National Weather Service Baltimore/Washington Forecast Office

Sterling Reporter

Volume 8, Issue 2 Spring 2009

MIC's Corner

By, James E. Lee
Meteorologist- In- Charge

The calendar has changed to spring from winter, and our forecast operations have started preparations for the upcoming severe weather season. Our office recently completed our annual Severe Weather Workshop, where we spend a day reviewing the latest science, technology, and policy changes, so that we are prepared when severe weather strikes.

Last year was the busiest severe weather season we have seen in our forecast area in many, many years. Our area received 836 reports of severe weather, which is about four times the number of reports that we normally have in a year. Severe weather reports include wind damage from thunderstorms, wind gusts from thunderstorms greater than or equal to 58 mph, hail stone diameter 0.75 inch or larger, or a tornado. This record number of reports provided special challenges to our office; as you may recall we were in preparation mode for our move to our new facility. Despite these challenging circumstances, our office was able to accurately forecast 76% of these severe weather events, with a 15-minute average lead time.

It is unlikely that we will see this number of severe weather reports again this year, although it is possible. But it doesn't matter whether the number of severe weather events is again over 800, or only 80; everyone has to be equally prepared. I do know this: Severe weather will occur again this year within our

Inside this issue:

Inauguration Support

By, Chris Strong
Warning Coordination Meteorologist

Once again, the National Weather Service Baltimore/Washington Forecast Office provided forecast services for the Presidential Inauguration. The planning for forecast support began well before the event with a kick off meeting in middle December. That meeting brought together members of the military, NWS, and the Department of Homeland Security at our office in Sterling, VA. It was decided when forecasts would start to be issued, how often, and what elements would be forecast. Also, it was very important to establish coordination calls to make sure that the forecasts that were issued were issued with one voice. If the day proved to be a difficult weather day, and many agencies were talking about varied forecasts, that would severely amplify the already huge logistical challenges of the day. The safety of the massive amount of people forecast to be in the area was firmly on everyone's mind.

(story continued on page 3)

St. Mary's County Becomes Storm Ready

By, Chris Strong, Warning Coordination Meteorologist

On St. Patrick's Day March 17, 2009, Meteorologist-In-Charge Jim Lee and Warning Coordination Meteorologist Chris Strong headed to Saint Mary's County in lower southern Maryland. The reason was to celebrate Saint Mary's County's recognition as a Storm-Ready county by the Maryland StormReady Advisory Board and the National Weather Service.

The duo from NWS Baltimore/Washington met up with Saint Mary's Director of Public Safety, David Zylak, as well as Michelle Lilly and Jaclyn Shaw from Saint Mary's Emergency Management, and then headed to the county Board of Commissioners meeting for the presentation. At the meeting, Chris and Jim presented President Jack Russell and David Zylak with a letter of recognition, a certificate, and two StormReady street signs to be placed on roads entering the county.

In order to be recognized as StormReady, a county must strengthen their ties with their local National Weather Service office, be able to disseminate weather alerts quickly, and train their citizenry on how to respond to the myriad of weather threats we get here in the Mid-Atlantic States. Saint Mary's hosted a

(Continued on page 3)

Northeast Regional Aviation Workshop

By, Brandon Peloquin, Senior Forecaster

At the end of January, the Sterling Weather Forecast Office welcomed Eastern Region Headquarters, several surrounding Weather Forecast Offices, the Aviation Weather Center and Northeast Center Weather Service Units to its new facility to participate in the Northeast Aviation Improvement Workshop. Ironically, the workshop occurred one day after wintry weather caused delays up and down the Northeast Air Space, resulting in delayed arrivals from several workshop participants.

The workshop was an all day event that focused on sharing best practices for aviation forecasting and enhancing awareness of air weather traffic impacts. Future scientific endeavors, programs and projects toward improving aviation weather services were also discussed. To augment the all day workshop, tours of the Potomac TRACON in Warrenton, VA and the FAA Command Center in Herndon, VA were also conducted on separate days from the workshop.

MIC's Corner (Continued)

region, and while I cannot pinpoint at this time where the severe weather will occur, everyone has to be equally prepared and know what to do when severe weather is in your area.

Lightning is an underrated killer. On average from 1978 to 2007, 62 people were killed annually by lightning in the United States. This is the same number of fatalities as tornadoes. In 2007, 98% of lightning deaths occurred outside, thus the slogan *"When Thunder Roars, Go Indoors."* You don't need to have a severe thunderstorm with large hail and damaging winds to be struck by lightning; rather, all thunderstorms pose a threat to life. I am asking everyone who is reading this column to review lightning safety tips at the following webpage http://www.lightningsafety.noaa.gov/overview.htm, and share these tips with your friends and family.

