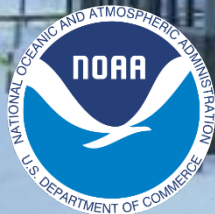


2023-24 Winter Outlook & NWS Tools for You

National
Weather
Service



NWS Baltimore/Washington

Bookmark this internal page for you!



- weather.gov/washington/wintermaps
 - Will have all our core partner winter graphics



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weather.gov/lwx

Outline



- ☐ What is normal?
- ☐ This winter's outlook
- ☐ Tools to help you



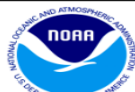


What is a “Normal” Winter (1991-2020 average)

DCA	Nov	Dec	Jan	Feb	Mar
Temperature (High/Low)	58°/42°	49°/35°	45°/30°	48°/32°	57°/39°
Snowfall 13.7” total	0.1”	1.7”	4.9”	5.0”	2.0”



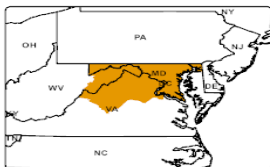
Snowfall: Last Winter (2022-23)



National Weather Service Baltimore/Washington

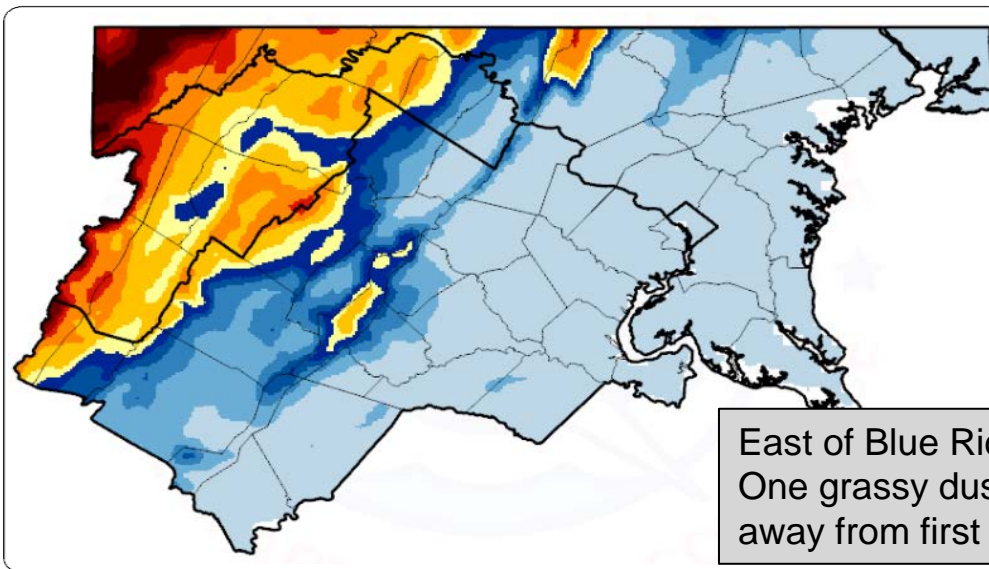
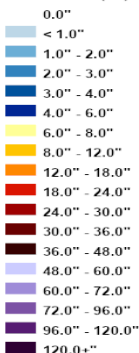
Snowfall 09/30/2022 08:00PM to 05/30/2023 08:00PM EDT

Analysis Data Source: NOHRSC (Values Estimated at Locations)



Created:
10/05/2023 08:48PM

Snowfall (in)



East of Blue Ridge
One grassy dusting (early Feb)
away from first snowless winter

This is an experimental product of the NWS GAZPACHO software package. Care should be taken in using the data. Unofficial observations may be plotted. Values at interpolated locations may not represent actual reports at that location.



