National Weather Service

Update on Winter Weather Initiatives

October 17, 2024

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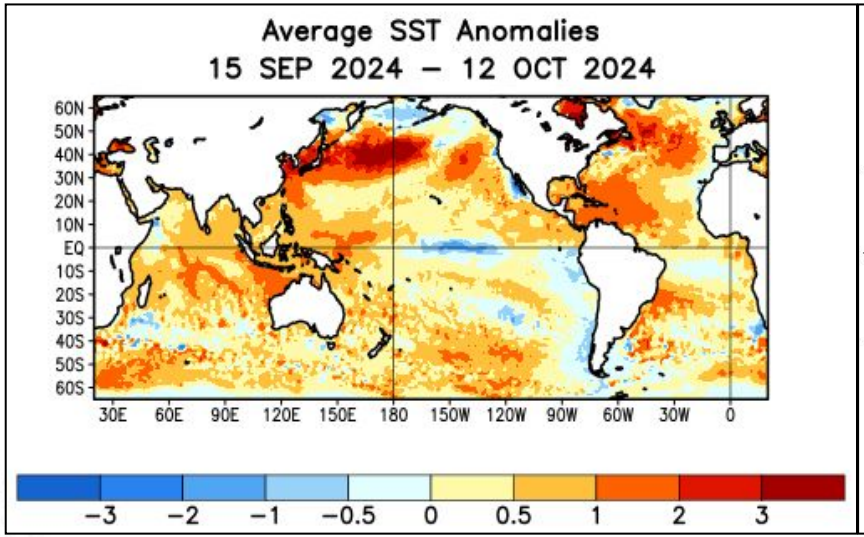
Presentation Will Be Available!

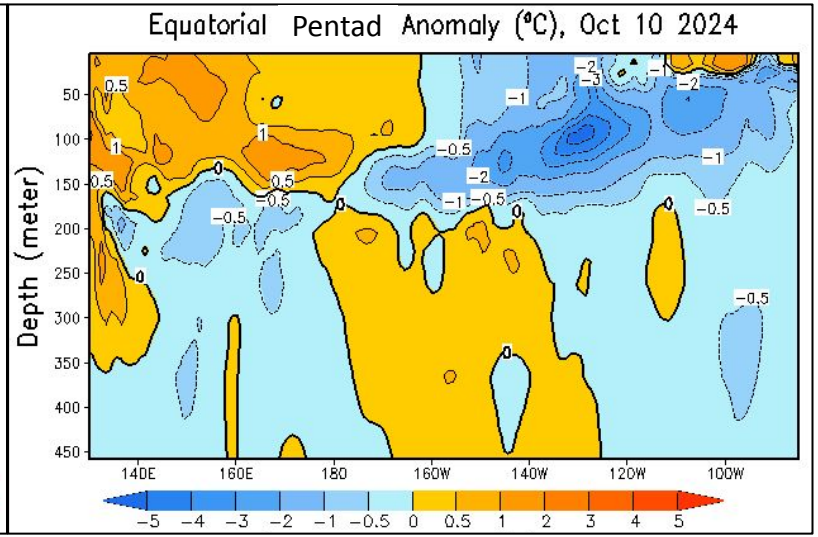
- Presentation PDF and Recording will be made available!
- Publicly posted at our Weather Ready Nation calendar page:
- https://www.weather.gov/wrn/calendar

Webinar Outline

- Winter Season Outlook
- Winter Program Overview
- Winter Key Messages
- Winter Weather Outlook
- Experimental Winter Storm Outlook
- Winter Storm Severity Index
- Probabilistic Precipitation Portal
- Probabilistic Snow Products
- Snow Character Maps / Snow Ratio Grids
- Winter Hazard Products
- Snow Squall Warnings
- Exploring Enhanced-Language for High-End Storms
  - Poll Questions
- Updates on Avalanche Weather Initiative
- Wind Chill to Extreme Cold
- Updated Outreach Materials and Initiatives

Climate Conditions – Pacific Ocean

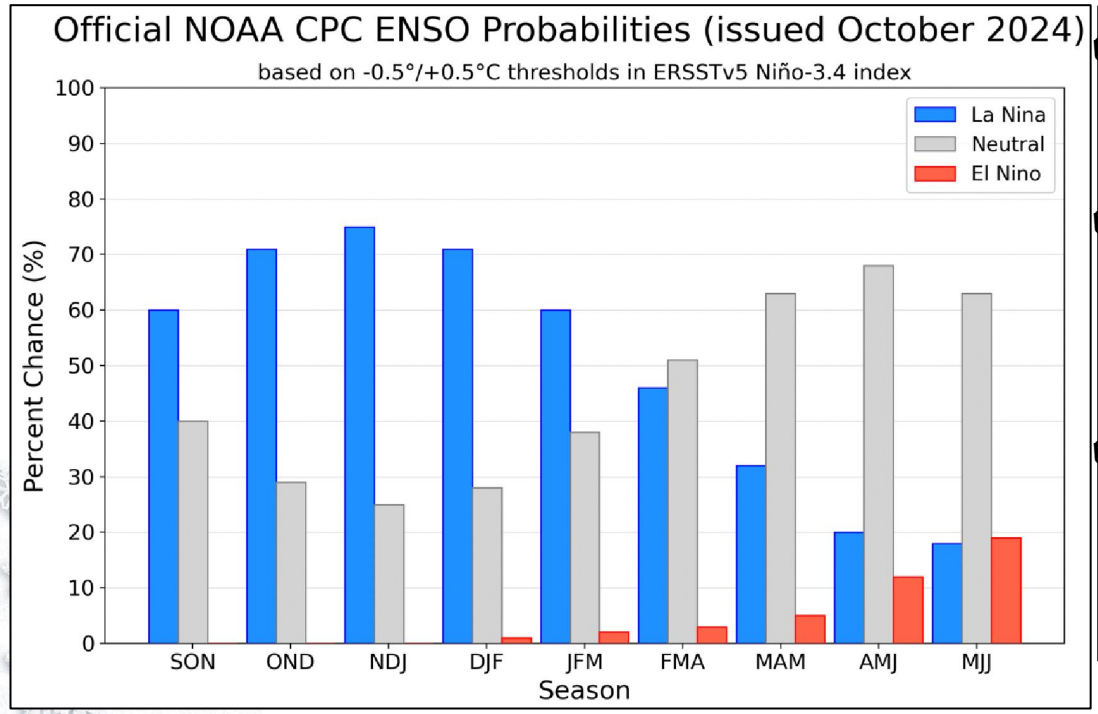




ENSO Alert System Status: **La Nina Watch**

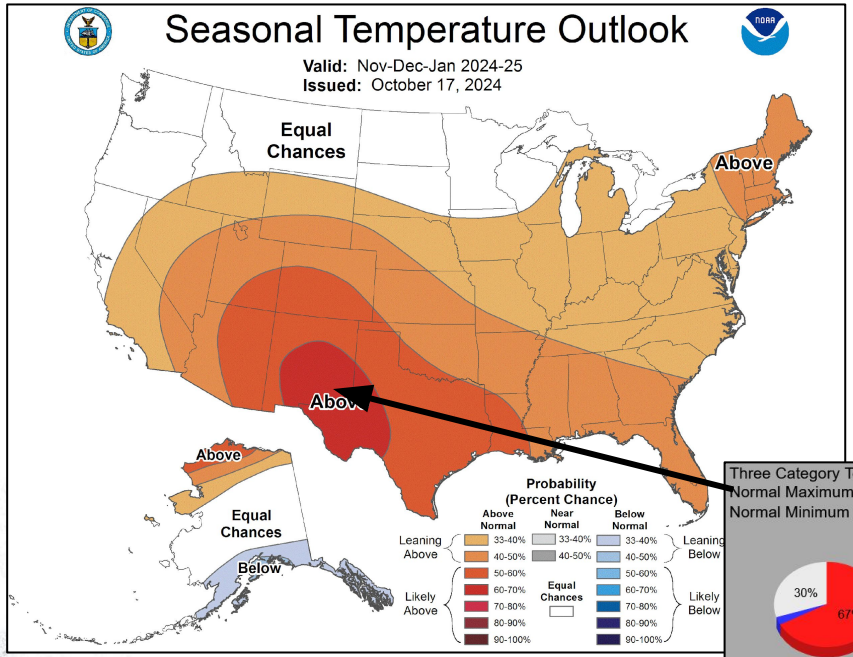
- ✔ ENSO-neutral conditions are present based on the latest ocean and atmosphere (not shown) conditions
- ✔ Equatorial Pacific sea surface temperatures (SSTs) small region of below-normal SSTs in east central Pacific (left)
- ✔ Oceanic heat content (right) indicates a reservoir of cooler than normal ocean temperatures (blue shades) below the surface across much of the Pacific ocean

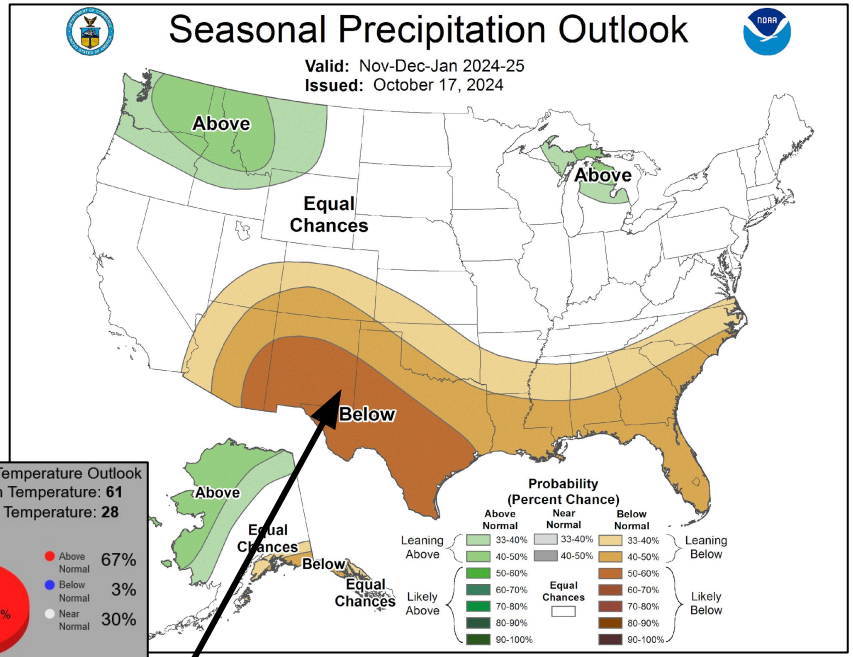
ENSO Outlook

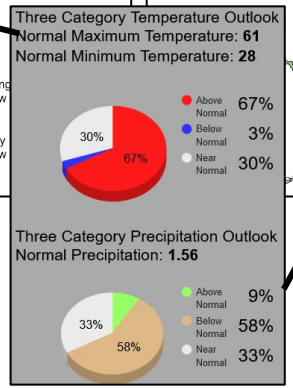


- ENSO Alert System Status:
  La Nina Watch
- La Nina is favored to continue develop (60%) during the Sep-Oct-Nov season (blue bars).
- The odds favor a weak, short duration La Nina event with ENSO neutral (gray bars) the most likely category by the Feb-Mar-Apr season.

