

National Weather Service

2021-22 Winter Outlook &

Tools to Help You



Chris Strong
National Weather Service
Baltimore/Washington



Outline

- **What is “Normal”**
- **What we have seen in the past**
- **This winter’s outlook**
- **NWS tools to help you**
 - 571-888-3501

What is a “Normal” Winter

1991-2020

(changes from 1981-2010)

30 Years



What is a “Normal” Winter

1991-2020

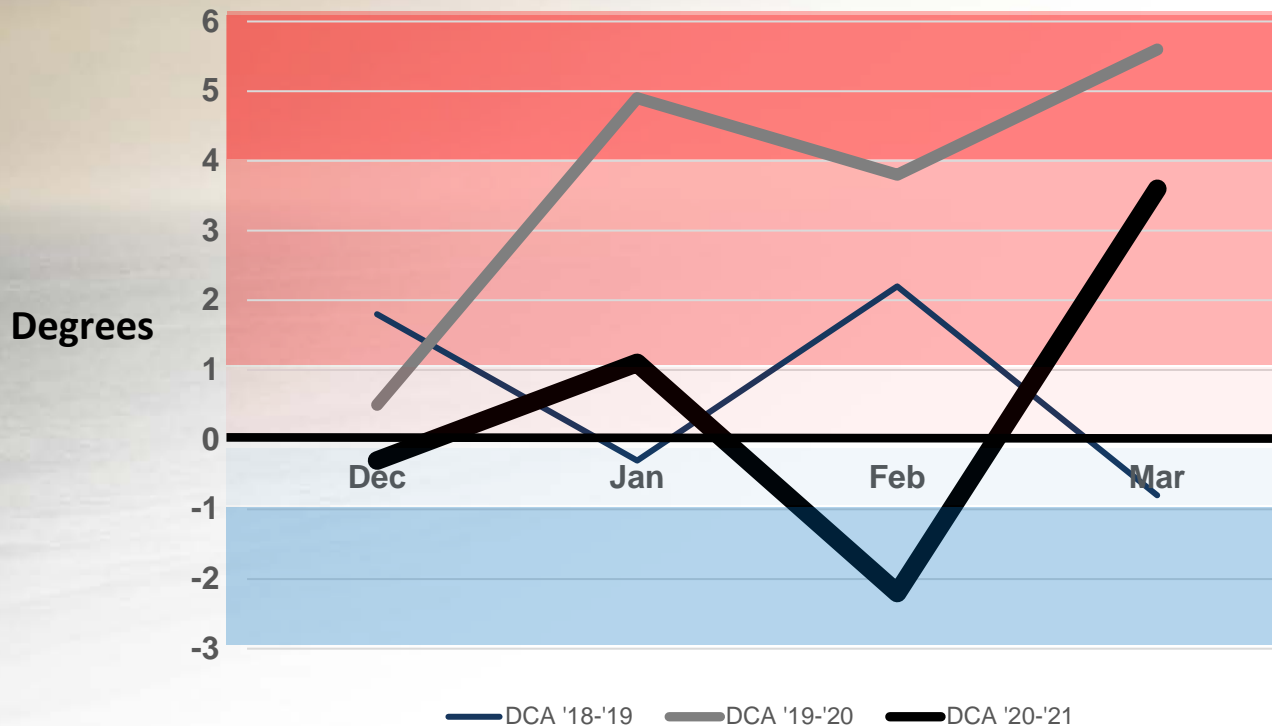
(changes from 1981-2010)

DCA	Nov	Dec	Jan	Feb	Mar
Temperature (High/Low)	58°/42° 0 / +1	49°/35° +2 / +2	45°/30° +2 / +1	48°/32° +1 / +1	57°/39° +1 / +1
Snowfall 13.7” total (-0.8)	0.1” -0.4	1.7” -0.6	4.9” -0.7	5.0” +0.2	2.0” +0.7

