

## QSF18 Implied Consent and Background Survey

### Smart phone/web based implementation

Thank you for volunteering to participate in this NASA research study to gather opinions about the perception of sonic thumps. We appreciate your participation, which is voluntary and confidential. You will receive compensation of \$25 per week for the two weeks of the survey for a total amount of \$50 as an expression of appreciation. If there is a question you do not want to answer, you may skip that question and move on to the next question. Your responses will be associated with your participant number and summarized so that the answers you provide cannot be associated with you or your household. You must be 18 years of age or older to consent to participate in this research. ***Responding to the survey questions implies your consent to participate in this background survey, and in the upcoming two week research study.***

During the research study you will go about your normal activities, and there will be supersonic flights in your area. The flights will produce audible sounds called sonic thumps. This muffled sound is very different from the sonic booms you have heard about – or may actually have heard – in the past. In fact, you may not even hear the sonic thumps at all. When a sonic thump occurs, you will be asked to provide information about your location and your perception of the sound.

You will be randomly assigned into one of two groups, one that receives reminders to listen for sonic thumps, and one that does not. The “no reminder” participants will simply respond when they hear a sonic thump. If you are in the reminder group, you will be sent reminders throughout the day. The message will read: “Did you just hear a sonic thump? Please click on the survey link, indicate your location, and answer yes or no. If your answer is yes, please complete the survey questions”. This message will sometimes be sent after a sonic thump and sometimes just as a reminder to listen. For all participants, please provide your responses as soon as possible after hearing each sonic thump. You will also be asked to complete a short daily survey at the end of each day, providing a rating of your perception of the sounds overall during that particular day. At the end of the research study we will provide the opportunity for your feedback on the surveys.

Participants have the option to use their own smart phones or other mobile devices to respond using the Qualtrics app, a mobile survey tool. Alternatively, you may choose to complete the surveys on the web. If you use your mobile device, we ask that you have location services activated on the mobile device you use to complete the survey. Your response location is required so that we can associate your location with the sound measured at the nearest noise monitor. You will need either Wi-Fi or Cellular connection access in order for your device to respond. ***Please ensure that location services is turned on when you respond to the surveys.***

#### **To turn on location services for iPhone:**

1. Go to Location in your iPhone's Settings by tapping: Settings > Privacy > Location Services.
2. Agree to allow location access always or while using the Survey application.

#### **To turn on location services for Android:**

1. Go to Location in Settings by Tapping Settings > Personal>Location.
2. Agree to allow location access always or while using the Survey application.

Every effort will be made to ensure the confidentiality of your identity and the data that you provide. Your participation is voluntary, so you may stop at any time, but your payment will be pro-rated for the time of participation. Please notify the researchers if you decide to withdraw from the study. Ethical review of this research study was provided by the NASA Institutional Review Board. If you have any questions regarding your rights as a research subject, how to volunteer or exactly what is expected of you, feel free to email the investigators at [QSF18@nasa.gov](mailto:QSF18@nasa.gov). If you have technical difficulties with the survey applications please contact the Penn State Survey Research Center at 1-800-648-3617.

### **Participation Assurance and Contact Information**

- A1** Are you willing to participate in this study?  
Yes. [go to A2]  
No. [Thank you for your interest in this research. Unfortunately, you do not meet the qualifications to participate.]
- A2** Had you heard about this test before you received our invitation to participate?  
Yes. [go to A2a.]  
No. [go to A3.]
- A2a** How did you hear about it? Check all that apply.  
Friend or family  
Social media  
Newspaper  
On-line publication  
TV or radio  
Other [Text box for open ended address response]
- A3** Are you 18 years of age or older?  
Yes [go to A4.]  
No. [Thank you for your interest in this research. You must be 18 years of age to participate.]
- A4** Are both your home and work addresses within the area of Hitchcock, Port Bolivar, Texas City, Tiki Island or Galveston [other location as warranted]?  
Yes  
No. Thank you for your interest in this research. Unfortunately, you do not meet the qualifications to participate.
- A5** Please provide your name.
- A6** Please provide the street address and/or building where you are during most of the work day.
- A7** Please provide your home address
- A8** Please provide your cell phone number and email address. Providing this information implies your consent for us to contact you by cell phone, text message or email.
1. Cell phone number:
  2. Email address:

- A9** Can you receive text messages throughout the day?
1. Yes
  2. No

### Social and Demographic Characteristics

- B1** What is your gender?
- Male  
Female

- B2** In what year were you born? [Enter 4-digit year]

- B3** Including yourself, how many people live in your household?
- \_\_\_\_\_ Number

- B4** [IF B3 > 1] Do any children under age 6 live in your household?
- 1 Yes
  - 2 No

- B5** [IF B3 > 1] Including yourself, how many adults age 18 or older live in your household?
- \_\_\_\_\_ Number

- B6** What is the highest grade or year of schooling that you completed? (Select one)
- 1 Grades 1 to 11
  - 2 12th Grade No Diploma
  - 3 High School Graduate or Equivalent (GED)
  - 4 Some college, technical school, or 2-year degree
  - 5 Bachelor's Degree (BA, AB, BS)
  - 6 Some graduate work (no degree)
  - 7 Masters, Doctoral, or Professional degree

