

1 **Appendix A: Survey Questionnaire**

2 Mojtaba Sadegh and Mariah Fowler Consent Form

3 **Title: Smoke Waves in the Treasure Valley**

4 **Alternative title: Human Response to Wildfire Smoke Survey**

5 Study Information Sheet

6 The study is being conducted by Mojtaba Sadegh, assistant professor, and Mariah Fowler, graduate student of Civil
7 Engineering, at Boise State University. The purpose of this study is strictly for research purposes. The researchers
8 are not affiliated in any way with any organization other than Boise State University.

9 The purpose of this study is to assess human response to wildfire smoke. During the study, you will answer some
10 survey questions and read a brief text. This survey should take you less than 10 minutes to complete. You must be
11 at least 18 years old to complete this survey.

12 This study involves no foreseeable risks. You may discontinue the study at any time. Your responses are completely
13 anonymous and cannot be linked to you in any way.

14 For this research project, we are requesting demographic information. Though it is unlikely, it is possible that the
15 combined answers to these questions may make an individual person identifiable. The researchers will make every
16 effort to protect your confidentiality. However, if you are uncomfortable answering any of these questions, you
17 may leave them blank.

18 **CONTACTS FOR QUESTIONS OR PROBLEMS**

19 Contact Information: If you should have any questions about this research study, please contact Mojtaba Sadegh
20 at 208-426-3774 or mojtabasadeqh@boisestate.edu. For additional information about your rights as a research
21 participant in this study, please feel free to contact the Boise State University Institutional Review Board Office.
22 You may reach the board office between 8:00 AM and 5:00 PM, Monday through Friday, by calling (208) 426-
23 5401 or by writing: Institutional Review Board, Office of Research Compliance, Boise State University, 1910
24 University Dr., Boise, ID 83725-1138.

25 In consideration of all of the above, I give my consent to participate in this research study.

26 In consideration of all of the above, I DO NOT consent to participate in this research study. [EXIT IF NO
27 CONSEN]

28

29

Date:

Survey location:

DEMOGRAPHIC DATA

If you are uncomfortable answering any of these questions, you may leave them blank.

1. Do you consent to participate in this research study?
 - ☐ Yes
 - ☐ No – If you do not consent to participate, please do not complete this survey
2. What is your age?
Fill in the blank _____
3. Which gender do you identify with?
 - ☐ A woman
 - ☐ A man
 - ☐ Other _____
4. What racial or ethnic group best describes you?
 - ☐ White / Caucasian
 - ☐ Hispanic or Latino
 - ☐ Black or African American
 - ☐ Native American / American Indian or Alaskan Native
 - ☐ Asian / Pacific Islander
 - ☐ Other _____
5. What is the ZIP Code where you currently live?
Fill in the blank _____
6. What is the highest degree or level of school you completed? If currently enrolled, highest degree received.
 - ☐ 8th grade or less
 - ☐ Some high school, no diploma
 - ☐ High school graduate, diploma or GED
 - ☐ Some college, no degree
 - ☐ Associates degree
 - ☐ Bachelor's degree
 - ☐ Master's degree
 - ☐ Ph.D, M.D., J.D. or similar
7. What is your total household income, including income from all members of your family, in 2017 before taxes? This figure should include salaries, wages, pensions, dividends, interest, and all other income.
 - ☐ \$25,000 or less
 - ☐ \$25,000 to \$49,999
 - ☐ \$50,000 to \$74,999
 - ☐ \$75,000 to \$99,999
 - ☐ \$100,000 or more

71
72 **ACTIVITY DATA**

73 8. Would you say that in general your health is:

- 74 ☐ Excellent
75 ☐ Good
76 ☐ Fair
77 ☐ Poor
78

79 9. During summer of 2018, have you engaged in any outdoor activities, such as hiking, biking, fishing,
80 gardening, running, or any other outdoor activity?

- 81 ☐ Yes – Please list the activities _____
82 ☐ No (skip to question 11)
83

84 10. During the summer of 2018, how often would you say you've engaged in the outdoor activities you've
85 listed above?

- 86 ☐ Daily
87 ☐ A few times per week
88 ☐ Once per week
89 ☐ Less than once per week, but more than once per month
90 ☐ Rarely – A few times during the summer
91 ☐ Never

92 **AIR QUALITY NOTIFICATION**

93 11. During the summer of 2018, have you ever received an air quality notification message suggesting you
94 avoid outside activity?

- 95 ☐ Yes
96 ☐ No

97 12. Do you ever seek out information related to wildfire and smoke notifications?

- 98 ☐ a. Yes
99 ☐ b. No (if you answered no to both questions 11 and 12, please skip to question 15)
100

101 13. Which source do you use to find wildfire smoke notifications? [Check all that apply]

- 102 ☐ Social media (like Facebook, Instagram, Twitter)
103 ☐ Television
104 ☐ Online news sources
105 ☐ Newspapers
106 ☐ Friends or Family
107 ☐ Personal observation
108 ☐ State agencies such as Department of Environmental Quality website
109 ☐ Idaho Smoke Information Blog
110 ☐ Federal sources such as AIRnow.gov website
111 ☐ Dynamic road sign displays (such as the signs on I-184 or I-84)
112 ☐ Other _____

