

NWS Flood Survey

Start of Block: CONSENT

Q1.1 FLASH FLOOD RESPONSE SURVEY

Thank you for helping us understand how people respond to hazardous weather!

This brief survey asks about your experience during the {DATE} weather event in your area. Your responses will help improve how weather alerts and information are delivered to the public. It should take 5–10 minutes to complete.

Your participation is:

- Voluntary – You can skip any question or stop at any time.
- Anonymous – We will not collect your name or contact information.
- Confidential – We will not reveal any personally identifiable information.

There is no risk or penalty if you choose not to take part. We are not offering any payment for participation. Results may be shared with local officials and made publicly available, but without any identifying details.

Questions?

- Contact Brenda Philips at bphilips@ecs.umass.edu or Cedar League at cedarleague@gmail.com
- For questions about your rights as a research participant, contact the UMass Amherst IRB at (413) 545-3428.

This study is approved under OMB Control Number: 0648-0805.

You can read more about your rights under the Paperwork Reduction Act here (with link)

BEGIN THE SURVEY BY PRESSING >> BELOW

Link

PRA Burden Statement

This survey is funded by the National Oceanic and Atmospheric Administration.

A Federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with an information collection subject to the requirements of the Paperwork Reduction Act of 1995 unless the information collection has a currently valid OMB Control Number. The approved OMB Control Number for this

information collection is 0648-0805. Without this approval, we could not conduct this survey collection. Public reporting for this information collection is estimated to be approximately 5-10 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the information collection. All responses to this information collection are voluntary. Send comments regarding this burden estimate or any other aspect of this information collection, including suggestions for reducing this burden to Ji Sun Lee, DOC/NOAA/NWS/OSTI, 1325 East West Highway, Silver Spring, MD 20910, (301) 349-6175, jisun.lee@noaa.gov.

End of Block: Consent

Start of Block: Panel Questions

Start of Block: INTRO

Q3.1 What is your 5 digit zip code?

Q3.2 How did you get the link to this survey?

- ☐ National Weather Service website/social media (1)
- ☐ Local News website/social media (2)
- ☐ Public Safety email list, website, or social media (3)
- ☐ A friend forwarded it to me (4)
- ☐ Community group email list, website or social media (5)
- ☐ Other (6) _____

Q3.31 Heavy Rain/Flooding recently occurred in your area. Please select the event date that you remember the most.

[IF BOTH TORNADO/FLASH FLOOD EVENT OCCURS, QUESTION DISPLAYED WILL READ: "Severe weather (high winds, hail, tornadoes and/or flash flooding) recently occurred in your area. Please select the event date you recall the most."]

Display this choice:
If BEGIN_DATE_1 Is Not Empty

☐ \${e://Field/BEGIN_DATE_1} (1)

Display this choice:
If BEGIN_DATE_2 Is Not Empty

☐ \${e://Field/BEGIN_DATE_2} (2)

Display this choice:
If BEGIN_DATE_3 Is Not Empty

☐ \${e://Field/BEGIN_DATE_3} (3)

Display this choice:
If BEGIN_DATE_4 Is Not Empty

☐ \${e://Field/BEGIN_DATE_4} (4)

☐ Other date (enter date mm/dd/yyyy) (6)

☐ I don't remember any event(s) (5)

Skip To: End of Survey If Q3.31 = 5

Q3.4 What type of weather were you most impacted by? [THIS QUESTION ONLY DISPLAYED IF AREA WAS IMPACTED BY BOTH A TORNADO AND FLASH FLOOD EVENT. IF FLOOD IS SELECTED, RESPONDENT ROUTED TO FLOOD SURVEY. IF TORNADO/SEVERE SELECTED, RESPONDENT WILL GET SEVERE WEATHER/TORNADO SURVEY.]

☐ High winds, hail or tornado (1)

☐ Flash flooding or heavy rain (2)

End of Block: INTRO

Start of Block: PRE-EVENT PHASE - INFO & ACTIONS



Q4.1

Please answer the rest of the survey based on what you experienced on [\\${Q3.31/ChoiceGroup/SelectedChoices}](#).

BEFORE the event began, did you know about the POTENTIAL for heavy rain/flash floods to occur?

- ☐ Yes (1)
- ☐ No (2)
- ☐ I don't know (3)

Skip To: End of Block If Q4.1 = 2

Skip To: End of Block If Q4.1 = 3

Q4.2 How far in advance were you aware that flash flooding was POSSIBLE for your area?

- ☐ Minutes before (1) **Skip to EVENT BLOCK if checked**
- ☐ Less than an hour before (2)
- ☐ Between 1 hour and 6 hours before (3)
- ☐ Between 7 hours and 24 hours before (4)
- ☐ Between 1 and 2 days before (5)
- ☐ 3 or more days before (6)
- ☐ I don't know (7)



Q4.4 People get their weather information in many ways. BEFORE the event happened, how did you access or receive information about possible heavy rain or flash flooding? (Select all that apply.)

