

Volume 6, Issue 1

Sterling Reporter



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

Spring 2007

<u>Emergency Manager – Broadcast Media</u> <u>Workshop 2007</u>

Steve Rogowski

On March 28th and 29th, we hosted a local Emergency Manager – Media Workshop. This gave local emergency managers and broadcast meteorologists an opportunity to tour our office and interact with our key operational program leaders. In addition to discussing how to mitigate the loss of life and property from hazardous weather, there was a lot of focus on information sharing and technology revolving around the NOAA Weather Radio, Amateur Radio and SKYWARN programs.



Local Emergency Mangers, Broadcasters and NWS Meteorologists pose for a group photo during the 2007 Emergency Management Workshop.

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MIC's Corner

Jim Lee, Meteorologist-In-Charge

June 2007 marks the 35th Anniversary of Tropical Storm Agnes hitting the mid-Atlantic region. Agnes' brunt was primarily due to fresh water flooding, with heavy rain across the region. For example, up to 16 inches of rain in western Fairfax County, and many locations received more than 6 inches. Many county-level streams and creeks had major flooding. Portions of Route 7, Route 1, Route 29-211, and Interstates 95 and 66 were closed due to flooding. Can you imagine the impact of an event like this with today's traffic volume? Tragically, sixteen people were killed in the Washington metropolitan area alone, many of these were motorists that were trapped in their vehicles.

The NOAA Climate Prediction Center is projecting a 75% chance that the Atlantic Hurricane Season will be above normal this year, with 3 to 5 major hurricanes of Category 3 or greater. We must be prepared for an event similar to what happened 35 years ago with Agnes; moreover, the changes in our region since 1972 warrant that we need to be prepared for a *higher impact event* than Agnes. These spring months prior to tropical weather season are the time to prepare. Please visit our partner FEMA's Hurricane Preparedness website, located at http://www.fema.gov/hazard/hurricane/hu season.shtm. At this site, you can find out how to prepare your home or business for tropical weather. Also, remember that the main threat to life in the mid-Atlantic piedmont from tropical weather is fresh water flooding. When you approach a flooded roadway, turn around and don't drown!

I want to introduce you to three recently hired staff members to our office: Greg Schoor joined us in mid-May as a General Forecaster; and in early June, Arthur Patrick will be our new Electronics Systems Analyst, along with Rick Winther as our latest Senior Forecaster.

I also want to let everyone know that it's hard to keep good help around, and with that, Dave Manning, our Warning Coordination Meteorologist, will be departing for higher ground as a staff member of our NWS Eastern Region Headquarters in Bohemia, NY. We will miss Dave greatly here at NWS Baltimore/Washington, but anticipate seeing and hearing from him still in his new position.

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 at 703-260-0107 x 222.

Valentine's Day Winter Storm

Howard Silverman

This year the winter season started out on the mild side. Most of the area received its first taste of winter in January, and that was just an inch or two. At National Airport, December temperatures averaged 4.7 degrees above average; January averaged almost 6 degrees above average. For Baltimore, those figures were 5.7 and 6.4 degrees, respectively. The trend was comparable elsewhere in the area. With temperatures that warm, most of the precipitation that we did receive came in the form of rain.

All that changed by the middle of February. On Monday February 12th, a powerful winter storm came out of the southern Plains, migrating to the Tennessee Valley by the morning of Tuesday February 13th, and into the Ohio Valley Tuesday night. Meanwhile, some of the energy from that storm transferred off the coast of North Carolina Tuesday night, spawning a secondary area of low pressure, which intensified as it head northeast up the coast early Wednesday morning, February 14th. Due to the date, this storm has become known as the "Valentine's Day Storm."

While most winter storms in the mid Atlantic provide their fair share of forecasting challenges, especially in term of precipitation type, this storm proved to be more challenging than most. Initial indications of a major snowstorm for the region soon transformed into a major ice storm. One item that was consistent was the amount of precipitation that would fall. While there were questions as to the form that the precipitation would take, there was good agreement that there would be a lot of it.

Precipitation started Monday night as light snow, and this precipitation spread east early Tuesday morning. As Tuesday wore on, however, precipitation became light and spotty. In addition, warm air in advance of the storm in the Midwest trekked north and overrode the colder air in place at ground level across the mid Atlantic. As a result, a mix of light snow, sleet, and freezing drizzle fell across the region. Accumulations Tuesday afternoon and evening were minimal, and consisted mainly of icing from a little sleet and freezing drizzle.

