

English

**Instructions/Instrucciones**

We appreciate your contribution to our study! This study (“Cost-Benefit Analysis of Extended Tornado Warnings”, IRB #11729) measures the benefits of a new tornado warnings system and asks for your opinion of its necessity. The questions should take about 15 minutes to complete.

There are no risks and benefit of participating in this survey. Your identity will be confidential. Your answers will never be associated with your name, address or access code. After removing all identifiers, we might share your data with other researchers or use it in future research without obtaining additional consent from you. At the same time, data are collected via an online survey system that has its own privacy and security policies for keeping your information confidential. We can make no assurance as to their use of the data you provide.

Please know that your participation is strictly voluntary. Even if you choose to participate now, you may stop participating at any time and for any reason.

If you have questions about this research, please contact:

Alexander Ugarov, PhD(e-mail: augarov@ou.edu; phone: 480-882-83-27)

You can also contact the University of Oklahoma – Norman Campus Institutional Review Board at 405-325-8110 or irb@ou.edu with questions, concerns or complaints about your rights as a research participant, or if you don’t want to talk to the researcher.

I am 18 years of age or older and I consent to participate in this study:

Yes

No (cannot participate)

Section A: Using Tornado Warnings/Sección A: Uso de Avisos de Tornados

In this section, we ask a few questions about *tornado warnings*. As you might know, a *tornado warning* is a message from weather forecasters which states that tornadoes are imminent, and that people should seek shelter immediately.

How do you usually receive tornado warnings?

Weather radio

Local radio

Local TV

Internet-based service

The Weather Channel

Cell phone app/SMS

Friend/family/neighbors

I usually do not receive tornado warnings

Other (specify):

At each of the following times, how likely are you to learn about a tornado warning when it is issued for your area?

	Practically no chance (<10%)	Unlikely (10- 50%)	Quite likely (51- 75%)	Almost certain (76-100%)
Weekday 2am	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Weekday 3pm	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Weekday 7pm	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Weekend 7 pm	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

If the National Weather Service issues a tornado warning for your area, how much time do you believe you would have, on average, before a tornado arrives?

(Please estimate to the best of your ability and write a number of minutes in the field below.)

Section B: House/Sección B: El Hogar

I live in a:

Apartment/Condo

Well-built house (brick, wood, concrete)

Well-built townhouse/rowhouse/duplex

Mobile home

Manufactured home

Other

How many separate rooms are in your house, apartment, or mobile/manufactured home?
(Include bedrooms, living rooms, kitchens, etc. but **EXCLUDE** bathrooms, porches, balconies, foyers, halls and unfinished basements. Write the number in the field below.)

Which area in your home would you use to shelter from a tornado?

Basement

Bathroom

Closet

Hallway

Kitchen, bedroom or a living room

Specifically designed safe room

Tornado shelter (including backyard shelter)

I would never shelter inside my home

Other area (write down):

Does your sheltering area have a window?

Yes

No

Our household has enough car space to transport all of us in case of an emergency__

Yes

No

We have no car

Section C: Tornado at Home Scenario/Sección C: Un Aviso de Tornado para su Hogar

For the following question, please imagine that you are home AT 7 PM (EVENING) when you learn that a tornado warning is issued for your area. What would you do in this scenario?

(Please check only one box.)

Nothing

Seek more information without taking shelter

Take shelter at home or near

Drive to another house or structure

Drive out of the potential tornado path

I would never learn about a warning at that time

Other (write down)

For the following question, please imagine that you are home AT 2 AM (NIGHT) when you learn that a tornado warning is issued for your area. What would you do in this scenario?

(Please check only one box.)

Nothing

Seek more information without taking shelter

Take shelter at home or near

Drive to another house or structure

Drive out of the potential tornado path

I would never learn about a warning at that time

Other (write down)

What do you expect to do if you hear a tornado siren at home?

We are not near a siren/Have never heard it

Nothing

Seek more information without taking shelter

Take shelter at home or near

Drive to another house or structure

Drive out of the potential tornado path

Other (write down)

How long does it usually take you to drive to the house or structure you would use as a shelter?

(Please, estimate to the best of your ability and write a number of minutes in the field below.)

If you drive to shelter in another house or structure, what kind of shelter would you use?

Room with windows in a well-built house

Room without windows in a well-built house

Basement

Specifically designed safe room

Tornado shelter outside of the house

Community/public shelter

Public building (mall, church, et cetera)

Other (write down):

When deciding to shelter or flee from a tornado, which sources would you use to seek more information?

(Please check all that applies.)

Radio or weather radio

Internet

Cell phone app/SMS

TV

Call somebody

Go outside and watch the sky

I would not seek more information

Other (write down):

Imagine now the following scenario. It is evening 7pm. Based on all the information available to you, a tornado can happen within 10 miles of your house or closer in the next 15 minutes. Next five questions on this page refer to this scenario.

The chance of a tornado passing within 10 miles of your house or closer within the next 15 minutes is 20%. Would you decide to shelter or flee in this scenario?