- ☐ Social media (ex. Facebook, Twitter/X, YouTube) (1)
- ☐ TV or cable news (2)
- ☐ Website (ex. weather.com, news website, NWS) (3)
- ☐ Wireless Emergency Alert (NWS mobile phone alert) (4)
- ☐ City or county notification (ex. Reverse 911, Code Red, Everbridge) (5)
- ☐ Smartphone app (ex. weather app, news app, neighborhood app) (7)
- ☐ Text message (ex. SMS, WhatsApp, App notification) (8)
- ☐ Phone call (9)
- ☐ Radio (10)
- ☐ NOAA weather radio (11)
- ☐ Sirens (12)
- ☐ Talking in-person with someone (14)
- ☐ Going outdoors or looking out a window (15)
- ☐ Voice assistant (ex. Alexa, Google Home, Siri) (17)
- ☐ Other (please specify): _____ (19)

4.3 Thinking about the information you received before the event, which people, organizations, or groups provided you with the most useful information about possible heavy rain or flash flooding? (Select up to 3 that were the most useful for you.)

- ☐ Commercial national weather or media organization

(ex. Weather Channel, AccuWeather, Google Weather, Good Morning America)

☐ Local TV station or local weather broadcaster
(ex. local meteorologist or anchor)

☐ National Weather Service (NWS)

☐ Other federal agency
(ex. FEMA, Department of Transportation)

☐ Friends or family

☐ Community leader
(ex. school official, mayor, clergy, governor)

☐ Local public safety official
(ex. emergency manager, police, firefighter)

☐ Local weather blogger or independent streamer
(ex. updates on Facebook, YouTube, or Twitter/X)

☐ Other (please specify): _____

Page
Break



Q4.13 Based on the information you had BEFORE the event, did you think any of the threats listed below might impact you or your family? (Select all that apply.)

- ☐ Heavy rains (1)
- ☐ Rapid rise in streams, creeks and rivers (2)
- ☐ Flooded roadways / closure of roads (3)
- ☐ Cars swept away (4)
- ☐ House/structural flooding (5)
- ☐ Destruction of property (6)
- ☐ Power outage (7)
- ☐ Personal injury (8)
- ☐ No threats/impacts (9)
- ☐ Other (please specify) (10)

Page
Break

Q4.12 Based on the information you had BEFORE the event began, what was your level of concern about how the heavy rain/flash floods might impact you or your family?

- ☐ No concern (1)
- ☐ Slightly concerned (2)
- ☐ Moderately concerned (3)
- ☐ Very Concerned (4)
- ☐ Extremely concerned (5)

Q4.14 What, if any, preparations did you make BEFORE the heavy rain or flash flood began? (Select all that apply.)

- ☐ Looked for additional weather information
- ☐ Shared weather information with someone else
- ☐ Changed travel plans, activities or appointments that might be impacted by the weather. **IF CHECKED THEN GO TO 4.15**
- ☐ Purchased emergency supplies (ex. sandbags, extra food, batteries)
- ☐ Protected my property or belongings (ex. moved vehicle, cleared drains)
- ☐ Made a sheltering or evacuation plan
- ☐ Took steps to care for pets or livestock (ex. moving animals, securing supplies)
- ☐ Checked in on family or others who might need help (ex. making sure everyone was safe, in the same place, or had a plan)
- ☐ No action taken
- ☐ Other (please specify): _____

4.15. Tell us more about how you changed your plans

- ☐ Cancelled or postponed a non-essential activity or appointment (ex. errands, social plans)
- ☐ Cancelled or postponed an important activity or appointment (ex. medical, work, childcare)

- ☐ Planned to delay travel until conditions improved (ex. decided to wait until the rain eased before leaving)
- ☐ Planned to take a different route to avoid areas likely to flood (ex. changed my usual route to stay on higher ground)
- ☐ Planned to allow more time for travel.

End of Block: PRE-EVENT PHASE - INFO & ACTIONS

Start of Block: EXPERIENCE/INFO/ LOCATION DURING EVENT

Q5.21 Where were you when you experienced the heavy rain or flooding? (Check all that apply.) **NOTE: WE WILL PRIORITIZE PEOPLE WHO WERE IN VEHICLES, THEN PUBLIC TRANSPORT/OUTSIDE, THEN HOME.**

- ☐ In a vehicle (1)
- ☐ At home or in a building (2)
- ☐ On-foot and outside (3)
- ☐ Using public transportation (4)
- ☐ I did not experience any heavy rain or flooding(5)

Skip To: End of Block If Q5.21 = 5

Skip to Driving BLOCK if Q5.21 = 1

SKIP to WALKING/PUBLIC TRANSPORT BLOCK if Q5.21 = 3 or 4

Q172 DURING the event, when you were [insert place] how did you know the heavy rain/ flash flooding event was happening? Tell us how you accessed weather information (Select all that apply.)