If you have any questions or comments about the NWS Baltimore/Washington Weather Forecast Office, please email me at James.E.Lee@noaa.gov, or phone me 703-996-2200, extension 222.

Inauguration Support (continued)

Starting 2 weeks before the 20th of January, the Hydrometeorological Prediction Center (HPC) at NOAA's National Center of Environmental Prediction (NCEP) began issuing daily general forecasts indicating that the day would likely feature near or below normal temperatures.

Here at the forecast office, we forecast up to seven days into the future. So, starting a week before the event we began to issue forecasts with increasing specificity as we neared the event. Actually, one caveat to that is that we began supporting the operations a few days before that, so that we could give forecasts to the practice Inauguration that was conducted Jan 10th – not that the forecasts were practice!

Cold weather established its grip over the region in the days before the Inauguration. Winter fell to its coldest depths in the days before the event. At its coldest on Jan 16th and 17th the high temperature was only 18 degrees (our coldest in 13 years), while the low Saturday morning was only 8 degrees at Reagan National Airport. The Potomac River froze over, and would remain so through the event. Forecasting ramped up as conference call briefings began being held several times per day. Elements to forecast during these briefings included temperatures, winds, chance of precipitation & what type, snow fall & snow cover, cloud cover, wind chill, Potomac water temperature, and even mixing height to help determine how any smoke would disperse. By the day of Inauguration, forecast briefings were being conducted every 3 hours, with each element being forecast hourly through the day.

Forecast briefings were attended by representatives from the NWS, NOAA, DHS, Presidential Inauguration Committee (PIC), the military, DC and VA emergency management and government, the National Park Service, and many others.

In the end, the event was well forecast. The main weather factors for the day were the cold temperature and wind chill - which were well forecast. After a morning low temperature of 19 degrees, the temperature stayed below freezing all day and only made it up to 30 degrees, with wind chill in the teens and 20s all day. However, temperatures in the 20s much of the day were much better than a few days before on the 16-17th when temperatures were bitterly cold.

All in all, the coordination and forecasting went well. We await our opportunity to meet these challenges again in 2013!

St. Mary's County (Continued)

Basics I Skywarn weather spotting class in November, and they have been very proactive in working with the National Weather Service to improve weather services and community response in the county.

Tropical storms and their tidal inundation are a formidable threat for Saint Mary's, as they are bounded by the Chesapeake Bay on the east, the Patuxent River on the north, and the Potomac River on the south. Isabel in 2003 and Ernesto in 2006 both brought significant damage to the county from tidal flooding. Severe thunderstorms and tornadoes also are prevalent, as the late spring and early summer of last year will surely attest.

No county will ever be storm proof, but with their efforts and StormReady recognition, Saint Mary's County Maryland will be well prepared for whatever weather threats come their way in 2009 and beyond. Congratulations!

Stephen Konarik Joins Staff

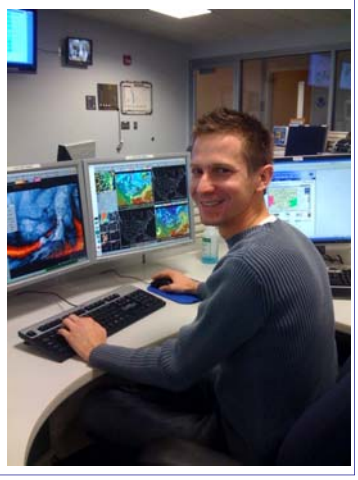
By, Nikole Winstead Listemaa

Senior Forecaster

The NWS Baltimore/Washington Forecast Office welcomes Stephen Konarik as our newest General Forecaster. Stephen was a Meteorologist Intern at the Atlanta Forecast Office. While in Atlanta, Stephen also served as an Adjunct Professor at Brewton-Parker College, where he taught an introductory meteorology course.

Stephen earned a Master's Degree in Atmospheric Science from N.C. State University, and a B.S. in Meteorology from Iowa State University.

WELCOME STEPHEN!



Climate Corner

By, Jared Klein, Forecaster

DCA

Average temperatures during Meteorological Winter* were near normal for Washington, DC. More specifically, the average monthly temperature was near normal for December, below normal for January, and above normal for February.