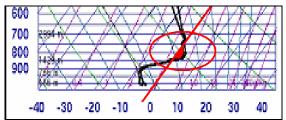
Tuesday evening the coastal low pressure developed as expected off Cape Hatteras. Across North Carolina at this time there were clusters of thunderstorms. At the same time, light freezing drizzle fell across the Sterling forecast area, and east to northeast winds suggested that this low level cold air (temperatures in the mid to upper 20s) wasn't going anywhere. That's the perfect recipe for a big ice storm.

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Valentine's Day Winter Storm

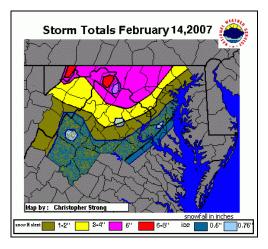
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Looking at data from our 00 UTC rawinsonde (*below*) and a continuous stream of ACARS temperature profiles seemingly confirmed this theory—there was a wedge of warm air (*circled in red*) between 4000-7000 feet off the ground, topping off near 4°C (40°F), while the air below that was all below freezing.



00Z Feb 14 2007 Rawinsonde Observation from KLWX Courtesy of University of Wyoming http://weather.uwyo.edu/upperair/sounding.html

However, this storm had one last curveball to throw. While locations to the east of Washington DC and south of the city of Baltimore as well as the central Shenandoah Valley received significant amounts of freezing rain, the lowest layer of cold air proved to be just a little too cold and a little too deep further north and west. So, instead of significant freezing rain, the precipitation melted and refroze prior to hitting the ground, leading to a big sleet event. Several inches of sleet fell overnight, with most of the precipitation ending during the Wednesday morning commute.



However, few people were commuting anywhere. The impact from this storm was felt for the remainder of the week. Since the precipitation had a high water content and temperatures were cold, this formed a thick ice pack which lingered. Road crews struggled to clear roads. Secondary roads were barely passable for days as the sleet hardened before crews could even get to them. In turn, this prompted school officials to cancel classes—in many cases through Friday. The last time the region experienced a sleet storm of this magnitude was February 1994. The 2007 Valentine's Day Storm is one to be remembered.

<u>Tis the Season: Make Sure You Are Prepared for</u> Upcoming Severe Weather

Randy Sly, SKYWARN Amateur Radio Coordinator

It's that time of year. You walk outside in the morning and something feels different. You can't put your figure on it... a smell in the air, humidity, building clouds. This may be one of those days. The severe weather season is already upon us.

Severe thunderstorms, tornadoes, and even hurricanes can now occur within our County Warning Area (CWA) at any time. As SKYWARN spotters, this is the reason we have received our training. The National Weather Service Forecast Office in Sterling depends on SKYWARN to provide "ground truth" reports during severe weather events. They look to our "eyes in the sky" and our measured surveillance as confirmation of their observations. Tis the season to be activated! So, do we need to prepare for this work? The answer is a definite "yes" and here are some important suggestions.

• Review the Basic I and II SKYWARN materials.

When you received your basic SKYWARN training, you received two very important documents. The first is a printout of the PowerPoint presentation used by the forecaster. The second is a full-color booklet entitled the *Basic Spotter's Field Guide*. If you have completed Basic II, you were given another outline and a second companion booklet, the *Advance Spotter's Field Guide*.

Hopefully you have held on to these important resources and filed them so they are easily accessible. Take time now, while the sun is shining, to go over each outline of the presentation, including the notes you scribbled on the page. Read through the Spotters Guides, placing special emphasis on the diagrams and photos. Be sure to review the difference between a tornado and a funnel cloud; what a wall cloud looks like, and the parts of a storm. We must become personally "storm ready."

• Take a refresher course if one is scheduled nearby.

The website for the Baltimore/Washington Forecast Office contains a listing of the upcoming SKYWARN classes being offered. If you haven't attended a class in the past three years, the NWS asks that you take a refresher in order to keep your standing as a spotter. Even if you have attended a class within the three year time frame, you really can learn a great deal from going again. Carve out a few hours of your schedule and register for a class. If you have taken Basic I, also think about going on to Basic II or one of the specialized classes. You will enjoy the experience and even gain some new insights. Be sure you check the website regularly to see if a SKYWARN class has been scheduled near you.