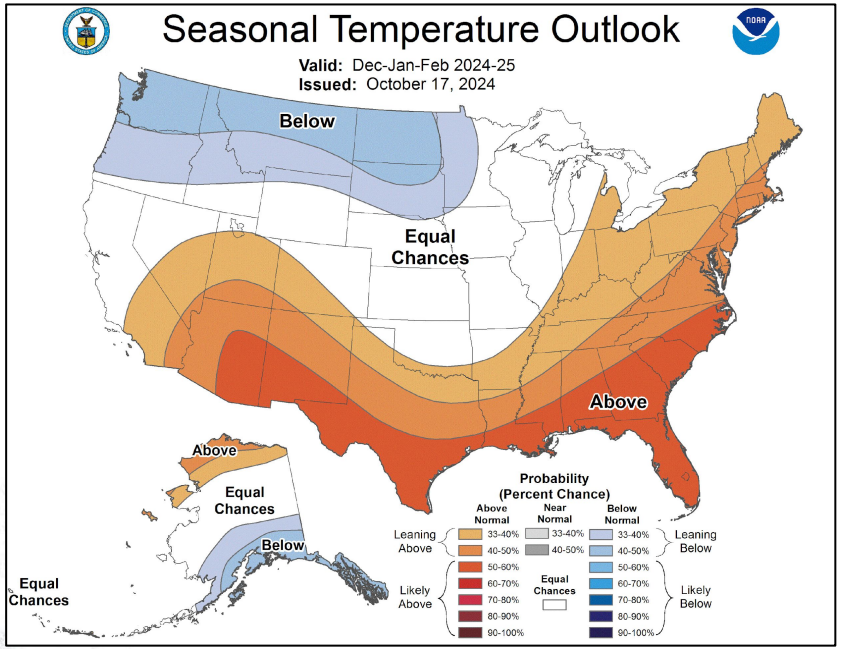
Nov-Dec-Jan T/P Outlooks

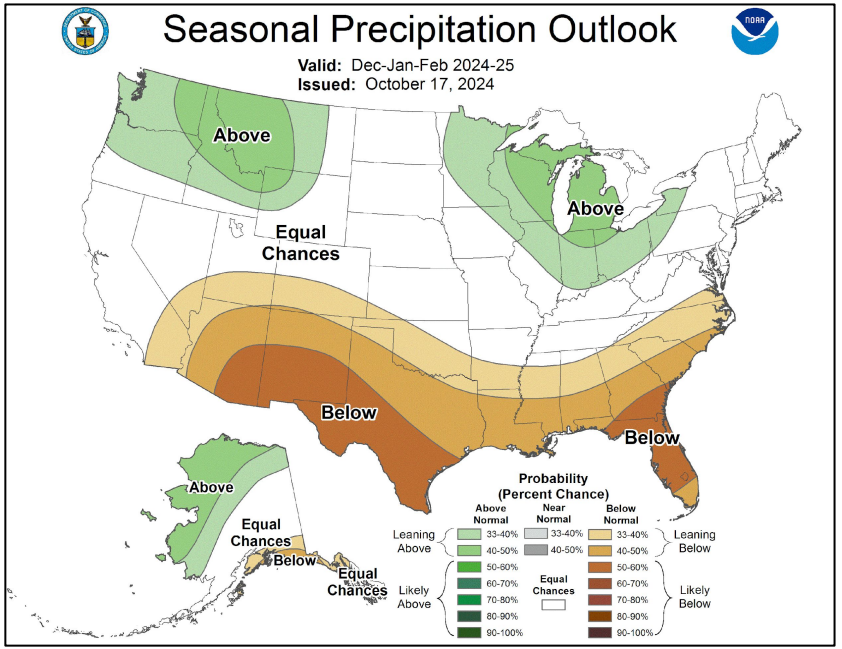






Dec-Jan-Feb T/P Outlooks





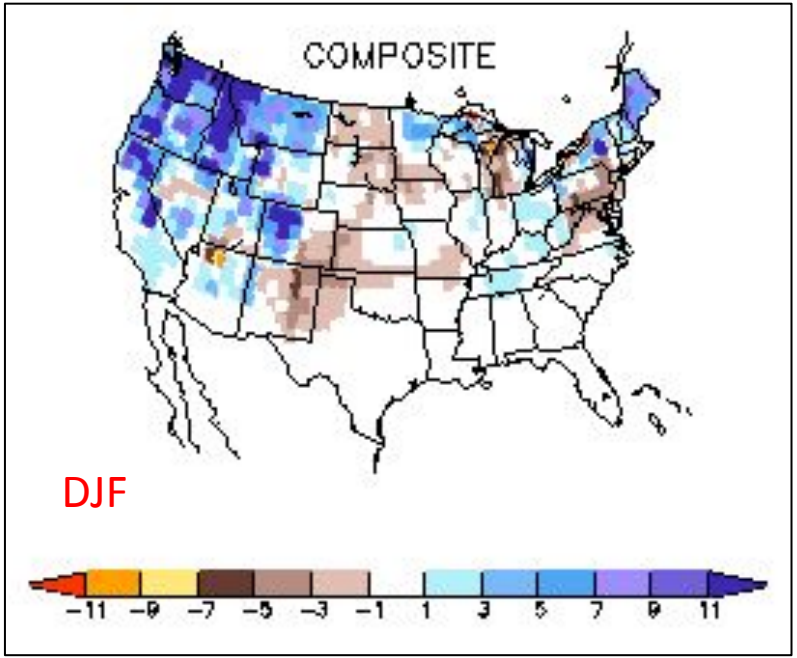
To be updated at 8:30 AM November 21, 2024

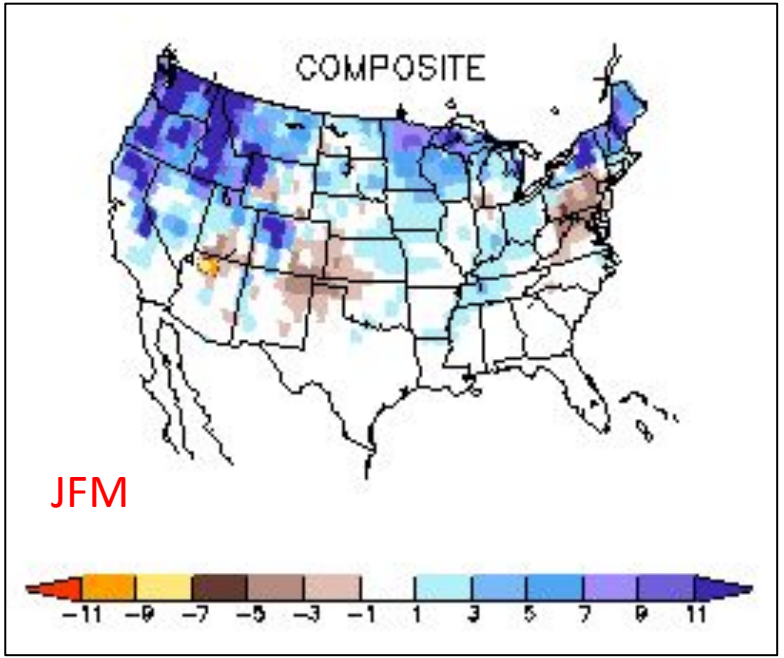
https://www.cpc.ncep.noaa.gov/products/predictions/long_range/

Factors Influencing the NOAA Winter Outlook

- ✔ Expectations of La Nina conditions during the winter months.
  - ✔ ENSO-neutral, weak La Nina and combined winter season composites
  - ✔ Statistical forecast tools linked to past, current and future values of Nino3.4 region
- ✔ Both positive and negative long-term temperature trends
- ✔ Dynamical model guidance from the NMME and C3S ensemble prediction suites (bias correction and calibrated)
- ✔ Statistical, hybrid forecast tools linked to climate predictors such as ENSO and sub-global relationships between key variables such as SLP, upper-level heights, SST and temperature
- ✔ Coastal SSTs and soil moisture conditions in some instances

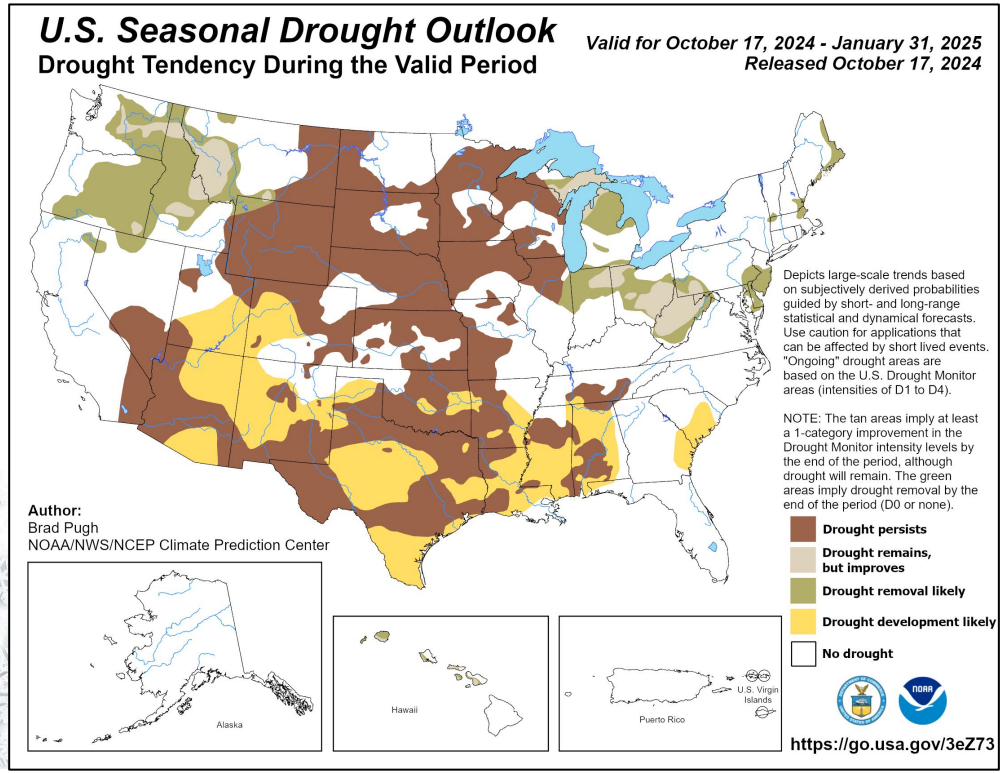
La Nina Potential Typical Impacts - Snowfall





