

MOST ACCURATE 7 YEARS IN A ROW



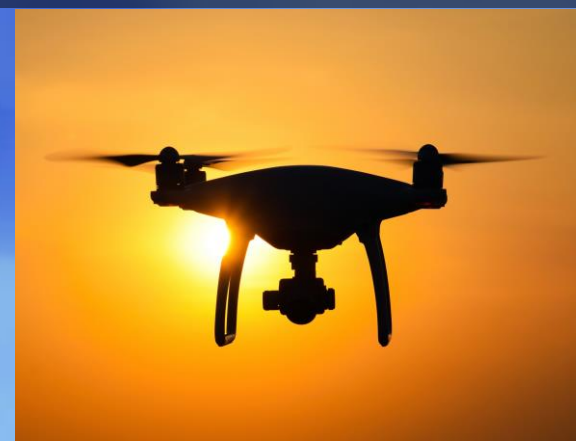
2021 IPWMAN ANNUAL CONFERENCE

STORM CHASING



WINTER FORECAST

USING DRONES



MEDIA PARTNERSHIPS



ABOUT ME

- **WCIA 3 CHIEF METEOROLOGIST**
- **BEEN IN TV WEATHER FOR 20 YEARS**
- **GREW UP IN VEEDERSBURG, INDIANA**
- **WORKED IN TERRE HAUTE, IN; LEXINGTON, KY; INDIANAPOLIS IN; SPRINGFIELD, MO AND NOW IN CHAMPAIGN, IL**
- **HAM RADIO OPERATOR WX9KSL**
- **PART 107 FAA DRONE PILOT**
- **AVID STORM CHASER/SPOTTER**



Meteorologist

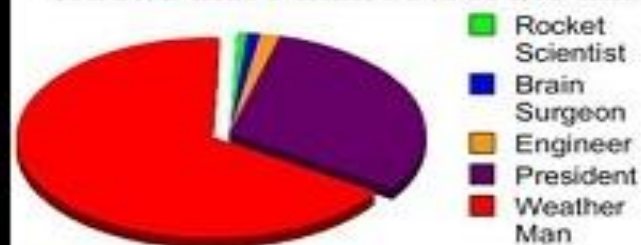


What my friends think I do



What my mom thinks I do

Chance of keeping your job if you're
WRONG more than 75% of the time



What society thinks I do



What Hollywood thinks I do



What I think I do

```
sum2 =sum2+fun*fun
value=1000.0*sum/n
unc=1000.0*sqrt(({sum2/n)-(s
write(*,11)value, unc
format(' Integral value:',f1
stop
end
function rand(ix)
integer a,p,ix,b15,b16,xhi,x
data a/16807/,b15/32768/,b16
xhi=ix/b16
xalo=(ix-xhi*b16)*a
```

What I really do



PrimeTime.

PrimeTime.

3:15

1

Blackmagic Design
The leading manufacturer of professional video equipment

Mini Converter
SDI to DVI



TECHNICAL O
CLEAN
NO FOOD O
ALLOW

WHAT YOU SEE



FUTURETRACK

THU 5:30 AM

RAIN MIX SNOW



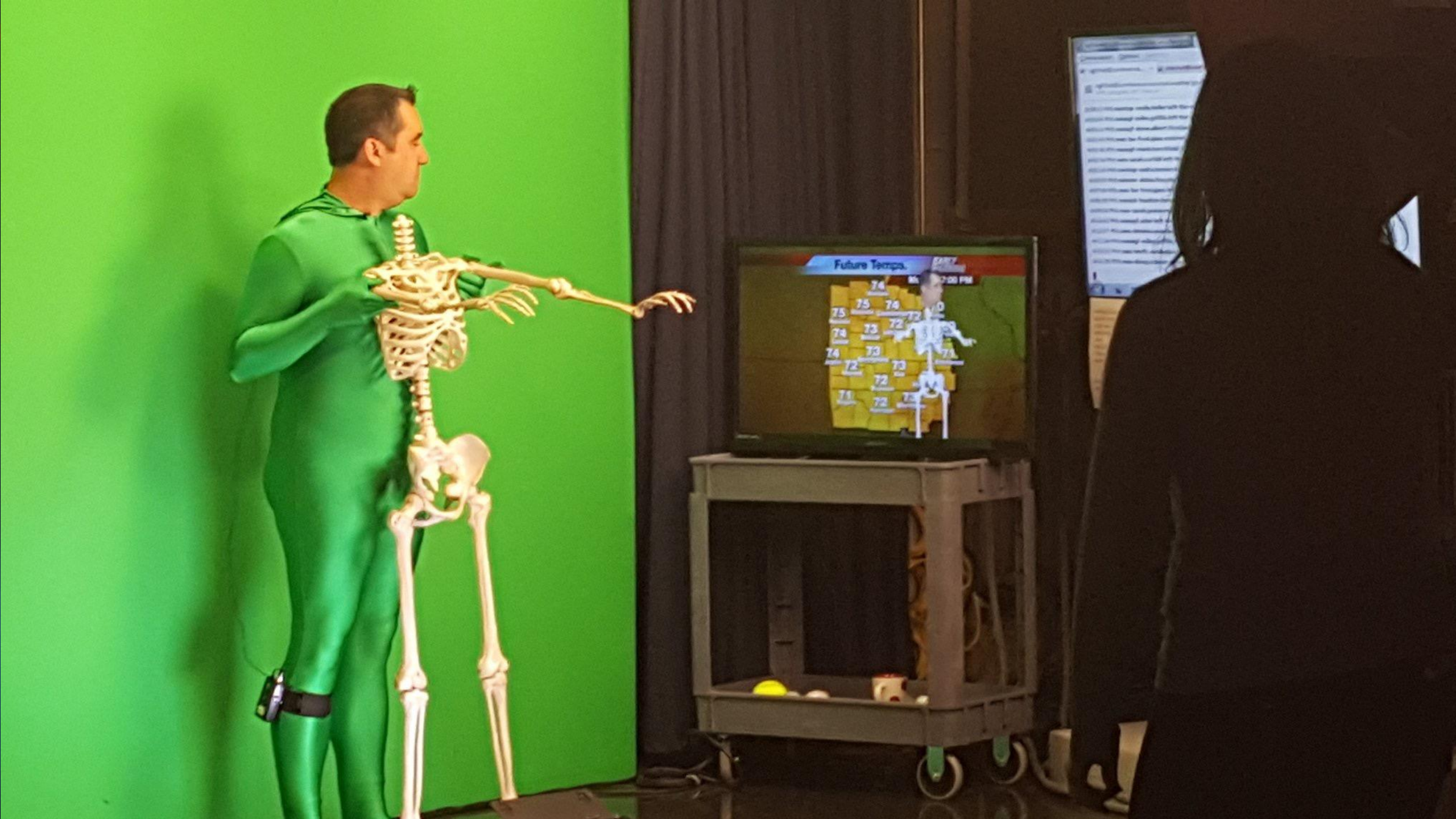
SPRINGFIELD
6:12 87°

WIND GUSTS FORECAST

THU 12:00 AM



DANVILLE
6:11 84°



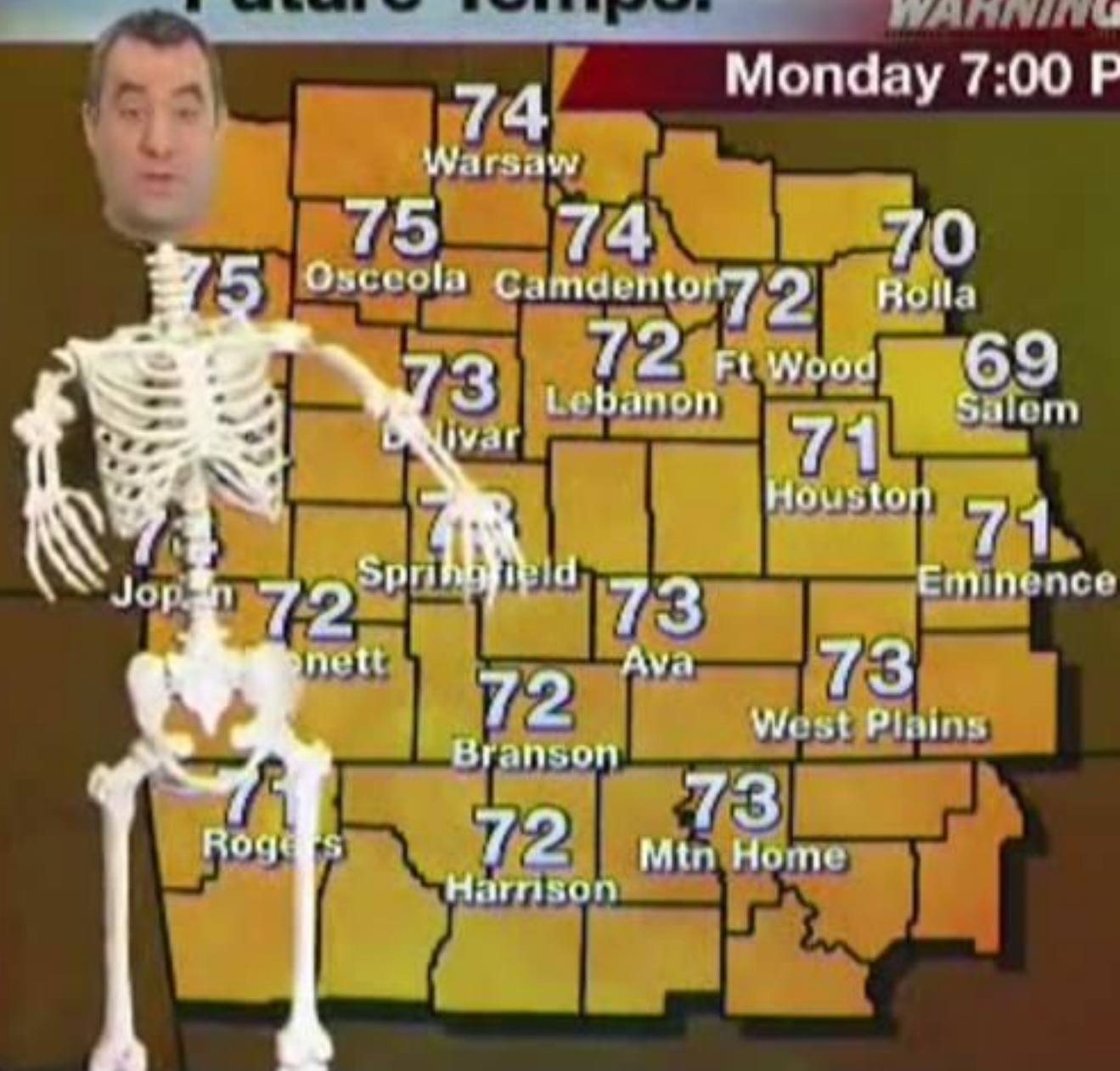
Future Tempo.

74	75	76	77	78
75	76	77	78	79
76	77	78	79	80
77	78	79	80	81
78	79	80	81	82
79	80	81	82	83
80	81	82	83	84
81	82	83	84	85

Future Temps.

