



# The Climate Change Story: Bridging the Gap Between Science & The Public

Bernadette Woods Placky  
Climate Central  
September, 2019





**AccuWeather**

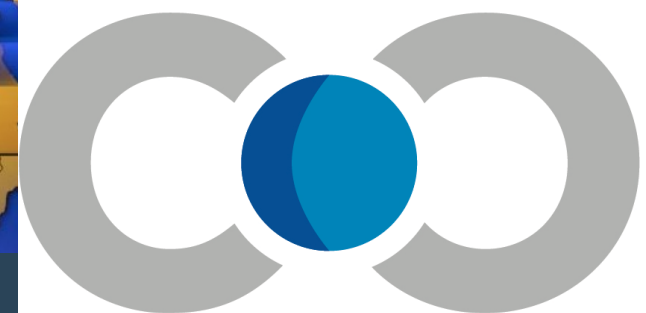


AccuWeather



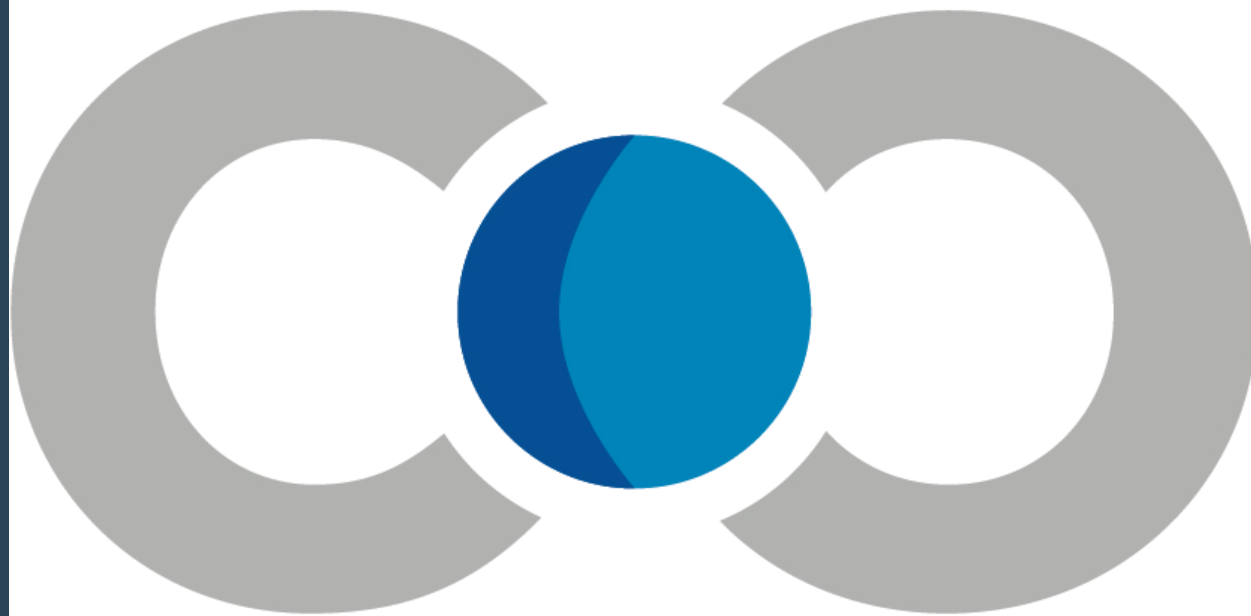


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# Different projects and programs, same mission

*Climate change is personal*

- Sea Level Rise
- Journalism – morphed
- World Weather Attribution
- Research – morphed
- Climate Matters
- Climate Matters in the Newsroom

