NWS Tornado

Start of Block: Consent

Q1.1 TORNADO 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 o	of Block: INTRO			
Q3.1 V	What is your 5 digit Zip Code?			
_				
Q3.2 F	low did you get the link to this survey?			
0	National Weather Service website/social media (1)			
0	Local news website/social media (2)			
0	Public Safety email list, website, or social media (3)			
0	A friend forwarded it to me (4)			
0	Community group email list, website or social media (5)			
0	Other (6)			



Q3.3 Severe weather event(s) (high winds, hail, or tornados) recently occurred in your area. Please select the event date you recall 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."

	ay this choice: f BEGIN_DATE_1 Is Not Empty	
0	\${e://Field/BEGIN_DATE_1} (1)	
	ay this choice: f BEGIN_DATE_2 Is Not Empty	
0	\${e://Field/BEGIN_DATE_2} (2)	
	ay this choice: f BEGIN_DATE_3 Is Not Empty	
0	\${e://Field/BEGIN_DATE_3} (3)	
	ay this choice: f BEGIN_DATE_4 Is Not Empty	
0	\${e://Field/BEGIN_DATE_4} (4)	
0	Other date (enter date mm/dd/yyyy) (7)	
0	I don't recall this event (5)	
0	I was out of town (6)	
Skip T	Γο: End of Survey If Q3.3 = 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.]

Skip To: End of Survey If Q3.3 = 6

- High winds, hail or tornado (1)
- Flash flooding or heavy rain (2)

End of Block: INTRO

Start of Block: PRE EVENT

Q4.1 Please answer the rest of the survey based on what you experienced on \${Q3.3/ChoiceGroup/SelectedChoices} BEFORE the event began, did you know about the POTENTIAL for a severe weather threat to occur?		
0	Yes (1)	
0	No (0)	
0	I don't know (2)	
	¯o: Q4.15 If Q4.1 = 0 ¯o: Q4.15 If Q4.1 = 2	
[X-[X	K-	
Q4.2 How far in advance were you made aware that severe weather was POSSIBLE for your area?		
0	Minutes before (1)	
0	Less than an hour before (2)	
0	Between 1 hour and 6 hours before (3)	
0	Between 7 hours and 24 hours before (4)	
0	Between 1 and 2 days before (5)	
0	3 or more days before (6)	
0	I don't know (7)	
Skip T	o: Q4.15 Event Phase If Q4.2 = 1 (Minutes before) is selected	

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Q4.5 People get their weather information in many ways. BEFORE the event happened, how did you access or receive information about *possible* severe weather? (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, Security System) (17)
☐ Other (please specify):(19)
Q4.3 Thinking about the information you received before the event, which people, organizations, or groups provided you with the most useful information about possible severe weather? (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) (1)
□ Local TV station or local weather broadcaster (ex. local meteorologist or anchor) (2)
□ National Weather Service (NWS) (3)
☐ Other federal agency (ex. FEMA, Department of Transportation) (4)
2 other redefal agency (cx. 1 21), i, Department of Transportation, (1)
□ Friends or family (5)
□ Friends or family (5) □ Community leader (ex. school official, mayor, clergy, governor) (6)
 □ Friends or family (5) □ Community leader (ex. school official, mayor, clergy, governor) (6) □ Local public safety official (ex. emergency manager, police, firefighter) (7)
□ Friends or family (5) □ Community leader (ex. school official, mayor, clergy, governor) (6)
 □ Friends or family (5) □ Community leader (ex. school official, mayor, clergy, governor) (6) □ Local public safety official (ex. emergency manager, police, firefighter) (7)

$\rm Q4.13$ Based on the information you were given BEFORE the event, did you think any of the threats listed below might impact you or your family? (Select all that apply.)		
	Damaging winds (1)	
	Destructive hail (2)	
	Flash flooding (3)	
	Frequent lightning (4)	
	Tornado (5)	
	Heavy rains (6)	
	Power outage (7)	
	Destruction of property (8)	
	Injury/losses (9)	
	⊗ No threats/impacts (10)	
	Other (11)	