Precipitation for December was near normal, followed by below normal months in January and February. February was especially a dry month with only 0.35 inches of precipitation. This marks the driest February on record for Washington D.C. dating back to 1872. Overall, the three month period from December through February was the 12th driest on record for Washington D.C. and the driest since 2001–2002.

During the December through February period, Reagan National Airport received only two inches of snow. This was the least amount of December through February snowfall since 1997–1998, and only the second time two inches or less of snow fell since 1975–1976. It was also the third meteorological winter in a row with below normal snowfall.

This winter featured several strong wind events following the passage of a cold front. A 40 mph or greater peak wind gust was recorded ten days during this period, including 55 and 51 mph wind gusts on December 31st and February 12th, respectively.

BWI

The average monthly temperature for Baltimore was near normal for December, below normal for January, and above normal for February. Overall, temperatures averaged to be near normal this meteorological winter. The minimum temperature on January 17th of 2 F was the lowest temperature recorded since January 19th 1997 when it was 1F.

Precipitation for December was near normal, followed by below meteorological winter. The minimum temperature on January 17th of 2 F was the lowest temperature recorded since January 19th 1997 when it was 1F.

Precipitation for December was near normal, followed by below normal months in January and February. The 0.26 inches of precipitation that fell this February makes it the driest month since March 2006 and the driest February on record for Baltimore dating back to 1871. Overall, the three month period from December through February was the 13th driest on record for Baltimore and the driest since 2001–2002.

During the December through February period, Baltimore-Washington International Airport received only 3.3 inches of snow. This was the least amount of December through February snowfall since 2001–2002, and only the third time less than 3.5 inches of snow fell since 1972–1973. It was also the third meteorological winter in a row with below normal snowfall.

This winter featured several strong winds events following the passage of a cold front, including 51 and 54 mph wind gusts on December 31st and February 12th, respectively.

***Meteorological Winter is defined as December, January & February**

Ask Dr. Science

Hello! I'm Steve Zubrick and I am the office Science and Operations Officer or "SOO". Some folks here call me "Dr. Science"; not because I have a PhD (I do have a Master's), but they (not *me*) think I know everything about weather science. In my job here, I keep up with the latest in weather science as it pertains to improving our forecast and warning operations. And, more importantly, I pass along this knowledge to the operations staff of forecasters.

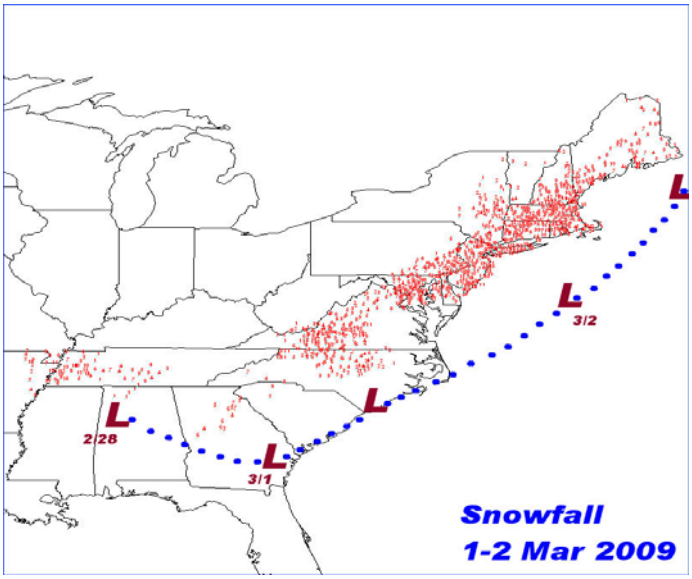
The purpose of this column is to select 1 or 2 questions readers submit about weather science. So, here's your chance. Ask away (don't be shy). I'm known to give elaborate explanations to the staff on various weather topics. My goal here is to offer explanations that are brief, concise and accurate; and perhaps understandable to those without a degree in meteorology. Submit your questions directly to me: Steven.Zubrick@noaa.gov.

March 1-2 Snowstorm

By, Brian Lasorsa, Forecaster

An area of low pressure passed through the Mid-Atlantic bringing the season's first and only significant snowfall to the Washington and Baltimore metropolitan areas. This storm system was unique, as it brought the heaviest snowfall amounts to lower southern Maryland.

The low pressure system tracked through the Mississippi Valley Friday night February 28th, and then eventually through the Mid-Atlantic Saturday March 1st and off the Mid-Atlantic coast on Sunday the 2nd. This system tapped into plenty of moisture from the Gulf of Mexico and Atlantic Ocean. Surface high pressure over Pennsylvania kept plenty of cold air in place during this time. As the moisture interacted with the cold air in place, snow broke out across the Mid-Atlantic. The low pressure center eventually emerged offshore of the Carolinas, bringing the heaviest snows south and east of the major Metropolitan areas.