Past 3 Winters (DCA) Temperature

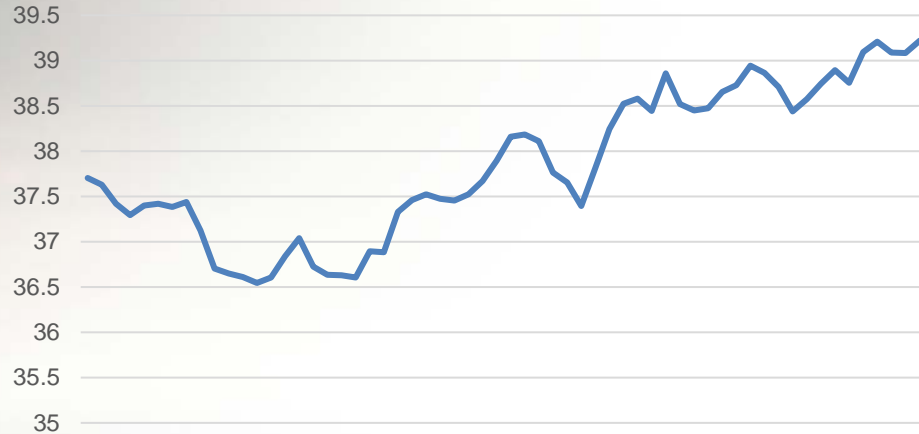
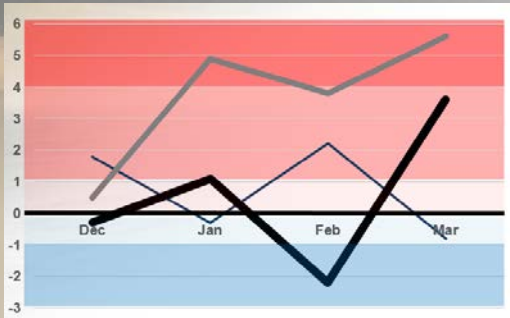
Last winter, close to normal; after our 7th warmest on record ('19-'20)

Departure from Normal



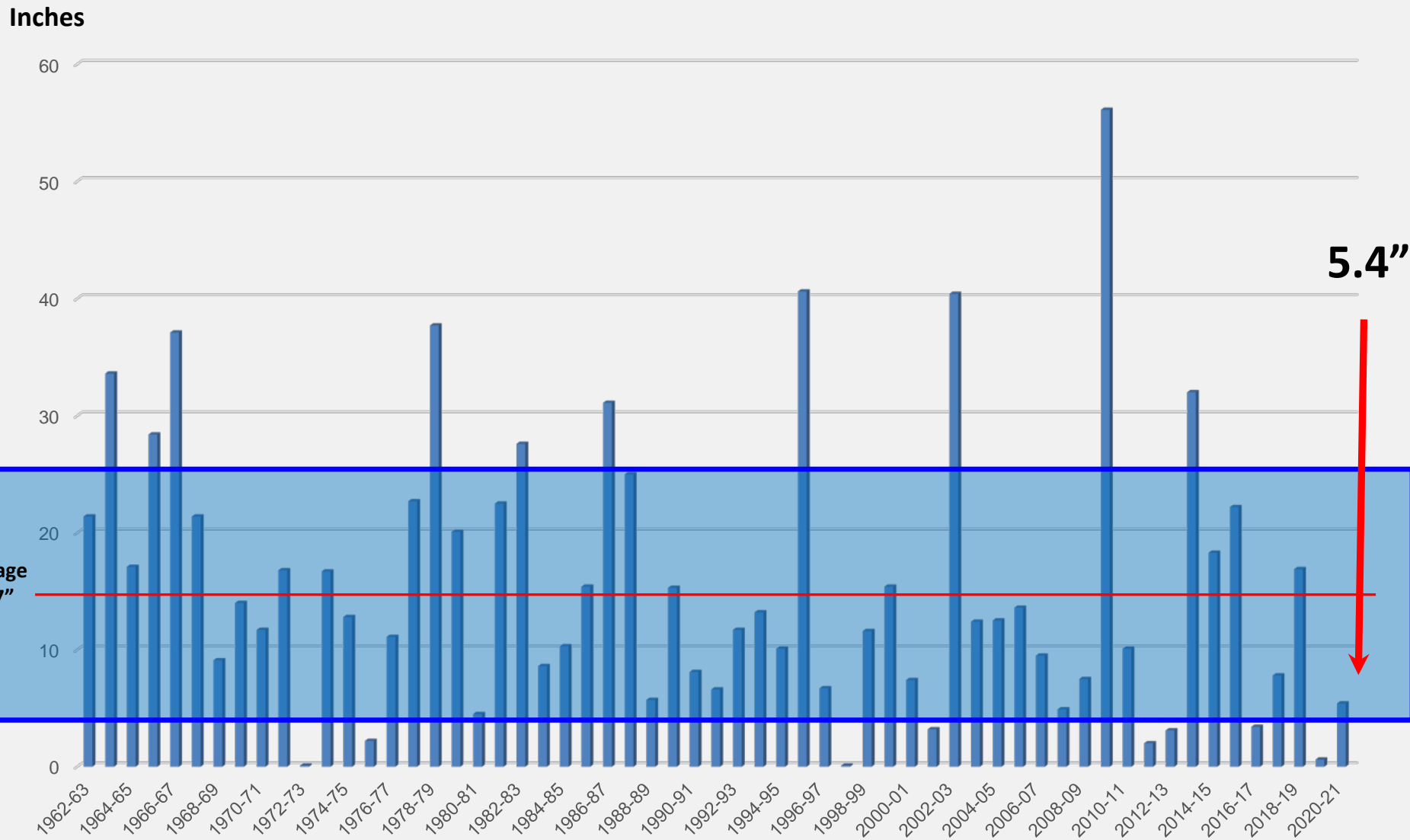
Past 3 Winters (DCA) Temperature

DCA Winter Temperature
20-yr rolling average (1941-2020)