- ☐ Social media (ex. Facebook, Twitter/X, YouTube) (1)
- ☐ TV or cable news (2)
- ☐ Website (ex. weather.com, news website, NWS) (3)
- ☐ Wireless Emergency Alert (NWS mobile phone alert) (4)
- ☐ City or county notification (ex. Reverse 911, Code Red, Everbridge) (5)
- ☐ Smartphone app (ex. weather app, news app, neighborhood app) (7)

- ☐ Text message (ex. SMS, WhatsApp, App notification) (8)
- ☐ Phone call (9)
- ☐ Radio (10)
- ☐ NOAA weather radio (11)
- ☐ Sirens (12)
- ☐ Talking in-person with someone (14)
- ☐ Going outdoors or looking out a window (15)
- ☐ Voice assistant (ex. Alexa, Google Home, Siri,) (17)
- ☐ Other (please specify): _____ (19)

Q6.1 DURING the event, when you were [Location] which people, organizations, or groups provided you with the most useful information the ongoing heavy rain or flash flooding? (Select up to 3 that were the most useful for you.)

- ☐ Commercial national weather or media organization (ex. Weather Channel, AccuWeather, Google Weather, Good Morning America)
- ☐ Local TV station or local weather broadcaster (ex. local meteorologist or anchor)
- ☐ National Weather Service (NWS)
- ☐ Other federal agency (ex. FEMA, Department of Transportation)
- ☐ Friends or family
- ☐ Community leader (ex. school official, mayor, clergy, governor)
- ☐ Local public safety official (ex. emergency manager, police, firefighter)
- ☐ Local weather blogger or independent streamer (ex. updates on Facebook, YouTube, or Twitter/X)
- ☐ Other (please specify): _____

End of Block: EXPERIENCE/INFO/ LOCATION DURING EVENT

Start of Block: EVENT - DRIVING

Q7.1

Were you the driver or the passenger in the vehicle?

- ☐ I was the driver (1)
- ☐ I was the passenger (2)

Q7.2 Was anyone in the vehicle with you? (Select all that apply.)

- ☐ Kid(s) 12 and under (1)
- ☐ Teen(s) 13 – 17
- ☐ Adult(s) 18+ (2)
- ☐ Senior citizen(s) (3)
- ☐ Person(s) with a disability (4)
- ☐ Pet(s) (5)
- ☐ I was alone (6)
- ☐ Other (7) _____

Q7.3 What type of vehicle you were in?

- ☐ Lower clearance vehicle (ex. car, small SUV, sedan, minivan, motorcycle) (1)
- ☐ Higher clearance vehicle (ex. truck, bus, large SUV, large van, semi) (2)
- ☐ Other (3) _____

Q7.31 Where were you traveling from? (Select one)

- ☐ Home
- ☐ Work
- ☐ School
- ☐ Childcare
- ☐ Retail, restaurant, or leisure location
- ☐ Transport hub (e.g., airport, train station)
- ☐ Location for an appointment or scheduled activity (e.g., doctor, performance, sports, lessons)

☐ Outdoor recreation area (e.g., park, trail)

☐ Other (please specify): _____

Q7.4 What was the primary purpose of your trip?
(Select one)

- ☐ Returning Home
- ☐ Traveling to school for yourself
- ☐ Traveling to work
- ☐ Picking up or dropping off kids or family
- ☐ Driving for work-related purposes
- ☐ Going to a transport hub
- ☐ Checking on or assisting family, pets, or livestock
- ☐ Attending a scheduled appointment or event (e.g., medical visit, sports, lessons, performance)
- ☐ Running errands or leisure activities (e.g., shopping, dining, recreation)
- ☐ Traveling due to a flood evacuation
- ☐ Other (please specify): _____

7.41 Were you aware of any school closings, event cancellations due to the flooding — — —

- ☐ School related closings or cancellations
- ☐ City related closing or cancelled activities
- ☐ Work related closings
- ☐ Retail closings
- ☐ Childcare related closings
- ☐ Adult care related closings (for seniors, disabilities)

Display this question:

If Q5.2 = 1



Q6.13 While in the vehicle, what actions, if any, did you take DURING the flash flood event? (Select all that apply.)

- ☐ Looked for additional weather information (1)
 - ☐ Shared information with somebody (2)
 - ☐ Allowed more time for travel or rerouted my trip(s) (4)
 - ☐ Assisted others during event (5)
 - ☐ No action taken (6)
 - ☐ Other (please specify) (7)
-

Q178 DURING the event, what was your level of concern about how the heavy rain/flash floods might impact you?

- ☐ Not concerned (1)
- ☐ Slightly concerned (2)
- ☐ Moderately concerned (3)
- ☐ Very concerned (4)
- ☐ Extremely concerned (5)

Q7.5 Did you encounter any amount of flooding or a closed road? (Flooding could have been any amount of moving or standing water on the road.)

