

Sterling Reporter

Volume 8, Issue 3

Summer 2009



MIC's Corner

By, James E. Lee
Meteorologist- In- Charge

Accurate weather observations are the cornerstone of the sciences of meteorology and hydrology. As truth is the foundation of jurisprudence, the weather observation is the foundation to numerical weather prediction models. Weather observations play a critical role in fulfilling the National Weather Service mission to protect life and property with timely and accurate warnings.

The Baltimore/Washington Weather Forecast Office (WFO) has an outstanding observation program. It is comprised of upper air observations from balloons launched twice daily from our facility; assessing weather observing equipment and procedures at regional airports, including Baltimore/Washington International Thurgood Marshall, Dulles International, and Reagan National airports; Skywarn Spotters, who collect and transmit hazardous weather observations such as hail and snowfall measurements; and the Cooperative Observer Program (COOP).



Mr. Richard Weaver (L) Mrs. Virginia Weaver (Center), Mr. Robert Weaver (R)

The COOP Program for the Baltimore/Washington WFO is comprised of approximately 80 stations in Maryland, West Virginia, Virginia, and the District of Columbia. Each of these stations is staffed by dedicated observers, who provide us with daily weather observations. These observations are forwarded monthly to the National Climatic Data Center in Asheville, North Carolina, where they become the weather record of the United States.

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Two Counties Renew their StormReady Status

By, Christopher Strong, Warning Coordination Meteorologist

In early summer, both Greene County Virginia and the University of Maryland renewed their StormReady recognitions.

Sheriff Scott Haas in Greene County was the driving force in recertifying the county. This included ensuring all schools and government buildings in the county have a properly functioning All-Hazards NOAA Weather Radio to get first alert capability for all NWS and Department of Homeland Security alerts. Their communications capabilities for both receiving and disseminating weather warnings out to the public were superior. Greene County has also been proactive in training its citizens to recognize the various weather threats that can affect their county. In addition to the public safety classes

(continued page 4)