**CLIMATE  CENTRAL**

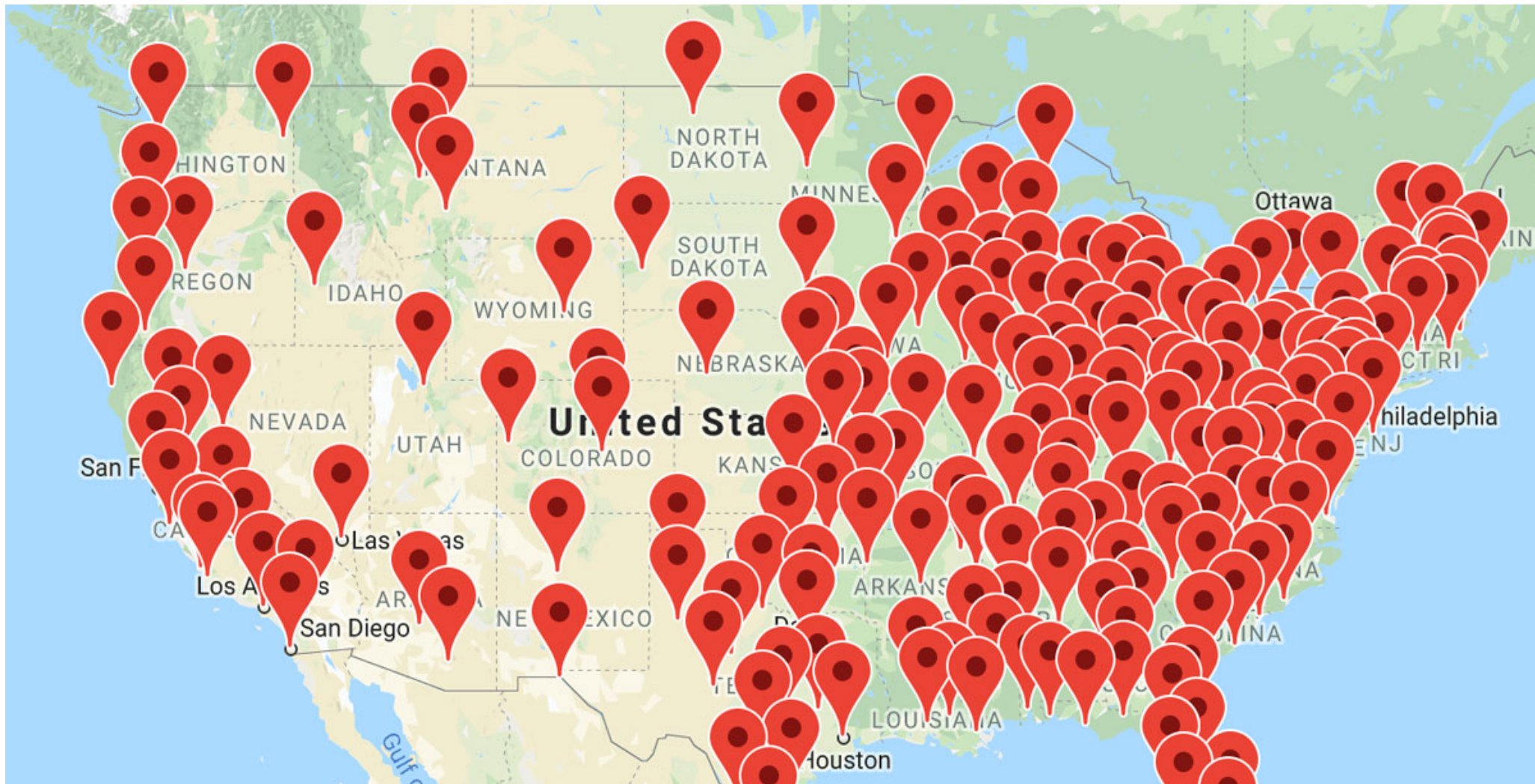


# Climate Matters

## TV Meteorologists are in a Unique Position

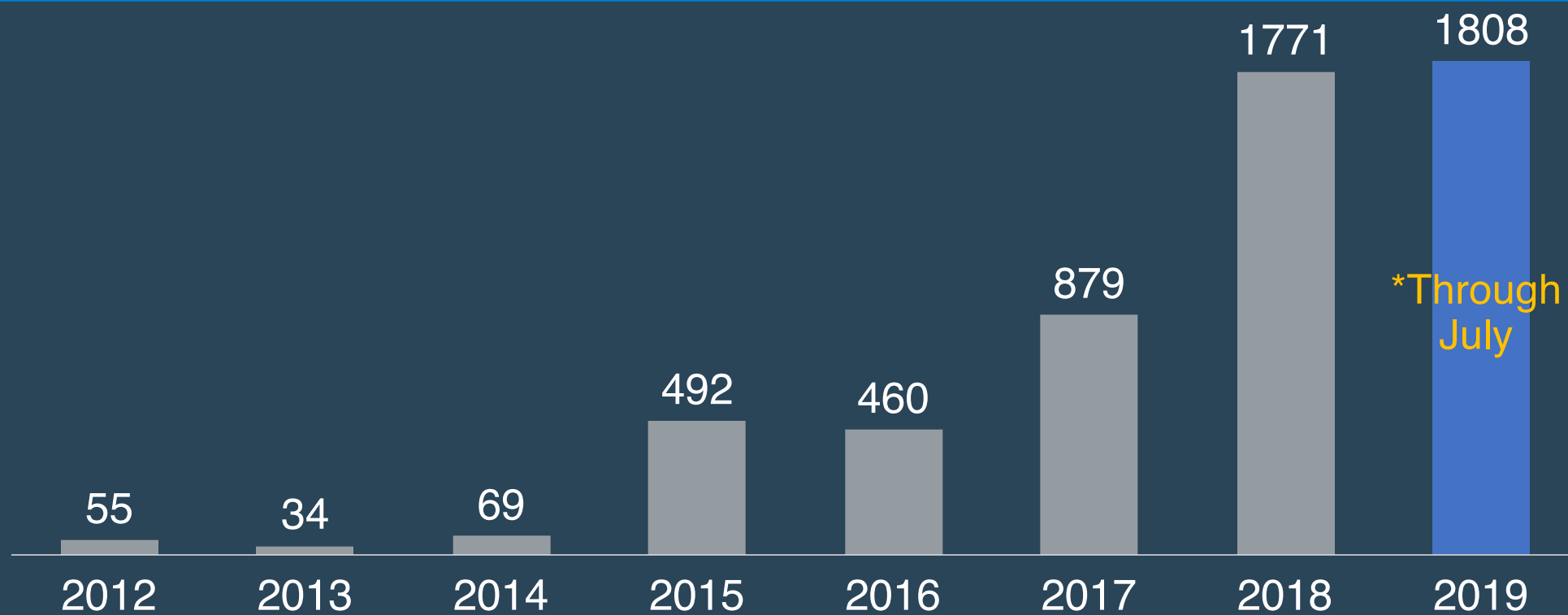
- *Trusted messengers*
- Large and dedicated audience
- Scientists
- Skilled communicators; locally
- Extreme weather is how most people experience climate change





