**OMB Control Number 1905-0186**

**2020 RECS Pretesting – Generic Clearance**

**Crowdsourcing Protocol (Instrument 1)**

## Instrument 1 (Crowdsourcing)

This survey is part of a voluntary research study to find out about your household energy use. In addition to asking you questions about your energy use, this web survey includes several open-ended questions specifically asking you to provide comments regarding how you came up with your answers to the questions. Your responses to these open-ended questions will be used to revise the survey questions. There are no right or wrong answers to the open-ended questions. Your feedback is extremely helpful for us to better refine the survey questionnaire. Your responses will be kept private and confidential.

The entire survey should take **about 30 minutes** to complete. You will receive **$5.00** after you complete the survey and your HIT is approved.

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| **TYPEHUQ** | |
| **ASK** | All respondents |
| Which best describes your home?   1. Mobile home 2. Single-family house detached from any other house 3. Single-family house attached to one or more other houses (for example: duplex, row house, or townhome) 4. Apartment in a building with 2 to 4 units 5. Apartment in a building with 5 or more units | |
| **NEXT** | BEDROOMS, NCOMBATH, NHAFBATH, OTHROOMS |
| **NOTE** | Question is included to satisfy skip logic for heat pump back-up source question (HPBACKUP), wood amount (WOODAMT/PELLETAMT), and air conditioning (ACEQUIPM). |
| **PROBES** | None |

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| **BEDROOMS, NCOMBATH, NHAFBATH, OTHROOMS** | |
| **ASK** | All respondents |
| How many of the following types of rooms are in your home? Include rooms in finished basements and finished attics. If none, please enter “0.”  \_\_\_\_ Bedrooms (BEDROOMS)  \_\_\_\_ Full bathrooms (A full bathroom includes a sink with running water, a toilet, and a bath or  shower.) (NCOMBATH)  \_\_\_\_ Half bathrooms (A half bathroom includes a sink with running water and either a toilet, a bath, or a shower.) (NHAFBATH)  \_\_\_\_ Other rooms (Include living or family rooms, kitchens, home offices, etc. Do not include hallways, closets, or rooms you already counted above.) (OTHROOMS)  {ALLOW RANGE 0-30 FOR EACH. REQUIRE RESPONSE FOR NUMBER OF BEDROOMS BECAUSE IT TRIGGERS THE SOFT CHECK IN SF2.} | |
| **NEXT** | SF1 |
| **NOTE** | Question is included to trigger the soft check on SF2. |
| **PROBES** | None |

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| SF1 | | |
| ASK | All respondents | |
| A home’s size is typically reported in “square feet.” Do you know your home’s square footage?   1. Yes 2. No | | |
| **NEXT** | | If SF1 = 1: SF2  Else: SF3 |
| **NOTE** | |  |
| **PROBES** | | None |

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| SF2 | | |
| ASK | If SF1 = 1 | |
| What is the square footage of your home? *We would rather you select ‘Don’t know” than provide a guess.*  \_\_\_\_\_\_\_\_square feet  Don’t know  “SOFT CHECK” WILL APPEAR FOR ALL RESPONSES OUTSIDE OF THE 25th-75th PERCENTILES BASED ON NUMBER OF BEDROOMS (SHOWN BELOW):   * 0 BEDROOMS: 450-800 SQ FT * 1 BEDROOM: 600-800 SQ FT * 2 BEDROOMS: 800-1200 SQ FT * 3 BEDROOMS: 1200-2000 SQ FT * 4 BEDROOMS: 1800-2800 SQ FT * 5+ BEDROOMS: 2000-4000 SQ FT   HALF WILL RECEIVE SOFT CHECK A:  You reported that your home is [FILL] square feet. This number is [larger/smaller] than we expected based on other information about your home. Please verify your response.   1. My response is correct. I would like to continue to the next question. 2. My response is incorrect. I would like to edit my response. 3. I am unsure. I would like to change my response to “Don’t know.”   IF SOFT CHECK = 2, ASK FOR SQUARE FOOTAGE AGAIN. INSTRUMENT SHOULD RECORD BOTH ORIGINAL RESPONSE AND UPDATED RESPONSE.  HALF WILL RECEIVE SOFT CHECK B:  Please verify your response.   1. My response is correct. I would like to continue to the next question. 2. My response is incorrect. I would like to edit my response. 3. I am unsure. I would like to change my response to “Don’t know.”   IF SOFT CHECK = 2, ASK FOR SQUARE FOOTAGE AGAIN. INSTRUMENT SHOULD RECORD BOTH ORIGINAL RESPONSE AND UPDATED RESPONSE. | | |
| **NEXT** | | If SF2 = DK, SF3  Else: SF4 |
| **NOTE** | |  |
| **PROBES** | | * How accurate do you think your response is? (Extremely accurate, Very accurate, Somewhat accurate, Not very accurate, Not at all accurate) * IF RECEIVED SOFT CHECK A: The survey noted that your original response was [larger/smaller] than we expected based on other information about your home. Please tell us what you thought when you saw this message. * How do you feel about this message? |