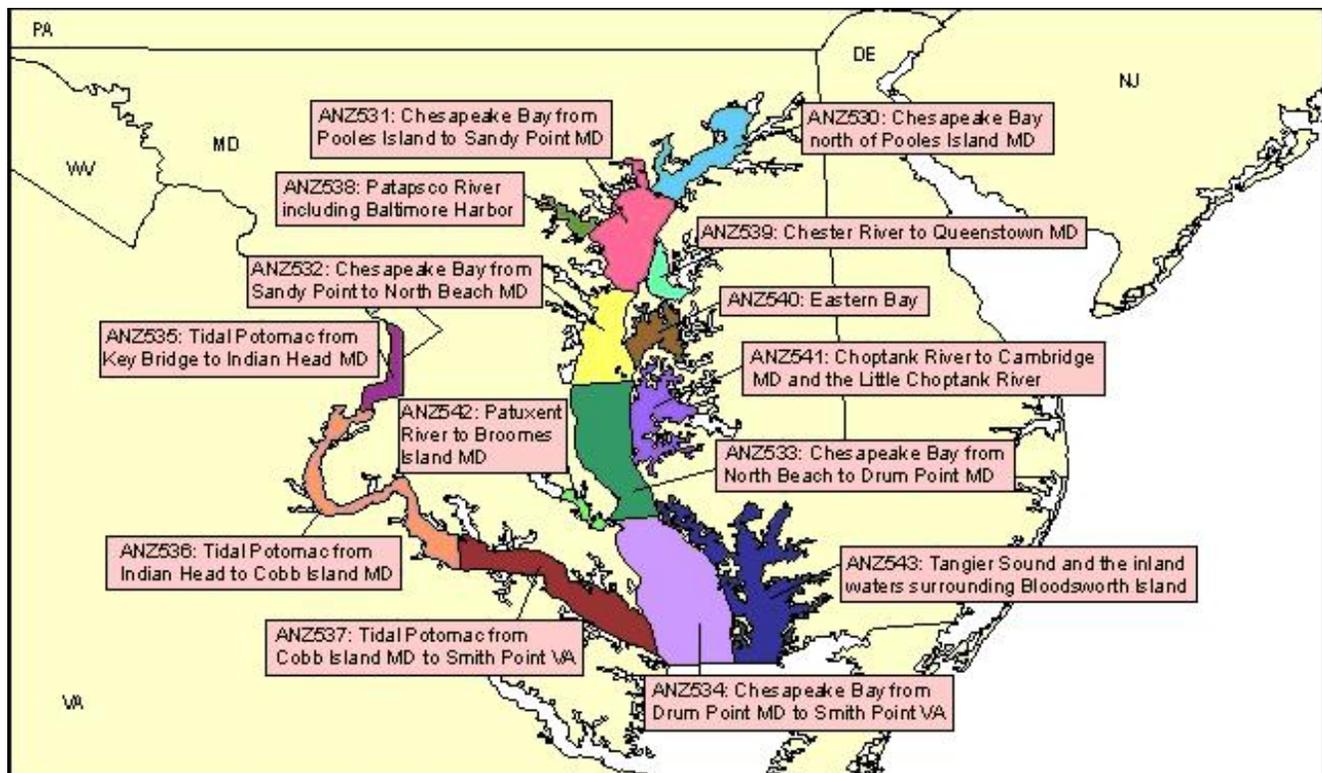
Increasing Marine Specificity

By, Brandon Peloquin, Senior Forecaster

On July 15th, marine zone changes became effective across the Baltimore/Washington marine area of responsibility. These changes were a multi-year effort which incorporated contributions from NWS Baltimore/Washington, Mount Holly and Wakefield, Eastern Region Headquarters and NWS Headquarters and, most importantly, support and assistance from constituents who comprise the local Baltimore/Washington Marine Users Committee.

With these changes, many of the smaller rivers and tributaries have been chopped off the existing marine area of the Tidal Potomac River and the Maryland Chesapeake Bay and absorbed with public land zones. However, some of the rivers and tributaries with higher boat traffic, such as the Patapsco River and Patuxent River, have been created as new marine zones. These marine zone changes will improve forecasts, warnings and services across the Baltimore/Washington marine area by making them more area-specific.

The New Marine Zones Designation



(story continued on next page)

**To phone in marine observations:
1.800.253.7091**

Increasing Marine Specificity (continued)

Your National Weather Service forecast

7NM SSE Annapolis MD Chesapeake Bay

NWS Baltimore, MD/Washington, D.C.
Mobile Weather Information | Comments/Suggestions

Experimental Marine Point Forecast
Last Update: 3:38 pm EDT Aug 2, 2009

38.87°N 76.45°W
Forecast Valid: 6pm EDT Aug 2, 2009-6pm EDT Aug 9, 2009

Forecast at a Glance

Tonight	Monday	Monday Night	Tuesday	Tuesday Night	Wednesday	Wednesday Night	Thursday	Thursday Night
SSW 10kt 2ft↓	NW 8kt↓ < 1ft	SSW 8kt↓ < 1ft	↑S 7kt < 1ft	S 8kt < 1ft	Light Wind < 1ft	SSE 6kt↓ < 1ft	Light Wind < 1ft	Light Wind < 1ft

Marine Point Forecast

Detailed Point Forecast

Hazardous marine condition(s):
Click Map for Forecast Disclaimer

Hazardous Weather Outlook

Tonight: SSW wind 8 to 10 kt becoming WNW after midnight. Scattered showers and thunderstorms before 10pm, then a slight chance of showers between 10pm and 3am. Patchy fog after 3am. Waves 2 ft subsiding to 1 ft or less.

Monday: NW wind 5 to 8 kt becoming variable and less than 5 kt in the afternoon. Isolated showers and thunderstorms after 2pm. Waves 1 ft or less.

Monday Night: SSW wind around 6 kt becoming variable and less than 5 kt after midnight. Isolated showers and thunderstorms before 10pm. Waves 1 ft or less.

Tuesday: Variable winds less than 5 kt becoming S 5 to 7 kt in the afternoon. Isolated showers and thunderstorms after 1pm. Waves 1 ft or less.

Tuesday Night: S wind 5 to 8 kt becoming WSW after midnight. Isolated showers and thunderstorms before 10pm. Waves 1 ft or less.

Wednesday: Variable winds 5 kt or less. A chance of showers and thunderstorms. Waves 1 ft or less.