What, if any, special preparations did you take in the day(s) and hour(s) BEFORE the severe weather event? (Please select all that apply)			
	Looked for additional weather information (1)		
	Shared information with someone else (2)		
(3)	Changed travel plans, activities or appointments that might be impacted by the weather		
food/w	Purchased emergency supplies (Ex. survival kit, prescription, generator, extra vater, gas) (5)		
	Protected my property or belongings (ex. move car, secure property) (6)		
	Made a sheltering/evacuation plan (7)		
	Took steps to care for pets or livestock (ex. moving animals, securing supplies)		
safe, i	Checked in on family or others who might need help (ex. making sure everyone was n the same place, or had a plan)		
	No action taken (8)		
	Other (please specify) (9)		



Q4.12 BEFORE the event began, what was your level of concern based on the information you were given?		
0	No concern (1)	
0	Slightly concerned (2)	
0	Moderately concerned (3)	
0	Very concerned (4)	
0	Extremely concerned (5)	
Q4.15 Did yo	u receive any weather warning(s) for this event?	
0	A Tornado Warning (1)	
0	A Severe Thunderstorm Warning (2)	
0	A Tornado Warning and a Severe Thunderstorm Warning (3)	
0	No Warning (4)	
0	Other (6)	

End of Block: PRE EVENT







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Q180 Thinking about the time period MINUTES BEFORE and DURING the severe weather
event, how did you access or receive information about this event?
☐ 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, Security System) (17)
☐ Other (please specify): (19)
5.1 Thinking about the information you received MINUTES BEFORE and DURING the severe weather event, which people, organizations, or groups provided you with the most useful information about this event? (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) (1)
☐ Local TV news or local weather broadcaster (ex. local meteorologist or anchor) (2)
□ National Weather Service (NWS) (3)
☐ Other federal agency (ex. FEMA, Department of Transportation) (4)
□ Friends or family (5)
□ Community leader (ex. school official, mayor, clergy, governor) (6)
□ Local public safety official (ex. emergency manager, police, firefighter) (7)
☐ Local weather blogger or independent streamer (ex. updates on Facebook, YouTube, or
Twitter/X) (8)
□ Other (please specify) (9):

O	No Concer	n (1)			
0	Slightly Concerned (2)				
0	Moderately Concerned (3)				
0	Very Conce	erned (4)			
0	Extremely	Concerned (5)			
Q5.11	. You said yo	u received Inine in v	warning type receive	ed from Q4.15]. Ple a	
-	_		Present near y Present, not intense (2)	rou during this time Present, moderately intense (3)	Present, very intense (4)
any of	_	ther condition(s) w	Present, not	Present, moderately	Present, very
any of	f these wear	ther condition(s) w	Present, not	Present, moderately	Present, very
RA FLOO	f these wear	ther condition(s) w	Present, not	Present, moderately	Present, very
RA FLOO	f these wear AIN (1) ODING (7)	ther condition(s) w	Present, not	Present, moderately	Present, very
RAFLOG	f these wear AIN (1) ODING (7) IND (2)	ther condition(s) w	Present, not	Present, moderately	Present, very
RAFLOG	AIN (1) ODING (7) IND (2) IAIL (3)	ther condition(s) w	Present, not	Present, moderately	Present, very

 $\mathsf{Q}5.10$ DURING the event, what was your level of concern based on the information you

were given?

-	s (5)
▼ 12 ((1) I Don't Know ~ ~ (447)
-	Please tell us the closest INTERSECTION and CITY you were in when you received ning, or knew the event was imminent?
0	Intersection (4)
0	City (5)
X-	
-	When you received [pipe in warning type received from Q4.15], where you indoors doors during this time?
0	Indoors (1)
0	Outdoors (2)
0	I don't know (3)

Q5.15 Q4.15	What were you doing at the time you received [pipe in warning type received from]?
0	Driving (1)
0	At Home (2)
0	Watching TV (3)
0	At Work or School (4)
0	Shopping/Errands/Restaurant/Recreation (5)
0	Appointment (6)
0	Sleeping (8)
0	Other (9)
	About how close was the storm to you when you received [pipe in warning type red from Q4.15]?
0	The storm was on top of me / on my street (1)
0	The storm was in my neighborhood (2)
0	The storm was in my town/city (3)
0	The storm was in the next town/city over (4)
0	The storm was in the next county over (5)
0	I don't know (6)
0	Other (7)



Q5.17 What action(s) did you first take after receiving [pipe in warning type received from Q4.15]? (Select all that apply.) Looked for additional weather information (1) Observed the weather around me (go outside, look out the window) (2) Protected property (home, yard, car, business) (3) Took shelter at my current location (4) Drove to safety/shelter (5) Stopped driving (6) Shared information with somebody (7) Gathered Friends/Family/Pets (8) Cancelled or rescheduled plans (9) None, the warning was not relevant for my location (10) I did not take any action(s) (11) Other (please list) (12)