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| SF3 | | |
| ASK | If SF1 = 0 or SF2 = DK | |
| We understand that you might not know how many square feet your home is. A home’s size is closely related to its energy use, so we would like you to provide an estimate. Please tell us which category best describes the square footage of your home.   1. Less than 500 square feet 2. 500-999 square feet 3. 1,000-1,499 square feet 4. 1,500-1,999 square feet 5. 2,000-2,499 square feet 6. 2,500-2,999 square feet 7. 3,000-3,499 square feet 8. 3,500-3,999 square feet 9. 4,000 square feet or more 10. Don’t know (*Select this option only if you are unable to provide a guess.*) | | |
| **NEXT** | | IF SF1=1, SF4  ELSE: HEATHOME |
| **NOTE** | |  |
| **PROBES** | | * How did you decide which response to select? Please describe your thought process. * Is anything about this question confusing or unclear? Please explain. * What do you think of the response categories? Do you think they should be changed, or are they okay? Please explain. |

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| SF4 | | |
| ASK | If SF1 = 1 & SF2 ≠ DK | |
| What sources of information did you use to determine your home’s square footage? *Select all that apply.*   1. I checked my property tax documents 2. I checked my lease or mortgage documents 3. I remember from when I leased or bought my home 4. I asked someone else who knows 5. I checked an internet site (e.g., Zillow) 6. Other (please specify): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | |
| **NEXT** | | HEATHOME |
| **NOTE** | |  |
| **PROBES** | | None |

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| **HEATHOME** | |
| **ASK** | All respondents |
| Is your home heated during the winter?  1 Yes  2 No, I do not have any heating equipment  3 No, I have heating equipment but do not use it | |
| **NEXT** | If HEATHOME=1 and TYPEHUQ in(4,5): APTHEAT  If HEATHOME=1 and TYPEHUQ in(1,2,3): EQUIPM  Else: AIRCOND |
| **NOTE** | Question is included to satisfy skip logic for heat pump back-up source question (HPBACKUP), wood amount (WOODAMT/PELLETAMT), secondary heating equipment (EQUIPAUX), and thermostat (THERMAIN). |
| **PROBES** | None |

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| **APTHEAT** | |
| **ASK** | If HEATHOME=1 and TYPEHUQ in(4,5) |
| Is your main heating equipment located in your apartment unit, or is it located somewhere else in the building?  1 In apartment unit  2 Somewhere else in building  Don’t know | |
| **NEXT** | If APTHEAT=1: EQUIPM  Else: EQUIPAUX |
| **NOTE** | Question is included to satisfy skip logic for heat pump back-up source question (HPBACKUP) and wood amount (WOODAMT/PELLETAMT). |
| **PROBES** | None |

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| **EQUIPM** | |
| **ASK** | If HEATHOME=1 and (TYPEHUQ in(1,2,3) or APTHEAT=1)) |
| What is the main type of heating equipment used to provide heat for your home?   1. Central furnace 2. Central heat pump 3. Ductless heat pump, also known as a “mini-split” 4. Steam or hot water system with radiators or pipes 5. Built-in electric units installed in walls, ceilings, baseboards, or floors 6. Built-in room heater burning gas, oil, or kerosene 7. Wood or pellet stove 8. Portable electric heaters 9. Other (please specify)   Don't know  HALF OF THE RESPONDENTS WILL SEE A VERSION OF THE QUESTION THAT DISPLAYS IMAGES. | |
| **NEXT** | If EQUIPM = 4: HPBACKUP  Else: FUELHEAT |
| **NOTE** |  |
| **PROBES** | * How confident are you that your response is correct? (Extremely confident, Very confident, Somewhat confident, Not very confident, Not at all confident) * Please indicate your familiarity with each type of equipment. (GRID WITH EQUIPMENT TYPES IN ROWS. COLUMNS: I know exactly what this is; I have an idea of what this is; I don’t know what this is) * Are there any other terms you would use to refer to this equipment? If so, please list them below. (LIST EQUIPMENT TYPES WITH A TEXT BOX NEXT TO EACH) |