770 TV Mets • 180 Markets • 244 Cities Produced

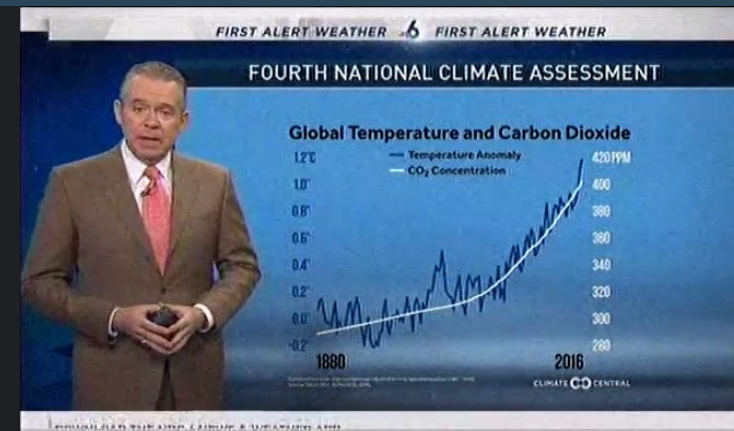
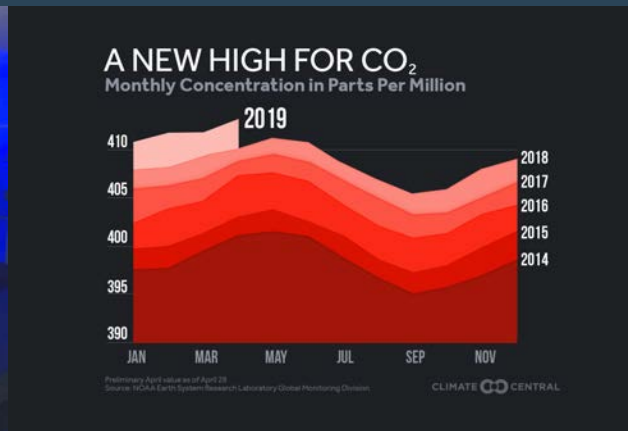
# Yearly TV Hits





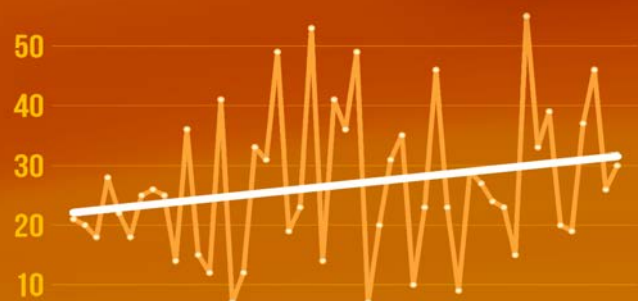
# How We Do It

- Focus on the science
- Localize data whenever possible
- Make it simple and clear
- Operate on a news cycle
- Produce content weekly, multiple formats, English & Spanish



**DAYS ABOVE 90°**

**9.6 MORE DAYS**



1970

PHILADELPHIA

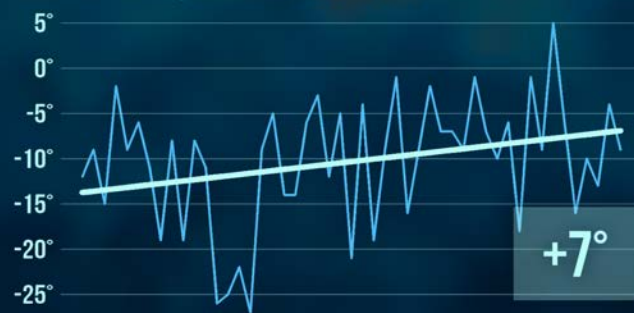
2018

This record based on data of change since 1970.  
Source: RCC-ACS.org

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**LESS EXTREME COLD**

Lowest Temperature Each Year



1970

CHICAGO

2018

Minimum temperature each year  
Source: RCC-ACS.org

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**WET GETTING WETTER**

CHANGE IN ANNUAL RAINFALL SINCE 1950

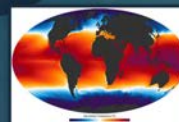


Statewide averages from NOAA/NCEI Climate at a Glance. Produced 5/22/2019  
Source: NOAA/NCEI Climate at a Glance

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**HURRICANES & CLIMATE CHANGE**