Wednesday Night: SSE wind around 6 kt becoming variable and less than 5 kt after midnight. A chance of showers and thunderstorms. Waves 1 ft or less.

Thursday: Variable winds 5 kt or less. Partly sunny. Waves 1 ft or less.

Thursday Night: Variable winds 5 kt or less. Mostly cloudy. Waves 1 ft or less.

Map data ©2009 Tele Atlas - Terms of Use
Requested Location: 38.87°N 76.45°W Forecast Area Elevation: 0 ft

Current Conditions

TPLM2 Thomas Point

Lat: 38.9°N Lon: 76.44°W Elev: 0
Last Update on Aug 2, 5:00 pm EDT

Air Temperature:	77°F (25°C)
Water Temperature:	81°F (27°C)
Dewpoint:	73°F (23°C)
Wave Hgt/Dir:	NA
Dominant Wave Period:	NA
Visibility:	NA

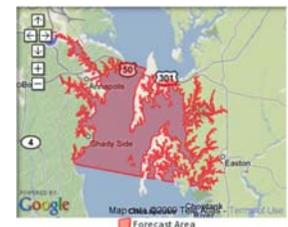
SE 9 G 11
KT

1011.4 mb

Nearby Observations: [Past Observations](#)

I would like to thank everyone involved in making the above changes happen, which I am confident will improve marine forecasts, warnings and services provided by the Baltimore/Washington Weather Service Forecast Office. If you have any feedback regarding the marine zone changes or Marine Point & Click, please email me at: Brandon.Peloquin@noaa.gov.

From the Point & Click Page, you can also access the larger areal marine zone forecast.



Additional Forecasts & Information

Zone Area Forecast for Chesapeake Bay from Sandy Point to North Beach MD (ANZ532)

Forecast Discussion

National Marine Forecasts	Tide Information
Printable Forecast	Text Only Forecast
Hourly Weather Graph	Tabular Forecast
Graphical Forecast	
International System of Units	About Marine Point Forecasts
Hazardous Weather	Regional Weather Conditions
Past Weather Information	Interactive Forecast Map
Home	

In addition to enhancing specificity through marine zone changes, the Baltimore/Washington Weather Forecast Office, like all other marine offices in Eastern Region, has incorporated the Marine Point & Click function on its website: <http://weather.gov/baltimore> or <http://weather.gov/washington>. In the past, users could visit the website, and receive the Coastal Waters Forecast which provided an average of conditions over a marine zone. The Coastal Waters Forecast remains available; however, users may now obtain a specific forecast for a point within a marine zone via the Point & Click function.

ANZ532-030715-
CHESAPEAKE BAY FROM SANDY POINT TO NORTH BEACH-
335 PM EDT SUN AUG 2 2009

.TONIGHT...W WINDS 10 KT. WAVES 1 TO 2 FT. SCATTERED SHOWERS AND TSTMS THIS EVENING...THEN A SLIGHT CHANCE OF SHOWERS AFTER MIDNIGHT. PATCHY FOG AFTER MIDNIGHT. VSBY 1 TO 3 NM THIS EVENING.

.MON...NE WINDS 5 TO 10 KT. WAVES 1 FT.

.MON NIGHT...SW WINDS 5 KT. WAVES LESS THAN 1 FT.

.TUE...SW WINDS 5 KT. WAVES LESS THAN 1 FT.

.TUE NIGHT...S WINDS 5 TO 10 KT. WAVES 1 FT.

.WED...SW WINDS 5 KT. WAVES LESS THAN 1 FT. A CHANCE OF SHOWERS AND TSTMS.

.WED NIGHT...E WINDS 5 KT. WAVES LESS THAN 1 FT. A CHANCE OF SHOWERS AND TSTMS.

.THU...N WINDS 5 KT. WAVES LESS THAN 1 FT. A CHANCE OF SHOWERS AND TSTMS IN THE MORNING.

.FRI...SE WINDS AROUND 5 KT. WAVES 1 FT. A CHANCE OF SHOWERS AND TSTMS.

WINDS AND WAVES HIGHER IN AND NEAR TSTMS.

StormReady (Continued)

that the county holds throughout the county, Greene County has partnered with the NWS several times over the years to hold weather spotter training classes, taught by NWS Meteorologists. These Skywarn classes and the StormReady program in general are vital to maintaining strong ties with the county and their residents. Those ties allow the county and NWS to work most effectively together when severe weather strikes.

