

# Basic Weather Spotting for the Inland Northwest

*Spring 2024*

*National Weather Service - Spokane*



**SKYWARN**



**NATIONAL WEATHER SERVICE**  
WEATHER FORECAST OFFICE • SPOKANE, WA

# This is a Live Virtual Class

- Voice in Computer - no phone needed - headphones helpful
- All are in listen mode until the end

## New to GoToWebinar? Here's the basics



### the Menu bar

- Audio – tests your volume
- Attendees – all in attendance
- **Poll** – answer poll questions
- **Questions** – type in a question for the speaker to answer
- **Handouts** – download & print
- Chat – speaker's comments
- Click on the **Hand** to raise
- Click orange arrow to collapse window



# Objectives

- Understand the roles & importance of the Weather Spotter
- Provide accurate and timely reports of severe weather
- Describe your community's severe weather threats
- Properly define a severe thunderstorm and basic thunderstorm structure
- Learn how to prepare and be safe during severe weather

Concentration on Basic weather spotting and the Checklist

Now let's look back to last year.....





# Flooding - April 10th, 2023

Stevens County - Heavy rain and snowmelt flooding





# Flash Flooding - June 9, 2023

Lewiston, ID



# To Our Current Weather Spotters....

# THANK YOU!



# SKYWARN



Eyes and Ears of the  
National Weather Service  
with a count of over 1200  
across the Inland NW!

# New to the program?

## What is a Weather Spotter?

- Weather enthusiast who volunteers time to report severe or hazardous weather
  - As needed basis
  - No weather equipment necessary
  - Simply call, email or send a report online
  - Become the eyes and ears of the National Weather Service





# National Weather Service (NWS)

## MISSION

- Part of the Federal Government
  - Dept of Commerce
  - NOAA
- One of 122 offices nationwide
- Forecasts, watches, warnings, and advisories 24/7/365 operations
- 25 staff members
- At least 2-3 people per shift

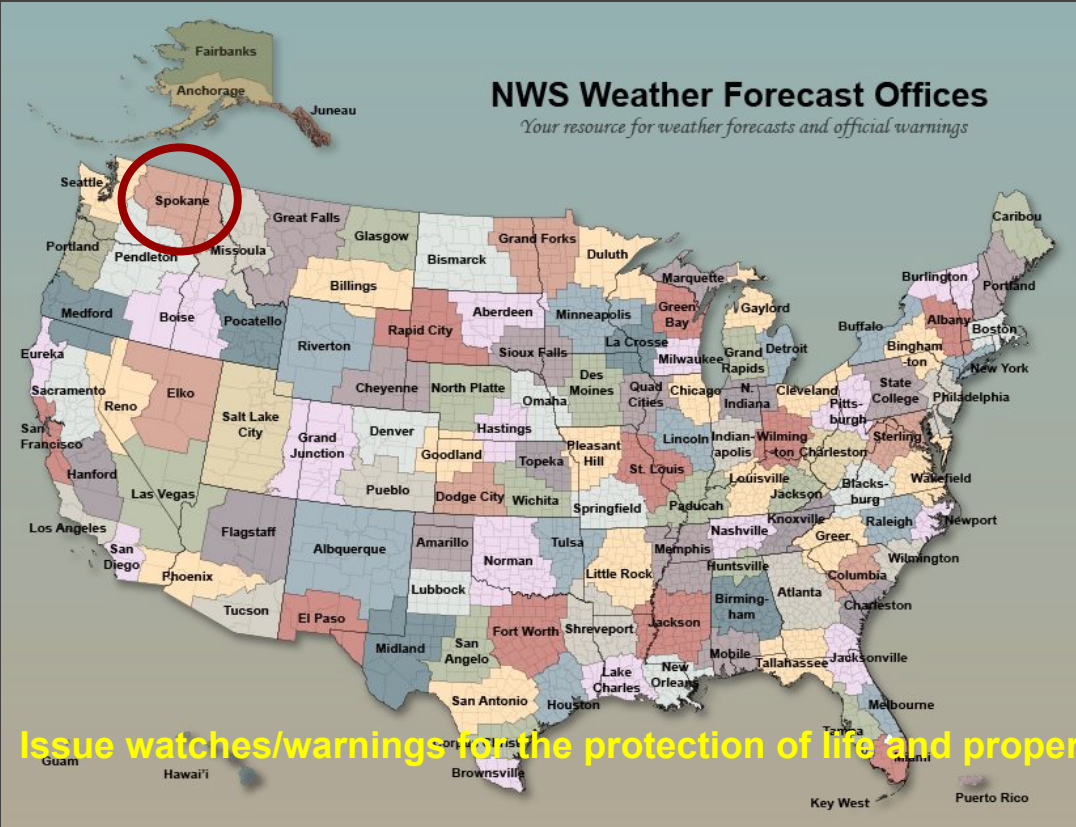
Provide weather, water and climate data, forecasts, warnings, and impact-based decision support services for the **protection of life and property and enhancement of the national economy.**



# NWS Spokane Forecast & Warning Area

## NWS Weather Forecast Offices

Your resource for weather forecasts and official warnings



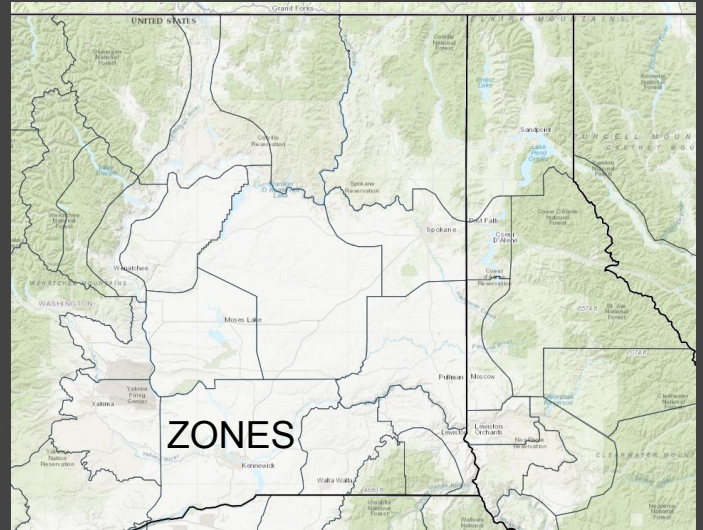
Issue watches/warnings for the protection of life and property

Includes 2 states

- 13 counties in eastern WA
- 8 counties in north Idaho

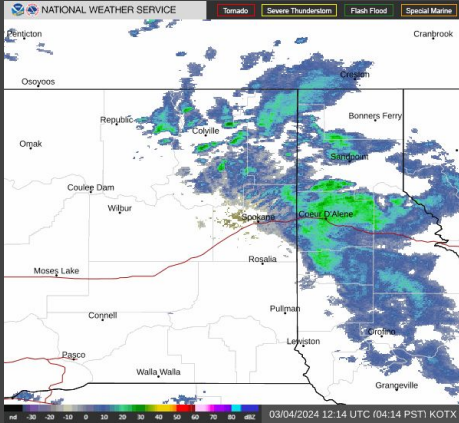
Elevations range

- 9500+ ft in the north Cascades
- 170 ft along the mid Columbia River

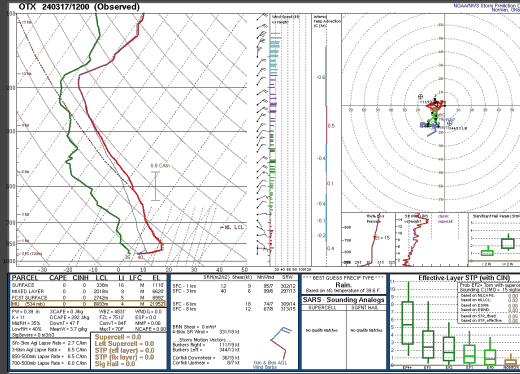


# How the NWS "Sees" Weather

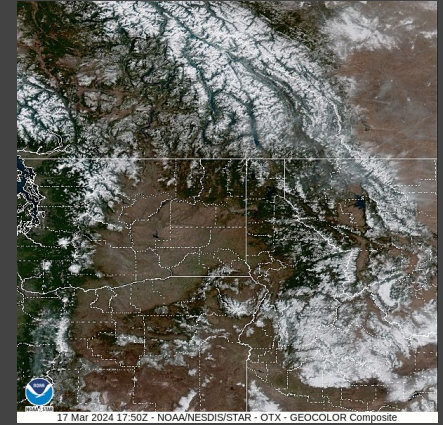
## Doppler Weather Radar



## Radiosonde (Weather Balloon)



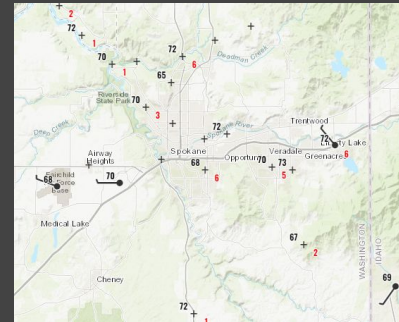
## Satellite



## Webcams

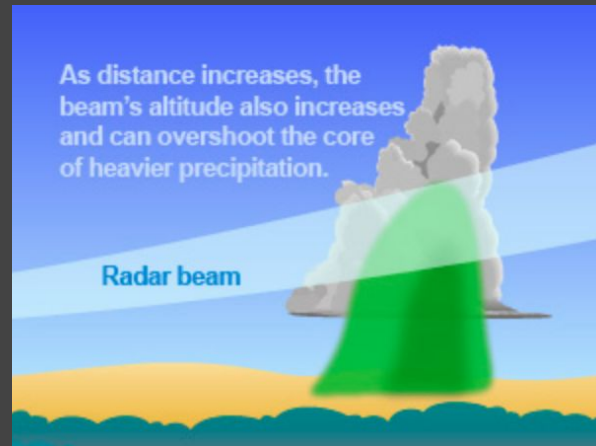
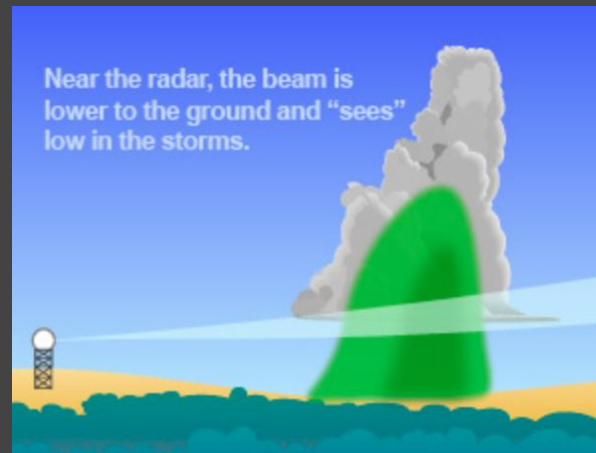
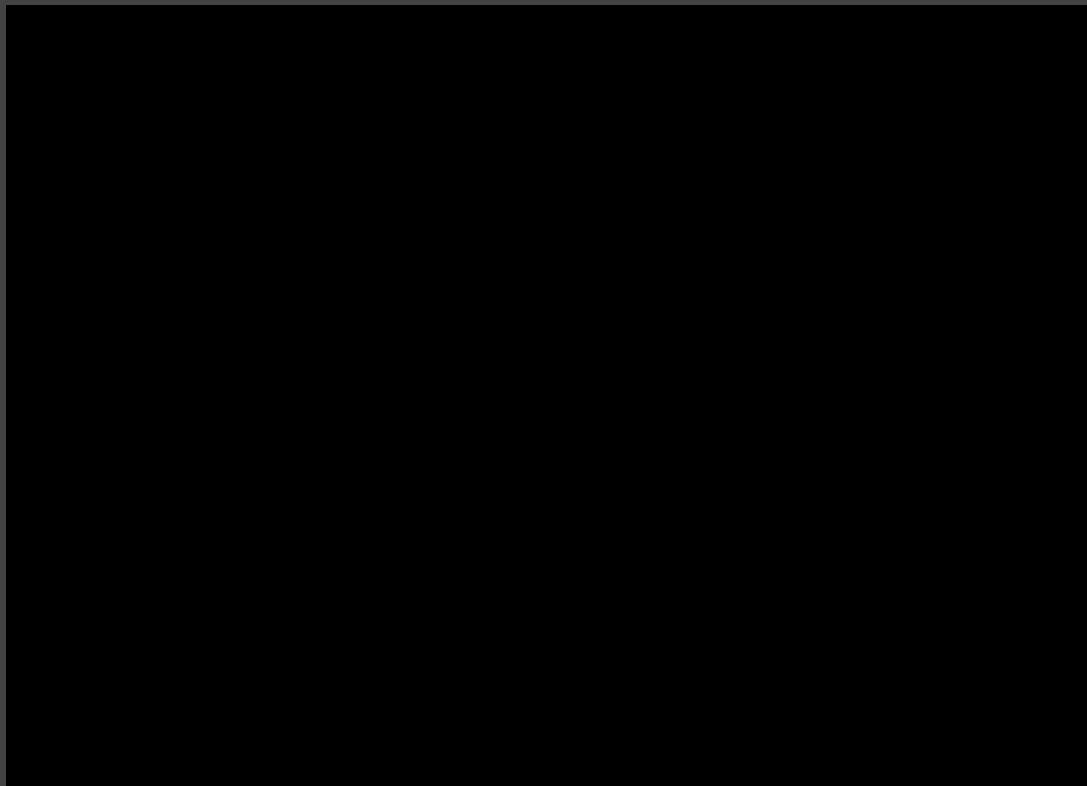


