Sterling Reporter

Newsletter of NOAA's National Weather Service Baltimore/Washington Forecast Office

Volume 3, Issue 4 **Winter 2004/2005**

Sterling Wins Gold!
Steve Rogowski

We're honored to be able to pass along the news of our Gold Medal awarded by the Department of Commerce for our contributions during Hurricane Isabel in September of 2003. We, along with offices in Wakefield Virginia, Newport North Carolina and the Tropical Prediction Center located in Miami Florida were recognized for the accurate and timely information before, during and after Hurricane Isabel. This allowed decision makers to be proactive in initiating an emergency response, keeping the public well aware of the potential dangers.

The Gold Medal is the highest honorary award given by The Department of Commerce; and is granted by the Secretary for distinguished performance characterized by extraordinary, notable, or prestigious contributions that impact the mission of the Department.

Hurricane Isabel was an extremely dangerous Category 5 Hurricane while over the open waters of the Atlantic. Its track and intensity were well forecast a week in advance; making the National Weather Service's forecast one of the best in history for a hurricane.

Inside This Issue

Meteorologist-In-Charge's Corner
Jim Lee

Welcome to the Winter Edition of the Sterling Reporter.

Since our last edition, the headlines have been dominated by the major earthquake off the west coast of Northern Sumatra, and the resulting tsunami, which killed over 250,000 people, and impacted many nations across the world. This tragic event was one of the top seven natural disasters of recorded history, with only the Tangshan Earthquake (255,000 deaths) of 1976 and the Bangladesh Cyclone (300,000 deaths) of 1970 having more deaths in any natural disaster of the past 100 years. For the record, the worst natural disaster in recorded history occurred in China in 1931, when 3,700,000 deaths were reported in the Huang He River Flood.

While tsunamis on the east coast of the United States are very rare, they are not as rare on the west coast and Alaska or in the Pacific Rim. NOAA's National Weather Service (NWS) operates two tsunami warning centers: The West Coast/Alaska Tsunami Warning Center (http://wcatwc.arh.noaa.gov) in Palmer, Alaska, provides tsunami warnings for Alaska, British Columbia, Washington, Oregon, and California; and the Pacific Tsunami Warning Center (http://www.prh.noaa.gov/pr/ptwc) in Ewa Beach, Hawaii, provides warnings for tsunamis to most countries in the Pacific Basin as well as to Hawaii and all other US interests in the Pacific.

Tsunamis are very rare on the east coast of the United States adjacent to the Atlantic Ocean and the southeast coast of the U.S. adjacent to the Gulf of Mexico. Despite the improbable occurrence of a tsunami in these areas, NOAA's NWS has recently put into place a tsunami program for both of these coastlines, which includes NWS Baltimore/Washington's area of responsibility. It is best to be prepared in case of any disaster, no matter how low the likelihood of event.

Our region is prone to practically every type of weather phenomenon that could potentially lead to disaster: hurricanes, river floods, flash floods, winter storms, tornadoes, severe thunderstorms, wind storms, wildfire, heat waves, and cold air outbreaks. It is our mission at NWS Baltimore/Washington to help protect life and property during these types of adverse weather events by using a three-tiered approach to notify the public: 1) Outlook – provides three to seven day notification of the chance of adverse weather; 2) Watch – provides 24 to 60 hour notice of potential of adverse weather; and then 3) Warning – which

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Fall 2004
Chris Strong

The autumn of 2004 was a bit warmer than normal with near normal precipitation. It also featured a number of interesting weather events along the way.

The temperatures averaged about a degree to a degree and a half warmer than the average. Baltimore at Baltimore/Washington International Airport averaged 57.7 degrees this fall, the normal was 56.1 degrees. Washington at Reagan National Airport averaged 60.3 degrees, a degree warmer than the 50.3 average. By month, September was much like the season, about a degree warmer than normal, while October was the exception and was slightly cooler than normal. November rebounded with one of the warmer Novembers on record (twentieth for Washington and thirty-second for Baltimore) to make up the difference.

Interestingly, Washington's Reagan National Airport, by the moderating waters of the tidal Potomac, had yet to reach freezing at the end of the season. Baltimore hit freezing on November 9th, Charlottesville November 8th, and Martinsburg way back on October 18th.

Precipitation was decidedly near normal around the region. Both Washington and Baltimore had near normal values, just over ten inches of rain. Other than a few flurries in the Appalachian Mountains, there was no snow during the fall of 2004. All precipitation fell as rain.

That rain did fall on more than our standard amount of days. Fall is typically the fairest time of year with the least amount of rain days. There were 32 days with measurable rain in Baltimore, and 30 in Washington, the average for both is 25 days. That was the most amount of rain days for autumn in Baltimore since 1993 had 33 days.

