

2017-18 Winter Outlook & NWS Resources

Chris Strong
National Weather Service
Baltimore/Washington Weather Forecast Office

Outline

- **The NWS – NCR DOTs partnership has helped develop new ways to communicate snow forecasts:**
 - Days 3-7 Winter Storm Threat
 - Days 0-3 Range of Possibilities
 - Days 0-1 Potential Winter Commuting Hazard
- **Previously existing communication**
- **NOAA/NWS winter outlook 2017-18**
- **Snow Observations within the District**



Everything discussed will be on:

www.weather.gov/washington/winter

“Range of Possibilities” Shrinks & Level of Detail Increases as event nears

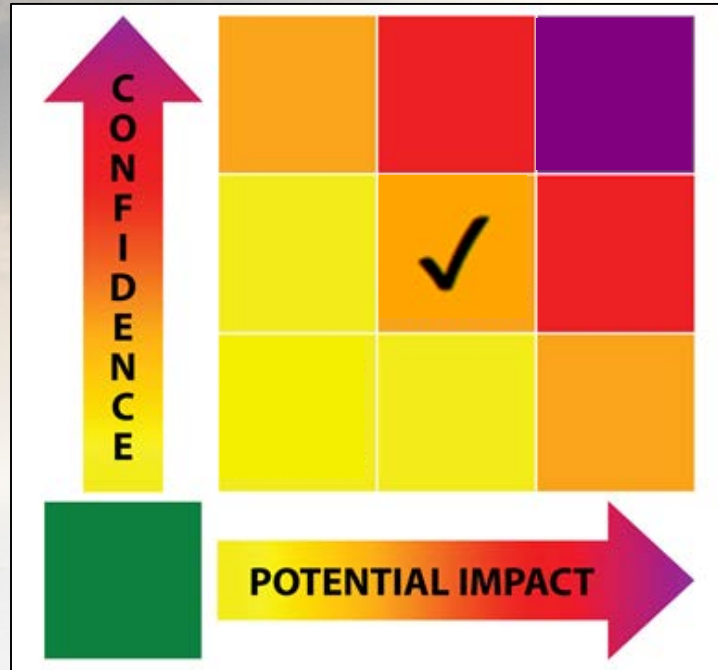


3-7 Days in Advance Threat Level

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.

3-7 Days in Advance

Winter Storm Threat



- Before accumulation #'s are possible
- Not just “snow likely”
- But, **how big a threat?**

3-7 Days in Advance

Winter Storm Threat



- **Blizzard of Jan 2016**
 - 7 days of threat
 - Threat increased
 - “High” 4 days in advance

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



- Provide the “Goal Posts” of what *could* happen
- Better decisions, based on fuller set of information
- Leads to less impact on the economy & society

0-3 Days in Advance

Range of Possibilities

Low End Potential

Expected Snowfall

High End Potential

Expect at Least This Much

Valid: 09/28/2016 10:00 PM - 09/29/2016 11:00 PM

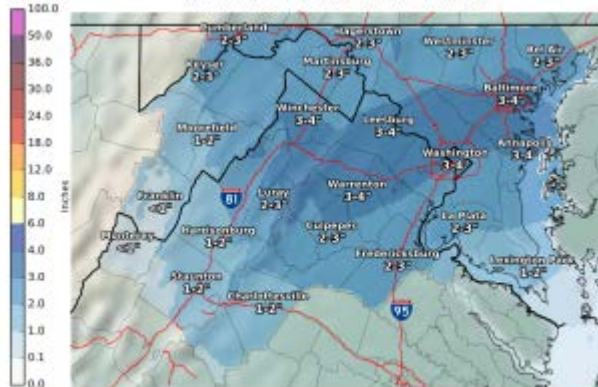


National Weather Service
Baltimore/Washington
09/29/2016 04:14 PM EDT

Follow Us: [f](#) [t](#)
www.weather.gov/bwx/winter

Most Likely Snowfall

Valid: 09/28/2016 08:00 AM - 09/29/2016 08:00 AM



National Weather Service
Baltimore/Washington
09/27/2016 03:15 PM EDT

Follow Us: [f](#) [t](#)
www.weather.gov/bwx/winter

Potential for This Much

Valid: 09/28/2016 08:00 AM - 09/29/2016 03:00 AM



National Weather Service
Baltimore/Washington
09/27/2016 03:18 PM EDT

Follow Us: [f](#) [t](#)
www.weather.gov/bwx/winter

Expect at least this much

Official NWS Forecast

Potential for this much

- Limits surprises
- More complete information to base decisions on

0-1 Days in Advance

Potential Winter Commuting Hazard

Combating the 8-10 Hour Commute



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 a traffic disaster.

But typically...

Road crew's plan & response time > "Confident forecast" lead-time

0-1 Days in Advance

Potential Winter Commuting Hazard

- **Enhanced NWS-DOT/DPW Communications**
 - NWS may not have confidence with enough lead time, but we can often see the *threat*.
 - NWS will now notify DOTs/DPW of the *threat* of “traffic disaster ingredients” combining:

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





0-1 Days in Advance

Potential Winter Commuting Hazard

w/ D.O.T. Notification Calls ~24hrs in Advance

...POTENTIAL WINTER COMMUTING HAZARD STATEMENT FOR THE WASHINGTON METRO AREA TUESDAY MORNING.....