## Weather Stations

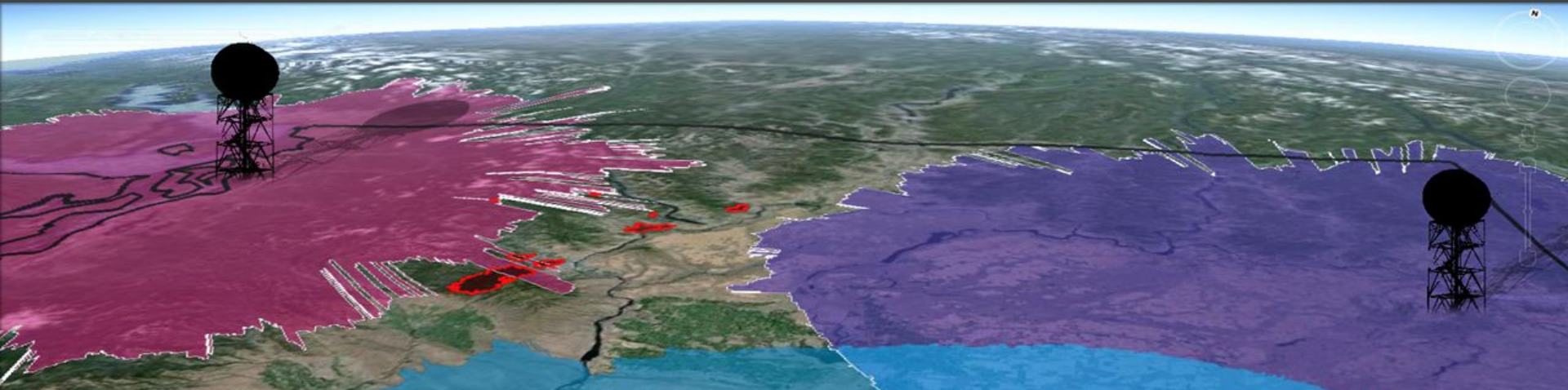




# WHY DO WE TRAIN SPOTTERS?



# WHY DO WE TRAIN SPOTTERS?



- Limitations to radar, satellite, and surface observations
- Receive Ground Truth on events
- Fill in the “holes” not seen by observations
- Understand the many micro-climates in the region
- Maximize Warning effectiveness and Lead Times
- Add Credibility to NWS Warnings - Leads to Public Action!

# #1 Poll Question

What is the role of a weather spotter?





# What's in a Spotter Report?



The checklist is titled "Inland Northwest Weather Spotter Checklist" and features the NOAA logo on the left and the SKYWARN logo on the right. It consists of a vertical list of 11 items, each with a colored background and specific reporting criteria:

- Tornado or Funnel Cloud:** ANY Kind
- Strong Winds:** +40 mph/Damage (58mph severe)
- Hail:** +3/4" in diameter (1" severe)
- Heavy Rain:** +1/2" in 1 hr or +1" in 12 hrs
- Flooding:** ANY Kind
- Mixed Precipitation:** freezing rain or sleet
- Snow:** +2" below 3K ft (valleys) or +6" abv 3K ft (mntns)
- Poor Visibility:** 1/2 mile or less
- Travel Problems:** due to weather
- Damage, Injury or Loss of life:** ANY
- Excessive Heat:** ANY
- Excessive Cold:** ANY

Specifics...Tell us the Story!

- WHO you are (Spotter ID)
- WHAT you are reporting
- WHEN did the event occur?
- WHERE did the event occur?
- Estimates of wind speeds and hail size
- Damage and injury reports

If unsure - report your uncertainty

Feel free to include reports while traveling and any delayed or second hand reports



# HOW TO REPORT: PHONE CALL



**Dial :**  
**1-800-483-4532**  
Spotter ID



**What:**  
Event you  
Witnessed



**Where:**  
Location  
of event



**When:**  
Time of  
the event



# HOW TO REPORT: ONLINE

[inws.ncep.noaa.gov/report/](http://inws.ncep.noaa.gov/report/)

[www.weather.gov/Spokane](http://www.weather.gov/Spokane)



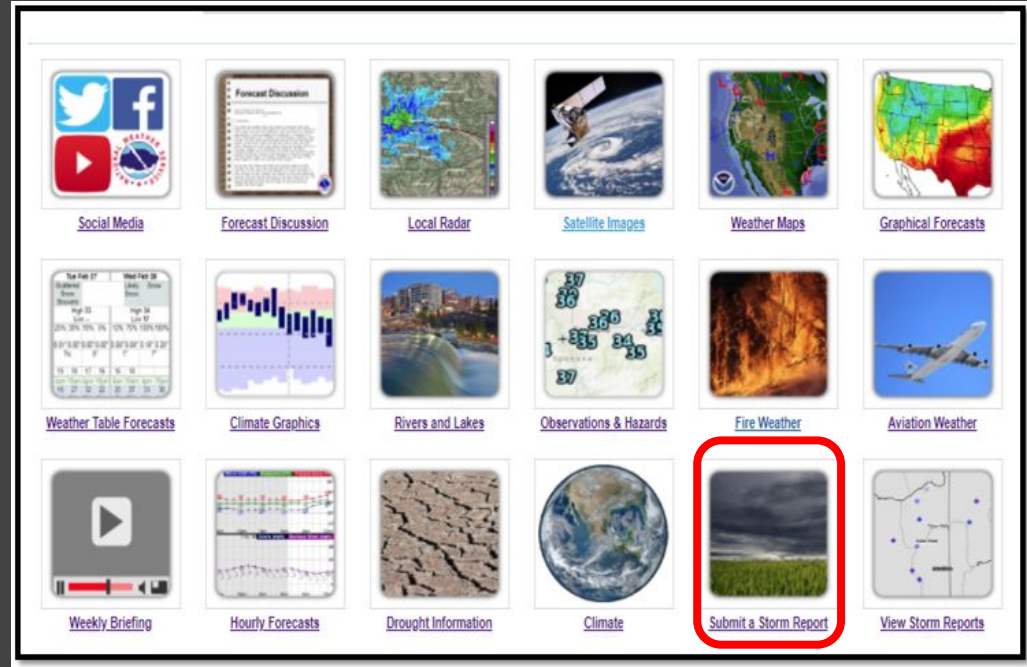
 **Storm Reports**  
Alerting the NWS to local weather

Report Type -> Details -> Location -> Review and Send

Please select a report type ▼

Back Next

[Privacy policy for weather reports](#)





# HOW TO REPORT: SOCIAL MEDIA

## X/Twitter



- @NWSSpokane
- #wawx & #idwx
- Share reports & pictures
- Monitored 24/7

## Facebook



- NWS Spokane
- Send reports & pictures
- Monitored 24/7



# HOW TO REPORT: THE mPING APP

Meteorological Phenomena Identification Near the Ground

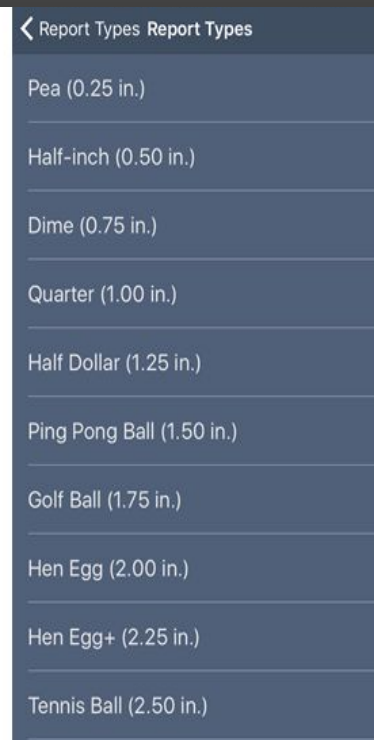
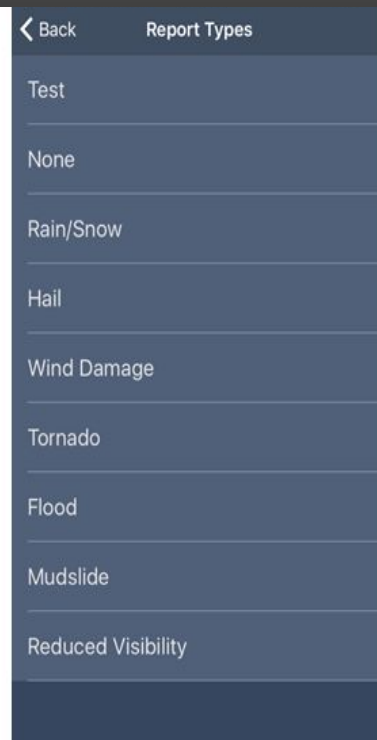
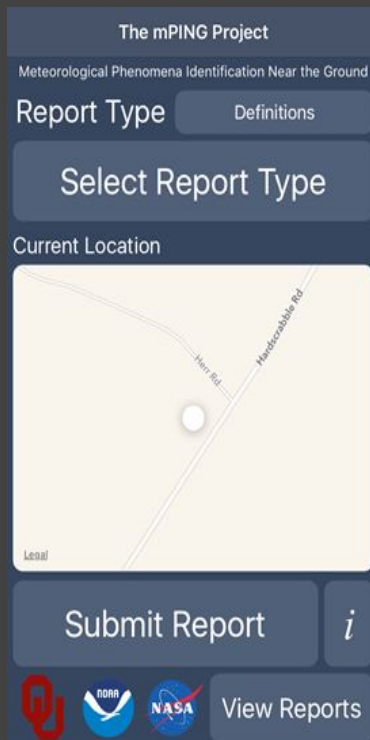
## FREE APP!