The warmest day of the season was 86 degrees in Baltimore and 87 for Washington, both on September 23rd. The coldest was 26 for Baltimore on November 11th, and 33 for Washington on November 14 and 26th.

The remnants of Hurricane Ivan was the most notable weather event for the Mid-Atlantic region. That storm moved through during September 17th and produced a record tornado outbreak for the region. Thirty five tornadoes touched down that afternoon and evening over the Sterling forecast area that encompasses western and central Maryland, DC, eastern West Virginia, and northern and northwest Virginia. The majority of the tornadoes in our forecast area occurred in northern Virginia, and west-central Maryland. The tornadoes ranged in intensity from F0 to F3, and produced significant damage to homes, businesses, and trees alike. The following website contains much more detailed information on this event: http://www.erh.noaa.gov/er/lwx/sept17tornadoes/index.htm

Also significant this season was an excessively warm Halloween. One of our warmest days of the season came at the end of October. High temperatures reached 75 to 80 degrees across the area that afternoon, Washington hit 79.

Another holiday weather event was a strong wind behind a cold front on Thanksgiving afternoon and night. Winds gusted 25 to 45 miles per hour across the area as cooler air moved in behind a low pressure system.

Sterling Forecast Office to Participate in 2005 Washington Boat Show
Steve Rogowski

The National Weather Service Forecast Office in Sterling Virginia will be extending our tradition of participating in the annual Washington DC Boat Show. This year's Boat Show runs from Wednesday, February 9th through Sunday, February 13th at the new Washington Convention Center.

Mariners appreciate how weather closely ties to sailing. Whether it's the danger of lightning and torrential rain from a passing thunderstorm, or stiff winds and high waves behind a cold front, the weather can be a significant impact for those on the waters.

At the NOAA display, you'll find a plethora of informational pamphlets, many of which will carry the marine theme of the Boat Show. Our internet site will be made available at our booth for those who are interested in learning how to access a wide array of weather data. We'll also be there to answer any questions and have discussions about our forecasts and warnings.

This year we plan to have a diverse group of our meteorologists participating during the show, which will allow the public to meet and talk with those who work hard to issue accurate and timely forecasts and warnings.

Additional information about this year's Washington Boat Show can be found at:
http://www.washingtonboatshow.com/

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provides 24 hour or less notification of impending adverse weather.

People living and visiting in the Baltimore/Washington region should be confident in the outlook/watch/warning services of the NWS Baltimore/Washington Forecast Office. Combining these services with partnerships with emergency managers, radio and television broadcasters, the print and internet media, other local, state, and federal government agencies, Cooperative Observers, amateur radio operators, and SkyWarn Spotters, we are "Working Together to Save Lives."

Winter Flooding

Rich Hitchens

One good thing about winter is that you don't have to worry about big floods. Right?

Any of you that have been around for more than 9 years know first hand that this is not a true statement. This past January marks the 9th anniversary of the devastating floods of winter 1996. Anyone remember that?

A heavy snowstorm affected the area early in the month. From the 6th to the 9th, Dulles Airport received 24.8 inches of snow. Accumulations of 3 feet or more were reported in some parts of the mountains of western Maryland, eastern West Virginia, and the Blue Ridge in Virginia.
Not only was it snowy, but it was cold too. The low temperature at Dulles on the 9th was 2 degrees below zero.

Later in the month, temperatures warmed, and a period of heavy rain occurred. The temperature at Dulles on Friday the 19th reached a record 62 degrees. The heavy snowpack that was around days before suddenly vanished and ran off into area streams and rivers. At the same time, a storm system moving through the region dumped 1 to 3 inches of rain with isolated spots receiving 5 inches. Already swollen waterways could take no more, and rose to record stages in some cases.

Wills Creek near Cumberland, Maryland crested at 23.1 feet, a record level. The North Branch Potomac at Cumberland peaked at 25.6 feet, the second highest level on record.

Forecasting winter floods is especially problematic. Many other factors need to be accounted for, and sometimes estimated, that are not required during the warm season. How much snow is there across the drainage area? How much water is it holding? Is the ground frozen or saturated? How much rain will fall into the snow? Will the rain melt the snow or will the snow absorb the rain water? If it melts, how fast will it occur?

Flooding is always a threat, even in winter. If you are in a flood prone area, and the forecast calls for rapidly warming temperatures and rain over a healthy snow pack, pay close attention to NWS weather and hydrologic forecasts.