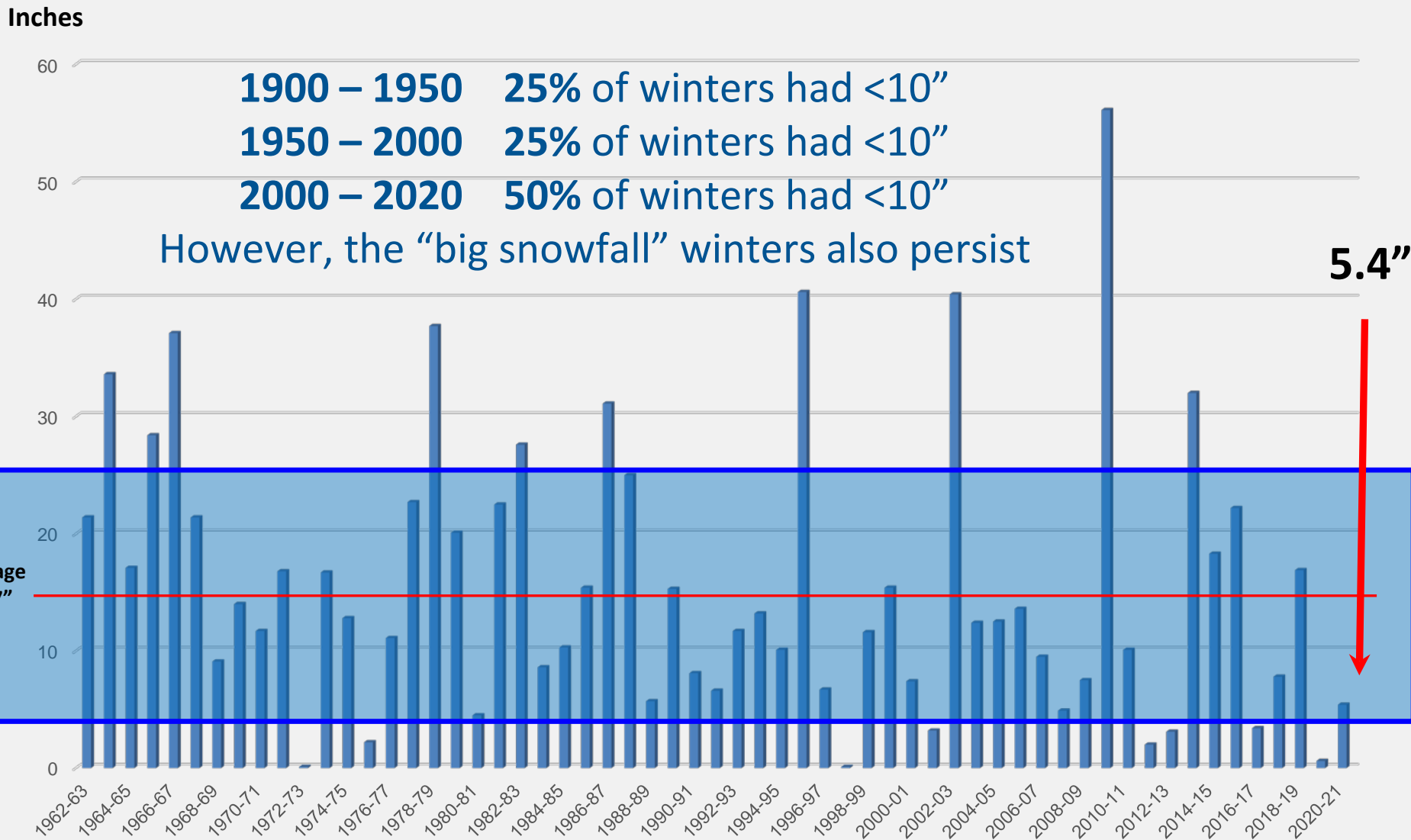


- **At DCA, a winter as warm '19-'20 happened:**
 - Once in the 2nd half of the 20th century,
 - 4 times in the past 20 winters, and
 - 2 times in the past 4 winters