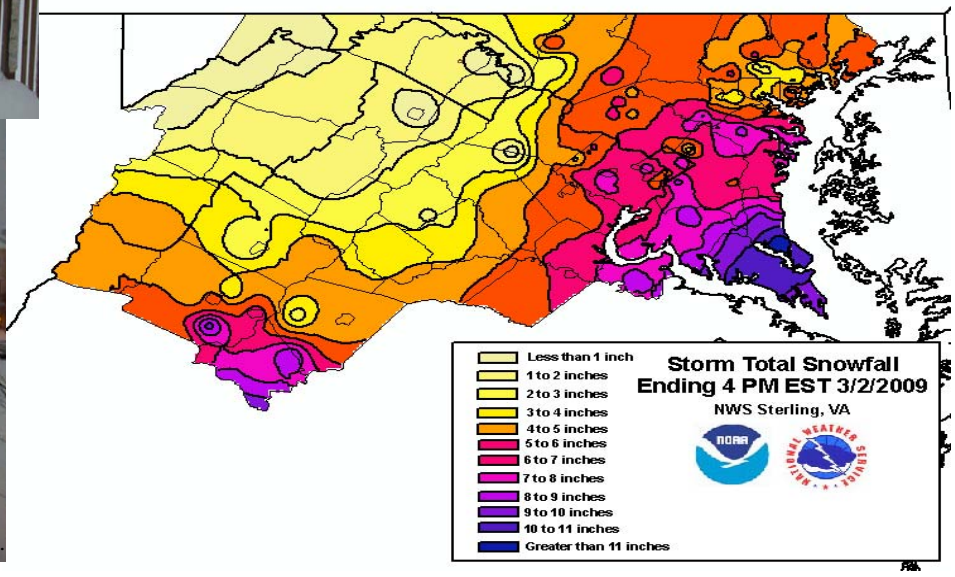


The heaviest snow fell overnight Sunday into Monday morning. The snowfall started out as a heavy wet snow. As temperatures fell below freezing and winds pick up, the snow became more powdery. This caused blowing and drifting snow, which caused poor travel conditions during the Monday morning rush hour.

The storm total at Washington National was 5.5 inches. The only other day of measurable snowfall for the entire winter season was on January 27th when 1.9 inches of snow fell. This means that 74 percent of the snowfall for the entire winter fell on March 1st and 2nd.

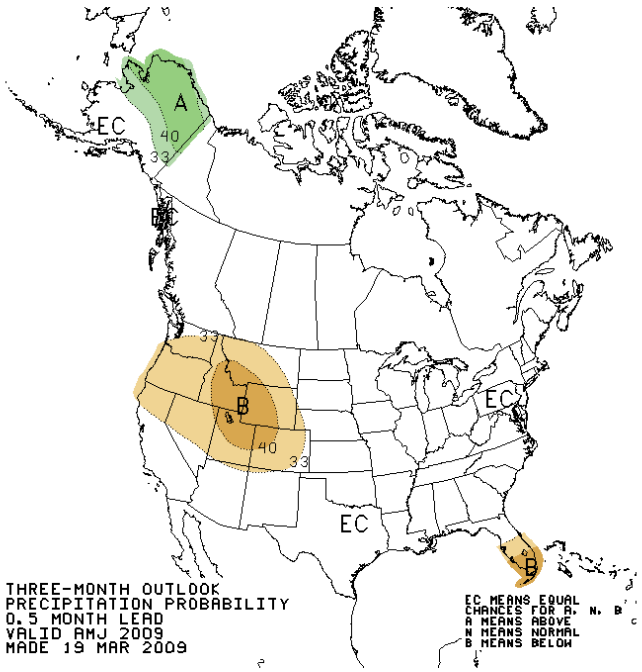
Photo provided by a King George County Spotter.