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| **HPBACKUP** | |
| **ASK** | If EQUIPM = 4 |
| Many heat pumps have a backup heating method that can be used when it is very cold. What type of backup heating does your heat pump use?   1. Electric backup 2. Natural gas backup (dual-fuel system) 3. No backup   Don't know | |
| **NEXT** | FUELHEAT |
| **NOTE** |  |
| **PROBES** | * How confident are you that your response is correct? (Extremely confident, Very confident, Somewhat confident, Not very confident, Not at all confident) * What other terms would you use to describe “backup heating?” |

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| **FUELHEAT** | |
| **ASK** | If HEATHOME=1 and (TYPEHUQ in(1,2,3) or APTHEAT=1)) |
| What is the fuel used by your main heating equipment?   1. Electricity 2. Natural gas from underground pipes 3. Propane (bottled gas) 4. Fuel oil 5. Wood or pellets 6. Other (please specify)   Don't know | |
| **NEXT** | If FUELHEAT=7: WOODAMT, PELLETAMT  Else: EQUIPAUX |
| **NOTE** | Question is included to satisfy skip logic for wood amount (WOODAMT/PELLETAMT). Probe is meant to capture additional information related to HPBACKUP. |
| **PROBES** | [*IF FUELHEAT = 1*]: Is your gas bill higher in the winter compared to other times of year? (Yes, No, Don’t Know) |

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| **WOODAMT/PELLETAMT** | |
| **ASK** | If FUELHEAT=7 |
| In the past year, about how much wood or pellets did your household use?  Total amount of wood logs used in the past year: \_\_\_\_\_ cords (WOODAMT)  Total amount of wood pellets used in the past year: \_\_\_\_\_ [ ] 40-pound bags [ ] tons (PELLETAMT)  HALF OF THE RESPONDENTS WILL SEE A VERSION OF THE QUESTION THAT DISPLAYS IMAGES. | |
| **NEXT** | EQUIPAUX |
| **NOTE** |  |
| **PROBES** | * How accurate do you think your response is? (Extremely accurate, Very accurate, Somewhat accurate, Not very accurate, Not at all accurate) |

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| **EQUIPAUX** | |
| **ASK** | If EQUIPAUX>0 |
| **VERSION 1**  In addition to your main heating equipment, does your household also use any of the following as a second source for heating your home? If more than one, select the type most frequently used.   1. No other equipment used 2. Portable electric heater 3. Wood-burning stove 4. Natural gas fireplace 5. Wood-burning fireplace 6. Other (please specify equipment and fuel)   **VERSION 2**  In addition to your main heating equipment, does your household also use any of the following as a second source for heating your home? If more than one, select the type most frequently used.   1. No other equipment used 2. Central furnace 3. Central heat pump 4. Ductless heat pump, also known as a “mini-split” 5. Steam or hot water system with radiators or pipes 6. Built-in electric units installed in walls, ceilings, baseboards, or floors 7. Built-in room heater burning gas, oil, or kerosene 8. Wood or pellet stove 9. Fireplace 10. Portable electric heaters 11. Other (please specify)   Don't know  HALF OF THE RESPONDENTS WILL SEE VERSION 1 AND HALF WILL SEE VERSION 2. | |
| **NEXT** | AIRCOND |
| **NOTE** |  |
| **PROBES** | For people in apartments that did not get asked EQUIPM: Were you thinking about equipment in your unit or in other parts of the building? (In unit, In other parts of the building) |

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| **FUELAUX** | |
| **ASK** | If EQUIPAUX>0 |
| What is the fuel used by your secondary heating equipment?  5 Electricity   1. Natural gas from underground pipes 2. Propane (bottled gas) 3. Fuel oil 4. Wood or pellets 5. Other (please specify)   Don't know | |
| **NEXT** | NEWEQMAMT |
| **NOTE** |  |
| **PROBES** | * Did you have any difficulty with this question? Please explain. |

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| **NEWEQMAMT** | | |
| **ASK** | If EQUIPAUX>0 | |
| Which of the following best describes how your household uses the [WEB FILL: EQUIPAUX / PAPER: secondary heating equipment] during the heating season?   1. Use all or almost all the time 2. Use at least once per week 3. Use a few times per month 4. Use only when it is very cold 5. Use only in rare situations, such as when a guest is visiting 6. Other (please specify) | | |
| **NEXT** | | OTHHEAT |
| **NOTE** | |  |
| **PROBES** | | * Did you have any difficulty with this question? Please explain. |