DCA Annual Winter Snowfall

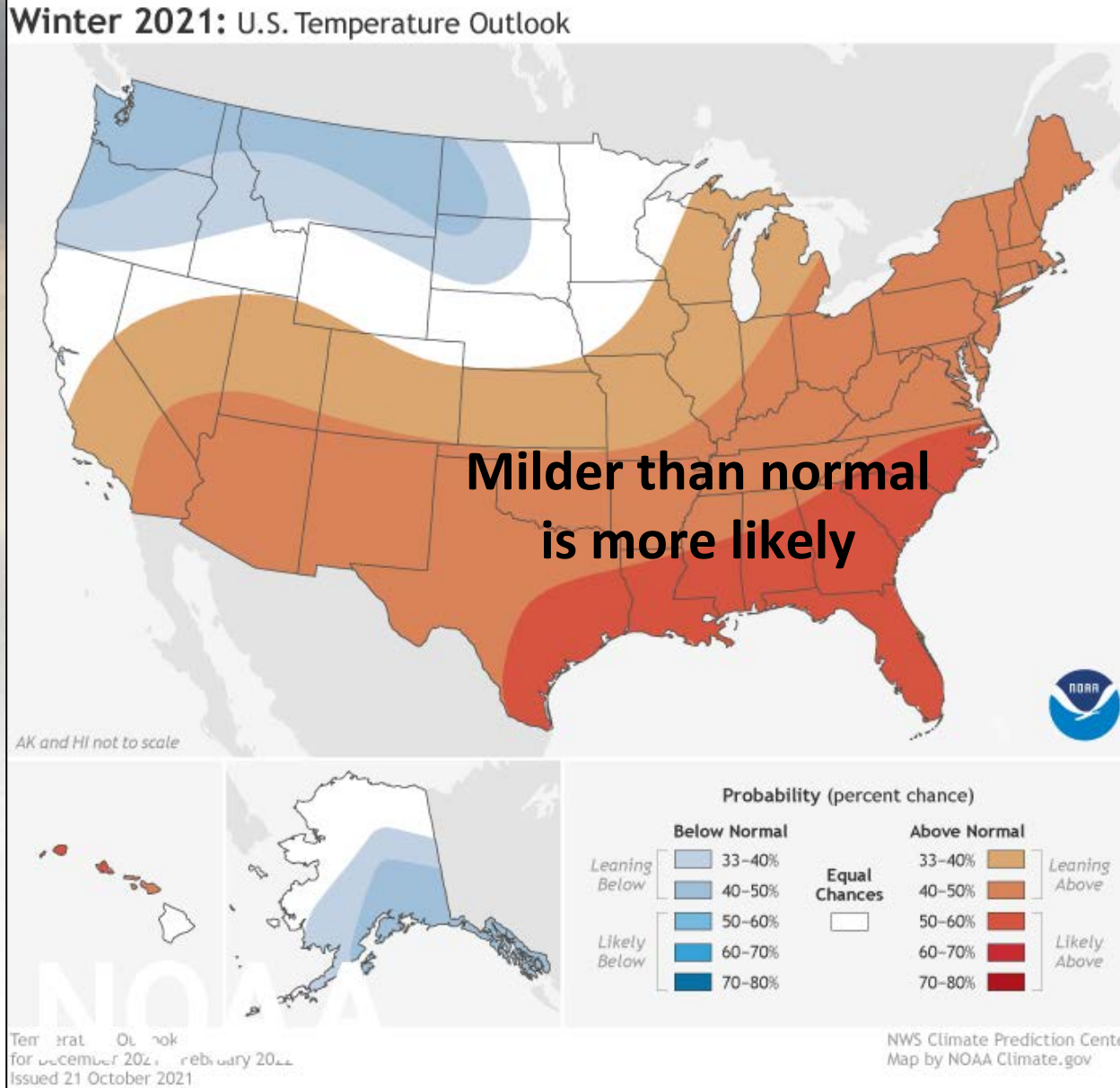


DCA Annual Winter Snowfall



Seasonal Forecast - Temperature

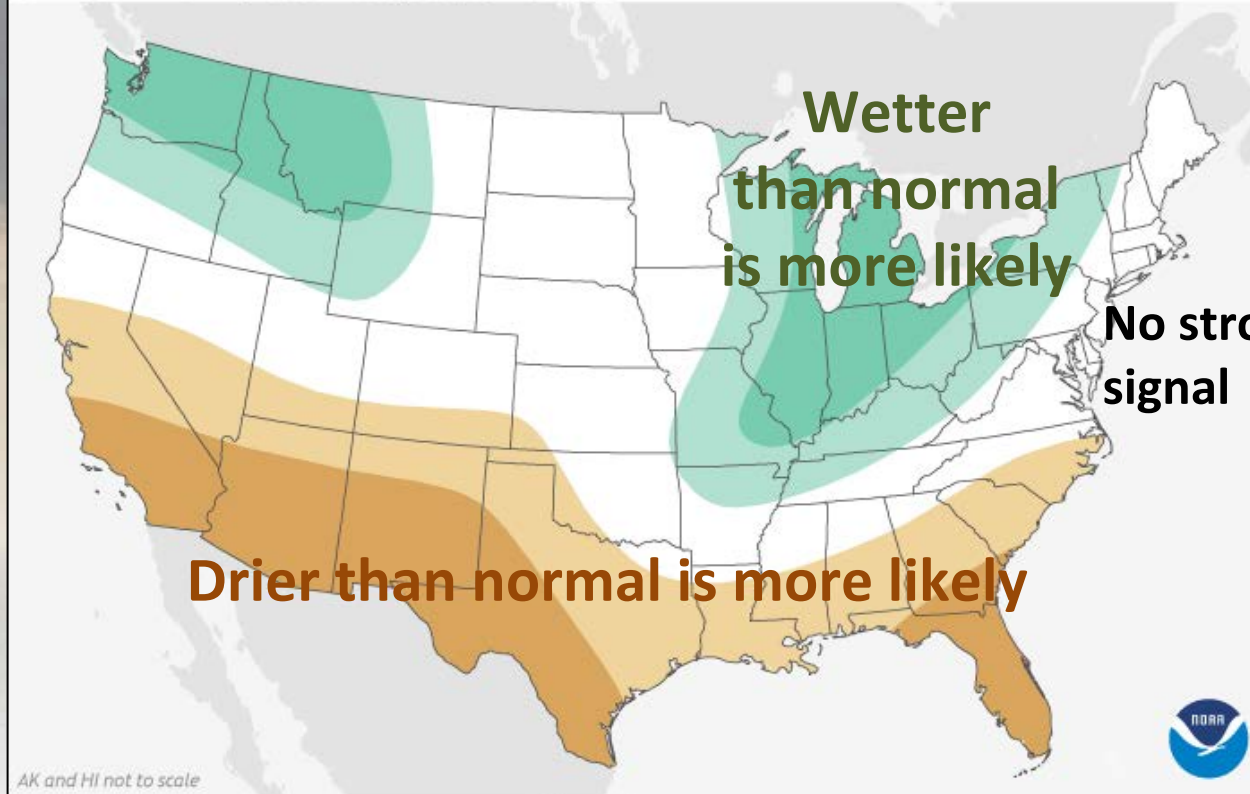
(Dec – Feb)



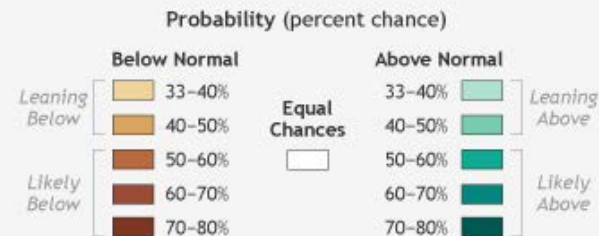
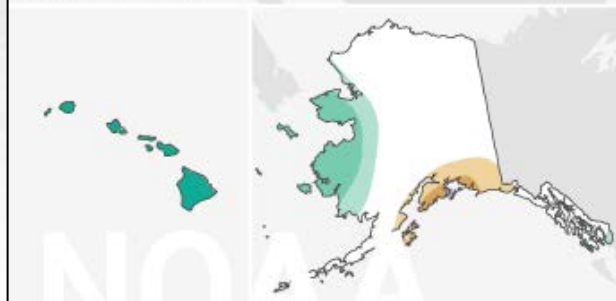
Seasonal Forecast - Precipitation

(Dec – Feb)

Winter 2021: U.S. Precipitation Outlook



AK and HI not to scale



Precipitation Outlook
for December 2021 - February 2022
Issued 21 October 2021

NWS Climate Prediction Center
Map by NOAA Climate.gov

Mid-Atlantic Winter Outlook 2021-22

- **El Niño/La Niña Cycle**
 - **La Niña**
 - More storm tracks to our west, can result in more freezing rain.
- **Mid-Atlantic Outlook:**
 - **Temperature**
 - Lesser chance of long-lasting cold
 - Fewer arctic outbreaks
 - **Precipitation**
 - No strong signal on more/less precipitation at this time