Report everything  
EXCEPT TORNADOES  
OR FUNNEL CLOUDS

Available on the  
**App Store**

GET IT ON  
**Google play**

Reports are anonymous and  
sent directly to the NWS



**NATIONAL WEATHER SERVICE**  
WEATHER FORECAST OFFICE • SPOKANE, WA

# Share your weather photos

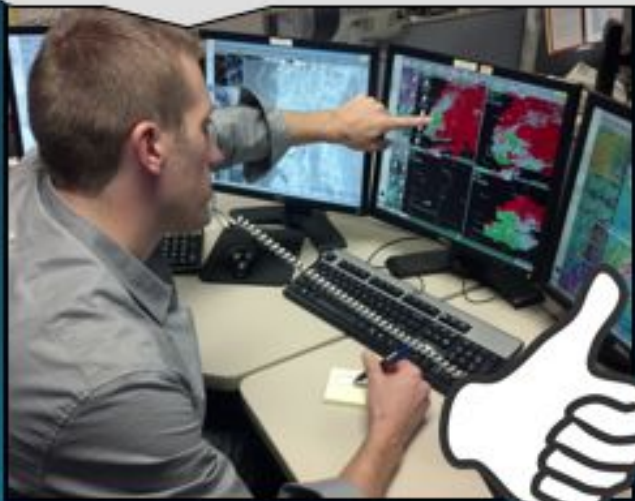
[nws.spokane@noaa.gov](mailto:nws.spokane@noaa.gov)



# Examples of Spotter Reports

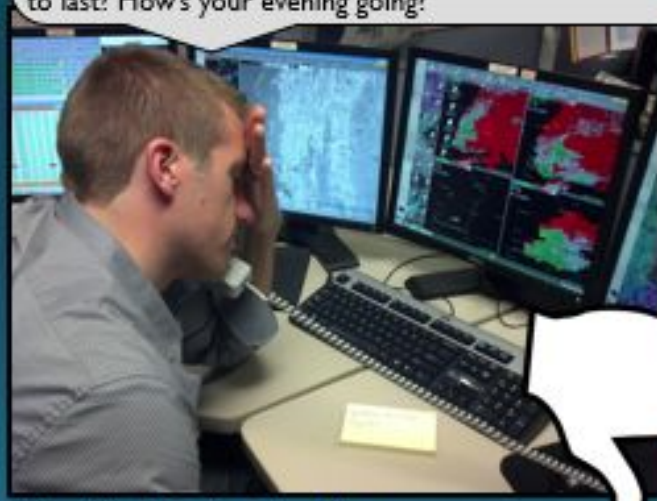
## Good Spotter Report

This is Tom Smith, Spotter Spokane #25 calling from my home on the South Hill. There is currently large hail falling. I measured one stone and it's about the size of a quarter. It began about 30 minutes ago.



## Needs Improvement

Hi there, how are you doing? Who is this? .... Well hi Steve! I'm a spotter in Okanogan County. I see lightning to the north and it rained here a little bit ago. The news is saying it's much worse to the south. Are we going to get another thunderstorm? .... How long is it supposed to last? How's your evening going?



National Weather Service - Spokane, WA





# NWS may Contact You!



As a registered weather spotter, you'll share your phone number with the NWS.

If we see severe or hazardous weather near your location...

We will likely try to call you to get information on what you are experiencing (ground truth) based on what is seen on radar!



# Emails are Important

Besides a phone number, it's important to share your email address!

You will likely be notified by email before there is a WIDESPREAD Severe Weather Risk or Thunderstorm Outbreak.

We send periodic emails to share quarterly newsletters and upcoming training opportunities.

YOUR NATIONAL WEATHER SERVICE SPOKANE QUARTERLY REPORT

## **The Weather Watcher**

**Of the Inland Northwest**

[www.weather.gov/Spokane](http://www.weather.gov/Spokane)



# #2 Poll Question

What elements can you provide in a spotter report?



# U.S. Thunderstorm Distribution

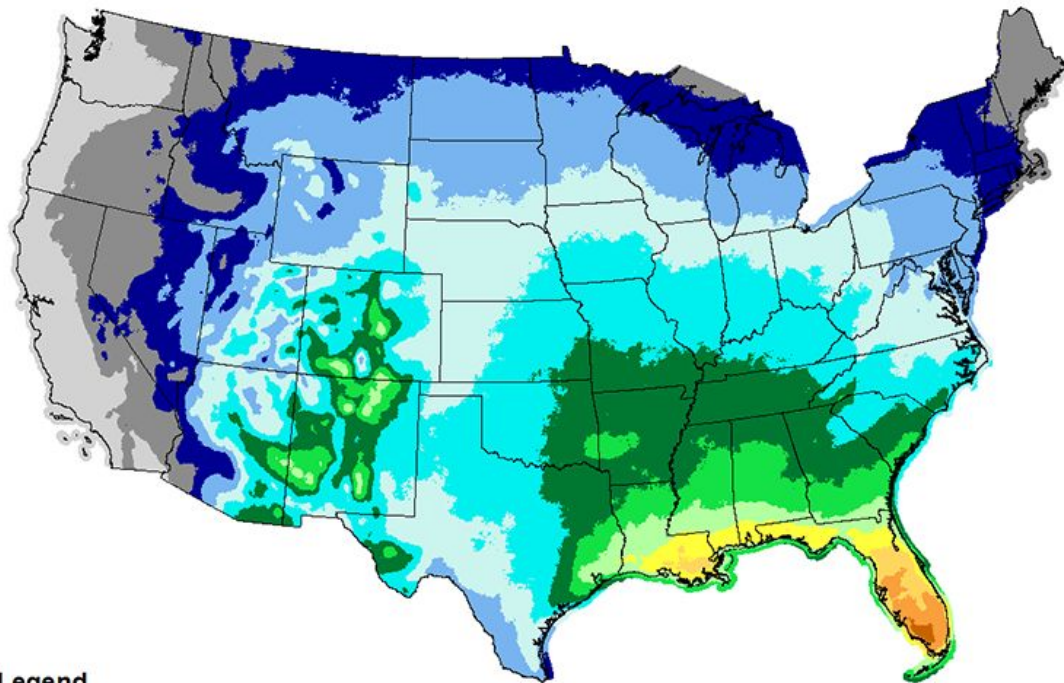
2023 Stats:

Spokane: 19 days

Lewiston: 18 days

Wenatchee: 14 days

## Annual Mean Thunderstorm Days (1993-2018)



### Legend



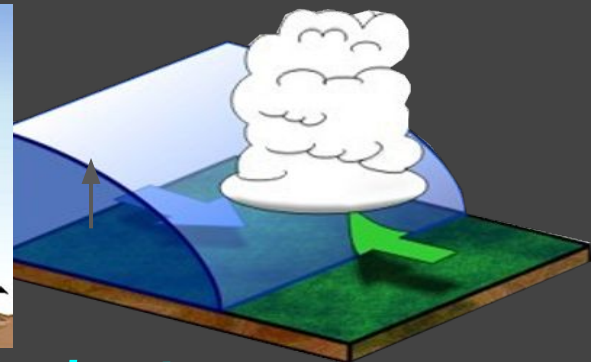
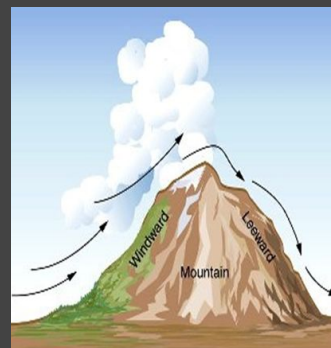


# WHAT CREATES A THUNDERSTORM?

Dew Point (°F)	How It Feels
<55°	Dry
55-60°	Comfortable
60-64°	Slightly Humid
65-69°	Humid
70°-75°	Very Humid
>75°	Oppressive

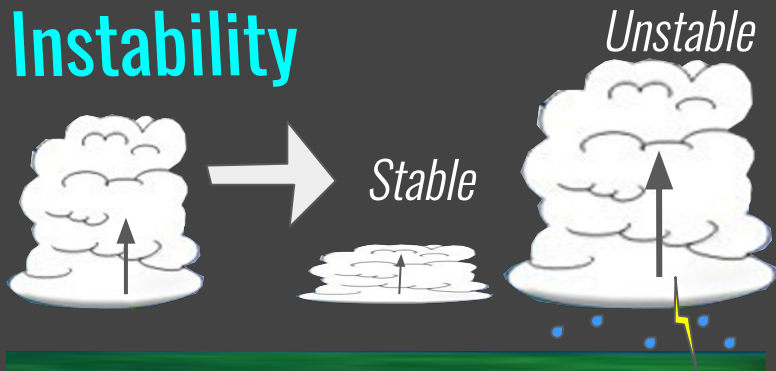


## 1. Moisture



## 2. Lifting Mechanism

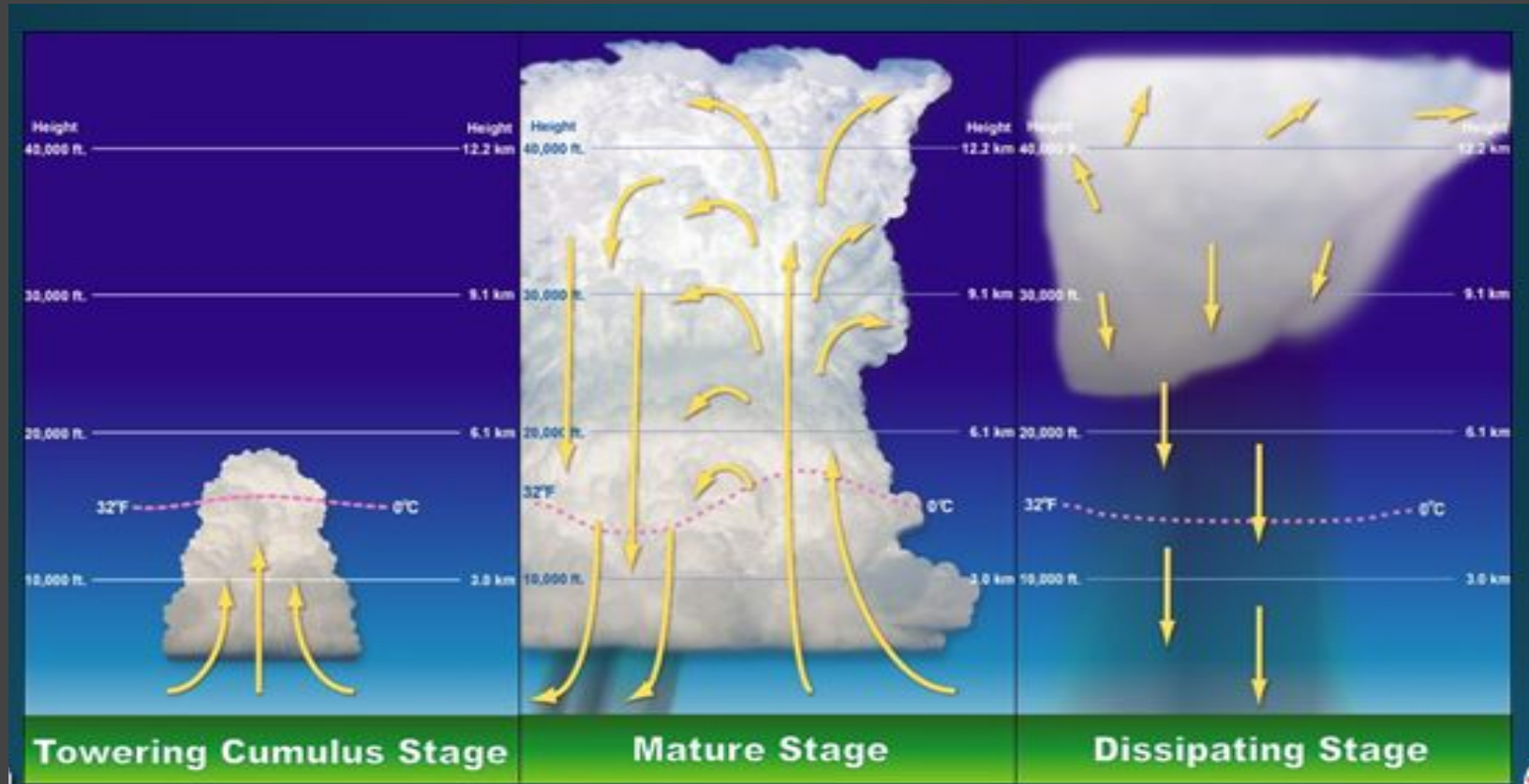
## 3. Instability



## 4. Wind Shear



# Stages of a Thunderstorm



# What is a Severe Thunderstorm?

Winds  $\geq$  58 mph



Hail  $\geq$  1" in diameter



Tornado

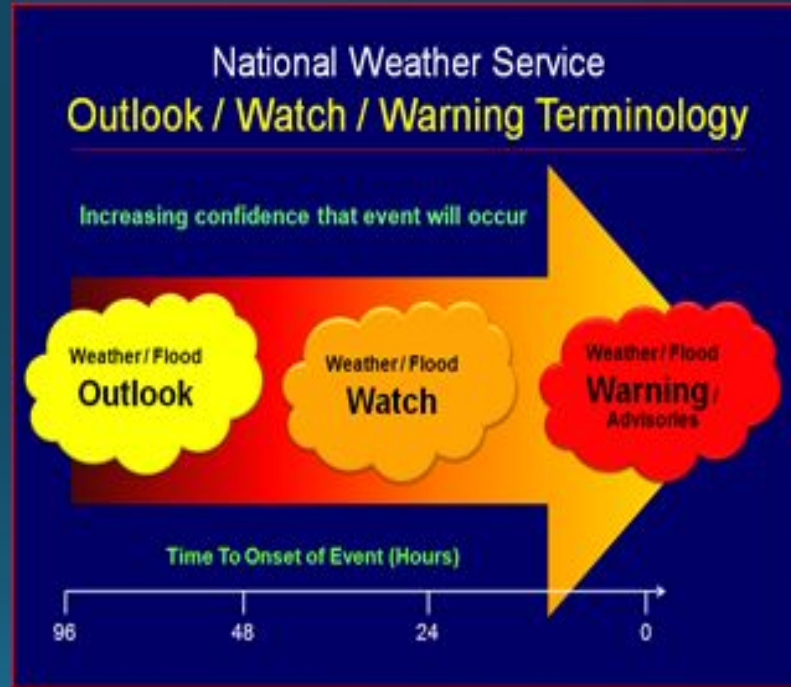


- Less than 10% of all thunderstorms are Severe
- Though Lightning is ALWAYS extremely dangerous, the amount of lightning does not make a storm SEVERE.