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weather.gov/lwx

Temperature the Past 3 Winters at Reagan National Airport



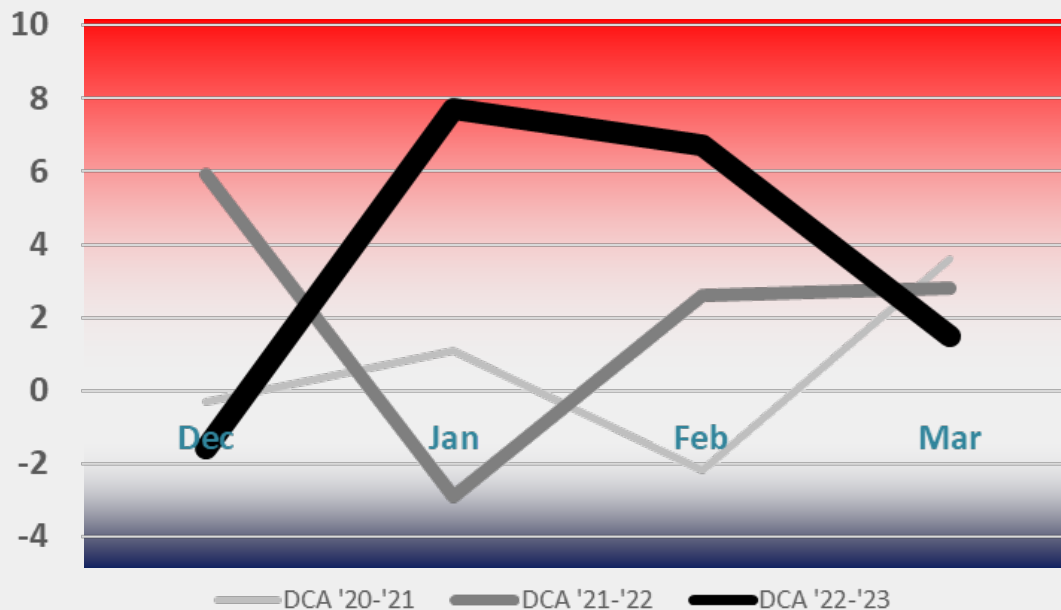
Departure from Normal (in degrees)

'22-'23 Third warmest on record (very cold Dec 24-26)

'21-'22 A return to mild...except January

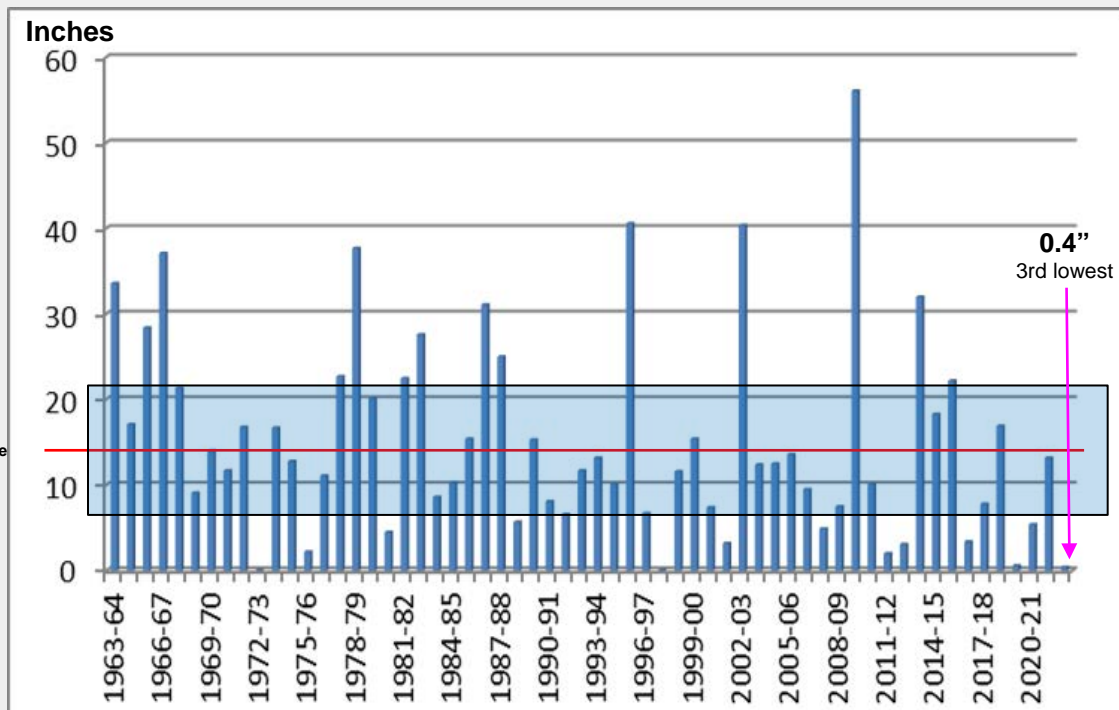
'20-'21 Near normal

['19-'20 also a top 10 warmest]