**Everything we will discuss is on our
NWS Winter Page**

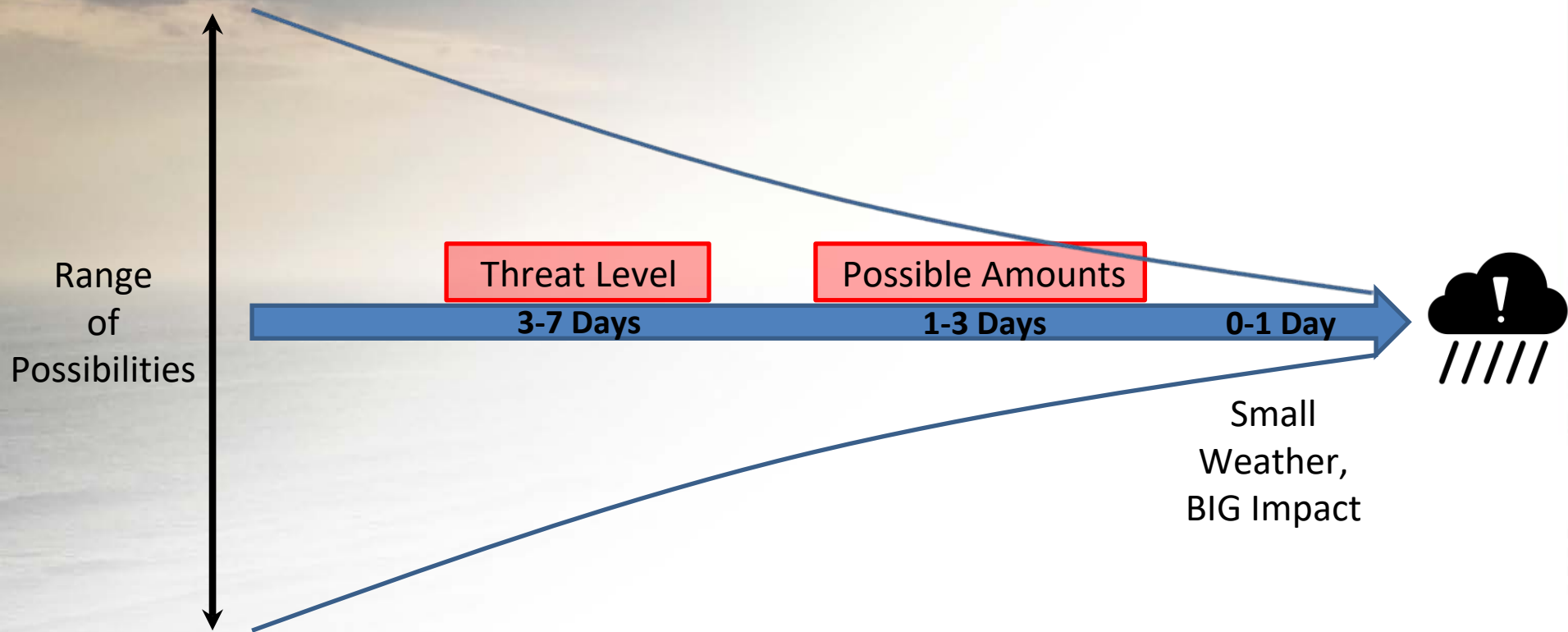
www.weather.gov/washington/winter

NWS “Headlines”

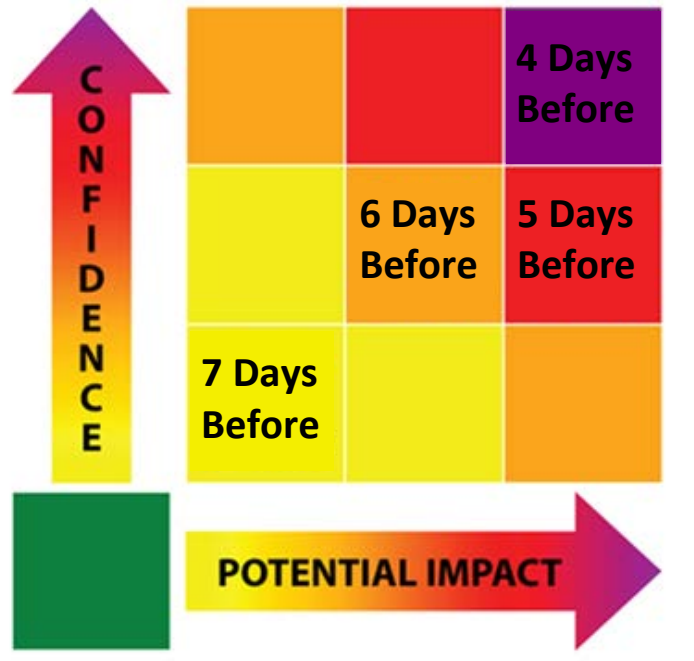
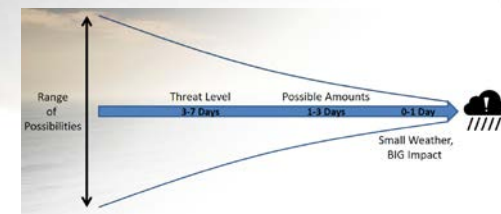
- Winter Storm **Watch**
 - Possibility of 5+” snow
 - ~1-3 days in advance
- Winter Storm **Warning** 5”+
- Winter Weather **Advisory** 1-4”
 - Expectation
 - ~12-24 hours in advance



As Event Nears, “Range of Possibilities” Shrinks & Level of Forecast Detail Increases



3-7 Days in Advance Winter Storm Threat

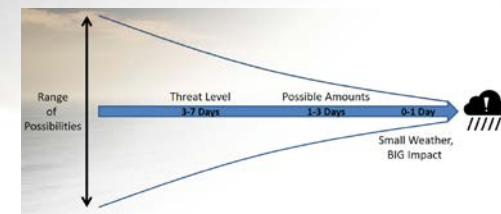


- **A real-world example:
Mid-Atlantic Blizzard of Jan 2016**
 - 7 days of threat
 - Threat increased
 - “**High**” threat 4 days before first flakes

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.