# STAY INFORMED: NWS Terminology

- **Watch:** Conditions are favorable, but not imminent, for severe weather or flooding
- **Warning:** Severe weather or flooding is imminent or already occurring
- **Advisory:** Minor nuisance or inconvenient weather or flooding is expected, but in most cases not anticipated to adversely affect plans.



## Short fused

Tornado  
Flash Flood  
Severe Thunderstorm

## Long fused

High Wind  
Flood  
Winter Storm  
Red Flag





# STAY INFORMED: STORM PREDICTION CENTER CONVECTIVE OUTLOOKS

Thunderstorms	1-Marginal	2-Slight	3-Enhanced	4-Moderate	5-High
<p>No severe thunderstorms expected</p>	<p>Isolated severe thunderstorms possible</p>	<p>Scattered severe storms possible</p>	<p>Numerous severe storms possible</p>	<p>Widespread severe storms likely</p>	<p>Widespread severe storms expected</p>
<p>Lightning &amp; flooding threats exist with <u>all</u> thunderstorms</p>	<p>Limited in duration and/or coverage and/or intensity</p>	<p>Short-lived and/or not widespread, isolated intense storms possible</p>	<p>More persistent and/or widespread, a few intense</p>	<p>Long-lived, widespread and intense</p>	<p>Long-lived, very widespread and particularly intense</p>
					



# STAY INFORMED

## NWS Spokane Webpage

[www.weather.gov/Spokane](http://www.weather.gov/Spokane)

**NATIONAL WEATHER SERVICE**  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

HOME FORECAST PAST WEATHER SAFETY INFORMATION EDUCATION NEWS SEARCH ABOUT

Local forecast by "City, ST" or ZIP code  
Enter location:  Go

**News Headlines**

- Rises on area rivers over the next week.
- Spring 2023 Weather Spotter Training Schedule - Register Here!

**MY FORECAST**  
2 Miles WSW Spokane WA

**NWS Forecast Office Spokane, WA**  
Spokane, WA  
Weather Forecast Office

Current Hazards Current Conditions Radar Forecasts Rivers and Lakes Climate and Past Weather Local Programs

Warm through Thursday then Much Cooler Rivers Running High Thunderstorms This Week

Mostly Cloudy  
**70°F**  
21°C [Get Detailed Info](#)

This Afternoon  
20%  
Slight Chance T-storms  
High: 74°F

Tonight  
20%  
Slight Chance T-storms  
Low: 52°F

**TEMPERATURE OUTLOOK**

	TUE May 2	WED May 3	THU May 4	FRI May 5	SAT May 6
<b>SPOKANE</b>	84★	81	80	59	60
<b>COLVILLE</b>	88★	82	85	69	60
<b>WENATCHEE</b>	85★	84	80	63	64
<b>LEWISTON</b>	84	87	81	63	67
<b>PULLMAN</b>	79	80	73	55	61
<b>SANDPOINT</b>	85★	77	82★	65	56

★ Forecast is near or above record high

change location

**NWS Spokane**  
Issued: 3:14 PM - Monday, May 1, 2023

Click a location below for detailed forecast.

Watches, Warnings & Advisories  
Flood Watch  
Hydrologic Outlook

Last Map Update: Mon, May 1, 2023 at 4:46:33 pm PDT

Text Product Selector (Selected product opens in current window)  
Latest Text Products Issued by OTX

Social Media Forecast Discussion Local Radar Satellite Images Weather Maps Graphical Forecasts

Weather Table Forecasts Climate Graphics Rivers and Lakes Observations & Hazards Fire Weather Aviation Weather

YouTube Channel Hourly Forecasts Drought Information Climate Submit a Storm Report View Storm Reports

Follow us on Twitter Follow us on Facebook Follow us on YouTube OTX RSS Feed

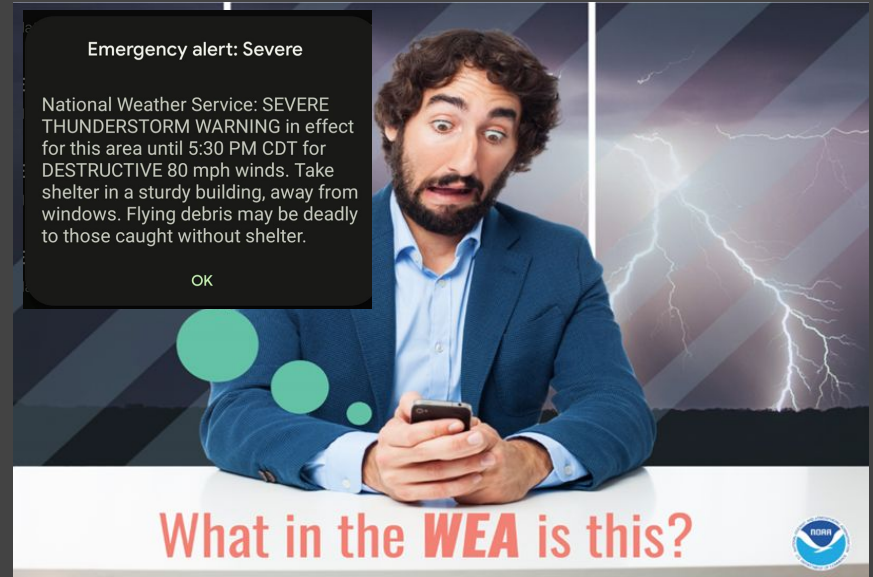
# STAY INFORMED

## Wireless Emergency Alerts (WEA)

WEA warns the public about dangerous weather, missing children, and other critical situations with a text-like message on your mobile device.

WEA-capable mobile devices will receive:

- Tornado Warnings (TOR)
- Severe Thunderstorm Warnings (SVR)\*
- Flash Flood Warnings (FFW)\*\*



Only *SVRs* with 80 mph wind or 2.75" diameter hail (baseball) tags will transmit over WEA!

Only *FFWs* with *CONSIDERABLE* or *CATASTROPHIC* damage tags will transmit over WEA!





# Stay Informed

## *FEMA App*



## Download the FEMA App Today

### Get Access to:

- Weather Alerts
- Disaster Resources
- Preparedness Tips

Apple



Android





# Stay Informed

## *NOAA Weather Radio*



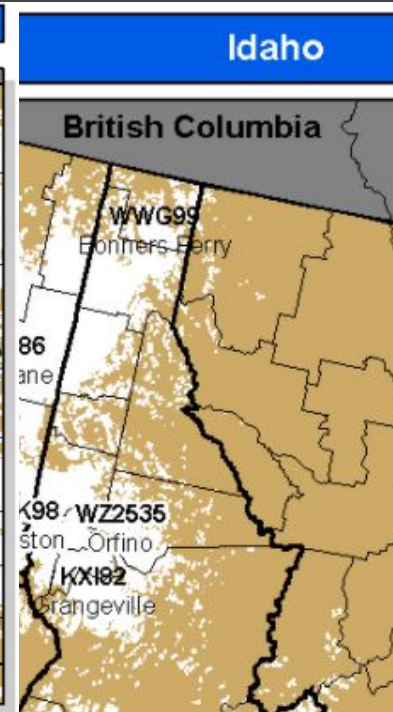
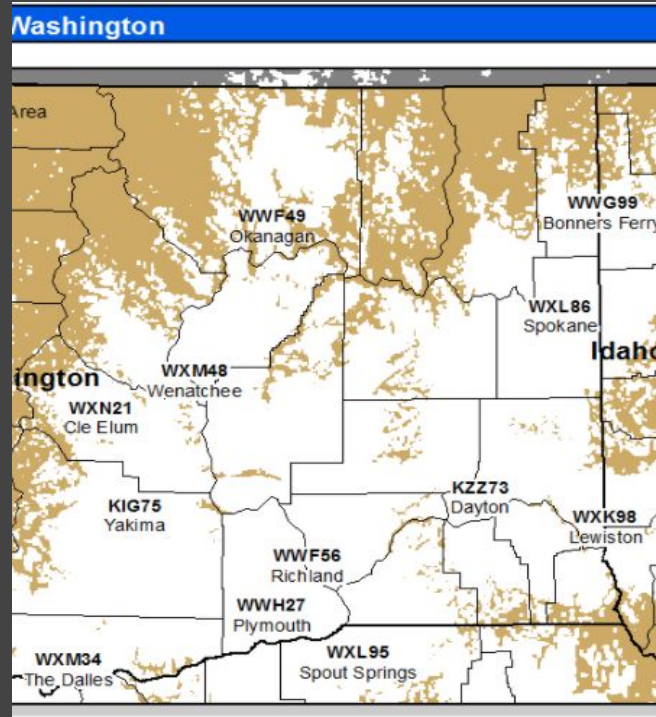
Radio stations  
broadcasting weather  
info 24/7/365.

Continuous operation.

