicle to Battelle to have the data collection equipment installed. All installations will be temporary and will not damage your vehicle. You must return the data collection device with all its components including the Samsung cellphone after the study is over. We will review the data equipment installation procedure with you prior to installing the equipment on your vehicle.
2. Complete the enrollment process at Battelle, which should take about 30 minutes. The enrollment process will include:
 - Notifying you about the study so that you make an informed decision about whether or not you want to take part in the study
 - Review of your valid driver's license and motor vehicle insurance
 - Providing instructions about the devices and how to contact us if you notice any problems with the device (e.g., loss of power), and questions we would like you to think about while you are using the equipment.
3. Drive on Northbound and Southbound I-5 mornings during the 5-day data collection period.
4. Return to Battelle to have the equipment removed, be debriefed about the study purpose, and complete a short questionnaire about your experiences using the equipment. Upon completion of these activities, you will receive the payment for your participation.

WHAT ARE THE BENEFITS OF PARTICIPATING IN THIS RESEARCH?

You will receive no direct benefits from this research, but you may find the research study interesting. We believe that your participation may benefit society by helping us collect data about traffic patterns which will ultimately help in the development of tools/countermeasures for improving traffic flow.

WHAT ARE THE RISKS TO ME IF I PARTICIPATE IN THIS RESEARCH?

The risk to you is no more than you would normally incur while driving.

Most components of the data collection device will not be visible to you except for the cellphone. The cellphone display will be on and will provide information messages to you while you are driving, but you are not required to take any action based on the information provided and you should continue to make your own driving decisions as you would when driving normally. You cannot operate or use the cellphone for any other purpose. The cellphone will be mounted such that, to the greatest extent possible, it does not pose a hazard to you and will not interfere with your normal field of view. The device will not affect the operating or handling characteristics of your vehicle.

Apart from coming to Battelle to have the equipment installed and de-installed from your vehicle, you are not being asked to drive any differently than you normally would.

You should be aware that the data collection device will record when you are on the I-5 N and S corridor, where you are on this corridor and how long it takes you to travel through the I-5 North section and South section between Edmonds and Tukwila. However, this data that is being gathered is anonymized such that neither we nor anyone else can trace any data back to the vehicle or driver. If someone other than you drives the equipped vehicle on I-5 between Edmonds and Tukwila between the hours of 6:00am and 10:00am during the data collection period, data will be collected for this driver as well.

When the data collection system is recording, you should be aware that it could collect information that could indicate that you are operating your vehicle in an illegal manner, e.g., driving faster than the posted speed limit. However, the data will be encrypted prior to transmission to our receiving station and will be stripped of any information that could potentially identify you before it is made available to the study investigators for review and analysis so there is no way to identify you.

If you should be stopped or detained as the result of operating your vehicle in an illegal manner, you are under no obligation to disclose your participation in this study. Any study data related to your vehicle's operation could potentially be subpoenaed by law enforcement officials. If subpoenaed, Battelle will comply with the subpoena. However, any data will be kept private in so far as permitted by law.

WHO WILL HAVE ACCESS TO MY DATA?

We expect this study will be a valuable source of data on basic driving behavior, so researchers who study traffic safety, traffic congestion, and traffic patterns may want to use the data. We plan to share this data with other researchers. In every case, the researchers who obtain access to this data will be required to sign a data-sharing agreement that specifies the ways in which they may use the data. Again, since this data is anonymized, there is no way to identify this data back to you or your vehicle.

WILL I RECEIVE COMPENSATION FOR PARTICIPATING IN THIS RESEARCH?

You will receive \$150 cash and a \$25 gas gift card at the end of the research study for your participation, but you must return to Battelle to have the data collection device removed from your vehicle.

WHAT ABOUT INSURANCE?

If you have an accident, break-in, or theft, you are not responsible for the costs of damage to the data collection device in your vehicle. However, Battelle will not be liable for any damages or expenses you may incur as a result of any accident, break-in or theft. Appropriate insurance is strongly recommended to cover these types of damages and expenses.

If you are injured as a direct result of taking part in this research study, Battelle will not be able to provide you with any medical treatment or financial compensation, except as provided through remedies available at law.

AM I FREE TO STOP PARTICIPATING?

As a participant in this research, you are free to withdraw at any time. If you decide to stop participating, please contact Paige Bacon, at 206-528-3242 and let her know that you would like to withdraw from the study. We will then schedule a time to return to Battelle to have the data collection device removed from your vehicle.

WHO APPROVES THIS RESEARCH?

This research study was approved by an Institutional Review Board whose purpose is to protect the rights and welfare of human subjects who participate in research.

WHAT IF I HAVE MORE QUESTIONS?

If you have any questions about the study, please contact Paige Bacon at 206-528-3242 or Dr. Denny Stephens, Principal Investigator at 614-424-4469.

If you have questions about your rights as a human subject participating in this research study, you may call the Institutional Review Board at 614-424-7648 between 8:00 a.m. and 5:00 p.m. EST.

HOW DO I PROVIDE MY CONSENT?

I have read and understand this informed consent, and I volunteer to participate in this research study. I understand that I will receive a copy of this form. I understand that my consent does not take away any of my legal rights in case of negligence or other legal fault of anyone who is involved in the study. I further understand that nothing in this consent form overrides any federal, state, or local law regarding informed consent.

Subject Volunteer

Name of Subject (Printed or Typed)

Signature of Subject Volunteer

Date

Time

Person Obtaining Consent

I, _____ (Print or Type),
verify that I have discussed this research study, its objectives, methods, associated risks, and benefits with the subject volunteer and have fully answered all questions to his/her satisfaction.

Signature of Person Obtaining Consent

Date

Time