0-3 Days in Advance

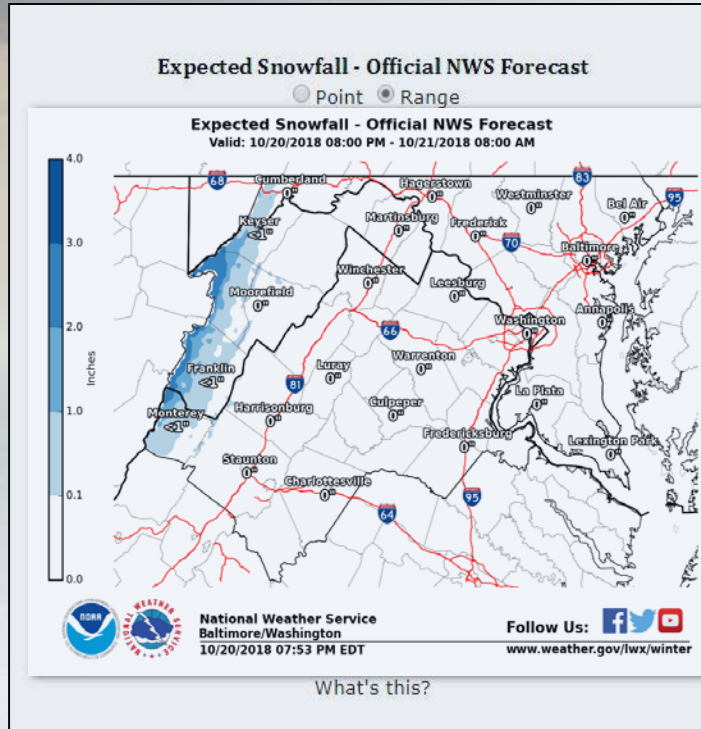
Range of Possibilities Snow Accumulation



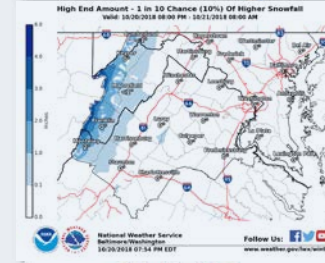
Current Snowfall Expectation

What our
forecasters
expect now.