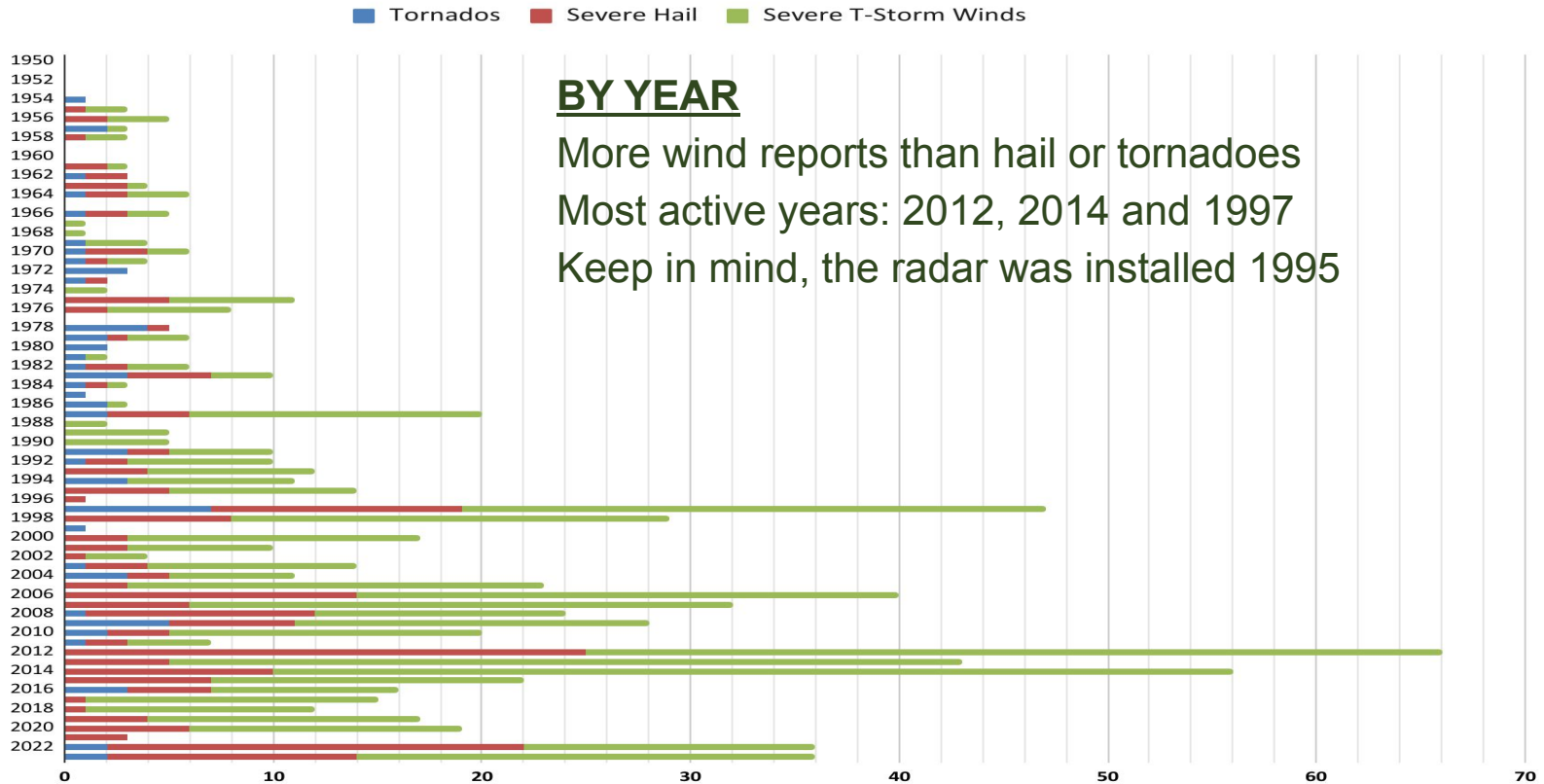
Battery backup capable.

Handheld device great for  
outdoor activities.

Can drive across the country and  
get info anywhere along path.



# Local Severe Weather Climatology



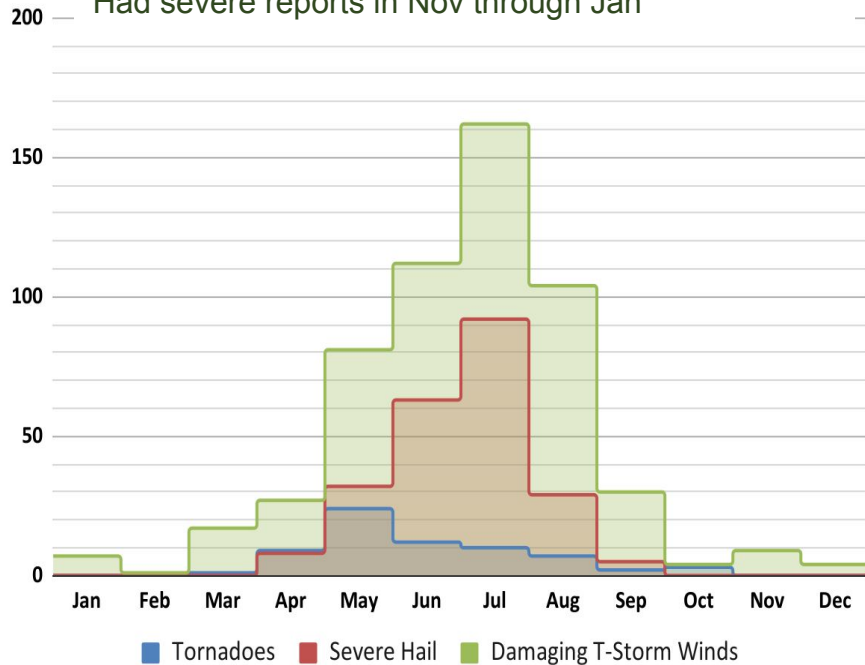
# Local Severe Weather Climatology

## BY MONTH

Peak month for Damaging Winds/Hail – July

Peak month for Tornadoes – May

Had severe reports in Nov through Jan

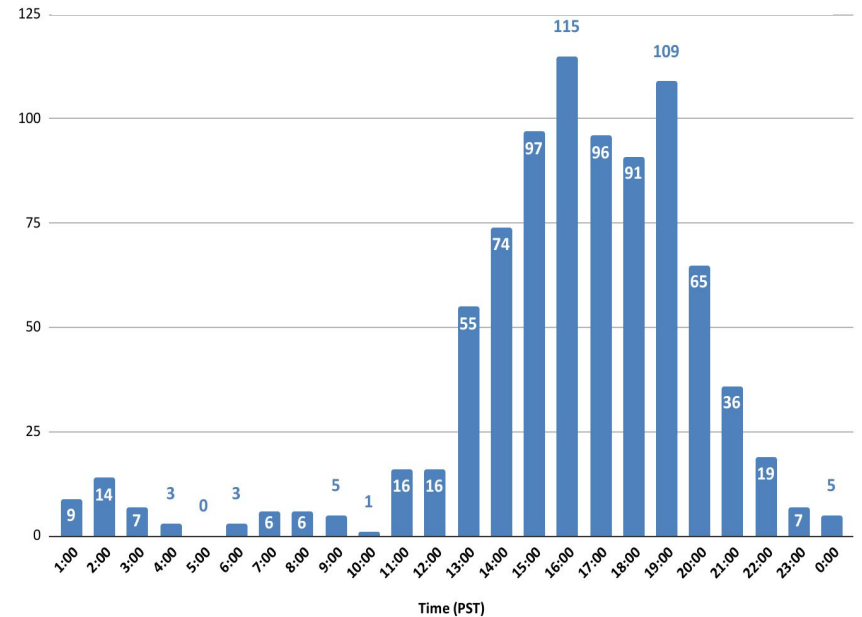


## BY TIME OF DAY

Most active mid afternoon to mid evening

Less active in the morning

Still get wind reports late at night



# #3 Poll Question

What ingredients are needed to create a thunderstorm?





# WHAT TO REPORT: TORNADOES

Look at the ground...look at the cloud base...is it in contact with both?

If yes...TORNADO!

If no...most likely funnel cloud or dust devil

## Typical Inland NW Tornado

- Less than 5 minutes on the ground (radar scan ~4mins)
- ¼ mile track
- Max wind speeds of 80-110 mph
- Mostly EF0 to EF1

*Coulee City - July 2023*



**kxly 4 News** VIEWER PICTURES  
MARK IN AIRWAY HEIGHTS

*Airway Heights - July 2016*



*Spokane - May 2022*



*Spokane - July 2016*



# How are Tornadoes Measured?

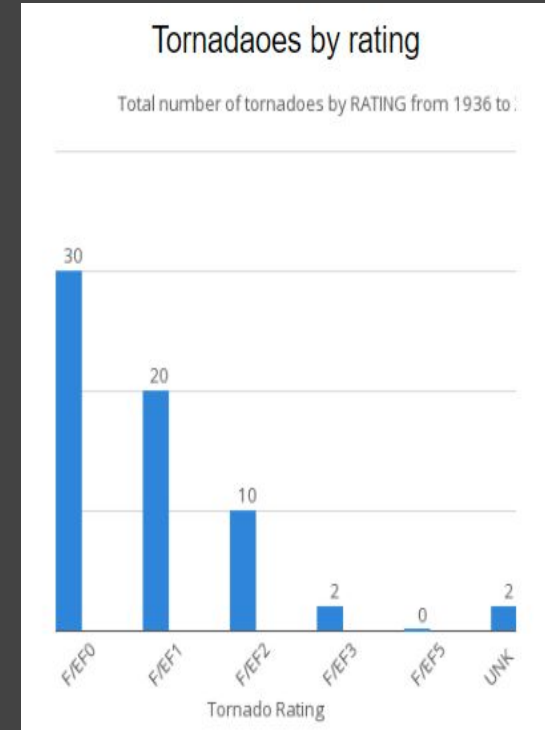
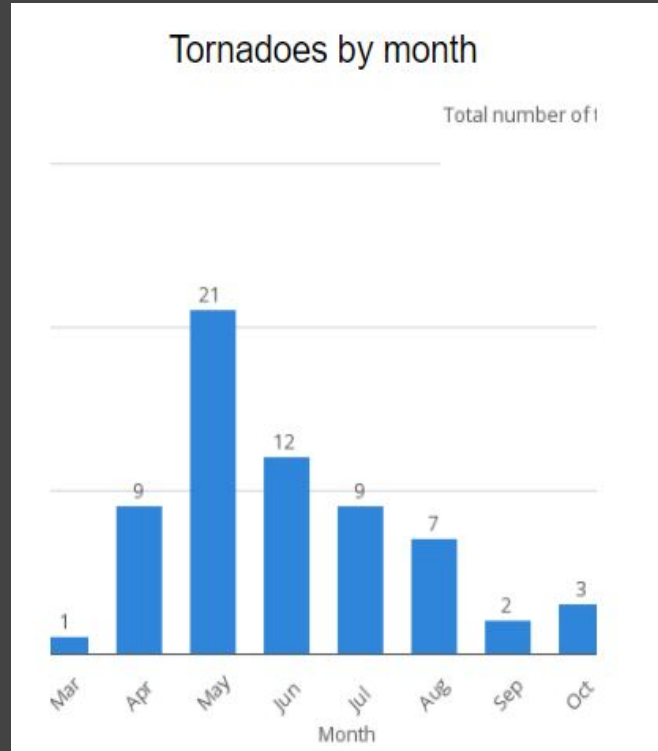
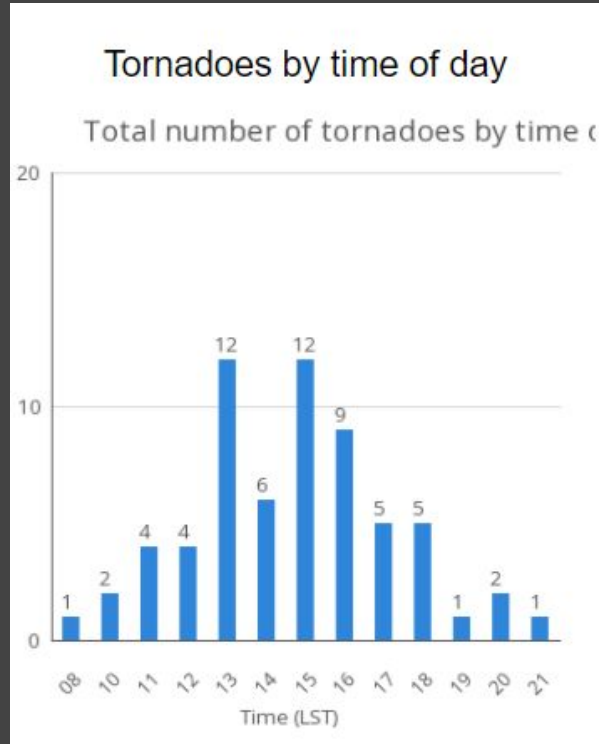
EF Rating	Wind Speeds	Expected Damage
<b>EF-0</b>	65-85 mph	'Minor' damage: shingles blown off or parts of a roof peeled off, damage to gutters/siding, branches broken off trees, shallow rooted trees toppled. 
<b>EF-1</b>	86-110 mph	'Moderate' damage: more significant roof damage, windows broken, exterior doors damaged or lost, mobile homes overturned or badly damaged. 
<b>EF-2</b>	111-135 mph	'Considerable' damage: roofs torn off well constructed homes, homes shifted off their foundation, mobile homes completely destroyed, large trees snapped or uprooted, cars can be tossed. 
<b>EF-3</b>	136-165 mph	'Severe' damage: entire stories of well constructed homes destroyed, significant damage done to large buildings, homes with weak foundations can be blown away, trees begin to lose their bark. 
<b>EF-4</b>	166-200 mph	'Extreme' damage: Well constructed homes are leveled, cars are thrown significant distances, top story exterior walls of masonry buildings would likely collapse. 
<b>EF-5</b>	> 200 mph	'Massive/incredible' damage: Well constructed homes are swept away, steel-reinforced concrete structures are critically damaged, high-rise buildings sustain severe structural damage, trees are usually completely debarked, stripped of branches and snapped. 