There is a POSSIBILITY for icy commuting conditions Tuesday morning. A period of snow is POSSIBLE (30 percent) across the Washington metro area during rush hour, with up to an inch of snow accumulation possible on sub-freezing roads.

If this threat does materialize during Tuesday morning rush-hour, untreated roads would turn icy. This could lead to hazardous commuting conditions, with extensive delays.

The most important action at this point is to stay informed. Know what you would do if this threat materializes, and plan accordingly. Stay tuned for updates and possible winter weather advisories.

Existing Communication

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



Existing Communication

- **MWCOG's MATOC Group**
 - Monthly meetings
- **Pre-winter visits to DOTs**
- **Phone calls to DPW/DOTs when threats arise**
- **Event-based conference calls with DOTs & EMs**
- **3 A.M. regional COG conference call**



NOAA/NWS Winter Outlook 2017-18

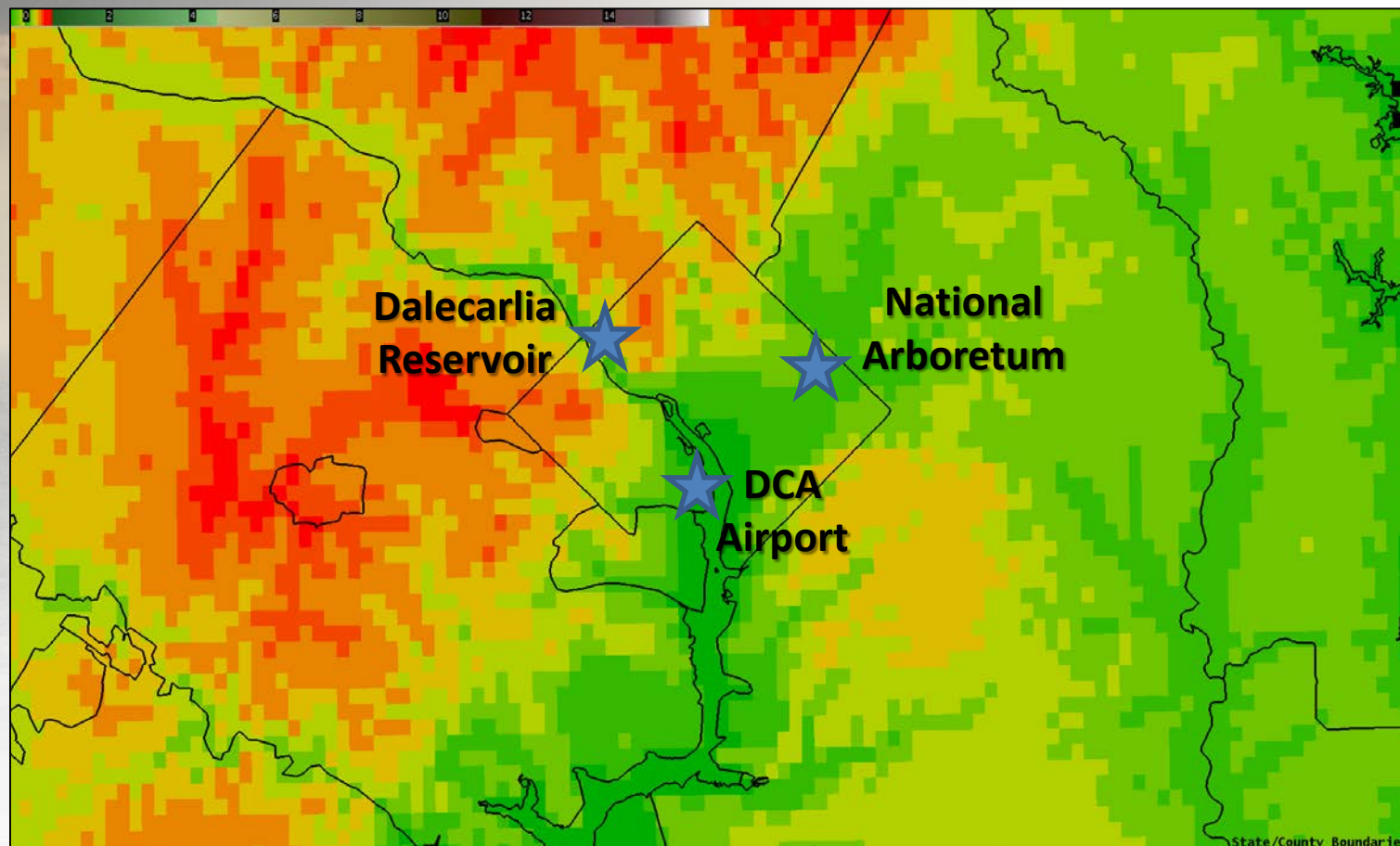
- **El Niño – La Niña Cycle**
 - Expected: Neutral or La Niña
- **Mid-Atlantic Winter Outlook**
 - More likely milder than normal (as a whole)
 - Fewer cold snaps
 - No strong signal yet on amount of precipitation
 - But with fewer cold snaps, less snow than average
 - But, need to be ready for the “big storm” every winter
 - Road temperatures in the 20s or colder = higher impact