Senior Forecaster Cindy Woods Moves on to National Weather Service Headquarters

Steve Rogowski

On a mid January Friday ahead of a prospective winter storm, staff members paused for a short period to bid Cindy farewell. Cindy, who served as a senior forecaster at the Sterling office for two years, accepted a position to work at National Weather Service Headquarters.

The mood during the going away party was mixed. There was of course happiness that Cindy's hard work was recognized and will lead to many bigger things in her career. However, an underlying tone of sadness could be felt by all, as each of us understood the loss our office will endure on several levels with Cindy's departure.

Each of us who gathered to see Cindy off, some of whom came in to work several hours early or during days off, had kind words and stories about Cindy to share. Cindy's dedication, strong scientific contributions, leadership, management skills, and unsurpassed ability to work through tough situations were common themes of our reflections.

Despite her new job, Cindy will remain a part of our office. From time to time, she plans to work the forecast desk here in Sterling to keep her on top of the operations within field offices of the National Weather Service.

The staff wishes Cindy the best of luck with her new job and looks forward to the next time she comes through the front door.

Weather Review – August/September 2004
Cindy Woods, Storm Data Focal Point

For the detailed report on these weather events, see the Storm Data monthly reports on our website at: http://www.erh.noaa.gov/lwx/Storms/Strmdata/index.htm

August

1st – Flash flooding caused the closure of numerous roads across north central Maryland and sporadically across northern Virginia. A quick rise of water in Gun Powder Falls carried a man who was tubing a few miles downstream. He was later found with only minor injuries.

2nd – A waterspout was reported 3 miles east of Annapolis over the Chesapeake Bay.

4th – Severe thunderstorms downed trees and power lines across much of western and central Maryland along with portions of eastern West Virginia.

10th – Lightning struck 3 houses across Anne Arundel and Howard Counties, causing fires at two of these homes.

11th – The Washington Metro Area experienced pockets of flash flooding, downed trees and power lines, and hail exceeding the size of golf balls (up to 3.00" diameter).

12th – Thunderstorms caused spotty flash flooding and damaging winds across northern Virginia and north central Maryland.

19th – Thunderstorms downed trees and power lines across a localized portion of north central Virginia.

20th – Heat Indices reached or surpassed the 105 degree mark across portions of north central Virginia and Maryland.

September

The majority of the storm damage in September was related to one of the three tropical systems that affected the Sterling Forecast Area.

8th - The remnants of Hurricane Frances produced scattered tornadoes and flash flooding across Maryland, northern Virginia, and eastern West Virginia. Tornado damage was scattered throughout Fauquier, Culpeper, King George, Stafford, Prince William, Clarke, and Orange counties in Virginia, as well as Charles County in Maryland. Felled trees, downed power lines and swollen creeks were common throughout region. 7 inches of rain fell in the western Panhandle of Maryland. In Allegany County, several bridges were under water and at least 20 basements flooded. Flooding also produced damage in Pendleton, Hampshire and Morgan counties in West Virginia.

11th - The U.S. Coast Guard and Calvert County Emergency Officials reported waterspouts near Cove Point.

17th – The remnants of Hurricane Ivan produced a widespread tornado outbreak across northern Virginia, much of Maryland, and the eastern Panhandle of West Virginia. Storm damage estimates were in the millions, and the heaviest damage was concentrated in Virginia. There were 23 confirmed tornadoes in Virginia, 9 in Maryland, and 3 in West Virginia. Over 350 homes were damaged from the tornadoes, and 6 people were injured. Flooding of small streams and creeks was common throughout the Mid Atlantic Region.

28th – The remnants of Hurricane Jeanne produced widespread flooding in Virginia, Maryland, and West Virginia. Rainfall amounts averaged 3 to 6 inches. Several primary, and numerous secondary roads were closed due to high water. Some bridges were washed out and some roads compromised due to water damage. Emergency and rescue personnel completed several water rescues of motorists and pedestrians, affected by the flooding.

In Calvert County, a waterspout moved onshore and produced a brief tornado touchdown near Solomon.