After the storms have passed, NWS will conduct surveys to assess the tornado damage. We use a list of damage indicators that align with the Enhanced Fujita Scale.



# Inland NW Tornado Stats ~ 64 reports (1936-2016)

*In Spokane metro area: last time tornado spotted was 2022  
There have been 15 tornadoes in the metro area.*



# What about Funnel Clouds & Dust Devils?

- Funnel clouds stay aloft attached to storm cloud
- Dust devils start at the ground and extend upward
- Tornadoes extend from storm cloud to the ground
- In doubt, check for cloud cover and debris on ground
- Take a picture and share!





# Tornado - May 6, 2022 - Spokane



# NON-SUPERCCELL TORNADOES



- Landspouts are narrow, rope-like condensation funnels that reach the ground.
- Landspouts form during the towering cumulus or mature stage of a thunderstorm.
- There is no rotating updraft - spinning originates near the ground.



# Cloud Types

Scud clouds - ragged



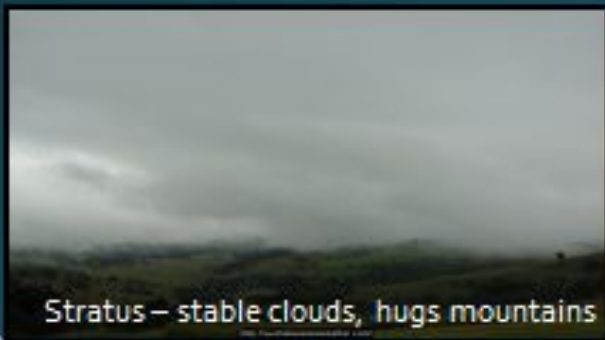
Cumulus



Towering Cumulus



Stratus – stable clouds, hugs mountains



Wall cloud – lowering cloud base/ rotation



National Weather Service Spokane



# #4 Poll Question

Identify this image.





# WHAT TO REPORT: STRONG WINDS



**30-40 mph**

- Whole trees in motion



**40-50 mph**

- Twigs / Small branches breaking



**50-58 mph**

- Branches / Small limbs breaking



**58-75 mph**

- Large branches broken / Structural damage?



**Over 75 mph**

- Loss of roofing / Trees uprooted or snapped



# WHAT TO REPORT: HAIL



Pea =  $\frac{1}{4}$  inch



Penny =  $\frac{3}{4}$  inch



Nickel = .88 inch



Quarter = 1 inch



Half Dollar =  $1\frac{1}{4}$  inch



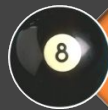
Walnut =  $1\frac{1}{2}$  inch



Golf Ball =  $1\frac{3}{4}$  inch



Egg = 2 inch



Billiard Ball =  $2\frac{1}{4}$  inch



Tennis Ball =  $2\frac{1}{2}$  inch



Baseball =  $2\frac{3}{4}$  inch



Official League

Softball =  $4\frac{1}{2}$  inch

If a ruler isn't available, reference hail to a common object



**NO MARBLES!**



*Otis Orchards -  
August 2022*

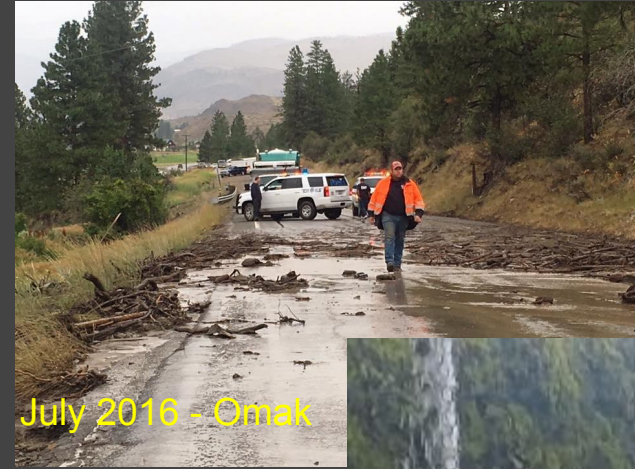




# WHAT TO REPORT: HEAVY RAIN

Report heavy downpours or long periods of steady rain  
Give specific locations - streets and creeks

- 0.50"+ in 1 hour - convective
- 1.0" in 12 hours or 1.5"+ in 24 hours - stratiform



# WHAT TO REPORT: FLOODS

Rising water on rivers, streams & low spots

Give specific locations of streams & streets





# WHAT TO REPORT: MUD & DEBRIS FLOWS

Water-saturated rock, mud and debris moving down a slope

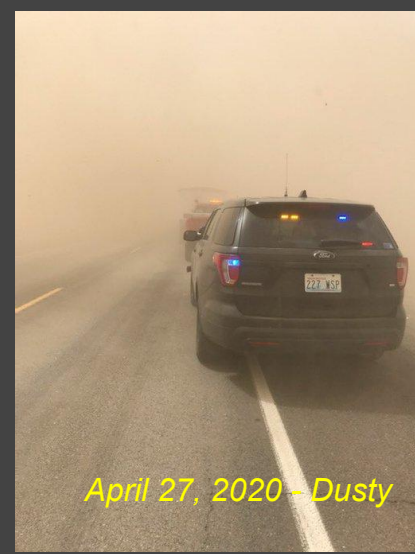
Give specific locations, roadways or intersections

Post-fire Floods



# WHAT TO REPORT: DUST STORMS

- Prolonged dry spell + strong winds + plowed fields
- Sudden reduction in visibility
- Give locations of roads and intersections
- Also called Haboobs
- If widespread, can lead to air quality issues
- Keep in mind - Smoke can limit visibilities as well.



*Harrington - Aug 2014*



*April 11, 2020 - Ritzville*



*Odessa - Aug 2014*





# #5 Poll question

Identify this image.



# Spotter Safety

- Personal Safety is the Primary Objective of every spotter
- Protect You and Your Family First
- Do NOT put yourself in harm's way
  - Don't walk or drive over obstructions as flooded roads or downed power lines
  - Don't put yourself under objects that have the potential to fall or be blown over
- **ACES - Awareness, Communication, Escape Route and Safe Zones**



*Pullman, May 2020*



*Spokane, Jan 2021*



*Moscow, April 2019*





# WEATHER SAFETY: LIGHTNING

- Lightning can strike as far as 10 miles from the thunderstorm.
- More than 50% of lightning deaths occur AFTER the storm has passed

Seek Safe Shelter indoors - or vehicle if needed  
Stay away from windows & doors  
Don't use a corded phone or take a bath/shower



Spokane, WA April 2017



0:06 1 view

Kahlotus - May 2020



# WEATHER SAFETY: LIGHTNING



## WHEN THUNDER ROARS GO INDOORS



Lightning Fatalities  
For Outdoor Sports



40%  
SOCCER



27%  
GOLF



17%  
RUNNING



10%  
BASEBALL



3%  
FOOTBALL



3%  
OTHER



[weather.gov/lightning](https://weather.gov/lightning)

step 1

Leave the field immediately



step 2

Seek shelter in an enclosed building or car



Wait 30 minutes after the last rumble of thunder to return outside



# WEATHER SAFETY: LARGE HAIL



## Speeds of Falling Hail By Size

Dime size	35 mph
Quarter size	50 mph
Golf Ball	66 mph
Baseball	85 mph
Softball	100+ mph

*Terminal velocity of an object assumes a round smooth surface*



# WEATHER SAFETY: TORNADOES



## OUTSIDE

- Cars are NOT safe!
  - Drive to the nearest sturdy building and seek shelter
  - Abandon the vehicle and find an area noticeably lower than the level of the road – lie down and cover your head.

***Treat Severe Thunderstorm or High Wind Warnings Seriously! Straight line winds can be as destructive as a Tornado***

## INSIDE

- Seek shelter in a strong building
- Lowest level of a sturdy building (basement is best)
- Small interior room away from windows (bathroom or closet)
- Put as many walls between you and the outside as possible
- Abandon mobile homes - move to a sturdy shelter close by





# WEATHER SAFETY: FLASH FLOODS



Don't underestimate the power of water!



6 inches of fast-moving water can knock over and carry away an adult.

12 inches of fast-moving water can carry away a small car.

18-24 inches of fast-moving water can carry away most large SUVs, vans and trucks.



Omak - June 2013



**IT ONLY TAKES about 12-18" to turn your vehicle into a BOAT!**



# #6 Poll question

Where is a safe place to go during a flood?



# Be Prepared - Disaster Kits and Disaster Plans

- **Water**, one gallon of water per person per day for at least three days
- **Food & medicine/prescriptions**, at least a three-day supply
- **Radio**, battery-powered or hand crank radio and a NOAA Weather Radio with tone alert and extra batteries for both
- **Flashlight and extra batteries**
- **First aid kit**
- **Whistle** to signal for help
- **Dust mask** to help filter contaminated air and plastic sheeting and duct tape to shelter-in-place
- **Moist towelettes, garbage bags and plastic ties** for personal sanitation
- **Wrench or pliers** to turn off utilities
- **Manual can opener** for food
- **Local maps**
- **Cell phone with chargers, inverter or solar charger**



<http://www.ready.gov/kit>



# Other Ways to Get Involved

- Weather Spotter
- Join the Community Collaborative Rain, Hail, and Snow Network
- Join the Citizens Weather Observers Program





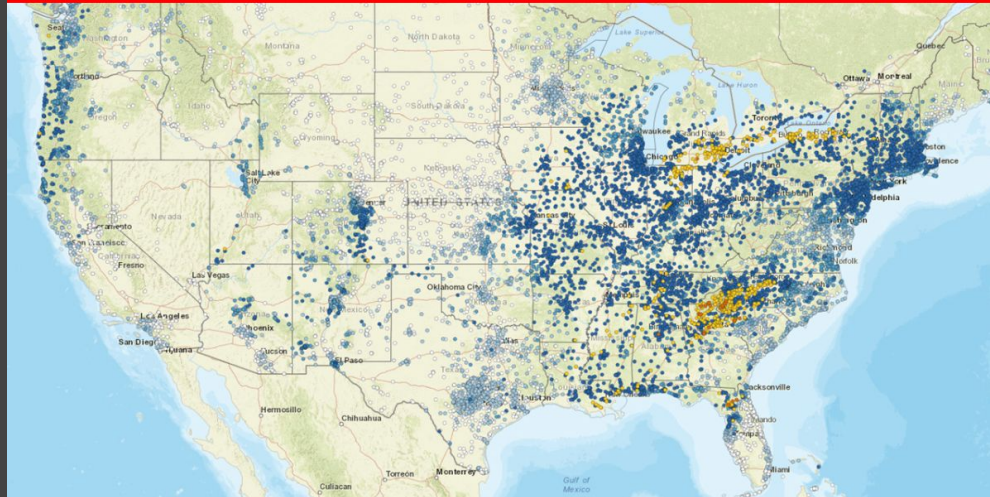
# Community Collaborative Rain, Hail and Snow Network - CoCoRaHS

Help Observe Precipitation in your Community

[www.cocorahs.org](http://www.cocorahs.org)

Volunteer take readings once a day - transmit on mobile device

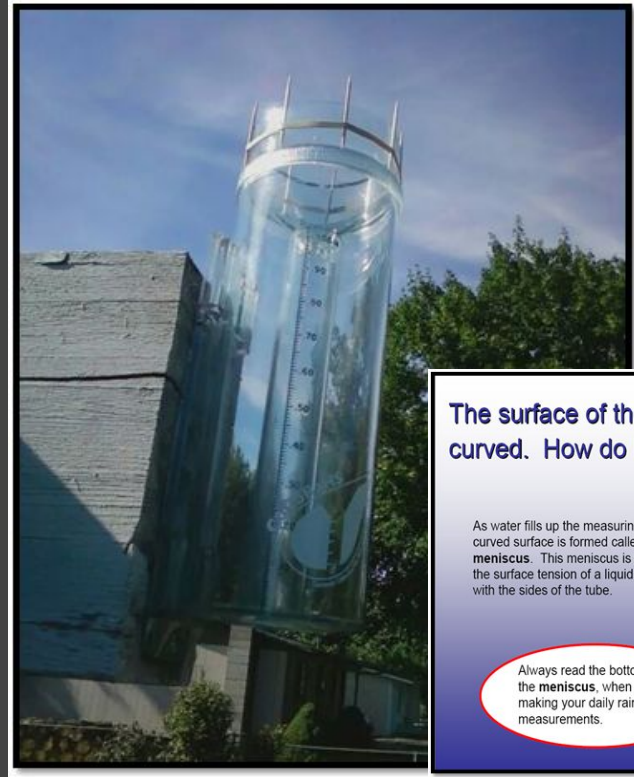
## CoCoRaHS Volunteers Across The Country



# Community Collaborative Rain, Hail and Snow Network - CoCoRaHS

## Five easy steps

1. Sign-up at on the CoCoRaHS web site [www.cocorahs.org](http://www.cocorahs.org)
2. Obtain a 4" plastic rain gauge
3. View the online "training slide show"
4. Set up the gauge in a "good" location in your yard - away from trees
5. Start observing precipitation and report online daily



The surface of the water in the gauge looks curved. How do I know where to read?