<https://youtu.be/cogg59V6PL0> (2:28)

Daily Snow Observations

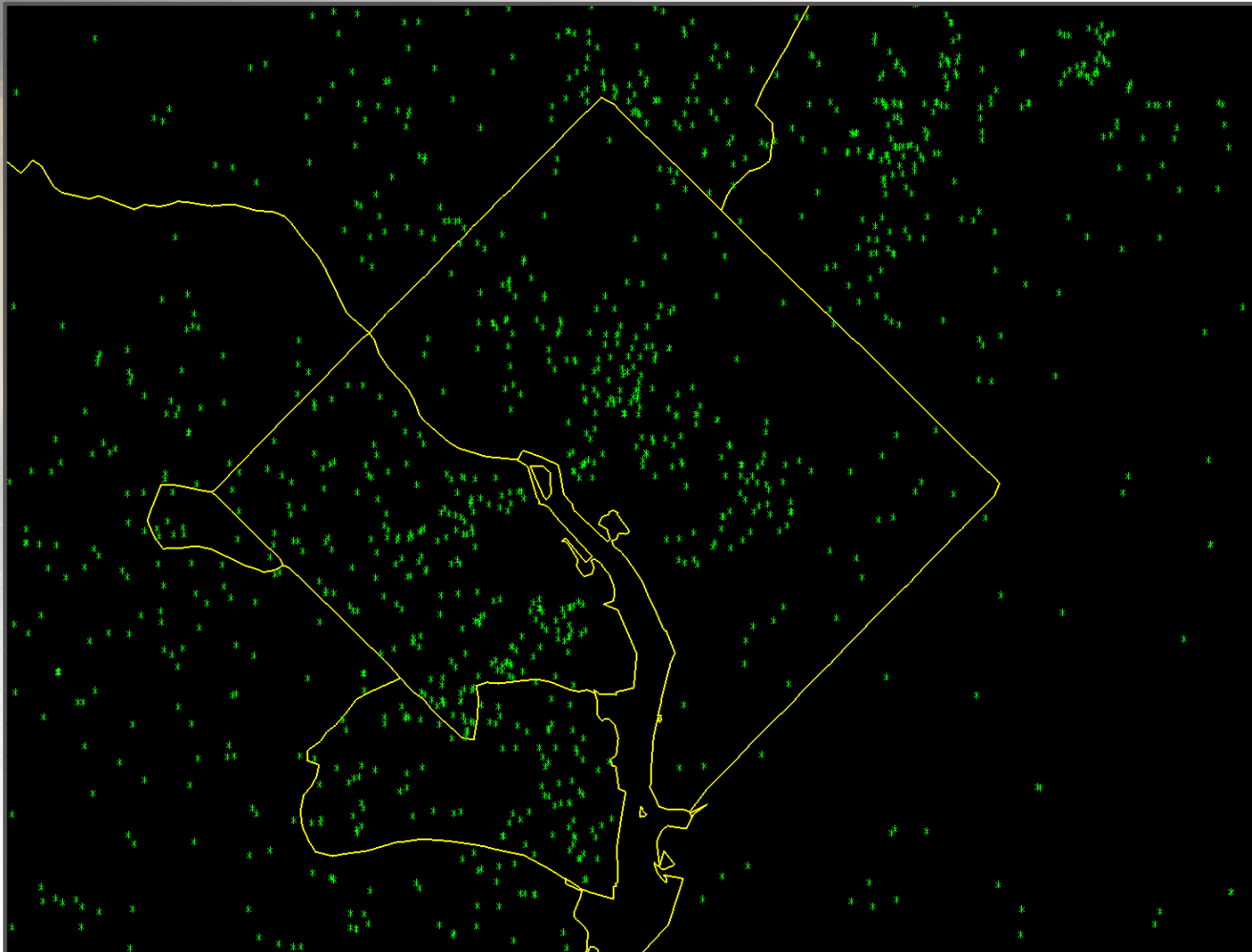
D.C. Metro Elevation

D.C. 0' – 410'



Volunteer Snow Observations

NWS “Spotters”



Summary

- **The NWS – NCR DOTs partnership has helped develop new ways to communicate snow forecasts:**
 - Days 3-7 Winter Storm Threat
 - Days 0-3 Range of Possibilities
 - Days 0-1 Potential Winter Commuting Hazard
- **Previously existing communication**
 - Watch / Warning / Advisory
 - Regular & event-driven meetings & conference calls
- **NOAA/NWS winter outlook 2017-18**
 - More likely milder than normal
 - No strong signal on precipitation, but less snow anticipated

Christopher.Strong@noaa.gov
Warning Coordination Meteorologist
NWS Baltimore/Washington
703-996-2223