What we know



Warmer water = more fuel

Heavier rain

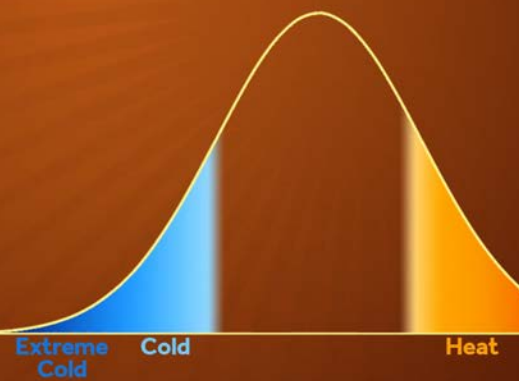


Higher storm surge



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## SMALL CHANGE IN AVERAGE BIG CHANGE IN EXTREMES



## SUMMER 2018 RANKINGS

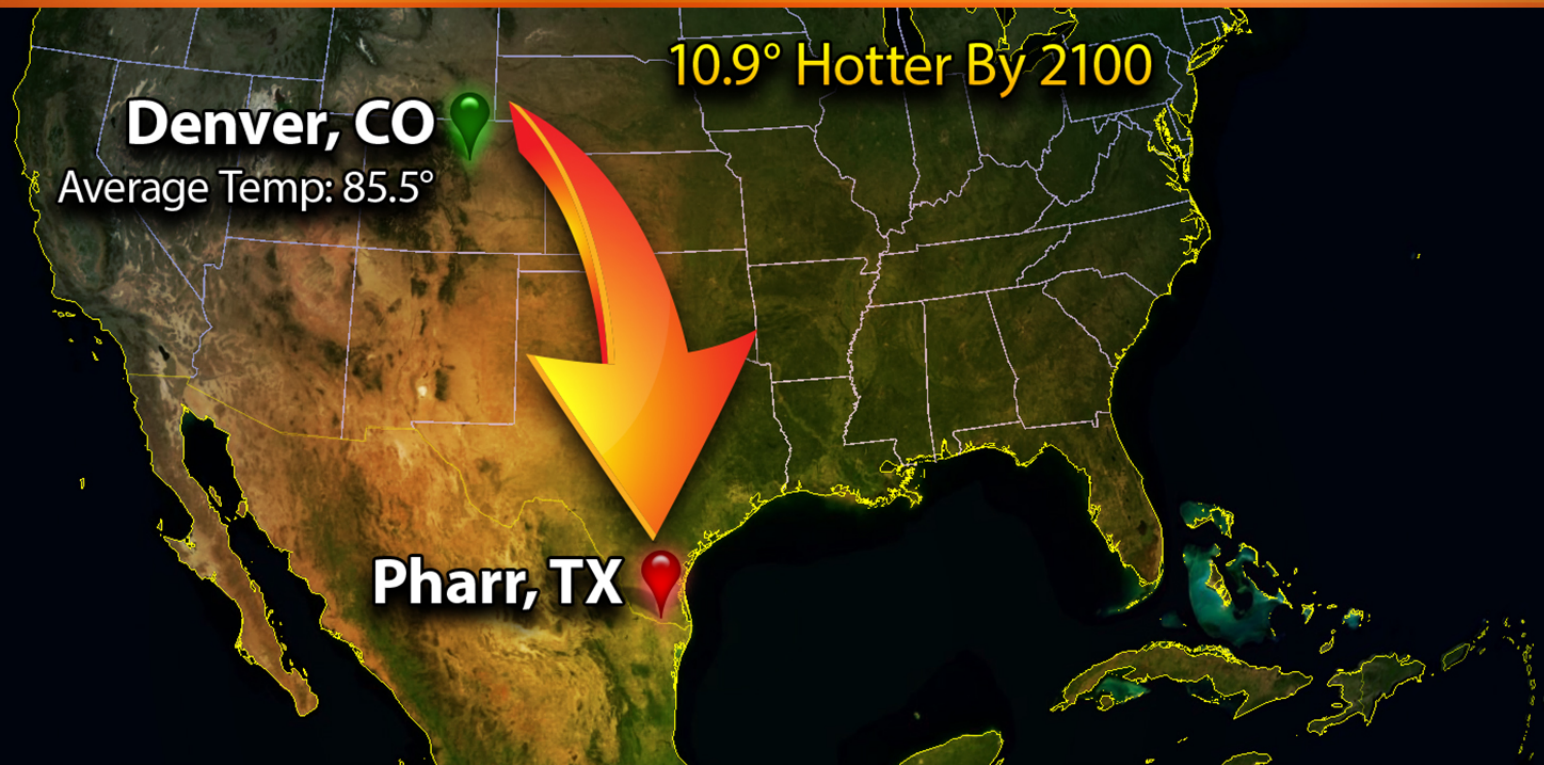


Data through 8/22/2018  
Source: RCC-ACIS.org

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# Where Your Summer is Headed



Future summer temperatures based on continuing with current emissions trends.  
Current temperatures: PRISM Climate Group, Oregon State University, <http://prism.oregonstate.edu>, accessed July 1, 2014.  
Projected temps: CMIP5 multi-model ensemble dataset.

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## Shifting Cities

### How Hot Will Summers Be By 2100?

Search or click on a city to find out.

type city here



Restore Map



III °F

CLIMAT



## Shifting Cities

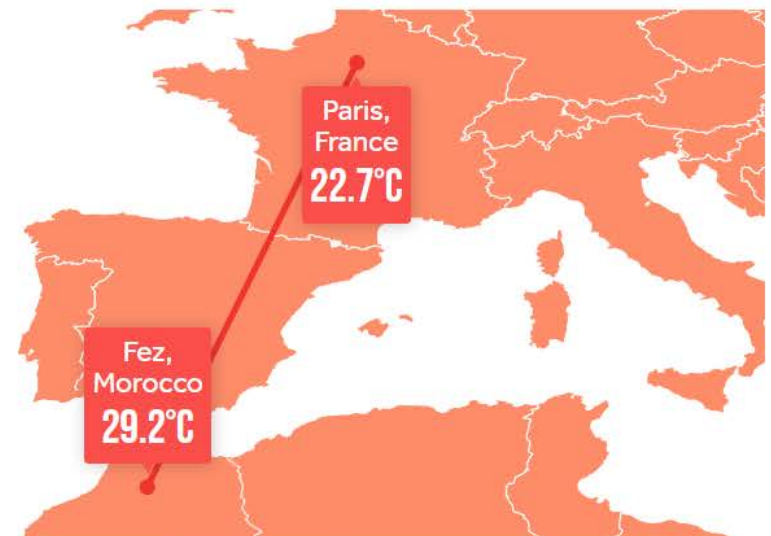
### How Hot Will Summers Be By 2100?

Summer highs in **Paris, France** could be more like **Fez, Morocco** by 2100 without emissions cuts.

Paris, France



Restore Map



III °F

But what about with  
moderate emissions cuts?