**EARLY
WARNING**

Monday 7:00 PM



7 Day Forecast

**EARLY
WARNING**

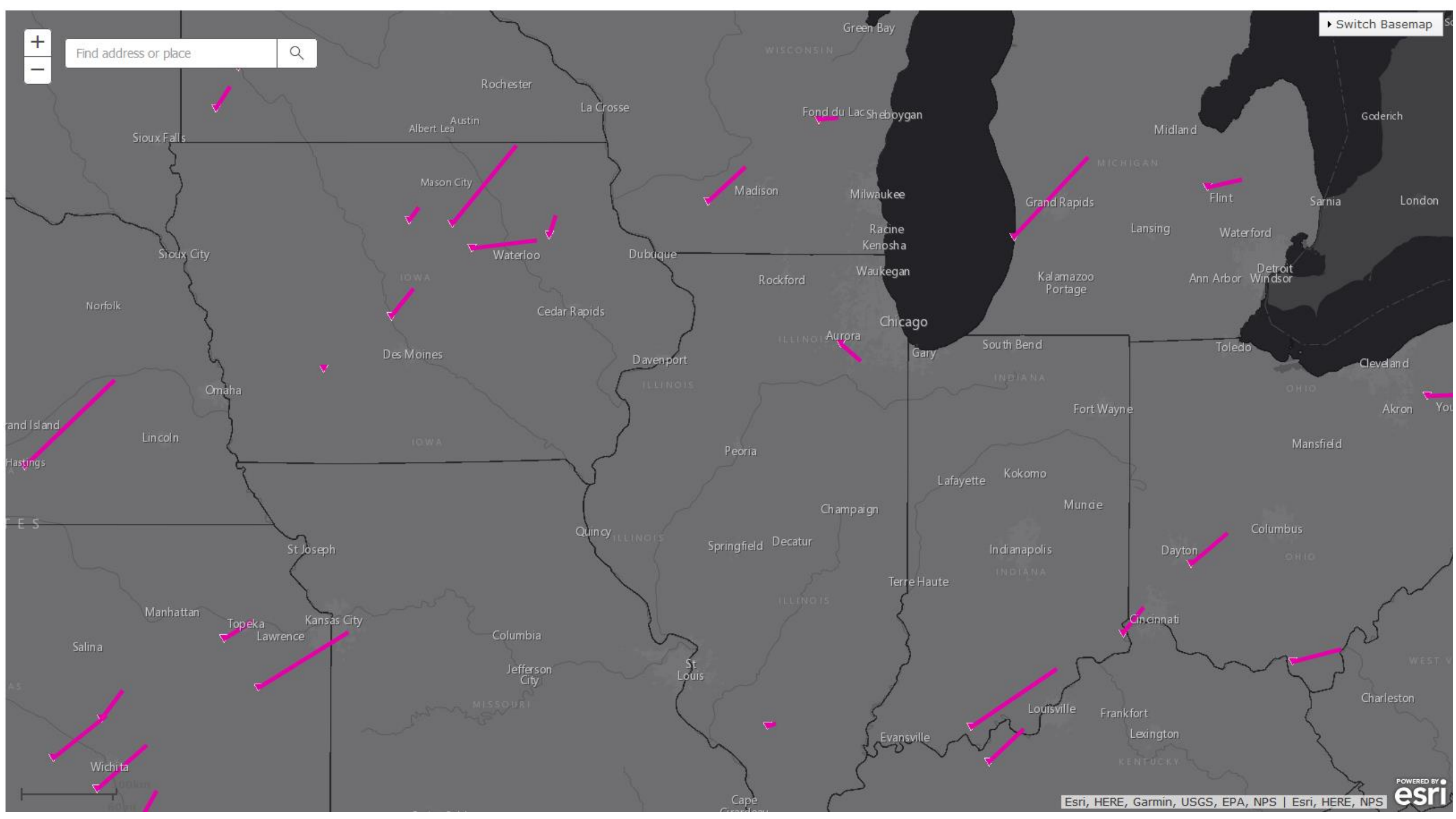




Find address or place



Switch Basemap

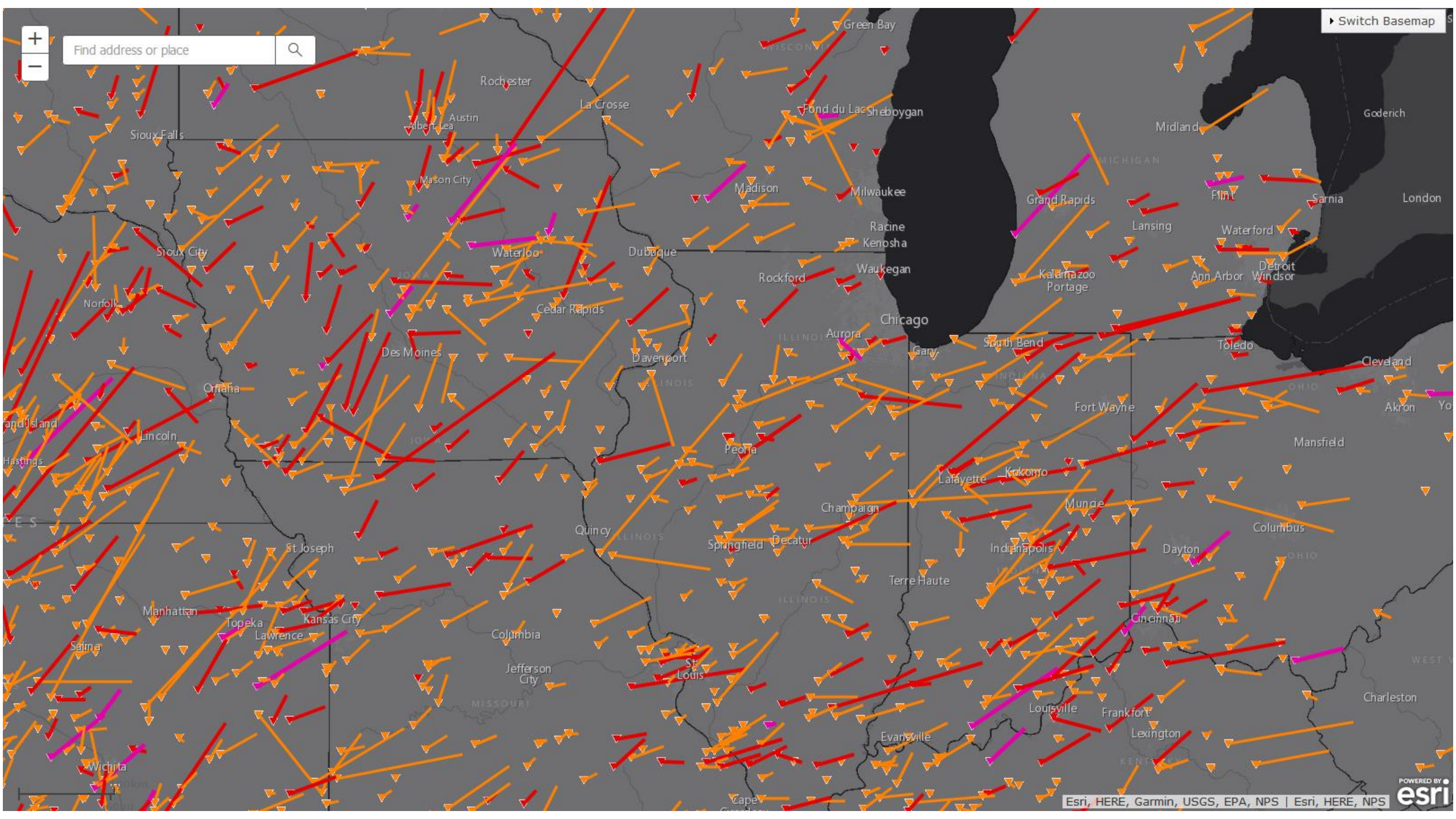




Find address or place



Switch Basemap

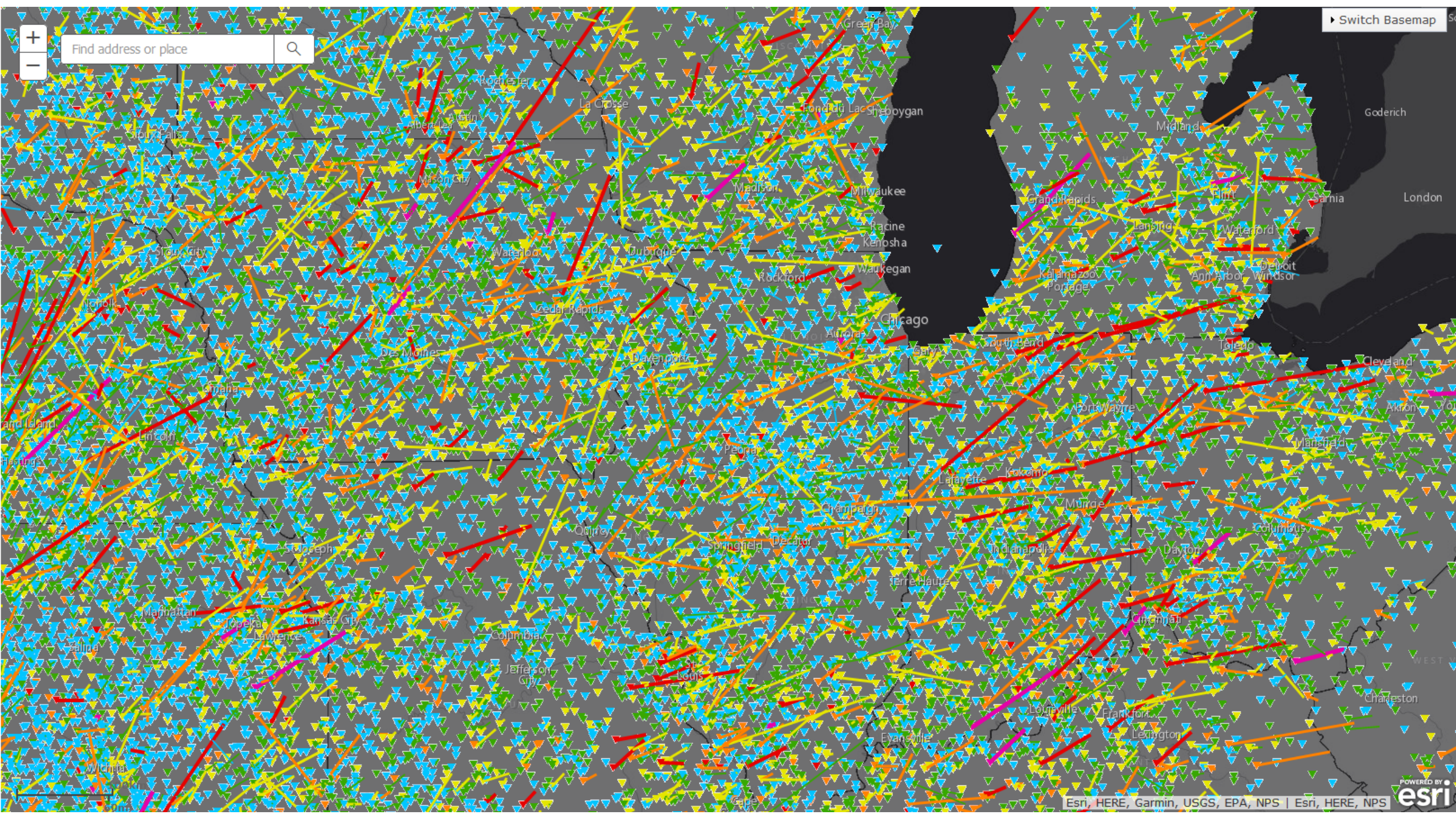




Find address or place



Switch Basemap



VORTEX 2



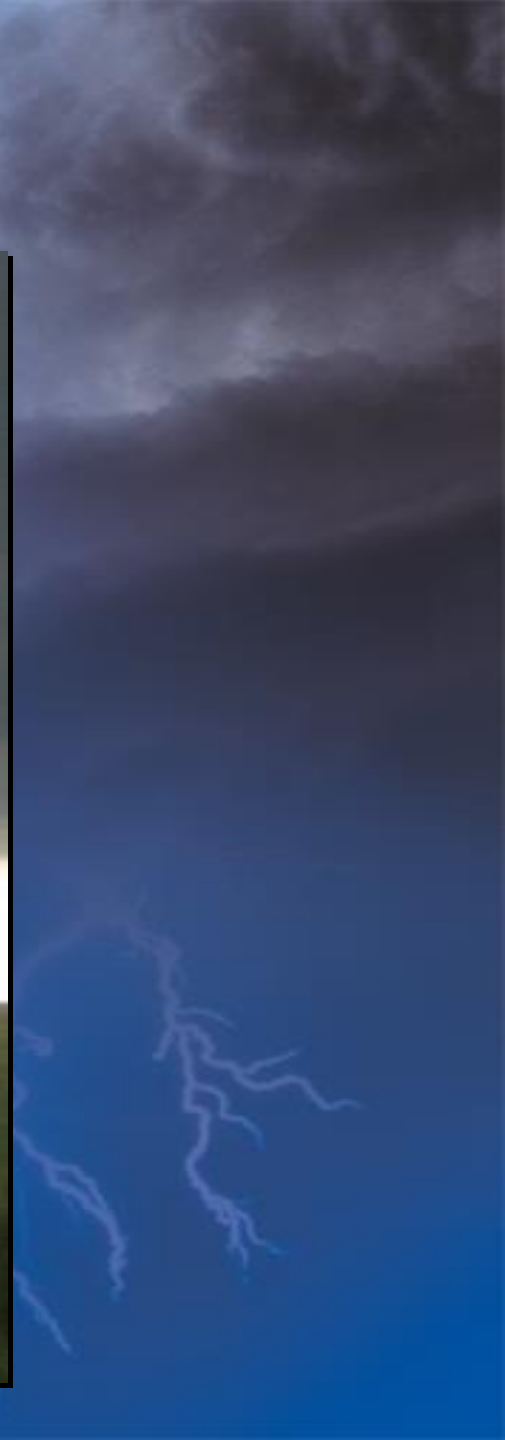
VORTEX 2



VORTEX 2



VORTEX 2



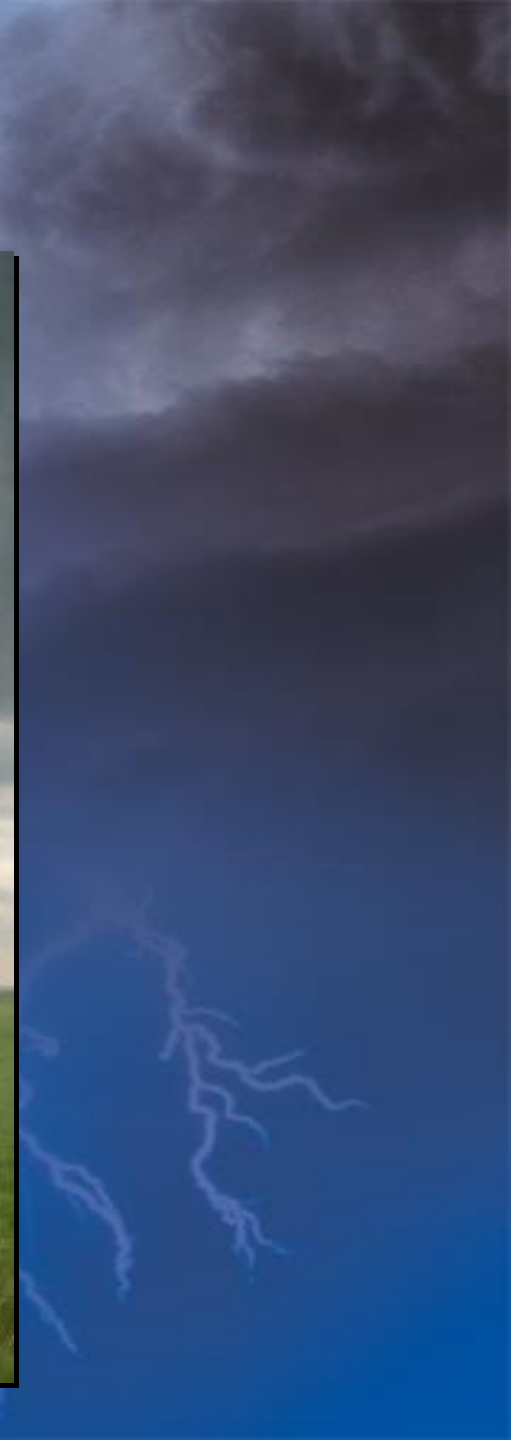
VORTEX 2



VORTEX 2



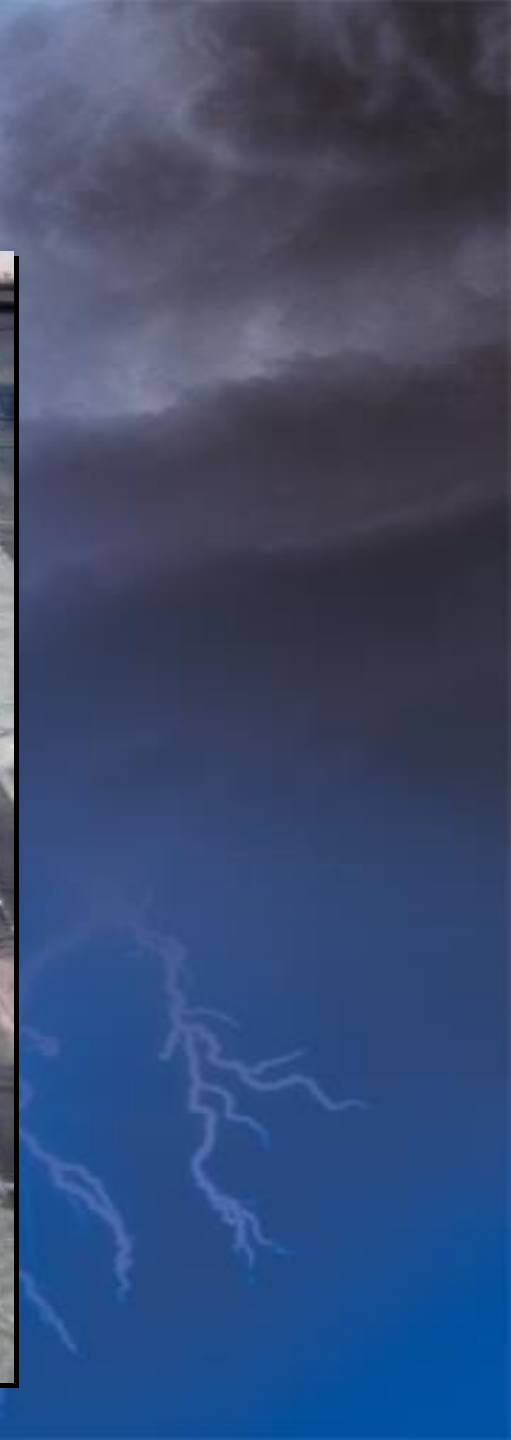
VORTEX 2



VORTEX 2



VORTEX 2



WHY PEOPLE CHASE/SPOT STORMS

- **ENTERTAINMENT: THE THRILL & CURIOSITY - NADERS**
- **SCIENCE: COLLECTING DATA TO LEARN MORE - MESOCYCLONES**
- **PUBLIC SAFETY: FIRST RESPONDERS INFORM PUBLIC -**
- **MEDIA: TO ENHANCE TV COVERAGE & INFORM PUBLIC - TORNADOES**