Check that all measuring devices are working.

Many of us have small weather stations at home, or at least a rain gauge. Is everything in working order? From my time at the SKYWARN operations desk during severe weather I have come to appreciate even more how important accurately measured reports are for the forecasters. This information carries a great deal of weight in their assessment process. A few years ago SKYWARN was activated for a severe weather event that included a large amount of rain. After turning the net control responsibilities over to another operator I went outside to check the amount of rain that had fallen.

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Preparations for a SKYWARN Spotter

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Since this was the first activation of the year, I had not taken time to see if my gauge was properly set. Not only had the rain gauge tilted, but a wasp had decided that the interior would make a good place to begin a nest. So much for giving an accurate report! Let's check our equipment now.

• Check your radio batteries and backup systems (if applicable).

Two-thirds of the spotters in our CWA are licensed Amateur Radio operators. During severe weather activations, the Forecast Office depends a great deal on the Amateur Radio Nets and Sub Nets that are used to bring information quickly and accurately to the Warning Coordination Meteorologist. Often normal power can be lost during severe weather; our equipment can also cease to operate. As we say each time we read the SKYWARN script, "we ask all operators to check their systems and backup systems at this time." How much more important this is before an event actually takes place. Be sure everything is in operational readiness.

By the way, if you are not a licensed Amateur Radio Operator and would like to learn more, please contact me at w4xj@arrl.net and I'll help you get started!

Program SKYWARN reporting numbers into phones and cell phones.

Severe weather reports, particularly during a "warning" activation, reach the NWS office in one of two ways: by Amateur Radio or telephone. Both are important and necessary. Your spotter ID card lists two telephone numbers – an 800 number and a regular number – that can be used to make a report. Program these numbers into your cell phone and home phone. This way you won't have to fumble for your spotter ID when making a report. Just hit "send" and call.

• Commit yourself to being an active Spotter.

The SKYWARN spotter program exists for one reason only—to support the work of the NWS forecasters by providing "ground truth" reports during severe weather emergencies. When SKYWARN is activated, the forecasters are not only hoping for but expecting reports from their more than 2,000 spotters across the CWA. Some areas are very sparse, when it comes to trained spotters. In those areas, it is vitally important for spotters to be involved. Other areas are more densely populated with trained spotters. Unfortunately, in those areas many spotters just assume that reports are being given. Wherever you live, send in your reports. In my years with SKYWARN I have never heard a forecaster say that they are getting too many reports.

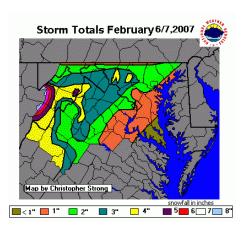
Recently I had the privilege of making a SKYWARN presentation to a Conference of Emergency Managers and Media Personnel hosted by the Sterling Weather Forecast Office. During the conference I listened as Jim Lee, the Meteorologist-in-Charge; Dave Manning, the Warning Coordination Meteorologist; and other forecasters spoke with great enthusiasm about the SKYWARN program and the work of our volunteers across the CWA. Their words boosted my sense of worth for our importance as an auxiliary to the weather service. We are doing an important work for them and for our community.

<u>January – March 2007 Storm Data</u> *Sarah Rogowski*

The Storm Data Publication can be found on our webpage at http://www.erh.noaa.gov/lwx/Storms/Strmdata/.

A low pressure system moving out of the central plains weakened as it pushed east across the forecast area. After snow began to fall across the region, warm air at low levels moved in above sub-freezing temperatures at the surface. Minor accumulations occurred during the late morning hours of January 21st before snow mixed with sleet and freezing rain and then changed over to freezing drizzle early on the 22nd. Total accumulations ranged from 1 to 4 inches across the region.

A fast-moving clipper system moved over the Mid Atlantic February 6th and 7th. Snowfall amounts ranged from 1 inch in the SE to 11 inches in Grant County.



A fast-moving cold front and strong upper level disturbance pushed across the Mid Atlantic during the late morning of February 23rd. Strong northwest winds behind the cold front gusted up to 60 mph, downing dozens of trees and power lines.