PORTLAND

## MOSQUITO SEASON GROWING

THEN

**71  
DAYS**

On average per year  
1980-1989

NOW

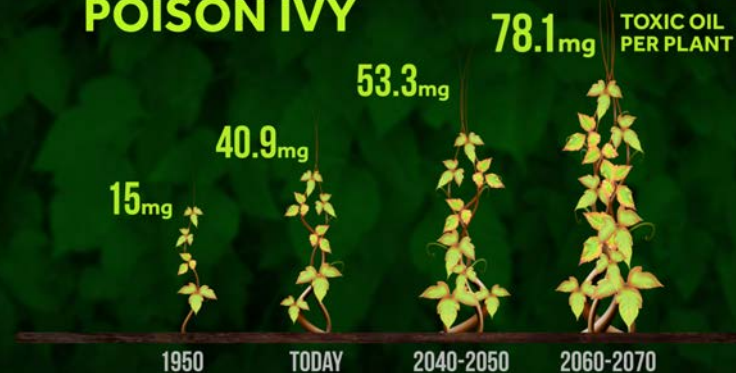
**103  
DAYS**

On average per year  
since 2006

Source: Yamana and Eltahir (2013), NCBI,  
National Institutes of Health, Daymet Data,  
Oak Ridge National Laboratory

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## MORE CO<sub>2</sub> MEANS BIGGER, MORE AGGRESSIVE POISON IVY

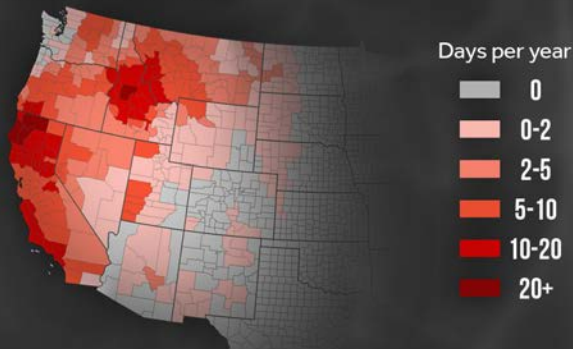


Average per plant in Ziska (2007) lab study

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## SMOKE WAVE DAYS

Wildfire Air Pollution



\*Smoke Wave Day = a day with a PM<sub>2.5</sub> concentration of at least 20 µg/m<sup>3</sup>  
PM<sub>2.5</sub> = Particulate matter smaller than 2.5 µm  
Source: Levy et al. 2017 Data: 2004-2009

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## LONGER GROWING SEASON = LONGER ALLERGY SEASON

CONSECUTIVE DAYS ABOVE FREEZING



Source: RCC-A&S.org  
Days between the annual last and first occurrence of 32°F. Produced 3/27/2019.

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## UNITED STATES NEW HOMES IN 2050 COASTAL FLOOD ZONE

TOTAL U.S. VALUE

**\$8.34 BILLION**

STATES WITH MOST HOMES AT RISK

1. NEW JERSEY

2. NORTH CAROLINA

3. FLORIDA

Homes built 2010-2016. Flood zone = local annual flood heights added to median sea level rise for 2050 (Kopp et al. 2017) under RCP4.5. Growth ratio: % growth in new homes in flood zone over % growth outside it. Housing data source: Zillow (home locations and values) and ZTRAX (built years).

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## Philadelphia FOOTBALL SEASON WARMING



Source: RCC-ACIS.org

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## BIRMINGHAM AREA THE POWER OF TREES

**21.4**  
MILLION  
TONS

CO<sub>2</sub> EQUIVALENT REMOVED

**5,968**  
MILLION  
GALLONS

STORM RUNOFF AVOIDED

**524**  
MILLION  
POUNDS

AIR POLLUTION ABSORBED

Source: U.S. Forest Service i-Tree Canopy Tool

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## TROUBLE BREWING



Climate Change is Impacting the Key Elements in Beer

Source: USDA, Climate Program Office

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# WEATHERPOWER

San Diego CA ▼

Select your market to see wind and solar electricity generation information from yesterday and forecasts for today and tomorrow.

## SOLAR

	YESTERDAY	TODAY	TOMORROW
ELECTRICITY GENERATED	6800	6500	6500
% HOMES POWERED	34%	33%	33%
% DAILY COST SAVED	250%	230%	230%
SOLAR POWER INDEX	5.2	9.1	9.2

[How are these values calculated?](#)

## WIND

DMA:	YESTERDAY	TODAY
ELECTRICITY GENERATED	570	9
% HOMES POWERED	2%	< 1%
REGION:	YESTERDAY	TODAY
ELECTRICITY GENERATED	49000	7900
% HOMES POWERED	22%	3%
WIND POWER INDEX	4.3	0.7

[How are these values calculated?](#)

## Graphics Generator



### Choose graphic:

- ☐ Wind
- ☒ Solar

### Choose background:

- ☒ Wind/solar image
- ☐ Black
- ☐ Transparent

☒ Include title

### Choose data:

- ☒ % Households Powered Locally
- ☐ % Households Powered Regionally (wind only)
- ☒ % Daily Cost Saved (solar only)
- ☐ Power Index (0-10 scale)