- B7** Do you believe that your hearing is normal? How would you characterize your hearing ability?
- 1 Normal (Go to B9)
  - 2 Somewhat diminished (Go to B8)
  - 3 Severely diminished (Go to B8)

- B8** [If B7>1] Do you have and wear a hearing aid, or hearing aids?
- 1 I wear a single hearing aid
  - 2 I wear two hearing aids
  - 3 I have hearing aids that I don't wear

4 I don't have and don't wear hearing aids

**B9** Which of the following best describes the type of *home* in which you live?

- 1 Single-family detached (no common walls)
- 2 Duplex or single-family attached (at least one common wall)
- 3 Apartment building/condominium or dormitory
- 4 Other [SPECIFY] [text box]

**B10** Which of the following best describes the construction type of the building in which you *work*?

- 1 Single residence type
- 2 Warehouse or flat box store
- 3 Single level office/school/commercial
- 4 Multi-floored office/school/commercial (2-3 floors)
- 5 Mid-rise multi-story (4 -11 floors)
- 6 High-rise multi-story (12 – 39 floors)
- 7 Skyscraper multi-story (40+ floors)

**B11** How quiet or loud do you expect it to be in your home?

- 1 Very quiet
- 2 Somewhat quiet
- 3 Neither quiet nor loud
- 4 Somewhat loud
- 5 Very loud

**B12** The research team may need to put noise monitoring equipment in residents' yards for the duration of the test. Would you be willing to have noise monitoring equipment located outdoors on your property?  
[SELECT ONE]

- 1 Yes
- 2 No
- 3 Depends (Please contact us with questions or for additional information)

#### **Attitudes and Experience with Neighborhood Noises**

**C1** We're interested in the noises that people hear in their neighborhood. Do you think your neighborhood is quiet or noisy or about average? Please select one.

- 1 Quiet
- 2 Noisy
- 3 Average

**C2** For each statement, please indicate if you strongly disagree, moderately disagree, neither agree nor disagree, moderately agree or strongly agree.

- a. I believe that people have a hard time getting used to noise.

- 1 Strongly disagree
- 2 Moderately disagree
- 3 Neither agree nor disagree
- 4 Moderately agree
- 5 Strongly agree

b. I believe that with time most people adapt to noise.

- 1 Strongly disagree
- 2 Moderately disagree
- 3 Neither agree nor disagree
- 4 Moderately agree
- 5 Strongly agree

c. I believe that with time I can adapt to noise.

- 1 Strongly disagree
- 2 Moderately disagree
- 3 Neither agree nor disagree
- 4 Moderately agree
- 5 Strongly agree

d. I believe that with time I can get used to even the loudest noise.

- 1 Strongly disagree
- 2 Moderately disagree
- 3 Neither agree nor disagree
- 4 Moderately agree
- 5 Strongly agree

**C3.** Next is a list of noises that might occur in your neighborhood. Please indicate how much each noise bothers, disturbs or annoys you. When you are at home, how much does noise from < noise source > bother, disturb, or annoy you?

a. Barking dogs

- 1 Not heard/Not at all annoyed
- 2 Slightly annoyed
- 3 Moderately annoyed
- 4 Very annoyed
- 5 Extremely annoyed

b. Thunder

- 1 Not heard/Not at all annoyed
- 2 Slightly annoyed
- 3 Moderately annoyed
- 4 Very annoyed
- 5 Extremely annoyed

c. Street traffic such as cars, trucks or motorcycles

- 1 Not heard/Not at all annoyed
- 2 Slightly annoyed
- 3 Moderately annoyed
- 4 Very annoyed
- 5 Extremely annoyed

- d. Commercial aircraft noise
  - 1 Not heard/Not at all annoyed
  - 2 Slightly annoyed
  - 3 Moderately annoyed
  - 4 Very annoyed
  - 5 Extremely annoyed
  
- e. Military aircraft noise
  - 1 Not heard/Not at all annoyed
  - 2 Slightly annoyed
  - 3 Moderately annoyed
  - 4 Very annoyed
  - 5 Extremely annoyed

**C4** How long have you lived in this area?

\_\_\_\_\_ [enter number of years]  
0 Less than 1 full year

As part of the research study, you will be asked to complete a short questionnaire each time you hear a sonic thump over a 2 week period. Please answer these questions as soon after hearing the noise as possible. The questions will ask things like what time you heard the sounds, your location, whether you were inside or outside, and how you reacted. We will also ask you to complete a short survey at the end of each day, telling us about the sounds you heard. Thank you!

**Confirmation (sent a few days before field test to confirm cell phone number and/or email address):**

You recently volunteered for a NASA sponsored study. You are in the “reminder” group, so please click the link to verify: (Qualtrics generated small link).

Webpage text at link: This question is for confirmation that you received the reminder. Please select: “I received the message” and press “submit.”