- ✔ Dec-Jan-Feb (DJF) seasonal snowfall departures from normal for La Nina events (left)
- ✔ Jan-Feb-Mar (JFM) seasonal snowfall departures from normal for La Nina events (right)

Nov-Dec-Jan Drought Outlook



- ✔ Anticipated conditions at the end of January 2025
- ✔ Areas of improvement or removal are forecast for parts of the Pacific Northwest and northern Rockies and Ohio Valley
- ✔ Drought development is forecast for many areas along the southern tier of the U.S.

https://www.cpc.ncep.noaa.gov/products/expert_assessment/season_drought.png

To be updated at 8:30 AM ET November 21, 2024

Take Home Messages

- ✔ Most likely a weak, short duration La Nina event for the winter 2024-2025. The coverage and degree of typical La Nina impacts is highly uncertain.
- ✔ High variability and frequent subseasonal changes likely this winter as compared to more persistent and consistent changes within the winter months.
- ✔ Above-normal temperatures are favored for the southern tier of the U.S., the eastern seaboard, north Alaska with colder than normal conditions most likely from the Pacific Northwest eastward to the northern Plains and for southern Alaska.
- ✔ Drier-than-normal conditions are favored across the southern tier of the U.S. with an enhanced likelihood of drought development by the end of the winter months.

The NWS National Winter Program

- The Winter Program is responsible for **policy** related to NWS winter products and services provided by both Weather Forecast Offices (WFOs) and National Centers.

- The Winter Program works to improve winter products and services through the **evaluation of new experimental products** , **collaboration initiatives** , **working with other NWS Headquarters Portfolios** , and by **leading teams** to address current issues with NWS winter products, services, and policy.

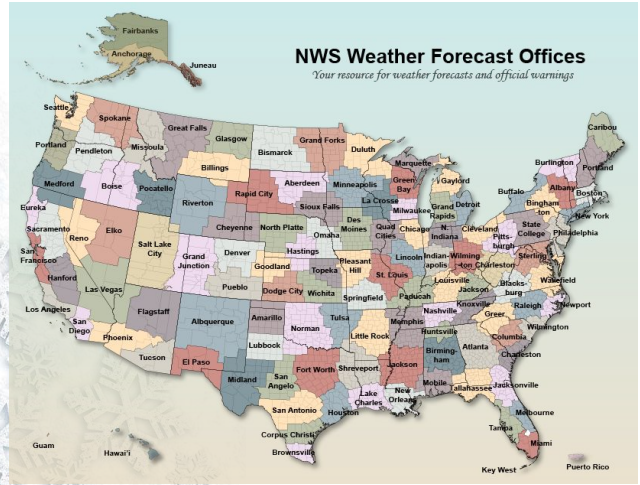
Winter Program Vision Statement

The delivery of winter forecast services that are collaborative, probabilistic, and impact-based.

How Does NWS Forecast Winter Weather?

Weather Forecast Offices (WFOs)

- There are 122 WFOs at the NWS
- Geographically distributed to provide local forecast information to the public and decision support briefings to local partners
- WFOs issue ALL winter-related Advisories, Watches, and Warnings



Weather Prediction Center (WPC)

- WPC is the primary National Center for winter weather - located in College Park, MD
- Focused on the winter weather “big picture”
- Works closely with WFOs for consistent message
- WPC specializes in longer-term (days) winter outlook and impact information

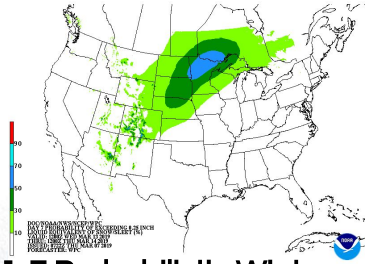
The Winter Probabilistic Data "Story"

The era of objective and probabilistic winter hazard information has arrived!

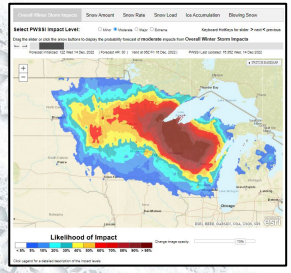
Forecast Lead Time Prior to Winter Event

7 Days — **1-3 Days** — **Hours**

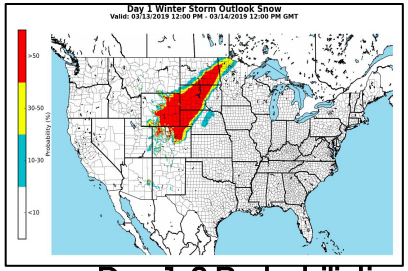
Day 4-7 Probabilistic Winter Weather Outlook &



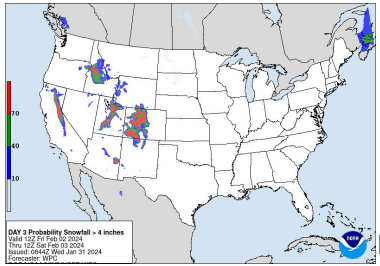
Day 1-7 Probabilistic Winter Storm Severity Index



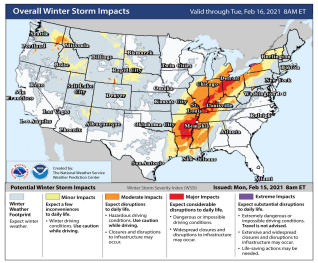
Day 1-4 Probabilistic Winter Storm Outlook



Day 1-3 Probabilistic Snowfall

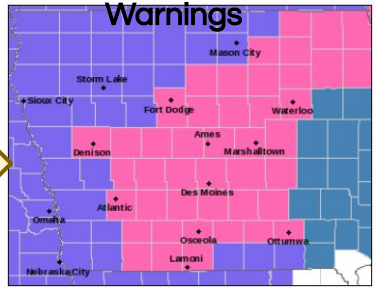


Day 1-3 Winter Storm Severity Index



Informs

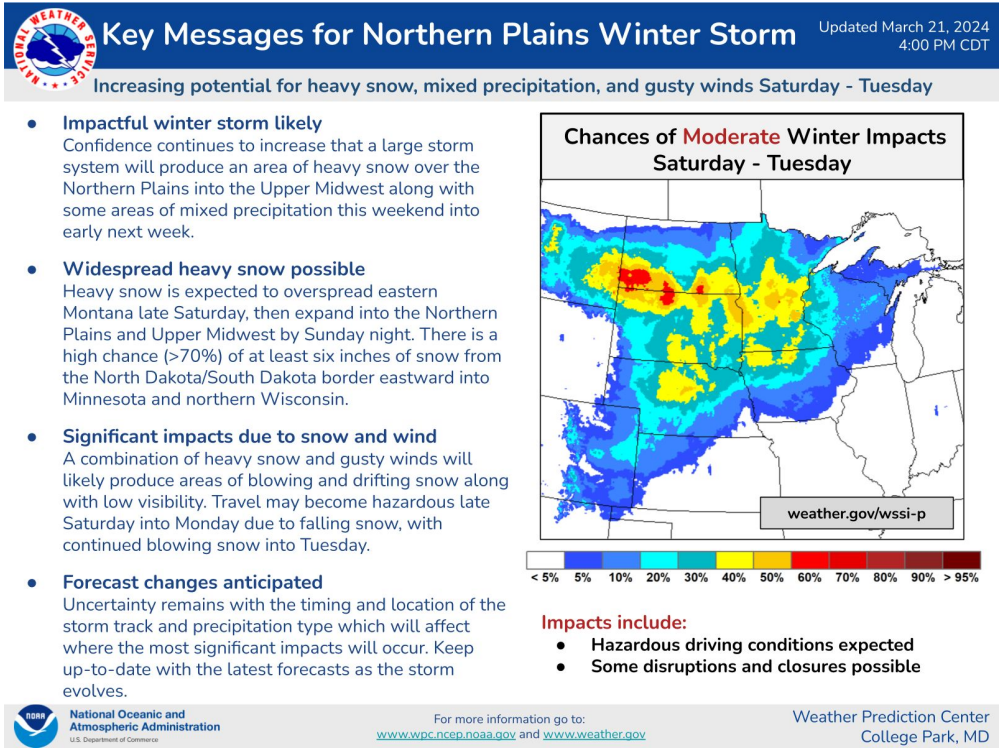
Winter Storm Watches / Winter Storm Warnings



Mesoscale Snowfall Discussion

Winter Key Messages

- **Goal:** Galvanize partners and the media around a consistent, coordinated message
- Used for high-impact storms that are expected to cause travel disruptions or pose a hazard to life and property and/or are rare events
- Collaborated among WFOs & WPC and integrated for consistent messaging
- Available on WPC website and across Social Media platforms (if active)
- **No changes this year**



Available here :

https://www.wpc.ncep.noaa.gov/key_messages/LatestKeyMessage_1.png
https://www.wpc.ncep.noaa.gov/key_messages/LatestKeyMessage_2.png

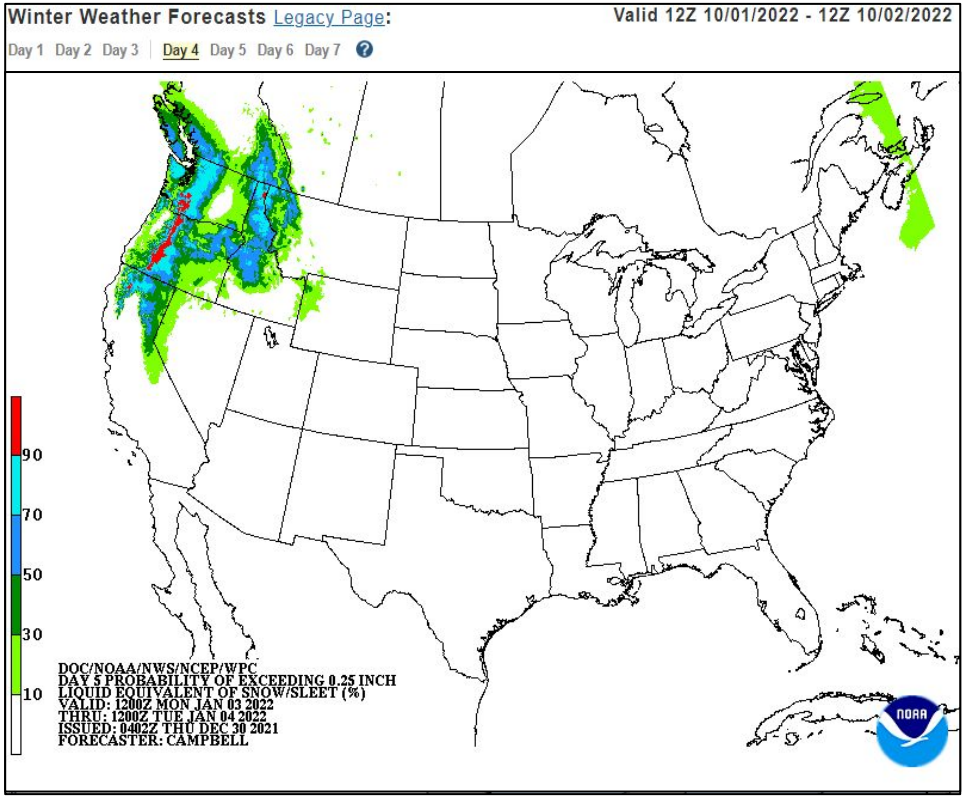
Days 4-7 Winter Weather Outlook

- **Goal:** Supports advanced planning of hazardous winter weather for both internal NWS and external partners