- ☐ Yes (1)
- ☐ No (2)
- ☐ Other (3) _____

Skip To: End of Block If Q7.5 = 2

Skip To: End of Block If Q7.5 = 3

Q7.6 Please enter the TOWN and closest INTERSECTION of the flooded road you encountered.

- ☐ Town (3) _____
- ☐ Intersection (1) _____

Q7.7 Please enter the approximate TIME OF DAY you encountered the flooded road.

Hour (4)

Minutes (5)

AM/PM (6)

▼ 12 (1) ... I Don't Know ~ ~ (447)

Q7.71 Was it dark outside?

- ☐ Yes (1) _____
- ☐ No (0) _____

Q7.8 What did you see when you encountered the flooded or closed road? (Select all that apply.)

- ☐ Flooded creek, stream, or river
- ☐ Presence of water on road (1)
- ☐ Flashing lights (2)
- ☐ Barricades (3)
- ☐ Public safety officials (4)
- ☐ Heavy traffic, blocked roads (5)
- ☐ I saw vehicles driving through (6)
- ☐ I saw vehicles turning around (7)
- ☐ I saw vehicle(s) stuck in flood water (8)
- ☐ I saw vehicle(s) swept away (9)
- ☐ Other (10) _____

Q7.9 How deep would you say the water was at that location?

- ☐ I did not see any water (1)
- ☐ Less than 3 inches (2)
- ☐ Between 3 to 6 inches (3)
- ☐ Between 6 to 12 inches (4)
- ☐ Between 12 to 24 inches (5)
- ☐ 24+ inches (6)
- ☐ I don't know (7) _____

Display this question:

If Q7.1 != 2



Q7.10 What did you or the driver do when seeing the flooded or closed road? (Select one.)

- ☐ Turned around and/or rerouted the trip (1)
- ☐ Continued driving on the road and made it through the flooded area (2)
- ☐ Continued driving on the road and it wasn't flooded, or my side of road wasn't flooded (3)
- ☐ Continued driving on the road and got stuck in flood waters (4)
- ☐ Stopped driving and pulled the car over (5)
- ☐ Other, describe (6) _____

Q170 Did you call anyone for help?

- ☐ Yes (please explain) (1) _____
- ☐ No (2)

The next set of questions asks about how different factors may have influenced the decision about what to do at the flooded or closed road. There are many different reasons that people avoid driving on flooded roads or end up driving on a flooded road. If you were the driver, please answer the next set of questions from your perspective. If you were the passenger, then please answer the questions based on any interactions you had with the driver.

Q7.01. How much do you agree or disagree with the following statements?

I felt confident the vehicle would make it through the water safely

- | | | | | |
|-----------------------------|--------------------|-------------------|-----------------|-----------------------|
| 1. Strongly disagree
(1) | 2. Disagree
(2) | 3. Neutral
(3) | 4. Agree
(4) | 5. Strongly agree (5) |
|-----------------------------|--------------------|-------------------|-----------------|-----------------------|

Reaching the destination was more important than avoiding the risk of driving through floodwater

- | | | | | |
|-----------------------------|--------------------|-------------------|-----------------|-----------------------|
| 1. Strongly disagree
(1) | 2. Disagree
(2) | 3. Neutral
(3) | 4. Agree
(4) | 5. Strongly agree (5) |
|-----------------------------|--------------------|-------------------|-----------------|-----------------------|

Everything happened so quickly that I/we acted before fully weighing the risks

- | | | | | |
|-----------------------------|--------------------|-------------------|-----------------|-----------------------|
| 1. Strongly disagree
(1) | 2. Disagree
(2) | 3. Neutral
(3) | 4. Agree
(4) | 5. Strongly agree (5) |
|-----------------------------|--------------------|-------------------|-----------------|-----------------------|

I was surprised by the depth of the water when the vehicle began driving through the floodwaters

- | | | | | |
|-----------------------------|--------------------|-------------------|-----------------|-----------------------|
| 1. Strongly disagree
(1) | 2. Disagree
(2) | 3. Neutral
(3) | 4. Agree
(4) | 5. Strongly agree (5) |
|-----------------------------|--------------------|-------------------|-----------------|-----------------------|

Q7.11

Please indicate how much the following warning and environmental factors influenced the driving decision at the flooded and/or closed road. the driving decision at the flooded and/or closed road. Select "Not a Factor" if the factor was not relevant.

	1. Not influential at all (1)	2. Slightly influential (2)	3. Somewhat influential (3)	4. Very influential (4)	5. Extremely influential (5)	Not a factor (6)
Presence of barricades/blockades	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Presence of flashing sign(s) indicating flooding	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Presence of safety officials	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
NWS Flash Flood Warning Received	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Intense rainfall outside	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Long rainfall duration	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Not seeing water on the road	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fast Moving Water on the Road	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Display this question:

If Q7.1 != 2

Q7.12 Please indicate how much the following social factors influenced the driving decision the driving decision at the flooded and/or closed road. Select "Not a Factor" if the factor was not relevant.