DCA Winter Snowfalls



Single Digit Snowfall Years

- 1900 – 1950** 25% of winters
- 1950 – 2000** 25% of winters
- 2000 – 2020** 50% of winters

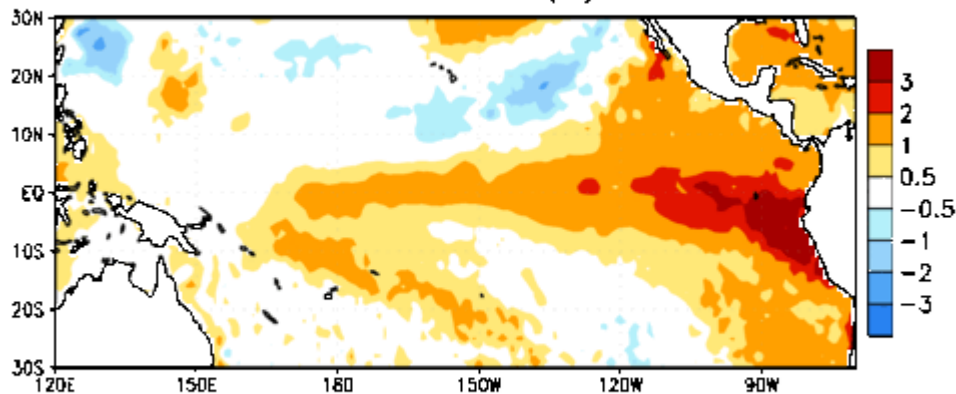
However, the “big snowfall”
winters also persist





Winter Outlook - The Return of El Niño

Week centered on 09 AUG 2023
SST Anomalies (°C)



El Niño/La Niña Cycle

El Niño

First El Niño, after 3 winters of La Niña

Higher chances for a big coastal snowstorm.

- Partially depends of eventual strength of El Niño.

Moderate = highest odds of coastal;

Strong = Less cold air



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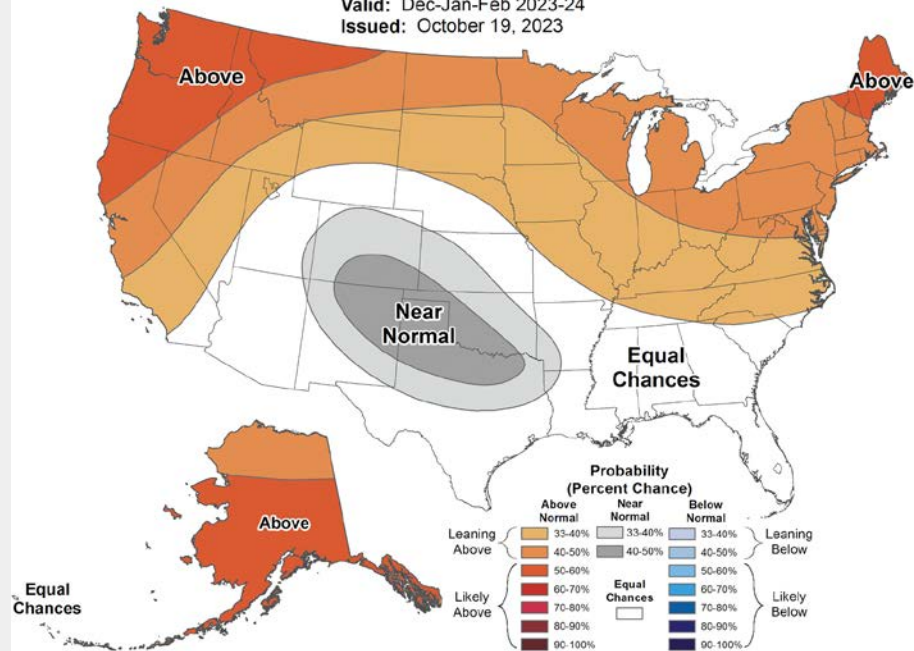
weather.gov/lwx