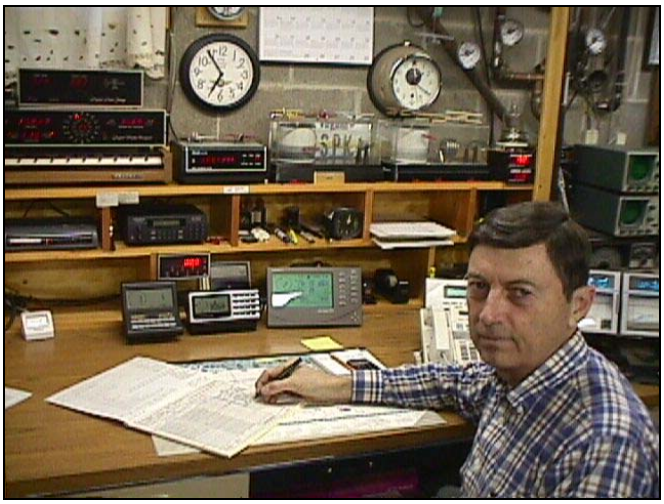
COOP Spotlight:
Bill Pancake of Keyser, WV

Bill Pancake was born in Keyser, WV in February of 1940. Bill formulated many of his current interests as a teenager. In the 1950's, Bill worked as a line boy at a local airport, and began tracking the daily weather during his Boy Scout days. At the age of 15, Bill purchased his first weather equipment, a used anemometer that he had to fix up, and which still operates today.

Bill soloed an airplane on his 16th birthday, which was the beginning of his real love of aircraft. Today he holds a commercial multi-engine, instrument, flight instructor, airframe/power plant mechanic, and FAA inspection authorization ratings. Bill was employed for 42 years as an electronic instrument technician at a large paper mill.

In 1967 Bill purchased his first airplane, and then began working on his friend's planes. This led to his opening of his own aircraft restoration shop in 1971. He has since rebuilt or restored over 30 airplanes, many of which have won contests across the country. Bill has a feature column for the National Aeronca Association magazine and several other aviation publications. His expertise is also recognized by folks across the world, who call Bill an average of ten times a day for help in their restoration and repair efforts.

Bill is well known for the gadgets that he builds by hand. He has a 144 ft tower in his backyard which he constructed to support his many weather instruments and ham radio antennas. Bill also builds and maintains his own equipment which measures creek level and flow, along with lightning detectors, rain gauges, along with rain and solar radiation detectors.



Although most of his educational background is self-taught, Bill has completed several advanced courses in electronics and the sciences.

One of Bill's most memorable experiences occurred during this past July, when he soloed his grandson on his 16th birthday from the same airfield he soloed from in 1956.

Bill has been a HAM radio operator since 1965 and a National Weather Service observer for the past ten years.

Cub Scouts Tour Sterling Office

Steve Rogowski

A day following Groundhog's Day, a group of about a dozen cub scouts toured the Sterling National Weather Service Office. The children, led by several adult chaperons, were reported to be especially inquisitive and interactive during their tour of our operations area. The children were then led outdoors to observe the launching of a weather balloon.

SKYWARN Recognition Day

David Manning

On 4 December 2004, NOAA's National Weather Service Forecast Office in Sterling, VA participated in the annual SKYWARN Recognition Day. Amateur radio operators staffed the amateur radio station at NWS Sterling throughout the event and reached countless contacts across the country during the event. The SKYWARN program is an integral part of the NWS warning process by providing 2-way communications to spotters in the field during periods of severe weather. This real time information exchange helps provide the latest information to those in the field. In addition, the information received from the spotters on the ground is critical to forecasters in providing the most accurate warnings possible.

SKYWARN Recognition Day was developed in 1999 by NOAA's National Weather Service and the American Radio Relay League. It celebrates the contributions that volunteer SKYWARN radio operators make to the National Weather Service. During the day SKYWARN operators visit NWS offices and contact other radio operators across the world.

NOAA's National Weather Service continues to extend its appreciation to the amateur radio operators whose selfless service benefits the residents of Maryland, West Virginia, Virginia, and the District of Columbia.

Upcoming SKYWARN Classes

For more information check out the SKYWARN website: http://www.erh.noaa.gov/er/lwx/skywarn/classes.html

BASICS I SKYWARN CLASS

This class is essential for becoming a SKYWARN Spotter. It is a 3-hour class that covers the basics of how SKYWARN and the National Weather Service operate, what you need to report and how, and how to spot severe thunderstorms and tornadoes. This class is a pre-requisite for all other classes.

BASICS II SKYWARN CLASS

This class is an optional sequel to the Basics I class. It is 2 1/2 hours long. It is good for spotters who need a refresher or feel they what additional information and training. It reviews the basic spotting techniques and covers more information about thunderstorms and Doppler radar. You must have taken Basics 1 to attend this class.

WINTER STORM CLASS

This is an optional 2 1/2 hour class that is occasionally offered seasonally (November - January). Its focus is on the Mid-Atlantic snow storms and nor'easters. It looks at the frequency and history of the storms, how they form and the difficulties in forecasting them, how to be prepared, how to measure snow and ice, and how SKYWARN operates during a winter event. You must have taken Basics I to attend.

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