Photo By: Alex Carrier
The Greene County Record



Clayton Stiver (WVIR), Nikole Listemaa (NWS) & Sheriff Scott Haas

For the University of Maryland, Major Jay Gruber and his staff at the University's Department of Public Safety were once again instrumental in attaining recertification for the University of Maryland's StormReady status. Since the deadly College Park tornado of September 2001, the university's capability to both receive and broadcast warnings and alerts of all kinds has grown into a top notch operation. Their ability to reach all of their students and faculty extraordinarily fast is impressive and utilizes several different methods. Between alert stations in buildings, sirens, text messaging, radio alerts, and phone systems, everyone on the university grounds can be sure that any type of warning or alert will be received (weather or otherwise) and the word will get out quickly. The month before the University of Maryland renewed their StormReady status, flash flooding struck the campus. During

the event, the University's Department of Public Safety remained in close contact with the Baltimore/Washington Forecast Office while monitoring the situation closely on their network of video cameras across the campus. This helped to mitigate damage and casualties from a dangerous flash flooding event.

Many thanks to Major Gruber, Sheriff Haas, their respective staffs, and the people of Greene County and the University of Maryland for continuing to work with their local National Weather Service office in our mission to protect lives and property from the many weather hazards that threaten our area.



MIC's Corner (Continued)

You can access our COOP observations on our homepage located at <http://weather.gov/washington>, and then select the COOP Observer link in the left hand column. From this location, you can view the previous day's maximum temperature, minimum temperature, precipitation, and snowfall plotted on a regional map from each of our COOP locations. From that same page, you can access archived COOP observations back to October 2008.

In recognition of longstanding COOP service, the National Weather Service (NWS) grants The Family Heritage Award to a family with 100 years or more of continuous COOP observations at one location. On May 13 of this year, I had the honor to present the Family Heritage Award to the Weaver Family of Dale Enterprise, Virginia, for providing more than 125 years of

service to the nation. Since 1880, the Weaver family has been taking daily weather observations for the historic climate record Dale Enterprise. The COOP station the Weavers operate is the oldest operating station in the Commonwealth of Virginia, and the third oldest in the entire Nation. Additionally, the NWS grants The Honored Institution Award to an institution with 75 years or more of continuous COOP observations. On July 27, I had the honor to present the Honored Institution Award to the Chesapeake Biological Laboratory in Solomons, Maryland, in recognition of 75 years of observations. Congratulations to the Weavers and to the Chesapeake Biological Laboratory; your observations are much appreciated!

Without all of our COOP Program weather observations, and other observations from our observation program, you would not be pleased with our forecasts and warnings. Thanks to all of our weather observers who contribute to the success of this office!

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.

Climate Corner

By, Jared Klein, Forecaster

March–May 2009

DCA

The average monthly temperature in Washington D.C. was slightly below normal in March, above normal in April and near average in May. Overall, temperatures this three month period of March–May 2009 averaged near normal. The minimum temperature on the morning of March 3rd was the coldest temperature recorded in Washington D.C. during the month of March since 1986. Just a month and a half later, the maximum temperature reached 92F on April 26th, which was the only time it reached 90F or above during this three month period and the hottest April temperature in Washington D.C. since 2002.

March was very dry with only half of the normal precipitation for the month. This dry pattern did not continue as monthly precipitation for both April and May were above normal precipitation. In fact, May 2009 was the 6th wettest May on record dating back to 1871. A total of 12.27 inches of rain fell in the two month period of April–May, making it the 5th wettest April–May period on record. Measurable precipitation was recorded on 29 days during the April–May 2009 period, the most in any two month period since May–June 2004. The 1.65 inches of rainfall from a line of heavy thunderstorms on May 26th broke the daily record of 1.49 inches previously set in 2003.

All of the 5.5 inches of snowfall during the month of March fell from the March 1–2 Washington D.C. snowstorm. A new daily record snowfall was set on March 2nd when 4.5 inches of snow fell, which broke the old record of 2.1 inches set in 1994.