- Web-based, graphical, probabilistic forecast depicting the probability of winter precipitation (snow & sleet) exceeding 0.25 inches (~6 mm) water equivalent over a 24-hour period (12Z–12Z, or roughly 8 am and 8 am Eastern Daylight Time)

- Four separate graphics produced twice daily showing the forecast for Days 4, 5, 6 and 7

- **No changes this year**



Winter Weather Outlook Page:
https://www.wpc.ncep.noaa.gov/wwd/pwpf_d47/pwpf_medr.php

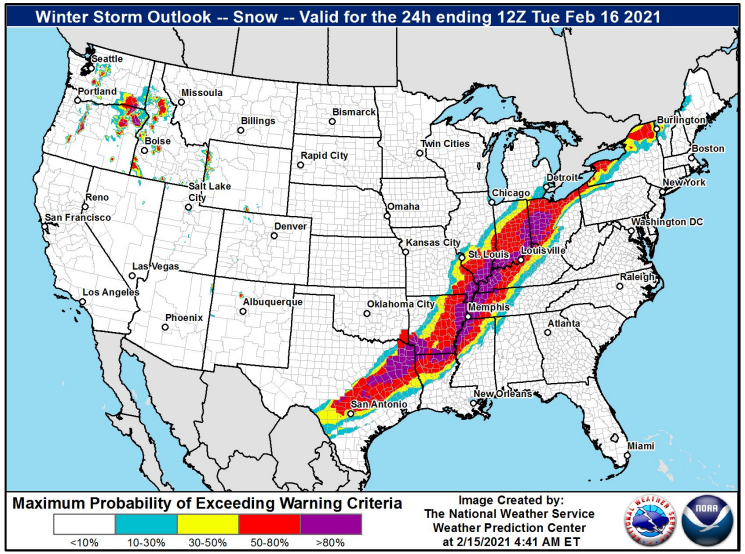
Experimental Winter Storm Outlook (WSO)

- **Goal:** Display the probability of realizing hazardous snow/ice accumulations using WFO-specific Watch/Warning criteria as a proxy threshold.

- Provides a Days 1-4 "Outlook" product in the winter program, serving to unify both external messaging and internal collaboration for consistent and collaborative Winter Storm Watch issuance.

- The WSO uses the event-based heavy snow watch/warning criteria as part of the evaluation (see: weather.gov/snow-criteria).

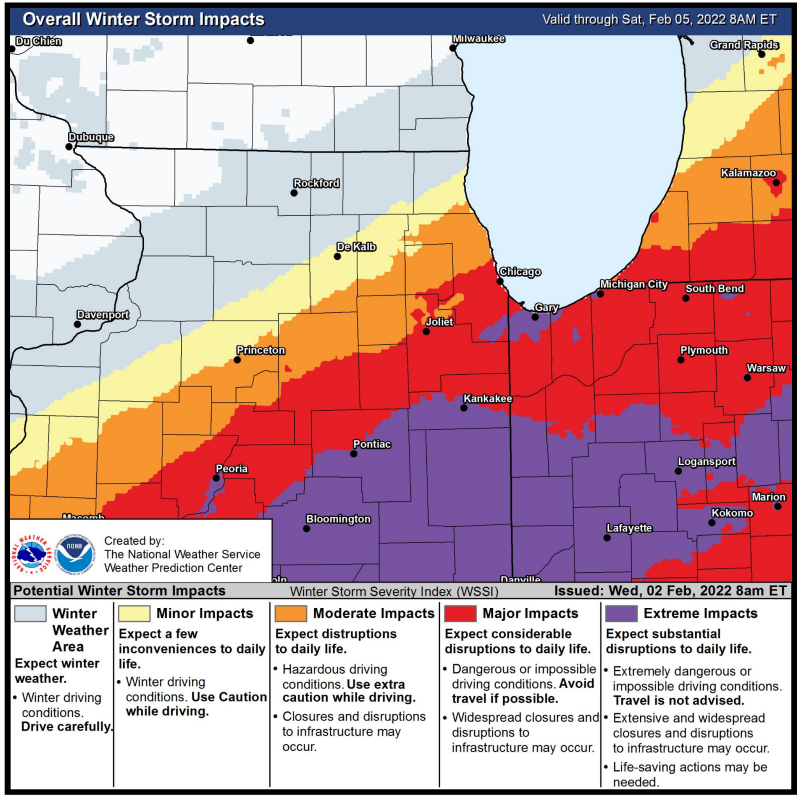
- **2024 Update:** Social science focus groups have begun involving partners to determine future changes to this product, possibly incorporating WSSI-P output to create a true Days 1-7 Outlook.



Available here :
https://www.wpc.ncep.noaa.gov/wwd/wso

Winter Storm Severity Index (WSSI)

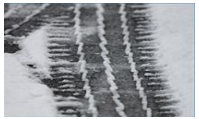
- **Goal**: Forecast the ***severity*** of community impacts from winter storms throughout the contiguous United States, including tree damage, property damage, transportation impacts, and disruptions to daily life
- The WSSI provides output for Days 1-3 (and also in 24 hour intervals)
- The WSSI is updated every two hours and incorporates the local snowfall forecast into its output
- The summary graphic is a composite of the maximum impact from any of the six components
- **No changes this year** , the 2023 update included:
  - Introduction of an ice climatology
  - Ice accumulation improvements
  - Updated ice and wind impact methodology
  - Impact-level threshold changes
  - Introduction of a snow load climatology
  - Flash Freeze & Ground Blizzard extended to 72 hours



Available here: www.weather.gov/wssi

WSSI Components & Scale

Ground Blizzard
Indicates the potential travel-related impacts of strong winds interacting with pre-existing snow cover



Flash Freeze
Indicates the potential of flash freezing during or after precipitation events.

Blowing Snow
Indicates the potential disruption due to blowing and drifting snow

Ice Accumulation
Indicates potential infrastructure impacts due to combined effects and severity of ice and wind

Snow Load
Indicates potential infrastructure impacts due to the weight of snow

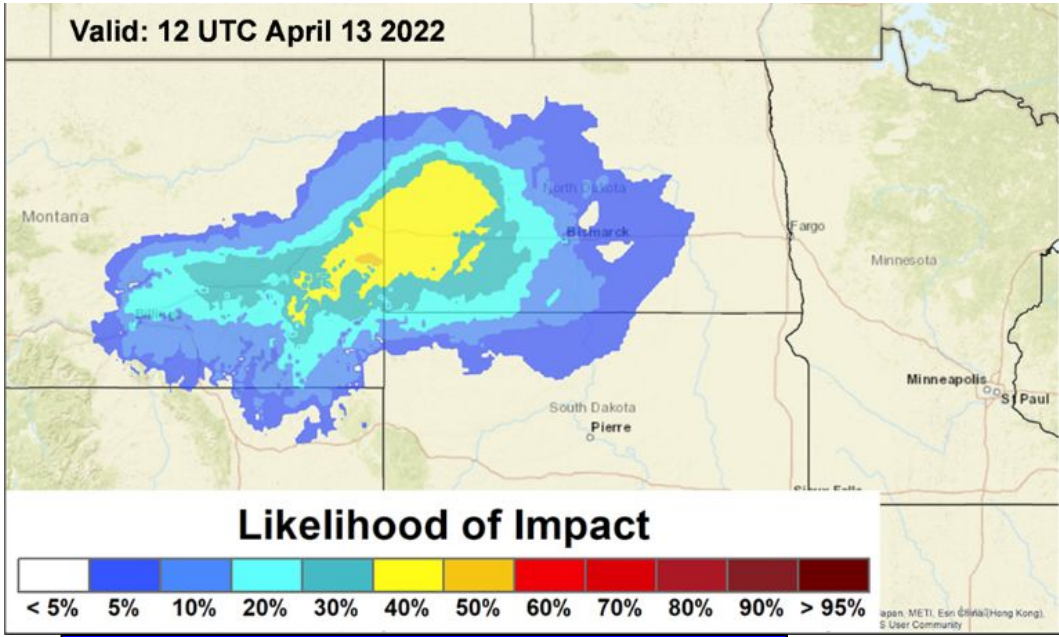
Snow Amount
Indicates potential impacts due to the total amount of snow or snow accumulation rate

Potential Winter Storm Impacts	
	Winter Weather Area **Expect Winter Weather.** • Winter driving conditions. **Drive carefully.**
	Minor Impacts **Expect a few inconveniences to daily life.** • Winter driving conditions. **Use caution while driving.**
	Moderate Impacts **Expect disruptions to daily life.** • Hazardous driving conditions. **Use extra caution while driving.** • Closures and disruptions to infrastructure may occur.
	Major Impacts **Expect considerable disruptions to daily life.** • Dangerous or impossible driving conditions. **Avoid travel if possible.** • Widespread closures and disruptions to infrastructure may occur.
	Extreme Impacts **Expect substantial disruptions to daily life.** • Extremely dangerous or impossible driving conditions. **Travel is not advised.** • Extensive and widespread closures and disruptions to infrastructure may occur. • Life-saving actions may be needed.