Based on the
latest, constantly-
evolving models

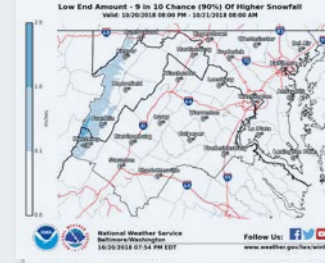


High End Amount 1 in 10 Chance (10%) of Higher Snowfall



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

0-1 Days in Advance

Potential Winter Commuting Hazard

Recipe for Traffic Disaster

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



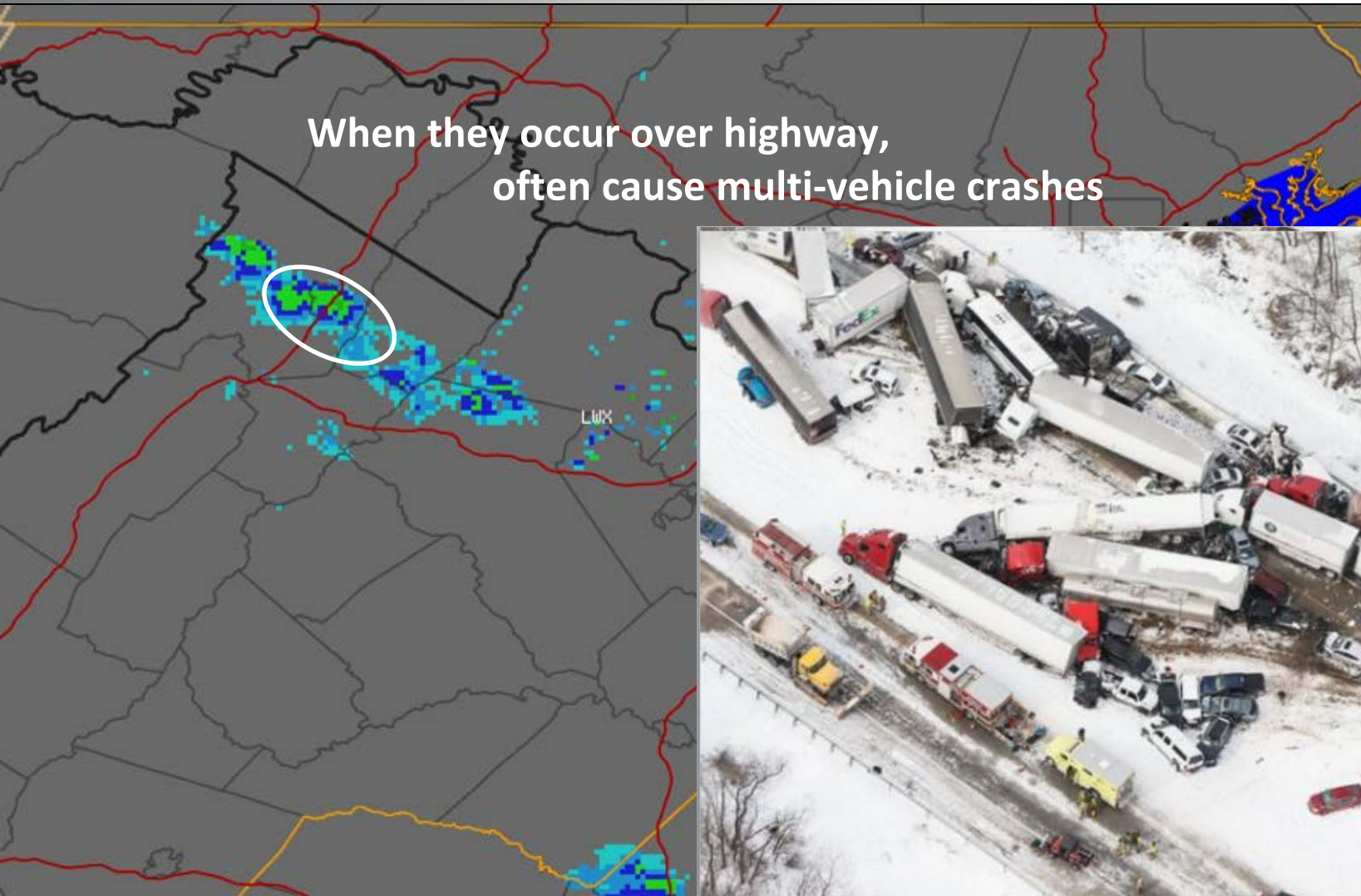
Together, these often create gridlock.

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

0-1 Days in Advance

Snow Squall Warning

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




twitter


@NWS_BaltWash

Social Media

NWS Baltimore-Washington @NWS_BaltWash · 8h
Most of this week will be quiet, but it won't end that way.



NWS Baltimore-Washington @NWS_BaltWash · 17h
Here is a look at the sunset from Sterling, VA this evening featuring our local WSR-88D KLWX. Not as cool overnight with lows in the 30s, except for the metros / along the bay where 40s are likely. Milder conditions continue on Monday with highs in the 60s under sunny skies.



NWS Baltimore-Washington @NWS_BaltWash · 20h
After the time change to Eastern Standard Time, sunsets will be around 5 PM today, before gradually moving toward 4:45 PM by the next month. Temperatures will continue to cool with normal lows nearing freezing by the Winter Solstice. #MDwx #VAwx #DCwx #WWwx

5:01 PM	4:45 PM	4:40 PM
TOTAL LENGTH OF DAYLIGHT 10 hrs, 18 mins, 42 secs	TOTAL LENGTH OF DAYLIGHT 9 hrs, 52 mins, 19 secs	TOTAL LENGTH OF DAYLIGHT 9 hrs, 26 mins, 18 secs
AVERAGES HIGH: 61 LOW: 44	AVERAGES HIGH: 51 LOW: 36	AVERAGES HIGH: 47 LOW: 38

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US National Weather Service Baltimore/Washington

Government Organization · Sterling, Virginia



Wall

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22 talking about this

2 were here

US National Weather Service Baltimore/Washington

With the recent October snow across the area, many people have been interested in finding out information about previous October snows. With this link, you can find climate information such as past snowfalls. This data consists of not only official climate sites but also volunteer cooperative observers.

Rational Weather Service Sterling

Government Internet Service Home page. The starting point for official government weather forecasts, warnings, meteorological products for forecasting the weather, and information about meteorology.

US National Weather Service Baltimore/Washington added 3 new photos to the album October 29, 2011 Early-Season Snow.

People You May Know

- Patty Tkster (2 mutual friends)
- Joe Veres (1 mutual friend)
- Dan DiTullo (1 mutual friend)
- Steven Pfaff (3 mutual friends)
- Roger Pierce

NWSBaltWash

Summary

- **The NWS – DOT/SHA partnership has helped develop new 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
- **Previously existing communication**
 - Watch / Warning / Advisory
- **NWS winter outlook 2021-22**
 - Fewer arctic outbreaks, but we will get them.
 - Higher likelihood of freezing rain & mixed precipitation

“New” Phone Number
571-888-3501
(for our partners)