BWI

The average monthly temperature for Baltimore was near normal in March, above normal in April and slightly below normal in May. Overall, temperatures during the three month period of

March–May 2009 averaged near normal. Two daily record low temperatures were set during this three month period; a low temperature of 10F on March 3rd broke the old record of 12F set in 1925, while a low temperature of 38F on May 19th broke the old record of 39F in 2003. Although the low temperature of 8F on March 4th did not set a daily record, it was tied for the third coldest temperature ever recorded at Baltimore during the month of March since records started in 1870, as well as being the coldest March temperature since it was also 8F on March 21, 1965. These record cold days were sandwiched between a stretch of hot days from April 25–27th, when temperatures soared into the 90s. This three day stretch was the only time it reached 90F in the March–May period and was only the fourth time Baltimore has ever experience 90F or higher on three days during the month of April, and the first since 1976.

Precipitation in March was well below average with Baltimore only receiving about half of the normal precipitation for the month. Conversely, precipitation for April and May were well above normal with Baltimore totaling around two times the normal precipitation in both months. April 2009 was the wettest April since 1983 while May 2009 was the wettest May since 1989, as well as the 2nd wettest May at Baltimore dating back to 1870. A total of 14.22 inches of rain was observed during the two month period of April–May 2009, making it the wettest April–May period since 1889. Measurable precipitation was recorded on 30 days during the April–May 2009 period, the most in any two month period since May–June 2004. On May 26th, a line of heavy thunderstorms brought 2.29 inches of rainfall, which broke the old daily record of 1.72 inches previously set in 2001.

A snowstorm on March 1–2 dumped 5.8 inches of snow on Baltimore. A new daily record snowfall was set on March 2nd when 4.7 inches of snow fell, which broke the old record of 3.7 inches set in 1969.

Ask Dr. Science



Steve Zubrick

Science and Operations Officer
(SOO)

Steven.Zubrick@noaa.gov

Dear Dr. Science,

I love going out on the Chesapeake Bay to fish. I often see in your Area Forecast Discussion (WBCAFDLWX) that the winds will be gusting out of the south due to “channeling up the Bay”. I certainly know the effect, but what causes it and how do you predict it?

Signed,
Gary Stein
Hollywood, MD

When forecasters refer to winds “channeling” up or down the bay, they are referring to higher surface wind speeds that are from the north or south moving over the waters. Several factors contribute to the increased wind speeds; the geography of the Bay, the large scale wind flow,

frictional effects and the uneven heating of land versus the water.

The Chesapeake Bay in Maryland is oriented generally in a north to south direction. When large scale winds over the entire Mid Atlantic are from north or south, they can travel the length of the Bay, generally unimpeded over the water as compared to land and its frictional effects.

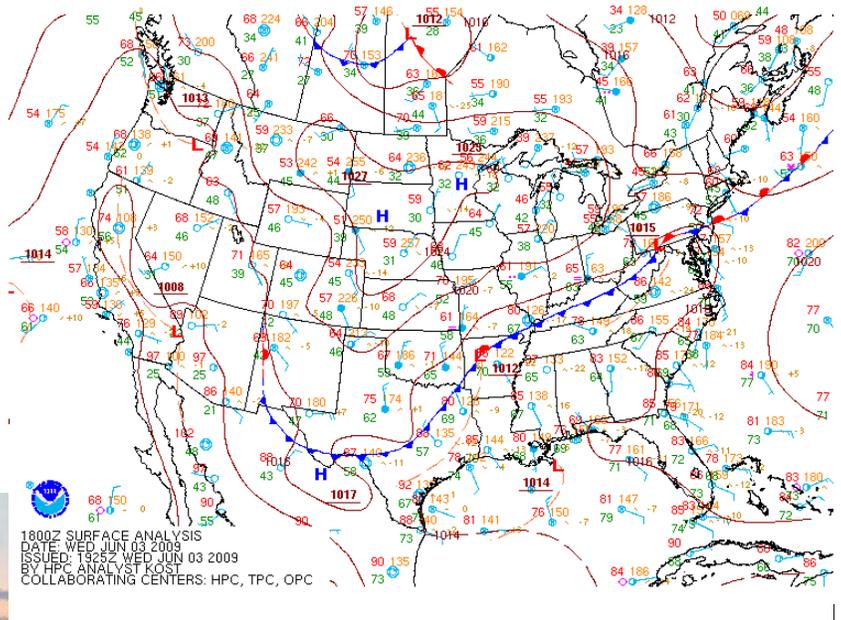
In the warmer months (April – October), the sun heats up land faster than water. As the air mass over the land continues to get warmer, it begins to rise. As the warmer air rises, it is replaced by the cooler air over the waters. This effect is maximized later in the day, when cooler ocean air begins