Shelter at home

Drive to a shelter

Flee

Neither

The chance of a tornado passing within 10 miles of your house or closer within the next 15 minutes is 40%. Would you decide to shelter or flee in this scenario?

Shelter at home

Drive to a shelter

Flee

Neither

The chance of a tornado passing within 10 miles of your house or closer within the next 15 minutes is 60%. Would you decide to shelter or flee in this scenario?

Shelter at home

Drive to a shelter

Flee

Neither

The chance of a tornado passing within 10 miles of your house or closer within the next 15 minutes is 80%. Would you decide to shelter or flee in this scenario?

Shelter at home

Drive to a shelter

Flee

Neither

The chance of a tornado passing within 10 miles of your house or closer within the next 15 minutes is 100%. Would you decide to shelter or flee in this scenario?

Shelter at home

Drive to a shelter

Flee

Neither

Imagine now the following scenario. It is 2am (night). Based on all the information available to you, a tornado can happen within 10 miles of your house or closer in the next 15 minutes. Next five questions on this page refer to this scenario.

The chance of a tornado passing within 10 miles of your house or closer within the next 15 minutes is 20%. Would you decide to shelter or flee in this scenario?

Shelter at home

Drive to a shelter

Flee

Neither

The chance of a tornado passing within 10 miles of your house or closer within the next 15 minutes is 40%. Would you decide to shelter or flee in this scenario?

Shelter at home

Drive to a shelter

Flee

Neither

The chance of a tornado passing within 10 miles of your house or closer within the next 15 minutes is 60%. Would you decide to shelter or flee in this scenario?

Shelter at home

Drive to a shelter

Flee

Neither

The chance of a tornado passing within 10 miles of your house or closer within the next 15 minutes is 80%. Would you decide to shelter or flee in this scenario?

Shelter at home

Drive to a shelter

Flee

Neither

The chance of a tornado passing within 10 miles of your house or closer within the next 15 minutes is 100%. Would you decide to shelter or flee in this scenario?

Shelter at home

Drive to a shelter

Flee

Neither

Section D: More Advance Time/Sección D: Mas Tiempo para Prepararse

Imagine now the following scenario. It is 7 pm in the evening. You receive a tornado warning and you have at least forty (40) minutes before a tornado can strike your house. What would you do in this case?

Nothing

Seek more information without taking shelter

Take shelter at home or near

Drive to a shelter

Drive out of the potential tornado path

Other (write down):

Section D-1: More Advance Time/Sección D: Mas Tiempo para Prepararse

Imagine now the following scenario. It is evening 7 pm. You learn that tornadoes could pass through your county from 7:40pm to 8:20pm. Next six questions on this page refer to this scenario.

The chance of a tornado passing within 10 miles of your house or closer from 7:40pm to 8:20 am is 0%. What would you most likely do in this scenario?

Nothing

Seek more info without taking shelter

Shelter at home or nearby

Drive to a shelter or another house/structure

Drive out of the potential tornado path

Other (write down):

The chance of a tornado passing within 10 miles of your house or closer from 7:40pm to 8:20 am is 20%. What would you most likely do in this scenario?

Nothing

Seek more info without taking shelter

Shelter at home or nearby

Drive to a shelter or another house/structure

Drive out of the potential tornado path

Other (write down):

The chance of a tornado passing within 10 miles of your house or closer from 7:40pm to 8:20 am is 40%. What would you most likely do in this scenario?

Nothing

Seek more info without taking shelter

Shelter at home or nearby

Drive to a shelter or another house/structure

Drive out of the potential tornado path

Other (write down):

The chance of a tornado passing within 10 miles of your house or closer from 7:40pm to 8:20 am is 60%. What would you most likely do in this scenario?

Nothing

Seek more info without taking shelter

Shelter at home or nearby

Drive to a shelter or another house/structure

Drive out of the potential tornado path

Other (write down):

The chance of a tornado passing within 10 miles of your house or closer from 7:40pm to 8:20 am is 80%. What would you most likely do in this scenario?

Nothing

Seek more info without taking shelter

Shelter at home or nearby

Drive to a shelter or another house/structure

Drive out of the potential tornado path

Other (write down):

The chance of a tornado passing within 10 miles of your house or closer from 7:40pm to 8:20 am is 100%. What would you most likely do in this scenario?

Nothing

Seek more info without taking shelter

Shelter at home or nearby

Drive to a shelter or another house/structure

Drive out of the potential tornado path

Other (write down):

Section D-2: More Advance Time/Sección D: Mas Tiempo para Prepararse

Imagine now the following scenario. It is 2 am (night). You learn that tornadoes could pass through your county from 2:40am to 3:20am. Next six questions on this page refer to this scenario.

The chance of a tornado passing within 10 miles of your house or closer from 2:40 am to 3:20 am is 0%. What would you most likely do in this scenario?