End of Block: WARNING/EVENT PHASE

Q6.1	This next set of questions focuses on your response to the event.
Did y	ou take shelter?
0	Yes (1)
0	No (0)
0	Other (2)
Skip T	o: Q6.6 If Q6.1 = 0
Displa _.	y this question:
If	Q6.1 = 1
O.	r Q6.1 = 2

Start of Block: Sheltering

Q6.2	2 Where did you shelter?
0	In a house, condo, or apartment (1)
0	In a mobile home (2)
0	In my school or workplace (3)
0	In a community storm shelter
0	In a sturdy building (not a residence) (4)
0	In a vehicle (5)
0	In a big box retail establishment (Home Depot, supermarket, etc.) (6)
0	I was outside (7)
0	Other (please describe) (8)
Skip	To: Q6.3 If Q6.2 = 1
Skip	To: Q6.3 If Q6.2 = 2
Skip	To: Q6.3 If Q6.2 = 3
Skip	To: Q6.3 If Q6.2 = 4
Skip	To: Q193 If Q6.2 = 5
Skip	To: Q6.3 If Q6.2 = 6
Skip	To: Q6.3 If Q6.2 = 7
Skip	To: Q6.3 If Q6.2 = 8

Did you shelter in any of the following locations? (Select one.)
I sheltered indoors, but I did not go to an interior room or a safe room (1)
I sheltered in an interior room without windows, such as a bathroom, closet, or walk-in
(2)
I sheltered in a basement (3)
I sheltered in a safe room or underground storm cellar designed to withstand tornadoes
Other (5)
Did you take any of the actions listed below when you sheltered? (Check all that) I stayed away from the windows (1)
I stayed away from the windows (1) I got under a sturdy object (ex. table, desk) (2)
get and a starty object (om table) abony (_)
I protected myself (wore helmet, shoes, used blankets/padding) (3)
I remained buckled in my vehicle (4)
⊗ I did not take any of these actions (5)
Other (please describe) (6)

Q6.4 V	When did you shelter?
0	Less than 5 minutes after I received the warning (1)
0	5- 15 minutes after I received the warning (2)
0	15-30 minutes after I received the warning (3)
0	30 minutes or more after I received the warning (4)
0	I did not receive a warning (Please explain when you took shelter) (5)
0	Other (6)

Display	this question:
If (Q6.1 = 0
X- X-	
-	ou indicated you did not shelter. Please tell us which of the following actions you (Select all that apply)
	I remained outdoors (1)
	I observed the weather (from outdoors or indoors) (4)
	I moved or remained indoors, but I did not go to an interior room or a safe room (2)
	No action taken (3)
	Other (please describe) (5)

Q6.7 This next set of questions asks about different factors that may have influenced your decision to shelter, or not to shelter.

Please indicate how much the following warning and environmental factors influenced whether or not you took shelter. 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 (0)
Receipt of an NWS warning	0	0	0	0	0	0
I did not trust the warning	0	0	0	0	0	0
I heard Sirens	0	0	0	0	0	0
I did not think I would be impacted by the weather	0	0	0	0	0	0
Storm was intense	0	0	0	0	0	0
Storm was close to me	0	0	0	0	0	0



Q6.8 Please indicate how much the following social factors influenced whether or not you took shelter. 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 (0)
Friends / family urged me to shelter	0	0	0	0	0	0
I saw other people taking action Previous	0	0	0	0	0	0
negative experience with severe weather	0	0	0	0	0	0
Fear for self, family, friends, pets	0	0	0	0	0	0
Having a family emergency plan	0	0	0	0	0	0

Q6.10 Please indicate how much the following situational factors influenced whether or not you took shelter. 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 (0)
Having enough time to shelter	0	0	0	0	0	0
Difficulty in finding a place to shelter	0	0	0	0	0	0
This event caught me by surprise	O	0	0	0	0	0
I was driving	0	0	0	0	0	0
I was sleeping	0	0	0	0	0	0