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| **OTHHEAT** | | |
| **ASK** | If EQUIPAUX>0 | |
| Is there any other equipment used for heating your home? If so, please specify the equipment and fuel.  Open-ended response  No other heating equipment | | |
| **NEXT** | | MOISTURE |
| **NOTE** | |  |
| **PROBES** | | * Did you have any difficulty with this question? Please explain. |

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| **MOISTURE** | | |
| **ASK** | | All respondents |
| Humidifiers add moisture to the air and are often used in the winter. Is a humidifier used in your home?   1. Yes, a portable humidifier 2. Yes, a whole-home humidifier 3. No | | |
| **NEXT** | If MOISTURE>0: USEMOISTURE  Else: AIRCOND | |
| **NOTE** |  | |
| **PROBES** | * Is anything about this question confusing or unclear? Please explain. | |

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| **USEMOISTURE** | | |
| **ASK** | | If MOISTURE>0 |
| In the last year, how many months was the humidifier used?  \_\_\_\_\_ months  {ALLOW RANGE 0 – 12) | | |
| **NEXT** | AIRCOND | |
| **NOTE** |  | |
| **PROBES** | * How confident are you that your response is correct? (Extremely confident, Very confident, Somewhat confident, Not very confident, Not at all confident) | |

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| **AIRCOND** | | |
| **ASK** | | All respondents |
| Is any air conditioning equipment used in your home?   1. Yes   0 No | | |
| **NEXT** | If AIRCOND=1 and TYPEHUQ in(4,5): APTCOOL  Else if AIRCOND=1 and TYPEHUQ in(1,2,3): ACEQUIPM  Else if HEATHOME = 1: THERMAIN  Else: ILTUSE | |
| **NOTE** | Question is included to satisfy skip logic for air conditioning equipment (ACEQUIPM) and thermostat (THERMAIN). | |
| **PROBES** | None | |

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| **APTCOOL** | |
| **ASK** | If TYPEHUQ in(4,5) and AIRCOND=1 |
| Is your main air conditioning equipment located in your apartment unit, or is it located somewhere else in the building?  1 In apartment unit  2 Somewhere else in building  Don’t know | |
| **NEXT** | If APTCOOL=1: ACEQUIPM  Else: THERMAIN |
| **NOTE** | Question is included to satisfy skip logic for air conditioning equipment (ACEQUIPM). |
| **PROBES** | None |

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| **ACEQUIPM** | |
| **ASK** | If AIRCOND=1 and (TYPEHUQ in(1,2,3) or APTCOOL=1)) |
| What is the main type of air conditioning equipment used to cool your home?   1. Central air conditioner 2. Central heat pump 3. Ductless heat pump, also known as a “mini-split” 4. Window or wall air conditioner 5. Portable air conditioner 6. Evaporative or swamp cooler   Don’t know  HALF OF THE RESPONDENTS WILL SEE A VERSION OF THE QUESTION THAT DISPLAYS IMAGES. | |
| **NEXT** | THERMAIN |
| **NOTE** |  |
| **PROBES** | * How confident are you that your response is correct? (Extremely confident, Very confident, Somewhat confident, Not very confident, Not at all confident) * Please indicate your familiarity with each type of equipment. (GRID WITH EQUIPMENT TYPES IN ROWS. COLUMNS: I know exactly what this is; I have an idea of what this is; I don’t know what this is) * Are there any other terms you would use to refer to this equipment? If so, please list them below. (LIST EQUIPMENT TYPES WITH A TEXT BOX NEXT TO EACH) |

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| **NUMCFAN, NUMFLOORFAN** | |
| **ASK** | All respondents |
| How many of the following types of fans does your household use? *If none, please enter “0.”*  \_\_\_\_\_ Number of ceiling fans (NUMCFAN)  \_\_\_\_\_ Number of floor or window fans (NUMFLOORFAN)  {ALLOW RANGE 0 – 50 FOR ALL} | |
| **NEXT** | THERMAIN |
| **NOTE** |  |
| **PROBES** | * When does your household use these fans? (For example: How often? For how long? At what time of year? Etc.) |

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| **NOTMOIST** | | |
| **ASK** | | All respondents |
| Dehumidifiers remove moisture from the air and are often used in the summer. Is a dehumidifier used in your home?   1. Yes, a portable dehumidifier 2. Yes, a whole-home dehumidifier 3. No | | |
| **NEXT** | If NOTMOIST>0: USENOTMOIST  Else: THERMAIN | |
| **NOTE** |  | |
| **PROBES** | * Is anything about this question confusing or unclear? Please explain. | |