Nothing

Seek more info without taking shelter

Shelter at home or nearby

Drive to a shelter or another house/structure

Drive out of the potential tornado path

Other (write down)

The chance of a tornado passing within 10 miles of your house or closer from 2:40 am to 3:20 am is 20%. What would you most likely do in this scenario?

Nothing

Seek more info without taking shelter

Shelter at home or nearby

Drive to a shelter or another house/structure

Drive out of the potential tornado path

Other (write down)

The chance of a tornado passing within 10 miles of your house or closer from 2:40 am to 3:20 am is 40%. What would you most likely do in this scenario?

Nothing

Seek more info without taking shelter

Shelter at home or nearby

Drive to a shelter or another house/structure

Drive out of the potential tornado path

Other (write down)

The chance of a tornado passing within 10 miles of your house or closer from 2:40 am to 3:20 am is 60%. What would you most likely do in this scenario?

Nothing

Seek more info without taking shelter

Shelter at home or nearby

Drive to a shelter or another house/structure

Drive out of the potential tornado path

Other (write down)

The chance of a tornado passing within 10 miles of your house or closer from 2:40 am to 3:20 am is 80%. What would you most likely do in this scenario?

Nothing

Seek more info without taking shelter

Shelter at home or nearby

Drive to a shelter or another house/structure

Drive out of the potential tornado path

Other (write down)

The chance of a tornado passing within 10 miles of your house or closer from 2:40 am to 3:20 am is 100%. What would you most likely do in this scenario?

Nothing

Seek more info without taking shelter

Shelter at home or nearby

Drive to a shelter or another house/structure

Drive out of the potential tornado path

Other (write down)

Section E: Public Referendum/Sección E: Referéndum Público

In this section, we ask you to vote for or against an adoption of a new tornado alert system. The new tornado alert system would have three new features. First, it would predict tornadoes at least forty minutes before they happen. Second, it would describe a future time interval in which tornadoes can happen instead of issuing tornado warnings effective immediately. Third, it would describe chances of a tornado to happen within that time interval. People would receive tornado alerts in the same way they currently receive tornado warnings.

The introduction of this new tornado alert system would incur a cost to the government. These costs would have to be met through taxes. Additional taxes would mean that you would have less money to spend on other things. For these reasons, the National Weather Service weighs costs and benefits of this system and would like to collect votes from the public.

This public referendum would determine whether the new tornado alert system is needed. Your vote would affect the choice of the system: if a new warning system gets the most votes, the government would most likely implement the system. Otherwise the old system would remain in place.

Please carefully read the description of both options in the table below and then make your referendum vote below the table.

Option 1	Option 2
<ul style="list-style-type: none"> Existing system of tornado warnings No change in taxes 	<ul style="list-style-type: none"> Tornado alerts are issued 40 minutes in advance Describe the time interval when tornadoes can happen at your location Specify the chance of tornadoes passing within 10 miles of your house or closer within that time interval Every US resident, including you, pays additional 5 USD each year in federal taxes

My vote:

Option 1	Option 2
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How certain are you in your choice in the question E1 above?

Completely certain	Not completely certain
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How likely do you think it is that the results of this referendum will affect the government's decision to adopt a new tornado alert system?

	Not at all likely				Extremely likely			
	1	2	3	4	5			
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>			

Section F: Demographic Information/Sección F: Información Demográfica

In this section, we ask you to provide a little bit of personal information. While you can skip some of these questions, answering them truthfully would help to understand better which groups experience more difficulties with tornadoes. The responses would not be connected back to you.

What gender are you?

Female	Male	Other
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In what year were you born?

Year	<input type="text"/>
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How many people, including you, live in your household (total, including children)?

How many adults (18 or older), including yourself, live in your household?

How many household members would you expect to do the same thing you do when sheltering from a tornado?

Please write 0 if there are no such household members.

Are you of Hispanic, Latino, or of Spanish origin?

Yes

No

How would you describe yourself? I am ____

Asian	White
From indigenous tribes of Americas	Native Hawaiian or Other Pacific Islander
Black or African American	Other

How good is your English?

	Not at all	Not very well	Very well	Perfectly/Native
I can read English	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I understand spoken English	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

What is the highest degree or level of school you have completed?

(If currently enrolled, mark the previous grade or highest grade received.)

No schooling completed

Grades 1-12, no high school diploma

High school diploma or GED

Some college, but no degree

Associate or bachelor's degree

Graduate or professional degree (master's, MD, PhD)

What is the TOTAL income of your household, before taxes, last year (2019)? Please count income from all members of your household, and from all sources including AFDC, food stamps, social security, dividend and interest.

Under \$10,000	\$100,000 to \$124,999
\$10,000 to \$24,999	\$125,000 to \$150,000
\$25,000 to \$49,999	More than \$150,000
\$50,000 to \$74,999	Decline to answer
\$75,000 to \$99,999	

End of Survey/Fin de la Encuesta

Thank you very much for completing the survey! If you have any thoughts or ideas, you are welcome to share them in the space below:



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