Winter Outlook - Temperature & Precipitation

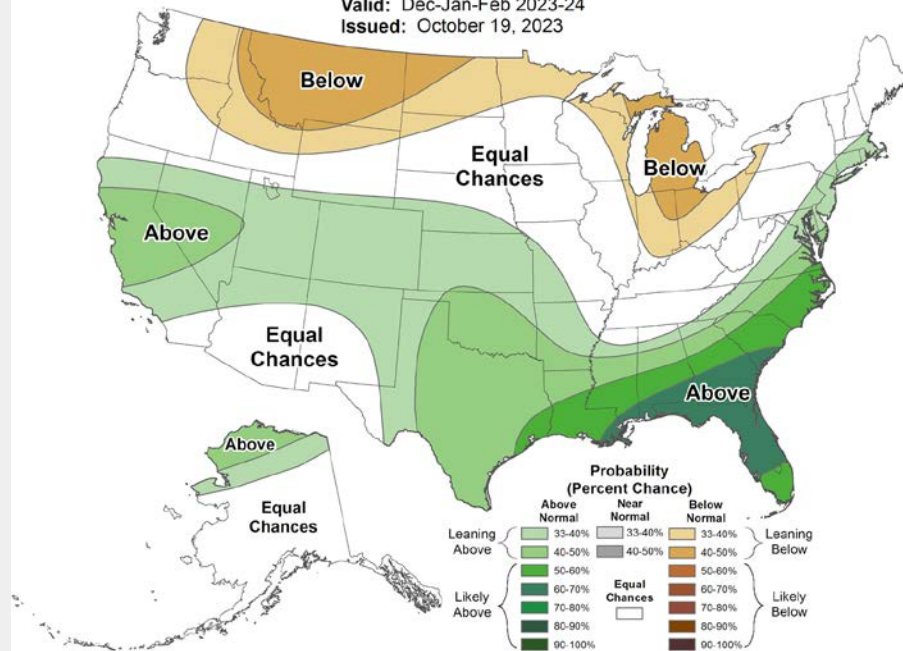
Seasonal Temperature Outlook

Valid: Dec-Jan-Feb 2023-24
Issued: October 19, 2023



Seasonal Precipitation Outlook

Valid: Dec-Jan-Feb 2023-24
Issued: October 19, 2023



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weather.gov/lwx



Winter Outlook - Mid Atlantic Region

El Niño/La Niña Cycle

El Niño

First El Niño, after 3 winters of La Niña

Higher chances for a big coastal snowstorm.

- Partially depends of eventual strength of El Niño.
Moderate = highest odds of coastal; Strong = Less cold air

Mid-Atlantic Outlook:

Temperature

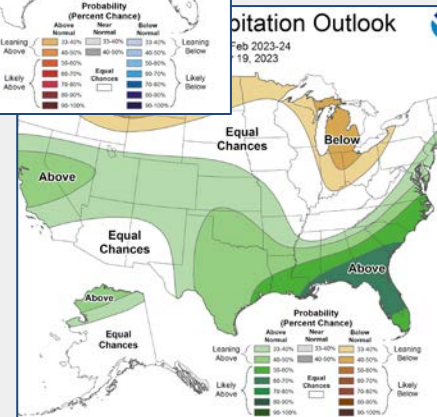
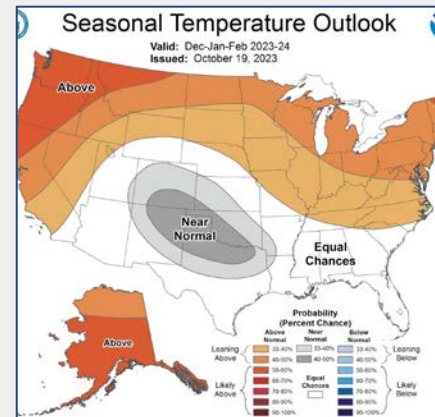
Slightly higher odds of warmer than average (as a whole).