Load Graphic

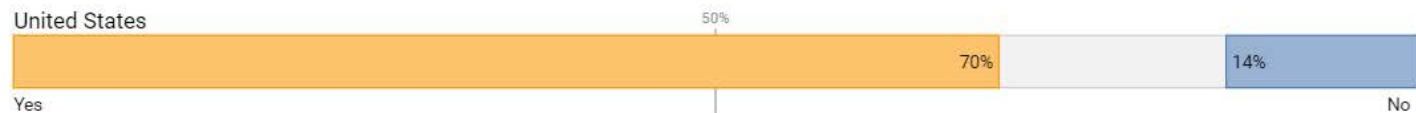
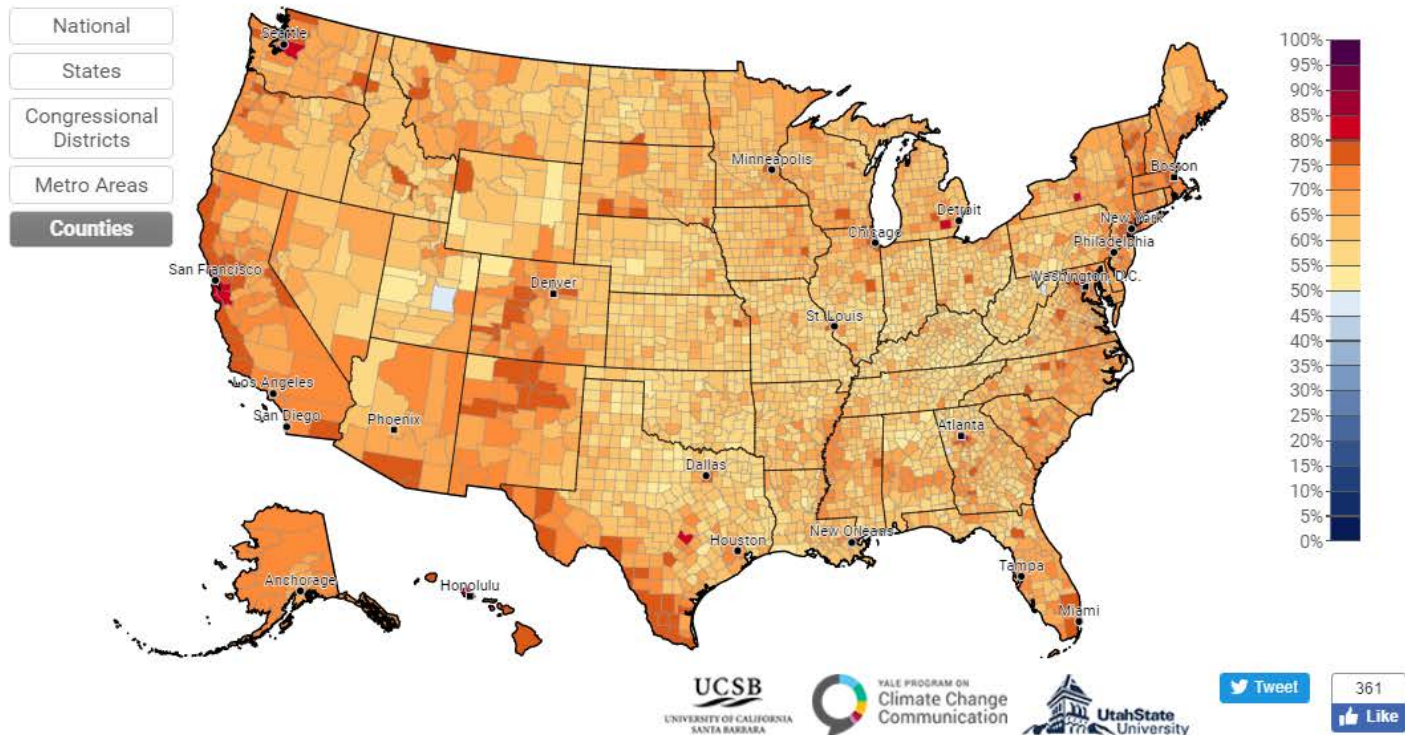
WeatherPower.climatecentral.org



## Estimated % of adults who think global warming is happening, 2018

Select Question: Global warming is happening ▼ Absolute Value ▼ [Permalink](#)

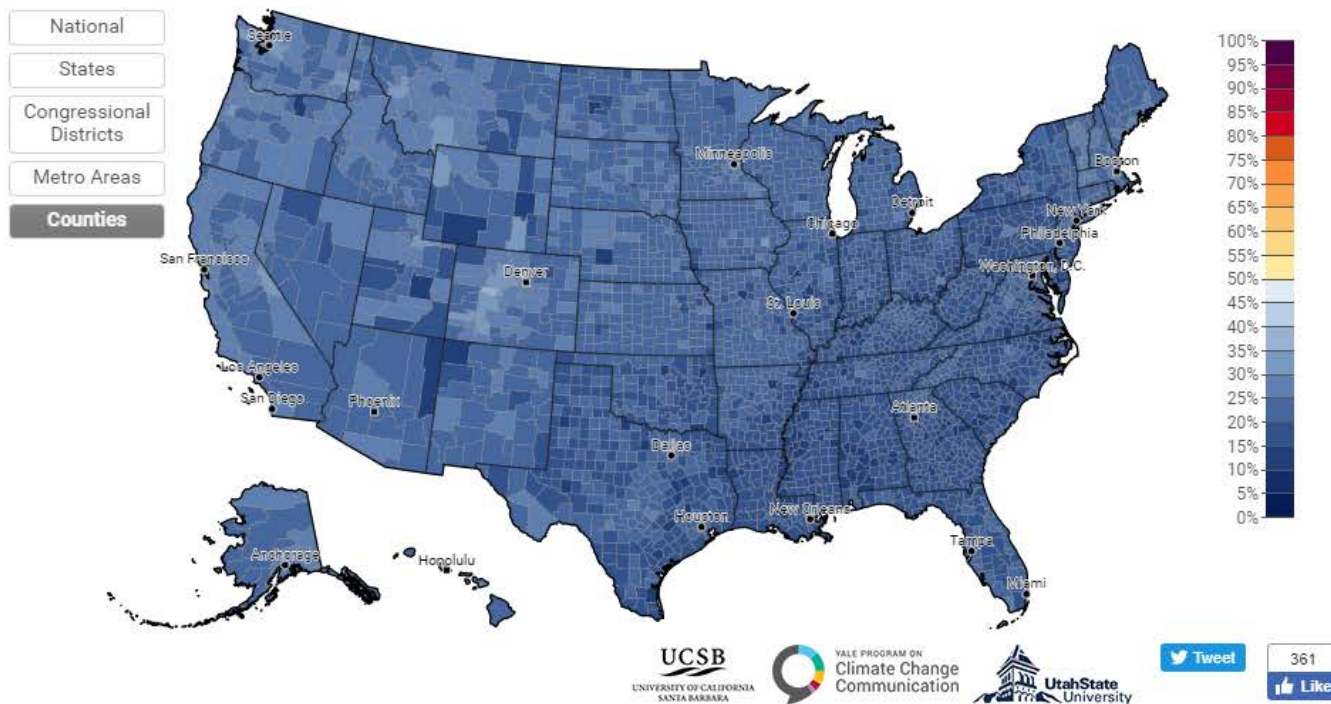
Click on map to select geography, or: Select a State ▼ Select a County ▼