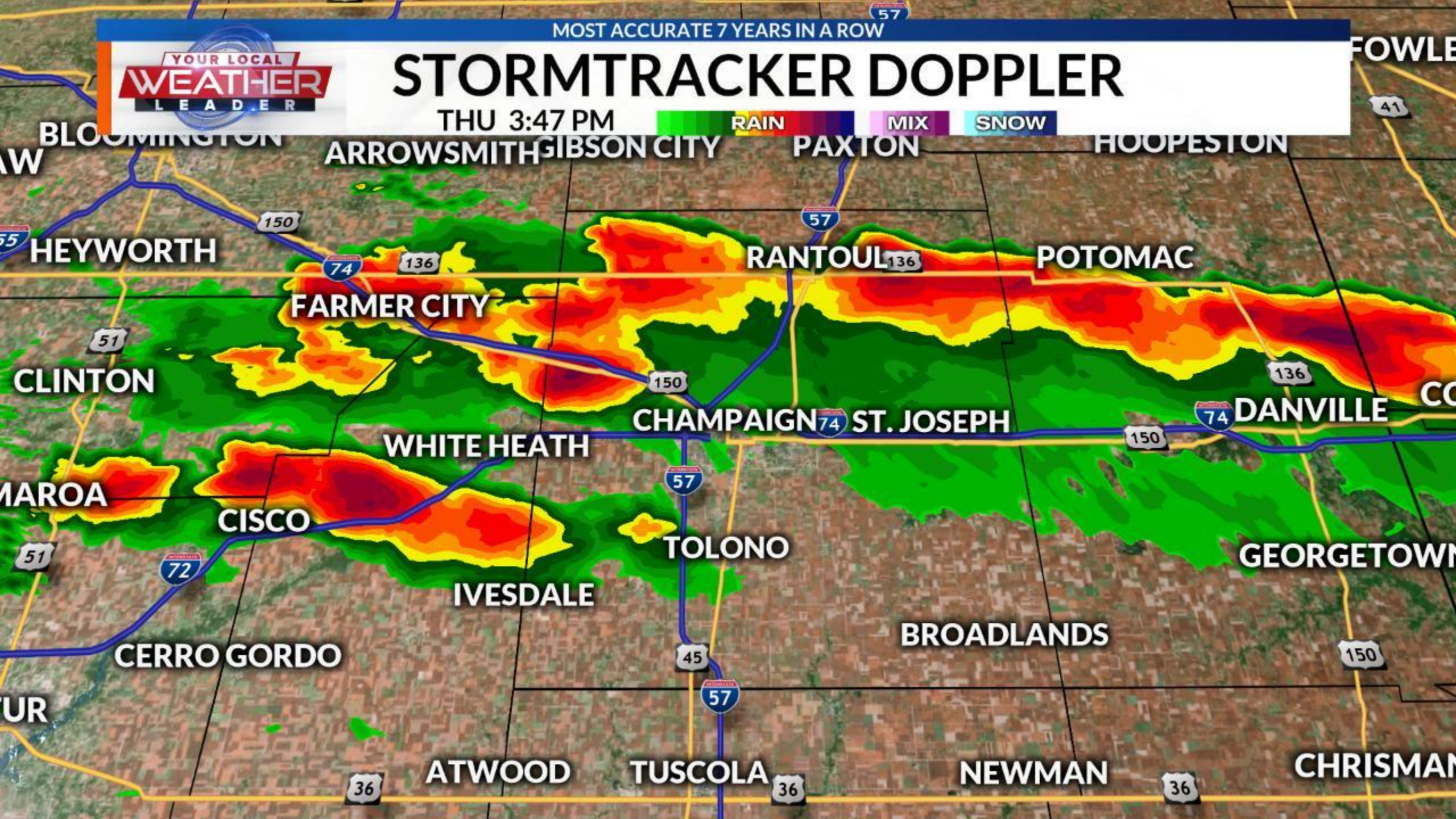
MOST ACCURATE 7 YEARS IN A ROW



STORMTRACKER DOPPLER

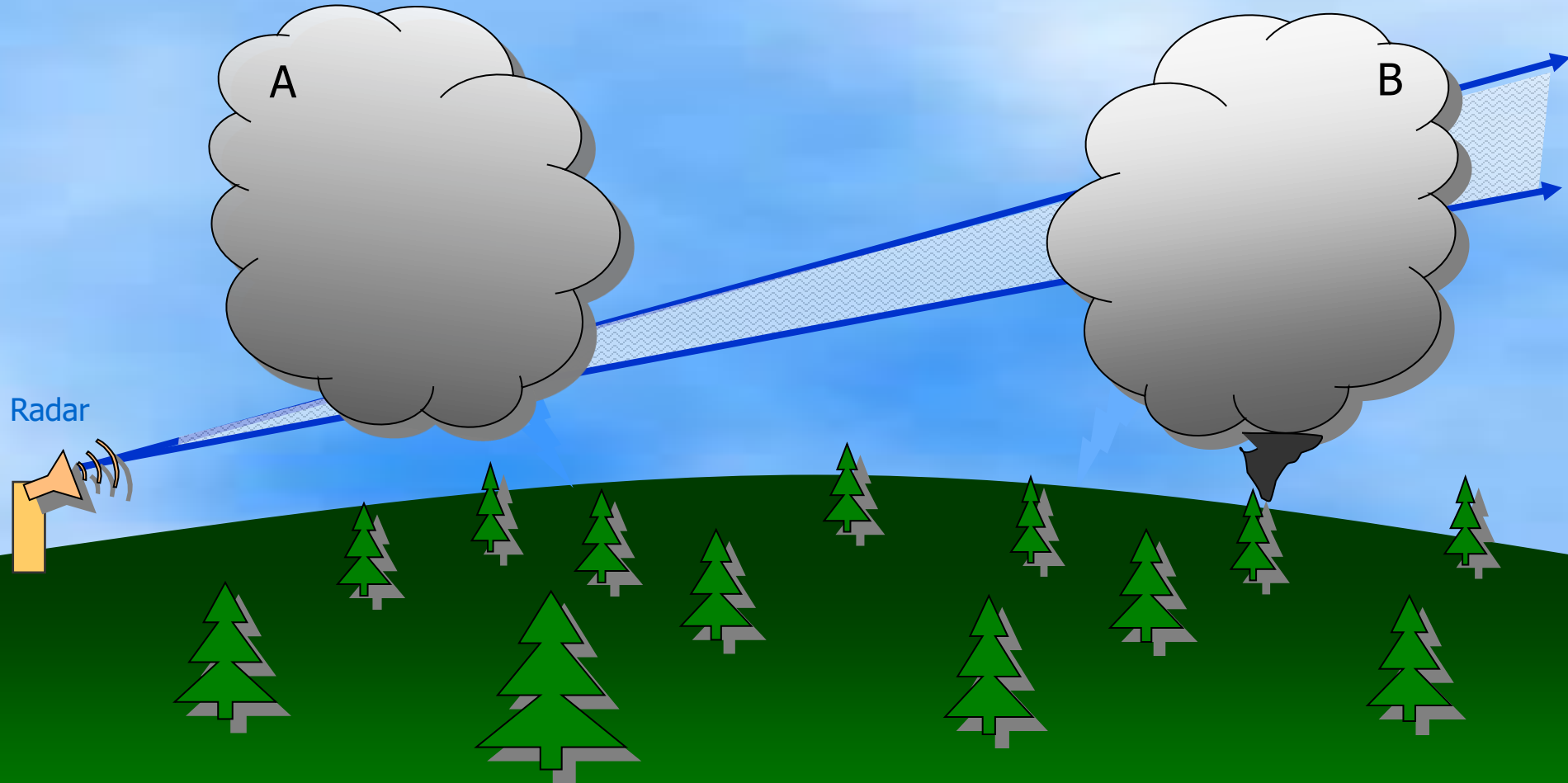
THU 3:47 PM

RAIN MIX SNOW



Why We Need Spotter Reports

Radar Horizon

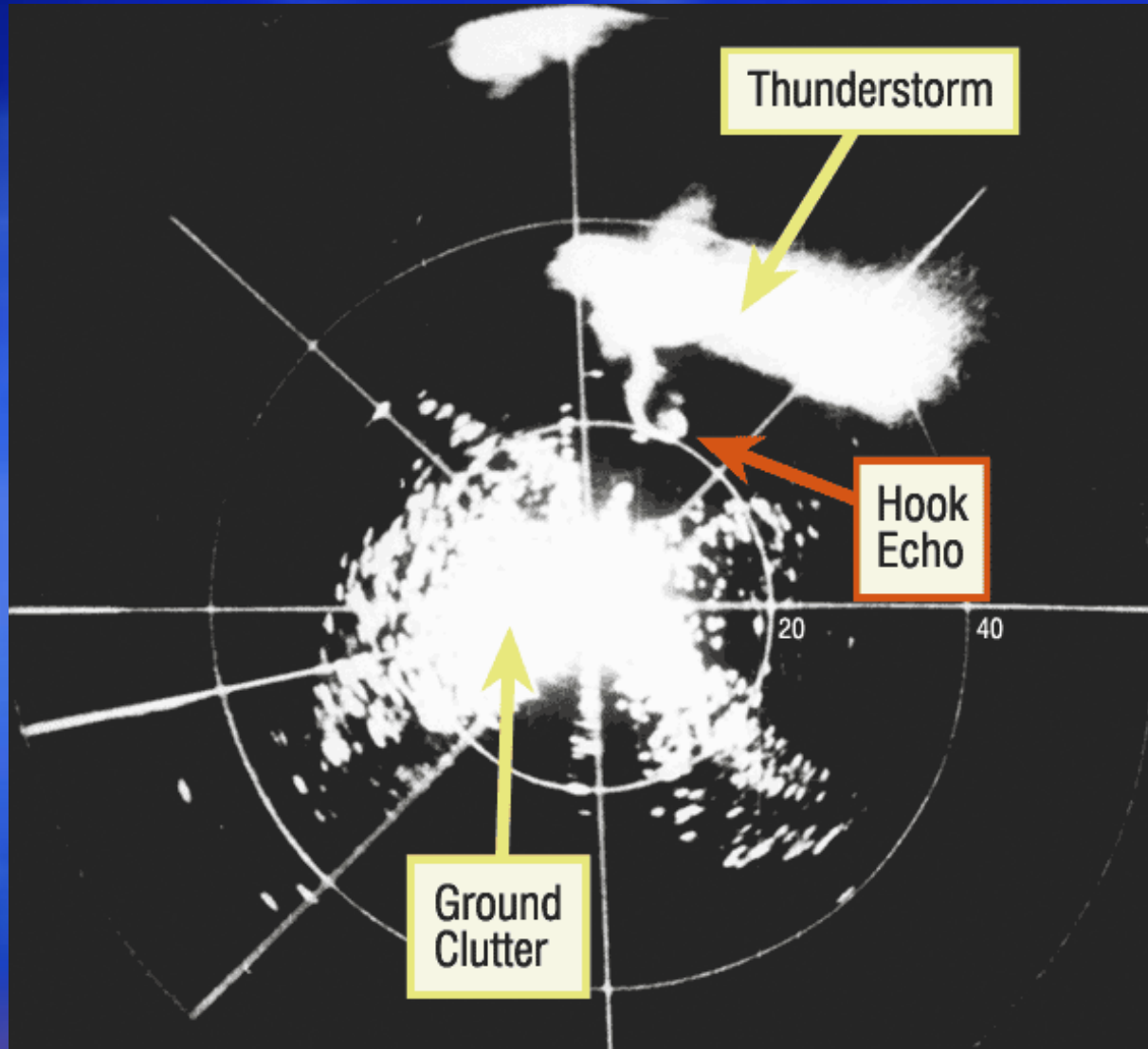


Radar beam cannot see lower portion of storm "B"

MOST ACCURATE 7 YEARS IN A ROW



FIRST RADAR HOOK ECHO



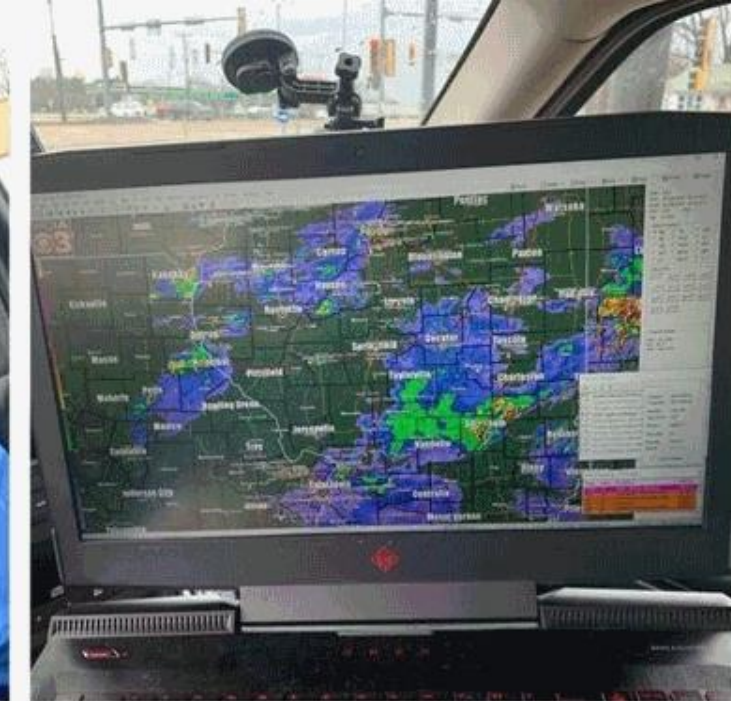
**First seen at the
Illinois State Water
Survey on April 9th,
1953 from the radar
in Champaign at
Willard Airport!**

THE IMPORTANCE OF CONFIRMATION

- **NOT EVERYONE TAKES A WARNING SERIOUS**
 - **IT'S JUST ANOTHER WARNING, NO BIG DEAL**
- **DANGER MUST BE PROVEN**
 - **A RADAR WITH THE COLOR RED DOESN'T CUT IT**
- **VISUAL EVIDENCE MAKES PEOPLE ACT**
 - **SOCIAL SCIENCE HAS PROVEN PEOPLE WILL ACT WHEN THEY SEE THE DANGER THEMSELVES, A WARNING OR SIREN ISN'T ENOUGH FOR MANY PEOPLE AS THEY'VE BECOME DESENSITIZED.**









KEVIN LIGHTY

WCIA 3 CHIEF METEOROLOGIST



The background image is a landscape photograph. The sky is filled with dark, heavy, blue-grey clouds, suggesting an approaching storm or late afternoon light. Below the clouds, there's a layer of lighter, wispy clouds. The foreground shows a desert-like terrain with low-lying, scrubby vegetation in shades of green and brown. In the far distance, there are faint silhouettes of mountains or hills. The overall mood is dramatic and powerful.