Strong El Niño can hinder cold air from reaching our storms.

Precipitation

Higher odds of more precipitation than normal

Due to higher coastal storm threat



NWS Winter Tools - weather.gov/lwx/wintermaps



Still can be snow in the forecast.
Check webpage, and monitor our partner emails for notifications.



Winter Storm **Watch**

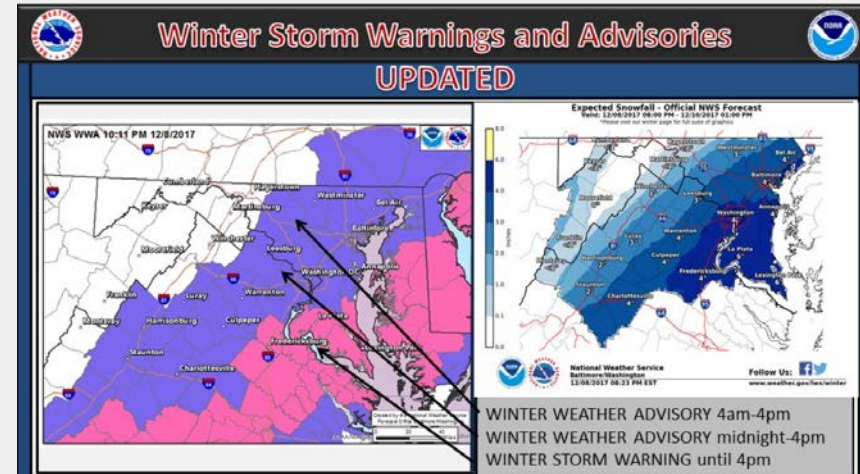
- Possibility of 5+” snow
- ~1-3 days in advance



Winter Storm **Warning** (Blizzard, Ice Storm)

Winter Weather **Advisory**

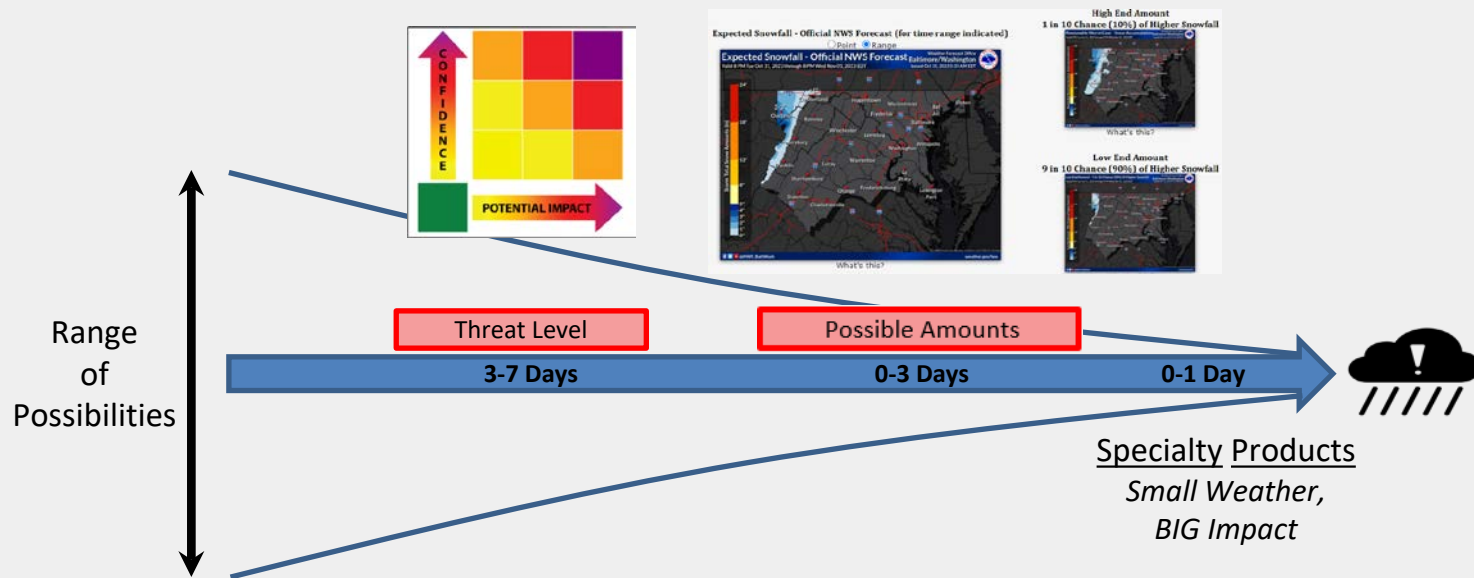
- Expectation (5”+ Warning; 1-4” Advisory)
- ~12-24 hours in advance