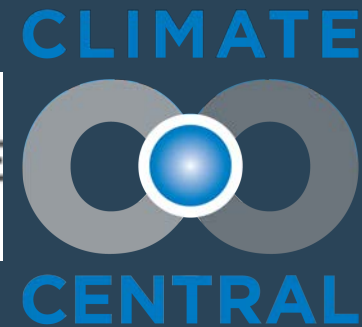
## Estimated % of adults who hear about global warming in the media at least once a week, 2018

Select Question: Hear about global warming in the media at least once a week Absolute Value Permalink

Click on map to select geography, or: Select a State Select a County



# Climate Matters In The Newsroom



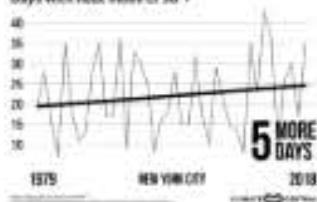
# CLIMATE MATTERS IN THE NEWSROOM

REPORTING BULLETIN: DATA, GRAPHICS & TIPS FOR LOCAL CLIMATE CHANGE COVERAGE

BALTIMORE | August 21, 2019

Extreme heat index days—when heat and humidity make it difficult for the body to cool itself off during workouts—have been increasing in cities across the country.

## Extreme Heat



Download Images for All Available Cities

## Extreme Heat



Download Image: JPG

## KEY CONCEPTS

- On [extreme heat index days](#), outdoor sports and heat can become a dangerous mix.
- 83% of U.S. cities assessed by Climate Central experienced an increase in annual heat index days above 90°F over the past four decades.
- Climate change's impact is being felt throughout the world of sports as governing bodies, coaches, and event organizers look to protect athletes and spectators during extreme heat conditions.

View Report

Download Data

## WHAT YOU NEED TO KNOW

## LOCAL INTERVIEW SUGGESTIONS

Check in with [your state's high school sports association](#) to find out what state-level policies are in place to ensure the safety of students who are playing sports during extreme heat conditions.

Talk to a local race director about challenges for events near you during extreme heat. The [Road Runners Club of America](#) has a [list of certified race directors](#) who have completed coursework in best practices for running events.

[Contact the Korey Stringer Institute](#) to speak with "ambassadors" from around the country who have personal stories regarding heat exertional illness.

The [SoLine service](#), [500 Women Scientists](#) or the press offices of local universities may be able to connect you with local scientists with expertise in heat and sports.

## NATIONAL INTERVIEW SUGGESTIONS



**Douglas J. Cava, PhD, ATC, PNAK, PACSW, PNAIA**  
CEO, [Korey Stringer Institute](#)  
Professor, Department of Kinesiology  
Director, Athletic Training Education  
University of Connecticut  
1-860-486-3624  
[douglas.cava@uconn.edu](mailto:douglas.cava@uconn.edu)



**Kristina Uehli**  
Senior Climate Scientist, Union of Concerned Scientists  
[Climate, Air, and Water in the United States: Climate Change and the Future of Dependability](#)  
Media contact: Ashley Siefert Nunez, Climate Communications Office  
1-202-331-0588  
[kuehli@ucsusa.org](mailto:kuehli@ucsusa.org)



**Jennifer Vance, PhD**  
Assistant Professor, Department of Sustainability, Arizona State University  
Research interests: Climate change, public health  
1-480-985-6380  
[jennifer.vance@asu.edu](mailto:jennifer.vance@asu.edu)



**Andrew Crundaten, PhD**  
Department of Geography, University of Georgia  
Research interests: Applied climatology, climate and human health, hydroclimatology  
1-706-583-0430  
[acrundaten@uga.edu](mailto:acrundaten@uga.edu)

## HOW WE GOT THE DATA

Climate Central analyzed daily maximum temperature and minimum relative humidity using the [gcm2MET](#) modeled dataset and based on the [findings](#) of Dai et al. 2019. Heat index temperatures were calculated using the National Weather Service [heat index](#) algorithms. The change in the number of 90°F+ and 105°F+ days are based on linear regression. The full methodology can be found in our [report](#).

## Climate Matters in the Newsroom in Action

- Amy Jo O'Donoghue [reported](#) that Western wildfires and hot, stagnant summers are contributing factors to Salt Lake City's unhealthy levels of ozone pollution, in [Deseret](#).





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# CLIMATE MATTERS

[LEARN MORE ABOUT CLIMATE MATTERS](#)

## RESOURCES

Localized data, analyses and multimedia — all grounded in science — to help you understand and share the story of our changing climate.

[View all resources >>](#)

## GET CLIMATE MATTERS

Interested in receiving weekly, location-specific updates on climate trends and topics?

[Click here to receive Climate Matters >>](#)

## Media Library

Keyword  Market  Topic  [Show more filters](#)

[SEARCH](#)

Click on the release below to get information specific to your city or market.

### GLOBAL CONVEYOR BELT

JUN 6, 2018

The global ocean conveyor belt is slowing down, impacting climate, sea levels and marine life.