	1. Not influential at all (1)	2. Slightly influential (2)	3. Somewhat influential (3)	4. Very influential (4)	5. Extremely influential (5)	Not a factor (6)
Seeing other vehicle(s) drive through successfully	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Seeing other vehicle(s) turn around	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Seeing other vehicle(s) stuck	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Past experience making it through	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Past experience NOT making it through	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Concern/fear for self, family, friends	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
High confidence in my vehicle/driving ability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Friends/family urged me to be cautious	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Display this question:

If Q7.1 != 2



Q7.14 Please indicate how much the following situational factors influenced the driving decision at the flooded and/or closed road. Select "Not a Factor" if the factor was not relevant.

	1. Not influential at all (1)	2. Slightly influential (2)	3. Somewhat influential (3)	4. Very influential (4)	5. Extremely influential (5)	Not a factor (6)
Needing to get to work/family/kids	0	0	0	0	0	0
Inconvenience of taking a detour	0	0	0	0	0	0
Heavy traffic, road blocked	0	0	0	0	0	0
Event timing (rush hour, evening, weekend)	0	0	0	0	0	0
This flood event caught me by surprise	0	0	0	0	0	0

End of Block: EVENT - DRIVING

Start of Block: EVENT - HOME/INDOORS

Q8.1

What type of building were you in during the heavy rain/flood event?

- ☐ Free standing home/residence (1)
- ☐ Multi-residential unit (Apartment/townhouse/condo) (2)
- ☐ Mobile home (3)
- ☐ Work place building (4)
- ☐ Retail building (5)
- ☐ Other (6) _____

Q8.2 Was anyone in the home/building with you? (Select all that apply.)

- ☐ Kid(s) 12 and under (1)
- ☐ Teen(s) 13 – 17
- ☐ Adult(s) 18+ (2)
- ☐ Senior Citizen(s) (3)
- ☐ Person(s) with a disability (4)
- ☐ Pet(s) (5)
- ☐ I was alone (6)
- ☐ Other (7) _____

Display this question:

If Q5.2 = 2



Q6.12 While indoors, what action(s), if any, did you take DURING the heavy rain/flash flood event? (Select all that apply.)

- ☐ Looked for additional weather information (1)
- ☐ Shared information with somebody (2)
- ☐ Cancelled or rescheduled plans (3)
- ☐ Protected home/building with sandbags (4)
- ☐ Protected my belongings (ex. move furniture, car) (5)
- ☐ Protected my family/pets (6)
- ☐ Assisted others during event (7)
- ☐ Remained indoors until safe (8)
- ☐ Relocated to a higher level in my home/building (9)
- ☐ Evacuated from my location (10)
- ☐ No action taken (11)
- ☐ Other (12) _____



Q6.11 DURING the event, what was your level of concern about how the heavy rain/flash floods might impact you?

- ☐ Not concerned (1)
- ☐ Slightly concerned (2)
- ☐ Moderately concerned (3)
- ☐ Very concerned (4)
- ☐ Extremely concerned (5)

Q8.3 Did you experience flooding at any of the locations below?

- ☐ I experienced flooding inside the building/home (1)
- ☐ I experienced flooding very close to the building/home (2)
- ☐ No, I did not experience any flooding (3)
- ☐ I don't know (4)

Skip To: End of Block If Q8.3 = 3

Skip To: End of Block If Q8.3 = 4

Q8.4 Please enter the TOWN and closest INTERSECTION where the flooding occurred.

☐ Town (3) _____

☐ Intersection (1) _____

Q8.5 Please enter the approximate time of day when you experienced the flooding.

Hour (4)

Minutes (5)

AM/PM (6)

▼ 12 (1) ... I Don't Know ~ ~ (447)



Q8.6 How did you know the flooding was happening? (Select all that apply.)

- ☐ I saw increasing water levels in the house (1)
- ☐ I saw flooding outside of the house (2)
- ☐ A friend, neighbor, or landlord called (3)
- ☐ Public safety or police notified me (4)
- ☐ Other (5) _____

Q8.7 What was the greatest water depth you observed during this event?

- ☐ I did not see any water (1)
- ☐ 0 to 3 inches (2)
- ☐ 3 to 6 inches (3)
- ☐ 6 to 12 inches (4)
- ☐ 12 to 24 inches (5)
- ☐ > 24 inches (6)
- ☐ Other (7) _____
- ☐ I don't know (8)

Q8.8 What action did you take in response to the flooding? (Select one.)

- ☐ I went to a non-flooded area or higher floor of the building (1)
- ☐ I evacuated the building (2)
- ☐ I stayed where I was and monitored the situation (3)
- ☐ I stayed where I was because I couldn't evacuate due to the flooding conditions (4)
- ☐ I stayed and protected my property and belongings (place sandbags, move car, move furniture/belongings) (5)
- ☐ No action taken (6)
- ☐ Other (7) _____



Q8.9 Did you contact anyone for help?