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Severe Weather on June 3, 2009

By, Brian Lasorsa, Forecaster

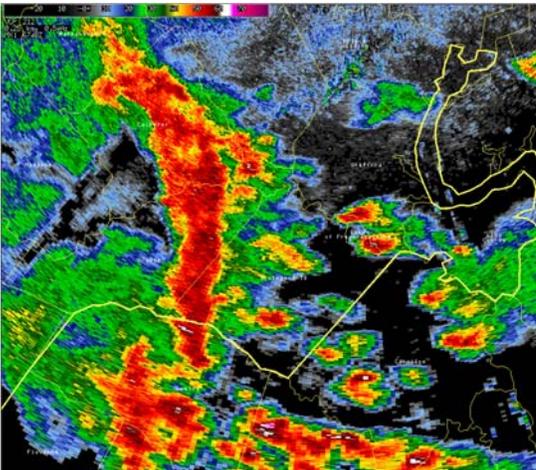
Severe thunderstorms rolled through the area Wednesday, June 3rd as a cold front slowly tracked across the region. High pressure over the western Atlantic continued to provide a southwest flow ahead of the cold front bringing in plenty of warm and humid air from the Gulf of Mexico. The warm and humid conditions contributed to an unstable atmosphere. As the cold front dropped south into the region Wednesday afternoon, it combined with the unstable atmosphere to trigger showers and thunderstorms. Due to the extreme amount of instability, some thunderstorms became severe causing damaging winds and large hail. One of the stronger thunderstorms even produced a tornado.



Mobile home damage in Stanley, VA. Photo provided by Page County Emergency Management.



Photo Provided by a Spotter in Spottsylvania County.



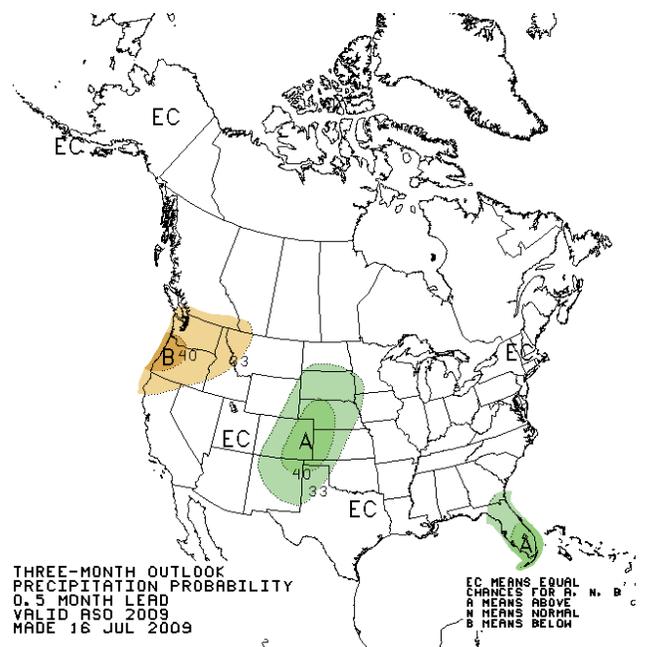
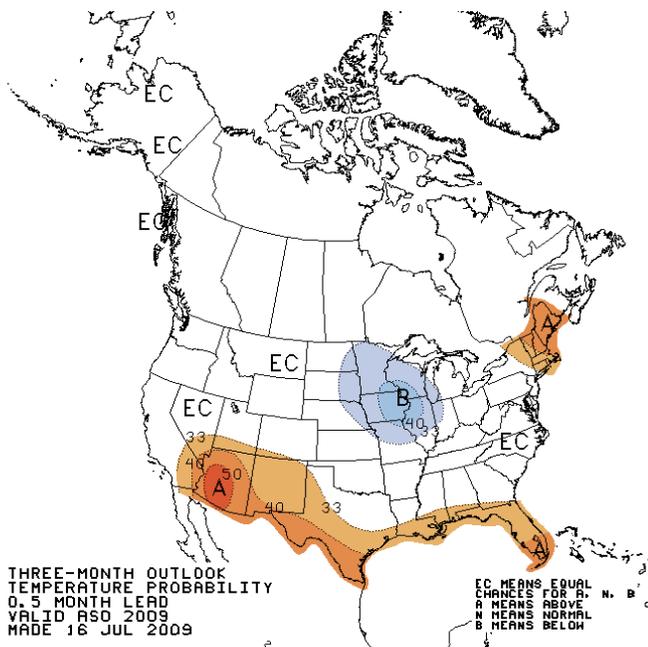
Radar picture of the line of severe storms that produced the large hail in Spottsylvania County.