As water fills up the measuring tube, a curved surface is formed called a **meniscus**. This meniscus is formed by the surface tension of a liquid in contact with the sides of the tube.



Always read the bottom of the **meniscus**, when the making your daily rain measurements.



# Citizen Weather Observer Program - CWOP



[www.wxqa.com](http://www.wxqa.com)

- Have a weather station and want to share data online
- Has a PC and Internet access
- Register Online & Receive a weather station ID
- Transmits data every 15 mins



# Different programs - All useful to the NWS

## Spotter

Severe Weather

No instruments  
required

Event driven

[Weather.gov](https://www.weather.gov)

## CoCoRaHS

Precipitation  
only

Rain gauge  
required

Daily  
commitment

[Cocorahs.org](https://www.cocorahs.org)

## CWOP

Weather data

Weather station

Daily  
commitment

[Wxqa.com](https://www.wxqa.com)





# Weather Spotter Resources Online

[weather.gov/otx/Spotter Resource Page](http://weather.gov/otx/Spotter_Resource_Page)

- Latest radar & satellite images
- Current watches, warnings & forecasts
- Latest NWS Storm Reports
- Maps of NOAA Weather Radio frequencies
- Current & Past Newsletters
- Spotter Guide
- Additional training resources - **MetEd**
- [www.weather.gov/jetstream/](http://www.weather.gov/jetstream/)

## What about Weather Spotter Training?

Spotter training sessions are important and needed to stay current on severe weather spotting. The sessions are conducted by the National Weather Service in the spring and fall. It's an opportunity for spotters to review basic spotter techniques and weather safety concerns.

- [Spotter Training Schedule](#) will be posted when and where classes are offered.
- Recorded Spotter training is available locally and nationally

## Locally Recorded Spotter Training

<a href="#">Fall Spotter Training 2022</a> <a href="#">Notes</a>	<a href="#">Snow Measurement Training 2022</a> <a href="#">Notes</a>
<a href="#">Basic Spotter Training 2022</a> <a href="#">Notes</a>	<a href="#">Advanced Spotter Training 2022</a> <a href="#">Notes</a>
<a href="#">Fall Spotter Training 2021</a> <a href="#">Notes</a>	<a href="#">Snow Measurement Training 2021</a> <a href="#">Notes</a>
<a href="#">Basic Spotter Training 2021</a> <a href="#">Notes</a>	<a href="#">Advanced Spotter Training 2021</a> <a href="#">Notes</a>

## National Spotter and Observer Training

<a href="#">COMET MetEd</a>	<a href="#">CoCoRaHS</a>
<a href="#">SKYWARN Spotter Training - Basic</a>	<a href="#">CoCoRaHS slide shows</a>
<a href="#">Role of the SKYWARN Spotter</a>	<a href="#">CoCoRaHS videos</a>
<a href="#">SKYWARN Spotter Convective Basics</a>	<a href="#">Wx Talks Webinars</a>

SKYWARN<sup>1</sup> Spotter Convective Basics  
Presented by the COMET Program



Begin »

- [MetEd Home](#)
- [COMET Home](#)
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# #7 Poll question

What are some items to have in an Emergency Kit?



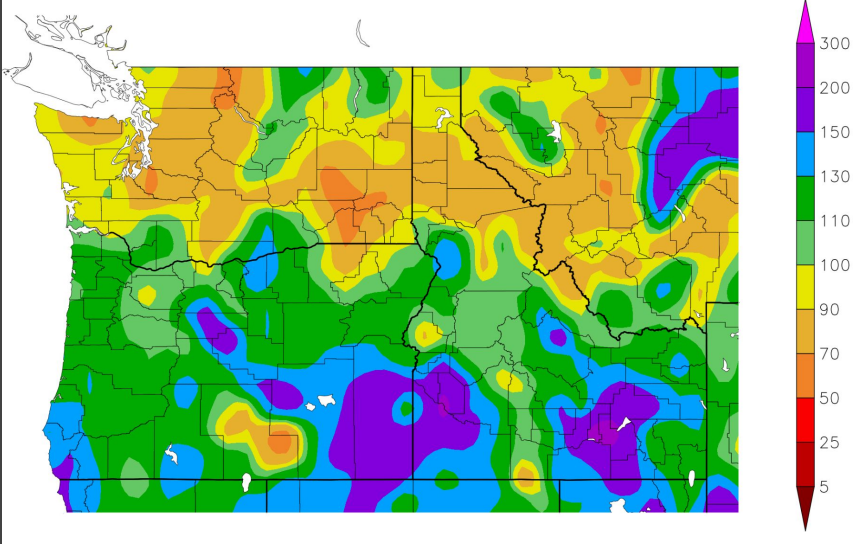
# Seasonal Outlook 2024

[wrcc.dri.edu/](http://wrcc.dri.edu/)

Since the start of the Calendar Year...

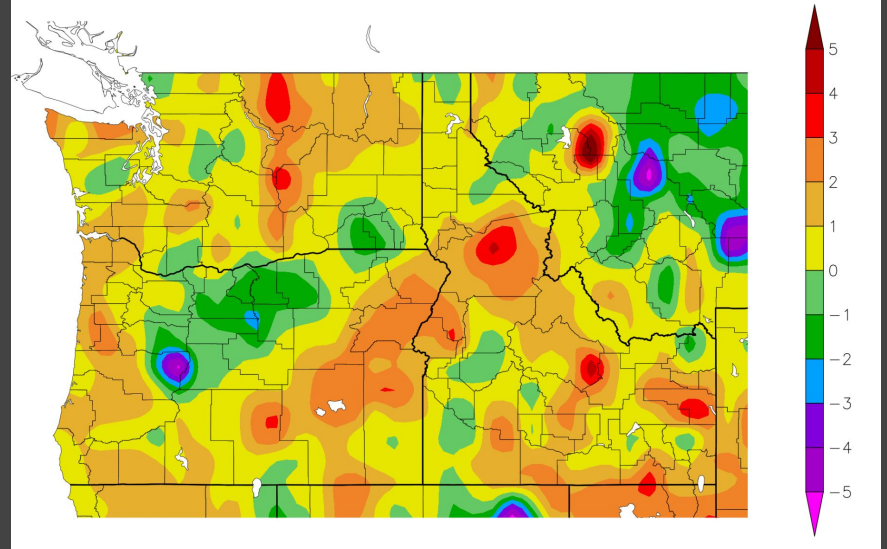
## Precipitation

Percent of Normal Precipitation (%)  
1/1/2024 - 4/19/2024



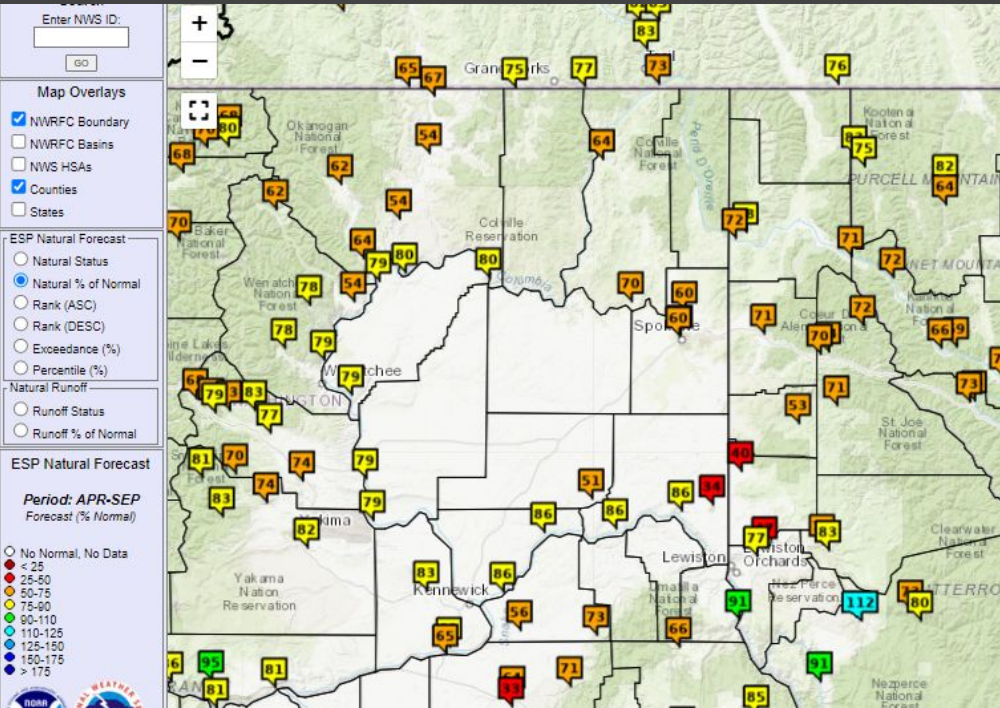
## Temperature

Departure from Normal Temperature (F)  
1/1/2024 - 4/19/2024



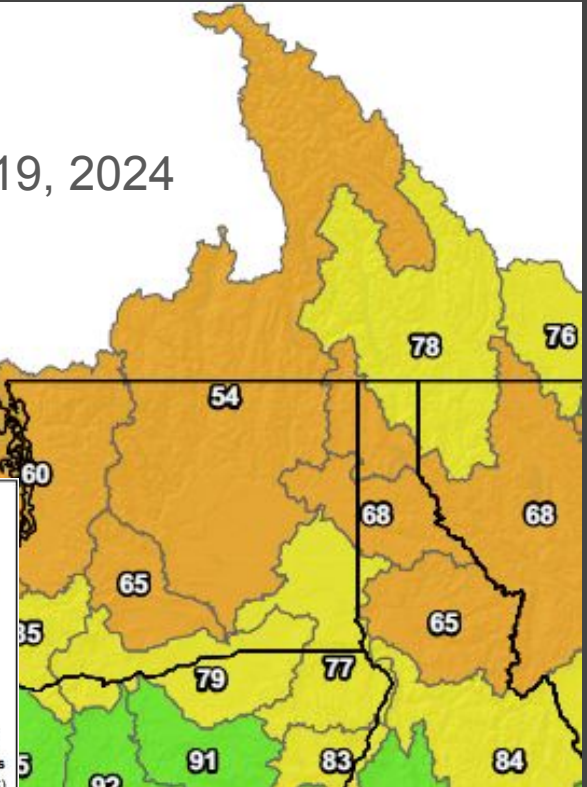
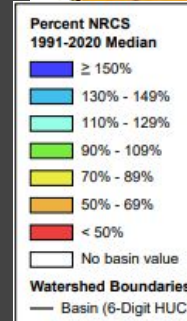
# Seasonal Outlook 2024