- ☐ No (1)
- ☐ Yes (please explain) (2) _____

Q8.10

This next set of questions asks about different factors that may have influenced your decision.

How much did the following warning and environmental factors influence the action(s) you took when you experienced the flooding? Select "Not a Factor" if the factor was not relevant to your decision.

	1. Not influential at all (1)	2. Slightly influential (2)	3. Somewhat influential (3)	4. Very influential (4)	5. Extremely influential (5)	Not a factor (6)
NWS Flash Flood Warning Received	0	0	0	0	0	0
Flooding at my location was minor	0	0	0	0	0	0
Intense rainfall	0	0	0	0	0	0
Rapidly increasing water levels INSIDE the home	0	0	0	0	0	0
Rapidly increasing water levels OUTSIDE the home	0	0	0	0	0	0
Rising Creek/River near me						

.

Q8.11

How much did the following social factors influence the action(s) you took when you experienced the flooding? Select "Not a Factor" if the factor was not relevant to your decision.

	1. Not influential at all (1)	2. Slightly influential (2)	3. Somewhat influential (3)	4. Very influential (4)	5. Extremely influential (5)	Not a factor (6)
Friends / family urged me to take action	0	0	0	0	0	0
I saw other people taking action	0	0	0	0	0	0
Previous negative experience with flooding	0	0	0	0	0	0
Concern/fear for self, family, friends	0	0	0	0	0	0

Page
Break

**Q8.13**

How much did the following situational factors influence the action(s) you took when you experienced the flooding? Select "Not a Factor" if the factor was not relevant to your decision.

	1. Not influential at all (1)	2. Slightly influential (2)	3. Somewhat influential (3)	4. Very influential (4)	5. Extremely influential (5)	Not a factor (6)
Needing to take care of family/friends/pets	0	0	0	0	0	0
I was trapped in the building	0	0	0	0	0	0
Having a car to use for evacuation	0	0	0	0	0	0
This event caught me by surprise	0	0	0	0	0	0
Event timing (rush hour, evening, weekend)	0	0	0	0	0	0

End of Block: EVENT - HOME/INDOORS

Start of Block: EVENT - OUTSIDE/ON FOOT



Q9.1 What were you doing at the time of the event?

- ☐ I was outside/walking (leisure, errands, dining, etc.) (1)
- ☐ I was doing outdoor activities. (ex. camping, boating, sports) (2)
- ☐ I was on public transportation (3) **IF YES THEN GO TO 9.12**

Q9.12 What type of public transportation were you using?

- ☐ City bus
- ☐ Commuter rail or train
- ☐ Subway or Metro
- ☐ Shuttle or paratransit
- ☐ Other (please specify): _____

Q9.2 Was anyone with you while outdoors or on public transit? (Select all that apply.)

- ☐ Kid(s) 12 and under (1)
- ☐ Teen(s) 13 – 17
- ☐ Adult(s) 18+ (2)
- ☐ Senior Citizen(s) (3)
- ☐ Person(s) with disability (4)
- ☐ Pet(s) (5)
- ☐ I was alone (6)
- ☐ Other (7) _____

Q9.21 Why were you outside or on public transportation at the time of the heavy rain or flooding? (Select one)

- ☐ Going to work
- ☐ Returning home
- ☐ Doing work-related travel (ex. job appointment, delivery)
- ☐ Going to school or class (for self)
- ☐ Picking up or dropping off a child or family member (ex. school, activity, appointment)
- ☐ Shopping or personal errands (ex. groceries, pharmacy, banking)
- ☐ Going to an appointment or event (ex. medical, sports, performance, lesson)
- ☐ Visiting family or checking in (including pets or livestock)
- ☐ Travelling to transportation hub (airport, train, bus)
- ☐ Leisure activities (ex. dining out, visiting friends, gym, park)

Outdoor recreational activities

- ☐ Evacuating or sheltering from the flood
- ☐ Other (please specify): _____

Page
Break



Q179 DURING the event, what was your level of concern about how the heavy rain/flash floods might impact you?

- ☐ Not concerned (1)
- ☐ Slightly concerned (2)
- ☐ Moderately concerned (3)
- ☐ Very concerned (4)
- ☐ Extremely concerned (5)



Q9.3 Did you experience flooding while outdoors or on public transportation?

- ☐ Yes (1)
- ☐ No (2)
- ☐ I don't know (3)

Skip To: End of Block If Q9.3 = 2

Skip To: End of Block If Q9.3 = 3

Page
Break

Q9.4 Please enter the TOWN and closest INTERSECTION where you experienced flooding.

☐ Town (3) _____

☐ Intersection (1) _____

Q9.5 Please enter the approximate time of day when you experienced flooding.