Impact definitions

Probabilistic Winter Storm Severity Index (WSSI-P)

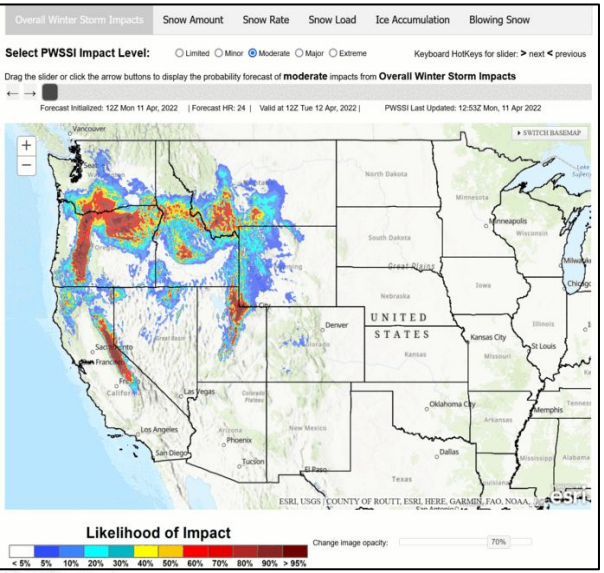
- **Goal:** Forecast the ***probability*** of reaching community impact from winter storms throughout the continental United States using the WSSI impact thresholds
- Produces five different levels of impact probabilities for Snow Amount, Snow Rate, Snow Load (heaviness), Ice Accumulation, and Blowing Snow
- The WSSI-P provides output for Days 1-7 in six hour intervals and is updated four times a day.
- **No changes this year, became Operational in December 2023**



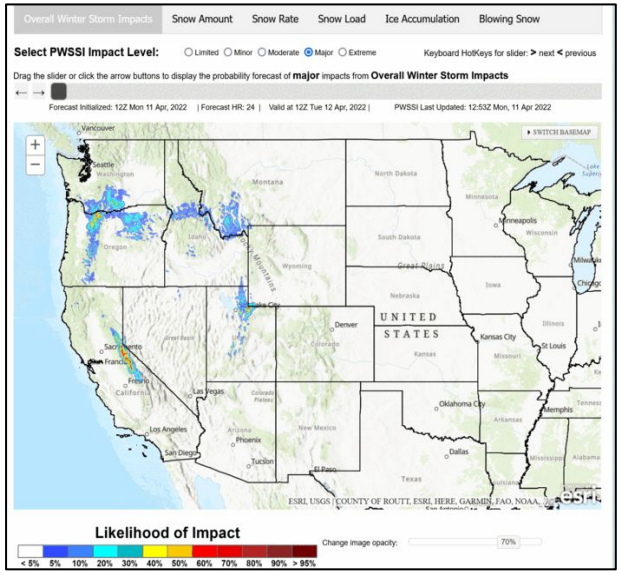
High Probabilities of Minor provide an envelope of expected impacts

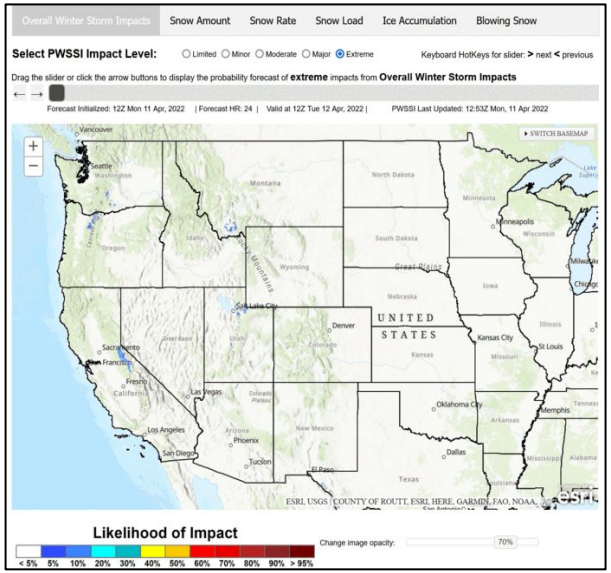
Available here :
https://www.weather.gov/wssi-p

Example of WSSI-P Impact Probabilities for a Winter Storm



High Probabilities of Moderate show where there is likely to be disruptions to daily life





High Probabilities of Major or Extreme depict where the most severe impacts are likeliest to occur

IDSS = Putting It All Together

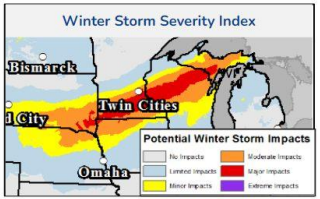
Conveying Potential Impacts for a Heavy Snow Event: December 9-11, 2021

Key Messages for Dec 9-11 Winter Storm

Updated December 10, 2021 2:30 PM CST

Significant snowfall and impacts from the Rockies through the Upper Midwest and Great Lakes

- **Significant winter storm will continue**
  A strong low pressure system will track across the Central Plains today to the Upper Midwest and Great Lakes tonight into Saturday.
- **Heavy snow will expand into the Upper Midwest and Great Lakes through Saturday morning**
  Total accumulations of 8-14 inches of snow with locally higher amounts are expected from southeastern SD through the Upper Midwest and into the U.P. of Michigan.
- **Widespread impacts to travel and infrastructure**
  All forms of travel will become dangerous as heavy snow rates reaching 2"/hr and strong winds create near whiteout conditions at times. The heavy and wet snow may produce scattered power outages.



Additional Snowfall Forecast

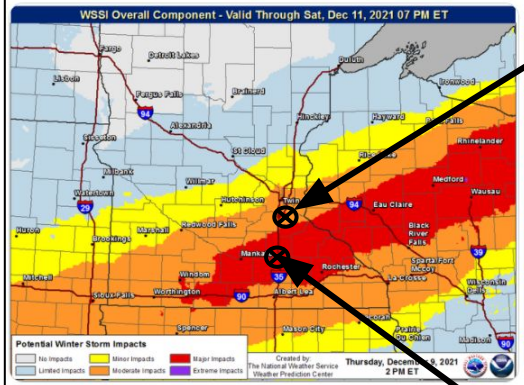
National Oceanic and Atmospheric Administration

For more information go to: www.wpc.ncep.noaa.gov and www.weather.gov

Weather Prediction Center
College Park, MD

NWS Twin Cities @NWSTwinCities

Here's the latest Winter Storm Severity Index. Major impacts from falling snow are expected across southern MN into central WI late Fri morning into Fri night. If you have flexible travel plans, it would be best to move them to early Fri or wait until Sat. #mnwx #wiwx



2:04 PM · Dec 9, 2021 · TweetDeck

MSP Airport @mspairport

With 11"+ of snow recorded at MSP, there have been more than 60 cancellations so far this morning.

Check here for the latest flight information before you head to #mspairport.

ow.ly/n5ZF50H8omo

9:30 AM · Dec 11, 2021

FOX 9 Live COVID-19 News Weather Sports Contests

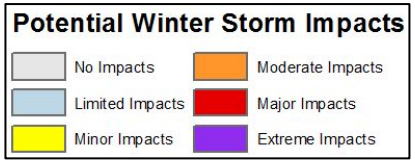
300+ crashes, including semi pileup on I-35 in Faribault

The Minnesota State Patrol reported 321 crashes from 6 a.m. Friday to noon Saturday, 311 vehicles off the road and 21 jackknifed semis. Twenty-six of those crashes had injuries and one was fatal.

Interstate 35 near Faribault was blocked by crash involving multiple semis during the snowfall on Friday, Dec. 10, 2021. **(MnDOT)**

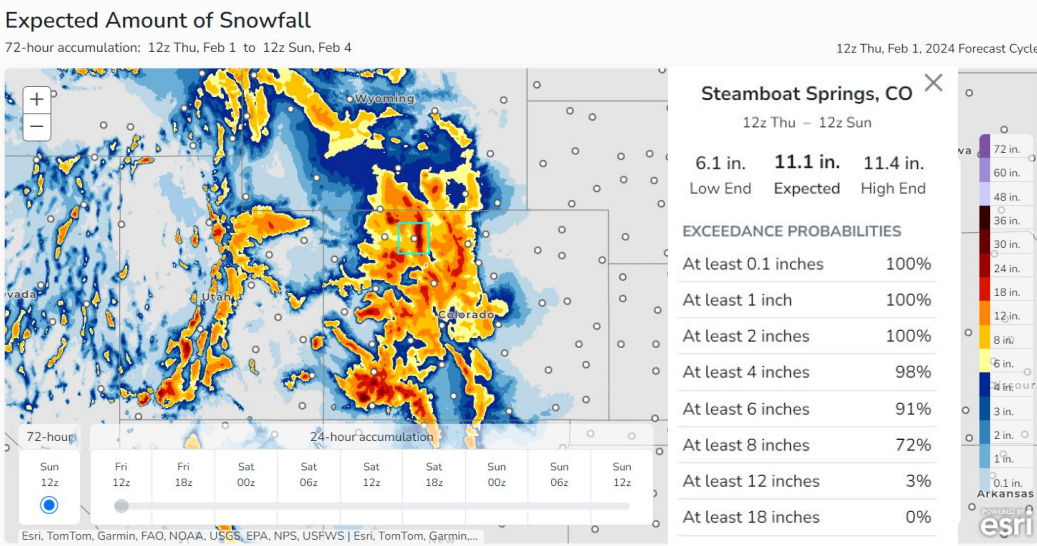
WSSI:

NWS forecasts + non-meteorological datasets (tree canopy, population density, etc) to convey potential IMPACTS such as tree damage, property damage, transportation impacts, and other disruptions to daily life



The Probabilistic Precipitation Portal

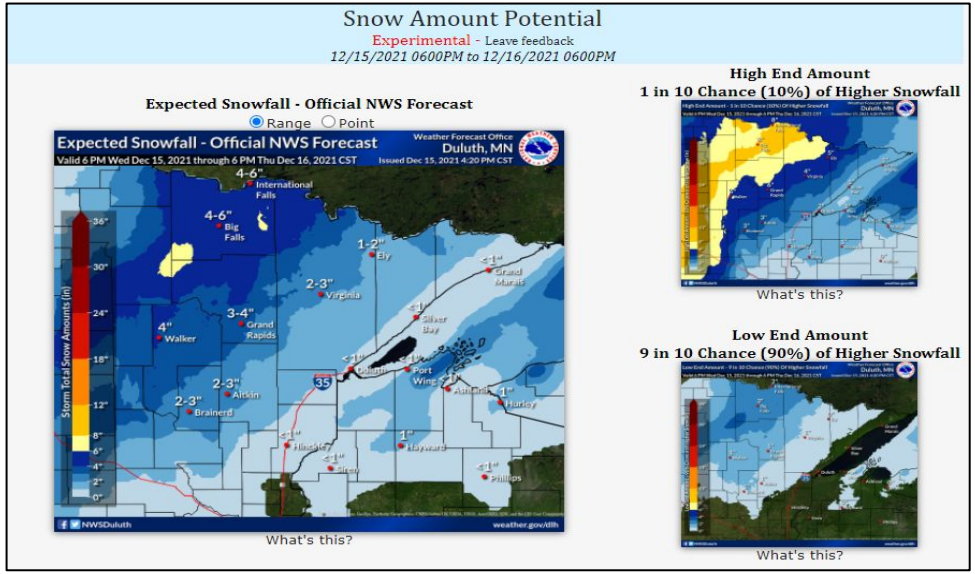
- **Goal:** A website to view probabilistic snow and liquid precipitation forecasts for the entire CONUS for the next 72 hours.
- Probabilities generated:
  - Expected Amount - the official forecast amount of snow
  - Low End Amount - 90% chance of receiving xx inches of snow
  - High End Amount - 10% chance of receiving xx inches snow
  - Exceedance Probabilities - chances of receiving at least 0.1, 1, 2, 4, 6, 8, 12, and 18 inches of snow
- **2024 Update:** The PPP is expected to reach Experimental status and become public-facing in November 2024