A strong cold front pushing south across the Mid Atlantic on March 5th brought strong gusty winds to northern Virginia, downing trees and power lines and causing several thousand power outages. Low relative humidity, strong gusty winds and drying fuels lead to critical fire weather conditions on the 5th. Several small brush fires began when strong winds brought down power lines and transformers and produced sparks.

A departing low pressure system to the south March 8th allowed very cold air to funnel from the north and generate areas of dense fog. With temperatures falling into the teens, fog froze on contact.

A low pressure system brought precipitation to the region on March 15th. Warm air briefly surged ahead of the low, allowing precipitation to begin in the form of rain. Heavy rain caused flooding across central and northern Virginia and much of Maryland. Colder air was later brought into the region by the low, forcing rain to change to snow and sleet before changing to all snow. Snowfall amounts ranged from 1 to 10 inches, with higher amounts along and west of the Allegheny Front.

NOAA Hurricane Hunter Aircraft Visit

On May 2nd, NOAA"s WP-3 Orion Turboprop Hurricane Hunter Aircraft visited Martin State Airport near Baltimore as part of its five – day, five – city tour of the east coast that began on April 30. The purpose of the tour is to raise public awareness of the hurricane threat along the eastern seaboard. Bill Proenza, the new director of NOAA's National Hurricane Center, Dean Gulezian, Director of the National Weather Service Eastern Region, Dr. Richard Knabb, Senior Hurricane Specialist, and Michelle Mainelli, Hurricane Specialist, joined the crew and scientists aboard the aircraft.



Bill Proenza, Director of the Tropical Prediction Center, addresses the crowd at Martin State Airport, as David Manning looks on [to R behind Proenza] Photo courtesy of Chris Strong, Senior Forecaster.

Jim Lee, Meteorologist-in-Charge, David Manning, Warning Coordination Meteorologist, Richard Hitchens, Senior Service Hydrologist, and Luis Rosa, the Tropical Weather Focal Point, worked with state and local Emergency Managers to conduct public tours of the NOAA P3 aircraft. The public had the opportunity to tour the aircraft and meet the aircraft crew and scientists (pictured below). Other safety information and displays were also available to the public.



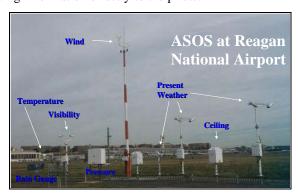
"The Man Behind the Curtain"

Les Thario, Acting Electronic Systems Analyst

Most of us recall the movie, The Wizard of Oz and the infamous line "Pay no attention to that man behind the curtain!" Well that could be uttered each day as a forecast is created in offices from coast to coast. The men and women behind the curtain are the Electronic/ Information technology staff employed at every NWS office throughout the country.

Everyday hundreds of electronic (ET) and information technology (IT) folks spend their work days repairing, calibrating, performing preventative maintenance, and developing the hardware and software to aid the forecasters in their job. This electronic equipment is located at sites ranging from the busiest airports to the most remote places in the country.

A typical day in the life of an electronic technician could involve several hours of what we refer to as "windshield time". Often we travel several hours before we can even start our repair or maintenance on a piece of equipment. One such piece of equipment is known as the ASOS, short for the Automated Surface Observation System. This system is comprised of several elements that supply the meteorologist/hydrologist with observational and climatology data. These data include air temperature and dew point, wind speed and direction, precipitation data, cloud height, freezing rain and thunderstorm information, atmospheric pressure and present weather. ASOS is not only important to forecasters, but is integral to the nation's aviation system as it provides vital take off and landing information directly to the pilots.



The modern day ET is a very "well rounded" technician. We work on everything from equipment built in the 1950's to the latest computer software and hardware. We are constantly challenged to incorporate new technology while maintaining the old.

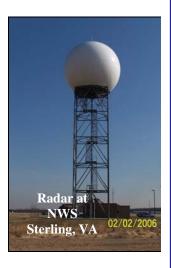
Ever heard the soothing sounds of what we affectionately call "IGOR"? Well that's the text-to-speech NOAA Weather All Hazards Radio broadcast. The electronic staff also maintains this NOAA radio system. The system is used to bring not only daily forecast information to the public but also distributes severe weather watch and warning information. It can also be used to broadcast public information statements ranging from air quality bulletins to Amber alerts for missing children, even for informing the general public of the latest Terror Alert Level.