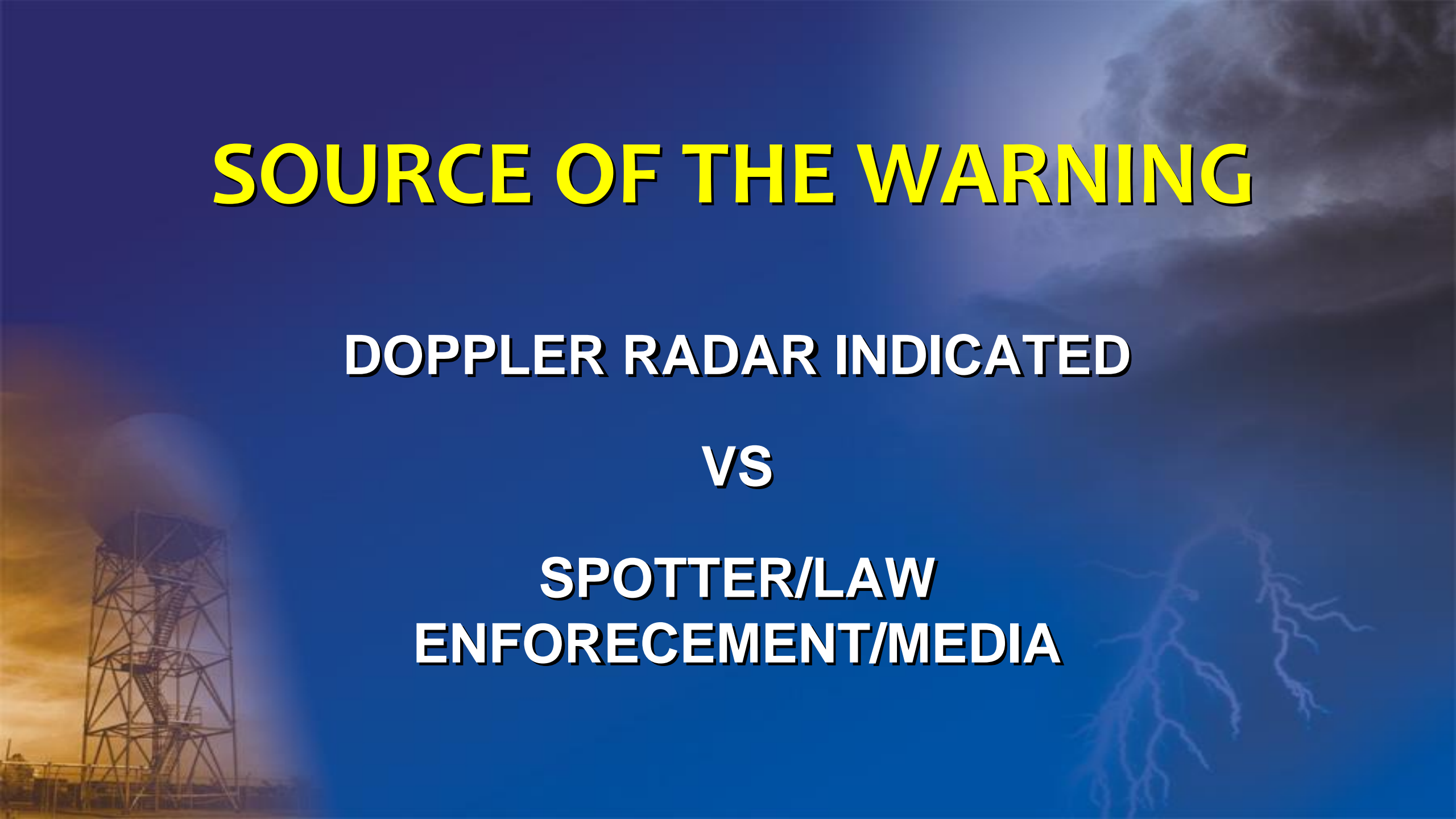
**YOUR REPORTS
MAKE A DIFFERENCE**

SOURCE OF THE WARNING

DOPPLER RADAR INDICATED

VS

**SPOTTER/LAW
ENFORCEMENT/MEDIA**



APARTMENTS



APARTMENTS



CNN
iReport



COURTESY GRANT DEARDORFF



BECOME A SPOTTER



**Weather
Spotter
TRAINING**

HAIL

Report the largest size stone you see

Compare to common objects



Dime/Penny	0.75 inches
Nickel	0.88 inches
Quarter	1.00 inches
Half Dollar	1.25 inches
Ping Pong Ball	1.50 inches
Golf Ball	1.75 inches
Hen Egg	2.00 inches
Tennis Ball	2.50 inches
Baseball	2.75 inches
Tea Cup	3.00 inches
Grapefruit	4.00 inches
Softball	4.50 inches

**WE ASK THAT YOU DON'T SAY MARBLE
SIZE HAIL – USE COINS AS A
REFERENCE SIZE!**



Taking a picture with your phone



Taking a picture with your phone
Don't do it vertical, always do horizontal.



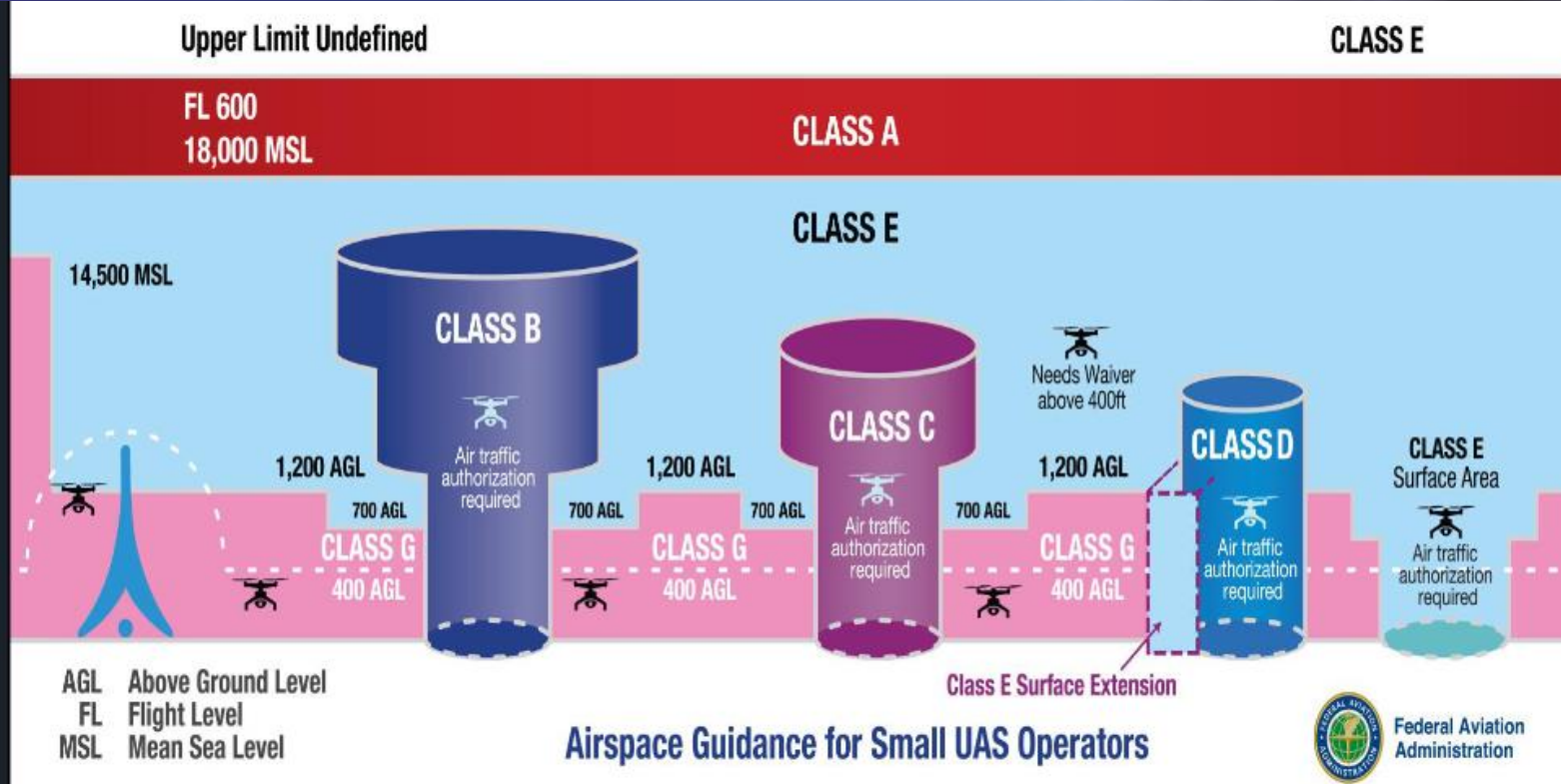


THE NEW HELICOPTER...

- Drones are cheaper
- Easier to buy and insure
- Low cost to maintain and operate
- Can go into smaller places and get more unique shots
- Can be equipped with various lenses
- Can be quickly deployed



FEDERAL RULES AND REGULATIONS



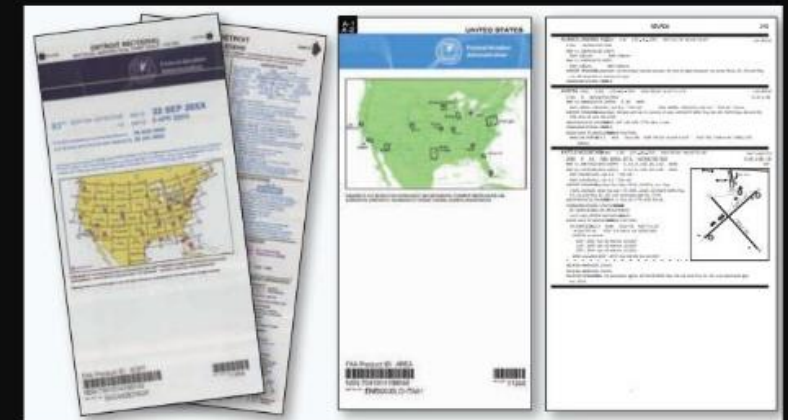
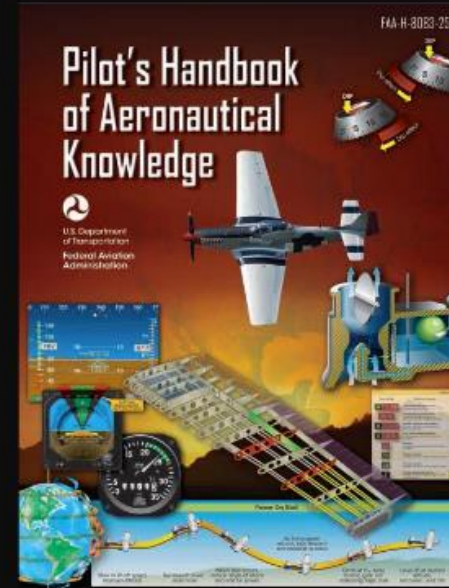
- Register your drone!
- No more than 400 feet
 - Not over people
 - Line of Sight
- Only in certain airspaces without approval

FAA PART 107

- Commercial Use
 - Be at least 16
 - Be able to read, speak, write and understand English
 - Be in a physical and mental condition to safely fly a drone
 - Pass the initial knowledge exam at an FAA certified testing center
 - Most are at local airports, colleges, etc.