[IMPACTS, OCEANS, SEA LEVEL RISE](#)

### Rapidly Intensifying Hurricanes

MAY 30, 2018

Rapid intensification, usually found in major hurricanes, has likely increased in the Atlantic basin since 1970 and may become more common in a warming world.

[SEVERE WEATHER, HURRICANES, TROPICAL WEATHER](#)

### 2018 RAIN SO FAR

MAY 23, 2018

Drought and deluge are both expected to be more common in a warming world.

[HEAVY RAIN, FLOODING, HEAVY DOWNPOURS](#)

[Market Versions Available](#)

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### Drought & Deluge in 2018

MAY 23, 2018

Drought and deluge are both expected to be more common in a warming world.

[HEAVY RAIN, FLOODING, HEAVY DOWNPOURS](#)

[Market Versions Available](#)

### Climate Matters in Action

Monica Woods shows how the fictional planets in the Star Wars universe compare to our own.

[Watch](#)

Join the conversation on [Facebook](#) and [Twitter](#).

### Extreme Weather Toolkits

Extreme weather coming your way? Here's its connection to climate change (and how you can cover it in your city).

[Learn more...](#)

### Upcoming Events

[NOAA: May Global Temperature Release](#)  
JUN 18, 2018

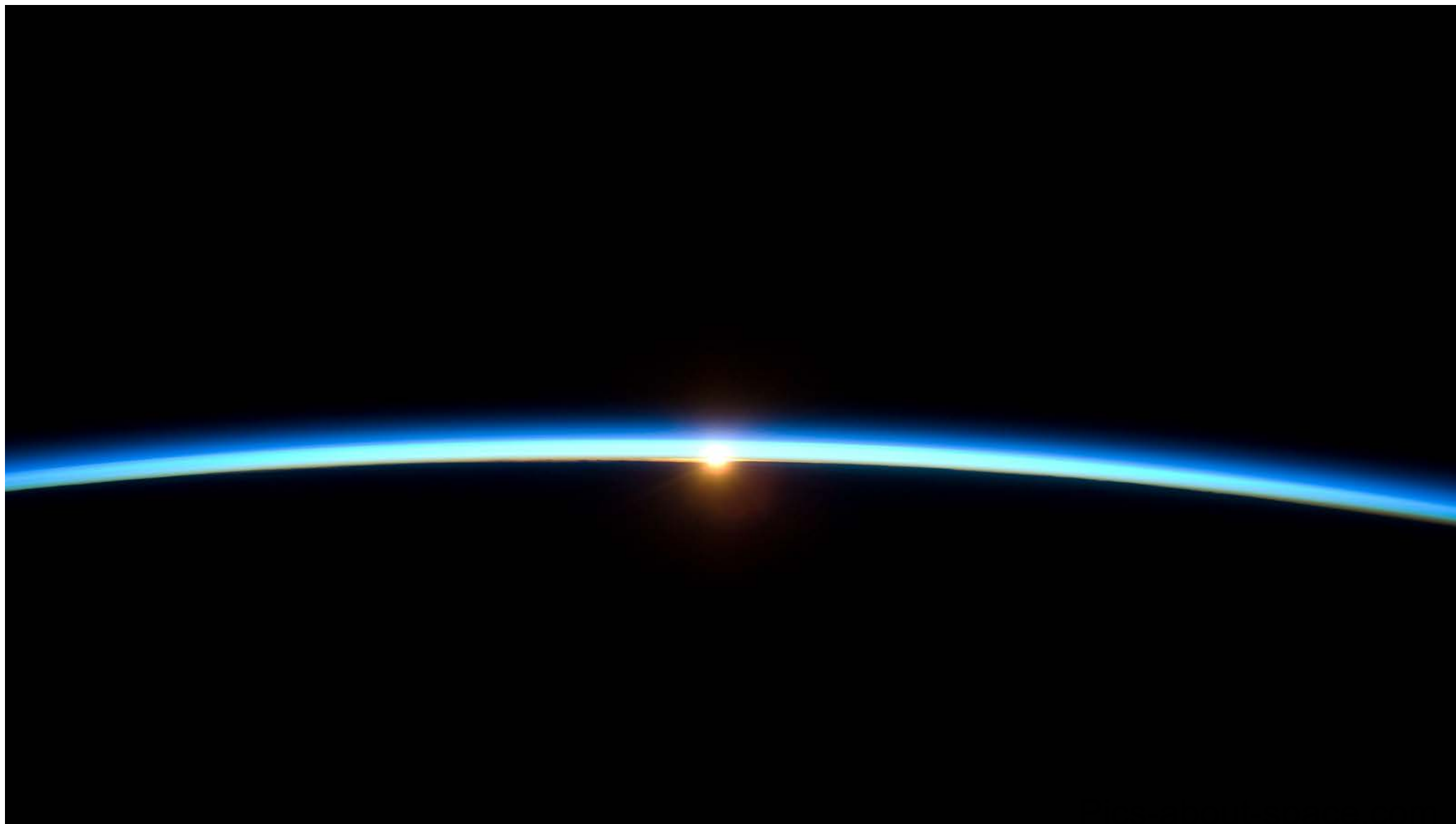
[Spanish Language Webinar: Climate Change Impacts and How We Know](#)

Medialibrary.climatecentral.org

# Lessons Learned

## Climate Matters

- Underestimated barriers
- Relationships and trust take time
- Power of network building
- Media likes good content
- KNOW YOUR AUDIENCE - topic, tone, timing
- Meet people where they are
- Personalize/localize
- Tell a story







Thank you!

bplacky@climatecentral.org  
@bernadettewoods