NWS Winter Tools - weather.gov/lwx/wintermaps

As event nears, “Range of Possibilities” shrinks & forecast detail increases.

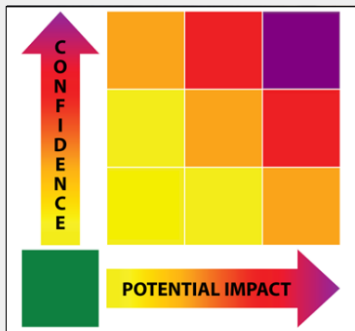
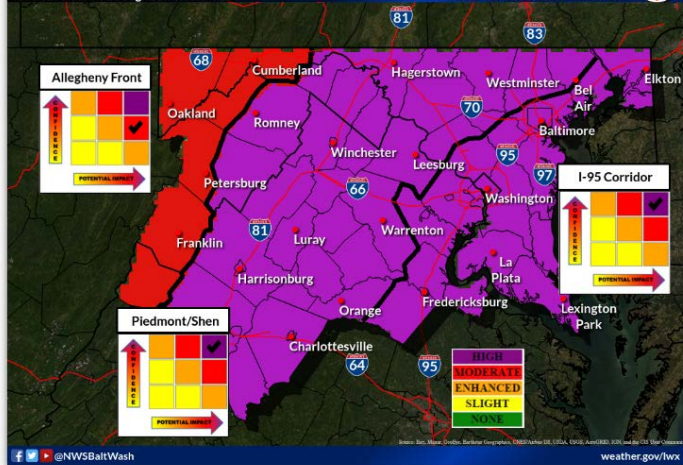




NWS Winter Tools - weather.gov/lwx/wintermaps



Day 5 Winter Storm Threat Weather Forecast Office Baltimore MD/Washington, DC
Valid Sat 8:00AM through Sun 8:00AM EDT
Issued Tue Oct 19, 2021 9:50 AM EDT



3-7 Days Out

Winter Storm Threat

High	High threat of high impact winter storm. Potential impacts include significant travel delays, closures, and threats to life and property. Plan ahead to minimize impact on you and your family.
Moderate	Moderate winter storm threat. Potential impacts include significant travel delays and closures. Plan ahead to minimize impact on you and your family.
Enhanced	Enhanced winter storm threat. Primary threat is disruption to travel.
Slight	Slight winter storm threat. If threat materializes, may cause travel disruptions.
None	No significant winter storm threat is currently expected. However, light wintry precipitation may still be possible.



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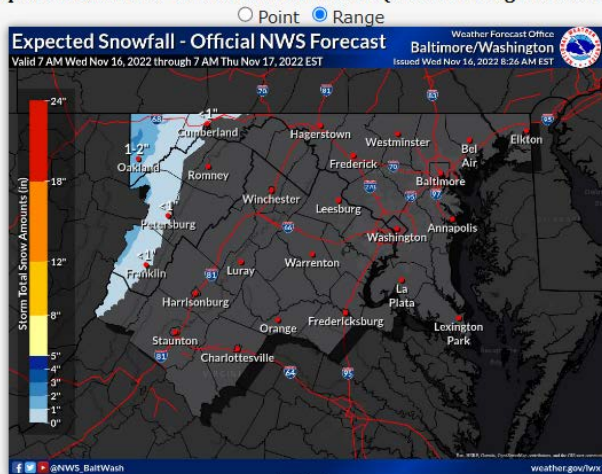
weather.gov/lwx



NWS Winter Tools - weather.gov/lwx/wintermaps

0-3 Days Out Range of Possible Accumulations

Expected Snowfall - Official NWS Forecast (for time range indicated)



What's this?