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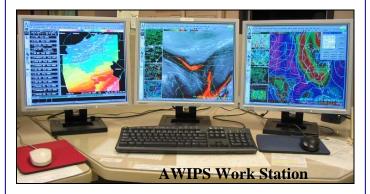
"The Man Behind the Curtain"

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Another system we maintain is the WSR-88D Doppler Radar. This radar provides real time weather radar data for the forecaster and has been commissioned and in use by the National Weather Service since around 1990. This complex system has had several hardware and software enhancements over the past decade, but will one day reach the end of its life cycle. When that day inevitably arrives, we will then "hit the books" and learn a new system.



Perhaps the most complex system we maintain is the Automated Weather Information Processing System (AWIPS). This computer system takes in all our data and puts it in one location for the forecasters and hydrologists, allowing them to integrate information in ways that were previously not possible. The complex system is networked with every other forecast office throughout the country, enabling data sharing and transfers at a rate hundreds of times faster than only a few years ago.



What else do we do? The list can include installing and maintaining telephone lines and modems for communication or data transfers. With the growing use of the Internet, the ET staff is increasingly called upon to help maintain and troubleshoot NWS Internet systems. Our office computer network is extensive and sophisticated; we are called upon to take care of it. Even though the government is moving toward "paperless" offices, many products still require printing. When the printers malfunction, guess who gets the call? The River Forecast Center monitors and forecasts the river and stream levels across the Mid Atlantic. In order to do this, a myriad of river and stream gages are utilized. When they break, we get the call. Basically, if it has wires, we probably have something to do with keeping it up and running.

So next time you see or hear an NWS broadcast you'll know that it was all made possible with the help of "that man behind the curtain".

Marine Users Committee Meeting

Brandon Peloquin

On April 17, the Baltimore/Washington Weather Forecast Office hosted another Marine Users Committee Meeting. Recall that the Marine Users Committee was formed in late 2005 in an effort to acquire feedback from local marine users on the Maryland Chesapeake Bay and Tidal Potomac River to improve marine forecasts and warnings. The committee consists of users from the United States Coast Guard, the Coast Guard Auxiliary, the Chesapeake Area Professional Captain's Association, local Power Squadrons and Sailing Clubs in addition to partners at NOAA's Chesapeake Bay Office and the Chesapeake Bay Observing System.

At this spring's meeting, the committee discussed ideas for improving the list of landmarks used in Special Marine Warnings. The goal is to streamline this list so only well known landmarks are used, which will help ensure that all marine users on the Bay and Potomac can react to our warnings in a timely manner. Additional plans were developed toward organizing a marine observation reporting network which includes support from the Coast Guard, Coast Guard Auxiliary, local Power Squadrons and other area small passenger vessels. This network will consist of routine marine observations of wind, wave height and weather, in addition to non-routine reports during times of severe weather. While buoys and near shore wind sensors provide some observational data, observations from ships and boats would greatly augment information used for marine weather forecasts. This observation program is organized for the purpose of obtaining critical weather observations from vessels over the marine waters. If you are a boater and would like to report a marine observation, please call our toll free number at 1.800.253.7091.

Severe Weather Workshop

Steve Rogowski

Our office held the annual severe weather workshop on April 10th. The workshop allows us to share new science and technology with the staff, as well as re-familiarizing ourselves with severe weather forecasting and warning techniques. This workshop is a unique opportunity to spend 8 consecutive hours dedicated to training. While the theme of this year's workshop was the detection of the severe pulse thunderstorm (the most common severe thunderstorm type across the Mid Atlantic Region), talks focusing on mesoscale analysis, radar networks, and flash flooding were also presented.

Our guest speaker this year was Josh Korotky, the Science and Operations Officer from the Pittsburgh NWS office. He presented his expertise in using AWIPS software to visualize severe weather environments (both with computer models and using the Doppler Radar). The sharing of techniques from different offices is an example of how the NWS strives to lead the way in severe weather prediction and detection. During the afternoon, several hours were devoted to putting our knowledge to the test in an interactive lab session. Simulations of past severe weather events allows us to make use of archived radar data to practice detecting severe thunderstorms in a classroom setting.