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| **USENOTMOIST** | | |
| **ASK** | | If NOTMOIST>0 |
| In the last year, how many months was the dehumidifier used?  \_\_\_\_\_ months  {ALLOW RANGE 0 – 12} | | |
| **NEXT** | THERMAIN | |
| **NOTE** |  | |
| **PROBES** | * How confident are you that your response is correct? (Extremely confident, Very confident, Somewhat confident, Not very confident, Not at all confident) | |

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| **THERMAIN** | |
| **ASK** | If HEATHOME=1 or AIRCOND=1 |
| What kind of thermostat does your household use to control the temperature inside your home?   1. Manual or non-programmable thermostat 2. Programmable thermostat 3. “Smart” or Internet-connected thermostat 4. Not applicable. Household does not use a thermostat   Don’t know | |
| **NEXT** | If HEATHOME=1: EQUIPMUSE  If AIRCOND=1: ACEQUIPMUSE  Else if TYPEHUQ = 4 OR 5: APTH20  Else if TYPEHUQ in (1, 2, 3): WHEATSIZ  Else: END |
| **NOTE** |  |
| **PROBES** | * How easy or difficult was it to answer this question? (Very easy, Somewhat easy, Neither easy nor difficult, Somewhat difficult, Very difficult) * Please explain why this question was easy or difficult to answer. |

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| **EQUIPMUSE** | |
| **ASK** | If HEATHOME=1 |
| Which of the following best describes how your household controls the indoor temperature during the winter?   1. Set one temperature and leave it there most of the time 2. Manually adjust the temperature 3. Programmable or smart thermostat automatically adjusts the temperature 4. Turn equipment on or off as needed 5. Our household does not have control over the equipment   9 Other (please specify) | |
| **NEXT** | If AIRCOND=1: ACEQUIPMUSE  Else if TYPEHUQ = 4 OR 5: APTH20  Else if TYPEHUQ in (1, 2, 3): WHEATSIZ  Else: END |
| **NOTE** |  |
| **PROBES** | None |

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| **ACEQUIPMUSE** | |
| **ASK** | If AIRCOND=1 |
| Which of the following best describes how your household controls the indoor temperature during the summer?   1. Set one temperature and leave it there most of the time 2. Manually adjust the temperature 3. Programmable or smart thermostat automatically adjusts the temperature 4. Turn equipment on or off as needed 5. Our household does not have control over the equipment   9 Other (please specify) | |
| **NEXT** | If TYPEHUQ = 4 OR 5: APTH20  Else if TYPEHUQ in (1, 2, 3): WHEATSIZ  Else: END |
| **NOTE** |  |
| **PROBES** | None |

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| **APTH2O** | |
| **ASK** | If TYPEHUQ = 4 OR 5 |
| Is your water heater located in your apartment unit, or is it located somewhere else in the building?  1 In apartment unit  2 Somewhere else in building  Don’t know | |
| **NEXT** | If TYPEHUQ in (1, 2, 3) or APTH2O=1: WHEATSIZ  Else: END |
| **NOTE** | Question is included to satisfy skip logic for air water heater questions (WHEATBKT, WHEATHP). |
| **PROBES** | None |

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| **WHEATSIZ** | |
| **ASK** | If TYPEHUQ in (1, 2, 3) OR APTH20 = 1 |
| What is the approximate size of your main water heater?   1. Small (30 gallons or less) 2. Medium (31 to 49 gallons) 3. Large (50 gallons or more) 4. Tankless or on-demand   Don’t know | |
| **NEXT** | WHEATBKT |
| **NOTE** | Question is included to satisfy skip logic for air water heater questions (WHEATBKT, WHEATHP). |
| **PROBES** | None |

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| **WHEATBKT** | |
| **ASK** | If WHEATSIZ in (1,2,3) |
| If your main water heater insulated using a water heater blanket?   1. Yes 2. No   Don’t know | |
| **NEXT** | WHEATHP |
| **NOTE** |  |
| **PROBES** | * How confident are you that your response is correct? (Extremely confident, Very confident, Somewhat confident, Not very confident, Not at all confident) |

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| **WHEATHP** | |
| **ASK** | If WHEATSIZ in (1,2,3) |
| Is your main water heater a hybrid heat pump water heater?   1. Yes 2. No   Don’t know | |
| **NEXT** | END |
| **NOTE** |  |
| **PROBES** | None |

This is the end of the survey.

This is your MTurk verification code: **[DISPLAY RANDOM 8-DIGIT ALPHANUMERIC STRING]**

Please enter the verification code in your HIT on MTurk to receive approval. Remember to copy your code before you close the current browser tab or window.

Thank you for your participation!