There was extra spin at the low-levels of the atmosphere near the cold front Wednesday afternoon. This caused one of the stronger thunderstorms to develop into a tornado. The tornado touched down near the intersection of Pond Avenue and Dogwood Lane, one mile west-northwest of the town center of Stanley. The tornado has been classified as an EF-1 with peak winds estimated at 90 to 100 mph. The path length of the tornado was one and two thirds of a mile and the path width was 600 yards. The tornado blew a mobile home off its foundation and it ripped off the roof of a large VDOT salt storage garage. The tornado was also responsible for several trees down.

Due to an abundant amount of moisture in the atmosphere, thunderstorms also produced locally heavy amounts of rain in a short period of time. This resulted in flash flooding across the Washington metropolitan area Wednesday evening. Cars were stranded in Rockville on interstate 270 and cars were floating in a parking lot one mile east of Herndon on Elden Street. Conditions gradually improved overnight Wednesday behind the cold front, but light rain continued to bring damp and dreary conditions through Friday.

August, September and October Outlook For Temperatures & Precipitation

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



Kevin Witt Joins Staff

By, **Nikole Listemaa,**
Senior Forecaster



The NWS Baltimore/Washington Forecast Office welcomes Kevin Witt as our newest Meteorologist Intern. He reported to work Kevin graduated from The Pennsylvania State University with a B.S. degree in Meteorology in 1998.

Since graduating from college, Kevin has spent ten years working for private meteorological firms across the United States. For the first four years out of college, Kevin worked at Wilkens Weather Technologies, Inc in Houston, Texas. His main duties included developing forecasts for energy and shipping companies and compiling climatological studies of tropical systems.

For the last six years, Kevin worked for AccuWeather, Inc in State College, Pennsylvania. Kevin issued forecasts for transportation companies, coastal communities, television and radio stations, and newspapers around the country. He also did some broadcasting work for radio stations such as WCBS in New York City and WBBM in Chicago.

Welcome Kevin!

Ask Dr. Science (continued)

to move into the mouth of the Bay. This, in combination with the large scale flow and less friction over the waters, can cause increased wind speeds from the south in the main channel of the Bay.

Over the last several years, our forecasters have had access to sophisticated, high-resolution weather prediction models that help account for the various physical parameters

(like differential heating, friction, etc) that control channeling of winds on the Bay. These models have demonstrated some skill in forecasting the “channeling” of winds in the main part of the Bay, especially during the late afternoon into the evenings during the summer months. Although the models are good, they're not perfect. Forecasters here rely on their experience, as well as the model guidance, to help predict situations where channeling winds are expected over the waters.

**If you have a question for
Dr. Science, please send
him an email to:**

Steven.Zubrick@noaa.gov

Subject: Ask Dr. Science

Skywarn Reporting Procedures

1. Tornado or Funnel Cloud
2. Storm Rotation
3. Hail (any size and depth on ground)
4. Wind 50 MPH or greater (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



There are currently no Skywarn classes scheduled.

Scheduling for the upcoming Skywarn Season (2009-2010) will begin in late August. Please check our website for further updates and class listings.

Skywarn classes are typically taught from September through early June.

<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

Baltimore/Washington Forecast Office

43858 Weather Service Road

Sterling, VA 20166

703.996.2200

<http://weather.gov/washington>



Sterling Reporter

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Editor: Nikole Winstead Listemaa