- 113 14. In a smoky week in summer 2018, about how many days did you look online (either on a computer, tablet,
114 or smartphone) for smoke-related information, such as air quality, smoke forecasts, or health notices?
115 ☐ 0 days
116 ☐ 1 days
117 ☐ 2 days
118 ☐ 3 days
119 ☐ 4-5 days
120 ☐ 6-7 days.
121
- 122 15. During summer of 2018, did you *ever* reduce your outside activities due to wildfire smoke?
123 ☐ Yes
124 ☐ No
125 ☐ Not applicable
126
- 127 16. During summer of 2018, think of the *longest* period of consecutive days you reduced or eliminated your
128 outdoor activities due to a smoke event. How many consecutive days did you reduce or eliminate activity?
129 ☐ 0 days
130 ☐ 1 to 2 days
131 ☐ 3 days
132 ☐ 4 days
133 ☐ 5 days
134 ☐ 6 days and more
135
- 136 17. What is the *minimum* air quality index rating that would cause you to reduce your outdoor activity on a
137 particular day?
138 ☐ Green – Good
139 ☐ Yellow – Moderate
140 ☐ Orange – Unhealthy for Sensitive Groups
141 ☐ Red – Unhealthy
142 ☐ Purple – Very Unhealthy
143 ☐ Maroon – Hazardous
144 ☐ I am not familiar with this rating
145
- 146 18. What is the *minimum* air quality index rating that would cause you to eliminate your outdoor activity on a
147 particular day?
148 ☐ Green – Good
149 ☐ Yellow – Moderate
150 ☐ Orange – Unhealthy for Sensitive Groups
151 ☐ Red – Unhealthy
152 ☐ Purple – Very Unhealthy
153 ☐ Maroon – Hazardous
154 ☐ I am not familiar with this rating

- 155
156
157 19. If you decided to limit your outdoor activity during a smoke event, what type of information motivated
your decision to do so? [Check all that apply]
158 ☐ Smoke-related health problem statistics
159 ☐ Air quality information
160 ☐ Smoke forecasts
161 ☐ Your own visual observation (seeing the smoke outside)
162 ☐ Wildfire information
163 ☐ Advice from your doctor
164 ☐ Advice from family and friends
165
- 166 20. What type of message could motivate / motivated you to take action to mitigate the risk of issues related to
167 wildfire smoke, such as staying indoors or leaving the area? [Check all that apply]
168 ☐ Text message
169 ☐ Phone call
170 ☐ Social media message
171 ☐ Online message
172 ☐ Message seen on television
173 ☐ Emergency alerts
174 ☐ Contact from family or friends
175
- 176 21. What was the *content* of the message(s) that motivated you to take this action to mitigate the negative
177 health impacts of wildfire smoke? [Check all that apply]
178 ☐ A short message warning about the risk (1 line of text)
179 ☐ A short message warning about the risk that included health or other statistics
180 ☐ A short statement (roughly 1 paragraph)
181 ☐ A visual infographic or picture
182 ☐ An online Q&A session (Facebook Live or Instagram Live)
183 ☐ A video
184 ☐ A conversation (either online, via phone, or in person)
185
- 186 22. When would receiving a smoke warning message be most likely to impact your decision to limit or avoid
187 outdoor activities *that same day*?
188 ☐ I would prefer to know the day before
189 ☐ Early morning (before 9 AM)
190 ☐ Late morning (9 AM – noon)
191 ☐ Afternoon (Noon – 5 PM)
192 ☐ Evening (5 PM or later)
193
- 194 23. Will you take preventive actions to reduce smoke-related health impacts in the future?
195 ☐ Yes – Please list the actions you might take _____
196 ☐ No
197 ☐ Not sure

198 **NATURAL HAZARD QUESTIONS**

199 24. Do you consider wildfire smoke events a natural hazard?

- 200 ☐ Yes
201 ☐ No
202 ☐ Not sure
203

204 25. As a public health threat, are wildfire smoke events more important, less important, or about as important
205 as other natural disasters, such as hurricanes or tornadoes?

- 206 ☐ Much less severe/important
207 ☐ Somewhat less severe/important
208 ☐ About as severe/important
209 ☐ Somewhat more severe/important
210 ☐ Much more severe/important
211

212 26. Would you consider evacuating your home only because of the wildfire smoke?

- 213 ☐ Yes, I have done this in the past.
214 ☐ Yes, I would consider it
215 ☐ No
216 ☐ Prefer not to answer
217

217 **HEALTH QUESTIONS**

218 27. Have you, or anyone in your household, experienced wildfire smoke-related illness?

- 219 ☐ Yes
220 ☐ No
221 ☐ Not sure
222

223 28. Did you have any of the following symptoms during or a few days after one of the smoke events in the
224 summer of 2018 in the Boise area / Treasure Valley? [Check all that apply]

- 225 ☐ Wheezing or whistling in the chest
226 ☐ Itchy or watery eyes
227 ☐ Irritated eyes
228 ☐ Sneezing or a runny or blocked nose
229 ☐ Dry irritated nose / sinuses
230 ☐ A sore or irritated throat
231 ☐ A cold
232 ☐ A dry cough at night
233 ☐ A dry cough first thing in the morning
234 ☐ A dry cough at other times of the day
235 ☐ A wet cough (congestion in the chest or phlegm production)
236 ☐ Bronchitis
237 ☐ An asthma attack
238 ☐ Headaches
239 ☐ Fatigue

- 240 29. Did you use/do any of the following to help with any symptoms during the smoke event? [Check all that
241 apply]
- 242 ☐ Take medication
 - 243 ☐ Wear a mask to protect your lungs
 - 244 ☐ Take long showers
 - 245 ☐ Visit a doctor or nurse
 - 246 ☐ Visit a doctor's office for asthma or smoke-related lung issues
 - 247 ☐ Use a personal air filtration system in your home or office
 - 248 ☐ Go to buildings that have air filtration systems like the mall or public library
 - 249 ☐ Miss work due to health problems
- 250
- 251
- 252
- 253
- 254