High End Amount
1 in 10 Chance (10%) of Higher
Snowfall



What's this?

Low End Amount
9 in 10 Chance (90%) of Higher
Snowfall



What's this?

High-End
Potential

How much/little
could it be, given
what some models
still show

Low-End
Potential

Current Snowfall
Expectation

What our forecasters
expect now.

Based on the latest,
constantly - evolving
models



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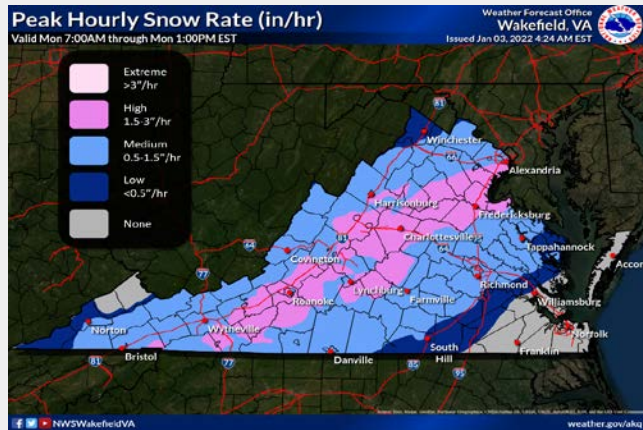
Advancements for this Winter



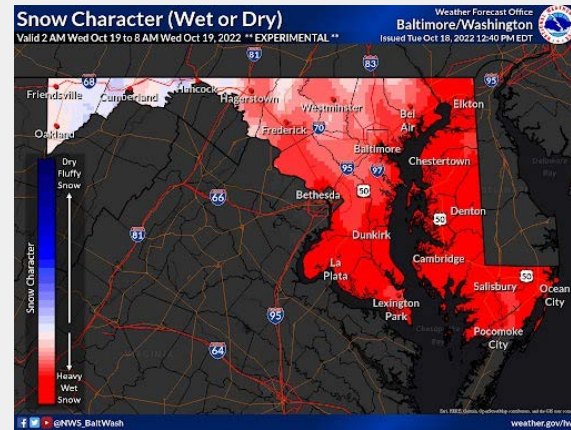
on: weather.gov/lwx/wintermaps

- Forecast Peak Rate & Character: 6 hour periods through the event
- Utilized in our briefings this winter

Peak Snow Rates



Wet / Dry Snow



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weather.gov/lwx



NWS Winter Tools - weather.gov/lwx/wintermaps

0-1 Day Out

Potential Winter Commuting Hazard Statement

Recipe for a Traffic Disaster

- 1" or less of snow
- During urban rush hour
- Sub-freezing road temperatures

Together, these often created gridlock.

Potential Winter Commuting Hazard Statement (~24hrs in advance)
if we see a chance of these coming together