The PPP uses a 61-member ensemble to create its probabilities

Experimental Local Snowfall Probabilities

- **Goal:** Provide customers and partners a range of snowfall amounts to better communicate forecast uncertainty during winter weather events on a local level.
- This provides the same information as the PPP, but at a more localized level for WFOs and local partners
- Each WFO displays these products on their local winter web pages
- **2024 Update:** Will be available for all CONUS locations for the first time



Local office Experimental pages:
https://www.weather.gov/prob-snow/

Experimental Snow Character Maps

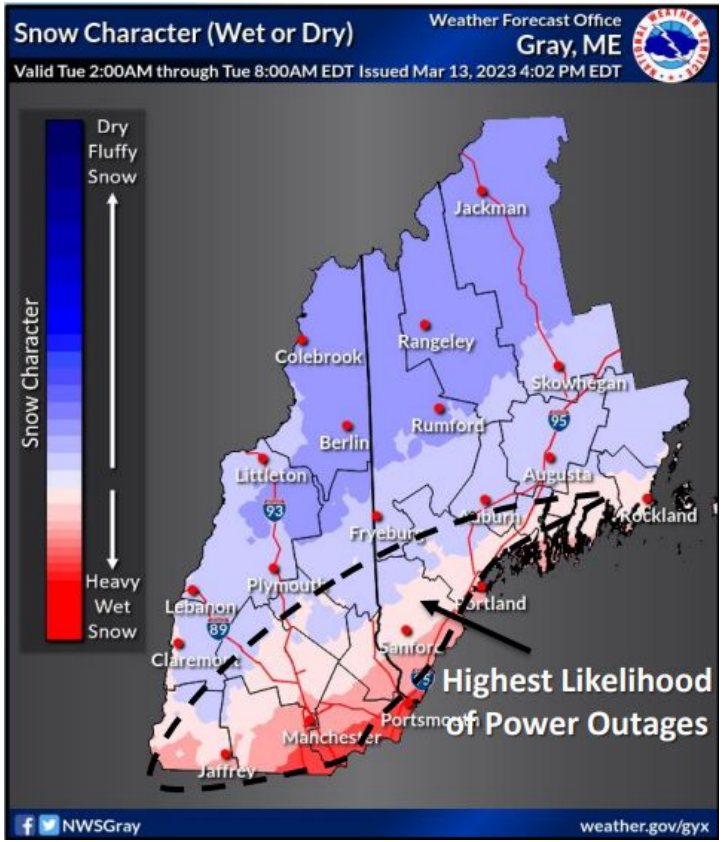
- **Goal:** Display the consistency of snow (dry/fluffy or heavy/wet) to better inform partners and the public regarding potential hazardous impacts

- Maine WFOs have been using these graphics for years, and the Winter Program is advocating for more WFOs to begin incorporating them on their local website or use them in partner briefings.

- These graphics are able to be made for the Lower 48 states and also Alaska. The underlying data can be accessed through the National Digital Forecast Database (NDFD) under "Snow-to-Liquid Ratio."

- **2024 Update:** More WFOs continue to bring these maps online

Available here :
https://digital.weather.gov

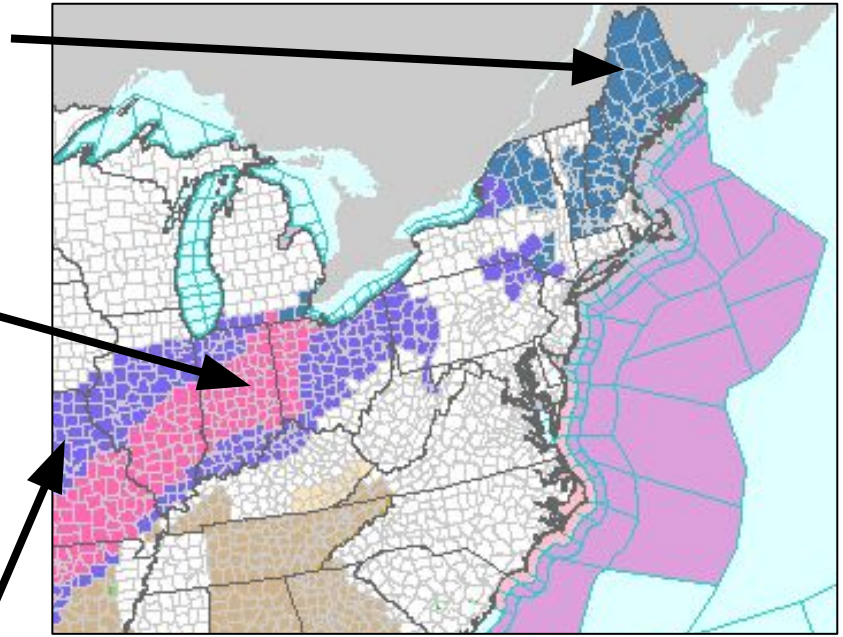


Winter Hazard Products

- **Winter Storm Watch:** Conditions are favorable (≥50% confidence) for a winter weather event to meet or exceed locally defined criteria or cause severe impacts.

- **Winter Storm Warning:** A winter weather event is expected (≥80% confidence) to meet or exceed locally defined criteria or cause severe impacts.

- **Winter Weather Advisory:** A winter weather event is expected to cause impacts, but will not exceed warning criteria or reach high enough severity levels to warrant a warning.



Example Hazard Map

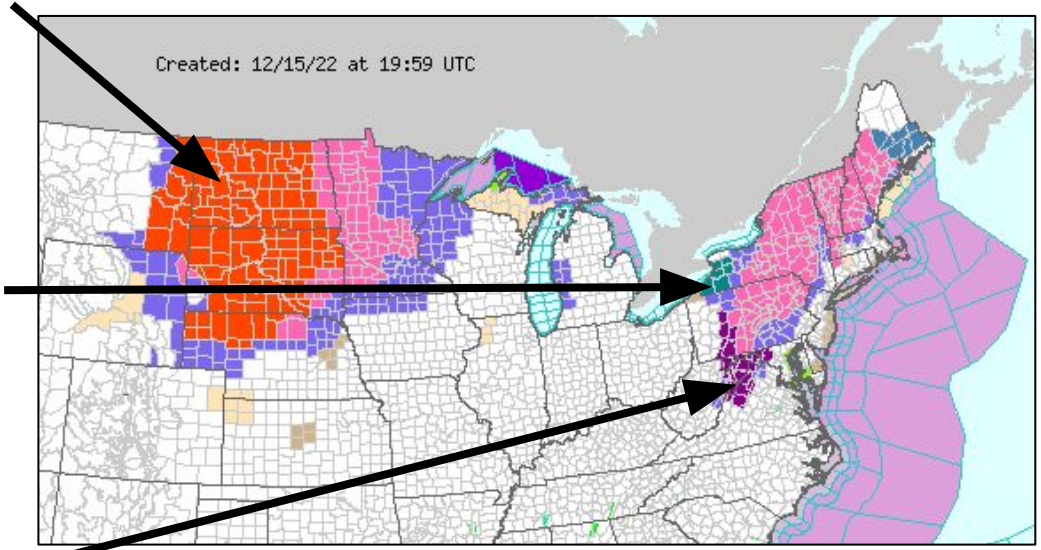
Snow Criteria Map: weather.gov/snow-criteria

Winter Hazard Products

- **Blizzard Warning:** Sustained or frequent wind gusts ≥35 mph and visibility ≤¼ mile in snow or blowing snow is expected (≥80% confidence) to last for ≥3 hours.

- **Lake Effect Snow Warning:** Lake Effect Snow is expected (≥80% confidence) to meet or exceed locally defined warning criteria or cause severe impacts. *Used in the Northeast US only.*

- **Ice Storm Warning:** Ice accumulation is expected (≥80% confidence) to meet or exceed locally defined ice amount criteria or cause severe impacts.



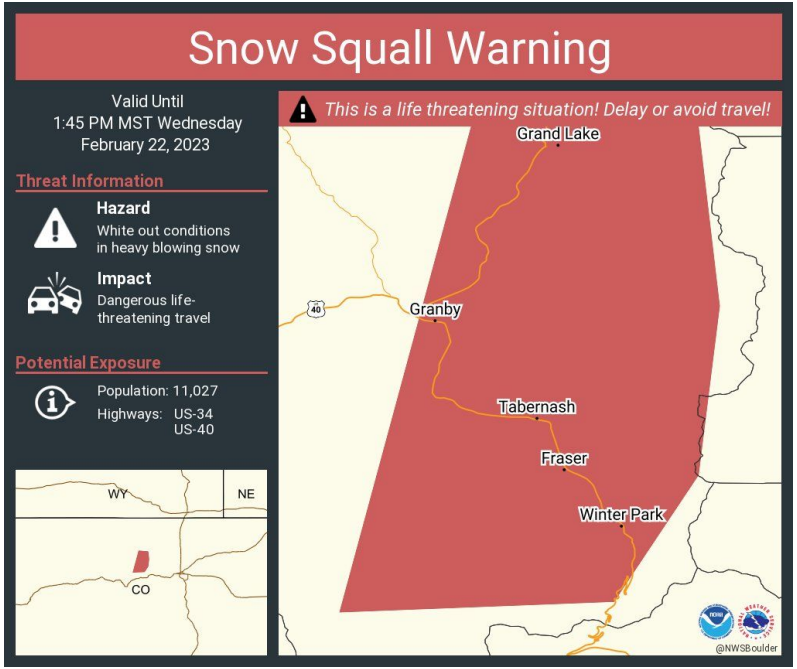
Example Hazard Map

Snow Squall Warnings and IBW Tags

- Snow Squall Warnings (SQW) are issued for intense and short duration periods of heavy snowfall, gusty winds, and reduced visibilities, possibly to whiteout.