Hour (4)

Minutes (5)

AM/PM (6)

▼ 12 (1) ... I Don't Know ~ ~ (447)

Page
Break



Q7.8 What did you see when you encountered flooding? Select All That Apply

- ☐ Flooded creek, stream, or river
- ☐ Flooded sidewalks and buildings
- ☐ Flooded roads
- ☐ Flooded path, parks, or recreation areas
- ☐ Flooding in the subways or rail (1)
- ☐ Flashing lights (2)
- ☐ Barricades (3)
- ☐ Public safety officials (4)
- ☐ Heavy traffic, blocked roads (5)
- ☐ I saw vehicles driving through (6)
- ☐ I saw vehicles turning around (7)
- ☐ I saw vehicle(s) stuck in flood water (8)
- ☐ I saw vehicle(s) swept away (9)
- ☐ Other (10) _____

Q9.6 What was the greatest water depth you observed outdoors during this event?

- ☐ I did not see any water (1)
- ☐ 0 to 3 inches (2)

- ☐ 3 to 6 inches (3)
- ☐ 6 to 12 inches (4)
- ☐ 12 to 24 inches (5)
- ☐ > 24 inches (6)
- ☐ Other (7) _____
- ☐ I don't know (8)

Page
Break



Q9.7A – Display if using Public Transportation

What action did you take in response to the flooding while using public transportation? (Select one.)

- ☐ I stayed on public transportation, and it avoided flooded areas
- ☐ I stayed on public transportation, and it made it through flooded areas
- ☐ I stayed on public transportation, and it got stuck in flood waters
- ☐ I left the train or bus due to flooding
- ☐ I walked through flooded areas to reach or exit the public transportation
- ☐ Other (please specify): _____

Q9.7B Display if On-foot/outdoors

What action did you take in response while you were on foot to the flooding? (Select one.)

- ☐ I went to a non-flooded area or higher ground (1)
- ☐ I evacuated the area (2)
- ☐ I stayed where I was and monitored the situation (3)
- ☐ I stayed where I was because I couldn't evacuate due to the flooding conditions (4)
- ☐ I stayed where I was and protected my belongings (5)
- ☐ I walked through flooded waters
- ☐ Other (8) _____

Q9.8 Did you contact anyone for help?

☐ No (1)

☐ Yes (please explain) (2) _____

Q9.9

This next set of questions asks about different factors that may have influenced your decision(s).

How much did the following warning and environmental factors influence the action(s) you took when you experienced the flooding?

	1. Not influential at all (1)	2. Slightly influential (2)	3. Somewhat influential (3)	4. Very influential (4)	5. Extremely influential (5)	Not a factor (6)
Receipt of a NWS warning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Intense rainfall outside	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Increasing water levels near me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q9.10 How much did the following social factors influence the action(s) you took when you experienced the flooding?

	1. Not influential at all (1)	2. Slightly influential (2)	3. Somewhat influential (3)	4. Very influential (4)	5. Extremely influential (5)	Not a factor (6)
Friends / family urged me to take action	0	0	0	0	0	0
I saw other people taking action	0	0	0	0	0	0
Previous negative experience with flooding	0	0	0	0	0	0
Fear for self, family, friends	0	0	0	0	0	0

Q9.12 How much did the following situational factors influence the action you took when you experienced the flooding?

	1. Not influential at all (1)	2. Slightly influential (2)	3. Somewhat influential (3)	4. Very influential (4)	5. Extremely influential (5)	Not a factor (6)
Knowledge of the area	0	0	0	0	0	0
Needing to take care of family/friends/pets	0	0	0	0	0	0
There wasn't a safe place to go	0	0	0	0	0	0
Limited access to transportation (Trapped)	0	0	0	0	0	0
This event caught me by surprise	0	0	0	0	0	0
Event timing (rush hour, evening, weekend)	0	0	0	0	0	0

End of Block: EVENT - OUTSIDE/ON FOOT

Start of Block: IMPACTS

Display this question:

If Q5.1 != 2



Q10.1 Which, if any, of the following impacts did you personally experience as a result of this heavy rain/flash flooding event? (Please select all that apply)

- ☐ Flooded roadways / closure of roads (1)
 - ☐ Flooded transportation stations
 - ☐ Power outage (2)
 - ☐ Food/water shortages (3)
 - ☐ Disruption to work/school/life (4)
 - ☐ Public health impacts (boil water, mold, etc.) (5)
 - ☐ Personal economic impacts (loss of wages) (6)
 - ☐ Injury (myself/friend/ or family member) (7)
 - ☐ Property loss/damage (home, car, business) (8)
 - ☐ Death of a friend/relative (9)
 - ☐ No impacts (10)
 - ☐ Other (please specify) (11)
-



**Q6.10 Do you recall receiving any of the following National Weather Service Products?
(Select all that apply.)**

- ☐ Flash Flood Watch (1)
- ☐ Flash Flood Warning (2)
- ☐ Flash Flood Emergency (3)
- ☐ Flood Warning (River) (11)
- ☐ Severe Thunderstorm Watch (4)
- ☐ Severe Thunderstorm Warning (5)
- ☐ Tornado Watch (6)
- ☐ Tornado Warning (7)
- ☐ I did not receive any of these (8)
- ☐ I don't remember (9)
- ☐ Other (10) _____