End of Block: Sheltering





_	Which of the following impacts did you personally experience from this severe er event? (Select all that apply.)
	Disruption to work/school/life (1)
	Disruption related to transportation (2)
	Power outage (3)
	Food/water shortages (4)
	Public health impacts (boil water, disease, etc.) (5)
	Personal economic impacts (loss of wages) (6)
	Injury (myself/friend/family) (7)
	Property loss/damage (8)
	Death of a friend/relative (9)
	⊗ No impacts (10)
	Other (please state) (11)
	v question Q7.3 NWS Ratings:
	Q4.3 = 3 (Received NWS info pre-event)
	· Q4.15 = 1 (Received an NWS Tornado Warning)
	2 (Received an NWS Severe Warning)
	24.15 = 3 (Received an NWS Tornado and Severe Warning)
Oı	5.1 = 3 (Received NWS info during event)

Q7.3 Now consider the information you received from the National Weather Service regarding this severe weather 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 (0)
Ease of finding winter weather forecast information specific to your geographic area	0	0	0	0	0	0	0	0	0	0	0
Accuracy of information for this winter weather event Explaining	0	0	0	0	0	0	0	0	0	0	0
the threat and expected impacts of this winter weather event Providing information to	0	0	0	0	0	0	0	0	0	0	0
help you make decisions relative to this winter weather event	0	0	0	0	0	0	0	0	0	0	0
Overall satisfaction with information or services received by the NWS	0	0	0	0	0	0	0	0	0	0	0

Q7.4 Is there anything	j else you would like	to share about your e	xperience this day?
O Yes (please des	scribe) (1)		
O No (0)			
End of Block: IMPACT	rs .		
Start of Block: DEMO	GRAPHICS		
X- X-			
Q8.1 We are intereste Please answer the fol	-	our previous experien	ce with severe weather.
	Yes (1)	No (0)	I don't know (2)
I have previously experienced a severe weather event I have experienced a	0	0	0
personal loss due to severe weather (ex. financial, belongings, injury)	0	0	O
My home has previously been damaged due to severe weather	0	0	O
Q8.1b I have an emerg	gency survival kit at	home.	
O Yes (1)			
O No (0)			
I don't know (2))		

Q8.1c I	have a	tornado sheltei	ring plan that I h	nave shared wit	h others (famili	es, others)
0	Yes (1)					
0	No (0)					
0 1	don't kı	now (2)				
Q8.1d I commu			lter safely if a to	ornado occurs (Ex. basement, s	safe room,
0	Yes (1)					
0	No (0)					
O .	don't kı	now (2)				
	ease se	lect how much 1. Strongly disagree (1)	you agree or di 2. Disagree (2)	sagree with the	e following state 4. Agree (4)	e ments. 5. Strongly agree (5)
Q8.2 Plo	arful of ere	1. Strongly	2. Disagree	_	_	5. Strongly
Q8.2 Pl o	arful of ere her v the r very	1. Strongly	2. Disagree	_	_	5. Strongly
Q8.2 Plo	arful of ere her v the r very ely evere her ngs usly hat I	1. Strongly	2. Disagree	_	_	5. Strongly



Q8.3 In what year were you born?

▼ 2005 (1) ... 1922 (84)

Q8.4 What is your sex?		
0	Male (1)	
0	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.	

Q8.7	Please tell us who lives in your household, including yourself. (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)	
Q8.8 Please select the range that best describes your annual household income from all sources before taxes and other deductions.		
0	\$0-\$25,000 (1)	
0	\$25,000 - \$50,000 (2)	
0	\$50,000 - \$100,000 (3)	
0	\$100,000 - \$150,000 (4)	
0	\$150,000 + (5)	
0	I prefer not to answer (6)	
$\ensuremath{Q8.10}$ For your primary job, do you have the flexibility to change your working schedule or location on short notice?		
0	Yes (1)	
0	No (0)	
0	Not Applicable (2)	

have received?		
0	Less than high school degree (1)	
0	High school graduate (high school diploma or equivalent including GED) (2)	
0	Some college but no degree (3)	
0	Associate degree in college (2-year) (4)	
0	Bachelor's degree in college (4-year) (5)	
0	Master's degree (6)	
0	Doctoral degree (7)	
0	Professional degree (JD, MD) (8)	
0	I prefer not to answer (9)	
Q8.12 In which type of housing do you currently live?		
0	Apartment (1)	
0	Townhouse, condo, duplex (2)	
0	House with a basement (4)	
0	House without a basement (8)	
0	Manufactured/mobile home (5)	
End of	f Block: DEMOGRAPHICS	