## Water Supply Outlook



## Snow Water Equivalent

April 19, 2024





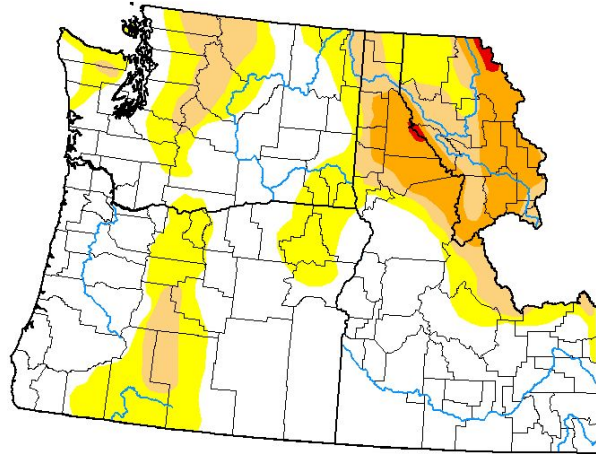
# Seasonal Outlook 2024

## US Drought Monitor & Seasonal Outlook

[cpc.ncep.noaa.gov](https://cpc.ncep.noaa.gov)

### U.S. Drought Monitor Pacific Northwest DEWS

April 16, 2024  
(Released Thursday, Apr. 18, 2024)  
Valid 8 a.m. EDT



**Intensity:**

- None
- D0 Abnormally Dry
- D1 Moderate Dry
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

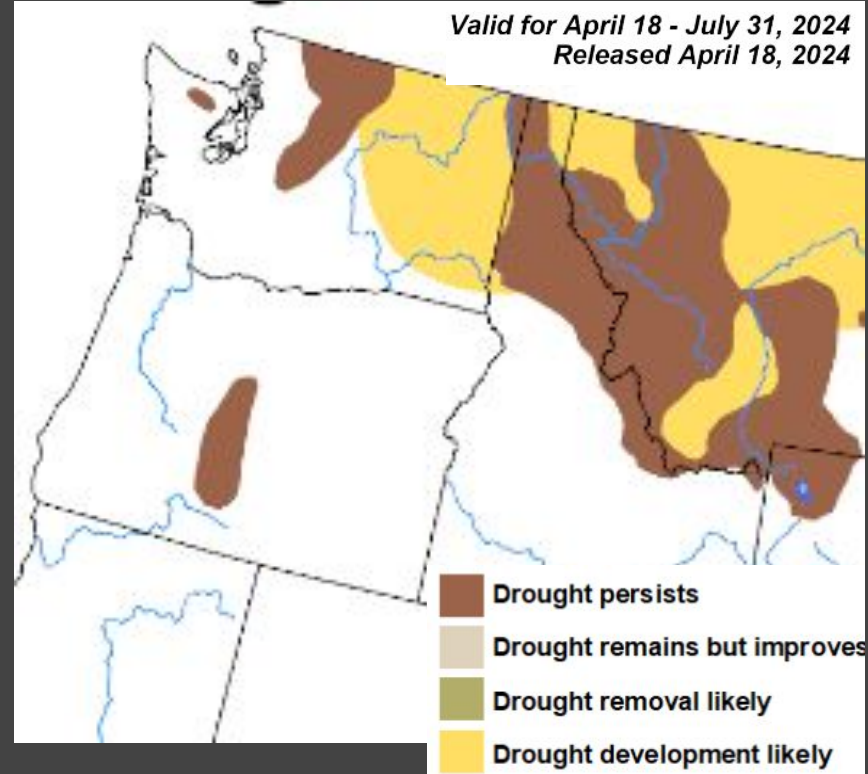
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

**Author:**  
Lindsay Johnson  
National Drought Mitigation Center



[droughtmonitor.unl.edu](https://droughtmonitor.unl.edu)

Valid for April 18 - July 31, 2024  
Released April 18, 2024

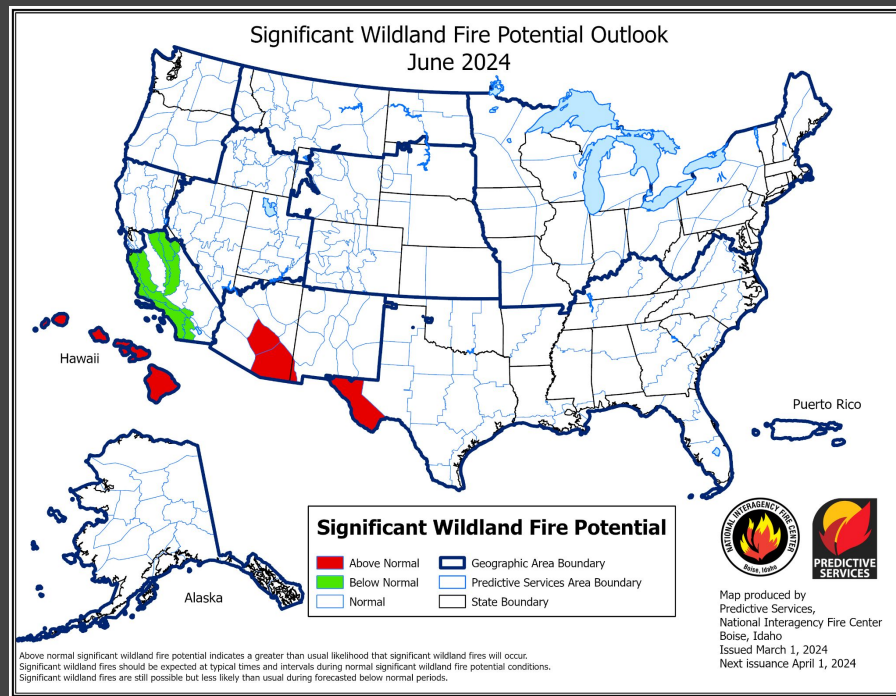
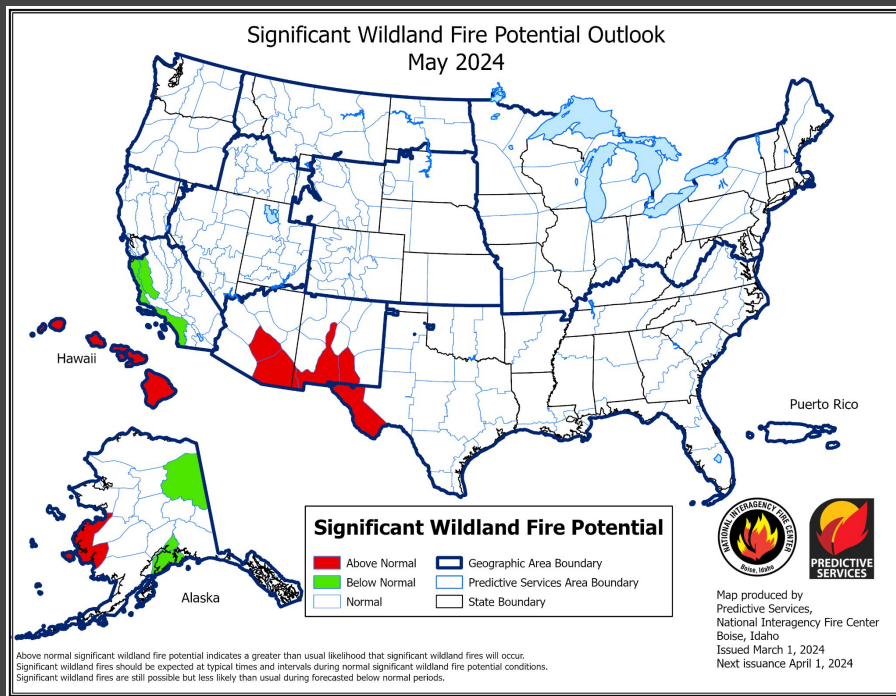


- Drought persists
- Drought remains but improves
- Drought removal likely
- Drought development likely

# Seasonal Outlook 2024

## Wildland Fire Potential

[www.nifc.gov](http://www.nifc.gov)







# Seasonal Outlook 2024 - April thru June

**La Niña  
coming!**

## 3 Month Outlook

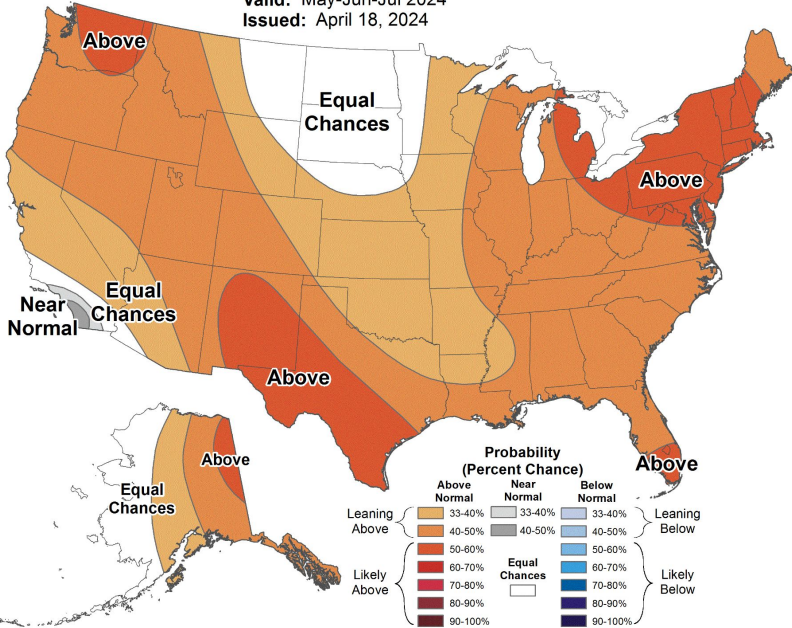
[www.cpc.noaa.gov](http://www.cpc.noaa.gov)



### Seasonal Temperature Outlook



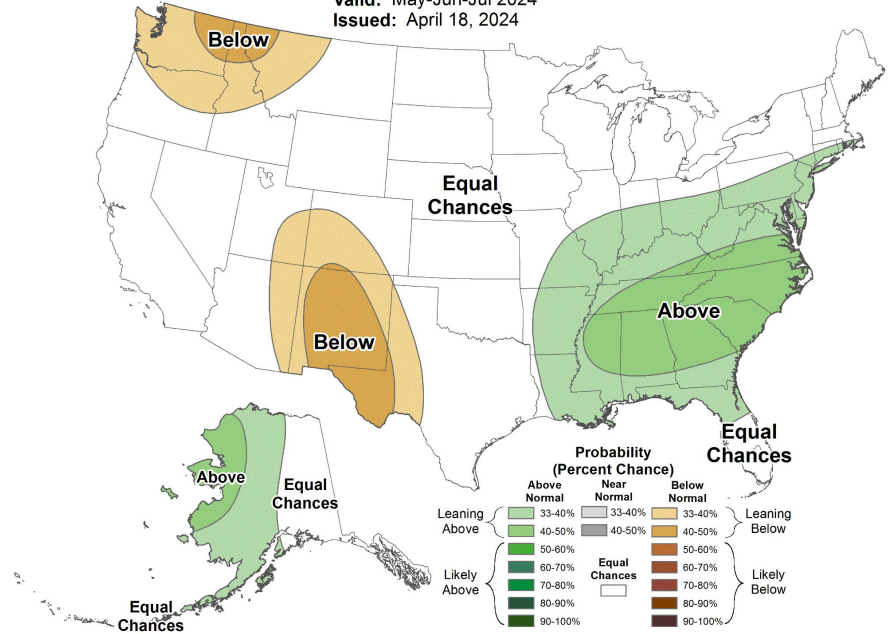
Valid: May-Jun-Jul 2024  
Issued: April 18, 2024



### Seasonal Precipitation Outlook



Valid: May-Jun-Jul 2024  
Issued: April 18, 2024





# NWS + Weather Spotters = Saved Lives

[nws.spokane@noaa.gov](mailto:nws.spokane@noaa.gov)

What's Next?

THANK YOU!

You will receive a follow-up email

- register as a weather spotter
- Spotter ID
- Spotter training certificate

## Any Questions?

I will unmute you - then you unmute yourself to talk.

*View from Steptoe Butte, May 2018*