- Improvements with its messaging to decision makers and to the public continues

- Impact Based Warning (IBW) tags have been implemented to better convey a snow squall's impact:
  - No tag (General SQW) indicates snow squall conditions are expected, however mitigating actions & societal factors will reduce threat to safe travel (i.e. overnight)
  - A "SIGNIFICANT" tag indicates an intense snow squall with a substantial threat to safe travel is expected
    - This will trigger a Wireless Emergency Alert (WEA)

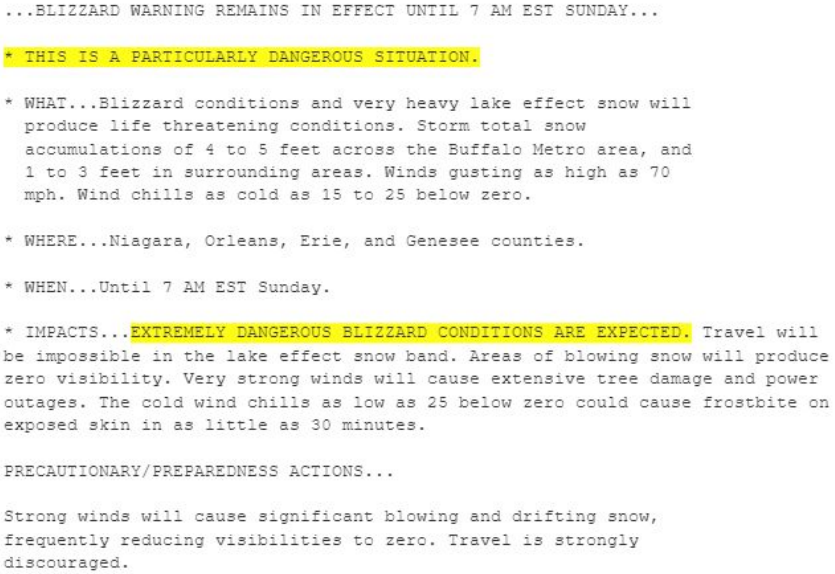


What This Means

WEA will ONLY activate for high-end events with the "SIGNIFICANT" tag

Exploring Enhanced-Language for High-End Winter Storms

- NWS is exploring enhanced-language for high-end winter storms
- Public comment period ran from 6/10/24 to 9/10/24 via Public Notification Statement 24-43 to allow forecasters to add "Particularly Dangerous Situation" language to certain Blizzard and Ice Storm Warnings if conditions are unusually extreme
- Need to balance potential overuse with the need to message life-threatening conditions - could even possibly trigger a WEA



...BLIZZARD WARNING REMAINS IN EFFECT UNTIL 7 AM EST SUNDAY...

* THIS IS A PARTICULARLY DANGEROUS SITUATION.

* WHAT...Blizzard conditions and very heavy lake effect snow will produce life threatening conditions. Storm total snow accumulations of 4 to 5 feet across the Buffalo Metro area, and 1 to 3 feet in surrounding areas. Winds gusting as high as 70 mph. Wind chills as cold as 15 to 25 below zero.

* WHERE...Niagara, Orleans, Erie, and Genesee counties.

* WHEN...Until 7 AM EST Sunday.

* IMPACTS...EXTREMELY DANGEROUS BLIZZARD CONDITIONS ARE EXPECTED. Travel will be impossible in the lake effect snow band. Areas of blowing snow will produce zero visibility. Very strong winds will cause extensive tree damage and power outages. The cold wind chills as low as 25 below zero could cause frostbite on exposed skin in as little as 30 minutes.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

Strong winds will cause significant blowing and drifting snow, frequently reducing visibilities to zero. Travel is strongly discouraged.

Enhanced-Language for High-End Winter Storms Poll Questions

Poll Question #1

Current Blizzard Warning

...BLIZZARD WARNING REMAINS IN EFFECT UNTIL 7 AM EST SUNDAY...

* WHAT...Blizzard conditions and very heavy lake effect snow will produce life threatening conditions. Storm total snow accumulations of 4 to 5 feet across the Buffalo Metro area, and 1 to 3 feet in surrounding areas. Winds gusting as high as 70 mph. Wind chills as cold as 15 to 25 below zero.

* WHERE...Niagara, Orleans, Erie, and Genesee counties.

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PRECAUTIONARY/PREPAREDNESS ACTIONS...

Strong winds will cause significant blowing and drifting snow, frequently reducing visibilities to zero. Travel is strongly discouraged.

Proposed Option for Blizzard Warning

...BLIZZARD WARNING REMAINS IN EFFECT UNTIL 7 AM EST SUNDAY...

* THIS IS A PARTICULARLY DANGEROUS SITUATION.

* WHAT...Blizzard conditions and very heavy lake effect snow will produce life threatening conditions. Storm total snow accumulations of 4 to 5 feet across the Buffalo Metro area, and 1 to 3 feet in surrounding areas. Winds gusting as high as 70 mph. Wind chills as cold as 15 to 25 below zero.

* WHERE...Niagara, Orleans, Erie, and Genesee counties.

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PRECAUTIONARY/PREPAREDNESS ACTIONS...

Strong winds will cause significant blowing and drifting snow, frequently reducing visibilities to zero. Travel is strongly discouraged.

1) Does the optional wording in the Blizzard Warning provide better information to help you make more informed decisions?

A) Yes **B) No** **C) Unsure**

Poll Question #2

Current Ice Storm Warning

...ICE STORM WARNING REMAINS IN EFFECT UNTIL 6 PM CST TUESDAY...

* WHAT...Significant icing expected. Total ice accumulations up to one half of an inch, with some areas receiving up to three quarters of an inch. Winds gusting as high as 45 mph.

* WHERE...Barnes, Cass, Ransom, Sargent and Richland Counties.

* WHEN...Until 6 PM CST Tuesday.

* IMPACTS...Power outages and tree damage are likely due to the ice. Travel could be nearly impossible. This will be a locally damaging icing event.

* ADDITIONAL DETAILS...Highest ice accumulations are expected to the west of Fargo and Wahpeton.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

Travel is strongly discouraged. If you must travel, keep an extra flashlight, food and water in your vehicle in case of an emergency. Prepare for possible power outages.

The latest road conditions for North Dakota can be found at travel.dot.nd.gov and for Minnesota at 511mn.org, or by calling 5 1 1 in either state.

Proposed Option for Ice Storm Warning

...ICE STORM WARNING REMAINS IN EFFECT UNTIL 6 PM CST TUESDAY...

* THIS IS A PARTICULARLY DANGEROUS SITUATION.

* WHAT...Significant icing expected. Total ice accumulations up to one half of an inch, with some areas receiving up to three quarters of an inch. Winds gusting as high as 45 mph.

* WHERE...Barnes, Cass, Ransom, Sargent and Richland Counties.

* WHEN...Until 6 PM CST Tuesday.

* IMPACTS...EXTREMELY DANGEROUS ICING CONDITIONS ARE EXPECTED. Power outages and tree damage are likely due to the ice. Travel could be nearly impossible. This will be a locally damaging icing event.

* ADDITIONAL DETAILS...Highest ice accumulations are expected to the west of Fargo and Wahpeton.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

Travel is strongly discouraged. If you must travel, keep an extra flashlight, food and water in your vehicle in case of an emergency. Prepare for possible power outages.

The latest road conditions for North Dakota can be found at travel.dot.nd.gov and for Minnesota at 511mn.org, or by calling 5 1 1 in either state.

1) Does the optional wording in the Ice Storm Warning provide better information to help you make more informed decisions?

A) Yes **B) No** **C) Unsure**

Poll Question #3

3) Should the NWS implement the wording for Blizzard and Ice Storm Warnings when conditions are unusually extreme?

A) Yes, but only for Blizzard Warnings
B) Yes, but only for Ice Storm Warnings
C) Yes, for both Blizzard and Ice Storm Warnings
D) No, the current Blizzard and Ice Storm Warning verbiage is sufficient

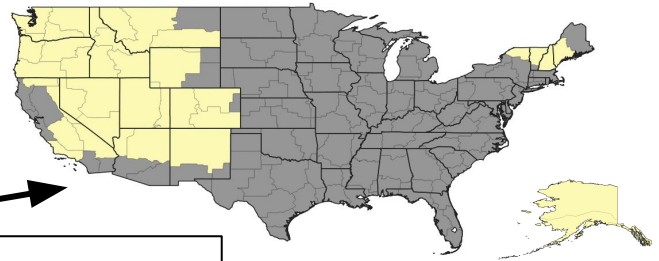
Avalanche Weather Initiative

Avalanche Weather Guidance

- Provides partners & public with forecast weather parameters critical to prediction of avalanche conditions, risk, mitigation, & recovery.
- Forecast Elements may include: temperature, weather, probability of precipitation, snowfall, liquid or snow-water equivalent, ice accumulation, snow level, winds, & cloud cover.
- Optional:
  - Forecast Discussion
  - Long Term Extension to Day 7
  - Probabilistic Snowfall Forecasts

...Mount St. Helens...

Date	Friday 09/23								Saturday 09/24			
Time (LT)	06	09	12	15	18	21	00	03	06	09	12	15
	6a	9a	12	3p	6p	9p	12	3a	6a	9a	12	3p
Cloud Cover	SC	FW	SC	SC	SC	SC	SC	SC	FW	SC	SC	SC
Cloud Cover (%)	40	15	30	30	40	40	35	30	25	25	30	30
Temperature	40	44	49	51	49	45	45	44	44	49	55	57
Max/Min Temp					51				44			
Wind Dir	W	NW	W	W	NW	W	NW	NW	NW	NW	S	SW
Wind (mph)	8	4	4	6	5	5	8	8	5	2	3	4
Wind Gust (mph)	20			16			19	17				
Precip Prob (%)	10	5	10	10	10	10	10	10	10	5	5	0
Precip Type												
12 Hour QPF					0.00				0.00			
12 Hour Snow					0.0				0.0			
Low End Snow					0.0				0.0			
High End Snow					0.0				0.0			
12 Hour Ice					0.00				0.00			
Snow Level (kft)	8.5	8.5	9.5	10.0	10.0	10.0	10.0	10.0	9.6	10.5	11.0	11.0



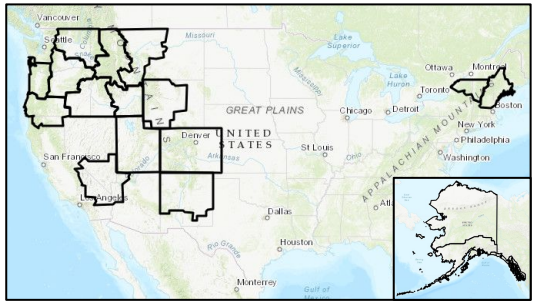
Offices that produce the AVG in Yellow. If you are an avalanche partner, **work with your WFO** for more information or to set up forecast areas.