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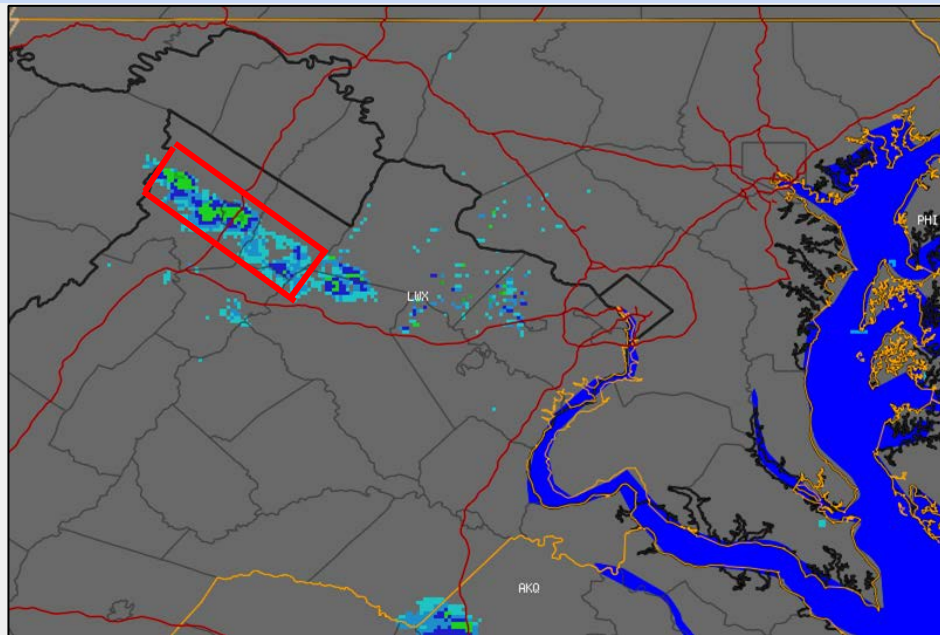
weather.gov/lwx



NWS Winter Tools - weather.gov/lwx/wintermaps

0-1 Day Out

Snow Squall Warning



When they occur over highways, they often cause multi-vehicle crashes





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NWS Winter Tools - weather.gov/lwx/wintermaps

Social Media

 @NWS_BaltWash
 @NWSBaltWash

NWS Baltimore-Washington
@NWS_BaltWash

Make use of today's quiet weather to prepare for Wednesday's winter storm. A Winter Storm Warning is in effect where we are most confident of heavier snow. A Watch remains in effect where heavy snow is possible but not yet certain. Keep up-to-date at weather.gov/lwx

First Widespread Winter Storm of the Season

National Weather Service Headlines
Wed: Wednesday, December 16, 2020

When: Wednesday & Wednesday night

What: Heavy snow, changing to Ice & Rain near and east of I-95

Expected Snowfall - Official WWS Forecast
Wed: 12:00:00AM 07:00 AM, 12:15:00AM 07:00 AM EST

National Weather Service
Baltimore/Washington
12/15/2020 04:43 AM EST

Follow Us:    

http://www.weather.gov/lwx

Issued at 12/15/2020 4:44 AM
Baltimore/Washington

National Weather Service Baltimore/Washington
@NWS_BaltWash

- Message of the Moment
- Public-facing for easy sharing



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weather.gov/lwx



NWS Services for Government Partners

“Heads Up” Email

- Threats before Watches & Warnings
- Email addresses to christopher.strong@noaa.gov to be added

iNWS alerts

- For Watches & Warnings (text and/or email)
- Register at: inws.ncep.noaa.gov

Monday/Thursday 10:30 A.M. 7 day Weather Threat Webinar

- 5 min look at threats for next 7 days
- Briefing time is 10:30 am
- Email addresses to christopher.strong@noaa.gov to be added





Constant Teamwork for Constant Improvement

- **COG's MATOC Group**
 - Monthly Meetings
- **Pre-winter visits & Exercises**
- **When threats arise -
Phone calls to government transportation sector**
- **Event-based conference calls**
- **Regional COG conference calls**





Summary: weather.gov/washington/wintermaps

- **The NWS – Transportation & EM partnerships have helped develop current ways to communicate snow forecasts:**
 - Days 3-7 Winter Storm Threat Level
 - Days 0-3 “Range of Possible” Snow Accumulations
 - Days 0-1 Potential Winter Commuting Hazard Statement & Snow Squall Warning...upcoming max rate & wet/dry
- **Existing framework**
 - **Watch** / **Warning** or **Advisory**
- **NWS winter outlook 2023-24**
 - Slightly higher odds of warmer than average (as a whole)
 - Higher odds of more precipitation than normal
 - Higher chances for a big coastal snowstorm

Chris Strong
Warning Coordination Meteorologist
NWS Baltimore/Washington
christopher.strong@noaa.gov



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