https://www.faa.gov/uas/commercial_operators/become_a_drone_pilot/

<https://bit.ly/37JMwBX>





**THAT'S A NICE
DRIVEWAY YOU JUST SHOVELED**



IT WOULD BE A SHAME



**IF YOU HAD
TO SHOVEL IT AGAIN**



SNOW PLOW DRIVER



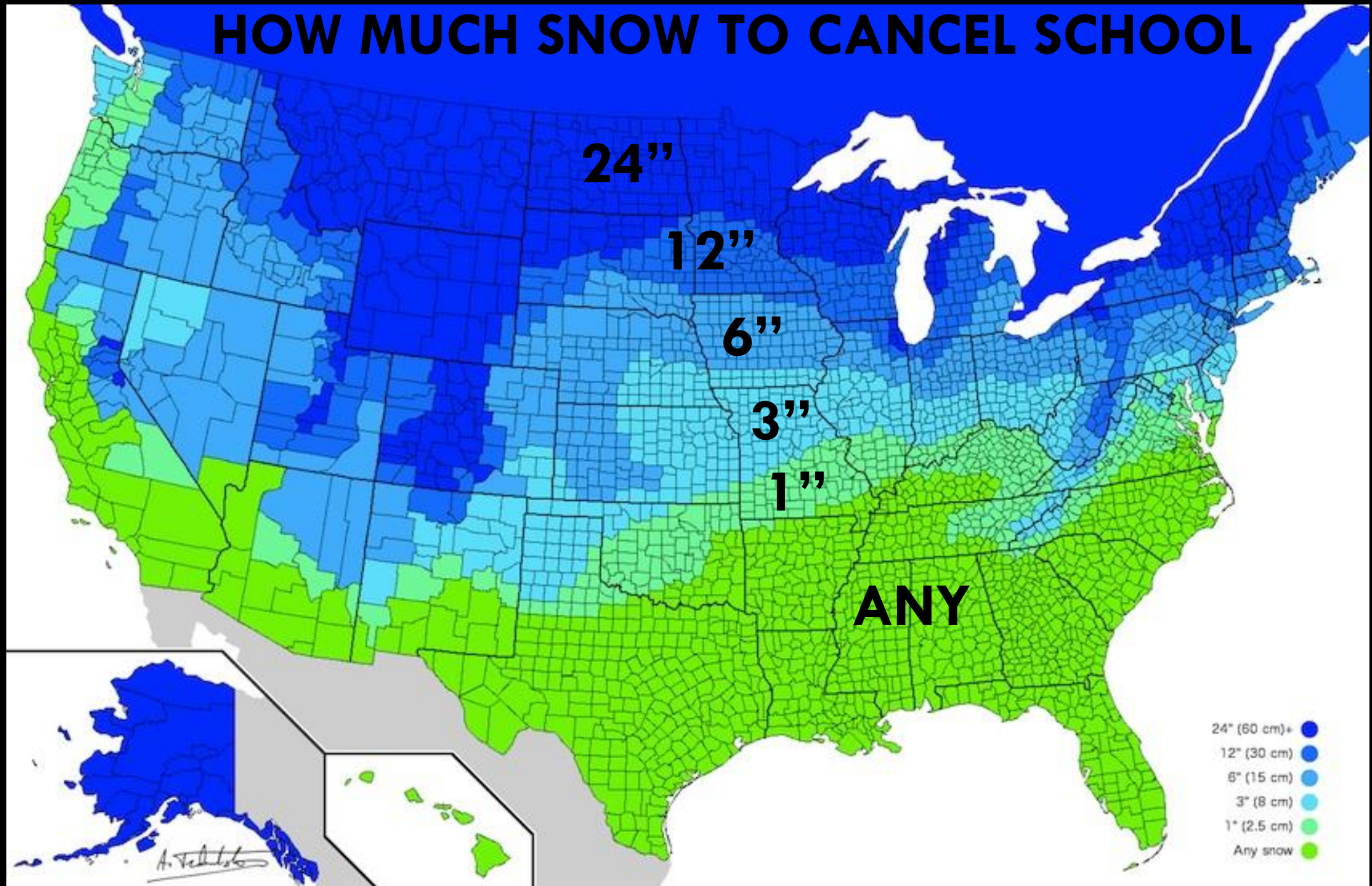
**DOESN'T CARE
ABOUT YOUR "PROBLEMS"**

THE CLASSIC



HILLBILLY SNOW PLOW

HOW MUCH SNOW TO CANCEL SCHOOL



Persimmon Seeds In Folklore

Fork



Knife



Spoon

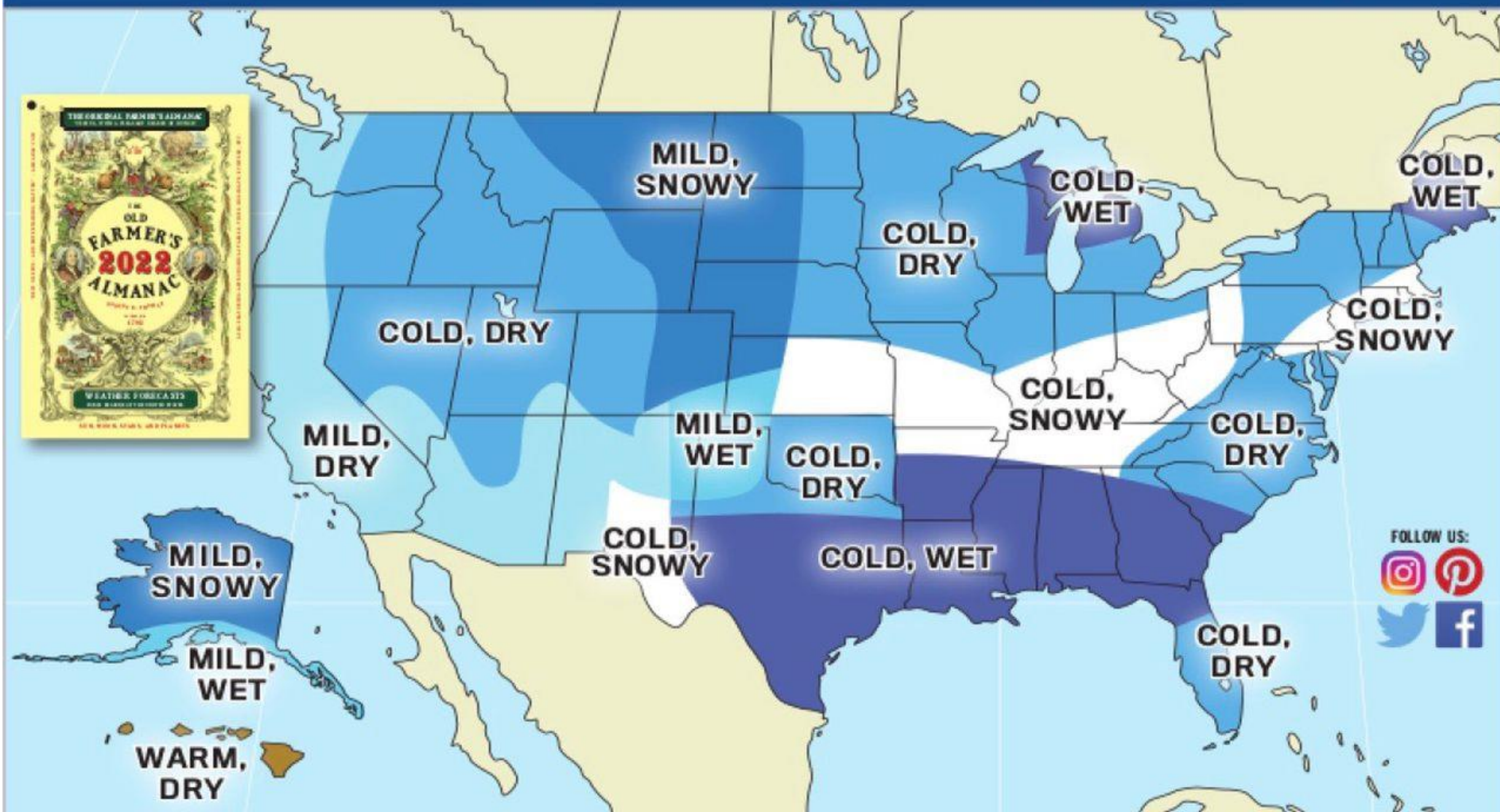




LOTS OF BROWN = A Milder WINTER

LOTS OF BLACK = A COLD HARSH WINTER

THE OLD FARMER'S ALMANAC WEATHER MAP FOR WINTER 2021-22



FOLLOW US:



2021-22 WINTER OUTLOOK

Frosty Flip-Flop Winter



FarmersAlmanac.com



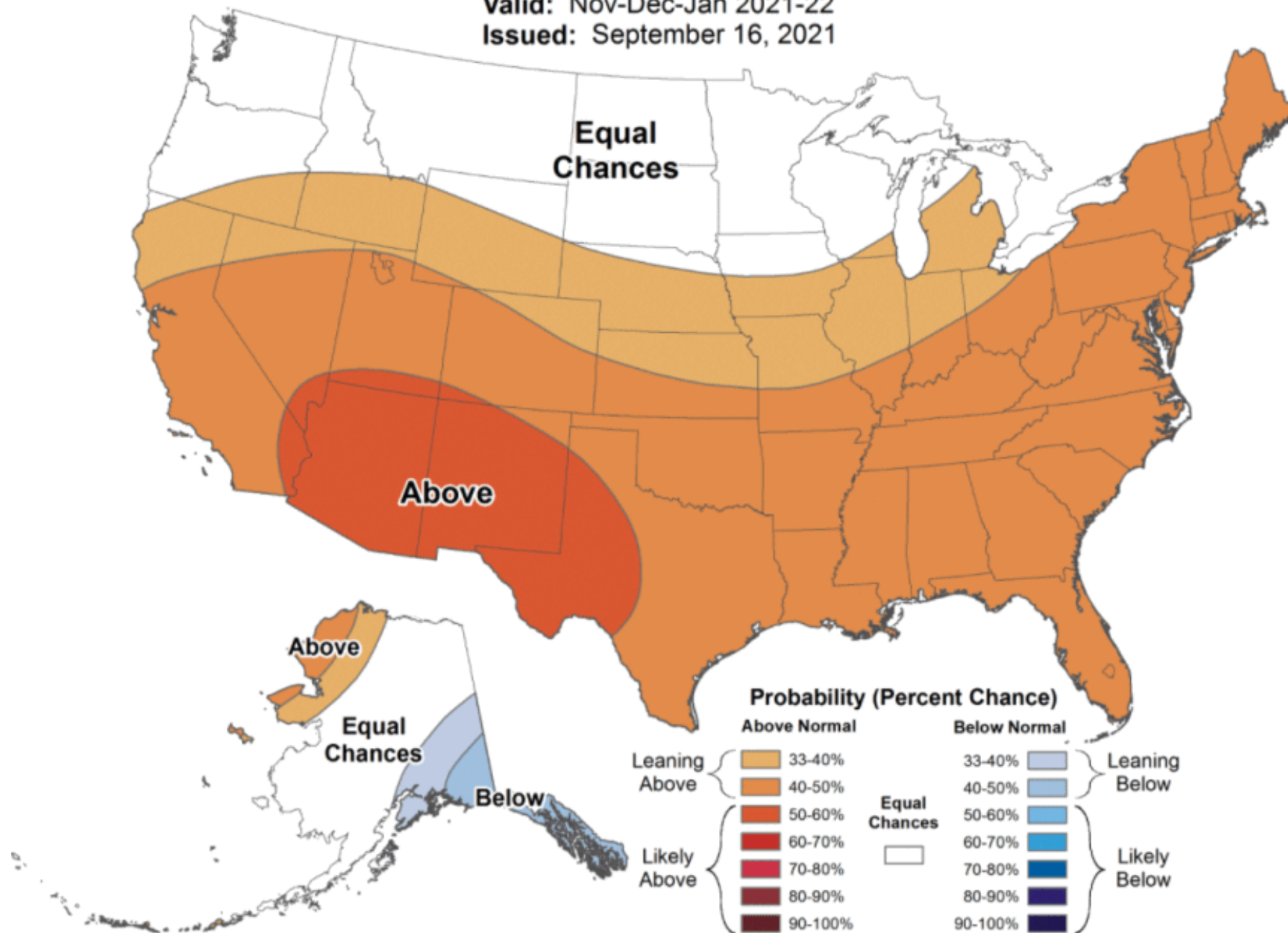


Seasonal Temperature Outlook



Valid: Nov-Dec-Jan 2021-22

Issued: September 16, 2021



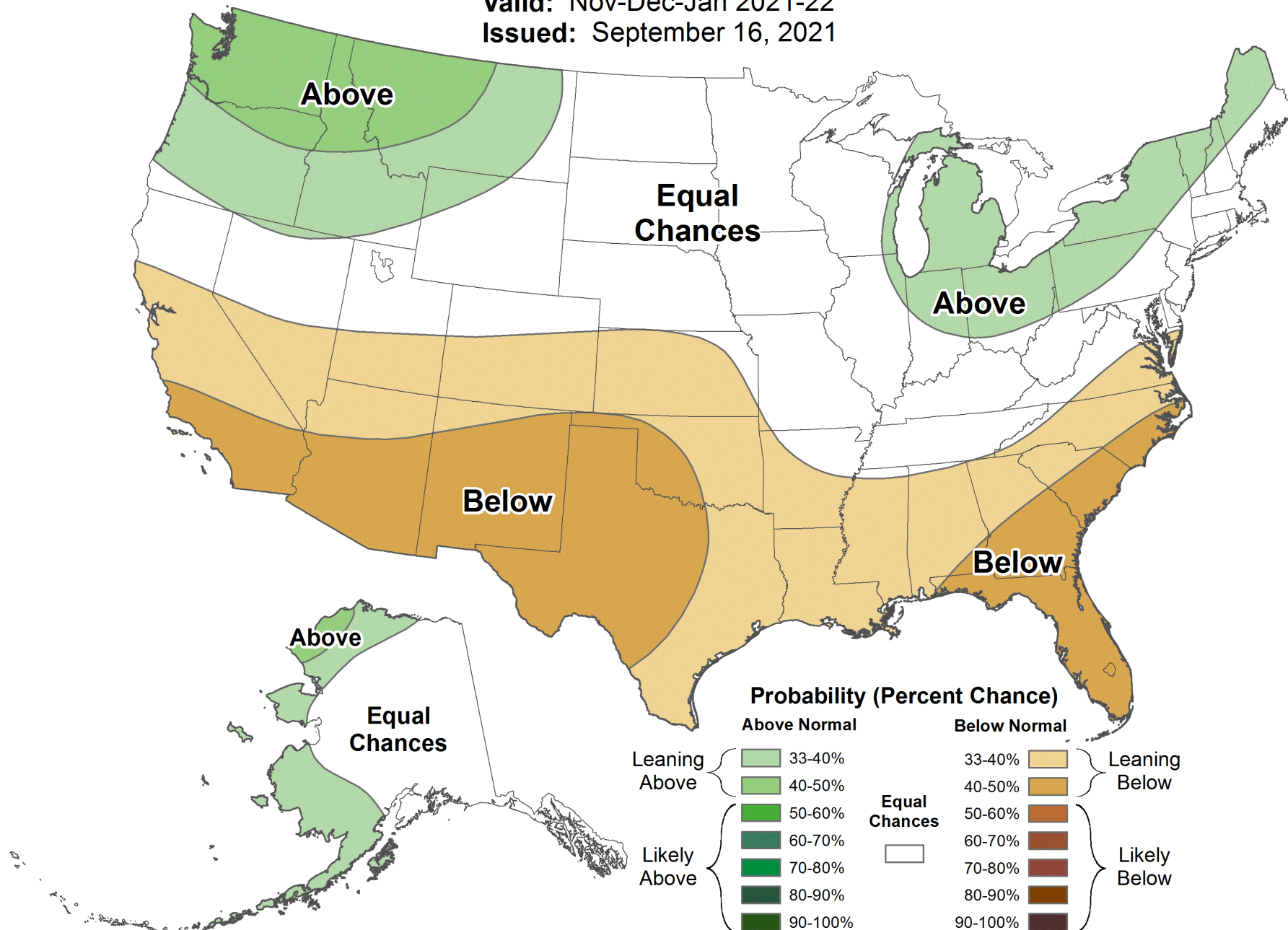


Seasonal Precipitation Outlook

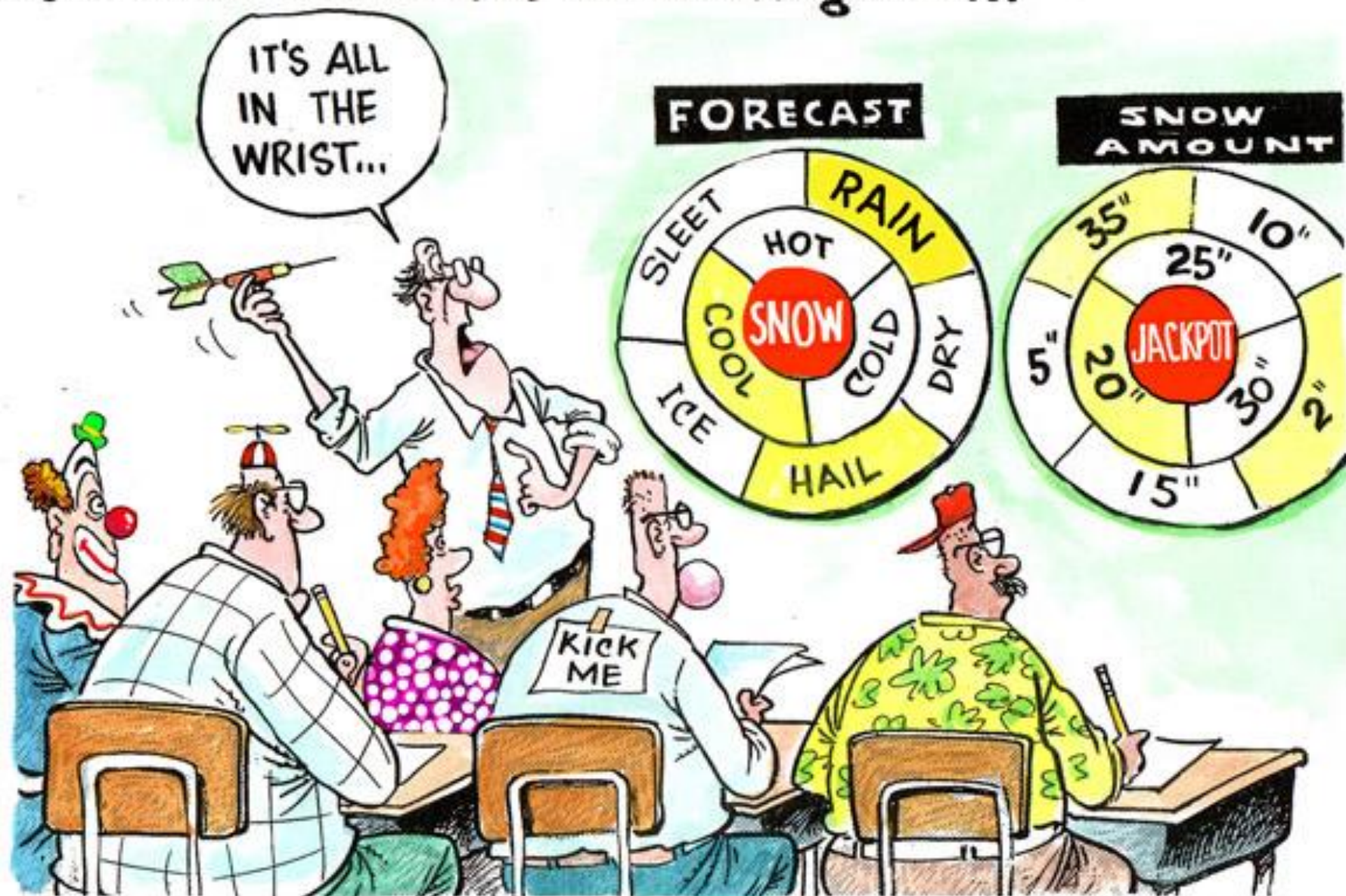


Valid: Nov-Dec-Jan 2021-22

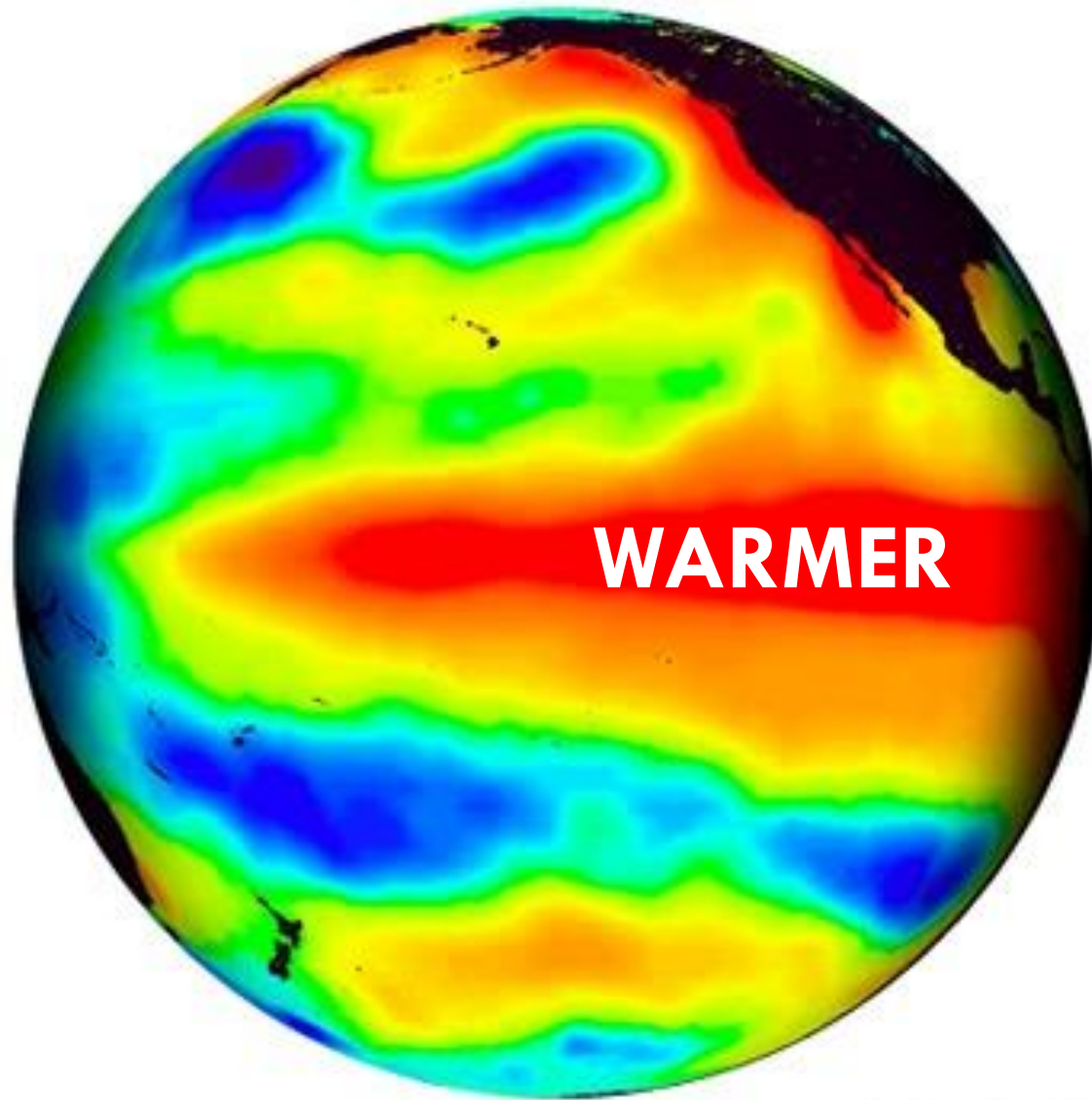
Issued: September 16, 2021



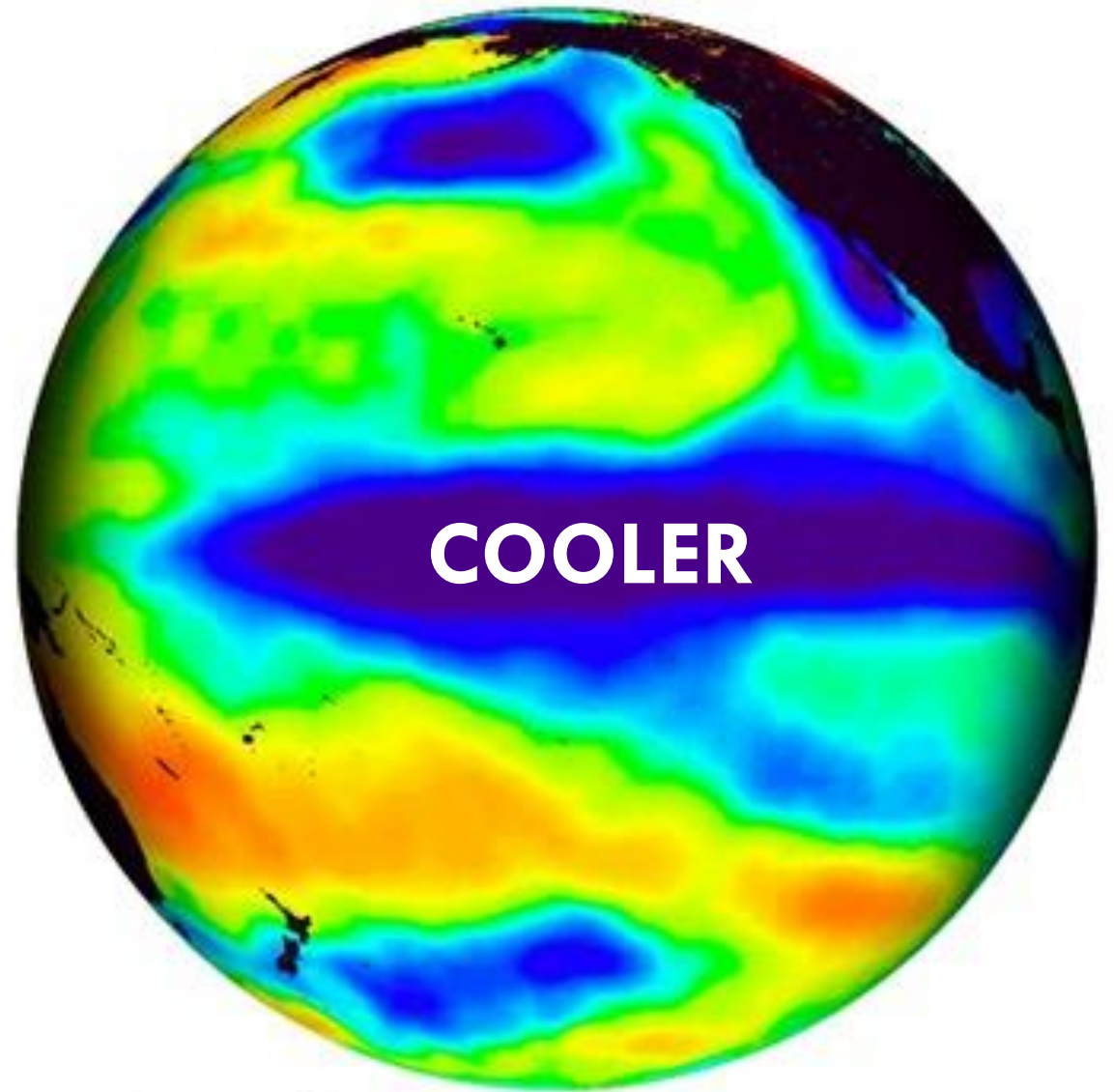
Refresher course for meteorologists...



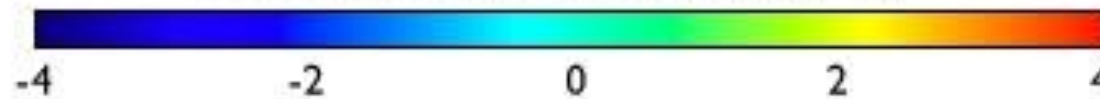
El Niño



La Niña

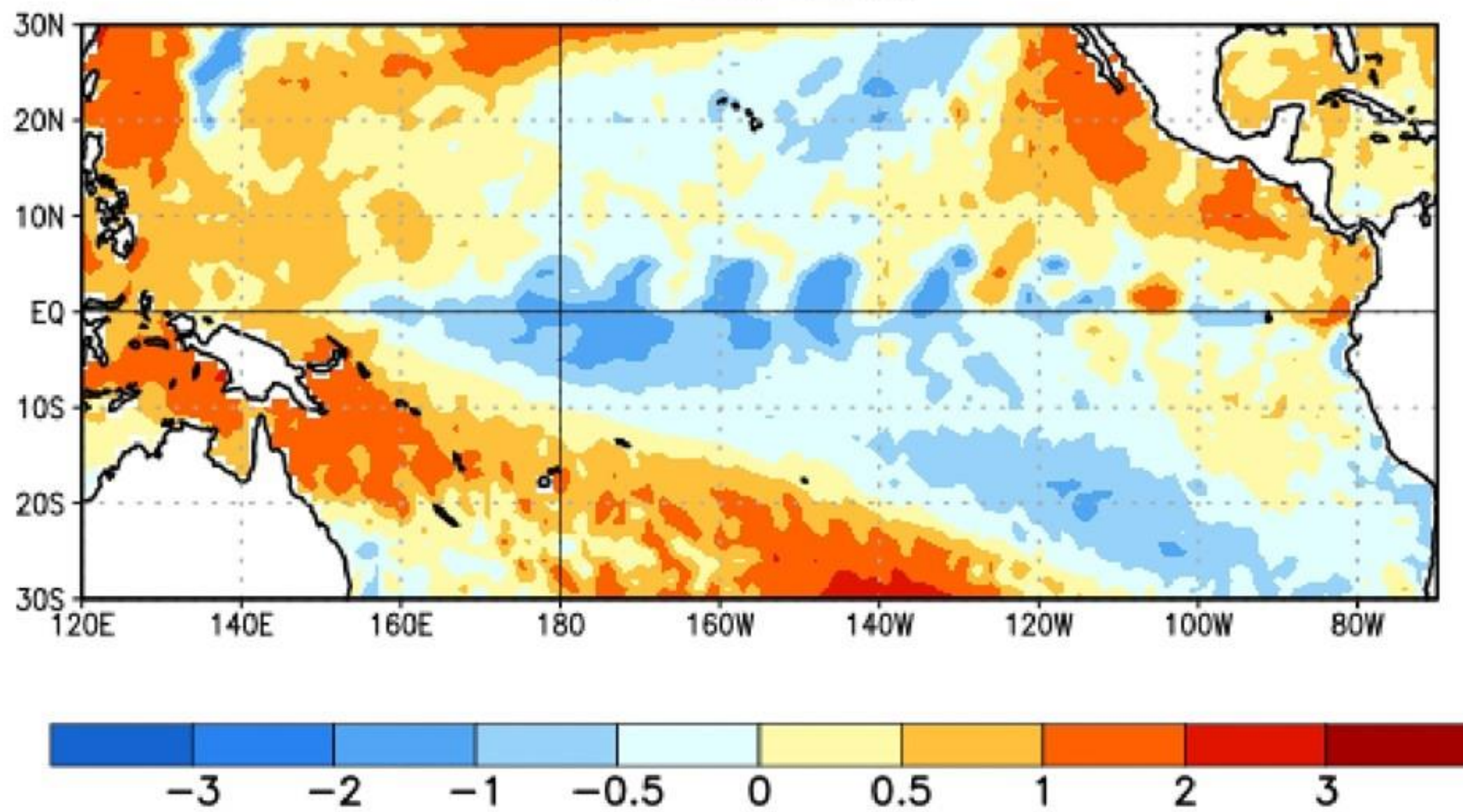


Sea Surface Temperature Anomaly ($^{\circ}\text{C}$)



SST Anomalies (°C)