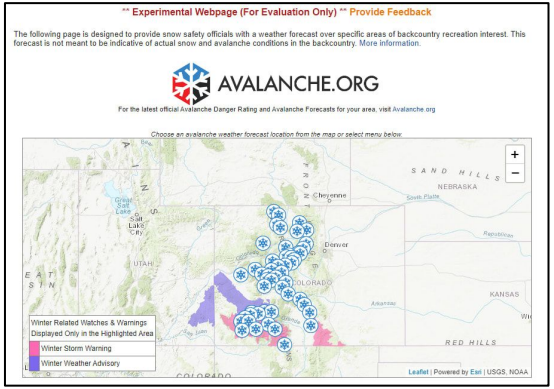
Avalanche Weather Initiative

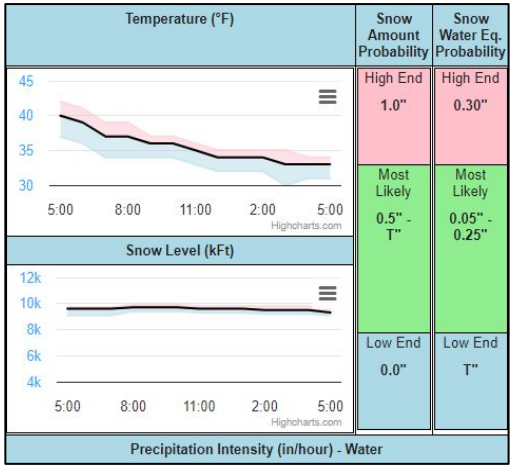
Experimental Avalanche Weather Web Pages

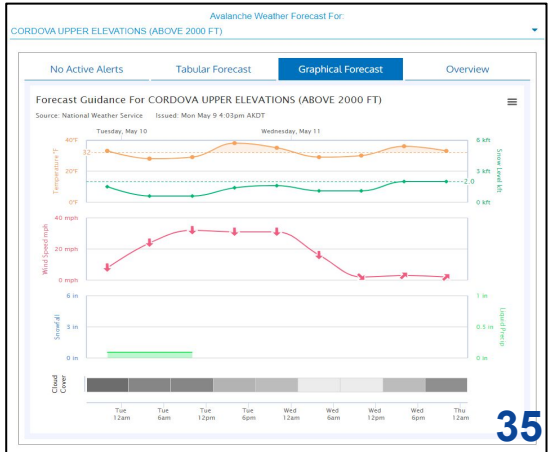
- Critical sources of information for partners & public to easily obtain avalanche weather products & information
- Includes: NWS weather alerts, avalanche center avalanche alerts, clickable points or polygons, relevant weather discussion, precipitation summary tables, a tabular & graphical forecast, & a local content section
- **2024 Update: Optional Probabilistic Display**

www.weather.gov/wrh/AvalancheWeather







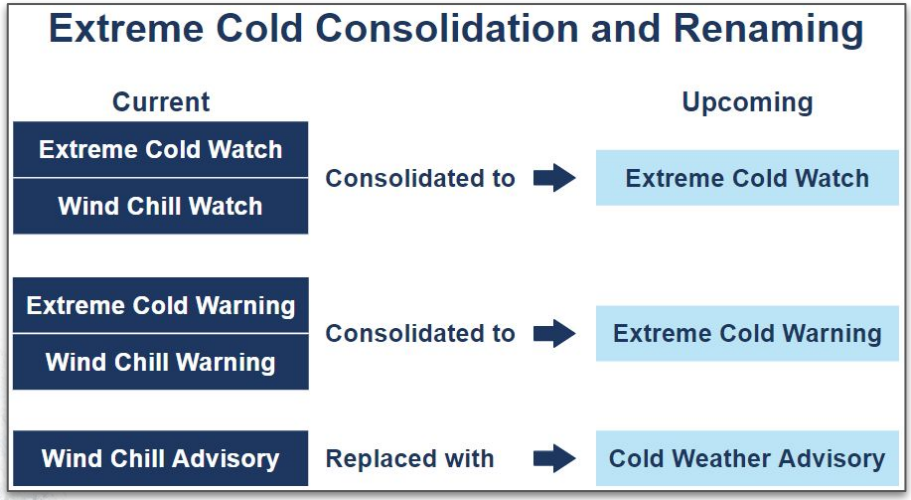


Feedback:

https://www.surveymonkey.com/r/ExpStandardizedWFOAvalancheWeatherWebpage_2024-2025

Wind Chill → Extreme Cold

As of October 1, 2024, the NWS simplified its suite of cold weather products to improve messaging of these hazards and provide better decision support services

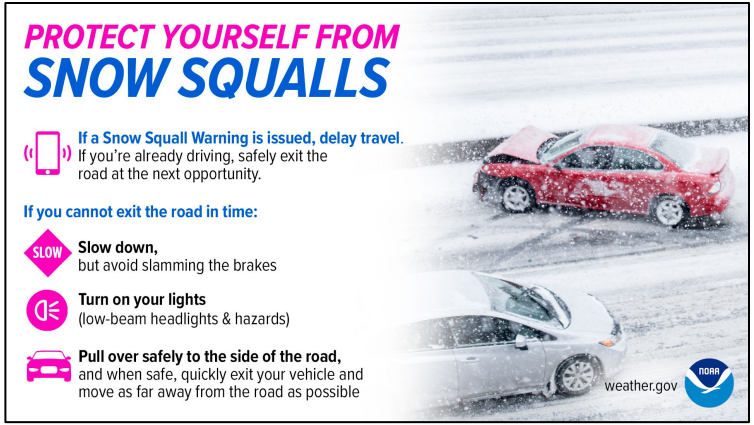


Why Do This?

- Emphasizes that **cold is dangerous** , regardless of wind
- **Simplifies messaging** by using a single product type
- Develops **new, consistent guidance** that is based on climatology and adjusted for impacts

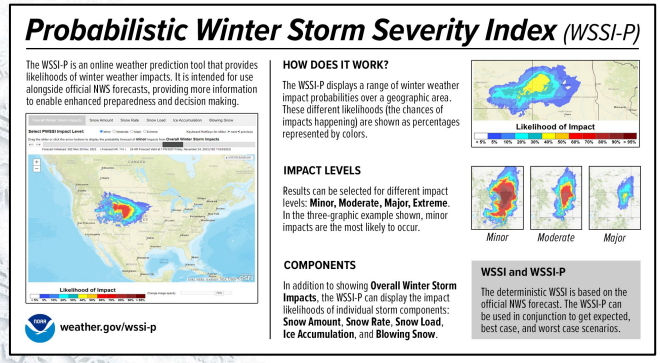
NWS Winter Safety Content

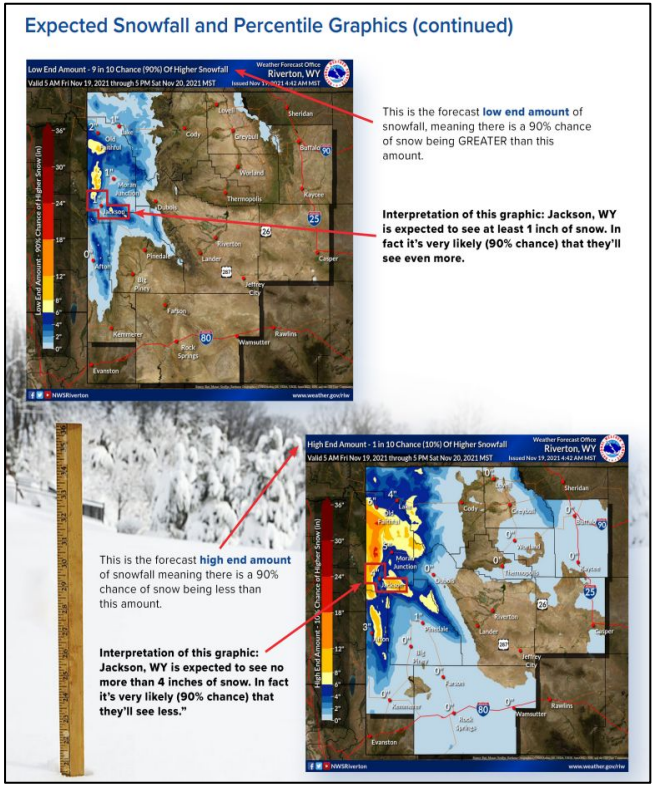
- NWS Winter Seasonal Safety Campaign launches on December 1 (first day of meteorological winter)
  - https://www.weather.gov/wrn/winter_safety
  - Contains content on winter hazards, including infographics, social media plans, presentations and videos
  - Encourage partners to use and share this information
- NOAA: The Great Outdoors: Feature on weather safety while recreating outdoors
  - https://www.noaa.gov/explainers/great-outdoors-weather-safety



NWS Educational/Outreach Materials

- Educational & outreach materials on winter products
- Probabilistic Snowfall Resources: https://www.weather.gov/prob-snow
- Snow Squall Warning Resources: https://www.weather.gov/media/safety/Snow-Squall-IBW.pdf
- Winter Storm Severity Index Resources: www.weather.gov/wssi (top of page)
- Probabilistic Winter Storm Severity Index: www.weather.gov/wssi-p (top of page)
- Extreme Cold Slides & Webinar: https://www.weather.gov/wrn/calendar
- ***Coming Soon: Probabilistic Precipitation Portal***





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Tony Fracasso:
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Important Links

NWS Key Messages
https://www.wpc.ncep.noaa.gov/key_messages/LatestKeyMessage_1.png
https://www.wpc.ncep.noaa.gov/key_messages/LatestKeyMessage_2.png

Days 4-7 Winter Weather Outlook
https://www.wpc.ncep.noaa.gov/wwd/pwpf_d47/pwpf_medr.php

Experimental Winter Storm Outlook
https://www.wpc.ncep.noaa.gov/wwd/wso

Winter Storm Severity Index
www.weather.gov/wssi

Probabilistic Winter Storm Severity Index
https://www.weather.gov/wssi-p

Local Probabilistic Snow
https://www.weather.gov/prob-snow/

Avalanche Weather
www.weather.gov/wrh/AvalancheWeather

NDFD Products:
https://digital.weather.gov

Presentation Will Be Available!

- Presentation PDF and Recording will be made available!
- Publicly posted at our Weather Ready Nation calendar page:
- https://www.weather.gov/wrn/calendar