New Employees

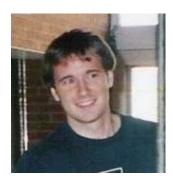
Jim DeCarufel accepted the Observing Program Leader position in April. He began his government career with the US Air Force in 1968 as a weather observer and meteorologist.

Jim served tours of duty across the United States and over seas. His tours include Ft. Stewart, GA, the Republic of Vietnam, Scott AFB, IL, Westover AFB, MA, Ft Knox, KY, RAF Lakenheath UK, Scott AFB, IL, Grissom AFB, IN, Mainz-Finthen FRG and Eglin AFB, FL.



He retired as a Senior Master Sergeant in March 1992. In June 1992, he accepted a position with the NWS at Chatham, MA, taking radar and upper air observations. He transferred to NWS Sterling in January 1993 where he was a Hydrometeorological Technician (HMT) until Feb 2004 and then became an Electronics Technician at Sterling.

In May, Greg Schoor was promoted to General Forecaster at Sterling from his previous Intern position at the Greenville-Spartanburg, South Carolina office.



Born and raised in Garden City, KS in the middle of "Tornado Alley," he watched several tornadic events growing up. This incredible severe weather influence gave him dreams of a career in meteorology and led him to the University of Oklahoma, where he received a B.S. in Meteorology in May 2005.

While at the Univ. of Okla., Greg worked for the NEXRAD Radar Operations Center in Norman, Okla. learning about the national network of WSR-88D Radars. After graduating, Greg was hired at the NWS Greenville-Spartanburg office where he developed an interest in the technological side of the National Weather Service. He was given the focal point duties for NOAA Weather Radio and was part of a team that handled the changes to office IT issues in the absence of their office ITO. He is excited about living in the Washington D.C. area and plans to spend a lot of time exploring the seemingly unlimited attractions around the region. One thing he doesn't plan on doing is storm chasing like he used to back in the Midwest, at least not in the DC area.

<u>February – April 2007 Climate Summary</u>

Temperatures at Reagan National Airport for the period of February through April were below average while precipitation average slightly below normal for February and March. However, April turned out to be wetter than normal. As for temperatures for each month individually, February was the 16th coldest on record but March turned out to be the 32nd warmest on record. As for April, winter held onto its grip through the middle of the month. Through the 19th the average temperature was only 47.9 degrees, making this the eighth coldest on record. However, the period from April 20th through April 30th averaged 63.5 degrees making this the 17th warmest on record. A couple weather events did highlight the period of February through April in 2007. One was the winter storm that occurred on the 13th and 14th of February. Liquid equivalent precipitation totaled at 1.06 inches and most of this was in the form of sleet. This was remembered by many as the worst ice storm since January of 1999. Another memorable event occurred on March 15th and 16th. On the 15th, the high soared to 75 degrees which is normal for the middle of May. However, on the 16th the temperature only topped off at 41 degrees and this is more typical for the middle of January. Along with the colder temperatures came a soaking rain that eventually ended as snow and sleet. Snow and sleet totals for the 16th were at one tenth of an inch.

Temperatures at Baltimore/Washington International Airport for the period of February through April were below average while precipitation was below average for February, but above average for the months of March and April. With an average temperature of 42.2 degrees, this period went down as tied for the 19th coldest period on record dating back to 1870. As for temperatures for each month individually, February was the 14th coldest on record but March turned out to be the 47th warmest on record. As for April, winter held onto its grip through the middle of the month. Through the 19th the average temperature was only 45.6 degrees, making it the fourth coldest period on record. However, April 20th through the 30th finally saw spring as temperatures averaged at 61.5 degrees, making this the 25th warmest period on record. A couple weather events did highlight the period at Baltimore/Washington International Airport. The first memorable event came on February 13th and 14th. Liquid equivalent precipitation for this period totaled at 1.16 inches and most of this was in the form of sleet. This was remembered by many as the worst ice storm since January of 1999. Another memorable event occurred on March 15th and 16th. On the 15th, the high soared to 75 degrees which is normal for the middle of May. However, on the 16th the temperature only topped off at 39 degrees and this is more typical for the middle of January. Along with the colder temperatures came a soaking rain that eventually ended as snow and sleet. Snow and sleet totals for the 16th were at six tenths of an inch.