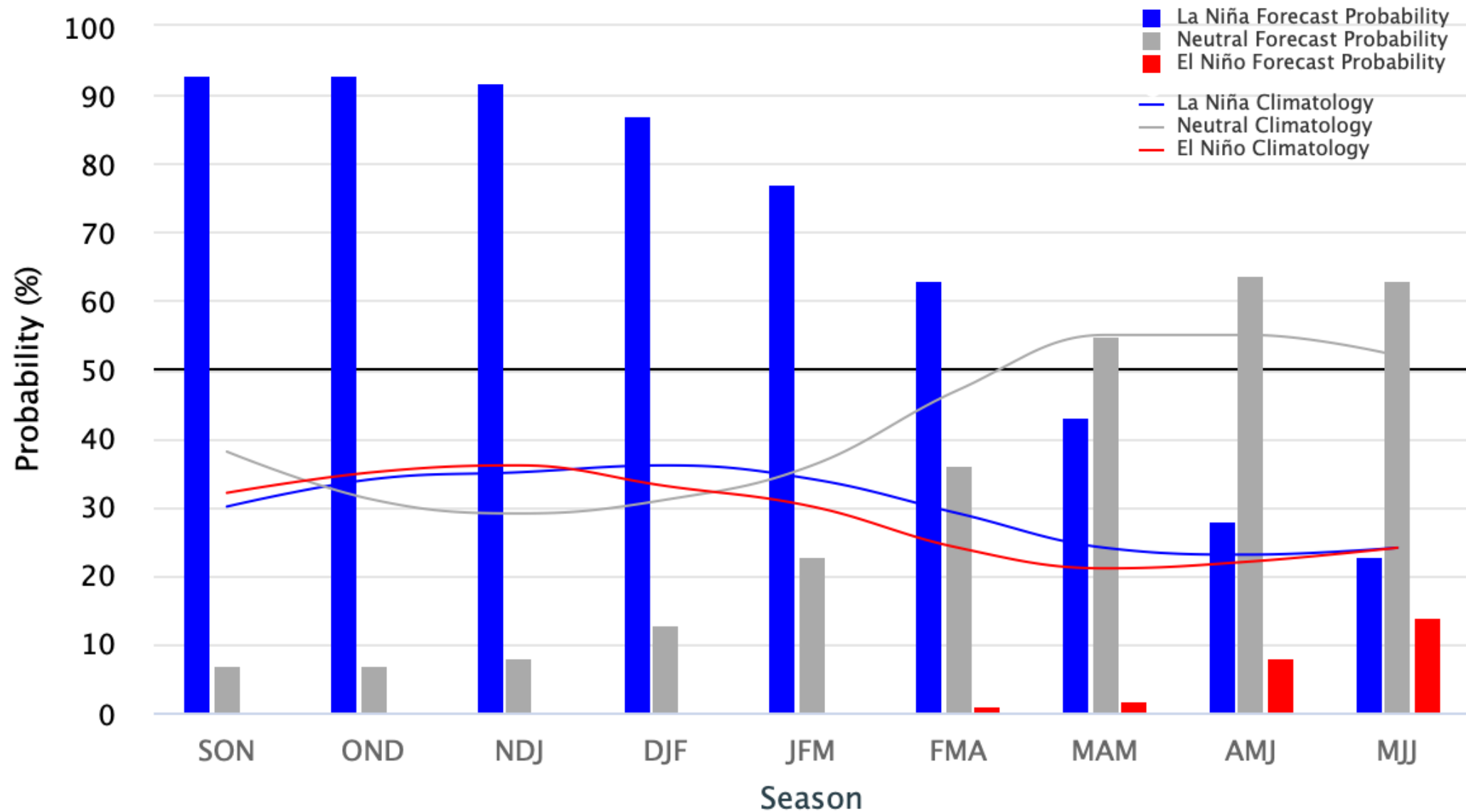
06 OCT 2021



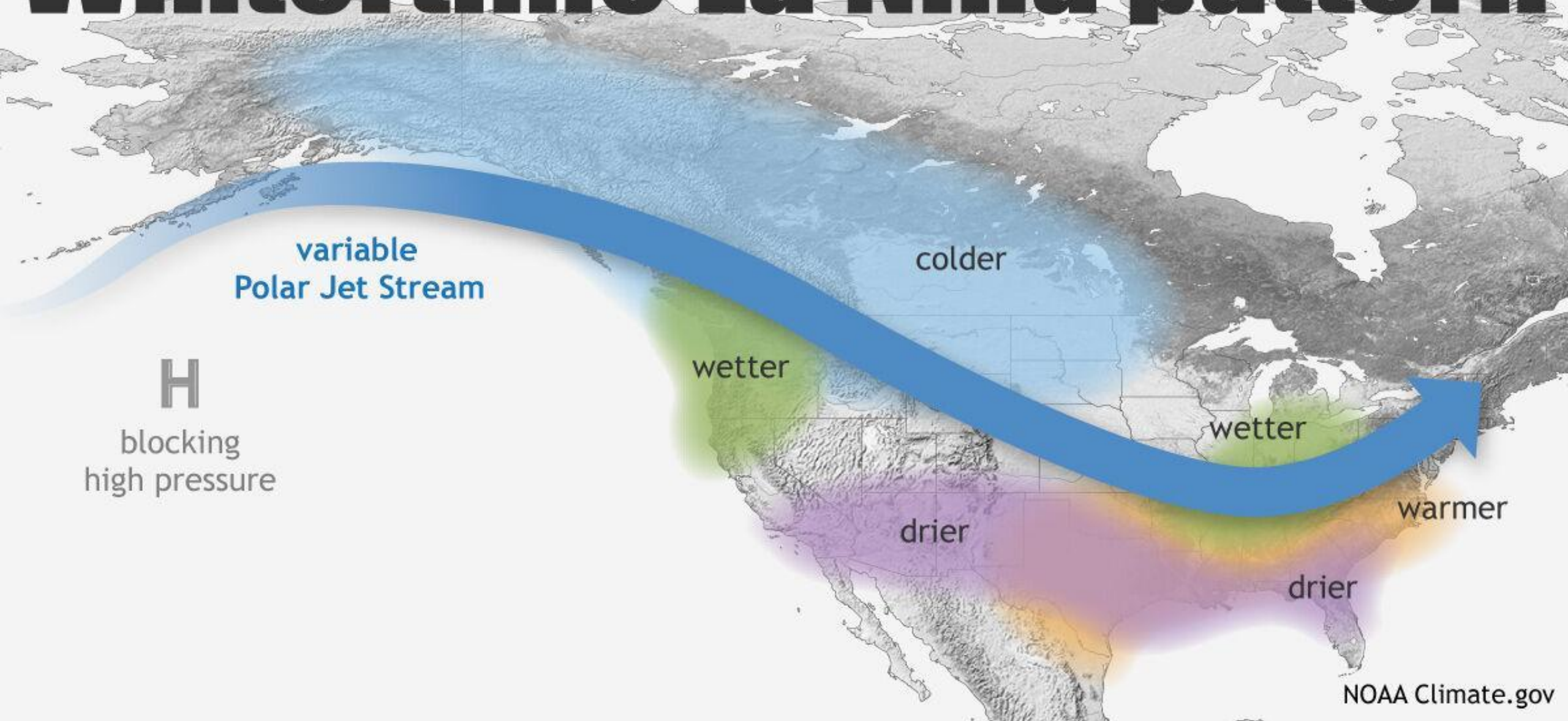
Early-October 2021 CPC/IRI Official Probabilistic ENSO Forecasts

ENSO state based on NINO3.4 SST Anomaly

Neutral ENSO: -0.5°C to 0.5°C



Wintertime La Niña pattern



ENSO Event Phase and Peak Intensity List (1850-2020)

"Super" El Nino: 1877-78, 1888-89, 1972-73, 1982-83, 1997-98, & 2015-16

Strong El Nino: 1896-97, 1899-00, 1902-03, 1918-19, 1930-31, 1940-41, 1957-58, 1965-66, 1987-88, 1991-92, & 2009-10

Moderate El Nino: 1855-56, 1868-69, 1885-86, 1904-05, 1905-06, 1911-12, 1913-14, 1923-24, 1925-26, 1939-40, 1941-42, 1951-52, 1963-64, 1968-69, 1976-77, 1977-78, 1986-87, 1994-95, & 2002-03

Weak El Nino: 1852-53, 1864-65, 1867-68, 1868-69, 1876-77, 1880-81, 1883-84, 1884-85, 1887-88, 1891, 1895-96, 1900-01, 1914-15, 1919-20, 1929-30, 1952-53, 1953-54, 1958-59, 1969-70, 1979-80, 2004-05, 2006-07, 2014-15, 2018-19, & 2019-20

Weak La Nina: 1869-70, 1870-71, 1872-73, 1873-74, 1879-80, 1894-95, 1897-98, 1898-99, 1903-04, 1906-07, 1908-09, 1910-11, 1915-16, 1922-23, 1938-39, 1944-45, 1950-51, 1954-55, 1956-57, 1964-65, 1971-72, 1974-75, 1978, 1983-84, 1989-90, 1995-96, 2000-01, 2005-06, 2008-09, 2016-17, 2017-18

Moderate La Nina: 1849-50(?), 1856-57, 1886-87, 1889-90, 1892-93, 1893-94, 1909-10, 1917-18, 1924-25, 1933-34, 1942-43, 1949-50, 1970-71, 1975-76, 1984-85, 1998-99, 2011-12, 2020-21

Strong La Nina: 1916-17, 1955-56, 1973-74, 1988-89, 1999-00, 2007-08, 2010-11

Table 3. ENSO Event Intensity List (1850-2020)

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Table 3. ENSO Event Intensity List (1850-2020)