Display this question:

If Q6.10 = 1-8 (Received any NWS Warning)

Or Q4.3 = 3 (Received Info from NWS Before Event)

Or Q6.1 = 3 (Received Info from NWS During Event)

Q10.2 Now consider the information you received from the National Weather Service before and during the flooding event. Using a scale from 1 to 10 where 1 is “Poor,” and 10 is “Excellent,” please rate the NWS on the following:

	1 (poor) (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)	8 (8)	9 (9)	10 (excellent) (10)	Don't know/ NA (11)
Ease of finding flooding forecast information specific to your geographic area	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Accuracy of information for this flooding event	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Explaining the threat and expected impacts of this flooding event	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Providing information to help you make decisions relative to this flooding event	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Overall
satisfaction
with
information
or services
received
by the
NWS



Q10.4 Is there anything else you would like to share about your experience this day?

☐ Yes (please describe) (1)

☐ No (2)

End of Block: IMPACTS

Start of Block: DEMOGRAPHICS



Q11.1 We are interested in learning about your previous experience with flash flooding. Please answer the following statements.

	Yes (1)	No (0)	I don't know (2)
I have experienced a personal loss due to flooding	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My home has previously flooded	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have previously driven through a flooded road	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I live in an area that frequently floods	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q171 I have an emergency survival kit at home.

- ☐ Yes (1)
- ☐ No (2)
- ☐ I don't know (3)



Q11.2 Please select how much you agree or disagree with the following statements.

	1. Strongly disagree (1)	2. Disagree (2)	3. Neutral (3)	4. Agree (4)	5. Strongly agree (5)
I am fearful of flooding	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I follow the weather very closely	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I take flash flood warnings seriously	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel that I am completely capable to keep myself safe during a flash flood	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



Q11.3 Please tell us more about yourself. In what year were you born?

▼ 2005 (1) ... 1922 (84)



Q11.4 What is your sex?



Male (1)



Female (2)

Q198 What is your race and/or ethnicity? Select all that apply.

☐

American Indian or Alaska Native

For example, Navajo Nation, Blackfeet Tribe of the Blackfeet Indian Reservation of Montana, Native Village of Barrow Inupiat Traditional Government, Nome Eskimo Community, Aztec, Maya, etc.

☐

Asian

For example, Chinese, Asian Indian, Filipino, Vietnamese, Korean, Japanese, etc.

☐

Black or African American

For example, African American, Jamaican, Haitian, Nigerian, Ethiopian, Somali, etc.

☐

Hispanic or Latino

For example, Mexican, Puerto Rican, Salvadoran, Cuban, Dominican, Guatemalan, etc.

☐

Middle Eastern or North African

For example, Lebanese, Iranian, Egyptian, Syrian, Iraqi, Israeli, etc.

☐

Native Hawaiian or Pacific Islander

For example, Native Hawaiian, Samoan, Chamorro, Tongan, Fijian, Marshallese, etc.

☐

White

For example, English, German, Irish, Italian, Polish, Scottish, etc.

Q11.7 Please tell us who lives in your household. (Select all that apply.)

- ☐ Adult(s) 18-64 years old (1)
- ☐ Adult(s) 65+ years old (2)
- ☐ Child(ren) 17 years old or younger (3)
- ☐ Pets (4)
- ☐ Person(s) with disabilities (5)
- ☐ I prefer not to answer (6)

Q11.8 Please select the range that best describes your annual household income from all sources before taxes and other deductions.

- ☐ \$0-\$25,000 (1)
- ☐ \$25,000 - \$50,000 (2)
- ☐ \$50,000 - \$100,000 (3)
- ☐ \$100,000 - \$150,000 (4)
- ☐ \$150,000 + (5)
- ☐ I prefer not to answer (6)

Q11.91 For your primary job, do you have the flexibility to change your working schedule or location on short notice?

- ☐ Yes (1)
- ☐ No (2)
- ☐ Not Applicable (3)

Q11.11 What is the highest level of school you have completed or the highest degree you have received?

- ☐ Less than high school degree (1)
- ☐ High school graduate (high school diploma or equivalent including GED) (2)
- ☐ Some college but no degree (3)
- ☐ Associate degree in college (2-year) (4)
- ☐ Bachelor's degree in college (4-year) (5)
- ☐ Master's degree (6)
- ☐ Doctoral degree (7)
- ☐ Professional degree (JD, MD) (8)
- ☐ I prefer not to answer (9)

Q11.12 In which type of housing do you currently live?

- ☐ Apartment (1)
- ☐ Townhouse, condo, duplex (2)
- ☐ House with basement (8)
- ☐ House without a basement (4)
- ☐ Manufactured/mobile home (5)

End of Block: DEMOGRAPHICS