<u>February – April 2007 Outreach</u> Sarah Rogowski

On February 8th, Richard Hitchens and Brandon Peloquin gave a presentation to the North Point Sailing Club in Edgemere, MD.

Sarah Rogowski conducted an office tour for a couple on February 28th. They were also able to observe a weather balloon release with Trina Heiser. Also on the 28th, Luis Rosa conducted a "Job Shadow Day" with Kathleen Bryant, a University of Maryland Meteorology student.

Steve Zubrick visited with the Arlington Rotary Club on March 1st to discuss urban forecasting challenges and weather technology. Also on the 1st, Rich Hitchens visited the Charles County EOC.

On March 6th, Luis Rosa conducted an office tour for members of the Westminster Presbyterian Church of Alexandria, VA.

On March 8th, Steve Zubrick conducted a tour for 13 scientists from the Chinese Shaanxi Provincial Meteorological Bureau . The visit focused on the use of radar in NWS warning operations, including flash flooding and severe weather.

Sarah Rogowski was a guest speaker at the North Carroll County High School Career Fair in Hampstead, MD., on March 21st.

On March 23rd, Chris Strong visited a 1st grade class at Poplar Tree Elementary School in Chantilly, VA.

Brian LaSorsa conducted an office tour on March 26th for a group from the Asbury Retirement Village from Gaithersburg, MD.

On April 17th, Steve Zubrick gave a presentation on local Weather Technology to a graduate-level meteorology class at Howard University.

On April 19th, Sarah Rogowski conducted a tour for meteorology students from Johns Hopkins University before they observed the weather balloon release with Trina Heiser. Also on the 19th, Chris Strong visited the Pendleton County Emergency Operations Center and conducted a SKYWARN Training Class.

On April 23rd, Howard Silverman and Sarah Rogowski conducted an office tour for Boy Scout Troop 1313.

On April 26th, an 8th grade student from Rachel Carson Middle School in Herndon shadowed Brandon Peloquin as part of "Out to Work Day." Sarah Rogowski was a guest speaker at the Kilmer Middle School Career Fair in Vienna, VA., on the 26^{th} .

Staffing News

Steve Rogowski

During the months of March and April, three of our office staff members departed. That is a substantial loss, especially considering our office only has 25 staff members.

James Brotherton left his post as Senior Forecaster for a promotion to Warning Coordination Meteorologist in Hanford, California. James has worked with the Homeland Security and Severe Weather Programs, but most will know him from the numerous SKYWARN presentations he gave in his short time at our office.

Observation Program Leader John Darnley rejoined the Pittsburgh office, enabling him to move back to be with family. John has a strong passion for weather observing, and brought his background of the CoCoRAHS program to our office.

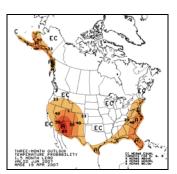
Forecaster Roger Smith moved back to the west, joining the Riverton, Wyoming office. While at our office, he led the Aviation and Backup programs, as well as serving as our union steward.

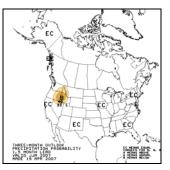
We wish James, John and Roger much happiness in their endeavors.

<u>June – July - August Outlook</u>

NOAA's National Weather Service Climate Prediction Center created these June – July – August temperature and precipitation outlooks during mid April. 'EC' means Equal Chance, 'A' stands for Above Normal, while 'B' is Below Normal.

These are probabilistic forecasts; the forecast probability anomaly is the difference between the actual forecast probability of the verifying observation falling in a given category and its climatologically value.





Climate Prediction Center outlooks, discussions and explanations are available at:

http://www.cpc.noaa.gov/products/predictions/90day/

Upcoming SKYWARN Classes

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

ATTENTION ALL SKYWARN SPOTTERS:

Please email Sarah Rogowski (<u>Sarah.Rogowski@noaa.gov</u>) if any contact information has changed.

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.

This class is a pre-requisite for all other classes.

HURRICANE CLASS

This is an optional 2 1/2 hour class that is offered seasonally (June-September). Its focus is Mid-Atlantic hurricanes, their frequency and history, outlook for the season, how hurricanes form, categories, their names, how to be prepared, and how Skywarn operates.

This class is a pre-requisite for all other classes.



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