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MY WINTER FORECAST

TEMPERATURES:
ABOVE AVERAGE

SNOWFALL:
ABOVE AVERAGE

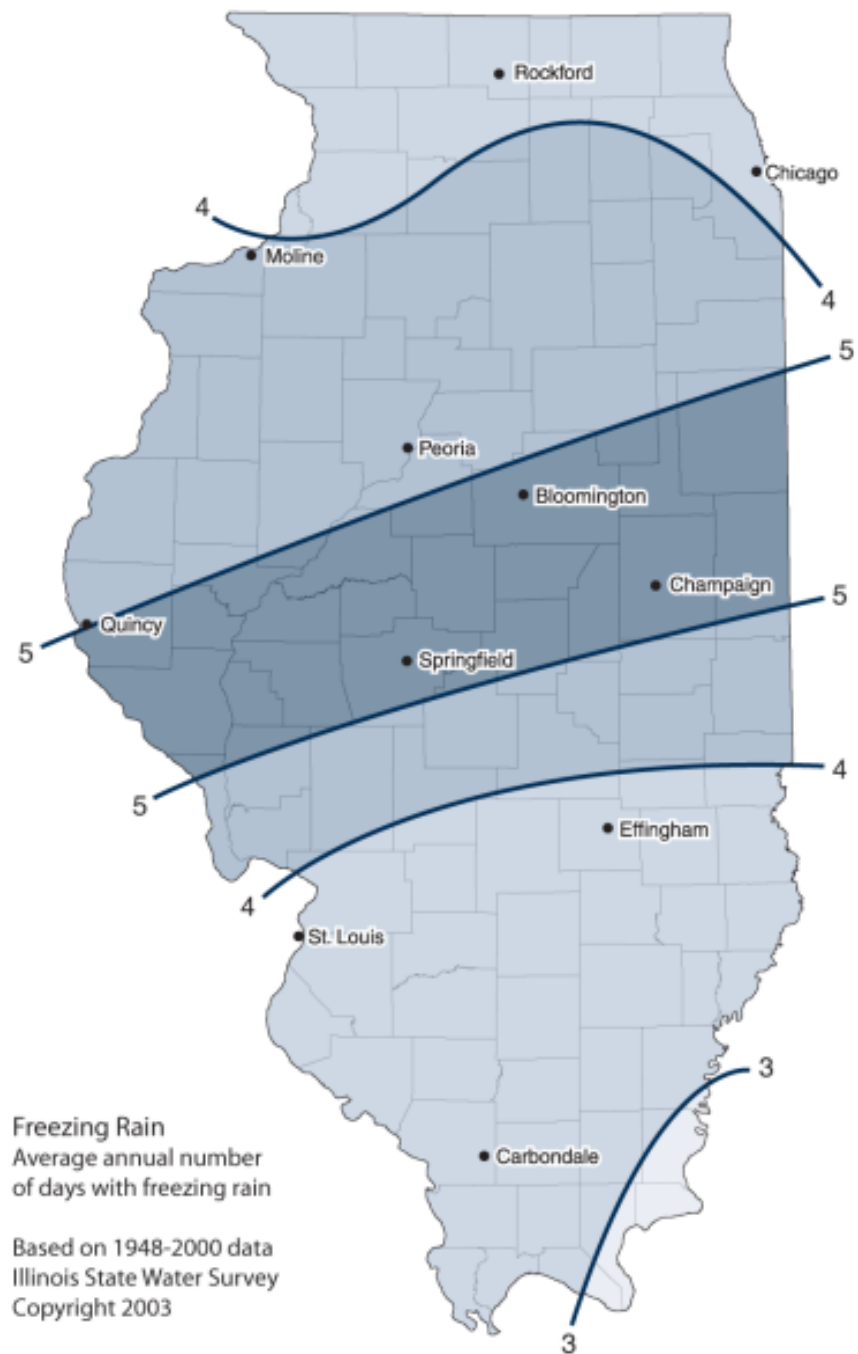


MOST ACCURATE 7 YEARS IN A ROW

MY WINTER FORECAST

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ABOVE AVERAGE

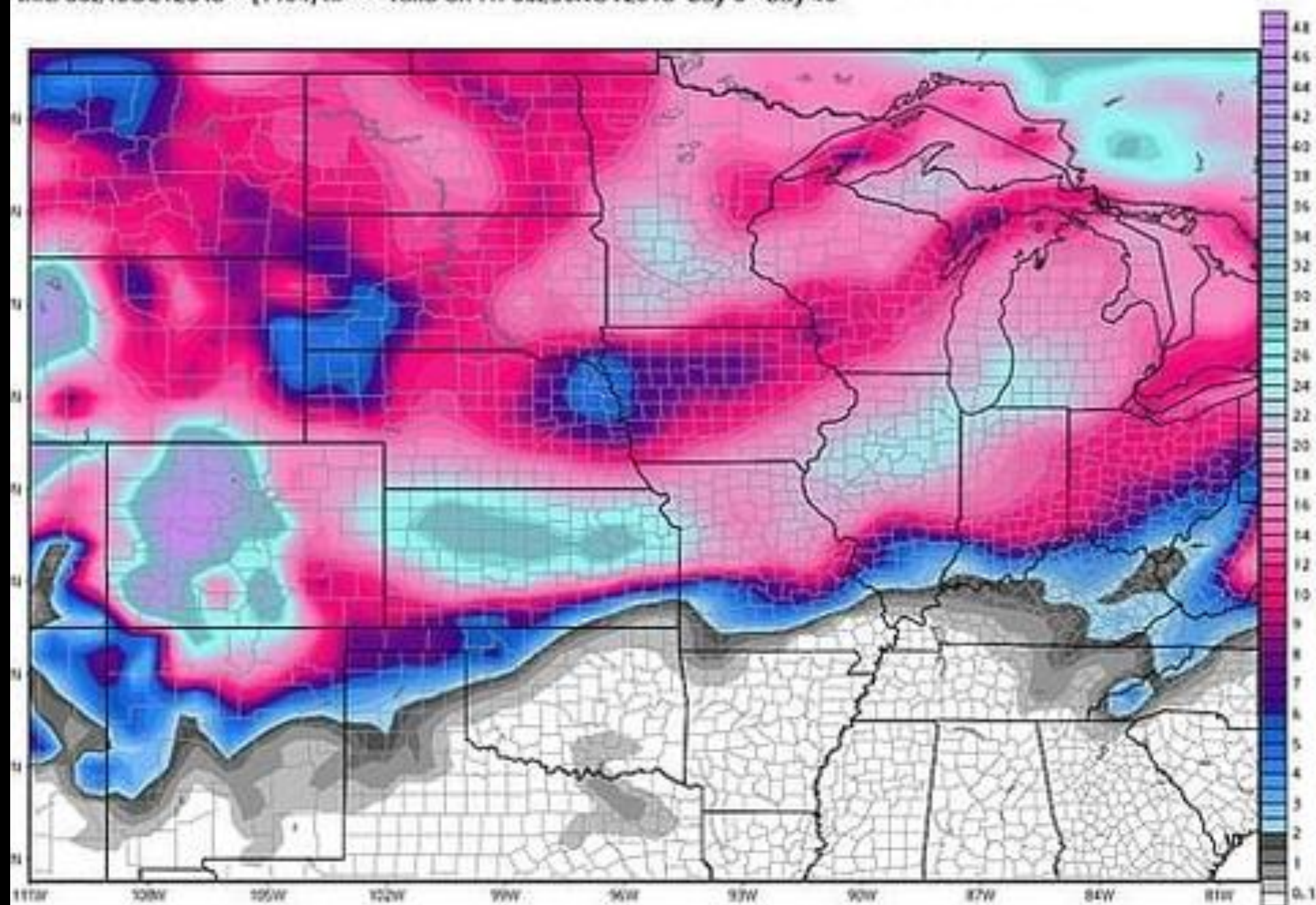
SNOWFALL:
ABOVE AVERAGE 25"-30"



Freezing Rain
Average annual number
of days with freezing rain

Based on 1948-2000 data
Illinois State Water Survey
Copyright 2003

PLEASE DON'T DO THIS



DON'T POST A SNOWFALL TOTAL MODEL GRAPHIC 46 DAYS OUT



Snow Day - #1 Source for winter weather
information

Like Page

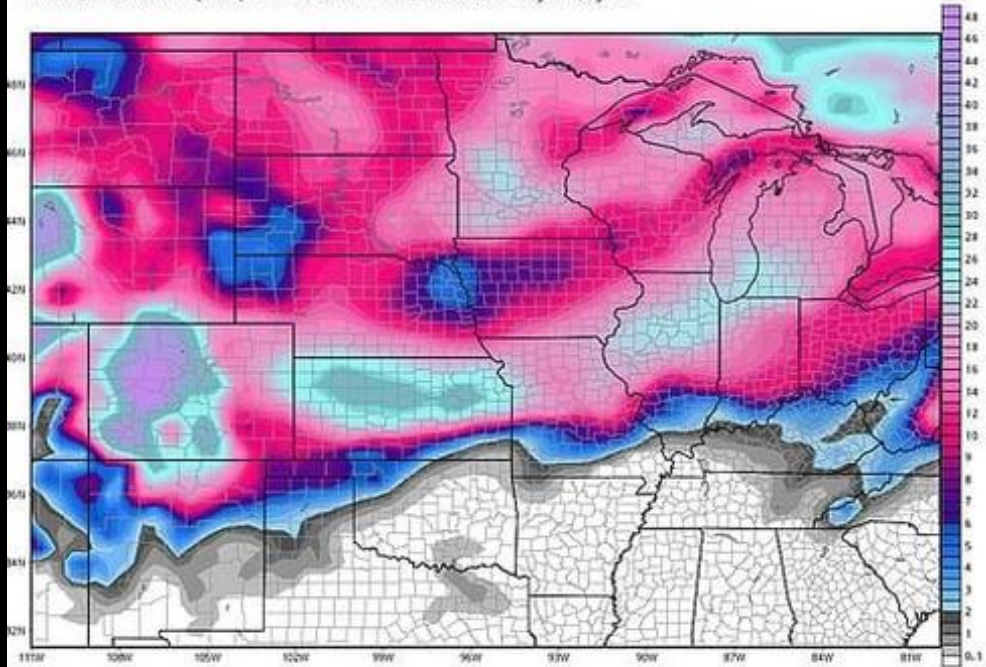


10 hrs · 🌐

Here is the EPS from the EURO model. This is the total snow in inches through the end of November. Im not asking you to focus on the specifics including totals, but to focus on the fact that it hits the Plains hard, specifically next month. So dont focus on amounts, but a general idea on what this model is hinting at. The CFS model from August i posted a ways back suprisingly did great with the early season snow over the Great Plains, so I dont see why we shouldnt put some stock into this. The general idea is that much cold air and perhaps wintry conditions will be common in November from the Plains to the northeast. Stay tuned!

ECMWF EPS-ENS EXTENDED Control 46-DAY TOTAL SNOWFALL [inches 10:1]
Init: 00Z15OCT2018 -- [1104] hr --> Valid on Fri 00Z30NOV2018 Day 0 - Day46

Maximum: 59.1 inch



Total Snowfall between 00Z15OCT2018-00Z30NOV2018

👍👎❤️ 267

81 Comments 442 Shares

Like

Comment

Share

</> Embed



DON'T POST A SNOWFALL TOTAL MODEL GRAPHIC 7 DAYS OUT



Snow Day - #1 Source for winter weather
information

Like Page

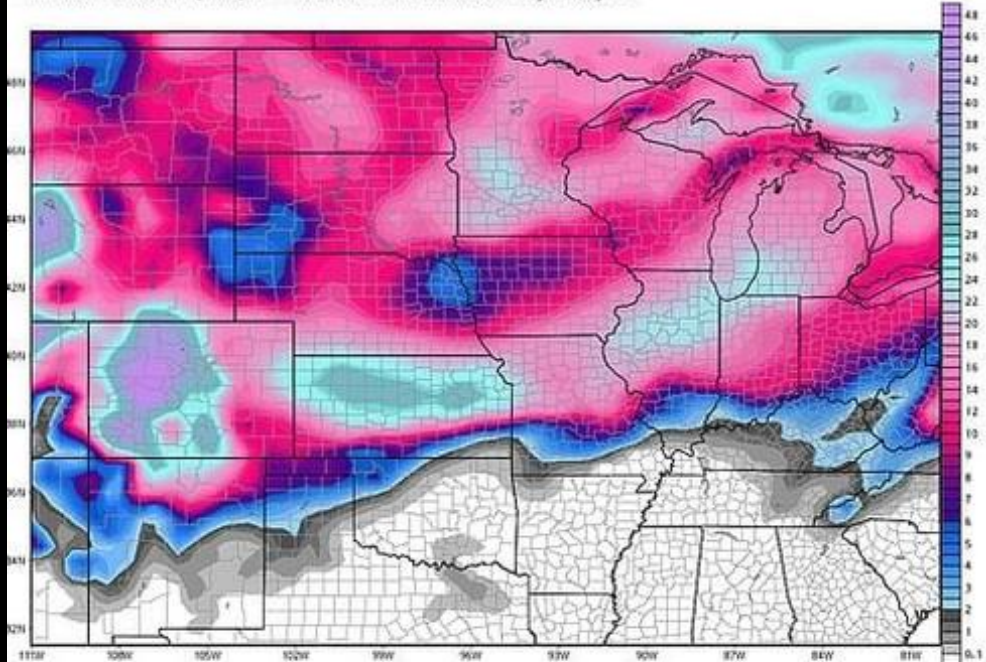


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Total Snowfall between 00Z15OCT2018-00Z30NOV2018

👍 🤔 ❤️ 267

81 Comments 442 Shares

Like

Comment

Share

Embed



STREAMING LIVE



ATHER ALERT • WE MARCH SNOWSTORM

29

22°

STEVE KEELEY
WOODSTOWN, NJ



MONTGO CO COMM COLLEGE: OPENING AT 10:00



MOST ACCURATE 7 YEARS IN A ROW

WORKING WITH THE MEDIA

**WE ARE ALL
WORKING
TOWARD THE
SAME GOAL**

**WE WANT TO
HELP KEEP THE
PUBLIC SAFE
AND INFORMED**

**MEDIA & PUBLIC
AGENCIES
SHOULD WORK
TOGETHER MORE**

**MEDIA ISN'T
THERE TO STIR
THINGS UP**

**WE UNDERSTAND
YOU HAVE A JOB
TO DO, BUT SO
DO WE**



MOST ACCURATE 7 YEARS IN A ROW

WORKING WITH THE MEDIA

WHEN WE ARRIVE ON SCENE WE JUST WANT BASIC INFORMATION

WE DON'T NEED THE FULL STORY, BUT SOME INFO IS BETTER THAN NOTHING

WE WOULD RATHER HAVE BASICS THEN JUST SPECULATE FROM WHAT WE SEE ON SCENE

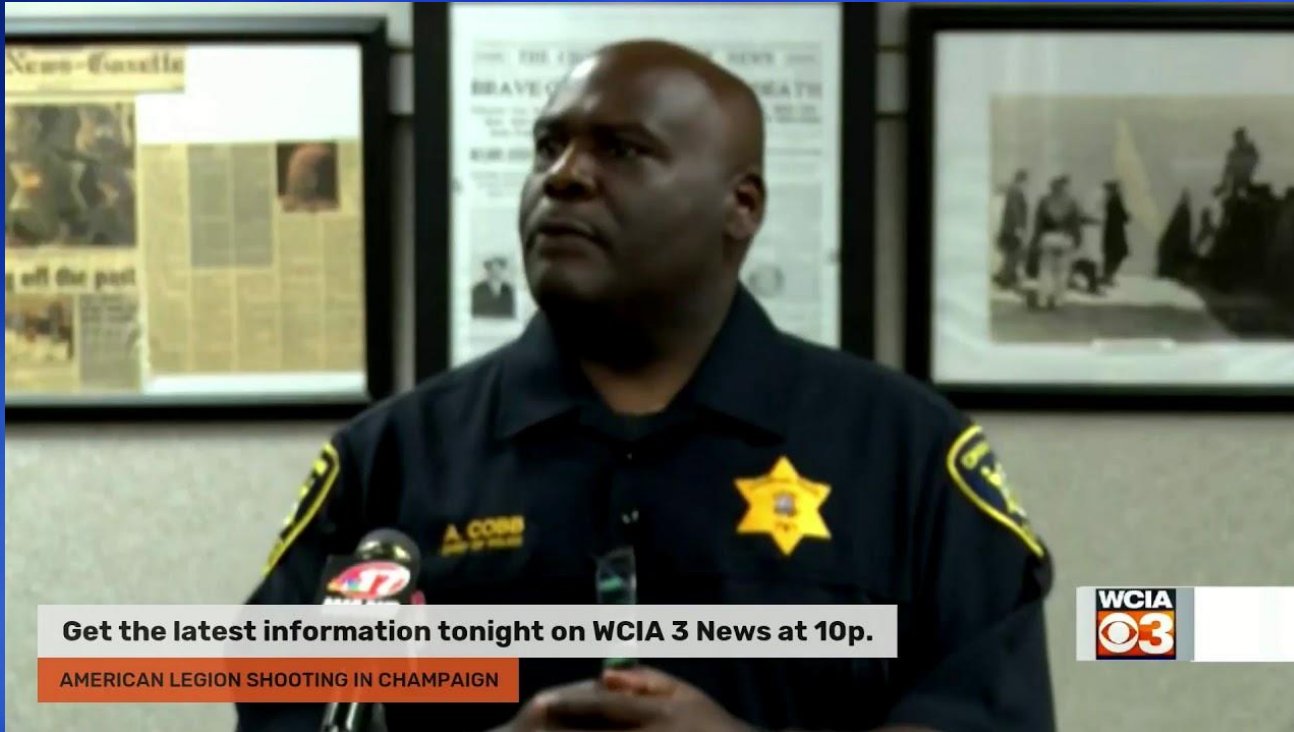
GIVE US A TIME FRAME WHEN YOU MAY BE ABLE TO GIVE US AN INTERVIEW WITH MORE DETAILS



MOST ACCURATE 7 YEARS IN A ROW



WORKING WITH THE MEDIA



Get the latest information tonight on WCIA 3 News at 10p.

AMERICAN LEGION SHOOTING IN CHAMPAIGN

**DESIGNATE A PERSON
WHO WILL HANDLE MEDIA
INQUIRIES ON SCENE**

**WE WOULD RATHER NOT
HAVE TO TRACK SOMEONE
DOWN AT HOME WHO
MAY NOT EVEN HAVE THE
FACTS**

**WE GET PHONE CALLS AND
SOCIAL MEDIA QUESTIONS
AND WE WANT TO HELP
THE PUBLIC KNOW WHAT'S
GOING ON**

**NOT THERE TO
SENSATIONALIZE, WE JUST
WANT THE FACTS RIGHT &
HAVE THE ABILITY TO
RELIEVE PUBLIC FEAR AND
SQUASH RUMORS**



MOST ACCURATE 7 YEARS IN A ROW

WORKING WITH THE MEDIA

**TALK TO US LIKE YOU
WOULD TALK TO A
FRIEND OR LOVED
ONE. REAL TALK,
CONVERSATIONAL.**

**ALWAYS LOOK AT
THE REPORTER AND
NOT THE CAMERA.**

**WE LIKE SOUND
BYTES THAT INVOKE
EMOTION. NOT JUST
INFO. WE CAN GET
THAT OFF CAMERA.**

**DON'T BE NERVOUS,
WE CAN ALWAYS
START OVER IF YOU
MESS UP. (AS LONG
AS WE AREN'T LIVE)**





MOST ACCURATE 7 YEARS IN A ROW

WORKING WITH THE MEDIA

WE WANT TO
DO STORIES
THAT AREN'T
JUST THE
BREAKING
NEWS ALL OF
THE TIME

WE WANT TO
DO OTHER
GOOD
STORIES, AND
THE PUBLIC
WANTS THAT
TOO

DID YOU GET
A NEW FIRE
TRUCK, LET US
KNOW

A NEW GRANT
FOR
SOMETHING,
WE'D LOVE TO
COVER IT

JUST
CONTACT US.
REACH OUT.
LET'S WORK
TOGETHER.





WCIA
3

51°
10:16



MOST ACCURATE 7 YEARS IN A ROW

QUESTIONS?



Meteorologist
Kevin Lighty



@KevinLighty



Kevin Lighty