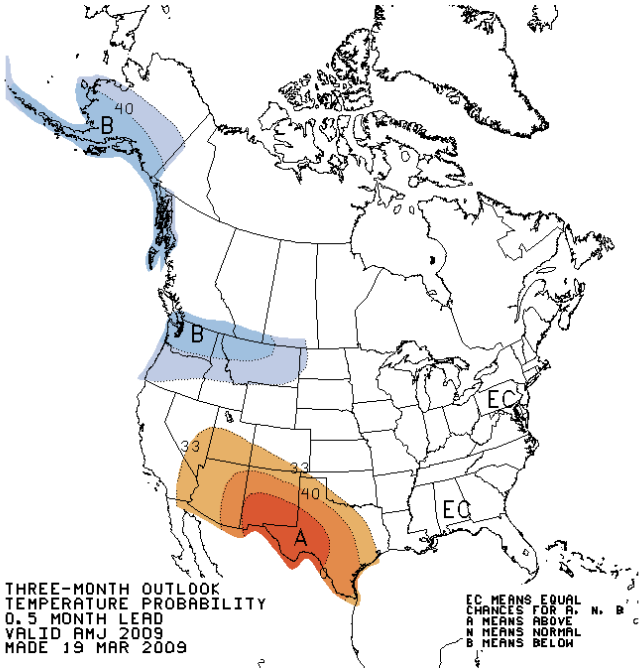
At Baltimore/Washington International the storm total was 5.8 inches. A total of 2.7 inches of snow previously fell during the winter season, making this storm system account for 68 percent of the season's snowfall. Washington Dulles reported 6.0 inches from this storm. Previously, only 2.0 inches of snow fell for the season, making this storm system account for 75 percent of the snowfall for the entire year.



April, May & June Outlook For Precipitation & Temperatures

For more information, visit the Climate Prediction Center's website:
http://www.cpc.noaa.gov





How's the Water?

By, Richard Hitchens,

Hydrologist

According to the National Integrated Drought Information System (NIDIS), much of the area from Baltimore southwest to Charlottesville and further north entered a moderate drought level in March. As of this writing in early April, the calendar year totals for Baltimore and Washington, DC are still 4 or more inches below normal. However, recent rains have brought stream and soil moisture to a wetter state than we experienced for much of February and March. Lack of snow and rainfall this winter is to blame for the dry conditions. So far in April, both sites have picked up over an inch of rain, which has helped lessen the severity of the dry conditions just a bit. During February 2009, the driest February on record in Washington, only 0.35" of precipitation fell.

Flow on the Potomac continues below normal. As of April 8th, water was heading toward Washington at a rate of 17,300 cubic feet per second as measure at the Little Falls Pumping Station just above the DC border with Maryland. The mean for April is 20,200. This is a big improvement versus readings for the last two months. The Climate Prediction Center indicates no strong signals are present that conditions through the end of June will be wetter or drier than usual.

For the latest drought information nationwide, visit :

http://www.drought.gov on the internet.

Local Broadcaster Visits NWS Office

By, Nikole Winstead Listemaa, Senior Forecaster

On March 23, the National Weather Service Baltimore/Washington Forecast Office was featured on the local ABC evening news broadcast. Doug Hill, Chief Meteorologist for ABC 7 News, broadcasted his weather segments live from our office. The segments were featured during the 5 PM and 6 PM news hours. Doug highlighted the technology that NWS Forecasters use during everyday operations.

Picture of Doug Hill (left) and James E. Lee (MIC)

Skywarn Reporting Procedures

1. **Tornado or Funnel Cloud**
2. **Storm Rotation**
3. **Hail (any size and depth on ground)**
4. **Wind 50 MPH (measured or estimated)**
5. **Wind Damage (downed trees and/or powerlines, structural)**
6. **Snow Accumulation (every two inches, storm total)**
7. **Ice Accumulation (any ice accumulation)**
8. **Heavy Rain (measured 1 inch, storm total)**
9. **Flooding (water out of banks and/or covering roadways)**
10. **Time of event & location**

How to report:

Telephone: 1.800.253.7091

Amateur Radio: WX4LWX

This is very time critical information that needs to be relayed to the forecaster **immediately**. Give the person on the phone/radio your name and spotter number.

If you absolutely cannot get to a telephone to relay a report or to email ***delayed*** reports and storm totals: **LWX-report@noaa.gov**

Upcoming Skywarn Classes

4/29 Basics I Hagerstown, MD

5/4 Basics I Forest Hill, MD

5/6 Basics I Woodbridge, VA

5/9 Basics I Monterey, VA

5/19 Basics I Kearneysville, WV

5/21 Basics I Arlington, VA

6/1 Basics I Silver Spring, MD

7/24 Basics I Luray, VA

Skywarn Classes are generally scheduled from September through June. For further information on the class schedule, please check our website listed below.

http: weather.gov/washington/skywarn/classes.html

Thank you for donating your time as a Spotter!

Please email any changes to your contact information to:

Nikole.Winstead.Listemaa@noaa.gov

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